

**Minutes of the 164th Quarterly Meeting
of the
Upper Mississippi River Basin Association**

**November 15, 2022
Davenport, Iowa**

Tim Hall called the meeting to order at 9:30 a.m. Participants were as follows:

UMRBA Representatives and Alternates:

Rick Pohlman	Illinois Department of Natural Resources
Chad Craycraft	Illinois Department of Natural Resources
Loren Wobig	Illinois Department of Natural Resources
Tim Hall	Iowa Department of Natural Resources
Jake Hansen	Iowa Department of Agriculture and Land Stewardship
Barb Naramore	Minnesota Department of Natural Resources
Patrick Phenow	Minnesota Department of Transportation
Dana Vanderbosch	Minnesota Pollution Control Agency
Matt Vitello	Missouri Department of Conservation
Steve Galarneau	Wisconsin Department of Natural Resources
Jim Fischer	Wisconsin Department of Natural Resources
Brian Weigel	Wisconsin Department of Agriculture, Trade and Consumer Protection

Federal UMRBA Liaisons:

Brian Chewning	U.S. Army Corps of Engineers, MVD
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges

Others in Attendance:

Kirk Hansen	Iowa Department of Natural Resources
Randy Schultz	Iowa Department of Natural Resources
Brad Parsons	Minnesota Department of Natural Resources
Kevin Stauffer	Minnesota Department of Natural Resources
Nick Schlessler	Minnesota Department of Natural Resources
Megan Moore	Minnesota Department of Natural Resources
Neil Rude	Minnesota Department of Natural Resources
Ashley Ellis-Smith	Mississippi Interstate Cooperative Resource Association
Ray Wolf	National Weather Service
Zachary Liebowitz	U.S. Environmental Protection Agency
David Busse	U.S. Army Corps of Engineers
Mandy Michalson	U.S. Army Corps of Engineers
Lance Engle	U.S. Army Corps of Engineers
Jim Cole	U.S. Army Corps of Engineers, MVD
Leanne Riggs	U.S. Army Corps of Engineers, MVD
Thatch Shepard	U.S. Army Corps of Engineers, MVD
Samantha Thompson	U.S. Army Corps of Engineers, MVD
Adam Ziegler	U.S. Army Corps of Engineers, MVR

Kim Thomas	U.S. Army Corps of Engineers, MVR
Andrew Goodall	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Marissa Laches	U.S. Army Corps of Engineers, MVR
Rachel Hawes	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Davi Michl	U.S. Army Corps of Engineers, MVR
Chuck Theiling	U.S. Army Corps of Engineers, MVR
COL Kevin Golinghorst	U.S. Army Corps of Engineers, MVS
Michael Feldmann	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Greg Kohler	U.S. Army Corps of Engineers, MVS
Courtney Cheever	U.S. Department of Agriculture, Minnesota NRCS
Peter Caffarelli	U.S. Department of Agriculture, Transportation Services
Richard Henderson	U.S. Department of Agriculture, Transportation Services
Greg Conover	U.S. Fish and Wildlife Service
Neal Jackson	U.S. Fish and Wildlife Service
Kraig McPeek	U.S. Fish and Wildlife Service, Illinois-Iowa Ecological Services
Lauren Larson	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
Sara Schmuecker	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
Laura Muzal	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
Matt Mangan	U.S. Fish and Wildlife Service, Illinois Ecological Services
Kelly Warner	U.S. Geological Survey, Central Midwest Water Science Center
JC Nelson	U.S. Geological Survey, Midcontinent Region
Jenn Lacey	U.S. Geological Survey, Midcontinent Region
Jim Dunker	U.S. Geological Survey
Olivia Dorothy	American Rivers
Kim Lutz	America's Watershed Initiative
Lindsay Brice	Audubon
Paul St. Louis	Clean Choice Energy
Gary Loss	HNTB Corporation
Aimee Andres	Inland Rivers, Ports and Terminals
Carolyn Mahlum-Jenkins	League of Women Voters
Doug Daigle	Lower Mississippi River Sub-Basin Committee (Hypoxia Task Force)
Nancy Guyton	Neighbors of the Mississippi
Chris Smith	Northern Grain Belt Ports
Rick Stoff	<i>Our Mississippi</i>
Bryan Hopkins	The Nature Conservancy
Gretchen Pfeiffer	The Nature Conservancy
Kirsten Wallace	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association
Natalie Lenzen	Upper Mississippi River Basin Association
Lauren Salvato	Upper Mississippi River Basin Association
Andrew Stephenson	Upper Mississippi River Basin Association
Erin Spry	Upper Mississippi River Basin Association

Minutes

Jim Fischer moved and Dana Vanderbosch seconded a motion to approve the draft minutes of the August 9, 2022 UMRBA quarterly meeting as written. The motion was approved unanimously.

Executive Director's Report

Kirsten Wallace pointed to the Executive Director's report in the agenda packet for a summary of the Association's work efforts since the August 2022 quarterly meeting. Wallace stated that the last quarter was a productive period for UMRBA filled with engagements to build partnerships. Wallace provided a few highlights as follows:

On October 5, 2022, UMRBA met with Corps Headquarters leadership in Washington, D.C. to discuss UMRBA's priorities relating to UMRR, NESP, and a flow frequency analysis for the UMRS as well as resolving the current project partnership agreement (PPA) impasse. UMRBA representatives included Tim Hall, Loren Wobig, Rick Pohlman, and Chad Craycraft. Waterways Council and The Nature Conservancy joined the meeting.

In early August 2022, UMRBA along with National Oceanic and Atmospheric Administration (NOAA) and the University of Minnesota's Institute on the Environment (UMN IonE) announced a new project this fall to explore how to enhance climate resilience in communities along the Upper Mississippi River from Minnesota to Missouri. UMN IonE hosted a first meeting of this new partnership on September 20-21, 2022. Representing UMRBA were Melissa Kuske of Minnesota DNR, Jason Conn of Iowa DNR, Kirsten Wallace as Association staff, and Brian Stenquist of *Meeting Challenges*.

Wallace explained that the Corps and each agency named in NESP's authorizing legislation are coordinating in developing scopes of work to support their respective roles in NESP's implementation. The Corps has standing MOAs with USGS and USFWS that allows for transferring funds to those agencies, and is establishing MOAs with the individual states and UMRBA to facilitate the transfer of funds in future years. For FY 2022, USGS has offered to utilize its cooperative grants authority to transfer \$200,000 to the individual states and UMRBA. In response to a request from Wallace, Rick Pohlman moved and Jim Fischer seconded a motion to authorize Wallace to enter into a cooperative agreement with USGS for up to \$200,000 to support UMRBA's roles in implementing NESP over a one-year term.

The UMRBA Board and the UMRBA Water Quality Executive Committee met with USEPA Regions 5 and 7 Regional Administrators on November 8, 2022 in St. Louis. Meeting topics included the UMRBA Interstate Water Quality Monitoring, basin-wide nutrient management, environmental justice, climate resilience, lead and copper rule, and national primary drinking water regulations for PFAS.

On November 9-10, 2022, UMRBA convened the Multi-Benefit Conservation Practices Nutrient Workshop in St. Louis, Missouri. This is the first in a series of two workshops that UMRBA will convene for the purpose of enhancing the collaborative nature of conservation practice implementation and accelerate nutrient reduction in the Upper Mississippi River Basin.

Tim Hall pointed to UMRBA's July 2022 to September 2022 financial statements provided on pages B-13 to B-17 of the agenda packet. Pohlman moved and Brian Weigel seconded a motion to approve the Association's budget report and balance sheet as included in the agenda packet.

Report from UMRBA Water Quality Executive Committee

Dana Vanderbosch congratulated the UMRBA member states on implementing the first steps of the ten-year plan and the passage of the Chloride Resolution in February 2022.

UMRBA's Upper Mississippi River Interstate Water Quality Monitoring Plan achieved a successful pilot through a collaboration among the Illinois EPA, Iowa DNR, Missouri DNR, Missouri DOC, Missouri HHS, and USEPA. UMRBA published two reports that evaluated the effectiveness and feasibility of the pilot; an analysis of the monitoring results to inform the states' CWA programs and an evaluation on the process of collaborative, interstate monitoring. Vanderbosch thanked the Missouri DNR for graphic support for those publications. The WQEC is currently determining the states' ability to resource the full implementation of the monitoring plan, which was a major focus of the November 8, 2022 meeting with USEPA Regions 5 and 7.

The UMRBA workshop held on November 9-10, 2022 in St. Louis focused on accelerating the multi-benefit methods of conservation practices. The conversations facilitated by the workshop were robust and dynamic, and attendees generated ideas that could be implemented regionally. Around 80 people attended the workshop, representing several dozen organizations. A second workshop is being planned for fall 2023 in the Minnesota. On behalf of UMRBA, Vanderbosch expressed sincere appreciation to USEPA its financial support of the workshops and to UMRBA staff for shaping the workshop and applying creativity and developing options for reflection.

UMRBA serves as the Hypoxia Task Force Sub-Basin Committee for the Upper Mississippi River Basin. The Infrastructure Investment and Jobs Act appropriated funding to the Gulf Hypoxia Program for the first time that includes financial support to the Sub-Basin Committees. The WQEC and state representatives are considering roles and responsibilities that UMRBA will serve in the upcoming years and will be focusing on developing a work plan for UMRBA to utilize its forthcoming allocation through the program.

In light of the UMRBA water quality ten-year program plan and the establishment of the Hypoxia Task Force, the WQEC is re-examining its Charter with respect to its scope, meeting frequency, and membership.

Illinois River Next Generation Water Observing System (NGWOS)

Jim Duncker presented a project update on the USGS Integrated Water Science activities in the Illinois River Basin. USGS's priority issues for the Illinois River Basin include increasing understanding of the cycle of nutrients and identifying communities of harmful algal blooms (HABs) by looking to historical data and establishing a baseline of available data.

The Next Generation Water Observing System (NGWOS) combines remote sensing, test beds, intense sub-basin monitoring, and basin wide monitoring to create a comprehensive picture. To expand NGWOS capabilities within the Illinois River Basin, USGS installed 16 new supergages, eDNA monitors, and HAB imagery monitors. Synoptic sampling is employed quarterly and has expanded to HUC 8 tributaries. FLAME continuous downstream water quality surveys were implemented throughout the Illinois River, creating snapshots of water quality conditions in the main stem of the river. Using this methodology, USGS successfully captured a June 2021 HAB event on the Illinois River at Starved Rock via discrete sampling, sonde data, and remote imagery.

USGS is currently refining this technology to be usable for remote sensing – i.e., retrieving water quality data from satellite imagery. This project is being initiated within NGWOS pilot basins and is planned to be expanded to a national scope.

In 2022, USGS flew the first airborne electromagnetic (AEM) survey on the Fox River. The AEM collects continuous surficial geology data up to 100 meters, showing drift thickness and buried bedrock valleys in the river basin. Most of the Illinois River Basin will be flown in the next year.

Integrated Water Availability Assessments (IWAAs) is the second component of the USGS IWS program for the purpose of examining the supply, use, and availability of the nation’s water. The goal for IWAAs is to create a common set of products in coordination with NGWOS and the and Integrated Water Prediction (IWP), to address regionally important science gaps, and to produce investigation, data, and enhanced assessments of water availability. The purpose for the Illinois River Basin NGWOS is to create a real time spatially and temporally continuous HABS forecasting capability based off of the NGWOS data collection effort. This phase was initiated in 2022.

USGS has completed compilation of data for the Illinois River Basin from supergages, synoptic surveys, FLAME sampling, remote sensing, and eDNA data. Now, USGS is currently in the modeling phase. This includes assessing existing models in conjunction with USGS models and datasets to forecast water availability impacts.

In response to a question from Chuck Theiling, Duncker stated that he was unsure if the electromagnetic mapper could detect drain tiles but offered to follow up with an answer at a later date. Duncker said the mapper was more suited to detect changes in glacial aquifers. In response to a question from Kirsten Wallace, Duncker explained that NGWOS data are transferable across the Midwest, especially in a corn and soybean setting.

Wallace asked about USGS’s plans to use NGWOS to assess social and economic factors. Duncker responded that USGS is examining non-riverine urban flooding in the Illinois River Basin, including in areas within underserved communities in Chicago. USGS is working with Harwood Heights to build a flood warning dashboard for its public works department. USACE, Illinois DNR, and the Metropolitan Water Reclamation District of Greater Chicago (MWRDGC) are involved in the effort. Kelly Warner added that IWAAs will have two phases with the second phase involving modeling different water uses and the socio-economic impacts of those activities.

Tim Hall asked if either the Delaware or Colorado River Basin NGWOSs have lent important insights that can be utilized by the Illinois River NGWOS. Duncker stated that each of the NGWOS basins focus on local priority information needs. The Delaware River project is working to limit salt intrusion and the Upper Colorado River is working to retain snowpack and water supply. Although their subject matters do not overlap, the Illinois River Basin NGWOS has benefitted from their advanced stages particularly in terms of learning from them in how they engage stakeholders.

Lauren Salvato asked if there will be opportunities to review the science plan for the Illinois River Basin NGWOS. Duncker explained that the science plan has changed over time into individual plans for the NGWOS and IWAAs projects. Both science plans are still in the drafting phase. The implementation plan for IWAAs will be completed and available by December 31, 2022.

USACE Harmful Algal Bloom Program

Kirsten Wallace pointed to pages D-1 to D-8 of the agenda packet, which includes a provision in the Senate and House negotiated version of the 2022 Water Resources Development Act (WRDA) that would add the Upper Mississippi River Basin as a priority geographic area for the Corps' Harmful Algal Bloom (HAB) Demonstration Program. Wallace observed that Congress is proposing an approach for attaching the Senate and House negotiated version of WRDA 2022 to the National Defense Authorization Act measure, making it likely that this provision will be enacted. Therefore, a presentation on the HAB demonstration program is timely and relevant.

Mandy Michaelson explained that HABs are increasingly being reported across the nation, impacting water resources. In WRDA 2018, Congress directed the Corps to enact scalable solutions to reduce the frequency and severity of HABs. In 2020, the Corps began hosting HAB listening sessions and initiated interagency workshops focused on freshwater research and development. In 2022, Congress appropriated included \$10.5 million for HAB research and development and \$4 million to the HAB demonstration program.

Michaelson explained that the Corps is focused on prevention, detection, and management. Michaelson provided examples of projects under the HAB demonstration project, including treating cyanobacteria present in sediment, UV and ultrasound mitigation, mechanical intervention, and creation of a real-time information transmittal process to alert managers to the presence of HABs. HAB Interception, Transformation, and Treatment System (HABITATS) field work in New York and Florida have successfully harvested HABs and converted the algal biomass to biofuels via hydrothermal liquefaction. UV-based mitigation to reduce cyanobacteria populations have been successfully demonstrated in lab environments at University of Illinois. A field pilot to test the technology is planned for summer of 2023 in Ohio. Bacterial remediation via enzymes to neutralize microcystin by transforming it into a weaker form is under development at the USACE Engineer Research and Development Center (ERDC).

WRDA 2020 Section 128 directed the Corps to deliver a HAB demonstration program, intended to implement innovative technologies into the field. Over 30 research projects were awarded. Michaelson pointed to the Corps' HAB demonstration program to learn more about the program, including the funded freshwater HAB research projects: <https://ansrp.el.erdc.dren.mil/HAB.html>.

Bryan Hopkins observed that some of the lab-based methods shown in the program are fairly aggressive, and asked about the wider ecosystem impacts of those methods. Michaelson explained that the lab investigations are focused on understanding non-intended impacts.

Wallace asked the WQEC to think about how the HAB demonstration program might be utilized within the Upper Mississippi River System for any suggested roles for UMRBA in relation to the program.

Kelly Warner asked how the Corps defined HABs with respect to converting HABs to biofuel and whether there might be economic impacts of biofuel production. Michaelson stated that the legal definition of a HAB is a toxin-producing bacteria, which typically means a cyanobacteria but could also apply to an out-of-control green algae bloom. In regards to economic impacts, data related to economics, performance, and efficiency are being collected. The Corps is collaborating with USGS in developing a case study of the associated economics. It is anticipated that the report will be released by the end of the calendar year.

Navigation Report

Container-on-Barge Shipping

Aimee Andres of Inland Rivers, Ports and Terminals presented a new database, using OpenTug's digitized platform, that allows multiple small freight carriers to combine small loads to create a full load for barge shipping on the river. IRPT is an association of many stakeholders including ports, terminals, shippers, carriers, and other transportation-related entities. Andres is currently coordinating with inland destinations to establish infrastructure aides for the short-term.

Illinois Waterway Major Rehabilitation

Adam Ziegler presented on the major rehabilitation of the Illinois Waterway. Consolidated closures in 2023 are required for infrastructure work that is not performed during times of industry shutdown to minimize impacts to shipping schedules. The Corps awarded two major construction contracts for Brandon Road and Dresden L&Ds in FY 2022. Brandon Road and Dresden L&Ds require installation of miter gates and machinery. Previous work to prepare for installation at Brandon Road L&D included bulkhead slot installation to facilitate dewatering.

The consolidated closure is scheduled to begin June 1, 2023; gates are anticipated to be closed for 120 days until September 30, 2023. Contractors are beginning work to prepare for construction.

The Corps is advancing designs on Marseilles L&D, focusing on electrical crossover installation to facilitate electrical updates in future contracts. Installation of miter gates and machinery at Starved Rock and Marseilles L&Ds is anticipated to occur in FY 2025 or later.

Low Water Impacts to Shipping

Lower Mississippi River Condition Report

Cody Eckhardt reported that the Mississippi River is in low flow status due to extreme and exceptional drought in some areas. Two dredges are currently active in St. Louis, and two dredges are in Memphis dredging the main stem and the Memphis harbors. Vicksburg has one dredge on the main stem and one on the Red River, and New Orleans also has a dredge on the main stem and in the harbor.

The Mississippi River at Memphis and Cairo has set record low water. The National Weather Service anticipates rainfall in the 28-day forecast. Compared to 2012 and 1988 drought, water levels at the Cairo gage have been lower than in recorded at the same time in 2012 and 1988. However, water levels are increasing and nearing 1988 levels. Shippers have reported difficulties in transporting fertilizer north.

Saltwater intrusion has become a problem with saltwater getting into drinking water intakes on the Lower Mississippi River. A saltwater barrier sill has been built at an elevation of -55 feet to keep the channel open to barge traffic while reducing intrusion.

Reservoirs can be managed to add some water to the system, but legal limitations exist. The Corps is releasing water from the Missouri, Mississippi, and Ohio River basin reservoirs to aid flows on the main stem in support of navigation. The Corps has increased its communication with industry and is working hard to maintain depth where possible. The U.S. Coast Guard is working to move buoys as water levels change, and virtual buoys have been added to help pilots navigate the channel. Dredging continues on

the mainstem with dustpan dredges, which are self-propelled and do not interfere with barge traffic. This is especially important in the southern reaches of the Lower Mississippi River where dredges deal with increased traffic and heavier currents. Eckhardt pointed to the installation of dikes south of Cairo that have resulted in less overall dredge need.

Middle Mississippi River Condition Report

Joan Stemler stated that the previous 10-daily low water record was surpassed in October at the St. Louis gage. A few rain events have helped to return to normal river levels since then. The Mississippi River between St. Louis to Cairo has been particularly low. Mel Price will be held at 0.5 feet above regulated flows to aid in low flows downriver by using extra storage to prevent low dips. This method will be incorporated into the new low water plan for this stretch of the river. MVD has approved deviations to the Lake Shelbyville and Carlyle Lake reservoirs water control plans; winter drawdowns will be delayed, and extra water will be used in winter during critical conditions. The extended forecast for the Middle Mississippi River shows dam release reductions beginning November 21, 2022. The first impacts of these reductions will be realized mid-December 2022. Without management intervention, the latest long extended forecast is predicting a -5.2 river stage at that same time. The weather predictions issued by NOAA indicates precipitation patterns will change in the near future; all factors indicate that river ice gorging may be needed during a heavy ice season.

Middle Mississippi River Dredging Status and Outlook

Lance Engle provided a report on dredging operations in the St. Louis District during the low water conditions. The dredging season of the Middle Mississippi Region began July 7 with the Dredge Potter, completing 24 locations with 3.6 million cubic yards of material. The Corps transferred the Dredge Jadwin from the Vickburg District to the St. Louis District, dredging 900,000 cubic yards. The Dredge Goetz was transferred from the St. Paul District for 30 days. The contracted Dredge Bill Holmen worked at the Kaskaskia River tributary in September and mechanical dredgers from the Rock Island and St. Louis Districts were used when required.

Pool 24 was excavated at Cottonwood; this location needs support every other year. No dredging was required in Pool 25, which is unusual. Pool 26 was dredged less than typical as well; three locations were dredged at the lower end of the pool and one location just south of L&D 25. Dredge Potter worked in the Illinois Waterway for a limited duration prior to being withdrawn due to low water. Dredge Goetz worked for 30 days on the Illinois Waterway at river miles 79-75 and 66. Dredging also occurred at Mel Price L&D at the lower auxiliary approach and Pool 27 at the mouth of the Missouri River confluence at Hartford.

The Dredge Potter removed 4.3 million cubic yards in the open river stretch of the Mississippi River. The Dredge Potter is currently operating at river mile 38. The Dredge Jadwin worked at river miles 103, 16, and later at river miles 1.3, 47, and 16. The Dredge Goetz started at the upper Chain of Rocks canal entrance in early October and just completed the lower entrance. Due to the amount of traffic on the river, the Dredge Goetz is only operating where space is available.

The Southeast Missouri Regional Port at Cape Girardeau was dredged by Dredge Bill Holmen to full dimension to prepare for low water conditions. Both Dredge Bill Holmen and Dredge Potter should be in St. Louis harbor by Thanksgiving. Dredge Goetz will be dredging to river mile 159 and will be operating into early December. In anticipation of low water this winter, dredging is being planned to establish full river dimension for shipping at -5.2 stage.

Economic Implications of Low Water and Other Factors

Rich Henderson stated that supply chain issues are a priority focus of the USDA Agricultural Marketing Service. As railroad strikes became more likely in the summer and fall 2022, shippers began to shift transportation to barge but encountered limitations due to low river stage. As of October 17, 2022, low water resulted in a 24 percent to 30 percent reduction in tons handled per barge. Barge rates are increasing dramatically because of high demand, lack of capacity, and shipment delays. Currently, barge rates are 145 percent higher than last year at this time and 128 percent higher than the three-year average. As a result of delays, future rates are also increasing. The number of unloaded grain barges at New Orleans are lower than last year (2021), even with the effects of hurricane Ida, and the five-year average.

Pete Caffarelli presented the impacts of the low water on the price of agricultural products. The number of grain inspections below the Mississippi River Gulf are much lower than average; low volumes are a direct result of low water issues. This increases prices of Gulf exports, pushing them above prices at Portland. Storage capacity of agricultural products has increased to compensate for the lack of capacity in barge transport.

Railroad transportation grain volumes appear to be increasing in response to less availability of barge transportation. Recent weeks show an increase of rail car activity, but overall activity remains low. The last year has been poor for rail service due to a major merger, regulatory proceedings, and the potential labor strike. Agricultural transportation was particularly challenging in 2022 due to low water levels, poor rail service, and limited options with other modalities. USDA does not expect prices to improve any time soon.

Paul Rohde characterized current barge transport as a stabilized crisis. Although barge transport can continue, rainfall is needed. Near-term contracts are improving transportation, and industry continues to work with the Corps to minimize impacts. Rohde commented that many upstream bound barges are empty. Downstream bound tows could see increases pending the Memphis gage levels.

The economic impact of reduced traffic been underscored in national and regional media coverage. Barge transportation offers between \$7 billion to \$9 billion in shipping cost savings every year. AccuWeather estimated that low water on the Mississippi River resulted in additional shipping costs of \$20 billion, but Rohde suspects it could be greater. Opportunity cost loss is another factor. The global market is changing, and the impacts to the American economy have not yet been fully realized.

UMRR and NESP Reports

Navigation and Ecosystem Sustainability Program

FY 2023 Report and FY 2024 Capability Outlook

Andrew Goodall stated that funds were transferred to USGS and USFWS for program support. The Corps is working with UMRBA and the individual states to transfer funding to support their roles and responsibilities, including by establishing memorandums of agreement (MOAs).

Goodall reported that the Rock Island District has forwarded to MVD a recommendation for the Advisory Panel. NEPA compliance evaluation is ongoing. A construction contract was awarded in September for the new lock at L&D 25. The design contract for L&D 22 fish passage has also been awarded, and fish monitoring activities initiated.

Goodall pointed to pages F-1 of the agenda packet for a map of ongoing programmatic activities. Construction awards are expected to be enacted in the near future for Pool 2 Wingdam Notching and Lock 14 Mooring Cell. The remaining projects that are currently considered as “active implementation” include Starved Rock Breakwater, Moore’s Towhead System Mitigation, Twin Island, and Alton Pools Islands. Construction of all of these projects are anticipated to begin within 90 days or in the next fiscal year.

Approved ecosystem projects for planning include North Sturgeon Lake, Wacouta Bay, Johnson Island, Sabula Lakes, Andalusia Island Complex, Liverpool Flowing Side Channel, Pool 24 Island Restoration, Pool 25 Side Channels, and Middle Mississippi River Stone Dike Alternations (Phase 1). MVD has also approved planning for seven additional mooring facilities and a design work for LaGrange. In 2023, the Corps plans to advance data collection and understanding of mitigation needs under NESP.

L&D 22 Fish Passage Monitoring

Kara Mitvalsky reported that, on September 26, 2022, the Corps awarded to a contract complete the design of L&D 22 Fish Passage. The Corps anticipates awarding a construction contract in FY 2024. Project plans include a rock ramp fishway to provide rest areas for fish and a bridge to allow pedestrian traffic overhead with gates to control activity. A debris boom will keep ice and debris from entering the structure at all water stages. A research center will be built nearby to host researchers and equipment for monitoring and adaptive management.

Mark Cornish stated that monitoring activities will be updated with the help of the Fish Passage Science Team, which includes experts from USFWS, USGS, state natural resource agencies, and the Corps. The team is focused on developing science plans for NESP as a whole, and are not limited to activities at L&D 22. The team’s recent activities include:

- Hosted an October 12 open house
- Participated in interviews that will be highlighted through a promotional video
- Developed research questions to inform fish passage designs and to ensure monitoring data can be used in other future modeling efforts

Anticipated tasks for Science Team in 2023 include:

- Designing the research center design
- Initiating pre-project monitoring
- Developing PIT-tag fish monitoring
- Designing a systemic ecological model to estimate the impacts of fish passage at each L&D on the Mississippi River

Over 330 fish have been tagged this year at L&D 22. The University of Michigan is integrating telemetry data by river reach, and is currently connecting with experts in the Great Lakes and Ohio River systems to understand their knowledge about fish movement between larger bodies beyond locked riverine systems.

Cornish noted that there has been interest in the impact to invasive carp from the L&D 22 fish passage. Spawning populations already exist above and below L&D 22. This site may allow testing of new

technologies without disrupting navigation and may be an opportunity to capture and remove fish from the system.

The Corps has developed a science plan and will develop designs and integrate components for an operational monitoring system over the next ten months. Cornish stated that the fish passage team has been collaborating with state and federal natural resource agencies in all their work. The program will need to use partnership connections to plan for future fishways and to find clever ways to move native fish and stop invasive species from moving through.

General Discussion

In response to a question from Olivia Dorothy, Goodall reported that there is no new update regarding environmental compliance. Goodall offered to connect directly with Dorothy to answer questions. Dorothy raised concern that the Corps is meeting with navigation industry and not providing that same opportunity for engagement with other stakeholders with respect to NESP. Goodall explained that the Corps is exploring opportunities for public input. In the interim, stakeholders can provide formal input via the District-based river teams. In response to a question from Dorothy, Goodall stated that the Corps is evaluating the current programmatic EIS and will provide an update when ready. Additionally, the Corps has taken no further action related to the former ASA R.D. James' 2019 memo regarding the NESP economic update.

Jim Fischer asked for the temporal extent of data collection needed to inform other similar efforts in the basin. Cornish responded that the science team is currently evaluating that question. Statistical analysis on the L&D 22 are underway to accelerate the process. In response to a clarifying question from Andrew Stephenson regarding the small passage design, Cornish explained that the science team is evaluating three adaptive management studies to assess whether a 50 percent reduction of the wing or a restructure of the bottom of the fishway further from the tailwaters of the dam would be effective for fish passage. Construction in the tailwaters can be difficult.

Tim Hall asked Andrew Goodall how the Advisory Panel would relate to UMRBA. Goodall stated that the Advisory Panel will include membership as identified in NESP's authorizing legislation. Ultimately, the ASA(CW) is responsible for selecting the Advisory Panel representatives. Goodall stated that one representative of each state would be incorporated, but Goodall was not positive about UMRBA's role in that designation. The timing of determination is unknown.

Jim Fischer noted that the Advisory Panel has a Congressionally-defined role in NESP's project selection process. Fischer asked Goodall how the Advisory Panel operationalizes that role and how that relates to the roles of the NESP Coordinating Committee and river teams. Goodall stated that the Advisory Panel is involved in selecting projects and providing strategic direction for NESP. Fischer expressed concern with the length of time it will take to establish and populate the Advisory Panel, particularly as that may affect NESP ramping up in the near term. Goodall stated that river teams are currently being asked to identify projects. The intention is to proceed under that approach until the Advisory Panel is operational. Chad Craycraft asked for an update on changes to the Advisory Panel based on federal and state agency input. Goodall acknowledged that the UMRBA Board is reviewing the Advisory Panel proposal. The Corps will review and consider UMRBA's input. Dorothy noted that the river teams do not encompass formal roles for nongovernmental organizations in the same manner as the Advisory Panel's membership. Goodall replied that, while the river teams are providing an interim solution, the longer term plan is to recommend that the ASA(CW) establish the Advisory Panel as provided in NESP's authorizing legislation.

Upper Mississippi River Restoration (UMRR) Program

Marshall Plumley explained that the District is implementing UMRR at a \$55 million planning scenario while operating under the existing FY 2023 continuing resolution. The President's FY 2023 budget and the House and Senate FY 2023 energy and water appropriations measures each include \$55 million for UMRR. Under this funding scenario, UMRR is anticipated to advance planning on nine habitat projects, design on eight habitat projects, and construction on eight habitat projects.

The 2022 UMRR Report to Congress was transmitted to Headquarters for review on November 9, 2022. Plumley anticipates that the report will be delivered to Congress in December 2022. Plumley expressed gratitude for partners' work involved in developing and commenting on the report.

The Report to Congress focuses on the tenets of the UMMR partnership: leading, innovating, and partnering. The report includes recommendations to integrate ecological resilience concepts and the Habitat Needs Assessment II into the program's habitat restoration work, to work with individuals and organizations whose actions affect the Upper Mississippi River ecosystem, and to continuously improve habitat restoration projects based on insights from constructed projects. The Corps is currently gathering letters of support to include as an appendix to the report.

Bryan Hopkins encouraged UMRR to integrate conservation-focused nongovernmental organizations into the program to leverage their expertise and capacity. Kirsten Wallace congratulated UMRR on its success and asked the Coordinating Committee to look for opportunities to communicate UMRR's accomplishments within their agencies and among their partners. Plumley mentioned that the Corps is planning to develop a four-page handout associated with the 2022 UMRR Report to Congress similar to the handout that accompanied the 2016 report. Chad Craycraft emphasized the value of UMRBA in supporting the Coordinating Committee members throughout the report development process.

Brandon Road Interbasin Project

Rick Pohlman presented an Illinois perspective of the Brandon Road update, and the system of deterrents to prevent the upstream movement of invasive carp. Illinois and Michigan formed a partnership, and Illinois agreed to be a non-federal sponsor of the project. Michigan is planning to contribute \$8 million and Illinois is planning to contribute \$2.5 million to provide the necessary cost-share for the project construction. Polman mentioned that Congress is considering modifying the cost-share contribution in WRDA 2022.

The Corps' project partnership agreement (PPA) continues to be a major hurdle. Accelerated funds from Illinois have been offered to keep the project moving. The states plan to continue to enforce regulatory provisions about floodway construction.

The project area is complicated in that it encompasses properties owned by a private entity, Illinois DOT, and Illinois DNR, as well as a stormwater easement. The private parcel must be acquired for project O&M and construction; due to a dispute about testing for soil contamination, the process to purchase the property is delayed and at an impasse.

Pohlman underscored Illinois DNR's charge to enforce administrative codes on construction in a floodway and public waters. A challenge for the project is determining mitigation procedures with water regulators. A visitor center has been proposed to inform the public about the project.

Construction will occur in phases. Phase 1a includes installation of leading-edge acoustic and bubble deterrents. The plans for Phase 1a are 65 percent complete; review is currently underway. Support buildings will be constructed adjacent to the barrier.

Pohlman announced that Illinois is now referring to invasive carp as “Copi,” in part to promote fish consumption as a means for reducing populations. The name “Copi” was derived from the carp’s “copious” population.

Mississippi Interstate Cooperative Resource Association

Mississippi River Proposal

Ashlee Smith introduced MICRA, explaining that the organization was formed in 1991 by fishery agencies throughout the Mississippi River basin. Membership includes fisheries chiefs within MICRA’s member states. Membership also includes federal and tribal representatives. Smith proposed a partnership between UMRBA and MICRA, pointing to the overlap in membership and areas of interest.

Brad Parsons, who is Minnesota’s fisheries chief and MICRA Chair, said MICRA was created to support the needs of fish species across state geographic boundaries and to represent the joint interests of states. MICRA supports projects like Brandon Road, but the group also hopes to enhance efforts throughout the Mississippi River basin.

Smith explained MICRA’s concerns with uncertainty surrounding the implementation of federal appropriations dedicated to managing aquatic invasive species. Currently, funds are allocated to USFWS, which has administered a large portion of funding to states at variable amounts. Due to the expanded scope and variable funding, there now is a great need for a dedicated funding source and a more formal interagency consultative body.

MICRA is proposing federal legislation to establish a Mississippi River Basin Fisheries Commission (MRBFC) to prioritize resources. The MRBFC is based on the Great Lakes Commission but is nonbinding and nonpartisan. The proposal suggests that each state’s chief of fisheries will serve as its respective state’s delegate to the MRBFC. The legislation also includes a competitive grant funding authority to support priority work of member states and nongovernmental organizations.

Smith noted that, MICRA is increasing its advocacy for the MRBFC legislation, and requested that the UMRBA Board consider submitting a letter of support for the legislation.

Parsons added that the states have agreed to a strategic plan for MICRA, largely due to the nature of interjurisdictional management of aquatic invasive species. Parsons stated that the existing infrastructure could be stronger together with federal funding to support the work, and a commission to support and improve cooperation among states and federal agencies.

Greg Conover stated that MICRA hopes the commission will move the group from communication and coordination into collaborative management. The MRBFC could create, implement, and evaluate management plans for sub-basins moving forward.

In response to Smith’s earlier request of the UMRBA Board, Tim Hall directed Association staff put forward a request to the Board with respect to whether the Association would express support for MICRA MRBFC proposal.

Administrative Issues

UMRBA FY 2024-2025 Dues and Water Quality Assessment

In response to a prompt from Kirsten Wallace, Rick Pohlman moved and Jim Fischer seconded a motion to set state dues and water quality assessment for fiscal years 2024 and 2025 at \$67,000 and \$21,600, respectively. The motion was unanimously approved.

Future Meeting Schedule

February-March 2023 — Virtual

- UMRBA quarterly meeting — February 28
- UMRB Coordinating Committee quarterly meeting — March 1

May 2023 — St. Paul, Minnesota

- UMRBA quarterly meeting — May 23
- UMRB Coordinating Committee quarterly meeting — May 24

August 2023 — La Crosse, Wisconsin

- UMRBA quarterly meeting — August 8
- UMRB Coordinating Committee quarterly meeting — August 9

With no further business, the meeting adjourned at 4:00 p.m.