

**Minutes of the 158th Quarterly Meeting
of the
Upper Mississippi River Basin Association**

**May 25, 2021
Web-Based Conference Meeting**

Dru Buntin called the meeting to order at 8:04 a.m. Participants were as follows:

UMRBA Representatives and Alternates:

Rick Pohlman	Illinois Department of Natural Resources
Chad Craycraft	Illinois Department of Natural Resources
Dave Glover	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
Rita Grimm	Iowa Economic Development Authority
Barb Naramore	Minnesota Department of Natural Resources
Katrina Kessler	Minnesota Pollution Control Agency
Dru Buntin	Missouri Department of Natural Resource
Chris Wieberg	Missouri Department of Natural Resource
Jennifer Hoggatt	Missouri Department of Natural Resource
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

Federal UMRBA Liaisons:

MG Diana Holland	U.S. Army Corps of Engineers, MVD
Brian Chewning	U.S. Army Corps of Engineers, MVD
Ken Westlake	U.S. Environmental Protection Agency, Region 5
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges
Scott Morlock	U.S. Geological Survey, Midcontinent Region
Verlon Barnes	Natural Resources Conservation Services

Others in Attendance:

BJ Murray	Illinois Department of Transportation
Randy Schultz	Iowa Department of Natural Resources
Benjamin Larson	Minnesota Department of Natural Resources
Megan Moore	Minnesota Department of Natural Resources
Brian Stenquist	Minnesota Department of Natural Resources
Carli Wagner	Minnesota Department of Natural Resources
Heidi Wolf	Minnesota Department of Natural Resources

Patrick Phenow	Minnesota Department of Transportation
Bryan Hopkins	Missouri Department of Natural Resources
Mike Halstad	Wisconsin Department of Transportation
Jim Cole	U.S. Army Corps of Engineers, MVD
Leanne Riggs	U.S. Army Corps of Engineers, MVD
Ben Robinson	U.S. Army Corps of Engineers, MVD
Thatch Shepard	U.S. Army Corps of Engineers, MVD
Chuck Camillo	U.S. Army Corps of Engineers, MVD
James Lewis	U.S. Army Corps of Engineers, MVD
Jim Bodron	U.S. Army Corps of Engineers, MVD
Kevin Wilson	U.S. Army Corps of Engineers, MVP
Angela Deen	U.S. Army Corps of Engineers, MVP
Maria DeLaundreau	U.S. Army Corps of Engineers, MVP
Steve Tapp	U.S. Army Corps of Engineers, MVP
Chris Erickson	U.S. Army Corps of Engineers, MVP
Jon Hendrickson	U.S. Army Corps of Engineers, MVP
Col. Steve Sattinger	U.S. Army Corps of Engineers, MVR
Kim Thomas	U.S. Army Corps of Engineers, MVR
Roger Perk	U.S. Army Corps of Engineers, MVR
Jodi Creswell	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
Davi Michl	U.S. Army Corps of Engineers, MVR
Scott Whitney	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Chuck Theiling	U.S. Army Corps of Engineers, MVR
Mark Cornish	U.S. Army Corps of Engineers, MVR
Rachel Hawes	U.S. Army Corps of Engineers, MVR
Michael Feldmann	U.S. Army Corps of Engineers, MVS
Jasen Brown	U.S. Army Corps of Engineers, MVS
Hal Graef	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Shawn Sullivan	U.S. Army Corps of Engineers, MVS
David Crane	U.S. Army Corps of Engineers, NWO
Michael IZard-Carroll	U.S. Army Corps of Engineers, NWO
Kayla Eckert Uptmore	U.S. Army Corps of Engineers, NWO
Mike Glasch	U.S. Army Corps of Engineers, NWO
Corina Zhang	U.S. Army Corps of Engineers, NWO
Brian Johnson	U.S. Army Corps of Engineers, Regional Planning Division North
Jason Daniels	U.S. Environmental Protection Agency, Region 7
Amy Shields	U.S. Environmental Protection Agency, Region 7
Chris Hamilton	U.S. Department of Agriculture, NRCS Missouri
Neal Jackson	U.S. Fish and Wildlife Service, UMRCC
Kraig McPeek	U.S. Fish and Wildlife Service, Illinois-Iowa Ecological Services
Sara Schmuecker	U.S. Fish and Wildlife Service, Illinois-Iowa Ecological Services
Matt Mangan	U.S. Fish and Wildlife Service, Illinois Ecological Services
Tim Yager	U.S. Fish and Wildlife Service, Winona
Jim Duncker	U.S. Geological Survey, Central Midwest Water Science Center
JC Nelson	U.S. Geological Survey, Midcontinent Region

Mark Gaikowski	U.S. Geological Survey, UMESC
Kristen Bouska	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Ted Stets	U.S. Geological Survey, Water Resources Mission Area
Steve Buan	National Oceanic and Atmospheric Administration, NWS
Mike Welvaert	National Oceanic and Atmospheric Administration, NWS
Olivia Dorothy	American Rivers
Nancy Guyton	Neighbors of the Mississippi
Kim Schneider	<i>Our Mississippi</i>
Rick Stoff	<i>Our Mississippi</i>
Gretchen Benjamin	The Nature Conservancy
Jason Beverlin	The Nature Conservancy
Barbara Charry	The Nature Conservancy
Doug Blodgett	The Nature Conservancy
Jason Beverlin	The Nature Conservancy
Rachel Curry	University of Illinois
Jim Lamer	University of Illinois, Illinois Natural History Survey
Marian Muste	University of Iowa
Brent Hoerr	Upper Mississippi, Illinois, and Missouri Rivers Association/Missouri Corn Growers Association
Mike Klingner	Upper Mississippi, Illinois, and Missouri Rivers Association
John Winkelman	Des Moines Levee District
Jim Koeller	Illinois Farm Bureau
Alayna Chunev	National Caucus of Environmental Legislators
Regan Griffin	Atchison County Levee District
Robert Matya	HDR, Inc.
Edward Brauer	Unaffiliated Stakeholder
Sadie Neuman	Unaffiliated Stakeholder
Kirsten Wallace	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association
Lauren Salvato	Upper Mississippi River Basin Association
Andrew Stephenson	Upper Mississippi River Basin Association

Minutes

Loren Wobig moved and Steve Galarneau seconded a motion to approve the draft minutes of the February 23, 2021 UMRBA quarterly meeting as provided in the agenda packet. 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 other work load efforts since the February 2021 quarterly meeting. On April 27, 2021, UMRBA launched a new web presence. The primary goal was to create a more accessible, useful resource for you to find information on the river, the ongoing and historic programs and projects, and UMRBA's current events and upcoming meetings. Staff will continue to expand website content, particularly with information about the river ecosystem, economy, and people who live along the river, and work to improve it. Wallace expressed appreciation to DJ Case for developing the website structure and to partners for their input in the initial stages of the website's development.

Of particular note is May 7, 2021 UMRBA comment letter regarding the Corps' implementation guidance for provisions in the Water Resources Development Act of 2020. In the letter, UMRBA offered the following requests of the Administration:

- Place a higher priority on financing NESP
- Resolve liability issues associated in the project partnership agreements
- Convene a representative team of interdisciplinary and interagency experts from the Upper Mississippi River and other regions across the country
- Employ a Section 729 planning process to enhance floodplain resilience related to floods, droughts, and sediment with UMRBA as the cost-share sponsor

Wallace said UMRBA and the Corps hosted a water level management workshop over a series of days in mid-May 2021 using the structured decision-making facilitation method to clarify ecological objectives for employing water level management as a management tool. Funding for the workshop was provided through the Corps' Sustainable Rivers Program, the Upper Mississippi River Restoration program, and partners' in-kind staff contributions. Wallace said the workshop is going well with additional meetings being planned for June 2021. Wallace expressed appreciation to the facilitator, Pat Heglund, for her role in leading the group through challenging discussions towards detailed objective statements. Wallace thanked the Corps for its partnership in this process as well as funding support.

Wallace reported that the UMR Hazardous Spills Group has initiated planning process to develop a five-year strategic plan for the purposes of positioning the group (including UMRBA staff resources) to effectively increase the prevention of, and preparation for, spills of hazardous materials as a means to maintain the multiple uses of the river. The first strategic planning session was convened virtually on April 21, 2021. The next planned meeting is scheduled for June 9, 2021 and will also be held remotely. Wallace thanked USEPA for offering facilitation support services through its contractual relationship with Tetra Tech. Wallace remarked that the Tetra Tech facilitator is well versed in spills planning and has led very productive conversations.

Wallace pointed to UMRBA's financial statements on pages B-24 to B-27 of the agenda packet. Tim Hall moved and Steve Galarneau seconded a motion to approve the Association's budget report and balance sheet as included in the agenda packet. The motion was approved unanimously.

Illinois River Basin Next Generation Water Observing System (NGWOS)

Jim Duncker provided an update on USGS's Illinois River Basin Next Generation Water Observing System (NGWOS), which is in the first year of its development. NGWOS is an element of USGS's Integrated Water Sciences program, collecting real-time observations or measurements of various water parameters to inform research regarding water processes and improve prediction capabilities. Simultaneously, USGS is modernizing its data delivery through its National Water Information System's National Water Dashboard. This will improve how data is shared with the public.

A related, follow-on program with separate funding, the Integrated Water Availability Assessments (IWAA) is scheduled to start in FY 2022 for the Illinois River Basin. The purpose of this effort is to comprehensively assess the water availability at regional and national level considering water quality and quantity from surface and groundwater sources as related to human and ecosystem needs and as affected by human and natural influences.

The Integrated Water Prediction (IWP) program develops large-scale modeling tools. Modelers will be listening to the conversations about data gaps and information needs to assess what types of prediction capabilities will be important for water resources management going forward.

Duncker reported that USGS is beginning to procure instrumentation for monitoring harmful algal blooms at fixed locations (i.e., gaging sites) and for mobile rapid response. It is a bit of an iterative process. USGS is working with partners to determine what and where instrumentation is needed to fill specific data gap priorities. This includes expanding instrumentation at existing gage locations and at other areas.

Acknowledging the national perspectives of USGS NGWOS program, Duncker explained that the Illinois River Basin is the third of 10 basins to receive this extensive monitoring and assessment and was selected because of its ability to advance research with national applications related to nutrient loading and harmful algal blooms. Therefore, the study plans have had a strong focus on those two topics while also recognizing that other information needs would be addressed as NGWOS is ramped up.

Duncker reviewed the framework for implementing NGWOS, expanding out water resources observations on the landscape. USGS will be testing new instrumentation through the NGWOS program in the Illinois River Basin. This will include intensive sub basin monitoring; whereas monitoring has traditionally been placed at tributary confluences. USGS will also employ basin-wide monitoring, also integrating the new technology to remote sensing – e.g., multispectral monitors for HAB events with satellite imagery.

Duncker emphasized that stakeholder engagement will be a priority throughout the IWS implementation in the Illinois River Basin. UMRBA has been the first group that USGS has engaged with regarding the Illinois River Basin NGWOS. USGS is also consulting with Illinois DNR, the Corps, and stakeholders within the Illinois River Basin.

Duncker provided an overview of USGS's anticipated schedule for implementing over the next 10 years. In FY 2021, the focus is on stakeholder engagement, defining information needs, and procuring instrumentation that then would be installed in FY 2021 and 2022. Priority issues raised during stakeholder engagements so far include nutrients, harmful algal blooms, water chemistry, urban hydrology, sediment, water balance, and new technology.

Duncker reported that FY 2021 field activities include expanding the capacity of existing monitoring. USGS has partnered with Illinois EPA and the Illinois nutrient reduction strategy monitoring group to monitor at multiple locations in Illinois since 2015. There is a good basis of information of nutrients leaving Illinois and contributing to the Gulf of Mexico hypoxia issues. Currently, monitoring occurs on the Lower Des Plaines to capture nutrients leaving the Chicago metropolitan area and at Florence, Illinois to capture nutrient levels at the end of the Illinois River Basin. There is a gap in knowledge of nutrient loading at smaller watershed scales within the Illinois River Basin. Monitoring has tracked interesting trends in nitrogen and phosphorus loading from the Illinois River that might be informed by the expanded monitoring. In FY 2021, will upgrade instrumentation at three existing gaging sites.

Duncker acknowledged USGS's priority for improving knowledge of harmful algal blooms through the Illinois River Basin NGWOS. USGS is currently approaching purchasing deadlines to procure instrumentation to monitor harmful algal bloom events at both fixed locations and for mobile rapid response. USGS is hoping to have instrumentation for this summer to capture any outbreaks.

USGS is also using NGWOS to establish baseline conditions for a wide range of parameters, collecting samples at three strategic locations on two separate dates (June and August 2021). Resources this year are focused on employing stakeholder meetings and buying equipment, preparing for field monitoring in FY 2022.

Dru Buntin notes Olivia Dorothy's question regarding timeframe for prediction within the IWP. Duncker said IWP engages in the conversations but it is very early in the process. IWP is informing where data gaps exist.

In response to a question from Buntin, Duncker explained that USGS is planning to select 10 IWS basins nationwide over the next 10 years with a new basin announced every year. USGS has not yet announced the fourth river basin.

Buntin explained that Missouri is evaluating opportunities to expand its soil moisture monitoring network. In response to a Governor-appointed group that recommended this expanded monitoring and forecasting capacity, the state's general assembly appropriated funds to do that. Buntin asked about the nature of USGS's partnership and processes for leveraging of nonfederal dollars. Duncker explained that USGS places a strong priority on its ability to align its efforts with partners. For example, USGS understands that the agriculture and research communities have extensive monitoring that can be integrated into a comprehensive network of data. It is in USGS's interest to utilize that data. Buntin asked if USGS's IWS process requires cost-share of some type. Duncker said NGWOS is not a cost-shared program. But USGS is looking to align and build with partners' efforts.

Buntin pointed to Ken Westlake's question in the chat forum regarding whether USGS's NGWOS has involved interagency discussions including USEPA. Duncker said USGS is scheduled to host a briefing on the Illinois River Basin NGWOS on June 2, 2021 and has invited a broad distribution list of stakeholders. Kirsten Wallace said she would forward the briefing invitation to UMRBA's Board members and federal liaisons.

Jennie Sauer mentioned that NGWOS providing funding to analyze approximately 600 historic phytoplankton samples from UMRR's long term resource monitoring. Sauer said it is a good showcase of leveraging large programs.

Navigation and Ecosystem Sustainability Program

Andrew Goodall provided an update on the progress in planning Navigation and Ecosystem Sustainability Program (NESP) in FY 2021 with the \$5 million allocation. Navigation-related projects include planning on the L&D 25 lock wall modification, L&D 14 mooring cell, and Moore's Towhead systemic mitigation project on the Illinois River. Ecosystem restoration-related projects include Twin Islands shoreline protection project, Alton Pool Islands, Pool 2 wingdam notching, and Starved Rock habitat restoration and enhancement. Goodall confirmed that all of these projects are anticipated to be construction-ready in FY 2021. NESP continues to advance planning of L&D 22 fish passage, which is current at a 35 percent design level. The Corps published a draft tentatively selected plan of L&D 22 fish passage for public review. The Corps held a public meeting on May 21, 2021 and is requesting comments by June 19, 2021.

Dru Buntin asked for the Corps' plans on meeting consultation needs with the states and other partners. Goodall said the Corps is evaluating the approach given the amount of funding received in FY 2021.

Buntin referred to Olivia Dorothy's comment in the chat forum. Goodall read Dorothy's comment: The NESP final environmental impact statement mandates an implemental implementation of the navigation components. The small-scale and nonstructural navigation efficiency projects must be constructed before the locks. Making modifications to L&D 25 lock wall violates the approved plan. How do you justify that? Goodall said he can follow up with Dorothy with additional detail. Goodall explained that the L&D 25 lock wall project and L&D 14 mooring cell projects are classified as small-scale efficiency improvements. [Note: L&D 25 lock wall is large-scale project. It was incorrectly listed as a small-scale navigation efficiency measure.]

Goodall read a comment from Dorothy in the chat forum, in which Dorothy referred to Goodall's explanation of Moore's Towhead being intended to mitigate future increases in navigation traffic. Dorothy said navigation traffic is no longer projected to increase, asking why that project continues to be prioritized. Goodall said systemic mitigation is a component of NESP's authorization, making Moore's Towhead within the program's purview to advance.

Goodall referred to a comment in the chat forum from Dorothy asking if the Corps has updated partners on the 2019 NESP economic update. Goodall said a partnership briefing has not yet occurred. Corps leadership has not yet provided guidance to District staff for doing that.

Goodall read a comment from Mike Klingner in the chat forum asking about the cost-benefit ratio of L&D 22 fish passage, noting the current frequency of gates being open. Goodall said the Corps' assessment is provided in the project's draft tentatively selected plan. Goodall referred Klingner to the plan, which is available publicly on the Corps' website.

Gretchen Benjamin said she is aware that the Corps has reassessed cost estimate of NESP's navigation component to \$3.8 billion whereas the navigation projects were collectively authorized in 2007 at \$2.2 billion. Benjamin noted that the new navigation cost estimate is larger than the 2007 total program authorization. She reminded that a cumulative impact assessment was completed around the navigation-related work, resulting in an integrated plan of both navigation and ecosystem restoration. This requires that all of that ecosystem restoration work is funded comparatively to investment in the navigation component. Benjamin questioned how partners will deal with the substantial increase in the navigation-related costs. Goodall explained that Congress directed the Corps to update costs associated with the navigation component only as part of the 2019 economic update. These costs increased primarily due to inflation. Fourteen years have passed since the 2007 authorization. It will require updating costs for ecosystem restoration as well. Benjamin recalled a comment from Scott Whitney during a partnership meeting in 2020 in which he explained that NESP would have to go through some form of reauthorization if the updated cost estimates are above a certain percentage of the program's original authorized cost. Therefore, it seems like the ramifications of these new cost estimates will be fairly significant. Goodall explained that Section 902 of WRDA 1986 defines the maximum amount that an authorization (project or program) may cost. This "Section 902 limit" also increases with inflation similarly to inflation updates for the project costs. It is unknown yet whether the updated costs for the program elements would exceed the updated Section 902 limit. If that were to occur, the Corps would seek a post authorization change report to increase the Section 902 limit.

Goodall referred to a comment in the chat forum from Dorothy, noting that UMRBA had formally requested a briefing on the 2019 NESP economic update. Dorothy asked if that request has been fulfilled or rescinded. She asked the Corps to provide a report on the 2019 NESP economic update and why the report included USDA's economic forecasts when the Corps' economists found the USDA report

to be not valid based on economic theory. Dorothy stated in the chat forum that the benefit-cost ratio found in the NESP economic update is between 0.26 and 0.67.

Buntin said the request from UMRBA to receive a briefing on the NESP economic update was not rescinded. Kirsten Wallace confirmed that the request occurred formally both verbally during the August 20, 2019 UMRBA quarterly meeting and through written communication in a July 19, 2019 letter to the ASA(CW)'s office. UMRBA has not yet received a briefing on the report. Goodall explained that direction provided to the District was simply to do the analysis for the economic update on NESP. The District forwarded the economic update to the Division in December 2019. There was not follow on direction for disseminating the results. Goodall was not engaged in decisions related to the report's publication, including attaching the USDA traffic projections.

Dorothy mentioned that the Corps provided to her a copy of the 2019 NESP economic update through a FOIA request and therefore should be publicly available to anyone else. Goodall said he will explore internally regarding plans to disseminate the report.

Atchison County Levee District

Dru Buntin said Atchison County is located in the northwest corner of Missouri bordering the Missouri River. The County's levee district was heavily impacted by the 2019 flood event, experiencing significant damage. Similar to other levee systems on the Mississippi and Missouri Rivers, the duration of the flood event was most impactful. The levee systems were not designed to withstand that type of flooding. In the wake of the 2019 flood, the Missouri Governor issued an executive order tasking a flood recovery advisory working group with evaluating opportunities to respond to the 2019 flood event and to make recommendations for utilizing state appropriated dollars to assist with the recovery. The Atchison County Levee District proposed the set back early in the discussions and it was one of the first recommendations to be supported through the working group. The levee setback involved the levee district, the state of Missouri, the Corps, USDA NRCS, TNC, and numerous other organizations and individuals.

Kayla Eckert Uptmor said she is the Chief of Civil Works for the Omaha District and is providing remarks on behalf of the District Commander Mark Himes and District Engineer Ted Streckfuss. Eckert Uptmor explained that the Governors of Missouri, Iowa, Nebraska, and Kansas engaged immediately at the start of the 2019 flood event and continued that direct and close engagement throughout the duration of the flood. The Governors charged the Corps with thinking strategically with respect to river management. Eckert Uptmor observed that the successes in responding to the 2019 flood event were achieved in large part because of cooperative engagement from public and private entities. While the Corps must follow the P.L. 84-99 rules, strong partnerships that occurred during the 2019 flood are imperative for repairing systems in ways that have multiple benefits.

In the chat forum, UMRBA shared the following web links related to the Atchison County Levee District levee set back as follows:

- Web page: <https://www.nature.org/en-us/about-us/where-we-work/united-states/missouri/stories-in-missouri/missouri-river-levees/>
- YouTube video (full length): <https://www.youtube.com/watch?v=a7TojhjZUVo>

UMRBA played the short length video trailer, which located at the following web link:
https://www.youtube.com/watch?v=81ecNuF_O1o.

Corina Zhang described the engineering and construction aspects associated with the levee setback. Zhang started with describing the 2019 flood event, which was particularly unique on the Missouri River because the flood event occurred mostly downriver from the dams and therefore was largely unregulated. Components included saturated soils and a bomb cyclone followed immediately by a very quick melting of the snowpack. The 2019 flood was unprecedented in that it occurred for more than nine months. Most of the 2019 flood damage to the levee systems on the Missouri River occurred from overtopping, resulting in more widespread damages spanning a large geography. Costs to repair damages in the Omaha District through the P.L. 84-99 program are estimated above \$600 million. Zhang used a series of photographs and maps to illustrate the extent of the damages.

Zhang mentioned that realignment was considered for another levee district but explained that time is a limiting factor. Decisions need to be made fairly quickly about how breaches will be repaired, particularly when major infrastructure is located behind the levee systems.

Zhang discussed the repair considerations and realignment risks associated with the Atchison County Levee District levee setback – e.g., short timeframe for sponsor acquisition of real estate, unknown material suitability. Part of the project's success was the collective agreement to assume the risk and adapt together as the project unfolded. Zhang highlighted the project's innovative design and construction features, including virtual contractor site visits,

Regan Griffin, Atchison County Levee District sponsor, discussed experiences with several major flood events since the 1950s. Historically, the Levee District had mostly fixed the breaches in place. More recent floods have required residents to evaluate other options. The Levee District was motivated to choose realignment to relieve known pinch points, update 67-year-old levees, and change the levee slope from three-to-one to five-to-one. Griffin said the District also felt compelled to compensate landowners for ground that would become riverside. Griffin explained that TNC arranged a meeting between the Levee District and government officials to discuss realignment opportunities. Ultimately, a critical issue was how to pay for the roughly \$3.2 million in cost. Griffin echoed earlier comments that convening people and building a strong partnership was the key to getting the project implemented.

Barbara Charry explained TNC's priorities for getting involved in this project. Levee setbacks are an important climate adaptation tool that increases flood resilience and results in multiple benefits, including habitat for wildlife, recreation, and water quality. TNC's primary roles were to convene partners and assist with real estate. TNC convened the initial meeting and facilitated discussions among partners to build agreed-upon solutions. Charry reflected on the importance of the facilitation role for achieving these types of projects that also support the local community. The other challenging issue is the lack of available funds for real estate, particularly as it relates to the quick timing in emergency situations.

In addition, TNC hosted a suite of communications materials associated with the project, including a dedicated web page, video, fact sheet, and playbook to share lessons learned and make it easier for future similar projects. The playbook is scheduled to be published in summer 2021. TNC hopes to achieve of these types of projects in the Mississippi and Missouri Rivers.

Chris Hamilton discussed the role of NRCS and its Emergency Watershed Protection Program for Floodplain Easements, which allows NRCS to purchase floodplain easements when the current condition of the land or watershed impairment poses a threat to health, life, or property. NRCS staff assess the need for the funds and work with landowners who apply voluntarily for the perpetual easements. The

program allows NRCS to restore the landscape to pre-settlement condition. NRCS staff engaged in the Levee District discussion to determine how the agency's programs could contribute in the realignment opportunity and how NRCS's programs could work with the Corps' programs. NRCS was able to secure over \$25 million through the Emergency Watershed Protection Program for floodplain easements on the Missouri River. This allowed NRCS to provide the funding to compensate landowners. Hamilton shared agreements that allowed partners to overcome implementation obstacles, including the use of an emergency clause through a memorandum of understanding, compatible use authorization, and policy waivers for early restoration.

Buntin underscored the damage that occurred during the 2019 flood: 80 levees overtopped or were breached, 1.2 million acres of agriculture land were flooded, 470 state highways were closed. The Governor's Flood Recovery Advisory Working Group was instrumental in providing recommendations that could then create the energy to move big projects such as the Atchison County levee setback. It propelled the state to do what it could to also ensure the project's success. Buntin explained that the real issue became funding for real estate. The state of Missouri agreed that compensation was important to provide to landowners for unprotected property. These types of projects need flexible funding sources when these disasters occur and as early decisions are made regarding repair opportunities. Buntin acknowledged the significance of the levee board in working with residents and applauded their hard work and leadership. Buntin also said the project underscored the value of having a systemic plan in place that will foster these types of opportunities. Buntin said the TNC playbook can also be helpful to transfer insights to the Upper Mississippi River. He also applauded TNC for its role in facilitating and fostering partnerships. Buntin said the state assembly has appropriated funds to identify comparable projects in other areas along the Missouri River. Buntin also thanked the Missouri DoC for its work in partnership with TNC in the acquisition of unprotected lands. The newly connected floodplain will have considerable ecological benefits and the plan is for those lands to be managed by Missouri DoC.

Dave Crane is the environmental lead on the Atchison County levee setback project. Crane illustrated how the various conservation programs fit together on the floodplain, showing the portions of the landscape where the various federal and state programs are implemented. Crane observed that large scale levee realignment projects can be achievable with conservation programs, landowners who are willing sellers, and people or organizations willing to purchase the lands for conservation purposes. Crane provided an overview of the environmental benefits associated with the levee realignment, including increased water conveyance, overtopping protection, restored wetlands and floodplains with habitat opportunities for various fish and wildlife species.

Buntin referred to a comment from Chuck Theiling in the chat forum asking about public access features. Crane said that, as part of the project, there will be multiple points of access including up-and-over ramps and one road at the downstream end that will be maintained as access over the levee.

Buntin referred to a comment from Kristen Bouska in the chat forum asking if there are plans to share this project in areas where levee districts are vulnerable to failure. Buntin said the playbook is intended to help in that way in terms of identifying policy and funding challenges for these types of projects and how solutions were achieved for this particular project. Buntin mentioned that Missouri is collaborating with Kansas, Nebraska, and Iowa on a Lower Missouri River study and have begun sharing this information in three specific areas of interest. Charry added that TNC engaged in media campaign to share the story in those surrounding communities.

MVD Perspectives

Dru Buntin introduced MG Diana Holland who took command of MVD in June 2020. Because of meeting restrictions, UMRBA has not had an opportunity to meet with MG Holland in-person yet. Buntin expressed appreciation to MG Holland for joining the UMRBA meeting to share her perspectives with UMRBA's member states and our partners. Buntin also expressed gratitude to MG Holland for her participation in the Mississippi River Commission's tour of the Atchison County Levee District in spring 2021.

MG Holland expressed her eagerness to participate in UMRBA's meeting and said she hopes that we will all be meeting in-person very soon. While we can all be thankful for the technology that is allowing us to continue meeting, the in-person exchanges are very important for strong partnerships. MG Holland introduced MVD, District, and ERDC leadership participating in the meeting.

MG Holland acknowledged the extraordinary partnership and effort in advancing the Atchison County levee setback. She said it would be great to continue seeing these types of opportunities move forward.

MG Holland said her top priority right now is building relationships with partners, starting by understanding their perspectives and the issues they are facing. She explained that partnerships have been important in her past experiences, but seem even more integral to the work done on the Mississippi River. There is substantial history that makes this region particularly special. Building partnerships require robust travel. She did not want to look back on 2020 as a lost year, so the Corps chose to mitigate risk associated with coronavirus. MG Holland said she made seven or eight trips to the Upper Mississippi River Districts as a means to showcase her support for the region.

MG Holland said the Mississippi River Commission has also had an aggressive agenda for 2021. The low water inspection tour will be on the Upper Mississippi River this year, and want to make the trip dynamic and inclusive. It is a great partnership opportunity, and hope to use the trip to build on our partnership priorities.

There is tremendous power in partnering, particularly among groups with different perspectives, interests, and ideas of solutions. There are many priorities we work on together that require building trust. Some shared concerns and challenges that will require us to talk and gather more include flooding and other disasters, environment protection, invasive species, aging infrastructure, and climate variability and volatility. Additionally, demands for water resources management are increasing every year at a pace that investment cannot maintain.

Dru Buntin noted the partnership between the Corps and UMRBA with respect to flood, drought, and sediment planning. Buntin asked how MG Holland envisions the partnership going from here. Buntin confirmed that the states remain committed to engaging with the Corps. MG Holland deferred to MVR Commander Col. Steve Sattinger to talk about the Corps' priorities with respect to that work. Buntin thanked Col Sattinger for his service during his tenure as District Commander and asked for his departing remarks.

Col. Sattinger said the Corps is happy to maintain a close partnership in developing the Keys to the River Report that was ultimately published by UMRBA. There was a tremendous amount of effort that went into producing the report. We continue to work on the necessary science that will inform the eventual study – e.g., hydraulic modeling, flow frequency study. Developing those tools is necessary to making the eventual study as valuable as possible to stakeholders. The Corps is hopeful that a new study start will be secured soon for the long term study. Right now, the right thing to do is to be sure that we know

exactly what we want to achieve through the report in part to know that we utilize the right tool. This includes aligning the states on flood risk management tools, managing sediment in the navigation channel, and mitigating drought. We will prepare to proceed through a Section 729 planning authority once a new start is achieved or a different tool that helps us move through the right process. We had some great staff from the Corps working on that project, including the project manager Paul St. Louis.

Col. Sattinger said the Keys to the River Report underlines the value of UMRBA, which is a forum to convene the five states and work on these hard issues with the federal agencies and other stakeholders. This region has a great team that works hard together. UMRBA provides tremendous efficiencies to work with the five states simultaneously and with our federal partners. Col. Sattinger said he will be transferring to the ASA(CW)'s office and will look forward to partnering with UMRBA and other partners through that capacity.

Kim Thomas said MVR continues to work with UMRBA to focus on the right tool to move the planning forward. Thomas said she is looking forward to those conversations and the continued partnership with UMRBA and the stakeholders.

Keys to the River Report

Dru Buntin acknowledged that the work started on the Keys to the River Report several years ago. A draft version was shared with about 60 stakeholders in mid January 2021 to get initial feedback on the report, which provided contextual history and other information around a set of vetted ideas. That version was revised substantially in March and April based on that feedback and then distributed to our broad stakeholder community on April 29, 2021. Today's purpose is to seek oral feedback on the report. Buntin introduced Brian Stenquist who graciously agreed to facilitate this portion of the quarterly meeting.

Brian Stenquist explained that the UMRBA Board would like to offer this opportunity for participants to offer thoughts on the Keys to the River Report. Stenquist reiterated that UMRBA sent an email request for thoughts on the Keys to the River Report on April 29, 2021. On May 7 and 11, UMRBA hosted informational webinars about the report's origins and development process to refresh stakeholders' familiarity with the report and to provide context to its content. In its April 29 email, UMRBA provided a set of questions to frame stakeholders thoughts and perspectives of the report as follow:

- What do you like about the report?
- What actions are important and can best support your work and the work of others?
- What are your preferences for UMRBA's next actions building upon the unified solutions identified in the report?
- What else do you need to support your work?
- Is there anything in this report that would make it more difficult for you?

Stenquist called for stakeholder feedback referring to the questions listed above as well as other thoughts generally. Buntin mentioned that the link to the report is included in the agenda packet and is provided in the chat forum.

Olivia Dorothy said she submitted written comments to the April 29, 2021 version on behalf of American Rivers and the Nicollet Island Coalition, which includes the Sierra Club, Great Rivers Habitat Alliance, Prairie Rivers Network, and Missouri Coalition for the Environment. Dorothy expressed

frustration that her comments on that version were mostly the same as comments provided on the January 14, 2021 version, noting her observation that the group's comments were not incorporated. Dorothy said the Nicollet Island Coalition is especially concerned that the Keys to the River Report seems to lay out a flood management plan that would put public safety at risk and violate state and federal standards. Dorothy noted opposition to statements regarding public awareness of floodplain farming, suggesting that that approach violates modern planning guidance. Dorothy pointed to a section of the report that discusses dredging side channels and backwaters, and characterized that action as being unrealistic from a cost and feasibility standpoint but also environmentally damaging. While the report acknowledges watershed-scale solutions, it limits actions exclusively to the floodplain. Dorothy asserted that the Keys to the River Report development process has been largely discriminatory against communities of color who live in floodplains by refusing to hold meetings in those communities. Dorothy expressed objection to a statement in the report that the perspectives of underserved communities has been voiced by government officials working with them. Dorothy said she raised this issue at a stakeholder meeting and was told that underserved communities were not our constituents. According to Dorothy, the report does not meaningfully discuss known problems. For example, the report suggests that future conditions are unknown, which dismisses scientific knowledge of climate predictions for the region. The report also fails to discuss levee wars and installation of tiles in the watershed. Dorothy asserted that, without fully understanding the problems, we cannot find effective solutions.

Brian Stenquist asked participants to offer any additional perspectives to Dorothy's comments. Loren Wobig asked Dorothy to provide specific actions that the Nicollet Island Coalition would want to see occur in the watershed – e.g., sediment reduction or harmful algal bloom mitigation efforts. Dorothy said Nicollet Island Coalition asserts that the problems occurring the Mississippi River need to be fully integrated with options for solutions through USDA programs – e.g., healthy soils initiative to increase organic soil on farm fields to slow movement of water. Generally, management on the Mississippi River needs to be more closely linked with USDA to resolve underlying causes of flooding and sediment problems in the river.

Dru Buntin explained that there has been considerable thought around the scope and potential deliverables of the next planning process. A planning process at the geographic scale of the Upper Mississippi River can quickly become overwhelming in terms of what can be reasonably accomplished. Buntin pointed to the Atchison County briefing earlier in the meeting that illustrated the necessity of having a systemic plan in place so that agreed-upon solutions can be implemented as opportunities arise. Additional reasoning for focusing on solutions in the floodplain is the Corps set of authorities. According to Buntin, we need to have a plan that focuses on solutions in the river floodplain that is informed by a watershed context – i.e., the tributaries mostly affecting the river's resilience. Having that watershed context can also inform where to focus future investment. There are other federal and state soil and water programs in addition to NRCS that will provide many tools in the watershed. Dorothy noted that the Corps' Section 729 planning guidance allows the agency to evaluate solutions outside of its authority.

Stenquist mentioned Nancy Guyton's comment in the chat feature that environmental sustainability and economic sustainability must co-exist. Stenquist read Guyton's additional elaboration in the chat feature that the economical sustainability is very important to those who flood often.

Stenquist pointed to Chuck Theiling's comment in the chat feature that recently completed the Minnesota River Basin Interagency Study used tiered modeling to evaluate the influence of agriculture conservation best management practices on hydrology and sediment and nutrient transport. Its results

are broadly applicable to watershed conservation. Theiling said the study evaluates the placement of best management practices through sediment transport modeling at the HUC-12 and smaller resolution scales. The evaluation included water, sediment, and nutrient transport through tiling infrastructure. Theiling said his comment in the chat feature was to raise awareness of the study.

Stenquist read a comment in the chat feature from Mike Klingner that flood control needs to be the number one effort and that the risk informed decision framework planning process employed under WRDA 1999 identifies three alternatives. Klingner encouraged that one of those three top alternative be selected for implementation quickly, and noted that any one of those three alternatives would be financed mostly through private assessment and with minimal public expense. Klinger expounded on this comment by explaining that the process involved the federal and states agencies and stakeholder representatives, including environmental interests. It led to the conclusion that improved levels of flood protection are recommended throughout the Upper Mississippi River. Klinger added that the discussion and results are published in the 2008 UMRS Comprehensive Plan, which is publicly available on the Corps' website.

In response to a question from Wobig, Klingner said systemic flood planning was completed for the Upper Mississippi River with an evaluation of national and regional economic development benefit analyses. Klingner expressed his perspective that the regional economic development analysis is more important to considering local economic benefits and is more inclusive of economic factors. Stenquist referred to a comment in the chat feature from Guyton asking Klingner for an elaboration on his comment regarding private assessment financing. Klingner explained that levee districts are political subdivisions of their respective states and have the ability to implement assessments to pay for improvements to their respective levee infrastructure following authorization by Congress for such improvements. Klingner noted the challenges of securing federal funds given the low national economic development numbers.

Buntin referred to Dorothy's comments earlier in the meeting. UMRBA certainly appreciates the comments regarding engagement with underserved communities and how we gain their input. The UMRBA Board has talked quite extensively about how we begin to do this going forward. We all as public servants in public government agencies want to, and need to, improve going forward. Buntin said the personalized comments about racism bear no resemblance to any of the conversations held among the Board.

Stenquist concluded the session after hearing no other comments offered.

Invasive Carp

Unified Method (MUM)

Minnesota DNR, in partnership with Wisconsin DNR, USFWS, and USGS, employed a significant effort to eradicate and detect the presence of invasive carp in Pool 8 in spring 2021. Carli Wagner explained that, in March 2020, there was a large capture of invasive carp in Pool 8 that raised concern of a potential reproduction event. In fall 2020, commercial fishing also reported several captures. Wagner observed that this exercise was equally about management intervention and learning. The project was supported by a USFWS state-interstate aquatic nuisance species management plan grant. Commercial fishing and other reconnaissance (e.g., eDNA sampling, tagging) in Pool 8 in October 2020 also helped to inform the project.

Wagner said the modified unified method exercise was employed in April 2021 for five days. The approach includes electric and acoustic stimulus that drives invasive carp into a concentrated, seinable area. USGS adapted the approach from a Chinese aquaculture technique and successfully implemented it in Kentucky, Illinois, and Missouri. Wagner explained in more detail how the process unfolded in Pool 8 over the five days. Wagner concluded that the effort was successful in reducing the density of invasive carp in Pool 8. The invasive carp collected were mostly male. Continued surveillance and removal are necessary in Pool 8. Next steps include increasing commercial fishing beginning in spring 2021, deploying two real-time receivers to aid tracking of tagged silver carp, sampling larval species, and employing more modified unified method density reduction events.

Buntin read Neal Jackson's comment in chat forum, asking about the cost of the modified unified method relative to the outcome and how this method compares to other removal efforts that have been used in the Upper Mississippi River System. Heidi Wolf said the costs associated with Minnesota DNR staff and partners' staff time in planning and implementing the project were not captured to be able to fully answer that question. The commercial fishing contract was the most expensive non-labor part of the project.

In response to a question from Lauren Salvato, Ben Larson explained that the location within Pool 8 where more invasive carp were captured is a staging area with some water movement and warmer temperatures, which is the most suitable habitat for the invasive carp. In response to Jim Lewis' comment in the chat forum that Larson referenced, Larson said the non-carp species were inventoried and he would send that information to Lewis.

Larson noted Ken Westlake's comment in the chat forum regarding native fish mortality. Larson explained that there was little mortality to none. The colder water in spring is a significant factor for the minimal mortality risk. Larson assumed that, if any, the eradication event may have resulted in a loss of a couple of freshwater drum. Paddlefish caught were placed immediately back into the river.

Steppass Fish Ladder

Jim Lamer explained recent research to evaluate the potential use of a steppass ladder by invasive carp. Illinois DNR is leading the research project in collaboration with the Illinois Natural History Survey, The Nature Conservancy, and Whooshh. For consideration of its use on the UMRS, it is important to evaluate how a steppass ladder could be used to facilitate longitudinal movement of native fish and bighead and silver carp, including what attracts fish to use the steppass fish ladder. A steppass fish ladder was installed at the water control structure in Emiquon Preserve, located on the Illinois River in the middle of the La Grange reach.

Lamer presented on the steppass fish ladder's features and the implementation and results of the trials of the installed ladder at Emiqueon Preserve. The steppass fish ladder was operated in fall 2020 using security cameras to record fish passage and in spring 2021 using Whooshh scanner. In both tests, the fish passing through the steppass fish ladder were gizzard shad. Illinois DNR is exploring the potential to adjust the elevation grade of the steppass fish ladder and then evaluate changes to size and type of fishing using the ladder. No bighead carp moved through the steppass ladder.

Lamer acknowledged that the ladder operation is dependent on river levels. Illinois DNR is exploring options for using a floating barge or other lift system to maintain the desired angle consistently at various river levels. Illinois DNR also hopes that the scanner technology can be used to separate desired and undesired fish species.

Lamer referenced a question from Bryan Hopkins in the chat forum and explained that the project partners coordinated weekly regarding invasive carp activity in the area. Electrofishing surveys were implemented to detect invasive carp.

NESP L&D 22 Fish Passage

Mark Cornish explained that L&D 22 fish passage is authorized under the Navigation and Ecosystem Sustainability Program (NESP) and was the product of rigorous study regarding options for improving fish passage on the UMRS. This evaluation is provided in the NESP Environmental (ENV) Report 54, following which L&D 22 fish passage was recommended in the 2004 Navigation Feasibility Study with Programmatic Environmental Impact Statement. The project was then authorized in the 2007 Water Resources Development Act and then provided in the 2008 Record of Decision and Implementation Guidance.

On May 17, 2021, the Corps published for public review the L&D 22 fish passage draft project implementation report with the associated environmental review documents. Comments are due by June 19, 2021.

Cornish explained that migration is essential to many native fish species for moving between habitats throughout their lives, including for reproduction, feeding, and winter survival. Navigation dams have reduced the ability for migratory fish to move access to important habitats. L&D 22 fish passage will restore a year-round connection of important habitats. In addition to longitudinal connectivity, a main goal for this project is to improve knowledge of fish passage at this scale for future potential applications.

Cornish explained that, over the past year, the Corps led a team of environmental specialists to evaluate various project alternatives using computer-generated models. Ultimately, the assessment resulted in the tentatively selected plan, which involves the following four features:

- 1) A rock ramp, known as the fishway, with a rock bottom and series of aligned boulders with gaps and spaces suitable for water and fish to move in-between
- 2) A bridge that extends from the storage yard over the fishway and ties into the spillway to enable people and vehicles to move over and around the fishway
- 3) Water control structures, or stoplogs, integrated into the bridge to control the flow of water into the fishway for research and allow for maintenance
- 4) A fixed debris boom immediately upstream of the fishway to protect the fish passage from large woody debris and ice as well as to function as a safe platform for monitoring and fish management activities

Cornish underscored the value of L&D 22 fish passage as serving as an important learning opportunity for potential future fish passage projects. The project has a substantial adaptive management component. The purpose is to evaluate how adjustments in different variables might alter the project's effectiveness. The four goals for LD& 22 fish passage adaptive management are as follows:

- 1) Improving the design criteria to find the appropriate channel width, depth, flow, hydraulic conditions, and shape of stone riffles

- 2) Reducing the cost of future fishways
- 3) Improving operation and maintenance of future fishways
- 4) Avoiding interference with navigation and water control functions of the locks and dams

Cornish highlighted the scientific analyses that have concluded that L&D 22 fish passage could benefit more than 30 species of fish living in the UMRS and that depend on migration for reproduction, food, and winter survival. A number of game fish would benefit from the facilitated passage, such as walleye, sauger, smallmouth and largemouth bass, northern pike, and multiple species of catfish. Rarer species would also benefit, such as shovelnose sturgeon, lake sturgeon, paddlefish, silver lamprey, and American eel. The rock and gravel fishway would also serve as a spawning ground for several fish species.

Cornish explained that L&D 22 was selected as an ideal location for fish passage because reproducing populations of invasive carp already exist in the pools above and below the project. Construction of fish passage would not expand their range and increase competitiveness of native species. The project's adaptive management component offers the opportunity to monitor and potentially remove aquatic nuisance species.

Cornish said the public comment process of the tentatively selected plan is the final stage of the feasibility phase. This step involves finalizing the tentatively selected plan by making necessary adjustments considering comments received from the public. MVR will then submit the tentatively selected plan to MVD, which would then submit the plan to Headquarters for approval. With the pre-construction engineering and design complete, the project would then be eligible for construction funds per a Congressional appropriation. The total cost of the L&D 22 fish passage project is estimated to be \$134 million, which is subject to change pending any delays in construction. The project would be fully paid with federal funds.

Dru Buntin read Karen Hagerty's comment in the chat forum, asking for the percent of time the gates are open and fish are able to pass through the dams. Cornish said he will provide Hagerty with the exact numbers following the meeting. Buntin read Ken Westlake's question in the chat forum regarding the Corps' anticipated schedule of the Corps' approval process following public comment on the environmental assessment. Andrew Goodall said the Corps anticipates finalizing the Corps approvals of the tentatively selected plan by the end of calendar year 2021.

Buntin directed UMRBA staff to prepare a comment letter for the Board's consideration. Steve Galarneau voiced support for that action.

Illinois Marine Transportation System Plan

BJ Murray reported on the Illinois Marine Transportation System Plan (IMTS) and Economic Impact Analysis Study. Murray pointed to the following web links that he provided in the chat forum, as follows:

- Illinois DOT's long range transportation planning web page: <https://idot.illinois.gov/transportation-system/transportation-management/planning/index>
[Note: At the bottom of the web page, a "marine" tab provides more detailed information on the DOT's marine transportation planning.]
- 2020 Illinois Marine Transportation System Plan: https://idot.illinois.gov/Assets/uploads/files/Transportation-System/Reports/OP&P/Marine/2021/IMTS_Plan_March2021_Web_Final.pdf

— A video summarizing the Marine Transportation System, its economic impact, and forecasted commodity flows: <https://youtu.be/h7F6aqf6thU>

Illinois DOT contracted with WSP to conduct an assessment of Illinois' waterways infrastructure and develop a transportation plan for the state's waterways. Murray provided an overview of Illinois' 19 public port districts, over 400 private terminals, lock infrastructure, and ferries, barges, tugboats, water taxis, and cruise ships that use the waterways for commercial and recreational navigation. The geographic extent includes marine transportation on Lake Michigan, four navigable rivers, and the Chicago Area Waterway System.

The IMTS plan includes six key elements: introduction, history and system overview, public port district profiles, commodity flows and economic value, needs assessment and strategy development, and implementation. The plan's development involved six steering committee meetings, over 70 stakeholder interviews, and two state freight advisory committees. Murray noted that this is the Illinois DOT's first plan for its inland marine transportation system. The plan integrates with other Illinois DOT long-range transportation plans and includes programmatic recommendations and links to implementation partners.

Murray mentioned the highlighted information on the Mississippi River. Details offered within each specific port profiles include their respective top commodities and volume statistics, multimodal connections, terminal information, and economic value in terms of employment, income, value added, and output. Murray showcased the Mid-America Intermodal Authority Port District as an example.

Murray said the IMTS has a collective economic impact of \$36 billion, supporting 166,628 jobs valuing \$10.5 billion in worker income and generating \$2.9 billion in federal, state, and local taxes. The IMTS moves \$17.4 billion in gross state product, equaling about 4 percent of Illinois' total gross state product. These statistics are generated from the Corps' waterborne commerce dataset, Transearch data regarding country origins and destinations, and USDOT's freight analysis framework forecasted freight flows.

Murray highlighted key statistics relating to the IMTS. In 2017, food and food products were the highest volume outbound commodity shipped. Inbound commodities were more equally shared among metal, chemical fertilizers, gravel and salt, petroleum, non-classified, and non-fertilizer chemicals, and other primary non-metal products. Top in-state commodities moved on the waterways include sand, gravel, shells, clay, salt, and stag. Other in-state commodities shipped include non-classified, coal, petroleum, and non-fertilizer chemicals. Two-thirds of the volume shipped on the IMTS are to outbound destinations, which mostly originates on the Ohio River. Most of the in-state traffic is located within the Chicago region. A forecast analysis to 2045 shows a five-million-ton net. While there is a reduction in outbound traffic from the Ohio River of 31 percent, there is an increase in volume shipped of 37 percent within the Chicago region. The IMTS also includes profiles of specific industries that move product on the IMTS. Murray noted statistical information for food products, coal, and primary metal products.

Murray provided a summary of the recommendations put forth in the IMTS plan, as follows:

- 1) Create a Marine Section within IDOT with dedicated staff
- 2) Formally "integrate marine" as a mode within IDOT
- 3) Formally "integrate marine" throughout the State of Illinois
- 4) Develop Illinois marine system funding program
- 5) Use existing funding sources to address marine needs

- 6) Streamline processes for port activity permitting, dredging and making beneficial use of dredged materials
- 7) Re-evaluate the port district structure within the state
- 8) Establish a port district board appointment process within IDOT

Federal Agency Funding Reports

Kirsten Wallace explained that this agenda item was reserved in the event that the Biden Administration had published the FY 2022 budget. Since that has not yet occurred, Wallace said this time could be used by UMRBA's federal liaisons to share relevant information about guidance related to land conservation or racial equity as well as any relevant general updates on federal programs or projects.

U.S. Environmental Protection Agency

Ken Westlake provided a brief fiscal update for USEPA since his report at the February 2021 UMRBA quarterly meeting. Westlake mentioned that President Joe Biden released a "skinny budget" for FY 2022 on April 9, 2021. That FY 2022 skinny budget proposes a 21 percent increase in USEPA's overall budget compared to FY 2021. As always, the final numbers will depend on Congressional action. The proposed FY 2022 increase will particularly affect water infrastructure through several mechanisms that USEPA uses to directly or indirectly support infrastructure development. Westlake showed trends in the CWA and Safe Drinking Water state revolving loan funds, including allocations to UMRBA member states between FY 2015 and FY 2021.

Westlake noted the passage of the America's Water Infrastructure Action, which received its first appropriation in FY 2021. The appropriation is to USEPA, which in turn will allocate the funds to states to distribute locally. Early in the Biden Administration, a \$2 trillion covid-response and stimulus measure (i.e., American Rescue Plan) was authorized into law that includes significant funds for water and wastewater infrastructure.

Westlake also discussed several measures pending in Congress that would have implications for the Upper Mississippi River. The proposed Drinking Water and Wastewater Infrastructure Act, which would authorize an additional \$30 billion to CWA and Safe Drinking Water Act revolving loan funds and \$6 billion in grant programs as well as environmental justice, climate resilience, and lead pipe replacement. The American Jobs Plan mentions state revolving loan funds and several infrastructure bills that are either proposed or in discussion that include attention to water and wastewater funding needs. Westlake noted the return of Congressionally-directed spending that may result in new or increased funding to advance particular Congressional priorities.

U.S. Fish and Wildlife Service

Sabrina Chandler reported that the FY 2022 skinny budget that Westlake mentioned includes a 16.3percent increase for DOI in comparison to the FY 2021 enacted levels. Chandler reported on the Administration's priorities (or pillars) for DOI that are delegated to USFWS to implement, including responsible development of renewable energy on public lands and waters, strengthening government-to-government relationships with sovereign nations, making investments in creating millions of family-supporting and union jobs, conserving at least 30 percent of lands and waters by 2030, and centering equity and environmental justice. USFWS Principal Deputy Director Martha Williams has added an additional pillar for USFWS around wildlife conservation, which the agency anticipates learning more

about in coming days. USFWS is very active in conservation initiative, with the objective focusing on protecting biodiversity, slowing extinction rates, and natural climate solutions on all public lands.

Chandler mentioned that USFWS is struggling with staffing issues. The agency is significantly understaffed even with slight increases in funding. Chandler anticipates these issues will continue for some time given centralization of hiring. For example, the Upper Mississippi Refuge typically has around 42 positions but are currently at around 25 people on staff.

U.S. Geological Survey

Scott Morlock echoed Chandler's explanation of DOI's budget. Morlock explained that USGS's role in advancing DOI's pillars, as Chandler discussed, includes reclaiming abandoned wells and mines and advancing climate science, including in support of conservation and mitigation efforts. Morlock mentioned that the skinny budget calls for restoring USGS's critical agency capacity. USGS leadership is also exploring how the agency's science support underserved communities, particularly vulnerability to natural disasters, as well as how science can support the land conservation priorities.

Morlock said Dave Applegate continues to perform the duties of USGS Director. Tanya Trujillo is nominated, and had a Congressional hearing last week, to become DOI Assistant Secretary for Water and Science. In that capacity, Trujillo would oversee the U.S. Bureau of Reclamation and USGS.

Administrative Issues

FY 2022 Budget

Kirsten Wallace described the assumptions made in developing the FY 2022 budget, including income and expenses. Wallace noted that there remains uncertainty regarding in-person meetings and other historical funding needs (e.g., agenda packet printing). The budget assumes both a slow resumption of in-person meetings as well as a hybrid approach going forward of both in-person and virtual meetings for UMRBA and partners, which impacts the line items for meetings, printing, and travel.

In response from a request from Buntin as Chair, Tim Hall moved and Rick Pohlman seconded a motion to approve the UMRBA FY 2022 budget as presented by Wallace.

Future Meeting Schedule

August 2021 — Remote

- UMRBA quarterly meeting — August 10
- UMRR Coordinating Committee quarterly meeting — August 11

November 2021 — Location TBD

- UMRBA quarterly meeting — November 16
- UMRR Coordinating Committee quarterly meeting — November 17

February 2022 — Location TBD

- UMRBA quarterly meeting — February 22
- UMRR Coordinating Committee quarterly meeting — February 23

With no further business, the meeting adjourned at 2:51 p.m.