

**Minutes of the 155th Quarterly Meeting
of the
Upper Mississippi River Basin Association**

**August 11, 2020
Web-Based Conference Meeting**

Steve Galarneau called the meeting to order at 9:00 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
Jake Hansen	Iowa Department of Agriculture and Land Stewardship
Tim Hall	Iowa Department of Natural Resources
Sam Hiscocks	Iowa Department of Transportation
Barb Naramore	Minnesota Department of Natural Resources
Whitney Place	Minnesota Department of Agriculture
Dru Buntin	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:

Brian Chewning	U.S. Army Corps of Engineers, MVD
Ken Westlake	U.S. Environmental Protection Agency, Region 5
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuges (on behalf of Sabrina Chandler)
Scott Morlock	U.S. Geological Survey, Midcontinent Region

Others in Attendance:

Kirk Hansen	Iowa Department of Natural Resources
Randy Schultz	Iowa Department of Natural Resources
Megan Moore	Minnesota Department of Natural Resources
Patrick Phenow	Minnesota Department of Transportation
Chris Wieberg	Missouri Department of Natural Resources
Bryan Hopkins	Missouri Department of Natural Resources
Mike Halstad	Wisconsin Department of Transportation
Thatch Shepard	U.S. Army Corps of Engineers, MVD
Ben Robinson	U.S. Army Corps of Engineers, MVD
Col. Karl Jansen	U.S. Army Corps of Engineers, MVP
Chris Erickson	U.S. Army Corps of Engineers, MVP
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Angela Deen	U.S. Army Corps of Engineers, MVP
Steve Tapp	U.S. Army Corps of Engineers, MVP

Jonathan Sobiech	U.S. Army Corps of Engineers, MVP
Col. Steve Sattinger	U.S. Army Corps of Engineers, MVR
Jodi Creswell	U.S. Army Corps of Engineers, MVR
Mari Fournier	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
Rachel Hawes	U.S. Army Corps of Engineers, MVR
Roger Perk	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Paul St. Louis	U.S. Army Corps of Engineers, MVR
Scott Whitney	U.S. Army Corps of Engineers, MVR
Col. Kevin Golinghorst	U.S. Army Corps of Engineers, MVS
Brian Johnson	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Shawn Sullivan	U.S. Army Corps of Engineers, MVS
Matt Vielhaber	U.S. Army Corps of Engineers, MVS
Joe Summerlin	U.S. Environmental Protection Agency, Region 5
Jason Daniels	U.S. Environmental Protection Agency, Region 7
Amy Shields	U.S. Environmental Protection Agency, Region 7
Lauren Kasparek	U.S. Environmental Protection Agency, Headquarters
Emma Maschal	U.S. Environmental Protection Agency, Headquarters
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuges
Matt Mangan	U.S. Fish and Wildlife Service, UMR Refuges
Neal Jackson	U.S. Fish and Wildlife Service, UMRCC
Kraig McPeek	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
Aleshia Kenney	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
Sara Schmuecker	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
JC Nelson	U.S. Geological Survey, Midcontinent Region
Kelly Warner	U.S. Geological Survey, Central Midwest Water Science Center
Mark Gaikowski	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Randy Hines	U.S. Geological Survey, UMESC
Jeff Houser	U.S. Geological Survey, UMESC
Danelle Larson	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Marty Hettel	American Commercial Barge Lines
Bonnie Cox	League of Women Voters
Carolyn Mahlum Jenkins	League of Women Voters
Lonni McCauley	League of Women Voters
Doug Daigle	Lower Mississippi River Sub-Basin Committee (Hypoxia Task Force)
David Stokes	Great Rivers Habitat Alliance
Sue Lowry	Interstate Council on Water Policy
Masiah Khan	One Mississippi
Rick Stoff	Our Mississippi
Brent Hoerr	Upper Mississippi, Illinois, and Missouri Rivers Association
Mike Klingner	Upper Mississippi, Illinois, and Missouri Rivers Association
Jim Koeller	Upper Mississippi, Illinois, and Missouri Rivers Association
Mark Ellis	Upper Mississippi River Basin Association
Lauren Salvato	Upper Mississippi River Basin Association
Andrew Stephenson	Upper Mississippi River Basin Association
Kirsten Wallace	Upper Mississippi River Basin Association

Minutes

Rick Pohlman moved and Barb Naramore seconded a motion to approve the draft minutes of the May 19, 2020 UMRBA quarterly meeting as provided in the agenda packet. The motion was approved unanimously.

Executive Director's Report

Kirsten Wallace reported that UMRBA requested an extension to its Planning Assistance to the States (PAS) agreement with the Corps for the development of the flood, drought, and sediment planning report. The extension was requested to accommodate delays resulting from the onset of the coronavirus pandemic. Wallace said the report writing team leads have reengaged and are working to finalize a draft report in fall 2020 for public input.

Wallace said the Navigation and Ecosystem Sustainability Program, WQEC strategic planning, and the Keys to the River 2020 report regarding flood, drought, and sediment planning have required us to dig deep into our history. Wallace remarked that the history illuminated that the programs, projects, and partnerships that we have today are the product of many incredible visionary leaders. This history teaches us that, together, we can accomplish great things. And, that what we are doing today will actually make a difference many years later and will shape how future generations deal with challenges and approach problem solving.

Wallace pointed to the written Executive Director's report included in the agenda packet for the Association's activities over the last quarter. She announced that the National Waterways Foundation published today (August 11, 2020) a series of state economic profiles, which utilize IMPLAN data to report on the value of waterways transportation. Profiles are available for each of the UMRBA member states.

Wallace pointed to UMRBA's financial statements on pages B-5 to B-11 of the agenda packet. Dru Buntin moved and Rick Pohlman seconded a motion to approve the Association's budget report and balance sheet as included in the agenda packet. The motion was approved unanimously.

Navigation and Ecosystem Sustainability Program

Capital Investment Strategy 2020 Update

Marty Hettel provided an overview of the draft 2020 Capital Investment Strategy, dated July 8, 2020. The Administration is currently reviewing the strategy, which is intended to serve as a five-year update to the 2016 version. Congress directed the Corps to develop these summaries with the Inland Waterways Users Board (IWUB) to inform annual appropriations within the context of a 20-year planning timeframe.

The 2020 draft strategy provides three long-term investment scenarios given the following assumptions or approaches:

- 1) Appropriations are maintained at the existing baseline of \$240 million with a growth rate of 1.5 percent annually, either providing for the construction of:
 - a) Nine of the planned projects by FY 2040 (with two additional projects ongoing) at a cost of \$5.7 billion
 - b) Fifteen of the planned projects by FY 2053 at an estimated cost of \$9.23 billion

- 2) Appropriations is increased to \$400 million annually, allowing for the construction of 15 construction projects by FY 2039 at an estimated cost of \$7.8 billion
- 3) Appropriations at levels required to construct all 15 planned projects in 10 years, at an estimated cost of \$7.05 billion

Hettel said the baseline scenario assumes that the existing cost share of inland waterways project construction and major rehabilitation remains – i.e., 50 percent paid by from general treasury and 50 percent paid from the Inland Waterways Trust Fund (IWTF). The second scenario assumes a change in the cost-share to 75 percent paid from the general treasury and 25 percent paid from the IWTF, currently being advocated the navigation industry. Hettel noted that the House and Senate EPW Committee’s versions of WRDA 2020 include a 65 percent general treasury/35 percent IWTF cost-share modification.

Hettel pointed to page C-3 of the agenda packet, which includes a priority sequence of lock modernization projects. All seven NESP projects are included in the total list of 13 projects listed (having completed feasibility studies). Given the strategy’s implementation timeline as discussed above, we can begin making assumptions about the level of appropriations that NESP may receive over the next decade.

Navigation and Ecosystem Project Planning Update

Col. Steve Sattinger recalled that the Corps allocated \$4.5 million of its FY 2020 work planning to NESP. The Corps is using those funds to put together a \$20 million package of construction-ready projects, including \$10 million for navigation projects and \$10 million for ecosystem restoration projects. The navigation projects include modifying the existing I-Wall at Lock 25, installing a mooring cell at Lock 14, and repairing bank erosion at Moore’s Towhead at river mile 76.2. The ecosystem projects include Pool 2 wing dam notching and L&D 22 fish passage on the Mississippi River and Twin Islands shoreline erosion projection, Alton Pool side channel restoration, and Starved Rock island protection on the Illinois River.

Kirsten Wallace reported that UMRBA is facilitating interagency partnership in lieu of institutional arrangements. On behalf of the federal and state implementing partners, UMRBA submitted letters supporting the advancement of the ecosystem projects mentioned by Col. Sattinger, including fish passage at L&D 22. Those letters are provided on pages C-15 to C-19 of the agenda packet. Wallace explained that NESP partners prioritized fish passage when they were sequencing ecosystem investment through the program. Fish passage restores longitudinal connectivity for native fish movement that was cut off by the system of dams. The emergence of invasive carp over the past 10 years to 15 years as well as other ecological challenges called that priority into question. In addition to the merit of fish passage for native species, the location of at L&D 22 provides an important learning opportunity where an invasive species is currently dominating. Steve Galarneau added that states evaluate risk with the value of fish passage given the growing populations invasive fish species.

Pointing to Col. Sattinger’s statement that an additional \$10 million is needed to finalize L&D 22 lock design, Hettel said the 2020 Capital Investment Strategy states that \$15.7 million is needed to complete design work. Col. Sattinger clarified that \$10 million is needed to compete for a construction new start. The remaining funds to complete design work would occur with construction funding if that is allocated.

Scott Whitney expressed appreciation to District staff who are working diligently to ensure that NESP can compete for a construction new start in the next fiscal year. Whitney also thanked UMRBA for its continued support and engagement in the program.

States Perspectives on Policy Issues

Steve Galarneau said UMRBA is extremely excited at the prospect that NESP might receive significant appropriations in the near term. It is apparent that the very quick ramp-up in funding would place substantial pressure on the states to advance projects. It will be important that the states are able to effectively participate in project planning, implementation, and permitting. Galarneau observed that the states do not function like contractors, meaning that states cannot build internal capacity as quickly. Galarneau requested that UMRBA and the Corps begin discussion options for providing capacity support to the states through NESP. He added that precedent exists for the federal government to support state staffing needs for program implementation.

Loren Wobig said many of NESP's ecosystem restoration projects will require cost-share agreements with the states and other non-federal entities. This will be particularly challenging for the program's execution. The Corps' existing project partnership agreements create major challenges to the states to execute, primarily because the liability provisions largely favor the federal government at the expense of the sponsors. The issues of major concern are that the sponsor must fully indemnify the federal government and assume OMRR&R responsibilities as prescribed by the Corps in perpetuity. Additionally, nonprofit entities are at a disadvantage by the Corps' current policy regarding donated goods. Wobig added that reforming PPAs will require both acts by Congress and the Administration. Congressional action is needed to change the indemnification policy, but the Corps can reinstate a bounded timeframe to sponsors' requirements for project OMRR&R.

Dru Buntin said UMRBA maintains its position that modifications to navigation structures or operations and projects located on Corps project lands, national refuges, and in the main channel or directly connected backwaters below the ordinary high water mark should fall into the categories of fully federal funded as described in the 2008 implementation guidance. Buntin said that UMRBA is asking that a programmatic cost share policy be created to ensure clarity and consistency. There will be some projects with unique considerations, but major cost share decision that affect similar project should not be made on an *ad hoc* basis. Buntin requested that the Corps continue to work through UMRBA as a forum to collaborate with the states, USFWS, USGS, and other program partners to determine the cost-share policy.

Kirsten Wallace added that UMRBA acknowledges the value of having institutional arrangements in place to provide the partnership consultation and guidance necessary to successfully implement the ecosystem restoration component of NESP.

In response to a question from Ken Westlake, Loren Wobig and Kirsten Wallace explained that UMRBA is seeking a legislative change to the liability requirements. Wobig reiterated that the Corps has the ability to reinstate an appropriate cap on OMRR&R obligations. Wallace said UMRBA is working with other nonfederal sponsors including TNC and the Interstate Council on Water Policy to advocate for the legislative fix. WRDA 2020 includes a provision directing the Corps to add specificity about the anticipated OMRR&R obligations in the PPAs. This will be challenging given that a) PPAs are executed prior to design work without fully understanding OMRR&R needs and b) costs would presumably need to be estimated in perpetuity. Buntin observed that the Corps' Office of Counsel treats the liability of nonfederal sponsors similarly across all mission areas. He asserted that the Corps should differentiate the liability needs between the different project types. If the challenges are not addressed, PPAs will be a serious impediment to NESP's implementation.

Barb Naramore directed UMRBA staff to develop a timeline for working on these issues so we can do everything to make forward progress. Naramore observed there is a set of known issues that we need to make progress in resolving, and putting structure around that would be helpful. Galarneau expressed support for that notion.

Invasive Carp at L&D 19

Mark Gaikowski explained that the L&D 19 fish behavior research will inform the planned installation of acoustic deterrent instrumentation in 2021. This research is pending publication in *Biological Invasions*, so the information is currently embargoed. The findings are also being shared with the Regional Asian Carp Coordinating Committee and navigation industry.

Andrea Fritts described USGS's research efforts of using technologies to deter invasive carp from passing through L&D 19. L&D 19 is a high-head, pinch point dam, meaning that it is impassible by fish moving upstream unless through the lock chamber. High densities of invasive carp populations exist below the lock site, and relatively low densities above the site. Intensive management is employed immediately above L&D 19 to remove invasive species.

Fritts explained that behavior analysis of invasive carp and native fish species will inform the selection and use of a deterrent technology. Bighead carp and native species were tagged with acoustic transmitters to track their movement around and in the lock, including when fish arrived at the lock, how long they stayed, and whether they passed through the dam as well as their routes through the dam. This information was assessed with commercial and recreational lockages, including direction of travel, duration of lockage, and number of barges. This is the first scientific evaluation to examine bigheaded carp passages with lock operation.

The transmitters showed that bighead carp passed upstream through the lock 14 times from 2017 to 2018, occurring from June to mid-September. Downstream passages occurred in April and May. Of the 14 upstream passages by bighead carp, 13 of them were originally tagged upriver of Pool 19. During the study, seven of seven bighead carp and four of 11 silver carp that were originally tagged upstream of Pool 19 made both downstream passages through the L&D and upstream passages through the lock. In contrast, none of the 42 silver carp and one of the 31 bighead carp tagged in Pool 20 completed the upstream passage during USGS's study. Three individual invasive carp originally tagged upstream of L&D 19 completed upstream passages through Lock 19 in 2017 and 2018.

Upstream passages of invasive carp occurred when a fish is located in the downstream approach of the lock chamber and enters the lock with an upstream-bound tow. The fish typically remain in the chamber when that vessel departs from the chamber, and then exits when a downstream-bound tow enters the lock chamber. Fritts noted that no passages occurred with recreational vessels, which transited the lock roughly 20 percent of the lockages evaluated in the study.

Fritts explained that Missouri Department of Conservation partnered on the study to evaluate the behavior of native fish species. Bigmouth buffalo and paddlefish are able to complete upstream passage at L&D 19, and also coincided with a similar sequence of commercial vessel lockages. To date, none of the 120-tagged lake sturgeon in Pool 20 have moved upstream through L&D 19.

Fritts concluded that this research will inform the use of experimental acoustic deterrent systems at L&D 19 as well as other deterrent work in other river systems with pinch-point locks and dams.

Lauren Salvato asked why fish move with commercial vessels and not with recreational vessels. Fritts explained that the hydraulics associated with commercial vessels help move fish into, and out of, the chamber. Fritts said this is particularly evident as the fish do not complete upstream movement until the presence of a downstream-bound tow.

Dave Glover asked if these findings affect the suggestions to maintain open gates during testing of the acoustic deterrent system as a means of creating "opportunity." Fritts explained that a regional science

team has discussed the potential research need of decoupling the influence of vessels with the idea that gates are only opened when a vessel is moving through the lock. Fritts said USGS is currently discussing this idea with the Corps, noting the balance of additional ware on the lock infrastructure.

UMRBA Water Quality Strategic Planning

Chris Wieberg reported that UMRBA's Water Quality Executive Committee (WQEC) agreed to employ a strategic planning effort aimed at answering how UMRBA can more effectively serve as an interstate water quality program of the five basin states. This will include an evaluation of the WQEC members' roles and responsibilities and how the Committee can be more influential and better integrated with the UMRBA Water Quality Task Force (WQTF).

As a first step, the WQEC reviewed the history of UMRBA's water quality program since its inception. A summary of that history is provided in the agenda packet, which describes a deliberate trajectory of assessing water quality problems and designing an approach for interstate assessments.

UMRBA completed a similar assessment in 2006 that is very similar to the types of planning questions being asked by the WQEC today. The 2006 *Organizational Options* report recommended the establishment of an interstate water quality agency for the UMR that coordinates and works on behalf of the states to fulfill their responsibilities under the Clean Water Act (CWA), with an initial focus on water pollution control activities. The states asserted that the responsibility needs be shared among the states and USEPA, under its Section 103 obligations. The states expected that USEPA would provide financial support, actively participate, and recognize the legitimacy of the interstate consultation processes and products that result. The report outlined an incremental process to for UMRBA to eventually serve as an interstate water quality program on the UMR that coordinates and works on behalf of the states to fulfill their CWA responsibilities, with an initial focus on water pollution control activities. The recommended immediate next steps were to create the WQEC and develop a share assessment of CWA designated uses on the Upper Mississippi River.

The WQEC convened its first strategic planning session virtually on July 22-23, 2020 and, generally, shared similar conclusions as the 2006 report – i.e., that there are critical unmet needs that can be best addressed by the UMR states working together. States can maximize their limited resources by pooling them, thereby avoiding unnecessary duplication of effort, adding value through consolidation or collaboration, and leveraging outside funding sources to advance water quality research and management efforts on the UMR.

Conversations during this first session made it clearly evident that the scope of the states' needs for an interstate water quality organization are primarily related to their CWA responsibilities and nutrient reduction strategies. The WQEC focused on the question of “what business should UMRBA be in and why” and the accomplishments the states hope to realize in three to five years as well as over a longer timeframe. Wieberg said the states were very aligned in their responses, which were that UMRBA should:

- Elevate the states' water quality programs, including CWA assessments and nutrient reduction strategies.
- Align states' water quality efforts, particularly as it relates to assessing water bodies. Focus on the areas that bind the five states together.
- Serve as an interstate consultation body.
- Provide the states with information so that they include the Upper Mississippi River as a focal area in addition to inland waters.

- Advocate for the UMR to secure federal and state resources and desired policy and program decisions.
- Serve as the go-to organization for all river-related questions.
- Add capacity to the states in implementing their CWA obligations and nutrient reduction strategies.

Wieberg explained that the WQEC voiced its strong preference for UMRBA to remain an association of states, with the states providing direction to UMRBA and working with each other through the interstate forum. Therefore, the ongoing planning assumption, is that UMRBA's formal structure will be unchanged – i.e., the strategic planning effort will not result in a recommendation for UMRBA to become an interstate compact with governing powers.

The discussions also clearly pointed to the UMRBA-proposed WQ Improvement Act as the necessary next step. The resources and partnership with USEPA and NRCS are required to sufficiently implement the CWA and nutrient reduction strategy programs.

The WQEC is scheduled to hold its second strategic planning session in early October 2020. The focus will be on a “services assessment,” providing a suite of recommended roles and responsibilities for UMRBA, the individual states, and USEPA. Wieberg thanked Wisconsin DNR for providing facilitation support through Dan Helsel. This has allowed UMRBA staff to effectively participate in the conversations.

In response to a question from Dru Buntin, Chris Wieberg and Kirsten Wallace explained that two pilots are to test the technical effectiveness and logistical feasibility of the Interstate Water Quality Monitoring Plan. The first pilot was employed in Reaches 0-3 (i.e., Twin Cities to La Crosse) in 2016. That effort showed the substantial value of the data beyond the initial intended use of providing a shared assessment of aquatic life, fish consumption, recreation, and drinking water use attainment. It also provided many insights about the feasibility of implementing unified and comprehensive monitoring of the Upper Mississippi River main stem. A second pilot is scheduled to begin October 1, 2020 that will extend from the Iowa River confluence to L&D 22. The second pilot has served as an important contrast to the first pilot simply by virtue of involving different states with unique circumstances. Together, the two pilots will generate valuable comparisons to inform whether and how to update the shared monitoring plan. Wieberg noted the problems of having inconsistent standards but also the challenges in developing shared assessments.

Clean Water Act Section 401 Water Quality Certifications

Lauren Kasparek summarized USEPA's update to CWA Section 401 Certification Rule. Kasparek explained that CWA Section 401 requires that any applicant for a federal license or permit which may result in a discharge into “waters of the United States” must obtain a water quality certification from the certifying authority that the discharge complies with all applicable water quality permits. The Trump Administration released EO 13868 in April 2018, determining that Section 401 guidance and regulations were outdated and inconsistent and directing USEPA to review the certification rule and issue new guidance. Subsequently, USEPA published updated guidance in June 2019 and a new proposed rule in August 2019. Other federal agencies' guidance regarding Section 401 were updated in September 2019. USEPA's issued the final rule in June 2020 that will take effect in September 11, 2020.

Kasparek discussed the key elements of the final rule, as follows:

- Requirements prior to submitting a request for certification
- Timeline to act on a request for certification

- Scope of certification review
 - The scope is defined as “assuring that a discharge from a federally licensed or permitted activity will comply with water quality requirements,” which involves applicable provisions of CWA Sections 301, 302, 303, 306, and 307 as well as state or tribal regulatory requirements for point source discharges into waters of the United States.
- Contents of a certification decision
- Federal agency role in Section 401
- Requirements when USEPA acts as a certifying authority
 - The final rule adds two additional requirements: that USEPA a) may request additional information from a project proponent and b) must issue public notice within 20 days of receipt of the certification request.
- Post-certification

Kasperek said USEPA is convening a workgroup for federal agencies to assist with implementation of the final rule and to facilitate any rule updates as needed.

In response to a question from Jim Fischer regarding how the rule change affects conditions set in permits, Kasperek explained that the permit must include an explanation regarding the condition’s necessity and an explicit link to state or tribal law. This is a procedural requirement; USEPA will not evaluate the substance of the condition. Changes to wetland permitting may result from modifications to the WOTUS definition. Kasperek said the rule changed the scope involving the activity of discharging to the discharge.

Interstate Council on Water Policy

Sue Lowry noted that UMRBA is a long standing member of ICWP’s Board, with Holly Stoerker simultaneously serving as part-time Executive Director for ICWP while in her Executive Director role for UMRBA. The impetus for ICWP’s formation in 1959 was to increase understanding around water monitoring, and because of that, USGS’s streamgage network has been a primary focal issue for the organization. Additionally, interstate entities continue to play a vital role as coordinating bodies for watershed-based planning and development initiatives.

ICWP undertook a study in 2006 of the various interstate water management patterns and practices across the county as the foundation for its recommendations intended to amplify the effectiveness of these organizations in the future of water resource management. ICWP is currently updating the report’s case studies, findings, and recommendations to existing organizations for improving their effectiveness.

Lowry summarized the updates to the Interstate Water Solutions report since the 2006 version. Emerging factors transforming how state and interstate organizations conduct business include a) the rise of anti-regulation and state sovereignty sentiments, b) funding cuts to federal agencies that provide critical data collection and forecasts, and c) uncertainty around how climate change is impacting the effectiveness of existing strategies and posing new, complex management challenges. In terms of opportunities, most notably, technology has advanced significantly from 2006 when the Internet was barely being used to the Internet now serving as a primary means for connecting and sharing information.

Lowry explained that the report recommends are that ICWP should:

- Work with interstate organizations to highlight, promote, and nourish regional approaches and effective organizations
- Foster integration of interstate water management needs and programs with federal initiatives and policies
- Work with interstate water organizations and key stakeholders to evaluate management initiatives, enhance education, and engage in strategic planning

Lowry announced that ICWP's annual meeting will be held remotely. The agenda will be centered among ICWP's four standing committees: water planning on October 6, water data and science on October 8, legislative and policy on October 13, and interstate water management on October 15.

In response to a question from Dru Buntin, Lowry said the House Appropriations Committee includes a slight increase in appropriations for USGS's streamgage program. Lowry recalled that, at ICWP's regional cooperator seminars in the late 2000s, many states expressed concern regarding decreasing availability of cooperator matching funds. While funding increases kept up with inflation over the last seven to 10 years, states are again receiving decreases in the cooperative funds. The streamgage appropriation has flatlined recently, requiring USGS to make tough decisions about dropping some gages or finding new partners to support them. Lowry anticipates that next year's ICWP FY 2022 appropriations request letter for streamgages will emphasize the need to keep up with inflation.

Water Resources Development Act

Kirsten Wallace summarized Upper Mississippi River-relevant provisions included in the Water Resource Development Act versions as passed by the House of Representatives on July 29, 2020 (H.R. 7575) and the Senate Environmental and Public Works Committee on May 11, 2020 (S. 3591). These provisions are as follows:

- Upper Mississippi River Restoration program –
Section 307 of the House measure includes an increase in UMRR's annual authorized appropriation for HREPs to \$40 million and for LTRM of \$15 million.
- Upper Mississippi River flood, drought, and sediment planning –
Section 211 of the House measure directs the Corps to employ a Section 729 planning effort to study the riverine areas of the Upper Mississippi and Illinois Rivers to identify the risks and vulnerabilities of those areas to increased flood damages as described in WRDA 2016.
- Inland Waterway Trust Fund (IWTF) –
The House and Senate EPW measures modify the cost-share for inland waterway new construction and major rehabilitation projects from 50 IWTF/50 federal to 35 IWTF/65 federal. The House measure includes a 2027 sunset cause of the modified cost-share formula.
- Beneficial use –
Section 125 of the House measure expands the calculation of the "federal standard" for the placement of dredged material to the "economic benefits and efficiencies from the beneficial use of dredged material." Section 1080 of the Senate EPW measure further expands the scope of placement options to include suitability of the material for a full range of beneficial uses, the economic and environmental benefits and impacts, and the feasibility of using the material for those beneficial uses.

- Project partnership agreements –
Section 1044 of the Senate EPW version directs the Corps to include in the PPA agreements a brief description of, and estimated costs for, the non-federal sponsor’s anticipated OMRR&R obligations.
- Principles and Guidelines –
Section 109 of the House measure directs the Corps to issue final agency procedures for the Principles, Requirements, and Guidelines (PR&G) pursuant to Section 2031 of WRDA 2007.
- High water and low water preparedness –
Section 1090 of the Senate EPW version directs the Corps to consult with the Inland Waterways Users Board and the U.S. Coast Guard to determine when an emergency condition exists, or is anticipated to exist, on an inland navigable waterway. This could trigger mitigation to remedy or prevent that emergency condition. This provision includes an authorized appropriation of \$25 million in total to expend in FYs 2022 through 2024.
- Project authorizations –
 - Brandon Road Feasibility Study
 - Meramec River Basin Ecosystem Restoration Project
 - Lower Missouri River Flood Risk and Resilience Study
 - Lower Mississippi River Comprehensive Plan

Wallace observed the theme of resilience explicitly and implicitly weaved throughout the House and Senate EPW WRDA 2020 measures.

In response to a question from Mike Klingner, Dru Buntin said Section 109 of the House WRDA 2020 measure specifically directs the Corps formulate projects that “fully identifies and analyzes national economic development benefits, regional economic development benefits, environmental quality benefits, and other societal effects.” Klingner said consideration of regional economic benefits will be important for Upper Mississippi River projects to be prioritized among other national water resource projects.

Jim Fischer directed UMRBA staff to seek additional information on the “high water and low water emergency preparedness” provision, noting that the St. Paul District has standing agreements with the states relating to emergency conditions. Fischer said he would want to know whether there would be any implications for the states’ roles in emergency situations.

Mississippi River Restoration and Resilience Initiative

Josh Straka extended Rep. Betty McCollum’s appreciation to UMRBA and the regional partners for their work demonstrating progress in restoring and building resilience in the Mississippi River. Roughly 10 years ago, Rep. McCollum authored the Mississippi River Special Resources Study, by working through the National Park Service to inventory public and private amenities along the river. The purpose was to help preserve its natural treasures and recognize the river’s historic and cultural value. Rep. McCollum is now interested in using her position as Chair of the House Interior Appropriations Subcommittee to develop a Mississippi River Restoration and Resilience Strategy. The goal is to enhance investment and coordination from the river’s headwaters to the Gulf of Mexico. Straka noted the success of regional program offices funded through USEPA, including Puget Sound, Chesapeake Bay, the Everglades, and the Great Lakes. These programs provide a model for assembling this initiative.

Straka said the House of Representatives passed the \$36.8 billion Interior-Environment FY 2021 funding measure in July 2020. Included in the appropriations measure is \$2 million for USEPA to lead an interagency effort to develop a Mississippi River Restoration and Resilience Initiative (MRRRI). Straka said he anticipates that additional stakeholders will be involved in the dialogue as the collaborative moves forward.

Dru Buntin mentioned that UMRBA is currently advocating for additional funding to flow through USEPA and NRCS to implement voluntary conservation measures and asked how Rep. McCollum sees that relates to her initiative. Straka explained that Rep. McCollum tasked several environmental organizations with putting together the MRRRI framework for the strategy identify key funding domains, such as clean water that includes sediment and nutrient reduction. Straka said he believes many of the groups involved in developing the MRRRI proposal also support UMRBA's proposal.

Pointing to his involvement in both GRLI and UMRBA, Steve Galarneau emphasized the value of federal-state partnerships with local involvement. Straka acknowledged the value that Minnesota, Wisconsin, and Illinois can provide in their experiences involved in GRLI and how to organize a similar approach on the Mississippi River. In response to a question from Kirsten Wallace regarding next steps, Straka said Rep. McCollum's office is working through the collaborative of environmental organizations. Straka said he believes UMRBA and the environmental collaborative can find commonalities. In response to a question from Ken Westlake, Straka said it is more likely that passage of an authorizing bill would occur in the next Congress.

Land Use Effects on Sediment Nutrient Processes

Becky Kreiling explained that, while we know that land use contributes to sediment and nutrient loads, there is relatively little scientific research linking land use to sediment and nutrient processes in large river networks. Kreiling emphasized the value of better understanding how land use best management practices affect sediment and nutrient process now and in the future as discharge into the river systems continues to increase in spring and winter months. Therefore, USGS's research in the Fox River basin focused on evaluating a) identify potential areas of increased nitrogen and phosphorus cycling in streams (for managers to target removal or retention) and b) assess how land use and agricultural best management practices influence in-stream sediment nutrient cycling. Kreiling explained the data and research findings. Agricultural best management practices restoring natural land cover (e.g., wetlands, riparian forest buffers, grass filter strips) directly affected denitrification enzyme activity and nitrate concentration. The ability to remove nitrogen may improve water quality conditions. The research also found that these best management practices have no measurable effect on phosphorus retention in sediment likely because of legacy phosphorus already stored in the sediment.

Kreiling listed the following research questions to apply the Fox River study to the Upper Mississippi River basin, as including:

- Can the effects of land use change on sediment and nutrient removal be quantified?
- Are these changes in land cover influencing nutrient cycling hot spots in the river?
- Can we identify other areas in the Upper Mississippi River System to convert agricultural land to natural cover to improve ecological services?

Administrative Issues

FY 2022-2023 UMRBA Dues

Steve Galarneau explained that August of even numbered years is typically when the Board establishes the UMRBA dues and WQ assessment contributions for the next two fiscal years – i.e., August 2020 is the time to set dues and for FYs 2022 and 2023. The Board has committed to raising the UMRBA dues and WQ assessment more regularly to avoid another significant increase in the future and to keep up with inflation. However, the onset of the coronavirus pandemic has created many unknowns about the states' finances in the near future. Therefore, Galarneau said the Board has discussed keeping dues levels unchanged for FY 2022 and considering dues for FY 2023 at UMRBA's August 2021 quarterly meeting. Barb Naramore said that approach would not accommodate Minnesota's biennium budgeting approach and suggested that the Board instead maintain its two-year cycle for evaluating dues and WQ assessment levels. In response to a question from Barb Naramore about whether that would be problematic to the Association's financial state, Kirsten Wallace replied that the Association will likely see reduced spending for travel and in-person meetings. Wallace said she recognizes and appreciates the unique challenges that the states are facing with respect to the pandemic's effects on their respective economies. Barb Naramore moved and Rick Pohlman seconded a motion to set UMRBA FYs 2022 and 2023 dues and WQ assessment to \$61,500 and \$20,500, respectively. The motion passed unanimously.

Future Meeting Schedule

October 2020 — Remote

- UMRBA quarterly meeting — October 27
- UMRR Coordinating Committee quarterly meeting — October 28

February 2021 — Remote

- UMRBA quarterly meeting — February 23
- UMRR Coordinating Committee quarterly meeting — February 24

May 2021 — TBD

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

With no further business, the meeting adjourned at 2:20 p.m.