

May 24, 2022



Upper Mississippi River
Basin Association

162nd Quarterly Meeting

Agenda
with
Background
and
Supporting
Materials

Hampton Inn-Gateway Arch
St. Louis, Missouri



162nd Quarterly Meeting
St. Louis, Missouri

Upper Mississippi River Basin Association

May 24, 2022

Agenda

Time	Topic	Presenter
9:30 a.m.	Call to Order and Introductions	<i>Tim Hall, Iowa DNR</i>
9:35	A Approval of Minutes of February 22, 2022 Meeting	
9:40	B Executive Director's Report	<i>Kirsten Wallace, UMRBA</i>
9:50	UMRS Ecosystem and Navigation Management <ul style="list-style-type: none">▪ Upper Mississippi River Restoration Program▪ Navigation and Ecosystem Sustainability Program	<i>Marshall Plumley, USACE</i> <i>Andrew Goodall, USACE</i>
10:45	Break	
11:00	C Inland Waterways Users Board Report	<i>David Frantz, USACE</i>
11:20	D UMRB Bottomland Forest Birds	<i>Nat Miller and Tara Hohman, Audubon</i>
11:40 a.m.	State Reports on American Rescue Plan Act Funds <ul style="list-style-type: none">▪ Process Status Update	<i>UMRBA Board Members</i>
12:00 noon	Lunch	
1:00 p.m.	E Interbasin Diversion Consultation <ul style="list-style-type: none">▪ Review of Upper Mississippi River Basin Charter	<i>Lauren Salvato, UMRBA</i>
1:30	F Illinois Silver Jackets Projects	<i>Terra McParland, Illinois DNR</i>
2:00	Federal Fiscal Report <ul style="list-style-type: none">▪ Infrastructure Investment and Jobs Act▪ FY 2022 Appropriations and FY 2023 Budget	<i>UMRBA Federal Liaisons</i>
3:00	G Administrative Issues <ul style="list-style-type: none">▪ FY 2023 UMRBA Budget▪ Future Meeting Schedule	
3:15 p.m.	Adjourn	

ATTACHMENT A

Minutes of the February 22, 2022
UMRBA Quarterly Meeting

(A-1 to A-19)

**Minutes of the 161st Quarterly Meeting
of the
Upper Mississippi River Basin Association**

**February 23, 2022
Web-Based Conference Meeting**

Dru Buntin called the meeting to order at 8:00 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
Tim Hall	Iowa Department of Natural Resources
Jake Hansen	Iowa Department of Agriculture and Land Stewardship
Sam Hiscocks	Iowa Department of Transportation
Barb Naramore	Minnesota Department of Natural Resources
Katrina Kessler	Minnesota Pollution Control Agency
Dru Buntin	Missouri Department of Natural Resources
Jennifer Hoggatt	Missouri Department of Natural Resource
Matt Vitello	Missouri Department of Conservation
Steve Galarneau	Wisconsin Department of Natural Resources
Jim Fischer	Wisconsin Department of Natural Resources

Federal UMRBA Liaisons:

Brian Chewing	U.S. Army Corps of Engineers, MVD
Branden Villalona	U.S. Department of Transportation, MARAD
Ken Westlake	U.S. Environmental Protection Agency, Region 5
Sabrina Chandler	U.S. Fish and Wildlife Service, UMR Refuges
Mark Gaikowski	U.S. Geological Survey, UMESC

Others in Attendance:

Kirk Hansen	Iowa Department of Natural Resources
Megan Moore	Minnesota Department of Natural Resources
Neil Rude	Minnesota Department of Natural Resources
Patrick Phenow	Minnesota Department of Transportation
Dave Hokanson	Minnesota Department of Health
Brooke Asleson	Minnesota Pollution Control Agency
Mike Rose	Minnesota Pollution Control Agency
Chris Wieberg	Missouri Department of Natural Resources
Dan Baumann	Wisconsin Department of Natural Resources
Sara Strassman	Wisconsin Department of Natural Resources

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
Renee Turner	U.S. Army Corps of Engineers, MVD
James Lewis	U.S. Army Corps of Engineers, MVD
Ben Robinson	U.S. Army Corps of Engineers, MVD
Jim Cole	U.S. Army Corps of Engineers, MVD
Cody Eckhardt	U.S. Army Corps of Engineers, MVD
Richie McComas	U.S. Army Corps of Engineers, MVD
Joseph Pritts	U.S. Army Corps of Engineers, MVD
Col. Karl Jansen	U.S. Army Corps of Engineers, MVP
Kevin Wilson	U.S. Army Corps of Engineers, MVP
Angela Deen	U.S. Army Corps of Engineers, MVP
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Zachary Kimmel	U.S. Army Corps of Engineers, MVP
Andrew Goodall	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Rachel Hawes	U.S. Army Corps of Engineers, MVR
Davi Michl	U.S. Army Corps of Engineers, MVR
Jodi Creswell	U.S. Army Corps of Engineers, MVR
Bre Popkin	U.S. Army Corps of Engineers, MVR
Chuck Theiling	U.S. Army Corps of Engineers, MVR
Kim Thomas	U.S. Army Corps of Engineers, MVR
Anthony Heddlesten	U.S. Army Corps of Engineers, MVR
COL Kevin Golinghorst	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
Lance Engle	U.S. Army Corps of Engineers, MVS
Greg Kohler	U.S. Army Corps of Engineers, MVS
Dave Reynolds	U.S. Army Corps of Engineers, MVS
Brian Johnson	U.S. Army Corps of Engineers, Regional Planning Division North
Sharon Sartor	U.S. Army Corps of Engineers, Headquarters
Kraig McPeek	U.S. Fish and Wildlife Service, Illinois-Iowa Ecological Services
Sara Schmuecker	U.S. Fish and Wildlife Service, Illinois-Iowa Ecological Services
Aleshia Kenney	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
Lauren Larson	U.S. Fish and Wildlife Service, Illinois-Iowa Field Office
Matt Mangan	U.S. Fish and Wildlife Service, Illinois Ecological Services
Tim Yager	U.S. Fish and Wildlife Service, Winona
JC Nelson	U.S. Geological Survey, Midcontinent Region
Kristen Bouska	U.S. Geological Survey, UMESC
Jennie Sauer	U.S. Geological Survey, UMESC
Jeff Houser	U.S. Geological Survey, UMESC
Jennifer Dieck	U.S. Geological Survey, UMESC
Andrew Strassman	U.S. Geological Survey, UMESC
Molly Woloszyn	National Oceanic and Atmosphere Administration, NIDIS
Jessica Brooks	National Oceanic and Atmospheric Administration
Bethany Perry	National Oceanic and Atmospheric Administration
Steve Buan	National Oceanic and Atmospheric Administration, NWS

Mike Welvaert	National Oceanic and Atmospheric Administration, NWS
Olivia Dorothy	American Rivers
Nat Miller	Audubon
Lindsay Brice	Audubon
Ethan Thompson	Great Rivers Environmental Law Center
Gary Loss	HNTB
Jim Koeller	Illinois Farm Bureau
Rylee Hince	Lake Pepin Legacy Alliance
Alex Kieilty	Lake Pepin Legacy Alliance
Doug Daigle	Lower Mississippi River Sub-Basin Committee (Hypoxia Task Force)
Rick Stoff	<i>Our Mississippi</i>
Doug Blodgett	The Nature Conservancy
Paul Rohde	Waterways Council Inc.
Jim Keller	Upper Mississippi, Illinois, and Missouri Rivers Association
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
Margie Daniels	Upper Mississippi River Basin Association

Minutes

Steve Galarneau moved and Tim Hall seconded a motion to approve the draft minutes of the November 16, 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 efforts since the November 2021 quarterly meeting. Wallace observed that primary focal areas for UMRBA staff have been the various UMRR programmatic efforts (e.g., 2022 Report to Congress, LTRM implementation planning), WQTF support and advancing other water quality projects (including engaging in the Hypoxia Task Force), hazardous spills planning, and convening the states in planning for the potential for out-of-basin water diversions.

Wallace pointed to pages B-18 to B-22 of the agenda packet for visual graphics depicting the results of a recent land-based freight transportation modal comparison funded by the National Waterways Foundation. Wallace explained that the new analysis compares efficiency in moving cargo (in terms of tonnage moved), fuel efficiency, carbon emissions, and safety. I would encourage you to use and share these graphics.

Wallace highlighted the funding for the Navigation and Ecosystem Sustainability Program in first iteration of the USACE's work plan associated with the Infrastructure Investment and Jobs Act (IIJA). The IIJA also includes funding for other UMRBA priorities such as precipitation analyses, climate resilience, the Gulf Hypoxia Action Plan. Wallace expressed appreciation to the UMRB Congressional delegation who have remained partnered together in support of NESP and UMRR. In particular, Wallace thanked Senators Dick Durbin and Tammy Baldwin and Representatives Cheri Bustos and Ashley Hinson who contacted the Administration to express the importance of funding NESP in the IIJA work plan.

Looking forward, Wallace said UMRBA anticipates publishing the How Clean is the River Report in late spring. An Executive Summary will be released within the next month that will allow us to share the results in advance of the publication. In addition, UMRBA is working in collaboration with UMRR to communicate the results of UMRR's third long term resource monitoring status and trends report. UMRBA is also developing stakeholder review strategies for the UMRBA 10-year water quality program plan and the 2021-2027 UMRBA hazardous spills strategic plan, and hope to have review requests released this spring.

Wallace pointed to UMRBA's financial statements on pages B-23 to B-26 of the agenda packet. Loren Wobig moved and Barb Naramore seconded a motion to approve the Association's budget report and balance sheet as included in the agenda packet. The motion was approved unanimously.

Wallace explained that she submitted edits to the UMRBA Personnel Manual using Track Changes to the UMRBA Board on February 18, 2022. The changes include 1) revising the Administrative Assistant position to an Operations Manager and 2) adjusting the salary range for the Executive Director. Rick Pohlman moved and Tim Hall seconded a motion to approve the updated UMRBA Personnel Manual as provided to the Board via email. The motion passed unanimously.

On December 8, 2021, USEPA notified UMRBA that its proposal had been selected for a \$122,060 cooperative agreement to support nutrient-related workshops over the next two years. The purpose of the agreement is to facilitate collaboration, cooperative action, and information sharing at a five-state interstate level around specific topics relating to conservation practices with stacked or multiple benefits. Wallace extended her sincere appreciation to USEPA for its partnership. Steve Galarneau moved and Barb Naramore seconded a motion to direct the Executive Director to enter into the cooperative agreement with USEPA as described.

Wallace acknowledged that the FY 2022 budget is determined by a set of assumptions, which have been somewhat challenging under the uncertainty of the covid pandemic – e.g., the resumption of in-person meetings. The current FY 2022 budget has income at \$869,203 and expenses at \$852,949, for an estimated net ordinary income of \$16,254. Wallace reported that she provided the UMRBA Board with a number of proposed updates to the FY 2022 budget on February 17, 2022, including additional revenue sources and associated expenses. The proposed revised UMRBA FY 2022 budget includes estimated income of \$889,503 and estimated expenses of \$879,449 for a net ordinary income of \$10,054. Tim Hall moved and Rick Pohlman seconded a motion to accept the FY 2022 budget as provided via email on February 17.

Recognizing Margie Daniels

Wallace announced the pending retirement of UMRBA Administrative Assistant Margie Daniels effective April 22, 2022, and recognized her tremendous career at UMRBA. Wallace explained that Daniels has been an integral member of UMRBA throughout its entire life, serving in its predecessor capacity as the Upper Mississippi River Basin Commission. Daniels performs many important functions for UMRBA, being involved in nearly every piece of UMRBA's work throughout its history. Daniels has touched nearly every report, letter, meeting, and other UMRBA product. Daniels has coordinated UMRBA's meetings and maintained UMRBA's website, ensuring that UMRBA's communications would be understood by our partners. Daniels has been truly instrumental to UMRBA's successes, paying attention to all the small details and big picture impact. Daniels also brings a very positive and energetic light to the UMRBA office. Wallace said she is particularly thankful to Daniels to her sense of humor. Wallace also remarked on her strong skillset in scattegrories, and said UMRBA staff will miss her competitive spirit.

Jennie Sauer expressed appreciation to Margie Daniels for her partnership with USGS and support of the UMRR Coordinating Committee, noting her attention to detail, willingness to be expendable, and meet USGS needs. Sauer wished Daniels well as she begins a new adventure in retirement. Jim Fischer remarked at Daniels friendly personality as well as her efficiency and effectiveness behind-the-scenes. Fischer said Daniels has made a tremendous difference for all those working on the river as well as to the river as a resource. Dave Hokanson offered best wishes and thanks to Daniels for all of her services over the years. Hokanson expressed appreciation to Daniels for her as a colleague, recognizing her for being thoughtful, supportive, and kind as well as for having an incredible sense of humor. Hokanson said Daniels has been essential to the spirit and success of UMRBA.

Buntin recalled that he first met Daniels about 20 years ago when he started engaging UMRBA by serving on its Board. As a Board member, Daniels has been tremendously helpful ensuring that he had everything he needed and being a helpful resource. Buntin expressed appreciation to Daniels for her consistency, presence, and friendliness. When he worked at the Association, Buntin said he got a first-hand understanding and appreciation of Daniels' service behind the curtain. Buntin acknowledged that Daniels has been the backbone of UMRBA throughout its existence, involved in all of the logistics and quarterly meeting packets and financial aspects. Buntin said he hopes Daniels is proud of her career and said he will miss working with her.

Naramore remarked on Daniels' enormous contributions and expressed her personal appreciation for all that Daniels has done over the years. Naramore said it has been a joy getting to work with Daniels and echoed others' sentiments of best wishes for fun and adventure in retirement.

Daniels said that her career and all the people she has worked with have meant a great deal to her. Daniels thanked the UMRBA partners for their support, and said she has enjoyed working with the past and present UMRBA Executive Directors, staff, and agency members.

Interbasin Diversion Consultation

Dru Buntin explained that the Governors' 1989 Upper Mississippi River Basin Charter sets forth a notification and consultation process for any new or increased water diversion out of the basin that would exceed an average of 5 million gallons per day during any 30-day period. At their February annual meetings, UMRBA members are to report on any qualifying diversion requests. The UMRBA member states reported as follows:

Illinois	—	Rick Pohlman	—	no diversions to report
Iowa	—	Tim Hall	—	no diversions to report
Minnesota	—	Barb Naramore	—	no diversions to report
Missouri	—	Dru Buntin	—	no diversions to report
Wisconsin	—	Steve Galarneau	—	no diversions to report

Buntin directed Barb Naramore to send letters to the Governors reporting the results of the annual diversion consultation.

Chloride Resolution

On behalf of the UMRBA Water Quality Executive Committee, Kirsten Wallace provided a draft UMRBA Chloride Resolution to the UMRBA Board for its consideration of adoption. The draft resolution is

provided on pages D-1 to D-2 of the agenda packet. It discusses observed trends in chloride throughout the Upper Mississippi River basin and acknowledges that, while there are ongoing efforts to reduce chloride runoff, solutions are limited and costly. The resolution calls for improving knowledge of the impacts of elevated chloride levels to designated uses, implementing a communications strategy, and facilitating cooperative action in research, monitoring, and implementing best management practices.

Dru Buntin mentioned that the UMRBA Board discussed specific language and asked for any amendments to the resolution. Tim Hall noted that the WQEC Iowa representative, Adam Schneiders, has suggested a revision to the resolution regarding chloride criteria given that Iowa has recently updated the state's chloride criteria and that USEPA is in the process of revising its chloride criteria. Wallace read the suggested change to the first resolution statement: "*Therefore, Be it Resolved*, UMRBA urges the U.S. Environmental Protection Agency to improve knowledge relating to elevated chloride levels in surface and groundwater to aquatic life and ecological processes." Hall moved and Buntin seconded a motion to adopt the resolution with the suggested change. Barb Naramore pointed to the language about increasing knowledge and noted its ambiguity. Naramore asked if there might be an alternate phrasing to better capture the intent. Hall changed his motion to maintaining the original language provided in the agenda packet and striking the last part of the first element of that resolution. Naramore confirmed that doing so would address the ambiguity. The motion was accepted unanimously.

Chloride Trends in the UMR Basin

Lauren Salvato discussed chloride trends in the Upper Mississippi River basin over the past 30 years and the associated concerns of elevated chloride levels in the region's waterbodies. While the sources of chloride are wide ranging and vary by state, road salt and water softeners are the major sources among all five states. Excess chloride is toxic to freshwater aquatic life, causing decreased diversity and abundance. Chloride is very difficult and expensive to remove from waterbodies and, therefore, curbing use is viewed as more practical management approach.

The UMRBA Water Quality Executive Committee and Task Force examined and compared state-specific trend analyses. The increasing trends since the 1980s are occurring in all five states. Salvato used Wisconsin DNR's long term data and a USGS gage station at Thebes, Illinois showing that chloride trends are occurring in the northern and southern portions of the basin.

UMRBA is finalizing a new analysis of water quality data from 1989 to 2018 for the Upper Mississippi River. The analysis found that, of the 80 percent of sites with high confidence trends, chloride concentrations have increased by 35 percent on average (or 8 mg/L). Pool 26 stands out with a notable 89 percent increase in chloride concentrations. Similarly, sulfate is trending upward in all monitoring sites except for the sites at Pools 8 and 13.

Chloride Technical Management Workgroup

Salvato reported that the Brooke Asleson with Minnesota PCA and Sydney Weiss with USEPA Region 5 co-host the Chloride Technical Management Workgroup, which was formed to address challenges in meeting permit requirements for chloride. More specifically, the workgroup's purpose is to convene states and tribes to a) share their experiences, knowledge, and resources to protect aquatic life uses by managing chloride, b) establishing resources and expertise that take time, money, effort, and energy to maintain, and c) sharing elements that strengthen chloride programs across the nation. The intent is to reverse the existing upward trajectory of chloride concentration in waterbodies, achieving better

environmental outcomes faster at a lower cost through collaboration. Participation includes various experts in the Midwest region as well as other areas throughout the nation.

Asleson reported that the Chloride Technical Management Workgroup has an organizational charter and three sub groups focused on a) potential partnerships with academia, b) opportunities for collaboration and pooling resources, and c) the application of Minnesota PCA's Smart Salting Assessment Tool to explore its utility to other states. Asleson noted that, as part of the second sub group, USEPA is creating a clearinghouse of chloride resources. The Workgroup will continue to shape its focus as it learns and matures. Salvato noted that UMRBA's chloride-related research and the newly adopted resolution can be made available nationally on USEPA clearinghouse.

Resilience Planning

Basin-Wide Precipitation Trends

Steve Buan illustrated long term trend analyses of precipitation and river flow in the Upper Mississippi River basin through a number of graphical visuals, concluding that:

- a) Precipitation is increasing throughout the Upper Mississippi river watershed
 - From 1985 to 1970, precipitation averaged 31.99 inches annually with 0 change in precipitation per decade. In contrast, extending the trend period to 2020 resulted in an increase in average annual precipitation to 33.19 inches and a trend in precipitation increasing 0.4 inches per decade.
 - Average annual precipitation from 1991 to 2020 was 35.09 inches, which is roughly 10 percent greater than average annual precipitation from 1985 to 1970.
 - 2019 was the wettest year in the time period from 1985 to 2020.
 - After 1970, there has been only one multi-year drought across the basin.
 - While annual precipitation averages are rising across much of the country, some of the largest increases are in the Upper Mississippi River basin.
 - Rising precipitation has been observed across all seasons in the Upper Mississippi River Basin, with the biggest increases occurring in winter and spring.
- b) Modeling suggests continued increase in precipitation trends over the next fifty years
 - Average annual precipitation is estimated to increase to 2.4 inches to 4 inches.
- c) River flow and flood duration is increasing over the same time period
 - At the USGS St. Louis gage, there has been a 37 percent increase in average river flow from 1970 to 2021.
 - At several sites, the Mississippi River was above flood stage approximately five to 10 times longer in the 2010s than on average over the preceding 80 years. Days above flood stage per year averaged roughly 25-30 days in the 1950s, 1960s, 1970s, 1990s and 2000s; dipping in the 1980s to about 5 days per year; and then increasing substantially to over 100 days in the 2010s.
 - Average peak flow (i.e., daily mean flow) also increased substantially in the 2010s in comparison to previous decades.

Buan said this information is accessible in three versions that are tailored to various audiences: a technical version with graphs and tables, a plain language version with simple icons, and a hybrid version that balances technical information with plain language.

Buan pointed out that Upper Mississippi River discharge is increasing at a greater rate than precipitation is increasing across the watershed. While precipitation is expected to continue to increase in the future, the trajectory of discharge rates is more questionable – i.e., will discharge continue to rise at a faster rate than precipitation or will mitigation measures help to slow the movement of water through the watershed and the river system.

Dru Buntin observed that the pictograph of seasonal shift in precipitation is helpful for visually seeing the magnitude of changes over the period of reference. Buntin asked Buan about the relative importance of drought management planning given the long term trends in precipitation and discharge. Buan cautioned that a depression similar in magnitude to the drought that occurred in the 1970s – sustained over multiple years – might be much worse today.

Buntin read Katrina Kessler’s question provided in the chat forum as follows: what models or tools should local engineers planners use to develop designs that reflect the additional 2.4 inches to 4.0 inches of annual precipitation. Buan said he would follow up with a response from NOAA researchers soon after the meeting.

Kirsten Wallace said UMRBA has all three pamphlets that Buan has referenced and will make them available on UMRBA’s website. Additionally, UMRBA will integrate the information in various communications about the river hydrology and climate change or resilience planning work. Wallace noted that the Upper Mississippi River Restoration program has a dedicated focus on understanding the impacts of changing hydrology to the Upper Mississippi River ecosystem. It is helpful to have this broader context of precipitation and basin-wide trends, and to connect and leverage the efforts to understand the trends and mitigate for impacts given the anticipated long term trajectories of precipitation and discharge. Buntin expressed agreement with Wallace’s observation. Buntin referenced a comment from Alex Kieley’s question in the chat forum (i.e., are these flows currently part of UMRBA’s models?), and explained that the intention of UMRBA’s Board is to raise awareness of this information and ensure that the information is incorporated into UMRBA’s member states’ and partners’ modeling and other projections as well as long term planning.

In response to a question from Westlake, Buan said the difference in increasing rates between river discharge and precipitation could be attributed to the culmination of multiple factors. Buan acknowledged the efforts to mitigate impervious surfaces in urban areas and conservation practices on agricultural landscape. At the same time, the seasonal shift in major precipitation may not align with some of those measures. For example, heavy, convective precipitation occurring earlier in the year before crop canopy is established or in the fall as crops are senescing results in higher runoff rates.

In response to a question from Loren Wobig, Buan said various research exists regarding changing duration and intensities of precipitation events and the effects of that on urban flooding. Buan explained that the NWS has generally observed changes in rapid onset flooding due to heavy, convective rainfall events and changing patterns of those events. Buan said science exploration typically starts by questioning conventional wisdom when it no longer fits within existing perspectives. Buan reflected on his early years with the NWS when veteran staff explained to him the typical year for flood-related predictions. Buan said the standard practices was to monitor snow pack and assess how snow pack amount and distribution would affect spring flooding. The remainder of the year was quiet and when

NWS staff would focus on improving modeling and procedures. A fundamental change occurred in 1993 with more frequent large summer floods. Buan said he has not yet quantified this shift, although the information related to seasonal shifts indicates that a shift in seasonal patterns is occurring.

2022 UMRS Flood and Drought Forecast

Mike Welvaert provided an outlook for the potential of spring flooding on the Upper Mississippi River and in the watershed in spring 2022. Welvaert announced that the overall risk for spring snowmelt flooding is about average, with various parameters and measurements of various driving factors generally at average levels. Welvaert reported that there are “near normal” river levels, lower-to-near normal soil moisture, average snowpack, and average frost depths. Welvaert noted that future precipitation and temperatures will affect the ultimate conditions.

Welvaert recalled the severe drought conditions in 2021, particularly in Iowa, Minnesota, and parts of North Dakota and South Dakota, and said dryness and some drought conditions persist in the area through conditions have improved. 2022 has seen below normal precipitation to date across most of the Upper Midwest, particularly within the Upper Mississippi River watershed. Therefore, NWS anticipates a below normal amount of water to move through the watershed, resulting in at best, a “normal” runoff year for the Upper Mississippi River. Looking forward, there are equal chances for above or below normal temperatures and precipitation favored at this time with a slight lean toward above normal precipitation. Currently, 89 total forecast points have a fifty or greater chance of flooding with 17 points experiencing moderate flood stage and three points experiencing major flood stage.

Midwest Drought Characteristics and Predictability

Molly Woloszyn provided an overview of recent research regarding characteristics and predictability of drought in the Midwest. The study evaluated local drivers and regional characteristics (e.g., onset, predictability) utilizing an integrated drought index that was developed a few years ago. The index combines information about soil moisture, snow water equivalent, and hydrological drought or runoff. Through a hierarchical clustering analysis, four regions within the Midwest emerged as having similar characteristics of speed at which hydroclimate varies, timing of wet and dry epochs, and decreasing drought trends. The regions include the Northern Great Plains, Great Lakes, Central Great Plains, and Ohio Valley.

As examples, Woloszyn explained that long term trends show that droughts persist longer in the Great Plains than in the Ohio Valley and the Great Lakes. Each region differs in terms of seasonality of drought onset and recovery. The results illustrate the importance of understanding and planning for drought and the general hydroclimate in these different regions.

Woloszyn said a webinar detailing the research findings is available on the NIDIS website (www.drought.gov). Brief summaries highlighting the key findings are also available.

In response to feedback received during the webinar, Woloszyn explained that NOAA is planning to initiate research soon regarding the likelihood of termination based on month also considering the antecedent conditions.

Missouri Proposed Flood Resilience Program

Jennifer Hoggatt explained that, during the 2019 floods on the Missouri and Mississippi Rivers, Governor Mike Parson formed an Advisory Working Group in July 2019 through Executive Order. The Advisory Group delivered interim recommendations in December 2019 for improving Missouri's resilience to major flooding (also including in final report on May 31, 2020) as follows:

- Innovative ideas and actions to prevent recurrent damages
- Increased funding (state and federal) for flood resiliency
- An enhanced flood monitoring system comparable to the Iowa Flood Information System, developed by the state of Missouri

Hoggatt reported on recent actions within Missouri to improve flood resilience that directly stemmed from the Advisory Group's recommendations. Missouri's legislature included funding in its FY 2022 appropriations package to assist Hold County, Brunswick, and Jefferson City with further study of flood resilience solutions as well as construction of the recommended project. These areas have local support and are ripe to proceed relatively quickly through the feasibility study process and into construction. Missouri DNR is entering into a partnership with the Corps to implement the feasibility study.

Hoggatt explained that Missouri Senate Bill 984, named the Flood Resilience Act, would authorize the Missouri DNR to improve statewide flood forecasting and monitoring and implement flood resilience projects. The measure proposes establishing a Flood Resilience Fund to provide consistent resources to implement construction projects. Hoggatt pointed meeting participants to pages E-7 to E-11 in the agenda packet for a summary of the measure and the legislative text.

Additionally, Missouri DNR has done extensive planning to establish a Missouri Hydrology Information Center. The goals for the Center are to enhance surface water monitoring and predictive capability to protect life and property, expand soil moisture mapping and water resources mapping and imagery, and displaying readily-accessible weather conditions. Hoggatt showed visualizations of the type and capacity of water information that is intended to be made available through the Hydrology Information Center, including the streamgage network and associated expansion products, the soil moisture network, and water resources mapping and imagery such as leaf-off imagery, LiDAR, and aquifer supply mapping.

Channel Maintenance Management

Richie McComas provided context of the Corps beneficial use program, noting that about 30 percent of the Corps' dredged material is beneficially used. The Corps' definition of beneficial use is "using dredged sediment to achieve additional benefits beyond its removal from a channel/waterway including other economic, environmental, and social benefits." McComas discussed the Corps' implementation of beneficial use over the last 20 years. While there are several important benefits, challenges to beneficial use of dredged material include funding constraints; federal and state policies, regulations, and business practices; technology limitations; and aligning government and private sector needs. McComas noted that, while the total amount of material dredged has decreased steadily and modestly since early 1980s, the costs of dredging operations has increased exponentially, particularly since the early 2000s. That has substantially reduced the Corps' capacity to implement beneficial use projects.

The Corps goals for regional sediment management are to keep sediments in the system, mimic natural sediment processes, reduce unwanted sedimentation, provide environmental enhancement, and maintain and protect infrastructure. McComas provided website links to the Corps Regional Sediment

Management beneficial use database (<https://rsm.usace.army.mil/budb/>) and the Dredging Information System (<https://dredging.usace.army.mil/lpwb/f?p=116:1:1087000207953:::>).

McCormas discussed Congress' renewed commitment to beneficial use through Section 125 of WRDA 2020. Specifically, Section 125 includes the following provisions:

- a) Establish a national policy to maximize the beneficial use of material obtained from Corps projects; requiring the Corps to calculate the economic and environmental benefits of the beneficial use of dredged material when calculating the Federal Standard
- b) Amend Section 204(d) of WRDA 1992 to direct that other-than-least-cost placements of dredged material for certain purposes be funded using appropriations available for construction or operation and maintenance of the water resources development project producing the dredged material
- c) Increase the number of beneficial use of dredged material demonstration projects to 35
- d) Direct the Corps to develop five-year regional dredged material management plans
- e) Emphasize greater coordination across the Corps' dredging contracts

Under the beneficial existing authority (i.e., CAP Section 204), projects require a cost-share sponsor, must be in feasibility, the placements are highly engineered placements, there is no follow-on O&M, and the projects are very limited by available funding. In contrast, Section 125 requires no cost-share (although the Corps will likely adopt the Section 204 cost share of 65 percent federal/35 percent non-federal) and encompasses a broader assessment of the Federal standard. Under Section 125, projects can start at any phase of the dredging cycle, be used for either temporary or permanent placement, and the Corps can "exercise in opportunity" – i.e., be ready to accept the material when needed.

Although the Corps can submit work packages for costs associated with beneficial use of the dredged material beyond the Federal standard, McComas pointed out that the competition for O&M funding is very high. In FY 2022, the navigation O&M appropriation nation-wide was \$4.3 billion and there were \$11 billion in O&M identified needs.

The purpose of the regional five-year DMMP is to forecast the various O&M projects within a District for five years and establish a process and schedule for accomplishing the needs. This includes securing specific real estate and environmental compliance that are required prior to implementation. The broader goal is to expand placement site portfolio, improve operational feasibility, integrate Corps business lines and projects, and increase stakeholder involvement. McComas noted that WRDA 2020 Section 125 maintains the Federal standard, but expands the benefits eligible in the calculation of the standard. McComas explained that Section 125 directs the Corps to develop a beneficial use decision document integration (BUDDI) that will serve as an addendum to the 20-year DMMP. The Corps is currently scoping an effort to update the 20-year DMMP guidance and template.

McComas reported that Corps leadership is currently developing national goals for beneficial use and establishing reporting metrics related to the Dredge Information System, in part to increase visibility via the Regional Sediment Management Beneficial Use Database (mentioned earlier). Additionally, Headquarters is developing guidance for implementing Section 125, particularly related to estimating economic and environmental benefits and increasing stakeholder engagement. The Corps will need to identify and address challenges related to implementing beneficial use such as real estate, timing, funding, and environmental coordination. One opportunity is to utilize MOAs for rapid execution. The Corps will also need to align multiple efforts. That will involve revolutionizing the Corps' beneficial use

tiger team and learning through “engineering with nature” and the Regional Sediment Management program.

Dru Buntin pointed to Tim Hall’s question in the chat forum directed to McComas regarding what will be the significant deterrent to utilizing beneficial use. McComas replied that cost and location will be the most constraining factors for implementing beneficial use projects. On behalf of Sara Stassman, Buntin offered her question posed in the chat forum to McComas of whether regionalization will account for cost differences by District. McComas said the Corps is still considering that question.

Jim Fischer mentioned that a group of state and federal agency staff who work on channel maintenance met in advance of the quarterly meeting. The group developed several questions about WRDA 2020 Section 125(c) that UMRBA staff submitted to McComas in advance of his presentation. Fischer asked about follow up engagement to walk through the questions for which answers remain unclear. In response to a question from Wallace, Fischer and Buntin directed UMRBA staff to facilitate subsequent conversations about Section 125 as implementation guidance is issued and/or the policy implications for the UMRS is known.

Federal Fiscal Report

U.S. Army Corps of Engineers

MG Diana Holland expressed appreciation for a recent discussion with Dru Buntin and Kirsten Wallace, highlighting the value of partnership and collaboration. MG Holland reflected that the funding appropriated by Congress through the Infrastructure Investment and Jobs Act (IIJA) and emergency disaster supplemental in response to Hurricane Ida. Through the two authorities, Congress appropriated a combined \$5.3 billion to MVD, which is additional funding above the annual appropriations. MG Holland described the historic funding as a testament of trust that Congress and partners have with the Corps and MVD in particular. Noting that the Corps expresses capacity and capability to Congress, MG Holland noted the partners’ role of influencing the ultimate appropriations decisions by Congress.

MG Holland reflected that the workforce remains the same, and therefore, the Corps is currently working on multiple efforts to help achieve balance between the workload within the agency’s workforce. This includes an aggressive hiring campaign, utilizing skillsets and capacity among Districts, and increasing contracting capabilities.

MG Holland expressed her excitement for the new start and appropriation for NESP. She emphasized the significance of ASA(CW) Michael Connor making first in-person trip in his capacity as ASA(CW) to L&D 25 to learn about NESP. ASA(CW) Connor has remarked about his appreciation for the navigation system and the importance of restoring the ecosystem. MG Holland said ASA(CW) Connor is a strong champion for the program.

MG Holland reflected on the importance of partnerships to the Corps, particularly in this era of unprecedented funding and opportunity. The Corps knows it cannot execute our mission without its partners. The Corps will need to count on its partners (state and federal agencies, local entities, non-federal sponsors, and so forth) and we look forward to working with UMRBA and all of the partners within the UMRS.

Renee Turner explained MVD’s overall programmatic efforts and current budget development activities. Turner explained that the Corps is currently executing the FY 2022 program under significant funding

through the annual appropriations, IJA, and disaster relief supplemental. The Corps continues to operate in FY 2022 under a continuing resolution that expires March 11 and is defending the FY 2023 program, noting the delay in the President’s release of the budget.

Turner explained broader funding trends for MVD since FY 2019 as well as for Upper Mississippi River projects and programs. Turner gave more details on the currently-funded projects in the region, including NESP, Brandon Road, UMRR, Mel Price, East St. Louis, the Illinois Waterway major rehabilitation, and O&M work for the navigation channel throughout the system. Turner noted that the Corps anticipates receiving even more funding to the basin through the FY 2022 appropriations when it is passed by Congress.

Acknowledging the conversation with MG Holland that she mentioned earlier, Buntin expressed appreciation for the opportunity to discuss the Corps intended approach (and reasoning) to receiving state permits and the arrangements needed to support planning, coordination, and accessibility of decision making among NESP’s implementing agencies, including with respect to the navigation and ecosystem authorities under NESP. Buntin expressed appreciation to MG Holland for her stated willingness to evaluate the best forums to support partners’ roles in executing NESP. MG Holland expressed agreement with Buntin’s statement and commitment to open and transparent communication and governance, which will be essential to delivering the program.

U.S. Environmental Protection Agency

Acknowledging the status of the FY 2022 appropriations process, Ken Westlake said USEPA’s FY 2022 funding is unknown but noted that the President’s FY 2022 budget includes a 21.3 increase above FY 2021 enacted levels. Westlake reported that the IJA allocated to USEPA \$61 billion to spend over five years – i.e., in FYs 2022-2026. Nearly 83 percent of the \$61 billion allocation is earmarked for water infrastructure projects with the other major allocations to clean up and revitalization efforts, cleaner school buses initiative, and pollution prevention. Westlake detailed the spending in USEPA programs and projects particularly relevant to the UMRS as follows:

- Over \$20 billion to support safe drinking water projects
- \$15 billion to support lead pipe replacement
- Over \$12 billion to support clean water projects for communities
- \$1.8 billion to protect regional waters/geographic initiatives
- \$125 million for additional water improvements
 - o \$60 million to the Gulf Hypoxia Task Force to be evenly allocated among the 12 states

Westlake reported the FY 2022 funding allocations to UMRBA member states under various program authorities as follows:

	Drinking Water SRF				CWA SRF	
	Total	Subtotal	Line Replacement	Emerging Contaminants	Subtotal	Emerging Contaminants
Illinois	\$288 million	\$68 million	\$107 million	\$28 million	\$81 million	\$4.3 million
Iowa	\$111 million	\$28 million	\$45 million	\$12 million	\$24 million	\$1.3 million
Minnesota	\$117 million	\$27 million	\$43 million	\$12 million	\$33 million	\$1.7 million

Missouri	\$147 million	\$32 million	\$50 million	\$13 million	\$50 million	\$2.6 million
Wisconsin	\$143 million	\$31 million	\$48 million	\$13 million	\$49 million	\$2.5 million

Buntin expressed excitement at the opportunities that lay ahead for investing substantially in important water resource projects. Buntin said the Missouri Governor Mike Parson is proposing to the state legislature the utilization of \$400 million in American Rescue Plan funds as grants. The proposal includes utilizing a portion of the funding to well position the state to execute the IJA funds. Among other things, this includes providing resources to local communities to apply for the SRF funds and assessing where lead service lines need to be replaced.

Westlake observed the enormity of water resource infrastructure needs that have been building for decades. It is important that we, as a society, are smart in employing the resources to effectively address basic public health and environmental issues. Westlake acknowledged that the underlying priorities of the Administration will carry forward through the expenditure of these funds. Westlake said USEPA intends to work closely with its state partners to deliver those priorities.

Westlake announced that he is planning to retire at the end of April 2022. USEPA is considering how it will staff its valued partnerships with UMRBA and UMRR. Westlake said USEPA will endeavor to have good staff coverage in these partnerships that builds on the historic relationships. Westlake thanked the many people he has worked with through UMRBA, including Association staff and state members as well as federal partners. Westlake remarked that his participation with UMRBA and on UMRS issues has been valuable.

On behalf of the UMRBA Board, Buntin expressed sincere gratitude to Westlake for his years of service to UMRBA and the river and wished him well in retirement.

Loren Wobig asked Westlake if USEPA is considering a program to assist under-resourced communities in their respective efforts to create a plan and put together a construction package that is needed to apply and compete for a water resource infrastructure improvement project. Westlake said he believes the IJA authorization allows for that type of planning. USEPA anticipates that about half of the money available through the SRFs would be provided as grants or forgivable loans to communities that cannot match or repay the resources coming from USEPA through the states.

Kirsten Wallace remarked on Westlake’s significant career devoted to the UMRS, particularly in facilitating the transition from the Navigation Study to the dual purpose authority of NESP. Wallace thanked Westlake for his tremendous service. Westlake reflected on the NEPA process in 2003-2004 through which the dual purpose NESP authority was developed. Westlake said he is a champion for NESP and its ability to modernize the river’s world-class navigation system and sustain and improve the river’s important ecosystem.

U.S. Fish and Wildlife Service

Sabrina Chandler noted that, similar to other federal agencies, USFWS is operating under a continuing resolution and does not have a final FY 2022 appropriation. Chandler explained that USFWS is currently operating at FY 2021 funding levels, but noted that the FY 2022 President’s budget request seeks funding that would support fixed cost needs and program priorities – i.e., climate change, habitat improvement, and species recovery.

Chandler explained that recent increases to salary are a fixed cost that consume a significant portion of USFWS Midwest Region's operating budget for its refuge program. If FY 2021 funding levels remain (e.g., a continuing resolution is passed for the entire fiscal year), Chandler explained that USFWS operations would be significantly impacted because of increases in fixed costs – e.g., potential hiring freeze.

Chandler reported on USFWS FY 2022 proposed funding levels relevant to the UMRS, including \$332.1 million to support ecological services (\$62.4 million increase over FY 2021), \$584.4 million to the National Fish and Wildlife Refuge System (\$80.5 million increase over FY 2021), and \$225 million to support the Fish and Aquatic Conversation Program (\$48 million increase over FY 2021).

Chandler reported that the IJA authorized appropriations to DOI of \$30.6 billion to be executed over five years, with \$445 million of that funding allocated to USFWS for programs related to the America the Beautiful Initiative. Five projects were selected to receive those funds that are located in other areas of the nation outside of the UMRS. Chandler noted potential opportunities within the UMRS to benefit from the \$200 million to the National Fish Passage Program. USFWS anticipates that funding and selection criteria for FY 2022 projects will be announced July 2022, working towards increasing resilience to climate change and supporting disadvantaged communities as well as protecting tribal resources.

Chandler noted that the Senate confirmed Martha Williams' nomination as the USFWS Director on February 17, 2022. Chandler said she is looking forward to understanding Director Williams' priorities and the implications for UMRS Refuges and other initiatives.

U.S. Geological Survey

JC Nelson said the FY 2022 House and Senate appropriations measures include increased funding related to invasive species, HABs, PFAS, and the federal priority streamgauge network. Nelson said the FY 2022 House appropriations measure includes a funding provision to support a Mississippi River Science Forum, noting that USGS staff will be waiting to see if that funding is ultimately included in the final appropriations package for the agency. The Forum would build upon USEPA's work under the umbrella of the Mississippi River Restoration and Resilience Initiative.

Nelson said the IJA authorized appropriations around \$400 million to DOI to support voluntary ecosystem restoration. This work is being administered by an ecological restoration working group within DOI, and is currently hosting listening sessions to get input into program. Nelson noted the potential for some of the funds to be allocated within the UMRS.

Nelson reported that USGS is helping to develop the America Conservation and Stewardship Atlas to develop and track a clear baseline of information on lands and waters that are conserved or restored. The purpose is to measure the progress of conservation, stewardship, and restoration efforts in a manner that reflects the goals and principles of the America the Beautiful Initiative

Nelson also noted that the USGS Climate Adaptation Science Centers are fully funded.

UMRS Ecosystem and Navigation Management

Dru Buntin reflected on the significance of the deeply-rooted partnership formed for the purposes of seeking balanced management on the UMRS. The UMRBA member states have maintained strong commitment to UMRR and NESP. UMRR is now a highly effective program that is making important contributions on an ongoing basis. The substantial funding for NESP in the IJA, and potentially in the FY

2022 appropriations process, marks a new era for the UMRS. Buntin stressed the importance of formalizing institutional arrangements for NESP to ensure an effective partnership among implementing agencies and other contributors.

Navigation and Ecosystem Sustainability Program

Andrew Goodall remarked on the historic nature of the IJJA authorized construction new start and \$829.1 million in construction funding, specifically allocated to L&D 25 lock modernization and L&D 22 fish passage. Goodall reflected that the funding of a navigation project and an ecosystem project advances NESP's dual purpose authority and applauded the steady commitment and coordination among navigation and ecosystem partners. The historic funding and unprecedented authority of NESP will alter the future of the UMRS, ensuring that it remains a vital transportation and ecosystem corridor.

Goodall reported that the Corps will immediately begin developing a plan for completing construction on both projects as quickly as possible. Through the IJJA authority, the Administration allocated \$732 million for a new 1,200 lock at L&D 25 and \$97.1 million for L&D 22 fish passage. The IWTF cost share requirement for L&D 25 lock modernization is waived, meaning that the project will be fully federally funded.

The primary purpose of the second chamber at L&D 25 is to improve navigation efficiency, reliability, and safety for navigation traffic transiting the facility along with adding operational redundancy at the lock site. The additional, 1,200-foot lock will reduce lockage times from 2.5 hours to approximately 45 minutes. The primary purpose of the L&D 22 fish passage project is to increase access for fish to upstream mainstem river and tributary habitats by permanently restoring the connection between river pools. The reconnection is anticipated to increase the size and distribution of 30 native migratory fish populations. In response to a question from Doug Blodgett, Goodall explained that additional funding will be needed for L&D 22 fish passage to implement adaptive management post-construction.

Goodall explained that, in 2021, resource managers worked through the District-based river teams to identify and select a suite of ecosystem restoration projects to implement through NESP. A set of 12 projects were ultimately approved by MVD and therefore are ready to begin implementation upon funding.

Goodall reminded that \$2.5 million in navigation projects and \$10 million in ecosystem projects are ready to begin construction pending funding. Those projects include Lock 14 mooring cell and Moore's Towhead systemic mitigation (navigation) and Pool 2 wingdam notching, Twin Islands and Alton Pool island protection, Starved Rock habitat restoration and enhancement.

Olivia Dorothy raised the issue of the NESP environmental compliance agreements (i.e., NEPA and the biological opinion) that include a suite of administrative elements prescribing incremental implementation of NESP; more specifically, that the Corps would provide notification reports evaluating the effectiveness of small scale and nonstructural measures prior to constructing the lock modernization projects. Goodall said he will follow up with Dorothy following the meeting with an answer. Goodall noted that per the authorization in the IJJA, the Administration funded two specific projects under NESP that are being implemented. Dorothy expressed her preference that answers be provided during the quarterly meeting so that they become part of the record. She also pointed to a disconnect between the Administration's actions to fund those two projects and NESP's authority. According to Dorothy, the environmental documents need to be revisited prior to constructing the L&D 25 lock modernization project. Dorothy

asked for the Corps plans to address those compliance needs. Goodall said he would follow up with Dorothy following the meeting.

Dorothy asked about the Corps' plans to reinitiate consultation. Goodall explained that the Corps has informally met with NESP's implementing member agencies (UMRBA, states, and federal agencies) on a monthly basis for the past two years. Goodall said the Corps vertical team is evaluating options for effective and efficient partner consultation. Goodall noted that NESP's authority also calls for an Advisory Panel with specific roles and responsibilities. Dorothy elaborated on the requirement stated in the NESP biological opinion for the Corps to reinstate formal consultation if and when a new species is added to the endangered species list, specifically new mussel species. Dorothy said new mussel species have since been added to the list and called for formal consultation. Additionally, Dorothy called for formal consultation to review the significant deviation to the environmental compliance administrative elements prescribed for NESP.

In response to a question provided by Paul Rohde in the chat forum, Goodall confirmed that part of the funding for the IJJA allocation to L&D 25 included a mitigation project involving side channel restoration and dike alteration.

Dorothy asked for the status of releasing itemized responses independent external peer review (IEPR) to the 2004 Navigation Feasibility Study, noting that itemized responses as required by law have not yet been released. Goodall said he will follow up with Dorothy following the meeting. Dorothy reiterated her frustration with the lack of answers provided by the Corps during the UMRBA quarterly meetings.

Upper Mississippi River Restoration

Marshall Plumley explained UMRR's authority to address the impacts of commercial and recreational navigation through rehabilitation of degraded habitat and systemic long term monitoring and science. Plumley underscored UMRR's work over the past 35 years to provide a healthier and more resilience UMR ecosystem that sustains the river's multiple uses through a broad partnership focused on ecosystem science and restoration. Plumley acknowledged that UMR ecosystem overlays a 1,200 mile commercially navigable river network and five USFWS National Wildlife Refuges, spanning and connecting five states. The river system supports a mosaic of diverse and varied terrestrial and aquatic natural habitats, linking the Great Lakes and the Gulf Coast.

Plumley stressed the strength and value of UMRR's partnership among a multitude of federal and state agencies, non-governmental organizations, and the public. UMRR has advanced the state of scientific monitoring and research to better understand how the UMRS functions and changes and has completed 59 habitat restoration projects that have improved 112,000 acres of habitat in Illinois, Iowa, Minnesota, Missouri, and Wisconsin.

Following six years of Congress fully funded UMRR at its authorized annual funding level of \$33.17 million, Congress increased UMRR's annual authorized funding level in WRDA 2020 to \$55 million. This increase in funding would allow UMRR to reduce the timeframe of constructing and planning habitat projects and advancing currently unmet science and monitoring needs.

In addition to the robust and stable funding, Plumley highlighted UMRR's recent accomplishments as follows:

- Renewing UMRR's Joint Charter of its consultation bodies

- Implementing priority initiatives outlined in the 2015-2025 UMRR Strategic Plan
- Completing the third long term resource monitoring status and trends report
- Publishing the second habitat needs assessment
- Establishing conceptual frameworks of ecological resilience and advancing supporting research

UMRR has placed more dedicated focus on external communications, developing a program flyer and programmatic storyline, creating an inventory of various communications and outreach materials, implementing a social media campaign on Earth Day around the theme “Restore Our Earth,” and disseminated a suite of communications in celebration of UMRR's 35th anniversary.

Plumley forecasted that UMRR is scheduled to benefit 76,110 acres of fish and wildlife habitat between 2021 and 2031, providing a detailed overview of the habitat projects currently being advanced through UMRR. Plumley reported that UMRR has initiated an implementation planning process specifically for LTRM, focusing on the potential to expand knowledge of the UMRS and to inform ecosystem restoration and management. The objective is to work under the umbrella of the 2015-2025 UMRR Strategic Plan to identify specific unmet information and research needs and determine a set of priority actions to address those needs.

UMRR is drafting the 2022 Report to Congress, with a draft scheduled to be submitted to Headquarters for review in June and a final version scheduled to be submitted to Headquarters in October 2022.

UMR Spills Group

Mark Ellis provided context of the UMR Spills Group, explaining that its purpose is to provide a forum for interagency cooperation, a unified voice for regional spill responders, and support for training activities. The Spills Group’s major resources the UMR Spills Response Plan and Resource Manual and UMR Equipment Viewer as well as an email listserv for disseminating notifications of spills in the region. Members include the five UMRBA member states, USACE, USCG, USEPA Regions 5 and 7, and USFWS. The Spills Group also benefits from close engagement with Community Awareness and Emergency Response (CAER) groups and industry – e.g., railroad, oil storage facilities, terminals.

Ellis said the Spills Group recently undertook strategic planning for 2021-2027. This is the first strategic plan for the UMR Spills Group, which decided to develop a strategic plan when considering a major update to its UMR Spill Response Plan. The process was facilitated by Eric Deselich of Tetra Tech courtesy of USEPA Region 7. The strategic plan was developed through a series of three meetings in April, June, and August 2021 with the draft plan completed during the UMR Spills Group’s November 30, 2021 meeting. The draft plan is provided on pages F-1 to F-14 of the agenda packet.

Ellis provided an overview of the strategic plan’s five primary goals, which are to:

- Develop guidance for stakeholders
- Support coordination and communication activities
- Garner participation from additional stakeholder groups
- Ensure sufficient resources to maintain services and attain group goals
- Identify technology and resources to advance group interests

As chair of the UMR Spills Group, Mike Rose spoke to the value of the process and thanked UMRBA for its leadership roles and USEPA for providing facilitation services. Rose expounded on the value as validating and managing the Spills Group's work, including defining roles and responsibilities, identifying and prioritizing action items, and supporting members' workload planning. Rose discussed the need to undergo a marketing strategy to communicate the importance of the Spills Group, including the relevance to stakeholders.

Ellis provided an outlook of activities that the UMR Spills Group is planning to undertake in 2022, including update the UMR Spills Response Plan and Resource Manual, maintaining existing UMR Pool Spill Response Plans, identify a UMR pool to develop a spill response plan in 2023, and support an industry-supported exercise. Additionally, the Spills Group will evaluate how increasing discharge in the river affects spill potential as well as response efforts.

Administrative Issues

Election of Officers

Kirsten Wallace thanked Dru Buntin for his service as Board Chair over the past year. Steve Galarneau moved and Rick Pohlman seconded a motion to nominate Tim Hall to serve as UMRBA Chair, Barb Naramore to serve as UMRBA Vice Chair, and Jason Tidemann to serve as UMRBA Treasurer. The motion for all three nominations carried unanimously by voice vote.

Future Meeting Schedule

May 2022 — St. Louis, Missouri

- UMRBA quarterly meeting — May 24
- UMRR Coordinating Committee quarterly meeting — May 25

August 2022 — Location TBD

- UMRBA quarterly meeting — August 9
- UMRR Coordinating Committee quarterly meeting — August 10

November 2022 — Location TBD

- UMRBA quarterly meeting — November 15
- UMRR Coordinating Committee quarterly meeting — November 16

With no further business, the meeting adjourned at 2:27 p.m.

ATTACHMENT B

Executive Director's Report

- **Executive Director's Report** *(B-1 to B-4)*
- **Treasurer's Quarterly Statement (5/11/2022)** *(B-5)*
- **FY 2022 Budget Report and Balance Sheet (4/01/2022)** *(B-6 to B-8)*



Executive Director's Report May 2022

UMRBA STAFF

Natalie Lenzen joined UMRBA staff as Operations Manager effective April 11, 2022. Margie Daniels retired as UMRBA's Administrative Assistant on April 22, 2022, having served as a member of the Association's staff since the organization's inception in 1981. Daniels was also staff for the UMRBA's predecessor, the Upper Mississippi River Basin Commission since 1976.

UMRBA is hiring a Project Specialist and will distribute an announcement when the position is filled.

Max Ball left UMRBA's OPA staff on April 21, 2022 to take a position with a planning firm. UMRBA is actively filling the vacancy and will disseminate an announcement when the position is filled.

ADVOCACY

UMRS FY 2023 Appropriations and WRDA 2022 Priorities

UMRBA staff continue to engage with Congressional staff to communicate UMRBA priorities for FY 2023 appropriations and WRDA 2022. This includes submitting FY 2023 appropriations requests and underscoring the necessity of PPA reform.

UMR BASIN CHARTER

UMRBA facilitated a scenario planning exercise in spring 2022 that occurred over three phases: 1) each state developed one or two scenarios of a potential out-of-basin diversion within their respective state, 2) states issued a notification and consultation process with states reviewing potential out-of-basin diversion proposal in other states, and 3) review of the Charter provisions in light of the context provided through the suite of scenarios. The exercise was implemented through an *ad hoc* group established to review the Charter provisions and provide the UMRBA Board with any recommendations for revision. On a May 4, 2022 conference meeting, the *ad hoc* provided the Board with an initial overview of the process and associated conclusions and recommendations.

ECOSYSTEM HEALTH

Upper Mississippi River Restoration

2022 Report to Congress

On May 6, 2022, the UMRR Coordinating Committee and contributors to the 2022 UMRR Report to Congress met virtually to review comments received on the report and suggested revisions in light of those comments. A second draft report was provided to the UMRR Coordinating Committee on March 28, 2022 for a month-long review. The report was also provided to non-governmental partners in April for an eight-day review period.

It is anticipated that a draft report will be provided to Corps Headquarters in June for a review, after which the UMRR Coordinating Committee will consider any revision based on feedback and provide a final report to Headquarters in October 2022.

In follow up to a series of discussion on various implementation issues, the UMRR Coordinating Committee has been reviewing issue papers relating to engaging non-traditional project sponsors, project partnership agreements, water level management, floodplain regulations, watershed inputs and climate change, external communications, land acquisition, and federal easement lands.

UMRBA's involvement in the report development is provided through a support services contract specific to the 2022 Report to Congress.

2015-2025 Strategic Plan

On April 29, 2022, UMRBA provided report on the broad partnership's review of progress achieved in implementing the 2015-2022 UMRR Strategic Plan as well as priorities for strategic implementation during the remainder of the plan's life. Staff will provide a brief of the survey results to the UMRR Coordinating Committee during its May 25, 2022 quarterly meeting and will facilitate a follow-on discussion to dive deeper into the results.

LTRM-Related Initiatives

UMRBA staff are participating in an implementation planning process for LTRM, focusing on the potential to expand knowledge of the UMRS and to inform ecosystem restoration and management. The objective is to work under the umbrella of the 2015-2025 UMRR Strategic Plan to identify specific unmet information and research needs and determine a set of priority actions to address those needs. Planning meetings occurred on March 31, April 7, and May 5, 2022.

UMRBA staff continue to work with UMRR partners in developing a press release regarding the third long term resource monitoring status and trends report that will be jointly issued by the Corps' Rock Island District and UMESC. As a next step, the UMRR partners will coordinate complimentary dissemination of the press release through their various media connections and other communications channels. This work is in preparation of the report's publication.

Navigation and Ecosystem Sustainability Program

On April 26-28, 2022, the NESP implementing agency partners met in Davenport, Iowa to discuss partner consultation expectations and organize around a suite of next steps. Participants discussed the magnitude of the investment needs over a 15-year planning horizon, broad implementation challenges, and new ways of doing business that will be require to meet the opportunities. UMRBA provided facilitation services through Brian Stenquist of *Meeting Challenges*.

NAVIGATION

Inland Waterways Users Board

UMRBA staff attended the April 20, 2022 Inland Waterways Users Board (IWUB) meeting. It was the IWUB's first meeting since 2020 and the first meeting since NESP received its construction new start. The agenda included an update of the Capital Investment Strategy, status of the Inland Waterway Trust Fund and ongoing projects, and a discussion of supply chain implications to inland waterways. ASA(CW) Michael Connor attended the meeting.

HAZARDOUS SPILLS COORDINATION, MAPPING, AND PLANNING

Oil Pollution Act (OPA) Planning and Mapping

UMRBA finalized the Wisconsin statewide ISA update, including aboveground oil storage facilities, pipelines, boat accesses, and non-navigational dams. Other work accomplished by UMRBA staff since February 2022 include the following:

- Incorporated updates from the Great Lakes Commission for Indiana aboveground storage facilities into the regional geodatabase, submitting the updated geodatabase to USEPA Region 5 on May 6, 2022.
- Supported the Minneapolis/St. Paul sub-area planning meeting in St. Paul, MN on May 10, 2022. The meeting was held as a hybrid of in-person and virtual attendance.
- Supported the Regional Response Team 5 semi-annual subcommittee and general meetings on April 27-28, 2022.
- Participated in Mapping Group conference calls on March 7, April 4, and May 2, 2022.

Upper Mississippi River Hazardous Spills Coordination Group (UMR Spills Group)

UMRBA hosted the semi-annual UMR Spills Group meeting on April 12, 2022. The meeting focused on completing the update of the UMR Spill Response Plan and Resource Manual. The Group aims to gather member signatures by the end of 2022. Activities for 2022 include prioritizing UMR Pool Spill Response Plan updates, identification of a Pool response plan to complete in 2023, and completion of Pools 25-26 response strategies that were delayed by the pandemic.

UMRBA met with USEPA Region 5 environmental justice staff on March 3, 2022 to review strategic planning processes and discuss equity considerations going forward.

WATER QUALITY

WQTF Meeting

The UMRBA WQTF met on March 4, 2022 virtually to discuss scoping of a potential emerging contaminants monitoring plan for the Upper Mississippi River. The intent is to consider the inclusion of emerging contaminant monitoring within the Interstate Water Quality Monitoring Plan. The meeting included a briefing from UMRBA staff on current knowledge related to emerging contaminants, including potential chemicals of interest and an eaglet study by Wisconsin DNR and other information from USEPA and USGS.

Clean Water Act 303(d) Program

UMRBA staff participated in a series of workshops on April 11 and 19, 2022 hosted by the Environmental Law Institute focusing on climate change and environmental justice within the CWA 303(d) program. The purpose of the April 11 workshop was to “identify effective ways to make water quality impairment determinations, TMDLs, and other restoration and protection plans more resilient and better support adaptation to climate change.” The purpose of the April 19 workshop was to “identify effective ways that water quality impairment determinations, TMDLs, and other restoration and protection plans, as well as CWA 303(d) Program engagement, collaborations, and

communications, can better contribute to achieving environmental justice.” Both workshops included a series of presentations from programs and projects across the nation.

General Activities

UMRBA staff participated in the following engagements:

- Upper Mississippi River Conservation Committee (UMRCC) March 22 Water Quality Tech Section, presenting on UMRBA’s UMR Interstate Water Quality Monitoring Plan as well as other state water quality monitoring on the river
- USEPA Region 5 April 28 conference call regarding harmful algal blooms
- Interstate Technology and Regulatory Council (IRTC) April 28-28 trainings regarding management of harmful algal bloom (i.e., cyanobacteria and benthic cyanobacteria)
- Lower Mississippi River Science Symposium on March 11
- Environmental Law Institute/USEPA April 9 workshop on climate change

COLLABORATION

Interstate Council on Water Policy

UMRBA staff attended the Interstate Council on Water Policy’s April 5-7, 2022 Washington D.C. Roundtable. The meeting was held jointly with Western States Water Council and the National Water Supply Alliance. The agenda included presentations on federal water resources programs, non-federal entities advancing water resource initiatives, states working collaboratively to address joint water resource planning needs, and panels on groundwater management, water supply forecasting, and basinwide water planning and climate resilience. A Congressional panel spoke about the IJA and annual appropriations process. Additionally, federal agency leaders spoke about the Administration’s priorities related to land conservation, climate change, science, and environmental justice.

FINANCIAL REPORT

Attached as page B-X is UMRBA Treasurer Jason Tidemann’s statement regarding his review of UMRBA’s financial statement for the period of February 1, 2022 to April 1, 2022.

Attached as pages B-X to B-X are UMRBA’s FY 2022 budget report and balance sheet. As of [DATE], 2022, ordinary income for FY 2022 totaled \$X and expenses totaled \$X for net ordinary income of \$X. As of this date, UMRBA’s cash assets totaled \$X.

Natalie Lenzen

From: Tidemann, Jason (DNR) <jason.tidemann@state.mn.us>
Sent: Wednesday, May 11, 2022 1:54 PM
To: Kirsten Wallace
Cc: Natalie Lenzen
Subject: RE: UMRBA February 2022 to April 2022 Treasurer Report

Hello Kirsten,

As Treasurer, I have reviewed the monthly financial statements for the period 2/1/22-4/1/22. Activity reported on the Balance Sheet, Profit/Loss Budget Overview, Check Register, Visa statements and Open Invoices Report provide a reasonable and consistent representation of the monthly financial activity for the referenced period.

Jason Tidemann

11:31 AM

04/01/22

Accrual Basis

Upper Mississippi River Basin Association
FY 2022 Profit & Loss Budget Overview
 July 1, 2021 through April 1, 2022

	Jul 1, '21 - Apr 1, 22	Budget	\$ Over Budget
Ordinary Income/Expense			
Income			
Contracts and Grants			
COE (UMRR)	32,077.34	91,242.82	-59,165.48
COE (RTC)	0.00	56,000.00	-56,000.00
EPA (OPA)	110,452.80	225,000.00	-114,547.20
USEPA (OWOW)	0.00	4,300.00	-4,300.00
Interstate WQ Pilot	23,683.25	86,400.00	-62,716.75
WQ Trends Report	0.00	5,500.00	-5,500.00
Missouri DoC (WLM)	901.79	7,000.00	-6,098.21
Total Contracts and Grants	167,115.18	475,442.82	-308,327.64
State Dues			
Illinois Dues	61,500.00	61,500.00	0.00
Iowa Dues	46,125.00	61,500.00	-15,375.00
Minnesota Dues	61,500.00	61,500.00	0.00
Missouri Dues	61,500.00	61,500.00	0.00
Wisconsin Dues	61,500.00	61,500.00	0.00
WQ Assessment	102,500.00	102,500.00	0.00
Total State Dues	394,625.00	410,000.00	-15,375.00
Interest Income			
Short Term Interest			
Short Term (Checking)	124.41	0.00	124.41
Short Term (Savings)	60.56	60.00	0.56
Short Term (Sweep)	0.00	1.00	-1.00
Short Term (CD)	0.00	4,000.00	-4,000.00
Total Short Term Interest	184.97	4,061.00	-3,876.03
Total Interest Income	184.97	4,061.00	-3,876.03
Total Income	561,925.15	889,503.82	-327,578.67
Expense			
Gross Payroll			
Salary	235,762.04	337,357.86	-101,595.82
UMRBA Time Wages	7,771.25	12,000.00	-4,228.75
OPA Wages	51,123.71	153,900.00	-102,776.29
Benefits	58,940.60	84,339.47	-25,398.87
Benefits UMRBA Time	0.00	1,200.00	-1,200.00
Benefits OPA	2,318.50	4,037.30	-1,718.80
Total Gross Payroll	355,916.10	592,834.63	-236,918.53
Payroll Expenses			
SocSec Company	21,841.32	36,755.75	-14,914.43
Medicare Company	5,382.63	8,596.10	-3,213.47
SUTA (Minnesota UC)	743.63	296.42	447.21
Workforce Enhancement Fee	157.12	296.42	-139.30
Total Payroll Expenses	28,124.70	45,944.69	-17,819.99
Travel	3,671.96	12,000.00	-8,328.04
Space Rental			
Office Rental	38,311.74	51,000.00	-12,688.26
Total Space Rental	38,311.74	51,000.00	-12,688.26

11:31 AM

04/01/22

Accrual Basis

Upper Mississippi River Basin Association
FY 2022 Profit & Loss Budget Overview
 July 1, 2021 through April 1, 2022

	Jul 1, '21 - Apr 1, 22	Budget	\$ Over Budget
Reproduction			
Copy Service	483.87	1,360.00	-876.13
Printing	0.00	500.00	-500.00
Total Reproduction	483.87	1,860.00	-1,376.13
Meeting Expenses	10,091.59	15,000.00	-4,908.41
Supplies	1,611.50	3,000.00	-1,388.50
Equipment			
Equipment (Maint./Rental)	964.13	1,600.00	-635.87
Total Equipment	964.13	1,600.00	-635.87
Legal and Financial			
Insurance	4,082.95	6,200.00	-2,117.05
Legal and Tax Services	14,215.00	17,000.00	-2,785.00
Bank Charges	69.00	10.00	59.00
Total Legal and Financial	18,366.95	23,210.00	-4,843.05
Telephone/Communications	12,504.67	6,500.00	6,004.67
Postage	157.56	1,200.00	-1,042.44
Other Services	3,824.00	7,000.00	-3,176.00
Publications	9,706.00	19,000.00	-9,294.00
State Travel Reimbursement			
Illinois	0.00	5,000.00	-5,000.00
Iowa	222.54	5,000.00	-4,777.46
Minnesota	0.00	5,000.00	-5,000.00
Missouri	0.00	5,000.00	-5,000.00
Wisconsin	0.00	5,000.00	-5,000.00
State WQ Travel	0.00	3,500.00	-3,500.00
Total State Travel Reimbursement	222.54	28,500.00	-28,277.46
OPA Expenses			
Equipment OPA	0.00	1,000.00	-1,000.00
Equipment (Maint./Rental) OPA	7,993.10	6,500.00	1,493.10
Travel OPA	828.64	2,800.00	-1,971.36
Other OPA	0.00	800.00	-800.00
Total OPA Expenses	8,821.74	11,100.00	-2,278.26
Interstate WQ Expenses			
Travel Interstate WQ	0.00	500.00	-500.00
Data Collection/Analysis IntWQ	17,644.46	58,200.00	-40,555.54
Other Interstate WQ	133.75	1,000.00	-866.25
Total Interstate WQ Expenses	17,778.21	59,700.00	-41,921.79
Total Expense	510,557.26	879,449.32	-368,892.06
Net Ordinary Income	51,367.89	10,054.50	41,313.39
Net Income	51,367.89	10,054.50	41,313.39

11:34 AM

Upper Mississippi River Basin Association

Balance Sheet

04/01/22

As of April 1, 2022

Accrual Basis

	Apr 1, 22
ASSETS	
Current Assets	
Checking/Savings	
Checking HT 2732	143,142.31
Savings HT 2575	337,211.40
Investment	
CD	406,361.81
Total Investment	406,361.81
Total Checking/Savings	886,715.52
Accounts Receivable	
Contract/grants	
Invoiced/Billable	2,102.53
Total Contract/grants	2,102.53
Total Accounts Receivable	2,102.53
Other Current Assets	
Prepaid Expense	
Office Rental Prepaid Expense	3,868.01
Total Prepaid Expense	3,868.01
Total Other Current Assets	3,868.01
Total Current Assets	892,686.06
Fixed Assets	
Accum. Deprec. UMRBA	-33,321.09
Accum. Deprec. OPA	-21,703.53
Accum. Deprec. WQ	-1,290.00
Accum. Deprec. 604(b)	-568.95
Accum. Deprec. STC	-2,989.68
UMRBA Equipment	33,455.89
OPA Equipment	21,705.26
WQ Equipment	1,290.47
604(b) Equipment	568.95
STC Equipment	2,989.68
Total Fixed Assets	137.00
TOTAL ASSETS	892,823.06
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Credit Cards	
Visa Chase 5294	2,476.66
Total Credit Cards	2,476.66
Other Current Liabilities	
Deferred MO DoC (WLM) Revenue	4,206.05
Direct Deposit Liabilities	-14,915.44
Payroll Liabilities	
SUTA (Minnesota UC)	674.01
Workforce Enhancement Fee	87.50
Accrued Vacation	54,764.70
Accrued Vacation FICA	4,189.50
Total Payroll Liabilities	59,715.71
Total Other Current Liabilities	49,006.32
Total Current Liabilities	51,482.98
Total Liabilities	51,482.98
Equity	
Retained Earnings	789,972.19
Net Income	51,367.89
Total Equity	841,340.08
TOTAL LIABILITIES & EQUITY	892,823.06

ATTACHMENT C

Inland Waterways Capital Investment Strategy Updates

(3-29-2022)

(C-1 to C-3)



INITIAL RANKING – CATEGORY 1 & 2



Category 1
Ongoing construction

Project Title	Project Location	State
Olmsted Locks and Dam	Ohio River	IL
Locks and Dams 2, 3, and 4, Monongahela River Navigation Project	Monongahela River	PA
Kentucky Lock Addition	Tennessee River	KY
Chickamauga Lock	Tennessee River	TN
Three Rivers ¹	MKARNS	AR
Montgomery Locks and Dam ¹	Upper Ohio River	PA
NESP Lock 25 ²	Mississippi River	MO
Thomas O'Brien Lock & Dam major rehabilitation ²	Illinois Waterway	IL
Emsworth Locks and Dam ²	Ohio River	PA
MKARNS 12 ft. channel ²	MKARNS	AR / OK

Category 2
Next Construction
Projects

Tier	Project Title	Project Location	State
A	NESP LaGrange Lock & Dam	Illinois Waterway	IL
A	Brazos River Floodgates ³	GIWW	TX
A	NESP Lock 24	Mississippi River	MO
B	NESP Lock 22	Mississippi River	MO
C	NESP Lock 21	Mississippi River	IL
C	Dashiields Lock	Ohio River	PA
C	NESP Peoria Lock	Illinois Waterway	MO
D	Colorado River Locks ³	GIWW	TX
D	NESP Lock 20	Mississippi River	MO

Notes: Blue font represents changes from 2020 CIS.

1. New start in FY 2021
2. New Start in FY 2022
3. New start required

Revised March 29, 2022

Tiers represent projects with similar priority



CATEGORY 3 ONGOING STUDIES



Project Title	Project Location	Status
Brandon Road L&D	Illinois Waterway	Ongoing MRR study
David D. Terry L&D (No. 6)	MKARNS	Ongoing MRR study
Dresden Island L&D	Illinois Waterway	Ongoing MRR study
GIWW Coastal Resiliency Study, TX	GIWW	Ongoing study. Fully funded in FY 2020.
GIWW, High Island to Brazos River, TX	GIWW	Study ongoing.
Greenup Lock	Ohio River	MRR study initiated in FY 21
Inner Harbor Navigation Canal Lock	New Orleans, LA	Study ongoing
Lock & Dam 18	Mississippi River	Ongoing MRR study
Marmet Lock	Ohio River	MRR study initiated in FY22
Meldahl L&D	Ohio River	MRR study initiated in FY21
New Cumberland Lock	Ohio River	MRR study initiated in FY22
Pike Island L&D	Ohio River	MRR study initiated in FY 20
Robert S. Kerr L&D	MKARNS	MRR study initiated in FY22
Starved Rock L&D	Illinois Waterway	Ongoing MRR study
Webbers Fall L&D	MKARNS	MRR study initiated in FY22
Winfield Lock & Dam	Kanawha River	Ongoing MRR study

Notes:

1. Changes from 2020 CIS shown in blue font.
2. Studies are funded by Investigations for specifically authorized studies and O&M for major rehabilitations.
3. Projects listed in alphabetical order.
4. Revisions from 2020 CIS report are denoted in blue font. Additional changes from 2020 CIS Report:
 - a. Calcasieu Lock study was removed from list because the study was closed due to lack of benefits and no further action was planned.
 - b. GIWW, Port O'Connor to Corpus Christi Bay study was removed from list since the study was closed and no further action was planned.



CATEGORY 4 POTENTIAL STUDIES



<u>Project Name</u>	<u>Location</u>	<u>Description</u>
Bayou Sorrel Lock	GIWW	Requires new study authorization. New study needed to re-evaluate benefits using current waterborne data.
Belleville Locks	Ohio River	Potential MRR
Braddock L&D	Monongahela River	Potential MRR
Hannibal Locks	Ohio River	Potential MRR
Lock No. 2 & Mills Dam	MKARNS	Potential MRR
London Lock	Kanawha River	Potential MRR
Marmet Dam	Kanawha River	Potential MRR
Melvin Price Locks & Dam	Mississippi River	Potential MRR
Ozark-Jeta Taylor L&D	MKARNS	Potential MRR
Racine Locks	Ohio River	Potential MRR
Willow Island Lock	Ohio River	Potential MRR

Notes:

1. Changes from 2020 CIS shown in blue font.
2. This list of potential studies was submitted by districts for consideration. Prior to funding the major rehabilitation study reports, the potential study requires screening to validate the potential.
3. Projects listed in alphabetical order.

ATTACHMENT D

Bottomland Forest Avian Monitoring

- **Executive Summary of USACE and Audubon UMR Bottomland Forest Avian Stewardship Plan (10-2018)** *(D-1 to D-2)*
- **Audubon website:** <https://riverlands.audubon.org/conservation/bottomland-forest-avian-monitoring>

Upper Mississippi River Bottomland Forest Avian Stewardship Plan

The Audubon Center at Riverlands
The U.S. Army Corps of Engineers, St. Louis District,
Rivers Project Office



**US Army Corps
of Engineers**®
St. Louis District



Audubon

Audubon Center
at Riverlands

October 2018

I. Executive Summary

Introduction

The U.S. Army Corps of Engineers (hereafter Corps) has a mission to manage and conserve natural resources, consistent with ecosystem management principles, while providing quality public outdoor recreation experiences that contribute to the quality of American life. On the Upper Mississippi River System (UMRS) the Corps monitors and manages a diverse array of wildlife on over 150,000 acres of forests, wetlands and grasslands. These public lands are managed in partnership with many; including non-governmental organizations and state and federal agencies.

More locally the Corps' Rivers Project Office, in West Alton, MO manages approximately 49,000 acres of floodplain habitat in the St. Louis District from Saverton, MO downstream to Cairo, IL and on the lower 80 miles of the Illinois River.

The mission of the National Audubon Society (NAS) and the Audubon Center at Riverlands (hereafter Audubon) is to conserve and restore natural ecosystems, focusing on birds, other wildlife, and their habitats for the benefit of humanity and the earth's biological diversity. Audubon's years of successes include ecosystem-wide conservation focused on protection and restoration of the nation's most special places from Alaska's Tongass to Sagebrush country and the Louisiana Coast. Audubon is now using 100-plus years of experience to ensure a sustainable future for the Mississippi River and its birds and other wildlife.

Opened in 2011, the Audubon Center at Riverlands is a key component of NAS's Upper Mississippi Program and a unique partnership with the Corps' Rivers Project Office. The Center is located in the 3,700-acre Riverlands Migratory Bird Sanctuary, which was established in 1988 and is owned and managed by the Corps. The Center and the Sanctuary are located on the Mississippi River near the confluence with the Missouri River and 18 miles from the confluence with the Illinois River. The Audubon and Corps partnership provides a powerful platform to use science, education, and advocacy to protect these vital natural resources.

Toward this end, in 2012 Audubon and the Corps jointly initiated an avian monitoring program for bottomland forests on 49,000 acres of public lands managed by the Corps' St. Louis District. These lands are interspersed along 180 miles of the Mississippi and Illinois rivers from the Sanctuary in West Alton north to Saverton, Missouri. This area includes the Great Rivers Confluence Important Bird Area (IBA), the Lincoln Alluvial Complex IBA, and the Ted Shanks Alluvial Complex IBA, all of which were identified by the Audubon Missouri IBA Technical Report in 2006 as critical for monitoring and protecting birds. Human encroachment, adverse land management and agricultural practices, invasive species and other unsustainable development have significantly reduced these once vast bottomland forest systems.

ATTACHMENT E

UMR Basin Charter (10-2-1989)

(E-1 to E-4)

THE UPPER MISSISSIPPI RIVER BASIN CHARTER

PRINCIPLES FOR THE MANAGEMENT OF UPPER MISSISSIPPI RIVER BASIN WATER RESOURCES AND NOTIFICATION AND CONSULTATION PROCESS GUIDELINES

FINDINGS

The Governors of the signatory Upper Mississippi River Basin States jointly find and declare that:

The water resources of the Upper Mississippi River Basin are precious natural resources. The Basin's water uses include municipal, industrial, and agricultural water supply; navigation; hydroelectric power and energy production; recreation; mining; and the maintenance of fish and wildlife habitat. The Basin States have a duty to protect, conserve, develop, and manage the water resources of the Basin.

The water resources of the Upper Mississippi River Basin comprise a valuable regional and national resource. The Upper Mississippi river system is a multi-purpose system with two Congressional mandates; it is managed both for commercial navigation and as a national wildlife refuge. The States in partnership with the federal government of the United States share a continuing and abiding responsibility to maintain and enhance all aspects of this multipurpose system. Without careful and prudent management, future diversions of the water resources of the Upper Mississippi River Basin may have significant adverse impacts on the environment, economy, and welfare of the region.

Management of the water resources of the Upper Mississippi River Basin is subject to the jurisdiction, rights, and responsibilities of each Basin State. Effective management of the water resources of the Basin requires the Basin States to exercise their jurisdiction, rights, and responsibilities in the interest of all of the people of the region through a continuing spirit of comity and mutual cooperation.

A preferred means to achieve effective management of the water resources of the Upper Mississippi River Basin is through the joint pursuit of unified and cooperative principles and policies mutually agreed upon and adhered to by the States of the Upper Mississippi River Basin.

PURPOSE

The purposes of this charter are to conserve the levels and flows of the water resources; to protect the environmental ecosystem; to secure present development; to provide a foundation for future investment and development; and to assure all significant benefits and impacts are considered before a decision is made.

**PRINCIPLES FOR THE MANAGEMENT
OF THE UPPER MISSISSIPPI RIVER BASIN WATER RESOURCES**

In order to achieve the purposes of this Charter, the Governors of the signatory Upper Mississippi River Basin States agree, subject to the laws of each state, that:

**Principle I
Integrity of the Upper Mississippi River Basin**

The water resources of the Upper Mississippi River Basin shall be managed for the wise use, benefit, and enjoyment of all citizens of the Basin. The planning and management of the water resources of the Upper Mississippi River Basin shall recognize that the water resources of the Upper Mississippi River Basin transcend political boundaries within the Basin and should be conserved and provided for beneficial uses including navigation, recreation, municipal and industrial water supply, irrigation, hydroelectric power and energy production, water quality, mining, maintenance of fish and wildlife habitat, aquatic ecosystem, and other instream and withdrawal uses.

**Principle II
Notification and Consultation**

The signatory states agree that it is the intent of the states that interbasin diversion of water resources will not be supported if individually or cumulatively they would have significant adverse impact on instream flows, in-basin uses, and the basin ecosystem.

Any state having knowledge of a proposal for a new or increased diversion of water which will exceed 5 million gallons per day average in any 30 day period from the waters of the Upper Mississippi River Basin to another basin shall notify and offer to consult with all signatory states in order to allow all signatory states to express their concerns, identify their interests, develop where possible mutually acceptable agreements, or take such other actions as they may find appropriate.

**Principle III
Cooperation Among States**

The Governors agree to pursue such additional agreements as may be necessary to promote greater cooperation with respect to any new or increased interbasin diversions of Mississippi River Basin waters.

**Principle IV
Reservation of States Rights**

The signatory States mutually recognize the rights and standings of each other to represent and protect the rights of their respective jurisdictions. Each State reserves and retains all rights and authority to seek, in any state, federal, or other appropriate court or forum, adjudication or protection of their respective rights.

NOTIFICATION AND CONSULTATION PROCESS GUIDELINES

1) State Appointments

- Each signatory state shall designate a contact person for the state's involvement in the notification and consultation process.
- The Upper Mississippi River Basin Association shall compile and maintain a mailing list.

2) Notification

- Notice shall be given to all signatory states of an anticipated diversion which exceeds 5 million gallons per day average in any 30 day period.
- The notice shall include at a minimum:
 - a) name, location, and sending and receiving waterbodies or basins
 - b) list of applicable permits
 - c) purpose of water use
 - d) method of measurement
 - e) request for comments

3) Comments/Objections

Comments or objections from the signatory states:

- a) shall be submitted by the Governor or his representative within 45 days
- b) should be based on hydrologic, economic, or environmental concerns
- c) may include a request for a consultation meeting

4) Consultation

- The originating state shall schedule and conduct a consultation meeting when a letter of objection has been received and a consultation meeting requested.
- The originating state shall provide a minimum 30 day notice of the meeting to the Governors or their representatives.
- The originating state shall be responsible for preparation of the agenda, chairing of the meeting, and preparation of notes of the meeting.
- The consultation meeting shall include opportunities for description of the proposed diversion, presentation of basin states positions, and discussion.

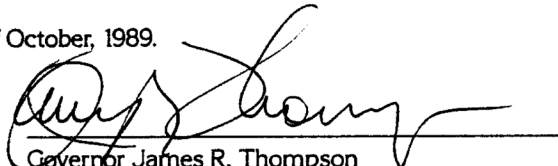
5) Decision

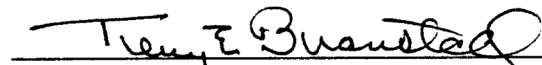
- If no objections are received, the originating state shall make its decision on the proposed withdrawal and inform the signatory states.
- If objections are received, whether or not a consultation meeting is convened, the originating state shall:
 - a) distribute to signatory states a summary of the consultation discussion and comments and a draft response to the diversion request.
 - b) allow 30 days for comments from the signatory states.
 - c) consider comments received.
 - d) distribute the final disposition of the diversion request to all signatory states within 15 days after the final decision has been made.

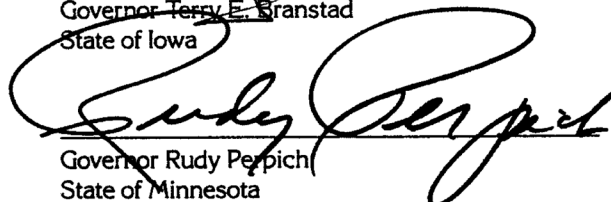
6) Annual Review

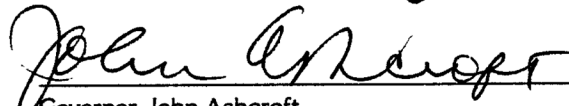
At each annual meeting of the Upper Mississippi River Basin Association each state shall report on its involvement with diversion requests.

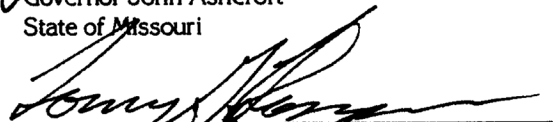
Signed at Milwaukee, Wisconsin this 2nd day of October, 1989.


Governor James R. Thompson
State of Illinois


Governor Terry E. Branstad
State of Iowa


Governor Rudy Perpich
State of Minnesota


Governor John Ashcroft
State of Missouri


Governor Tommy Thompson
State of Wisconsin

ATTACHMENT F

Illinois Silver Jackets Project Report (5-24-2022)

(F-1)

Upper Mississippi River Basin Association

05/24/2022

Topic: Illinois Silver Jackets Projects

Prepared by IDNR – Office of Water Resources

Summary:

Silver Jackets teams bring together multiple state, federal, and local agencies to learn from one another in reducing risk from floods. By applying their shared knowledge, the teams enhance preparedness, mitigation, and response and recovery efforts when such events do occur. No single agency has all the answers, but leveraging multiple programs and perspectives can provide a cohesive solution.

Program Goals:

- Facilitate strategic life-cycle flood risk reduction.
- Create or supplement a continuous mechanism to collaboratively solve state-prioritized issues and implement or recommend those solutions.
- Improve processes, identifying and resolving gaps and counteractive programs.
- Leverage and optimize resources.
- Improve and increase flood risk communication and present a unified interagency message.
- Establish close relationships to facilitate integrated post-disaster recovery solutions.

Types of Projects:

- Data Collection and Mapping Tools
- Flood Preparedness and Evacuation Plans
- Structural Flood Damage and Watershed Risk Assessments
- Development of Partnerships/Alliances
- Levee Breach Analysis
- Loss Avoidance Study
- Flood Plain Management Plan

Highlighted Project:

Structures at Flood Risk (SAFR) Risk Assessments in IL

The SAFR web mapping tool illustrates the potential flood depths and costs associated with various flood events. This additional risk information helps leaders make informed decisions for all levels of flood management. They can also share this information with their community members to educate them about their personal flood risk. So far, we have completed this work for the Upper MS River. The goal is to continue collecting data and mapping all the flood-prone structures in the state and uploading them all to the SAFR site.

Storymap: <https://storymaps.arcgis.com/stories/0db0525de78f4d87a224d3c1f92f6a82>

ATTACHMENT G

Additional Items

- **Future Meeting Schedule** *(G-1)*
- **Frequently Used Acronyms (4-29-2022)** *(G-2 to G-8)*

**QUARTERLY MEETINGS
FUTURE MEETING SCHEDULE**

AUGUST 2022

To be determined

August 9 UMRBA Quarterly Meeting

August 10 UMRR Coordinating Committee Quarterly Meeting

NOVEMBER 2022

To be determined

November 15 UMRBA Quarterly Meeting

November 16 UMRR Coordinating Committee Quarterly Meeting

Acronyms Frequently Used on the Upper Mississippi River System

AAR	After Action Report
A&E	Architecture and Engineering
ACRCC	Asian Carp Regional Coordinating Committee
AFB	Alternative Formulation Briefing
AHAG	Aquatic Habitat Appraisal Guide
AHRI	American Heritage Rivers Initiative
AIS	Aquatic Invasive Species
ALC	American Lands Conservancy
ALDU	Aquatic Life Designated Use(s)
AM	Adaptive Management
ANS	Aquatic Nuisance Species
AP	Advisory Panel
APE	Additional Program Element
ARRA	American Recovery and Reinvestment Act
ASA(CW)	Assistant Secretary of the Army for Civil Works
A-Team	Analysis Team
ATR	Agency Technical Review
AWI	America's Watershed Initiative
AWO	American Waterways Operators
AWQMN	Ambient Water Quality Monitoring Network
BA	Biological Assessment
BATIC	Build America Transportation Investment Center
BCOES	Bid-ability, Constructability, Operability, Environmental, Sustainability
BCR	Benefit-Cost Ratio
BMPs	Best Management Practices
BO	Biological Opinion
CAP	Continuing Authorities Program
CAWS	Chicago Area Waterways System
CCC	Commodity Credit Corporation
CCP	Comprehensive Conservation Plan
CEICA	Cost Effectiveness Incremental Cost Analysis
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CFS	Cubic Feet Per Second
CG	Construction General
CIA	Computerized Inventory and Analysis
CMMP	Channel Maintenance Management Plan
COE	Corps of Engineers
COPT	Captain of the Port
CPUE	Catch Per Unit Effort
CRA	Continuing Resolution Authority
CREP	Conservation Reserve Enhancement Program
CRP	Conservation Reserve Program

CSP	Conservation Security Program
CUA	Cooperative Use Agreement
CWA	Clean Water Act
CY	Cubic Yards
DALS	Department of Agriculture and Land Stewardship
DED	Department of Economic Development
DEM	Digital Elevation Model
DET	District Ecological Team
DEWS	Drought Early Warning System
DMMP	Dredged Material Management Plan
DNR	Department of Natural Resources
DO	Dissolved Oxygen
DOA	Department of Agriculture
DOC	Department of Conservation
DOER	Dredging Operations and Environmental Research
DOT	Department of Transportation
DPR	Definite Project Report
DQC	District Quality Control/Quality Assurance
DSS	Decision Support System
EA	Environmental Assessment
ECC	Economics Coordinating Committee
EEC	Essential Ecosystem Characteristic
EIS	Environmental Impact Statement
EMAP	Environmental Monitoring and Assessment Program
EMAP-GRE	Environmental Monitoring and Assessment Program-Great Rivers Ecosystem
EMP	Environmental Management Program [Note: Former name of Upper Mississippi River Restoration Program.]
EMP-CC	Environmental Management Program Coordinating Committee
EO	Executive Order
EPA	Environmental Protection Agency
EPM	Environmental Pool Management
EPR	External Peer Review
EQIP	Environmental Quality Incentives Program
ER	Engineering Regulation
ERDC	Engineering Research & Development Center
ESA	Endangered Species Act
EWMN	Early Warning Monitoring Network
EWP	Emergency Watershed Protection Program
FACA	Federal Advisory Committee Act
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FDR	Flood Damage Reduction
FFS	Flow Frequency Study
FMG	Forest Management Geodatabase
FONSI	Finding of No Significant Impact

FRM	Flood Risk Management
FRST	Floodplain Restoration System Team
FSA	Farm Services Agency
FTE	Full Time Equivalent
FWCA	Fish & Wildlife Coordination Act
FWIC	Fish and Wildlife Interagency Committee
FWS	Fish and Wildlife Service
FWWG	Fish and Wildlife Work Group
FY	Fiscal Year
GAO	Government Accountability Office
GEIS	Generic Environmental Impact Statement
GI	General Investigations
GIS	Geographic Information System
GLC	Governors Liaison Committee
GLC	Great Lakes Commission
GLMRIS	Great Lakes and Mississippi River Interbasin Study
GPS	Global Positioning System
GREAT	Great River Environmental Action Team
GRP	Geographic Response Plan
H&H	Hydrology and Hydraulics
HAB	Harmful Algal Bloom
HEC-EFM	Hydrologic Engineering Center Ecosystems Function Model
HEC-RAS	Hydrologic Engineering Center River Analysis System
HEL	Highly Erodible Land
HEP	Habitat Evaluation Procedure
HNA	Habitat Needs Assessment
HPSF	HREP Planning and Sequencing Framework
HQUSACE	Headquarters, USACE
H.R.	House of Representatives
HREP	Habitat Rehabilitation and Enhancement Project
HSI	Habitat Suitability Index
HU	Habitat Unit
HUC	Hydrologic Unit Code
IBA	Important Bird Area
IBI	Index of Biological (Biotic) Integrity
IC	Incident Commander
ICS	Incident Command System
ICWP	Interstate Council on Water Policy
IDIQ	Indefinite Delivery/Indefinite Quantity
IEPR	Independent External Peer Review
IGE	Independent Government Estimate
IIA	Implementation Issues Assessment
IIFO	Illinois-Iowa Field Office (formerly RIFO - Rock Island Field Office)
ILP	Integrated License Process
IMTS	Inland Marine Transportation System

IPR	In-Progress Review
IRCC	Illinois River Coordinating Council
IRPT	Inland Rivers, Ports & Terminals
IRTC	Implementation Report to Congress
IRWG	Illinois River Work Group
ISA	Inland Sensitivity Atlas
IWR	Institute for Water Resources
IWRM	Integrated Water Resources Management
IWS	Integrated Water Science
IWTF	Inland Waterways Trust Fund
IWUB	Inland Waterways Users Board
IWW	Illinois Waterway
L&D	Lock(s) and Dam
LC/LU	Land Cover/Land Use
LDB	Left Descending Bank
LERRD	Lands, Easements, Rights-of-Way, Relocation of Utilities or Other Existing Structures, and Disposal Areas
LiDAR	Light Detection and Ranging
LMR	Lower Mississippi River
LMRCC	Lower Mississippi River Conservation Committee
LOI	Letter of Intent
LTRM	Long Term Resource Monitoring
M-35	Marine Highway 35
MAFC	Mid-America Freight Coalition
MARAD	U.S. Maritime Administration
MARC 2000	Midwest Area River Coalition 2000
MCAT	Mussel Community Assessment Tool
MICRA	Mississippi Interstate Cooperative Resource Association
MDM	Major subordinate command Decision Milestone
MIPR	Military Interdepartmental Purchase Request
MMR	Middle Mississippi River
MMRP	Middle Mississippi River Partnership
MNRG	Midwest Natural Resources Group
MOA	Memorandum of Agreement
MoRAST	Missouri River Association of States and Tribes
MOU	Memorandum of Understanding
MRAPS	Missouri River Authorized Purposes Study
MRBI	Mississippi River Basin (Healthy Watersheds) Initiative
MRC	Mississippi River Commission
MRCC	Mississippi River Connections Collaborative
MRCTI	Mississippi River Cities and Towns Initiative
MRRC	Mississippi River Research Consortium
MR&T	Mississippi River and Tributaries (project)
MSP	Minimum Sustainable Program
MVD	Mississippi Valley Division

MVP	St. Paul District
MVR	Rock Island District
MVS	St. Louis District
NAS	National Academies of Science
NAWQA	National Water Quality Assessment
NCP	National Contingency Plan
NIDIS	National Integrated Drought Information System (NOAA)
NEBA	Net Environmental Benefit Analysis
NECC	Navigation Environmental Coordination Committee
NED	National Economic Development
NEPA	National Environmental Policy Act
NESP	Navigation and Ecosystem Sustainability Program
NETS	Navigation Economic Technologies Program
NGO	Non-Governmental Organization
NGRREC	National Great Rivers Research and Education Center
NGWOS	Next Generation Water Observing System
NICC	Navigation Interests Coordinating Committee
NPDES	National Pollution Discharge Elimination System
NPS	Non-Point Source
NPS	National Park Service
NRC	National Research Council
NRCS	Natural Resources Conservation Service
NRDAR	Natural Resources Damage Assessment and Restoration
NRT	National Response Team
NSIP	National Streamflow Information Program
NWI	National Wetlands Inventory
NWR	National Wildlife Refuge
O&M	Operation and Maintenance
OHWM	Ordinary High Water Mark
OMB	Office of Management and Budget
OMRR&R	Operation, Maintenance, Repair, Rehabilitation, and Replacement
OPA	Oil Pollution Act of 1990
ORSANCO	Ohio River Valley Water Sanitation Commission
OSC	On-Scene Coordinator
OSE	Other Social Effects
OSIT	On Site Inspection Team
P3	Public-Private Partnerships
PA	Programmatic Agreement
PAS	Planning Assistance to States
P&G	Principles and Guidelines
P&R	Principles and Requirements
P&S	Plans and Specifications
P&S	Principles and Standards
PCA	Pollution Control Agency
PCA	Project Cooperation Agreement

PCX	Planning Center of Expertise
PDT	Project Delivery Team
PED	Preconstruction Engineering and Design
PgMP	Program Management Plan
PILT	Payments In Lieu of Taxes
PIR	Project Implementation Report
PL	Public Law
PMP	Project Management Plan
PORT	Public Outreach Team
PPA	Project Partnership Agreement
PPT	Program Planning Team
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RCP	Regional Contingency Plan
RCPP	Regional Conservation Partnership Program
RDB	Right Descending Bank
RED	Regional Economic Development
RIFO	Rock Island Field Office (now IIFO - Illinois-Iowa Field Office)
RM	River Mile
RP	Responsible Party
RPEDN	Regional Planning and Environment Division North
RPT	Reach Planning Team
RRAT	River Resources Action Team
RRCT	River Resources Coordinating Team
RRF	River Resources Forum
RRT	Regional Response Team
RST	Regional Support Team
RTC	Report to Congress
S.	Senate
SAV	Submersed Aquatic Vegetation
SDWA	Safe Drinking Water Act
SEMA	State Emergency Management Agency
SET	System Ecological Team
SMART	Specific, Measurable, Attainable, Risk Informed, Timely
SONS	Spill of National Significance
SOW	Scope of Work
SRF	State Revolving Fund
SWCD	Soil and Water Conservation District
T&E	Threatened and Endangered
TEUs	twenty-foot equivalent units
TIGER	Transportation Investment Generating Economic Recovery
TLP	Traditional License Process
TMDL	Total Maximum Daily Load
TNC	The Nature Conservancy

TSP	Tentatively selected plan
TSS	Total Suspended Solids
TVA	Tennessee Valley Authority
TWG	Technical Work Group
UMESC	Upper Midwest Environmental Sciences Center
UMIMRA	Upper Mississippi, Illinois, and Missouri Rivers Association
UMR	Upper Mississippi River
UMRBA	Upper Mississippi River Basin Association
UMRBC	Upper Mississippi River Basin Commission
UMRCC	Upper Mississippi River Conservation Committee
UMRCP	Upper Mississippi River Comprehensive Plan
UMR-IWW	Upper Mississippi River-Illinois Waterway
UMRNWFR	Upper Mississippi River National Wildlife and Fish Refuge
UMRR	Upper Mississippi River Restoration Program [Note: Formerly known as Environmental Management Program.]
UMRR CC	Upper Mississippi River Restoration Program Coordinating Committee
UMRS	Upper Mississippi River System
UMWA	Upper Mississippi Waterway Association
USACE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VTC	Video Teleconference
WCI	Waterways Council, Inc.
WES	Waterways Experiment Station (replaced by ERDC)
WHAG	Wildlife Habitat Appraisal Guide
WHIP	Wildlife Habitat Incentives Program
WIIN	Water Infrastructure Improvements for the Nation Act
WLM	Water Level Management
WLMTF	Water Level Management Task Force
WQ	Water Quality
WQEC	Water Quality Executive Committee
WQTF	Water Quality Task Force
WQS	Water Quality Standard
WRDA	Water Resources Development Act
WRP	Wetlands Reserve Program
WRRDA	Water Resources Reform and Development Act