



## Upper Mississippi River Basin Association

151st Quarterly Meeting

Agenda

with Background and Supporting Materials

Radisson Hotel La Crosse, Wisconsin



## **Upper Mississippi River Basin Association**

August 20, 2019

Agenda

Time	Attachme	nt Topic	Presenter
9:15 a.m.		Call to Order and Introductions	Rick Pohlman, Illinois DNR
9:20	A1-13	Approval of Minutes of May 21, 2019 Meeting	
9:30	<b>B1-14</b>	Executive Director's Report	Kirsten Wallace, UMRBA
9:45		UMRS Flood, Sediment, Drought Open Sessions	Kirsten Wallace, UMRBA and Angie Freyermuth, USACE
10:10	C1-2	<ul> <li>9-Foot Navigation Channel Management</li> <li>USACE Report</li> <li>States' Perspectives</li> </ul>	Steve Tapp, Dave Reynolds, and Lance Engle, USACE Megan Moore, Minnesota DNR, Jim Fischer, Wisconsin DNR, and Matt Vitello, Missouri DoC
11:00		<ul><li>Recreation Challenges on the UMRS</li><li>Bow Fishing Tournaments</li></ul>	<b>Kevin Stauffer</b> , Minnesota DNR and <b>Sabrina Chandler</b> , USFWS
11:20	D1-9	Navigation and Ecosystem Sustainability Program	Andrew Goodall, USACE
11:40	E1	U.S. Department of Interior Reorganization	Sabrina Chandler, USFWS and JC Nelson, USGS
11:50	F1	<ul><li>Administrative Issues</li><li>Future Meeting Schedule</li></ul>	
12:00 noo	n	Adjourn	
		(See Attachment F for frequently used acronym	ns.)

## ATTACHMENT A

# Minutes of the May 21, 2019 UMRBA Quarterly Meeting (A-1 to A-13)

#### DRAFT Minutes of the 150<sup>th</sup> Quarterly Meeting of the Upper Mississippi River Basin Association

#### May 21, 2019 St. Louis, Missouri

Rick Pohlman called the meeting to order at 9:35 a.m. Participants were as follows:

UMRBA Representatives and Alternates:

Rick Pohlman	Illinois Department of Natural Resources
Loren Wobig	Illinois Department of Natural Resources
Tim Hall	Iowa Department of Natural Resources
Barb Naramore	Minnesota Department of Natural Resources
Bryan Hopkins	Missouri Department of Natural Resources
Chris Klenklen	Missouri Department of Agriculture
Matt Vitello	Missouri Department of Conservation
Cheryl Ball	Missouri Department of Transportation
Steve Galarneau	Wisconsin Department of Natural Resources
Jim Fischer	Wisconsin Department of Natural Resources

Federal UMRBA Liaisons:

Brian Chewning	U.S. Army Corps of Engineers, MVD
Marty Adkins	U.S. Department of Agriculture, NRCS
Ken Westlake	U.S. Environmental Protection Agency (via phone)
Sabrina Chandler	U.S. Fish and Wildlife Service (via phone)
Scott Morlock	U.S. Geological Survey, Midwest Region

Others in Attendance:

Illinois Department of Natural Resources
Illinois Department of Transportation
Illinois Department of Transportation
Missouri Department of Natural Resources
Missouri Department of Transportation
National Oceanic and Atmospheric Administration, NWS
National Oceanic and Atmospheric Administration, NWS
National Oceanic and Atmospheric Administration, NIDIS
U.S. Army Corps of Engineers, MVD
U.S. Army Corps of Engineers, MVD
U.S. Army Corps of Engineers, MVD
U.S. Army Corps of Engineers, MVP
U.S. Army Corps of Engineers, MVR

Col. Bryan Sizemore	U.S. Army Corps of Engineers, MVS
Brian Johnson	U.S. Army Corps of Engineers, MVS
Michael Feldmann	U.S. Army Corps of Engineers, MVS
Hal Graef	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Brandon Schneider	U.S. Army Corps of Engineers, MVS
Shawn Sullivan	U.S. Army Corps of Engineers, MVS
Matt Vielhaber	U.S. Army Corps of Engineers, MVS
Verlon Barnes	U.S. Department of Agriculture, NRCS
Sandra Morrison	U.S. Geological Survey, Midwest Region
Mindi Dalton	U.S. Geological Survey, Water Resources Mission Area
Amy Beussink	U.S. Geological Survey, Central Midwest Water Science Center
Kelly Warner	U.S. Geological Survey, Central Midwest Water Science Center
Mark Gaikowski	U.S. Geological Survey, UMESC
Frank Morton	America's Watershed Initiative
James Kearns	Inland Rivers Ports and Terminals
Laurence Flentje	Gregory Drainage and Levee District
Maisah Kahn	Missouri Coalition for the Environment
Brent Hoerr	Missouri Corn Growers Association/Missouri Corn Merchandising Council
Nancy Guyton	Neighbors of the Mississippi
Bertha Mae Taylor	Neighbors of the Mississippi
Brad Walker	Nicollet Island Coalition
Josh Sewell	Taxpayers for Common Sense
Gretchen Benjamin	The Nature Conservancy
Antonio Arenas	University of Iowa/Iowa Flood Center
Bruce Brinkman	Upper Mississippi, Illinois, and Missouri Rivers Association
Mike Klingner	Upper Mississippi, Illinois, and Missouri Rivers Association
John Winkelman	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

#### Minutes

Chris Klenklen moved and Rick Pohlman seconded a motion to approve the draft minutes of the February 26, 2019 UMRBA quarterly meeting as written. The motion was approved unanimously.

#### **Executive Director's Report**

Kirsten Wallace expanded on her written Executive Director's report as follows:

- Congressional members have been increasingly focused on the Navigation and Ecosystem Sustainability Program. On March 19, 2019, Senator Dick Durbin hosted a bicameral, bipartisan meeting among UMRS Congressional members staff to discuss their joint strategy for ensuring NESP is a high priority for the Corps in FY 2020. UMRBA was joined by TNC, WCI, Illinois Corn Growers Association, and North America's Building Trades Union to describe the context and importance of NESP.
- UMRBA testified before the House Transportation and Infrastructure Committee at its April 10, 2019 hearing regarding the shared commitment to integrated, multi-purpose management of the Upper Mississippi River's economic and ecological uses. The testimony discussed UMRBA's origins, the agreement to pursue Mel Price lock expansion and establish the Upper Mississippi

River Restoration program, and the integrated approach to the Navigation and Ecosystem Sustainability Program.

- UMRBA continue to outreach with key players regarding the Association's proposed UMRS WQ Improvement Act, including USEPA and NRCS leadership on March 6, 2019 and April 5, 2019, respectively. UMRBA also plans to attend the May 15-16, 2019 Hypoxia Task Force meeting in Baton Rouge.
- UMRBA is scheduled to relocate its office space in the Twin Cities metro area on May 29, 2019.

Wallace pointed to the Association's financial report on pages B-5 to B-9 of the agenda packet, including UMRBA Treasurer Jason Tidemann's review of the financial statement from February 2019 to April 2019. Tim Hall moved and Chris Klenklen seconded a motion to approve the Profit and Loss Statement and Balance Sheet dated May 6, 2019. The Board unanimously approved the motion by voice vote.

#### **Navigation**

#### Iowa Upper Mississippi Inland Waterway Report

Sam Hiscocks said Iowa DOT is finalizing an assessment of viable investment alternatives to enhance Upper Mississippi inland waterway infrastructure. In particular, the study examined the following three scenarios: a mooring cell to improve locking efficiency and reduce navigation impacts to the ecosystem, a major lock rehabilitation program to increase the navigation system's reliability, and a second, 1,200-foot chamber at three existing L&D sites on the UMR.

Ultimately, the assessment resulted in the following six recommendations:

- Specific to Iowa:
  - Employ a state-federal PPA and/or contribute funds to construct the mooring cell at L&D 14
  - Establish a regional cooperative working group with other UMR states to expand and promote micro infrastructure investments (e.g., mooring cells) throughout the UMR navigation system
  - Update the State of Iowa port authority statutes to allow for the state's ports to enter into PPAs with the Corps and develop financing tools for navigation system improvements
  - Evaluate an additional economic scenario that focuses on new markets, technologies, and innovation in the uses for transporting goods on the UMR e.g., containerized traffic
- For federal and other regional partners:
  - Encourage Congress, the Administration, and the Corps to fund and complete necessary implementation guidance for the following authorities enacted in WRRDA 2014:
    - Sections 2004(a) to evaluate the use of federally tax-exempt bonds secured against IWTF monies
    - 2004(b) to study other potential revenue sources for inland and intracoastal waterways infrastructure
    - Section 5014 to establish a water infrastructure public-private partnership program specific to construction and major rehabilitation work in all Corps mission areas
  - Explore the potential to implement portions of NESP as separable elements (or a split delivery model), specifically to advance the first increment of mooring cells
  - Engage with regional stakeholders to consider establishment of a broader UMR port or navigation authority to promote UMR navigation improvements

Hiscocks concluded that Iowa DOT is interested in providing \$2 million in contributed funds to construct a mooring cell located 1.4 miles downstream of L&D 14. Possible funding sources include the Linking Iowa's Freight Transportation System (LIFTS) infrastructure bank funds or the National Highway Freight Program. The mooring cell would reduce the distance of the nearest fleeting location by 2.2 miles, resulting in an estimated savings to navigation of 217 hours or 9 days per year. Relative to other scenarios evaluated in the assessment, the mooring cell project resulted in the greatest benefit-to-cost ratio. The mooring cell's benefits to Iowa include reduced landside traffic congestion, infrastructure damage, and transportation costs. Iowa believes this project will demonstrate the state's commitment to the UMR navigation system and hopes it will trigger similar infrastructure investment projects by other UMR states. The project is estimated to take two years to construct, including planning and design work.

In response to a question from Ken Westlake, Scott Whitney said the mooring cell would require an updated environmental assessment to consider impacts to mussels and shoreline erosion.

#### Illinois Marine Transportation System Plan

B.J. Murray reported that Illinois DOT has contracted with WSP to conduct an assessment of Illinois' waterways infrastructure and develop a transportation plan for the state's waterways. The contract is for \$1.5 million over a one year term. Study components will include stakeholder outreach, facilities inventory, commodity flows, L&D closure, and funding opportunities. In particular, the study will examine statewide port facilities, users, operators, and carriers, as well as waterborne commodity flows, volumes, utilization, and capacity. Additionally, the study will assess the economic impacts of ports on the state and the economic contributions of major industries that rely on the Illinois Marine Transportation System (IMTS). An output of the study will include a port, waterway, and system-level identification of needs along with recommendations for action. Illinois DOT recently distributed a postcard broadly among stakeholders with a reference to the following website dedicated to this effort: http://www.illinoismarinetransportationsystem.com/.

Murray said a steering committee is being convened that includes about 30 individuals representing public port districts, private terminals and operators, and state and federal agencies. Illinois DOT plans to convene the steering committee five times at various locations throughout the state and host four roundtable engagements with broader stakeholders. Murray said the first steering committee meeting is scheduled for July 9, 2019 at the Illinois International Port District in Chicago.

Clayton Stambaugh said Illinois DOT has several other maritime transportation initiatives of about \$25 million over the past several years. Illinois DOT's renewed attention to the state's inland waterway transportation was mostly triggered by the Corps' 2012 report regarding impacts of the Panama Canal expansion and the 2012 significant drought, when the agency became acutely aware of the need to be more involved in state and federal decision making and planning. Illinois DOT began by developing a series of white papers that include goal statements. One recommendation is the IMTS plan and economic impact analysis study that Murray overviewed. Stambaugh said the overall goal for Illinois DOT is to mitigate congestion on land-based modes of transportation, increase sustainability of waterways transportation, and increase maritime competition. Other strategic recommendations include a) enhance integration of Illinois DOT and other state agencies, b) formalize and advance research activities, and c) foster collaborative relationships with stakeholders. Illinois DOT has begun providing technical assistance to ports in developing master plans and initiated work on developing performance measures and targets as well as research on beneficial uses of material dredged from the 9-foot navigation channel.

In response to a question from Cheryl Ball, Stambaugh explained that Illinois cannot directly apply its freight funds to private entities but can utilize public ports as a pass through for such investment opportunities. In response to a question from Mike Klingner regarding grant opportunities, Stambaugh

and Murray explained that state appropriations are not currently directed to do so and offered that stakeholders could elect to communicate the potential benefits to the state legislature.

Loren Wobig and Kirsten Wallace said they will serve as members of the Illinois steering committee and can provide a connection to UMRBA.

#### Inland Rivers Ports and Terminals Association Report

On behalf of Inland Rivers Ports and Terminals (IRPT) Association, Jim Kearns explained its proposal for an Inland Ports and Terminals Grant Program, which would offer a stand-alone discretionary program dedicated to ports and terminals. Kearns discussed there are limited federal funding opportunities to support port and terminal infrastructure investment; mostly because ports and terminals cannot compete with larger land-based transportation projects. For example, current programs require a \$5 million project minimum that far surpasses the project costs for ports and terminals.

Kearns said the Inland Ports and Terminals Grant Program would be administered by MARAD with eligible entities including both private and public facilities and with no minimum award floor. Funds may be used to construct buildings, physical facilities, equipment, bulk transload projects, and so forth as well as landside infrastructure projects. Kearns clarified that the Inland Ports and Terminals Grant Program would utilize dedicated funds from existing programs and not increased appropriations.

Kearns reported that, on May 9, 2019, the Senate Committee on Commerce, Science, and Transportation passed a Maritime Administration Authorization and Enhancement Act of 2019, which includes a provision regarding port operations, research, and technology. The bill would authorize \$600 million with 25 percent set aside for small projects (i.e., less than \$11 million). Kearns said that limitations include the lack of funding directed to rural projects and the enduring minimum funding threshold and requirement that eligible receipts be public entities or private entities with a public sponsor.

Kearns encouraged people to contact Aimee Andres, IRTP's Executive Director, at admin@irpt.net regarding IRPT's proposed legislation.

#### Navigation and Ecosystem Sustainability Program

Scott Whitney reported that UMRBA and USACE met on May 20, 2019 regarding the Navigation and Ecosystem Sustainability Program 2019 economic update and the historical documents outlining approaches for institutional arrangements and a transition from UMRR to NESP. Whitney said Congress invested \$65 million for NESP PED until the Congressional ban on earmarks in 2010. The program has gone essentially unfunded since then. In the FY 2019 energy and water appropriations measure, Congress directed the Corps to complete an economic update for NESP by August 2019 as a means of addressing the Administration's questions. In response, the Corps allocated \$1 million for the update. Whitney referred to pages C-9 to C-17 of the meeting agenda packet for a scope of work and schedule.

Whitney said Congressional support remains strong for NESP, pointing to the members' letter provided on pages C-5 to C-8 of the meeting agenda packet. Fifty-one members of Congress joined the letter, which requests language in the FY 2020 House and Senate energy and water appropriations measures that the Corps fund PED in order to start construction as soon as funding becomes available. Kirsten Wallace expressed appreciation to The Nature Conservancy and Waterways Council for their continued support for NESP, including helping to circulate the letter for signatures.

Josh Sewell asserted that a confident return on investment would be helpful for ensuring that federal money is spent well given the substantial federal debt. Given his concern with the economic update's limited scope, Sewall expressed support for additional funding and time to develop a more accurate

assessment of costs and benefits. Sewell also expressed concern regarding long term projections of transportation of agricultural goods on the Mississippi River and encouraged the Corps to include the volatility. Whitney expressed appreciation to Sewell regarding his statement, and said the upper end of the economic update estimate is very conservative. Whitney said the economic update has a far greater level of confidence than past analyses. Economists walked back trend projections. The Corps is utilizing the navigation investment model, which is fully certified and has been used on other inland river systems.

#### 2019 Flood Report

#### Mississippi River Cities and Towns Initiative Perspective

Grafton, Illinois Mayor Rick Eberlin, representing the Mississippi River Cities and Towns Initiative (MRCTI), provided a perspective of Mississippi River mayors regarding this year's flood as well as proposed solutions. Eberlin said the Mississippi River mayors are better equipped to deal with major flood events since 2011 due to MRCTI's ability to provide a platform for coordination, information sharing, and cooperation among local, state, and federal levels of government as well as with private and philanthropic sources. Additionally, there has been substantial investment in restored natural infrastructure, including wetlands near Dubuque, Grafton, and Alton; new tracts of protected floodplain in Iowa; and a tributary conservation near the confluence of the Missouri River. Increased investment in disaster mitigation and planning is also paying dividends.

Mississippi River mayors are experiencing the impacts of climate-related records over the last 10 years - e.g., Iowa has received more precipitation in the last 12 months than any one-year period over the last 124 years. This year, Davenport experienced record flooding. Eberlin expressed gratitude to Davenport for its decision not to build a flood wall, alluding to potential impacts to other localities. Eberlin described the unprecedented frequency of major flood events in Grafton, Illinois. Major flood events like the one experienced this year cripple the town's businesses.

Eberlin stated that MRCTI convenes the Mississippi River mayors around a common vision of resilience and sustainability that involves all member communities absorbing disaster risk rather than moving the problem down river. Eberlin emphasized the importance of natural infrastructure in managing water to a greater benefit than conventional infrastructure.

Eberlin said MRCTI is being asked about its positions regarding agricultural levees. In response, he explained that MRCTI believes the alleged over-built levees in Illinois, Iowa, and Missouri have resulted in impacts and is eager to work with the Corps to understand those impacts and solutions going forward. The majority of MRCTI members represent rural communities where agriculture is an essential component of the economy, so MRCTI does not seek a rural/urban dichotomy in this debate but rather an opportunity to better manage the system in a more sustainable manner. Cities are both impacted by flooding and are contributors to flood conveyance.

On behalf of MRCTI, Eberlin requested that UMRBA consider the merits of a unified systemic approach to flood conveyance. The existing inconsistencies of flood protection practices and rules among the five Upper Mississippi River basin states is undesirable for MRCTI's member localities. He expressed the commitment of MRCTI to working through UMRBA's process with mayors being engaged and part of the solution. Eberlin suggested that science and data inform the process and outcomes.

Eberlin also mentioned that MRCTI has been pursuing a set of solutions to address the flooding challenges to Mississippi River localities, including increasing pre-disaster mitigation grant funding from \$22 million to \$246 million. MRCTI is also proposing that Congress establish a resilience revolving loan fund, which appears to have the necessary support to be introduced as a stand-alone measure or as part of an infrastructure package.

#### 2019 Flood Report: Mississippi and Missouri Rivers

Antonio Arenas provided an overview of precipitation, soil moisture, and other conditions that ultimately resulted in major flood events on the Mississippi and Missouri Rivers in 2019. Arenas explained that 2018 was the wettest year for the nation on record and the wettest year on record for Iowa, with significant rainfall events in June 2018 and October 2018. Shallow groundwater wetness in much of Iowa and Nebraska was above the 95th percentile relative to 1948-2012. At the end of 2018, the soil was highly saturated with limited capacity to absorb water.

In the early months of 2019, the combination of large snowfall events followed by cold temperatures (i.e,. polar vortex) through the end of February resulted in significant frozen ground with no snowmelt. The snowmelt started rapidly with many Iowa towns experiencing major flooding due to ice jams. A major rainfall event on March 13-14, 2019 (i.e., bomb cyclone) in combination with the rapid snowmelt caused significant flooding on the Missouri River. Stream gages show that flooding in on the Platte River was a primary driver of flooding on the Missouri River near Nebraska City. The Platte River's influence is also shown as the flood conditions recede. Arenas showed the extent of the flooding on maps.

Arenas showed the extent of flooding on April 19, 2019 from Bellevue, Iowa to Clinton, Iowa, where the Mississippi River experienced the longest duration flood over a 150-year period. Davenport, Iowa also experienced record flooding in terms of duration and flood stage.

In response to a question from Michael Klingner, Arenas explained that the Iowa Flood Center received a HUD grant to work with the state's watershed management authorities to implement conservation practices that provide flood storage. At the local scale, certain landscape conservation practices can reduce flooding impacts by 25 percent. Scott Morlock said USGS received a FEMA grant for using LiDAR to document the extent of Midwest flooding this year. In response to a question from Barb Naramore, Arenas said the area with an elevated water table above the 75th percentile would cover a much larger extent. Naramore observed the localized challenges of being able to handle the pressure of an elevated water table with the aging infrastructure. Marty Adkins reported that NRCS activated its emergency watershed protection program and is particularly focused on levee repair.

#### **UMRS Floodplain Resilience Plan**

Kirsten Wallace explained that the Association has been calling for a federal-state partnership to address the challenges of managing for floods, sediment, and drought and creating systemic, comprehensive, and integrated solutions that will result in a more resilient Upper Mississippi ecosystem and economy. At its 2017 flood and sediment summit, participants shared in their ask for a system plan, a regional coordinating forum (governance body), resolution to policy impediments and financial resources needs, and improve and better utilize knowledge.

As a first step in changing the conversational dynamic around managing floods, sediment, and drought, UMRBA and USACE are scheduled to host six local open sessions as outlined below to focus on how local action can affect a systemic plan and vice versa. These open sessions are a means of both seeking input into a longer term UMRS floodplain resilience plan and building trust, transparency, and ultimately buy-in into the objectives.

- July 13 Hannibal, Missouri
- July 20 Muscatine, Iowa
- July 27 Dubuque, Iowa
- August 3 Winona, Minnesota

- August 24 Godfrey, Illinois
- September 7 Cape Girardeau, Missouri

Wallace explained that the structure and facilitation method is built from what is called "open space events," where participants bring forward conversation ideas of interest to them that they would facilitate. The discussion topics would center around the question of "how can all of us do a better job addressing three key issues on the Upper Mississippi River: sediment/channel maintenance, flood risk reduction, and preparation for extended droughts?"

Brian Stenquist will be the event facilitator and will work with participants to organize the "marketplace" of conversation sessions. Each of the six workshops would have up to fifteen different conversations, with five conversations occurring concurrently for an hour. Participants can pick which conversations to attend and can decide to leave and move to another conversation as desired. The conversation lead will be asked to take notes, which meeting organizers will collect, copy, and distribute to all meeting participants at the end of the workshop. Wallace explained that this approach advances UMRBA's goal of utilizing the method of systemically developing informed consent (SDIC), so that the process, outcomes, and key actors are well understood and enjoy regional agreement. She requested that UMRBA Board members, federal liaisons, and partners serve as a network and help to disseminate workshop announcements and subsequent products and news. Wallace said MVR is also hosting a webpage devoted to this effort that includes an opportunity for input from stakeholders unable to participate in a session.

Barb Naramore asked whether plans exist for sorting through and refining the ideas offered at the open sessions. Wallace said there will likely be some natural progression of ideas discussed among participants, with note of why some ideas are not feasible. The ultimate summary or reflection on the open sessions may need to reflect how the unfold – i.e., what is common or unique among the sessions; frequently raised questions, issues, or solutions. In response to a question from Michael Klingner, Wallace said the meetings will start at 9 a.m. and adjourn no later than 4 p.m. Klinger suggested that these sessions be followed by another communications effort to integrate science/knowledge into the questions and solutions raised.

#### **Drought**

#### Mississippi River Drought Trade Footprint

Elizabeth Ossowski said the National Integrated Drought Information System's (NIDIS's) mission and activities of providing regional early warning drought systems, prediction and forecasting, research and monitoring, planning and preparedness, collaboration, and a centralized source of drought-related information. NIDIS convenes nine regional drought early warning systems (DEWS), which utilize new and existing networks of governmental and nongovernmental entities to make climate and drought science accessible and useful for decision makers. The Upper Mississippi River basin is mostly located in the Midwest DEWS.

Ossowski reported that the NIDIS Reauthorization Act was enacted on January 7, 2019, increasing funding for NIDIS by \$1 million from FY 2019 to FY 2023. Highlights of the reauthorization include direction to engage in partnerships with the private sector; to provide resources that reflect watershed differences in drought conditions; to support improvements in seasonal, subseasonal, and low flow water prediction; and to develop a national soil moisture monitoring network strategy.

Ossowski announced that NIDIS is scheduled to host its second National Drought Forum on July 30-31, 2019 in Washington, D.C. Goals for the forum are to assess the status of national drought readiness, to

discuss progress since the first forum in 2012, and to help provide new information and guidance for coordination to improve the nation's preparedness to drought.

Ossowski recalled the impacts of the 2012 drought to the Upper Mississippi River basin, acknowledging that the Mississippi River corridor is at the center of the nation's weather and climate impacts. Therefore, NIDIS is partnering with USDA, NOAA, and the Mississippi River Cities and Towns Initiative to develop a Mississippi River Drought Trade Footprint Study. The study will lend a better understanding of the sensitivity of the Mississippi River corridor to drought and assess the impacts and opportunities for reducing risks to communities. Focus areas of the study will include agricultural production, commercial navigation and transportation, manufacturing, and recreation and tourism. The study's research objectives as follows:

- How does drought impact trade on the Mississippi River in select geographical units?
- What are the economic implications in the river corridor when the river's capacity is limited in providing for commercial navigation due to low water levels?
- Where are those impacts felt within the global marketplace?
- What are the economic implications of drought in the basin on the manufacturing industry along the corridor?
- What are the economic implications of drought on the region's ability to support recreation and tourism along the river?

The study will include more in-depth community-based drought vulnerability assessments in three to four pilot locations. The objective is to better understand long term drought risk – i.e., how do drought events filter to local communities, what are options to reduce risk, activity alternative economic resources, and seek broader relief. The footprint is intended to provide a foundation for corridor-wide guidance to build economic and community resilience. The study will examine the onset (timing, rate), persistence (i.e., duration), and demise. Ossowski said a NIDIS anticipates securing a full time economist to develop the study's approach to estimating the economic impact and trade footprint in summer 2019 and completing the report in 2021.

#### Groundwater and Streamflow Information Program

Mindi Dalton provided an overview of USGS's Water Mission Area and its plans for developing shortand long-term national water availability assessment. Dalton explained that the National Academies of Sciences, Engineering, and Medicine published a 2018 report recommending that USGS's Water Mission Area explore the following strategic questions:

- What is the quality and quantity of atmospheric, surface, and sub-surface water, and how do these vary spatially and temporally?
- How do human activities affect water quantity and quality?
- How can water accounting be done more effectively and comprehensively to provide data on water availability and use?
- How does changing climate affect water quality, quantity, and reliability, as well as water-related hazards and extreme events?
- How can long-term water-related risk management be improved?

Dalton said USGS's Water Mission Area has four major priorities as follows: 1) modernizing the National Water Information System to maximize data integrity, reliability, and accessibility while simplifying data delivery; 2) develop the next generation water observing system to measure, collect,

and deliver data to help address water resource challenges; 3) develop water prediction models to support daily to decadal forecast-based management of water supplies and infrastructure ; and 4) perform integrated water availability assessments to evaluate availability in terms of spatial and temporal distribution of water quality and quantity.

Dalton explained that USGS's Integrated Water Availability Assessments (IWAAs) address requirements provided in the 2009 Secure Water Act. The requirements include assessing the status and trends of water quality and quantity, developing national scale indicators of availability, and developing and applying predictive tools. Specifically, the IWAAs are intended to evaluate current water supply and demand, quality, and use as well as long term trends in water availability; to provide seasonal to decadal forecasts of availability; and to inform water resource decisions through socioeconomic tools. USGS's FY 2019 priorities for its Water-Use Data and Research (WUDR) program are to improve the collection, Q/A processes, and transfer to USGS of water use data; to improve water-use data for irrigation, public supply, or industrial users (e.g., collection of monthly rather than annual withdrawals); and to research methods and/or coefficients to improve water-use estimates. Dalton stressed the importance of improving state processes to acquire, maintain, document, and electronically deliver water use data in USGS's goal to report daily water use estimates by 2022 for 90 percent of the total water use in the nation.

USGS received FY 2019 appropriations to evaluate 10 pilot IWAA projects, including two in the Upper Mississippi River basin – i.e., the Cambrian-Ordovician aquifer and Fox-Wolf-Peshtigo basins. Both pilot projects will inform how water quality affects water use availability. The Cambrian-Ordovician pilot project will assess the characterization and prediction of pathogen and radium concentrations, which can have adverse impacts on water availability and human health. This information will be especially important given that the aquifer supplies 631 million gallons of water per day for public supply, supporting a population of about 26 million people. USGS will advance the first of three stages for the Fox-Wolf-Peshtigo basin that will ultimately develop a model that will integrate nitrate transport below the root zone to domestic wells with nitrate source information and management scenarios.

In the next year or two, USGS will continue to develop a Delaware River Basin holistic workplan addressing potential impacts of the drought of record under current supply and demand conditions. Additionally, USGS will advance the 10 pilot projects that will ultimately support the development of national and regional integrated water availability assessments. Dalton said the projects will be conducted with state and local partners through cooperative matching funds. By 2021, USGS plans to serve daily water availability indices inclusive of quantity, quality, and use as well as to implement full assessments in western states.

In response to a question from Loren Wobig, Dalton said USGS intends to work through the state Water Science Centers as a means of coordinating with state and local stakeholders.

#### Missouri 2018 Drought Response Report

Jennifer Hoggatt provided a report on the 2018 drought event in Missouri and the state's response activities. Hoggatt said drought conditions develop throughout the entire state in 2017, with the Climate and Weather Committee convening its first meeting on January 29, 2018. Conditions subsequently appeared to improve following early spring rain. However, drought conditions reappeared after an abnormally cool April and record warmth in May, particularly in the north western corner of Missouri. The Climate and Weather Committee reconvened again on June 7, 2018 and June 13, 2018 as conditions deteriorated. Per the Committee's recommendation, Governor Michael Parson issued an executive order for all counties experiencing severe, extreme, or exceptional drought through December 1, 2018. The order triggered the Drought Assessment Committee to convene and directed all state agencies to examine how they could assist in the state's response. The Committee includes representatives from

24 state and federal agencies, universities, and various local government entities. Suspension of administrative rules and appropriations facilitated the state's ability to provide assistance. Hoggatt said Missouri's communications and coordination throughout the state and with a broad array of stakeholders resulted in tremendous input into the National Drought Mitigation Center.

Hoggatt said Missouri agriculture-related responses included easing restrictions on hay transportation, utilizing federal assistance through USDA programs, providing emergency hay and water access on public lands, and assisting in implementing BMPs such as planting cover crops. To address drinking water issues, Missouri issued mandatory conservation measures in three communities, provided emergency financial assistance, and monitored for potential leaks in rural water sources.

Hoggatt explained that peak drought conditions in Missouri were reached on August 14, 2019. About eight to 12 inches of rainfall in northern Missouri through September 26, 2019 alleviated the drought conditions. The final meeting of the Drought Assessment Committee was held on September 27, 2018, and Governor Parson's executive order was expired on December 1, 2018. Hoggatt pointed to the 2018 Drought Report for more detailed information on the state's drought response actions, located at www.dnr.mo.gov/drought.htm. Missouri is also scoping a new drought mitigation plan.

In response to a question from Marty Adkins about what other states are reporting in terms of drought, Hoggatt said information sharing typically occurs through a drought-related listserv and at national and regional water-related forums. Tim Hall said Iowa is focusing its drought planning in the northwestern part of the state where there is greater vulnerability due to shallow groundwater and agriculture. Adkins asked if Missouri communities are revising local ordinances to reduce vulnerability to significant droughts. Hoggatt said Missouri intends to provide a more comprehensive toolkit for municipalities in the drought mitigation plan. Chris Klenklen added that the North Central Climate Adaptation Science Center hosts a monthly conference call, which is especially helpful for sharing information during significant events.

#### **Federal Agency Reports**

#### U.S. Army Corps of Engineers

Brian Chewning reported that the FY 2019 USACE work plan includes the following Mississippi Riverrelated programs and projects:

- \$150,000 for GLMRIS
- \$57.5 million for LaGrange lock major rehabilitation
- \$33.17 million for UMRR
- \$95.198 million for East St. Louis flood risk reduction project
- \$254.359 million for O&M of the 9-foot navigation channel on the Upper Mississippi and Illinois Rivers
- \$2.5 million to reduce or eliminate combined sewer overflow from the Illinois Madison and St. Clair Counties into the Mississippi River

Additionally, per the FY 2018 disaster supplemental appropriations, \$117.5 million is allocated to the Cedar Rapids flood risk management project and \$11.3 million to the Bois Brule levee deficiency correction.

#### U.S. Environmental Protection Agency

Ken Westlake said Congress enacted the FY 2019 appropriations measures for most federal agencies including USEPA, which was appropriated \$8.85 billion. That amount is consistent with the agency's FY 2018 funding level. While a major cut is proposed for USEPA in the President's FY 2020 budget, Westlake anticipates that Congress will appropriate at past-year levels. Program and project-related allocations have not yet been released, but Westlake said he anticipates relatively stable funding for the Clean Water Act revolving loan funds.

#### U.S. Fish and Wildlife Service

Sabrina Chandler reported that USFWS's FY 2019 appropriation is consistent to FY 2018, including allocations to Upper Mississippi River programs. The FY 2020 President's budget proposes relatively consistent funding levels for the Service with the exception of \$509.5 million for the National Refuge System, representing a nearly \$20 million increase and the highest funding level for refuges. Of particular note, the budget would increase funding for O&M of refuge facilities that would help advance resource needs on UMRR habitat projects.

Internal discussions regarding the planned DOI reorganization continue to occur. Questions still remain about potential implications for USFWS work that spans Illinois and Iowa given that the new boundary splits between the states. The roles and responsibilities of the DOI regional directors are still under consideration.

Matt Vitello reported that Missouri DoC and Missouri DNR convened a call with DOI intergovernmental affairs. DOI staff said regional directors are not yet assigned but that agency representation in interstate organizations such as UMRBA will be determined once those positions are filled. Chandler expressed USFWS's continued commitment to remain actively engaged in UMRBA for the time being.

#### U.S. Geological Survey

Scott Morlock reported that USGS's FY 2019 appropriation is \$1.16 billion, which is a \$12 million increase above its FY 2018 appropriation. Most of the increase is directed to the agency's water mission area. The President's FY 2020 budget proposes \$983 million. Morlock said detailed allocations can be found online.

Morlock said the DOI reorganization should not have significant impacts to USGS's roles and responsibilities. Most of the agency's science is conducted and delivered through the state Water Science Centers. USGS will move from seven to 11 regions under the new construct, but will not hire any additional regional directors. Therefore, one or more regional directors will be responsible for multiple regions. Morlock said he will continue to be actively engaged in UMRBA and greatly appreciates the partnership that the Association facilitates. Amy Beussink added that, although the new region will split along the Mississippi River between Illinois and Missouri and Iowa, the three states will still be combined in one Water Science Center.

#### U.S. Department of Agriculture

Marty Adkins reported that NRCS anticipates rolling out new rulemaking following changes to the RCPP authorized in the 2018 Farm Bill. Adkins said the UMRBA states will receive about \$107 million in FY 2019 funding under the Environmental Quality Incentives Program (EQIP). Iowa was recently granted an additional \$7 million to implement projects that were unexpended by other

states. The Conservation Stewardship Program was allocated \$700 million for national projects. Adkins noted that the Watershed Protection Program received funding for the first time since FY 2011.

Adkins announced that he is scheduled to retire in August 2019 and Verlon Barnes will represent NRCS as its federal liaison to UMRBA. Barnes serves as NRCS's Upper Mississippi and Missouri River Basin Coordinator and liaison to the Corps.

#### **America's Watershed Initiative**

Frank Morton introduced himself as America's Watershed Initiative's new Executive Director. Morton said his background is mostly in the barge and towing business with experience throughout the Mississippi River watershed.

Morton said AWI's goals for the next year include the following:

- An updated report card of the Mississippi River watershed originally published in 2015. The report card evaluates management of the river for six broad goals: ecosystems, recreation, flood control and risk reduction, economy, water supply, and transportation. The updated report card will also assess management of the river for energy.
- A series of webinars to connect watershed stakeholders. The first webinar is scheduled for June 25, 2019 and will essentially replay on June 27, 2019. The webinar will also be recorded and available on AWI's website. The first webinar's focus is about the changing dynamics of water moving through the watershed. The AWI Board acknowledges that the volume and velocity of water moving to the Mississippi River is increasing and affecting all major uses and purposes of the river system.
- A white paper written by previous MVD Commander Duke DeLuca outlining a vision statement for America's Watershed and describing the challenges facing the country in managing for the river's sustainability.

Morton explained that AWI is also focusing on fundraising, connecting with various businesses, foundations, and other stakeholders throughout the basin.

#### Administrative Issues

Future Meeting Schedule

August 2019 — La Crosse

- UMRBA quarterly meeting August 20
- UMRR Coordinating Committee quarterly meeting August 21

October 2019 — St. Paul

- UMRBA quarterly meeting October 29
- UMRR Coordinating Committee quarterly meeting October 30

February 2020 — Dubuque, Quad Cities, or Muscatine

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

With no further business, the meeting adjourned at 3:20 p.m.

## ATTACHMENT B

## **Executive Director's Report**

- Executive Director's Report (B-1 to B-4)
- UMRBA Letter to ASA(CW) re the 2019 NESP Economic Update (7/19/2019) (B-5)
- Treasurer's Quarterly Statement (8/6/2019) (B-6)
- FY 2019 Budget Report and Balance Sheet (8/7/2019) (B-7 to B-11)
- FY 2020 Budget Report and Balance Sheet (8/7/2019) (B-12 to B-14)



#### ADVOCACY

#### **USACE Programs and Projects**

UMRBA was joined by The Nature Conservancy and Waterways Council in meeting with the Office of Management and Budget and ASA(CW) staff on August 1, 2019 and with USACE Headquarters on August 2, 2019. Discussions focused on the Upper Mississippi River Restoration program, Navigation and Ecosystem Sustainability Program, and UMRBA's proposal for using the Section 729 authority to improve management of floods, sediment/the 9-foot navigation channel, and drought.

On July 19, 2019, UMRBA Chair Rick Pohlman sent a letter to ASA(CW) R.D. James on behalf of the Association requesting that the Corps brief the UMRBA Board on the 2019 NESP economic update and work with UMRBA to develop a coordinated communications strategy regarding the results. The letter is provided on page B-5 of the agenda packet.

#### UMR WQ Improvement Act

UMRBA met with NRCS Undersecretary Bill Northey and NRCS Policy Advisor Faith Burns on July 29, 2019 regarding the Association's legislative proposal for a UMR WQ Improvement Act as well as staffers for Representatives Ron Kind and Rodney Davis. Additionally, UMRBA convened a conference call with House Transportation and Infrastructure Committee staff on August 7, 2019 to discuss the measure and its potential inclusion in the Committee's legislative initiatives.

#### DROUGHT

The National Integrated Drought Information System (NIDIS) and the National Drought Resilience Partnership (NDRP) co-hosted the second National Drought Forum on July 30-31, 2019 in Washington, D.C. Kirsten Wallace attended along with members of the Interstate Council on Water Policy. The agenda included a series of presentations regarding drought readiness and forecasting as well as facilitated discussions regarding priorities related to coordination, flexibility, and resilience. During the forum, members of the Trump Administration's Water Sub-Cabinet announced the National Drought Resilience Partnership's new set of priority actions.

#### ECOSYSTEM HEALTH

#### Upper Mississippi River Restoration

UMRBA staff participated on an August 9, 2019 UMRR Communications Team call. Participants focused on developing a pilot communications and outreach approach to work with organizations and individuals in the HNA-defined Lower Illinois River watershed that affect sediment runoff. Sediment was identified as a major ongoing threat to the fish and wildlife habitat in the area.

Andrew Stephenson attended the UMRS District-based river team meetings held during summer 2019 to select new habitat restoration projects for implementation in FY 2021 to FY 2025. These included the June 17, 2019 St. Paul District Fish and Wildlife Work Group meeting in La Crosse; the July 9-10, 2019 Fish and Wildlife Interagency Committee meeting in Bettendorf; and the August 14-15, 2019 St. Louis District River Resources Action Team in St. Louis.

#### **FLOODS**

#### Mississippi River Cities and Towns Initiative

UMRBA joined MRCTI's June 10, 2019 emergency conference call regarding ongoing flooding throughout the entire Mississippi River. Briefings were provided by USACE, NWS, and FEMA regarding emergency operations and forecasted conditions.

#### Illinois DNR Flood Meeting

Illinois DNR Director Colleen Callahan hosted a July 11, 2019 meeting with stakeholders regarding potential changes to the state's floodplain management rules and regulations. Kirsten Wallace provided an overview of UMRBA's local meeting sessions planned for the summer and fall 2019 and follow-on work to develop near-term solutions and a scope for a planning effort to improve management of floods, sediment/the 9-foot navigation channel, and drought. The July 11 meeting included position statements from levee districts and conservation organizations regarding their potential opposition or support of changes to floodplain rules and regulations.

#### **Resilience Loan Fund Legislation**

UMRBA participated in a roundtable forum hosted by Representative Angie Craig on August 15, 2019 in Hastings, Minnesota. Representative Craig co-introduced legislation with Representative Rodney Davis to create a resilience revolving loan fund that would operate similarly as the CWA state revolving loan funds.

#### UMRS FLOOD, SEDIMENT, AND DROUGHT PLANNING

#### **Open** Sessions

UMRBA and the Corps co-hosted a series of local open sessions in July 2019 and August 2019 to answer the question: what can we do to more effectively address the issues of flooding, navigation channel maintenance, sediment management, and long term drought? These forums are set up to facilitate local dialogue and conversation among different river users and to learn from participants about how potential solutions might fit in a system plan or be affected by it. The open sessions were held in Hannibal on July 13, 2019; Muscatine on July 20, 2019; Dubuque on July 27, 2019; and Winona on August 3, 2019. Open sessions are scheduled on August 24, 2019 in Godfrey and September 7, 2019 in Cape Girardeau.

#### HAZARDOUS SPILLS COORDINATION, MAPPING, AND PLANNING

#### Oil Pollution Act (OPA) Planning and Mapping

UMRBA continues collecting data for the Minnesota statewide update. Data themes completed or currently in process include special designated areas, aboveground storage tanks, hazardous materials, locks and dams, and marinas. The Association participated in an August 12, 2019 conference call with USEPA and the Great Lakes Commission to coordinate on the project.

UMRBA led field work to verify spill response strategies on Pools 20 and 21 on July 23, 2019. Participants included USCG, USEPA, USACE, USFWS, Illinois DNR, Missouri DNR, and local emergency management. Strategies will be shared with stakeholders for review and comment. The Association also hosted a resource and response planning meeting for Pools 24 and 25 in Pittsfield, Illinois on August 6, 2019. Field work for verification will be scheduled following strategy development.

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

The UMR Spills Group distributed invitations to members for a BNSF Railway-sponsored exercise and training held in Prairie du Chien, Wisconsin on August 8, 2019. The training utilized response strategies and planning materials developed by UMRBA and its partners. Staff are reaching out to members to identify a theme and location for the next meeting.

#### **NAVIGATION**

#### National Waterways Foundation

Kirsten Wallace participated in the National Waterways Foundation's June 7, 2019 meeting via conference call. The meeting included a strategic planning discussion with the goal of informing priorities for future research projects, an update regarding the Foundation's marketing initiative, and a briefing on the Illinois Waterway closure. Subsequent to the meeting, the Foundation finalized a contract with Cambridge Systematics to update profiles detailing the economic impacts of waterways transportation for Missouri and Louisiana. The National Waterways Foundation anticipates updating profiles for the other states.

#### Illinois Marine Transportation System

UMRBA staff joined the first Illinois Marine Transportation System Steering Committee meeting via conference call on July 9, 2019. Illinois DOT has contracted with WSP to conduct an assessment of Illinois' waterways infrastructure and develop a transportation plan for the state's waterways. The Steering Committee will be asked to provide input for the assessment. On the July 9 call, the Committee was provided with an overview of the study's goals and initial plans and other information collected regarding stakeholder outreach, facilities inventory, commodity flows, the planned closure of Illinois L&Ds for major rehabilitation and maintenance, and funding sources to invest in the state's navigable waterways.

#### WATER QUALITY

#### UMRBA WQ Executive Committee and Task Force

The UMRBA WQEC and WQTF held a joint meeting on June 4-5, 2019 in the Quad Cities. Agenda topics included the development of a UMR WQ Improvement Act, nutrient monitoring, a UMRBA chloride policy position and communications, and emerging contaminants – i.e., PFAS and manganese.

#### **CROSS-CUTTING COLLABORATION**

#### America's Watershed Initiative

AWI hosted a webinar at two different times on July 25, 2019 and July 27, 2019 regarding the increasing volume of precipitation moving through the Mississippi River watershed. Presenters included Steve Buan of the National Weather Service and retired MG Michael Walsh, who was the MVD Commander during the 2008 flood. AWI plans to convene subsequent webinars that expand on our understanding of changing hydrology dynamics into the complexities that pose challenges to integrated, balanced management among uses and purposes of the Mississippi River watershed. Kirsten Wallace joined AWI Board members in meeting with the McKnight Foundation on July 2, 2019 regarding its financial support of AWI.

#### Wisconsin County Conservationist Committee Meeting

Lauren Salvato presented on Upper Mississippi River-related issues and efforts as well as UMRBA's priorities and ongoing work to the Wisconsin Land and Water County Conservationist Committee at its July 18, 2019 meeting. The meeting also included a similar presentation about the Great Lakes provided by the Great Lakes Alliance.

#### Interstate Council on Water Policy

The ICWP convened on August 5, 2019 to employ a one-to-two year strategic planning session. Kirsten Wallace serves as the second Vice Chair of the ICWP Board and Chair of ICWP's Legislative and Policy Committee.

#### **RELOCATION**

UMRBA moved to a new office location on May 29, 2019. The Association's new address is:

7831 East Bush Lake Road, Suite 302 Bloomington, MN 55439

#### FINANCIAL REPORT

Attached as page B-6 is UMRBA Treasurer Jason Tidemann's statement regarding his review of UMRBA's financial statement for the period of April 1, 2018 to May 31, 2018.

Attached as pages B-7 to B-11 are UMRBA's FY 18 budget report and balance sheet reflecting yearend adjustments. As of June 30, 2018, ordinary income for FY 18 totaled \$591,809 and expenses totaled \$530,844 for net ordinary income of \$60,965. At fiscal year's end, UMRBA's cash assets and investments totaled \$847,931.

Attached as pages B-12 to B-14 are UMRBA's FY 19 budget report and balance sheet. As of August 2, 2018, ordinary income for FY 19 totaled \$101 and expenses totaled \$45,566 for net ordinary income of minus \$45,465. As of this date, UMRBA's cash assets totaled \$789,611.



July 19, 2019

Honorable R.D. James Assistant Secretary of the Army (Civil Works) 108 Army Pentagon Room 3E446 Washington, DC 20310-0108

Dear Secretary James:

On behalf of the Upper Mississippi River Basin Association (UMRBA), I am writing to request that the U.S. Army Corps of Engineers (Corps) provide a briefing to UMRBA's member states regarding the 2019 Navigation and Ecosystem Sustainability Program (NESP) economic update prior to its scheduled August 2019 publication and coordinate with UMRBA on a shared communications strategy. As part of the communications strategy, we invite the Corps to announce the results at a UMRBA-sponsored August 19, 2019 NESP Summit in La Crosse, Wisconsin.

We are acutely aware that the economic update will have significant consequences for the future of NESP. The states of the Upper Mississippi River have a vested interest in NESP's success and must be involved in understanding and evaluating the factors influencing funding decisions and the NESP implementation strategy – e.g., how investment in the set of NESP locks is sequenced.

UMRBA is a five-state organization representing the joint perspectives of the Governors of Illinois, Iowa, Minnesota, Missouri, and Wisconsin with members from the states' departments of agriculture, natural resources, transportation, and economic development. Since its inception in 1981, UMRBA has served as the dedicated regional forum for our five states to remain informed and engaged on Upper Mississippi River issues in partnership with the Corps. We believe that the Corps' extensive collaboration with the five states throughout the NESP reconnaissance and feasibility study has resulted in persistent, wide-ranging support for the program since 2004. It is disappointing that UMRBA has not been consulted regarding the 2019 NESP economic update. With this briefing and shared communications strategy, we hope our NESP partnership is restored, enabling us to implement this vital infrastructure and ecosystem program in true federal-state collaboration as envisioned.

Sincerely,

Rick Pohlman Upper Mississippi River Basin Association, Chair

From:	Tidemann, Jason (DNR) <jason.tidemann@state.mn.us></jason.tidemann@state.mn.us>
Sent:	Tuesday, August 6, 2019 9:45 AM
То:	Kirsten Wallace
Cc:	Margie Daniels (mdaniels@umrba.org)
Subject:	RE: UMRBA May 2019-July 2019 Treasurer Report

Hello Kirsten,

As Treasurer, I have reviewed the monthly financial statements for the period <u>May 2019-July 2019</u>. 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.

Thanks

Jason Tidemann

9:39 AM

08/07/19

**Accrual Basis** 

## Upper Mississippi River Basin Association FY 2019 Profit & Loss Budget Overview July 1, 2018 through June 29, 2019

	Jul 1, '18 - Jun 29, 19	Budget	\$ Over Budget
Ordinary Income/Expense			
Income			
Contracts and Grants			
COE (UMRR)	74,817.17	81,270.00	-6,452.83
EPA (OPA)	122,868.87	136,000.00	-13,131.13
NPS (STC)	21,494.69	25,000.00	-3,505.31
Total Contracts and Grants	219,180.73	242,270.00	-23,089.27
State Dues			
Illinois Dues	60,000.00	60,000.00	0.00
lowa Dues	60,000.00	60,000.00	0.00
Minnesota Dues	60,000.00	60,000.00	0.00
Missouri Dues	60,000.00	60,000.00	0.00
Wisconsin Dues	60,000.00	60,000.00	0.00
WQ Assessment	100,000.00	100,000.00	0.00
Total State Dues	400,000.00	400,000.00	0.00
Other Income			
Travel Reimbursed Received	227.45	300.00	-72.55
Total Other Income	227.45	300.00	-72.55
Interest Income			
Short Term Interest			
Short Term (Checking)	14.22	0.00	14.22
Short Term (Savings)	59.46	80.00	-20.54
Short Term (Sweep)	104.23	1.00	103.23
Short Term (CD)	13,848.54	6,200.00	7,648.54
Total Short Term Interest	14,026.45	6,281.00	7,745.45
Total Interest Income	14,026.45	6,281.00	7,745.45
Total Income	633,434.63	648,851.00	-15,416.37
Expense			
Depreciation			
Depreciation UMRBA	1,669.87	0.00	1,669.87
Depreciation OPA	794.72	0.00	794.72
Depreciation STC	913.52	0.00	913.52
Depreciation Leasehold Improve	5,841.17	0.00	5,841.17
Total Depreciation	9,219.28	0.00	9,219.28
Gross Payroll			
Salary	300,984.57	312,345.00	-11,360.43
UMRBA Time Wages	7,718.08	5,320.00	2,398.08
OPA Wages	48,033.88	39,145.00	8,888.88
STC Wages	3,180.58	0.00	3,180.58
Accrued Vacation	5.695.25	0.00	5,695.25
Benefits	75.246.22	78,086.25	-2,840.03
Benefits UMRBA Time	276.64	0.00	276.64
Benefits OPA	2.164.31	0.00	2.164.31
Benefits STC	193.85	0.00	193.85
Total Gross Payroll	443,493.38	434,896.25	8.597.13

9:39 AM 08/07/19

**Accrual Basis** 

Upper Mississippi River Basin Association FY 2019 Profit & Loss Budget Overview July 1, 2018 through June 29, 2019

#### Jul 1, '18 - Jun 29, 19 Budget \$ Over Budget **Payroll Expenses** SocSec Company 27.155.92 26.963.57 192.35 **Medicare Company** 6.342.39 6,306.00 36.39 SUTA (Minnesota UC) 217.45 42.55 260.00 42.55 Workforce Enhancement Fee 260.00 217.45 **Accrued Vacation FICA** 435.69 0.00 435.69 **Total Payroll Expenses** 34,454.00 33,704.47 749.53 35,835.84 32,000.00 3,835.84 Travel **Space Rental** 30,369.60 35,000.00 -4,630.40 **Office Rental** 6,881.45 7,800.00 -918.55 Parking 37,251.05 42,800.00 -5,548.95 **Total Space Rental** Reproduction **Copy Service** 1,359.24 1,360.00 -0.76 409.40 1,745.00 -1,335.60 Printing 3,105.00 **Total Reproduction** 1,768.64 -1,336.36 Meeting Expenses 25,598.52 35,000.00 -9,401.48 Supplies 4,688.51 2,800.00 1,888.51 Equipment Equipment (Purchase) 0.00 1.200.00 -1.200.00Equipment (Maint./Rental) 1,594.12 1,510.00 84.12 2.710.00 **Total Equipment** 1.594.12 -1,115.88Legal and Financial Insurance 5,433.08 6,200.00 -766.92 9,300.00 Legal and Tax Services 9,000.00 300.00 **Bank Charges** 1.23 50.00 -48.77 14,734.31 15,250.00 -515.69 **Total Legal and Financial Telephone/Communications** 29,361.55 40,000.00 -10,638.45 Postage 1,033.98 1,500.00 -466.02 **Other Services** 7,074.00 5,000.00 2,074.00 **Publications** 2,908.00 2,500.00 408.00 **Relocation Expenses** 971.41 5.071.41 4.100.00 Moving Expenses 2.666.66 4.500.00 -1.833.34Telecommunications **Total Relocation Expenses** 7,738.07 8,600.00 -861.93 State Travel Reimbursement Illinois 3,922.27 5,000.00 -1,077.73lowa 2,035.76 5,000.00 -2,964.24 626.38 5,000.00 -4,373.62 Minnesota 4.999.94 5.000.00 Missouri -0.06 5.000.00 -5.000.00 Wisconsin 0.00 State WQ Travel 561.33 3,500.00 -2,938.67 **Total State Travel Reimbursement** 28,500.00 -16,354.32 12,145.68

9:39 AM 08/07/19

**Accrual Basis** 

Upper Mississippi River Basin Association FY 2019 Profit & Loss Budget Overview July 1, 2018 through June 29, 2019

	Jul 1, '18 - Jun 29, 19	Budget	\$ Over Budget
OPA Expenses			
Equipment OPA	0.00	1,000.00	-1,000.00
Equipment (Maint./Rental) OPA	6,490.28	6,980.00	-489.72
Travel OPA	1,937.31	4,400.00	-2,462.69
Other OPA	3,674.43	800.00	2,874.43
Total OPA Expenses	12,102.02	13,180.00	-1,077.98
STC Expenses			
Travel STC	406.28	1,200.00	-793.72
Other STC	2,444.41	1,000.00	1,444.41
Total STC Expenses	2,850.69	2,200.00	650.69
Total Expense	683,851.64	703,745.72	-19,894.08
Net Ordinary Income	-50,417.01	-54,894.72	4,477.71
Other Income/Expense			
Other Income			
Unrealized gains(losses)	993.51	0.00	993.51
Total Other Income	993.51	0.00	993.51
Net Other Income	993.51	0.00	993.51
Net Income	-49,423.50	-54,894.72	5,471.22

B-9

9:44 AM 08/07/19 Accrual Basis

## Upper Mississippi River Basin Association Balance Sheet

As of June 30, 2019

	Jun 30, 19
ASSETS	
Current Assets	
Checking/Savings	
Checking 1696	37,400.95
Savings 6935	63,339.51
Investment	
Sweep 3698	146.11
CD	674,928.19
	675 074 20
lotal investment	075,074.30
Total Checking/Savings	775,814.76
Accounts Receivable	
Contract/grants	
Invoiced/Billable	31.911.46
Total Contract/grants	31,911.46
Total Accounts Receivable	31,911.46
Other Current Assets	
Prepaid Expense	
Office Rental Prepaid Expense	3,868.01
Travel Prepaid Expense	423.44
Meeting Expense Prepaid Expense	2,475.00
Total Prepaid Expense	6,766.45
Investment Interest Receivable	7,154.05
Total Other Current Assets	13,920.50
Total Current Assets	821,646.72
Fixed Assets	
Leasehold Improvements	27 316 00
Accum, Deprec, Leasehold Improv	-27.316.00
Accum, Deprec, UMRBA	-30.535.94
Accum, Deprec, OPA	-21,248.06
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	3,377.62
TOTAL ASSETS	825,024.34
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Credit Cards	
Visa Wells Fargo 0198	41.05
Total Credit Cards	41.05
Other Current Liabilities	
Office Expense Liabilities	
Moving Expense	-502.72
State WQ Travel Expense	408.22
OPA Travel Expense	41.76
Total Office Expense Liabilities	-52.74

9:44 AM 08/07/19 Accrual Basis

## Upper Mississippi River Basin Association Balance Sheet

As of June 30, 2019

	Jun 30, 19
Payroll Liabilities	
SUTA (Minnesota UC)	51.38
Workforce Enhancement Fee	51.38
Accrued Payroll	8,988.29
Accrued SocSec Company	700.38
Accrued Vacation	41,047.77
Accrued Vacation FICA	3,140.15
Total Payroll Liabilities	53,979.35
Total Other Current Liabilities	53,926.61
Total Current Liabilities	53,967.66
Long Term Liabilities Deferred Lease Incentive Liabil	-0.02
Total Long Term Liabilities	-0.02
Total Liabilities	53,967.64
Equity	
Retained Earnings	820,480.20
Net Income	-49,423.50
Total Equity	771,056.70
TOTAL LIABILITIES & EQUITY	825,024.34

9:48 AM

08/07/19

**Accrual Basis** 

## Upper Mississippi River Basin Association FY 2020 Profit & Loss Budget Overview July 1 through August 7, 2019

	Jul 1 - Aug 7, 19	Budget	\$ Over Budget
Ordinary Income/Expense			
Contracts and Grants			
COE (UMRR)	0.00	97.721.70	-97.721.70
EPA (OPA)	0.00	150.000.00	-150.000.00
NPS (STC)	0.00	87,821.00	-87,821.00
Total Contracts and Grants	0.00	335,542.70	-335,542.70
State Dues			
Illinois Dues	0.00	60,000.00	-60,000.00
lowa Dues	30,000.00	60,000.00	-30,000.00
Minnesota Dues	0.00	60,000.00	-60,000.00
Missouri Dues	20,000.00	60,000.00	-40,000.00
Wisconsin Dues	0.00	60,000.00	-60,000.00
WQ Assessment	0.00	100,000.00	-100,000.00
Total State Dues	50,000.00	400,000.00	-350,000.00
Other Income			
Travel Reimbursed Received	0.00	300.00	-300.00
Total Other Income	0.00	300.00	-300.00
Interest Income			
Short Term Interest			
Short Term (Checking)	0.92	0.00	0.92
Short Term (Savings)	1.27	60.00	-58.73
Short Term (Sweep)	8.22	1.00	7.22
Short Term (CD)	1,444.56	8,500.00	-7,055.44
Total Short Term Interest	1,454.97	8,561.00	-7,106.03
Total Interest Income	1,454.97	8,561.00	-7,106.03
Total Income	51,454.97	744,403.70	-692,948.73
Expense			
Gross Payroll			
Salary	18,493.37	320,552.00	-302,058.63
UMRBA Time Wages	43.75	2,500.00	-2,456.25
OPA Wages	4,314.65	75,546.00	-71,231.35
Benefits	4,623.36	80,138.00	-75,514.64
Benefits OPA	225.84	3,915.00	-3,689.16
Total Gross Payroll	27,700.97	482,651.00	-454,950.03
Payroll Expenses			
SocSec Company	1,574.35	29,681.63	-28,107.28
Medicare Company	531.98	6,941.67	-6,409.69
SUTA (Minnesota UC)	6.46	239.37	-232.91
Workforce Enhancement Fee	6.46	239.37	-232.91
Total Payroll Expenses	2,119.25	37,102.04	-34,982.79
Travel	5,169.61	30,000.00	-24,830.39
Space Rental Office Rental	11,604.05	46,417.00	-34,812.95
Total Space Rental	11,604.05	46,417.00	-34,812.95

9:48 AM

08/07/19

Accrual Basis

## Upper Mississippi River Basin Association FY 2020 Profit & Loss Budget Overview July 1 through August 7, 2019

	Jul 1 - Aug 7, 19	Budget	\$ Over Budget
Reproduction			
Copy Service Printing	339.81	1,360.00	-1,020.19 -800.00
	0.00		-000.00
Total Reproduction	339.81	2,160.00	-1,820.19
Meeting Expenses	12,844.67	31,000.00	-18,155.33
Supplies	458.12	3,000.00	-2,541.88
Equipment (Maint./Rental)	69.17	1,600.00	-1,530.83
Total Equipment	69.17	1,600.00	-1,530.83
Legal and Financial			
Insurance	4,411.02	6,200.00	-1,788.98
Legal and Tax Services	0.00	2,000.00	-2,000.00
Bank Charges	0.00	10.00	-10.00
Total Legal and Financial	4,411.02	8,210.00	-3,798.98
Telephone/Communications	950.57	6,000.00	-5,049.43
Postage	85.75	1,200.00	-1,114.25
Other Services	3,500.00	7,000.00	-3,500.00
Publications	3,070.00	2,500.00	570.00
State Travel Reimbursement	0.00	5 000 00	5 000 00
	0.00	5,000.00	-5,000.00
IOWA Minposota	0.00	5,000.00	-5,000.00
Minnesola 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	0.00	28,500.00	-28,500.00
OPA Expenses			
Equipment OPA	0.00	1,000.00	-1,000.00
Equipment (Maint./Rental) OPA	0.00	6,500.00	-6,500.00
Travel OPA	988.83	2,800.00	-1,811.17
Other OPA	0.00	800.00	-800.00
Total OPA Expenses	988.83	11,100.00	-10,111.17
Interstate WQ Expenses			
Travel Interstate WQ	0.00	2,000.00	-2,000.00
Data Collection/Analysis IntWQ	0.00	45,821.00	-45,821.00
Other Interstate WQ	0.00	1,200.00	-1,200.00
Total Interstate WQ Expenses	0.00	49,021.00	-49,021.00
Total Expense	73,311.82	747,461.04	-674,149.22
Net Ordinary Income	-21,856.85	-3,057.34	-18,799.51
Net Income	-21,856.85	-3,057.34	-18,799.51

9:51 AM 08/07/19

Accrual Basis

## Upper Mississippi River Basin Association Balance Sheet

As of August 7, 2019

	Aug 7, 19
ASSETS	
Current Assets	
Checking 1696	54,826.61
Savings 6935	38,800.58
Investment	130.00
CD	675,928.19
Total Investment	676,067.28
Total Checking/Savings	769,694.47
Accounts Pacoivabla	
Contract/grants	
Invoiced/Billable	13,590.49
Total Contract/grants	13,590.49
Total Accounts Receivable	13,590.49
Other Current Assets	
Investment Interest Receivable	7,154.05
Total Other Current Assets	7,154.05
Total Current Assets	790,439.01
Fixed Assets	
Leasehold Improvements	27,316.00
Accum Deprec. Leasehold Improv	-27,316.00
Accum, Deprec, OPA	-21 248 06
Accum. Deprec. WQ	-1,290.00
Accum. Deprec. 604(b)	-568.95
Accum. Deprec. STC	-2,989.68
UMRBA Equipment	33,455.89
WO Equipment	21,705.26
604(b) Equipment	568.95
STC Equipment	2,989.68
Total Fixed Assets	3,377.62
TOTAL ASSETS	793,816.63
LIABILITIES & EQUITY	
Liabilities	
Current Liabilities	
Visa Wells Fargo 0198	476.45
Visa Wells Fargo 8876	8.75
Total Credit Cards	485.20
Other Current Liabilities	
Payroll Liabilities	00.40
SUTA (Minnesola UC) Workforce Enhancement Fee	-20.10
Accrued Vacation	41,047.77
Accrued Vacation FICA	3,140.15
Total Payroll Liabilities	44,131.60
Total Other Current Liabilities	44,131.60
Total Current Liabilities	44,616.80
Long Term Liabilities Deferred Lease Incentive Liabil	-0.02
Total Long Term Liabilities	-0.02
Total Liabilities	44,616.78
Equity	
Retained Earnings	771,056.70
Net Income	-21,856.85
Total Equity	749 199 85
	703 846 63
IVIAL LIADILITIES & EQUIT	/ 93,010.03

## ATTACHMENT C

# <u>Congressional Members' Letter re</u> <u>MVR Emergency Dredging Funds (7/18/2019)</u> (C-1 to C-2)

DEMOCRATIC STEERING AND POLICY COMMITTEE

COMMITTEE ON AGRICULTURE

CHERI BUSTOS 17th District, Illinois

COMMITTEE ON APPROPRIATIONS

SUBCOMMITTEE ON DEFENSE SUBCOMMITTEE ON LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION

SUBCOMMITTEE ON MILITARY CONSTRUCTION AND VETERANS AFFAIRS

## **Congress of the United States** House of Representatives Washington, DC 20515-1317 July 18, 2019

Major General Richard G. Kaiser Commander, Mississippi Valley Division U.S. Army Corps of Engineers 1400 Walnut Street Vicksburg, MS 39180

Dear Major General Kaiser,

We write in support of the emergency dredging funding request from the U.S. Army Corps of Engineers Rock Island District. Historic flooding throughout the Midwest this year has created an immediate need for emergency dredging to remove deposited sediment and bring our waterways back to authorized channel levels.

During the flooding, locks along the Upper Mississippi were closed for months, halting the movement of goods along the river. Although the river is now open, extensive emergency dredging is required to return the channel to authorized dimensions, including 25 critical areas facing imminent channel closure. As the region now looks to make up for lost shipping time, it is imperative that the dredging needs of our waterways are addressed to ensure navigability.

The Rock Island District has identified \$6.7 million in emergency dredging needs along the Upper Mississippi River, with an anticipated funding shortfall date of August 10, 2019. Meanwhile, the Illinois River, which feeds into the Mississippi and serves as a key connector for moving agricultural goods, faces an immediate shortfall of \$5 million in emergency dredging.

Congress authorized \$908 million in disaster funding for Operations and Maintenance activities, including emergency dredging, in H.R. 2157, the Additional Supplemental Appropriations for Disaster Relief Act (Pub.L. 116-20). As the Army Corps determines how to allocate this funding, we urge the swift approval of the Rock Island District's request for funding for emergency dredging on the Upper Mississippi River and Illinois Waterway.

C-1

We thank you for your expeditious consideration of this request.

Sincerely,

Rutos

Cheri Bustos Member of Congress

WASHINGTON DC OFFICE 1233 LONGWORTH HOUSE OFFICE BUILDING WASHINGTON, DC 20515 ROCK ISLAND OFFICE 2401 4th Ave. Rock Island, IL 61201

Darin LaHood Member of Congress

PEORIA OFFICE 820 SW Adams Street Peoria, IL 61602 Rockford Office 119 N. Church St., Suite 101 Rockford, IL 61101

Abby Finkenauer Member of Congress

Mike Bost Member of Congress

Raja Krishnamoorthi Member of Congress

Lamen Underwood

Lauren Underwood Member of Congress

Rodney Davis Member of Congress

Adam Kinzinger Member of Congress

Mixe Que Mike Quigley

Member of Congress

Daniel W. Lipinski Member of Congress

.U.

Dave Loebsack Member of Congress

anice Schakowsky Member of Congress

Bobby L. Rush Member of Congress

Jesús G. "Chuy" García Member of Congress

John Shimkus Member of Congress

Bill Foster Member of Congress

Sean Casten Member of Congress

## **ATTACHMENT D**

# 2019 Navigation and Ecosystem Sustainability Program Economic Update Scope of Work (D-1 to D-9)

## NAVIGATION AND ECOSYSTEM SUSTAINABILITY PROGRAM ECONOMIC UPDATE SCOPE OF WORK

## **1. BOTTOM LINE UP FRONT**

The overall objective of this economic update is to provide decision makers updated economic information on the NESP authorization that would allay their budgetability concerns for the program. NESP is strongly supported by the five Upper Mississippi River System states, congressional interests, navigation, and environmental stakeholders. In November 2017, 40 members of the House of Representatives sent a letter of support for NESP to Mr. Mulvaney, Director, Office of Management and Budget and subsequently in December 2017, 10 senators also sent a letter of support to Mr. Mulvaney. This shows the strong support of NESP which will create jobs, provide economic relief to America's farmers, and would allow USACE to "turn dirt" and generate near-term economic benefit by alleviating existing and future lock congestion through combination of small scale and large scale measures Authorized in WRDA 2007.

Previous concerns and uncertainties on the economic viability of NESP will be addressed in this update which in turn will lead to the development of a "Central Scenario." While developing a "Central Scenario", the range will also be tightened for the low and high traffic scenarios and a most probable and foreseeable future condition will be developed.

In addition to the inputs listed below, the team will seek every opportunity to relate the new/updated information to the Administration's Infrastructure and Transportation Goals. The team clearly understands that a case needs to be built as to why NESP should be funded as it relates to enhancing international competitiveness, modernizing aging infrastructure, preserving national security, increasing transportation efficiency, and serving the National interest.

This scope of work has been developed to describe what was previously proposed for past economic updates, what is planned for this update, and prepares the basic elements to guide the near-term development of a Project Management Plan. This analysis will investigate the authorized plan (7 locks) and will perform a sensitivity analysis to evaluate a smaller subset of locks as separable construction features.

## 2. INTRODUCTION

The purpose of this scope of work is to provide necessary clarity for the economic update guidance and provide background information on the issues and concerns surrounding the economic analysis of the Upper Mississippi River – Illinois Water Way (UMR-IWW) System Navigation Feasibility Study and describe the current economic update recommendations. Per previous ASA(CW)'s guidance, the PDT provided a proposal, dated 7 January 2016, that called for a very comprehensive \$6.8 million economic analysis, this proposal was not funded. The recently approved and funded FY19 Workplan provided \$1 million to complete an economic update for NESP.

On November 8, 2007, the United States Congress passed the Water Resources Development Act (WRDA) 2007, Title VIII which authorized the first increment in accordance with Chief of Engineers Report, dated 15 December 2004. This authorization is more commonly referred to as the Navigation

and Ecosystem Sustainability Program (NESP). The NESP Authorization is a very unique dual purpose authorization for both navigation efficiency improvements and ecosystem restoration. For the purposes of this economic update, the focus is largely on the authorized navigation efficiency improvements which include:

- New Locks
  - New 110'x1200' lock chambers at Locks 20, 21, 22, 24, and 25 on the Upper Mississippi River and at LaGrange Lock and Peoria Lock on the Illinois Waterway.
- Small Scale and Non-structural Improvements
  - Mooring facilities at Locks 12, 14, 18, 20, 22, 24, and LaGrange Lock or other alternative locations that are economically and environmentally feasible.
  - Provide switchboats at Locks 20 through 25 on the Upper Mississippi River.

The UMR-IWW transportation system exists of 37 navigation projects, however, this update analysis will focus on the 7 navigation projects authorized for the addition of a secondary 110'x1200' lock chamber and the additional small scale navigation projects, mooring cells and switchboats. In addition to the authorized plan analysis, a sensitivity analysis will be done to evaluate a smaller subset of locks as separable construction features.

### 3. INPUT/ASSUMPTION UPDATES

The table below summarizes the inputs required for the update. Information below the table details the analyses that will be done for each input.

INPUT	DESCRIPTION	REMARKS
3.1 Engineering Reliability	Lock outages due to unreliability have been absent from prior work and are an important driver in this update	<ul> <li>Current practice is to define and model the risk probabilistically and focus on unscheduled outages which add additional burden to the already congested system.</li> <li>Reliability analysis will inform the economics inputs and lead to the development of a "Central Scenario"</li> <li>Tools not available in the 2008 economic update will be utilized to perform the analysis. The tools that will be utilized should improve, expedite, and focus the engineering reliability effort considerably.</li> <li>In general, as locks continue to age and see increased utilization their performance reliability decreases</li> </ul>
3.2 Forecasted Barge Traffic Demands	Traffic Demands are a primary driver in the analysis	<ul> <li>Will include utilization of off the shelf public and private sources of long term grain and non-grain forecasts.</li> <li>Sensitivity tests of no growth and no growth beyond 20 years will be performed</li> </ul>
3.3 Barge Transportation Demand Elasticity	Demand elasticity is fundamental to the estimation of system equilibrium traffic levels	<ul> <li>Demand elasticity from the 2008 Economic Update will be carried forward</li> <li>Basis of the demand elasticity was founded on series of surveys of individuals Upper Mississippi River and Illinois Waterway shippers.</li> </ul>
3.4 Transportation Rates – Long-Run and Short- Run	Rates on the waterway versus other means of transportation	<ul> <li>Transportation rate savings equates to the difference between the waterway routed rated and the alternative transportation rates.</li> <li>Bulk of the effort will involve price leveling adjusting the existing long-run transportation rates from the 2008 economic update.</li> </ul>
3.5 Lock Performance Characteristics	Relationship between average tow transit	<ul> <li>The lock performance characteristics are combined with vessel cost information to estimate increased waterway</li> </ul>

	times to annual traffic level	•	transportation costs in the system given specified lock assumptions. Lock performance characteristics will be developed for 1-2 of the locks that would be affected by the authorized plan and extrapolate the data for the other lock sites. Current fleet configurations will be analyzed.
3.6 Cost Estimates and Laydown	Previous cost estimates will be indexed to 2018 dollars	•	Two locks – Lock 22 and Lock 25 were designed to 50% level, and costs were appropriately developed for this level of design. These costs will be indexed. An estimate was developed for the overall program assuming a 15 year implementation. These costs will be indexed.

This section answers the following questions:

- 1. What are the major inputs required for an economic update of NESP?
- 2. What was the recommendation for updating these inputs in 2016?
- 3. What is the current path for updating these inputs given time and budget constraints?
- 4. What is the risk and uncertainty involved with the proposed analysis path?

The major inputs needing to be updated for this analysis include: engineering reliability (probabilistic risk and scheduled maintenance needs), forecasted barge traffic demands, barge transportation demand elasticity, transportation rates, Without-Project and With-Project condition lock performance characteristics (tonnage-transit curves) and project cost with implementation schedule. These inputs, described below, represent the key drivers in determining economic justification.

#### **3.1 Engineering Reliability**

Engineering reliability is considered the primary driver, and primary uncertainty, in the analysis. Operations and maintenance funding for the Corps' civil works infrastructure has been largely flat or declining for decades, while the needs for maintaining the aging infrastructure have increased.

Engineering reliability can be expressed for the Without-Project and With-Project conditions through both the expected scheduled maintenance needs and through probabilistic engineering reliability (hazard functions and event-trees). While previous studies noted that decades of largely flat or declining maintenance funding has adversely affected reliability in the system, previous analysis only quantified the risk through scheduled service disruption events. Current analytical practice is to define and model the risk probabilistically and focuses on risk of unscheduled unavailability / service disruptions.

**<u>Reference Perspective:</u>** For the Without-Project condition Engineering typically investigates the reliability (scheduled maintenance needs and unscheduled risk) of the existing projects to understand the value of installing the new locks in reducing the existing chamber maintenance and unscheduled repair costs, and their corresponding transportation impacts.

For the With-Project condition Engineering typically investigates the reliability (scheduled maintenance needs and unscheduled risk) of the major components at each of the seven new locks as if they were constructed.

**<u>Current Proposal</u>**: As under past proposals for the economic update, both the Without-Project and With-Project conditions scheduled maintenance and unscheduled risk will be updated, however, unlike

the previous proposal this effort focus on the 7 navigation projects authorized for addition of a secondary 110'x1200' chambers and will leverage existing data and analytics from the Asset Management (AM) Operational Condition Assessment (OCA) and a next generation Operational Risk Assessment (ORA) tool that has been developed and piloted on other parts of the IMTS. Additionally, these same tools were used as a primary basis for the analysis behind the Corps "Inland and Intracoastal Waterways Twenty-Year Capital Investment Strategy" (March 2016) submitted through OASACW and OMB to Congress per Title II, Subtitle A, Section 2002, (d) of the Water Resources Reform and Development Act of 2014 (WRRDA 2014). Taking advantage of the newer ORA tool that was not available at the time of the previous proposal should improve, expedite, and focus the Engineering Reliability effort considerably.

As noted, only scheduled maintenance and unscheduled risk will be defined for the 7 navigation projects authorized for addition of a secondary 110'x1200' chambers. Given that service disruptions at the other 30 navigation projects will be identical under the Without-Project and With-Project conditions as defined by the authorized increment 1, itemization of the information in inconsequential.

Instead of component-level reliability models including failure model analysis, limit-state performance analysis, and detailed event trees analysis, engineering reliability on selected representative locks and their components using the AM OCA ORA framework will be utilized. Analysis will still focus on major lock components, their risk of failure over time and likely repair cost, reliability improvement, and lock service level disruption and duration. Risk and Reliability determination will generally follow these steps:

- a) Ensure current OCA condition ratings are accurate and reflect recent maintenance, repair and replacements, including those currently underway in the Work Plan.
- b) Update the 'baseline' National Weibull parameters to better reflect the reliability of the components in the local system which reflect current site conditions and operating environment.
- c) Verify, and adjust as necessary, the National baseline recovery durations for use in the Event Tree Analysis (ETA). The current ORA tool provides the equivalent of the 'moderate' outage option in the ETA so the Team will be required to also determine whether minor and / or catastrophic failure levels should be included.
- d) Update inputs to the ORA tool based on Steps a-c and run the ORA model.

The results of Steps a-d will provide the subset of mission critical components requiring further detailed analysis in the Navigation Investment Model (NIM) Lock Risk Module (LRM). The LRM (a life-cycle event-tree simulation) will be used on all 7 NESP locks and their identified high risk components.

**<u>Risk:</u>** The tools suggested for the engineering reliability update receive great attention by the Asset Management arm at HQUSACE and represent an advancement over the analysis level of the 2004 and 2008 reports. The tools are used to help identify national risks and understand investment needs. For the O&M program, these tools are maturing into the primary means to prioritize the O&M budget for navigation. As previously mentioned, by leveraging existing Asset Management tools and processes that were not available at the time of the last update the team believes that risks will be reduced considerably. As compared to previous economic updates, what is planned for the engineering reliability analysis would be a moderate reduction in risk.

Risk Level: Low.

#### 3.2 Forecasted Barge Traffic Demands

Traffic demands are often a primary driver and source of uncertainty in an analysis. The demand and benefit of the transportation system is driven by its utilization. In the case of the UMR-IWW System, the main demand and benefit is derived from export grain shipments and international trade. In the 2004 Feasibility and 2008 Economic Update only a low and high forecast scenarios were developed to bracket a reasonable range of freight traffic.

**<u>Reference Perspective</u>:** The low (LTS) and high traffic scenario (HTS) demand forecasts are typically updated, along with the development of a new central forecast scenario (CTS), in two distinct efforts, one for grain (corn, soybeans, and wheat) and another for non-grain commodities.

For the grain forecasts, the Global Grain Model (GGM) used in the 2008 re-evaluation is typically employed. This model, developed by North Dakota University would evaluate the distribution of grain flows and shipments through U.S. waterways, is a large scale nonlinear programming model. It has the objective of minimizing costs of world grain trade, subject to meeting the demands at importing countries and regions, and available supplies and production potential in each of the exporting countries and regions. By varying several key variables within the GGM (US corn-based ethanol demand, US corn yields, rest of world corn yields, US area available for planting, US rail capacity, China corn, and Panama Canal) LTS, CTS and a HTS were to be created for grain.

For the non-grain forecasts, methods that were used in the 2008 Re-evaluation Report would typically be used to develop an LTS, CTS and a HTS. Data on demographic, economic and industry variables affecting traffic flows for each commodity group will be compiled from industry interviews and different public and private sources.

**Current Proposal:** Off the shelf public and private sources of long term traffic forecasts of Grain and Non-Grain will be compiled to develop the LTS, CTS and HTS forecasted demands. Sources will likely include the Department of Agriculture for the grain commodities and the Department of Energy for some of the non-grain commodities. Additional sensitivity tests of no growth and CTS no growth beyond 20-years will be performed.

**<u>Risk:</u>** The current proposal may not capture industry specific or regional trends thereby making the overall traffic demand forecast less reliable and harder to defend. As such, overestimating or underestimating traffic demand may occur having an impact on project justification. Forecasted demands and forecasted equilibrium traffic levels are always controversial.

Risk Level: Medium.

#### **3.3 Barge Transportation Demand Elasticity**

The use and definition of barge transportation demand elasticity was contentious in the initial phases of the UMR-IWW System Navigation study resulting in review by the National Academy of Sciences (NAS). As a result the 2008 Re-evaluation Report, a theoretical econometric shipper's modal choice model was

developed to define commodity level movement demand functions. The basis of demand elasticity and demand function specification was founded on a series of surveys of individual UMR-IWW shippers.

Demand functions are fundamental to the estimation of system equilibrium traffic levels (i.e., conversion of forecasted demands to forecasted traffic levels) and as such to the benefits attributable to a waterway. The demand functions defines how shippers adjust waterway quantities in response to changes in waterway operating conditions (prices). The demand function fundamentally reflects the willingness-to-pay for use of the waterway, and therefore represents multi-modal costs and the basis of NED benefit estimation.

**<u>Reference Perspective</u>**: To capture current conditions, survey's and re-specification and re-estimation of the econometric demand elasticity models are typically done.

**<u>Current Proposal</u>**: The demand elasticity functions developed for the 2008 Economic Update will be carried forward for this effort.

**<u>Risk:</u>** Using previously developed demand elasticity functions may not capture changes in shipper willingness-to-pay for barge transportation since the last analysis thereby lowering dependability of the results. Grain end use and routing options have probably not significantly changed since the 2008 analysis and the demand elasticities are only used to estimate equilibrium traffic levels from the demand forecasts. The primary benefits for the recommended initial increment of the UMR-IWW come from the avoidance / minimization of traffic service disruptions in the Without-Project condition and in project transit efficiency gains (quicker processing and less congestion delays). As such, the demand elasticity has similar impact to the analysis as the demand forecasts; the determination of the level of traffic impacted by service disruption and transit efficiencies.

#### Risk Level: Medium

#### 3.4 Transportation Rates - Long-Run and Short-Run

Transportation rate savings equates to the difference between the waterway routed rate (ultimate origin to ultimate destination) and the alternative routed rate, often defined as the least-costly all-overland routed rate. The transportation rates can be classified as long-run rates or short-run rates.

Long-run transportation rates represent rates in the transportation market when demand equals supply in the historic analysis base year. Since long-run transportation rates occur at equilibrium, they are typically utilized as a proxy for the willingness-to-pay for barge transportation. The long-run rates are useful for calibration and validation of the shipping-plan for the without project condition.

The short-run rates refer to rates charges when unscheduled disruptions occur. Movements can be defined as diverting off the waterway under specified waterway service disruption events (e.g., contractual arrangements require timely delivery, etc.). The diverted tonnage is then accessed a diversion or spot rate which is higher than the long-run least-costly all-overland base rate. Short term rates are utilized to access impacts from unscheduled system service disruptions shipper-response diversions.

**<u>Reference Perspective</u>**: Long-run and short-run rates typically are re-estimated for movements currently utilizing the UMR-IWW navigation system. Transportation rate/cost estimates encompass the

total costs incurred for existing system use including access and transfer costs as well as the total transportation costs that would be incurred if existing waterway movements were forced to use an alternative route / mode of transportation. A sample of waterborne movements using the UMR-IWW system would be developed for this purpose with rate information collected via surveys and interviews with shippers and terminal operators. The sample rates would then be extrapolated to the population of movements.

**Current Proposal:** The bulk of this effort will involve price leveling adjusting the existing long-run transportation rates developed for the 2008 Economic Update using appropriate indexes. A long-run transportation rate analysis may be performed on a small sample of movements to help with estimating the costs of unexpected short-term closures. Short-run rates will be developed from data from the University of Tennessee Center for Transportation Research (UT-CTR).

**<u>Risk:</u>** Price level adjusting long-run transportation rates used in the 2008 update and performing a transportation rate analysis on small sample should develop relatively accurate results, especially in light of the fact that only the base water routed rate is used for the system model shipping-plan calibration / validation. Accurate short-run alternative route / mode rates are more critical to the analysis. Work on these UMR-IWW alternative route / mode rates appear to be largely done as part of the National Waterways Foundation and the U.S. Maritime Administrations October 2017 report titled "The Impacts of Unscheduled Lock Outages".

#### Risk Level: Low

#### 3.5 Lock Performance Characteristics (tonnage-transit curves)

Lock project tonnage-transit curves show the relationship between average tow transit times to annual traffic level. These curves are combined with vessel cost information to estimate increased waterway transportation costs in the system given specified lock project assumption (e.g., lock chamber size), traffic levels, and / or service disruptions.

While the UMR-IWW transportation system includes 37 navigation projects, only the 10 navigation projects with efficiency improvements in the first increment require Without-Project and With-Project tonnage-transit curves (7 navigation projects authorized for the addition of a secondary 1200' x 110' lock chamber and 3 additional navigation projects authorized for mooring facilities). Note that 6 of the 7 navigation projects authorized for construction of a second lock chamber will require additional analysis for implementation of mooring cells and / or use of switch boats prior to construction completion.

**<u>Reference Perspective:</u>** Transit curves would be developed by lock location for the existing 37 locks operating on the UMR-IWW system and all with-project NESP improvements. It would be expected that the USACE-certified Waterway Analysis Model (WAM) was be used to develop these transit curves.

**Current Proposal:** Rather than generate transit curves utilizing WAM for 37 locks or for the 7 navigation projects actually altered under the authorized plan, the current proposal is to generate transit curves for a smaller number of lock projects by generating curves that are considered representative of other structures and extrapolated to these other locations. For example, rather spend time and funds on developing individual set of curves for Mississippi River Lock and Dam 22 and Mississippi River Lock and Dam 24, a single set of curves will used for both. Commonality of traffic and similarities in lock design will be used to group the tonnage transit curves.

**<u>Risk</u>**: Developing a limited number of transit curves on a sample of locks and then extrapolating to other projects may not yield accurate curves for these other lock locations which could call into questions Without-Project and With-Project delay profiles.

#### Risk Level: Low

#### 3.6 Cost Estimates and Laydown

Cost estimates for Locks 22 and 25 received the most effort in previous PED efforts resulting in roughly a 50% design level, detailed quantities, MCACES estimate and individual CSRAs.

**<u>Reference Perspective</u>**: The supporting MCACES estimates would be converted to the current version of MII and then updated as needed. The CSRAs will be reviewed and reworked as needed.

Locks 20, 21, and 24 are patterned after Locks 22 and 25. The quantities for Locks 22 and 25 will adjusted based on Locks 20, 21, and 24 site specific characteristics (i.e. – lockwall height). MCACES estimates will be conducted as well as cost and schedule risk analysis.

The conceptual designs for LaGrange and Peoria Locks will be revisited to understand if there are any impacts on the flood plain to ensure the scope of the projects are fully considered. The resulting design will be quantified and estimated based on work on the Mississippi River Locks. MCACES estimates will be conducted as well as cost and schedule risk analysis. The Peoria analysis should additionally consider the bridge and its impact on approach conditions as well as other landside infrastructure that might be impacted.

Budgetary estimates for this work includes the all efforts including design, cost, the cost center, ATR, management, oversight, coordination, etc.

**Current Proposal:** Index the cost estimate prepared for the program in 2004 to 2018 dollars. Indexing appears the only viable option given the time and schedule for the update. In addition to the indexing, the team will also make an assessment of other cost-related items such as sensitivity of continuous versus sporadic funding, etc. and the cost estimate will undergo an abbreviated Cost and Schedule Risk Analysis.

**<u>Risk:</u>** Some risks are inherent in any estimate, such as the funding stream may differ from what is anticipated, etc. Risk associated with this updating methodology is that the cost index may not capture the true historical rise in prices, or the escalation for the future years (used to calculate a fully funded estimate) may differ from what is assumed. Risk, in cost estimates, is handled by adding contingency. So, a cost estimate that is merely indexed, will likely have a higher contingency than one supported by a detailed cost estimate.

#### Risk Level: High

## 4. COSTS BY TASK

Input	2016 Estimate	Current Estimate	
Engineering Reliability	\$759,365	\$200,000	
Forecasted Barge Traffic	\$420.000	¢150.000	
Demands	\$420,000	\$130,000	
Barge Transportation Demand	¢200.000	¢72 E00	
Elasticity	\$300,000	\$72,500	
Transportation Rates	\$300,000	\$125,000	
Lock Performance	\$210,000	¢72 E00	
Characteristics	\$210,000	ş72,500	
Cost Estimates and Laydown	\$1,242,000	\$120,000	
Reviews, Report Writing, and	\$650.000	¢200.000	
Final Submission	\$650,000	\$500,000	
TOTAL	\$6.8M (this estimate included other items not show as part of this update)	\$1,000,000	

## 5. SCHEDULE

	ECONOMIC UPDATE SCHEDULE											
Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19	Apr-19	May-19	Jun-19	Jul-19
Scoping Develo	and PMP											
	3.1 Engi	neering Re	liability									
			3.2	Forecaste	d Barge Tra	affic Dema	nds					
			3.3 Barge Transportation Demand Elasticity									
			3.4 Transportation Rates - Long-Run and Short-Run									
		3.5 Lock Performance Characteristics										
	L	3.6 Cost Estimate Indexing										
							Report	Writing, Re	eviews, an	d Final Sub	mission	

## ATTACHMENT E

## Department of the Interior Unified Regions Map

## 12 Unified Regions Based on Watersheds



## ATTACHMENT F

## Additional Items

- Future Meeting Schedule (F-1)
- Frequently Used Acronyms (5/2/2019) (F-2 to F-7)

#### QUARTERLY MEETINGS FUTURE MEETING SCHEDULE

### **OCTOBER 2019**

#### St. Paul, Minnesota

October 29UMRBA Quarterly MeetingOctober 30UMRR Coordinating Committee Quarterly Meeting

	FEBRUARY 2020
<u>TI</u>	3D: Quad Cities, Dubuque, or Muscatine
February 25 February 26	UMRBA Quarterly Meeting 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
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
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
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
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
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
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
HAB	Harmful Algal Bloom
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
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
IIA	Implementation Issues Assessment
IIFO	Illinois-Iowa Field Office (formerly RIFO - Rock Island Field Office)
ILP	Integrated License Process
IMTS	Inland Marine Transportation System
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
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
	$E_A$ Compiled by UNADD A Staff $\frac{5}{2}$

MARAD	U.S. Maritime Administration
MARC 2000	Midwest Area River Coalition 2000
MICRA	Mississippi Interstate Cooperative Resource Association
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
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	Preliminary 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

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
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