Minutes of the 132nd Quarterly Meeting
of the
Upper Mississippi River Basin Association

November 18, 2014
St. Paul, Minnesota

UMRBA Chair Arlan Juhl called the meeting to order at 9:32 a.m. Participants were as follows:

UMRBA Representatives, Alternates, and State Members of the Water Quality Executive Committee and Water Quality Task Force:

Arlan Juhl	Illinois Department of Natural Resources
Dan Stephenson	Illinois Department of Natural Resources
Marcia Willhite	Illinois Environmental Protection Agency
Diane Ford	Iowa Department of Natural Resources
Tim Hall	Iowa Department of Natural Resources
John Olson	Iowa Department of Natural Resources
Sam Hiscocks	Iowa Department of Transportation (by phone)
Dave Frederickson	Minnesota Department of Agriculture
Barb Naramore	Minnesota Department of Natural Resources
Patrick Phenow	Minnesota Department of Transportation
Rebecca Flood	Minnesota Pollution Control Agency
Robert Stout	Missouri Department of Natural Resources
Trish Rielly	Missouri Department of Natural Resources
Bryan Hopkins	Missouri Department of Natural Resources
Dan Baumann	Wisconsin Department of Natural Resources
Jim Fischer	Wisconsin Department of Natural Resources

Federal UMRBA Liaisons and Federal Members of the Water Quality Executive Committee:

Juan Hernandez	U.S. Department of Agriculture, NRCS
Mark Moore	U.S. Army Corps of Engineers, MVD
Col. Dan Koprowski	U.S. Army Corps of Engineers, MVP
Col. Mark Deschenes	U.S. Army Corps of Engineers, MVR
Ken Westlake	U.S. Environmental Protection Agency, Region 5 (by phone)
Tim Henry	U.S. Environmental Protection Agency, Region 5
Charlie Wooley	U.S. Fish and Wildlife Service
Scott Morlock	U.S. Geological Survey

Others in Attendance:

Garrett Pederson	Iowa Department of Transportation
Andrea Vaubel	Minnesota Department of Agriculture
Kevin Stouffer	Minnesota Department of Natural Resources
Harry Bozoian	Missouri Department of Agriculture
Renee Turner	U.S. Army Corps of Engineers, MVD
Kevin Baumgard	U.S. Army Corps of Engineers, MVP
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Chris Erickson	U.S. Army Corps of Engineers, MVP

Tom Novak	U.S. Army Corps of Engineers, MVP
Steve Tapp	U.S. Army Corps of Engineers, MVP
Gary Meden	U.S. Army Corps of Engineers, MVR
Hank DeHaan	U.S. Army Corps of Engineers, MVR (by phone)
Ken Barr	U.S. Army Corps of Engineers, MVR
Marv Hubbell	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR
Michael Tarpey	U.S. Army Corps of Engineers, MVR
Tim Eagan	U.S. Army Corps of Engineers, MVS
Brian Johnson	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Kat McCain	U.S. Army Corps of Engineers, MVS
Colleen Oestreich	U.S. Department of Agriculture, NRCS
Steve Faryan	U.S. Environmental Protection Agency, Region 5
Bob Clevenstine	U.S. Fish and Wildlife Service
Barry Johnson	U.S. Geological Survey, UMESC
John Anfinson	National Park Service, MNRRA
Steve Buan	National Weather Service
Craig Schmidt	National Weather Service
Olivia Dorothy	American Rivers
Jordy Jordahl	America's Watershed Initiative (by phone)
Jeff Jacobs	National Research Council (by phone)
Paul Dierking	HDR
Mark Muller	McKnight Foundation
Barry Drazkowski	St. Mary's University of Minnesota
Dru Buntin	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Matt Jacobson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association
Holly Stoerker	Upper Mississippi River Basin Association (retired)

Minutes

Dan Baumann moved and Diane Ford seconded a motion to approve the draft minutes of the August 5, 2014 quarterly meeting. The motion carried unanimously on a voice vote.

Executive Director's Report

Dru Buntin presented the Executive Director's report and noted that the report is organized according to the focus areas in the 2013-17 UMRBA Strategic Plan. Among the items in the report, in the *Commercial Navigation focus area*, Buntin highlighted the August 20, 2014 letter to President Obama from the Governors of the five UMRBA states expressing the states' ongoing support for the Navigation and Ecosystem Sustainability Program (NESP) and requesting the inclusion of funding for NESP in the Administration's FY 2016 budget request. Buntin said the UMRBA Navigation Working Group recently created by the Board is now operating and has held a number of meetings via conference call.

Ecosystem Restoration and Monitoring focus area - Buntin said Col. Deschenes hosted a September Upper Mississippi River Restoration Program (UMRR) leadership meeting in Dubuque including representatives from the program's federal, state, and nongovernmental partner organizations. The highest priorities established by participants at the meeting relate to problems with provisions of the Corps' project partnership agreements (PPAs). Buntin said UMRBA staff will continue to work with

the state and nongovernmental members of the UMRR Coordinating Committee, the Corps, and Board members to address the problems with PPA provisions. UMRBA staff developed a summary of the issues related to PPAs that will be communicated directly to MVR Commander Col. Deschenes. Buntin said Marv Hubbell will provide a briefing on the draft FY 2015-2025 UMRR Strategic Plan later in the quarterly meeting.

Spills Response, Planning, and Mapping focus area - Buntin said UMRBA's Oil Pollution Act (OPA) staff continue to work on the Minnesota statewide update of the Inland Sensitivity Atlas. As work on the Minnesota atlas moves toward completion, staff have initiated work on the next statewide update for Illinois. Buntin said the UMR Spills Group sponsored a spill response exercise and training on October 2-4, 2014 in La Crosse, Wisconsin. This functional exercise built on the tabletop exercise held earlier in the year and tested response to a rail-based release of petroleum to the UMR in Pool 8. Buntin said a full briefing on the exercise would be provided later in the quarterly meeting.

Water Quality focus area - Buntin highlighted the completion in May 2014 of a series of presentations in UMRBA quarterly meetings regarding state nutrient reduction strategies. This positioned the states well to work together with staff support from UMRBA in the preparation of a multi-state application for funding from NRCS under the new Regional Conservation Partnership Program (RCPP) authorized by Congress in the last Farm Bill. Buntin indicated Dave Hokanson would provide a briefing on the RCPP multi-state proposal later in the quarterly meeting.

Cross-cutting Initiatives and Collaboration focus area - Buntin said he attended the America's Watershed Initiative (AWI) Summit held in Louisville, Kentucky on September 30 through October 2, 2014. At the Summit, AWI released the preliminary report cards for the Mississippi River and its component basins, including the UMR. Buntin said AWI Executive Director Jordy Jordahl would provide a briefing regarding the AWI Summit and the preliminary report cards later in the quarterly meeting.

Buntin said UMRBA is extremely fortunate to have active Board members who have years of service to their respective states. Consequently, the upcoming retirements of Board members Arlan Juhl and Diane Ford mark a significant event for the Association. Buntin expressed UMRBA staffs' appreciation for both members' service. UMRBA Chair Juhl presented a UMRBA certificate of appreciation to Ford for her service. Ford said she enjoyed both of her two periods of service on the UMRBA Board and indicated her intent to continue to participate in Upper Mississippi River management issues in her retirement. Vice Chair Dan Baumann presented a UMRBA certificate of appreciation to Juhl for his years of service. Baumann indicated how much he personally has enjoyed working with both Juhl and Ford and expressed the other Board members appreciation for their leadership and service. Juhl said it has been a privilege working with UMRBA and indicated Vice Chair Baumann will assume responsibility for the Chair's duties at the beginning of 2015.

Buntin directed the Board's attention to page B-14 of the agenda packet for a copy of UMRBA Treasurer Jason Tidemann's statement regarding his review of UMRBA's financial statement for the period of July 1, 2014 through September 30, 2014. Robert Stout offered and Dave Frederickson seconded a motion to approve the Treasurer's statement. The Board unanimously adopted the motion by voice vote.

St. Paul District Update

Col. Dan Koprowski provided the Board with an overview of MVP and some of the district's recent activities. Koprowski said the district borders follow the edges of four river basins – the Mississippi River, the Red River of the North, the Souris River and the Rainy River – and covers an area of approximately 139,000 square miles. This area includes most of Minnesota, the western half of

Wisconsin, the northeastern half of North Dakota and small portions of northeastern South Dakota and northeastern Iowa. The district also shares approximately 500 miles of border with three Canadian provinces. The district headquarters is located in downtown St. Paul.

In fiscal year 2014, Koprowski said historic summer flooding on the Mississippi kept MVP staff busy. In addition to assisting communities with flood fighting, sedimentation on the river caused by the flooding resulted in emergency dredging throughout the navigation season. For the next fiscal year, Koprowski said MVP staff will be focused on closing Upper St. Anthony Falls Lock and Dam, completing a Pool 2 realignment study, updating reach specific dredged material management plans, and updating the comprehensive Channel Maintenance Management Plan.

Koprowski said MVP received a number of directives with the signing into law of the 2014 Water Resources Reform and Development Act (WRRDA) by President Obama on June 10, 2014. He noted the enactment of the WRRDA law was the first passage of such an act since 2007. One provision of WRRDA requires the closure of the Upper St. Anthony Falls Lock and Dam within one year as a means to prohibit migration of invasive Asian carp upstream. Although the site will no longer be open to navigation, MVP will continue to maintain the infrastructure at the site, as it supports hydropower, water supply and occasionally flood control. Koprowski said an Environmental Assessment (EA) regarding the Upper St. Anthony closure is expected to be released by the end of calendar year 2014.

In 2013, 13 million tons of commodities were shipped on the Mississippi River within the St Paul District's area of operation, including 3 million tons of grain grown in the Upper Midwest. Koprowski said the industries making these shipments saved nearly $370 million by using the inland waterways instead of overland shipping methods. Despite the second latest start to the navigation season and a nearly three-week channel closure due to the flooding, the navigation tonnage increased compared to 2013.

Koprowski said this upcoming winter, MVP will be dewatering Lock and Dam 5A, which is located near Winona, Minnesota. This past winter, MVP dewatered Lock and Dam 8. Koprowski said MVP dewaters all of the locks and dams in the district on a rotating basis with each of them being dewatered approximately every 20 years. The dewatering allows the Corps to provide needed upgrades and mechanical repairs to the locks and dams and keeps them operating well past their original identified lifespan of 50 years.

Koprowski said current MVP Upper Mississippi River Restoration (UMRR) Program projects include building islands in Capoli Slough and Harpers Slough in Pool 9, planning for island building projects in North and Sturgeon Lakes in Pool 3, and habitat improvement projects in Conway Lake in Pool 9 and McGregor Lake in Pool 10.

Koprowski said one current focus of MVP staff is the Fargo-Moorhead flood risk management project recently authorized by Congress in WRRDA. The project includes building a 30-mile long diversion channel in North Dakota with upstream staging. The plan includes 19 highway bridges, four railroad bridges, three gated control structures and two aqueduct structures. In addition to reducing flood risk from the Red River of the North, Koprowski said the project is also intended to reduce flood risk from the Sheyenne, Rush, Lower Rush and Maple rivers. He said it will provide flood risk reduction for more than 200,000 people and 70 square miles of infrastructure in the communities of Fargo, Moorhead, West Fargo, Horace, and Harwood. Koprowski said this project is also a potential pilot for implementation using public-private partnership (P3) alternative delivery methods as authorized under WRRDA. While MVP is currently waiting for federal funding and the signing of a PPA, staff continues designing various parts of the project. Koprowski said MVP is also working the Minnesota Department of Natural Resources, providing the agency with the information needed to finish an environmental impact statement required by state law.

In response to a question from Dan Baumann, Koprowski said MVP did not anticipate any problems with executing the FY 2015 UMRR allocation of about $33 million, its fully authorized annual appropriation. Marv Hubbell said he expects the execution rate will be approximately 97 percent.

Arlan Juhl asked how the EA will address impacts resulting from the Upper St. Anthony closure. Given that Congress mandated the closure in WRRDA, Koprowski said the EA would simply identify and analyze impacts resulting from the closure. He said approximately 800,000 tons of material passed through the lock in the past year. In response to a question from Patrick Phenow, Koprowski said MVP has not yet determined if the Upper St. Anthony lock will be open at all in 2015. Olivia Dorothy asked if the Corps was considering portages for recreational boaters. Koprowski said the issue had been raised, but a determination has not been made. In response to a question from Bryan Hopkins, Koprowski said the project's flood risk management component requires that lock remain operational. Therefore, there will be no hard closure.

Navigation

NESP Update

Michael Tarpey provided an update regarding the Navigation and Ecosystem Sustainability Program (NESP). Tarpey said the feasibility study for what ultimately became the NESP authority started in 1993. The study was restructured in 2001, completed in 2004, and authorized as NESP by Congress in 2007. NESP includes a dual purpose, fifty-year plan for navigation efficiency and ecosystem restoration projects on the Upper Mississippi River System (UMRS). The first increment of funding authorized for NESP includes $2.4 billion for navigation efficiency projects and $1.85 billion for ecosystem restoration projects. Tarpey referenced some UMRS ecosystem challenges including loss of floodplain connectivity, island habitat, and habitat diversity. Navigation challenges include aging infrastructure and the lack of sufficient operation and maintenance (O&M) and major rehabilitation funds for UMRS inland waterways infrastructure. Tarpey said uncertainty regarding the program's economic analysis has prevented the inclusion of funding for NESP in the Administration's budget. However, Tarpey said it is important to recognize the value of the work covered in the NESP authorization. If fully implemented, Tarpey said NESP would provide a significant increase in the funding available for navigation and ecosystem projects on the UMRS. He said recent traffic trends are down, but the Corps projects an increase in traffic with completion of the Panama Canal expansion and other factors.

Tarpey said MVD reprogramed $50,000 in funding to analyze the requirements for updating the economic analysis and cost estimates for some NESP projects. He said small scale navigation efficiency projects and ecosystem restoration projects could be ready to proceed if funding is appropriated. Tarpey said priority areas for the Corps include finishing lock designs initiated and identifying comparable ecosystem projects. Robert Stout asked for some perspective on the conversations occurring within the Corps regarding NESP and P3s. Tarpey said Corps staff believe updating the existing lock designs could aid progress on NESP. Col. Deschenes said Corps leaders are extremely focused on WRRDA implementation, including evaluating potential implications for other inland waterway projects resulting from cost share modifications for the Olmsted project. Deschenes said even with WRRDA provisions, the current situation with inland waterway infrastructure on the UMRS and inland waterway system in general is unsustainable. He said P3s can potentially help address this unsustainable path, but partners need to explore all available options. Gary Meden pointed out that MVR does not yet have the WRRDA implementation guidance. In response to a question from Stout, Deschenes said it is possible that a P3 project could include some portion of NESP. He said he is hearing a direction from Corps leadership that project sponsors should explore P3s for inland waterway projects.

Dru Buntin indicated that the states have discussed the importance of retaining the dual navigation and ecosystem focus of NESP in whatever options are considered moving forward. A great deal of experience shows the states that integrating the rivers' multiple uses provides the best path to getting projects completed. Past efforts that have not integrated and considered multiple uses have resulted in uncompleted projects. Buntin said the states recommend the Corps also consider the potential of P3 ecosystem projects in addition to navigation. Deschenes said the Corps agrees with this perspective and indicated the agency is involving various interest groups in the attempt to identify multiple funding constructs for multiple project types.

In response to a question from Ken Westlake, Tarpey said the Corps does not anticipate an update to the NESP NEPA documents at this point. Barry Johnson noted reference in Tarpey's presentation to a projected increase in shipping on the UMRS and asked if this increase was due to container shipping. Tarpey said the projected increase primarily includes grain and not container shipments. Olivia Dorothy commented on the text in one of presentation slides referencing the fuel efficiency of barge transportation and said a recent study shows the fuel efficiency may not be as much as previously thought. Deschenes said the increased demand projected for shipping is more than container-on-barge and includes factors such as the completion of the Panama Canal expansion and the increase in petroleum shipments in tanker barges. In response to a question from Dru Buntin, (Col.) Deschenes said he would provide USACE's information regarding tanker barge shipping trends at a future meeting. Arlan Juhl said, given that some 2013 grain is still in storage, it is not surprising to see the projected increase in grain shipments.

Public Private Partnerships (P3s)

Hank DeHaan provided information regarding the public-private partnership (P3) pilot program authorized by Congress in WRRDA 2014. DeHaan said the intent of the program is to evaluate the effectiveness and efficiency of allowing non-federal entities to carry out authorized water resources development projects. Several factors have combined to spur interest in the potential of private investment in the inland waterways system, including:

- Navigation infrastructure was largely constructed in the 1930s and is much of it is past its useful life.
- Current funding for maintenance is not matching the need.
- The operations and maintenance (O&M) budget is stagnant and on a downward trend.
- MVD has identified over $1.3 billion in backlogged maintenance, with over $700 million of that deferred maintenance within MVR.
- Aging infrastructure is experiencing significant deterioration.
- The reliability of the system is decreasing while the risks to users and shippers are increasing.
- Increasing service interruptions caused by the lack of adequate maintenance is negatively impacting commerce.

DeHaan said the P3 pilot program will allow non-federal partners to work with the Corps to evaluate the potential of channel improvement, inland navigation, flood damage reduction, aquatic ecosystem restoration, and other projects. DeHaan said the pilot program will allow project funding mechanisms to be developed. Successful pilot projects will result in the execution of an agreement detailing project financing, planning, design, construction, operations, and maintenance.

DeHaan said the State of Illinois is working with partners to develop an Illinois Waterway P3 pilot project. Illinois Governor Pat Quinn sent a September 2014 letter to MVD supporting the project. Project partners are considering the formation of an Inland Rivers and Waterways Authority and

evaluating potential private sector revenue streams. The Illinois Waterway P3 pilot project could include improvements for eight locks and dams on the Illinois Waterway and proposed work ranges from addressing the maintenance backlog to construction of two new 1,200 foot locks. The Corps' preliminary estimates of funding required range from $300 million to $900 million depending on the magnitude of the effort. Some potential funding mechanisms being considered include tariffs, fuel surcharges, state financing, federal appropriation, additional Inland Waterways Trust Fund dollars, etc.

DeHaan said the Inland Rivers and Waterways Authority was being formed by Illinois and would serve as the non-federal entity in the proposed P3 pilot project. The Authority includes executive and advisory boards with state and industry representation and is charged with coordinating the Illinois Waterway P3 project. Todd Main, Chief of Staff at the Illinois Department of Natural Resources, is the project lead. DeHaan said the project is still in conceptual stage as the Corps' Institute for Water Resources (IWR) is developing WRRDA implementation guidance in conjunction with districts, divisions, and headquarters. He indicated Congress had not yet appropriated funding for P3 project implementation.

In response to a question from Robert Stout, Gary Meden said partners should provide any input regarding WRRDA implementation guidance to district and headquarters staff. Meden said the implementation guidance is not yet available, but the Corps has received a significant amount of input from non-federal partners to date. Col. Deschenes said the Corps conducted multiple webinars, conference calls, and other meetings to gather input. Arlan Juhl indicated the states would appreciate an additional opportunity to comment on the implementation guidance once it is released as it is difficult to provide specific comments in advance of having the text of the guidance. Col. Deschenes said he understood this and would provide that input to Corps staff involved in the development of the implementation guidance. Juhl said Illinois proposed the inclusion of comparable ecosystem restoration and navigation funding in the P3 pilot. DeHaan said this was still being discussed with the Illinois Soybean Association and other project partners.

Channel Maintenance Needs

Steve Tapp provided an overview of the dredging management and dredged material management components of the Corps' navigation mission. Tapp said the Corps' navigation mission is to provide safe, reliable, efficient, and environmentally sustainable waterborne transportation systems for movement of commerce, national security, and recreation. He said MVP's navigation mission includes 284 miles of nine-foot navigation channel, 38 miles of three and four-foot channel, 13 locks and dams, 1,500 channel control structures, and 18 shallow draft harbors. Maintenance of the navigation channel also requires a significant amount of dredging.

Tapp said both hydraulic and mechanical dredging are used on the UMRS. Hydraulic dredging is more cost effective and yields higher production, while mechanical dredging requires minimal setup and allows remote placement at small sites. Tapp provided a table showing a thirty-year history of the total quantity of dredged material in MVP and said the average annual amount is 890,000 cubic yards.

Tapp said dredging management requires a balanced approach to recreation, ecological, and navigation concerns. This includes the placement of material where it can be used productively for upland improvement, island construction, or stockpiled for removal. Tapp said the unique and sensitive environment in the UMRS require consideration of impacts on such things as the National Wildlife Refuge system, the migratory bird flyway, historic and cultural resources, and federal and state protected areas.

Tapp said there is a long history of federal and state agencies working together on dredging issues dating back to a 1974 interagency study of dredging issues. This effort culminated in the execution of

partnering agreements to guide a balanced, multi-resource approach to river management. Tapp said planning on dredging issues has included:

- The 1974 Interagency Study of Dredging Issues
- The 1980 completion GREAT Study
- Reconnaissance Reports completed in the 1980s
- The 1996 Channel Maintenance Management Plan
- Continued planning for priority reaches

Tapp said most of the planning was completed in the early 1980s, with only two planning documents completed since the 1996 Channel Maintenance Management Plan. There are currently four dredged material management planning processes underway. Tapp said there is a need to review and prioritize all reaches while overhauling the Channel Maintenance Management Plan. In addition to dredged material management, the Corps is also seeing increased dredging requirements and increased cost. Tapp said the Corps needs additional funding for dredging needs. He provided a summary of channel maintenance expenditures in MVR, which have ranged from roughly $9 million to $19 million.

Tapp said MVP appreciates the input of state partners as well as their efforts to reduce sediment loading. Tapp said state partners' understanding of the resource allows for helpful input during site selection. In response to a question from Dan Baumann, Tapp said planning is very high on the Corps' list of priorities for dredging management. Baumann asked if the Corps has involved the sand industry in discussions of potential beneficial reuse of dredged material. Tapp said the Corps has coordinated with the sand industry in the past, but could always do more. He said the Corps has also reached out to state departments of transportation to investigate how dredged material might be used in transportation projects. In response to a question from Harry Bozoian, Tapp said the Corps received Section 401 water quality certifications for each site. In response to a question from Dru Buntin, Tapp said there are three stockpile sites within MVP that are at capacity.

Jim Fischer commended Tapp and the staff at the Fountain City office for their long history of working with state partners. Fischer noted there are multiple factors that are challenging the ability to carry out a balanced approach to dredging needs. Fischer said UMRBA might offer a forum in which to coordinate on dredging issues. Barb Naramore agreed and said state staff are seeing stresses on the system. She said the states want to highlight these issues and work with the Corps proactively to address them. Naramore said planning at the system level needs to be undertaken if situations such as occurred this past year are to be avoided.

Proposed Service Level Reduction at LSAF and L&D 1

Kevin Baumgard provided an overview of proposed service level reductions at the Lower St. Anthony Falls (LSAF) Lock and Dam and Lock and Dam 1 (L&D 1). Baumgard said the Inland Marine Transportation System (IMTS) consists of 12,000 miles of waterways, over 200 locks and dams, and transports 60 percent of domestic waterborne tonnage. Baumgard indicated the IMTS Board of Directors approved Level of Service (LOS) guidance in November 2011. This guidance directed consistency across the Corps with a goal of reducing operational costs and improving system-wide maintenance. Baumgard said MVP implemented a LOS reduction to 19 hour per day at Twin Cities locks and dams in March 2013. On June 10, 2014, President Obama signed the 2014 WRRDA which directed MVP to close navigation at Upper St. Anthony Falls L&D within one year.

Baumgard said MVP issued a Federal Register notice and received comments in September and October 2014 proposing a further LOS reduction at Twin Cities locks and dams to 10 hours per day. Baumgard indicated MVP would decide on any LOS reductions after the Upper St. Anthony Falls Environmental

Assessment (EA) was completed. Any LOS changes would be made after the closure of the Upper St. Anthony Falls lock.

Baumgard provided information regarding the performance guidelines determining level of service. Locks with more than 1,000 commercial lockages per year meet the threshold for full service. Locks with between 500 to 1,000 commercial lockages per year receive two shifts per day. Locks with less than 500 commercial lockages per year or greater than 1,000 recreational lockages per year receive a single shift. The remaining locks are operated at set times each day, on weekends or holidays, or by appointment. Baumgard provided lockage data from 2010 through 2014 for Lower St. Anthony Falls L&D and L&D 1. Total annual lockages at Lower St. Anthony Falls lock ranged from 1,369 to 2,266. Total annual lockages at L&D 1 ranged from 1,380 to 2,362. Recreational lockages make up a significant portion of each total.

Baumgard said the Corps does not have the legal discretion to close the locks in the Twin Cities as a means to control the movement of aquatic invasive species. Congress granted the Corps authority to operate the locks for the benefit of navigation. Baumgard said the Corps would close locks to prevent passage of aquatic invasive species only if Congress directed them to do so. He reiterated that LOS reductions at Twin Cities locks were being made in response to navigation use.

America's Watershed Initiative Summit and Preliminary Report Cards

Jordy Jordahl provided an update on recent America's Watershed Initiative (AWI) activities. Jordahl said AWI was made up of diverse groups committed to addressing issues on the watershed scale and identifying opportunities for integrated management of the basin's water resources. He said the AWI Summit was designed to have active participation of representatives from all the component basins of the Mississippi River watershed. Jordahl said AWI leaders were seeking input from Summit participants on the preliminary report cards measuring the state of both the component basins and the entire basin in six AWI goal areas. Participants at the Summit included leaders from the Ohio and Tennessee Rivers, the Upper Mississippi River, the Lower Mississippi River, the Missouri River, the Arkansas River, and the Red River. He said AWI received 250 specific suggestions from Summit participants regarding the report card project. Over 40 participants made specific commitments for action to support AWI efforts, while 30 participants agreed to participate in formal report card review teams. Jordahl said following significant discussions during the first two days of the Summit, participants identified next steps for AWI to:

- Continue to collect data to improve the report cards
- Seek opportunities to integrate management in the Mississippi River watershed
- Engage governors of the watershed's 31 states
- Engage private sector interests for potential funding and influence
- Strengthen communications efforts

Jordahl said the report card is not the goal of AWI, but rather an important tool to aid sustainable management of the river. He said the current version of the report card is a work in progress as some data are not reliable, while others are not sufficient for the purpose. Additional work is also needed to improve the analytical methods for assigning grades. Jordahl reiterated that the report cards will measure the state of the basin in the following six goal areas:

- Supply abundant, clean water to our farms, communities, and businesses
- Provide reliable flood control and risk reduction
- Support local, state, and national economies

- Support and enhance healthy and productive ecosystems
- Create world class recreational opportunities
- Serve as the nation's most valuable river transportation corridor

Jordahl said the report card project was designed to be built in the basins. He said the basin's huge scale will require inclusion of a wide variety of data. AWI's objective was to find the best data at a large scale and create an iterative process for measuring trends in the six goal areas. The process is intended to yield a tool towards achieving cooperative governance. Jordahl highlighted the multiple meetings throughout the basin to gain input from a broad array of basin leaders.

Jordahl provided background on the graphical paddlewheel layout of the report card as well as the different color coding used to represent the grades. He said AWI intended to have the initial report card finalized in spring of 2015. In response to a question from Col. Deschenes about next steps after completion of the report card, Jordahl said the report card is designed to be a tool to aid in furthering AWI's board goals. He said different partners will use the report card in different ways.

Mississippi River Water Quality and Interstate Collaboration – Workshop Report

Jeff Jacobs provided information on the report for the National Research Council (NRC) Mississippi River Water Quality and Interstate Collaboration Workshop held November 18 – 19, 2013. He noted the NRC workshop conflicted with UMRBA's November 2013 quarterly meeting, but said some WQTF members participated in the workshop. Jacobs said the NRC was established in 1916 by the National Academy of Sciences (NAS) to respond to requests from Congress, federal agencies, and others. NRC work is predominantly conducted by committees of volunteer experts. NRC includes 35 boards, 650 committees, and 6,500 volunteers that produce approximately 250 reports each year. The NRC has an annual budget of $330 million and is designated as a nonprofit organization.

Jacobs highlighted some of the work of NRC's Water Science and Technology Board (WSTB) and noted the WSTB reports from 2008, 2009, and 2012 related to Mississippi River water quality. He noted that the McKnight Foundation funded the initial 2008 report and acknowledged Mark Muller's presence at the meeting. The 2008 report found nutrients and sediments to be the two water quality problems at the scale of the entire Mississippi River. The report said the Mississippi River is and "orphan" from a water quality perspective and called for USEPA to more aggressively use multiple Clean Water Act authorities to collect and share water quality data for the length of the river, promote better interstate coordination among the ten Mississippi River corridor states, and establish water quality criteria for nutrients for the Mississippi River at the mouth and Gulf of Mexico. The 2008 report also recommended that USEPA and USDA strengthen cooperative activities, and affirmed the importance of targeting USDA conservation programs.

Jacobs said the NRC's 2009 report recommended that USEPA and USDA establish a Mississippi River Nutrient Control Implementation Initiative (NCII) to:

- Demonstrate the ability to reduce nutrient loading in priority watersheds
- Evaluate the local water quality benefits of nutrient control
- Build an institutional model for cooperative research on nutrient control actions
- Evaluate the cost-effectiveness of various nutrient control actions

The 2009 report also recommended that USEPA and USDA establish a Mississippi River Basin Water Quality Center to administer the NCII. Jacobs said the report also highlighted the importance of recognizing the minimum ten-year lag time between implementation of nutrient control actions and

water quality response. Jacobs said the NRC was pleased to see establishment of the NRCS Mississippi River Basin Healthy Watershed Initiative (MRBI), but noted no center for implementation was established.

Jacobs said the most recent NRC report was designed to summarize scientific challenges and priorities related to Mississippi River water quality monitoring and evaluation. The report was based upon presentation and discussion at the November 2013 workshop. The McKnight Foundation, NRCS, the Walton Family Foundation, and the National Academies Presidents Fund sponsored the report. Jacob summarized the topics discussed at the workshop. The report ultimately identified the following priority areas for improving water quality monitoring and evaluation:

- Importance of action-oriented monitoring and evaluation
- Importance of long-term monitoring and consistent methods
- Tracking changes in land management
- Landowner perceptions and conservation practices
- Importance of modeling and development needs
- Interstate and interagency collaboration on monitoring

In response to a question from Dru Buntin, Jacobs said NRC does not currently have any additional Mississippi River water quality work planned.

McKnight Foundation Mississippi River Program

Mark Muller provided information on the history of the McKnight Foundation and noted the location of the Foundation's offices along the Mississippi River in Minneapolis, Minnesota. The McKnight Foundation was created in 1953 by William and Maude McKnight. William McKnight was a longtime CEO of the 3M Company. The McKnight Foundation holds assets of approximately $2 billion, and Muller highlighted the general categories of programmatic work supported by this funding, including:

- Region and Communities
- Midwest Climate and Energy
- Education and Learning
- Arts
- International
- Mississippi River
- Minnesota Initiative Foundations and Related
- Neuroscience

Muller said the goal of the McKnight Foundation's Mississippi River Program is to restore the water quality and resiliency of the Mississippi River. He said the program funds approximately $8.5 million in Mississippi River work annually. Much of this work is based on the findings contained in a series of NRC reports, beginning with the one commissioned by the McKnight Foundation in 2008. Muller said the initial report found nonpoint source pollution, particularly nutrient loading, to be the main water quality problem in the Mississippi River basin and agriculture to be the major source of nonpoint source pollution. The report also found the need for additional federal agency coordination on Mississippi River water quality issues and highlighted the importance of wetlands and floodplains in the basin. Muller said the Mississippi River Program's strategies include to:

- Protect and expand floodplains and wetlands in the ten-state Mississippi River corridor
- Reduce agricultural pollution in four states along the northern half of the river, focusing on farmland with high nitrogen and phosphorus runoff
- In the ten-state Mississippi River corridor, achieve cross-boundary and interagency coordination to improve water quality

Muller said the Mississippi River Program has funded approximately $110 million in work, primarily in the Upper Mississippi River states as well as in Louisiana. He said high corn and soybean prices have driven more acreage into row crop production, but noted that farmers are becoming more efficient in nutrient application. Muller said federal conservation funding has also been increasing and states are also beginning implementation of nutrient reduction strategies. He also noted collaborative work such as the recently announced Environmental Defense Fund work with Walmart on an initiative to reduce fertilizer pollution from commodity grain crops.

In response to a question from Col. Deschenes, Muller said McKnight would be interested in looking at ways to collaborate with the Corps. Charlie Wooley noted that Corps staff have been engaged in the USFWS landscape conservation initiative. He also noted the Corps' role in implementing the Upper Mississippi River Restoration program. Wooley said both of these efforts are resulting in water quality improvements. In response to a question from Dru Buntin, Muller said McKnight provides funding support for the Mississippi River Cities and Towns Initiative and the Mississippi River Network. Muller said McKnight has also provided funding support for the Nicolet Island Coalition and Audubon for Mississippi River work. In response to a question from Jim Fischer, Muller said the issues highlighted in the NRC reports still requiring the greatest attention include reducing nonpoint source pollution, increasing wetlands and floodplain protection, and establishing a Mississippi River water quality center of expertise.

Water Quality

Chair Arlan Juhl introduced Water Quality Executive Committee (WQEC) Chair Rebecca Flood who provided a report on the past year's activities. Flood said 2014 has been a busy year for UMRBA's Water Quality Program and she directed the Board's attention to page G-1 of the agenda packet for a copy of the 2014 Water Quality Program Progress Report. The UMRBA Board approved the UMR Clean Water Act Recommended Monitoring Plan in February 2014, and Flood said Minnesota and Wisconsin are planning for pilot monitoring in 2016. Other 2014 highlights include refinements made to plan specifics, creation of a web-based viewer, and partner outreach. Flood also noted progress on the Assessment Feasibility Project. The draft methodology is under development and the states are examining possible shared approaches such as a "State of the River" report similar in approach to the report created by the National Park Service for the Twin Cities area of the river. Flood highlighted some of the 2015 UMRBA Water Quality Program goals, including:

- Monitoring Strategy – continue to aid pilot implementation of monitoring strategy (in Minnesota and Wisconsin); develop operations manual; work on data mining, compilation, and analysis through virtual pilot implementation; enhance online water quality viewer; and continue partner outreach.
- Assessment Feasibility Project – complete methodology document; and scope a "State of the River" report.
- Nutrients and Water Quality – plan for UMR workshops to facilitate information exchange on Regional Conservation Partnership Program (RCPP) or other nutrient reduction efforts; and help identify nutrient-related research needs.

- Partnership and Collaborative Efforts – continue participation in Mississippi River Cities and Towns Initiative (MRCTI); continue participation in America's Watershed Initiative (AWI); continue engagement of public water systems.

Flood said one additional priority is continuing efforts to identify additional partners and potential sources of support for water quality monitoring. Flood asked Dave Hokanson to provide an update on the multi-state RCPP application. Hokanson provided a general overview of the approach each state proposes in the request for $17 million in federal funding. He noted an additional $19 million in partner contributions that would bring the total project amount to $36 million. Hokanson said the states also proposed that UMRBA host at least three regional workshops to share outcomes and lessons learned.

UMR Spills Group Functional Exercise

Tom Kendzierski, Chair of the UMR Hazardous Spills Coordination Group, provided background on the recent functional response exercise held in La Crosse, Wisconsin on October 2 – 4, 2014. The exercise involved a hypothetical release of Bakken crude oil from a rail shipment into the river. The functional exercise was designed to meet the following needs identified by the UMR Spills Group:

- Test existing plans and tools (UMR Spills Plan, Inland Sensitivity Atlas, other applicable plans)
- Support development of new plans (i.e. Pool 8 geographic response plan)
- Bring together local, state, federal, and private sector partners
- Exercise specific capabilities and areas of concern; address emerging issues

Kendzierski said planning for an initial April 2014 tabletop exercise started in October 2013. The UMR Spills Group then began planning for the October exercise after identifying a need to hold a functional exercise with an opportunity for associated training sessions. Kendzierski acknowledged the public and private sector partners involved in the exercise planning team including representatives of local, state, and federal agencies, as well as rail, engineering, and consulting companies.

In addition to exercising staff response functions, Kendzierski said the exercise focused on establishment of incident command, testing functionality and interoperability of communications, field deployment of boom testing response strategies, and testing of the Pool 8 Incident Action Plan. He said the Spills Group also wanted to integrate federal and state agencies in this simulation of impacts to high value natural resources such as migratory waterfowl.

Dave Morrison summarized the functional exercise approach. He said it included a classroom training the first day (Thursday), field training the second day (Friday), and evening and weekend (Saturday) training and exercise components to encourage local/volunteer participation. Morrison said training topics included existing response plans, resource protection, Bakken crude characterization, incident command system roles, Natural Resource Damages Assessment (NRDA), air monitoring, wildlife capture, and coordination with railroads in response. The exercise planning team pre-populated the incident command system to facilitate testing of unified command. Morrison said 125 people participated in the exercise, including:

- 27 local staff (fire, police, emergency management, county, and city)
- 21 state staff (Iowa, Minnesota, Wisconsin)
- 43 federal staff (USEPA, FRA, USFWS, NOAA, USDA, USCG, CAP, and U.S. Marshal)
- 29 industry/private sector staff (BNSF, CP, OSROs, local facilities)
- 1 elected official (county board)

- 1 citizen advocacy group (CARS)
- 3 UMRBA staff

Morrison provided additional detail about the exercise event scenario. The scenario included a derailment and release near rail mile marker 293 on the Wisconsin side of the river. Further, the scenario entailed five rail cars spilling 150,000 gallons of Bakken crude (30,000 gallons per car) and reaching the river in the Goose Island area. Under the scenario, an estimated 2,200 waterfowl congregated in the area southwest of Goose Island. The spill occurred at 2:00 a.m. and there was no large fire associated with it. Morrison said the exercise began at 8:00 a.m. with local and private sector response in progress.

Morrison said the following strengths and successes were identified by the exercise planning team:

- Broad participation, interaction, and collaboration (local, state, federal, and private sectors)
- Effective, realistic simulation of events
- Incident Command System (ICS) quickly established
- Practical, hands-on ICS training
- Communication systems established and effective
- Exposure to a wide variety of personnel and equipment (collection and containment, air monitoring, wildlife, communications)

The team identified the following areas for improvement:

- Coordination issues within the ICS structure
- Limited ICS readiness among some participants, lack of "practical" ICS training
- Underutilization of some personnel and assets
- Challenges associated with media engagement
- Permit lacking for wildlife rehabilitator
- Few individuals with shoreline assessment training
- Limited ability/readiness to discuss in-situ burning options
- Restrictions on participation in overflights
- Specific local/technical communications issues

In response to a question from Bryan Hopkins, Morrison said the exercise was largely supported through in-kind contributions.

Steve Faryan provided the perspective of USEPA regarding the exercise. He thanked Morrison for leading the exercise as well as for Morrison's work in developing the initial action plan. Faryan said some of the ideas in this plan as well as lessons learned from the exercise have already been shared with other USEPA regions. USEPA was able to bring in part of the agency's incident management team to participate in the exercise. Faryan noted the success of the exercise in moving towards better engagement from industry, especially the rail companies. He said rail companies do not typically have pre-standing response teams they can engage in an ICS structure. Faryan added that rail companies have begun to move response assets into the La Crosse and Prairie du Chien areas.

Tim Yager said the exercise occurred in area of the Upper Mississippi River National Wildlife and Fish Refuge for which he has responsibility. He pointed out the ecological significance of the area and said it was good to see agencies and industry looking proactively at response needs designed to protect this high value resource. Yager said the exercise helped the USFWS understand existing and needed skills sets of agency staff related to spill response. He said the exercise exposed some communication and coordination challenges and he expects the after action report will summarize these. Yager thanked the planning team and said the exercise had been a good opportunity for improving communication.

Morrison said the next task for the team was to finish the after-action report and identify additional training and exercise needs. He cited development of pre-scripted, resource specific messages and consideration of strategies for in-situ burning as two other possible next steps for the UMR Spills Group. In response to a question from Arlan Juhl, Morrison said the advanced briefings were one of the exercise components that would not be possible in a real spill event. In response to a question from Robert Stout, Morrison said command roles begin at the local level and ultimately build to a unified command structure. Charlie Wooley expressed his appreciation to Morrison, USEPA's Ann Whelan, UMRBA staff, and others for their roles in facilitating the exercise.

Upper Mississippi River Restoration Strategic Plan

Marv Hubbell recognized the members of the UMRR strategic planning team in attendance and noted that the UMRR Coordinating Committee is scheduled to consider adoption of the 2015-2025 UMRR Strategic Plan at tomorrow's meeting. He said the Corps has found the input received during the comment period to be extremely helpful and reflective of the public interest in, and support for, the program. Hubbell said UMRR has 28 years of experience and has achieved several notable planning milestones, including:

- Three Reports to Congress
- Two Habitat Restoration Manuals
- Implementation Issues Assessment (IIA) Papers
- Two Status and Trends Reports
- Two Long Term Resource Monitoring Strategic and Operational Plans
- Hundreds of other scientific, technical and other planning reports

Hubbell said the strategic plan was undertaken to develop a partnership vision to guide the program's implementation over the next decade and to ensure the delivery of products and services that are nationally significant and regionally relevant. He expressed the value of a strategic plan that incorporates the range of activities carried out by the program. Hubbell said the development of the strategic plan reinforced the strength of the regional partnership and underscored the collaborative approach program partners take to the program's implementation. He said the strategic planning team included broad representation from UMRR partners. The strategic plan was initiated in April 2013 and the team held seven meetings to craft the plan. Hubbell reiterated that the team members distributed the draft plan, and an open public comment period was held.

Hubbell said the strategic plan represents the first formal program vision and mission statement for UMRR. He highlighted the plans for goals of:

- Enhancing habitat for restoring and maintaining a healthier and more resilient UMRS
- Advancing knowledge for restoring and maintaining a healthier and more resilient UMRS
- Engaging and collaborating with others
- Using a strong, integrated partnership in implementing UMRR

If the UMRR Coordinating Committee adopts the strategic plan, Hubbell said partners will focus on the plan's implementation. He said achieving the outcomes in the plan will require several significant steps. He said the existing health and resiliency of the UMRS must be determined and indicators must be established to monitor progress. Hubbell said the plan also calls for the increased use of habitat projects to test important science questions on the UMRS. This will require the increased involvement of scientists with project development teams as well as additional project performance monitoring.

Hubbell acknowledged the contributions of Diane Ford and Barry Johnson to UMRR, and said both had provided amazing support for the river and the program.

Administrative Issues

Future Meeting Schedule

Buntin said the next meeting series will be held February 10-11, 2015 in Rock Island, Illinois, with the UMRBA Quarterly meeting on the 10th and UMRR Coordinating Committee on the 11th. The May meetings will be held May 5-6, 2015 in St. Louis, Missouri with the UMRBA quarterly meeting on the 5th, and UMRR Coordinating Committee on the 6th. The August quarterly meetings will be held August 5-6, 2015 in La Crosse, Wisconsin.

With no further business, Diane Ford offered and Dave Frederickson seconded a motion to adjourn. The motion passed unanimously, and the meeting adjourned at 3:26 p.m.