

**Minutes of the 142nd Quarterly Meeting
of the
Upper Mississippi River Basin Association**

**May 23, 2017
St. Louis, Missouri**

UMRBA Chair Tim Hall called the meeting to order at 9:33 a.m. Participants were as follows:

UMRBA Representatives and Alternates:

Rick Gosch	Illinois Department of Natural Resources
Tim Hall	Iowa Department of Natural Resources
Jake Hansen	Iowa Department of Agriculture and Land Stewardship
Sam Hiscocks	Iowa Department of Transportation
Dave Frederickson	Minnesota Department of Agriculture
Barb Naramore	Minnesota Department of Natural Resources
Patrick Phenow	Minnesota Department of Transportation (by phone)
Robert Stout	Missouri Department of Natural Resources
Bryan Hopkins	Missouri Department of Natural Resources
Dan Baumann	Wisconsin Department of Natural Resources (by phone)
Jim Fischer	Wisconsin Department of Natural Resources
John Petty	Wisconsin Department of Agriculture, Trade, and Consumer Protection

Federal UMRBA Liaisons:

Marty Adkins	U.S. Department of Agriculture, NRCS
Donald Balch	U.S. Army Corps of Engineers, MVD
Col. Craig Baumgartner	U.S. Army Corps of Engineers, MVR
Col. Anthony Mitchell	U.S. Army Corps of Engineers, MVS
Ken Westlake	U.S. Environmental Protection Agency (by phone)
Tim Yager	U.S. Fish and Wildlife Service
Mark Gaikowski	U.S. Geological Survey

Others in Attendance:

Chris Klenklen	Missouri Department of Agriculture
Megan Moore	Minnesota Department of Natural Resources
Kevin Stauffer	Minnesota Department of Natural Resources
Brian Stenquist	Minnesota Department of Natural Resources (by phone)
Matt Vitello	Missouri Department of Conservation
Sreedhar Upendram	Missouri Department of Natural Resources
Chris Erickson	U.S. Army Corps of Engineers, MVP
Aaron Snyder	U.S. Army Corps of Engineers, MVP
Dennis Hamilton	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
Scott Whitney	U.S. Army Corps of Engineers, MVR
Mike Feldmann	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
John Peukert	U.S. Army Corps of Engineers, MVS
Deanne Strauser	U.S. Army Corps of Engineers, MVS
Shawn Sullivan	U.S. Army Corps of Engineers, MVS
Neal Jackson	U.S. Fish and Wildlife Service
Amy Buessink	U.S. Geological Survey
Jim Stefanov	U.S. Geological Survey
Kelly Warner	U.S. Geological Survey
Alex Heeb	Alton Telegraph
Olivia Dorothy	American Rivers
David Stokes	Great Rivers Habitat Alliance
Brad Walker	Missouri Coalition for the Environment
Gretchen Benjamin	The Nature Conservancy
Nancy Guyton	Neighbors of the Mississippi
Charles Williamson	Neighbors of the Mississippi
Aaron Baker	Upper Mississippi, Illinois, and Missouri Rivers Association
Diane Barnett	Upper Mississippi, Illinois, and Missouri Rivers Association
Mike Klingner	Upper Mississippi, Illinois, and Missouri Rivers Association
Kristian Starnier	Upper Mississippi, Illinois, and Missouri Rivers Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association (by phone)

Minutes

Dave Hokanson noted an emailed request from Olivia Dorothy for a correction to the minutes of the February 7, 2017 meeting summary. Dorothy asked that, on in the last paragraph of page A-14, her statement read as follows: “She also observed that, as it is apparent it will take some time to move construction projects forward, there is concern about progress on the ecosystem side if lock projects are not constructed due to a lack of economic justification.” Dave Frederickson moved that the meeting summary be approved with the modification requested by Dorothy. John Petty seconded Frederickson’s motion and the summary was approved via voice vote.

Executive Director’s Report

Dave Hokanson provided an overview of the Executive Director’s report as found on pages B-1 to B-7 of the meeting packet. In particular, he noted staff changes at UMRBA, explaining that Dru Buntin ended his service as UMRBA’s Executive Director on April 28, 2017 in order to become Deputy Director of the Missouri Department of Natural Resources. Hokanson said he had been named Acting Executive Director by the UMRBA Board upon Buntin’s departure and the Board had begun the process to fill the Executive Director position on a permanent basis. It is the Board’s goal to have the position filled by September 2017.

Under the Ecosystem Restoration and Monitoring focus area, Kirsten Mickelsen reported that the latest Upper Mississippi River Restoration (UMRR) Report to Congress had just been completed, noting that its production was facilitated by UMRBA staff in coordination and under contract with the Corps.

Hokanson directed the Board’s attention to page B-10 of the agenda packet for a copy of UMRBA Treasurer Jason Tidemann’s statement regarding his review of the Association’s financial statement for the period of January 2017 to April 2017. 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. Louis District Perspectives

Col. Anthony Mitchell provided his perspectives as the Commanding Officer of the USACE's St. Louis District. Noting his ending command date of June 30, 2017, Mitchell reflected on the challenges presented by floods and flood recovery on the UMRS including the budget and resource limitations in addressing these issues. Mitchell acknowledged that these will continue and emphasized the need for a systemic flood risk management (FRM) plan on the UMRS, addressing the issues in a collaborative fashion. Mitchell offered that a first step should be to form an executive steering committee to address FRM issues; of which the Corps would be involved but should not lead.

Mitchell said the 2008 Upper Mississippi River Comprehensive Plan fell short due to its limited focus on the main stem and levee heights. He said this constrained scope should not be repeated in future efforts and rather that a watershed-informed approach, such as the watershed study advocated by UMRBA and other partners, should be pursued as a means of developing a common path addressing the needs and concerns of a variety of stakeholders.

Mitchell noted that one goal all stakeholders appear to agree on is the development of an improved Upper Mississippi River hydraulic model to inform both forecasting and flood response. The model will lend an assessment of levee impacts, including the impacts of raising levee heights.

Mitchell recognized the importance of UMR to the St. Louis District. He said the program has restored over 6,000 acres of important fish and wildlife habitat in the District just within his command tenure. The Open River segment of the UMR is an important area for restoration that the St. Louis District is exploring. Mitchell said he also sees great promise in using environmental pool management as a means of better supporting the river's multiple uses.

Mitchell described the state of infrastructure maintenance needs on the UMRS and throughout the inland waterway system. He said the Navigation and Ecosystem Sustainability Program (NESP) offers an important partnership-developed pathway to addressing infrastructure and capacity needs while also restoring the ecosystem.

In closing, Mitchell urged the UMRS partners to keep working as a team in developing a common vision for achieving results. Specifically, he recommended the following:

- 1) Remain focused on common goals
- 2) Collaborate and work in a united front
- 3) Seek investment
- 4) Drive action

Frederickson thanked Mitchell for his remarks and service. In response to a question from Frederickson, Mitchell said he will be moving to the Pentagon to work in the office of the Assistant Secretary of the Army (Civil Works). Mickelsen also thanked Mitchell for all his work on behalf of the UMRS and with all of the river partners, including the UMR states.

Water Level Management

Kirsten Mickelsen provided a summary of UMRBA's April 4-5, 2017 UMRS water level management (WLM) workshop held in Dubuque, Iowa. Mickelsen explained that workshop's intent was to clarify misunderstandings among partners about the mechanics of water level management to inform any recommendations about its use as a tool to improve ecological health. In particular, workshop objectives were to reach:

- 1) A common understanding of WLM implementation mechanics and stakeholder perspectives, and
- 2) consensus on a suite of recommendations.

Mickelsen said Minnesota DNR provided facilitation services through Brian Stenquist.

Mickelsen briefly introduced the mechanical elements of WLM to give context of what is all involved in coordination and planning and the considerations that to need to be evaluated. She noted that concerns regarding WLM can essentially be broken down into two large categories: mechanical (including impacts to pool management, lock operations, and channel maintenance, additional costs) and biological (including impacts on fish and mussel communities).

Mickelsen said a total of 48 individuals participated in the workshop, representing state and federal agencies, environmental NGOs, and the navigation industry. She described the workshop's first day as more focused on providing background information and sharing initial partner perspectives while the second day involved facilitated discussion designed to reach a common set of recommendations. Mickelsen thanked Minnesota DNR's Brian Stenquist for acting in the role of workshop facilitator. She recalled that Stenquist was particularly helpful in ensuring that all voices were involved in the discussions and were all reflected in the suite of recommendations.

Mickelsen gave a brief description of resulting recommendations. Participants discussed the "what, why, how, and who" that would be involved in implementing the recommendations including any particular role(s) for UMRBA. Mickelsen presented the recommendations in that format as follows:

1) *Opportunistic Opportunities*

- What: Seize opportunities – within operating band
- Why: Ecological benefits at relatively low cost
- How: Be ready/plan; monitor biological responses; engage public; identify, share, and own the risk
- Who: Federal and state agencies, river teams, NGOs
- UMRBA: Engage agency leadership; develop UMRS pool management manual

2) *Cost-Benefit Analysis*

- What: Define and quantify trade-offs (across spectrum)
- Why: Validate the additional effort
- How: Complete a meta-analysis; define the scope; perform additional studies of costs and benefits
- Who: Federal and state agencies, river teams, NGOs, universities, contractors
- UMRBA: Support and facilitate; pursue necessary policy changes

3) *Address Policy Limitations*

- What: Lack of awareness and understanding of limiting policies and how to address them
- Why: Policies seemingly a hold-up, perceived or real
- How: Gain a comprehensive understanding; define solutions
- Who: Corps and other federal and state agencies, NGOs
- UMRBA: Facilitate dialogue and action

4) *Pools 13 and 18*

- What: Execute drawdowns and more routine, opportunistic WLM
- Why: High success potential, substantial ecological benefits and learning opportunities
- How: Just do it!, ask for it; revisit NESP recommendations; employ an outreach campaign; prepare navigation channels
- Who: Corps and other federal and state agencies
- UMRBA: Communicate partners' ask; lead or support public outreach campaign

5) *Funding*

- What: Associated costs are expensive – e.g., dredging, material placement, monitoring, river training structures
- Why: Costs are a hold up
- How: seek and secure necessary funding; reduce unnecessary costs; generate public support; quantify ecological benefits, savings to out year dredging
- Who: Corps, non-federal partners
- UMRBA: Communicate partners' ask; lead or support public outreach campaign; facilitate discussion among partners

6) *Hydraulics and Hydrology*

- What: Better understand how hydraulics and hydrology (H&H) affect river management
- Why: Successful implementation depends on H&H conditions; conditions are changing in ways that may be constraining
- How: Research water flows from watershed, floodplain, channel; develop predictive models; secure public and agency support, funding, expertise
- Who: Partners determine objectives; Corps, USGS, other technical experts develop models, studies
- UMRBA: Obtain political support; facilitate collaboration and information dissemination

Mickelsen asked partners who had participated in the workshop to share some of their perspectives regarding the workshop recommendations as well as the possibilities for WLM on the UMRS in general.

Brian Johnson said he is most energized about the “opportunistic opportunities” recommendation, noting that each of the three Corps Districts saw opportunities to move forward on WLM. Johnson added that many of these actions can be pursued with little additional input of resources. The Districts will work together to share experiences and knowledge regarding WLM. Johnson emphasized that follow up from the workshop will be critical in making sure that opportunities are pursued.

Jim Fischer commented on the cost-benefit analysis recommendation, saying it will be important to get a better handle on both the costs and the benefits of WLM. He noted that, from an ecological perspective, the potential negative impacts on mussel community are a major consideration. Understanding the risks here will be important in order to evaluate whether the benefits outweigh potential impacts. For example, the anticipated benefit to vegetation (for waterfowl consumption) may be compared to anticipated mussel losses. In response to a question from Marty Adkins, Fischer explained that an objective of water level management would be to mimic the natural hydrograph to the

extent possible. But, he cautioned that WLM must be implemented in recognition that certain biota have now adapted to modified river conditions.

Megan Moore focused on the policy limitations recommendation, noting that her comments focus primarily on the St. Paul District as that is the area of the UMR in which she works and with which she is most familiar. Moore emphasized that no policy “show stoppers” were identified in the workshop and a key notion was that it is very important to go ahead and ask about potential opportunities. Also, it is important to cultivate an environment of openness to WLM in the District.

Tim Yager spoke to the recommendations in regard to Pools 13 and 18, explaining that successful WLM will depend on the right combination of channel conditions and flows. Yager added that, since both these pools are in the Rock Island District, it is critical to have District leadership support.

Gretchen Benjamin addressed the funding recommendation, noting that there are opportunities for advancement at relatively low cost. Benjamin added that, while her understanding is that there are opportunities to move WLM management forward under UMR, it will ultimately be very important to have NESP in place to facilitate broader implementation of WLM. This includes automating gates for easier manipulation of water levels. She also noted that Section 7001 of WRDA 2014 provides the opportunity to propose projects and that this could be an opportunity to move forward a pool-specific or systemic proposal related to WLM.

Mark Gaikowski offered comments regarding the hydraulics and hydrology recommendation. Gaikowski said it is important to identify what we currently know, what we do not know, and what we want to learn in regard to hydraulics and hydrology. This information is foundational to planning future WLM actions.

Col. Craig Baumgartner said the Rock Island District is very interested in pursuing opportunities in Pools 13 and 18. Col. Baumgartner said it will be important to compile further information regarding these opportunities and to be as consistent as possible in pursuing WLM.

Barb Naramore asked how UMRBA might work to ensure continued progress in regard to WLM. Mickelsen replied that one step could be a statement from UMRBA’s Board urging the Corps to continue to pursue WLM. Additionally, she said, UMRBA could continue to host partnership calls on the topic.

Robert Stout asked Mickelsen if she could provide clarification in regard to the anti-drawdown law as well as any other legal or administrative requirements impacting WLM. Mickelsen said her understanding is that the anti-drawdown law is focused on preserving overwintering habitat for fish and furbearers during winter conditions. Regarding other requirements, she said the main consideration is that the pools must be maintained within the established operating band.

Adkins said USDA has been tasked to make accommodations for changing weather patterns in its work and asked if this is a consideration for WLM. He added that, if this is the case, it will be important to include NOAA/National Weather Service in planning for WLM. Mickelsen agreed and said NWS staff participated in the WLM workshop and it will be important to keep them engaged.

Naramore suggested that UMRBA staff consider the implications of WLM for the Association’s work, and come to the August meeting with information for the Board to review regarding these implications and possible path(s) forward for WLM. Hall concurred, saying he would like have a discussion in August regarding what is next for WLM on the UMRS.

Navigation

Mickelsen presented the M-35 Marine Highway Action Plan, highlighting a number of its elements including: 1) conduct a container-on-barge feasibility analysis considering competitiveness with land-based modes and 2) create an asset inventory of ports, terminals, and intermodal connectors including public and private assets with information about commodities handled. She explained that the subsequent, brief presentations would provide updates regarding each of these action plan items.

M-35/M-55 Container-on-Barge Planning Project – Mickelsen said UMRBA is part of a multi-partner proposal to the Maritime Administration (MARAD) for a container-on-barge (COB) planning project, which included the City of St. Louis Port Authority as the primary applicant and the Mississippi River Cities and Towns Initiative (MRCTI), and Inland Rivers Ports and Terminals, Inc. (IRPT) as other partners. She said MARAD announced in October 2016 that the project will be a grant recipient. Negotiations regarding the specific execution of the project are ongoing. Further updates will be provided to the Board as the project details are finalized.

UMRS Navigation Asset Inventory – Mickelsen explained that UMRBA staff had been working with UMR state departments of transportation in the development of a UMR Navigation Asset Inventory. She said Mark Ellis and Matt Jacobson had been the lead UMRBA staff on the project and she turned the presentation over to Ellis, who then walked through the features of the inventory.

Ellis explained that the inventory is an ArcGIS online product and incorporates themes including UMR ports, terminals, marinas, and locks and dams, as well as Foreign Trade Zones. Ellis demonstrated the functionalities included in the asset inventory viewer, including pop-up attribute tables, varying base maps, and search capabilities.

Mickelsen explained that next steps for the UMR Navigation Asset Inventory include seeking additional input and comment, making adjustments as needed in light of comments, connecting the viewer to the UMRBA website, and then engaging in stakeholder outreach and further distribution.

National Geographic Mississippi River Geotourism MapGuide

Todd Antoine of Great Rivers Greenway provided an introduction to National Geographic's Mississippi River Geotourism MapGuide. Antoine said Great Rivers Greenway is a regional public agency dedicated to creating and maintaining greenways in the St. Louis area. Antoine said Great Rivers Greenway is a partner in the MapGuide project, which is a product of the National Geographic's Travel Programs. The intent of the MapGuides is to promote authentic, sustainable tourism through knowledge and stories of local people and by relying on the principles of geotourism. Antoine described the essence of "sustainable tourism" – tourism that takes full account of its current and future economic, social, and environmental impacts, addressing the needs of visitors, the industry, the environment, and host communities.

Antoine described the functions and purposes of the map guides as including:

- As a platform to inventory and promote the places and people that locals most respect and recommend, in partnership with National Geographic.
- Bringing local people and organizations together to define what's special about their destination.
- Producing hundreds of pages of authentic, original content by local residents and experts.
- Cultivating pride-of-place in local people and building an ethic to protect and enhance their assets.
- Offering visitors unique and authentic experiences, connecting them to the region, making them partners in sustainability.

Antoine described a nomination process by which locations and events are selected for inclusion in MapGuides, which exist both as websites and in printed format. He also explained that content from the online MapGuides can be embedded in partner websites and apps.

Turning to the Mississippi River Geotourism MapGuide in particular, Antoine described it as follows:

- Over 1,500 pages of content about unique and authentic places and events in the ten river states
- Over 1,000 local content contributors from all sectors
- Long term platform to inventory and showcase the region's unique character, heritage, and beauty
- Establishes Mississippi River as a global destination for geotourists around the world
- Supports local businesses by providing appealing regional context and marketing resources
- Unites river communities across boundaries by celebrating their diversity and the river that bonds them
- Promotes values of authenticity, sustainability, and natural and cultural heritage

Antoine explained that people along the Mississippi River have contributed almost 2,000 nominations of communities, sites, attractions, festivals, events, and small businesses for inclusion on the website. As a project partner, Great Rivers Greenway included information about each of the greenways in St. Louis City, St. Louis County and St. Charles County.

Antoine provided a live demonstration of the Mississippi River Geotourism MapGuide, which can be found at <https://mississippiriver.natgeotourism.com/>.

American Society of Civil Engineers' 2017 Infrastructure Report Card

Bill Stahlman of America's Central Port shared an overview of the American Society of Civil Engineers' (ASCE) 2017 Infrastructure Report Card. Stahlman explained that ASCE has prepared a comprehensive assessment of the nation's 16 major infrastructure categories a report card starting in 1998 and every four years since then. Using a simple report card format, ASCE examines current infrastructure conditions and needs, assigns grades (A through F), and makes recommendations to raise the grades. Stahlman explained that grades are assigned based on these key criteria: capacity, condition, funding, future need, operation and maintenance, public safety, resilience, and innovation

Stahlman noted that overall infrastructure grades have been in the Ds since 1998 and that 2017 is consistent with this trend with the overall infrastructure score for 2017 being a D+. Stahlman said that, in addition to grading the nation's infrastructure, ASCE estimates the investment needed in each infrastructure category to maintain a state of good repair and earn a grade of B. ASCE has identified a current need of \$4.5 trillion for all investments needed throughout the country. As such, even if \$2.5 trillion is invested between 2016 and 2025, an estimated investment gap of \$2 trillion will remain.

Looking at individual sector scores for 2017, Stahlman noted that rail received the highest grade (B) while transit received the lowest grade (D-). Overall, slight improvements were seen in seven categories: hazardous waste, inland waterways, levees, ports, rail, schools, and wastewater. Six categories remained relatively stable: aviation, bridges, dams, drinking water, energy, and roads. Three categories were in decline: parks, solid waste, and transit. Stahlman noted that, in general, improved areas typically benefited from strong leadership, thoughtful policymaking, and investments that garnered results.

Stahlman then provided details on the grades in four of the sectors with most relevance to commercial navigation and ports: inland waterways (D), ports (C+), roads (D), and rail (B). The grades for inland waterways, ports, and rail had increased while the roads grade had remained unchanged.

Stahlman described some of the potential consequences of failing to close this infrastructure gap. According to ASCE's latest economic study assessing likely consequences, the following could result from failure to address infrastructure: \$3.9 trillion lost in U.S. GDP, \$7 trillion lost by U.S. businesses, and 2.5 million U.S. jobs lost.

In order to address infrastructure needs, Stahlman said ASCE recommends action in investment, leadership & planning, and preparation for the needs of the future. Stahlman's remarks are as follows:

Recommended Investment Solutions:

- Put the "trust" back into "trust funds." Dedicated public funding sources on the local, state, and federal levels need to be consistently and sufficiently funded from user-generated fees, with infrastructure trust funds never used to pay for or offset other parts of a budget.
- Fix the Highway Trust Fund by raising the federal motor fuel tax. To ensure long-term, sustainable funding for the federal surface transportation program the current user fee must be raised and tied to inflation to restore its purchasing power, fill the funding deficit, and ensure reliable funding for the future.
- Authorize programs to improve specific categories of deficient infrastructure and support that commitment by fully funding them in an expedient, prioritized manner.
- Infrastructure owners and operators must charge, and Americans must be willing to pay, rates and fees that reflect the true cost of using, maintaining, and improving all infrastructure.

Recommended Leadership and Planning Solutions:

- Require all projects greater than \$5 million that receive federal funding use life cycle cost analysis and develop a plan for funding the project, including its maintenance and operation, until the end of its service life.
- Create incentives for state and local governments and the private sector to invest in maintenance.
- Develop tools to ensure that projects most in need of investment and maintenance are prioritized, to leverage limited funding wisely.
- Streamline the project permitting process across infrastructure sectors, with safeguards to protect the natural environment, to provide greater clarity to regulatory requirements, bring priority projects to reality more quickly, and secure cost savings.
- Identify a pipeline of infrastructure projects attractive to private sector investment and public-private partnership.

Recommended Preparation for the Future Solutions:

- Developing active community resilience programs for severe weather and seismic events to establish communications systems and recovery plans to reduce impacts on the local economy, quality of life, and environment.
- Considering emerging technologies and shifting social and economic trends – such as autonomous vehicles, distributed power generation and storage, and larger ships – when building new infrastructure, to assure long-term utility.
- Improving land use planning at the local level to consider the function of existing and new infrastructure, the balance between the built and natural environments, and population trends in communities of all sizes, now and into the future.

- Supporting research and development into innovative new materials, technologies, and processes to modernize and extend the life of infrastructure, expedite repairs or replacement, and promote cost savings.

John Peukert said the infrastructure need for inland waterways and marine ports is probably greater than the amount cited in the report of \$37 billion, and more likely in the \$50-\$60 billion range. Stahlman concurred, agreeing that the investment need is likely greater, but that the report across all categories is relatively conservative, with the goal of the report to be realistic without being alarmist. That said, he did clarify that the report emphasizes particular points where there are critical life, health, and safety issues.

Stout echoed Stahlman's conclusions for the need to invest in infrastructure. He said one of the key issues is communicating to the public to improve understanding of the issues and investment needed. Jim Fischer suggested expressing infrastructure needs as a percentage of GDP and asked how this might compare to an earlier era where infrastructure building was at its peak. Stahlman said it is challenging to make such comparisons, given the changes in prices over time. That said, he emphasized that it is clear we are under-investing as compared to historic rates and current needs.

Brad Walker said he recognizes the difficulty in quantifying infrastructure needs and appreciates ASCE's efforts. However, the Nicollet Island Coalition has developed a critique of the report card particularly in regard to its portrayal of inland waterways needs and can make that available upon request.

In response to an audience question regarding prioritization, Stahlman acknowledged that prioritization can be challenging and recommends beginning with the most local actions. Efforts can build from the bottom up to regional and national levels.

UMRS Study on Flood Risk and Channel Maintenance

Kirsten Mickelsen gave an overview of the potential for a watershed study addressing flood risk management and channel maintenance on the UMRS. Mickelsen reported that UMRBA is planning a summit to be held in July to help inform the study's scope. Mickelsen reviewed the regional drive behind that triggered this idea for a watershed study. Particularly, this included the recognition that substantial changes in land use throughout the UMRS watershed compounded with increasing frequency and severity of flood events is impeding the economic resilience of local river communities and the safety and reliability of commercial navigation.

Mickelsen noted that there are interrelated, complex challenges facing UMRS flood risk management and channel maintenance, including forecasting, contingency planning, model development and integration, real estate acquisition, limited budget and escalating costs, changes in land use and weather, and policy development. There are overlapping information needs for addressing these issues including coordination and communication (e.g., triggers, tools); previous plans, reports, and other existing information; data and technology; maps, models and monitoring; forecasting future conditions; rules, processes, and consistencies in policies and management; and sediment sources, hot spots, disposal sites, and beneficial use.

Mickelsen offered a few key questions that will need to be examined, including:

- What does a systemic FRM plan look like and function like?
- What do long term channel maintenance strategies provide?
- What is needed for an informed, consent-based decision-making process?

As the result of conversations with the Corps and other river partners, UMRBA has suggested that the following could be among the purposes of a Section 729 Watershed Study on the UMRS:

- 1) To develop an integrated, comprehensive, systems-based FRM approach.
- 2) To develop new, or renew existing, long term strategies for channel maintenance.
- 3) To improve the resilience of local communities.
- 4) To identify opportunities to support environmental sustainability and restoration.
- 5) To address other floodplain specific programs, needs, opportunities, in concert with 1 and 2 above.

Mickelsen said the purpose of the upcoming summit on July 26-27, 2017 in Dubuque, Iowa is to help inform the scope of a potential UMRS watershed study. She said the summit would use a facilitated discussion approach in order to a) gain a better understanding of partner perspectives, b) provide context regarding existing data and analytical capabilities, c) define overarching objectives for a watershed study, and d) inform the scope of such a study. Mickelsen explained that an “input team” would help inform the summit agenda and that invitees would include representatives from across the spectrum of river stakeholders, including federal and state agencies, levee districts, municipalities, the navigation industry, universities, watershed organizations and environmental interests.

Fischer said it is important to see that both FRM and channel maintenance are brought together in the watershed study as both these issues are important to states and other stakeholders. Mike Klingner said he is glad to see that UMRBA is engaged on these issues and that one perspective to consider is impact on transportation and bridge crossings. As such, he suggested that departments of transportation also be included in the discussions. Naramore observed that it will also be important to include agriculture interests among the summit invitees. Moore said the study will also be helpful to other river management needs such as water level management. Dorothy encouraged integration across multiple levels of government and partners so that it is not just a federal focus emerging from a watershed study.

USACE Flood Risk Management Update

Scott Whitney introduced the Corps FRM update, saying that he and Col. Baumgartner would jointly present on four topics relevant to FRM on the UMRS. This includes UMR levee survey findings, UMR regional hydraulic model development, levee safety engagement strategy, and flood control reservoir study. Whitney observed that FRM challenges are similar to what they been historically but that factors such as increased population increase the economic and social consequences of flood events. Whitney emphasized that the Rock Island District has a long history of working with multiple interests in engaging in water management on the UMRS and looks forward to working with partners to address FRM challenges.

UMR Levee Survey Findings

Whitney explained that in the winter of 2015-2016, the Rock Island District conducted surveys on 28 UMR mainstem levee systems from Muscatine, Iowa to the District’s southern boundary near Hamburg, Illinois. He said the surveys were initiated in response to concerns regarding unauthorized modifications to levees and increases in levee heights. The surveys were plotted against authorized and historical levee elevations to discern nature and extent of deviations. Whitney said the UMR mainstem levee system surveys found significant sections of seven Federal levee districts (10 systems) to be 2 to 4 feet above the levee systems’ federally authorized elevation. In total, about 80 miles of levees (of roughly 200 miles surveyed) were greater than 2 feet above authorized levels. He explained that USACE concerns here are that the levee height increases do not cause injurious impacts elsewhere and that the authorized purpose of the levee is not changed.

Subsequent to the completion of the survey, Whitney said the Corps has engaged in coordination and collaboration with multiple levee districts the three affected states (Illinois, Iowa, and Missouri), state agencies, and FEMA Regions 5 and 7 in working to identify effective FRM solutions. He added that the process must also be responsive to interest from the media, NGOs, municipalities, other partner agencies and Congress. Whitney observed that the levee survey helps illustrate the need for a systemic approach to FRM on the UMRS.

UMR Regional Hydraulic Model

Whitney stated that the current phase of hydraulic model development focuses from Muscatine, Iowa to the Thebes Gap with regard to how water moves across the landscape (as opposed to a hydrologic model, which looks at how water interacts with the landscape). Whitney said the goal is to complete this phase of model development by September 2017, having a fully functional model for that river section in place. Currently, he said the goal of having a 50 percent functional model has been achieved and briefings will continue to keep states and other partners informed regarding model development. Whitney emphasized that a hydraulic mode is a central tool in considering a watershed approach to UMRS FRM.

Des Moines River Regulation Manual Update

Whitney explained that the Des Moines River Reservoir Regulation Manual includes the water control plans for Saylorville Lake and Lake Red Rock. He said this update to the manual will focus on how to best manage water within the existing, authorized project. Whitney added that water control manuals provide guidance for direction, operation and management of water storage for each individual project or system of projects. He said the manual update project is currently underway with an external round of review upcoming and goal of completing a final, approved manual by September 2018.

Levee Safety Engagement Strategy

Whitney said this strategy builds on lessons learned in events such as Hurricane Katrina and superstorm Sandy in order to reduce costs and other impacts from disaster situations – to implement actions to save lives and reduce losses before the next catastrophic event occurs. He said that process will be carried out to ensure transparency and will include extensive work with the Silver Jackets. Stout asked what resources are available to the Silver Jackets in a flood event. Whitney replied that the Silver Jackets can help deliver actions as prioritized at the state level, bringing multiple tools together to leverage assets. He added that the Silver Jackets also can bring in a communication network during a flood response. Baumgartner added that USACE highly values the Silver Jackets as forum which supports effective flood response.

UMRS FRM Discussion

Col. Baumgartner the he is looking forward to the July Summit and feels comfortable with what UMRBA has proposed as a method of exploring flood risk and channel maintenance issues. Col. Baumgartner said there appear to be many shared goals among the partners as well as a recognition that a broad, systemic approach is lacking and is needed.

In moving forward, Col. Baumgartner acknowledged that challenges will exist in regard to funding available and the need to coordinate at multiple levels of government and across jurisdictions. He added that stakeholders need to be committed to reaching consensus and that the process itself must be transparent. Col. Baumgartner noted that “horizontal” coordination will be critical – that is, coordination from state to state and among federal agencies. It is important to consider “systems within systems” such as navigation, ecosystem function, flood protection, and others in looking at a system-wide approach. A watershed approach must also include principles of predictability and resiliency.

Col. Baumgartner then outlined proposed steps forward for UMRS FRM as follows:

- Develop Shared Vision and Find Common Voice
- Define the UMRS regional FRM challenge, including:
 - Survey levee heights
 - Develop a comprehensive H&H model
- Establish regional interagency oversight – likely a state-led entity
- Build a coalition of stakeholders
- Execute a collaborative Watershed Study
- Update agreements, legislation, policy and guidelines

Col. Baumgartner pointed out that these steps forward may not occur sequentially and may occur simultaneously, but are important parts of making progress in regard to FRM. He said his sense is that a watershed study is the best available tool to support a systemic approach. Lastly, Col. Baumgartner emphasized that it will be critical to keep returning to common goals throughout the process.

Marty Adkins asked about the extent to which the Principles and Guidelines (P&G) for water resource projects and/or the National Environmental Policy Act (NEPA) will affect a watershed study and systemic approach to FRM. Aaron Snyder replied that the 729 Watershed Study authority is fairly broad and is primarily intended as a development tool for local, including state, use. As such, considerations related to the P&G and NEPA are very minimal for the study itself. Col. Baumgartner concurred that the Section 729 authority is quite broad and flexible.

Robert Stout said that, given this flexibility, it is likely that different partners will have different perspectives in regard to what a study should look like. As such, he emphasized that the summit will be extremely important in establishing a shared vision of what a watershed study on the UMRS would incorporate. Naramore said she appreciated Col. Baumgartner and Snyder's emphasis on flexibility in a watershed study. She added that, per her previous comment, it will be important to include agriculture interests, beyond the levee districts alone, in summit discussions.

Klinger concurred with Stout's observation that scoping the study will be very important and added that the outcomes of the study will need to be tangible and implementable. He asked Col. Baumgartner if there was any indication of what a study budget might be or when a study might be funded, and if the "3x3x3" approach would apply to such a study. Col. Baumgartner said the specifics are yet to be determined, but that feedback at the regional and national level within USACE had been very encouraging. Snyder added that the "3x3x3" approach would not necessarily apply in this case and, to a certain extent, the budget for the study would be dependent on the outcomes of the scoping process.

Federal Partner Perspectives

Tim Hall invited UMRBA's federal liaisons to provide any updates regarding their agency's priorities, budgets, and ongoing work on the UMR.

USDA NRCS

Marty Adkins said USDA now has a final FY 2017 budget, which does not include major changes from FY 2016 levels. However, the budget for federal FY 2018 has yet to be established. Adkins noted that the current Farm Bill expires in 2018 where much attention will be focused on the development of the next

version. Adkins said the Regional Conservation Partnership Program (RCPP) continues to be a very successful initiative. Dave Frederickson commented that Minnesota is utilizing the RCPP, while also continuing to implement its Agricultural Water Quality Certification program. Regarding the certification program, Frederickson said it continues to grow and while, the number of acres is small compared to the overall size of the watershed, it still represents significant progress in partnering to improve water quality.

USFWS

Tim Yager noted USFWS is addressing impacts to its refuge properties that were damaged by flooding in the past year. In terms of budget, Yager said an FY 2018 budget is expected soon.

USGS

Mark Gaikowski said that final FY 2017 budget levels were similar to those in FY 2016. Gaikowski said the President's FY 2018 budget proposed an 18 percent overall cut to the agency, but noted that the final FY 2018 budget awaits action by Congress and as such is yet to be determined. Gaikowski reported that USGS is undergoing realignment of some of its divisions and offices.

USACE

Col. Baumgartner said the Corps is seeing positive indications regarding its Continuing Authorities Program (CAP). Adkins asked about levee districts dropping out of the PL 84-99 program and not being able to get approvals under the Section 408 program. Col. Baumgartner replied that the Corps would like to keep as many as possible within PL 84-99, as keeping them in the PL 84-99 program is a "win-win" for all involved. Regarding Section 408, Col. Baumgartner said he has not declined any applications for permits, though in some cases there needs to be negotiation to get to a mutually acceptable solution. He said another option to consider is the system-wide improvement framework (SWIF), which provides non-federal sponsors with a process to remain temporarily eligible for PL 84-99 assistance while they correct deficiencies as part of a broader, system-wide improvement to their levee systems. John Peukert said some small levee districts with small tax bases have been hit by a several floods in a short period of time. As such, it can be a financial challenge to remain eligible for PL 84-99.

USEPA

Ken Westlake said USEPA, like other federal agencies, received similar funding for FY 2017 as in FY 2016. However, FY 2018 funding is very likely to be reduced as the President's budget proposes a 30 percent cut in funding and personnel for the agency. In particular, Westlake noted that voluntary and geographic programs, including the Great Lakes program, are targeted for cuts. He noted that cuts to Great Lakes programs include work on aquatic nuisance species. In terms of policy, Westlake said a number of efforts to reduce regulation are underway, including a revisit of the previously proposed Waters of the United States rule.

Administrative Issues

FY 2018 UMRBA Budget

Hokanson said UMRBA's proposed FY 2018 budget had been prepared and is ready for Board action. He noted that copies of the budget are available to meeting participants. Stout moved to approve the proposed FY 2018 budget. Dan Baumann seconded the motion. The motion passed unanimously on a voice vote.

Executive Director Transition

Tim Hall said UMRBA's Board had discussed the Executive Director transition process and has chosen to pursue an open, competitive process. Hall said an announcement of the position opening should be posted in late May or early June, with a goal of having the position filled permanently by September 1. He encouraged participants to share information regarding the position opening when it becomes available.

Future Meeting Schedule

Hokanson summarized the following future meeting schedule:

August 8-9, 2017 in Onalaska/La Crosse, Wisconsin

August 8 – UMRBA quarterly Meeting

August 9 – UMRR Coordinating Committee quarterly meeting

November 6-8, 2017 in St. Paul, Minnesota

November 6 – UMRBA Water Quality Executive Committee

November 7 – UMRBA quarterly Meeting

November 8 – UMRR Coordinating Committee quarterly meeting

Additionally, Hokanson proposed the following:

February 6-7, 2018 in the Quad Cities

February 6 – UMRBA quarterly Meeting

February 7 – UMRR Coordinating Committee quarterly meeting

With no further business, the meeting adjourned at 2:57 p.m.