

**Minutes of the 141<sup>st</sup> Quarterly Meeting  
of the  
Upper Mississippi River Basin Association**

**February 7, 2017  
Rock Island, Illinois**

UMRBA Chair Robert Stout called the meeting to order at 9:37 a.m. Participants were as follows:

UMRBA Representatives and Alternates:

Rick Gosch	Illinois Department of Natural Resources
Dan Stephenson	Illinois Department of Natural Resources
Tim Hall	Iowa Department of Natural Resources
Dave Frederickson	Minnesota Department of Agriculture
Barb Naramore	Minnesota Department of Natural Resources (by phone)
Robert Stout	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
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
Ken Westlake	U.S. Environmental Protection Agency
Sabrina Chandler	U.S. Fish and Wildlife Service
Scott Morlock	U.S. Geological Survey
Branden Criman	U.S. Maritime Administration

Others in Attendance:

Randall Schultz	Iowa Department of Natural Resources
Megan Moore	Minnesota Department of Natural Resources
Matt Vitello	Missouri Department of Conservation
Andrea Collier	Missouri Department of Natural Resources
Steve Galarneau	Wisconsin Department of Natural Resources
Maj. Gen. Michael Wehr	U.S. Army Corps of Engineers, MVD
Jim Bodron	U.S. Army Corps of Engineers, MVD
Charles Camillo	U.S. Army Corps of Engineers, MVD
Gabe Harris	U.S. Army Corps of Engineers, MVD
Capt. Jordan Peck	U.S. Army Corps of Engineers, MVD
Thatch Shepard	U.S. Army Corps of Engineers, MVD
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Sharin Khazrajafari	U.S. Army Corps of Engineers, MVP
Tom Novak	U.S. Army Corps of Engineers, MVP
Jim Ross	U.S. Army Corps of Engineers, MVP
Dennis Hamilton	U.S. Army Corps of Engineers, MVR

Andrew Barnes	U.S. Army Corps of Engineers, MVR
Mark Cornish	U.S. Army Corps of Engineers, MVR
Tom Davison	U.S. Army Corps of Engineers, MVR
Hank DeHaan	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
Marshall Plumley	U.S. Army Corps of Engineers, MVR
Jason Smith	U.S. Army Corps of Engineers, MVR
Brandon Stevens	U.S. Army Corps of Engineers, MVR
Michael Tarpey	U.S. Army Corps of Engineers, MVR
Jackie Veninger	U.S. Army Corps of Engineers, MVR
Scott Whitney	U.S. Army Corps of Engineers, MVR
Hal Graef	U.S. Army Corps of Engineers, MVS
Brian Johnson	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
Tim Yager	U.S. Fish and Wildlife Service
Mark Gaikowski	U.S. Geological Survey, UMESC
Jeff Ziegeweid	U.S. Geological Survey
Jessica Brooks	National Weather Service
Terry Simmons	National Weather Service
Tom Boland	Amec Foster Wheeler
Olivia Dorothy	American Rivers
Patrick O'Connell	Chicago Tribune
Roger Less	HDR
Brad Walker	Missouri Coalition for the Environment
Gretchen Benjamin	The Nature Conservancy
Doug Blodgett	The Nature Conservancy
Dave Hamilton	The Nature Conservancy
Nancy Guyton	Neighbors of the Mississippi
Bertha Mae Taylor	Neighbors of the Mississippi
Kristian Starner	Upper Mississippi, Illinois, and Missouri Rivers Association
Paul Rohde	Waterways Council, Inc. (by phone)
Dru Buntin	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association

### **Minutes**

Dan Baumann moved and Rick Gosch seconded a motion to approve the draft minutes of the November 15, 2016 quarterly meeting as written. 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 said Kirsten Mickelsen attended the December 13, 2016 meeting of the Inland Waterway Users Board (IWUB) in Linthicum Heights, Maryland. Mickelsen said members discussed FY 2017 funding and the status of the Inland Waterways Trust Fund (IWTF) revenues and projects. She said IWUB members also raised concerns with the implications for ongoing project construction given uncertainty regarding FY 2017 appropriations and the continuing resolution authority.

Buntin said he attended a December 5, 2016 press conference in St. Louis, Missouri in which the Administrator of the Maritime Administration announced that the M-35/M-55 Container-On-Barge project is being awarded a \$96,000 grant. UMRBA submitted this grant application in partnership with the St. Louis Port Authority, Inland Rivers Ports and Terminals Association (IRPT), and the Mississippi River Cities and Towns Initiative (MRCTI). Since the announcement of the award, UMRBA has been working with the partnership to develop a budget, scope, and schedule to submit to MARAD for contractual purposes.

Buntin said UMRBA staff continue to work with the UMRS state departments of transportation (DOTs) to develop an interactive web-based inventory of the UMRS's commercial navigation-related assets. This will include information about ports and terminals, foreign trade zones, intermodal connections, and other related themes. The M-35 Advisory Committee recommended this effort at its February 22, 2016 meeting. Buntin said the DOTs have discussed unveiling this inventory via a webinar inviting all regional stakeholders, including ports, terminals, operators, shippers, and economic development organizations.

In the *Ecosystem Restoration and Monitoring focus area*, Buntin said UMRBA staff continue to work with Corps staff to finalize the 2016 UMRR Report to Congress. Marv Hubbell indicated that he expects the transmittal of the Report to Congress to occur in the next few days. Mickelsen noted that copy of the Report to Congress brochure is included in the meeting packet.

Buntin said at the November 15, 2016 quarterly meeting, the Board directed staff to explore opportunities for a workshop to discuss the opportunities and challenges of employing more routine and systemic pool-scale water level management in order to identify a shared understanding and consensus on any recommendations. Buntin said UMRBA then hosted a December 21, 2016 conference call with an *ad hoc* group helping to plan a UMRS water level management workshop. The group discussed recommendations for the workshop's objectives and agenda, including ideas for presentations and format for a facilitated discussion. Mickelsen said she also attended the UMRS Water Level Management Task Force's meeting on January 31, 2017 in Winona, Minnesota to get feedback on the proposed workshop agenda and overall approach to facilitating discussion among the federal agencies, states, and nonprofit organization partners.

In the *Flood Risk Management focus area*, Buntin said there would be further discussion of regional flood risk management later in the quarterly meeting. He noted that the Upper Mississippi, Illinois, and Missouri Rivers Association (UMIMRA) annual meeting is being held later this week on February 9-10, 2017 in Burlington, Iowa. He said he would be attending the UMIMRA meeting and participating in a discussion with UMIMRA Board members and staff from the five UMR state departments of natural resources and the Corps of Engineers.

In the *Spill Response Planning and Mapping focus area*, Dave Hokanson said the Oil Pollution Act project staff's Inland Sensitivity Atlas work has been focused on completion of the Illinois statewide update of the Atlas. Data collection and verification is now drawing to a close and work in the upcoming months will focus on map creation, quality control, and production of the final Atlas materials. As work on the Illinois Atlas update concludes, data collection will begin for the Wisconsin Atlas statewide update. He said project staff also continue to facilitate the development of spill response plans for UMR Pools via an interagency process. Response plans for UMR Pools 11 and 12 were completed and distributed to stakeholders in December 2016. Pool 9 is the next UMR Pool for which a plan will be developed, though work on Pool 9 is not anticipated to begin until later in 2017.

Additionally, as part of contract work with USEPA, project staff have begun to examine Toxics Release Inventory (TRI) data for the UMR corridor, along with other key regional data sets, in order to identify release locations, quantities, chemical types, media impacted, trends, and spatial relationships.

Hokanson said UMRBA project staff also continue work under a cooperative agreement with the National Park Service (NPS) to create spill response planning tools for the St. Croix National Scenic Riverway. He said staff have recently revised and updated the preliminary hazard analysis for the project area and have shared this with stakeholders in advance of planning meetings scheduled for February 8 and February 16, 2017 in the St. Croix watershed.

Hokanson said the UMR Spills Group will next meet April 25-26, 2017 in Davenport, Iowa. Topics to be addressed at this meeting will include case studies of recent UMR incidents, notification drills, web-based tools to support the Group's work, geographically-specific planning efforts, training, and exercises.

In the *Water Quality focus area*, Hokanson said staff continue work with the UMRBA Water Quality Task Force (WQTF), staff of the Minnesota Department of Natural Resources, Minnesota Pollution Control Agency, Wisconsin Department of Natural Resources, and (Twin Cities) Metropolitan Council on pilot field implementation of the *UMR CWA Recommended Monitoring Plan* on the segment of the river between the Twin Cities and La Crosse, Wisconsin. He said this has included monitoring for chemistry, fish, vegetation, and macroinvertebrate components. Monitoring at 60 probabilistic sites has been completed and fixed site monitoring will continue through April 2017. Data compilation and analysis has begun and will continue throughout the spring. Hokanson said the pilot monitoring group held a conference call on January 18, 2017 to discuss project completion and development of project reports including an initial water quality condition report and a report evaluating the success and "doability" of the project overall.

Hokanson said the WQTF will next meet on February 21-22, 2017 in Davenport, Iowa. Topics to be addressed in this meeting will include updates on the Lake Pepin TMDL and Des Moines Water Works legal action, consultation regarding impairment listing and TMDL implementation along the UMR, status reports on state nutrient loss reduction strategies and related research, and UMR CWA monitoring strategy implementation. The meeting will also incorporate a conference call of the UMR Harmful Algal Bloom (HAB) Work Group and topics to be addressed will include: USEPA's draft recreational criteria for cyanotoxins, ORSANCO's work on the Ohio River regarding HABs, outcomes of the USEPA Region 7 HAB workshop, and cyanotoxin monitoring efforts by the states and other agencies. Additionally, Hokanson said he will give a presentation at the USEPA Region 7 workshop on February 16, 2017 regarding the UMR HAB Work Group.

Hokanson said he attended the meeting of the Mississippi River/Gulf of Mexico Hypoxia Task Force (Hypoxia Task Force) in New Orleans, Louisiana on December 5-6, 2016. He said this Hypoxia Task Force meeting addressed topics including collaboration with land grant universities, 2016 hypoxic zone conditions, state nutrient loss reduction strategies, as well as other collaborative efforts to reduce nutrient loss and measure nutrient loading.

In the *Cross Cutting Collaboration focus area*, Buntin said on January 11, 2017, UMRBA sent a letter to then Vice President-elect Mike Pence in his position leading the new administration's transition team, offering the states' shared priorities related to commercial navigation, watershed influences to flood risk and channel maintenance, and ecosystem health and water quality. The letter's recommendations emphasize modernizing and repairing waterway infrastructure, enhancing capabilities to predict flood events and minimize their damage, and protecting and improving the river's water quality and ecological health. Buntin noted that the letter is included in the meeting agenda packet.

Hokanson said UMRBA staff participated in the development of the report *Upper Mississippi River Conference 2016 Action Agenda: Raise the Grade*, which was released on December 16, 2016. He said this document captured the outcomes and recommendations emerging from the Upper Mississippi River Conference held in Moline, Illinois on October 13-14, 2016. The *Action Agenda* includes recommendations for near term steps to “raise the grade” in the various goal areas of the America’s Watershed Initiative (AWI) report card for the Mississippi River Basin, which was released in 2015. These goal areas include ecosystems, flood control and risk reduction, transportation, water supply, economy, and recreation.

Buntin directed the Board’s attention to page B-25 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, 2016 through September 30, 2016. Dave Frederickson offered and Tim Hall seconded a motion to approve the Treasurer’s statement. The Board unanimously adopted the motion by voice vote.

Dan Baumann noted that the written UMRBA Executive Director’s reports have served as a valuable tool in sharing the importance of the work being accomplished by the states through the Association. He said the reports provide an easy way to document the breadth of UMRBA’s work and answer any questions within the states. Robert Stout agreed and noted that this is particularly important given challenging budgets within the states.

### **Interbasin Diversion Consultation**

UMRBA Chair Robert Stout noted that the five states are party to the 1989 Upper Mississippi River Basin Charter. Dru Buntin explained that the Charter sets forth a notification and consultation process for any new or increased water diversion out of the basin that will exceed an average of 5 million gallons per day during any 30-day period. The Charter also requires the signatory states to report on their involvement in qualifying diversion requests at UMRBA’s annual meeting. The states reported as follows:

- Illinois, Rick Gosch — no qualifying diversion requests
- Iowa, Tim Hall — no qualifying diversion requests
- Minnesota, Barb Naramore — no qualifying diversion requests
- Missouri, Robert Stout — no qualifying diversion requests
- Wisconsin, Dan Baumann — no qualifying diversion requests

Stout said UMRBA staff would send the customary letters to the Governors conveying the results of the states’ diversion reporting.

### **2017 UMRBA Strategic Plan Priorities**

Chair Stout said the Board has adopted priorities for calendar year 2017 in the focus areas which are part of the *UMRBA 2013-2017 Strategic Plan*. He noted that Board members would briefly summarize the 2017 priorities. In the *Aquatic Nuisance Species focus area*, Dan Stephenson said the Association’s priorities include monitoring the Great Lakes and Mississippi River Interbasin Study (GLMRIS) Brandon Road feasibility report and sharing the states’ shared perspectives when appropriate. Stephenson noted that the Brandon Road topic would be covered later in the quarterly meeting. He said

the 2017 priorities also include collaborating in regional efforts to address aquatic nuisance species and providing a venue for information sharing on prevention and control.

In the *Commercial Navigation focus area*, Stout said priorities include continued advocacy for the Navigation and Ecosystem Sustainability Program (NESP) as well as for a watershed study that would result in long term strategies for improving channel maintenance and management. He said 2017 priorities also include implementation of a grant from the Maritime Administration aimed at engaging shippers, inland ports and barge operators, and ocean carriers in order to facilitate container shipping on the Mississippi River. Stout said the Association will also continue to support the Navigation Work Group and the M-35 Marine Highway Corridor Advisory Committee, while also tracking legislation and providing comment when appropriate.

In the *Ecosystem Restoration and Monitoring focus area*, Dan Baumann said priorities include continued advocacy for NESP and full funding for the Upper Mississippi River Restoration (UMRR) Program as well as the provision of services for UMRR under the contract with the Corps of Engineers. Baumann noted that Association is also planning a Water Level Management workshop in April 2017 to foster discussions among key stakeholders regarding the ability to employ more routine, systemic, large-scale water level management on the UMRS.

In the *Flood Risk Management focus area*, Rick Gosch said priorities include working with regional partners to scope a watershed study to develop long term strategies for improving flood risk management. Gosch said the Association will continue to facilitate conversations among state floodplain managers and to participate in flood-related interagency groups when appropriate. In response to a question from Marty Adkins, Gosch said the specific scope of the watershed study will be determined based on the input from partners. Buntin said to date the discussion of the study scope has focused primarily on the floodplain, but would consider watershed factors such as tributary flows and sedimentation.

In the *Hydropower focus area*, Stout said priorities include continuing to staff and support the Hydropower Group as needed and maintaining an inventory of existing and proposed UMRS hydropower projects. Stout said the Association will also continue to share information and facilitate dialog among partners regarding the topic.

In the *Spill Response Planning and Mapping focus area*, Tim Hall said the Association's priorities include staff support for the UMR Hazardous Spills Group and assistance with any associated training, exercises, and tool development to assist the Group in its work. Hall said UMRBA will conduct regional spill contingency planning and mapping work under contract with USEPA as well as work to create a spill response plan for the St. Croix National Scenic Riverway under contract with the National Park Service.

In the *Water Quality focus area*, Jim Fischer said the Association's priorities are numerous and ambitious and he thanked Dave Hokanson for keeping the states engaged and focused. Fischer said 2017 priorities include continued engagement with regional partners such as the Mississippi River Cities and Towns Initiative (MRCTI) to identify common water quality goals and opportunities for collaboration. He said the Association will also communicate the importance of UMR water quality to USEPA, Congress, and others using messages developed in collaboration with regional partners. UMRBA will seek to identify staffing and funding mechanisms to better support collaborative UMR water quality work. Fischer said the Association will continue to support the Water Quality Executive Committee and Water Quality Task Force and will continue to provide a forum for states to share information regarding nutrient loss reduction strategy implementation. He said the Association will continue to support implementation of the *UMR Clean Water Act Monitoring Strategy* and pilot

implementation in Minnesota and Wisconsin, while also supporting the UMR Harmful Algal Bloom (HAB) Work Group.

In the *Cross-Cutting focus area*, Stout said UMRBA will continue to collaborate with MRCTI, America's Watershed Initiative (AWI), and the Interstate Council on Water Policy (ICWP). Stout noted that Buntin served as ICWP Chair this past year. He said the Association will also seek to complete the UMR economic profile and indicated that the Board is looking forward to the inclusion of the Illinois River counties in the profile.

In response to a question from Olivia Dorothy, Kirsten Mickelsen said the water level management workshop mentioned by Baumann will be held on April 4 and 5, 2017.

### **Federal Liaison Updates**

*U.S. Geological Survey (USGS)* – Scott Morlock said the Midwest and Southwest Regions of USGS have undertaken a series of meetings with partners to insure that the agency's work in the Mississippi River watershed (including over 3000 stream gages, Upper Mississippi River Restoration Program science, water quality gages, etc.) is aligned with partner priorities. He said USGS plans to take this input and formulate a comprehensive science strategy for the entire Mississippi River. Morlock said over the course of the next year, USGS will continue to hold listening sessions with partners to get their input on the strategy. Morlock noted that USGS is operating under a continuing resolution for FY 2017 with a \$106 million increase over the FY 2016 enacted funding levels for specific initiatives related to invasive species, ecological stream flows, pollinator health, unconventional oil and gas development, earthquake monitoring in the Midwest, the Water Smart program, a national hydraulic model and rapid deployment of gages. He noted that the FY 2018 budget request from the Administration for USGS is pending. In response to a question from Robert Stout, Morlock said in the past USGS state science center directors have worked with partners in their respective states to determine priorities. Through this new effort, USGS hopes to integrate these priorities into a more comprehensive strategy for the Mississippi River.

*U.S. Fish and Wildlife Service (USFWS)* – Sabrina Chandler noted that USFWS does not yet have a new Director, and as such determinations of priorities under the new Administration are pending. However, she said work continues in regard to Landscape Conservation Design (LCD) and the Service is coordinating with Landscape Conservations Cooperatives (LCCs) to engage partners and pursue land acquisitions. These LCC efforts have included work on the Middle Mississippi River, the Illinois River, and the Cache River (Illinois). Chandler also described a number of ongoing USFWS projects including work at the Whitney Genetics Laboratory in La Crosse regarding Asian Carp management and control, a Midwest Monarch butterfly habitat initiative, and consideration of the Rusty Patch Bumblebee for listing under the Endangered Species Act.

Regarding the USFWS budget, Chandler explained that the FY 2017 Continuing Resolution (CR) included a 5 percent "holdback" and that while a FY 2018 budget has not been determined, the agency is planning for a 10 percent reduction.

Steve Galarneau asked Chandler to comment on LCC work in the Great Lakes area, how this connects to LCC efforts throughout USFWS' Midwest Region, and how Landscape Conversation Design (LCD) is integrated. Chandler responded that the LCCs in the Great Lakes and Upper Mississippi areas are focused on land acquisition and will seek to implement LCD at smaller scales within the larger LCC units.

*Natural Resource Conservation Service (NRCS)* – Marty Adkins reported that soil management and soil health in particular continue to be areas of primary emphasis for NRCS. This has included

implementing training of technical staff regarding soil health and the integration of a more ecosystems-based approach to soil health. He said NRCS is also working to increase consistency among states in Farm Bill compliance in regard to wetland conservation, particularly in the prairie pothole region. Adkins commented that NRCS is also working with USFWS and USGS in regard to pollinator health.

Adkins explained that NRCS continues to pursue the targeting of conservation programs to achieve maximum benefit, and gave the example of the Regional Conservation Partnership Program (RCPP) as a primary mechanism wherein targeting has been implemented. He noted that several RCPP projects are moving forward in the UMR basin. Adkins added that NRCS also continues to work with USEPA on the targeted National Water Quality Initiative (NWQI). He said NRCS is focused on building partnerships across multiple sectors and is working with a variety of partners including ag retailers, agronomists, and agriculture sustainability groups. Further, he said, NRCS is seeking ways to better share information while also protecting the privacy of producers.

Regarding budget considerations, Adkins said NRCS is in the same position as the other federal partners in that it is currently working under a CR for FY 17 and anticipating budget cuts for FY 18. He also noted that confirmation of a new Secretary of Agriculture is still pending.

Robert Stout commented that Missouri is currently working with NRCS on an RCPP project in Grand River watershed which illustrates the importance of strategically employing resources. He said this project has very much proved the value of partnerships and shared planning efforts, with partnerships needed a both larger and smaller scales. Adkins thanked Stout for his comment and concurred on the need for partnership to happen at multiple levels.

*Maritime Administration (MARAD)* – Branden Criman reported that Transportation Secretary Chao had recently taken office and had met with MARAD staff, noting further that a nomination for MARAD Administrator is expected soon. She said business is proceeding as usual at this time, adding that investment in ports has increased substantially in the last few years and that this investment is expected to continue. Criman said \$4.85 million had been allocated for the Marine Highway Program as part of the current FY 17 continuing resolution. She noted that a rule revision proposed on January 11, 2017 would expand the definition of materials which can be palletized, allowing for the potential expansion of the types of materials which could be carried via the inland waterways and beyond just the use of container on barge for many materials and products. Criman said comments on the proposed rule revision are welcome.

*U.S. Environmental Protection Agency (USEPA)* – Ken Westlake explained that USEPA is operating under a Continuing Resolution (CR) through April 28, 2017, which provides funding at 57.5 percent of FY 2016 enacted budget. The agency's FY 17 budget beyond the end of the CR is still to be determined. He also noted that federal civilian agencies are under 90-day hiring freeze through late April as directed via an Executive Order (EO) from President Trump. Westlake said budget limitations and uncertainty may lead to partial grant awards for base program support in FY 17. He then reviewed recent budgets for water-related programs (e.g., CWA Section 106, CWA Section 319, revolving loan funds) and compared them to the allocations made to date under the FY 17 CR.

### **Federal Flood Risk Management Standard**

Scott Whitney provided an update regarding the Federal Flood Risk Management Standard (FFRMS) under Executive Order (EO) 13690. Whitney explained that the EO 13690 amends EO 11988 on Floodplain Management, which was originally issued in 1977. The new EO, entitled *Establishing a Federal Flood Risk Management Standard and Considering Stakeholder Input*, was issued in 2015 and reflected work done by the Hurricane Sandy Rebuilding Task Force and supported President Obama's Climate Action Plan. He explained that some sections of EO 11988 were unchanged by the new EO,

such as longstanding directives to minimize impacts on floodplains and to restore and preserve floodplains. However, the new EO calls for agencies to use more resilient approaches when proposing new actions involving federal investment in the floodplain. It also calls on agencies to replace the one percent annual chance defined floodplain with the FFRMS floodplain approach when considering actions near the floodplain.

Whitney explained that the FFRMS includes three options for determining the floodplain of concern: a climate-science informed approach, a freeboard value approach, or the 0.2 percent chance floodplain. EO 13690 recommends the climate-science informed approach but gives agencies the flexibility to choose from among the three options identified. The new EO also directs agencies to, where possible, use natural systems ecosystem process and nature-based approaches when developing alternatives to proposed actions. Overall, the intent of the EO is to assist in reducing the risk and cost of future flood disasters by ensuring that federal investments are constructed to better withstand the impacts of flooding.

Whitney described next steps associated with the EO as follows:

- Deadline for public comments on the draft Engineer Circular (EC) for implementing EO 11988 has changed from January 30, 2017 to May 1, 2017. This extension is being offered in response to several requests and in recognition of the difficulty in compiling comments over the holiday season, the level of complexity and uncertainty around some of the changes in process being considered, and changes in guidance for new regulations provided by the new Administration.
- A notice was issued in the Federal Register in mid-December 2016 announcing availability of the draft EC for implementing EO 11988 and opportunity to provide comment. The notice may be found on the Federal Register website in the Table of Contents under “Corps of Engineers.”
- The notice, the draft EC, and a document including a series of topic areas and issues for which feedback would be particularly valuable remain available for review on the following website: <http://www.iwr.usace.army.mil/Missions/FloodRiskManagement/FloodRiskManagementProgram/AbouttheProgram/PolicyandGuidance/FederalFloodRiskManagementStandard.aspx>
- All comments may be submitted electronically by email (to [USACE-EO11988@usace.army.mil](mailto:USACE-EO11988@usace.army.mil)) or in hard copy by mail. The list of topic areas and issues of interest was made available along with the draft EC in order to help reviewers understand the type of input and the topical areas that would be most helpful. However, any and all input and comments will be welcomed and considered. Comments are requested by May 1, 2017.

Stout asked whether the primary goal of the EO is provide for greater flexibility or if there is another primary policy goal. Whitney replied that the primary goal is to build resiliency regarding federal projects, while also providing for flexibility in approach. Bryan Hopkins asked how this EO applies to levees. Whitney explained that he EO does not apply retroactively, it is forward-looking. However, he added, it would apply for any new levees or modifications to existing levees. Hopkins further asked whether the EO would apply in the case where a levee was damaged by flooding and then rebuilt. Whitney said this is still being worked out, but it appears that it would not apply to repair actions under Public Law 84-99 (PL 84-99).

### **Mississippi Valley Division Update**

Major General Michael Wehr provided an update from USACE’s Mississippi Valley Division (MVD). He began with an overview of MVD’s area of operation, including both a geographic description of the

Mississippi River and the staffing of the Division. He noted that two new Commissioners joining the Mississippi River Commission (MRC) in January, as follows:

- Brig. Gen. Mark Toy, who is commander of the Corps' Great Lakes & Ohio River Division, and
- Rear Admiral Shepard Smith, who is the director of Coast Survey and serves as the commission's representative of the National Oceanic and Atmospheric Administration.

He also noted that Mr. R.D. James was also just recently re-appointed the MRC.

MG Wehr next offered a number of observations regarding navigation and navigation infrastructure. He commented on NESP's dual purpose authority and noted that this program aligns with national and regional perspectives in that it addresses capacity, efficiency, reliability, and redundancy. However, he noted that NESP has not been budgeted for construction under the policy of recent Administrations, and the need for updated economic study has been raised.

MG Wehr observed that there is a window of opportunity for increase infrastructure funding, as the new Administration is focused on energy and infrastructure. He also noted the "Four Revolutions" impacting inland waterways as described by previous MVD Commander DeLuca: agricultural productivity increases, expanded energy production, the return of manufacturing, and climate change. MG Wehr thanked UMBRA for its efforts in working with states and Governors in regard to infrastructure priorities and noted that the states priorities are in alignment with USACE's Capital Investment Strategy.

Robert Stout thanked MG Wehr for his remarks and noted that, in regard to economic impacts, UMRBA is engaged with a number of partners in continuing to develop an economic profile for the UMR which demonstrates the importance of the river across a number of sectors. He also said he sees strong alignment between UMRBA's Strategic Plan priorities and those described in MG Wehr's remarks. Stout then asked MG Wehr how public-private partnerships (P3s) are anticipated to fit into future projects and budgets. MG Wehr replied that he is aware of interest in the new Administration regarding the use of P3s, and that this may be incorporated into future (FY 18 and FY 19) budget cycles. Buntin observed that in consideration of infrastructure projects, the new Administration appears to be most interested in those that have an existing revenue source. Therefore, he suggested, the Inland Waterway Trust Fund (IWTF) could potentially be considered as a source of revenue for purposes of defining inland waterway infrastructure investment as a P3.

Buntin also thanked MG Wehr for his comments and directed his attention to the UMRBA transition priorities letter in the meeting packet. Among the priorities listed there, he highlighted the following: strong support for NESP, importance of repair and modernization for La Grange lock and dam, the need to address the maintenance backlog in the inland waterways, support for continued development of the HEC-RAS model, and the need for a systemic approach to channel maintenance. Additionally, and beyond the contents of the transition paper, Buntin said UMR partners are very interested in exploring how to best implement water level management to achieve multiple use benefits.

Stout added that the UMR states also want to remain very engaged in the area of flood risk management (FRM) and in regard to a potential watershed study addressing both channel maintenance and FRM. MG Wehr concurred, saying he sees good opportunities to engage regarding FRM at this time, and this engagement would also include FEMA. He noted that FRM work is also ongoing on the lower river.

Buntin said he also wanted to highlight that ecosystem restoration is a high priority item for the states, including strong support for the Upper Mississippi River Restoration (UMRR) program. He added that

the states recognize the need to communicate effectively regarding the importance of ecosystem restoration and the ongoing need to take action in light of continuing stressors on the ecosystem.

Gretchen Benjamin commented that, as UMR partners continue to communicate messages regarding NESP, it will be critical to emphasize its dual purpose authorization and the importance of comparable progress between navigation improvements and ecosystem restoration. She emphasized that this will be essential in maintaining the broad coalition of support for NESP.

Brad Walker commented that not all present are NESP supporters. Specifically, he said a number of environmental groups do not support NESP as written and authorized. Walker said these groups question the federal investment in the lock and dam system and feel that the states are supportive of NESP because it does not require the investment of state resources. He added that the industry contribution to waterway infrastructure via the IWTF is small as compared to that of the industry contribution in other sectors such as rail. Walker emphasized that the environmental groups do support ecosystem restoration and small scale navigation improvements, but do not support the NESP program overall.

### **Navigation and Ecosystem Sustainability Program (NESP)**

#### **Federal Infrastructure Initiative**

Dru Buntin began the discussion regarding NESP by describing recent activity related to the Trump Administration's infrastructure emphasis. He noted that materials regarding a possible infrastructure initiative are included in the meeting packet, and pointed out that Upper Mississippi and Illinois River locks reportedly had been included on a draft list of projects identified by the Trump Transition Team. Buntin explained that the states had shared priority projects lists and, while it is not clear what process was used to develop any lists, the reported project list appears to be consistent with UMRBA's understanding of states' submissions. He noted that the locks shown in the reported list (UMR Locks 20-25 and Illinois River Locks) appear to include those identified for modernization under NESP.

Buntin said UMRBA is also working with partners in regard to messaging associated with inland waterways infrastructure. In particular, he noted that the UMR states remain very committed to the dual purpose authorization of NESP, and as such have an interest in conveying that infrastructure projects executed under NESP are to be accompanied by comparable progress in ecosystem restoration. Buntin described the history of compromise and partnership-building which led to NESP authorization. He said the opportunity to potentially move forward on infrastructure projects under the new Administration, coupled with a need to develop a message which incorporates the importance of ecosystem restoration, has led to today's partner conversation.

#### **Partner Perspectives**

Paul Rohde of the Waterways Council, Inc. (WCI) next offered perspectives on behalf of the commercial navigation industry. Rohde said the navigation community continues to be a strong supporter of the dual purpose (navigation and ecosystem restoration) approach as included in the NESP authorization. He noted that this has been evidenced by the support of the Inland Waterways Users Board (IWUB). He added that Congressman Rodney Davis of Illinois is strongly committed to the ecosystem restoration side of NESP, as well as the navigation side.

Rohde said WCI has recently posted videos on its website to provide information about NESP. Additionally, WCI will be holding its Washington, D.C. fly-in in late March and will use this as an opportunity for further outreach in support of NESP, as this is one of its priority messages. He thanked UMRBA and other partners for their continued cooperation and support.

Additionally, Rohde said WCI has seen some interest in the House in revisiting earmark restrictions, which may provide an opportunity for more projects to move forward.

Gretchen Benjamin of The Nature Conservancy (TNC), said TNC has been supportive of NESP since its authorization and emphasized the importance of its dual-purpose approach. She noted that the Navigation Study which preceded program authorization thoroughly reviewed navigation infrastructure needs as well as ecosystem restoration needs, including a cumulative impacts assessment. Benjamin explained that the 2007 NESP authorization essentially reflected the findings of the Navigation Study. She emphasized that this systemic approach provides for the most beneficial and comprehensive approach to restoration, something that cannot be achieved in a project-by-project mitigation approach.

Benjamin explained that the UMRR program has been incredibly successful, but more tools for restoration are needed, but that more opportunities and tools for restoration are needed, as would be offered via NESP. She said the need to expand restoration is urgent as recent science indicates that approximately 2-3 percent of existing UMR habitat is being lost each year, despite the important work being accomplished under UMRR, as it cannot keep up with the degradation resulting from multiple, ongoing stressors on the system.

Regarding the reported list of the Administration's priority infrastructure projects, Benjamin said TNC's concern is that ecosystem components are not included alongside lock improvements, and it is not clear how ecosystem restoration might fit in with any infrastructure initiative and if this might include projects such as water level management, floodplain reconnection, and floodplain forest restoration. For the NESP program specifically, Benjamin estimated that approximately \$12 million in PED funds could be expended within a year, and then construction projects totaling \$86 million would be ready to move ahead in the second year. In the third and fourth years, approximately \$100 million worth of construction could be carried out. Benjamin also emphasized that, alongside construction, approximately \$10 million to \$12 million per year would need to be dedicated to monitoring and adaptive management.

Regarding a future transition from UMRR to NESP, Buntin said the states have previously worked with USACE on transition planning and have firmly held that UMRR must be fully funded until NESP reaches a point where it provides an overall increase in restoration activity beyond UMRR levels. Additionally, the long term monitoring component must be supported throughout any transition, as it benefits not only the UMRS but also large programs nationally.

#### Status of NESP Projects

Michael Tarpey provided an update on the status of projects under NESP and how USACE would plan to resume work under NESP if funding is made available. He began by reviewing the overall scope of NESP, which has an authorized funding of \$4.2 billion dollars to carry out navigation projects (seven 1200-ft locks, mooring cells & switchboats) and ecosystem restoration (225 projects with adaptive management). He also noted strong, ongoing support for NESP among a variety of stakeholder groups and stated that the vision of NESP is "to seek long-term sustainability of the economic uses and ecological integrity of the Upper Mississippi River System." He emphasized the urgency of moving forward with NESP, particularly in light of declining infrastructure and the need to maintain economic competitiveness, but added that it will likely take efficient funding for 15 to 20 years to realize the full social, ecologic, and economic benefits of NESP.

Tarpey next described USACE's planned resumption approach for the ecosystem and navigation components of NESP as follows:

#### NESP Ecosystem Resumption Approach:

- First phase: Restart planning & design (Corps will work with Federal & state agencies, and river teams to review & validate projects.)
  - Pool 18 water level management
  - Shoreline protection for cultural sites in Pools 10 -13
  - Shoreline protection at Twin Island
  - Wingdam notching in Pool 2 and Herculaneum
  - Reno Bottoms forestry management
  - Peoria Pool backwater restoration
  - Side channel restoration at Buffalo Island and Schenimann Chute
  - Fish passage at L&D 26 and L&D 22
  - Emiquon West floodplain restoration
- Second Phase: Continue planning & design / Start Construction
  - Finish phase 1 planning & design projects. Initiate new projects.
  - Construct shoreline protection in Pool 13 and Twin Island
  - Implement Pool 18 water level management
  - Construct Buffalo Island and Schenimann Chute side channel restoration projects
  - Construct Pool 2 wingdam notching
- 3rd Phase: Implementation
  - Continue planning & design of new projects
  - Construction of ecosystem restoration projects

#### NESP Navigation Resumption Approach

- First phase: Restart planning & design (Corps will work with Federal & state agencies, and river teams to review & validate projects.)
  - Lock design at LaGrange, Lock 25, & Lock 22
  - Switchboat planning and design
  - Mooring cell planning & design
  - Update economic analysis & cost estimate
  - Moore's Island mitigation
- Second Phase: Continue design / Start Construction
  - Finish lock design at LaGrange, Lock 25, & Lock 22
  - Construction of mooring cells at LD14, LaGrange, & LD24, finish planning & design of additional mooring cells
  - Switchboat implementation at LD25
  - Construct Lock 22 Approach Walls
  - Construction of Moore's Island mitigation
- Third Phase: Implementation
  - Construct additional mooring cells
  - Initiate 1,200-foot lock construction (site TBD)
  - Start lock design at Peoria and Lock 24

Tarpey noted that NESP's restoration authority does include approaches such as water level management and forestry management, as well as fish passage. As such, it provides a broader suite of tools than is currently available to the UMRR program.

Tarpey said if funding were to be received, work could restart with PED, moving to construction within two to three years. Buntin said there has been interest from the Administration in identifying projects that could move to construction within one year. He said it is very important to identify what pieces of the program may be ready to be constructed within a year, and to begin moving forward in regard to permitting requirements, so that the opportunity is not missed due to a lack of being prepared. Tarpey replied that this interest is understood and that there may particular projects – such as the notching of wing dams – which could be implemented relatively quickly.

Kirsten Mickelsen commented that, in regard to the phases outlined by Tarpey, that these would not necessarily happen as discrete, separate steps – that work on one could be initiated while another is completed. Tarpey confirmed that this correct, work in a phase could begin even while a previous phase is being completed. He added that, if full funding is received, USACE will proceed as needed to execute.

Megan Moore asked how restoration projects might be moved from UMRR to NESP authority. Scott Whitney said USACE will proceed in light of previously developed UMRR-NESP Transition Plan, and that there would be review of projects and consideration of those which could be moved over. He said there would likely be a 3 to 5 year period of transition between programs.

Moore asked how operations and maintenance (O&M) might transfer on old projects if NESP ultimately replaces UMRR. Marv Hubbell responded that the O&M responsibility would remain with the non-federal sponsor as established under UMRR. Sabrina Chandler asked how O&M costs would be covered for new ecosystem projects under NESP. Whitney said this is still to be determined, though USACE recognizes that an increased number of projects under NESP would mean a greater need for O&M. Chandler said this is an important issue to addressed up front as increased O&M obligations could be a significant challenge for project partners. Benjamin observed that language in the 2016 Water Infrastructure Improvements for the Nation (WIIN) Act may help to reduce the O&M obligation for restoration projects, but concurred that this is an important issue. Shawn Sullivan said further USACE guidance on O&M obligations would be helpful, as there are a number of questions still to be sorted out regarding this issue. Monique Savage read from the WIIN Act text, noting the relationship between O&M obligation and project success laid out here. Chandler said USFWS' concern is not just in regard to the duration of the O&M responsibility, but also in regard to specific and significant costs which may be incurred, such as for pump maintenance.

Tarpey observed that there will be other processes and costs associated with project construction, such as the NEPA process and permitting costs. Buntin concurred, summarizing the preceding discussion as illustrating that there is more to be considered than simply picking projects to move forward, but also being aware of what this implies for permitting, O&M, and other considerations. Whitney concurred, saying the entire life cycle of a project needs to be considered in making a selection regarding projects to move forward.

Marty Adkins asked what the expectations are for O&M beyond the 10-year period described in the WIIN Act. Buntin commented that this ten year period follows a USACE “determination that the project’s physical features are functioning as intended,” and therefore there might be very little to maintain at that time. Tarpey added that this question may be more fully addressed as guidance is developed for the WIIN provisions.

Olivia Dorothy said a second economic study is needed regarding the small scale measures in NESP, and that this would be consistent with the adaptive management provisions in NESP. She also observed that, as it is apparent it will take some time to move ecosystem project forward, there is concern about progress on the ecosystem side if lock projects are not constructed due to lack of economic justification. In general, she said, a better understanding of the long-term vision for ecosystem restoration is needed and

that groups such as American Rivers and the Nicollet Island Coalition have concerns in light of the number of unanswered questions regarding planning for future restoration projects. Tarpey replied that any further economic analysis will need to follow Administration policy and that USACE continues to seek guidance on how Congress and the Administration wish to proceed. He added that the Navigation Study underlying NESP did lay out a 50-year vision restoration and navigation improvements on the UMRS.

Moore asked whether science and monitoring would continue under NESP as done under UMRR and whether DOI would continue be a partner in this work. Tarpey and Hubbell replied that this work is expected to transition from UMRR to NESP, as described in the transition plan. Mickelsen commented that more information about UMRR, NESP, and the transition plan is available on the UMRBA website.

Buntin said UMRBA will continue to convene conversations with USACE and other partners to help develop a shared vision of how ecosystem projects may move forward. Stout asked whether this discussion is likely to necessitate changes to the UMRR-NESP Transition Plan. Buntin said he did not feel any changes were needed at this time, but that some could emerge from ongoing discussions.

### **Aquatic Nuisance Species (ANS)**

#### **Managing the Threat of ANS on the UMRS**

Mark Cornish provided a presentation regarding the management of ANS threats on the UMRS, representing the interagency Upper Mississippi Asian Carp Workgroup. He began by reviewing the roles of various entities engaged in ANS issues on the UMRS, including USFWS, the Mississippi Interstate Cooperative Resource Association (MICRA), the Upper Mississippi River Conservation Committee (UMRCC), and the Upper Mississippi Asian Carp Workgroup. He also described the plans that have been established at the regional and project levels to address ANS.

Cornish outlined the goals of monitoring and assessment, in regard to Asian Carp, as follows:

- 1) delineate geographic boundaries of invasive carp species, 2) determine the extent of reproduction, 3) understand life history, 4) estimate population abundances, and 5) evaluate effectiveness of actions.

Regarding containment, Cornish said one of the primary challenges is to develop an effective deterrent strategy in an open river system. He said prevention is the most effective approach, and reduces cost, so that is the goal wherever possible. However, strategies will need to be different in different sections of the system, depending on the extent to which Asian Carp are already present. Further, we need to be cognizant of the presence of native species populations and manage in way that benefits the system overall.

Cornish said one method of control, in areas where an Asian Carp population has been established, is removal via harvesting, as has been done in Pool 19. This can be directly helpful in reducing overall populations, impacting reproduction, and slowing upstream expansion. He added that harvesting also provides useful information regarding the population extent and characteristics.

Cornish then described a number of projects focused on Asian carp prevention and control as follows:

*Larval Asian Carp Monitoring* – Monitoring of egg, larval, and juvenile densities in Pools 8-13 of the UMR and the Maquoketa, Turkey, Upper Iowa, and Wisconsin Rivers. Taking place in the May to September timeframe in habitats include the thalweg, channel border, and backwaters.

*2016 Asian Carp Telemetry* – A system-wide, interagency effort to track the movements of Asian carp. Agencies involved include Minnesota DNR, USFWS, and Missouri Department of Conservation.

*Lock and Dam 19 Adaptive Resolution Imaging Sonar (ARIS)* – To observe fish aggregations and behavior in and around lock, as well as impact of Asian carp deterrent technologies (e.g. speakers).

*Carbon Dioxide at Lock and Dam 14* – Using the auxiliary lock chamber to test the use of carbon dioxide as a deterrent.

Lastly, Cornish noted the importance of communication regarding ANS control efforts, listing a number of means by which information is distributed, including workshops, reports, and [asiancarp.us](http://asiancarp.us) website.

### Brandon Road Study Tentatively Selected Plan

Andrew Leichty gave an update regarding the Brandon Road Tentatively Selected Plan (TSP). He first explained that action at Brandon Road is included in 3 of the 8 options presented in the Great Lakes and Mississippi River Interbasin Study (GLMRIS), and that its characteristics as a high head dam and location on single pathway from the Illinois River into the Chicago Area Waterway System make it a particularly appealing site for control measures. Leichty then described the overall schedule for the Brandon Road Study and in particular pointed out that a draft study report is scheduled to be released February 28, 2017 with a 45-day public review period anticipated to begin March 3, 2017. He added that a final, signed Chief's report is then anticipated in January 2019.

Leichty then described the various control measures which have been considered and noted that while some have now been excluded from the study, five measures remain under consideration – electric barrier, water jets, acoustics complex noise, flushing lock, and lock closure. He explained that, in some cases, measures screened from the study simply require more research. Additionally, he said nonstructural measures – such as increased fishing removal and public outreach/education remain as part of potential actions.

Leichty summarized the alternatives under consideration as follows, noting that these may include combinations of specific measures and emphasizing that the full range of alternatives must be considered:

- *No Action*: Sustained current activities
- *Non- Structural Alternative*: Increasing what is already being done – monitoring, public outreach and education and increased removal
- *Technology Alternative – Electric Barrier*: Primary deterrent (continuous electric barrier) , plus flushing lock and fish entrainment mitigation
- *Technology Alternative – Complex Noise*: Primary deterrent (complex noise), plus flushing lock and fish entrainment mitigation
- *Technology Alternative – Complex Noise with Continuous Electric Barrier*: Primary deterrents (continuous electric barrier + complex noise) plus flushing lock and fish entrainment mitigation
- *Technology Alternative – Complex Noise with Intermittent Electric Barrier*: Primary deterrents (complex noise + intermittent electric barrier), plus flushing lock and fish entrainment mitigation
- *Lock Closure*: Concrete wall – high effectiveness but significant environmental, economic, and social impacts

Leichty closed by noting the importance of leveraging partnerships and strong communication, regardless of the particular plan proposed.

## **Incorporating Climate Change Impacts to Inland Hydrology in Studies, Designs, and Projects**

Kevin Landwehr shared information regarding recently-released USACE guidance addressing the incorporation of climate change impacts in studies, designs, and projects. He noted that USACE's overarching climate change adaptation policy requires consideration of climate change in all current and future studies to reduce vulnerabilities and enhance the resilience of our water resources infrastructure. The recent guidance document, ECB 2016-25, *Guidance for Incorporating Climate Change Impacts to Inland Hydrology in Civil Work Studies, Designs, and Projects* was released in September 2016 and is intended to assist districts at a qualitative level in integrating likely climate change impacts into their processes.

Landwehr explained that key components of the assessment process described in the guidance include a literature review, the application of the Climate Hydrology Assessment Tool to identify trends in historic, observed instantaneous peak flow data and potential future projections of climate data, the application of the Corps Nonstationarity Detection Tool to assess annual instantaneous peak flow records for shifts in the hydrologic properties in a watershed, and the use of the USACE Watershed Vulnerability Assessment Tool. He then described each of the components in further detail.

Landwehr said the first step in assessing climate change impacts on a study area to seek out any relevant scientific literature and official reports related to observed and projected changes to climate that might impact watershed hydrology and project purpose. To support this portion of the guidance, he explained that USACE compiled a literature synthesis examining broad trends in observed and projected climate at a 2-digit hydrologic Unit Code (HUC) scale, where each of these regional reports summarizes observed and projected climate and hydrologic patterns cited in reputable peer-reviewed literature. The literature synthesis is available at: <http://www.corpsclimate.us/rccciareport.cfm>.

Landwehr next described the USACE Climate Hydrology Assessment Tool, which he explained is used to identify both trends in historic, observed maximum peak flows at USGS gages within a study area and to assess future projected changes in the study area and watershed of interest. This tool is available at: [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=313:2:0::NO](http://corpsmapu.usace.army.mil/cm_apex/f?p=313:2:0::NO). He then discussed the USACE Watershed Climate Vulnerability Assessment Tool, which facilitates a screening level, comparative assessment of how vulnerable a given HUC-4 watershed is to the impacts of climate change relative to the other 202 HUC-4 watersheds within the continental United States. This is currently a restricted access tool, though it is expected to be available outside USACE's firewall later in the year.

Lastly, Landwehr described the Nonstationarity Detection Tool, which enables the user to apply a series of statistical tests to assess the stationarity of annual peak streamflow data series at any United States Geological Survey (USGS) annual instantaneous peak streamflow gage site with more than 30 years of flow record through 2014. The tool is intended to aid practitioners in identifying continuous periods of statistically homogenous (stationary) annual peak streamflow datasets that can be adopted for further hydrologic analysis. This tool is available at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=257:2:0::NO](http://corpsmapu.usace.army.mil/cm_apex/f?p=257:2:0::NO).

In closing, Landwehr observed that climate change science is a rapidly evolving field and thus USACE's approach to incorporating climate change impacts into policy will be responsive to the latest actionable findings in the field. He said USACE recognizes the uncertainty associated with climate science and is continuing to work towards being able to characterize this uncertainty in a meaningful and practical way. For now, the guidance requires USACE to take a qualitative approach by assessing the latest research and the statistical properties of available datasets. This qualitative level of analysis enables USACE to make better risk informed decisions and to incorporate adaptable project features into design and planning processes.

## **Regional Flood Risk Management**

Scott Whitney provided a briefing on a number of topics related to flood risk management. In his introductory remarks, Whitey said a vision for flood risk management (FRM) on the UMR is an implementable UMR Flood Risk Management Strategy, with the goal being a predictable UMR system. He referred to the findings presented in two documents, *Room for the River* (USACE's summary report regarding the 2011 floods) and the Mississippi Valley Division's 2014 *Regional Flood Risk Management Annex* as being critical in considering FRM for the UMR.

### *UMR Levee Survey*

Whitney explained that in 2016, the Rock Island District conducted surveys on 28 UMR mainstem levee systems from Muscatine, Iowa to the District's southern boundary. 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 main-stem levee system surveys found significant sections of 7 Federal levee districts (10 systems) to be 2 to 4 feet above the levee systems' federally authorized elevation. He noted that two of these levee districts are in Illinois, three are in Missouri, and two are in Iowa; adding that this area also involves two FEMA Regions (5 & 7).

Whitney described how USACE had subsequently engaged with multiple partners regarding the survey results as follows:

- *Sponsors (Levee Districts)*: Transmit levee survey results. For levee districts with unauthorized levee modifications (raises), formally seek input to findings (within 60 days); establish dates to meet face-to-face.
- *Congress*: Inform Congressional Offices that levee surveys were provided to levee districts USACE's path forward. Respond to inquiries as required with continuous follow up.
- *States/FEMA*: Transmit levee survey results. Meetings to present/ discuss findings; solicit input to findings; describe USACE path forward. Highlight initiation of hydraulic modeling (first of four segments) that will facilitate analysis of system performance and potential flood profiles.
- *USACE Vertical Team*: Inform Chief and ASA(CW) Darcy of release and communication strategy. Maintaining regular status updates for continued awareness and tracking.

In terms of determining impacts of these modifications, Whitney said the goal would be to move from a qualitative assessment based primarily on expert judgement to a more quantitative approach. Bryan Hopkins asked to what extent the Section 408 process addresses what occurs as part of the impacts assessment. Whitney said that many of the steps in an impacts assessment are addressed under the 408 process, but that a retroactive 408 process has not been done before and as such USACE is trying to work through what the implications of this would be.

Buntin asked whether, in a flood-fighting situation, a levee district would be allowed to restore levees to height previous found to be out of compliance, and whether any impacts assessment would need to be done under this scenario. Whitney said this action would be allowed in a flood-fighting situation. Buntin asked whether this would also be true on the MR&T. Whitney said this would not be allowed on the MR&T. Buntin said this scenario illustrates the need for a shared, systemic vision the UMR to avoid these kind of contradictory situations. He added that FEMA certification introduces another layer of complexity and potentially inconsistent expectations. Whitney said he and USACE are aware that authorization (under USACE) is separate from certification (under FEMA). Buntin emphasized that the point he is making is less about compliance *per se* than illustrating that we lack a coherent approach on the UMR.

## *2016 Water Infrastructure Improvements for the Nation (WIIN) Act*

Whitney next presented a summary of UMRS-relevant provisions from the 2016 WIIN Act, which include:

- Sec 1113: Non-Federal interest dredging authority
  - Non-Federal interest may perform maintenance dredging on an authorized navigation project
  - Costs can be reimbursed
  - Needs agreement
- Sec 1115: Reservoir sediment
  - Pilot program to accept non-Federal or commercial removal of sediment captured behind dams
- Sec 1153: Authority to accept and use materials and services
  - Non-Federal sponsor can contribute services and materials to repair, restore, replace or maintain a water resources project
  - Can only provide supplementary services to federal employees, and may only use such services to perform work not otherwise funded by congress
- Sec 1161: Completion of ecosystem restoration projects
  - Amends Sec 2039 of WRDA 2007
  - The responsibility of the non-Federal sponsor for OMRR&R shall cease 10 years after the date which the Secretary makes the determination of project success
- Sec 1201: Authorization of proposed feasibility studies
  - (13) Dubuque Iowa - Project for flood damage reduction
- Sec 1206: Upper Mississippi and Illinois Rivers
  - Conduct a study of the riverine areas located within the UMR/IWW basins to identify the risks and vulnerabilities of those areas to increased flood damages
- Sec 1316: Hannibal Small Boat Harbor, Hannibal, Missouri
- Sec 1322: Expedited Consideration
  - (b) Expedited Consideration
    - Expedited Completion of Flood Damage Reduction and Flood Risk Management Projects
      - (B) Cedar River, Cedar Rapids, Iowa
- Sec 1322: Expedited Consideration
  - Requires a plan for expeditiously completing programmatic authorities for aquatic ecosystem or improvement of the environment such as UMRR & Section 519

Whitney commented that, overall, much is still to be determined in regard to the WIIN provisions, particularly in regard to the issuing of guidance and provision of funding.

### *UMRS Watershed Study*

Whitney said there are two mechanisms by which a UMRS study could advance: 1) per WIIN 2016 Section 1206, a flood risk management-focused feasibility study, or 2) per authority of Section 729 of WRDA 1986, a more broadly focused watershed study. Whitney noted that the first option would be subject to a 50/50 cost share provision and that a federal interest would need to be demonstrated for it to

move forward. He also noted that the states, via UMRBA, have expressed interest in engaging as a cost share partner for a Section 729 study.

In regard to a Section 729 watershed study, Whitney said the next step in the process would be study scoping and that it may be possible that funds would be available yet this year to start the scoping process. He added that USACE recognizes that levee districts have near term concerns and as such is open to ways to take action even before a study would be completed. Whitney also noted that the specific role for USACE can vary in a Section 729 watershed study from primary leadership to more of a supporting role. As such, the particular path the study takes is yet to be determined. Jason Smith noted that, for such a study to move forward to scoping, USACE simply needs to identify a cost share partner.

Marty Adkins observed that significant flood damages still seem to be occurring and it is apparent that lessons have not been learned from previous events or from the Galloway report. Whitney replied that a systemic approach should allow for the better integration of these lessons learned into a more holistic plan.

Robert Stout said there are many decision-makers who need to be brought into this process. As such, stakeholder engagement, and stakeholder commitment to the process will be essential. Olivia Dorothy said she agrees with a holistic approach and broad stakeholder engagement. Regarding the Section 408 process and the levee survey, she asked whether the 408 process is structured to provide for public meetings or other public input. Whitney and Sullivan said the 408 process does include a public input component, but they would need to check into the specifics of how this is structured.

#### *HEC-RAS Model Development*

Whitney said work continues in the updating of the HEC-RAS model. He noted that on January 30, 2017 a working, but not calibrated, model was made available to interagency stakeholders and that a next step is to provide a calibrated model by June 30, 2017. Overall, the goal is to have a completed, reviewed model by September 30, 2017. Whitney noted that updates will continue to be provided at UMRBA Quarterly meetings as well as via webinars to be held February 15, July 15, and September 15.

Stout asked whether any modeling conducted for the purposes of Section 408 authorization would be consistent with the outcomes of updated HEC-RAS modeling. Whitney said there should be consistency between the modeling efforts. Landwehr added that the HEC-RAS model will describe the baseline condition and that if a levee district proposes a modification, then the model would need to be adjusted accordingly. Stout asked whether the model could be run in real time, such as during a flood event. Whitney said the model is not really designed for this use, it is intended to model a given, rather than dynamic, set of conditions. Karen Hagerty asked how the model would integrate flood-fighting conditions. Landwehr said USACE is exploring how to integrate conditions from the 1993 to illustrate flood fighting conditions.

#### **Administrative Issues**

##### *Election of Officers*

Robert Stout proposed the nomination of Tim Hall of Iowa as UMRBA Chair and Dave Frederickson of Minnesota as Vice Chair. Dan Baumann moved that this nomination be put forward. Rick Gosch seconded the motion. Hall and Frederickson were then elected unanimously by voice vote.

*FY 2017 Budget Amendment*

Rick Gosch offered and Dan Baumann seconded a motion to adopt amendment #3 to UMRBA's FY 17 budget reflecting additional expenditures associated with the formatting and printing of the UMRR Report to Congress. The motion passed unanimously on a voice vote.

*Future Meeting Schedule*

Buntin said the May 2017 meetings will be held May 23-24, 2017 in St. Louis, Missouri with the UMRBA quarterly meeting on the 23<sup>rd</sup>, and the UMRR Coordinating Committee on the 24<sup>th</sup>. The August quarterly meetings will be held August 8-9, 2017 in La Crosse, Wisconsin with the UMRBA quarterly meeting on the 8<sup>th</sup>, and the UMRR Coordinating Committee meeting on the 9<sup>th</sup>. He also proposed that the November 2017 meetings be held in St. Paul, with the UMRBA quarterly meeting on November 7<sup>th</sup>, and the UMRR Coordinating Committee meeting on November 8<sup>th</sup>.

With no further business, the meeting adjourned at 4:10 p.m.