

**Minutes of the 129<sup>th</sup> Quarterly Meeting, 33<sup>rd</sup> Annual Meeting  
of the  
Upper Mississippi River Basin Association**

**February 25, 2014  
Moline, Illinois**

UMRBA Chair Dave Frederickson called the meeting to order at 10:45 a.m. Participants were as follows:

UMRBA Representatives and Alternates:

Arlan Juhl	Illinois Department of Natural Resources
Dan Stephenson	Illinois Department of Natural Resources
Diane Ford	Iowa Department of Natural Resources
Dave Frederickson	Minnesota Department of Agriculture
Barb Naramore	Minnesota Department of Natural Resources
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
Sheri Walz	Wisconsin Department of Transportation

Federal UMRBA Liaisons:

Jay Mar	U.S. Department of Agriculture, NRCS
Mark Moore	U.S. Army Corps of Engineers, MVD
Ken Westlake	U.S. Environmental Protection Agency, Region 5
Tim Yager	U.S. Fish and Wildlife Service
Barry Johnson	U.S. Geological Survey
Bill Paape	U.S. Department of Transportation, MARAD

Others in Attendance:

Rick Gosch	Illinois Department of Natural Resources
Loren Wobig	Illinois Department of Natural Resources
John Olson	Iowa Department of Natural Resources
Ed Engle	Iowa Department of Transportation
Andrea Fetherston	Minnesota Department of Agriculture
Chris Klenklen	Missouri Department of Agriculture
John Goss	Council on Environmental Quality
Renee Turner	U.S. Army Corps of Engineers, MVD
Lauren Fleer	U.S. Army Corps of Engineers, LRC
Tom Novak	U.S. Army Corps of Engineers, MVP
Col. Mark Deschenes	U.S. Army Corps of Engineers, MVR
Gary Meden	U.S. Army Corps of Engineers, MVR
Roger Perk	U.S. Army Corps of Engineers, MVR
Ken Barr	U.S. Army Corps of Engineers, MVR
Marv Hubbell	U.S. Army Corps of Engineers, MVR
Karen Hagerty	U.S. Army Corps of Engineers, MVR

Chuck Theiling	U.S. Army Corps of Engineers, MVR
Brian Johnson	U.S. Army Corps of Engineers, MVS
Brian Markert	U.S. Army Corps of Engineers, MVS
Bob Clevensine	U.S. Fish and Wildlife Service
Doug Yeskis	U.S. Geological Survey, Illinois Water Science Center
Maren Stoflet	National Weather Service
Tom Boland	AMEC
Jean Payne	Illinois Fertilizer and Chemical Association
Olivia Dorothy	Izaak Walton League
Gary Loss	Missman, Inc.
Greg Ryckaert	Missman, Inc.
Brad Walker	Missouri Coalition for the Environment
Rebecca Smith	The Nature Conservancy
Michelle Perez	World Resources Institute
Dru Buntin	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association

### **Minutes**

Diane Ford moved and Arlan Juhl seconded a motion to approve the draft minutes. The motion carried unanimously.

### **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, Buntin highlighted the January release of the Great Lakes and Mississippi River Interbasin Study (GLMRIS) report and indicated that Asian Carp Director John Goss from the Council on Environmental Quality would be briefing the Board on this topic later in the meeting. Buntin said UMRBA staff attended the GLMRIS Steering Committee meeting immediately prior to the release of the report, as well as a public meeting in Bloomington, Minnesota. Dave Wethington with the Corps' Chicago District also provided a conference call briefing to the Board regarding the alternatives contained in the GLMRIS report.

Buntin said UMRBA staff and Craig Markley with the Iowa Department of Transportation on February 5, 2014 toured the de-watering and major maintenance being performed by the Corps' St. Paul District at Lock and Dam 8 in Genoa, Wisconsin. Staff also met with MVD Commander DeLuca at the site and had a productive discussion on shared priorities. Buntin thanked Minnesota Department of Agriculture staff for assistance in preparing the *UMRBA Commercial Navigation Perspectives* brochure and said staff provided copies of the brochure to MVD leadership. Brig. Gen. DeLuca is scheduled to attend the May 2014 UMRBA Quarterly meeting in St. Louis. Buntin thanked Chris Erickson with the St. Paul District for arranging the tour and briefing with Brig. Gen. DeLuca and said the tour gave UMRBA staff a greater understanding of the challenges of operating and maintaining navigation infrastructure.

In the Ecosystem Restoration and Monitoring focus area, Buntin highlighted UMRBA staff's ongoing facilitation of the Upper Mississippi Restoration – Environmental Management Program (UMRR-EMP) strategic planning process and indicated the next meeting of the strategic planning team is scheduled for April 8-10, 2014 in Rock Island. In late spring, the team will distribute a complete draft plan to partners for review.

Buntin informed the Board that UMRBA has hired two new Oil Pollution Act (OPA) project staff in recent months. Matt Jacobson joined UMRBA in December and has worked for the University of

Missouri – Columbia as well as the City of Columbia, Missouri. Jacobson holds a Masters of Arts degree in Geography from the University of Missouri and a Bachelor of Arts degree in Geography from the University of Minnesota. Kevin Cunningham joined UMRBA in January and has worked for USEPA Region 5 in the Superfund Division. Cunningham has a Bachelor of Science degree in Geography from Northern Illinois University. With these two additions, the OPA project is now fully staffed. Buntin said the UMR Hazardous Spills Coordination Group will next meet in April in La Crosse, Wisconsin. A tabletop spill response exercise will be conducted in conjunction with this meeting.

Buntin noted the recent February 5-6, 2014 meeting of the Water Quality Task Force in which members heard from representatives of the Ohio River Valley Water Sanitation Commission, the Delaware River Basin Commission, Chesapeake Bay Program regarding approaches to monitoring, assessment, and data management on other large interstate waters. Buntin said the Board would consider the draft UMR Clean Water Act Monitoring Strategy later in the meeting. He directed the Board's attention to pages B-6 through B-9 for a copy of UMRBA's letter to USEPA requesting that the agency explicitly include the Mississippi River in its FY2014-2018 Strategic Plan and act upon this inclusion by supporting the states' ongoing water quality work.

President Obama signed the \$1.1 trillion FY14 omnibus federal appropriations legislation on January 17, 2014. Buntin said pages B-10 through B-12 of the agenda packet contained a comparison table prepared by UMRBA staff with funding levels of programs relevant to the UMRS.

Buntin directed the Board's attention to page B-19 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 October 1, 2013 through January 31, 2014. Diane Ford offered and Robert Stout seconded a motion to approve the Treasurer's statement. The Board unanimously adopted the motion by voice vote.

### **Interbasin Diversion Consultation**

Dru Buntin said pages C-1 through C-5 of the agenda packet contain background information regarding the UMR basin states' annual consultation process on interbasin diversion requests, as well as a copy of the Upper Mississippi River Basin Charter outlining this process. He said the Charter requires UMR basin states to notify each other at each year's annual meeting of any anticipated diversion which would exceed five million gallons per day on average in any 30 day period. Buntin said no such diversions had been reported by the states since the execution of the Charter in 1989.

Chair Dave Frederickson asked Board members if they were aware of proposed diversions meeting the conditions outlined in the Charter to report. Barb Naramore indicated Minnesota has no diversions to report. Arlan Juhl said Illinois had no active proposals for qualifying diversions, although he noted that the Great Lakes and Mississippi River Interbasin Study report contains a number of alternatives that would result in a qualifying diversion if implemented. Jim Fischer said Wisconsin had no diversions to report. Robert Stout stated Missouri had no diversions to report. Diane Ford said Iowa had no diversions to report. Buntin indicated he would prepare letters to UMR state Governors notifying them of the results of the diversion consultation process.

### **Illinois Nutrient Reduction Strategy**

Marcia Willhite provided background on the scope of water quality impacts related to nutrients leading to the State of Illinois' development of a nutrient reduction strategy. She said three lakes and 83 stream miles in Illinois are not supporting the public water supply designated because of elevated nitrate levels. Further, eight percent of community water supplies in Illinois have documented elevated nitrate levels.

Phosphorus is documented as a contributing cause in 35 percent of the stream impairments in the state. Willhite said that, of the acres of lakes in Illinois listed as impaired for aesthetics, 82 percent are impaired in part due to total phosphorus and 81 percent are impaired in part due to the presence of aquatic algae. Thirty river or stream segments are impaired in part by aquatic algae. She said Illinois is one of the largest contributors of nutrients to the Gulf of Mexico, comprising 15 to 19 percent of total nitrogen loading and 10 to 13 percent of phosphorus loading. Of the nutrient loading originating in Illinois, 16 percent of nitrogen and 47 percent of phosphorus is attributable to sewage effluent discharges, while 84 percent of nitrogen and 53 percent of phosphorus is attributable to non-point sources. Willhite said that, while the non-point sources were primarily agricultural, urban stormwater sources were also important, but not well quantified.

Current nutrient water quality standards in Illinois are limited. Illinois has a total phosphorus standard of 0.5 mg/L that applies only to lakes where such a standard has been deemed necessary to protect aquatic life and aesthetic uses. The state has a nitrate standard of 10 mg/L that applies only to streams and lakes designated as public water supplies. Illinois also has narrative water quality standards for all waters prohibiting excess algae or plant growth. Willhite pointed out that significant research has been conducted in Illinois to determine the relationship between nutrient concentrations and biological impacts, finding that nutrient concentrations alone do not result in such impacts in Illinois streams. Physical factors such as depth, shading, turbidity, substrate, and gradient often are limiting to algae growth. Willhite said these analyses determined no cause-effect threshold values for phosphorus and chlorophyll and underscored the need for scientifically defensible nutrient standards. Illinois' current approach to nutrient standards development includes:

- Updating the narrative water quality standards to define and prohibit excess algae and aquatic plant growth and link this to phosphorus
- Expanding the coverage of the state effluent standards for phosphorus to include discharges upstream of stream segments not meeting the narrative standard
- Protecting streams that are already low in phosphorus

Willhite said in February 2013, the State of Illinois began a partnership with the University of Illinois to develop a science assessment for nutrient reduction. The purpose of this assessment was to determine the current conditions in Illinois of nutrient sources and export by rivers in the state from both point and non-point sources. The science assessment was also to identify methods that could be used to reduce these nutrient losses and develop estimates of the likely efficacy of such methods. Finally, the assessment was to estimate the costs of statewide and watershed-level application of these methods needed to reduce nutrient losses and meet TMDL and Gulf of Mexico goals.

Willhite said Illinois is working with stakeholders to develop the state's nutrient reduction strategy. This effort began in March 2013 with an overview of the issue and the process of strategy development. In August 2013, the state formed a nutrient reduction strategy policy workgroup made up of state agencies, municipal and industrial dischargers, agricultural associations, environmental groups, and technical assistance providers. In December 2013, subcommittees were formed to focus on point source, agricultural non-point source, and urban non-point sources issues. Willhite said rough drafts of strategy components would be available for discussion by the policy workgroup in May 2014. These drafts will also be provided to USEPA for preliminary review. The target date for completion of Illinois' nutrient reduction strategy is June 2014 with a public comment period to be conducted in July 2014.

Willhite said the science assessment found that nutrient loading in Illinois streams has remained relatively constant in recent decades, with a slight increase in phosphorus loading. The assessment found Illinois' contribution to Gulf of Mexico loading to be 11 percent for phosphorus and 20 percent

for nitrogen. The goal of Illinois' reduction strategy is to achieve 45 percent reductions in nitrogen and phosphorus loading as compared to the 1980 to 1996 period of record. Since phosphorus loading has slightly increased since this period, the phosphorus reductions required will be closer to 50 percent. This entails significant reductions in both point and non-point sources. Willhite said Illinois is somewhat anomalous as compared to other UMR states in that there is a roughly equal split between point and non-point sources of phosphorus. She showed a series of maps that highlighted the difficulty in selecting priority watersheds in which to target reductions. Priority watersheds will vary depending upon whether nitrogen or phosphorus is the focus as well as whether point or non-point sources are being targeted.

Willhite said that, similar to Iowa, Illinois is looking at various implementation scenarios and the reductions they would achieve, as well as the cost and combination of practice implementation they would entail. She shared a number of different statewide scenarios developed for both phosphorus and nitrogen reductions that integrate strategies for both point and non-point sources. In response to a question from Robert Stout, Willhite said all new permits have monitoring requirements and this allows the state to use the resulting data to calculate nutrient loading from point sources. However, if point sources do not have new permits with monitoring requirements, the state has to estimate loading from such point sources. Bryan Hopkins asked if measures such as constructed wetlands and nutrient trading are incorporated into the reduction scenarios in Illinois' strategy. Willhite said some scenarios did include such measures and used literature values to determine the level of reduction expected.

### **New Approaches in Agriculture to Minimize Environmental Impact**

Marcia Willhite introduced Jean Payne and said Ms. Payne has been very helpful in promoting new strategies to make progress on nutrient losses in the agricultural sector. Payne said agricultural leaders must take ownership of the role of agriculture in non-point source contributions to nutrient loading. She said the extensive use of field tiling makes the nutrient loss issue particularly difficult in Illinois, but it is critical that the agricultural sector transition from discussion to action on nutrient issues. Consequently, the Illinois Council on Best Management Practices (CBMP), a coalition of agribusiness and agricultural organizations, established the "Keep it for the Crop (KIC) by 2025" nutrient stewardship program and hired a Director of Nutrient Stewardship to manage the program. Payne said that CBMP has worked with the Illinois EPA to identify priority watersheds in which to target efforts to reduce nutrient loss from non-point sources.

Payne said the focus of the KIC program includes:

- Managing nitrogen as a system instead of an application
- On-farm nitrogen rate trials to develop optimal application rates in targeted watersheds
- A soil testing program known as "N-Watch" that is designed to be an education and management tool
- A targeted program at Lake Springfield with retailers, farmers, soil and water conservation districts, and City Water, Light and Power to lower lake nitrate levels
- Promotion of cover crops to retain nutrients when N-Watch tests indicate elevated levels of soil residual nitrogen after harvest

Payne said they are reexamining whether the historic practice of a single fall application of nitrogen is appropriate. The result would be multiple applications spread out over a period of time. The application rates would not change, but the amount applied would be split and the focus shifted to stabilization and the goal of in-crop utilization. Payne said results from nitrogen application trials indicate there is a great deal to learn about optimum application rates. Test field plots in which

recommended nitrogen rates were applied did not necessarily result in higher yield than those with less nitrogen applied. Payne said one way to track application of nitrogen in priority watersheds over time is by using point of sale information, but generalizing it to protect producer anonymity. She said the N-Watch soil testing program should help optimize application as it will allow producers to understand the inventory of nitrate in their soil as well as where it is in the soil profile.

Payne highlighted CBMP partnership with Illinois Discovery Farms and the Illinois State University Department of Agriculture to establish the Central Illinois Discovery Farm. This research site will be located in Lexington, Illinois and will consist of 15 individually monitored tile-drained 1.6 acre fields. Study at the site will analyze the following nitrogen management systems within a three-year corn and soybean rotation:

- Control – no fertilizer and no cover crop
- Fall applied nitrogen – no cover crop
- Fall applied nitrogen – cereal rye/tillage radish
- Split nitrogen applications between fall and spring – cereal rye/tillage radish
- Spring applied nitrogen – no cover crop

All plots at the site will receive an identical recommended rate of nitrogen for the region.

Payne said the KIC program is funded by a 75 cents per ton assessment on fertilizer sold in the state. The program is also focused on sharing information with farmers regarding Illinois' nutrient reduction strategy. In response to a question from Dave Frederickson, Payne said the environmental community has joined CBMP in seeking support for the KIC program, but environmental groups are also interested in seeing results. Dan Baumann asked if producers were seeing reduced costs from following the recommendations of the program. Payne said there are actually increased costs in implementing split application, but there are corresponding increases in yield. In response to a question from Ken Westlake, Payne said the fertilizer assessment is collected at the point of sale and sent directly to the Illinois Nutrient Research and Education Council.

### **Iowa Nutrient Reduction Strategy Implementation**

At the Quarterly meeting in June 2013, the Board heard information regarding Iowa's nutrient strategy development. John Olson presented information to the Board on the implementation of Iowa's nutrient reduction strategy since that time. Olson said that, while Iowa's strategy has both non-point and point source components, there are some common threads that run through both such as acknowledgement of the nutrient problem and recognition that traditional approaches may not be effective. The overriding goal is to make Iowa's strategy practical in its approach to implementation. They are focusing on technology-based actions to achieve nutrient reduction, while also continuing to assess and evaluate numeric nutrient water quality standards.

In Iowa, point sources contribute 8 percent of total nitrogen loading and 20 percent of total phosphorus loading. Olson said point sources can have greater impacts at low flows and within certain watersheds. The Iowa Department of Natural Resources is working with the regulated community to use the existing rules to implement technology-based limits in lieu of nutrient criteria. These limits are based upon the effect of the pollutant in the water and the feasibility and reasonableness of treating such pollutants. Iowa is focusing on 102 major municipal wastewater treatment plants, 29 major industries (10 of which have nutrients), and 17 minor industries with biological treatment processes for waste. Of this total of 148, they expect 130 to have significant nutrient loads. For these 130 wastewater facilities, Olson said the strategy assumes 25 milligrams per liter total nitrogen and 4 milligrams per liter total phosphorus

discharge concentrations. Using average annual flows and biological nutrient removal technology limits, these concentrations can be reduced to 10 milligrams per liter total nitrogen and 1 milligram per liter total phosphorus. This would result in reducing point source facility nutrient loading by two-thirds to three-quarters. Existing loading from these facilities is estimated to be 18,300 tons per year total nitrogen and 2,900 tons per year total phosphorus. After implementation of the technology-based limits, this loading is estimated to be 7,300 tons per year total nitrogen and 730 tons per year total phosphorus. This would reduce the point source contribution from 8 to 4 percent for total nitrogen, and from 20 to 16 percent for total phosphorus.

The point sources identified in the strategy are required to submit feasibility and planning studies within two years. DNR will review the studies, negotiate a construction schedule, amend the facility's permit to incorporate the schedule, and incorporate limits into the permit following one year of performance evaluation. This approach gives the regulated facility the benefit of certainty over the ten-year life of the permit, while allowing the flexibility of tailoring the permit limits based on specific conditions. Olson said the cost of biological nutrient removal at the 130 point source facilities is estimated to be \$1.53 billion over twenty years. Implementation will be determined on a case-by-case basis with cost and affordability as primary factors. Olson said to date the Iowa DNR has issued 14 permits with the study requirements, with a goal of completing 20 permits per year. The progress is being tracked in bimonthly and annual reports and there is a nutrient loading work group that continues to refine loading estimates.

Olson said nonpoint sources contribute 92 percent of total nitrogen and 80 percent of total phosphorus loading in Iowa. Both point and nonpoint sources play important roles on an annual and seasonal basis in Iowa water quality. Olson said as Iowa is a national and global leader in the production of food and renewable fuels, a goal of the nutrient reduction strategy is to make Iowa an equal national and global leader in addressing the environmental and conservation needs associated with food and renewable fuels production. Olson highlighted significant funding appropriated by the Iowa legislature for non-point source nutrient efforts including the Iowa Water Quality Initiative, additional staff support, and a Nutrient Research Center at Iowa State University. In August 2013, the Iowa Department of Agriculture and Land Stewardship (IDALS) released \$2.8 million in Water Quality Initiative funding providing 50 percent cost share for a subset of conservation practices. All one hundred of Iowa's Soil and Water Conservation Districts are participating in the initiative. They received over 1,200 applications for funding covering 120,000 acres of cropland. Some of the practices eligible for Water Quality Initiative funding include no-till, strip till, cover crops, and nitrification inhibitor. Olson said Iowa has established watershed demonstration projects in targeted priority watersheds to provide:

- Demonstration of practices and technologies identified in a science assessment
- Strong outreach and education to disseminate information on these practices to promote increased awareness and adoption of available practices and technologies for achieving reductions in nutrient loading to surface waters
- Local and regional hubs for demonstrating practices and providing practice information to farmers, landowners, farm managers, and peer networks

To date, eight watershed demonstration projects totaling \$4.16 million have been selected. IDALS has announced an additional \$2.5 million in funding for this program and is accepting applications for a second round of projects through March 31, 2014. IDALS is also accepting applications from local Soil and Water Conservation Districts (SWCDs) seeking to assist in raising awareness of the Water Quality Initiative and Nutrient Reduction Strategy. Some examples of potential projects with SWCDs include cover crop workshops and showcasing conservation-minded farmers who are embracing practices benefiting water quality. IDALS is also working with Iowa State University Extension on education and outreach efforts, including an Integrated Crop Management Conference, pesticide and manure

applicator training, and direct work with individual farmers/landowners to encourage continued conservation practice adoption.

Olson said the Iowa state agencies working on the implementation of the nutrient reduction strategy also continue to work with the Nutrient Research Center at Iowa State University to:

- Pursue a science-based approach to nutrient management research
- Evaluate the performance of past and emerging nutrient management practices
- Use an adaptive management framework for providing recommendations for the implementation of nutrient management practices and the development of new nutrient management practices

The state has funded ten Nutrient Research Center projects to date covering research on such topics as yield changes of corn following cover crops, optimal design and performance of woodchip bioreactors, saturated buffer establishment and monitoring, in-stream phosphorus transport from bed and bank erosion, and social-economics of agriculture and nutrient reduction. Olson said the Iowa agencies continue to develop new and expanded frameworks for tracking progress beyond ambient water quality monitoring. This includes working with the public and private sector to gather better baseline data and tracking load reductions resulting from conservation practice adoption. They are also working with agribusiness consulting and advisory services to expand the resources available to farmers as a means to improve water quality and soil health.

### **NRCS Initiatives in Iowa**

State Conservationist Jay Mar provided information regarding NRCS initiatives relevant to the Mississippi River basin, including the National Water Quality Initiative (NWQI), the Soil Health Campaign, the Wetland Reserve Enhancement Program (WREP), the Wetland Reserve Program (WRP), and the Mississippi River Basin Healthy Watersheds Initiative (MRBI). Mar said there are four NWQI watersheds in Iowa - two within the Rathbun watershed, Badger Creek, and Black Hawk Lake. To date, NRCS has executed 39 contracts for \$1.2 million on NWQI projects in Iowa. Mar said NRCS' soil health campaign was initiated in 2012 to increase the recognition of the role of healthy soil in production as well as water quality, drought mitigation, and flood control. He said NRCS has funded MRBI projects in Iowa that incorporate WREP and WRP to allow targeting of resources to restore and protect wetlands in MRBI areas.

Mar said NRCS launched MRBI in FY2010 to help producers avoid nutrient and sediment loss, while also addressing water quality concerns. To date, NRCS has funded MRBI watershed projects in 13 Mississippi River Basin states including all five Upper Mississippi River Basin states. In Iowa, NRCS has funded 18 watershed project areas within 5 targeted 12-digit HUCs. Mar noted that these MRBI project areas are similar to the state's water quality nutrient reduction priority areas. Examples of projects funded in Iowa include cover crops, bioreactors, grassed waterways, and no-till. In FY2013, Mar said NRCS provided \$6 million in MRBI funding to execute 182 Environmental Quality Incentive Program (EQIP) contracts for implementing nutrient reducing practices on 31,500 acres. Also in FY2013, MRBI funded 52,400 acres of cover crops, 106 acres of grassed waterways, 17,800 acres of no-till, and 6 bioreactors. Mar highlighted MRBI projects in the Boone River, Maquoketa, and Upper Cedar River watersheds in Iowa. In the Boone River watershed, producers are implementing nutrient management plans to reduce the amount of fertilizer inputs through the use of a nitrogen calculator, stalk nitrate tests, and chlorophyll meter tests. As a result, in FY2013 they saw a 96,000 pound reduction in nitrogen loss on 4,000 acres. In the Maquoketa watershed, there are numerous beef, swine, and dairy operations making manure a key resource concern. As of FY2013, MRBI has funded 13 manure storage operation management plans in that watershed, allowing for proper timing of manure applications. In FY2013, NRCS has provided approximately \$525,000 in MRBI funding to execute

28 EQIP and Conservation Stewardship Program contracts in the Upper Cedar River watershed, reducing nutrient loading on over 5,000 acres.

Mar said a key part of implementing MRBI projects is the marketing and showcasing of success stories of farmers participating in the program. He highlighted the specific case of a farmer participating in an MRBI project in North Central Iowa. This particular producer farms 820 acres of corn and soybeans in the Boone River watershed, which flows into the Des Moines River and ultimately the Mississippi River. The farm consists of mostly flat ground and contains poorly draining soils. Consequently, the resource concerns on the farm are nitrogen leaching and soil erosion. Through participation in MRBI, the farmer applied practices such as strip-till, implementation of a new nutrient management plan, and cover crops, to nearly the entire farm. Prior to implementing these practices, runoff leaving the tiles on the farm contained higher nitrate levels than the receiving stream. After implementing the practices, testing in 2012 and 2013 showed that peak nitrate levels leaving the drain tile outlets on the farm were half of those in the receiving stream.

Mar stressed the importance of plant roots in the uptake of nutrients and the increase of soil porosity. Native plants typically have deeper root systems and this has a benefit to soil health. When undertaking crop rotations, Mar said farmers should consider plants with deeper roots and the benefits to soil health. Dave Frederickson pointed out the tremendous partnership that UMR states have with their respective NRCS State Conservationists. Mar said NRCS is interested in further enhancing these partnerships in order to make positive changes.

### **Upper Mississippi River Comprehensive Plan**

Michael Tarpey presented information regarding a new direction the Corps is contemplating with remaining funding for the Upper Mississippi River Comprehensive Plan. Given the lack of an acceptable cost-benefit ratio, no federal plan for specific flood risk reduction measures is moving forward. Consequently, the Corps is considering a new approach in which the agency would work with the states, levee districts, and land managers to determine what technical assistance or tools would be helpful as local and state interests contemplate a regional approach to flood risk management. Tarpey indicated that communication is at the forefront of this new approach and said the Corps would be working with interested parties to gain the input of local and state leaders. Barb Naramore said previous work on the Comprehensive Plan was primarily focused on levees in the lower three Upper Mississippi River states and asked if this new approach would be different. Tarpey said the Corps is interested in gaining input from all five UMR states, but the approach to flood risk management technical assistance and tools may differ within the basin states. In response to a question from Dan Baumann, Jay Mar said NRCS is considering the benefits of soil health in retaining water on farmed lands. Tarpey indicated the Corps would be interested in working with NRCS to incorporate appropriate information into the Corps' flood risk reduction work. Tarpey also said the Corps is currently undertaking a reconnaissance study in the Cedar River watershed, and that it might be appropriate to consider NRCS work in this effort.

### **Role of Targeting in Nutrient Reduction**

Michelle Perez presented information to the Board regarding a study conducted by the World Resources Institute (WRI) on the role of targeting in nutrient reduction efforts with particular emphasis on analyzing NRCS' MRBI program. Perez asserted that targeting conservation practices in specific watersheds contributing most to nutrient loading is critical to addressing nutrient water quality concerns. She said the traditional conservation program service delivery model allowing any farmer to participate regardless of whether their farm is located in a strategically important sub-area of the watershed may solve that individual producer's recourse concerns, but is not the most effective way of addressing larger water quality issues. In the WRI study, targeting is defined as maximizing nutrient reduction per dollar spent by focusing efforts in specific contributing sub-watersheds. Perez said there are administrative

measures of success such as acres treated or dollars expended, but also water quality metrics that can be quantified by edge-of-field, in-stream, and watershed outlet monitoring. Perez highlighted USGS' SPARROW modeling as one example of a tool that is helpful in determining specific areas where targeting conservation practices will have the most effect. She provided several examples of programs that use targeting in implementation, including:

- Rural Clean Water Program
- USEPA 319 Projects
- NRCS Conservation Effects Assessment Projects
- Iowa's Watershed Councils
- Minnesota's Agricultural Water Quality Certification Program

Perez said WRI's goal in the MRBI study was to highlight the program's successes as well as its shortcomings in order to inform future efforts such as the new NRCS Regional Conservation Partnerships Program. She noted that WRI has also completed reports on nutrient trading, targeting water quality measures nationally, barriers to targeting, and lessons-learned from the Chesapeake Bay TMDL. Perez provided information on the number of projects WRI reviewed in each state and said this constituted approximately 60 percent of the first two years of MRBI projects. WRI conducted a literature review on factors leading to the success of other targeting efforts and identified the key characteristics of successful initiatives. WRI staff reviewed two years of MRBI proposals as well as the performance reports on the projects. They also interviewed MRBI project managers and national experts in targeting water quality work.

Perez said some key characteristics for the success of targeting were required by NRCS in the MRBI project proposals, including:

- The degree of stakeholder and producer buy-in
- Goals that are specific, measurable, achievable, relevant and time-bound
- Geographic in approach to targeting
- Methods to measure and evaluate projects

Two key characteristics not specifically required were cost-effectiveness and the degree to which adaptive management is incorporated into the program. Perez said most MRBI projects went beyond output goals to include outcome goals and also had multiple and quantified goals. However, she said roughly half of the most ambitious project goals were not specific, measurable, achievable, relevant or time-bound. The WRI report also suggested that NRCS should have included some reference to addressing TMDLs in the request for MRBI projects.

As it relates to stakeholder participation in the MRBI projects, Perez said there was a diverse mix of Soil and Water Conservation Districts, NGOs, state agencies, and universities involved. The overwhelming majority of projects had some form of participation by producers, but few involved producers in the project design stage. In selecting projects or geographic targeting, Perez said NRCS included references to scientific, institutional, and cultural reasons behind the agency's selection of watershed projects, but there was not a strong explanatory narrative describing the selection criteria. She suggested this was done better at the project level than at the watershed level. Perez said the WRI report gave credit to the program's intent to monitor projects' impact at multiple tiers. However, MRBI monitoring is most focused on nutrient parameters and not outcome variables such as dissolved oxygen, chlorophyll, or biological indicators. Perez said NRCS leadership on edge-of-field monitoring is important. However, the report found there is also a need for a comparable approach to in-stream and

watershed pour-point monitoring. The report suggests that NRCS should clarify how success measurements will be compiled and maintained. Only half of the MRBI projects include descriptions of how water quality baseline condition will be determined and this will make the determination of success impossible on these projects. The WRI report suggests that NRCS establish teams to advise MRBI project participants on water quality monitoring, metrics, and modeling. The report recommends prioritizing future projects that have existing baseline monitoring data. The report also recommends that NRCS consider requiring watershed-based planning to help attain landscape-scale water quality outcomes.

Perez said the report found that only three MRBI projects planned to estimate the cost-effectiveness of nutrient management efforts. She said 40 percent of projects include adaptive management measures to modify implementation based upon observed results, while 42 percent of projects contain outreach strategies to share project results. The WRI report recommends that, at a minimum, NRCS require a narrative description of how project planners will measure the cost-effectiveness of efforts and allow for the funding of tools to help determine project efficacy. The report also recommends that NRCS establish an adaptive management framework for modifying projects based upon results.

Perez shared some information from the WRI report on nutrient trading. This analysis found that, even without trading, implementing conservation practices to reduce nutrient loading resulted in a financial benefit to producers on roughly 20 percent of acreage. She suggested that, if tools can be developed to determine portions of operations on which conservation practices provide such a benefit, implementation of conservation practices may be able to be increased without additional funding beyond technical assistance.

Perez closed by suggesting four ideas for the UMR states to consider. She said states should include as many affected stakeholders as possible when designing targeting and/or trading programs to achieve specific water quality goals. Perez said states should also identify ideal watersheds for achieving local water quality goals. She said states should develop needed datasets, models, and other tools for quantifying agricultural baseline, nutrient reductions, and the cost-effectiveness of programs. Perez also suggested that states consider dedicating a portion of federal, state, or other funding for targeting or trading projects. In response to a question from Barry Johnson, Perez said the WRI report did recommend monitoring at the outlet of streams and at the base of watershed to determine project efficacy. Johnson asked if WRI thought such monitoring would show an impact from MRBI projects. Perez said there are likely not yet enough MRBI projects to see a measureable impact, but with states' implementation of nutrient reduction strategies, it may be possible to observe positive changes to water quality. Perez pointed out that leaders in the Chesapeake Bay have struggled to measure progress towards achieving TMDL goals. However, she said targeting has not been effectively used in the Chesapeake Bay and she suggested that this is being done more effectively in the Mississippi River basin.

### **Water Quality Monitoring Strategy**

Marcia Willhite said the Water Quality Executive Committee (WQEC) is recommending that the UMRBA Board adopt the draft *UMR Clean Water Act Recommended Monitoring Plan* so that the WQEC and Water Quality Task Force, with support from UMRBA staff, can move forward with pilot projects to refine strategy implementation. If the Board adopts the monitoring plan, in addition to implementation of pilot projects, Willhite said next steps will include outreach to potential partners, development of a data management plan, securing funding and in-kind resources for implementation, and continuation of the Clean Water Act assessment methodology feasibility project. Dave Hokanson said that while he did not plan to cover the details of the monitoring strategy as part of today's presentation, copies of the strategy are available at the back of the meeting room. He emphasized that,

while the strategy did propose some new monitoring, it also envisions taking advantage of existing data collection and working in partnership with such efforts.

For Board consideration, Dru Buntin read a portion of a draft resolution regarding the monitoring strategy. Relevant portions of the draft resolution include:

- The Upper Mississippi River states hereby adopt the *Upper Mississippi River Clean Water Act Recommended Monitoring Plan* developed by the Upper Mississippi River Basin Association Water Quality Task Force and endorsed by the Upper Mississippi River Basin Association Water Quality Executive Committee; and
- The states will work together to identify the resources, develop the infrastructure, and establish the procedures needed to implement the *Recommended Monitoring Plan*; and
- The states will collaborate with their partners, including the United States Environmental Protection Agency, other federal agencies, local governments, universities, private entities, and other interested parties in implementing the *Recommended Monitoring Plan*, in order to best utilize data and resources for the mutual benefit of all involved; and
- The states commit to revisiting and revising the *Recommended Monitoring Plan* as needed and as implementation proceeds.

Dan Baumann made and Arlan Juhl seconded a motion to adopt the resolution regarding Upper Mississippi River Clean Water Act Monitoring. The motion was unanimously adopted by voice vote.

### **Great Lakes and Mississippi River Interbasin Study Report**

John Goss provided information regarding the Asian Carp Regional Coordinating Committee's efforts to create a sustainable control program to prevent the establishment of an Asian carp population in the Great Lakes. In response to this threat, the Committee developed a comprehensive plan known as the Asian Carp Control Strategy Framework. Some components of the framework include:

- Extensive monitoring and response
- Development of new control technologies
- Continued implementation of an effective electric barrier system
- Development of a long-term control solution through the Great Lakes and Mississippi River Interbasin Study (GLMRIS)

Goss said monitoring shows established Asian carp populations have remained in essentially the same location in recent years and are downstream of the existing electric barrier on the Illinois River and approximately 60 miles from Lake Michigan. He shared information regarding the proposed approach on 2014 monitoring and said there will be an increased focus on the leading edge of established Asian carp populations downstream of the barriers as well as the impact removal efforts are having on populations in this area. Goss said an additional electric barrier is under construction and should be complete in the next year and a half. Additional sampling will occur in the spring and fall of 2014 above the electric barrier and Goss shared the focus areas of this monitoring. In 2013, he said contracted commercial fishers removed over 271 tons of fish. Of this amount, 11,389 were bighead carp, 37,471 were silver carp, and 209 were grass carp. These efforts were in addition to the approximately 1 million tons of Asian carp removed in previous years. Goss highlighted a collaborative effort between the Illinois Department of Natural Resources, USGS, and Southern Illinois University

aimed at conducting field trials on control technologies including algal attractants, water guns, commercial fishing, and the netting of Asian carp.

Goss introduced Lauren Fleer with the Corps' Chicago District to provide the Board with an overview of the GLMRIS report released in January 2014. Fleer pointed out that Congress authorized GLMRIS in the Water Resources Development Act of 2007. This authorization directed the Corps to evaluate a range of options and technologies available to prevent the transfer of aquatic nuisance species between the Great Lakes and Mississippi River basins. The two main study goals were to identify ways to prevent the transfer of aquatic nuisance species and, if the prevention measures were expected to cause impacts to existing uses and users of the waterway, to identify those impacts, and also identify ways to lessen—or mitigate—those impacts. Fleer said stakeholder engagement was an important part of the process since the study began. The Corps held public scoping meetings all over the country in 2011 as well as frequent coordination meetings with federal, state and local agencies. The Corps also published interim products on the agency's website to keep the public informed and generate feedback.

Fleer said in July of 2012, Congress passed additional legislation that required the Corps to do three things:

- Deliver a complete GLMRIS report within 18 months
- Focus the GLMRIS study on the Chicago Area Waterway System (CAWS) as the main continuous aquatic connection between the basins
- Evaluate hydrologic separation or the placement of a physical barrier to potentially prevent the transfer of species within the CAWS

Fleer provided background information on the CAWS, including its multiple uses of navigation, water supply and conveyance, flood risk management, and recreation. She said the GLMRIS report contains a range of potential control alternatives as well as conceptual design, general mitigation requirements, and cost range for such alternatives. While the GLMRIS report does not rank the alternatives or contain a preferred alternative, it does contain an alternative comparison tool to support decision-making. Fleer said additional analysis would be required prior to implementing the alternatives. In order to analyze the potential movement of aquatic nuisance species by swimming, floating, or hitchhiking, the Corps looked at a number of control technologies. These include a GLMRIS lock, aquatic nuisance species treatment plants, electric barriers with an engineered channel, screened flow gates, and a physical barrier. Fleer provided a short summary of the eight alternatives the Corps ultimately developed in the GLMRIS report. These include:

- Alternative 1: No New Federal Actions - Sustained Activities
- Alternative 2: Nonstructural Control Technologies
- Alternative 3: Mid-System Control Technologies without a Buffer Zone
- Alternative 4: Control Technology Alternative with a Buffer Zone
- Alternative 5: Lakefront Hydrologic Separation
- Alternative 6: Mid-System Hydrologic Separation
- Alternative 7: Mid-System Separation Cal-Sag Open Control Technology with a Buffer Zone
- Alternative 8: Mid-System Separation CCSC Open Control Technology with a Buffer Zone

Fleer outlined the public engagement process the Corps is implementing on GLMRIS and said the comment period on the report was recently extended through March 31, 2014. She said some themes have emerged in the comments received to date. Bighead and silver carps seem to be the aquatic nuisance species of greatest concern. Many commenters have stated that physical separation will be the

most effective solution. However, commercial navigation interests have highlighted the economic importance of the waterways and are opposed to physical separation. Fler said many commenters have said the 25-year implementation timeline for several alternatives is too long and have questioned some of the mitigation requirements the Corps has identified for alternatives.

Since the release of the GLMRIS report, Fler said there has been an increased focus on the CAWS Brandon Road Lock and Dam as a potential location for control technology. This location would reduce the risk of transfer from the Mississippi River basin, but would not address the transfer from Lake Michigan. The location would offer an opportunity for phased implementation of control technologies. Fler said construction of a GLMRIS lock at this site could address floating aquatic nuisance species and combining this with an electric barrier could prevent swimming species from entering the lock chamber. In response to a question from Bryan Hopkins regarding whether wastewater returns or outfalls could be used as a water source for the GLMRIS lock chamber, Fler said this would not be necessary as no treatment is proposed for this one-way control concept. In response to a question from Arlan Juhl, Fler said the Corps intends to provide additional information regarding comments received, but the agency does not plan to formally respond to comments.

Goss provided information regarding additional potential pathways for aquatic nuisance species transfer between the Great Lakes and Mississippi basin beyond the CAWS. However, he said none of these locations was rated as a high risk of transferring Asian carp. Goss said the National Asian Carp Control Plan contains multiple components to prevent new introductions, prevent spread, and control existing populations. He said the Regional Coordinating Committee is also focusing on the CAWS Brandon Road Lock and Dam as a potential location for implementing control technologies. Goss said commercial fishermen from Tennessee to Illinois are beginning to capture more Black carp. The vast majority of Black carp captured have been determined to be diploid and their sizes are approaching maturity. Goss said in the last few weeks, six Black carp were captured in Missouri and two in Tennessee. He pointed out that several states allow the use of diploid Black carp in aquaculture operations.

Dru Buntin pointed out that the Corps had provided a briefing to the Board via conference call and webinar on January 28. Following this briefing, the Board discussed the potential of a UMRBA resolution on the topic. For Board consideration, Buntin read the relevant portions of a draft *UMRBA Interbasin Aquatic Nuisance Species Prevention and Control Resolution*. The action items in the draft resolution are as follows:

- Upper Mississippi River Basin States assert that significant additional analysis and information regarding water quality, flood risk reduction, and commercial navigation impacts and mitigation is required before Congress should consider authorization of any of the structural alternatives presented in the GLMRIS report; and
- Upper Mississippi River Basin States support action on a suite of near-term measures and further analysis to reduce the risk of Asian carp and other invasive species passing through the Chicago Area Waterways System, including:
  1. continued implementation of the Asian Carp Control Strategy Framework and related efforts;
  2. immediate implementation of additional non-structural control measures outlined in the GLMRIS alternative two (such as use of chemical controls, ballast and bilge management, habitat alternation, and controlled harvesting);
  3. design, engineering and testing of the “GLMRIS lock,” as a national demonstration project, to determine its viability, effectiveness and cost in preventing aquatic nuisance species transfer; and

- Efforts to develop and reach regional consensus on long-term aquatic nuisance species solutions should be continued and should include input from potentially affected stakeholders within both the Mississippi River and Great Lakes basins; and
- Upper Mississippi River Basin States support reasonable and appropriate regulatory and non-regulatory prevention measures that protect U.S. waters from the detrimental effects of aquatic nuisance species and the high costs of control and management; and
- Long-term solutions must couple the regional priority to prevent interbasin movement of aquatic nuisance species with priorities to prevent flooding, protect water quality, and enhance waterways for recreation and commercial transportation.

Dan Baumann made and Diane Ford seconded a motion to adopt the *UMRBA Interbasin Aquatic Nuisance Species Prevention and Control Resolution*. The motion was approved unanimously by voice vote.

### **Regional Rail Transportation of Crude Oil**

Ed Engle provided background information regarding rail transportation of crude oil given recent media attention to the subject. He said that rail is the most common method for transporting hazardous materials as it is safer than truck transport and allows more flexibility in the types, destination and quantities of materials transported than pipelines. While rail transportation of crude oil has been in the news, Engle said it is a relatively small portion of rail traffic shipments. He said the purpose of his presentation was to provide data and information regarding rail shipments and safety practices.

Engle showed a map of the major arteries of rail shipments of crude oil in North America and noted most destinations are ports in the Northwest, Northeast, and South as well as refineries predominately in the South. He provided some contextual concepts for the presentation, including:

- Railroads are private companies that seek to minimize risk and maximize profits
- Route decisions are business decisions
- Minimizing risk is in a railroad's best interest
- Regulation of rail is federal and occurs through the Federal Railroad Administration (FRA), Surface Transportation Board (STB), and the Pipeline Hazardous Materials Safety Administration (PHMSA)
- Crude oil transportation is intermodal
- Railroads do not generally own the cars
- Railroads have common carrier obligations

Engel said a common carrier is legally bound to carry all passengers or freight as long as there is enough space, the fee is paid, and no reasonable grounds to refuse to do so exist. A common carrier that unjustifiably refuses to carry a particular person or cargo may be sued for damages. Engle said railroads are common carriers and, therefore, cannot refuse service without a compelling reason and must take shipments of cars that are functional and meet federal safety requirements.

Engel said railroads have a three-part approach to safe transportation – avoiding incidents, planning for incidents, and responding to incidents. Railroads invest heavily in infrastructure improvements and self-inspect the entire rail system with the FRA conducting spot checks. Engle said that the Iowa Department of Transportation also conducts spot checks of rail tracks. The FRA and PHMSA jointly regulate hazardous cargo. Engle provided information from the Association of American Railroads stating that, from 1980 to 2012, railroads reinvested \$525 billion to maintain and modernize the freight rail network, with \$12.5 billion spent in 2012.

Engel highlighted recent modifications recommended by the rail industry and the National Transportation Safety Board (NTSB) to rules governing the puncture, leakage, and bursting of tanker cars. He said they also recommended modifying or phasing out older cars. These rule modifications were submitted in late 2013 and should be finalized in 2014.

Engel pointed out that railroad employees undergo extensive training on safety in general; and have specialized requirements for handling hazardous loads. He said the rail industry develops response plans, plans for infrastructure improvements, and provides training for local emergency responders through the Transportation Community Awareness and Emergency Response (TRANSCAER) initiative. Railroads are required to report incidents to applicable agencies and law enforcement. Engel said railroads must provide manifest information on shipments, support responders at the scene of an incident, and track the protection of employees and responders. He provided information regarding the safety of rail hazardous shipments occurring in 2010 and noted that shipments of crude oil and ethanol had increased since that time. In 2010, 99.9 percent of hazardous materials shipped by rail reached their destination without a release. In that same year, hazardous shipments constituted roughly 6 percent of all U.S. rail traffic. Engel said train incidents with a hazardous materials release declined by 91 percent from 1980 to 2010.

Engel provided a map of U.S. rail routes showing the concentration of traffic and noted the heaviest traffic occurs on the east-west routes. He then provided a map of rail routes in Iowa and noted the state has over 4,000 miles of track. As occurs nationally, he noted most of the heavy traffic in Iowa flows east-to-west or vice versa across the state. In 2012, crude oil constituted less than 1 percent of Iowa rail shipments. Engel highlighted types of materials shipped by rail in Iowa in 2012 and noted that, out of a total of nearly 387 million tons, approximately 2.5 million tons was crude oil.

Engel pointed to some recent trends regarding the quantity of crude oil, ethanol and total hazardous materials shipments. Shipments of all of these materials have been increasing from 1996 to 2012. However, he said there are substantially more rail shipments of total hazardous materials and ethanol than of crude oil, and all of these are a relatively small fraction of the total materials shipped via rail.

Engel said when assessing risk, it is important to consider a combination of the types and volumes of shipments. While an incident with rail shipment of crude oil is obviously a concern, crude oil is still a small portion of the total of hazardous materials shipped. As it pertains to concerns regarding the potential of a rail crude oil shipment incident potentially impacting the Mississippi River, Engel noted that a small percentage of the rail lines in Iowa are along the river. In response to a question from Arlan Juhl, Engel said grain rail shipments constitute approximately one half of the amount of coal rail shipments in Iowa. In response to a question from Bill Paape, Engel said a potential rail crude oil shipment incident at a bridge crossing on the Mississippi River could be a risk, but said such bridges are regularly inspected by the Coast Guard. Tim Yager thanked Engel for his presentation and said the topic has garnered much interest recently as it pertains to the potential for a rail incident to impact UMR refuges. Engel acknowledged the recent media attention to rail shipments of crude oil, but said he hoped his presentation helped highlight the need to plan for all possible spills. Yager agreed. Dru Buntin thanked Yager for requesting that this topic be discussed at the UMRBA meeting. Dave Hokanson pointed out that the USFWS and USEPA have led efforts to develop Geographic Response Plans on sensitive UMR pools and that these efforts were initiated following a rail incident.

### **FY2014 Appropriation Highlights from Federal Advisors**

With the President signing the FY2014 omnibus federal appropriations legislation in January 2014, UMRBA Federal Advisors provided updates from their respective agencies. Jay Mar said that, since 2010, the NRCS Mississippi River Basin Initiative has successfully entered into 123 partnership

agreements, treating more than 566,000 acres of targeted conservation. Mar said the President recently signed the Agricultural Act of 2014, a five-year comprehensive farm bill. He said the 2014 Farm Bill contains significant investments in conservation. The bill consolidates 23 conservation programs into 13 programs and strengthens current policies, while supporting conservation on a larger landscape scale for efficiency and effectiveness. Notable streamlining changes contained in the bill include folding the Wildlife Habitat Incentives Program (WHIP) into the Environmental Quality Incentives Program (EQIP), merging easement and working lands programs into one Agricultural Conservation Easement Program (ACEP), reducing the Conservation Stewardship Program (CSP) cap to \$10 million per year or 50 million acres over the length of the Farm Bill.

Mar said the new Farm Bill provides for a new Regional Conservation Partnership Program intended to provide opportunities for partners to leverage funding for priority concerns such as water quality, water quantity, or wildlife on a larger landscape basis. Mar said the legislation also links crop insurance to conservation compliance and provides opportunities to historically underserved farmers such as veterans. With the new Farm Bill as law, Mar said USDA is now developing implementation policy and said final posting to the federal register is expected in late summer or early fall. In response to a question from Dru Buntin, Mar said the new Regional Conservation Partnership Program will involve a competitive process with the first year of project occurring in 2015. In response to a question from Marv Hubbell regarding the expected acreage impact of agricultural conservation easements, Mar said such a total may be determined by a dollar amount instead of an acreage total, but the funding total is not yet known.

Mark Moore said MVD contains six districts and has the largest geographic area of operations of any Corps division. He said the omnibus FY14 appropriations legislation includes a \$719 million increase in Corps civil works funding as compared to the FY13 continuing resolution. For MVD, this will mean a \$159 million increase in FY14 civil works funding. Moore said the appropriations legislation did not contain specific directed funding for NESP or the Upper Mississippi River Comprehensive Plan, but did include \$32 million for UMRR-EMP. Under the legislation, Moore said funding for the Mississippi River and Tributaries (MRT) project increased by \$68 million, while operations and maintenance funding for the Mississippi River above the confluence with the Ohio River as well as on the Illinois River remained relatively unchanged from FY13 levels. He said construction funding for the portion of the Mississippi River between the confluences with the Ohio and Missouri Rivers increased from \$9 million in FY13 to \$50 million in FY14.

In response to a question from Bill Paape, Moore said the implications from a change to the federal cost share for the Olmsted Project on the Ohio River remained unclear. In response to a question from Robert Stout, Col. Deschenes said MVR work on the UMR Comprehensive Plan was being funded with remaining funding previously appropriated. Dan Baumann asked how MVD compares to funding allocated to other Corps divisions and Moore said MVD competes well. Dru Buntin said he thought the Board would appreciate MVD providing information showing how MVD allocates funding among districts and across budget lines. Jim Fischer asked if the Corps has considered how to keep states engaged as the agency's budget increases while state funding is relatively flat. Bryan Hopkins also encouraged the Corps to remain cognizant of state financial and staffing limitations. Marv Hubbell acknowledged the pace has increased for UMRR-EMP and that this does put additional pressure on state partners. Col. Deschenes said the Corps is sensitive to this issue and requested that staff from state agencies inform the Corps when issues arise. Renee Turner indicated the Corps is starting work on the FY16 budget request and said the agency needs to understand states' capacity in order to inform this process. Fischer said the states are completely supportive of the increased funding for UMRR-EMP and simply want to work with the Corps to avoid any bottlenecks.

Ken Westlake said in FY13 appropriations, USEPA had experienced an approximately 8 percent reduction and suggested the \$300 million increase in the FY14 appropriations omnibus be considered in

that light. Westlake said Section 106 funding for states, tribes and interstate organizations was slightly increased by \$4.8 million in the FY14 appropriations legislation as were the Clean Water and Drinking Water SRF programs. He provided the estimated allocations for the Clean Water and Drinking Water SRFs for UMR states as follows:

- Illinois – \$63 million Clean Water SRF; \$37 million Drinking Water SRF
- Iowa - \$19 million Clean Water SRF; \$13 million Drinking Water SRF
- Minnesota - \$26 million Clean Water SRF; \$16 million Drinking Water SRF
- Missouri - \$39 million Clean Water SRF; \$18 million Drinking Water SRF
- Wisconsin - \$38 million Clean Water SRF; \$15 million Drinking Water SRF

Westlake pointed to UMRBA's recent letter to USEPA requesting that the agency specifically reference in its strategic plan the Mississippi River as a priority focus area and provided information regarding FY14 appropriations for other geographic programs. The omnibus FY14 appropriations legislation provided funding to the Chesapeake Bay program (\$70 million), the Great Lakes program (\$300 million), and the Gulf of Mexico (\$4.4 million).

Similar to USEPA, Tim Yager said the USFWS experienced a 6.2 percent reduction in FY13 and the FY14 omnibus appropriations legislation had restored roughly half of that cut. Yager provided specific information regarding programmatic funding levels at the USFWS nationally for FY14. He said the USFWS has three programs of particular note in the UMR, including Ecological Services, Refuges and Wildlife, and Fisheries. UMR Ecological Services work is estimated to be funded at \$750,000 in FY14 and will include some spill Geographic Response Plan work, a mussel movement study associated with a Pool 6 drawdown, and a pallid sturgeon restoration plan for the middle Mississippi River. Yager said USFWS Fisheries Program activities on the UMR include Fish and Wildlife Conservation Offices in La Crosse, Wisconsin, Columbia, Missouri, and Carterville, Illinois. He said FY14 funding for work at these offices is estimated at \$3.8 million. The UMR National Fish Hatchery in Genoa, Wisconsin is expected to receive \$950,000 for FY14 work, while the UMR Fish Health Center in La Crosse, Wisconsin is expected to receive \$900,000. The Whitney Genetics Lab, also located in La Crosse is slated to receive \$1.4 million for work in FY14, and Yager said the USFWS is considering consolidating the two La Crosse programs. He provided the Board with information regarding the FY14 priorities for the Fisheries Program, including aquatic invasive species, large migratory species such as lake and pallid sturgeon, and Asian carp surveillance through eDNA.

Yager pointed out that the five UMR stations in the National Wildlife Refuge System have been consolidated into Area 1 of the system, which also includes the Missouri and Illinois Rivers. He said the base budget for Area 1 is \$12.9 million, and the USFWS is undertaking workforce planning as well as various incentives for employee retirement. Consequently, the agency is planning to merge some refuge units under single supervisors. Yager said FY14 refuge planning activities include comprehensive conservation plans, habitat management plans, and spill response plans, while construction includes visitors centers and offices at Mingo and Port Louisa NWRs. He provided information regarding UMR-EMP projects on which the USFWS was expecting FY14 staff work, including Harpers Slough, Pool 12 overwintering, Lake Odessa, Clarence Cannon, Pool 3 water level management, and Middle Mississippi River planning. Yager said there were land acquisitions planned in FY14 at Winona, Trempealeau, and McGregor, and that refuge system staff are also involved in some transmission line right-of-way issues.

Yager said that federal assistance to states through USFWS grant programs continues to increase. He highlighted FY14 funding for UMR Basin states in the following programs:

- Sport Fish Restoration - \$57 million
- Wildlife Restoration - \$73 million
- State Wildlife - \$10 million
- Boating Access - \$13 million
- Hunter Education - \$6 million
- Aquatic Education - \$2 million
- Boating Infrastructure - \$8 million

Yager said the USFWS has approximately \$750,000 in FY14 funding to support bird conservation research, monitoring, and landscape design in the UMR and Great Lakes regions under the agency's Joint Ventures Program. He also highlighted USFWS work with Landscape Conservation Cooperatives (LCCs) and showed the Board a map of 22 LCCs across the country. LCCs are a venue for the conservation community to identify where priorities align related to the landscapes and decisions needed to sustain key fish and wildlife species. Science tools and products are then constructed to help all involved make progress via individual missions and authorities. Bryan Hopkins asked if Yager could provide an update on a recent UMRR-EMP-CC meeting presentation regarding exotic faucet snails and bird mortality. The faucet snail is an intermediate host for three intestinal trematodes or flukes that cause mortality in ducks and coots. Yager said the USFWS continues to see bird mortality caused by the faucet snails, but has yet to determine how this can be addressed.

Barry Johnson said the omnibus FY14 appropriations legislation included \$1.032 billion for USGS nationally, a \$20 million increase over FY13 levels. He said FY14 funding for USGS' ecosystems mission area increased by \$3.7 million and includes \$550,000 for studying white nose bat syndrome and \$1 million for accelerating Asian carp control efforts in the Great Lakes. Johnson said FY14 funding for the agency's environmental health mission area increased by \$1 million for study of endocrine-disrupters in the Chesapeake Bay watershed. He said FY14 funding in the water resources mission area increased by \$9.8 million, including \$600,000 for groundwater availability studies and \$6 million to expand the National Streamflow Information Program. In response to a question from Robert Stout, Doug Yeskis said it was unclear if this increased funding would allow USGS to reestablish stream gauges taken offline as a result of past budget cuts. In response to a question from Arlan Juhl, Yeskis said FY14 funding for the Cooperative Water Program would be the same as FY13 funding levels.

Bill Paape said the five UMR states recently submitted an application to MARAD to designate the UMRS as a marine highway. He said FY14 appropriations for the Transportation Investment Generating Economic Recover (TIGER) competitive grant program was increased to \$600 million. In response to a question from Dan Baumann, Paape said the purpose of the marine highway designation was to move more freight to the inland waterways system and relieve congestion from landside transportation modes. He said there is no funding available this year, but the designation would position the UMRS to compete for future funding. In response to a question from Ken Westlake, Paape said the designation allows MARAD to work with partners to establish priorities and strategies for enhancing use of the inland waterway system within the designated corridor. In response to a question from Dan Baumann, Paape said MARAD has used work groups to facilitate collaboration regarding priorities in other designated marine highways.

## **Administrative Issues**

### *Office Lease*

Arlan Juhl offered and Robert Stout seconded a motion authorizing the Executive Director to execute a new five-year lease for UMRBA's existing office space in the Hamm Building in St. Paul. The motion was adopted unanimously on a voice vote.

### *UMRR-EMP Report to Congress Contract*

Robert Stout offered and Dan Baumann seconded a motion authorizing the Executive Director to execute a contract with the Corps of Engineers not to exceed \$75,000 to provide services related to the writing, printing, and production of the 2016 UMRR-EMP Report to Congress.

### *Future Meeting Schedule*

Buntin said the next meeting series will be held May 13-14, 2014 in St. Louis, with the UMRBA Quarterly meeting on the 13<sup>th</sup> and UMRR-EMP CC on the 14<sup>th</sup>. The August meetings will be held August 5-6, 2014 in East Peoria with the UMRBA meeting on the 5<sup>th</sup> and UMRR-EMP CC on the 6<sup>th</sup>. The November quarterly meetings will be held November 18-19, 2014 in St. Paul, Minnesota.

### *Election of Officers*

Dave Frederickson offered a slate of candidates for UMRBA Officers for Board consideration, including Arlan Juhl as Chair, Dan Baumann as Vice Chair, and Jason Tidemann as Treasurer. Diane Ford made and Robert Stout seconded a motion to adopt the slate of Officers. The motion was adopted unanimously by voice vote.

### *Mike Jawson Recognition*

Frederickson noted the upcoming retirement of UMESC Director Mike Jawson and said the Board was appreciative of Jawson's contributions to the UMR partnership. As Jawson was not in attendance, Frederickson provided Barry Johnson with a certificate of appreciation from UMRBA to give to Jawson.

With no further business, Robert Stout offered and Dan Baumann seconded a motion to adjourn. The motion passed unanimously, and the meeting adjourned at 5:00 p.m.