

**Minutes of the
110th Quarterly Meeting
of the
Upper Mississippi River Basin Association**

**May 19, 2009
St. Paul, Minnesota**

The meeting was called to order at 9:30 a.m. by UMRBA Chair Gary Clark. The following were present:

UMRBA Representatives and Alternates:

Gary Clark	Illinois (DNR)
Bernie Hoyer	Iowa (DNR)
Laurie Martinson	Minnesota (DNR)
Rebecca Wooden	Minnesota (DNR)
Dick Lambert	Minnesota (DOT)
Mike Wells	Missouri (DNR)
Dru Buntin	Missouri (DNR)
Todd Ambs	Wisconsin (DNR)
Jim Fischer	Wisconsin (DNR)

Federal UMRBA Liaisons:

Charles Barton	U.S. Army Corps of Engineers (MVD)
Bill Franz	U.S. Environmental Protection Agency (Region 5)
Charlie Wooley	U.S. Fish and Wildlife Service (Region 3)
Mike Jawson	U.S. Geological Survey (UMESC)

Others in attendance:

Jay Rendall	Minnesota (DNR)
John Wells	Minnesota (EQB)
Gaylen Reetz	Minnesota (PCA)
Steve Johnson	National Park Service
Randy Thoreson	National Park Service
COL Jon Christensen	U.S. Army Corps of Engineers (MVP)
Jeff DeZellar	U.S. Army Corps of Engineers (MVP)
Jon Hendrickson	U.S. Army Corps of Engineers (MVP)
Rebecca Soileau	U.S. Army Corps of Engineers (MVP)
Dan Wilcox	U.S. Army Corps of Engineers (MVP)
Chuck Spitzack	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)
Leo Keller	U.S. Army Corps of Engineers (MVR)
Bruce Munholand	U.S. Army Corps of Engineers (MVS)
Brian Johnson	U.S. Army Corps of Engineers (MVS)
Todd Strole	U.S. Army Corps of Engineers (MVS)/TNC
Don Hultman	U.S. Fish and Wildlife Service, UMR NWFR
Teri Heyer	U.S. Forest Service
Jim Stark	U.S. Geological Survey (Minnesota)
Barry Johnson	U.S. Geological Survey (UMESC)

Brad Walker	Izaak Walton League of America
Tom Boland	MACTEC
Ron Kroese	McKnight Foundation
Vince Shay	The Nature Conservancy
Gretchen Benjamin	The Nature Conservancy
Mark Gorman	Northeast-Midwest Institute
Dan Larson	River Resources Alliance
Don Powell	Short Elliott Hendrickson
Christine Favilla	Sierra Club
Paul Rohde	Waterways Council Inc.
Barb Naramore	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association
Mark Ellis	Upper Mississippi River Basin Association
Sanhita Chattopadhyay	Upper Mississippi River Basin Association
Courtney Larson	Upper Mississippi River Basin Association
Peg Donnelly	Upper Mississippi River Basin Association/US EPA Region 5

Announcements

Gary Clark welcomed Colonel Christensen, Commander of the St. Paul District. Colonel Christensen expressed his appreciation for UMRBA’s work, and for the spirit of collaboration among agencies and stakeholder groups on the UMR. He noted that several UMR projects are receiving funding under the American Recovery and Reinvestment Act (ARRA), including the Lock and Dam 3 embankment project, a top priority in the St. Paul District. Christensen said the schedule for executing the ARRA-funded projects is ambitious, but stressed the Corps’ readiness to meet the challenge.

Meeting Minutes

Gary Clark noted that Olivia Dorothy’s name was misspelled on the attendance list from the February 17, 2009 meeting. Bernie Hoyer moved and Laurie Martinson seconded a motion to approve the minutes of UMRBA’s February meeting, with the correction identified by Clark. The motion carried unanimously.

Executive Director’s Report

Barb Naramore highlighted the following items from her written report included in the agenda packet:

- USACE is working with EMP partners to scope the Report to Congress due in December 2010. UMRBA staff is supporting the scoping effort under its current EMP services agreement, and will likely be asked to assist in writing and editing the report under next year’s contract. UMRBA played a similar role in connection with EMP’s 1997 and 2004 Congressional reports.
- Work is virtually complete on an integrated FY 10-14 LTRMP Strategic and Operational Plan. The plan will be presented to the EMP-CC at its May 21 meeting for potential endorsement.
- Representatives of the Water Quality Executive Committee and UMRBA staff met with the McKnight-funded Mississippi River Water Quality Collaborative on April 16. The WQEC and Collaborative agreed to seek ongoing dialog and information exchange on issues of mutual interest.
- MVR Commander Robert Sinkler has responded to the WQEC’s January 2009 letter regarding how to engage water quality program staff in ecosystem objective setting. Based on the Colonel’s response, it appears there will be minimal opportunity to bring water quality program perspectives to

the current phase of floodplain reach objective setting, which is nearing completion. UMRBA staff will continue to follow up with USACE program staff to ensure that the water quality programs are informed as the second phase gets underway. This second phase will focus on objective setting for 12 geomorphic reaches of the UMRS.

In addition, Naramore distributed a summary of FY 09 appropriations and American Recovery and Reinvestment Act funding for projects and programs of interest on the UMRS. She also introduced Sanhita Chattopadhyay and Courtney Larson, two relatively new UMRBA staff people working on spills planning and mapping, and Peg Donnelly, the EPA Region 5 staff person working under an intergovernmental personnel agreement on UMRBA's designated uses project.

Minnesota River Basin Integrated Watershed Study

John Wells, of Minnesota's Environmental Quality Board (EQB), explained that the state is working with USACE and other partners on a collaborative study of the Minnesota River Basin. The study is broad in scope, including flood damage reduction, ecosystem restoration, watershed management, water quality management, and ground water management. In addition to an integrated plan, Wells said the study will also produce a decision support system (DSS) and advanced models for the basin. He emphasized the state's hope that the plan and DSS will facilitate coordination and prioritization of resource expenditures by all levels of government within the basin, with strong local stakeholder involvement.

USACE is participating in the study through its Section 22 Planning Assistance program, which requires a 50 percent non-federal cost share. The total estimated cost of the study is \$8.4 million. Wells said a large portion of the non-federal match will be in-kind. For example, he said Minnesota anticipates contributing approximately \$2.5 million in LiDAR work. Minnesota EQB is the lead sponsor, and is coordinating the efforts of other non-federal participants. In addition to EQB, other state participants include the Minnesota Pollution Control Agency; Departments of Natural Resources, Health, and Agriculture; and Board of Soil and Water Resources. Local government participation is being coordinated through the Minnesota River Board, and three tribal communities are also engaged. Other federal agency participants include the Fish and Wildlife Service, Natural Resources Conservation Service, and USGS.

Wells cited a variety of challenges in undertaking the study, including how to engage local people; address urban and rural perceptions, contaminants for which there are not standards, land use issues, and climate change; avoid reinventing the wheel; understand what induces behavioral change; get the economics right; and ensure the study results in better decision making.

Wells said USACE and Minnesota EQB signed the study cost sharing agreement in September 2008. Since then, they have convened an Interagency Study Team; and various non-federal partners have committed to a \$4 million match. Wells said the next key step is obtaining the necessary Congressional appropriation for the USACE portion of the study. Barb Naramore noted that the President's recently released budget request appears to include \$350,000 for the study.

Bernie Hoyer asked about the study's specific water quality goals. Wells explained that the major goal is to obtain a better understanding of the basin's hydrology, which will in turn inform water quality management. In response to a question from Vince Shay, Dan Wilcox explained that sediment fingerprinting assesses the mineralogy of sediments to identify the source(s) of the material. Using this technique, Wilcox said researchers have clearly established the Minnesota River Basin as the largest sediment source for Lake Pepin. Todd Ambs asked what approaches are being employed to encourage the participation of agricultural interests. Wells said one key is ensuring that proposed changes in agricultural practices are economically sound for producers.

Navigation and Ecosystem Sustainability Program

Chuck Spitzack reported that General Walsh submitted his Advisory Panel (AP) recommendations to Corps Headquarters on February 11, 2009. There has been no further action since then. Spitzack noted that the General's proposal calls for higher level agency representation on the AP than the partners had recommended. Barb Naramore said UMRBA sent a letter to General Walsh on March 2, sharing the states' perspectives regarding the AP, and the level of representation in particular. She asked whether General Walsh would be responding to the states' letter, and whether the letter had been shared with Corps HQ. Spitzack said he did not know. [Note: Subsequently, UMRBA did receive a response from General Walsh, and MVD staff confirmed that the states' letter was forwarded to Corps HQ.]

Spitzack reported that the Corps has been continuing to work with Illinois on institutional arrangements for the Illinois River. The Illinois River Basin Restoration Comprehensive Plan, which was developed with extensive stakeholder involvement, will serve as the definitive statement on restoration goals and objectives for the Illinois River. An Illinois River Team will establish priorities for cost-shared projects and facilitate interagency coordination on implementing NESP and the Restoration Comprehensive Plan. Team membership will mirror that of the Illinois River Coordinating Council. An Illinois River Work Group (IRWG) will serve a similar role to the FWWG, FWIC, and RRAT Tech, with open membership. There will also be regional IRWG teams for the upper, middle, and lower portions of the Illinois River, to facilitate stakeholder involvement. An Illinois Science Advisory Committee will also provide technical input to the IRWG.

Spitzack also described how the Corps plans to employ adaptive management in conducting system and reach planning for the UMRS. He explained that a Regional Support Team (RST) will work directly with NECC and will develop a systemic approach for ecosystem restoration, which will help guide reach planning efforts. The four Regional Planning Teams (RPTs) will use that guidance in developing draft geomorphic reach plans. Those draft plans will be reviewed by the RRT, RRCT, and/or RRAT, which will then provide final reach plans back to the RST for coordination with NECC. For the Illinois River Reach, the RPT will provide a draft reach plan to the IRWG, RRCT, and RRAT; and will work with the three teams to make any necessary revisions. According to Spitzack, the RST will essentially operate as a hub for system and reach planning, a key component of NESP's adaptive management approach. The schedule currently calls for NECC to act on the draft reach plans at its November 2009 meeting. [Note: At the May 20 joint session of the NECC and EMP-CC, that schedule was adjusted, with system-level review of the plans deferred until February 2010.]

Spitzack reported that Corps staff continue to work on the Implementation Report to Congress (IRTC). The NESP authorization requires such reports on a four-year cycle for the ecosystem restoration portion of the program, with the first report due by June 30, 2009. The reports are to include baselines, milestones, goals, and priorities for the restoration projects, and also measure progress in meeting those goals. The Corps circulated a draft IRTC for partner review in April, with comments due by May 28. Spitzack said the comments received so far indicate general satisfaction with the report; but he said concerns were expressed with the length of the executive summary, the proposal to rename NESP as the Environmental and Navigation Program (ENP), and the lack of detail regarding the transition plan. The Corps plans to issue a revised draft for final partner review on July 9. Spitzack explained that this review period will be extremely brief, as MVR plans to submit the report to Corps HQ on June 15.

Spitzack also reported that the Corps' Outreach Team is working to develop a broad, umbrella identity for the agency's work on the UMRS. Individual projects and programs would retain their separate identities, with the umbrella identity intended to improve the public's overall connection with the river system. Under this approach, public outreach would extend more from the partnership and system perspective, and less from individual districts and programs. Spitzack said that the team is proposing *The Upper Mississippi River Works — A Partnership for Sustainability of the Upper Mississippi River and Illinois Waterway System*, but remains open to alternatives.

Dru Buntin expressed concern with the proposal to rename NESP as the ENP, recalling that the purpose previously described for a name change was to have a catchier name with a clear connection to the UMRS. Buntin noted that ENP is not particularly catchy and does not draw a clear connection to the UMRS. In addition, he said there is obviously potential for significant confusion with the EMP.

Rebecca Wooden said Minnesota does like the tone and style of the April IRTC draft. The UMRBA Board directed staff to draft comments on the June 9 revised IRTC for the Board's consideration.

Given the lack of response to the states' March 2 letter concerning the Advisory Panel, and uncertainty whether the letter has been shared with Washington, Buntin suggested that UMRBA convey the states' AP concerns directly to Corps HQ. Todd Ambs concurred, emphasizing that the states need to be very clear that, if the AP is not structured properly, it will be counterproductive. Charles Barton noted that the ultimate decision maker regarding the AP will be the Assistant Secretary of the Army for Civil Works (ASA(CW)). However, there is currently no schedule for forwarding the AP proposal to the ASA(CW). Barton said there is certainly time to address a letter to General Van Antwerp, Chief of Engineers. He encouraged UMRBA to copy General Walsh on any letter to General Van Antwerp.

EMP and NESP: Partner Report on Funding and Transition Issues

Vince Shay said TNC is very pleased to be part of the informal coalition of industry, environmental, and state interests supporting NESP and EMP. According to Shay, having such diverse interests working together is quite powerful and is well-received in Washington. He noted that the group has had very good access on the Hill. Shay reported that group members made many Congressional visits in February and March, both as a group and individually. In addition to visiting delegation offices, the group also met with staff for both the House and Senate appropriations and authorizing committees. The group also worked hard to encourage members of the House delegation to sign a joint members' letter supporting \$20 million for EMP and \$35 million for NESP in FY 10. That letter was spearheaded by Representatives Carnahan (D-MO) and Schock (R-IL).

Paul Rohde underscored Shay's comments regarding the uniqueness and effectiveness of the informal coalition. He also expressed particular thanks to The Nature Conservancy for furnishing the group with the services of Rich Innes, an excellent lobbyist. Rohde said the good news is that we have more collaboration and coordination than ever before, which is tremendously important in delivering a consistent message and sharing workload. However, he cautioned that there are some very real funding challenges facing NESP.

Barb Naramore highlighted three major messages from the group's Washington visits:

1. The revenue shortfalls in the Inland Waterway Trust Fund (IWTF) present a major hurdle to NESP receiving a construction new start, as do overall fiscal constraints.
2. The appropriating committees are quite adamant about the need for an EMP/NESP transition plan.
3. NESP proponents need to be working with the Assistant Secretary and OMB. Gaining Administration support for NESP is critical, as Congress is unlikely to initiate and sustain NESP construction funding entirely on its own.

Naramore said the informal coalition also worked hard to educate the delegation and committee staff on the importance of keeping the EMP fully functional until such time as NESP is operating at a level that can support program transition. In particular, the group focused on the impediment presented by FY 08 and 09 House report language. This language blocks EMP from planning new projects or moving

projects from planning to construction unless there has been construction on a previous phase. This restriction will reduce the EMP's execution capability if it is extended to FY 10. Naramore said she believes the group made progress in addressing this issue, but said it remains to be seen how the committee staff will address the issue in the context of the FY 10 energy and water spending bill.

Marv Hubbell asked for more detail regarding the group's the IWTF-related discussions. Naramore said she was struck by the range of expectations expressed, with respect to both timing and likely scenarios for resolution. She said she heard everything from "an agreement is imminent" to "this is completely intractable and will be with us for quite some time." Rohde said industry is working with USACE to develop a white paper plan for capital investment in the navigation system. He explained that identifying future navigation infrastructure needs through this plan will inform consideration of options for addressing the IWTF issue. He also stressed that, from industry's perspective, it is critical to address inefficiencies in the project funding and delivery system. Rohde also reported that members in the Senate have formed an *ad hoc* working group to consider legislative options for addressing the IWTF. He said there appears to be interest in forming a similar group in the House. Rohde also expressed industry's disappointment in the Obama Administration's decision to make the same lockage fee proposal that the Bush Administration offered last year. He observed that the lockage fee proposal was soundly rejected last year, both by Congress and industry.

Gary Clark expressed the states' appreciation to all members of the coalition for their efforts on behalf of NESP and EMP. He said the diverse interests have been very effective and their work is highly regarded.

Asian Carp Control Research

National Carp Management Plan — Mike Weimer provided an overview of the *Management and Control Plan for Bighead, Black, Grass, and Silver Carps in the United States*, which was finalized in November 2007 as a product of the Aquatic Nuisance Species Task Force led by the Fish and Wildlife Service. Weimer, who serves as Assistant Regional Director for Fisheries in Region 3, explained that the plan includes 133 recommended actions, with an estimated cost of \$286 million over 20 years. The recommendations address containment, control and extirpation, minimizing impacts, education and outreach, research, and adaptive management. Sam Finney, of the Service's Carterville fisheries office, is the full time plan coordinator.

According to Weimer, the plan recommends 16 specific research-related actions, accounting for \$18.6 million of the plan's total estimated costs. Among the research priorities are:

- developing effective sampling gears and monitoring methods;
- assembling information about distribution, biology, life history, and population dynamics;
- developing effective containment methods;
- developing a strategy to extirpate or reduce abundances;
- determining ecological and economical effects; and
- developing viable alternatives to the uses of farm raised Asian Carp (identified as the plan's highest research priority).

Weimer noted that the Service and its partners are in the initial stages of implementing the carp management and control plan.

UMESC Research — Mike Jawson reported that there are some exciting potential carp control options on the horizon. He explained that the present-day UMESC, which was formed by combining the LTRMP and La Crosse fish lab, has origins in previous carp control research. The fish lab was

originally tasked with controlling common carp, and did pioneering work in sea lamprey control. The work formerly performed by that lab is now part of UMESC's aquatic ecosystem health branch. UMESC research also supports registration of seven of the eight currently approved aquaculture drugs. He emphasized that the registration process is long and quite complex, with the standards rivaling those for human use drugs.

Jawson explained that UMESC has extensive, and very sophisticated, facilities for conducting aquatic invasive species (AIS) and drug registration research. The focus of UMESC's existing AIS research is identifying and exploiting specific life stage vulnerabilities. He noted that the sea lamprey's Achilles' heel proved to be in its larval stage.

Jawson said researchers are very enthused with the potential to develop bioactive agents for Asian carp control. He noted that the Asian carp are very effective filter feeders, and thus research on the control of zebra and quagga mussels may offer some insights. He reported that Advanced Bionutrition, a private company, is interested in applying its MicroMatrix technology to aquaculture. Jawson explained that the MicroMatrix is a bioactive compound, with the bioactive element triggered when it hits the target's stomach. Barb Naramore distributed copies of a proposal to provide UMESC with \$3 million in FY 10 funding to support MicroMatrix research. She noted that advocates include a range of interests, but it is not in the Administration's FY 10 request.

In response to a question from Bernie Hoyer, Jawson said USGS currently has about \$250,000 annually for AIS research, which is sufficient to fund one scientist. Mike Wells asked how the proposed research relates to carp control research being done elsewhere, including USGS's Environmental Research Center in Columbia, Missouri. Jawson said there is interaction between scientists both within and between agencies. He said UMESC's intent would be to work with an advisory council of resource managers if it received a substantial increase in AIS funding.

Hoyer asked how much of the \$18.6 million in research identified in the national plan has been funded. Weimer said only a small fraction of the necessary funds has been secured. Weimer observed that funding needs far outstrip available resources.

Charlie Wooley said the Service wants to engage the states on AIS as a national issue. He observed that one opportunity for the states to increase their involvement would be to devote some of their federal aid funds to AIS research and management. Wooley said the Service is also examining ways in which its own regions can pool resources and fund needed research. Jay Rendall encouraged the agencies to use the established regional AIS groups to enhance coordination. He noted that there are groups for the Great Lakes and Upper Mississippi River.

Naramore noted that the MicroMatrix proposal would involve investing public money in a control method that requires a proprietary delivery device. She asked how the proprietary issues would be addressed. Jawson explained that there is existing legislation that generally governs federal agencies in such circumstances. He noted that money would not be transferred between USGS and Advanced BioNutrition in this particular case, and said the company is willing to work collaboratively and see where the research leads.

Flood Risk Management

Comp Plan — Chuck Spitzack explained that the Comp Plan authorization called for a plan that “addresses water resources and related land resource problems and opportunities in the Upper Mississippi and Illinois River Basins in the interest of systemic flood damage reduction.” He noted that the study scope was restricted to the two rivers. The Corps ultimately evaluated eight alternatives, concluding that Plan H was the best performing systemic plan, but not finding it to be in the federal interest.

The ASA(CW) submitted the Comp Plan to Congress in January 2009, with no recommended plan for systemic flood damage reduction. The plan did, however, recommend the following additional actions:

- pursue cost-shared feasibility studies for reconstruction of existing flood damage reduction systems, where federal interest is determined;
- further study critical transportation infrastructure; and
- expand the Comp Plan's mainstem analysis to tributaries of the UMR to fully address flood risk management and present a true basin-wide analysis.

Subject to available funding, Spitzack said the Corps' next priorities are to:

- develop a management plan for a comprehensive watershed study of the Iowa-Cedar River Basins in the interest of systemic flood damage reduction and other purposes,
- develop a management plan for a systemic analysis of critical transportation systems, and
- conduct a survey level review of existing flood damage reduction projects for the purpose of identifying those that are likely to benefit from a cost-shared feasibility study.

In response to a question from Bill Franz, Spitzack explained that the critical infrastructure analysis would focus primarily on river crossings, both highway and rail. Mike Wells asked whether the President included the Comp Plan in his FY 10 budget request. Spitzack said it is not in the Administration's budget, but noted that the Corps has received several Congressional inquiries. He said the Comp Plan received approximately \$200,000 in FY 09 funding.

Barb Naramore asked about the cost-sharing requirements for the Corps' recommended next steps. Spitzack said the watershed studies could be done partly at 100 percent federal expense. The extent of required cost share would depend on how the study for a particular tributary basin was scoped. Spitzack said the systemic analysis of critical transportation could be done at 100 percent federal expense, but site-specific feasibility work would need to be cost-shared.

Interagency Levee Task Force — Bruce Munholand reported that the Interagency Levee Task Force (ILTF) and the associated state-based Interagency Levee Work Groups (ILWGs) are approaching the end of their 12 month charters. Among the accomplishments of the ILTF and the ILWGs since their formation in August 2008, Munholand highlighted the following:

- developed organizational framework for national flood risk management program execution,
- recommended revisions to federal agencies' recovery policy and guidance,
- developed handbook for interagency flood risk management task forces,
- developed generic comprehensive communication and education plan,
- reviewed over 130 project information reports,
- explored five potential nonstructural projects, and
- conducted community outreach.

Munholand said that participating agencies are now considering a potential transition from the ILTF to a Regional Interagency Flood Risk Management Team that would cover the five UMRS states. Similarly, the ILWGs may transition to permanent flood risk management groups based on the "Silver Jackets" model. This would provide an ongoing mechanism for interagency coordination on the full cycle of

flood risk management (FRM), from planning to mitigation to response and recovery, and back to planning. Munholand said the Corps would also like to establish a National Flood Risk Management Steering Committee.

Munholand emphasized that the Corps understands the resource constraints faced by all agencies, and thus is encouraging adapting existing groups to meet the needs for state-level FRM coordination. He stressed that the federal agencies want to assist, not lead, the state groups. He said the state FRM teams will need to establish their own goals, but suggested that these might include reducing flood risk, implementing mitigation plans, facilitating integrated post-disaster recovery and mitigation, and leveraging state and federal technical resources. He briefly reviewed the status of efforts in each of the UMR states, noting that at least three of the five states are proposing to integrate the interagency FRM functions into existing teams. Munholand said it is unlikely that teams will be stood up in all five states by the end of July, but said some are quite close.

Munholand explained that the Regional Interagency Flood Risk Management Team would foster a comprehensive regional approach to FRM planning and implementation. Within that broad mission, goals would include:

- understanding the regional dynamics of FRM;
- coordinating policies, programs, and actions;
- encouraging consistent application of federal policies;
- seeking improvements to national FRM policy and guidance; and
- disseminating national guidance.

Potential core members include the relevant regional offices of FEMA, NRCS, USFWS, USGS, EPA, and USACE, as well as the five UMR states and representatives of each state-based interagency FRM team. Munholand said a wide range of other agencies, NGOs, and professional associations might participate as support members. A typical agenda might include information on state plans and initiatives, reports from the state FRM teams, discussion of key regional issues and projects, information on national developments and guidance, and updates from various stakeholders.

Munholand said the Corps would like to circulate a final draft charter for the regional team by mid-June, followed by review and possible signing at the ILTF's final meeting, scheduled for July 14.

Bernie Hoyer asked why only five non-structural alternatives were considered out of 130 projects. Munholand noted that the ILTF was not established until August 2008, after considerable recovery work was already well underway. In many cases, levee repairs were initiated quite quickly. Munholand said establishing interagency collaboration more rapidly following future floods might increase the use of non-structural approaches. He expressed optimism that having standing FRM teams at the state and regional levels should expedite interagency coordination on response and recovery.

Rebecca Wooden asked how the Corps' emphasis on regional and state teams relates to the work of the National Levee Safety Committee. Munholand said national guidance is under review and expected to be released shortly.

Gary Clark suggested that UMRBA staff remain engaged in the formation and implementation of any regional coordination group. The other Board members concurred. Clark observed that the National Levee Safety Committee has recommended delegating levee safety to the states. He said this would present significant issues and said the states will want to monitor developments closely.

Hydrokinetics

Janet Sternburg said there is increased interest in developing hydropower on the Mississippi River and elsewhere. She explained that this includes both traditional hydropower and hydrokinetic generation, which extracts energy from the movement of water without the use of dams. Hydrokinetic installations are being proposed throughout the country, in rivers, oceans, and tidal areas. Sternburg showed examples of the turbine technology involved, noting that a single project installation will typically consist of many individual turbines. Among hydrokinetic's benefits, Sternburg cited lack of reliance on dams and diversions, reduction in greenhouse gases, reduced reliance on fossil fuels, reliability and renewability, and ability to operate in a variety of environments.

According to Sternburg, Free Flow Power is the major player on the Mississippi and its tributaries. In addition to a number of hydrokinetic proposals on the Mississippi, Ohio, and Missouri Rivers, she noted that Free Flow has also filed preliminary permit applications for low head turbines at several of the locks and dams on the UMR. All of this activity has occurred since 2005, as utilities have been seeking to increase their use of alternative energy sources. Sternburg noted that hydropower currently accounts for approximately 7 percent of the country's electricity generation, while the Department of Energy estimates that hydrokinetics alone could eventually meet 20 percent of electricity demand.

Between St. Louis and Missouri's southern border, Sternburg said there are 14 hydrokinetic projects proposed that would cover 74 river miles. Within the state on the Missouri River, there are an additional 27 project proposals, covering 192 river miles. The number of turbines per project varies, but would typically be in the thousands per project. Sternburg explained that the turbines are generally being proposed for outer bends of the river, and would be placed on pilings driven into the substrate. Underwater transmission lines would link the installations to the existing power grid.

According to Sternburg, Free Flow Power has expressed a desire to minimize impacts, including the use of fish-friendly turbine designs. However, she emphasized that there is little real world experience with the technology. She said it is quite simply unknown what the impacts would be from placing several thousand turbines over 10 miles of river, and then repeating this at multiple locations along the length of the river. According to the Sternburg, Missouri Department of Conservation has several concerns that it will ask to have studied.

Among the environmental issues for consideration, Sternburg cited alteration and loss of aquatic habitats, mortality to fish and other aquatic animals, impacts to threatened and endangered species populations and important recreational/commercial fish populations, alterations to fish pathways, suspension of sediment and contaminants, changes in water flows and velocities, electromagnetic fields, noise, impacts to terrestrial habitat from extending transmission lines, impacts to public lands, and cumulative effects. In addition, Sternburg said economic and social impacts must also be considered, including impacts on commercial navigation, restricted public access to project areas, potentially reduced fishing and hunting success, and limitations on sand and gravel dredging operations. She also noted that there are several operational questions that remain to be resolved, including the turbines' vulnerability to river debris and barge strikes, impacts of sediment movement, and damage to underwater transmission lines.

Steve Johnson reported on the National Park Service's experience with a hydrokinetic project at Lock and Dam 2 in Hastings, Minnesota. As an amendment to an existing hydropower license, Johnson said the permitting process for this installation went quite rapidly. He said the Federal Energy Regulatory Commission (FERC) dismissed all of the Park Service's licensing recommendations, despite the project site's location within the boundaries of the Mississippi National River and Recreation area. The Park Service's concerns included fish mortality, user conflicts, and cumulative effects. While FERC did direct the applicant to consult with NPS in developing its studies, Johnson said the applicant did not do

this, and instead simply furnished copies of its completed studies. Johnson noted that the hydrokinetic installation at Lock and Dam 2 is not operational, and the licensee is concerned that flow rates are too great to permit successful operation.

Johnson introduced Randy Thoreson, who represents NPS on a national hydrokinetics task force. Thoreson reviewed the major steps in FERC's integrated licensing process. In granting a license, Thoreson noted that FERC has the authority to require a wide range of protection, mitigation, and enhancement measures (PMEs). He speculated that there will likely be many PMEs on hydrokinetic licenses. Beyond FERC and the applicant, players in the licensing process include USFWS, USACE, NPS, USFS, state resource agencies, interest groups, and members of the public. Thoreson said NPS's general concerns with hydrokinetics include impacts to natural resources, recreation, aesthetic values, and cultural resources.

Bernie Hoyer asked what is behind such extensive interest in an unproven technology. Thoreson agreed that it is unusual, and noted that it is relatively easy to submit a preliminary license application, but much more difficult to make it through the entire licensing process. Laurie Martinson said it appears that many applicants are simply speculating on the potential of the technology, acting early to ensure exclusive rights to develop hydrokinetics in what are thought to be promising locations. Martinson observed that good fish population information is critical to assessing impacts. She noted that the state permit for the Hastings facility required a fish mortality study.

Dru Buntin asked whether each project area will be handled separately, and required to obtain its own license and permits. Sternburg said this is the expectation. She said FERC and Free Flow Power have agreed to proceed first with seven lead projects, in hopes that these proposals will help elucidate issues. One complication that will almost certainly arise, according to Sternburg, is with projects that cross state boundaries, as most of them will. She said it remains to be seen whether the applicant will be required to obtain permits from multiple states for a single project, or whether the involved states will work together to issue joint permits. Thoreson observed that the federal agencies face a similar challenge in coordinating across their regions.

Biological Indicators Workshop

Kirsten Mickelsen reported that UMRBA held its biological indicators workshop the first week in May. She explained that the workshop came in response to increasing interest in indicators across a range of UMR agencies and programs. Of particular note, developing biological indicators was a strong recommendation coming out of UMRBA's 2008 sessions aimed at enhancing coordination between water quality and ecosystem restoration programs on the UMR.

Mickelsen explained that the recent biological indicators workshop was designed to foster dialog among river scientists and managers about the use of indicators to support both water quality and ecosystem restoration work on the UMR. Specific workshop goals included framing the issue; reviewing current research and development efforts; learning from experiences in other large aquatic ecosystems; and identifying issues, opportunities, and next steps. The agenda included an opportunity to share perspectives between restoration and water quality programs, define key concepts in developing and using indicators, explore current research and applications, and discuss opportunities and obstacles.

Dave Hokanson said the workshop was quite successful in getting a range of perspectives on the table for discussion. There were 71 attendees, divided roughly equally between the two major program areas, with good representation from a range of federal and state agencies as well as NGOs. Hokanson said that the workshop participants identified a range of issues and obstacles, including the need to articulate clear and shared goals, identify leaders for indicators development, and standardize monitoring protocols; the lack of a dramatic driver on the UMR; the degree of longitudinal and latitudinal variation

on the UMR; and the question of how best to include stakeholder input. At the same time, participants also identified several opportunities and potential next steps, including the relative wealth of UMR data and research, lead agencies' willingness to discuss cross-cutting goals, and the opportunity to use reach objective-setting and other existing forums. While participants acknowledged that there are many important issues to resolve, they also emphasized the opportunity to take some initial steps and begin refining tools while these larger issues are being addressed. According to Hokanson, participants generally believed that fish, macroinvertebrates, and vegetation offer the most immediate promise for indicators development on the UMR. There was also considerable discussion about the potential to leverage LTRMP infrastructure to expand monitoring in support of indicators.

Hokanson explained that immediate next steps for UMRBA include drafting the workshop report, with the goal of having a final version of that report available for discussion at UMRBA's August quarterly meeting. Bill Franz said the workshop was quite well done, with an excellent agenda and very good discussions. He urged the agencies to make continued collaboration on indicators a priority. Todd Ambs concurred that the workshop was very well done, with excellent speakers and information. But he also observed that there are many big challenges, such as the identification of reference conditions. He said it will take considerable work and collaboration to determine what condition we are trying to achieve for the UMR. He observed that, if establishing indicators was easy, we would already have them. Marv Hubbell also praised the workshop, describing it as an excellent opportunity for serious thought and discussion. Hubbell said he believes participants identified several discrete activities on which progress can be made while some of the larger issues are being addressed.

604(b) Water Quality Proposal

Gaylen Reetz noted that the states, through UMRBA's Water Quality Executive Committee, have been pursuing federal funds for some time to support their interstate water quality efforts on the UMR. He reported that stimulus funding for the Clean Water State Revolving Funds (CWSRFs) under the American Recovery and Reinvestment Act appears to offer an opportunity. Specifically, a portion of CWSRF funding is set aside for 604(b) planning grants. Of their 604(b) set aside, states are required to pass through 40 percent in the form of planning grants to regional and interstate organizations, unless they are granted a waiver. Reetz explained that, under typical annual CWSRF appropriations levels, the money available for pass through is so small that Minnesota has sought annual waivers. He said it would simply not be cost effective to initiate a grant process for the small amount of money usually involved (i.e., less than \$200,000 annually in Minnesota's case). However, with enactment of the ARRA, Reetz said the dynamic has changed considerably. He said the 604(b) totals for the five UMR states under ARRA range from \$536,000 for Iowa to \$1,790,000 for Illinois.

Reetz said the ARRA 604(b) funds come with significant accounting and reporting requirements, but appear to offer an excellent opportunity to make progress on some of the states' UMR water quality collaboration priorities. He noted that USEPA has encouraged the states to use a portion of their funds in this way, and has confirmed UMRBA's eligibility for 604(b) funds. Reetz said the water directors in all five states are supporting the approach, and have collectively identified approximately \$200,000 they could make available to UMRBA.

In scoping the proposed UMR project, Reetz explained that UMRBA staff and members of the WQEC and WQTF have focused on supporting the states' identified common priorities, developing UMRBA's capacity to support the states' water quality programs, creating products that will make an ongoing contribution, meeting the 604(b) program's planning focus, and addressing nutrient issues from a regional perspective. The major focus areas will be improving water quality standards and assessment approaches; evaluating UMR nutrient impacts, data, and monitoring needs; and fostering inter-program collaboration.

Reetz said the next steps include having UMRBA refine its preliminary scope into a single, integrated work plan that it submits to each of the five states. That work plan will include detail on each of the proposed focus areas, and will describe each state's financial contribution to the various project elements. He explained that the intent is for UMRBA enter into separate funding agreements with each state, per USEPA's advice. Reetz said the states are at different points in their overall 604(b) process, but will require a final work plan from UMRBA fairly soon. After that, the states will work individually with UMRBA on the specifics of their grant making processes.

Gretchen Benjamin asked whether the 604(b) funds have the potential to extend beyond the 30 month time horizon of the ARRA. Dave Hokanson said the states are certainly seeking to identify a long term source of federal support for interstate water quality efforts on the UMR. Reetz said the ARRA 604(b) funds represent an important opportunity to demonstrate what can be done. Mark Gorman observed that, with the potential for increased CWSRF funding in FY 10 and beyond, 604(b) could be an ongoing source of support for the states' UMR efforts. Reetz said this might be the case, but emphasized that there are many factors involved, and said the states will also pursue other USEPA funding options. Todd Ambs concurred that this is an important opportunity to make progress and establish a track record.

Laurie Martinson moved and Mike Wells seconded a motion directing UMRBA staff to develop a single, integrated 604(b) grant proposal for review by the WQEC and Board. The motion further authorized the UMRBA Executive Director to enter into funding agreements with the individual states, consistent with the approved proposal. The motion carried unanimously.

Minnesota Clean Water, Land, and Legacy Amendment

Laurie Martinson reported that, in November 2008, Minnesota voters approved a constitutional amendment increasing the state sales tax rate for 25 years and dedicating that revenue to a variety of clean water, natural resource, and cultural purposes. She explained that the amendment was the result of many years of work, dating back to efforts by Mark Holsten and others in the Minnesota House of Representatives as early as 2000. While the specifics of the proposal evolved over time, the final version approved by voters increases the sales tax by 3/8 of one percent, with the revenue from that increase apportioned as follows:

- 33% — Outdoor Heritage Fund to restore, protect, and enhance wetlands, prairies, forests, and habitat for fish, game, and wildlife
- 33% — Clean Water Fund to protect, enhance, and restore water quality in lakes, rivers, and streams and to protect ground water (at least 5% of this is set aside for drinking water)
- 14.25% — Parks and Trails Fund to support parks and trails of regional or statewide significance
- 19.75% — Arts and Cultural Heritage Fund to support arts, arts education, and arts access, and to preserve Minnesota's history and cultural heritage.

Martinson noted that the amendment passed strongly, with 56 percent of voters voting "yes." She explained that voters who did not vote on the ballot question were effectively voting "no," thus making the margin all the more impressive.

Martinson then detailed some of the specifics on how annual allocations within each of the major funds are being made. For example, the Lessard Outdoor Heritage Council, composed of four legislators and eight citizens, makes annual recommendations to the legislature on how money in the Outdoor Heritage Fund should be used. There are similar groups to make recommendations regarding projects under the other funds. The Governor also makes recommendations regarding allocations under all four of the major funds. In total, it is estimated that the sales tax increase will generate an estimated \$250 million annually over its 25 years.

Martinson said Minnesota DNR views the dedicated funding as an opportunity to leave a legacy for future generations. She said the department will focus on restoring and maintaining a healthy natural resource base and creating high quality recreational opportunities. She also emphasized that, under the terms of the amendment, revenues from the dedicated sales tax cannot be used to supplant traditional sources of funding.

Gaylen Reetz explained that Minnesota was already fundamentally changing its approach to clean water management when the constitutional amendment was enacted. He said the dedicated revenue stream will accelerate the state's ability to make this transition, which was directed in the 2006 Clean Water Legacy Act. The 2006 legislation provided one-time funding, and a directive to monitor, assess, and develop TMDLs statewide in 10 years. The amendment means these efforts will have an ongoing source of support.

Reetz said the fundamental change Minnesota is pursuing is to move away from developing TMDLs one at a time and instead to adopt a watershed approach. The state will look at eight major watersheds per year, monitoring loads at major "pour points," key biological and physical parameters (including intensive stream monitoring on a 10-year cycle), and representative lakes (also on a 10-year cycle). Planning will also be done via the same major watersheds and will include both TMDLs and protection strategies. Each plan will integrate both point source and nonpoint source elements, and will be locally led. There will be a time lag of two or three years between planning and monitoring in an individual watershed. Implementation of management actions, including permit requirements and best management practices, will follow planning by about one year. With the continuous cycle envisioned, the implementation phase will last approximately seven years in each watershed, followed by another monitoring phase. An adaptive management approach will be taken in assessing the effectiveness of management actions. Reetz said a stable funding source is critical of the success of this cyclical, watershed-based approach. He observed that the state legislators have high expectations and will be looking for results.

Dru Buntin asked how the state will be approaching protection and restoration efforts on private lands. Reetz said Minnesota's Board of Water and Soil Resources will be the lead on working with private landowners and will fund a range of approaches, including riparian buffer strips, watershed grants, etc.

Todd Ambs thanked Martinson and Reetz for their presentations. He described Minnesota voters' passage of the amendment as one of the most significant state-level developments he has seen in 20 years. Ambs said the states are losing momentum as they strive to address critical environmental challenges with a patchwork of funding. He suggested that dedicated funding is key to making lasting progress.

Administrative Issues

Bylaws and Administrative Policies — Barb Naramore explained that she is proposing minor adjustments to UMRBA's bylaws, as well as several new and revised administrative policies, most of which are in response to an increased IRS emphasis on good governance procedures for nonprofits. She noted that she provided the package of policy and bylaws proposals to Board members in an email dated April 23, 2009. She then handed out hardcopies of that package to federal liaison members and other meeting participants. Naramore briefly described the elements of the package:

- Bylaws — modifications to more clearly identify and reflect the function of the Board, establish the Executive Director as an officer, modify provisions related to the execution of contracts and related documents, reference existing and new administrative policies as relevant, make other minor adjustments to reflect actual practice, and incorporate gender neutral language.

- Travel Policy — modifications to explicitly permit representatives and alternates to claim reimbursement for travel expenses in connection with related meetings held in conjunction with UMRBA meetings.
- Code of Ethics — new policy in connection with revised IRS Form 990, based on review of several templates.
- Whistleblower Protection Policy — new policy in connection with revised IRS Form 990, based on review of several templates.
- Fundraising Policy — new policy in connection with revised IRS Form 990; reflects fact that UMRBA does not engage in charitable fundraising; describes UMRBA’s typical revenue sources, and establishes general parameters in terms of consistency with UMRBA’s mission and policies.
- Gift Acceptance Policy — new policy in connection with revised IRS Form 990; reflects fact that UMRBA does not solicit gifts; establishes a process and standards for consideration and action on unsolicited gifts.
- Document Retention and Destruction Policy — new policy in connection with revised IRS Form 990, based on review of several templates.

Gary Clark noted one additional grammatical change to the existing bylaws offered by Bernie Hoyer. Specifically, the first sentence of Section VI should be altered to read “The Association is empowered to establish committees, the members of which need not be Association members.” Todd Ambs moved and Mike Wells seconded a motion to adopt the entire package of bylaws amendments and new and revised administrative policies, with addition of the grammatical change described by Clark. The motion passed unanimously.

FY 10 UMRBA Budget — Naramore presented a proposed FY 10 budget, which was previously provided to the UMRBA Board via email on May 13, 2009. She explained that the draft budget reflects revenues of \$581,100 and expenses of \$566,297, for a projected surplus of \$14,803. However, she emphasized that there is more uncertainty than usual on both the revenue and expense side of the budget. Key variables include the states’ dues contributions, the size of the USEPA spills planning and USACE support services agreements, and the possible 604(b) water quality grants. Naramore said it may well be necessary to amend the budget once some of these factors are better known. Wells moved and Laurie Martinson seconded a motion to approve the draft FY 10 budget as presented. The motion passed unanimously.

Hoyer asked for clarification regarding the Single Audit Act issue that Naramore raised in her additional budget notes, dated May 12, 2009. Naramore explained that she does not anticipate that UMRBA’s federal fund expenditures will be sufficiently high in FY 10 to trigger Single Audit Act compliance, but said this could become an issue in future years. The act’s requirements, which would substantially increase UMRBA’s audit costs, apply to organizations expending more than \$500,000 in federal funds in any fiscal year. Naramore said she raised the issue in the budget notes simply for Board awareness, and said staff will monitor its potential applicability to UMRBA as various funding agreements are made.

Future Meeting Schedule — Naramore reported that the next two quarterly meeting series are scheduled for August 4-6, 2009 in Peoria and November 17-19, 2009 in the Quad Cities, with UMRBA’s meeting falling on the first day of each series. The Board set the winter quarterly meetings for February 23-25, 2010 in St. Louis.

With no further business, the meeting adjourned at 3:27 p.m.