

**Minutes of the
120th Quarterly Meeting
of the
Upper Mississippi River Basin Association**

**November 15, 2011
Moline, Illinois**

UMRBA Chair Dru Buntin called the meeting to order at 12:35 p.m. Participants were as follows:

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

Arlan Juhl	Illinois Department of Natural Resources
Marcia Willhite	Illinois Environmental Protection Agency
Dru Buntin	Missouri Department of Natural Resources
Robert Stout	Missouri Department of Natural Resources
John Madras	Missouri Department of Natural Resources
Dave Frederickson	Minnesota Department of Agriculture
Rebecca Flood	Minnesota Pollution Control Agency
Scott Humrickhouse	Wisconsin Department of Natural Resources
Jim Fischer	Wisconsin Department of Natural Resources
Russ Rasmussen	Wisconsin Department of Natural Resources

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

Tessa Chadwick	Natural Resources Conservation Service, Illinois
Charles Barton	U.S. Army Corps of Engineers, MVD
Tim Henry	U.S. Environmental Protection Agency, Region 5
Tim Yager	U.S. Fish and Wildlife Service, UMR Refuge
Dave Bornholdt	U.S. Geological Survey, Midwest Area

Others in Attendance:

Dan Stephenson	Illinois Department of Natural Resources
Dan Sallee	Illinois Department of Natural Resources
Steve Shults	Illinois Department of Natural Resources
Diane Ford	Iowa Department of Natural Resources
Tim Schlagenhaft	Minnesota Department of Natural Resources
Janet Sternburg	Missouri Department of Conservation
Renee Turner	U.S. Army Corps of Engineers, MVD
Scott Whitney	U.S. Army Corps of Engineers, MVD
Terry Birkenstock	U.S. Army Corps of Engineers, MVP
Chuck Spitzack	U.S. Army Corps of Engineers, MVP
Russ Snyder	U.S. Army Corps of Engineers, MVP
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
Sharonne Baylor	U.S. Fish and Wildlife Service, UMR Refuge
Scott Yess	U.S. Fish and Wildlife Service/UMRCC
Jon Duyvejonck	U.S. Fish and Wildlife Service, RIFO
Amber Andress	U.S. Fish and Wildlife Service, RIFO

Gary Johnson	U.S. Geological Survey, Illinois WSC
Kevin Richards	U.S. Geological Survey, Iowa WSC
Mike Jawson	U.S. Geological Survey, UMESC
Barry Johnson	U.S. Geological Survey, UMESC
Tom Boland	AMEC
Mike McGinn	Cardno ENTRIX
Scott Stuewe	HDR
Gary Loss	HNTB
Olivia Dorothy	Izaak Walton League
Brad Walker	Missouri Coalition for the Environment
Barb Naramore	Upper Mississippi River Basin Association
Dave Hokanson	Upper Mississippi River Basin Association
Kirsten Mickelsen	Upper Mississippi River Basin Association

Minutes

Tessa Chadwick indicated that Jon Hubbert is with NRCS's Iowa office, not the Illinois office as shown in the draft August 2011 minutes. Dave Frederickson moved approval of the August 16, 2011 minutes, with the correction offered by Chadwick. Arlan Juhl seconded Frederickson's motion, which then passed unanimously.

Executive Director's Report

Barb Naramore reported that USACE has exercised Option Year 2 of its UMRR-EMP support services agreement with UMRBA. The contract maximum for Option Year 2, which includes support for four quarterly and six special meetings, is \$70,550. However, payments under the contract will be based on the actual number of meetings for which USACE requests support.

State and federal agency participants on UMRBA's *ad hoc* Hydropower Group continue to coordinate on a range of issues. Kirsten Mickelsen has been helping members answer a variety of process-related questions regarding FERC's hydropower review process. In addition, issues surrounding water quality certification and cumulative effects assessment remain a primary focus.

Naramore directed the Board's attention to pages B-5 to B-9 of the agenda packet for the current Treasurer's Statement, Profit and Loss Statement, and Balance Sheet. As of October 31, 2011, ordinary income totaled \$360,969 and expenses totaled \$224,511, for net ordinary income of \$136,458. She noted that, because most dues payments are received relatively early in the fiscal year and expenses are distributed more evenly throughout the year, it is common for UMRBA to have a fairly substantial net income figure at the close of the first quarter. Naramore also provided an updated FY 11 budget report and balance sheet on pages B-10 to B-12 of the agenda packet. Relative to the FY 11 financials accepted by the Board at its August 16, 2011 meeting, the revised statements reflect an additional \$3,738 of work-in-progress that should have been recognized as FY 11 income at the close of the fiscal year. The revised statements bring UMRBA's net ordinary income for FY 11 to \$33,433, rather than \$29,695 as previously reported.

Arlan Juhl moved and Scott Humrickhouse seconded a motion to accept the revised FY 11 year-end Profit and Loss Statement and Balance Sheet and the FY 12 statements dated October 31, 2011, as included in the written Executive Director's report for the meeting. The motion carried unanimously.

UMRBA Strategic Planning

Dru Buntin announced that the UMRBA Board has initiated a strategic planning effort. He explained that UMRBA has undertaken similar exercises in the past, with the most recent having been in 2007. With many new members on the Board and important developments on priority issues, Buntin said the Board views this as an opportune time for strategic planning. He said the Board will look at UMRBA's mission, priorities, and resource allocation, with the goal on ensuring that all are appropriately aligned.

Buntin reported that the Board held its first strategic planning session yesterday. The Board anticipates completing the strategic planning effort within one year. As part of the effort, the Board will first seek input from the state members of various groups, including the Association's Water Quality Executive Committee, Water Quality Task Force, *ad hoc* Hydropower Group, and Hazardous Spills Coordination Group, as well as the Environmental Management Program Coordinating Committee. A bit later in the process, the Board will solicit input from federal partners, private sector interests, and NGOs.

Water Quality

Executive Committee Report

Marcia Willhite reported that 2011 has been a very active year for the UMR states' water quality efforts, working through UMRBA. She said the Water Quality Executive Committee (WQEC) and Water Quality Task Force (WQTF) look forward to providing input to the Board's strategic planning effort and expressed confidence that water quality will continue to be a major focus for UMRBA.

Dave Hokanson briefly highlighted three recently completed UMRBA water quality projects, all funded by the states using American Recovery and Reinvestment Act (ARRA) funding. The first of these projects involved reviewing existing biological assessment tools and developing guidance for the states as they consider incorporating bio-assessment of the main channel into their Clean Water Act (CWA) programs. The resulting guidance document concludes that existing tools from USEPA's Environmental Monitoring and Assessment Program could support CWA bio-assessment on the UMR, with some modification. Indices for fish, macroinvertebrates and aquatic vegetation all hold promise, according to Hokanson. The report also highlights the need for a coordinated monitoring strategy and data management system to support systemic bio-assessment on the UMR.

Hokanson explained that the second project involved a survey and synthesis of information regarding the monitoring, occurrence, and impacts of nutrients on the UMR. The project focused in particular on identifying impacts to CWA designated uses on the UMR mainstem, with attention to algal blooms, fish kills, recreational impacts, and drinking water concerns. The project report presents a variety of nutrient-related findings, as well as several recommendations, including:

1. Develop more consistent nutrient monitoring protocols and enhanced data sharing.
2. Develop a coordinated CWA monitoring strategy for the UMR, including a focus on nutrients.
3. Develop common methods of tracking nutrient impacts.
4. Address both point and non-point sources of nutrients, in part by building on successful conservation efforts.
5. Any nutrient criteria developed for the UMR should consider the need for both nitrogen and phosphorus standards, appropriate distinctions for different portions of the river, appropriate use of response variables in conducting assessments, and the role of criteria as one part of a broader approach to addressing nutrients.

6. Develop consistent nitrogen and phosphorus discharge monitoring requirements for permit holders.
7. Work further with water suppliers to address their nutrient-related operational challenges.

Hokanson explained that UMRBA's third ARRA-funded project was also nutrient-related, seeking to engage a diverse range of participants in a regional conversation about nutrients, with the goal of sharing information about current efforts and identifying opportunities for future cross-program collaboration. A total of 63 participants, representing state and federal agencies as well as water suppliers, agricultural interests, and environmental groups, participated in two workshops. Common themes emerging from the two workshops included the following:

1. A fair amount is known in general about the nutrients problem and potential solutions, but there is less certainty regarding many specifics.
2. Many factors make addressing nutrient impacts on the UMR challenging.
3. Engaging the public and stakeholders is critical to any future success.
4. Monitoring and data are essential.
5. There's an important opportunity to build on the success of NRCS's Mississippi River Basin Initiative.
6. There needs to be more of a voice for the UMR to inform and influence national/federal decisions.
7. Partnerships are critically important and cross-programmatic conversations should continue.

Hokanson said UMRBA staff and the WQEC plan to bring a report addressing aquatic life designated uses to the Board for consideration at its February 2012 meeting. Specifically, the report will identify distinct lateral and longitudinal strata on the UMR that may merit different aquatic life use standards and assessment approaches. Development of this report has been supported in part by USEPA, through an intergovernmental personnel agreement. Hokanson said staff are also supporting an interstate conversation related to arsenic and other human health-related contaminants on the UMR and, with funding from Illinois EPA, have initiated a two-year project to develop a comprehensive CWA monitoring strategy for the UMR.

Willhite outlined the WQEC's future priorities as follows:

1. Develop a coordinated CWA monitoring strategy for the UMR — the need for such a strategy came through very clearly in the bio-assessment, nutrients, and aquatic life designated uses projects. Willhite noted that UMRBA received several strong proposals to provide technical services for the monitoring strategy effort and has selected Midwest Biodiversity Inc., which also worked on the bio-assessment project as the project contractor.
2. Address nutrients and other non-point source issues on a regional basis — this is a long-term effort involving many players.
3. Continue conversations with Lower Mississippi states, USEPA, USDA, the agriculture community, environmental NGOs, and others regarding the UMR states' efforts.
4. Pursue short-term funding opportunities — the states' voluntary annual water quality assessments are not, by themselves, sufficient to continue the kinds of advancements made possible with the ARRA funding. With State Revolving Fund appropriations declining, 604(b) is unlikely to be a significant source of future funding.
5. Revisit the WQEC's Organizational Options Report and consider whether the states need a more formal compact to advance their joint water quality work.

Buntin thanked the WQEC and WQTF members for their excellent work over the past year. He also especially thanked Willhite and her staff for securing Section 106 supplemental funds to support development of the coordinated UMR water quality monitoring strategy.

In response to a question from Mike McGinn, Willhite said Illinois has been working closely with stakeholder groups to identify potential approaches to establishing numeric nutrient standards. However, she said research thus far has not shown clear cause-effect relationships on which to base numeric criteria. She said Illinois is unlikely to meet the December 31 deadline for numeric nutrient criteria.

Mississippi River Basin Initiative

Tessa Chadwick said the USDA-led Conservation Effects Assessment Project (CEAP) has been extraordinarily helpful, providing a wealth of valuable information. For example, CEAP results indicate that significant progress has been made in reducing phosphorus and surface nitrogen run-off, while sub-surface nitrogen levels have been less tractable. This has led NRCS to launch a major agricultural drainage water management initiative nationally. In addition, the Mississippi River Basin Initiative (MRBI) is emphasizing drainage water management in its projects. Chadwick cited an MRBI project in northwest Illinois that is showing important success in reducing sub-surface nitrogen loss.

Buntin observed that MRBI has been extremely popular in all five UMR states. He said Missouri DNR is participating very actively, in some cases contributing to project funding, using revenue from the state's dedicated sales tax that funds soil and water conservation as well as state parks. Buntin asked whether NRCS anticipates a third round of MRBI funding. Chadwick says this remains to be determined, based on appropriations. However, she said MRBI continues to be a high priority for USDA.

Ecosystem, Navigation, and Comp Plan Updates

Upper Mississippi River Restoration—Environmental Management Program

Marv Hubbell noted that Congress and the Office of Management and Budget began referring to the EMP several years ago as Upper Mississippi River Restoration. To avoid confusion and help translate between this formal designation and the program's historic name, USACE is now referencing the program as Upper Mississippi River Restoration-Environmental Management Program (UMRR-EMP).

Hubbell briefly recapped EMP's FY 11 accomplishments. He noted that USACE started the year assuming annual appropriations of \$19 million. However, when the final FY 11 numbers were ultimately determined in June 2011, EMP actually received a total of \$21.1 million. Of this amount, \$6.4 million went to Long Term Resource Monitoring (LTRM) and \$13.9 million went to habitat projects. While very welcome, Hubbell said the increased funding late in the fiscal year made it quite challenging to obligate fully by September 30. The program's FY 11 execution rate was over 99.9 percent, an accomplishment Hubbell credited to the extraordinary efforts of Corps staff and program partners alike. Beyond the program's very strong fiscal performance, Hubbell said FY 11 highlights included the September 29 event celebrating EMP's 25th anniversary and restoration of 100,000 acres, completion of the 2010 Report to Congress, initiation of the Implementation Issues Assessment, completion of systemic land use/land cover and bathymetric data collection, certification of six models used in planning habitat projects, and substantial completion of all three of EMP's national priority habitat projects. Hubbell said the anniversary event was quite successful, with Assistant Secretary Darcy and MG Walsh, as well as leaders from many partner agencies, participating.

Hubbell reported that the Administration requested \$18.15 million for the EMP in FY 12, while the House has approved \$16.455 million. While the full Senate has not acted on an Energy and Water measure, the Senate Appropriations Committee included the President's full request in its markup. With USACE and most domestic agencies currently operating under a Continuing Resolution Authority (CRA), the final FY 12 number for EMP remains to be determined. For now, Hubbell said, program staff are using a conservative assumption of \$16.455 million for the year. He reviewed the allocation plan, assuming this funding level, and noted that the St. Paul District will be "repaying" LTRM for money that was reallocated to the district late in FY 11 to meet contracting needs.

Hubbell said he has been told that EMP's Regional Review Plan will be approved. This means that MVD will not have to seek an HQ waiver from independent external peer review (IEPR) requirements for each individual HREP. Instead, HREPs will be presumed to be exempt, unless they trigger one of the specific IEPR requirements set forth in the 2007 Water Resources Development Act. Hubbell said this will result in substantial time savings for most habitat projects.

Navigation and Ecosystem Sustainability Program

Chuck Spitzack reported that NESP's final FY 11 allocation was lower than what was provided under the CRA. As a result, USACE had to suspend work under NESP in June 2011, having already more than fully expended NESP's FY 11 allocation. Staff from HQ, MVD, and the three districts held an internal meeting on November 3, 2011 to discuss NESP's status. Spitzack said the conclusion from that meeting was that, absent new and compelling information, the Administration is unlikely to include NESP in its future budget requests. He observed that it will be difficult to generate new information without additional program funding. Spitzack said staff will be seeking a meeting with Assistant Secretary Darcy to discuss NESP's future, including the relative risks associated with under- and over-investment in the UMRS's navigation infrastructure.

In response to a question from Arlan Juhl, Gary Meden said the Office of Management and Budget (OMB) has strong reservations about the economic justification for NESP. Spitzack explained that OMB and other critics of the NESP feasibility study are concerned with uncertainties on several key economic assumptions and cost-benefit ratios. Dru Buntin asked whether shortfalls in the Inland Waterway Trust Fund (IWTF) are also a factor in the Administration's decision not to budget for NESP. Spitzack said the IWTF situation may well be a consideration, in terms of how to prioritize among inland navigation needs, given the Fund's limited capacity to support new investment.

UMR Comprehensive Plan

Spitzack explained that the UMR Comprehensive Plan's 1999 authorization directed USACE to develop strategies and plans for systemic flood damage reduction in the context of integrated water resource management. In its 2008 Comp Plan report, USACE presented the following conclusions and recommendations:

1. None of the systemic plans analyzed meet the threshold for recommending federal investment, based on national economic development (NED) benefits
2. There are several elements warranting further working, including:
 - a. Reconstruct existing projects to restore their original authorized level of protection, where there is a willing non-federal sponsor.
 - b. Protect critical transportation infrastructure.
 - c. Maintain, update, and share hydrologic and economic data and models.
 - d. Convey flood risks for specific locations to the public.
 - e. Analyze tributary watersheds.

With the limited funding provided since the 2008 report, USACE has pursued several of its recommendations for further work, including:

1. Ongoing discussions with landowners and local units of government concerning the systemic flood damage reduction plans analyzed — including considerable effort to clarify what was and was not recommended in the 2008 report
2. Work with state Departments of Transportation to identify critical transportation infrastructure — 2 Illinois River crossings and 8 UMR crossings will be evaluated further, though not at the level of a full feasibility analysis, given current funding
3. Work with five major levee districts concerning the potential for reconstruction projects
4. Support for elements of the Iowa-Cedar Rivers Basin work, with the expectation that the interagency approach being used may serve as a template for future integrated water resources management (IWRM) in other tributary basins

Spitzack said USACE received \$750,000 in Comp Plan funding in June 2011, a limited amount of which was carried over for expenditure in FY 12. However, these funds will be fully expended by the end of the first quarter of FY 12, meaning Comp Plan efforts will have to be suspended if no additional FY 12 funds are provided. Spitzack observed that the funding discontinuity has been particularly challenging for the Comp Plan's interagency efforts. If work does need to be suspended, Spitzack said USACE staff will hold a final conference call with agencies and stakeholders in January to update the status of work in all areas.

Dru Buntin observed that the systemic plans presented in the 2008 Comp Plan are highly controversial in Missouri. He urged USACE to meet directly with levee district boards and local officials before advancing any new plans. Spitzack said the Corps has been heavily engaged in explaining Plan H to affected areas and conducting additional modeling efforts. Buntin encouraged USACE to get beyond the specifics of Plan H and instead start a new conversation that focuses on how to take a systems approach to flood risk management given that actions in one place may have significant impacts on other locations.

Our Mississippi

Spitzack also announced that the fall issue of USACE's *Our Mississippi* has been released. He said he views the publication as foundational to the Corps' IWRM efforts and emphasized that *Our Mississippi's* goal is to be transparent, not promotional. In response to a question from Jim Fischer, Spitzack said future funding for the publication is uncertain. Spitzack said he is working to identify a stable funding source within MVD and the three districts to maintain *Our Mississippi*. He said USACE recently released its 2011-2015 strategic plan and observed that *Our Mississippi* and the Comp Plan both align with the strategic plan's emphasis on IWRM.

Inland Waterways Trust Fund

Gary Meden briefly described the Capital Development Plan developed jointly by USACE staff and navigation industry representatives. Designed to address revenue shortfalls in the Inland Waterways Trust Fund (IWTF) and the need to recapitalize the nation's navigation infrastructure, the plan calls for:

1. raising the current fuel tax of \$0.20 per gallon by between \$0.06 and \$0.09,
2. eliminating the industry cost-share requirements for dams and for lock rehabilitations of under \$100 million, and
3. reducing industry's exposure to cost overruns.

The Inland Waterways Users Board (IWUB) approved the Capital Development Plan in April 2010 and subsequently submitted it to the Assistant Secretary for Civil Works. Assistant Secretary Darcy, pointing to budget constraints and long-held federal cost-share policy, dismissed the Capital Development Plan in a December 2010 letter to Representative Jim Oberstar, then Chair of the House Transportation and Infrastructure Committee. She did not, however, offer an alternative approach at the time.

More recently, the Administration outlined its alternative as part of the President's Plan for Economic Growth, released in September 2011. Presented in a draft Inland Waterways Capital Investment Act, the Administration's proposal calls for leaving the fuel tax as its current level of \$0.20 per gallon and adding a new annual fee for vessels on the inland waterways system. The Secretary of the Army would determine the fee levels needed to meet specified IWTF revenue and fund balance targets. The initial revenue target would be \$1.1 billion over 10 years. Of note, the Secretary would also have the option of establishing a two-tiered fee schedule, with vessels transiting the locked portion of the system paying higher fees.

Meden acknowledged that the Administration's proposal presents a variety of implementation issues, including the fact that USACE has no mechanism in place for tracking individual barges and collecting fees. In addition, a two-tiered system of fees might drive traffic off of the locked portion of the system, with shippers using alternate modes to move cargo below St. Louis for transfer to barge.

Meden said industry, the Administration, and Congressional leaders all recognize that current funding is clearly insufficient to maintain and improve the nation's navigation infrastructure. He said this point of common agreement is critical to finding a path forward.

Dru Buntin noted that the Administration's proposal would allow, but not require, the Secretary to establish a two-tiered fee. Meden concurred, but said the expectation is clearly that the Secretary would do so. Buntin said UMRBA has historically opposed any tax or fee that would disproportionately affect the locked portion of the system, both because such a system would be cumbersome to implement and because it would undermine the function of the inland waterways as a navigation *system*.

Paul Rohde observed that the Capital Development Plan effort was preceded by a 2008 USACE case studies report examining cost overruns in lock and dam construction. Referred to as *The Good, the Bad, and the Ugly* report, this study sought to identify trends in, and causes of, cost overruns. It informed many of the reform recommendations included in the Capital Development Plan.

Rohde said industry was very disappointed by the Administration's initial lack of response to the Capital Development Plan, and its ultimate dismissal of the recommendations. Rohde said industry has been working extensively with House Transportation and Infrastructure Chair John Mica, who included a maritime title in the Surface Transportation authorization measure he introduced in July 2011. In August, USACE announced significant additional cost overruns on the Olmsted project, much to the frustration of industry and many in Congress. Originally authorized at \$775 million, the current official cost estimate for Olmsted is over \$2 billion. A revised estimate that incorporates the most recent increases is due to the Assistant Secretary in December. Rohde stressed that the navigation industry, which is paying half the costs of the Olmsted project, has no control over these escalating costs.

Rohde said industry representatives met with Assistant Secretary Darcy and MG Grisoli in September and expressed concern with the continued overruns at Olmsted, the Administration's failure to appoint members to the IWUB, and the Administration's position on the Capital Development Plan. Later that same month, President Obama mentioned the need to invest in navigation infrastructure in a major jobs speech, and OMB invited the industry to discuss the Administration's proposed new vessel fees.

Despite Pentagon statements to the contrary, Rohde said the Administration's failure to appoint IWUB members appears to be related to the IWTF impasse. He also noted that the Administration's draft bill would extend the range of work for which an industry cost share is required to include preconstruction engineering and design and other planning activities.

Rohde said industry representatives outlined their recommended path forward at a September 21, 2011 hearing before the House Water Resources Subcommittee. Their recommendations included:

1. Incorporating the Capital Development Plan into the maritime title of the House Transportation and Infrastructure Committee's Surface Transportation bill
2. Preventing the Administration's proposed user fees from being included any legislation developed by the deficit reduction "Super Committee"
3. Adopting the Capital Development Plan in a successful 2012 Water Resources Development Act

Rohde said the Olmsted cost overruns are one reason funds are not available to support navigation improvements authorized under the Navigation and Ecosystem Sustainability Program. He said the magnitude of the most recent overrun will likely drive discussion on the Hill regarding alternative strategies for addressing the IWTF situation. He characterized the continuing problems at Olmsted as a compelling demonstration of the need for the kinds of reforms proposed in the Capital Development Plan.

If changes are not made, Rohde said it will be 40 years before IWTF funding will be available to initiate UMRS projects under NESP, and that is barring any emergencies or new major rehabilitation projects. In contrast, under the Capital Development Plan's proposed schedule, work on the new lock at L&D 25 could commence within one year of adoption and would be complete within eight years of its initiation.

Dru Buntin suggested that, given the division between industry and the Administration, the UMRBA Board consider drafting a letter to the Administration, with copies to the IWUB. He observed that many of the points from UMRBA's 2010 IWTF letter remain relevant and could be updated with a statement that also addresses the Administration's new proposal.

Arlan Juhl asked whether decision makers would have proceeded differently on the Olmsted project had they known its true costs at the outset. Rohde said Congress ultimately made the decision to authorize Olmsted as a replacement for two upstream locks and dams. He said the question of whether an alternate approach would have been preferable will be easier to answer after an independent review of the true costs of the replacement project. Relevant questions include how the costs and benefits of Olmsted compare with those of rehabilitating and improving the two existing structures. Rohde said it is undeniable, however, that Olmsted is a tremendous impediment to making progress on other navigation investment needs.

In response to a question from Juhl, Rohde said industry is very concerned with the growing gap between authorized and actual costs on navigation projects. He cited analysis showing that this gap, and the time required to complete construction, is much greater for projects authorized after the 1986 WRDA than for those authorized in 1986. In response to a question from Gary Loss, Rohde said the Administration and Congress are not, at present, focused on the Panama Canal expansion's implications for inland navigation. He said, however, that the Panama Canal is very much on the minds of farmers and agricultural shippers.

Barb Naramore asked Rohde whether the overruns at Olmsted are primarily due to inefficient funding streams, bad cost estimating, or innovative construction techniques that did not work as well as

anticipated. Rohde said industry believes that much of the problem stems from the project's reliance on in-the-wet construction techniques, but he acknowledged that USACE did not reach this same conclusion in its 2008 *The Good, the Bad, and the Ugly* report.

Rohde said major rehabilitations are also an important factor in evaluating demands on the IWTF. He explained that deferred operation and maintenance, which has become increasingly common across the Corps, has the effect of ultimately making major rehabilitation projects more expensive.

The UMRBA Board directed staff to draft a letter regarding the IWTF for its consideration.

Flood Recovery

Scott Whitney reported that this year saw record flooding on the Lower Mississippi, Missouri, and Souris Rivers. He noted that MVD staff were focusing on recovery issues even during the height of their emergency response operations on the Mississippi River. As MVD's Regional Flood Risk Manager, Whitney said he has been charged with leading the division's recovery efforts, which will focus on:

1. assessing damages,
2. evaluating system performance and lessons learned, and
3. repairing flood damages to the system.

Whitney said repair efforts will include two phases, with the first consisting of interim measures to "reset" the system and reduce risks. Longer term efforts will focus on restoring the Mississippi River and Tributaries (MR&T) project to full system integrity. He explained that many levees suffered damages that have weakened them to the point where they may not perform as designed if there is more flooding before repairs are completed.

Currently, MVD's critical repair needs are estimated at approximately \$1 billion, though that number is subject to change. Estimates on the Missouri River are much more preliminary, because high water continues to impede damage assessments. Thus far, Congress has not enacted any emergency supplemental funding, leaving USACE and the other federal agencies to address recovery needs within existing resources. Under this "self-funding" approach, Whitney said any USACE project that cannot fully obligate its funding is subject to having those funds reprogrammed to support recovery. He explained that the Corps is taking a systems approach to prioritizing recovery needs, with much of the decision making taking place in Washington. Last week, Whitney said MVD received an additional \$20 million in reprogrammed funds, but said this will likely be all the reprogrammed funds this year. Absent an emergency supplemental, Whitney estimated that MVD will need at least 15 years to complete repair work. Under this scenario, many communities would face an increased level of flood risk for many years. Whitney said the Corps is taking steps to ensure that it communicates effectively with communities about their flood risk.

Whitney said USACE will be conducting a system performance evaluation (SPE) for the MR&T. Questions will include:

1. How did the system perform?
2. How could the system perform in its present, post-flood condition?
3. What does the system need to perform in the future?

In response to a question from Arlan Juhl, Whitney said there is a master list of flood repair priorities within MVD. However, USACE is not yet sharing the list. Instead, Corps Headquarters will be integrating those priorities with repair needs on the Missouri River and elsewhere. Dru Buntin said he understands the Corps' reluctance to release the list until all needs have been identified and incorporated. However, he stressed that the lack of ranked priorities makes it very difficult for the states and others to communicate in specific, meaningful terms with Members of Congress about funding needs. Buntin said a prioritized list and modeling information about impacts and future flood risk are what is needed to make a compelling case for supplemental funding. Whitney said MVD understands the states' need for this information, and also believes it is a critically important part of informing local communities about their increased risk exposure. He said MVD will release the prioritized needs list as soon as it is permitted to do so.

Asian Carp

Minnesota's Asian Carp Action Plan

Tim Schlagenhaft explained that staff from the National Park Service's Mississippi National River and Recreation Area established an *ad hoc* Asian Carp Task Force in early 2011. The group has focused on the threat that Asian carp present to the Mississippi River in and above the Twin Cities, as well as to Minnesota's inland lakes and rivers. With representatives from federal, state, and local agencies and tribal governments, the group has worked with stakeholders and others to develop an Asian Carp Action Plan. The Action Plan addresses:

1. early detection and response,
2. prevention and deterrence,
3. mitigation and control, and
4. communication and outreach.

Schlagenhaft said bighead, silver, and grass carp have been caught occasionally on the Mississippi and St. Croix Rivers in Minnesota and Wisconsin going back as far as 1996. However, none of the species is known to have established a breeding population in these areas. In 2011, Minnesota DNR worked with the National Park Service and others to implement an eDNA sampling effort on the Mississippi, Minnesota, and St. Croix Rivers. The sampling was conducted in July and September. A substantial portion of those samples tested positive for Asian carp DNA. While follow-up work with commercial fishermen did not capture any live fish, the eDNA hits, together with past instances of live fish being caught, have combined to increase concern that the opportunity to take preventive actions may be waning.

Schlagenhaft explained that most dams on the UMR are relatively low head and operate in a run-of-the-river mode during high flows, permitting fish to pass directly through the dams at these times. He noted that Upper St. Anthony, L&D 1, and L&D 19 have higher heads and permit fish passage only through their lock chambers. He noted that closing the lock chambers at these three dams could prevent fish passage entirely, but said only Congress could authorize and direct USACE to make such an operational change. Schlagenhaft said Minnesota DNR has state funding to make improvements to the Coon Rapids dam upstream from Upper St. Anthony. These improvements will improve the structure's effectiveness as a barrier, but Schlagenhaft explained that the head at the Coon Rapids dam is too low, particularly during winter ice conditions, for it to be a completely effective barrier.

Schlagenhaft said Minnesota is advocating for a feasibility study to evaluate the potential for a permanent barrier at Upper St. Anthony and other possible locations. In addition to evaluating the effectiveness of various barrier options, the study would look at associated economic, ecological, and

recreational impacts. Along with Upper St. Anthony, Schlagenhaft said candidate barrier sites in Minnesota include the mouth of the St. Croix and the lock chambers at L&Ds 1, 2, and 5. L&D 19 at Keokuk could also provide an effective barrier for species such as black carp that are not yet established upstream of this point. Schlagenhaft noted that the Minnesota and Wisconsin DNRs and USFWS co-funded a 2004 study by a private consultant that recommended multiple deterrent technologies as the best option. This study led to a 2007 Congressional authorization for an acoustic barrier at L&D 11. However, that authorization was never funded.

Schlagenhaft said a combination of strategies, including barriers, control technologies, and habitat improvements for native species is likely to provide the best long-term option. He explained that Governor Dayton has adopted this multi-pronged approach in his Asian Carp Action Plan, which:

1. calls for a cooperative approach;
2. recognizes Asian carp as an urgent issue requiring immediate action;
3. endorses a formally chartered a multi-organizational task force;
4. supports immediate congressional action to give the Corps emergency authority to close Upper St. Anthony and L&D 1 if Asian carp are detected nearby; and
5. supports the long-term actions recommended by *ad hoc* Task Force, including enhancing information about carp movements and population size, evaluating and installing (if feasible) deterrent barriers, accelerating research on long-term controls, and improving habitat for native species.

Schlagenhaft said Governor Dayton will be hosting a November 18, 2011 summit with Congressional leaders, federal agency managers, and others to discuss the issue and his Action Plan recommendations. Schlagenhaft outlined Minnesota DNR's perspectives on lock closure, stressing that these do not represent an integrated state position or the position of the *ad hoc* Task Force at this time:

1. Lock closures in the Twin Cities offer the only 100 percent effective way to prevent fish from swimming upstream into Upper Mississippi River above the Twin Cities and threatening Mille Lacs and other premier fisheries resources.
2. A feasibility study evaluating options and their likely impacts is the department's highest priority.
3. USACE should receive emergency closure authority, with clearly defined criteria that would trigger a closure. Those criteria should include the collection of live adult or juvenile fish or eDNA evidence in strategic locations.

In response to a question from Dru Buntin, Schlagenhaft confirmed that emergency lock closures to prevent the spread of Asian carp would require Congressional authorization.

USACE Overview of Navigation-Related Considerations

Russ Snyder explained that the three Minneapolis locks, Upper and Lower St. Anthony and L&D 1, operate jointly for the most part — i.e., the vast majority of commercial traffic that moves through any one of these locks moves through all three of them. All three have private hydropower operations on-site. He also emphasized that these structures, and the rest of the UMRS locks and dams, are part of the 9-foot channel project and are not authorized and operated individually. The City of Minneapolis was the cost-share sponsor for Upper and Lower St. Anthony, which were constructed in the 1950s and '60s.

Snyder reviewed the specifications of Upper and Lower St. Anthony and L&D 1. Each has a single 56' x 400' lock chamber, with their vertical lifts ranging from 25 to 49 feet. Tonnage through the locks

in 2010 was 664,000 tons, or the equivalent of approximately 165 truckloads per day. Figures for 2011 are expected to be similar. Approximately half of this tonnage is sand and aggregate, and about 20 percent is iron and steel scrap. Snyder said a 2004 study from the Minnesota Department of Transportation estimated that moving aggregate from below L&D 1 to above Upper St. Anthony produced about \$4.50 per ton in benefits associated with keeping heavy truck traffic off of metro roadways. He noted that other commercial users of the three Minneapolis locks include several excursion boats.

In terms of trends and future demand, Snyder said the 2010 tonnage total is below the five-year average of 920,000 tons. He attributed this in part to one cement shipper's decision to relocate to St. Paul due to zoning issues, as well as to a systemwide decline in traffic. MVP projects that annual tonnages in the future will likely be below 1,000,000 tons, but above 500,000. This is based on the City of Minneapolis' announced plans to close its terminal and the lack of appropriately zoned real estate to support private sector expansion.

Snyder said there is abundant recreational boat traffic in the Twin Cities and noted it is not uncommon for recreational boaters to use just one or two of the three Minneapolis locks. In 2010, Upper St. Anthony locked 2,450 private recreational boats and 70,000 passengers on excursion boats, while L&D 1 locked 4,313 private recreational craft and 10,000 excursion boat passengers.

Regarding the question of emergency lock closures, Snyder emphasized that USACE does not have the legal authority to close locks in an effort to control the movement of aquatic nuisance species. Only Congress could grant such authority, according to Snyder. He further explained that the Corps' current temporary closure authority extends only to closures needed to facilitate construction and other work on the 9-foot channel project. The implementing regulations governing temporary closures require that the closures be genuinely temporary and limited in duration to minimize disruption of navigation. Snyder noted that, following the I-35W bridge collapse in 2007, the Coast Guard exercised its authority to close the river to commercial and recreational vessels as a matter of public safety, while the locks at Upper and Lower St. Anthony technically remained open.

Snyder said USACE also has little operating flexibility with which to address invasive species. For example, the Corps cannot modify dam gate operations at its UMRS structures without affecting navigation or, during high flow events, without inducing flood damages to property, habitat, and the dam structures themselves. Snyder said MVP has started closing the lower gates when the locks are not in use, to reduce opportunities for fish to lock through its structures. He said MVP may also consider scheduling lockages at the Minneapolis locks, with the goal of reducing the number of lock operations but not the number of vessels locking through — i.e., encouraging multiple vessels to lock together when possible. He said the Minneapolis locks currently operate on a 24/7 basis.

Snyder explained that the 2007 WRDA authorized USACE to design, construct, and operate a dispersal barrier on the UMR. WRDA 07 identifies L&D 11 as the probable location, but expressly gives the Corps the latitude to locate the barrier elsewhere on the UMR. The authorization provides for construction and operation and maintenance by USACE at 100 percent federal expense. However, Congress has not appropriated any funds for the project. Snyder noted that the Corps also has other general authorities under which it could build a barrier, but these authorities require non-Corps funding, at least a part of which would have to come from another federal agency. These authorities are 31 U.S.C. 1535 (Economy Act) and 10 U.S.C. 3036(d) (Chief's Economy Act). In addition, under 33 U.S.C. 408 (Section 408), the Corps could enter into an agreement with a state under which USACE would permit the state to construct a barrier. Snyder emphasized that all of these options would require 100 percent non-Corps funding. Operation and maintenance would be the responsibility of the funding party.

Snyder concluded by emphasizing that USACE is seeking to work cooperatively with other public agencies, within the bounds of its authorities, on the UMR. He stressed that the Corps' options for seeking to prevent the movement of aquatic nuisance species are rather limited.

Research on Control Methods

Mike Jawson provided an overview of USGS's ongoing Asian carp control research, much of which is being conducted with funding from the Great Lakes Restoration Initiative. The efforts involve a range of partners working under the Asian Carp Regional Coordinating Committee's research framework. Jawson emphasized that USGS is focusing on new tools to control or remove carp, but with an eye toward technologies that may be transferrable to other aquatic nuisance species (ANS). He observed that a combination of control strategies will likely be needed to effectively combat Asian carp, and said one key will be developing tools that are sufficiently selective.

Jawson explained that the Upper Midwest Environmental Sciences Center (UMESC) in La Crosse is involved in much of USGS's Asian carp research. Current projects include:

1. Research on the carps' feeding behaviors and modeling what this may imply for the species' eventual spread
2. Identifying the carps' impacts on native fish in the Mississippi River System
3. Development of biocide control strategies — with an emphasis on evaluating toxicants that are already registered for other uses and identifying a selective oral delivery mechanism — preliminary findings suggest potential for combining i) a delivery mechanism with a particle size of 50-100 μm , ii) a toxin that is released in the presence of trypsin, and iii) application in late winter or early spring, when Asian carp are feeding more actively than native fish
4. Potential use of pheromones to aid in attracting and herding Asian carp — 10 of 240 pheromones evaluated have shown initial promise
5. Evaluation of physical control options, including electrical fields and seismic technology such as hydroguns — while each has clear limitations, they may also have some potential; for example, hydroguns are not species-specific, but might have application in protecting particularly high value areas, or perhaps could be used in combination with an attractant that would concentrate carp in a particular area

Tim Schlagenhaft stressed the need to carefully consider any control option's impacts on native species. Jawson concurred and said this is why some physical controls may be best used in very specific circumstances, such as using hydroguns on a temporary basis if an electrical barrier system fails. He observed that developing chemical controls that exploit specific aspects of the Asian carps' physiology may offer the best long term option.

Other Updates/Action Items

Barb Naramore noted that UMRBA's scoping comments on the Great Lakes and Mississippi River Interbasin Study (GLMRIS) emphasized the importance of involving all affected states — i.e., those in the Mississippi River Basin as well as those in the Great Lakes Basin. She said USACE has responded to those comments by offering to expand membership on the GLMRIS Executive Steering Committee (ESC). Naramore said Corps staff have indicated that they would be pleased to have Iowa and Missouri participate directly on the ESC, or, if the states prefer, to have UMRBA staff participate on their behalf. Naramore asked Dru Buntin and Diane Ford to let her know how their states would like to proceed.

Schlagenhaft said many of the needs UMRBA identified in its GLMRIS scoping comments remain very relevant, particularly in terms of the importance of preventing within basin spread and the need to invest in long-term controls. He suggested that the states may want to advocate for resources to address these important needs.

Administrative Issues

Barb Naramore announced that the UMRBA Board and UMRR-EMP staff had agreed to shift the February and May meeting schedules slightly. The next quarterly meeting series will run from February 28 to March 1, with the Board's strategic planning session on February 28, the UMRBA quarterly meeting on February 29, and the EMP-CC quarterly meeting on March 1. These meetings will be held in Davenport. The May quarterly series will be held May 22-24, 2012 in St. Louis, following this same three-day sequence. After conferring with Charles Barton about the anticipated dates for the Mississippi River Commission's low water inspection trip, the UMRBA Board then set its summer quarterly meeting for August 29, 2012 in La Crosse.