

**Upper Mississippi River Basin Association
Joint Meeting of the Water Quality Executive Committee and
Water Quality Task Force Meeting
November 14, 2011
Moline, Illinois**

Meeting Summary

Participants

Gregg Good	Illinois Environmental Protection Agency
Marcia Willhite	Illinois Environmental Protection Agency
John Olson	Iowa Department of Natural Resources
Rebecca Flood	Minnesota Pollution Control Agency
Shannon Lotthammer (1)	Minnesota Pollution Control Agency
Angela Preimesberger (1)	Minnesota Pollution Control Agency
Mohsen Dkhili	Missouri Department of Natural Resources
John Madras	Missouri Department of Natural Resources
Jim Baumann	Wisconsin Department of Natural Resources
Russ Rasmussen	Wisconsin Department of Natural Resources
Tim Henry	United States Environmental Protection Agency, Region 5
Karen Flournoy	United States Environmental Protection Agency, Region 7
John DeLashmit (1)	United States Environmental Protection Agency, Region 7
Dave Hokanson	Upper Mississippi River Basin Association
Barb Naramore	Upper Mississippi River Basin Association

(1) Joined the meeting by phone.

Call to Order, Opening Comments, and Introductions

The meeting of the UMRBA Water Quality Executive Committee (WQEC) and Water Quality Task Force (WQTF) was called to order at 10:40 a.m. by WQEC Chair Marcia Willhite and WQTF Chair John Olson. Willhite welcomed all and noted that both the WQEC and WQTF had identified the need for a joint meeting, particularly in light of the numerous projects which have been completed or are nearing completion. Olson thanked the WQEC for the opportunity to hold a joint meeting. Introductions by all participants followed.

History, Roles, and Goals of the WQEC and WQTF

Dave Hokanson gave a brief summary of the history and functions of both the WQEC and WQTF. He noted that the WQTF has a more technical function and was constituted in its current form by the UMRBA in 1998, while the WQEC is more policy-focused and was established by resolution of the UMRBA Board in 2006. Hokanson said the WQEC acts to both guide the activities of the WQTF and to implement the recommendations/products emerging from the WQTF. He added that the actions and products the WQTF and WQEC are subject to the concurrence and/or approval of the UMRBA Board.

Willhite described the 2006 “organizational options” process and report, which resulted in the formation of the WQEC. She said this was part of a growing UMRBA emphasis on water quality in recent years. She further described how the states have pursued improved UMR CWA implementation using a state-

based approach, using existing organizations rather than creating new ones. Willhite said that, with some experience in doing UMR water quality projects since 2006, it may be an appropriate time for the states to revisit their organizational approach.

In regard to WQEC representation, Olson noted that Shelli Grapp has replaced Chuck Corell as Iowa DNR's WQEC member.

Project Status Overview

Hokanson gave a brief overview of the status of current and recent work, including the aquatic life designated uses project, the three efforts funded with CWA section 604(b) funds (biological assessment, nutrient report, and cross programmatic workshops), arsenic/human health discussions, and UMR monitoring strategy development.

Olson said the nutrient component of the WQTF's recent work seems particularly relevant, given numerous developments in this area which have occurred since the project was first scoped, including the "nutrient framework" memo from US EPA Acting Assistant Administrator for Water Nancy Stoner and the state's work on nutrient reduction strategies. Willhite reminded the group that while the WQEC and WQTF have pursued the creation of fundamental CWA components for the UMR, US EPA and other groups have been primarily concerned with nutrients on the UMR. As such, she said nutrient components were built into recent project work. She concurred with Olson that recent nutrient-related developments have highlighted the relevance of this work. Olson said, at minimum, statewide nutrient reduction strategies need to be kept in mind by the WQEC and WQTF.

Aquatic Life Designated Uses and Biological Assessment Discussion

Hokanson summarized major findings and recommendation of these recent efforts, noting that they are being discussed together due to their interconnections.

Aquatic Life Designated Uses Report

Hokanson said a specific issue for consideration by the WQEC and WQTF in regard to the aquatic life designated uses (ALDU) project is the classification structure recommendation made in the project report. He noted the memo circulated in advance of the meeting, which described the issue of whether to alter the classification structure in light comments received from UMR resource managers and scientists on the draft final project report. In particular, comments received suggested that the recommended classification structure may over-emphasize distinctions among lateral strata (and the main channel and side channels specifically) and as a result may be more complicated than necessary. Commenters had also noted the potential need for an additional longitudinal distinction to capture notable water quality changes due to the effect of Lake Pepin. Hokanson said the WQTF had discussed these issues via a conference call earlier in the month but had not reached a consensus. As such, he said, the topic was now put forward for joint consideration by the WQEC and the WQTF.

Olson suggested that, if a consensus could not be reached, one approach might be to document a series of options. Jim Baumann said he had been among the WQTF members who advocated that the structure be left as recommended (i.e., with four distinct lateral strata), adding that the report's recommendations do not necessarily require different criteria for each class. Therefore, he felt that some of the concerns expressed regarding an overly complicated approach may be mitigated. Baumann emphasized that this report and others like it are guidance to the states, which can be implemented flexibly and are essentially working documents. In this case, he said, the approach may be revisited as the monitoring strategy is developed and more progress is made developing biological assessment tools.

Willhite said the approach of providing options may have some merit. Moreover, she said, the report's recommendations can act as a tool for the states collectively, or a state individually, in shifting approaches to the UMR. She added that the states' rulemaking processes may ultimately determine what is do-able in terms of classification.

John Madras said preserving a greater number of classes may be advantageous at this point, in particular if the report functions as a guidance document. Specifically, he said maintaining more classes at this juncture allows for more questions to be asked as implementation proceeds. Madras said his preference is to maintain the ability to ask questions and to talk with stakeholders about such questions. He added that monitoring may ultimately determine what is feasible. Madras also agreed with Willhite that the rulemaking process would likely result in further refinement of the approach.

Gregg Good said it will be important to have the classification structure established going into monitoring strategy development, as it will be very difficult to design a monitoring strategy if there is not clarity about the classification structure. He added that he also liked the flexibility of retaining the greater number of distinctions at this time. Madras said he would like to see the monitoring strategy process address all of the classification "boxes" as part of its discussions. Willhite agreed, adding that her preference is to allow the monitoring strategy process to help address some of the questions about classification.

Russ Rasmussen said the comments made by river resource managers and scientists should be acknowledged in the report and not lost in the process. He suggested that the lateral distinctions be kept as currently recommended, but that the considerations raised by commenters be discussed in the text of the report. Rasmussen said the question of main channel versus side channel separation will need to be revisited as implementation proceeds, to determine whether different approaches are indeed necessary for these strata.

Olson said he sees appeal in a consensus decision and that offering options, as he had previously suggested, may actually undermine interstate consistency. Therefore, he would like to see a joint recommendation coming from the states. Willhite agreed, suggesting that the classification structure be kept in its current form, the comments made acknowledged, the report finalized, and the states proceed in pursuing implementation.

Olson asked whether wetlands should be acknowledged in the current classification structure. Willhite said that wetlands bring in entirely different regulatory considerations, and that Illinois still needs to develop its own internal processes regarding wetlands. Rasmussen said Wisconsin has upcoming changes in its administrative processes related to wetlands. Baumann said he would be reluctant to recommend adding a new piece to the classification structure at this point. Rasmussen suggested that the report could simply acknowledge wetlands as an issue, but not attempt to incorporate them into the classification structure.

Shannon Lotthammer said, going forward, other factors beyond data analysis may come into play and therefore it is desirable to maintain the maximum flexibility in a classification structure recommendation. She also said Minnesota is already using site specific standards for Lake Pepin, so the creation of a longitudinal distinction at Lake Pepin would not add appreciably to regulatory complexity and would be consistent with Minnesota's approach. Lotthammer also said it is important to keep emphasizing flexibility in making recommendations.

Willhite summarized the discussion by stating that it appears a "4 x4" matrix should be used as the report's recommended classification structure, with an acknowledgement of the comments made on the draft report and a recognition that the side and main channels are the strata most likely to be potentially

combined as implementation proceeds. Rasmussen agreed, saying the report revisions should also include a short discussion about potential future consideration of wetlands. Lotthammer agreed with the approach suggested by Willhite and Rasmussen, adding that it is important to recognize the need for flexibility. Madras commented that the suggested plan for finalizing the report is fine, with the understanding that the report is to be used as guidance and that further discussions will follow as implementation proceeds.

Willhite asked how the group saw the report's recommendations playing out in states' rulemaking. Madras responded that states could now take time to look at the report and its underlying data, and then determine how this fits into triennial rulemaking processes. He added that this conversation needs to be continued among the states as they pursue implementation.

Hokanson said UMRBA staff would proceed in finalizing the report as just described by the WQEC and WQTF. He asked whether the groups would like to see a summary flyer produced to accompany the final report. All agreed that a summary flyer should be produced.

Good commented that the report should now form the structural baseline moving forward in UMR work, and that it is likely the most work will be done initially in the main channel. Olson asked for clarification on how isolated backwaters are being addressed at this time. Rasmussen replied that a brief discussion of isolated backwaters and wetlands would be included, noting these as areas for potential future work. Lotthammer said Minnesota is addressing wetlands on an intrastate basis currently and may develop its own approach before wetlands are considered in a UMR context. A final comment was made by several participants that the language in the report's Figure 5-4 should be modified to make clear that the "criteria" shown in the figure are an example only and do not represent a recommendation of the WQEC or WQTF.

Biological Assessment Guidance Document

The WQEC and WQTF next discussed outcomes and next steps related to the recently-completed biological assessment document project. Olson suggested one important potential next step is to re-examine the fish assemblage work done to construct a biological condition gradient, to further inform biological attainment threshold choices. He said a second important piece of followup work is to consider assessment methodology questions arising from the guidance, and in particular exploring questions such as the percentage of a river reach which must meet a biological threshold in order for that reach to be considered in attainment.

Baumann agreed that further examination of the fish assemblage and biological condition gradient work is merited. He said he would recommend further technical review by Wisconsin DNR staff. Bauman said he has also heard from Wisconsin DNR staff that the EMAP-GRE sampling techniques recommended in the guidance document are very labor intensive and that this may raise practical challenges in implementation. He added that more data is likely needed to support fish biological condition gradient work and there are lingering questions about whether or not the recommended macroinvertebrate techniques are ready for implementation.

Willhite asked Baumann when the issues he raised need to be addressed. Baumann replied that, in the case of intensiveness of the fish sampling technique, this might be addressed in the monitoring strategy project. Rasmussen agreed, saying that he did not want to see the monitoring strategy effort paralyzed by the inability to implement an intensive approach. Willhite noted that in Illinois, monitoring is ultimately limited by available resources. Good pointed out that the intent of the monitoring strategy project is to lay out options and make sure a monitoring effort is actually implemented.

Hokanson said he heard three major areas of potential followup work on bioassessment emerging from the preceding discussion:

- Some of the recommendations of the biological assessment guidance will be examined further and ground-truthed during the monitoring strategy project.
- There is a needed to do further work to verify, and modify as needed, the fish-based biological condition gradient. This appears to be an issue separate from monitoring strategy development.
- Additionally, there is a need to answer questions related to assessment and the development of an assessment methodology. Again, this is related to the monitoring strategy project, but likely separate from it.

Good added that issues of independent applicability will need be addressed as part of assessment methodology development.

UMR CWA Monitoring Strategy Project

Hokanson gave an introductory presentation regarding the UMR CWA monitoring strategy project, noting that the project's first deliverable is a project Scoping Report, which will provide information in support of the project's first work session. He presented a draft outline for this Scoping Report as follows:

- Monitoring strategy background, including:
 - Functions (and as compared to other monitoring)
 - Adequate monitoring framework
 - US EPA ten recommended elements for monitoring and assessment programs
 - Approaches in other large systems
- Current UMR monitoring and research, including:
 - Current monitoring: state, federal, regional, and local
 - Research: EMAP-GRE and others
- Rationale/need for UMR CWA strategy, including:
 - Limitations and gaps from CWA perspective
- Goals and objectives for UMR CWA strategy

Hokanson asked for feedback on the proposed report outline, which he could then provide to Chris Yoder of the Midwest Biodiversity Institute, the project contractor.

Good said it will be particularly important to emphasize goals and objectives at the first project work session. He suggested that one priority may be to focus first on the monitoring needs for the main channel. Good continued by saying that the Scoping Report should provide a prompt for the goals and objectives discussion at the first work session.

Good and Willhite suggested that the monitoring strategy should at least attempt to address all the major assigned designated uses. Willhite added that the primary objective of the monitoring strategy should be to support 305(b) assessment. She also said she agreed with the proposed outline as presented by Hokanson.

Rasmussen said one of the monitoring strategy goals needs to be assuring consistency among the states. He added that another important goal is alignment with the work of the Hypoxia Task Force, so that the

monitoring strategy can help them with better understanding nutrient concentrations and loading. Willhite agreed, but cautioned that the monitoring strategy needs to be most focused on foundational CWA pieces.

Olson commented that putting together a monitoring strategy will definitely shed light on inconsistencies between states. Willhite concurred, noting that one element contributing to inconsistent monitoring approaches is the lack of consistent water quality standards among the states. Good noted that ORSANCO is able to get agreement among the states on both standards and monitoring.

Willhite suggested that the first project work session include just state and federal CWA staff, and that the scope of attendees be expanded subsequently to include a broader representation from other UMR stakeholder groups.

UMR Human Health Uses/Arsenic Project and Issue Paper

Hokanson summarized the contents of the draft arsenic-focused issue paper as follows:

- Arsenic background, including:
 - Health effects
 - Occurrence in environment
 - Occurrence in the UMR basin
- Current CWA approaches, including:
 - Water quality criteria (across uses, acute vs. chronic)
 - Current impairments (two reaches, Iowa only)
- CWA issues, including:
 - Attainability in light of natural occurrence
 - Arsenic (III) vs. total arsenic
 - TMDLs and load allocations
- Potential actions to address CWA issues, including:
 - Source assessment
 - Examining measurement issues
 - Criteria modification
 - Designated use modification
 - Utilizing category “4n”

Willhite commented that the issue paper gives some insight into options for dealing with naturally occurring contaminants. Rasmussen said he thought the use of category “4n” in the listing process was the most compelling of the options presented, followed by modification of the use designation. Mohsen Dkhili commented that use of a category such as “4n” still results in an impairment listing.

Willhite said she had been unaware of the combined drinking water and fish consumption approach to human health uses (as Iowa employs) until the recent draft TMDL. Tim Henry raised a question regarding the approach of changing the use designation, asking whether it is meaningful to have a “drinking water after treatment” use.

Tom Poleck noted that the relationship between Safe Drinking Water Act (SDWA) maximum contaminant levels (MCLs) and CWA ambient water quality standards is certainly an issue to consider. John DeLashmit added that measurement issues (i.e., total arsenic v. arsenic [III]) are also important. DeLashmit also emphasized the importance of exploring further how much of the observed arsenic concentrations may have an anthropogenic source.

Olson asked DeLashmit whether US EPA Region 7 had any plans to move forward on the previously drafted arsenic TMDL. DeLashmit said Region 7 has no current plans to proceed and would like to first develop a better understanding of some of the issues. Rasmussen asked whether there is a protocol in place to deal with criteria-setting for natural contaminants. DeLashmit said there has been in other contexts and programs. Poleck noted that Oregon's recent change in their arsenic criteria included both modifications to the assumptions regarding consumption as well as the use of a 10^{-4} cancer risk level.

Tim Henry said it is important to connect with US EPA Headquarters on this issue and that he would like to get comments from a CWA-SDWA integration group working within Region 5. Henry said he would assemble comments and send to UMRBA by the beginning of December.

Willhite asked the group whether they felt common arsenic criteria are needed among the UMR states. Rasmussen replied that criteria should be consistent within a reasonable risk range. Willhite asked the group whether a more expansive source assessment should be pursued. Olson observed that the issues highlighted in the arsenic discussion are bigger than the UMR and relevance nationally. Willhite replied that then perhaps the appropriate next step is to connect with national conversations, including those happening via the Association of Clean Water Administrators (ACWA) and the Region 5 CWA-SDWA integration group, as previously mentioned by Henry. She added that it may also be important to keep considering potential changes to use designations.

Olson said the conversation regarding naturally-occurring contaminants would be beneficial. He added that he is less confident in conversations regarding human health use definitions, as he feels that states are likely locked in to their existing definitions. Olson said he was particularly interested in the possibilities for using a "4n" categorization. Henry said he would be sure to get feedback on this idea in comments from US EPA.

Hokanson said comments on the issue paper will be taken through December 1, 2011, after which time he will proceed in finalizing the report.

UMR Nutrients Discussion

Baumann reported that recent increases in nutrient loading have been observed in Wisconsin. Rasmussen added that this appears to be at least in part a result of highly erodible lands being put back into production recently, with flashiness of rainfall patterns also potentially contributing. Henry said in Lake Erie total phosphorus has stayed relatively steady, but dissolved phosphorus has been increasing. He said one of the possible explanations for this is that, while conservation practices have had success in limiting surface runoff, drain tiles are transporting both nitrogen and phosphorus, and that fertilizer rates have not been adjusted to reflect enrichment of the soil. Baumann said some of these factors may be relevant for the trends Wisconsin is observing.

Willhite said several recommendations of the recent UMR nutrients report will be useful for monitoring strategy development. She said continuing a conversation with water suppliers appears to be one obvious follow up activity emerging from the report. Willhite added that investigating NPDES permit discharge monitoring requirements seems to be another promising area for further activity.

Rasmussen said Wisconsin requires nitrogen monitoring by NPDES permit holders. Rebecca Flood said Minnesota PCA has recently sent letters to all NPDES permit holders in the state to notify them that monitoring will begin with their next permit renewal. Baumann asked how frequently MPCA plans to require monitoring. Flood said she believed monitoring would be required at least twice per month. Madras said Missouri DNR has put in place monitoring for dischargers to some lakes, but that there were not yet any statewide requirements. Olson said he was not sure of Iowa DNR's discharge monitoring

requirements. All agreed that compiling further detail regarding the states' NPDES nutrient monitoring requirements would be beneficial. The WQEC members offered specific contact persons in their states as follows: Illinois EPA (Alan Keller), Minnesota PCA (Wendy Tourri), Missouri DNR (Refaat Mefrakis), Wisconsin DNR (Susan Sylvester). Baumann added that this may be the first of several types of information it may be useful to collect and share among the states.

Madras observed that, should numeric nutrient criteria be adopted in Missouri, there would likely be many entities and individuals interested in trading programs. Willhite asked Madras how he thought a nutrient trading system might work. Madras responded that load would need to be calculated to allow for trading. Dkhili added that trading requires working on problems at a watershed level.

Hokanson summarized the outcomes of the recent cross-programmatic, nutrient-focused workshops, highlighting the following as emergent themes:

- General outlines of problems and solutions related to nutrients on the UMR are known, the specifics of problems and solutions are less apparent.
- Many factors, including scale, time lags, and institutional complexity make the UMR and its basin particularly challenging for nutrient reduction.
- Engaging stakeholders and the public at large is critical for success.
- Monitoring and data are essential components of successful nutrient reduction programs.
- The Mississippi River Health Watersheds Initiative (MRBI) has met with considerable initial success and should be built upon.
- There is a need to identify a “message” or “voice” for the UMR to inform national decisions.
- Partnerships are critical for success.
- Continuing the conversation is important.

Willhite suggested that further conversations with NGOs be pursued and that the identification of any common goals would be very beneficial going forward. Baumann commented that the Gulf Hypoxia Task Force's Coordinating Committee has been having monthly calls and discussing statewide nutrient reduction strategies. He also suggested that there may be benefit from the UMR states periodically discussing progress on strategies. Bauman noted that he learned the most at the Hannibal, Missouri workshop where he heard information from states he does not otherwise typically interact with. He suggested that the UMR states convene some kind of nutrient-focused forum in the next six to nine months.

Dkhili noted that ACWA does already have a discussion forum addressing nutrient standards. Willhite asked if a similar venue existed for discussing statewide nutrient strategies. Baumann said he was not aware of such a venue.

Willhite asked if the most important conversation is currently to be had amongst the states or with stakeholders. Dkhili replied that, with the Gulf being a major endpoint of concern, there is certainly a role for the Mississippi River states to talk amongst themselves. Rasmussen agreed, saying it will be important to coordinate with the Hypoxia Task Force. Baumann agreed, but also asked how coordination in regard to a monitoring strategy could best be accomplished. Good suggested that a water monitoring council could be created, similar to state monitoring councils and the Lake Michigan monitoring council.

Reflecting on UMRBA Water Quality Progress, Opportunities, and Challenges

Olson said he feels that, in general, UMRBA's water quality efforts are providing the states what they are seeking. Willhite said it appears that UMRBA's work is beginning to put in place the basic pieces to support improved CWA programs on the UMR. Good said the work accomplished reflects "doing what we can" with available resources. Willhite agreed, saying that while many challenges remain, much has already been accomplished. Madras said one measure of success may be to consider how progress is viewed from the outside, and particularly in light of Gulf Hypoxia. Flood agreed that there is benefit in linking UMRBA efforts to addressing hypoxia when possible. Henry and Willhite agreed that making UMRBA efforts relevant to the issue of Gulf Hypoxia is important.

Willhite identified additional three potential action areas for UMRBA efforts in the near future:

- Enhancing collaboration and cooperation with lower basin states.
- Revisiting the outcomes of the Organizational Options report.
- Considering how to implement the UMR CWA monitoring strategy and identifying resources to support its implementation.

With no further business, the meeting adjourned at 5 p.m.