Summary of the Spring 2012 Meeting of the
UMRCC Water Quality Technical Section
March 20, 2012

Riverport Inn
Winona, MN

Prepared by John Sullivan, Water Quality Technical Section Chair
Wisconsin Department of Natural Resources

The spring meeting was held on the afternoon of March 20, 2012 in conjunction with the Annual UMRCC meeting at the Riverport Inn, Winona, MN. We had 19 individuals representing state and federal agencies. A listing of attendees is provided at the end of this summary.

<u>**State/Agency Reports**</u>

Wisconsin DNR – John Sullivan reported that the Wisconsin legislature passed regulatory reform bills that will influence the DNR's work once signed by the Governor. These changes will influence wetland regulations, Chapter 30 permitting, Water Quality Trading (point vs nonpoint source) and other water program activities. Wisconsin's priorities for Triennial Standards Review include: Antidegredation policy, phosphorus implementation guidance, pollutant trading guidance and phosphorus site-specific criteria. A TMDL implementation guidance team has been formed to address an assortment of issues related to WPDES permitting, pollutant trading and watershed permitting. Jim Fischer has been appointed to the long vacant Mississippi River Team leader position.

Iowa DNR – John Olson reported that their 2012 Integrated Clean Water Act Report and impaired water list is in preparation with a draft expected by fall of 2012. In 2011, Iowa began collecting "tissue plugs" from predatory fishes for mercury analysis as part of their consumption advisory program. Nutrient criteria development for lakes, streams and rivers is on-going. The current stream/river approach will base numeric nutrient criteria on response variables (e.g., chlorophyll-a and DO) and their impact on biologic integrity (IBI values). Following the Kansas approach, Iowa has prepared a draft nutrient reduction strategy that sets technology-based nutrient reduction goals for point source dischargers independent of nutrient targets. IDNR is working with Iowa's Department of Agriculture & Land Stewardship to develop a combined PS-NPS nutrient reduction strategy.

Minnesota PCA – Louise Hotka mentioned that Shannon Lotthammer, PCA section manager and representative on the UMRBA WQ Task Force, Mike Feist, the South Biological Unit lead for Great Rivers participated in the monitoring strategy workshop in Davenport earlier this year. PCA is switching from the original transparency tube design to one that will use a small weighted secchi disk in a 100 cm tube for all professional and volunteer monitoring programs. This is being done to reduce the number of transparency

measurements greater than 60 cm or less than 20 cm, which severely limits the usefulness of the measurements as supporting information for the State WQ Standards for turbidity and total suspended solids (proposed). A fair number of new tubes of the old design are left in our stock and are available for educational programs anywhere if requested before May 1. Contact Louise (651-757-2450) for more information. MPCA is moving ahead with designing the Large Rivers (Minnesota, St. Croix, Red, Rainy River, and Mississippi R reaches upstream of the St. Croix confluence) portion of our aquatic life/recreation condition monitoring activities in fall/winter 2012-2013, with a plan to pilot this work in a limited area in summer 2013.

USGS/UMESC – Jeff Houser indicated the 2011 LTRM water quality data should be available within a few weeks.

UMRCC Coordinators's Report – Scott Yess (selected items). A reminder to members that all UMRCC library holdings are listed in the UMRCC library database available from the UMRCC web page (http://www.umrcc.org/Library%20Catalog.html).
A new video focusing on the UMRCC will be shared with all at the Annual meeting tomorrow. Teachers workshop for 2012 will be canceled. UMRCC-sponsored vegetation sampling is planned for Pool 7 and 14 this summer. The Mussel Ad-Hoc Group has been elevated to a full Technical Section this year. Additional information from the coordinator will be available as part of the annual meeting minutes.

No other agency reports were provided.

Presentations

Minnesota's Draft River, Pool & Lake Pepin Eutrophication and Sediment WQS – Steve Heiskary & William Bouchard, MPCA. Steve provided an update on their river nutrient criteria and Will discussed TSS criteria development. Criteria for rivers will be based on different regions within Minnesota. They provided the rationale and linkage with biological response variables. All technical documents are posted on their web page. The draft rule and statement of need and reasonableness (SONAR) should be prepared later this spring. Public hearings planned in the fall of 2012 with final rules completed in the Winter of 2012-2013.

UMR Clean Water Act Monitoring Strategy Update - John Olson, IADNR. John provided an overview based on previous summaries prepared by David Hokanson (UMRBA) and Chris Yoder (MBI). The basic objective of the strategy is to provide a consistent assessment framework for UMR Clean Water Act monitoring activities for the five states. The strategy will address both longitudinal and lateral monitoring as recommended in the Aquatic Life and Designated Use Report (currently being finalized) and Biological Assessment Implementation Guidance prepared for the UMRBA. A scoping report was completed in December 2011. A work session was held in early February in Davenport, IA. Future work sessions are planned for the summer and fall 2012. The final report is expected by September 30, 2013.

Real-time continuous water quality monitoring at Lake Odessa, Louisa County, Iowa -Caroline Davis, LACMRERS. Caroline provided a description of continuous DO, temperature, turbidity and nitrate monitoring in [Lake Odessa](#) and the river. Lake Odessa is a backwater in the river's floodplain just west of Lock and Dam 17. The objectives are to investigate nitrate cycling and processing as related to seasonal flow management activities in this backwater. Monitoring will be on-going through the fall of 2012. She plans to install chlorophyll-a sensors at select locations this year. Velocity surveys and spatial water quality surveys are also plan this year to better characterize and quantify nitrate processing in this backwater. The data will be used in the development of hydrodynamic and water quality models by U of Iowa researchers.

Wisconsin's Large River Invertebrate IBI -Brian Weigel, WDNR. Brian provided a summary of his IBI development and validation process, which included monitoring of 100 sites from 38 rivers in Wisconsin. Sampling consists of deploying Hester-Dendy artificial substrates consistent with Ohio EPA methods. Comparisons to Wisconsin's FISH IBI have been made. Brian believes the method is applicable to the Upper Mississippi and provides the ability to compare to other large rivers in Wisconsin.

Minnesota's Invertebrate IBI for Evaluating the Condition of Depressional Wetlands- William Bouchard, MPCA. Will described the development of a macroinvertebrate IBI for Minnesota's depressional wetlands. Sampling consists dipnet sweeps in shallow vegetated wetlands accessed by wading. Vegetation debris is placed onto ½-inch hardware cloth to separate debris from the invertebrate collecting pans below. Invertebrates are encouraged to fall through the mesh and/or are picked from the debris during a 10-minute counting period. Snails and leeches are identified to species and insects and other phylum to genus. They initially used activity traps (PVC bottles), but found they were less efficient since it required two visits and didn't greatly improve the IBI response. They have also developed a plant IBI to go along with their invertebrate IBI and both respond differently to stressors. IBIs for depressional wetlands have been developed for major ecoregions of Minnesota.

Mayfly Hatch Monitoring Network for the UMR -Mark Steingraeber, USFWS. Mark provided a history of mayfly hatch monitoring on the UMR including the use of National Weather Service Doppler Radar. He also described models for predicting the timing of emergence based on developmental thresholds that are water temperature based and discussed potential water quality factors influencing hatches (or the lack of hatches) in some years. Mark is working with Kent Johnson and others in expanding a mayfly hatch network in the UMR.

Water Quality Technical Section Meeting Attendees
March 20, 2012

Name	Agency	email
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