Summary of UMRCC Fall WQ Tech Section Meeting
Fall Meeting
Tuesday, October 8, 2024 (1:00pm – <5:00 pm)
Virtual

Chair: Daniel Kendall, Iowa Department of Natural Resources
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The Fall meeting of the UMRCC Water Quality Technical Section was virtual.

Attendees included:

In Person	
Daniel Kendall	Iowa Department of Natural Resources - State Rep/Chair
Shawn Giblin	Wisconsin Department of Natural Resources - State Rep
Rob Burdis	Minnesota Department of Natural Resources - State Rep
Molly Sobotka	Missouri Department of Conservation - State Rep
Ryan Morris	Illinois Environmental Protection Agency - State Rep
Bud Hammes - Presenter	Friends of Trempealeau Lakes
Ashley Johnson - Presenter	Iowa Department of Natural Resources
Kathi Jo Jankowski - Presenter	US Geological Survey
Scott Gritters	Iowa Department of Natural Resources
Lucas Youngsma	Minnesota Department of Natural Resources
Phil Monson	Minnesota Department of Natural Resources
Steph Szura	Minnesota Department of Natural Resources
Kristen Dieterman	Minnesota Pollution Control Agency
Kathryn Smith	Missouri Department of Conservation
Neal Jackson	UMRCC Coordinator
Elizabeth Bruns	US Army Corps of Engineers - Rock Island
Emma Doyal	US Army Corps of Engineers - Rock Island
Nicole Manasco	US Army Corps of Engineers - Rock Island
Ed Hammer	US Environmental Protection Agency R5
Micah Bennett	US Environmental Protection Agency R5
Alicia Carhart	Wisconsin Department of Natural Resources
Jeremy King	Wisconsin Department of Natural Resources
John Kalas	Wisconsin Department of Natural Resources
Patrick Kelly	Wisconsin Department of Natural Resources
Sammi Boyd	Wisconsin Department of Natural Resources

Agenda:

1:00 Greetings
1:20 Talks
1:20 – 1:50 Saving the Trempealeau Lakes – Bud Hammes, PhD, Friends of Trempealeau Lakes Chair (20min + Questions)

1:50 – 2:20 Phytoplankton Response to Nitrogen Remediation in a Pool 14 Mississippi River Backwater – Ashley Johnson, Water Quality Component Specialist for the Iowa DNR Long Term Resource Monitoring Station on Pool 13 at Bellevue, IA (15-20min + Questions)

2:20 – 2:50 Understanding variation in ice phenology and under ice conditions across backwater lakes of Pools 4, 8 and 1 – Kathie Jo Jankowski, Research Ecologist with the U.S. Geological Survey (at the Upper Midwest Environmental Sciences Center) and Water Quality Component Lead for LTRM

2:55 Break (~10 min)

3:05 Working/Discussions Session

- Discuss Status Emerging contaminants resolution and list of chemicals of concern.
- Wisconsin Salt Wise
- Future topics
  - What should we discuss next time

4:10 Agency Updates:

Minnesota	Fish & Wildlife Service
Wisconsin	Army Corps
Iowa	USGS
Illinois	Others
Missouri	

<5:00 Adjourn

Quick Talks Recap:

The meeting had three great talks to start the meeting. The first talk discussed the Friends of Trempealeau Lakes organization and water quality issues in the Trempealeau Lakes. Bud Hammes introduced the Friends of Trempealeau Lakes, a nonprofit organization addressing these issues. He discussed the formation and objectives of the Friends of Trempealeau Lake organization, which aims to reduce nitrogen leaching and improve the lake's ecosystem. He highlighted the unique water system of the lakes, their current state, and the need for restoration efforts. Bud explained the Trempealeau terrace, a 30 square mile area of sand outwash, and its agricultural use, which contributes to nitrogen leaching. Bud also identified the primary source of groundwater nitrogen leaching as the farmland in the village of Trempealeau. He also mentioned working with few farms to impact leaching. Plans are made to meet key producers and discuss nitrogen optimization research. Bud also mentioned the collaboration with the Wisconsin DNR to seek funding for dredging Second Lake. There were great questions and discussion after this talk. The group also discussed the importance of water quality and the need for involvement in protecting the Mississippi River.

The second talk discussed phytoplankton and water quality in Pool 14 and was given by Ashley Johnson, a Water Quality Component Specialist for the Iowa DNR Long Term Resource Monitoring Station on Pool 13. Ashley presented her work on phytoplankton in a backwater on Pool 14 of the Mississippi River. She shared her findings on the elevated levels of nitrogen ammonia and the frequent fish kills and algal blooms. Ashley discussed her process of analyzing 137 samples from Savannah Bay and Schricker's Slough, using a sedimentation method. She noted that she initially aimed to analyze 100 individuals per sample but realized this might not be sufficient. Ashley also shared her progress in analyzing data from various sites and her findings on cyanobacteria and other plankton. Ashley expressed interest in increasing the project's scope by incorporating

biomass data and diversity indices. There were also great questions and discussion after this talk as well. The group discussed the potential relationship between discharge data and diatoms, and the possibility of looking at unionized ammonia data. Additionally, Ashley agreed to present her work again at the spring meeting.

The third talk discussed winter dynamics and ice data management. Kathie Jo Jankowski a research ecologist with the U.S. Geological Survey discussed the results of a project examining winter and overwintering dynamics in the upper Mississippi region. She raised questions about the collection and management of ice data, suggesting the possibility of consolidating methods. The project was a collaborative effort involving several field stations and individuals. Kathi Jo presented data showing a decrease in freezing degree days and ice thickness across different areas of the river, and highlighted the variation in ice dynamics within the river. Kathi Jo noted significant differences in ice phenology across lakes, and suggested that these differences could have implications for ice coverage duration and ice-off timing. She concluded that as winters change, understanding how these changes affect organisms in backwaters will be crucial. Additionally, ice cover loss has implications for water quality, recreation, safety, and wildlife. Kathi Jo discussed using satellite data like MODIS to monitor ice patterns and their correlation with geomorphology. There were also great questions and discussion after this talk as well. Scott suggested MODIS data could help detect ice formation for river users. Shawn and Kathi Jo noted snow depth affects oxygen levels and ice fishing seasons, which impacts local economies. Kathi Jo put a question to group about what the availability of ice data that the group might know off. Elizabeth said the CORP has some data on ice thickness at locks and dams. Kathi raised collecting ice quality metrics to improve safety. She and Shawn discussed challenges predicting ice strength over thickness.

Working/Discussion:

The WQTS used the working/discussions session to current status of the resolution from Emerging Contaminants Resolution to Contaminants of Concern Resolution. Dan and Shawn discussed the resolution language for a project involving a list of contaminants, agreeing to share it with state representatives for final sign-off and voting of the to 10 contaminants of concern. The group deliberated on the pathway forward for the contaminants list, considering whether to trim it down to 10 or keep it inclusive. The plan was will be to keep a top 10 list and periodic reassessment. An all-inclusive list would also be maintained and added to as new contaminants of concern are discovered. The team also discussed presenting the updated resolution and list in December.

Dan announced the Boards approval of partnership funding of $1000.00 with the Wisconsin Salt Wise Group.

Agency Updates

Minnesota:

- PCA is looking to set a standard for sulfate. They have been collecting sulfate data on the Mississippi in preparation of the standard. They will be collecting sampling into this fall.
- Minnesota is also putting significant time and money into the update of our Nutrient Reduction Strategy https://www.pca.state.mn.us/air-water-land-climate/reducing-nutrients-in-waters A lot of different people are involved in this update, 10 different organizations, several committees. Working on analyzing and summarizing all the data we have available over the last 10 years. Looking at what agricultural BMPs are most effective, and how we can best scale up these BMPs across the landscape and urban wastewater nutrient discharge. The draft updated NRS will be available for public comment summer 2025. MPCA will also be doing a big river water quality assessment in a couple of years, we are working to collect and compile the data now. As many of you have probably heard MN is also working on responding to the petition a number of groups submitted to the EPA regarding nit rate in drinking water. Part of our response to this is the development of the SE Minnesota Nitrate Strategies Collaborative Work group.
    - Members of that group include citizens, farmers, ag retailers, agency staff, and many more. the charge for this group is
        - Build a shared understanding of the challenges and opportunities of addressing nit rate pollution in southeastern Minnesota.
        - Deliberate and build consensus on ways to strengthen the long-term nit rate reduction strategies.
        - Develop recommendations for improving, prioritizing, and implementing strategies, including strengthening communication and engagement activities, policy or funding proposals, or collaborative strategies to accelerate prevent ion and mitigation activities.

Wisconsin:

- Field work happening on sediment and ground water in Trempealeau. This work is setting the ground work for future work here.
- Wittman Bottoms area work is coming in the future.
- Pigeon Island work is complete
- Emerging contaminant in Mayfly tissue project is progressing. Something of note is that neonics and other contaminants can be detected in the tissue.
- Backwater residence time study is nearly complete and a paper is coming soon.
- Wisconsin is hosting a neonic's forum in Madison on October 30.

Iowa:

- News from the central office, The Water Quality Monitoring and Assessment section is getting a new supervisor. Mark Moeller will be starting at the end of October.
- Pre-sampling for Pool 13 has been completed. Sensors have been set in the wing dams in preparation for the HREP

Illinois:

- There has been a good influx in new employees at the Illinois EPA.

- They are focusing on training and updating SOPs.
- Ill EPA has returned to pre-covid sampling protocols. They are officially up to 4 quarter sampling at all sites on the Mississippi.

Missouri:

- Implementation plan is moving forward on a project assessing an unmonitored reach of the river. They are encouraged sharing of data set ideas for that reach as the project moves forward. Additionally, new staff will be working on that project.

Fish and Wildlife Service:
No update provided.

USGS:
No update provided.

Army Corps of Engineers:

- Rock Island is working on getting time series and discrete data into a new database. The data will be available for access online. They are also looking to make the data available for pushing to WQX
- In preparation mode for the winter monitoring season.
- Good news from NESP. 4 WQ sondes have been purchased for post project monitoring at Starved Rock sites..

Others:
No update provided.