

Upper Mississippi River Basin Association Water Quality Task Force Meeting

January 28-29, 2020

Highlights and Action Items Summary

September 17-18, 2019 Highlights and Actions Summary

The UMRBA Water Quality Task Force (WQTF) approved the draft highlights and action items summary of its September 17-18, 2019 meeting as written.

Review of Past Meetings

October 28-29, 2019 UMRBA Board-WQEC Meeting

Lauren Salvato recalled the October 28-29, 2019 discussion among the UMRBA Board and WQEC regarding UMRBA's Planning Assistance to the States (PAS) agreement with the Corps to scope a long term planning effort to address sedimentation, flooding, and drought conditions on the Upper Mississippi River (UMR). UMRBA is seeking a Section 729 planning authority with the Corps to integrate a watershed context into solutions for managing the river.

The PAS is using the Systematic Development of Informed Consent (SDIC) approach to engage the wide variety of affected interests. UMRBA held six local conversations along the UMR in summer 2019. A main takeaway was that the public views the status quo of river management as unacceptable and that the public supports a new management approaches to ensure a resilient future. A report is being developed, named as the "Keys to the River 2020" report to 1) offer a suite of actions can be pursued now without additional study or planning and 2) outline a detailed proposal for creating a comprehensive, long-term strategy for reducing the consequences of future floods, drought, and sedimentation. UMRBA will want to seek input from the WQEC on the draft report.

At their joint October 2019 meeting, the Board and WQEC also discussed the proposal for a UMR WQ Improvement Act. Participants reviewed the draft legislative text and discussed how a Mississippi River Program Office would function and administer grant money. They agreed to include a cap on administrative costs and dedicate at least 70 percent to implementing conservation practices. Input was split as to whether the legislation should include both urban and agricultural nonpoint source pollution. UMRBA continues to work on communication and outreach.

USEPA Region 5 WQ Managers Meeting

Gregg Good explained that the December 3-5, 2019 meeting was the second annual gathering hosted by USEPA Region 5 to share information about states' activities. Some of the topics discussed were 2019 accomplishments, 2020 priorities, topics of particular interest (e.g., HABs and PFAS), budgets and staffing, and Section 106 projects. Technical discussion included diatom indices, headwater stream assessments, and quality assurance of biological data.

Illinois NLRS Partner Conference

Salvato reported that she attended the Illinois Nutrient Loss Reduction Strategy (NLRS) conference on December 3-4, 2019 in Springfield, Illinois. She presented on the WQ Improvement Act, which was well received by Illinois stakeholders. Questions were raised regarding the potential path for advancing the legislation, including its sponsorship.

Harmful Algal Blooms

February 3-4, 2020 HABs Workshop

Salvato asked whether states planned to attend the February 3-5, 2020 HABs workshop hosted by USEPA Regions 5, 7, and 8. UMRBA staff will be presenting on the UMRBA HABs Manual. Iowa, Minnesota, Missouri, and Wisconsin are planning to send representatives. Jason Daniels said USEPA is anticipating about 200 attendees. Remote connection will not be made available.

Minnesota Blue Algae Factsheets

Salvato referred to the agenda packet B1-11, which includes the State of Minnesota's algal bloom factsheets in four languages: English, Hmong, Somali, and Spanish. Pam Anderson is willing to share the translations, so reach out to her if you are interested.

Additional Discussion

Dan Kendall asked whether states had made any decisions related to USEPA's recommended recreational water quality criteria of 8 µg/L for microcystins and 15 µg/L for cylindrospermopsin. He said that Iowa has not made any decisions yet, but if they use USEPA's recommendations, they will have to change their field sampling protocols. Shawn Giblin asked whether Iowa is seeing anatoxin-a in its waterbodies, and added that the UMR has low concentrations in the samples collected by WIDNR. Kendall replied that they have not seen any detections at this time. Iowa DNR is currently engaged in a project with Iowa State University to screen for a presence or absence of anatoxin-a in lakes. Anderson said Minnesota is seeing anatoxin-a. Salvato asked whether there is any sort of pattern in the presence or absence of toxins. Anderson responded that it varies by state. For example, Ohio does not have anatoxin-a issues, but has cylindrospermopsin. North Dakota has been doing testing to see if they have patterns with bordering states. Anderson said researchers at either the University of Minnesota Duluth or the Science Museum of Minnesota are involved in a cylindrospermopsin study in lakes but has not seen many detections.

Nutrients

State Updates

Missouri – Justin Sherwood announced that the 2018 numeric nutrient criteria was approved by USEPA, concluding a multi-year effort for Missouri DNR staff to refine the science right and gain stakeholder support. The criteria include a framework that integrates nutrient parameters (total N and total P) and their response in lakes (algae/chl-a). The information may determine if a lake is trending towards impairment, which is defined as exceedances in 2 or more years in a 3-year period. In response to a question from Anderson, Hoke confirmed that the agency would need 3 years of data to make a determination. The criteria are applied towards the 2020 303(d) cycle and approximately 47 new waters qualify as impaired. Since going on public notice, an algal bloom occurred in a drinking water reservoir. Cyanobacteria counts exceed the threshold, so that reservoir will be added to the list as well. The Missouri Coalition for the Environment sued DNR alleging the criteria are arbitrary and capricious.

Minnesota – Anderson said that Minnesota PCA is nearly done with the nutrient reduction strategy (NRS) Progress report, which was delayed because PCA worked with USGS on data trends around the time of the federal 2019 shutdown. The trends in Minnesota’s three basins – Mississippi River, Great Lakes, and Lake Winnipeg – all show similar nutrient trends (i.e., increase in nitrogen, decrease in phosphorus). The 319 program has shifted to the subwatershed focus, HUC 10 or 12, so that projects can be closely maintained in the long term.

Minnesota has focused TMDL assessments and monitoring on the watershed scale to be more aligned and supportive of municipalities in their reporting. The program is called watershed restoration and protection strategies. The approach includes monitoring and collecting data, assessing the data, developing strategies, and conducting restoration and protection projects. The restoration projects are largely driven at the local level.

The Hypoxia Task Force (HTF) grant money went to the University of Minnesota to work on the modeling for nitrate limits. The model would allow input of what is going on at a plant and optimizing current practices (at no cost to the plant). The funding only partially covered the work, and PCA is seeking additional resources to complete the effort.

Wisconsin – Giblin said the 2017-2019 NRS progress update will be completed in spring 2020. The report highlights farmer-led watershed groups that promote BMPs and reduce nitrate groundwater contamination through initiatives such as well head protection. DNR is developing performance standards to reduce nitrate leeching. Finally, the state is using its HTF grant money to deploy a BMP tracking system.

Illinois– Good said there are two major pieces to Illinois NLRs that calculate the nutrients leaving the states. They are the loading calculations of Dr. Greg McIsaac and the USGS continuous monitoring network. The contract for the continuous monitoring network ends on September 30, 2020, and Illinois is in search of funding to prevent the gauges from being discontinued. Good said the gauges have been useful, especially when an algal bloom occurs. Gary Johnson said that the gauges are more than \$15,000 and he hopes that funders come through. USGS relies on partners to keep the gauges running.

Iowa –Kendall relayed the update provided by Adam Schnieders via email. He said that the nutrient reduction strategy update will be complete in November 2020. It will identify needs and gaps in nitrogen and phosphorus research. The 2018 impaired waters list is currently out for public comment. Point source (NPDES) permitting was wrapped up for 54 municipalities. Nonpoint source practices are being scaled up and implemented on the ground. That includes 30 newly constructed wetlands, with the goal of constructing 90 wetlands over the next 15 years. Iowa DNR is developing partnerships with restoration groups to increase the implementation of saturated buffers and bioreactors, and working with NRCS to determine new Farm Bill provisions. Finally, the HTF grant money went towards communication efforts.

NGRREC - Ted Kratschmer mentioned he will be at the HTF meeting in Washington D.C., February 3-4, 2020 and is working with the HTF coordinating committee to identify sentinel sites and calculate flow normalized trend analyses. There will be a dashboard on the organizations’ website, aimed to be complete by the end of 2020.

Salvato added that Kirsten Wallace will be joining the HTF meeting on behalf of the Association. UMRBA was invited to join the coordinating committee officially in winter 2020, and Salvato joined the December 2019 and January 2020 conference calls. The February 2020 meeting topics include meeting with the water subcommittee, NRS progress reports from each state, discussion on HTF metrics, and SERA-46 framework for NRS collaboration.

UMRBA – Salvato cited a 2019 USGS publication, “Network Controls on Mean Variance of Nitrate Loads from the Mississippi River to the Gulf of Mexico.” The main takeaways are that despite putting conservation practices on the ground, nitrate reduction is minimal. The authors pointed out that the Upper Mississippi River Basin drives large interannual variability, and that nitrate reductions were made at the sites with the greatest improvement potential – i.e., had high nitrate loads.

At the its joint October 2019 meeting, the UMRBA Board and WQEC directed UMRBA staff to plan for a workshop for the five states to get more in-depth about nutrient reduction strategy progress tracking. Salvato handed out a working scope for the potential workshop and described the objectives:

- Strengthen regional collaboration among individuals and organizations involved in nutrient reduction strategy development
- Learn how the UMR states track nutrient reduction progress and associated challenges
- Identify priorities and actionable items for states to pursue collaboratively

The workshop would be kept internal to state agencies, and potentially expanded to external partners at a later date. Salvato said she will keep the WQTF updated while she works with the WQEC to plan the agenda and topics. The workshop is tentatively planned to overlap with the July 22, 2020 WQEC-WQTF joint meeting. WQTF members agreed it would be helpful to spend more time discussing progress tracking and its associated challenges.

Presentations

Iowa’s Bioavailable Aluminum Standard

Dr. Katie Greenstein, Iowa DNR’s wasteload allocation coordinator and technology standard lead, presented on Iowa’s new aluminum standard. The existing standard is based off of USEPA’s 1988 criteria for total recoverable aluminum, which is not representative of Iowa’s ambient water chemistry. To develop Iowa’s aluminum standard, regional and temporal datasets were collected for dissolved organic carbon (DOC), hardness, and pH. The decision to move towards the bioavailability of aluminum (equals dissolved plus colloidal phases) is supported by a methodology developed at Oregon State University. The proposed statewide criteria are adjusted based on ecoregions: acute criterion = 2,500 µg/L based on 95 percent confidence intervals (CI) and the chronic criterion is 890 µg/L (within 95 percent CI). The criteria have cleared the Governor’s office and will soon enter the lawmaking process. Kendall said the new criteria’s impact on the UMR are two new impairments in CWA reaches 6 and 7.

In response to a question about data sources from Giblin, Kendall replied that Iowa primarily used its ambient monitoring data. Hoke commented that he impressed with the DOC data, and Greenstein emphasized that they had to make a concerted effort to collect additional data sources. In response to a question from Aaron Johnson, Greenstein explained that the 10th percentile is based off the collective data. The analysis first evaluated all the data together. Staff adjusted the analyses for areas when the additional data was available.

Missouri’s Water Quality Trading Clearinghouse

Salvato provided an overview of USEPA’s guidance of water quality trading. A memo released in February 2019 emphasized the use of and promoted a market-based mechanism for improving water quality. She cited agenda packet pages C1-3 which includes USEPA’s announcement regarding the HTF

grant money, \$100,000 per state, to help with the implementation of state nutrient reduction strategies. Missouri DNR agreed to give a presentation on the use of their grant money.

Sherwood said the nutrient trading program is still in the development phase. A trading program would support Missouri's NRS by providing alternate pathways for meeting compliance and creating market-based incentives for the implementation of conservation practices. The preferred style is a clearinghouse to keep trading simple and to start with credits for nutrients only. A third-party clearinghouse lends more credibility to the program. The anticipated outputs are 1) obtain values for the performance of agricultural BMPs implemented in Missouri, 2) provide tangible justification for DNR to establish pollution credit prices in Missouri, and 3) provide a scientific and data driven method and baseline for awarding credits to future BMPs. Sherwood said Missouri DNR hopes to do the work in-house.

In response to a question on references and cases studies from Salvato, Sherwood replied that DNR prefers to have references specific to Missouri and for that reason does not have any yet. A question posed to the entire group was which states have nutrient trading programs. Both Anderson and Giblin displayed links to their respective organization's website. Giblin added that trading in Wisconsin is starting to catch on, and the program includes practices like stream bank stabilization.

Illinois' Nutrient and Soil Trends

Dr. Tim Hodson described his research question: have nutrient and soil losses to Illinois rivers attenuated since federal and state efforts to implement BMPs began, and are they attenuating today? Billions of dollars have been put towards conservation efforts, but measuring the efficacy is challenging due to confounding variables like population change and economic trends. Hodson utilized Illinois EPA's ambient monitoring network data to take a 10-year and 40-year evaluation. He calculated flow normalized trends and distinguished changes that may be controllable by watershed management (CQTC) versus those by climate (QTC). For the 2008-2017 evaluation, the results were the following:

- TSS *likely* increased 20% (-7 to 54 confidence interval (CI))
- Nitrogen *likely* increased 10% (-1 to 19 CI)
- Phosphorus *likely* increased 12% (-2 to 28 CI)
- Increasing soil erosion
- Corn and soy bean production increased 18% and the population was stable

For the 1978-2017 evaluation, the results were the following:

- TSS *likely* decreased 22% (-63 to 32 CI)
- Nitrogen *likely* decreased 4% (-13 to 5 CI)
- Phosphorus *likely* increased 15% (-6 to 40 CI)
- Decreasing soil erosion
- Corn and soy bean production increased 86% and the population increased 18%

Hodson believes the largest investments were made prior to 2008-2017 and the benefits of those investments, in terms of nutrient reductions, have already been realized. He believes the low hanging fruit have been “captured,” so we may see diminishing returns with continued investments. Hodson said he would like to evaluate the data in more depth and is always looking for collaborators.

Good said Hodson’s report will be important in Illinois and he appreciated the 10-year and 40-year evaluation. He is concerned that stakeholders may latch on to the results of the 10-year evaluation, which reveals increases in phosphorus, nitrogen, and TSS. Salvato asked what takeaways resource managers can utilize, and Hodson replied that USGS’ role is to interpret the data but that data indicate that soil health and management have an impact. For point source pollution, the answers are less clear but may have to do with waste water treatment plant (WWTP) investments. Giblin asked whether Hodson’s methods would be detailed in his paper. Hodson recommended using the resources he used, from Choquette et al., 2019.

Clean Water Act (CWA) Program Updates

State Updates

Missouri – The 2020 303(d) list is on public notice until February 14, 2020 and will be submitted to USEPA Region 7 by the end of March 2020. The list will be uploaded by October 2020 and represents the second of Missouri’s lists added to ATTAINS. With the 2020 list underway, Hoke said that Missouri did not sign on to the USEPA’s 10-year vision and goals for 303(d).

The 2020 305(b) list is being assembled now. Missouri DNR staff asked that USEPA Region 7 provide the core elements of the report, so they can scale back from 200 pages.

New watershed models developed by DNR staff will be used to model any new TMDLs. Hoke said that to keep up and revise the 6-8 TMDLs from the consent decree, a public notice will be put out every 6 weeks so they can finish by the end of the 2020 calendar year.

Chris Wieberg is starting fee discussions on clean water and will be reaching out to key stakeholder groups.

Minnesota – The 2020 305(b) list is out for public comment. Anderson said PCA staff expect to have responses by April 1, 2020. The list includes sulfate and river nutrients. PCA staff expect some difficulties uploading the 2020 list to ATTAINS but hope to have it all resolved by the 2022 list.

Anderson said PCA trimmed their 305(b) report to 30-40 pages, and offered the report to Hoke as an example. There are TMDLs in progress for the Upper Mississippi River watershed including the Upper Iowa and the Upper Watonwan. The Minnesota River Basin TSS TMDL was recently submitted. The Lake Pepin TMDL, 15 years in the making, held its first round of public comment. And finally, 44 of the 80 watershed plans have been approved, and 8 are pending.

Wisconsin – Ashley Beranek said the Mississippi River 303(d) assessments are complete and will be submitted through ATTAINS. DNR staff are working on responses to public comments, with one pending legal action. The 305(b) report is currently being drafted and will be scaled back to be able to upload to ATTAINS.

Giblin said the Wisconsin River TMDL was approved. The TMDL represents 14 percent of the state, and calls for implementing no-till practice and working with county conservation districts and farmer-led groups to implement BMPs.

Illinois – Good said the 2018 303(d) report has not yet been submitted to ATTAINs due to the learning curve for new staff and the challenges associated with ATTAINs. As a reminder, Illinois has not had formally approved reports since 2008. Illinois EPA is working with USEPA Region 5 to figure out a solution and move forward. The 2020 303(d) lists have been started but the report has not yet been drafted.

Iowa – Kendall said that Iowa DNR staff are going through public comments now for the 2018 impaired waters listing. They are planning to submit data to ATTAINs. Staff have begun working on the 2020 assessment and hope to be done by the end of calendar year 2020.

Emerging Issues

PFAS Updates

PFAS Risk Communication

Salvato pointed to Attachment D of the agenda packet which includes the PFAS Risk Communications Hub, with relevant resources, factsheets, and case studies. The site was developed by the Environmental Research Institute of the States, a subsidiary of the Environmental Council of the States (ECOS), which focuses on educational and research issues.

PFAS Caucus

Salvato provided an update from the January 22, 2020 ECOS-PFAS caucus conference call. The focus was on data management. USEPA has nation-wide PFAS data stored on echo.epa.gov. In addition to data from the unregulated contaminant monitoring rule, states submitted their PFAS data for multiple media (e.g., water and sediment). The site will also have a trend analysis and visualization tool.

Microplastics

Salvato recalled that at the September 17-18, 2019 WQTF meeting, participants discussed exploring additional emerging contaminants such as pharmaceuticals and microplastics. While attending the December 3-4, 2019 Illinois NLRs conference, Salvato connected with members of the League of Women Voters who told her about the microplastics study led by John Scott and Sam Panno.

John Scott provided background on plastic production, which has grown exponentially since the 1950's. The definition of a microplastic is any material less than 5 millimeters in diameter. There are two categories of microplastics: primary are intentionally made (e.g., microbeads) and secondary are broken down macroplastics. Microplastics are found nearly everywhere you look, in part due to the persistence and bioaccumulative nature of the additives. Some additives are known to be endocrine disruptors and absorb environmental pollutants. The research and monitoring of microplastics is relatively recent and studies are coming online with different methods of measuring the prevalence of the microplastics.

The motivation for the study was due to the lack of studies on microplastics in groundwater. Panno and Scott analyzed microplastics and pharmaceuticals and personal care products (PCPPs) in karst formations in the driftless areas of northwest Illinois and sinkhole areas of southwest Illinois. Karsts are particularly vulnerable to contaminants due to the interconnectedness and porosity of rock formations in the subsurface. Panno said the results were that PCPPs were found in groundwater in 14 of 15 sites. Microplastics were found within all of the karst springs. A chemical composition analysis of the presence of PCPPs and enteric bacteria indicated that the source of microplastics is septic effluent.

In response to a question from Salvato about the microplastic methodology, Scott replied that Loyola's methodology was developed in-house but is similar in nature to NOAA's. Giblin asked about the chemical analyses for microplastics. Scott stated the Illinois Sustainable Technology Center (ISTC) laboratory has a unique ability to do a polymer analysis, which is both labor intensive and utilizes infrared light. Salvato requested additional details on the Lake Muskegon study that Scott referenced. Scott deployed devices in Lake Muskegon to collect plastics. Periodically they extract the microplastics, characterize, and analyze the age.

Good asked the other WQTF members whether there is microplastics monitoring in their states. Anderson said there is legislative interest and funding was awarded to the Minnesota Department of Health (MDH). MDH is having discussions with USGS, MPCA and universities regarding the methodology to sample waterbodies, but MDH may coordinate sampling contaminants of emerging concerns with the 2020 USEPA National Aquatic Resource Surveys. Kendall replied that Iowa State conducted a study, and he will check back on their methodology. Hoke mentioned that Missouri Riverkeepers have microplastics data and DNR supports its citizen scientists. Missouri DNR would need a funding source to start collecting data. Scott said he is in discussion with the Missouri Foundation of Health regarding sampling. Karen Hagerty said the UMRR Cape Girardeau field station found plastics in their zooplankton samples, and the Illinois Natural History Survey has 10 years of fish larvae preserved that may be analyzed for the presence of microplastics.

Anderson said that WWTPs ask MNPCA what to do about microplastics. Scott suggested that a major behavior change is needed with regard to single-use plastic. It is ironic that plastic is designed for short-term uses but in the environment, it lasts for centuries. Good added that State of Illinois agencies are looking at ways to eliminate single use plastic from buildings. Scott, in response to a question from Good, described the ISTC as a department housed at the University of Illinois that interfaces between academic sciences and business.

Chloride

New Hampshire's Limited Liability

Salvato followed up on the discussion during the September 17-18, 2019 WQTF meeting on how the State of New Hampshire was able to pass limited liability. She reached out to Ted Diers with the Watershed Management Bureau of the NH Department of Environmental Services. Diers said limited liability took four sessions to pass. The issue arose when the state began planning for the expansion of I-93, a major artery into Boston, MA. Because of the chloride impairments, only three lanes were approved. Four lane expansion was viable if the state implemented BMPs. The state also wanted to allow for developments along the I-93 corridor.

Limited liability failed so many times because Democrats dislike tort reform and Republicans dislike the expansion of government regulation. A NH State Senator understood the need for limited liability in order to advance the development, so he championed the effort. The state senator was on the finance committee and added limited liability in the state's budget. That was one way to pass, or the other was for the Governor to sign limited liability into law.

Diers said you really need a champion at the legislature but should also be working with municipalities, who have an easier time implementing BMPs. He added that the state is experiencing more ice storms, which is a new challenge associated with road salt usage. He requested to be a part of any future regional or national conversations about chloride.

Good requested a review of what limited liability does. Anderson responded that it is a protection for private contractors if a slip and falls lawsuit occurs while implementing road salt BMPs. The private contract must take a smart salt training course and report salt usage. She added that New Hampshire uses brine but is not sure how frequently and at what levels. Brine works well for pre-treatment but salt is still needed after ice buildup. In response to a question from Good, Anderson said that private companies applying salt to private parking lots account for a big part of salt usage. In the Twin Cities Metro Area, county and state agencies have gone through the training, but private applicators do not have the incentive to reduce salt application. Giblin said there are incentives to apply salt rather than plow because less labor is required. Ettinger said he is interested in chloride as it is believed to increase cyanobacteria. He will share the paper with the WQTF.

Action Items

- **Ettinger will send resources on the relationship between chloride and cyanobacteria**

UMR Hazardous Spills

Mark Ellis, the Mapping and Spills Program Director, described his roles and responsibilities for the Association. The Oil Pollution Act was a 1990 amendment to the CWA. UMRBA helps USEPA meet the requirements of the CWA by actions such as spill prevention, control, and countermeasure plans. WQTF members may be involved in spill response by monitoring the natural resources affected. For example, a spill in Pool 11 occurred near Ball Town, IA in which eight tank cars derailed, three of which ended up in the Mississippi River. An estimated 55,000 gallons of ethanol were released or burned. Both Iowa DNR and Wisconsin DNR responded by sampling water and fish tissue. Illinois EPA was notified as a downstream state. The mobilization of organizations and agencies was enhanced with the development of spill response plans, which consist of site-specific response strategies and supporting materials to aid decision makers. The goal is to reduce the decision-making time during a response and to cut down the time from gathering personnel to getting out in the field. Ellis demonstrated a spill response plan developed for Pool 20 and the materials provided by the Inland Sensitivity Atlas.

Hazardous spills coordination is another aspect of Ellis' work. Each state has a hazard mitigation plan to reduce vulnerabilities to hazards by identifying risk and sensitivities. The coordinating body comprises five states, federal partners, and local entities. The coordination group serves as a forum for interagency cooperation, regional coordination for spill responders, and supports exercises and training activities. The group produced a resource manual that identifies vulnerable facility location (e.g., PWS intakes).

Ettinger asked whether the Pipeline and Hazardous Materials Safety Administration is involved in UMRBA's work, and Ellis responded that they provide information but are not involved in local level plans. Ellis added that pipeline crossings are a risk for potential releases. Giblin suggested adding a table on mean velocity at USGS gauges, to better understand transport of the hazardous material. He added that it was barrier when Wisconsin DNR responded to monitor the Ball Town spill. The ethanol was no longer in the area sampled. Good asked who is ultimately in charge if a spill occurs, for example, near Dubuque. Ellis said that generally the Fire Chief is the first to respond to the initial incident and would be considered the commander. If responding to the spill exceeds local capacity to respond effectively, then command may scale up or expand to include additional agencies (e.g., responsible party, state or federal responders). Resource trustees may take part in a response as well as support a Natural Resources Damage Assessment, a separate process that can lead to work to restore the damaged areas to previous conditions.

Interstate Water Quality Monitoring

Reaches 8-9 Pilot

Salvato announced that the Reaches 8-9 pilot is underway. In December 2019, Illinois EPA sampled all three fixed sites at L&D 17, 19, and 21. Three public water suppliers collected samples: Keokuk, Warsaw, and Quincy. Warsaw and Quincy are involved in PFAS sampling. Overall sampling went relatively smoothly, and the few issues that occurred are being resolved for the next round of sampling beginning in early February 2020. The Reaches 8-9 Planning Committee will meet in person in late April 2020 to prepare for probabilistic sampling. [Note: The Reaches 8-9 pilot sampling was postponed until October 1, 2020 due to COVID-19].

Salvato said she attended the January 14-16, 2020 UMRR Science Meeting and participated in the water quality and eutrophication workgroup. One of the proposals was on microplastics sampling to collect a baseline of data for the Upper Mississippi River. She approached the Reaches 8-9 planning committee to see if they were interested in adding microplastics into the sampling protocol. The committee was amenable if the budget allowed and open to future discussions. Kendall said Iowa State developed a microplastics sampling protocol and reached out to them to see if they would share their resources.

Salvato suggested a discussion at the upcoming WQEC-WQTF meeting on updates to the UMR Recommended Monitoring Plan. In response to a question from Good, Salvato said the purpose would be to have initial discussions and discuss the following topics:

- Should we eliminate tributary networks since it has not been included in two pilots? This is also the case for probabilistic metals monitoring.
- How would laboratory analysis work for full implementation of the Monitoring Plan? Is using one laboratory still feasible when shipping costs are significant?
- Should we incorporate a use assessment for emerging contaminants?

Giblin said that the Great Lakes has a small network of sites to monitor for emerging contaminants and uses tools to combine water data and toxin analysis.

Administrative Items

Future Meetings

- The next WQEC-WQTF joint meeting will be convened virtually on July 22, 2020.

Report: How Clean is the River? Update

Ted Kratschmer explained NGRREC's role with the Hypoxia Task Force (HTF) trends working group. The goal of the working group is to calculate nutrient trends of the Mississippi River Basin to have a unified information among HTF states. NGRREC is currently working on a list of criteria to filter out available sites, and the focus is watersheds that lie within a state's boundary. The end product will be an automated dashboard on the Great Lakes to Gulf website.

Salvato reviewed the recommendations to date of the HTF trends working group.

- Focus on both concentration and loading annually and in the spring if the method allows
- Utilize multiple trend periods: the HTF baseline (1985-1996), and the last 10, 20 and 30 years
- Include streamflow in trend analyses
- Include both significance and uncertainty
- Utilize the parametric test

In response to a question from Salvato, WQTF agreed that the HTF working group and other efforts were not duplicates, and the *How Clean is the River?* report update should continue. While there are a few differences between the two projects, the chosen method (WRTDS) parametric test is the same. NGRREC and the WQTF can work together on the R code, for example.

WQTF members also agreed to look at other ongoing efforts such as UMRR's status and trends report to see if the results are comparable.

Action Items

- **Minnesota PCA share R trend analysis codes with Missouri DNR**
- **Missouri DNR staff combine datasets to evaluate which sites will be retained in the trend analysis (Google Drive folder linked [here](#))**
- **UMRBA staff will plot sites on ArcGIS online following dataset evaluation by Missouri DNR staff**
- **UMRBA will schedule a call with Minnesota PCA, Missouri DNR, and NGRREC to review codes, selected sites, and discuss any remaining questions**

Attendance

Anna Belyaeva*	Illinois Environmental Protection Agency
Gregg Good	Illinois Environmental Protection Agency
Nicole Vidales	Illinois Environmental Protection Agency
Roger Bruner*	Iowa Department of Natural Resources
Katie Greenstein	Iowa Department of Natural Resources
Daniel Kendall	Iowa Department of Natural Resources
Pam Anderson	Minnesota Pollution Control Agency
Allison Gamble*	Minnesota Pollution Control Agency
James Jahnz*	Minnesota Pollution Control Agency
John Hoke	Missouri Department of Natural Resources
Megan Schmieder*	Missouri Department of Natural Resources
Justin Sherwood*	Missouri Department of Natural Resources
Robert Voss*	Missouri Department of Natural Resources
Coreen Fallat*	Wisconsin Department of Agriculture and Consumer Protection
Ashley Beranek*	Wisconsin Department of Natural Resources
Shawn Giblin	Wisconsin Department of Natural Resources
Karen Hagerty*	U.S. Army Corps of Engineers, Rock Island District
Nicole Manasco*	U.S. Army Corps of Engineers, Rock Island District
Micah Bennett*	U.S. Environmental Protection Agency, Region 5
Matt Gluckman*	U.S. Environmental Protection Agency, Region 5
Aaron Johnson*	U.S. Environmental Protection Agency, Region 5
Sydney Weiss *	U.S. Environmental Protection Agency, Region 5
Jason Daniels*	U.S. Environmental Protection Agency, Region 7
Aleshia Kenney*	U.S. Fish and Wildlife Service, Region 3
Tim Hodson*	U.S. Geological Survey, Central Midwest Water Science Center
Gary Johnson	U.S. Geological Survey, Central Midwest Water Science Center
KathiJo Jankowski*	U.S. Geological Survey, Upper Midwest Environmental Science Center
Ted Kratschmer*	National Great Rivers Research and Education Center
Albert Ettinger*	Mississippi River Collaborative and Sierra Club
Sam Panno*	Illinois State Geological Survey
John Scott*	University of Illinois, ISTC
Kathy Hawes*	Tennessee Clean Water Network
Mark Ellis	Upper Mississippi River Basin Association
Lauren Salvato	Upper Mississippi River Basin Association
Kirsten Wallace*	Upper Mississippi River Basin Association

**Remotely connected*