

Zach Zimmerman

From: Kessler, Katrina (MPCA) <katrina.kessler@state.mn.us>
Sent: Monday, February 24, 2020 4:32 PM
To: Jean Wagenius
Cc: Gauthier, Greta (MPCA); Neuschler, Catherine (MPCA)
Subject: Follow up on St. Louis River Mercury TMDL

Good afternoon Representative Wagenius –

I am following up on the February 13 House Energy and Climate Finance and Policy Division meeting where Nancy Schuldt highlighted previous work between state, federal and Tribal partners to develop a mercury total maximum daily load (TMDL) for the St. Louis River (SLR). As I conveyed following the hearing, the Minnesota Pollution Control Agency is very interested in coordinating across jurisdictions to reinvigorate that effort, particularly now that some additional data has been collected. I wanted to provide you a brief history of the work to date along with a high level assessment of what steps remain.

Minnesota's Statewide Mercury TMDL set caps on water and air sources and established an implementation plan. The reductions called for in that TMDL will benefit all waters across the state. However, as mentioned in the February 13 hearing, some waters have exceptionally high mercury concentrations and require mercury reductions beyond those called for in the statewide plan. The SLR is one of them.

In January 2011, US EPA Region 5 hired a contractor to develop mercury models in support of a TMDL for the Upper SLR estuary and upstream. Unfortunately that contractor chose a model that MPCA scientists did not believe could accurately model methylmercury, a concern that was shared by seven expert peer reviewers and was expressed repeatedly to EPA over multiple years. Ultimately the MPCA could not support a model that we had already said we thought was technically deficient.

While that effort did not result in a TMDL it did generate a "SLR TMDL Road map" for next steps which is still relevant. Since that time (2013) there has been a lack of federal funding to complete all of the identified next steps. In the absence of a federally led comprehensive effort, US EPA, state and Tribal field work has continued opportunistically as funding permitted to collect data needed to assess and research mercury fate and transport. We are also leveraging information gathered during work in the SLR area of concern. Additional data that has been gathered includes:

- 2013: MPCA contract with DNR to conduct a mercury loading study in the SLR
- 2015: EPA Region 5 contractor RTI collected water and sediment mercury data
- 2017: Joel Hoffman (EPA, Great Lakes Toxicology and Ecosystems division) coordinated mercury study of SLR Estuary and Bad River (data analysis is ongoing)
- 2015- 2017: MPCA, UMD, and UW-LaCrosse LCCMR project to investigate processes that influence methylmercury levels in five rivers with high mercury concentrations in fish (manuscripts in development)

This data will be helpful in calibrating a future model to support a SLR TMDL. Based on the SLR Road Map there are a number of key steps remaining, such as:

- An ongoing load monitoring study (conducted by USGS and funded by the Great Lakes Restoration Initiative) to understand the effect of plugged ditched peatlands – a potential practice to reduce mercury – in the Whiteface River, a tributary of SLR with the highest mercury load in 2013. This project started in 2019 and continues through 2020. MPCA and Fond du Lac are on the technical advisory committee for this work.
- A need to integrate the findings from the above described studies completed from 2015 – 2017, along with a 2006 study by Fond du Lac Band of Lake Superior Chippewa and MDNR.

- An update of mercury fish tissue concentrations and trends, which was last completed in 2013 and MPCA plans to update with 2017 data.
- A review of the SLR TMDL for conventional pollutants, completed by MPCA in September 2018, to evaluate the potential of practices in that TMDL, such as reducing TSS, to also reduce mercury.

The MPCA estimates roughly that the above will cost approximately \$1M to complete. This is comparable with what EPA spent on developing the preliminary models mentioned previously. Assuming funding is available in 2021, MPCA estimates that a SLR mercury TMDL could be done in coordination with federal, state and tribal partners by 2024 for approval by EPA in 2025.

We are happy to discuss the above if that would be helpful.

Kind regards,
Katrina

Katrina Kessler, P.E. | Assistant Commissioner for Water Policy and Agriculture

Minnesota Pollution Control Agency (MPCA)

520 Lafayette Road | St. Paul, MN | 55155

Office Phone: (651) 757-2303

katrina.kessler@state.mn.us | www.pca.state.mn.us



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