

# **Poplar River TMDL Technical Advisory Committee (TAC) Draft Meeting Minutes**

**Date:** August 27, 2007

**In attendance:**

Dave Stark – Cook County SWCD  
Keith Anderson – Cook County SWCD  
Wayne Seidel – Cook and Lake County SWCD  
Don Goodell- Cook County Water Advisory Committee  
Clyde Hanson – Sierra Club  
Bruce Martinson-Cook County Commissioner  
Curt Sparks – North American Wetland Engineering  
Jay Michels – Emmons and Oliver Resources  
Charles Skinner – Poplar River Management Board and Lutsen Mountains  
Kirsten Swenson – MPCA  
Tom Schaub – MPCA  
Karen Evens – MPCA  
Greg Johnson – MPCA  
Dan Breneman – NRRI  
Jerry Henneck – NRRI  
Elaine Ruzycki - NRRI

Also see Greg Johnson's Powerpoint and handouts.

Notes compiled by MPCA and SWCD staff.

Dave Stark convened the meeting at 2 pm. Introductions were given and the agenda, sign up list, public comment form and acronyms were distributed.

Dave suggested that people in attendance fill out comment forms and also will be contacted during the official comment period. Dave noted that minutes from the initial public meeting, a summarized list of questions and answers and the Data Assessment Summary have been posted on the Lake Superior Streams website. NRRI will be completing Biological Monitoring fieldwork this week and the QAPP will be posted soon.

Dave asked the group for feedback on meetings, radio interviews and to contact him if there were additional ideas for education or keeping parties apprised.

Karen distributed a revised schedule for the TMDL.

Karen distributed a summary of the EPA contractors' tasks.

Karen described that Tasks 1-4 have been completed thus far.

The source assessment document is currently a rough outline of what will be incorporated into the TMDL document. The physical channel assessment is the next report due and the fieldwork was completed in July. The WEPP/GIS model is being updated. Mid

November is the revised date for a Preliminary Draft TMDL, but is subject to change. Karen asked for comments to be submitted on timeline or any other concerns on the TMDL to Dave. Summaries of future reports will be posted on the Lake Superior Streams web site. Dave mentioned that if the TAC was interested in having these preliminary reports sent out to the public, that they should share that comment with the SWCD, MPCA and/or EPA.

Karen reviewed the original study questions from the QAPP.

Question: What would MPCA like from the TAC?

Answer: Karen mentioned that the EPA contractor is under contract until March 2008 and if there are any major omissions, errors or comments on the documents released to date that the contractor and EPA want to hear about them as soon as possible.

Comment: Is anyone aware of when the next fisheries report is due from DNR? Aquatic life issues are important as well as which areas of the stream have supported this use in the past. No one present was sure of the status of the next report. Jay Michels mentioned he would be meeting with MDNR staff in October.

Question: Is there any opportunity to review the WEPP model, input files and calibration? TAC would like more information on how the model is being setup.

Answer: We will pass a copy of these meeting minutes along to the EPA contractor and you can also submit this comment. If you comment during the formal period the model will have been completed. Karen and Tom described the EPA contract as a grant and the specific timelines and turnarounds on the document.

Comment: Concern about the process going well beyond the intent of the Clean Water Act. Specifically, the questions about the 10 NTU standard and whether the river can be brought down to that level, even under natural conditions with or without manmade influences. Felt that this has been assumed throughout the process and is costly and maybe not achievable or that the correct information may not have been gathered to answer the question. In favor of complying with the Clean Water Act, but not in making the river cleaner than nature intended. He did not feel that this basic question has been addressed.

Greg provided a short summary of the Clean Water Act and MN Rules and expressed that he thought the way that the contract was written would be successful in getting the information to answer some of these concerns. Greg explained that the water quality standards includes both human and natural or background levels of pollution. Acknowledged that the standards are not perfect, but that there has been an increasing interest in including impacts from both point and non-point sources of pollution. Greg explained that the water quality standard applies across the board – so to speak, not by source of pollutant. He described the TMDL equation and defined load allocation as human caused loading and natural or background loading. MN Rules have some procedures for this with site-specific standard application. These set out a process for documenting conditions and identifying a standard that is attainable and meets use

support goals. This has not been done a lot in the non-point source arena. Most waters are defined qualitatively with narrative descriptions on use support. Benefit of TMDL is that it is collecting data from many sources for analysis, the land use/land cover portion enhanced with the WEPP, physical channel and biologic data – more of a watershed approach than just one discipline. The stakeholder process is part of answering this question and it will take some time. There are other projects that are addressing this issue as well e.g. The Red River Basin and Minnesota River.

Comment/Question: Duration and intensity should be looked at rather than just one value. Should the turbidity standard be applied statewide or should they be broken down by geographic location or by watershed? How many parameters go into listing the impairment for turbidity? Karen described the Load Duration Curve (LDC) and that the stream does meet the standard at some low flows.

Comment: If the TMDL study is well designed we'll learn more at the end of process and spend tax dollars more efficiently in the future. Hopefully the natural background information will be better understood after the process and less money will have to be spent in the future.

Question: When should we send our message regarding our concerns about standards being an issue and natural conditions?

Answer: Greg mentioned that he would stay after the meeting to make sure that a strategy was devised to make sure that this concern is brought to EPA. Both Dave and Greg followed up after the meeting.

Comment/Question: Is the 10 NTU the right value to use? We may find we need to take a watershed-by-watershed approach on this issue.

Greg: Watershed science is still evolving and developing. It is MPCA's goal and design of this study to bring information in with more information than just turbidity.

At 3 pm the review of the data summary support began.

Greg described the ambient water quality monitoring, north shore load study and indicated that this included approximately six streams and more storm based sampling. He reviewed the executive summary, highlights of report, data tables, graphs, Pigeon River data and use of 30-year dataset.

Comment/Question: Milestone sampling seemed to indicate that water quality was improving. Has this been looked at? Were there enough samples taken to have any lessons learned?

Answer: MPCA and RTI group have looked at this as a long-term trend analysis. Water quality has probably improved a bit since 1973, includes randomness and probably under reports higher flow values.

Comment: The acres or water volume for snowmaking is not correct per other data from Lutsen Mtn staff. 60 acres from WEPP document is incorrect and snowmaking area is much larger. Gallons of water withdrawal are correct from the MDNR document. Commenter felt strongly that the data was misrepresentative of actual conditions.

Clarification: Karen noted that the numbers utilized were from the source documents provided for the AUAR environmental review process and that MPCA would pass along any corrected information that Lutsen staff can provide to provide a more accurate sense of the snowmaking operation. Karen also noted that the Data Assessment document mentioned the need for additional information on the snowmaking operation.

Greg mentioned that administratively the report has been approved by EPA and will not be corrected in the data assessment summary, but will be corrected in the final TMDL. Curt Sparks mentioned that this was a small portion of the overall river flow.

Comment: The EPA and RTI team should factor in the snow loading into the peak flows of the watershed and the hydrology and hydraulics of the stream channel. As a technical advisory committee that should be taken to the RTI team as a potential hole in the report.

Tom Rider will provide information that they have developed for their snowmaking mgmt – locations / acres of all runs and problems with inefficiencies in snowmaking. Comment that this should be factored into the modeling.

Comment: Regarding NTU in a table of NTU, NTRU, FNU comparisons and how MPCA applies the “correct” standard. Greg commented that a lot of work is being done on this and it is evolving.

Dan Breneman from NRRI provided a brief overview of biological work to be completed. Procedures and sample locations discussed and available for review in QAPP document on website. Sampling for inverts, periphyton and habitat/substrate evaluation. Embeddedness sampled somewhat but more intensive data from other sources will be considered. Dan mentioned drought year issues and changes in biomass.

Comment: The biology is an important element as to whether the stream is identified as a trout stream. Invertebrate life may or may not be present and influence abundance of trout. Commenter expressed a desire for biological data and Onion River reference or comparative data be included as part of the process. The biology and the uses are very important to this TMDL. Some portions of the river do not support and have not supported trout in the past.

Question: How is the biological study going to fit in with the TMDL?

Response: It usually takes about a year to do the fieldwork, process the data and provide a report. Under the current schedule it won't be completed before the draft TMDL.

Question: How will you be using the invertebrate data?

Answer: Dan - Typically invertebrate data is looked at for abundance and lumped together with similar communities. We selected 4 sites each having a 150-meter reaches with similar riparian conditions. We look at relationships between the communities in different areas of the stream and compare them with other streams – with caution. Turbidity influences the ability of macroinvertebrates, like trout to spawn. If the habitat is filled with sediment they will migrate to other locations to search out a suitable habitat.

Question: Do you have any control stream without human activity and an acceptable turbidity level to compare to?

Answer: Dan - We can't compare time and temperature exactly to another stream but we make observations and compare to other streams with archived data and look at the comparisons of upstream vs. downstream conditions in the stream.

Comment: Dave - This TMDL is attempting to incorporate additional sources of information on macroinvertebrates and geomorphology to broaden the discussion on impaired streams.

Question: What are you seeing in north shore streams in terms of biology? Are you seeing a diversity that you would expect?

Answer: Dan - NRRI has not collected data on the Poplar River. With caution you can compare to other rivers. You must take into consideration the differences in the watersheds, geology etc.

Question: Is there any way to gauge if the macroinvertebrates are dying due to high turbidity?

Answer: Dan – Typically invertebrates are used to gauge stream health as indicators as they influence the fish that often get more attention. You can look at upstream or downstream changes. Sampling sub basins can be done to identify areas that may be impacting the community. You can also look at diversity and some species are more tolerant of changes.

Question: Will embeddedness be completed as part of the Biological Monitoring?

Answer: Dan and Greg. Not to the extent that a hydrologist would do it. This is being completed more with the physical channel assessment. NRRI will take a crude look at the percent embeddedness and other factors in the habitat analysis. We will get a good snapshot in time. We will get biomass data and can compare that to some data from Anne Hershey and Andy Wold that has been collected over the last 10 years, but they did not sample the Poplar, but maybe the EPA did

Question: Does higher turbidity effect life spans or reproduction of invertebrates?

Answer: Greg – MPCA staff are looking at this and developing more specific water quality standards with these questions in mind (macroinvertebrates, multiple stressors).

At the present time, macroinvertebrate data is not defined in terms of its' connection to water quality standards.

Dan – Couldn't say for sure that turbidity itself is a reason for mortality. He noted that invertebrates have evolved with some levels of sediment/erosion. Assuming that there is sediment it can effect the gills and respiration and causes a stress to the organism whether a fish or a macroinvertebrate.

The meeting adjourned at 4 PM

The next Poplar River Management Board (PRMB) meeting was scheduled for Oct 22, 2007.