

Regarding request for public informational meeting: MPCA is hosting/conducting a public informational meeting on May 6, 2020 from 10 AM to 12 PM. This informational meeting will include coverage of MS4 wasteload allocation derivation details, discussion of links between the wasteload allocations and MS4 permits and time for questions.

Responses to questions included below:

1. The Report included this sentence: "The Lake Pepin model represented a 20% reduction in the MS4 load from the Twin Cities Metropolitan Area." This is a confusing sentence. One would imagine that a number of different scenarios were run using the model and it is difficult to understand the use of the word "represented" in this context.

This is how the model represented MS4 loadings: MS4 loadings were included in loadings from the major basins at the boundary conditions (Lock and Dam 1, Minnesota River mouth, St. Croix River mouth, etc.). [The Lake Pepin model did not simulate individual MS4 loads.](#) One exception was the "direct drainage" from the Twin Cities metro area below Lock and Dam 1. For this area, a loading rate was estimated based on a Kloiber paper/report (Kloiber, S., 2006, "Estimating Nonpoint Source Pollution for the Twin Cities Metropolitan Area Using Landscape Variables. Water, Air and Soil Pollution"). The estimated TP load from this area was approximately 30 metric tons per year over 372 square miles, which converts to 0.278 lbs/ac/yr. This estimated MS4 loading rate from the TCMA below Lock and Dam 1 was reduced by 20% in the model scenario to meet water quality standards. The 20% reduction was assumed to be reasonable for MS4 areas for modeling purposes. See excerpt from page 62 of the Kloiber modeling report.

- a. Did the model scenario showing Lake Pepin meeting WQS include the 20% reduction in the MS4 load from the TCMA? [Yes.](#)
 - b. If yes, why was the 20% reduction not used, in favor of a 30% reduction for all MS4 permittees? [The reference to a 30% reduction in the TMDL report is only putting the actual TMDL MS4 wasteload allocation \(WLA\) in context with respect to the 0.5 lb/ac/yr estimate from Appendix J of the Statewide Phosphorus Assessment Report. In other words, if MS4s were discharging at 0.5 lb/ac/yr, as estimated and presented in Appendix J of the Statewide Phosphorus Assessment Report, then a 30% reduction would be needed to achieve the TMDL MS4 WLA of 0.35 lb/ac/yr. The TMDL MS4 WLA is set as a loading rate of 0.35 lb/ac/yr. It is not set as a percent reduction from baseline or existing loads.](#)
2. The Report included this sentence: "Tributary monitoring conducted by MCES shows that many MS4 areas are already likely meeting 0.35 lb/acre/year as a 10-year average (Metropolitan Council 2014)."
 - a. Do you have a copy of the report and/or dataset that is the basis for this sentence? If yes, would you please share it with us? [See data summary pasted below. The dotted line indicates the export goal used to calculate the Lake Pepin and Mississippi River MS4 wasteload allocations](#)
 - b. Would this data be sufficient to demonstrate that some cities are in compliance with the target of 0.35 lbs/acre/year? If yes, which cities? [The data serve to confirm that the export coefficient on which the wasteload allocations are based is a reasonable goal for MS4 cities.](#)
 - c. Is there newer data from Met Council? [Met Council provided \(4/27/20\) the following update regarding the data at sites depicted in the figure below:](#)

For the sites in that plot, we have TP loads through the following years:

Bassett: 2018 (only TSS and CI were requested for 2019 but we could run TP loads)

Battle: 2015

Minnehaha: 2015

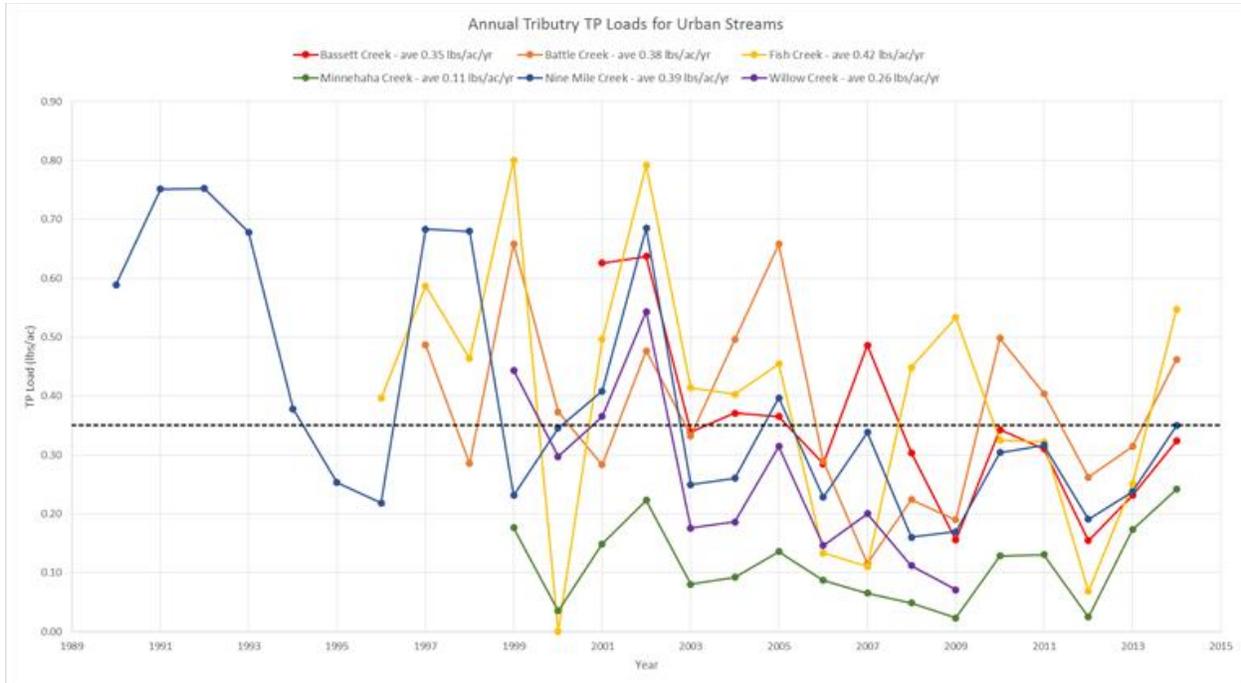
Nine Mile: 2015

Willow: 2009

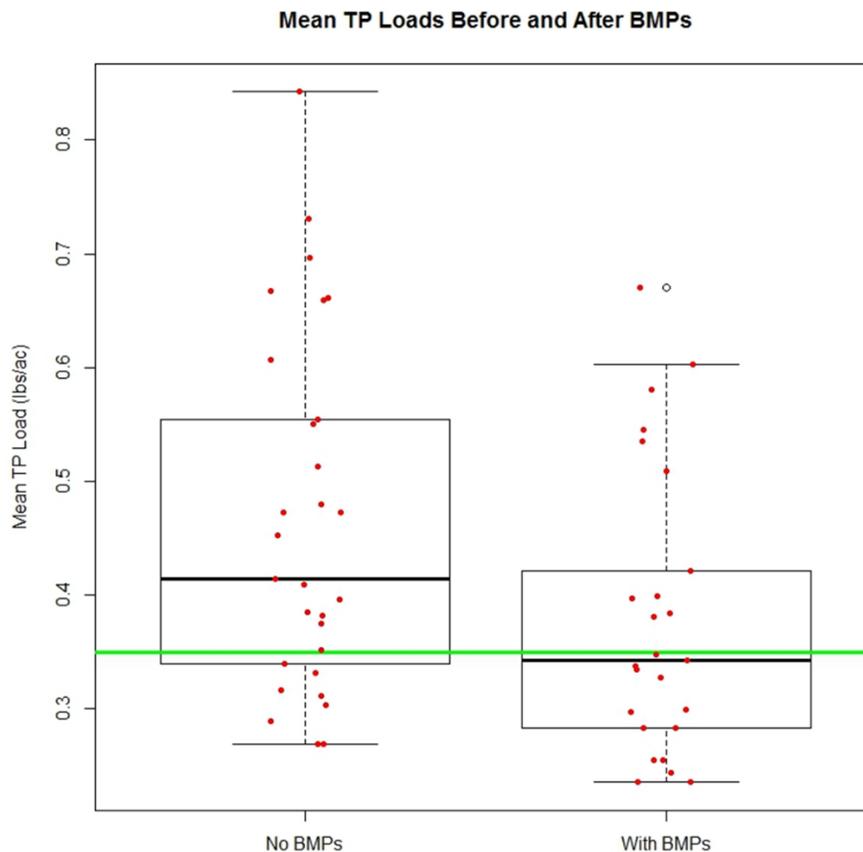
Fish: 2015

If you are interested in any of these sites/data, please contact Jack Barland at METC.

- d. Has the MPCA checked with multiple watershed organizations to see if they have similar data or model results? No; MPCA would welcome sharing/presentation of similar export coefficient data from other entities.



3. The Report includes this sentence: "Modeling by 30 MS4s as part of their evaluation of nondegradation showed that median loading rates were slightly below 0.35 lb/acre/year following implementation of BMPs."
- a. We suspect that the MPCA has a summary spreadsheet and/or report of the submittals by the 30 nondeg cities. If that is so, would you please share the summary spreadsheet and/or report with us? The summary box plot pasted below depicts the TP export from 30 MS4 cities (nondegradation analysis estimates). The green line indicates the export goal used to calculate the Lake Pepin and Mississippi River MS4 wasteload allocations. Email correspondence (3/23/17) between MCSC at Hans Holmberg (LimnoTech) indicates that MCSC already has the spreadsheet summarizing the nondegradation data.



- b. The nondeg analysis and submittals were done quite a while ago. When were those submitted? [Approximately 2006](#). Isn't there good reason to believe that the P discharge rates have improved since then? [That is not known, however, it is possible that the phosphorus discharge rates have changed over time.](#)
 - c. Will the MPCA accept the nondeg analysis, for cities that are at or below the target loading rate, as sufficient demonstration of compliance with the TMDL WLA? [The MPCA may consider a variety of information from an MS4 to demonstrate compliance with a WLA. This includes information presented in a city's non-deg analysis. However, that information is 12 years old and would need to be updated in order for the MPCA to consider it acceptable for compliance demonstration purposes.](#)
4. The Report includes this sentence: "The extent of reduction needed to achieve 0.35 lb/acre/year will vary by MS4."
- a. Has the MPCA considered how MS4 cities will demonstrate progress toward meeting or compliance with this target loading? What options have been considered? Will there be multiple options available to MS4 permittees? May we discuss this issue with you, sooner rather than later? [The options and possible approaches are variable according to different scenarios, some of which are outlined below:](#)
 1. [Are there watersheds within the city where a more restrictive WLA exists? If yes, no need to demonstrate progress \(toward Pepin goal\) for those watersheds.](#)
 2. [For watersheds where there is no more restrictive WLA, which may include an entire city, does the city have a sufficient existing model that has been or can be used to estimate loading from the watershed\(s\) or the city on a lb/ac/yr basis? If yes, compare the loading rate](#)

with the Pepin target. If loading is less than the Pepin target, no need to demonstrate progress.

3. If a sufficient model shows loading to be greater than the Pepin target, the city can use the following options (note there may be other options that are not included here).
 - a. Calculate the needed reduction by subtracting the Pepin target from the calculated rate. Implement BMPs and take reduction credits.
 - b. Incorporate P-reduction practices into the model and recalculate loading rates for comparison with the Pepin target.
 4. For a city that has not done modeling or has not calculated phosphorus loads, we recommend the following.
 - a. Assume a default loading rate based on literature or calculate loading using the MPCA Simple Estimator Tool.
 - b. Implement BMPs. If using a literature value for loading rate, calculate the needed reduction by subtracting the Pepin target from the literature value. Implement BMPs and apply reductions to the required reduction. If using the Simple Estimator Tool, either enter BMPs as they are implemented or enter new phosphorus runoff concentrations into the spreadsheet. Note that adjusting concentrations requires some familiarity with the relationship between stormwater practices and the effect on phosphorus concentrations in runoff.
 - b. For cities starting from scratch (no previous data or modeling to rely on), has the MPCA considered how they will estimate the total phosphorus discharge from their MS4 systems? This is a very different exercise than estimating the cumulative pollutant load reduction for other TMDLs. The simple spreadsheet tool will not be useful. [Since all MS4s should have land use acreages, the Simple Estimator Tool is sufficient. The MPCA is in the process of developing guidance and will be conducting training on this tool.](#)
 - c. Has the MPCA considered the cumulative cost to estimate the P loading for so many permittees? It would be a shame to waste \$1 million or more on just estimating some numbers to keep you folks happy. \$1,000,000 divided by 205 permittees is less than \$5,000 each. [The MPCA believes that many regulated MS4s have already estimated their P loading. For MS4s who have not, the MPCA encourages them to use the Simple Estimator Tool and associated guidance provided to them which will reduce cost substantially. In general, understanding pollutant loading is a positive thing for any stormwater management effort, with or without any TMDL context.](#)
5. A number of MS4 cities have good-sized natural lakes, within their boundaries and discharging to their MS4 systems, that have significant in-lake treatment programs to reduce phosphorus loading in the lakes and, hence, reduced amounts of phosphorus in their discharges to the MS4 systems. An example is Lake Como in Saint Paul. Sometimes, the in-lake treatment is done and paid-for by an MS4 city. In other cases, such work is done by a watershed district. Will the MS4 permittees be able to “take credit”, in the context of this TMDL, for these in-lake treatments and the associated reductions in the amount of phosphorus in their MS4 systems? [It depends on how the permittee is calculating progress toward TMDL compliance. If the permittee is implementing BMPs and calculating associated reductions, the MPCA can't give credit for in-lake treatments for purposes of reductions necessary to achieve a WLA under the MS4 permit. If the permittee is using a model or other tool to calculate loading from its system, then any practice that reduces phosphorus loads would be reflected in the inputs for that model or tool. Consequently, in-lake treatments are incorporated into the loading estimate calculations performed for purposes of comparison with the target loading rate.](#)
 6. Appendix C of the TMDL Report includes: “Cities not currently in the MS4 program but now exceed or are approaching a population of 5,000 and will eventually be brought into the MS4 program”
 - a. When will these cities be brought into the MS4 program? Will this occur based on the 2020 Census data? [Once the 2020 census data is made available to the MPCA \(could be as far out as 2021-2023\), the MPCA will perform a preliminary analysis to determine which, if any, unregulated MS4s may be subject to NPDES regulation based on the census data. When the](#)

analysis is completed, the MPCA will notify potentially affected MS4s and provide them an opportunity to engage with the MPCA on its findings. Based on the outcome of that process, the MPCA will confirm NPDES applicability and make a final determination to bring some MS4s into the program. In accordance with Minn. R. 7090.1010, Subpart 1.B, MS4s confirmed to be subject to NPDES regulation will have 18 months to prepare and submit an application for coverage under the permit. Once those MS4s receive coverage under the MS4 permit, they will have additional time to build their programs per the schedule outlined in the permit.

- b. Have these cities been notified by the MPCA that they should expect to be “brought into the MS4 program”? No. Since Minnesota rules allow municipality’s ample time to adjust to being regulated under NPDES, the MPCA finds it prudent to wait until the 2020 census data are known before communicating with potential future regulated MS4s. Census results have historically proven to be unpredictable. For instance, as compared with the 2000 census, the 2010 census showed shrinkage and growth of Urbanized Area (UA) as well as increases and decreases of municipal populations.