

2026 Modification to Lake St. Croix Excess Nutrients Total Maximum Daily Load Report

GENERAL INFORMATION

TMDL project name	Lake St. Croix Excess Nutrients TMDL
Date of original EPA TMDL Approval	August 8, 2012
2019 modification	2019 Modification to Lake St. Croix Nutrient Total Maximum Daily Load Report
MPCA approval date for 2019 modification	June 5, 2019
2026 TMDL Modification Public Notice Dates	January 5, 2026- February 4, 2026
TMDL Assessment Unit Identification (AUID) and pollutant that requires modification	82-0001-00 – Total Phosphorus (TP)
TMDL tables being modified	Table 17 (2019). Lake St. Croix TMDL Phosphorus Allocations – Basin-Wide Table 18 (2019). Lake St. Croix TMDL Phosphorus Allocations - State of Minnesota

EXPLANATION OF MODIFICATION

What is being changed from the final Total Maximum Daily Load (TMDL) to the modified TMDL?

The Minnesota Pollution Control Agency (MPCA) is making adjustments to Municipal Separate Storm Sewer Systems (MS4s) wasteload allocations (WLAs) to account for two new permittees, two terminated permittees and multiple existing MS4 permittee jurisdictional boundary and regulated area changes within the TMDL project area. The adjustments will not change the approved overall total loading capacities of the TMDL.

Given the modification described, are there any changes to Stormwater Pollution Prevention Programs (SWPPPs) to account for the modified WLAs? When will the SWPPPs be updated?

Permitted MS4s (Table 2) with assigned WLAs will be required to account for the TP impaired Lake St. Croix (Table 1) in their SWPPPs when the MS4 General Permit is reissued.

- Chisago City and Linwood Township MS4s will be required to submit SWPPPs when they apply for permit coverage (expected in 2027).
- Current MS4 permittees will be required to submit updated SWPPPs when they apply for permit coverage under the reissued MS4 General Permit (expected in 2026).

Table 1. Waterbody and impairment requiring modification.

AUID	Water Body Name	Impairment	Baseline Year
82-0001-00	Lake St. Croix	TP	1992

Table 2. Regulated MS4s within the TMDL Subwatershed. Additions underlined, removals struck through.

Regulated MS4	MS4 Permit #	To be maintained in TMDL	To be changed in TMDL
Mahtomedi City MS4	MS400031	X	
Maplewood City MS4	MS400032	X	
North St Paul City MS4	MS400041	X	
Oakdale City MS4	MS400042	X	
Pine Springs City MS4	MS400044	X	
White Bear Lake City MS4	MS400060	X	
Cottage Grove City MS4	MS400082	X	
East Bethel City MS4	MS400087	X	
Grant City MS4	MS400091	X	
Hugo City MS4	MS400094	X	
Lake Elmo City MS4	MS400098	X	
Woodbury City MS4	MS400128	X	
Washington County MS4	MS400160	X	
West Lakeland Township MS4	MS400162	X	
MNDOT Metro District MS4	MS400170	X	
Century College MS4	MS400171	X	
Ramsey County MS4	MS400191	X	
Valley Branch Watershed District	MS400217^a		X
Stillwater City MS4	MS400259	X	
North Branch City MS4	MS400260	X	
Forest Lake MS4	MS400262	X	
Minnesota Correctional Facility-Stillwater	MS400289^b		X
Oak Park Heights City MS4	MS400290	X	
Wyoming City MS4	MS400294	X	
Bayport City MS4	MS400295	X	
<u>Chisago City MS4</u>	<u>MS400339*</u>		<u>X</u>
<u>Linwood Township MS4</u>	<u>MS400342*</u>		<u>X</u>

*Proposed permit numbers

^a Permit terminated 8/21/2025

^b Permit terminated 7/31/2025

Explanation of modifications:

- There are two newly regulated MS4s: Chisago City (proposed permit number MS400339) and Linwood Township (proposed permit number MS400342) (Table 2). When the TMDL was modified in 2019, any stormwater contributions from Chisago City and Linwood Township were considered unregulated stormwater and were covered under the load allocations (LAs) as they were not designated as MS4s. Because it has been determined that Chisago City and Linwood Township will now be regulated MS4s under the next MS4 General Permit, a portion of the LA is being reallocated to WLAs for the Chisago City MS4 and the Linwood Township MS4.
- There are two terminated MS4s: Valley Branch Watershed District MS4 (permit number MS400217) and Minnesota Correctional Facility-Stillwater. The associated stormwater contributions are located within other regulated MS4 areas and will continue to be assigned to MS4 WLA.

- WLAs for MS4s named in the original TMDL were adjusted according to current MS4 jurisdictional boundaries and regulated areas per the 2020 Decennial Census Urban Area with population over 50,000. Adjustments include both WLA to LA and LA to WLA.

Transfer Methodology:

- The TP WLA for all cities, counties and townships MS4s is 0.19 lb/ac/yr multiplied by the jurisdictional area of each MS4 within the impairment subwatershed (Table C-7 in the 2012 TMDL).
- The WLA for Minnesota Department of Transportation (MnDOT) Metro MS4 is 0.26 lb/ac/yr multiplied by the regulated area based on 2020 Decennial Census Urban Area with population over 50,000 within the impairment subwatershed (Table C-7 in the 2012 TMDL).

The MPCA is proposing the following modifications:

Lake St. Croix, AUID 82-0001-00

The MPCA is shifting 53.9 lb/day of TP from the watershed land use LA to the MS4 WLA within the state of Minnesota (Modified Table 17; Modified Table 18).

Figure 1. Lake St. Croix (AUID 82-0001-00) TP TMDL Subwatershed and regulated MS4 areas.

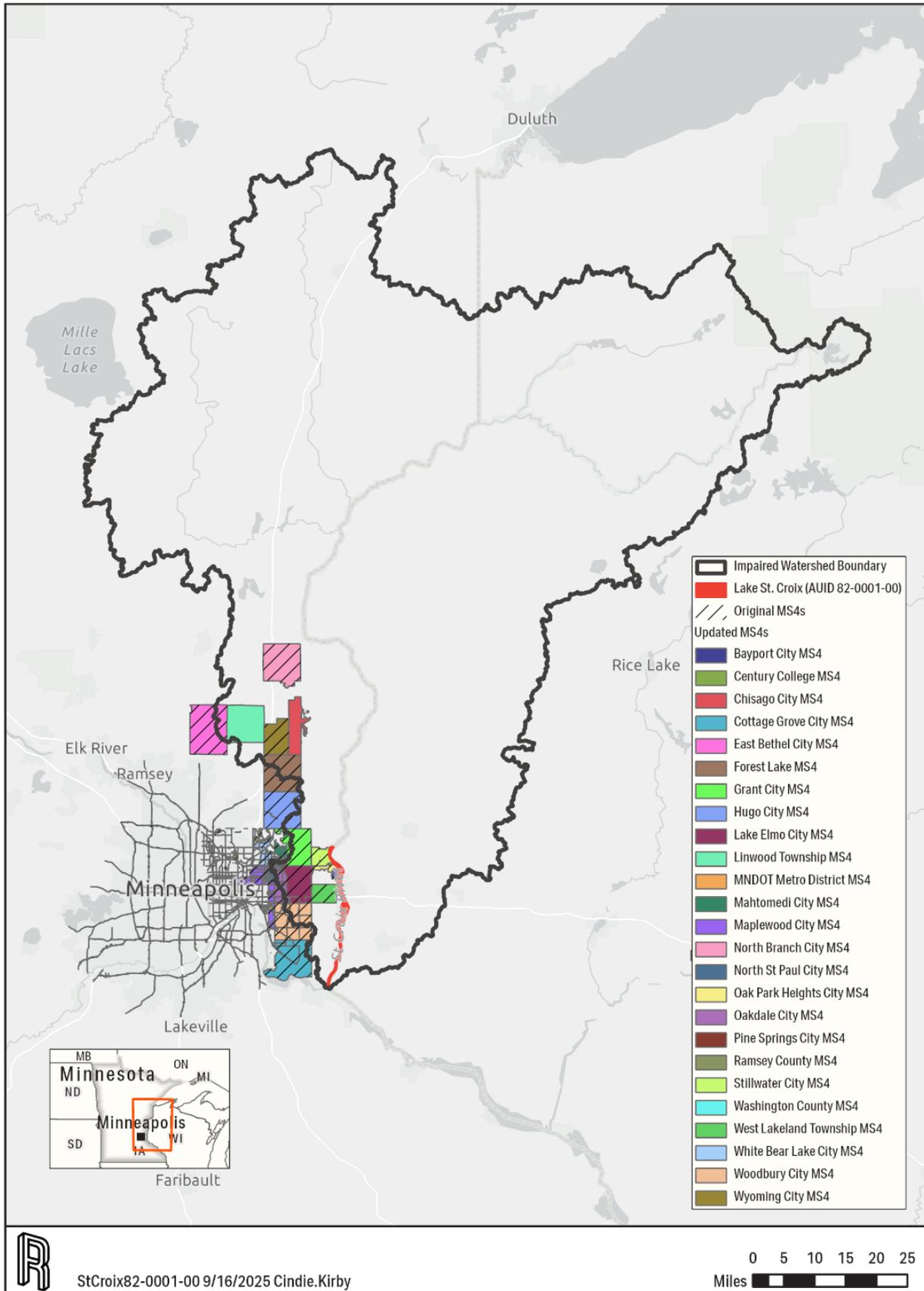
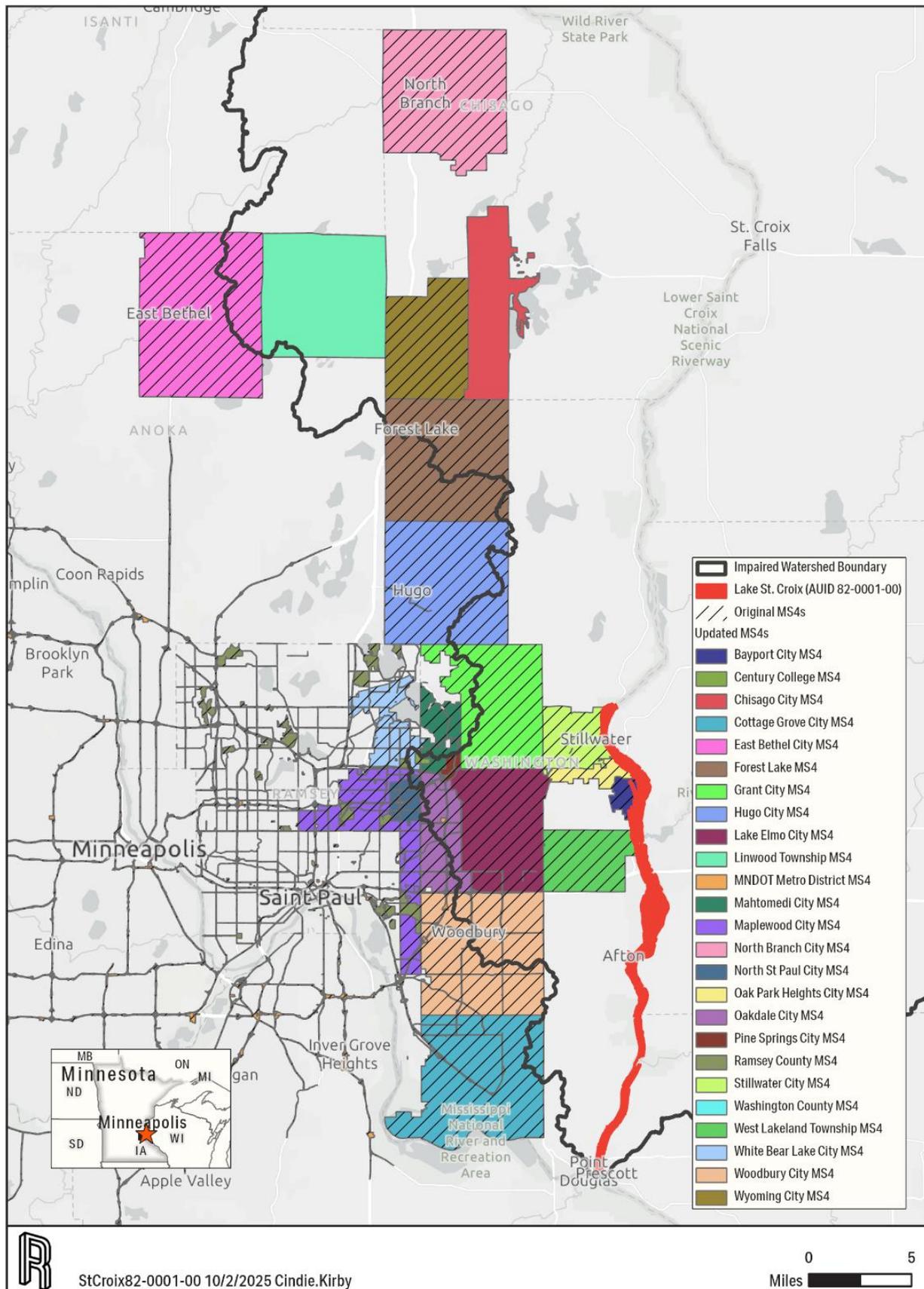


Figure 2. Magnified Lake St. Croix (AUID 82-0001-00) TP TMDL Subwatershed and Regulated MS4 Areas.



TABLES

Table 17 (2019). Lake St. Croix TMDL Phosphorus Allocations – Basin-Wide (Page 7 of 2019 modification).

	Existing (1990s)	TMDL	Existing (1990s)	TMDL
Component	(metric tons/yr)		(pounds/day)	
Non-Regulated Loads (LA)	397.369	295.872	2,398.5	1,785.9
Watershed background	165.559	165.559	999.3	999.3
Watershed land use	224.274	122.777	1,353.7	741.1
Internal	7.095	7.095	42.8	42.8
Atmospheric	0.441	0.441	2.7	2.7
Wasteloads (WLAs)	61.975	40.656	374.1	245.3
MS4 Permittees	8.743	5.420	52.8	32.7
Wastewater Facilities	51.914	33.994	313.3	205.2
General Permits – WI	1.000	1.000	6.0	6.0
Construction runoff – MN	0.159	0.121	1.0	0.7
Industrial runoff - MN	0.159	0.121	1.0	0.7
Reserve Capacity (RC)	--	4.816	--	29.0
RIB conversions – WI	--	1.929	--	11.6
Non-contributing- WI	--	0.396	--	2.4
ISTS	--	2.491	--	15.0
Tribal Load (TL)	0.656	0.656	4.0	4.0
Watershed runoff	0.352	0.352	2.1	2.1
Wastewater	0.304	0.304	1.9	1.9
Margin of Safety (MOS)	--	18.000	--	108.6
Total Load	460.000	360.000	2,776.6	2,172.8

Modified Table 17. Lake St. Croix TMDL Phosphorus Allocations – Basin-Wide (modifications highlighted in yellow).

	TMDL	TMDL
Component	(metric tons/yr)	(pounds/day)
Non-Regulated Loads (LA)	286.960	1,732.0
Watershed background	165.559	999.3
Watershed land use	113.865	687.2
Internal	7.095	42.8
Atmospheric	0.441	2.7
Wasteloads (WLAs)	49.568	299.2
MS4 Permittees	14.332	86.6
Wastewater Facilities	33.994	205.2
General Permits – WI	1.000	6.0
Construction runoff – MN	0.121	0.7
Industrial runoff - MN	0.121	0.7
Reserve Capacity (RC)	4.816	29.0
RIB conversions – WI	1.929	11.6
Non-contributing- WI	0.396	2.4
ISTS	2.491	15.0
Tribal Load (TL)	0.656	4.0
Watershed runoff	0.352	2.1
Wastewater	0.304	1.9
Margin of Safety (MOS)	18.000	108.6
Total Load	360.000	2,172.8

**Table 18 (2019). Lake St. Croix TMDL Phosphorus Allocations - State of Minnesota
(Page. 9 of 2019 modification).**

	Existing (1990s)	TMDL	Existing (1990s)	TMDL
Component	(metric tons/yr)		(pounds/day)	
Non-Regulated Loads (LA)	155.212	119.874	936.8	723.5
Watershed background	73.435	73.435	443.2	443.2
Watershed land use	78.009	42.671	470.9	257.6
Internal	3.548	3.548	21.4	21.4
Atmospheric	0.220	0.220	1.3	1.3
Wasteloads (WLAs)	34.260	23.525	206.9	141.9
MS4s	7.446	4.727	45.000	28.5
Wastewater	26.496	18.556	159.9	112.0
General Permits - WI	--	--	--	--
Construction runoff - MN	0.159	0.121	1.0	0.7
Industrial runoff - MN	0.159	0.121	1.0	0.7
Reserve Capacity (RC)	--	0.959	--	5.8
RIB conversions – WI	--	--	--	--
Non-contributing- WI	--	--	--	--
ISTS	--	0.959	--	5.8
Tribal Load (TL)	0.132	0.132	0.8	0.8
Watershed runoff	0.132	0.132	0.8	0.8
Wastewater	--	--	--	--
Margin of Safety (MOS)	--	7.605	--	45.9
Total Load	189.604	152.095	1,144.5	917.9

Modified Table 18. Lake St. Croix TMDL Phosphorus Allocations - State of Minnesota (modifications highlighted in yellow).

	TMDL	TMDL
Component	(metric tons/yr)	(pounds/day)
Non-Regulated Loads (LA)	110.962	669.6
Watershed background	73.435	443.2
Watershed land use	33.759	203.7
Internal	3.548	21.4
Atmospheric	0.220	1.3
Wasteloads (WLAs)	32.437	195.8
MS4s	13.639	82.4
Wastewater	18.556	112.0
General Permits - WI	--	--
Construction runoff - MN	0.121	0.7
Industrial runoff - MN	0.121	0.7
Reserve Capacity (RC)	0.959	5.8
RIB conversions – WI	--	--
Non-contributing- WI	--	--
ISTS	0.959	5.8
Tribal Load (TL)	0.132	0.8
Watershed runoff	0.132	0.8
Wastewater	--	--
Margin of Safety (MOS)	7.605	45.9
Total Load	152.095	917.9

Reasonable Assurance:

The MPCA is responsible for applying federal and state regulations to protect and enhance water quality in Minnesota. The MPCA oversees stormwater management accounting activities for all permitted MS4 entities listed in this TMDL modification. The MS4 General Permit requires regulated municipalities to implement best management practices (BMPs) that reduce pollutants in stormwater to the maximum extent practicable. A critical component of permit compliance is the requirement for the owners or operators of a permitted MS4 conveyance to develop a Stormwater Pollution Prevention Program (SWPPP). The SWPPP addresses all permit requirements, including the following six measures:

- Public education and outreach
- Public participation
- Illicit discharge detection and elimination program
- Construction site runoff controls
- Post-construction runoff controls
- Pollution prevention and municipal good housekeeping measures

A SWPPP is a management plan that describes the MS4 permittee's activities for managing stormwater within their regulated area. The TMDL report and this modification assign WLAs to permitted MS4s in the study area. The MS4 permit requires applicants to submit information at the time of application on applicable WLAs. They must document how they will make progress on performance-based WLAs (bacteria, chloride, temperature), demonstrate they are currently meeting their numerical WLAs (oxygen demand, nitrate, TP, or total suspended solids [TSS]), or develop a compliance schedule for those numerical WLAs that are not being met. A compliance schedule includes BMPs that will be implemented over the permit term, a timeline for their implementation, and a long-term strategy for continuing progress towards assigned WLAs. The MPCA requires MS4 owners or operators to submit their application and corresponding SWPPP document to the MPCA for review. Once the application and SWPPP are deemed complete by the MPCA, all application materials are placed on 30-day public notice, allowing the public an opportunity to review and comment on the prospective program.

Progress on BMP implementation must be reported annually. For WLAs being met at the time of permit application, the same level of treatment must be maintained in the future. Regardless of WLA attainment, all permitted MS4s are still required to reduce pollutant loadings to the maximum extent practicable.

The MPCA's stormwater program and its National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) permit program are regulatory activities providing reasonable assurance that implementation activities are initiated, maintained, and consistent with WLAs assigned in this study.

Several nonpermitted reduction programs exist to support implementation of nonpoint source reduction BMPs in the Lower St Croix River Watershed alone. Per the spending for water quality implementation projects website (data compiled by MPCA: [Spending for water quality implementation projects](#)), 75 million dollars in state and federal grants, loans, local government and landowner cost share match have been spent on nonpoint source projects since 2004. Efforts to reduce nonpoint source pollution loading will continue.

Implementation:

This TMDL modification assigns new applicable TP WLAs to Chisago City MS4 and Linwood Township MS4. This will result in permit requirements for both permittees. The modification does not affect other previously assigned MS4 permittees, as it is a categorical TMDL with designated target loading rates.

When evaluating TP WLA attainment during permit application, permittees should evaluate the areas draining to stormwater conveyance within the impairment subwatershed within their jurisdictional boundary (Figure 1 and Figure 2). Any wasteload reducing BMPs implemented since the baseline year (Table 1) in those areas can be counted toward WLA attainment. Cities, townships and counties can measure their progress against a loading rate of 0.19 lb/ac/yr TP. MnDOT Metro MS4 can measure their progress against 0.26 lb/ac/yr TP. See [Making WLA determinations | Minnesota Stormwater Manual](#).

Prior to implementation, permitted MS4s are encouraged to compare their sewersheds (e.g., catchments, pipesheds, etc.) with the drainage areas for each impaired water body to ensure appropriate BMP crediting. If a permitted MS4 sewershed is different from what is defined as the drainage area in this report, the sewershed should be considered part of the MS4 contribution to the impaired water if sufficient evidence of the appropriate sewershed area is provided to the MPCA. With Agency approval, any wasteload-reducing BMP implemented since the TMDL baseline year within the

sewershed of the impaired waterbody will be creditable towards an MS4's load reduction for purposes of annual reporting and demonstrating progress towards meeting the WLA(s).

Projects undertaken recently may take a few years to influence water quality. Any wasteload-reducing BMP implemented after the baseline years noted in Table 1 will be creditable toward the MS4's load reductions. If a BMP was implemented during or just prior to the baseline year, the MPCA is open to presentation of evidence by the MS4 permit holder to demonstrate that it should be considered as a credit.