

Addressing Total Maximum Daily Load Requirements in Municipal Stormwater Permits

Preparing your SWPPP Document to include applicable wasteload allocations



Overview

- q TMDL background
- q Permit language and ties to TMDLs
- q Compliance and expectations
- q Application materials and guidance
- q Locating relevant information
- q Examples



Connecting MS4 Permits and TMDLs



Total Maximum Daily Loads

$$\text{TMDL} = \text{WLA} + \text{LA} + \text{RC} + \text{MOS}$$

Where:

WLA = Wasteload Allocation (permitted sources)

LA = Load Allocation (non-permitted sources)

RC = Reserve Capacity (future growth)

MOS = Margin of Safety



Impaired Waters to TMDL

- q Assessment
- q 303(d) listing
 - § Biannual “Impaired Waters List”
 - § Approved by EPA
- q Listed waters required to have a TMDL completed



Linking Permits and TMDLs

q 40 C.F.R. 122.44(d)(vii)(B)

*Limits in NPDES permits must be **consistent** with the assumptions and requirements of any available waste load allocation in an approved TMDL.*

q 40 C.F.R. 130.2(h)&(i)

WLAs are to be expressed in numeric form in TMDLs

q 33 U.S.C 1342(p)(3)(B)(iii); 40 C.F.R. 122.44 (k)(2)&(3)

WQBELs for NPDES-regulated storm water discharges that implement WLAs in TMDLs may be expressed in the form of best management practices (BMPs) under specified circumstances.



Permit Language

Part II.D.6.

6. For each applicable Waste Load Allocation (WLA) approved prior to the effective date of this permit, the applicant shall submit the following information as part of the SWPPP document:
- a. TMDL project name(s)
 - b. Numeric WLA(s), including units
 - c. Type of WLA (Le., categorical or individual)
 - d. Pollutant(s) of concern
 - e. Applicable flow data specific to each applicable WLA
 - f. For each applicable WLA not met at the time of application, a compliance schedule is required. Compliance schedules can be developed to include multiple WLAs associated with a TMDL project and shall include:
 - (1) Interim milestones, expressed as BMPs or progress toward implementation of BMPs to be achieved during the term of this permit
 - (2) Dates for implementation of interim milestones
 - (3) Strategies for continued BMP implementation beyond the term of this permit
 - (4) Target dates the applicable WLA(s) will be achieved
 - g. For each applicable WLA the permittee is reasonably confident is being met at the time of application, the permittee must provide the following documentation:
 - (1) Implemented BMPs used to meet each applicable WLA
 - (2) A narrative describing the permittee's strategy for long-term continuation of meeting each applicable WLA .



Required Submittals

- q **At application** (note: all application materials are subject to public notice)
 - § List of TMDLs and applicable WLAs
 - § Compliance schedules
 - § Long term implementation strategy
 - § Target date
- q **Annual reports**
 - § All BMPs receiving credit
 - § Cumulative progress
 - § Any changes



Assessing Compliance

- q Compliance exists with permits, **not** with TMDLs
- q Interim milestones, expressed as BMPs, are the basis for compliance measurement
- q Audits



How to Find & Use the MS4 TMDL Documents



Overview

Questions to be answered in this PowerPoint:

- q Where can I find the SWPPP Document TMDL attachments?
- q How do I use and fill out the TMDL attachment?
- q Is there guidance available for me to better understand TMDLs and how to fill out the TMDL Attachment?



Where can I find the SWPPP Document TMDL Attachment?

Step 1: Go to www.pca.state.mn.us/ms4

Municipal Stormwater

IN THIS SECTION

- Stormwater Impervious Cover Maps
- Annual Reports for Municipal Separate Storm Sewer Systems (MS4)
- Phase II Municipal Separate Storm Sewer System Audit Process
- Public Notice Process for Municipal Separate Storm Sewer Systems
- Restriction on Coal Tar-Based Sealants
- Coal Tar-based Sealcoat - Minnesota Local Government FAQ's
- MS4 General Permit

RELATED TOPICS

- Construction Stormwater

Stormwater Program for Municipal Separate Storm Sewer Systems (MS4)

Permit reissued

The MPCA Citizens Board approved reissuance of the MS4 permit on May 21, 2013. See the [news release](#) for more information. The reissued permit takes effect on Aug. 1, 2013. The new permit and associated documents are available under the Permit tab below.

Program update — What's new

- Guidance is now available on the MPCA web site for MS4 permittees and other municipalities specific to stormwater sediment removal best management practices. The new guidance and publication is titled “**Managing Stormwater Sediment Best Management Practice Guidance for Municipalities**” and it is located on the main [Stormwater](#) page.
- The MPCA grant funds to assist municipalities with removing contaminated sediment from stormwater ponds has been exhausted. There are no grant funds remaining. For more information, see [Restriction on Coal Tar-Based Sealants](#).

[Overview](#) **[Permit](#)** [Guidance and BMPs](#) [Links](#) [Contacts](#)

MS4 permit requirements

MS4s are required to develop and implement a stormwater pollution prevention program (SWPPP) to reduce the discharge of pollutants from their storm sewer system to the

ON THIS PAGE

- [What is an MS4](#)
- [Maps of MS4s](#)
- [MS4 Mapping Tool](#)
- [Special waters and impaired waters](#)
- [MS4 permit requirements](#)
- [Public process for SWPPPs](#)
- [Permit and program forms](#)
- [Guidance and fact sheets](#)
- [Best management practices](#)
- [Stormwater financial assistance](#)
- [Links to additional information](#)
- [Staff contacts](#)

EMAIL ALERTS






Sign up for **Municipal stormwater** email updates

RELATED LINKS



Where can I find the SWPPP Document TMDL Attachments?

Step 2: Scroll to Application Items

Application Items	Summary	Fact Sheets and Instructions
 MS4 SWPPP Application for Reauthorization (SWPPP Document) (PDF Version) (wq-strm4-49a)	Application for Reauthorization	 MS4 SWPPP Application for Reauthorization (SWPPP Document) Example (wq-strm4-49b)
 MS4 Permit TMDL Attachment Spreadsheet (wq-strm4-49c)	Application supplement for MS4s with approved TMDL with a Waste Load Allocation (WLA) prior to the effective date of Permit.	 Guidance for MS4 TMDL Requirements (wq-strm4-49f)  Master List MS4 Permit TMDLs Spreadsheet (PDF Version) (wq-strm4-49d)



Where can I find the SWPPP Document TMDL Attachment?

Step 3: Download 'MS4 Permit TMDL Attachment Spreadsheet' and 'Master List MS4 Permit TMDLs Spreadsheet'

- q Download the Excel versions of both spreadsheets
- q 'MS4 Permit TMDL Attachment Spreadsheet' will save as **wq-strm4-49c**
- q 'Master List MS4 Permit TMDLs Spreadsheet' will save as **wq-strm4-49d**



'Master List MS4 Permit TMDLs Spreadsheet'

- q EPA-approved TMDLs prior to August 1, 2013
- q Arranged alphabetically by MS4
- q Acknowledge WLAs and public notice

Permittee name	Preferred ID	TMDL project name	Waterbody ID	Type of WLA	Numeric WLA	Unit	Percent reduction	Flow condition	Waterbody name	Pollutant of concern	Date approved
Albert Lea City	MS400263	Lower Mississippi River Basin Fecal Coliform Bacteria TMDL	07080202-501	Individual	2.70	10 [^] 12 organisms/month		High	Shell Rock River, Albert Lea Lake to Goose Creek	Fecal Coliform	4/5/2006
Albert Lea City	MS400263	Lower Mississippi River Basin Fecal Coliform Bacteria TMDL	07080202-501	Individual	0.72	10 [^] 12 organisms/month		Moist	Shell Rock River, Albert Lea Lake to Goose Creek	Fecal Coliform	4/5/2006
Albert Lea City	MS400263	Lower Mississippi River Basin Fecal Coliform Bacteria TMDL	07080202-501	Individual	0.25	10 [^] 12 organisms/month		Mid-Range	Shell Rock River, Albert Lea Lake to Goose Creek	Fecal Coliform	4/5/2006



'MS4 Permit TMDL Attachment Spreadsheet'

- q Five tabs on the bottom of the spreadsheet:
 - § Instructions
 - § Example TMDL WLA Spreadsheet
 - § Example Compliance Schedule
 - § TMDL WLA Spreadsheet
 - § Compliance Schedule

15																				
16																				
17																				
18																				
19																				
20																				

Instructions Example TMDL WLA Spreadsheet Example Compliance Schedule TMDL WLA Spreadsheet Compliance Schedule

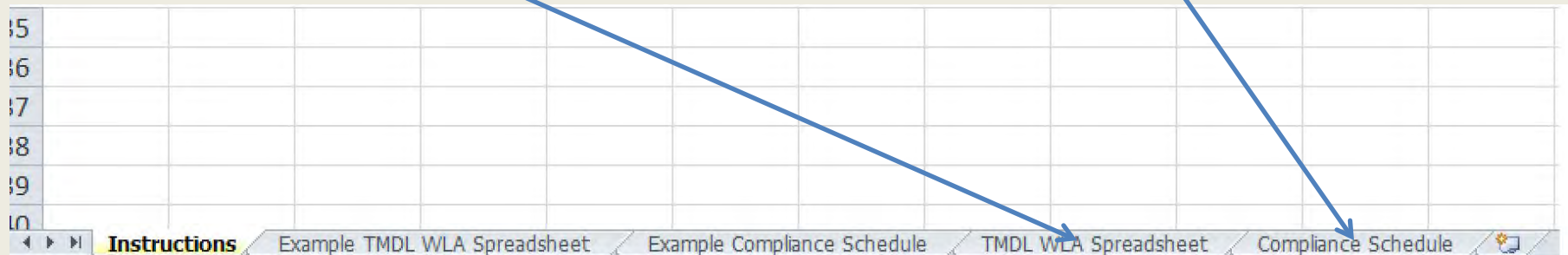


How to navigate the 'MS4 Permit TMDL Attachment Spreadsheet'






- q Paste your MS4's TMDL information into table on the 'TMDL WLA Spreadsheet' tab
- q Fill out the 'Compliance Schedule' tab
 - § Use the 'Example Compliance Schedule' tab if you need a reference on how to fill it out

Paste TMDL information in this tab

Fill out all required information in this tab



Is there guidance available for me to better understand TMDLs and how to fill out the TMDL Attachment?

Application Items	Summary	Fact Sheets and Instructions
 MS4 SWPPP Application for Reauthorization (SWPPP Document) (PDF Version) (wq-strm4-49a)	Application for Reauthorization	 MS4 SWPPP Application for Reauthorization (SWPPP Document) Example (wq-strm4-49b)
 MS4 Permit TMDL Attachment Spreadsheet (wq-strm4-49c)	Application supplement for MS4s with approved TMDL with a Waste Load Allocation (WLA) prior to the effective date of Permit.	 Guidance for MS4 TMDL Requirements (wq-strm4-49f) ←  Master List MS4 Permit TMDLs Spreadsheet (PDF Version) (wq-strm4-49d)



Completing the TMDL Documents



Example WLA Spreadsheet and Compliance Schedule



**Minnesota Pollution
Control Agency**

520 Lafayette Road North
St. Paul, MN 55155-4194

MS4 Permit TMDL Attachment Spreadsheet

Municipal Separate Storm Sewer Systems (MS4) Program
Total Maximum Daily Load (TMDL)

Doc Type: Permit Application

Instructions

This form is to be completed and submitted with your MS4 SWPPP Document. Please navigate through this form using the tabs at the bottom of the page. An example of a mock completed form is provided to you as a reference. Please refer to the "Addressing TMDL Requirements in MS4 General Permit Applications and Stormwater Pollution Prevention Program Documents" PDF for additional assistance, instructions, and basic background information on TMDLs.



Wasteload Allocations: Individual v Categorical

- q Spreadsheet indicates individual or categorical
- q Submittal information the same
- q Indicate WLA type
- q BMPs to be implemented

MS4	WLA (lbs./year)	Type of WLA
City A	10	Individual
City B	40	Categorical
Township C		Categorical



Interim Milestones

- q Required component of compliance schedules
- q Must be at least annual
- q BMPs or progress toward the implementation of BMPs



What Constitutes Progress?

- q New effort in pollutant reduction to address a TMDL WLA
- q Progress toward the implementation of a BMP
 - § Planning
 - § Funding
 - § Construction
 - § Operation



Dates and Timelines

- q Interim milestone implementation
 - § Enforceable date tied to compliance schedules
- q WLA target date
 - § Estimation of date WLA will be fully achieved



Locating TMDL-Relevant Information

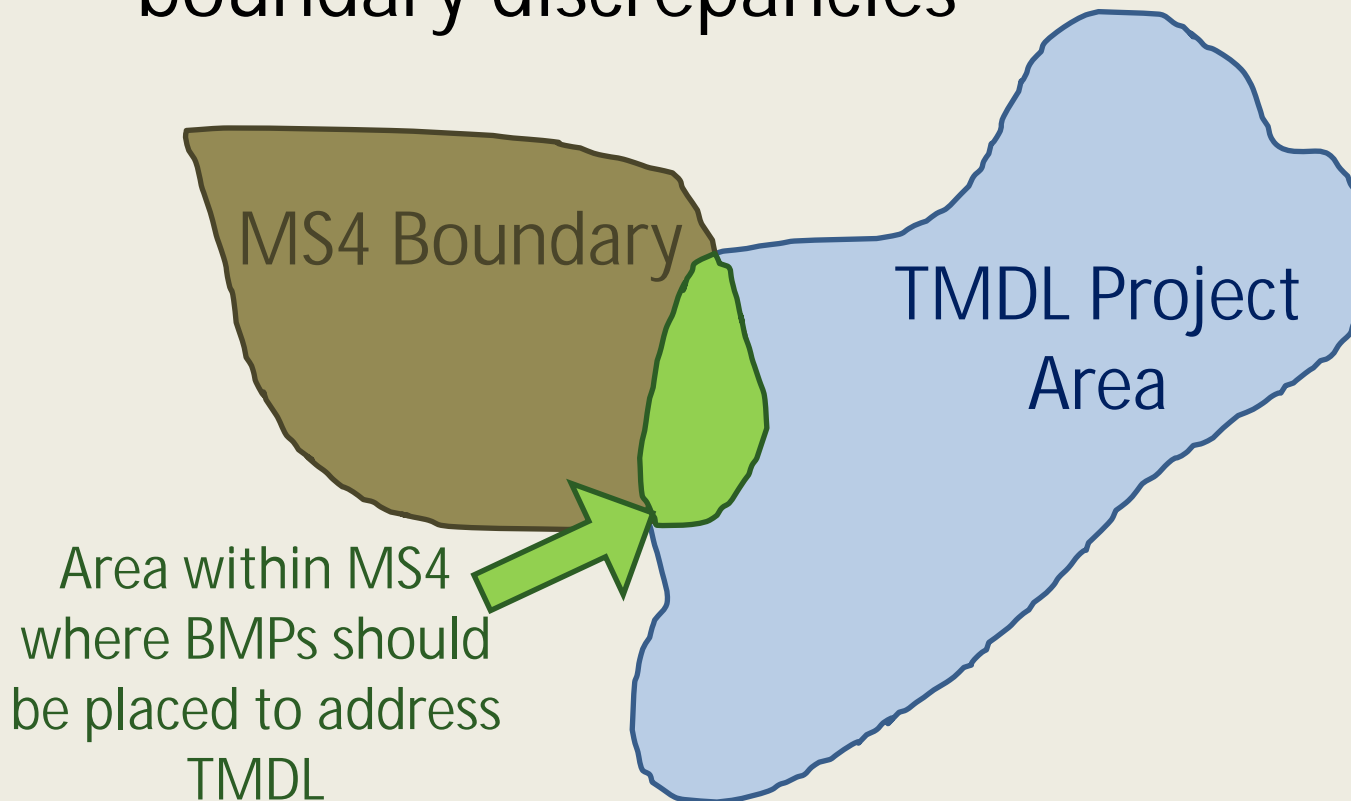
- q TMDL report
 - § WLAs
 - § Implementation section
 - § Reasonable assurance
- q Project maps
 - § TMDL/WRAPS project boundaries
- q Implementation Plan
 - § Target areas
 - § BMPs
 - § Cooperative opportunities

[Home](#)>[Water](#)>[Impaired Waters and TMDLs](#)>[TMDL Projects](#)



TMDL Project Area v. MS4 Area

- q Project boundaries and jurisdictional boundary discrepancies



MS4 Mapping Tool

- q Homepage>Water>Stormwater>Municipal (MS4) Stormwater
>Scroll down to Maps of MS4s and click MS4 Mapping Tool

Maps of MS4s

MS4 mapping tool

- [MS4 mapping tool](#): This is an electronic map tool using Geographic Information Systems (GIS) technology.
Note: This is best viewed using Internet Explorer 5.0 or higher or Netscape 6.0 or higher, with pop-up blockers disabled and screen resolution set to 1024x768 or higher.

Mandatory MS4s

- [Duluth Area](#)
- [Fargo/Moorhead Area](#)
- [Grand Forks Area](#)
- [La Crosse/La Crescent Area](#)
- [Minneapolis/St. Paul Area](#)
- [Rochester Area](#)
- [St. Cloud Area](#)



Note: The maps above for Duluth, Minneapolis/St. Paul and St. Cloud areas are interactive. Once you've opened one of those maps, click on a numbered area within the grid on the map to open a new map showing details of the grid area.

<http://www.pca.state.mn.us/ms4>



Spatial Data Available

- q Homepage>Data>Spatial Data (TMDL/WRAPS project boundaries and Municipal Storm Sewer Systems permit holders (MS4s))

The screenshot displays the Minnesota Pollution Control Agency (MPCA) website. At the top, there is a navigation bar with the MPCA logo, the text "Minnesota Pollution Control Agency", and a search box. Below the navigation bar, there are several tabs: Home, Air, Water, Waste, Regulations, Living Green, Quick Links, Data, and About MPCA. The "Data" tab is selected. The main content area is titled "Spatial data" and contains the following text: "Spatial data consist of coordinates (geographic or projected) that represent the physical location of a site or a site feature along with metadata that describe how and by whom those coordinates were collected." Below this, it states: "MPCA offers data and shapefiles for many of our data-based applications. The shapefile download includes both data and files that require geographic information system (GIS) software to make maps or perform other geography-based functions." A link is provided: "Questions about these data sets? Contact MPCA's [Data Desk](#) at 651-296-6300 or 1-800-657-3864 toll free." A toggle switch is also present: "Click to turn toggle document summaries on or off". A list of data sets is provided, including: "303(d) Impaired waters - Lakes (2010)", "303(d) Impaired waters - Streams (2010)", "303(d) Impaired waters - Wetlands (2010)", "Feedlots", "Minnesota Lake Assessments (2004)", "Minnesota Lake Assessments (2006)", "Minnesota Lake Assessments (2010)", "Minnesota Stream Assessments (2006)", "Minnesota Stream Assessments (2010)", "MPCA Water Quality Monitoring Stations", "Municipal Storm Sewer System permit holders (MS4s)", "TMDL/WRAPS project boundaries", and "What's in my Neighborhood (WIMN)". A "RELATED TOPICS" section is also visible, listing: Home, Air, Water, and Lake Superior Barrel Investigation Map.

<http://www.pca.state.mn.us/index.php/data/spatial-data.html>



TMDL Example: Lake St. Croix Excess Nutrients

- q Large watershed TMDL
 - § Multiple regulates MS4s
 - § Many are geographically separated
 - § MS4s make up a small percentage of total land use
- q Multi-state project



Wasteload Allocations: Lake St. Croix Nutrient TMDL

q Categorical WLA

q Numeric and percent reduction provided

Permittee name	Preferred ID	TMDL project name	Waterbody ID	Type of WLA	WLA	Unit	Percent Reduction	Flow Condition	Waterbody Name	Pollutant of Concern	Date Approved
Century College	MS400171	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012
Cottage Grove City	MS400082	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012
East Bethel City	MS400087	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012
Forest Lake City	MS400262	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012
Grant City	MS400091	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012
Hugo City	MS400094	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012
Lake Elmo City	MS400098	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012
Mahtomedi City	MS400031	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012
Maplewood City	MS400032	Lake St. Croix Nutrient TMDL	82-0001	Categorical	24.1	lbs/day	34%	N/A	Lake St. Croix	Phosphorus	8/8/2012



SWPPP Document Information: Lake St. Croix Nutrient TMDL

- q WLA not currently being met
- q Compliance schedule necessary

Compliance Schedule PART II.D.6.f.-g.

Is your MS4 currently meeting its WLA for any approved TMDLs?

NO (Complete Table 1, Strategies for continued BMP implementation beyond the term of this permit, and Table 2 below)

YES (Provide the following information below)

If YES, indicate the WLAs (may be grouped by TMDL Project) you believe are reasonably being met. For each WLA, list the implemented BMPs and provide a narrative strategy for the long-term continuation of meeting each WLA. PART II.D.6.g.(1)-(2)

Go to:

[Table 1](#)

Go to:

[Strategies...](#)

Go to:

[Table 2](#)



Compliance Schedule: Lake St. Croix Nutrient TMDL

- q Interim milestones for current permit term
 - § BMP, ID, and implementation date

Interim Milestone (Best Management Practice)	BMP ID	Implementation Date	Lake St. Croix Nutrient TMDL; Phosphorus	TMDL Project Name & Pollutant2
Install community rain garden	RGDN 44	6/20/2014	x	
Review existing development standards for potential inclusion of volume control standard	ORDN 03	6/20/2015	x	
Draft new development standard language for inclusion into city ordinance	ORDN 03	6/20/2016	x	
Increase enforcement of pet waste disposal ordinance, including issuing fines	WSTE 11	6/20/2016	x	
Begin curbside collection of yard waste and grass clippings for all households within the City limits	WSTE 22	6/20/2017	x	



Compliance Schedule: Lake St. Croix Nutrient TMDL

q Strategy for continued compliance

Strategies for continued BMP implementation beyond the term of this permit.
PART II.D.6.f.(3)

Adopt performance standard for new development and redevelopment consistent with treating the first inch of runoff from impervious surfaces; explore options for treating dissolved fraction of phosphorus

q Target date

Table 2	
Target dates the applicable WLA(s) will be achieved. PART II.D.6.f.(4)	
TMDL Project	Target Date to Achieve WLA
Lake St. Croix Nutrient TMDL	2022



TMDL Example: Carver Creek Turbidity TMDL

- q No reduction in loading required of MS4s
 - § WLAs still reported on application
 - § WLAs are currently being met
- q Demonstrate the same level of treatment will be maintained to ensure compliance with permit



Wasteload Allocations: Carver Creek Turbidity TMDL

- q Individual WLAs for each regulated MS4
- q Zero percent reduction

Permittee name	Preferred ID	TMDL project name	Waterbody ID	Type of WLA	WLA	Unit	Percent reduction	Flow condition	Waterbody name	Pollutant of concern	Date approved
Carver City	MS400077	Carver Creek Turbidity TMDL	07020012-516	Individual	39.8	kg/day	0%	High	Carver Creek	TSS	9/26/2012
Carver City	MS400077	Carver Creek Turbidity TMDL	07020012-516	Individual	12.4	kg/day	0%	Moist	Carver Creek	TSS	9/26/2012
Carver City	MS400077	Carver Creek Turbidity TMDL	07020012-516	Individual	4.1	kg/day	0%	Mid-Range	Carver Creek	TSS	9/26/2012
Carver City	MS400077	Carver Creek Turbidity TMDL	07020012-516	Individual	1.4	kg/day	0%	Dry	Carver Creek	TSS	9/26/2012
Carver City	MS400077	Carver Creek Turbidity TMDL	07020012-516	Individual	0.2	kg/day	0%	Low	Carver Creek	TSS	9/26/2012



SWPPP Document Information: Carver Creek Turbidity TMDL

- q WLA is currently being met
- q Strategy for continued compliance

Compliance Schedule PART II.D.6.f.-g.

Is your MS4 currently meeting its WLA for any approved TMDLs?

NO (Complete Table 1, Strategies for continued BMP implementation beyond the term of this permit, and Table 2 below)

Go to:

[Table 1](#)

Go to:

[Strategies...](#)

Go to:

[Table 2](#)

YES (Provide the following information below)

If YES, indicate the WLAs (may be grouped by TMDL Project) you believe are reasonably being met. For each WLA, list the implemented BMPs and provide a narrative strategy for the long-term continuation of meeting each WLA. PART II.D.6.g.(1)-(2)

The Carver Creek Turbidity TMDL does not call for a reduction in loading from the regulated MS4s; therefore the city is currently meeting all applicable WLAs associated with this project. We will continue to maintain at least the same level of treatment to ensure continued compliance with this provision of the MS4 General Permit.



Questions/Comments?



Contact Us/Questions

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www.pca.state.mn.us/ms4

