



VLAWMO MS4/TMDL Discussion

March 12, 2020

- New requirements in the MS4 permit for Minimum Control Measures (MCMs) 1 and 2 and TMDLs
- Resources
- Estimated timeline for the new permit



MCM 1: Public Education and Outreach

For cities and townships:

At least once a year, distribute educational materials or equivalent outreach to residents, businesses, commercial facilities, and institutions on:

- Impacts of deicing salt on receiving waters
- Ways to reduce deicing salt use
- Proper storage of salt or other deicing materials



MCM 1: Public Education and Outreach

For cities and townships:

At least once a year, distribute educational materials or equivalent outreach focused on:

- Impacts of pet waste on receiving waters
- Proper management of pet waste
- Any existing regulatory mechanism(s) for pet waste



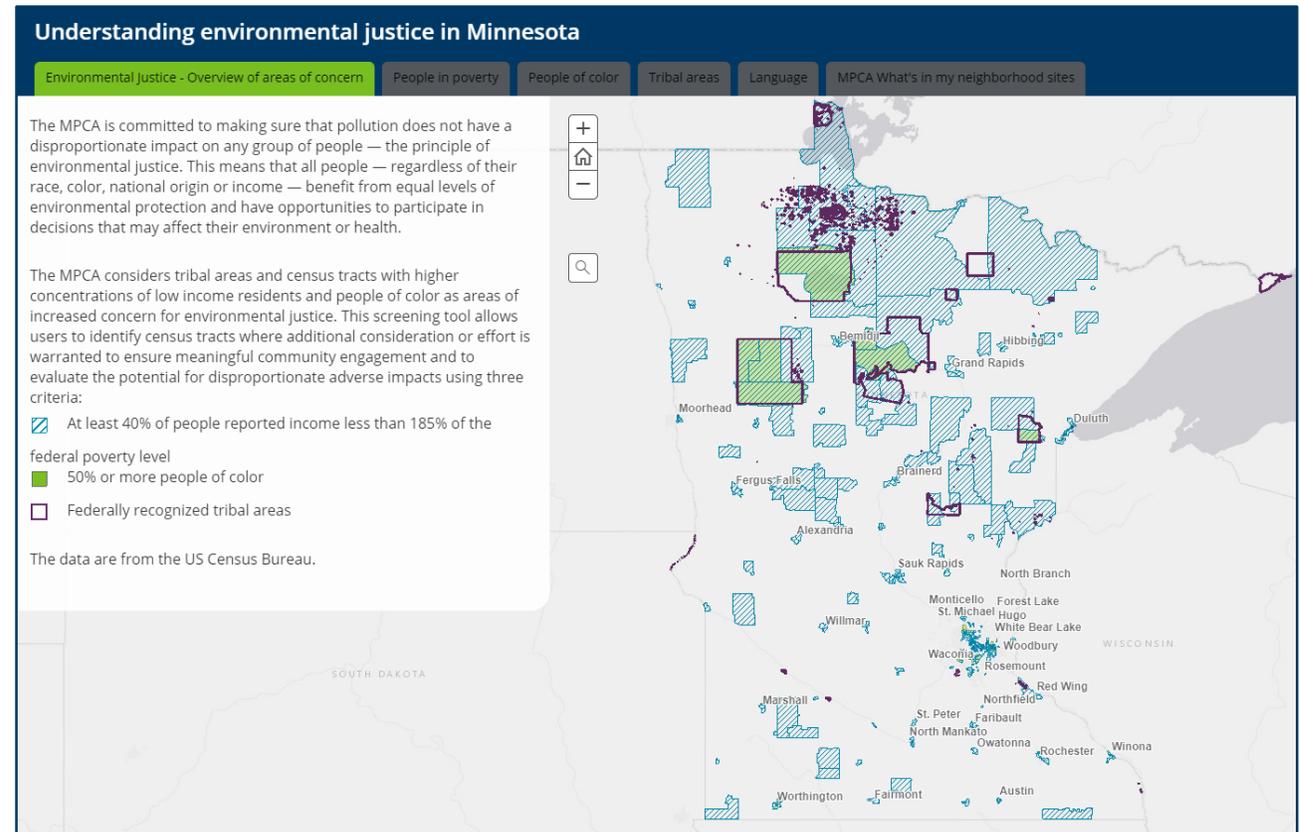
MCM 1: Public Education and Outreach

Distribute educational materials or outreach focused on at least two other stormwater-related issues of high priority.



MCM 1: Public Education and Outreach

- Consider how to engage with low-income residents, people of color, and non-native English speaking residents
- See “Areas of environmental justice concern” link on www.pca.state.mn.us/ej



The MS4 Toolkit

Educational materials and training resources you may use.

Go to stormwater.pca.state.mn.us and search for “MS4 toolkit”

Minnesota Stormwater Manual

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Municipal Separate Storm Sewer System (MS4) toolkit

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Municipal Separate Storm Sewer System (MS4) toolkit

Information: NOTE: Additional materials will be added to the MS4 Toolkit over the upcoming year!

The [municipal separate storm sewer system \(MS4\)](#) toolkit is a resource for stormwater program staff. It is intended to help entities regulated under the MS4 program meet the requirements of the general permit. It offers a wide range of stormwater education information including sample fact sheets, newsletters, videos, and other resources.

MCM 1: Public education and outreach

Stormwater overview

The following pages address general stormwater topics.

- [Stormwater 101 - streets to streams](#)
- [Information about common pollutants](#)
- [How we protect water](#)

What residents can do

The following pages address what residents can do to reduce negative impacts on stormwater.

- [Inside the home](#)
- [Outside and in the yard](#)
- [In the neighborhood and community](#)



Six Minimum Control Measures (MCM). Hover over an image to read caption and click on image to link to an MCM.

The MS4 Digital Document Library

Examples documents you may use.

Go to stormwater.pca.state.mn.us and search for “MS4 DDL”

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Minnesota Stormwater Manual

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MS4 Digital Document Library

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About the Digital Document Library

Welcome to the Minnesota Pollution Control Agency's (MPCA) municipal separate storm sewer system (MS4) Digital Document Library (DDL). The DDL is a space for stormwater program staff to store and circulate example documents that are being used to manage stormwater pollution prevention programs (SWPPPs). In the DDL, you'll find inspection checklists and forms, site plan review checklists, documentation tracking mechanisms, standard operating procedures, photos/graphics, and many more useful materials to help you implement your SWPPP.

Documents in the DDL are available to all site users for download and use. MPCA staff have reviewed all materials to ensure their compliance with the [MS4 General Permit](#) prior to posting.

We believe that having example documents will reduce the resources (staff time, financial, etc.) required to implement effective SWPPPs.

Search by minimum control measure (MCM)

To find what you're looking for, enter the minimum control measure (MCM) section below that corresponds to the area in which you need assistance.

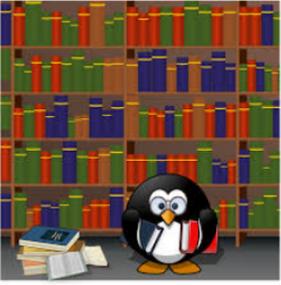
- [MCM 1 Public Education and Outreach](#) - public education outreach materials, public education implementation plan, examples of how to document outreach activities, and examples of outreach materials
- [MCM 2 Public Participation/Involvement](#) - examples of how to document events held
- [MCM 3 Illicit Discharge Detection and Elimination](#) - regulatory mechanism to prohibit illicit discharges, illicit discharge recognition training, procedures for investigating, locating, and eliminating the source of illicit discharges, and spill response procedures
- [MCM 4 Construction Site Stormwater Control](#) - site plan review procedures & items to evaluate, construction site inspection procedures and inspection checklists, and documentation of site plan reviews
- [MCM 5 Post-Construction Stormwater Management](#) - legal mechanisms for long-term maintenance of structural stormwater best management practices (BMPs), site plan review checklists
- [MCM 6 Pollution Prevention/Good Housekeeping](#) - facilities inventory examples; procedures for determining pond effectiveness of treating total suspended solids (TSS) and total phosphorus (TP); inspection checklists for documenting structural stormwater BMPs, stormwater management ponds, outfalls, stockpiles, and storage and material handling areas; employee training commensurate with the employee's job responsibilities
- [General Stormwater Program Management](#) - examples of how to track activities applicable to your SWPPP, enforcement response procedures

Search by document category

Or, search by document categories:

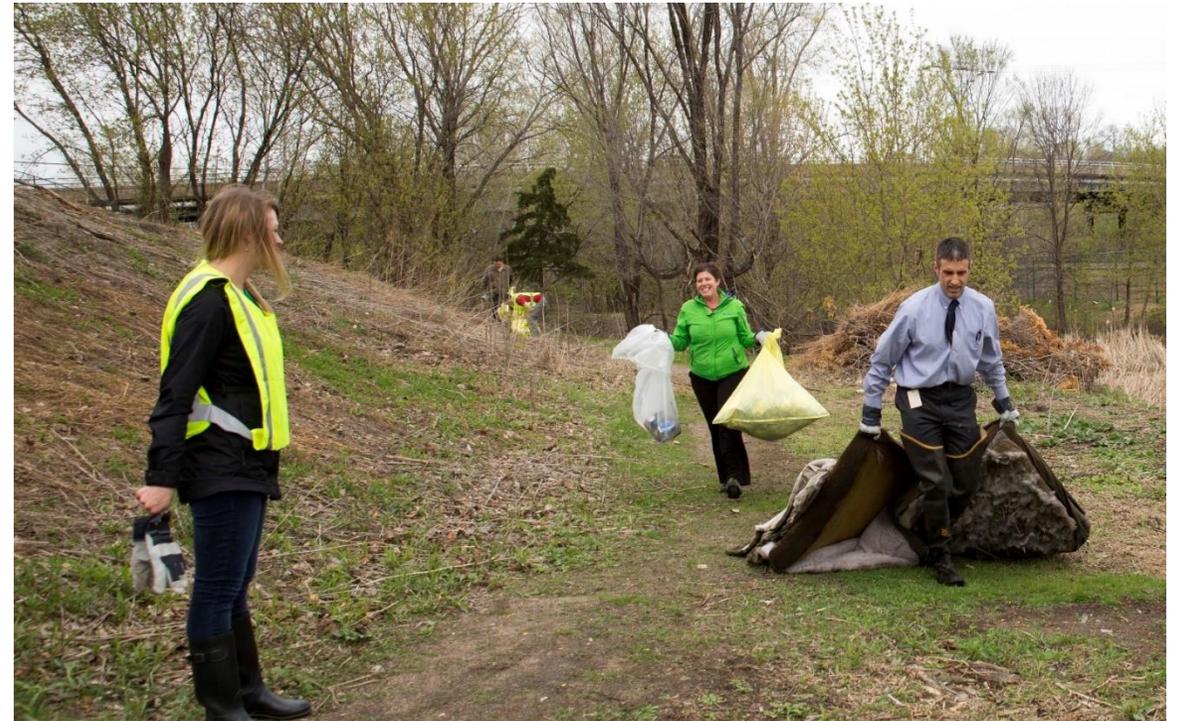
- [Templates](#)
- [Checklists](#)
- [Examples of procedures](#)
- [Model language](#)

Photo Library



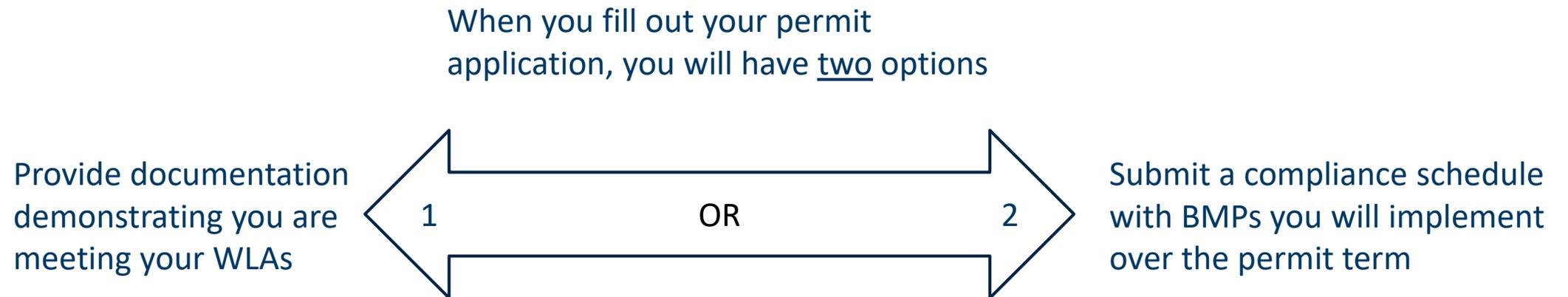
MCM 2: Public Participation/Involvement

- Each year, provide at least one public involvement activity that includes a pollution prevention or water quality theme



Total Maximum Daily Load (TMDL) Requirements

If you have any applicable waste load allocations (WLAs) for dissolved oxygen or oxygen demand, nitrate, total suspended solids (TSS), or total phosphorus (TP)



Draft List of WLAs

Available at
pca.state.mn.us/ms4permit

MINNESOTA POLLUTION CONTROL AGENCY

DRAFT MS4 Permit TMDL WLAs List

Municipal Separate Storm Sewer Systems (MS4) Program
 Total Maximum Daily Load (TMDL), Wasteload Allocations (WLAs)

Permittee name	MS4 Permit #	TMDL project name	Waterbody ID	Waterbody name	WLA type	Numeric WLA	Units
Albert Lea city of	MS400263	Lower Mississippi River Basin-Fecal Coliform TMDL	07080202-501	Shell Rock River	Individual	2.7	trillions of organisms/month
Albert Lea city of	MS400263	Lower Mississippi River Basin-Fecal Coliform TMDL	07080202-501	Shell Rock River	Individual	0.72	trillions of organisms/month
Albert Lea city of	MS400263	Lower Mississippi River Basin-Fecal Coliform TMDL	07080202-501	Shell Rock River	Individual	0.25	trillions of organisms/month
Albert Lea city of	MS400263	Lower Mississippi River Basin-Fecal Coliform TMDL	07080202-501	Shell Rock River	Individual	**	trillions of organisms/month
Albert Lea city of	MS400263	Lower Mississippi River Basin-Fecal Coliform TMDL	07080202-501	Shell Rock River	Individual	**	trillions of organisms/month
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	8.3	billions of organisms/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	4.8	billions of organisms/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	2.5	billions of organisms/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	0.8	billions of organisms/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	0.2	billions of organisms/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	1.8	tons/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	0.6	tons/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	0.2	tons/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	0.1	tons/day
Albertville city of	MS400281	North Fork Crow and Lower Crow Bacteria, Turbidity, and Low DO TMDL	07010204-502	Crow River	Individual	0.1	tons/day

TMDL Requirements

- Performance-based approach for:
 - Bacteria
 - Chloride
 - Temperature
- Permittees who have an applicable WLA for these pollutants will not need to complete a compliance schedule.

TMDL Requirements

- If you have an applicable WLA for bacteria:
 - Maintain a written or mapped inventory of potential areas and sources of bacteria (e.g., dense populations of waterfowl or other bird, dog parks).
 - Maintain a written plan to address the areas and sources identified in the inventory.



TMDL Requirements

- If you have an applicable WLA for chloride:
 - Document the amount of deicer applied each winter maintenance season
 - Each year conduct an assessment of your winter maintenance operations to reduce the amount of deicing salt applied and determine opportunities to improve BMPs
 - May use the MPCA's Smart Salting Assessment Tool to meet this requirement. Available at: smartsaltingtool.com



Photo by David R. Gonzalez of the Minnesota Department of Transportation

TMDL Requirements

- If you have an applicable WLA for temperature:
 - Maintain a written plan that identifies specific activities the permittee will implement to reduce thermal loading during the permit term



Photo courtesy of U.S. Fish and Wildlife Service, Midwest Region

Go to stormwater.pca.state.mn.us and search for “TMDLs”

Minnesota Stormwater Manual Search Search Help Log in

Total Maximum Daily Loads (TMDLs) Page Contents

File:2014 BWSR Board Tour.jpg > MCM 1 Public Education and Outreach > MS4 Digital Document Library > Special:Search > Total Maximum Daily Loads (TMDLs)

Total Maximum Daily Loads (TMDLs) are EPA approved amounts of pollutant loading that can occur and have a water body meet water quality standards. This page is collection of links and resources to better understand, and meet, TMDL requirements.

TMDL MS4 permit guidance

- [Guidance for meeting chloride TMDL MS4 permit requirements](#)
- [Guidance for meeting bacteria TMDL MS4 permit requirements](#)
- [Guidance for meeting dissolved oxygen or oxygen demand TMDL MS4 permit requirements](#)
- [Guidance for meeting temperature TMDL MS4 permit requirements](#)
- [Guidance for categorical TMDLs](#)
- [List of Approved TMDLs with MS4 WLAs \(updated November 2019\)](#)
- [Forms, guidance, and resources for completing the TMDL annual report form](#)
- [Baseline year](#)
- [Summary of TMDL requirements in stormwater permits](#)
- [Interpreting wasteload allocations based on flow/load duration curves](#)

TMDL toolkit for MS4 permit compliance

- [Overview of models used to meet MS4 TMDL permit requirements](#)
- **P8**
 - [Recommendations and guidance for utilizing P8 to meet TMDL permit requirements](#)
 - [Case study for using P8 to meet TMDL permit requirements](#)
- **WINSLAMM**
 - [Recommendations and guidance for utilizing WINSLAMM to meet TMDL permit requirements](#)
 - [Case study for using WINSLAMM to meet TMDL permit requirements](#)
- **MIDS (Minimal Impact Design Standards calculator)**
 - [Recommendations and guidance for utilizing the MIDS calculator to meet TMDL permit requirements](#)
 - [MIDS calculator](#)
 - [Case study for using the MIDS calculator to meet TMDL permit requirements](#)
- **MPCA Simple Estimator**
 - [Recommendations and guidance for utilizing the MPCA Simple Estimator to meet TMDL permit requirements](#)
 - [Guidance and examples for using the MPCA Estimator](#)
 - [Case study for using the MPCA Simple Estimator to meet TMDL permit requirements](#)

Confluence of the St. Croix and Mississippi rivers. Note the St. Croix River is not impaired for sediment, while the Mississippi River is impaired.

[Access a quick guide](#) for using models to meet MS4 TMDL requirements

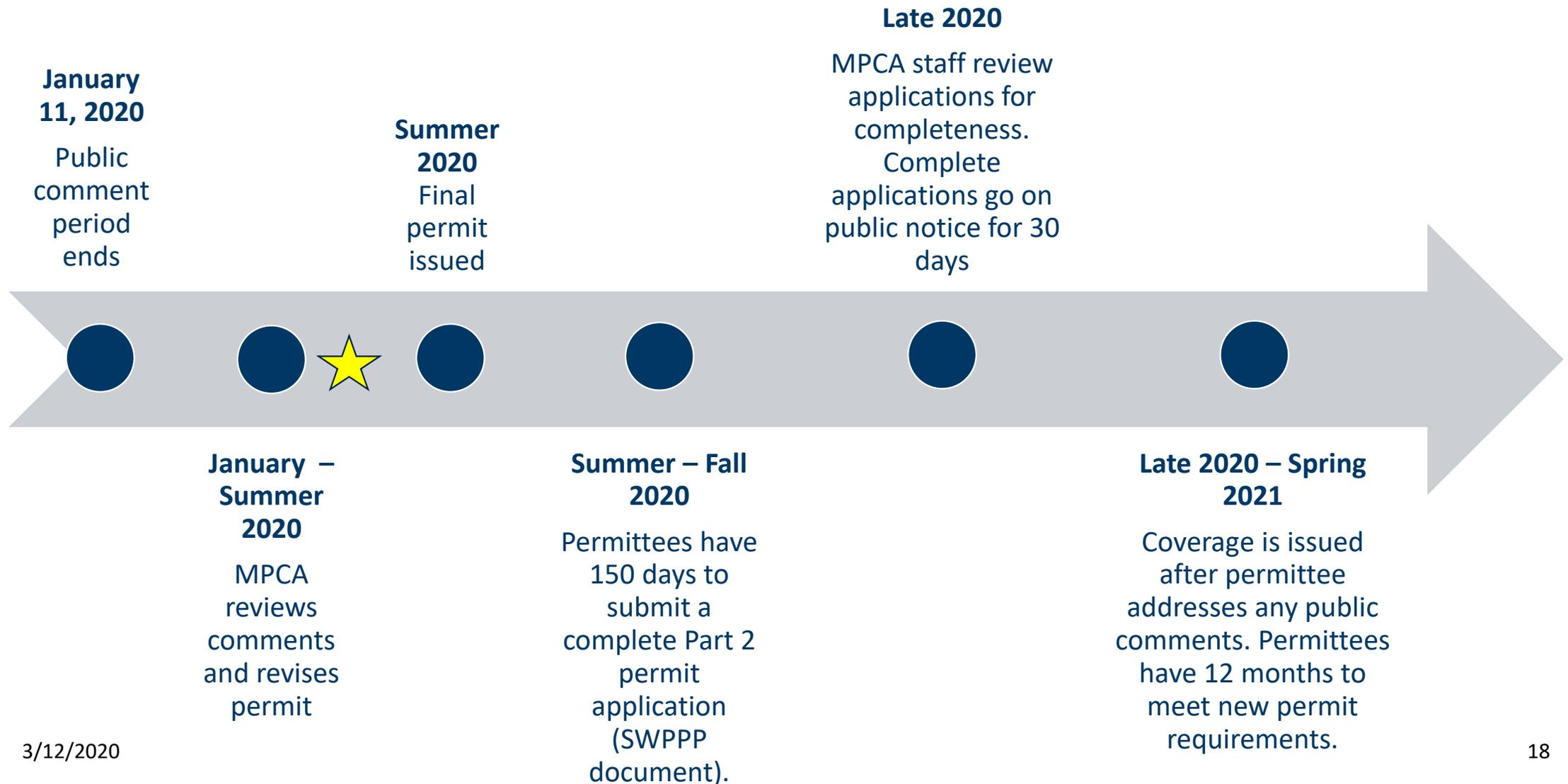
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Other Guidance Materials

- Examples and guidance materials to help meet new permit requirements:
Go to stormwater.pca.state.mn.us and search for “new permit requirements”
- Draft permit language and other helpful documents available at www.pca.state.mn.us/ms4permit

Minimum Control Measure (MCM) 3 - Illicit discharge detection and elimination	
Permit item 18.5: For cities, townships, and counties, the permittee's regulatory mechanism(s) must require owners or custodians of pets to remove and properly dispose of feces on permittee owned/operated land areas. [Minn. R. 7090]	Materials under consideration
Permit item 18.6: For cities and townships, the permittee's regulatory mechanism(s) must require proper salt storage at commercial, institutional, and non-NPDES permitted industrial facilities. At a minimum, the regulatory mechanism(s) must require the following: a. designated salt storage areas must be covered or indoors; b. designated salt storage areas must be located on an impervious surface; and c. implementation of practices to reduce exposure when transferring material in designated salt storage areas (e.g., sweeping, diversions, and/or containment). [Minn. R. 7090]	Chloride Reduction Model Ordinance
Permit item 18.8 a. training all field staff in illicit discharge recognition (including conditions which could cause illicit discharges), and reporting illicit discharges for further investigation. Field staff includes, but is not limited to, police, fire department, public works, and parks staff. Each calendar year following the initial training, the permittee must provide a refresher-training to all field staff on illicit discharge recognition and reporting. Training for this specific requirement may include, but is not limited to, videos, in-person presentations, webinars, and/or training documents; and b. ensure that individuals receive training commensurate with their responsibilities as they relate to the permittee's IDDE program. Individuals includes, but is not limited to, individuals responsible for investigating, locating, eliminating illicit discharges, and/or enforcement. The permittee must ensure that previously trained individuals attend a refresher-training every three (3) calendar years following the initial training. [Minn. R. 7090]	DDL: MCM 3 Illicit Discharge Detection and Elimination - see Training tools section Materials under consideration (possible video) Materials under consideration (PowerPoint materials)
Permit item 18.9: The permittee must maintain a written or mapped inventory of priority areas the permittee identifies as having a higher likelihood for illicit discharges. At a minimum, the inventory must include the following: a. non-NPDES permitted business/industrial activities with storage of large quantities of significant materials that could result in an illicit discharge; and b. areas where illicit discharges have been identified in the past and continues to pose a risk. [Minn. R. 7090]	Materials under consideration
Permit item 18.10: The permittee must conduct illicit discharge inspections at least once each calendar year in areas identified in item 18.9. [Minn. R. 7090]	DDL: MCM 3 Illicit Discharge Detection and Elimination - see Training tools and Documentation & tracking templates sections

Estimated Timeline



Contact Information

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- Full MPCA MS4 contact list available at: www.pca.state.mn.us/ms4