MINNESOTA POLLUTION CONTROL AGENCY

AUTHORIZATION TO DISCHARGE STORMWATER
ASSOCIATED WITH SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS
UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)/
STATE DISPOSAL SYSTEM (SDS) PROGRAM
MNR040000

Permittee:	Multiple
General Permit name:	Small Municipal Separate Storm Sewer Systems General Permit
Issuance date:	November 16, 2020
Expiration date:	November 15, 2025

2022 Annual Meeting
City Engineers Association of Minnesota

MS4 Permit Update…and a few other things

Randy Neprash, PE

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nmsa National Municipal Stormwater Alliance

Minnesota Cities Stormwater Coalition
Municipal stormwater professionals working together for clean water

I have mostly retired from MCSC Minnesota work

I've been doing this for 20 years

MCSC is working on the transition to find a new staff person

MCSC is looking at every organizational function and considering new directions

I am working more on national stormwater issues

Minnesota Cities Stormwater Coalition
Municipal stormwater professionals working together for clean water

nmsa National Municipal Stormwater Alliance

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Yes, we have a new MS4 General Permit

The MPCA followed a good process to revise the MS4 General Permit

- Meetings with stakeholders – some draft permit language
- Pre-public notice release to everyone – comments and discussion
- Formal public notice
- Final permit

The MPCA, under new Federal rule, had to make this permit "clear, specific, and measurable".

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The New MS4 Permit

New MS4 Permit format – 28 pages

18.1	**MCM 3: Illicit Discharge Detection and Elimination (IDDE).** [Minn. R. 7090]
18.2	New permittees must develop, implement, and enforce, and existing permittees must revise their current program as necessary, and continue to implement and enforce, a program to detect and eliminate illicit discharges into the MS4. The permittee must incorporate Section 18 requirements into their program. [Minn. R. 7090]
18.3	The permittee must maintain a map of the permittee's MS4, as required in Section 14. [Minn. R. 7090]
18.4	To the extent allowable under state or local law, the permittee must develop, implement, and enforce a regulatory mechanism(s) that prohibits non-stormwater discharges into the permittee's MS4, except those non-stormwater discharges authorized in item 3.2. A regulatory mechanism(s) for the purposes of the General Permit may consist of contract language, an ordinance, permits, standards, written policies, operational plans, legal agreements, or any other mechanism, that will be enforced by the permittee. The regulatory mechanism(s) must also include items 18.5 and 18.6, as applicable. [Minn. R. 7090]
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 land areas. [Minn. R. 7090]
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]

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The New MS4 Permit

The Permit Application was due on April 15, 2021

The MS4 permittees completed the permit applications and they submitted them to the MPCA for preliminary review.

When the MPCA staff determined the applications were complete, they went on public notice for 30 days.

When the MS4 permittees addressed any applicable public comments or hearing requests, the MPCA made final determinations and issued coverage under the new permit.

This process is completed and all the coverage letters have gone out to the permittees.

The MS4 permittees have 12 months from the date coverage was extended to meet the new permit requirements. This is where we are now.

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The New MS4 Permit

More to the Application….

Application materials

- MS4 Part II permit application (wq-strm4-49a)
- TMDL application form: Permittees that are subject to an EPA-approved total maximum daily load (TMDL) waste load allocation (WLA) must also complete another customized application form, which is available at https://stormwater.pca.state.mn.us/index.php?title=Guidance_for_completing_the_MS4_Permit_TMDL_Application_Form.

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The New MS4 Permit

TMDL Application Form

Almost very MS4 permittee needs to fill out this form. 231 of 248

Your application is not complete unless you include this form, if it is applicable to you. The MPCA will just send your application back.

The MPCA has created a unique form for each permittee – an Excel spreadsheet file available on the MPC's Web site.

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The New MS4 Permit

TMDL Application Form

This workbook contains worksheets for TMDL Waste Load Allocations

The worksheet called ***Bacteria Chloride Temp*** contains a custom list of applicable WLAs for bacteria, chloride or temperature. This provides information to answer questions 141, 146 and 151 on the MS4 Part 2 Permit Application.
The worksheet called ***Applicable WLAs Determination*** contains a custom list of oxygen demand, nitrate, TSS and/or TP WLAs for each permittee. Column B in this worksheet needs to be completed by the applicant in order to populate the following worksheets. If there are no TMDLs listed, you have no TMDLs to report on in this workbook, and you should enter 'No' for question 155 on the MS4 Part 2 Permit Application.
The worksheet called ***Compliance Schedule*** should be completed for all oxygen demand, nitrate, TSS and/or TP TMDL Waste Load Allocations (WLAs) you are not meeting.
The worksheet called ***Compliance Schedule*** **BMPs** should be completed for all oxygen demand, nitrate, TSS and/or TP TMDL Waste Load Allocations (WLAs) you are not meeting.
The worksheet called ***Reductions for WLAs met*** should be completed for all oxygen demand, nitrate, TSS and/or TP TMDL Waste Load Allocations (WLAs) you are claiming to meet.
The worksheet called ***BMPs for WLAs met*** should be completed for all oxygen demand, nitrate, TSS and/or TP TMDL Waste Load Allocations (WLAs) you are claiming to meet.
The worksheet called ***TMDL Master List*** contains summary information for all U.S. Environmental Protection Agency-approved TMDL waste load allocations. It is for informational/reference purposes only.

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The New MS4 Permit

TMDL Application Form

TMDL Project - waterbody - pollutant	WLA type	Numeric WLA	Units	Flow Condition	Percent Reduction	Notes
Crystal, Keller, and Lee Lakes Nutrient Impairment TMDL-Keller-(19-0025-00)-TP	Individual	0.312	lbs/day	Not Applicable	53%	(blank)
		114.000	lbs/yr	Not Applicable	53%	(blank)
Long and Farquar Lakes (Metro)-Farquar-(19-0023-00)-TP	Individual	0.170	lbs/day	Not Applicable	73%	(blank)
		63.000	lbs/yr	Not Applicable	73%	(blank)
Long and Farquar Lakes (Metro)-Long-(19-0022-00)-TP	Individual	0.130	lbs/day	Not Applicable	84%	(blank)
		48.000	lbs/yr	Not Applicable	84%	(blank)
South Metro Mississippi TSS TMDL-Mississippi River-(07040001-531)-TSS	Categorical	154.000	lbs/acre/year	Not Applicable	Not Available	(blank)
Vermillion River Watershed JPO WRAPS 2008-Alimagnet-(19-0021-00)-TP	Individual	0.110	lbs/day	Not Applicable	44%	(blank)
		39.100	lbs/yr	Not Applicable	44%	(blank)
Vermillion River Watershed JPO WRAPS 2008-Unnamed-(19-0349-00)-TP	Individual	1.040	lbs/day	Not Applicable	36%	(blank)
		381.000	lbs/yr	Not Applicable	36%	(blank)

Bacteria, Chloride and Temperature Wasteload Allocation TMDL projects (permit item 12.9)

Column A, rows 9 and beyond, will list any applicable WLAs for bacteria, chloride or temperature TMDL projects (USEPA approved, more than a zero % reduction). Use the information in this tab to answer questions 141, 146 and 151 in the MS4 Part 2 Permit Application. If there is not a project listed for any certain pollutant, you would check the 'No' box for the corresponding question(s) in the MS4 Part 2 Permit Application.

Permittee name	city of
Percent Reduction	(Multiple Items)

Applicable WLAs for Bacteria, Temperature, or Chloride
Fecal Coliform
Lower Mississippi River Basin-Fecal Coliform TMDL
Vermillion River

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The New MS4 Permit

TMDL Application Form

Compliance schedule for Wasteload Allocations not being met (permit item 12.8)

Fill in the target year that each of the applicable WLA(s) will be achieved for each TMDL , waterbody and pollutant listed in column A. If you have an applicable WLA for total suspended solids (TSS) or total phosphorus (TP), a cumulative estimate of TSS and TP load reductions to be achieved during the permit term and the method used to determine the estimate should be entered in Columns D and E. For further instruction on completing this tab, refer to:

https://stormwater.pca.state.mn.us/index.php?title=Guidance_for_completing_the_MS4_Permit_TMDL_Application_Form#12.8_Compliance_schedule_tab

TMDL Project Name, Waterbody, and Pollutant	Pollutant	Target year WLA will be achieved	Estimated pollutant reduction this permit cycle (include units, such as lbs, percent reduction, lb/acre, etc.)	Method(s) for calculating reduction

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The New MS4 Permit

If you claim to meet a TMDL WLA…

12.10 If the applicant is claiming to meet an applicable WLA where a reduction in pollutant loading is required for oxygen demand, nitrate, TSS, or TP, the applicant must provide documentation to demonstrate the applicable WLA is being met. At a minimum, the applicant must provide the following information:

a. a list of all structural stormwater BMPs implemented to achieve the applicable WLA, including the BMP type (e.g., constructed basin, infiltrator, filter, swale or strip, etc.), location in geographic coordinates, owner, and year implemented; and
b. documentation using an Agency-approved method, which demonstrates the estimated reductions of oxygen demand (or its surrogate pollutants), nitrate, TSS, or TP from BMPs meet the MS4 WLA reductions included in the TMDL report, if that information is available (e.g., percent reduction or pounds reduced); or
c. documentation using an Agency-approved method, which demonstrates the applicant's existing load meets the WLA. [Minn. R. 7090]

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The New MS4 Permit

TMDL Application Form

Documentation for Waste load Allocations being met (permit item 12.10)

Fill in the following table for each applicable oxyen demand, nitrate, TSS and/or TP WLA you are claiming to meet using the MPCA-approved method. This should either de from BMPs that serve to meet the MS4 WLA reductions included in the TMDL report OR demonstrates the MS4's existing load meets the WLA. For more guidance on con

https://stormwater.pca.state.mn.us/index.php?title=Guidance_for_completing_the_MS4_Permit_TMDL_Application_Form#12.10_Reductions_f

Required	Cumulative Estimated Reductions - Required		Required	Required if "other" selected in column D
TMDL project name, waterbody and pollutant	**Cumulative estimated reduction**- How are you claiming to meet the WLA?	**Cumulative estimated reduction** (Enter value corresponding to units specified in Column B)	**Method(s) used to calculate**	**Name of other model**

Required	Required	Required if WLA is categorical	Required if WLA is categorical	Optional
Do you have the calculations available on file?	**Is this part of a categorical WLA?** (See Column E on Applicable WLAs determination tab)	**If part of a Categorical WLA, how did you determine your portion of the WLA?**	**What is your portion of the categorical WLA? (Include units)**	**Notes**

The New MS4 Permit

Some of the New Items in the Permit

- **Version of the MS4 General Permit with all the new items highlighted**
- **https://www.pca.state.mn.us/sites/default/files/wq-strm4-94a.pdf**
- **Special requirements for pet waste**
- **More staff training**
- **Salt and bacteria requirements**
- **More checklists**

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The New MS4 Permit

Some of the New Items in the Permit

- **More clear, specific, and measurable requirements, generally**
- **Quantified volume control and water quality volume treatment standards – for regular and linear projects**
- **New infiltration prohibitions**
- **A few new definitions**
- **Others…**

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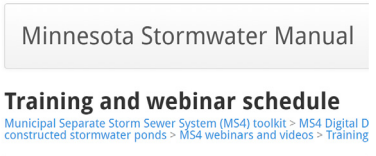
The New MS4 Permit

Helpful Items from the MPCA

The MPCA does a remarkable job of providing guidance and information for MS4 permittees

Training and webinar schedule - Minnesota Stormwater Manual (state.mn.us)

https://stormwater.pca.state.mn.us/index.php?title=Training_and_webinar_schedule



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The New MS4 Permit

Helpful Items from the MPCA

Up-coming webinars			
Event	**Date**	**Time**	**Webinar or training**
Pretreatment - how can we do better?	January 19	1:00-2:30 PM CST	Webinar

Up-coming trainings			
Event	**Date**	**Time**	**Webinar or training**
MS4 Outreach/Question & Answer Session - MCM 3: Illicit Discharge Detection and Elimination	Feb. 17, 2022	9-11 AM	Webinar
MS4 Outreach/Question & Answer Session - MCM 4: Construction Site Stormwater Runoff Control	Mar. 17, 2022	9-11 AM	Webinar
MS4 Outreach/Question & Answer Session - MCM 1: Public Education and Outreach & MCM 2: Public Participation/Involvement	Apr. 21, 2022	9-11 AM	Webinar
MS4 Outreach/Question & Answer Session - Audit Process and Agency Enforcement	May 19, 2022	9-11 AM	Webinar
MS4 Outreach/Question & Answer Session - MS4 Mapping	June 16, 2022	9-11 AM	Webinar

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The New MS4 Permit

Helpful Items from the MPCA

Past Events			
Event	**Date**	**Time**	**Webinar or training**
TMDL Application Webinar Series General Question and Answer Recording	Tuesday March 23	9-10 AM	Webinar
MPCA Simple Estimator training Level 1	Thursday March 25	9-11 AM	Training
MPCA Simple Estimator training Level 1	Tuesday March 30	9-11 AM	Training
MPCA Simple Estimator training Level 1	Wednesday March 31	1-3 PM	Training
MIDS Calculator - Introduction	Thursday April 1	9-11 AM	Training
More Questions and Answers - April 6, 2021 Webex meeting recording	Tuesday April 6	9-10 AM	Webinar
MPCA Simple Estimator training Level 1	Tuesday April 6	1-3 PM	Training
MIDS Calculator - Introduction	Wednesday April 7	9-11 AM	Training
MIDS Calculator - Introduction	Monday April 12	1:30-3:30 PM	Training
MIDS Calculator updates - Version 4	Tuesday April 13	10-11 AM	Webinar
Street sweeping	Thursday, May 13, 2021	9:30-11:00	Webinar
Engineered media	Wednesday May 26, 2021	9:30-11:00	Webinar
MIDS Calculator - Introduction	Sept. 21	10:00AM-Noon	Training
MIDS Calculator - Intermediate	Sept. 21	1:00-3:00 PM	Training
MS4 Outreach/Question & Answer Session - MS4 Regulation 101	Oct. 21, 2021	9-11 AM	Webinar
MS4 Outreach/Question & Answer Session - MCM 5: Post-Construction Stormwater Management	Nov. 18, 2021	9-11 AM	Webinar
MS4 Outreach/Question & Answer Session - Total Maximum Daily Loads (TMDLs)	Dec. 16, 2021	9-11 AM	Webinar
MS4 Outreach/Question & Answer Session - MCM 6: Pollution Prevention/Good Housekeeping for Municipal Operations	Jan. 20, 2022	9-11 AM	Webinar

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Helpful Items from the MPCA

Minnesota Stormwater Manual

MS4 Digital Document Library

Minnesota Stormwater Manual

Municipal Separate Storm Sewer System (MS4) toolkit

Minnesota Stormwater Manual Search

Assessing total suspended sediment and total phosphorus removal efficiency of permittee owned/operated constructed stormwater ponds

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The New MS4 Permit

Helpful Items from the MPCA - TMDLs

- **Unique informational form for each permittee**
- **Simple Estimator tool to estimate load reductions for TSS and TP**
- **Assistance to develop WLA for categorical TMDLs**

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The New MS4 Permit

Help from MCSC

- Please stay tuned….
- Watch for information from the new MCSC staff person

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The New MS4 Permit

Other things - Minnesota

- New funding for stormwater projects
  - More grants – Public Facilities Authority, the Clean Water State Revolving Fund (CWSRF), BWSR
  - Overflow and Sewer Grants (OSG) Program – MPCA

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Planning grants for stormwater, wastewater, and community resilience

- I hope all this will be a new focus for MCSC

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The New MS4 Permit

Other things - Minnesota

- MS4 Permit fee increases – MPCA
  - Watch the upcoming session of the Legislature

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The New MS4 Permit

Other things - Minnesota

- MS4 Permit fee increases – MPCA

Type of Permittee	Fee based on	Fee Detail	Current Fee (every five years)	30% Fee Scenario (annual fee)	30% Fee Scenario (every five years)	Comparison with current fee (rounded)
City or township	Population	1,000 or fewer	$400	$150	$750	2 times
		1,000 - 3,000	$400	$150	$750	2 times
		3,001 - 10,000	$400	$1,000	$5,000	13 times
		10,001 - 30,000	$400	$4,500	$22,500	56 times
		30,001 - 50,000	$400	$7,500	$37,500	94 times
		50,001 - 75,000	$400	$10,500	$52,500	131 times
		75,001 - 100,000	$400	$15,000	$75,000	188 times
		100,000+	$400	$20,000	$100,000	250 times
County	Percent urbanized area	0% - 24%	$400	$1,000	$5,000	13 times
		25% - 49%	$400	$2,000	$10,000	25 times
		50%+	$400	$3,000	$15,000	38 times
Non-traditional (colleges, prisons, etc.)	Developed land (acres)	0 - 149	$400	$500	$2,500	6 times
		150+	$400	$1,000	$5,000	13 times
MnDOT Greater MN	Flat fee		$400	$3,000	$15,000	38 times
MnDOT Metro			$400	$20,000	$100,000	250 times
Watershed districts	Flat fee		$400	$500	$2,500	6 times

MS4 Program Cost	Current fee revenue	% covered by fees	30% Cost Fees (rounded)	Comparison with current fee (rounded)
$2,909,391	$20,240	0.70%	$873,000	43 times

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The New MS4 Permit

Other things - Minnesota

PFAS = Per- and polyfluoroalkyl substances
- PFOA, PFOS, GenX, and other chemicals – large family

- We have gotten very good at detecting them at extremely low concentrations
- We have found that they are hazardous to human health at very low concentrations
- Once in the environment, they decay and decompose incredibly slowly
  - "Forever chemicals"
- We are finding them everywhere
  - Including rainfall in remote locations
- We are struggling to find any treatment options for drinking water and wastewater
  - Practicable stormwater treatment is pretty much hopeless – too expensive

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The New MS4 Permit

Other things - Minnesota

A possible future nightmare scenario for stormwater

- We set very low concentration thresholds for Water Quality Standards
- We assess waters and find PFAS impairments almost everywhere
- Impairments ➔ TMDLs ➔ Waste Load Allocations ➔ Linked to MS4 Permits
  - Significant pollutant load reductions
- We still have no treatment options for stormwater…
- …so the MS4 permittees have unachievable WLAs

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The New MS4 Permit

Other things - Minnesota

A possible path away from the nightmare

- In the wastewater permitting world, they have "qualified pretreatment programs"
- These are for situations where there are low effluent limits for specific chemicals but only very limited viable treatment options – no technically-feasible methods
- Everyone recognizes that it is not possible to meet the effluent limits
- Define appropriate treatment options and write them into the POTWs permit
  - The goal becomes improvement, rather than meeting effluent limits
- By implementing those options, the POTW is considered to be meeting their permit requirements, even though they are not meeting the effluent limits

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Other things - Minnesota

PFAS, stormwater, and TMDLs

- I had thought we had time on this issue
- The new Minnesota draft Impaired Waters List has 26 waters listed as impaired for PFAS chemicals
- For two of those listed waters, the listed completion date for the TMDLs is 2023
- Work on these TMDLs may have already started
- I am now trying to work with our state agency to initiate discussions about PFAS, stormwater, and TMDLs

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The New MS4 Permit

Other things - National

- Waters of the United States (WOTUS) – definition rule
  - Third time – after 2015 and 2020
  - Supreme Court just agreed to hear a WOTUS case
- *(b) Non-jurisdictional waters. The following are not "waters of the United States":*
- *(10) Stormwater control features constructed or excavated in upland or in non-jurisdictional waters to convey, treat, infiltrate, or store stormwater runoff;*
- This language was dropped. NMSA is working to have it restored

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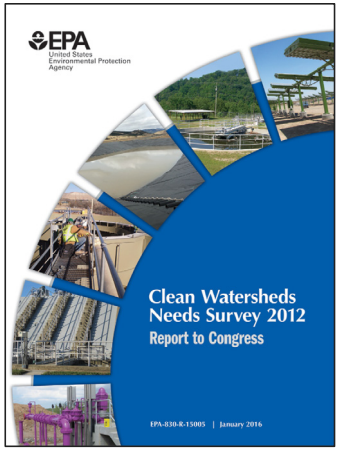
Other things - National

EPA Clean Watershed Needs Survey

The stormwater data in the 2012 CWNS was very weak.

- 15 states had no data.
- Another 16 states listed needs of less than $100 million.
- Only 21% of the MS4 permittees submitted any data.

This needs to change



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Other things - National

EPA has funding and is currently working on a new CWNS

They want to do a better job collecting stormwater needs data.

20-year timeframe, in theory. 5-year timeframe is more practicable.

Roughly, any work that would be eligible for Clean Water State Revolving Fund support is an eligible need for the CWNS

EPA is ramping up now. The Federal data portal will open in March 2022 and will remain open for a year.

Local programs submit needs data to their state. The states submit data to EPA.

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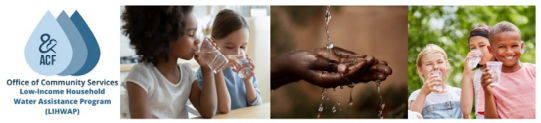
Other things - National

Low Income Household Water Assistance Program (LIHWAP)

Listen



Low Income Household Water Assistance Program (LIHWAP) provides funds to assist low-income households with water and wastewater bills. LIHWAP grants are available to States, the District of Columbia, the Commonwealth of Puerto Rico, U.S. Territories, and Federally and state-recognized Indian Tribes and tribal organizations that received fiscal year 2021 Low Income Household Energy Assistance Program (LIHEAP) grants.

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Other things - National

Congress has written new stormwater initiatives into the big bipartisan infrastructure bill

Congress is looking for new ideas

Watch for further news…..

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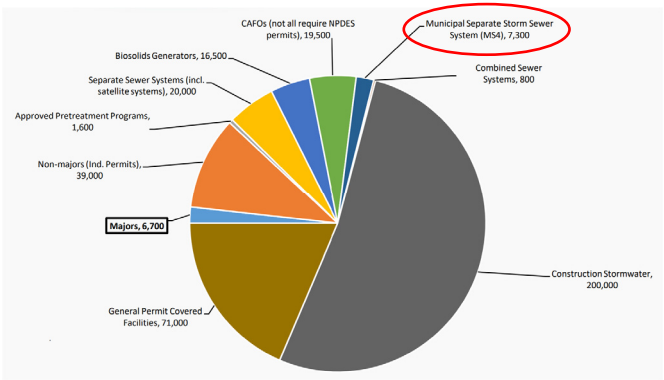
MS4 Permit

Other things - National

National E-reporting for all NPDES permits – coming in the next couple years



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Thanks and good luck!

Minnesota Cities Stormwater Coalition
Municipal stormwater professionals working together for clean water

We are <u>not</u> the government and we are here to help!

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