

MS4 General Permit
Town of Manchester 2017 Annual Report
 Existing MS4 Permittee
 Permit Number GSM 000063
 [January 1, 2017 – December 31, 2017]

This report documents Manchester’s efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2017 to December 31, 2017.

Part I: Summary of Minimum Control Measure Activities

1. Public Education and Outreach (Section 6 (a)(1) / page 19)

1.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-1 Implement public education and outreach	In Progress		Gather at least five educational brochures from various entities per year to update Town’s website	Planning/ Matt Bordeaux	Jul 1, 2018	Anticipate completing by the deadline of Jul 1, 2018	
1-2 Educate residents about home generated pollutants and management	In Progress	<i>Created storm drain demonstration for educational purposes at Government Academy</i>	Formalize Field Services presentation at Government Academy to discuss home generated pollutants and management	Public Works/ Ken Longo	Jul 1, 2018	Anticipate completing by the deadline of Jul 1, 2018	
1-3 Educate volunteer organizations doing work in Town	Not Started	<i>Added Garden Club liason to Conservation Commission</i>	Meet with Manchester Garden Club to discuss opportunities to incorporate green infrastructure	Planning/ Matt Bordeaux	Jul 1, 2019	Anticipate completing by the deadline of Jul 1, 2019	

1-4 Turf management education	Not Started		Direct mail a brochure regarding grass clippings/fertilizer/leaf management to local commercial landscaping companies	Planning/ Matt Bordeaux	Jul 1, 2020	Anticipate completing by the deadline of Jul 1, 2020	
1-5 Chemical storage/FOG/recycling education	Not Started		Direct mail a brochure regarding chemical storage/FOG/recycling to local commercial developments along the Hockanum River watershed	Planning/ Matt Bordeaux	Jul 1, 2021	Anticipate completing by the deadline of Jul 1, 2021	
1-6 Educate school age children about stormwater management	Not Started		Visit three elementary or middle schools to discuss stormwater management	Planning/ Matt Bordeaux	Jul 1, 2022	Anticipate completing by the deadline of Jul 1, 2022	

1.2 Describe any Public Education and Outreach activities planned for the next year, if applicable.

<ul style="list-style-type: none"> • Updating Town’s website with additional educational brochures/resources • Discuss residential stormwater management at 2018 Government Academy classes • <i>Street Tree program – Public Outreach</i>

1.3 Details of activities implemented to educate the community on stormwater

Program Element/Activity	Audience (and number of people reached)	Topic(s) covered	Pollutant of Concern addressed (if applicable)	Responsible dept. or partner org.
<i>Example: Educational stormwater sign installed at high school</i>	<i>Students, parents, teachers (approx. 1000)</i>	<i>Impact of impervious cover, stormwater infiltration</i>	<i>Phosphorus, nitrogen</i>	<i>Parks & rec</i>
<i>Example: Brochures distributed at IWWA desk</i>	<i>Developers, home owners (approx. 150)</i>	<i>Impact of impervious cover, Septic systems & Fertilizer use</i>	<i>Bacteria, nitrogen and phosphorus</i>	<i>IWWA</i>

2. Public Involvement/Participation (Section 6(a)(2) / page 21)

2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-1 Comply with public notice requirements for the Stormwater Management Plan	Completed	Stormwater Management Plan put on Town's webpage to solicit comments	Solicit comments on Plan	Engineering/ Jeff LaMalva	Apr 3, 2017	Apr 27, 2017	
2-2 Comply with public notice requirements for Annual Reports	In Progress	2018 Annual Report put on Town's webpage to solicit comments	Solicit comments on Annual Report	Engineering/ Jeff LaMalva	Feb 15, 2018	Feb 22, 2018	
2-3 Schedule annual Hockanum River cleanup day			Schedule one cleanup day per year	Planning/ Hockanum River Linear Park Committee	Jul 1, 2018	Anticipate completing by the deadline of Jul 1, 2018	
2-4 Administer web-based customer service program which allows residents to notify Town of any stormwater issues	In Progress	Town's MarkIT web based customer service program is monitored daily.	Respond to customer requests within three business days.	Engineering/GIS Jeff LaMalva	Jul 1, 2018	Continuous	

2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.

- Annual Hockanum River cleanup day Sept 28-29
- Solicit comments on Annual Report
- Continue monitoring of web-based customer service program for stormwater issues

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	YES	March 2017	http://engineering1.townofmanchester.org/index.cfm/storm-water-

			pollution-prevention/
Availability of Annual Report announced to public	YES	March 2018	http://engineering1.townofmanchester.org/index.cfm/storm-water-pollution-prevention/

3. Illicit Discharge Detection and Elimination (Section 6(a)(3) and Appendix B / page 22)

3.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3-1 Develop written IDDE program	In progress	Town is in process of completing written IDDE program using the CT IDDE program template	Develop written plan of IDDE program	Planning/ Matt Bordeaux	Jul 1, 2018	Anticipate completing by the deadline of July 1, 2018.	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	In progress		Produce map and lists of outfalls for publication on Town's website	Engineering/GIS Jeff LaMalva	Jul 1, 2019	Anticipate completing by the deadline of July 1, 2019	
3-3 Implement citizen reporting program	Completed	Tutorial on use of MarkIT citizens reporting tool added to the Town's website	Educate public on the use of the MarkIT citizen reporting tool	Engineering/GIS Jeff LaMalva	Jul 1, 2018	Jun 2017	
3-4 Establish legal authority to prohibit illicit discharges	In Progress	Committee is reviewing model ordinances to develop draft	Write and adopt a stormwater ordinance	Attorney's Office/ Tim O'Neil	Jul 1, 2018	Anticipate completing ordinance by the deadline of July 1, 2018	
3-5 Develop record keeping system for IDDE tracking	Completed	Electronic folders in Engineering Division's project files created to store complaints/inspections/photos of illicit discharge complaints	Maintain list of complaints/inspections for annual reporting	Engineering/GIS Jeff LaMalva	Jul 1, 2018	Dec 2017	

3-6 Address IDDE in areas with pollutants of concern	In Progress		Conduct dry weather inspections of outfalls along the Hockanum River	Public Works/ Ken Longo	Jul 1, 2018	Anticipate completing inspections by the deadline of July 1, 2018	
3-7 Complete list and maps of all MS4 stormwater outfalls throughout municipality	Not started		Produce map and lists of outfalls for publication on Town's website	Engineering/GIS Jeff LaMalva	Jul 1, 2022	Anticipate completing by the deadline of Jul 1, 2022	

3.2 Describe any IDDE activities planned for the next year, if applicable.

- The written program will be posted to the Dept of Public works webpage and a link listed in next year's Annual Report; will update the written IDDE program as needed throughout the permit term.
- Continue to monitor the Town's MarkIT system for stormwater/IDDE issues
- Complete and adopt the Stormwater ordinance
- Conduct dry weather inspections of outfalls along the Hockanum River

3.3 List of citizen reports of suspected illicit discharges received during this reporting period.

Date of Report	Location / suspected source	Response taken

3.4 Provide a record of illicit discharges occurring during the reporting period and SSOs occurring July 2012 through end of reporting period using the following table.

Location (Lat long/ street crossing /address and receiving water)	Date and duration of occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed (include dates)	Sampling data (if applicable)

3.5 Briefly describe the method used to track illicit discharge reports, responses to those reports, and who was responsible for tracking this information.

3.6 Provide a summary of actions taken to address septic failures using the table below.

Location and nature of structure with failing septic systems	Actions taken to respond to and address the failures	Impacted waterbody or watershed, if known

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	#
Estimated or actual number of interconnections	0
Outfall mapping complete	(75%)
Interconnection mapping complete	N/A
System-wide mapping complete (detailed MS4 infrastructure)	(75%)
Outfall assessment and priority ranking	(0%)
Dry weather screening of all High and Low priority outfalls complete	0

Catchment investigations complete	0
Estimated percentage of MS4 catchment area investigated	0%

3.8 Briefly describe the IDDE training for employees involved in carrying out IDDE tasks including what type of training is provided and how often is it given (minimum once per year).

4. Construction Site Runoff Control (Section 6(a)(4) / page 25)

4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	In Progress	Working on draft of updated Public Improvement Standards	Review and update Zoning Regulations, Wetlands Regulations, Subdivision Regulations and Public Improvement Standards	Planning/ Gary Anderson	Jul 1, 2019	Anticipate completing by the deadline of Jul 1, 2019	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Completed	Planning Department schedules bi-weekly meetings with Town staff from other departments to discuss pending site plan applications	Continue bi-weekly staff review meetings	Planning/ Renata Bertoti	Jul 1, 2017	Mar 2017	
4-3 Review site plans for stormwater quality concerns	Ongoing	Town staff reviews all site plan applications for stormwater quality concerns	Continue to review all private development plans	Planning/ Renata Bertoti	Jul 1, 2017	Ongoing	
4-4 Conduct site inspections	Ongoing	Engineering Division inspection staff	Continue to inspect all construction	Engineering/ Jeff LaMalva	Jul 1, 2017	Ongoing	

		conduct site inspections on a daily basis	activity on a minimum weekly basis				
4-5 Implement procedure to allow public comment on site development	Ongoing	Public comments are received during public hearings through the Planning and Zoning Commission	Continue public hearing process through Planning and Zoning Commission	Planning/ Gary Anderson	Jul 1, 2017	Ongoing	
	Ongoing	Engineering Division responded to resident complaints on active construction sites	Review and respond to public comments on active construction sites within three days	Engineering/ Jeff LaMalva	Jul 1, 2017	Ongoing	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Completed		Modify application package to include language notifying developers about DEEP construction stormwater permit requirements	Planning/ Gary Anderson	Jul 1, 2017	March 2018	

4.2 Describe any Construction Site Runoff Control activities planned for the next year, if applicable.

- Review Zoning Regulations, Subdivision Regulations and Wetlands Regulations for compliance to MS4 requirements
- Continue to review site plans and inspect construction activity associated with private development
- Continue to hear public comments at Planning and Zoning Commission public hearings
- Continue to respond to complaints related to construction activity in Town

5. Post-construction Stormwater Management (Section 6(a)(5) / page 27)

5.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5-1 Establish and/or update legal authority and guidelines regarding LID and runoff reduction in site development planning	Not started		Include new section in Zoning Regulations requiring LID and runoff reduction	Planning/ Gary Anderson	Jul 1, 2021	Anticipate completing by the deadline of Jul 1, 2021	

5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Not started		Monitor construction activity on a minimum weekly basis to assure compliance with LID/runoff reduction requirements approved by the PZC	Engineering/ Jeff LaMalva	Jul 1, 2021	Anticipate completing by the deadline of Jul 1, 2021	
5-3 Implement long-term maintenance plan for stormwater basins and treatment structures	Not started		Implement plan to maintain five detention basins per year	Public Works/ Ken Longo	Jul 1, 2019	Anticipate completing by the deadline of Jul 1, 2019	
5-4 DCIA mapping	Not started		Complete DCIA mapping and place mapping on Town's website	Engineering/GIS Jeff LaMalva	Jul 1, 2020	Anticipate completing by the deadline of Jul 1, 2020	
5-5 Address post-construction issues in areas with pollutants of concern	Not started		Conduct random inspections of recently completed developments within areas of concern	Planning/ Matt Bordeaux	Not specified	Anticipate completing by the deadline of Jul 1, 2019	

5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.

- Develop maintenance plan for stormwater detention basins
- Work on DCIA mapping
- Conduct random inspections of recently completed developments

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	acres
DCIA disconnected (redevelopment plus retrofits)	acres this year / acres total
Retrofits completed	#

DCIA disconnected	% this year / % total since 2012
Estimated cost of retrofits	\$
Detention or retention ponds identified	# this year /# total

5.4 Briefly describe the method to be used to determine baseline DCIA.

6. Pollution Prevention/Good Housekeeping (Section 6(a)(6) / page 31)

6.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-1 Develop/implement formal employee training program	Completed	Reviewed existing plan	Develop written employee training program	Public Works/ Ken Longo	Jul 1, 2017	August 10, 2017	Program has been in place for many years. Program was developed by Anchor Engineering.
6-2 Implement MS4 property and operations maintenance	Completed	Procedures developed for spill containment, chemical storage and turf management.	Develop written procedures for chemical storage, turf management, spill containment, etc. for Town owned facilities	Public Works/ Ken Longo	Jul 1, 2017	2017	Written procedures on file at Public Works Office.
6-3 Implement coordination with interconnected MS4s	Ongoing	Field Service Administrator coordinates with DOT District office when working on drainage systems that connect to State owned systems.	Review/Coordinate with DOT when working on drainage systems that connect to State owned systems	Public Works/ Ken Longo	Jul 1, 2017	Ongoing	
6-4 Develop/implement program to control other sources of pollutants to the MS4	In progress	Began review of watersheds for potential stormwater quality structures; Began design of stormwater quality basin at Globe Hollow parking lot	Review/Prioritize existing watersheds for potential water quality treatment structures	Engineering/ Jeff LaMalva	Jul 1, 2017	Ongoing	
6-5 Track projects that disconnect DCIA	Not started		Maintain a list of all projects completed that provide disconnection of DCIA	Engineering/ Jeff LaMalva	Jul 1, 2017	Jul 1, 2020	Awaiting completion of DCIA mapping

6-6 Implement infrastructure repair/rehab program	Ongoing	Existing catch basins on streets that were resurfaced were rehabilitated by Field Services staff	Repair of rehabilitate existing catch basins on streets to be resurfaced	Public Works/ Ken Longo	Jul 1, 2017	Ongoing	
6-7 Develop/implement plan to identify/prioritize retrofit projects	Not started		As part of Town's annual Capital Improvement Plan, identify at least two potential projects per year for retrofit/replacement	Engineering/ Jeff LaMalva	Jul 1, 2020	Anticipate completing by the deadline of Jul 1, 2020	
6-8 Develop/implement street sweeping program	Completed	All streets swept; Volume and miles documented	Sweep all streets at least once per year; document volume collected and miles swept	Public Works/ Ken Longo	Jul 1, 2017	Jul 1, 2017	
6-9 Develop/implement catch basin cleaning program	In Progress	Many catch basins cleaned within DCIA area	Clean 1/3 of basins within DCIA>11% Areas	Public Works/ Ken Longo	Jul 1, 2020	Anticipate completing by the deadline of Jul 1, 2020	
6-10 Develop/implement snow management practices	Completed	Dates, times, hours worked, temperature, snowfall and salt usage all recorded for each storm	Document results of snow removal program	Public Works/ Ken Longo	Jul 1, 2017	Completed	

6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.

- Complete review and prioritization of watersheds for water quality structures
- Identify two stormwater retrofit projects for Capital Improvement Plan in October 2018
- Rehabilitate existing catch basins on roads resurfaced in 2018
- Continue implementation of street sweeping and catch basin cleaning programs

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	YES (8/10/17)
Street sweeping	
Curb miles swept	1,052 miles
Volume (or mass) of material collected	346.8 ton
Catch basin cleaning	
Total catch basins in priority areas	#
Total catch basins in MS4	#
Catch basins inspected	#
Catch basins cleaned	#
Volume (or mass) of material removed from all catch basins	Not tracked
Volume removed from catch basins to impaired waters (if known)	
Snow management	
Type(s) of deicing material used	Salt
Total amount of each deicing material applied	8332 tons
Type(s) of deicing equipment used	In body & all seasons spreaders
Lane-miles treated	520 miles
Snow disposal location	Globe Hollow Parking Lot/Parkade
Staff training provided on application methods & equipment	No
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	lbs or %
Reduction in turf area (since start of permit)	acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$

6.4 Catch basin cleaning program

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule. [\[Complete this section for the 2017 Annual Report only\]](#)

Priority catch basins are identified as drainage low points, catch basins in industrial areas and areas with active road construction.

6.5 Retrofit program

Briefly describe the Retrofit Program identification and prioritization process, the projects selected for implementation, the rationale for the selection of those projects and the total DCIA to be disconnected upon completion of each project. [\[Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.\]](#)

Catch basins located within roads to be resurfaced are inspected and repaired/retrofitted. In addition, the Town contracted storm drainage improvements in a know flooding-prone area on New Street.

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years. [\[Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.\]](#)

Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years. [\[Provide information if available in 2017 report. Section to be completed for the 2019 Annual Report.\]](#)

Part II: Impaired waters investigation and monitoring [This section required beginning with 2018 Annual Report]

1. Impaired waters investigation and monitoring program

1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution. This data is available on the MS4 map viewer: <http://s.uconn.edu/ctms4map>.

Nitrogen/ Phosphorus Bacteria Mercury Other Pollutant of Concern

1.2 Describe program status.

Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.

Not started. It is anticipated that baseline sampling will be completed by the deadline of June 30, 2019

2. Screening data for outfalls to impaired waterbodies (Section 6(i)(1) / page 41)

2.1 Screening data collected under 2017 permit

Complete the table below for any outfalls screened during the reporting period. Each Annual Report will add on to the previous year’s screening data showing a cumulative list of outfall screening data.

Outfall ID	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
<i>Ex. 6-3B</i>	<i>7/30/17</i>	<i>Bacteria</i>	<i>- E. coli 1,000 col/100ml - T Coliform 600 col/100ml</i>	<i>Chemworks</i>	<i>Yes</i>

2.2 Credit for screening data collected under 2004 permit

If any outfalls to impaired waters were sampled under the 2004 MS4 permit, that data can count towards the monitoring requirements under the modified 2017 MS4 permit. Complete the table below to record sampling data for any outfalls to impaired waters under the 2004 MS4 permit.

2.2 Wet weather sample and inspection data

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor.

Outfall / Interconnection ID	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern

3. Catchment Investigation data (Appendix B (A)(7)(e) / page 9)

3.1 System Vulnerability Factor Summary

For those catchments being investigated for illicit discharges (i.e. categorized as high priority, low priority, or problem) document the presence or absence of System Vulnerability Factors (SVF). If present, report which SVF's were identified. An example is provided below.

Outfall ID	Receiving Water	System Vulnerability Factors
<i>1-1C</i>	<i>Mill River</i>	<i>1, 3, 5, 6, 8</i>

Where SVFs are:

- History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
- Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
- Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
- Common or twin-invert manholes serving storm and sanitary sewer alignments.
- Common trench construction serving both storm and sanitary sewer alignments.
- Crossings of storm and sanitary sewer alignments.
- Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
- Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
- Areas formerly served by combined sewer systems.

Part IV: Certification

“I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute.”

Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name: Scott Shanley	Print name: Jeff LaMalva
Signature / Date:	Signature / Date: