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MS4 General Permit
Town of Manchester 2023 Annual Report
Existing MS4 Permittee
Permit Number GSM 000063
[January 1, 2023 – December 31, 2023]

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, 2023 to December 31, 2023.

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	Additional educational brochures uploaded to website;	Gather at least five educational brochures from various entities per year to update Town's website	Planning/ Dave Laiuppa	Jul 1, 2018	Ongoing	
1-2 Educate residents about home generated pollutants and management	In Progress	9/28/23 Government Academy session included educational information re: pollutant management	Formalize Field Services presentation at Government Academy to discuss home generated pollutants and management	Public Works/ Ken Longo	Jul 1, 2018	Ongoing	
1-3 Educate volunteer organizations doing work in Town	In Progress	Town's wetlands officer met with Hockanum River Committee periodically in 2023 re: MS4 related topics	Meet with Hockanum River Committee to discuss opportunities	Planning/ Dave Laiuppa	Jul 1, 2019	Ongoing	

			to incorporate green infrastructure				
1-4 Turf management education	In progress	Turf management educational material posted on Town website and Manchester Matters.	Provide educational material on Town website and target landscape contractors with door hangers	Planning/ Dave Laiuppa	Jul 1, 2020	Ongoing	Goal changed to include turf management education on Town website and to target landscape contractors using door hangers.
1-5 Chemical storage/FOG/recycling education	In progress	Direct mailing not started; however FOG/recycling education materials added to webpage and plans for recycling/sustainability education center made	Direct mail a brochure regarding chemical storage/FOG/recycling to local commercial developments along the Hockanum River watershed	Planning/ Dave Laiuppa	Jul 1, 2021	Ongoing	
1-6 Educate school age children about stormwater management	In progress	School visits not started; however we did work with UCONN students on stormwater project at Manchester High School	Visit three elementary or middle schools to discuss stormwater management	Planning/ Dave Laiuppa	Jul 1, 2022	Ongoing	

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

- Update Town's website with additional educational brochures/resources
- Discuss residential stormwater management at 2024 Government Academy classes
- Meet with Hockanum River Committee to discuss MS4 topics
- Direct mail brochures to targeted audiences for BMP 1-4 and 1-5
- Continue plans for recycling/sustainability education center located at Manchester Landfill site
- Schedule visits to Keeney and Buckley elementary schools

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.
Government Academy /Public Works Session	Manchester residents (approx. 30)	Model of stormwater system		Public Works Dept
Educations brochures on Town's Stormwater webpage		Residential stormwater management		Planning Dept

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	Completed	2023 Annual Report put on Town's webpage to solicit comments	Solicit comments on Annual Report	Engineering/ Jeff LaMalva	Feb 15, 2023	August 13, 2024	
2-3 Schedule annual Hockanum River cleanup day	Completed		Schedule one cleanup day per year	Planning/ Hockanum River Linear Park Committee	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	Ongoing	

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

- Schedule formal Hockanum River cleanup effort
- 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	https://www.manchesterct.gov/Government/Departments/Public-Works/Engineering-GIS/Storm-Water-

			Pollution-Prevention
Availability of Annual Report announced to public	YES	August 13, 2024	https://www.manchesterct.gov/Government/Departments/Public-Works/Engineering-GIS/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	Completed		Develop written plan of IDDE program	Planning/ Dave Laiuppa	Jul 1, 2018	March 2019	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Completed		Produce map and lists of outfalls in priority areas	Engineering/GIS Jeff LaMalva	Jul 1, 2019	Aug 2019	
3-3 Implement citizen reporting program	Completed		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	Completed		Write and adopt a stormwater ordinance	Attorney's Office/ Tim O'Neil	Jul 1, 2019	May 2019	
3-5 Develop record keeping system for IDDE tracking	Completed		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	Ongoing	7 outlets at 4 locations along Hockanum River inspected.	Conduct dry weather inspections of outfalls along the Hockanum River	Public Works/ Tim Bockus	Jul 1, 2019	Ongoing	*Dry weather inspections completed along Hockanum River and Lydall Brook*
3-7 Complete list and maps of all MS4 stormwater outfalls throughout municipality	Completed		Produce map and lists of outfalls for publication on Town's website	Engineering/GIS Jeff LaMalva	Jul 1, 2022	Completed August 2020	

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

- Continue to monitor the Town's MarkIT system for stormwater/IDDE issues
- Conduct dry weather inspections of outfalls along the Hockanum River, Lydall Brook and Hop Brook

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

Date of Report	**Location / suspected source**	**Response taken**
December 2023	U-Haul – 260 Tolland Tpk erosion	Cease and Desist issued by Wetlands Agent - Hockanum
August 2023	69 Woodside Drive / Animal waste dumped in watercourse	Notice of Violation issued by Wetlands Agent; Cease and correct (PZC)

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)
None						

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

Engineering is responsible for tracking reports and responses that come in through the MarkIT system or any other means. Results will be sent to the Director of Public Works for enforcement in accordance with the Town's stormwater ordinance.

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
None		

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	265
Estimated or actual number of interconnections	0
Outfall mapping complete	(100%)
Interconnection mapping complete	N/A
System-wide mapping complete (detailed MS4 infrastructure)	(100%)
Outfall assessment and priority ranking	(50%)
Dry weather screening of all High and Low priority outfalls complete	(30%)
Catchment investigations complete	0
Estimated percentage of MS4 catchment area investigated	30%

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).

Field staff are given outfall maps and trained to search for indicators of illicit discharges such as oil sheen, cloudy water, floatables, suds, staining and odor. If found, staff will enter data on reporting form for Public Works Director to initiate investigation and enforcement, if necessary.

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	Ongoing	Town's Board of Directors approved a series of fines for environmental violations to be issued by Town's wetlands officer	Review and update Zoning Regulations, Wetlands Regulations, Subdivision Regulations and Public Improvement Standards	Planning/ Gary Anderson	Jul 1, 2019	Ongoing	
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/ Megan Pilla	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/ David Laiuppa	Jul 1, 2017	Ongoing	
4-4 Conduct site inspections	Ongoing	Engineering Division inspection staff conduct site inspections on a daily basis	Continue to inspect all construction activity on a minimum weekly basis	Engineering/ Jeff LaMalva	Jul 1, 2017	Ongoing	
4-5 Implement procedure to allow public comment on site development	Ongoing	Public comments are received during public hearings through the	Continue public hearing process through Planning	Planning/ Gary Anderson	Jul 1, 2017	Ongoing	

		Planning and Zoning Commission	and Zoning Commission				
	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.

- 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	Completed	Sustainable Design and Low Impact Development Guidelines adopted in June 2020	Include new section in Zoning Regulations requiring LID and runoff reduction	Planning/ Gary Anderson	Jul 1, 2021	June 15, 2020	

5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	In progress	Ongoing inspection of construction sites to assure compliance with PZC requirements	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	Ongoing	
5-3 Implement long-term maintenance plan for stormwater basins and treatment structures	Completed	Long term maintenance plan completed	Implement plan to maintain five detention basins per year	Public Works/ Ken Longo	Jul 1, 2019	June 2019	
5-4 DCIA mapping	Completed	Completed DCIA mapping	Complete DCIA mapping and place mapping on Town's website	Engineering/GIS Jeff LaMalva	Jul 1, 2020	October 2020	
5-5 Address post-construction issues in areas with pollutants of concern	Ongoing	Conducted random inspections of two sites of concern: Chatsworth Condos and Stevens Pipe	Conduct random inspections of recently completed developments within areas of concern	Planning/ David Laiuppa	Not specified	Ongoing	

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

- Continue maintenance of stormwater detention basins per plan
- Conduct random inspections of recently completed developments

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	972 acres (Method 2)
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	None

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

The Town uses the weighted method (Method 2) using the five categories of land use in each basin.

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		Develop written employee training program	Public Works/ Ken Longo	Jul 1, 2017	Latest 8/31/18	Program has been in place for many years. Program was developed by Anchor Engineering.
6-2 Implement MS4 property and operations maintenance	Completed		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 coordinated with DOT District office on work at 840 Middle Turnpike East and 30 Charter Oak Street	Review/Coordinate with DOT when working on drainage systems that connect to State owned systems	Public Works/ Keith Volkert	Jul 1, 2017	Ongoing	
6-4 Develop/implement program to control other sources of pollutants to the MS4	In Progress	Identified areas at Center Springs Park and Manchester Country Club parking lot for water quality basins	Review/Prioritize existing watersheds for potential water quality treatment structures	Engineering/ Jeff LaMalva	Jul 1, 2017	Ongoing	

6-5 Track projects that disconnect DCIA	In Progress		Maintain a list of all projects completed that provide disconnection of DCIA	Engineering/ Jeff LaMalva	Jul 1, 2017	Ongoing	
6-6 Implement infrastructure repair/rehab program	Ongoing	Upgraded catch basins on streets resurfaced	Repair of rehabilitate existing catch basins on streets to be resurfaced	Public Works/ Tim Bockus	Jul 1, 2017	Ongoing	
6-7 Develop/implement plan to identify/prioritize retrofit projects	In Progress		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	Ongoing	
6-8 Develop/implement street sweeping program	Completed		Sweep all streets at least once per year; document volume collected and miles swept	Public Works/ Tim Bockus	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/ Tim Bockus	Jul 1, 2020	Ongoing	
6-10 Develop/implement snow management practices	Completed		Document results of snow removal program	Public Works/ Ken Longo	Jul 1, 2017	Completed 2017	

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 2024
- Rehabilitate existing catch basins on roads resurfaced in 2025
- Continue implementation of street sweeping and catch basin cleaning programs

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics (2022)	
Employee training provided for key staff	YES (ONGOING)
Street sweeping	
Curb miles swept	218
Volume (or mass) of material collected	522 TONS
Catch basin cleaning	
Total catch basins in priority areas	
Total catch basins in MS4	5534
Catch basins inspected	1245
Catch basins cleaned	1245
Volume (or mass) of material removed from all catch basins	354 TONS
Volume removed from catch basins to impaired waters (if known)	
Snow management	
Type(s) of deicing material used	Treated Salt
Total amount of each deicing material applied	1,365 TONS
Type(s) of deicing equipment used	In body & all seasons spreaders
Lane-miles treated	520 miles
Snow disposal location	Globe Hollow Parking Lot
Staff training provided on application methods & equipment	Ongoing
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	Unknown
Reduction in turf area (since start of permit)	Unknown
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, a new water quality basin was installed at Manchester Country Club.

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.]
New hydrodynamic separators and/or water quality basins will continue to be installed on road reconstruction projects. Use of infiltration at municipal parking lots and parks will be reviewed for feasibility.

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.]
All road and parking lot projects will be reviewed for water quality per our Public Improvement Standards and treatment structures included in the project.

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.
The Town contracted with Weston and Sampson to conduct monitoring at fourteen outfalls throughout Town. Samples were collected on August 22, 2022, September 22, 2022 and October 24, 2022. Results are enclosed.

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?**
8600516				Phoenix Environmental	
8600042				Phoenix Environmental	
8500081				Phoenix Environmental	
8500104				Phoenix Environmental	
8500116				Phoenix Environmental	
8500121				Phoenix Environmental	
8500149				Phoenix Environmental	
8600317				Phoenix Environmental	
8500148				Phoenix Environmental	

8500137				Phoenix Environmental	
8500139				Phoenix Environmental	
8600563				Phoenix Environmental	
8600564				Phoenix Environmental	
8600212				Phoenix Environmental	
8500182	8/22/22	Nitrogen Phosphorous, Bacteria Turbidity	1.34 mg/L 0.226 mg/L >48400 MPN/100mls 28.7	Phoenix Environmental	Yes
8500558	8/22/22	Nitrogen Phosphorous, Bacteria Turbidity	4.10 mg/L 0.520 mg/L >48400 MPN/100mls 52	Phoenix Environmental	Yes
8600482	8/22/22	Nitrogen Phosphorous, Bacteria Turbidity	5.71 mg/L 0.461 mg/L >48400 MPN/100mls 20.85	Phoenix Environmental	Yes
8500170	8/22/22	Nitrogen Phosphorous, Bacteria Turbidity	1.07 mg/L 0.125 mg/L >48400 MPN/100mls 11.58	Phoenix Environmental	Yes
8500286	8/22/22	Nitrogen Phosphorous, Bacteria Turbidity	0.99 mg/L 0.224 mg/L >48400 MPN/100mls 27.5	Phoenix Environmental	Yes
8500169	8/22/22	Nitrogen Phosphorous, Bacteria Turbidity	1.15 mg/L 0.197 mg/L >48400 MPN/100mls 21.57	Phoenix Environmental	Yes
8500285	8/22/22	Nitrogen Phosphorous, Bacteria Turbidity	1.81 mg/L 0.195 mg/L >48400 MPN/100mls 31.5	Phoenix Environmental	Yes
8500219	9/22/22	Nitrogen Phosphorous, Bacteria Turbidity	3.89 mg/L 0.725 mg/L >48400 MPN/100mls 10.42	Phoenix Environmental	Yes
8500149	9/22/22	Nitrogen Phosphorous, Bacteria Turbidity	0.73 mg/L 0.077 mg/L >48400 MPN/100mls 5.25	Phoenix Environmental	Yes
8500148	9/22/22	Nitrogen Phosphorous, Bacteria Turbidity	0.71 mg/L 0.077 mg/L >48400 MPN/100mls 5.46	Phoenix Environmental	Yes
8500249	9/22/22	Nitrogen Phosphorous, Bacteria Turbidity	1.03 mg/L 0.130 mg/L >48400 MPN/100mls 6.48	Phoenix Environmental	Yes
8600298	10/24/22	Nitrogen Phosphorous, Bacteria Turbidity	0.8 mg/L 0.066 mg/L >48400 MPN/100mls 17.18	Phoenix Environmental	Yes

8500002	10/24/22	Nitrogen Phosphorous, Bacteria Turbidity	1.89 mg/L 0.477 mg/L >48400 MPN/100mls 93	Phoenix Environmental	Yes
Adams St	11/23/20	Bacteria Nitrogen Phosphorous	19,900 MPN/100mls 2.88 mg/l 0.42 mg/l	Phoenix Environmental	Bacteria Nitrogen Phosphorous
New State Rd	11/23/20	Bacteria Nitrogen Phosphorous	>24,200 MPN/100mls 0.46 mg/l 0.09 mg/l	Phoenix Environmental	Bacteria only
North Main St	11/23/20	Bacteria Nitrogen Phosphorous	>24,200 MPN/100mls 0.65 mg/l 0.19 mg/l	Phoenix Environmental	Bacteria only
North School St	11/23/20	Bacteria Nitrogen Phosphorous	>24,200 MPN/100mls 0.87 mg/l 0.16 mg/l	Phoenix Environmental	Bacteria only
Hartford Rd	11/23/20	Bacteria Nitrogen Phosphorous	>24,200 MPN/100mls 1.05 mg/l 0.11 mg/l	Phoenix Environmental	Bacteria only
Charter Oak St	11/23/20	Bacteria Nitrogen Phosphorous	>24,200 MPN/100mls 0.91 mg/l 0.09 mg/l	Phoenix Environmental	Bacteria only

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.

Outfall	**Sample date**	**Parameter** (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	**Results**	**Name of Laboratory (if used)**	**Follow-up required?**
Ex. 1-1A	*11/4/16*	*Nitrogen*	*TN - 1.5 mg/l*	*Chemworks*	*No*
Ex. 1-1B	*10/15/16*	*Nitrogen*	*TN - 5.2 mg/l*	*Chemworks*	*Yes*

3. Follow-up investigations (Section 6(i)(1)(D) / page 43)

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall	**Status of drainage area investigation**	**Control measure implementation to address impairment**
Ex. 1-1B	*Completed investigation of outfall drainage area – athletic field complex drains into waterbody*	*Reduce fertilizer use on fields and create 50 foot vegetated buffer.*

4. Prioritized outfall monitoring (Section 6(i)(1)(D) / page 43)

Once outfall screening has been completed for at least 50% of outfalls to impaired waters, identify 6 of the highest contributors of any pollutants of concern. Begin monitoring these outfalls on an annual basis by July 1, 2020.

Outfall	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)

Part III: Additional IDDE Program Data [This section required beginning with 2018 Annual Report]

1. Assessment and Priority Ranking of Catchments data (Appendix B (A)(7)(c) / page 5)

Provide a list of all catchments with ranking results (DEEP basins may be used instead of manual catchment delineations).

1. Catchment ID (DEEP Basin ID)	2. Category	3. Rank
4500-00-3-R8	High priority	18
4500-00-4-L4	High priority	18
4500-14-1	High priority	18
4504-00-3-R1	High priority	18
4504-00-2-R2	High priority	18
4004-01-2-R1	High priority	13
4004-04-1.	High priority	13
4500-13-1	High priority	13
4500-14-1-L2	High priority	13
4504-01-2-R1	High priority	13
4504-00-2-R1	High priority	13
4504-03-1.	High priority	13
4504-04-1.	High priority	13
4500-09-2-R1	High priority	11
4500-00-3-R5	High priority	11
4500-00-3-L3	High priority	11
4500-00-3-R6	High priority	11
4500-08-1.	High priority	11
4500-00-3-R7	High priority	11
4500-12-1*	High priority	11
4504-05-2-R1	High priority	11
4500-12-1-L2	High priority	10
4500-12-1-L3	High priority	10
4500-11-1.	High priority	10

4504-02-1-L1	High priority	10
4504-01-1-L1	High priority	10
4504-03-1-L1	High priority	10
4504-04-1-L2	High priority	10
4009-02-1.	High priority	10
4504-04-1-L1	High priority	10
4009-00-1	High priority	10
4009-00-2-L2	High priority	10
4500-09-2-L1	Low priority	6
4500-00-3-R4	Low priority	6
4004-02-1.	Low priority	6
4503-06-1.	Low priority	6
4004-02-1-L1	Low priority	6
4004-05-1.	Low priority	6
4500-14-1-L1	Low priority	6
4006-08-1.	Low priority	6
4504-05-2-L1	Low priority	6
4504-05-1.	Low priority	6
4006-07-1.	Low priority	6
4504-06-1.	Low priority	6
4006-09-1.	Low priority	6
4500-00-4-L5	Low priority	3
4504-02-1.	Low priority	3
4504-01-1.	Low priority	3
4006-10-1.	Low priority	3
4006-00-1	Low priority	3
4009-00-1-L1	Low priority	3
4006-11-1-L3	Low priority	3
4006-10-1-L1	Low priority	3
4006-00-2-R1	Low priority	3
4006-05-1.	Low priority	3
4006-11-1-L1	Low priority	3
4006-11-1-L2	Low priority	3

2. Outfall and Interconnection Screening and Sampling data (Appendix B (A)(7)(d) / page 7)

2.1 Dry weather screening and sampling data from outfalls and interconnections

Provide sample data for outfalls where flow is observed. Only include Pollutant of concern data for outfalls that discharge into stormwater impaired waterbodies.

Outfall / Interconnection ID	Screening / sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or enterococcus	Surfactants	Water Temp	Pollutant of concern	If required, follow-up actions taken
6-4A	*3/20/17*	*0.3 mg/l*	*Not detected*	*400 uS/cm*	*0.4 ppt*	*E. coli 200 col/100ml*	*0.2 mg/l*	*15 C*	*n/a*	*No*
6-4B	*3/20/17*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Evidence of prior dry weather flow – raised priority of catchment investigation*

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
1-1C	*Mill River*	*1, 3, 5, 6, 8*

Where SVFs are:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
8. 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.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.
11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance).
12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance).

3.2 Key junction manhole dry weather screening and sampling data

Key Junction Manhole ID	Screening / Sample date	Visual/ olfactory evidence of illicit discharge	Ammonia	Chlorine	Surfactants

3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants

3.4 Data for each illicit discharge source confirmed through the catchment investigation procedure

Discharge location	Source location	Discharge description	Method of discovery	Date of discovery	Date of elimination	Mitigation or enforcement action	Estimated volume of flow removed

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: Steve Stephanou	Print name: Jeff LaMalva
Signature / Date:	Signature / Date: