



MOVE YOUR ENVIRONMENT FORWARD

2017 ANNUAL REPORT

Small Municipal Separate Storm Sewer Systems (MS4) Waterbury, CT

Prepared For:

City of Waterbury
Department of Public Works
Waterbury, CT

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MS4 General Permit
 Town of Waterbury 2017 Annual Report
 Existing MS4 Permittee
 Permit Number GSM GSM000094
 January 1, 2017 – December 31, 2017

This report documents the City of Waterbury'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	EPA SW education materials located on City website, printed info about Water Quality impacts of improper waste disposal into the MS4, etc is located in PW Dept. City Hall and Silas Bronson Library	Publish a program	Public Works or Dept. of Education/City Civil Engineer	Jul 1, 2018	July 1, 2018	In previous years, "Do Not Feed the Geese" signs were posted in parks
1-2 Address education/ outreach for pollutants of concern	In progress	The City will distribute info on common sources of phosphorus, nitrogen and bacteria pollution and how to prevent/reduce the amount reaching the MS4	Conduct workshops	Public Works or Dept. of Education/City Civil Engineer	Jul 1, 2018	July 1, 2018	Topics to address Bacteria: Septic systems, sanitary cross connections, waterfowl, pet waste, and manure piles
1-3 Make GIS information available	In progress	A map with the City's outfalls can be found on the website	Public GIS access	PW and IT/ City Civil Engineer	N/A	Ongoing	



BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-4 Storm Drain inlets labelled	In progress	The City has a CB standard frame that states "Dump No Waste. Drains to Waterways." This frame is used within the City's Right of Way	CB standard frame	PW/City Civil Engineer	N/A	Ongoing use with new projects	

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

World Water Day event at Silas Bronson Library was scheduled for 3/21/18. Due to inclement weather this event was cancelled. The City plans to schedule something similar later in 2018.

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.
Information on Stormwater for Citizen education can be found on the City's website at: http://www.waterburyct.org/content/9569/9605/9632/10197/default.aspx	City-wide (residents)	Stormwater	NA	Public Works or Information Tech (IT)/ City Civil Engineer
Pet Waste Stations and signs have been posted at many City Parks in the past. These signs are maintained and replaced as needed.	City-wide (residents)	Pet Waste	E-coli	Public Works

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	Published in Republican American newspaper, available on City website, in Public Works office	Publish public notice, Plan posted on City website	Public Works/ City Civil Engineer	Apr 3, 2017	Newspaper Notice was published on 3/29/17	Posted on City website on 4/3/17
2-2 Comply with public notice requirements for Annual Reports	2016 Report Completed, 2017 Report notice to be posted by due date	Published in Republican American newspaper, available on City website, in Public Works office	Publish public notice, Report posted on City website	Public Works/ City Civil Engineer	Feb 15, 2018	Newspaper Notice was published on 2/15/2018. Report posted on website on 2/15/2018	
2-3 Annual "Clean-up" Days along waterbodies	Completed	Held on May 6, 2017	Event occurred	Public Works/Local Volunteers & Citizens	N/A	May 6, 2017	1,860 lbs metal and 10.4 tons of trash collected

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

World Water Day event at Silas Bronson Library was scheduled for 3/21/18. Due to inclement weather this event was cancelled. The City plans to schedule something similar later in 2018.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Y	3/29/17 in newspaper, 4/3/17 on website	http://www.waterburyct.org/filestorage/9569/9605/9632/10197/SMP_-_WTBY_2017.pdf
Availability of 2016 Annual Report announced to public	Y	January 2017 –for 2016 Report	http://www.waterburyct.org/filestorage/9569/9605/9632/10197/Waterbury_2016_MS4_Annual_Report.pdf
Availability of 2017 Annual Report announced to public	Y	February 15, 2018 in newspaper.	Link to Report on website: https://www.waterburyct.org/content/9569/9605/9632/10197/default.aspx

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	City is in process of completing written IDDE program	Develop written plan of IDDE program	Public works/ City Civil Engineer	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	A list and map have been generated however some additional changes required to finalize	Completed list and map	Public Works/ City Civil Engineer	Jul 1, 2019	Anticipate completing by the deadline of July 1, 2019.	
3-3 Implement citizen reporting program	Completed	The Citizens Service Center website allows the public to search for info and submit service requests		Public Works/Mayor's office/IT	Jul 1, 2017	Completed prior to the new MS4 permit	Citizen's Service Center webpage: http://www.waterburyct.org/311/ Service requests can be submitted at this website. Smartphone Application: iReportWTBY can

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
3-4 Establish legal authority to prohibit illicit discharges	In progress	The current ordinance is being implemented and enforced	Update the legal authority	Public Works/ Corporation Counsel	Jul 1, 2018	Anticipate completing by the deadline of July 1, 2018.	also be used to file complaints and concerns
3-5 Develop record keeping system for IDDE tracking	Completed	The past 5 years of SSOs have been summarized on the inventory spreadsheet provided in the IDDE plan, and are included in this report. The City is using a similar spreadsheet for other IDDE tracking, in Excel format.	Spreadsheet	Public Works/ City Civil Engineer	Jul 1, 2017	An SSO inventory/tracking system was completed in Oct 2017. A similar spreadsheet was generated recently for IDDE tracking.	
3-6 Address IDDE in areas with pollutants of concern	In Progress	IDDE will be addressed City-wide	IDDE Program	Public Works/ City Civil Engineer	Not specified	This BMP will be conducted in conjunction with IDDE Screening	

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

The written IDDE 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.

Maintain master IDDE tracking spreadsheet and ensure all employees involved in IDDE program understand the logging process.



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

Date of Report	Location / suspected source	Response taken
None		

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 Occurrence	Time Start	Time End	Discharge to MS4 or surface water?	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures completed (include dates). Provide sampling data if applicable)	Corrective measures planned
The City reported the following SSOs:								
605 Woodtick Rd	1/05/2015	3:41 pm	4:15 pm	N/A	NOT Known homeowner said minor	Raw Sewage	Removed sticks, rags & other debris from MH#132	Added this section of Sanitary line to LTMP
Woodtick & Frost Rd	1/19/15	1:42 pm	3:00 pm	N/A	Not Know homeowner would not let WPC worker into house	Blockage	Removed grease blockage	Added to LTMP
Piping Rock Pump Station	2/6/15	10:00 am	10:20am	N/A	1,500 gal	Electrical Equip. Failure	Vacuum Truck	Trouble shoot electric control panel
76 Piping Rock Dr.	4/4/17	8:57 am	9:52 am	N/A	51-500 gal	Blockage	Cleaned and limed area	n/a
417 Pearl Lake Rd	3/26/15	12:30 pm	12:40pm	N/A	10 gal	Raw Sewage	Cleaned main line/homeowner will mop & clean garage floor	Added this area to Long Term Cleaning Plan
497 Plank Road	10/10/16	2016	Unknown	Surface Water	5,000 gal	Blockage - I-84 construction crew broke	Removed stones & bricks from MH.	Repaired Manhole



Location (Lat long/ street crossing /address and receiving water)	Date Occurrence	Time Start	Time End	Discharge to MS4 or surface water?	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures completed (include dates). Provide sampling data if applicable)	Corrective measures planned
62 Harper Ave.	6/29/17	8:30 am	10:37am	N/A	51-500 gal	a city MH while working in the Plank Rd area Raw Sewage / sewer line blockage	Cleaned and limed area	Restored flow and limed area
Harper Ave. R.O.W	6/16/16	8:00 am	9:30 am	N/A	1,500 gal	Vandals	Removed debris from MH, Jetted line- vacuumed and removed paper products	Added new locking MH cover- 6-21-16
831 Woodtick Road	8/20/17	10:15 am	10:50am	N/A	51-500 gal	Sewer Line Blockage	n/a	This area added to the LTMP
282 Scott Rd	2/6/17	10:26 am	8:33 pm	N/A	51-500 gal	Blockage	n/a	This area added to the LTMP
40 Old Colony Drive	5/7/17	5:07 am	7:30 am	N/A	0-50 gal	Raw Sewage-Excessive Flows storm event	Cleaned 650 ft.	n/a
95 Schraffts Drive	1/12/16	12:45 pm	2 pm	N/A	800-1,000 gal	Raw Sewage	Owner called contractor	Jetted line
62 Hewlett St.	1/21/16	3:35 pm	4:00 pm	N/A	Not determined	Raw Sewage	Jetted sanitary line on Eculid Ave, MH # 59 to 61-there wasn't any waste on ground	Added this area to City's LTMP
25 Branch St	2/23/16	11:00 am	12:15pm	N/A	About 50 gals	Blockage	Cleaned 600ft of main sanitary line	Added another cleaning day to current LTMP
Overlook Ave ROW	3/31/15	12:45 pm	4:15 pm	N/A	2,000 per hour	Blockage	Vacuumed & racked, limed waste material	Added to Long Term cleaning plan
800' West of Bunker Hill Rd	5/6/15	12:30 pm	4:30 pm	Surface Water	2,000 per hour	Broken Pipe, misaligned Manhole & sewer line	Raked & pick up debris & paper products	Repaired misaligned manhole & sewer line
800' West of Bunker Hill Rd	5/13/15	2:00 pm	4:30 pm	Surface Water	2,000-3,000 gal	Blockage	Raked & pick up debris & paper products	Repaired misaligned manhole & sewer line
35 Sharon Rd	12/15/12	5:30 pm	7:30 pm	N/A	2,000-3,000	Sewer Main	Jetted line & vacuumed debris Add to LTMP	Added to LTMP

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

Reports filed through the website or Smartphone App are entered into the IDDE tracking spreadsheet by one of the City's Civil Engineers.

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
Nothing to report for 2017 (information obtained from Richard Lee, Chief Sanitarian of the Waterbury Health Department)		

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	TBD
Estimated or actual number of interconnections	TBD
Outfall mapping complete	~50%
Interconnection mapping complete	TBD
System-wide mapping complete (detailed MS4 infrastructure)	TBD
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	%



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).

Employees in the City of Waterbury involved in the IDDE program will be trained at a minimum on how to identify illicit discharges and SSOs. Staff will watch the workshop presentations located on the UCONN Nemo website for clarification on their specific duties. Training will be conducted annually and recorded on the form located in the Appendix of the IDDE Plan.

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		Revised Regulations	PW/Planning/ City Civil Engineer	Jul 1, 2019	Anticipate completing by the deadline of July 1, 2019.	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Ongoing	Interdepartmental meetings are being conducted	As necessary by project	PW/Planning/ City Civil Engineer	Jul 1, 2017	Ongoing	
4-3 Review site plans for stormwater quality concerns	Completed	Site Plan reviews include the review of stormwater controls or BMPs in accordance with an E&S Control Plan for sites with soil disturbance of one-half acre or more	On-going as required	PW/Planning/ City Civil Engineer	Jul 1, 2017		
4-4 Conduct site inspections	Completed	The City has been conducting inspections of construction sites to ensure the adequacy of the installation.	On-going as required	PW/Planning/ City Civil Engineer	Jul 1, 2017		



BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-5 Implement procedure to allow public comment on site development	Completed	The public can contact the Citizens Service Center by phone or entering a complaint in the QAlert System on the website	Provide notification	PW/Planning/ City Civil Engineer	Jul 1, 2017		Information submitted is forwarded to the P&Z and PW Depts. Info regarding construction site runoff is forwarded to the Zoning enforcement officer
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Completed	Waterbury informs developers that they have a potential obligation to apply for a permit if their construction disturbs >1 acre of land.	Provide notification	PW/Planning/ City Civil Engineer	Jul 1, 2017		The notification includes a provision that a copy of the SWPPP be provided to the City upon request.

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

None at this time

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		Publish guidelines	PW/Planning/ City Civil Engineer	Jul 1, 2021	Anticipate completing by the deadline of July 1, 2021.	



BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	In Progress		Notify developers	PW/Planning/ City Civil Engineer	Jul 1, 2019	Anticipate completing by the deadline of July 1, 2019.	
5-3 Identify retention and detention ponds in priority areas	Not Started		Publish Plans	PW/Planning/ City Civil Engineer	Jul 1, 2019	Anticipate completing by the deadline of July 1, 2019.	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Not Started		Update maps	PW/ City Civil Engineer	Jul 1, 2019	Anticipate completing by the deadline of July 1, 2019.	
5-5 DCIA mapping	Not Started		Developed goals	PW/ City Civil Engineer	Jul 1, 2020	Anticipate completing by the deadline of July 1, 2020.	
5-6 Address post-construction issues in areas with pollutants of concern	Not Started		On-going as required	PW/Planning/ City Civil Engineer	Not specified		Waterbury will prioritize those areas for the DCIA retrofit program under BMP 6

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

None at this time



5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	See below
DCIA disconnected (redevelopment plus retrofits)	List not completed at this time
Retrofits completed	In progress
DCIA disconnected	In progress
Estimated cost of retrofits	In progress
Detention or retention ponds identified	In progress

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

The City will follow guidance provided on the UCONN-NEMO website to calculate the directly connected impervious area. The City plans to use method 2 to calculate the 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	In the process of updating	Formal Industrial SW Permit training was conducted at 3 City facilities. Training was provided for: pesticide & fertilizer application; proper pool maintenance; spill protocols; vehicle wash protocols; E&S controls for road, building & park repairs; & Work order system for SW system maintenance.	Make amendments to current Training Plan, in accordance with 2017 Stormwater Management Plan (SMP)	PW/ City Civil Engineer	Jul 1, 2017	Make amendments by July 1, 2018, in conjunction with IDDE Plan completion	The City will continue its training program, but will make amendments with respect to the following: SOPs consistent with MS4 permit, goals and objectives of SMP, IDDE plan components, Spill Response protocol and responsibilities.
6-2 Implement MS4 property and operations maintenance	On-going	Areas of maintenance include: Parks & Open Space; Pet Waste Mgmt; Waterfowl Mgmt.; City-owned Buildings, Facilities & Utilities; Vehicles & Leaf Management	Keep records of maintenance	PW/Parks/ Waterbury City Staff responsible for maintenance	Jul 1, 2018	Property and operations maintenance is currently underway and will continue for the duration of the permit term	
6-3 Implement coordination with interconnected MS4s	Not started		Schedule/ Conduct Meetings	PW/Planning/ City Civil Engineer	Not specified		
6-4 Develop/implement program to control other sources of pollutants to the MS4	Not started		Designate a responsible person(s), investigate, start a log	PW/ City Civil Engineer	Not specified		



BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-5 Evaluate additional measures for discharges to impaired waters	No New Problem Areas Identified	The City continues to add "Do Not Feed the Geese" signs around parks. Many pet waste stations and "Pick-Up After Pet" signs are located in various parks.	Designate responsible person(s), hold meetings, start a log	PW/Parks/ City Civil Engineer	Not specified	Ongoing	
6-6 Track projects that disconnect DCIA	In Progress	The City will keep a log of projects that have disconnected DCIA from the MS4	Maintain spreadsheet/ log	PW/Planning/ City Civil Engineer	Jul 1, 2017	Ongoing	The tracking log has been started and will continue to be updated throughout the duration of the permit.
6-7 Implement infrastructure repair/rehab program	Not Started	Waterbury will begin to keep a log of MS4 structures requiring repair, rehabilitation, or an upgrade to reduce/eliminate the discharge of pollutants	Create spreadsheet/log Complete projects	PW/ City Civil Engineer	Jul 1, 2021	Anticipate completing by the deadline of July 1, 2021.	This program will be updated with information gathered during IDDE investigations and monitoring activities
6-8 Develop/implement plan to identify/prioritize retrofit projects	Not Started		Create spreadsheet/log to identify potential DCIA disconnection projects	PW/Planning/ City Civil Engineer	Jul 1, 2020	Anticipate completing by the deadline of July 1, 2020.	
6-9 Implement retrofit projects to disconnect 2% of DCIA	Not Started		Implement Plan (above)-Goal is to reduce DCIA acreage by 1% each year starting July 1, 2021	PW/Planning/ City Civil Engineer	Jul 1, 2022	Anticipate completing by the deadline of July 1, 2022.	
6-10 Develop/implement street sweeping program	Ongoing	See table in Section 6.3 for 2017 street sweeping statistics. Streets and parking lots within Priority Areas were swept following	Maintain log of street sweeping details	PW/ City Civil Engineer	Jul 1, 2017	This BMP will continue throughout the duration of the permit	The City meets the sweeping frequencies outlined in the SMP, including rural and uncurbed streets and parking lots with no CBs.

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		<p>winter maintenance activities in 2017. This occurs at least once per year. In addition, areas with increased pollutant potential were swept more frequently. Street sweepings were disposed at the North End Disposal Area.</p> <p>The City cleaned catch basins observed to be full based on resident or department work reports or complaints; The City has a designated catch basin cleaning crew during the spring. The City continues to monitor the 18 trash extruders installed in catch basins in high litter areas.</p>					
6-11 Develop/implement catch basin cleaning program	Ongoing		<p>Maintain log of catch basin cleanings and inspections. Develop formal program.</p>	PW/ City Civil Engineer	Jul 1, 2020	<p>This BMP will continue throughout the duration of the permit. Formal program to be completed by the deadline of July 1, 2020.</p>	See Table below for 2017 statistics
6-12 Develop/implement snow management practices	Ongoing	<p>The City will continue to brief associated staff at every snow storm on the SOPs for the use, handling, storage, application and disposal of de-icing products to minimize exposure to stormwater. The City will continue to consider the use of alternative materials to chloride based or other salt deicing products.</p>	<p>Maintain manual with SOPs, records of training, log of snow management activities</p>	PW/ City Civil Engineer	Jul 1, 2018	<p>Anticipate completing by the deadline of July 1, 2018.</p>	<p>The City will manage and dispose of snow accumulations in accordance with the DEEP BMP found at www.ct.gov/deep/stormwater</p>

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		See Table below for 2017 snow management statistics					

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

None at this time

6.3 Pollution Prevention / Good Housekeeping reporting metrics

Metrics	Not MS4 specific
Employee training provided for key staff	
Street sweeping	
Curb miles swept	650 miles
Volume (or mass) of material collected	Data Unavailable. Will be implemented in 2018.
Catch basin cleaning	
Total catch basins in priority areas	To be determined
Total catch basins in MS4	To be determined
Catch basins inspected	~2800
Catch basins cleaned	2400
Volume (or mass) of material removed from all catch basins	Data Unavailable
Volume removed from catch basins to impaired waters (if known)	Data Unavailable
Snow management	
Type(s) of deicing material used	Sand and salt (4 parts sand, 1 part salt)
Total amount of each deicing material applied	16,000 cubic yards
Type(s) of deicing equipment used	Sand and salt spreader
Lane-miles treated	325 miles treated multiple times during each snow storm. During this snow season, DPW responded to 14 storm events.
Snow disposal location	State property on Meadow St. (I-84 Exit 21) for excess snow
Staff training provided on application methods & equipment	Yes. Staff is briefed at every snow storm.
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	N/A
Reduction in turf area (since start of permit)	N/A
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	None at this time

6.4 Catch basin cleaning program

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule.

The City will utilize the citizen service request and work order tracking program called QAlert that includes a mobile app (iReportWTBY) for the public to report catch basins requiring maintenance, to prioritize catch basins to be cleaned. Use of this system aids the City in quantifying annual catch basin maintenance, including cleaning and repairs.

The City will prioritize catch basins near impaired waters and construction sites. Those CBs shall be cleaned more frequently.

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. [Section to be completed for the 2019 Annual Report.]

No information to report at this time.

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years. [Section to be completed for the 2019 Annual Report.]

No information to report at this time.

Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years. [Section to be completed for the 2019 Annual Report.]

No information to report at this time.

Part II: Impaired waters investigation and monitoring [This section is in progress, and will be updated in the 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.

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?

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?

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

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 is in progress, and will be updated in the 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

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



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

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 than 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 than 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."

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