

2018 Annual Report – MS4 General Permit

City of Meriden
Meriden, Connecticut

Meriden 2019



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MS4 General Permit
 City of Meriden 2018 Annual Report
 Existing MS4 Permittee
 Permit Number GSM 000038
 January 1, 2018 – December 31, 2018

This report documents City of Meriden's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2018 to December 31, 2018.

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	Complete/ Ongoing	Educational materials posted on the City website include the following: <ul style="list-style-type: none"> • Stormwater Management Plan (Storm Water page) • Notification of fines for dumping debris into water body/ storm drain (FAQs page) • Citizen Request Form for illegal dumping (Contact page) • Memo to public that all catch basins discharge to water bodies (Engineering Docs page) • City of Meriden DPW Important Information Guide discusses the following related topics: 	Update and maintain City website to include educational materials.	Meriden Stormwater Committee	Ongoing	Initially completed Jul 1, 2018	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
		<ul style="list-style-type: none"> o Keeping catch basins and water bodies free of debris o Environmental benefits of reduced winter sand use on roads o Leaf and Christmas tree pickup / disposal (Winter Safety Info page) • 2017 Annual Water Quality Report discusses source water and contamination (Meriden Water Division page) 					
	Complete/ Ongoing	The City handed out copies of the 2017 Annual Water Quality Report.	Distribute educational materials.	Meriden Stormwater Committee	Ongoing	Initially completed Sep 1, 2017	
1-2 Address education/ outreach for pollutants of concern*	Complete/ Ongoing	The City posted educational materials on the City's website addressing impaired waters and stormwater pollutants of concern. (See BMP 1-1 for list of specific items posted.)	Select educational materials appropriate for impaired waters and stormwater pollutants of concern.	Meriden Stormwater Committee	Ongoing	Initially completed Jul 1, 2018	
1-3 Work with area organizations and groups	Ongoing	The City has continued phased implementation of the Quinnipiac River Linear Trail. The program includes walking trails with educational resources along the Quinnipiac River.	Work with local organizations (QRWA, etc.) to identify public education opportunities and assist with plan implementation.	Meriden Stormwater Committee	N/A	Started Jul 1, 2017 (Ongoing)	Reason for Addition: Organizations outside of the City Departments & Commissions can be good resources for public education & outreach.

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

- Educate the public on stream channel maintenance taking place in 2019.
- Continue to post stormwater-related articles in the Meriden Department of Health newsletter.
- Continue to collaborate with the local newspaper in order to publish future environmental articles in the Record Journal, social media, and the City website.
- Continue to have the Board of Education integrate topics in the Core Science Curriculum Framework, including those related to water quality, into its school curriculum.
- Continue to work with local organizations (QRWA, etc.) to identify public education opportunities and assist with plan implementation.
- Start construction of the next 2 sections of the Quinnipiac River Linear Trail; an on-road section from the end of the Sodom Brook Trail at Platt High School to the Bradley Avenue Bridge, and a section along Harbor Brook from Hanover Street to Cooper Street.

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.
2017 Annual Water Quality Report Handout	Sent to 17,225 drinking water customers and posted on City website.	Source of drinking water and potential contamination	Salts, Metals, Radioactive Materials, Bacteria, Volatile Organic Contaminants	Meriden Water Division
Storm Drain: Where Does the Water Go? Provided through Facebook, Twitter, Record Journal Newspaper, and Neighborhood Groups	All City Residents	Stormwater discharge	Illicit discharges	Health and Human Services
City's Annual Spring Cleanup May 5, 2018 (Annual Fall Cleanup cancelled due to inclement weather.)	168 volunteers participated	Littering / Trash Pickup	N/A	Parks & Recreation Public Works Departments
QRWA Annual Spring & Fall River Cleanups April 21, 2018 September 15, 2018	60+ volunteers participated at each cleanup	Littering / Trash Pickup	N/A	Quinnipiac River Watershed Association
QRWA Facility Environmental Field Trips for Schools	12 field trips reaching 300+ students	Environmental Education	N/A	Quinnipiac River Watershed Association

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	Complete	The draft Stormwater Management Plan was made available to the public: <ul style="list-style-type: none"> An electronic copy was posted on the City's website. Hard copies were made available at City Hall. 	Make draft Stormwater Management Plan available electronically on the City website and paper copies available in City Hall. Publish notice of availability on website or local newspaper.	City Engineer	Apr 3, 2017	Apr 3, 2017	
	Complete/Ongoing	The final Stormwater Management Plan was made available to the public: <ul style="list-style-type: none"> An electronic copy was posted on the City's website. Hard copies were made available at City Hall. 	Make final Stormwater Management Plan available electronically on the City website and paper copies available in City.	City Engineer	Ongoing	Initially completed Jul 1, 2017	
2-2 Comply with public notice requirements for Annual Reports	Complete	A public notice was posted to the City's website as well as the Record Journal on January 31, 2019. The draft Annual Report was made available to the public from February 15, 2019 to March 18, 2019.	Make draft Annual Report available electronically on the City website and paper copies available in City Hall. Publish notice of availability on website or local newspaper.	City Engineer	Feb 15, 2019	Feb 15, 2019	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-2 Comply with public notice requirements for Annual Reports (Continued)	In Progress	The City has finalized the 2018 Annual Report and will submit it to DEEP, as well as post it on the town website by the April 1, 2019 deadline.	Make final Annual Report available electronically on the City website.	City Engineer	Apr 1, 2019	Anticipate completing by Apr 1, 2019	
2-3 Work with area organizations and groups	Ongoing	The City conducts annual meetings of the Stormwater Committee.	Conduct regular meetings of the Meriden Stormwater Committee	City Engineer, Meriden Stormwater Committee	N/A	Started Jul 1, 2017 (Ongoing)	Reason for addition: Committee will represent City Departments & Commissions with stake in stormwater mgmt.
	Ongoing	The City worked with QRWA on the Annual Downriver Classic Canoe & Kayak Race as well as the annual spring and fall clean-ups on the Quinnipiac River.	Work with local organizations (QRWA, etc.) to identify public involvement opportunities and assist with plan implementation.	City Engineer, Meriden Stormwater Committee	N/A	Started Jul 1, 2017 (Ongoing)	Reason for addition: Organizations outside of the City Departments & Commissions can be good resources for public involvement.

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

- Continue to conduct annual stormwater committee meetings to review SMP implementation progress.
- Continue to work with the partnership of governmental agencies, businesses, concerned citizens and non-profit organizations such as the QRWA and school system to participate in their environmental work as well as to sponsor and support clean-up projects and environmental events.
- Continue to collaborate with QRWA through the Linear Trail volunteers on the development of environmental education classes at these locations.
- Provide public notice of annual report.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan to public	Yes	Mar 30, 2017	www.cityofmeriden.org/Content/Storm_Water_Management/
Availability of Annual Report announced to public	Yes	Jan 31, 2019	Record Journal and www.cityofmeriden.org/Content/Storm_Water_Management/

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	The City is in process of completing written IDDE program using the CT IDDE program template.	Develop written plan of IDDE program	Engineering	Jul 1, 2018	Anticipate completing by Jul 1, 2019	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	In progress	The City is contracting with a consultant to update existing GIS mapping to include all municipal stormwater outfalls in the City.	Update GIS mapping to include all stormwater outfalls in the municipality.	Engineering, IT	Jul 1, 2019	Anticipate completing by Jul 1, 2019	
	In progress	The City is contracting with a consultant to update the list of all municipal stormwater outfalls in the City.	Develop a list (database or spreadsheet) of stormwater outfalls in municipality.	Engineering, IT	Jul 1, 2019	Anticipate completing by Jul 1, 2019	
	In progress	The City is contracting with a consultant to update GIS mapping to meet the General Permit.	Update GIS storm system mapping in priority areas to include required elements listed in Appendix B of the General Permit.	Engineering, IT	Jul 1, 2019	Anticipate completing by Jul 1, 2019	
3-3 Implement citizen reporting program	Complete	The City continues to maintain their existing web form (Citizen Service Request Form) for reporting.	Continue to implement a citizen reporting 'hotline' and advertise it on the City website and in municipal offices.	Engineering, Legal Counsel, City Council	Jul 1, 2017	Jul 1, 2017	

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 City has started reviewing existing Discharge Limitations Ordinance for revision.	Review City's existing Discharge Limitations Ordinance and revise, as necessary.	Engineering, Legal Counsel, City Council	Jul 1, 2018	Anticipate completing by Jul 1, 2019	
3-5 Develop record keeping system for IDDE tracking	Complete	The City has developed an IDDE tracking recordkeeping system.	Develop IDDE tracking recordkeeping system.	Engineering	Jul 1, 2017	Jul 1, 2017	
3-6 Address IDDE in areas with pollutants of concern	Not Started		Identify areas with high potential for septic system failure.	Health and Human Services, Engineering	Not specified	Anticipated completion by the end of the permit period.	
3-7 Conduct SSO inventory	Complete	The City has identified known SSOs that occurred as far back as 7/18/2016. Records prior to that event were documented on paper and lacked detailed information as to what did and did not discharge to the MS4.	Review City records to identify any known locations where SSOs have discharged to the MS4 within the previous 5 years (7/1/12 – 6/30/17).	Engineering	Oct 29, 2017	Feb 7, 2019	Reason for addition: Part of the IDDE Program.
3-8 Assess and prepare a priority ranking of catchments	In Progress	The City is contracting with a consultant to do this work.	Classify each catchment within priority areas into an excluded, problem, high priority, or low priority catchment.	Engineering, Department of Public Works	Jul 1, 2019	Anticipate completing by Jun 1, 2019	Reason for addition: Part of the IDDE Program.

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
	In Progress	The City is contracting with a consultant to do this work.	Rank catchments within each category (except excluded catchments) based on screening factors found on page 6 & 7 in Appendix B of the General Permit.	Engineering, Department of Public Works	Jul 1, 2019	Anticipate completing by Jun 1, 2019	Reason for addition: Part of the IDDE Program.
3-9 Conduct outfall and interconnection screening and sampling	In Progress	The City is contracting with a consultant to do this work.	Conduct dry weather screening and sampling (where flowing) of every MS4 outfall and interconnection (except for excluded and Problem Catchments)	Engineering, Department of Public Works	Jul 1, 2019	Anticipate completing by Jun 1, 2019	Reason for addition: Part of the IDDE Program.
3-10 Conduct catchment investigations and remove illicit discharges	Not Started		Evaluate catchments for System Vulnerability Factors and begin catchment investigations.	Engineering, Department of Public Works	Jul 1, 2018	Anticipate completing by Jul 1, 2019	Reason for addition: Part of the IDDE Program.
	Not Started		Where System Vulnerability Factors are present, conduct manhole inspections. Isolate and verify sources. Remove identified illicit discharges and conduct confirmatory outfall screening.	Engineering, Department of Public Works	Jul 1, 2020	Anticipate completing by Jun 1, 2020	Reason for addition: Part of the IDDE Program.

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

- Complete and begin implementing written IDDE program.
- Adopt Illicit Discharge Ordinance.
- Evaluate catchments for System Vulnerability Factors, begin dry weather outfall screening, and begin catchment investigations with the assistance of a consultant.
- Continue to map stormwater drainage structures and piping network.
- Continue to maintain the Citizen Service Request Form to respond to illicit discharges.
- Continue to assess, and improve if necessary, the process and procedures for logging and responding to complaints associated with illicit discharges.
- Incorporate IDDE topics into the City's annual stormwater training program. Provide employee training annually.

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

Date of Report	Location / suspected source	Response taken
4/4/2018	200 Pond View Drive / Oil from private plow truck spilled into catch basin.	4/4/2018 – Owner had storm drain cleaned out.
5/31/2018	Gilbert Road / Sanitary sewer overflow of approximately 100 gallons.	5/31/2018 – Blockage was cleared, area of spill was cleaned and bleached, and the bleach was vacced up and disposed of at WPCF.
7/7/2018	Intersection of Hanover and Cook Avenue / Sanitary sewer overflow of approximately 50 gallons.	7/7/2018 – Blockage was cleared, area of spill was cleaned and bleached, and the bleach was vacced up and disposed of at WPCF.
8/29/2018	198 West Main Street / Employee dumping of unknown substance into catch basin.	829/2018 – CT DEEP had the manager of the Dry Cleaning business hire someone to cleanout the catch basin. The manager also spoke with the employees about not dumping anything down catch basin.
11/28/2018	15 Kickory Street / Sewage overflow from clogged or broken vent pipe.	12/4/2018 – A health order was issued and the the pipe was fixed.

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)
Taco Bell 760 E Main St	4/13/2015	MS4	Unknown	Employees dumping grease in catch basin.	4/13/2015 – Health Department had Taco Bell hire a company to clean out the catch basin.	N/A
31 Britannia St	4/22/2015	MS4	Unknown	Owner pumped sewage into storm drain from back-up in basement.	4/22/2015 – Owner told and stopped pumping sewage into storm drain and cleared sewer line.	N/A

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)
Xing Long 502 West Main St	5/1/2015	MS4	Unknown	Owner he admitted to dumping mop water in catch basin.	5/1/2015 – Health Department told him he cannot dump in catch basin and the shopping center owner had the catch basin cleaned out.	N/A
Gourmet Chinese Kitchen 979 Broad St	4/1/2016	MS4	Unknown	Employees dumping mop water into storm drain	4/1/2016 – Health Department told owner they cannot dump mop water down storm drain.	N/A
37 Randolph Ave	7/10/2015	MS4	Unknown, Small Amount	Someone connected house sewer to house storm drain line that handled gutters, minor over flow into road then into storm drain.	8/3/2015 – Property owner was able to repair original sewer line and sewage now going to sanitary sewer.	N/A
290 Pratt St	7/18/2016	MS4 to Harbor Brook	Unknown	Blockage in sanitary sewer line caused an overflow into the storm drain leading to Harbor Brook.	7/18/2016 – WPCF cleared blockage that caused overflow. Under normal conditions sewage goes to sanitary sewer. 5/19/2017 – Owner had the connection to storm drain system removed. There were 2 separate overflow connections.	N/A
302 Center St	12/29/2017	MS4	Unknown	Sewer overflowed down sidewalk into road and storm drain.	12/29/2017 – Owner was ordered to clear sewer line (completed 12/29/17).	N/A
200 Pond View Drive	4/4/2018	MS4	Unknown	Oil from private plow truck spilled into catch basin.	4/4/2018 – Owner had storm drain cleaned out.	N/A
Gilbert Road near Manhole #39-51	5/31/2018	MS4	Approximately 100 gallons	Sanitary sewer overflow.	5/31/2018 – Blockage was cleared, area of spill was cleaned and bleached, and the bleach was vacced up and disposed of at WPCF.	N/A
Intersection of Hanover and Cook Avenue	7/7/2018	MS4	Approximately 50 gallons	Sanitary sewer overflow.	7/7/2018 – Blockage was cleared, area of spill was cleaned and bleached, and the bleach was vacced up and disposed of at WPCF.	N/A
51 Prescott Street	7/24/2018	MS4	Unknown	Exposed and broken sewer pipe.	8/9/2018 – A health order was issued and the pipe was replaced.	N/A
Prescott Road near Manhole #19-162	8/8/2018	MS4	Approximately 50 gallons	Sanitary sewer overflow.	8/8/2018 – Blockage was cleared, area of spill was cleaned and bleached, and the bleach was vacced up and disposed of at WPCF.	N/A

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)
198 West Main Street	8/29/2018	MS4	Unknown	Employee dumping of unknown substance into catch basin.	8/29/2018 – CT DEEP had the manager of the Dry Cleaning business hire someone to cleanout the catch basin. The manager also spoke with the employees about not dumping anything down catch basin.	N/A
15 Kickory Street	11/28/2018	MS4	Unknown	Sewage overflow from clogged or brokwn vent pipe.	12/4/2018 – A health order was issued and the the pipe was fixed.	N/A

*Illicit discharge records prior to July 1, 2014 are inaccessible due to a transition to new software. SSOs prior to 2016 are documented on paper and lack information as to weather or not there was a discharge to the MS4.

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

Illicit discharge reports are tracked through the Citizen Service Request Form. Reports are sent to the Director of Public Works. DPW investigates any reports received and if illicit discharges are found. DPW works with Land Use, the Town Sanitarian, and Code Enforcement to eliminate the discharge.

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
There were no known cases of septic system failures discharging to surface water or the MS4 during the reporting period.		

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	600
Estimated or actual number of interconnections	Approx. 50
Outfall mapping complete	94%
Interconnection mapping complete	50%
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).

- IDDE topics will be incorporated into the City's annual stormwater training program.

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	Not Started		Review and update, as necessary, existing land use regulations and implementation policies for compliance with the MS4 General Permit construction site stormwater runoff control requirements.	Engineering, Planning Division, Legal Counsel	Jul 1, 2019	Anticipate completing by Jul 1, 2019	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Complete	The City continues to follow the interdepartmental coordination procedures as described in Section 5.2 of the SWMP.	Implement interdepartmental coordination procedures as described in Section 5.2 of the SWMP.	Planning Division, Engineering, Planning Commission, Inland Wetlands & Watercourse Commission	Jul 1, 2017	Jul 1, 2017	
4-3 Review site plans for stormwater quality concerns	Complete/Ongoing	<ul style="list-style-type: none"> The City continues conducts site plan reviews for all projects subject to the land use regulations. 52 applications were review in 2018. 	Complete site plan reviews for all projects subject to the land use regulations listed in BMP 4-1.	Planning Division, Engineering, Planning Commission, Inland Wetlands & Watercourse Commission	Jul 1, 2017	Jul 1, 2017	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-4 Conduct site inspections	Complete/ Ongoing	<ul style="list-style-type: none"> The City continues conducts inspections and enforcement to assess and ensure the adequacy of the installation, maintenance, operation, and repair of construction and post-construction control measures. All active sites (approximately 130) were inspected at least once in 2018. 5 Notice of Violations and 10 warnings were issued in 2018. 	Conduct inspections and enforcement to assess and ensure the adequacy of the installation, maintenance, operation, and repair of construction and post-construction control measures.	Planning Division, Engineering	Jul 1, 2017	Jul 1, 2017	
4-5 Implement procedure to allow public comment on site development	Completed	<p>The City's land use application review process continues includes provisions for public review and comment.</p> <p>The City's stormwater FAQ webpage continues to provide notice of Meriden's 'hotline' for stormwater related comments.</p>	<p>Provisions for public review and comment in land use application review process.</p> <p>Notice of Meriden's 'hotline' for stormwater related comments on the municipal stormwater website.</p>	Planning Division	Jul 1, 2017	Jul 1, 2017	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Completed	The City continues to inform developers/contractors of their potential obligation to register under the DEEP construction general permit and to provide a copy of the Storm Water Pollution Control Plan to Meriden upon request.	Inform developers/contractors of their potential obligation to register under the DEEP construction general permit and to provide a copy of the Storm Water Pollution Control Plan to Meriden upon request.	Planning Division	Jul 1, 2017	Jul 1, 2017	

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

- Review existing land use regulations to determine whether updates are required to meet the construction site runoff control legal mechanism.
- Continue interdepartmental coordination in plan review through Department of Coordination.
- Continue to review site plans and conduct construction site inspections.
- Continue to document the number (per permit year) of construction plan submittals, construction startups, and construction inspections and report these numbers in the annual report.

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		Review and update, as necessary, existing land use regulations and implementation policies for compliance with the General Permit post-construction stormwater management requirements.	Engineering, Planning Division, Legal Counsel	Jul 1, 2021	Anticipate completing by Jul 1, 2021	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Not Started		Review and update, as necessary, current regulations to identify, reduce, or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices.	Engineering, Planning Division, Legal Counsel	Jul 1, 2019	Anticipate completing by Jul 1, 2019	
	Not Started		Complete plan reviews and ensure compliance for all projects subject to the legal authority and/or guidelines listed in BMP 5-1.	Planning Division, Engineering, Planning Commission, Inland Wetlands & Watercourse Commission	Jul 1, 2019	Anticipate completing by Jul 1, 2019	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5-3 Identify retention and detention ponds in priority areas	Complete	A total of 36 detention/retention ponds have been identified within existing GIS mapping which has been confirmed to be complete.	Identify stormwater basins and treatment systems in priority areas and include them in GIS mapping.	Engineering	Jul 1, 2019	Feb 11, 2019	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Not Started		Develop a long-term maintenance plan for any retention/detention basins and stormwater treatment structures owned by the City or on a City easement and installed within the priority area. (None exist currently.)	Engineering	Jul 1, 2019	Anticipate completing by Jul 1, 2019	
	Not Started		Implement maintenance plan including annual inspection of retention / detention basins and stormwater treatment structures and removal of accumulated sediment and pollutants.	Engineering, Department of Public Works	Jul 1, 2019	Anticipate completing by Jul 1, 2019	
5-5 DCIA mapping	Not Started		Calculate the Directly Connected Impervious Area (DCIA) of outfall catchment areas using guidance provided by DEEP and UConn CLEAR.	Engineering, Planning Division	Jul 1, 2020	Anticipate completing by Jul 1, 2020	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
5-5 DCIA mapping (Continued)	Not Started		Revise DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA.	Engineering, Planning Division	Jul 1, 2020	Anticipate completing by Jul 1, 2020	
5-6 Address post-construction issues in areas with pollutants of concern	Not Started		Address erosion and sediment problems noted during inspections conducted under Item 5-3 through the retrofit program developed under BMP 6-7.	Engineering, Department of Public Works	Not specified	Anticipate completing by Jun 1, 2020	

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

- Begin the process of reviewing and updating existing land use regulations and policies with the assistance of a consultant.
- Develop estimates of DCIA with the assistance of a consultant.
- Continue to implement procedures for addressing post construction BMPs for residential and commercial projects.
- Continue to require the recording of stormwater maintenance agreements on the City's Land Records.
- Continue to record the number (per permit year) of stormwater structures installed in the City and report this number in their Phase II annual report.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	N/A
DCIA disconnected (redevelopment plus retrofits)	N/A
Retrofits completed	N/A
DCIA disconnected	N/A
Estimated cost of retrofits	N/A
Detention or retention ponds identified	36

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

DCIA will be estimated from high-resolution impervious cover and land use/cover data available from UConn NEMO and empirical equations (Sutherland Equations) relating DCIA and Total Impervious Area (TIA). The DCIA estimates will be developed at the CTDEEP Local Basin scale.

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	Complete/ Ongoing	City staff members regularly receive training on topics including, but not limited to, hazardous materials and spill containment, health and safety, and winter road salt application. In November 2018, two Highway Department staff attended the "Green Sno Pro: Sustainable Winter Operations" offered by UConn T2.	Continue City employee training program. Building on the City's current program to increase awareness of water quality issues.	Department of Public Works	Jul 1, 2017	Initially completed Jul 1, 2017	
6-2 Implement MS4 property and operations maintenance	Complete	The City continues to implement their Integrated Pest Management Plan, which includes soil testing to determine the proper type and amount of fertilizers to be used	Implement turf/fertilizer management BMPs for parks and open space.	Department of Public Works, Parks and Recreation	Jul 1, 2018	Feb 2017	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-2 Implement MS4 property and operations maintenance (Continued)	Complete/ Ongoing	A City ordinance continues requires the prompt removal of all solid waste and litter left by dogs or other animals on a public street, sidewalk, public property, or private property owned by another person before leaving the premises, and the disposal of the solid waste and/or litter in a sanitary manner. Pet waste stations are located on both sections of the Linear Trail, and along the Quinnipiac River and Sodom Brook trails.	Implement pet waste education program and maintain signage, baggies, and disposal receptacles in areas where pet walking is common.	Department of Public Works, Parks and Recreation, Meriden Stormwater Committee	Jul 1, 2018	Jul 1, 2017	
	Complete/ Ongoing	The City continues to maintain signage to discourage feeding waterfowl.	Maintain signage and implement other waterfowl management BMPs in targeted areas, as warranted.	Department of Public Works, Parks and Recreation	Jul 1, 2018	Jul 1, 2017	
	In Progress	The City implements Stormwater Pollution Prevention Plans (SWPPPs) for the Transfer Station, the Highway Facility, and the Water Pollution Control Facility.	Evaluate other municipal buildings and facilities for spill prevention and pollution prevention practices and implement additional BMPs as necessary.	Department of Public Works	Jul 1, 2018	Anticipate completing by Jul 1, 2019	
	Ongoing		Evaluate and modify, as necessary, municipal vehicle and equipment parking, fueling, and maintenance practices.	Department of Public Works	Jul 1, 2018	Ongoing	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-2 Implement MS4 property and operations maintenance (Continued)	Complete/ Ongoing	The City continues to require residents to place leaf waste in paper bags for municipal pick-up and disposal, thus limiting the amount of yard waste that is deposited in the municipal storm sewer system. The Department of Public Works also continues to street sweep prior to impending storms in the fall to further reduce the amount of leaves and yard waste that enters the storm sewer system.	Continue current leaf management program.	Department of Public Works, Parks and Recreation	Jul 1, 2018	Jul 1, 2017	
6-3 Implement coordination with interconnected MS4s	Ongoing	The City continues to coordinate with neighboring municipalities as-needed.	Coordinate with neighboring municipalities, institutions, and DOT regarding stormwater management program activities associated with adjacent MS4s.	Department of Public Works	Not specified	Ongoing	
6-4 Develop/implement program to control other sources of pollutants to the MS4	In Progress		Control through IDDE program, water quality monitoring, the City's Discharge Limitations Ordinance, and targeted education and outreach to commercial, industrial, municipal, institutional facilities owners/ operators (see BMP 1-1).	Meriden Stormwater Committee	Not specified	Anticipate completing by Jul 1, 2019	

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*	Not Started		Implement the measures and procedures described in Section 7.2 of the SWMP including those measures to address stormwater pollutants of concern.	Department of Public Works, Parks and Recreation	Not specified	Anticipate completing by Jul 1, 2019	
6-6 Track projects that disconnect DCIA	Ongoing		Annually track total acreage of DCIA that is disconnected as a result of redevelopment or retrofits (see BMPs 5-4 and 6-7)	Planning Commission, Engineering	Jul 1, 2017	Ongoing	
6-7 Implement infrastructure repair/rehab program	Ongoing	As funding permits, the City maintains the storm sewer system as part of its infrastructure maintenance program.	Repair, rehabilitate, or retrofit MS4 infrastructure (e.g., conveyances, structures, outfalls) as needed in a timely manner	Engineering	Jul 1, 2021	Anticipate completing by Jul 1, 2021	
6-8 Develop/implement plan to identify/prioritize retrofit projects	Not Started		Develop retrofit plan and list of priority sites	Engineering	Jul 1, 2020	Anticipate completing by Jul 1, 2020	
6-9 Implement retrofit projects to disconnect 2% of DCIA	Not Started		Disconnect 1% per year of Meriden's DCIA from the MS4	Engineering	Jul 1, 2022	Anticipate completing by Jul 1, 2022	

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-10 Develop/implement street sweeping program	Complete/ Ongoing	The City continues to sweep all streets at a minimum frequency of once per year beginning in the spring to remove winter road sand and debris.	Continue to inspect and sweep all municipally-owned or –operated streets and parking lots.	Department of Public Works	Jul 1, 2017	Jul 1, 2017	
6-11 Develop/implement catch basin cleaning program	Complete/ Ongoing	The City continues to clean catch basins and drainage lines during the spring, summer, and fall of every year. In addition to general cleaning, catch basins are rebuilt or otherwise repaired by the City as needed.	Inspect and clean catch basins	Department of Public Works	Jul 1, 2020	Anticipate completing by Jul 1, 2020	
6-11 Develop/implement catch basin cleaning program (Continued)	In Progress	The City has started to develop a plan for optimizing catch basin cleaning. Catch basins receiving complaints of poor drainage are prioritized. Inspections will emphasize areas where more frequent sweeping is required.	Develop a plan for optimizing catch basin cleaning (i.e., reduced frequency in certain areas) based on inspection findings	Department of Public Works	Jul 1, 2020	Anticipate completing by Jul 1, 2020	
6-12 Develop/implement snow management practices	Complete/ Ongoing	During the winter months, the City continues to use environmentally responsible salt application practices.	Implement practices for deicing material management and snow and ice control	Department of Public Works	Jul 1, 2018	Jul 1, 2017	The City currently stores salt in an enclosed building.

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

- Continue to document pertinent maintenance/cleaning operations.
- Continue to maintain a list of complaints that it receives regarding road and highway maintenance concerns.
- Continue to conduct employee training.
- Continue to inspect the Central Maintenance Garage monthly and maintain records of each inspection.
- Inspect catch basins when they are cleaned and document the inspection findings.
- Aside from municipal facilities with existing SWPPPs, evaluate other municipal buildings and facilities for spill prevention and pollution prevention practices and implement additional BMPs as necessary.
- Evaluate and modify, as necessary, municipal vehicle and equipment parking, fueling, and maintenance practices.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	Yes / November 2018
Street sweeping	
Curb miles swept	190 miles
Volume (or mass) of material collected	665.81 tons*
Catch basin cleaning	
Total catch basins in priority areas	Estimated 5,000
Total catch basins in MS4	5,048*
Catch basins inspected	200
Catch basins cleaned	250
Volume (or mass) of material removed from all catch basins	665.81 tons*
Volume removed from catch basins to impaired waters (if known)	50 catch basins were cleaned in priority areas
Snow management	
Type(s) of deicing material used	Salt and salt brine
Total amount of each deicing material applied	4,000 tons
Type(s) of deicing equipment used	Plow trucks
Lane-miles treated	190 miles
Snow disposal location	Miller Street Parking Lot
Staff training provided on application methods & equipment	2 Staff members November 2018
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	0%
Reduction in turf area (since start of permit)	0 acres
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	Not yet determined

*Catch basin and street sweepings are combined.

**Number of catch basins owned by the City.

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program
The City cleans catch basins and drainage lines during the spring, summer, and fall of every year. In addition to general cleaning, catch basins are rebuilt or otherwise repaired by the City as needed.
The City will optimize catch basin inspection and cleaning through the following actions:
<ul style="list-style-type: none"> • Document the findings of catch basin inspections (i.e., catch basins that receive heavier sediment or debris loads). • Prioritize inspection and maintenance for municipally-owned catch basins located near impaired waters and construction activities. • Clean catch basins in "priority areas," as defined in the MS4 General Permit, more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings. • Establish a schedule for frequency of routine cleaning to ensure that no catch basin at any time will be more than fifty (50) percent full. • If a catch basin sump is more than fifty (50) percent full during two consecutive routine inspections/cleaning events, the City will document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the maximum extent practicable, abate contributing sources.

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 2018 report. Section to be completed for the 2019 Annual Report.]
N/A
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 2018 report. Section to be completed for the 2019 Annual Report.]
N/A
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 2018 report. Section to be completed for the 2019 Annual Report.]
N/A

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
 (Turbidity and PCBs)

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.

In Box 1.2, add this: All waterbodies in the state are subject to the Northeast Regional Mercury TMDL, however no specific monitoring or sampling is required in association with this TMDL.

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

2.1 Screening data

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?
Nothing to report.					

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?
Hanover Ave & Park Place (754818.30, 982130.19)	10/7/2009	E. Coli	6790 MPN/100 mL	Phoenix Environmental	Yes
East Main St & Research Pwy (752283.58, 997431.99)	10/7/2009	E. Coli	1330 MPN/100 mL	Phoenix Environmental	Yes
Cook Ave & Summer St (754000.37, 984145.79)	10/7/2009	E. Coli	5480 MPN/100 mL	Phoenix Environmental	Yes
Hanover Ave & Park Place (754818.30, 982130.19)	11/4/2010	E. Coli	8660 MPN/100 mL	Phoenix Environmental	Yes
East Main St & Research Pwy (752283.58, 997431.99)	11/4/2010	E. Coli	1040 MPN/100 mL	Phoenix Environmental	Yes
Cook Ave & Summer St (754000.37, 984145.79)	11/4/2010	E. Coli	>24200 MPN/100 mL	Phoenix Environmental	Yes
Hanover Ave & Park Place (754818.30, 982130.19)	10/19/2011	E. Coli	760 MPN/100 mL	Phoenix Environmental	Yes
East Main St & Research Pwy (752283.58, 997431.99)	10/19/2011	E. Coli	460 MPN/100 mL	Phoenix Environmental	Yes
Cook Ave & Summer St (754000.37, 984145.79)	10/19/2011	E. Coli	3280 MPN/100 mL	Phoenix Environmental	Yes
Hanover Ave & Park Place (754818.30, 982130.19)	11/24/2014	E. Coli	1500 MPN/100 mL	Phoenix Environmental	Yes
East Main St & Research Pwy (752283.58, 997431.99)	11/24/2014	E. Coli	60 MPN/100 mL	Phoenix Environmental	No
Cook Ave & Summer St (754000.37, 984145.79)	11/24/2014	E. Coli	960 MPN/100 mL	Phoenix Environmental	Yes
Hanover Ave & Park Place (754818.30, 982130.19)	9/10/2015	E. Coli	5170 MPN/100 mL	Phoenix Environmental	Yes
East Main St & Research Pwy (752283.58, 997431.99)	9/10/2015	E. Coli	690 MPN/100 mL	Phoenix Environmental	Yes
Cook Ave & Summer St (754000.37, 984145.79)	9/10/2015	E. Coli	15530 MPN/100 mL	Phoenix Environmental	Yes

Outfall	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
Hanover Ave & Park Place (754818.30, 982130.19)	9/19/2016	E. Coli	2850 MPN/100 mL	Phoenix Environmental	Yes
East Main St & Research Pwy (752283.58, 997431.99)	9/19/2016	E. Coli	1010 MPN/100 mL	Phoenix Environmental	Yes
Cook Ave & Summer St (754000.37, 984145.79)	9/19/2016	E. Coli	>24200 MPN/100 mL	Phoenix Environmental	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
Nothing to report.		

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)
Nothing to report.				

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
Nothing to report.		

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
Nothing to report.										

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
Nothing to report.									

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
Nothing to report.		

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
Nothing to report.					

3.3 Wet weather investigation outfall sampling data



Outfall ID	Sample date	Ammonia	Chlorine	Surfactants
Nothing to report.				

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
Nothing to report.							

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: Timothy Coon, City Manager	Print name: Rachel Schnabel, PE – Fuss & O'Neill, Inc.
Signature / Date:  3/29/2019	Signature / Date:  March 26, 2019