

MS4 General Permit
Town of Westbrook 2019 Annual Report
Existing MS4 Permittee
Permit Number GSM 000054
[January 1, 2019 – December 31, 2019]

This report documents Westbrook’s efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2019 to December 31, 2019.

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 (if needed, more space available after this table)	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-1 Implement public education and outreach	In progress	<ul style="list-style-type: none"> Maintain existing library of storm water educational materials Expand library As part of the science curriculum, 7th graders in Westbrook continue to conduct surveys of Cold Spring Creek, located behind school, once or twice/month. Westbrook Middle School offers a one-day, after-school field trip to the vernal pool located behind the school. Vernal pool development, the importance of vernal pools to the ecosystem and wildlife diversity are discussed 	<p>Research and add materials to website.</p> <p>Continue to publish pertinent articles in quarterly Westbrook Events publication</p>	<p>Planning, Zoning & Development/E. Knapp</p> <p>Inland Wetlands/H. Wallace</p> <p>Health Department/Z. Faiella*</p> <p>WPCC/ Public Works/J. Riggio</p>	Ongoing	Ongoing	<p>*Change in personnel</p> <ul style="list-style-type: none"> Student surveys of Cold Spring Creek include testing for water temperature, dissolved oxygen, pH, nitrates, and visual observations and conclude with reports/projects for class sharing. Vernal pool field trip is led by a

		<ul style="list-style-type: none"> GIS information available on the Town website include coverages of FEMA Flood Zones (last updated 2/6/2013), Coastal Resources, Hurricane Inundation, Natural Resource Protection, Water Resource Protection, Assessor's Parcel Map, USGS topography, Open Space, Zoning, Public Works, Windborne Debris and Beach Associations, all of which are relevant to storm water management 					volunteer, and typically has an enrollment of 6-10 students
1-2 Address education/outreach for pollutants of concern*		<ul style="list-style-type: none"> Continue to maintain webpage/target individual groups to address pollutants of concern (bacteria, pet waste, lawn care, fertilizers, pesticides, mercury, improper waste disposal, impervious coverage and illicit discharges) Westbrook Plan of Conservation and Development on file in Westbrook Town Hall includes recommendations for storm water management, and included input from Westbrook Town staff, volunteers and citizens. The plan can be found on the Town's website: http://westbrookct.us/Docs/2011%20POCD.pdf Water Pollution Control Commission septic pump-out program requires homeowners to have system maintenance performed at least every 5 years. Pumpers required to log pump-outs online, Town tracks information and mails reminders continually to residences outside 5-year parameter. WPCC webpage contains educational material relative to septic systems and water pollution, with link to DEEP P2 webpage WPCC submits Facebook posts to local "Friends of Westbrook" with reminders for septic "Do and Don't" during septic smart week, and hung posters around town, including the Town Green 	<ul style="list-style-type: none"> Continue Storm Water "Team" meetings to implement SWMP, including education/outreach Continue submission of storm water pertinent articles for publication in local "Westbrook Events" with specific attention to pollutants of concern 	Public Works/J. Riggio Inland Wetlands/H. Wallace Planning, Conservation & Development/E. Knapp WPCC/	Ongoing	July 1, 2017; ongoing	<ul style="list-style-type: none"> Pet Waste brochure mailed annually with dog licensing renewals SSDS pamphlet mailed with Certificates of Discharge for new install/system upgrade "Westbrook Events" published quarterly; mailed to every Town residence/business address Pump-out reminders mailed to residents Continue to display IDDE poster at several locations around Town.

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

Continue to monitor/update a cross-reference of WPCC and dedicated Storm Water webpages to be sure public attention is directed to all pertinent information resources. Continue submission of relevant articles to “Westbrook Events.”

1.3 Details of activities implemented to educate the community on stormwater

Program Element/Activity	Audience (and number of people reached)	Topic(s) covered	Pollutant of Concern addressed (if applicable)	Responsible dept. or partner org.
<i>Maintain Storm Water dedicated webpage for online library of educational materials; add content regularly</i>	<i>All members of the public</i>	<i>Overview of storm water, illicit discharge, Impact of impervious cover, storm water infiltration, pet waste management</i>	<i>Phosphorus, nitrogen, bacteria,</i>	<i>Public Works</i>
<i>Articles in local “Westbrook Events” with storm water related topics and advertisement of webpage</i>	<i>Residents of Westbrook – direct mail to ~3500 households</i>	<i>Various</i>	<i>Bacteria, nitrogen and phosphorus</i>	<i>Public Works, Water Pollution Control Commission, Zoning, Health, Inland Wetlands</i>
<i>SSDS pamphlet mailed with Certificates of Discharge for new install/system</i>	<i>Homeowners – 22</i>	<i>Proper care of septic systems</i>	<i>Bacteria</i>	<i>WPCC</i>
<i>Pet Waste brochure mailed annually with dog licensing renewals</i>	<i>Dog owners – ~350 households annually</i>	<i>Pet waste management</i>	<i>Bacteria</i>	<i>Town Clerk (Public Works supplies brochures for mailing inclusion)</i>

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

2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-1 Final Stormwater Management	Completed	SWMP is available for review at Town Garage and on webpage http://westbrookct.us/stormwater.php	Remind residents of availability	Public Works/J. Riggio	Ongoing	March 30, 2017	

Plan publically available							
2-2 Comply with public notice requirements for Annual Reports	<i>In progress</i>	<i>To be noticed in Hartford Courant, and on webpage http://westbrookct.us/stormwater.php</i>	<i>Notify public of DRAFT availability; accept comments from the public for a 30-day period. Make final Plan available on webpage and at Town offices</i>	<i>Public Works/J. Riggio</i>	<i>Feb 15, 2019</i>	<i>Feb 15, 2019</i>	<i>Paper copies (DRAFT and Final) will be available for review at Town Garage and on webpage http://westbrookct.us/stormwater.php</i>
2-3 Storm Water Drain Marker Program	<i>In progress</i>	<i>The Town of Westbrook continues to add catch basin markers reading "No Dumping, Drains to Waterway" and to monitor/replace as necessary</i>	<i>Purchase and install additional catch basin markers</i>	<i>Public Works/J. Riggio</i>	<i>n/a</i>		<i>Markers will be replaced as needed.</i>
2-4 Clean-Up Activities	<i>Ongoing</i>	<ul style="list-style-type: none"> <i>The Conservation Commissions 2 Conservation Interns continued to maintain trails and parking areas in the State-approved Menunketesuck Greenway which included erosion control on Horse Hill Woods (228 acres) and Chapman Mill Pond (83 acres) on the Menunketesuck River Watershed. Erosion control was also conducted on the 7-acre Salt Island Overlook and the Mulvey Municipal Center Patchogue Riverbank Walkway, both protecting coastal estuaries. Trash pickup was part of the regular tasks.</i> <i>The Westbrook Garden Club is working to clean up Salt Island Overlook (Open Space overseen</i> 		<i>Conservation Commission/M. Marx</i>			
				<i>Westbrook Garden Club/D. Rie</i>			

		<p><i>by the Conservation Commission) and establish a meadow, utilizing native plantings. Phase I (ridding the area of existing vegetation) has been completed without the use of herbicides.</i></p> <ul style="list-style-type: none"> • <i>Local beach organizations maintain their designated beach areas that include sponsored beach clean-ups</i> • <i>The Town contracts a beach cleaning service to conduct a comprehensive sweeping of Town beaches prior to Memorial Day, just after the 4th of July, and regular cleanings through Labor Day. During these cleaning events, the beaches are dragged and trash is removed from beach areas.</i> • <i>Westbrook sponsors an Adopt-A-Spot program that enables private citizens to maintain small garden areas around Town. These pervious areas with shrubs and flowering plants help to reduce the amount of storm water runoff entering the Town's drainage system.</i> 		<p><i>Public Works/J. Riggio</i></p> <p><i>Planning/Zoning & Development/E. Knapp</i></p>			<p><i>A description of the program, guidelines and available locations is provided on the Town's website:</i> http://westbrookct.us/adopt_a_spot.php</p>
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2.2 Describe any Public Involvement/Participation activities planned for the next year, if applicable.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan to public	Yes	2017 03 30	Hartford Courant and http://westbrookct.us/stormwater.php
Availability of Annual Report announced to public	Yes	2020 02 14	Hartford Courant and http://westbrookct.us/stormwater.php

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	Complete	Written IDDE program completed	Evaluate document annually	Public Works/J. Riggio	Jul 1, 2018	2017 11 01	IDDE program appears on webpage http://westbrookct.us/stormwater.php with a hard copy available for review at Public Works facility
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	In progress	<ul style="list-style-type: none"> The Town has located and mapped known outfalls in the urbanized area (MS4 regulated area) using GPS equipment. Began compiling spreadsheet 	<p>Continue to update map, continue to add data to spreadsheet</p> <p>Map remaining outfalls outside of the urbanized area and within Town boundary</p> <p>Add current map to dedicated storm water webpage</p>	Public Works/J. Riggio	Jul 1, 2019	The Town will continue to work toward completion of this task	Engineering firm contracted to assist with meeting this goal

3-3 Implement citizen reporting program	Complete	Logged reports per existing SOP	Track and investigate reported incidents	Storm Water Team	Ongoing	July 1, 2017	Storm water dedicated webpage includes information regarding IDDE and provides telephone number and email address for public to report instances
3-4 Establish legal authority to prohibit illicit discharges	Complete	Ordinance adopted	Review and update as necessary	Public Works/J. Riggio	Jul 1, 2018	2018 04 05	
3-5 Develop record keeping system for IDDE tracking	Complete	Excel spreadsheet stored on Town server is accessible to Land Use and Public Works personnel for logging data	Review and revise system as necessary	Storm Water Team	Jul 1, 2017	July 1, 2017	
3-6 Address IDDE in areas with pollutants of concern	In progress	Investigate reported complaints and respond as appropriate		Storm Water Team	Not specified		

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

Continue to 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
2019 03 05	141 Salt Island Road/Sump pump	Site visit revealed slight sheen in water running to catch basin, inconclusive whether coming from sump, or oil on roadway being picked up and carried by discharge. Reported to DEEP Spill Response.
Ongoing	8 Rip Tide/Existing basement sump pump lowered in conjunction with "finished" basement project during by new homeowner during dry weather conditions. Groundwater level rise as result of normal weather conditions caused pump to run continuously - filling catch basin and flooding roadway	Homeowner working with engineer to rectify problem as of 2019 07 03. Problem not considered IDDE at this time, as recycling ground water does not access MS4, or discharge to surface waters.

2019 07 01	7 Pepperidge Avenue/ Anonymous phone call to Health Dept. reporting septage on beach. Site investigation inconclusive, but seepage from sea wall in line with septic tank.	Homeowner directed to have tank pumped, which was completed 2019 07 03. Septic company reported system appears to have very little use
2019 10 15	207 Salt Island Road/sump pump	Large amount of water discharging to road. Spoke with homeowner, basement flooded

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)
41.280386, -72.445144/141 Salt Island Road	2019 03 05	MS4		Basement sump pump/homeowner	Reported to DEEP Spill Response, found to be insignificant, no action taken	

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

Complaints are logged in software under “IDDE” heading and are easily searchable by Town personnel for follow-up, or inclusion in Annual Report. Accompanying supportive data (i.e. pictures, emails, etc.) is able to be uploaded so all information is together and accessible. Responding Town personnel is responsible to ensure all data is logged, and Colleen Topitzer, DPW, is responsible for reporting.

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

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

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	275
Estimated or actual number of interconnections	5
Outfall mapping complete	64%
Interconnection mapping complete	0%
System-wide mapping complete (detailed MS4 infrastructure)	36% (estimated)
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).

- *Transfer Station and DPW Facility employees attend annual and as needed Storm Water Pollution Prevention Plan training as mandated in the CT DEEP General Permit for the Discharge of Storm Water Associated with Industrial Activity*
- *Land Use staff attend outside workshops that cover storm water related topics, pending workshop availability*
- *Staff tasked with IDDE responsibilities did an in-house review of our Illicit Discharge Detection and Elimination 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
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<p>4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit</p>	<p><i>Ongoing</i></p>	<p><i>The Town of Westbrook Zoning Regulations (most recent 2020 1 31, Section 7.K) provides for all development and redevelopment beyond incidental maintenance of residential properties install and maintain erosion and sedimentation controls using “best management practices”</i></p> <p><i>Regulations developed by the Inland Wetlands and Watercourses Commission specify the submittal of a map or written description of erosion and sedimentation controls as part of an application, and are required to meet acceptable standards that include the most recent version of the Connecticut Guidelines for Soil and Sediment Control; verification that the plan has been followed is required prior to issuance of a Certificate of Occupancy</i></p>	<p><i>Review regulations for compliance with MS4 requirements</i> <i>The Town will continue to require developers, construction site operators, or contractors maintain consistency with the 2002 Guidelines for Soil Erosion and Sedimentation Control, as amended, the CT Storm Water Quality Manual, and all storm water discharge permits issued by DEEP within the municipal boundary pursuant to CGS 22a-430 and 22a-430b.</i></p>	<p><i>Planning, Zoning & Development/E. Knapp Wetlands/H. Wallace</i></p>	<p><i>Jul 1, 2019</i></p>	<p><i>2017 07 01</i></p>	<p><i>Erosion and Sedimentation Control Plans submitted for subdivisions and commercial developments were reviewed by the Zoning Commission in 2016.</i></p>
<p>4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval</p>	<p><i>Complete</i></p>	<p><i>Review process to ensure procedure meets end goal</i></p>		<p><i>Planning, Zoning & Development/E. Knapp Wetlands/H. Wallace Health/</i></p>	<p><i>Ongoing</i></p>	<p><i>2017 07 01</i></p>	<p><i>Regular staff meetings held to review application and office procedures, which are updated as necessary</i></p>

4-3 Review site plans for stormwater quality concerns	Ongoing	All applications are reviewed for compliance with existing regulations, which address storm water quality concerns, prior to issuance of permit		Planning, Zoning & Development/E. Knapp Wetlands/H. Wallace Health/	Ongoing	2017 07 01	
4-4 Conduct site inspections	Ongoing	Regular inspections occur throughout project to track progress and ensure compliance		Planning, Zoning & Development/E. Knapp Wetlands/H. Wallace Health/	Ongoing	2017 07 01	
4-5 Implement procedure to allow public comment on site development	Ongoing	Commission meeting agendas posted, public welcome to attend, or forward written communication to be read into the minutes. Time given during meeting for public comment		Planning, Zoning & Development/E. Knapp Wetlands/H. Wallace	Ongoing		
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing	Applicants made aware of State and Federal permits during application review		Planning, Zoning & Development/E. Knapp Wetlands/H. Wallace	Ongoing	2017 07 01	

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

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	<i>In progress</i>			<i>Planning, Zoning & Development/E. Knapp</i>	Jul 1, 2021	<i>2020 01 31</i>	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	<i>In progress</i>	<i>Revise Zoning regulations to address</i>		<i>Planning, Zoning & Development/E. Knapp</i>	Ongoing beginning Jul 1, 2019	<i>2020 01 31</i>	
5-3 Identify retention and detention ponds in priority areas	<i>In Progress</i>	<i>Develop list of retention and detention ponds; prioritize</i>	<i>Collect data to identify priority area</i>	<i>Wetlands/H. Wallace</i>	Jul 1, 2019		
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	<i>In progress</i>	<i>Continue collection of data during inspections and general field observations</i>	<i>Develop spreadsheet from field notes</i>	<i>Public Works/J. Riggio</i>	Ongoing beginning Jul 1, 2019	<i>2020 07 01</i>	
5-5 DCIA mapping	<i>Not started</i>	<i>Engineering firm contracted to address and begin mapping</i>		<i>Public Works/J. Riggio</i>	Jul 1, 2020	<i>Anticipate project to be in progress by deadline of 2020 07 01</i>	
5-6 Address post-construction issues in areas with pollutants of concern	<i>Not started</i>			<i>Planning, Zoning & Development/E. Knapp</i>	Not specified		

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

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	TBD acres
DCIA disconnected (redevelopment plus retrofits)	0 acres this year / acres total TBD
Retrofits completed	0
DCIA disconnected	0 % this year / 0% total since 2012
Estimated cost of retrofits	TBD
Detention or retention ponds identified	0 this year /# total TBD

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

Based on information contained in the CT DEEP Factsheet: *Town of Westbrook Water Quality and Stormwater Summary*, prepared by the CT DEEP, 1,516.18 acres of the town has an impervious area exceeding 12% which is approximately 14.71% of the town. 300.20 acres have an impervious cover ranging from 12% to 25%, 551.98 acres have an impervious cover ranging from 26% to 50%, 460.57 acres have an impervious cover ranging from 51% to 75% and 203.43 acres have an impervious cover ranging from 76% to 100%.

Based on information on the UConn CLEAR Connecticut MS4 Data website the town has a total area of 10,309.50 acres. The total impervious surface area consists of 980.50 acres which consists of 248.74 acres of buildings, 253.85 acres of roads (150.94 acres of town roads and 102.92 acres of state roads) and 477.91 acres of other impervious surface areas.

The DCIA Mapping will be conducted in substantial accordance with the methodologies presented in the October 25, 2017 UConn CLEAR Webinar entitled *CT MS4 Mapping Details, Clarifications and Tools*, the October 19, 2018 UConn CLEAR Workshop entitled *CT MS4 Mapping Workshop* as well as information contained in the EPA reference entitled *Estimating Change in Impervious Area (IA) and Directly Connected Impervious Area (DCIA) for Massachusetts Small MS4 Permit Utilizing Sutherland equations*.

The DCIA computations will be prepared utilizing Connecticut Environmental Conditions Online MS4 base mapping prepared by UConn CLEAR.

Impaired waters will be determined from the report entitled *2018 Integrated Water Quality Report*, dated August 1, 2019, prepared by the State of Connecticut Department of Energy and Environmental Protection.

The method to determine the 2012 baseline DCIA will be to first compile the CT DEEP drainage basin characteristics in a Microsoft Excel spreadsheet. Information of the Connecticut Environmental Conditions Online MS4 Mapping will be used to determine the impervious area breakdown as Buildings, Roads and Other. For CT DEEP drainage basins that fell in two or more municipalities the advanced mapping tab of Connecticut Environmental Conditions Online will be used to delineate and determine the applicable town CT DEEP basin area. It will be assumed that the entire drainage basin characteristics were directly proportional to the applicable town CT DEEP drainage basin area.

In that ConnDOT has a MS4 Stormwater Program which applies to state owned roads and facilities which the town has no control over, it was decided that the impervious state road area would be determined and deducted from the total impervious road area for each CT DEEP drainage basin as the impervious road associated with state highways and facilities constitutes a considerable portion of the total town impervious road area.

The ConnDOT state highway, parking lot and facility impervious road areas will then be determined for each CT DEEP drainage basin. The ConnDOT state highway, parking lot and facility impervious road areas will then be deducted from the total town impervious road area to determine a town owned impervious road area for each CT DEEP drainage basin.

Subsequent to the above deduction, the total impervious area in acres and percentage will then be recomputed for each CT DEEP drainage basin.

The DCIA for each of four development scenarios associated Sutherland equation will then be utilized to compute the DCIA:

For impervious percentage less than 6%:

100% of the impervious area was assigned to the slight connectivity Sutherland Equation where $DCIA\% = 0.01 * (IA\%)^{2.0}$

For impervious area between 6% and 12%:

50% of the area will be assigned to the partial connectivity Sutherland Equation where $DCIA\% = 0.04 * (IA\%)^{1.7}$ and
50% of the area will be assigned to the average connectivity Sutherland Equation where $DCIA\% = 0.10 * (IA\%)^{1.5}$

For an impervious area between 12% and 18%:

50% of the areas will be assigned to the average connectivity Sutherland Equation where $DCIA\% = 0.10 * (IA\%)^{1.5}$ and
50% will be assigned to the high connectivity Sutherland Equation where $DCIA\% = 0.40 * (IA\%)^{1.2}$

For an impervious area of greater than 18%:

100% of the area will be assigned to the high connectivity Sutherland Equation where $DCIA\% = 0.40 * (IA\%)^{1.2}$

The DCIA for each CT DEEP drainage basin will then be submitted to determine the entire town DCIA.

Land Use files will be reviewed to determine disconnection of DCIA since July 1, 2012 for utilization in reaching the CT DEEP goal of 2% disconnection of the 2012 baseline DCIA by June 30, 2022.

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	Ongoing	<ul style="list-style-type: none"> Continued on the job training for daily activities at the DPW Facility, Transfer Station and road ROWs to practice safe materials handling Storm Water Pollution Prevention Plan training - Transfer Station and DPW Facility employees attend annual and as needed Storm Water Pollution Prevention Plan training as mandated in the CT DEEP General Permit for the Discharge of Storm Water Associated with Industrial Activity Land Use staff attend outside workshops that cover storm water related topics, pending workshop availability 	<ul style="list-style-type: none"> Continue providing on-the-job instruction to new and existing employees related to stormwater management Continue annual IDDE training/review Continue to seek and attend outside training resources on subject matter relative to storm water management. 	Public Works/J. Riggio Planning, Zoning & Development/E. Knapp Wetlands/H. Wallace Health/WPCC/ Director of Emergency Management/D. Izzo	Ongoing	Implemented 2017 07 01	

		<ul style="list-style-type: none"> • <i>Spill protocols in place</i> 						
6-2 Implement MS4 property and operations maintenance	<i>Ongoing</i>	<ul style="list-style-type: none"> • <i>Re-review methods of fertilizer optimization methods with landscape contractor</i> • <i>Continue to properly dispose of grass clippings and leaves at Town properties to ensure this material does not enter the MS4 system or waters of the State of CT</i> • <i>Continue current pet waste management practices – posted “No Dogs Allowed” signage in areas where dogs are not allowed, and receptacles/pet waste baggies or required carry-out in areas where dogs are allowed.</i> • <i>Continue existing protocols to ensure Town-owned facilities, vehicles and equipment comply with MS4 permit regulations</i> • <i>Continue current leaf management</i> 	<ul style="list-style-type: none"> • <i>Continue to monitor municipal properties relative to pollutants of concern for proper use, storage, and disposal of same.</i> • <i>Continue to ensure that employees understand and implement proper use, storage, and disposal procedures.</i> 	<i>Public Works/J. Riggio</i>			<i>Implemented 2018 07 01</i>	
					Ongoing beginning Jul 1, 2018			

		<p><i>practices, which are in compliance with MS4 permit regulations</i></p> <ul style="list-style-type: none"> • <i>Vehicle wash protocol includes a dedicated wash bay with wastewater collection system.</i> • <i>A Stormwater Management Facility Operations and Maintenance Program Plan Manual was developed with an Effective Date of 2019 07 01. Inspections will first begin with detention basins and water quality basins to determine if the basins are functioning as designed or if retrofits may be required.</i> • <i>Large diameter MS4 stormwater outfalls to impaired waters will also be inspected to determine if retrofits to reduce pollutant loads to the impaired waters is possible.</i> 					
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6-3 Implement coordination with interconnected MS4s	<i>Not Started</i>	<i>Coordinate interconnections with DOT</i>	<i>Contact DOT to begin dialog of responsibilities</i>	<i>Public Works/J. Riggio</i>	Not specified	
6-4 Develop/implement program to control other sources of pollutants to the MS4	<i>In Progress</i>	<i>Listing of storm water general permit registrants within the Town of Westbrook reviewed</i>	<i>Determine non-permitted locations that have potential to contribute pollutants</i>	<i>WPCC/</i>	Not specified	
6-5 Evaluate additional measures for discharges to impaired waters*	<i>In Progress</i>	<ul style="list-style-type: none"> <i>Continue proper fertilization application policies at Town facilities</i> 	<i>Develop waterfowl program to include identification of lands where waterfowl congregate and implementation of appropriate measures to educate public, discourage feeding practices, and discourage congregation</i>	<i>Public Works/J. Riggio</i>	Not specified	<p><i>Local Elks Club utilizes large "dog cut-out" on lawn areas to discourage congregation of geese.</i></p> <p><i>New parking lot in Town Center utilized pervious pavement and native, drought-resistant plantings</i></p>
6-6 Track projects that disconnect DCIA	<i>Not Started</i>		<i>Develop and implement a procedure to track DCIA annually. Review Land Use files to identify instances of disconnectoin</i>	<i>Planning, Zoning & Development/E. Knapp</i>	Ongoing	
6-7 Implement infrastructure repair/rehab program	<i>In progress</i>	<i>Developed Stormwater Management Facility Operations and Maintenance Program Plan Manual</i>	<i>Follow manual specifications for inspecting and identifying needed repairs</i>	<i>Public Works/J. Riggio</i>	Jul 1, 2021	<i>Retained services of engineering firm</i>
6-8 Develop/implement plan to identify/prioritize retrofit projects	<i>In progress</i>		<i>Review total DCIA; identify and prioritize suitable retrofit projects</i>	<i>Public Works/J. Riggio</i>	Jul 1, 2020	<i>Retained services of engineering firm</i>

6-9 Implement retrofit projects to disconnect 2% of DCIA	<i>Not Started</i>		<i>Review total DCIA; identify and prioritize suitable retrofit projects</i>		Jul 1, 2022		<i>Retained services of engineering firm</i>
6-10 Develop/implement street sweeping program	<i>Ongoing</i>	<i>All streets are swept annually at end of winter, typically February through May. Streets are monitored and swept additionally as necessary, typically in late fall. Town owned and operated parking lots and work yards, are swept as needed. Beach areas are swept twice per year.</i>	<i>Continue to track sweeping activities to include inspection/observation results, curb miles swept, dates of cleaning, volume or mass of material collected, and method of reuse or disposal.</i>	<i>Public Works/J. Riggio</i>	Ongoing beginning Jul 1, 2017	2017 07 01	
6-11 Develop/implement catch basin cleaning program	<i>Ongoing/In progress</i>	<i>All catch basins (approx. 1000) are cleaned annually. Priority is given to clean out catch basins at lower elevations. Additional cleaning performed upon verbal or written communication received from public, or during field observation</i>	<i>Develop spreadsheet to track all cleanings and collect data to include: total number of catch basins, number inspected, number cleaned, total volume or mass of material removed with attention to those catch basins which drain to water quality limited waters</i>	<i>Public Works/J. Riggio</i>	Ongoing beginning Jul 1, 2020	<i>Anticipate completion by deadline of 2020 07 01</i>	
6-12 Develop/implement snow management practices	<i>Ongoing</i>	<i>Westbrook utilizes sand, or a mix of sand/salt for snow and ice control. Materials are stored at the Town Garage facility in a dedicated salt shed which is monitored and maintained to ensure containment and minimize risk of exposure to storm water. The facility</i>		<i>Public Works/J. Riggio</i>	Ongoing beginning Jul 1, 2018	2017 07 01	<i>DPW crew members review proper practices annually. New crew members trained in best management practices</i>

		<p><i>parking lot is swept regularly. Records are kept to track volume of material used. On the job training provided to staff and outside contractors to ensure standard operating practices for minimal material use are optimized.</i></p>					
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6.2 Describe any Pollution Prevention/Good Housekeeping activities planned for the next year, if applicable.

Continue with training and regular review of existing procedures. Establish contact with DOT to begin compliance efforts with regard to interconnections. Work on waterfowl program.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	Yes, 2019 10 03
Street sweeping	
Curb miles swept	40 miles
Volume (or mass) of material collected	258 tons
Catch basin cleaning	
Total catch basins in priority areas	TBD
Total catch basins in MS4	600
Catch basins inspected	1000
Catch basins cleaned	1000
Volume (or mass) of material removed from all catch basins	337 tons
Volume removed from catch basins to impaired waters (if known)	
Snow management	
Type(s) of deicing material used	Sand & Salt
Total amount of each deicing material applied	387 ton sand/372 ton salt
Type(s) of deicing equipment used	Plows/Spreaders
Lane-miles treated	100 miles

Snow disposal location	Town ROW
Staff training provided on application methods & equipment	Yes/SOP/reviewed at start of season annually
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
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	TBD

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program

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.

Describe plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years.

Describe plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years.

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Part II: Impaired waters investigation and monitoring

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.

2017 - No MS4 stormwater outfalls which discharge directly to impaired waters were screened during dry weather or sampled.

2018 - No MS4 stormwater outfalls which discharge directly to impaired waters were screened during dry weather or sampled.

2019 - No MS4 stormwater outfalls which discharge directly to impaired waters were screened during dry weather or sampled.

Dry weather screening and sampling was scheduled for the Fall of 2019 but the unseasonably high precipitation, and resulting high groundwater conditions, precluded dry weather screening and sampling. It is anticipated that dry weather screening and sampling will be conducted in 2020.

It is anticipated that follow up sampling will be conducted in 2020 based on initial dry screening and sampling results.

The Town of Westbrook has retained an engineering firm to assist with this process.

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? *

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? *

*Follow-up investigation required (last column) if the following pollutant thresholds are exceeded:

Pollutant of concern	Pollutant threshold
Nitrogen	Total N > 2.5 mg/l
Phosphorus	Total P > 0.3 mg/l
Bacteria (fresh waterbody)	<ul style="list-style-type: none"> E. coli > 235 col/100ml for swimming areas or 410 col/100ml for all others Total Coliform > 500 col/100ml
Bacteria (salt waterbody)	<ul style="list-style-type: none"> Fecal Coliform > 31 col/100ml for Class SA and > 260 col/100ml for Class SB Enterococci > 104 col/100ml for swimming areas or 500 col/100 for all others
Other pollutants of concern	Sample turbidity is 5 NTU > in-stream sample

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)

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Part III: Additional IDDE Program Data

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:

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

Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name: Noel Bishop, First Selectman	Print name: Colleen A. Topitzer, Administrative Assistant
Signature / Date:	Signature / Date:

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