

MS4 General Permit
Town of Cromwell 2017 Annual Report
Existing MS4 Permittee
Permit Number GSM 000061
[January 1, 2017 – December 31, 2017]

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

Part I: Summary of Minimum Control Measure Activities

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

1.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
1-1 Implement public education and outreach	Ongoing	<ul style="list-style-type: none"> Made a variety of pamphlets available to the Public at Town Hall covering a range of Stormwater topics Provided a number of clickable links on the Engineering Department web page covering stormwater topics 	15 brochures made available 10 web links made available	Engineering	Jul 1, 2018	Plan was implemented under previous general permit, and continues today	
1-2 Address education/ outreach for pollutants of concern*	Ongoing	<ul style="list-style-type: none"> Obtaining pamphlets covering pollutant of concern information 	3 brochures – one for each concern	Engineering	Jul 1, 2018	Plan to implement during 2018 inside Town Hall	

1-3 Available at Public information meetings	Ongoing	<ul style="list-style-type: none"> Town Engineer attends/participates at P&Z and Inland Wetlands meetings to educate on the MS4 requirements and stormwater quality issues 	Monthly attendance ongoing	Engineering	Jul 1, 2017	Plan was implemented under previous general permit, and continues today	
1-4 Continued Storm Drain Marking/Stenciling	On hold this period	<ul style="list-style-type: none"> Town relies on Boy Scouts or other service organizations to implement this activity 	100 stencils	Engineering Boy Scouts	Jul 1, 2017	This BMP was not implemented this year, plan to resume in 2018	
1-5 Continued Watercourse Signage	Ongoing	<ul style="list-style-type: none"> Replace watercourse signage at street crossings 	2 signs replaced	Highway	July 1, 2017	All named water bodies have signage	Replacement will be an ongoing effort and will occur as needed

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

The plan is to continue and to expand upon the work started. Plan to learn from the CTDEEP, other communities and groups about what additional public education resources are available, and implement them if possible.

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.
Clickable links on Engineering Department web site	General Public (web traffic is not recorded)	Impact of impervious cover, stormwater infiltration	Bacteria, nitrogen and phosphorus	Engineering
Brochures distributed at Town Hall (2 nd floor – Public Works, Engineering, Zoning, Wetlands, Building Dept. etc)	Developers, home owners (approx. 100)	Impact of impervious cover, Septic systems & Fertilizer use	Bacteria, nitrogen and phosphorus	Engineering
Town Engineer available at Planning & Zoning, Inland Wetlands and Town Council Meetings	General Public (broadcasted on the web), commissions, etc.	Commented on applications and Town projects in regards to stormwater	Varied	Engineering

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	Posted the Plan in Town Hall and on Town web site, and notice in Hartford Courant	One Time	Engineering	Apr 3, 2017	April 3, 2017	No public comments were received, no requests to view in person were made
2-2 Comply with public notice requirements for Annual Reports	Ongoing	The Annual Plan shall be noticed on the Town's website	One Time	Engineering	Feb 15, 2018	Feb 15, 2018	
2-3 Comply with public notice requirements for Annual Reports	Ongoing	The Annual Plan shall be noticed on the Town's website	Annually	Engineering	July 1, 2017	Annually	
2-4 Present to Town Council, BOF& Public Works	Complete	Presentation of New Plan to stake holders	One Time	Engineering		Spring of 2017	
2-5 Participate in Household Hazardous Waste and Solid Waste Recycling	Ongoing	Transfer Station available to all residents, two hazardous waste collection days provided annually	Annually	Solid Waste Public Works	July 1, 2017	Annually	

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

Participate in regional spring and fall Household Hazardous Waste collection events organized by RiverCOG.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Y	April 3, 2017	Town Hall, Library, www.cromwellct.com
Availability of Annual Report announced to public	Y	February 15, 2018	www.cromwellct.com
Household Hazardous Waste Collection Day(s)	Y	4/8/2017 & 9/30/2017	Transfer Station, Town Hall, www.cromwellct.com

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	Ongoing	Town 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 the deadline of July 1, 2018.	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Complete	The MS4 system is 100% mapped, updates are done as new infrastructure is acquired	Develop map and list	Engineering	Jul 1, 2019	Completed prior to July 1, 2017. As new subdivisions are built, new info is added to the map	100% of the Town is currently mapped. Roads not yet accepted by Town may not be included.
3-3 Implement citizen reporting program	Complete	Citizen reporting went online prior to July 1, 2017.	Receive citizen complaints	Engineering M. Shewokis	Jul 1, 2018	July 1, 2017	No complaints received as of yet
3-4 Establish legal authority to prohibit illicit discharges	Ongoing	Ordinance created, approved by Town Council and Public Hearing	Establish Legal Authority	Engineering J. Harriman	Jul 1, 2018	Anticipate completion prior to deadline	Awaiting finalization of Ordinance by Town Attorney

3-5 Develop record keeping system for IDDE tracking	Ongoing	Spreadsheet will be developed when first IDDE is reported	Create spreadsheet	Engineering J. Harriman	Jul 1, 2017	TBD	Town staff are not aware of any illicit discharges. Cromwell sewers are separate from storm sewers. When/if IDDE sampling shows signs of connection or discharge this will be completed.
3-6 Address IDDE in areas with pollutants of concern	Ongoing	Engineering department began IDDE sampling	Start sampling	Engineering M. Shewokis J. Harriman	Not specified	Sampling has begun, will continue in future permit years	
3-7 Detailed MS4 infrastructure mapping	Complete	The MS4 system is 100% mapped, updates are done as new infrastructure is acquired	Develop map and list	Engineering	Jul 1, 2020	Completed prior to July 1, 2017. As new subdivisions are built, new info is added to the map	100% of the Town is currently mapped. Roads not yet accepted by Town may not be included.
3-8 Complete list and maps of all MS4 outfalls throughout municipality (>10")	Complete	The MS4 system is 100% mapped, updates are done as new infrastructure is acquired	Develop map and list	Engineering	Jul 1, 2022	Completed prior to July 1, 2017. As new subdivisions are built, new info is added to the map	100% of the Town is currently mapped. Roads not yet accepted by Town may not be included.

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

The written program will be posted to the Dept of Public works webpage and a link listed in next year's Annual Report; will update the written IDDE program as needed throughout the permit term.

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

IDDE Sampling program will continue as weather permits.

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

Date of Report	Location / suspected source	Response taken
NA	NA	No reports have been received

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)
NA					Cromwell WPCA reports no SSO's w/impact to MS4	
NA					No illicit discharges reported 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.

A review of the records from Cromwell WPCA indicate there have been no SSOs to the MS4 from July 2012 to the present. The following departments have no knowledge of illicit discharges to the MS4 (Engineering, Zoning, Health, Public Works, Building). The citizen reporting not

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
<i>Residential home on Nooks Hill Road</i>	Cromwell Director of Health working w/Power of Attorney for elderly/invalid occupant to vacate. Sewers available but not feasible for current owner.	No direct impact – inland wetlands are 500 feet away This is the only septic system failure of record at this time

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	207
Estimated or actual number of interconnections	Est. 17
Outfall mapping complete	100%

Interconnection mapping complete	100%
System-wide mapping complete (detailed MS4 infrastructure)	100%
Outfall assessment and priority ranking	0%
Dry weather screening of all High and Low priority outfalls complete	24
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).

The Town combines IDDE training with general MS4 and Industrial stormwater permit training session on an annual basis. In 2017 this training was provided on 2/2/2017 and was given to every available Public Works and Sewer Department employee on that day.

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

4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	In Planning Stage	Town Staff (Town Planner and Town Engineer) have met to discuss permit requirements	Upgrade regulations	Town Planner Town Engineer	Jul 1, 2019	Projected to complete by permit requirement date	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Ongoing	Town Planner forwards applications to various department heads for review	Review applications	Town Planner Zoning Officer Town Engineer Fire Chief Police Chief	Jul 1, 2017	This has been in place since before 2012	This has been Town policy for many years.

4-3 Review site plans for stormwater quality concerns	Ongoing	Site plan applications reviewed by Town Engineer, Zoning Officer & Town Planner	Number completed yearly	Town Planner Zoning Officer Town Engineer	Jul 1, 2017	20 P&Z applications 12 IW applications reviewed	
4-4 Conduct site inspections	Ongoing	Conduct frequent inspections (ZEO, Engineering)	Number of sites inspected yearly	Engineering ZEO	Jul 1, 2017	2 subdivisions 1 Capitol Improvement projects inspected	ZEO maintains a running list of all zoning permits inspected (17 in 2017)
4-5 Implement procedure to allow public comment on site development	Ongoing	Allow Public Comment on Site Development projects	# Public Hearings/procedures	Town Planner ZEO	Jul 1, 2017	Public Comment is on every IWC & P&Z agenda. Public Hearings also allow application specific comment	Very little, if any, public comment is received. Meeting minutes are available for review, and commissions consider all public comment.
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing	Notify developers of DEEP permit requirement	Append procedure to Town Engineer's review comments	Town Engineer	Jul 1, 2017	Town Engineer inserts a handout and a general comment to all applications where this applies. July 1, 2017	

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

Continue to follow present SOP.

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	Pending	No activity this period	Update zoning regulations	PZC Town Planner	Jul 1, 2021	By permit due date	

5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Not started				Jul 1, 2019	By Permit Due Date	
5-3 Identify retention and detention ponds in priority areas	Not started				Jul 1, 2019	By Permit Due Date	
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	In Progress	The Town regularly maintains storm water basins and structures,	Maintain infrastructure annually	Highway Division	Jul 1, 2019	By Permit Due Date	
5-5 DCIA mapping	Not Started				Jul 1, 2020	By Permit Due Date	
5-6 Address post-construction issues in areas with pollutants of concern	Not started				Not specified	By Permit Due Date	

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

1. Create list of retention/detention ponds in Town that are the Town's responsibility to maintain. Most of these are currently maintained, but there is no record keeping methodology implemented.
2. Obtain a template or sample LID legal authority to update the Town Zoning Regulations.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	481.5

DCIA disconnected (redevelopment plus retrofits)	7.04 acres this year / 7.04 acres total
Retrofits completed	0
DCIA disconnected	1.5 % this year / 1.5 % total since 2012
Estimated cost of retrofits	\$1.9M
Detention or retention ponds identified	0 this year /0 total (see 5.2 above)

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

Referencing the UCONN MS4 Stormwater Assistance Program website, the equation for a Moderately Connected town was used : $DCIA\% = 0.1(\%IC)^{1.5}$. Total DCIA was obtained from the UCONN MS4 Stormwater Mapping Tool available online. SO, $DCIA\% = 0.1(14.96)^{1.5} = 5.8\%$. Total IC from the map tool for Cromwell is listed as 8,301.54 acres in 2012. 5.8% of 8,301.54 is 481.5 acres of DCIA.

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

6.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
6-1 Develop/implement formal employee training program	Ongoing	Staff were trained in February of 2017	Train once annually	Public Works Engineering	Jul 1, 2017	2/2/2017	Training is combined with Industrial Storm water permit
6-2 Implement MS4 property and operations maintenance	In Progress	This is being done currently, need to create an SOP	Create an SOP	Public Works	Jul 1, 2018	By permit due date	
6-3 Implement coordination with interconnected MS4s	Not started				Not specified		Need clarification as to what this entails

6-4 Develop/implement program to control other sources of pollutants to the MS4	Not started				Not specified		
6-5 Evaluate additional measures for discharges to impaired waters*	Not started				Not specified		
6-6 Track projects that disconnect DCIA	In Progress	Established baseline (2012) computed first projects impact to DCIA	Maintain a list to track progress	Engineering	Jul 1, 2017	7/1/2017	
6-7 Implement infrastructure repair/rehab program	In Progress	I/I repair project was designed and specified in 2017 – to be bid in 2018	Reduce I/I in the sanitary sewer system	Cromwell WPCA	Jul 1, 2021	This phase will be completed in 2018	See project description below in 6.2
6-8 Develop/implement plan to identify/prioritize retrofit projects	Not started				Jul 1, 2020		
6-9 Implement retrofit projects to disconnect 2% of DCIA	In progress	Completed Raymond Place Drainage and Roadway Improvements Project	Disconnect 2% of DCIA	Public Works Engineering	Jul 1, 2022	October 2017	This project reduced DCIA by 11.4%. This 55 acre residential development received new stormwater system and a new retention basin.
6-10 Develop/implement street sweeping program	Complete	The Town sweeps twice per year. In spring after snow, and in fall during leaf collection. Every mile is swept 2x	Sweep twice annually	Highway Department	Jul 1, 2017	July 1, 2017	By July 1, only the spring sweep was completed. The fall sweep was late this year (December) because the leaves were late to drop.

6-11 Develop/implement catch basin cleaning program	Complete	The Town cleans at least 1/3 of the basins annually on a rotating schedule	Clean 1/3 of basins annually	Highway Department	Jul 1, 2020	October 2017	
6-12 Develop/implement snow management practices	In progress	Implemented a salt brine pre-treatment system in problem areas (hills, curves, bridges)	Reduce salt use with brine solution	Highway Department	Jul 1, 2018	November 2017	

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

The Sanitary Sewers I/I Project consists of the rehabilitation of existing sanitary sewer system piping within various local and State roadways and Town sewer easement areas. Furthermore, the rehabilitation methods consist of cured-in-place pipe lining of both manhole to manhole sections and spot repair areas, open cut spot repair and open cut pipe replacement (manhole to manhole), cure-in-place lateral lining, pipe joint sealing and other miscellaneous system rehabilitation work. The areas of repair include: Bellaire Manor, Bellevue Terrace, Blackhaw Drive, Cambridge Drive, Catherine Street, Coles Road, Congress Drive, Crest Drive, Douglas Drive, Elm Road, Forest Road, Geer Street, Grace Lane, Hillside Road, Lincoln Street, Marsal Lane, Missionary Road, New Lane, Nordland Avenue, Rosewood Lane, Sebethe Drive, Timber Hill Road, Wightman Place, Walnut Tree Road, Warner Court, Washington Road, Willowbrook Road. Estimated cost of this repair work is \$1,225,000.00 – Bids will open in March, 2018.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	y / 2/2/2017
Street sweeping	
Curb miles swept	234.6 miles (2x both sides of road)
Volume (or mass) of material collected	75 +/- cy
Catch basin cleaning	
Total catch basins in priority areas	#
Total catch basins in MS4	1937
Catch basins inspected	800

Catch basins cleaned	800
Volume (or mass) of material removed from all catch basins	100 +/- cy
Volume removed from catch basins to impaired waters (if known)	unknown
Snow management	
Type(s) of deicing material used	Treated salt + brine
Total amount of each deicing material applied	1,936T & 6400G
Type(s) of deicing equipment used	Spreaders, brine truck
Lane-miles treated	117 miles +/-
Snow disposal location	Hoffman Farm lot
Staff training provided on application methods & equipment	Y frequently
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	0 lbs
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	\$0

6.4 Catch basin cleaning program

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

The Town is divided into three regions; east of Main Street (Route 99), between Main Street and Shunpike Road (Route 3) and west of Shunpike Road. Each section is cleaned every three years on a rotating schedule. The town hasn't used sand for snow operations in many years and streets are swept twice annually. It is our experience that this schedule ensures that there is not a significant buildup in the sumps that would lead to a discharge at an outfall. Catch basins near construction sites are monitored by engineering and zoning department staff, and any sediment buildup requiring removal is completed by the offending development/developer through Notice of Violation.

6.5 Retrofit program

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

The Raymond Place drainage and roadway improvements project was in development for many years. The area was prone to flooding, and lacked storm water quality measures. The 55 acre subdivision built in the 1950s was rebuilt with new catch basins and a pipe network to bring the runoff to an off-site retention basin that retains the WQV. Construction was started in the fall of 2016 and was completed in 2017. This project reduced DCIA significantly within the project area, and the total project cost was over \$3M (an additional \$1M was spent replacing the water system in that neighborhood).

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


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

Part 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

Print name:



Signature / Date:

Anthony J. Salvatore
2/15/18

Document Prepared by

Print name:

Jon Harriman - Town Engineer

Signature / Date:

Jon Harriman 2/15/2018