

MS4 General Permit
Town of Burlington 2017 Annual Report
Existing MS4 Permittee
Permit Number GSM 000049
[January 1, 2017 – December 31, 2017]

This report documents Town 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	Bi-annual newsletter to residents includes information on stormwater	Inform public	BoS/DPW	Jul 1, 2018	none	Ongoing activity – mailed out with tax bill
1-2 Address education/ outreach for pollutants of concern*		Town has no impaired waters – no pollutants of concern	None at this time	BoS	Jul 1, 2018	Unless an impaired waterbody is identified, no action is anticipated	

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

The Town of Burlington has no impaired waterbodies. The town also does not have sub-basins with a calculated DCIA above the 11% threshold. (Mapping of sub-basins and computation of DCIA percentage has been completed.) The Town also only has minimal areas defined as “Urban” by the 2010 census, and which appear to only be overlap from adjoining municipalities. The Town will upgrade the information available, but does not view this effort as urgent.

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.
Add notices to tax bills	Tax payers	Miscellaneous – as needed	N/A	<i>Selectman's office</i>
Updates on Town web page	Web users	To post links to information	N/A	<i>Selectman's office</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 Comply with public notice requirements for the Stormwater Management Plan	Ongoing	Post info on web page	Establish sector of Town webpage For Stormwater programs	DPW/BoS	Apr 3, 2017	ongoing	
2-2 Comply with public notice requirements for Annual Reports	Ongoing	Post info on web page	Establish sector of Town webpage For Stormwater programs	DPW/BoS	Feb 15, 2018	ongoing	

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

None anticipated at this time.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	At completion	TBD	Town web page
Availability of Annual Report announced to public	At completion	TBD	Town web page

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	Town is in process of reviewing the CT IDDE program template	Develop written plan of IDDE program	Public Works	Jul 1, 2018	Anticipate completing by the deadline of July 1, 2018.	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	In progress	Approx 95% complete	Map outfalls in "urban" areas	Public Works	Jul 1, 2019	Future focus on new development	<i>Anticipate 12/2018 completion of existing outfalls</i>
3-3 Implement citizen reporting program	Pending	Initial discussions on procedures and format	Establish method of defining areas for which reporting is desired	BoS	Jul 1, 2017		<i>Town forces inspect catch basins and will respond to resident's reports</i>
3-4 Establish legal authority to prohibit illicit discharges	Pending	Initial discussions on procedures and format	Authorize Town attorney to draft regulation for review	BoS	Jul 1, 2018		<i>Anticipate moving ahead in future</i>
3-5 Develop record keeping system for IDDE tracking	Pending	No formal process initiated	Identify contact point and format for reporting	Public Works	Jul 1, 2017	Minimal areas for which reporting is needed to comply with requirement	
3-6 Address IDDE in areas with pollutants of concern		No areas with pollutants of concern			Not specified		

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

Ongoing implementation of listed activities

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

Date of Report	Location / suspected source	Response taken
None		

3.4 Provide a record of illicit discharges occurring during the reporting period and SSOs occurring July 2012 through end of reporting period using the following table.

Location (Lat long/ street crossing /address and receiving water)	Date and duration of occurrence	Discharge to MS4 or surface water	Estimated volume discharged	Known or suspected cause / Responsible party	Corrective measures planned and completed (include dates)	Sampling data (if applicable)
None						

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

DPW responds to resident complaints, inspects noted areas and responds if issues detected.

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	30
Estimated or actual number of interconnections	±1 (DOT)
Outfall mapping complete	80 (%)
Interconnection mapping complete	0 (%)
System-wide mapping complete (detailed MS4 infrastructure)	20 (%)
Outfall assessment and priority ranking	100 (%)
Dry weather screening of all High and Low priority outfalls complete	30
Catchment investigations complete	All
Estimated percentage of MS4 catchment area investigated	100%

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).

Annual training

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	Pending	None	Initiate development of regulations	BoS	Jul 1, 2019		Regulations not formally updated but requirements have been incorporated into new construction.
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Ongoing	Addressed as issues are identified			Jul 1, 2017		Informal process in place
4-3 Review site plans for stormwater quality concerns	Ongoing	All applications are reviewed for compliance to regulations			Jul 1, 2017		Part of current application review process
4-4 Conduct site inspections	Ongoing	All inspected as needed – or resident complaints		Town Engineer	Jul 1, 2017		
4-5 Implement procedure to allow public comment on site development	Ongoing	Residents may speak at Wetland meetings			Jul 1, 2017		
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing	Project review for application and inspections include notification			Jul 1, 2017		

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

Ongoing enforcement of regulations through inspections

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				Jul 1, 2021		
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Pending				Jul 1, 2019		
5-3 Identify retention and detention ponds in priority areas	Pending				Jul 1, 2019		<i>Need to identify ponds</i>
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Pending				Jul 1, 2019		
5-5 DCIA mapping	Done	Calculate DCIA% for Each subbasin	Identify Basins with >11% DCIA	DPW/Consultant	Jul 1, 2020	All basins evaluated – none found with DCIA > 11%	
5-6 Address post-construction issues in areas with pollutants of concern	Pending	No areas with pollutants of concern			Not specified		Will develop plan for “urbanized” areas

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

Town-owned ponds (±40) mown and have sediment removed 1/yr

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	1068 acres
DCIA disconnected (redevelopment plus retrofits)	0 acres this year / 0 acres total
Retrofits completed	0
DCIA disconnected	0 % this year / 0 % total since 2012
Estimated cost of retrofits	\$0
Detention or retention ponds identified	5 this year /40 total

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

List of sub-basins identified using GIS. IC% found online from CT ECO for each sub-basin. Modified Sutherland equations used to calculate DCIA for each basin, with connectivity level estimated from GIS coverage of impervious area also found at CT ECO.

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	Employees trained to handle materials used or collected by Town		Highway Department	Jul 1, 2017		Training will address new issues as they arise
6-2 Implement MS4 property and operations maintenance	Ongoing	Develop waste management procedures			Jul 1, 2018		
6-3 Implement coordination with interconnected MS4s	Pending	To at least next yr with DOT			Not specified		Will work with DOT when they have implemented their MS4
6-4 Develop/implement program to control other sources of pollutants to the MS4	Pending				Not specified		Need to identify other potential sources from interconnections and other sources
6-5 Evaluate additional measures for discharges to impaired waters*	Pending	With no impaired waters – need to evaluate waters to identify other areas of focus			Not specified		No impaired waters
6-6 Track projects that disconnect DCIA	Ongoing	Will track when areas for disconnect identified			Jul 1, 2017		
6-7 Implement infrastructure repair/rehab program	Ongoing	Repair infrastructure as failures identified		Highway Dept	Jul 1, 2021		

6-8 Develop/implement plan to identify/prioritize retrofit projects	Pending				Jul 1, 2020		
6-9 Implement retrofit projects to disconnect 2% of DCIA	Pending	Best opportunities are to be researched and targeted			Jul 1, 2022		
6-10 Develop/implement street sweeping program	Ongoing	Streets swept annually, in spring			Jul 1, 2017		
6-11 Develop/implement catch basin cleaning program	Ongoing	All CB's inspected annually and cleaned as needed			Jul 1, 2020		
6-12 Develop/implement snow management practices	Pending				Jul 1, 2018		

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

Continue current activities

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	Yes
Street sweeping	
Curb miles swept	90 miles
Volume (or mass) of material collected	±200 tons
Catch basin cleaning	
Total catch basins in priority areas	#300
Total catch basins in MS4	#1800
Catch basins inspected	#450
Catch basins cleaned	#450
Volume (or mass) of material removed from all catch basins	100 tons
Volume removed from catch basins to impaired waters (if known)	N/A
Snow management	
Type(s) of deicing material used	Cargill Clearlane
Total amount of each deicing material applied	1500 tons
Type(s) of deicing equipment used	Trucks/Spreaders
Lane-miles treated	90 miles
Snow disposal location	N/A
Staff training provided on application methods & equipment	y / Oct.-Nov.
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	N/A
Reduction in turf area (since start of permit)	N/A
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$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]
Catch basins are cleaned and inspected each year – problem CBs are targeted for maintenance

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.]

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 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 II: Impaired waters investigation and monitoring [This section required beginning with 2018 Annual Report]

1. Impaired waters investigation and monitoring program

1.1 Indicate which stormwater pollutant(s) of concern occur(s) in your municipality or institution. This data is available on the MS4 map viewer: <http://s.uconn.edu/ctms4map>.

Nitrogen/ Phosphorus Bacteria Mercury Other Pollutant of Concern

1.2 Describe program status.

Discuss 1) the status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) any changes to the Stormwater Management Plan based on monitoring results.
No impaired waters

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

2.1 Screening data collected under 2017 permit

Complete the table below for any outfalls screened during the reporting period. Each Annual Report will add on to the previous year's screening data showing a cumulative list of outfall screening data.

Outfall ID	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?
N/A					

2.2 Credit for screening data collected under 2004 permit

If any outfalls to impaired waters were sampled under the 2004 MS4 permit, that data can count towards the monitoring requirements under the modified 2017 MS4 permit. Complete the table below to record sampling data for any outfalls to impaired waters under the 2004 MS4 permit.

Outfall	Sample date	Parameter (Nitrogen, Phosphorus, Bacteria, or Other pollutant of concern)	Results	Name of Laboratory (if used)	Follow-up required?

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

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall	Status of drainage area investigation	Control measure implementation to address impairment

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

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

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

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

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

2.1 Dry weather screening and sampling data from outfalls and interconnections

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

Outfall / Interconnection ID	Screening / sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or enterococcus	Surfactants	Water Temp	Pollutant of concern	If required, follow-up actions taken

2.2 Wet weather sample and inspection data

Provide sample data for outfalls and key junction manholes of any catchment area with at least one System Vulnerability Factor.

Outfall / Interconnection ID	Sample date	Ammonia	Chlorine	Conductivity	Salinity	E. coli or Enterococcus	Surfactants	Water Temp	Pollutant of concern

3. Catchment Investigation data (Appendix B (A)(7)(e) / page 9)

3.1 System Vulnerability Factor Summary

For those catchments being investigated for illicit discharges (i.e. categorized as high priority, low priority, or problem) document the presence or absence of System Vulnerability Factors (SVF). If present, report which SVF's were identified. An example is provided below.

Outfall ID	Receiving Water	System Vulnerability Factors

Where SVFs are:

1. History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages.
2. Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs.
3. Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints.
4. Common or twin-invert manholes serving storm and sanitary sewer alignments.
5. Common trench construction serving both storm and sanitary sewer alignments.
6. Crossings of storm and sanitary sewer alignments.
7. Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
8. Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.
9. Areas formerly served by combined sewer systems.
10. Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas.

11. Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).
12. History of multiple local health department or sanitarian actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather than poor owner maintenance).

3.2 Key junction manhole dry weather screening and sampling data

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

3.3 Wet weather investigation outfall sampling data



Outfall ID	Sample date	Ammonia	Chlorine	Surfactants

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

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

Part IV: Certification

"I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify that, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that a false statement made in this document or its attachments may be punishable as a criminal offense, in accordance with Section 22a-6 of the Connecticut General Statutes, pursuant to Section 53a-157b of the Connecticut General Statutes, and in accordance with any other applicable statute."

Chief Elected Official or Principal Executive Officer	Document Prepared by
Print name: Theodore C. Shafer, First Selectman	Print name: Stephen R. McDonnell, P.E.
Signature / Date:  10-29-2018	Signature / Date:  2/24/19