

TOWN OF WILLINGTON, CONNECTICUT
MS4 STORMWATER PROGRAM
ANNUAL REPORT FOR 2019



DRAFT

Prepared: February 2020

MS4 General Permit
Town of Willington, CT / 2019 Annual Report
Existing MS4 Permittee
Permit Number GSM 000123
January 1, 2019 – December 31, 2019

This report documents the Town of Willington'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	Staff meetings to set up public participation and place public information on website.	News Releases & Informational Meetings	Public Works & Planning / Land Use	Ongoing		Meetings are held on an annual basis between Selectmen, PublicWorks and Department staff.
1-2 Address education/ outreach for pollutants of concern*	In progress	Staff meetings to set up outreach program for public participation	News Releases & Informational Meetings	Public Works & Planning / Land Use	Ongoing		Continuing to involve varied membership from Town Committees.
1-3 Integrate water quality into school curriculum	Not Started	Will strive to work with schools during 2020 to educate teachers and students with respect to stormwater quality	Educate students on common stormwater topics	Public Works, Planning / Land Use, and School Committees	Not Started	Plan to implement program during the 2020 school year	Extension of the public education program to schools

Supplemental information on BMP activities:

BMP	
1-3 Integrate water quality into school curriculum	The Town, through Public Works and School Committees, will coordinate with school officials, during the coming academic year, to determine feasibility of stormwater programs for upper grade students and develop a short curriculum to educate students about water quality and its effect on public health and welfare.

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

Outreach and educational efforts will be continue to be outlined and explained to the general public through information on the Town's website for the coming year and, as noted above, efforts will be made to reach out to schools to include students and educators in an effort to maintain good water quality within the Town's rivers and streams.

1.3 Details of activities to be implemented to educate the community on stormwater

Program Element / Activity	Target Audience	Topics to be covered	Pollutant of Concern to be addressed (as may be applicable)	Responsible Department
A program curriculum to highlight stormwater issues and explain them to school students will be undertaken, as noted above.	Students, teachers and parents	Impact of impervious cover, stormwater infiltration, illicit discharges, water quality, etc.	Phosphorus, nitrogen, hydrocarbons, chemicals, etc.	Board of Selectmen, Public Works, Planning / Land Use, School Committees
Brochures to be distributed at IWWA and also available at First Selectman's Office	Developers, home owners and professional consultants	Impact of impervious cover, septic systems, fertilizer use, stormwater design and low inmpact devlopment	Bacteria, nitrogen and phosphorus	Board of Selectmen, Public Works and IWWA

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

2.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
2-1 Comply with public notice requirements for the Stormwater Management Plan	Completed	Continue with posting of additional information and annual report		Public Works & Planning / Land Use	Apr 1, 2020	April 1, 2020	
2-2 Comply with public notice requirements for Annual Reports	In progress	Report in progress. Out for public comment.	Publish notice, as required	Public Works & Planning / Land Use	Feb 15, 2020	February 15, 2020	

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

- (1) Plan school and field visits for school children
- (2) Designate an inspector or group that will inspect and report on questionable practices and potential violations.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan to public	Yes	2019 - 2020	Town Website (Public Works)
Availability of Annual Report announced to public	Yes	February 15, 2020	Town Website

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 the process of completing a written IDDE program using the CT IDDE program template	Develop written plan of IDDE program	Public Works	July 1, 2020	July 1, 2020	
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas, specifically in the urban area in the southwest section of Town	In progress	Solicit information on available mapping firms	Determine survey needs and procure services of GIS mapping firm	Public Works	July 1, 2020	July 1, 2020	
3-3 Implement citizen reporting program	Ongoing	Coordinate reporting with existing input from Town residents	Posting of reporting forms on website	Public Works & Selectmen's Office	Nov. 1, 2018	July 1, 2020	
3-4 Establish legal authority to prohibit illicit discharges	Ongoing	Ordinance is currently under consideration through legal consultants	Draft final ordinance for staff and public input	Public Works & Selectmen's Office	July 1, 2018	November 1, 2020	
3-5 Develop record keeping system for IDDE tracking	In progress	Record keeping system under consideration by Public Works and Land Use Dept.	Draft document for staff and public input	Public Works & Land Use Dept.	July 1, 2018	July 1, 2020	
3-6 Address IDDE in areas with pollutants of concern	In progress	Currently being identified	Preliminary list of potential IDDE sources	Public Works & Land Use Dept.	July 1, 2018	July 1, 2019	

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

Public Works has not identified any IDDE activities to date, but will continue to monitor Town-wide activities and make inquiries where and as necessary

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

Date of Report	Location / suspected source	Response taken
None received to date		

3.4 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 reported during the 2019 calendar year					None planned, but as noted above, staff will continue to monitor any potential IDDE activities	

3.5 Method used to track illicit discharge reports, responses to those reports, and who was responsible for tracking this information.

Public Works and IWWA continue to keep track of any reported illicit discharge activity. As noted above, no such reports were received in 2019.

3.6 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
These activities are coordinated with the regional health department and, as of the current submittal, no failures have been reported which might impact runoff to streams or rivers	Continued monitoring of Health Department actions to correct problems related to septic systems and leach fields.	No impacts to date, but such situations will be investigated and acted upon should any septic related failures occur.

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	Inventory in progress
Estimated or actual number of interconnections	Inventory in progress
Outfall mapping complete	0% (Inventory in progress)
Interconnection mapping complete	0% (Inventory in progress)
System-wide mapping complete (detailed MS4 infrastructure)	0% (Inventory in progress)
Outfall assessment and priority ranking	0% (Inventory in progress)
Dry weather screening of all High and Low priority outfalls complete	0% (Inventory in progress)
Catchment investigations complete	0% (Inventory in progress)
Estimated percentage of MS4 catchment area investigated	0% (Inventory in progress)

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).

Town staff have participated and will continue to participate in annual meetings, seminars and hearings related to these issues, and will continue to do so as such become available.

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

4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable Goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional Details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	In progress	Continue with current procedures.	Maintain current standards and review periodically.	Land Use Dept.	Jul 1, 2019		
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Ongoing	Continue with current procedures.	Maintain current standards and review periodically.	Land Use Dept.	Ongoing		
4-3 Review site plans for stormwater quality concerns	Ongoing	Continue with current procedures.	Maintain current standards and review periodically.	Land Use Dept.	Ongoing		
4-4 Conduct site inspections	Ongoing	Continue with current procedures.	Maintain current standards and review periodically.	Land Use Dept.	Ongoing		
4-5 Implement procedure to allow public comment on site development	Ongoing	Continue with current procedures.	Maintain current standards and review periodically.	Land Use Dept.	Ongoing		
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing	Continue with current procedures.	Maintain current standards and review periodically.	Land Use Dept.	Ongoing		

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

Integrate stormwater compliance checklist into review process once completed.

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	In progress	Continue with current procedures.	Maintain current standards and review periodically.	Land Use Dept.	Jul 1, 2022		
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	In progress	Continue with current procedures.	Maintain current standards and review periodically.	Land Use Dept.	Jul 1, 2022		
5-3 Identify retention and detention ponds in priority areas	In progress	Continue with current procedures for existing facilities and map future development.	Maintain current standards and review periodically.	Land Use Dept.	Jul 1, 2020		
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	In progress	Continue with current procedures for Town and monitor commercial and industrial sites in future.	Maintain current standards and review periodically.	Public Works and Land Use Dept.	Jul 1, 2020		
5-5 DCIA mapping	In progress	Solicit information on available mapping firms and coordinate with Town-wide stormwater mapping.	Procure services of GIS mapping firm	Public Works and Selectmen's Office	Jul 1, 2020		
5-6 Address post-construction issues in areas with pollutants of concern	In progress	Continue with current procedures.	Maintain current standards and review periodically.	Public Works and Land Use Dept.	Jul 1, 2020		

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

Public Works continues to clean high priority detention ponds, storm water catch basins and other Town facilities related to runoff and drainage. In addition, the Town has completed several significant stormwater improvement projects which have resulted in improved water waulity; Public Works will continue to monitor the effectiveness of these projects and maintain them into the foreseeable future.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	Currently under study
DCIA disconnected (redevelopment plus retrofits)	Currently under study
Retrofits completed	Currently under study
DCIA disconnected	Currently under study
Estimated cost of retrofits	Currently under study
Detention or retention ponds identified	Currently under study

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

These metrics are currently under development through the use of both DEEP, Regional Planning and Town based GIS mapping. Once completed, the Townplans for the layer to be added to its base GIS maps.

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	Maintain existing program.	Maintain existing program.	Public Works	Jul 1, 2019	Ongoing	
6-2 Implement MS4 property and operations maintenance	Ongoing	Maintain existing program.	Maintain existing program.	Public Works	Jul 1, 2019	Ongoing	
6-3 Implement coordination with interconnected MS4s	Ongoing	Under study	Maintain existing program.	Public Works	Jul 1, 2019	Ongoing	
6-4 Develop / implement program to control other sources of pollutants to the MS4	Ongoing	Under study	Maintain existing program.	Public Works	Jul 1, 2019	Ongoing	
6-5 Evaluate additional measures for discharges to impaired waters*	Ongoing	Under study	Maintain existing program.	Public Works	Jul 1, 2019	Ongoing	
6-6 Track projects that disconnect DCIA	Ongoing	Under study	Maintain existing program.	Public Works	Jul 1, 2019	Ongoing	
6-7 Implement infrastructure repair/rehab program	Ongoing	Will include future projects for Village Hill and Schofield Roads.	Maintain existing CIP program.	Public Works	Jul 1, 2021	Ongoing	
6-8 Develop/implement plan to identify / prioritize retrofit projects	Ongoing	Under study		Public Works	Jul 1, 2020	Ongoing	

6-9 Implement retrofit projects to disconnect 2% of DCIA	Ongoing	Under study		Public Works	Jul 1, 2022	Ongoing	
6-10 Develop / implement street sweeping program	Ongoing	Program in place	Maintain existing CIP program.	Public Works	Ongoing beginning Jul 1, 2017	Ongoing	
6-11 Develop/implement catch basin cleaning program	Ongoing	Program in place	Maintain existing CIP program.	Public Works	Ongoing beginning Jul 1, 2020	Ongoing	
6-12 Develop/implement snow management practices	Ongoing	Program in place	Maintain existing CIP program.	Public Works	Ongoing beginning Jul 1, 2018	Ongoing	

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

Will continue programs of street sweeping, catch basin cleaning and repair of deteriorating infrastructure.	
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6.3 Pollution Prevention / Good Housekeeping Reporting Metrics

Metrics	
Employee training provided for key staff	2019
Street sweeping	
Curb miles swept	120
Volume (or mass) of material collected	600 tons
Catch basin cleaning	
Total catch basins in priority areas	831
Total catch basins in MS4	
Catch basins inspected	831
Catch basins cleaned	831
Volume (or mass) of material removed from all catch basins	200 Tons
Volume removed from catch basins to impaired waters (if known)	0
Snow management	
Type(s) of deicing material used	1:2 Mix of Sand & Salt
Total amount of each deicing material applied	2,153 Tons Sand 1,115 Tons Salt 3,375 Gallons Calcium Chloride
Type(s) of deicing equipment used	
Lane-miles treated	
Snow disposal location	Town property (old gravel pit)
Staff training provided on application methods & equipment	Ongoing
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)	Not applicable
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	Not applicable

6.4 Catch basin cleaning program

Updates or modifications to your catch basin cleaning program
Program is being implemented efficiently; no current modifications are anticipated.

6.5 Retrofit program

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.
Prioritization is dependent on the capital improvement plan and budget. Conditional assessments of projects are evaluated on an annual basis.

Plans for continuing the Retrofit program and how to achieve a goal of 1% DCIA disconnection in future years.
The program will be evaluated on an annual basis and, because DCIA areas are limited within the Town, no long term changes area anticipated at this time.

Plans for continuing the Retrofit program beyond this permit term with the goal to disconnect 1% DCIA annually over the next 5 years.
Again, as noted above, a lower goal will be reviewed and evaluated on an annual basis.

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

1.1 Stormwater pollutant(s) of concern occur(s) in Willington.

Nitrogen/ Phosphorus ☐

Bacteria ☐

Mercury ☐

Other Pollutant of Concern ☐

1.2 Program status.

1) The status of monitoring work completed, 2) a summary of the results and any notable findings, and 3) changes to the Stormwater Management Plan based on monitoring results.

The Willimantic River, according to the latest mapping available as of the date of this report, is the only waterway or water body within the Town of Willington that is currently listed as impaired. This river forms the westerly boundary of the Town of Willington, a boundary that is shared, in part, with the towns of Ellington, Tolland and Coventry. The river emanates from the Town of Stafford at Willington's northwest corner and continues into the Town of Mansfield at its southwest corner. The source of the impairment in the river has been found to be from two sources, the wastewater treatment plant just upstream in Stafford, and the subsurface sewage disposal system of the State of Connecticut's highway rest area along the river's intersection with Interstate 84. It must be noted that there are no direct stormwater discharges to the Willimantic River from the Town of Willington's stormwater drainage system. As such, the Town of Willington has not contributed to the impairment of this river.

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

2.1 Screening data

Table 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? *
Not Applicable					Because the Town of Willington has no direct outfalls to the only impaired waterbody, the Willimantic River, there are no current plans to collect or screen data for this purpose.

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. The table below is a 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? *
Not Applicable					See previous discussion under Sections 1.2 and 2.1.

*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 othersTotal 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 SBEnterococci > 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)

Outfalls exceeding the pollutant threshold.

Outfall	Status of drainage area investigation	Control measure implementation to address impairment
Not Applicable	See previous discussion under Sections 1.2 and 2.1.	

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, this table would identify 6 of the highest contributors of any pollutants of concern. Monitoring for these outfalls would begin on an annual basis by July 1, 2020.

Outfall	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
Not Applicable			See previous discussion under Sections 1.2 and 2.1.	

Part III: Additional IDDE Program Data

1. Assessment and Priority Ranking of Catchments data (Appendix B (A)(7)(c) / page 5)

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
In progress		

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

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
In progress										

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
In progress									

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, this represents a report which SVF's were identified.

Outfall ID	Receiving Water	System Vulnerability Factors
In progress		

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
In progress					

3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants
In progress				

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
In progress							

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: Erika Wieceński First Selectman, Town of Willington	Print name: Karl F. Acimovic, P.E. & L.S.
Signature / Date:	Signature / Date: