Town of Stonington
&
Borough of Stonington

Draft
2017 Annual Stormwater Report

Prepared by
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Stonington Town Engineer

February 15, 2018

Introduction

The following Annual Stormwater Report summarizes achievements made during 2017 by the Town & Borough of Stonington in implementing the goals and recommendations identified in the 2017 Stormwater Management Plan (SMP). The SMP was prepared to address the requirements of the CTDEEP *General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems* (MS4). Copies of the SMP and the Annual Report can be viewed electronically on the Town of Stonington or Borough of Stonington website, or in person at either Town Hall location.

For more detailed stormwater information, please view the SMP at the following location: http://www.stonington-ct.gov/sites/stoningtonct/files/file/file/stoningtonswmp_-rjc20170303_rev.pdf

Questions or comments on the SMP or Annual Report can be forwarded to either of the two contacts provided below:

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MS4 General Permit

Town of Stonington & Borough of Stonington - 2017 Annual Report

Existing MS4 Permittee

Permit Numbers: **GSM 000056 (TOS) & 000113 (BOS)**

[January 1, 2017 – December 31, 2017]

This report documents **Town of Stonington & Borough of Stonington** joint 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	• Updated & maintain the Town's Stormwater webpage. • *Distributed (2) stormwater quality articles via- "Stonington Events" magazine mailed quarterly to all town residents*	Update and maintain Town and Borough websites to include educational materials identified in **Table 3 of the SMP** and/or available on the CLEAR and CT NEMO MS4 Guide website, CUSH website, or listed in the Connecticut Nonpoint Source Management Program Plan. Distribute educational materials.	Water Quality Taskforce (WQTF) & Engineering Dept.	Jul 1, 2018	Ongoing	Work with WQTF to initiate program with elementary school kids

1-2 Address education/ outreach for pollutants of concern*	*Not started*	*None*	Select educational materials appropriate for impaired waters and stormwater pollutants of concern (see **Tables 2 and 3 of SMP**).	*WQTF*	Jul 1, 2018	*Projected Completion date: Spring/summer 2018*	*Develop training material and outreach program with WQTF*

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

- Distribute educational book markers to Stonington school system & local libraries
- Consider placing markers/plaques on all catch basins in downtown areas

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.
(2) Stormwater related articles were placed in the Stonington Events magazine which is mailed quarterly to all residents	Entire Town	General Stormwater quality & conveyance tips	Fertilizers, pesticides, detergents & pet waste	Engineering Department

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	Applicable public notice is still maintained on the Town Engineering webpage	Maintain current notices and copy of latest SMP on Borough and Town websites	Engineering & Borough Warden	Apr 3, 2017	April 3, 2017	
2-2 Comply with public notice requirements for Annual Reports	Completed	Notice of draft SMP is listed on the town Engineering webpage by February 15, 2018	Maintain current notices	Engineering & Borough Warden	Feb 15, 2018	Feb 13, 2018	
2-3 Establish Water Quality Task Force	In progress	*Working with Board of Selectmen to identify structure of group*	Create WQTF to assist in implementation of MS4 permit requirements	Town Engineer & BOS	March 2018	Summer 2018	Increased community participation will improve overall program and help to offset cost to community

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

- Reinstate and restructure the previous Stormwater Quality Task Force and begin to hold quarterly meetings to review SMP implementation progress.
- Participate in Southeast Stormwater Collaborative in conjunction with the Eastern CT Conservation District

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	yes	March 31, 2017	Town of Stonington Website: http://www.stonington-ct.gov/sites/stoningtonct/files/file/file/stoningtonswmp_-rjc20170303_rev.pdf

Availability of Annual Report announced to public	yes	February 15, 2018	Town of Stonington Website under the Engineering Department

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 completing written IDDE program using the CT IDDE program template	Develop joint IDDE program for the town and the Borough	Engineering & Borough Warden	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	Not Started	none	Update GIS storm system mapping & Develop a list (database or spreadsheet) of stormwater outfalls in priority areas including catchment delineations	Engineering & Planning	Jul 1, 2019	Anticipate completing by the deadline of July 1, 2019.	
3-3 Implement citizen reporting program	Completed	Responded to several Inquiries regarding drainage capacity concerns	Continue to support a citizen reporting 'hotline' and advertise it on the Town and Borough websites	Engineering	Jul 1, 2017	Completed June 2017	
3-4 Establish legal authority to prohibit illicit discharges	Existed Previously But Requires Modification	None	Review existing ordinance and revise accordingly	Engineering	Jul 1, 2018	Spring/summer 2018	

3-5 Develop record keeping system for IDDE tracking	Not started	none	Develop IDDE tracking recordkeeping system	Engineering & Borough Warden	Jul 1, 2017	Anticipate completing by the deadline of July 1, 2019.	
3-6 Address IDDE in areas with pollutants of concern	Not started	none	Identify areas with high potential for septic system failure.	Sanitation, Engineering	Not specified	Anticipate completing by the deadline of July 1, 2019.	
Example additional BMP: 3-7 Consolidate IDDE tracking spreadsheets	Not started	Compile all the IDDE tracking requirements into one spreadsheet		Engineering	-	Jul 1, 2018	Reason for addition: Make it easier to track all IDDE activities

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

- Modify the existing IDDE ordinance to meet the current permit requirements.
- Develop a written IDDE program and determine what staff or outside consultant will be responsible for implementing.
- Post IDDE program to the Engineering Webpage and keep current with contact/hotline information
- Maintain master list of any potential ID's, monitor, evaluate and address accordingly.

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

Date of Report	Location / suspected source	Response taken
NA		

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)
Velvet mill Stonington Borough	11/15/2017	Unknown	unknown	Velvet Mill	An active sewer lateral was discovered as part of a municipal drainage system CIP project, which drained to an unknown destination. The line was redirected into the towns sanitary sewer system.	NA

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

The Town of Stonington Engineering Department is the lead party responsible for tracking and responding to any known or reported Illicit discharges. Currently we have an excel spread sheet with potential ID connections that require dry weather sampling and further investigation. In addition to the Engineering Department, the Stonington Water Pollution Control Authority (WPCA) and local health district, Ledge Light Health District, typically field calls related to sewer overflows or sanitation issues and concerns. The Engineering Department has advised these other town departments of their responsibility to record any such SSO and/or ID related information on provided standardized forms and report to the Engineering Department.

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**
Failing septic system at 271 Montauk Ave (Single Family House-SFH)	Health order issued, septic repair completed	None
Damaged septic tank at 12 Grandview Park (SFH)	Septic repair (tank) completed	None
Septic tank replacement 48 Lords Hill (SFH)	Septic repair (tank) completed	None
Failing septic system 15 Sherwood Dr (SFH)	Septic repair (tank, pump chamber and leaching) completed	None
Failing septic system 417 River Rd (SFH)	Repair plan approved, permit obtained but system not yet repaired, to issue health order	Pawcatuck River
Septic failure at 352 Flanders Rd (SFH)	Septic repair (tank and leaching)	None
Septic Failure 45 Greenhaven Rd (SFH)	Septic repair (tank and leaching)	None
Septic Failure 4 High Ridge Ct (SFH)	Septic Repair (leaching only)	None
Damaged septic tank 40 Stewart Rd (SFH)	Septic repair (tank only)	None
Damaged septic tank 180 Masons Island Rd	Septic repair (tank only)	Mystic Harbor

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	Town (340) Borough (12)
Estimated or actual number of interconnections	Unknown
Outfall mapping complete	Existing MS4 mapping is complete (0% updates per new MS4 requirements)
Interconnection mapping complete	(0 %)
System-wide mapping complete (detailed MS4 infrastructure)	Existing MS4 mapping is complete (0% updates per new MS4 requirements)
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).

On December 21, 2017, the Town of Stonington Engineering Department coordinated 2 specific training sessions on the following topics:

- Spill Prevention and Response
- Town wide Stormwater Management Training - MS4

Training was required for the following facility employees:

- Public Works
- Police Department - Maintenance
- School Facilities – Maintenance
- Water Pollution Control Authority
- Solid Waste/Transfer Station
- Town Dock

Training materials and sign-in sheet have been provided in the Appendix

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

4.1 BMP Summary

BMP	Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
4-1 Implement, upgrade, and enforce land use regulations or other legal authority to meet requirements of MS4 general permit	Not Started	None	Review and update, as necessary, existing land use regulations and implementation policies for compliance with the MS4 General Permit construction site stormwater runoff control requirements.	Town & Borough Land Use Agencies	Jul 1, 2019	Projected completion date July 2019	
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	Ongoing	Site plan review & approval processes are followed for all applicable land use applications	Continue to implement interdepartmental coordination procedures as described in **Section 5.2** of the town SMP	Town & Borough Land Use Agencies	Jul 1, 2017	Ongoing throughout entire permit	
4-3 Review site plans for stormwater quality concerns	Ongoing	Reviewed over 12 different Land development applications for	Continue to complete site plan reviews for all projects subject to the land use regulations listed in BMP 4-1.	Engineering & Town & Borough	Jul 1, 2017	Ongoing throughout entire permit	

		compliance with existing stormwater quality regulations		Land Use Agencies			
4-4 Conduct site inspections	Ongoing	The Stonington Zoning Enforcement Officer is tasked with ensuring all erosion and sediment control measures are adequately installed prior to the start of construction.	Continue to conduct inspections and enforcement to assess and ensure the adequacy of the installation, maintenance, operation, and repair of construction and postconstruction control measures.	Town & Borough Land Use Agencies and/or town staff (Stonington ZEO)	Jul 1, 2017	TBD based on available funding and staff time	Additional and ongoing inspections for the maintenance of E&S measures is something the town will continue to consider when funding becomes available for increased inspections.
4-5 Implement procedure to allow public comment on site development	ongoing	Both the Town of Stonington & Borough have a hotline which remains active and up to date.	Continue to post notices of Stonington's "hotline" for stormwater related comments on the municipal stormwater websites.	Town & Borough Land Use Agencies	Jul 1, 2017	March 31, 2017	
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	Ongoing	Required (2) Town School projects to register with CTDEEP prior to construction Also informed several other developers of their responsibility to register projects as necessary	Continue to inform developers/contractors of their obligation to register under the DEEP construction general permit and to provide a copy of the Storm Water Pollution Control Plan to Stonington upon Request, as necessary.	Town & Borough Land Use Agencies / Engineering Department	Jul 1, 2017	Ongoing throughout entire permit	
Example additional BMP: *4-7 Develop stormwater compliance checklist*	Not Started	None	Develop checklist to provide developers on stormwater mgmt. compliance requirements	Engineering & Water Quality Task Force	NA	Jul 1, 2019	Reason for addition: Make it easier to ensure compliance with stormwater regulations

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

Continue to monitor construction sites to the best of staff ability. Ensure Construction General Permit is applied for and on file with the town for applicable projects prior to the start of construction.

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	Ongoing	LID Guidelines for land development currently exist in the towns Technical Standards. These standards need to be modified to fully encompass the MS4 objectives.	Review and update, as necessary, existing land use regulations and implementation policies (including Technical Standards) for compliance with the General Permit postconstruction stormwater management requirements.	Town Planning Zoning Commission, Borough Planning Zoning Commission, Engineering, WQTF	Jul 1, 2021	On or before Jul 1, 2021	
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Ongoing	The engineering and planning departments promote LID practices on all applicable land-use applications. Currently LID regulations are recommendations and not mandates.	Review and update, as necessary, current regulations to identify, reduce, or eliminate existing regulatory barriers to implementation of LID and runoff reduction practices.	Town Planning Zoning Commission, Borough Planning Zoning Commission, Engineering	Jul 1, 2019	On or before Jul 1, 2019	
5-3 Identify retention and detention ponds in priority areas	Ongoing	All private and municipal stormwater infrastructure approved as of 2014 has been documented in an excel spread sheet. Information includes: Site	Review past permits and known stormwater facilities in an effort to create a comprehensive list of stormwater systems within priority areas.	Planning Department, Engineering Department, Public Works, Borough Warden	Jul 1, 2019	On or before Jul 1, 2019	

		location, ownership, type of stormwater infrastructure and maintenance responsibilities.					
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	Ongoing	The Engineering Department and Planning Department continue to require maintenance plans for all stormwater infrastructure proposed as part of land-use applications. Follow-up of implementation strategies and measures can be improved upon.	Develop a long-term maintenance plan for retention/detention basins and stormwater treatment structures. Implement maintenance plan including annual inspection of retention / detention basins and stormwater treatment structures and removal of accumulated sediment and pollutants.	<u>Planning:</u> Town Planning Department, Borough Planning & Zoning Commission, Engineering <u>Implementation:</u> Engineering, Public Works, Planning Department	Jul 1, 2019	On or before Jul 1, 2019	
5-5 DCIA mapping	Not Started	None	Calculate the Directly Connected Impervious Area (DCIA) of outfall catchment areas using guidance provided by DEEP and UConn CLEAR. Revise DCIA estimate as development, redevelopment, or retrofit projects effectively add or remove DCIA.	Engineering & Planning	Jul 1, 2020	On or before Jul 1, 2020	
5-6 Address post-construction issues in areas with pollutants of concern	Ongoing	Currently the engineering & planning staff respond to calls regarding active erosion & sediment control issues.	Address erosion and sediment problems noted during inspections conducted under BMP 5-3 through the retrofit program developed under BMP 6-7 defined within the SMP.	Engineering, Planning, Public Works	Not specified	On or before Jul 1, 2022	

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

Work with the WQTF to determine best means and methods for post-construction stormwater management activities.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	Unknown (Acres)
DCIA disconnected (redevelopment plus retrofits)	Unknown (acres this year / acres total)
Retrofits completed	None
DCIA disconnected	Unknown (% this year / % total since 2012)
Estimated cost of retrofits	Unknown ($)
Detention or retention ponds identified	Unknown (# this year /# total)

5.4 Briefly describe the method to be used to determine baseline 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	Train Borough and Town staff on a yearly basis regarding the following topics: Spill Prevention and Response Town wide Stormwater Management Training (MS4)	Continue Implement joint training program for Town and Borough employees, building on the Town's current program defined in section 7.2 of the SMP	Public Works, Engineering & Borough	Jul 1, 2017	Ongoing throughout entire permit timeframe	
6-2 Implement MS4 property and operations maintenance	Ongoing	The Department of Public Works has two State certified lawn/turf care applicators of which are directly responsible for the day to day maintenance of athletic fields for the Stonington school district. The care of these athletic field is high quality and utilizes current industry BMP standards. All other municipal buildings and facilities grounds are maintained by the Public Works Department Leaf removal services for all town citizens and municipal facilities/grounds is provided for by the Department of Public Works	• Implement **turf/fertilizer management** BMPs for parks and open space • Implement **pet waste** education program and install additional signage, baggies, and disposal receptacles, as needed, in areas where pet walking is common • Implement **waterfowl management** BMPs in targeted areas as needed • Evaluate **municipal buildings and facilities** for spill prevention and pollution prevention practices and implement additional BMPs as necessary • Evaluate and modify, as necessary, municipal **vehicle and equipment parking, fueling, and maintenance** practices • Continue current leaf management program	Town & Borough Public Works Departments	Jul 1, 2018	Ongoing throughout entire permit timeframe	

6-3 Implement coordination with interconnected MS4s	Not Started	None	Coordinate with neighboring municipalities, institutions, and DOT regarding stormwater management program activities associated with the adjacent MS4s.	Town Public Works, and Borough Highway Department	Not specified	Estimated Summer 2018	
6-4 Develop/implement program to control other sources of pollutants to the MS4	Not Started	None	Control through IDDE program, water quality monitoring, the Town's Illicit Discharge and Illegal Connection Ordinance, and targeted education and outreach to commercial, industrial, municipal, institutional facilities owners/operators (see BMP 1-1 within the SMP).	WQTF	Not specified	Estimated Summer 2019	
6-5 Evaluate additional measures for discharges to impaired waters*	Not Started	None	Implement the measures and procedures described in S**ection 7.2 of the SMP** including those measures to address stormwater pollutants of concern	Town & Borough DPW	Not specified	Estimated Summer 2019	
6-6 Track projects that disconnect DCIA	Not Started	None	Annually track total acreage of DCIA that is disconnected as a result of redevelopment or retrofits (see BMPs 5-4 and 6-7 of the SMP)	Town Engineering, Planning	Jul 1, 2017	Throughout entire permit timeframe	
6-7 Implement infrastructure repair/rehab program	Not Started	None	Repair, rehabilitate, or retrofit MS4 infrastructure (e.g., conveyances, structures, outfalls) as needed in a timely manner.	Engineering, Public Works	Jul 1, 2021	Throughout entire permit timeframe	

6-8 Develop/implement plan to identify/prioritize retrofit projects	Not Started	None	Develop retrofit plan and list of priority sites	Engineering, Planning WQTF	Jul 1, 2020	Summer 2022	
6-9 Implement retrofit projects to disconnect 2% of DCIA	Not Started	None	Disconnect 1% per year of Stonington's DCIA from the MS4	Engineering, Planning WQTF	Jul 1, 2022	Summer 2022	
6-10 Develop/implement street sweeping program	Ongoing	Both the Town and the Borough sweep streets on a yearly basis. Downtown areas get swept more than once to keep areas clean and prepare for special events.	Continue to inspect and sweep all municipally-owned or –operated streets and parking lots Schedule for completion: a. Priority Areas – annually in spring following the cessation of winter maintenance activities (i.e., sanding, deicing, etc. b. Outside Priority Areas (inc. rural uncurbed streets and parking lots with no catch basins) – in spring or develop and implement an inspection, documentation, and targeted sweeping plan	Town of Stonington & Borough DPW	Jul 1, 2017	Ongoing throughout permit timeframe	
6-11 Develop/implement catch basin cleaning program	Ongoing	Both the Town and the Borough clean/vacuum catchbasins on a yearly basis.	Inspect and clean catch basins as necessary Inspection Schedule: a. 100% within Priority Areas b. 100% of MS4 Develop a plan for optimizing catch basin cleaning (i.e., reduced frequency in certain areas) based on inspection findings, such that no catch basin is more than 50% full	Town of Stonington & Borough DPW	Jul 1, 2020	Ongoing throughout permit timeframe	

6-12 Develop/implement snow management practices	Ongoing	The Town of Stonington has 14 designated plow routes. All plow drivers have attended training for salt application and snow removal BMPS. No sand is used on the towns road system.	Implement practices for deicing material management and snow and ice control	Town of Stonington & Borough DPW	Jul 1, 2018	Ongoing throughout permit timeframe	

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

GPS has been installed on all plow trucks within the Town of Stonington DPW Department and software is being installed on some of the trucks which will track how much salt has been applied and the rate of application per truck. This will provide the DPW with valuable information which will help us manage each and every truck, drive, and application to ensure its both effective and efficient.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	(20 employees) /December 21, 2017
Street sweeping	
Curb miles swept	TOS: 68 miles Borough: 7 miles
Volume (or mass) of material collected	TOS: 174 (tons)
Catch basin cleaning	
Total catch basins in priority areas	Unknown (#)
Total catch basins in MS4	TOS: 1600 Borough: 110
Catch basins inspected	TOS: 1200 Borough: 80
Catch basins cleaned	TOS: 1200 Borough: 80

Volume (or mass) of material removed from all catch basins	TOS: 125 (tons) Borough: 48.4(tons)
Volume removed from catch basins to impaired waters (if known)	Unknown (lbs or tons)
Snow management	
Type(s) of deicing material used	Ice-B-Gone
Total amount of each deicing material applied	TOS: 1050 (tons) Borough: 169 (tons)
Type(s) of deicing equipment used	TOS: Compu-Spread by Rexroth Borough: Standard Spreaders
Lane-miles treated	TOS: 226 Borough: 112
Snow disposal location	Spellman Park common space
Staff training provided on application methods & equipment	All TOS DPW employees have attended snow plowing training by the UCONN CT T2 training center
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	Unknown (lbs or %)
Reduction in turf area (since start of permit)	None (acres)
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	Borough: 500$

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]
A complete mapping system (hard copy binder of entire pipe network) is provided to a DPW employee who is tasked with accompanying the storm vac consultant during cleaning. Town Staff is asked to identify problematic catch basins from a structural standpoint and/or sediment accumulation standpoint. Typically, 50% of the towns catch basins are cleaned on a yearly basis with an alternating schedule. The objective in future years is to define a cleaning strategy which will focus cleaning efforts on priority areas and problematic basins with a continued check on all basins on a 2-3 yr cycle. The Borough cleans and inspects all catch basins on a yearly basis.

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.]

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.

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?**
Ex. 6-3B	*7/30/17*	*Bacteria*	*- E. coli 1,000 col/100ml* *- T Coliform 600 col/100ml*	*Chemworks*	*Yes*

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?
Ex. 1-1A	*11/4/16*	*Nitrogen*	*TN - 1.5 mg/l*	*Chemworks*	*No*
Ex. 1-1B	*10/15/16*	*Nitrogen*	*TN - 5.2 mg/l*	*Chemworks*	*Yes*

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

Provide the following information for outfalls exceeding the pollutant threshold.

Outfall	Status of drainage area investigation	Control measure implementation to address impairment
Ex. 1-1B	*Completed investigation of outfall drainage area – athletic field complex drains into waterbody*	*Reduce fertilizer use on fields and create 50 foot vegetated buffer.*

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)

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
4011-00-2-R3	*High Priority*	*3*
4000-33-2-R2	*Low Priority*	*10*

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
6-4A	*3/20/17*	*0.3 mg/l*	*Not detected*	*400 uS/cm*	*0.4 ppt*	*E. coli 200 col/100ml*	*0.2 mg/l*	*15 C*	*n/a*	*No*
6-4B	*3/20/17*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*-*	*Evidence of prior dry weather flow – raised priority of catchment investigation*

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
1-1C	*Mill River*	*1, 3, 5, 6, 8*

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 that 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 that 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: Rob Simmons – Town of Stonington	Print name: Scot Deledda, P.E. – Town Engineer
Signature / Date: FEB 15 2018	Signature / Date: 2/15/18
Print name: Jeffrey Callahan – Borough Warden	
Signature / Date: 2.14.18	