

MS4 General Permit
Town of Newtown 2019 Annual Report
Existing MS4 Permittee
Permit Number GSM 000048
[January 1, 2019 – December 31, 2019]

Introduction

This Stormwater Management Annual Report (SMAR) was developed by the Town of Newtown to protect water quality and reduce the discharge of pollutants from the municipality's storm sewer system to the maximum extent practicable (MEP). This SMAR addresses the requirements established by the CT Department of Energy and Environmental Protection's (DEEP) General Permit for the Discharge of Stormwater from Small Municipal Separate Storm Sewer Systems (MS4 General Permit). This permit is the local enforcement mechanism of the U.S. Environmental Protection Agency's (EPA) National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II Rule. This report documents Newtown'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.

SMAR Structure

The report outlines a program of best management practices (BMPs), measurable goals, responsible individuals or departments, and implementation schedules for the following six minimum control measures:

- (1) Public education and outreach
- (2) Public involvement and participation
- (3) Illicit discharge detection and elimination
- (4) Construction site stormwater runoff control
- (5) Post-construction stormwater management in new development and redevelopment
- (6) Pollution prevention/good housekeeping

Appendices to this permit include links to the Newtown Zoning & Inland Wetland Regulations, a map of Newtown Watershed Basins, and a map of Newtown's impaired waterbodies.

Area Subject to the Report

The measures identified in this SMAR will be applied throughout the boundaries of the Town of Newtown except as otherwise noted and be consistent with the MS4 General Permit requirements. Stormwater discharge from municipally-owned maintenance garages, salt sheds and other facilities subject to the DEEP Industrial Stormwater General Permit will continue to be regulated under the conditions of that permit.

Description of Municipality

The operator of the MS4 is the Town of Newtown. The Town of Newtown is a public entity located in the county of Fairfield, State of Connecticut. The Town of Newtown covers an area of approximately 59.11 square miles, located in Western Connecticut. The Connecticut Department of Transportation (DOT) operates an MS4 on state highways located in the Town of Newtown. This system is regulated under the CT DOT's MS4 permit. Implementation of the BMPs identified in this plan will be coordinated between Newtown and CT DOT.

Part I: Summary of Minimum Control Measure Activities

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

Newtown will distribute information on common sources of phosphorus, nitrogen, bacteria, and mercury pollution and how to prevent or reduce the amount reaching the MS4 and discharging into waterways.

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	Ongoing	During school year	Educate Students on water quality	Reed Middle School Science Dept.	Ongoing	Have implemented for last 10 years	
1-2 Address education/outreach for pollutants of concern*	Ongoing	During school year	Educate Students on water quality	Newtown High School Life Sciences Dept.	Ongoing	Have implemented for last 10 years	

Extra space for describing above BMP activities, if needed:

Public Education Program	The program includes handouts for family involvement. The handouts are used to inform parents and siblings of the opportunities to reduce non- point source pollutants.
---------------------------------	---

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

Same programs in school system to be implemented annually.

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.
Formed Pootatuck Watershed Association	Monthly Public meetings of Committee (approx 500 annually)	Impact of impervious cover, stormwater infiltration, water quality	All	Land Use, Public Works, Parks and Rec.
EPA Stormwater handout (<i>Attached Hand Out in Appendix</i>)	All Town	Impact of impervious cover, stormwater infiltration, water quality	All	PW

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
2-1 Final Stormwater Management Plan publically available	Draft Form	Create Draft	Adopt Plan	DPW, Land Use	7/2021	2021
2.2 Conduct household hazardous waste collection	Ongoing, Yearly Complete for 2019	Household Hazardous Waste Collection Day. The Town of Newtown held its annual hazardous waste collection day for residents at DPW on June 6, 2020. Items that were able to be collected included oil based paints and strippers, paint thinner, solvents, stains and varnishes, solvent adhesives, lighter fluid, waste fuels: kerosene, gasoline engine degreaser, carburetor cleaner, brake fluid, transmission fluid, pesticides and insecticides, weed killers, moth balls, flea powder, resins and adhesives, rubber cement, airplane glue, hobby supplies, artist supplies, photo chemicals, chemistry sets, furniture, floor, metal polishes, oven, toilet and drain cleaners, rug and upholstery cleaner, dry	Conduct at least one Household Hazardous Waste Collection Day per year for the Newtown community. Notify residents about Household Hazardous Waste Collection dates through the Town website.	DPW	Ongoing	6/2020

		cleaning solvents, spot removers, swimming pool chemicals, fluorescent light bulbs, mercury thermometers.				
--	--	--	--	--	--	--

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

The following activities are planned for 2020:

1. Publish notice of 2019 Annual Report MS4.
2. Identify one volunteer organization for clean up assistance. Provide material/logistical support as needed and available.
3. Conduct at least one Household Hazardous Waste Collection Day.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan to public	Draft	Attached	7/2020
Availability of Annual Report announced to public	Draft	Attached	7/2020

3. Illicit Discharge Detection and Elimination (Section 6(a)(3) and Appendix B / page 22)

This minimum control measure outlines a program to detect and eliminate current illicit discharges to the MS4 and prevent further illicit discharges in the future.

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	Adopted program in 2016	None reported	Yes	Newtown Land Use Agency / CT DEEP	N/A	Ongoing	N/A
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas	Adopted Map and list in 2016	None reported	Yes	Netow Public Works / Newtown Land Use Agency	N/A	Ongoing	N/A

3-3 Implement citizen reporting program	Adopted program in 2015	None reported	Inspect installed signs annually	Newtown Land Use Agency / CT DEEP	N/A	Ongoing	N/A
3-4 Establish legal authority to prohibit illicit discharges	Adopted 1974 and 1992	None reported	Process all applications and violations	Newtown Land Use Agency / CT DEEP	N/A	Ongoing	N/A
3-5 Develop record keeping system for IDDE tracking	Adopted program in 2016	None reported	Yes	Newtown Land Use Agency	N/A	Ongoing	N/A
3-6 Address IDDE in areas with pollutants of concern	Adopted program in 2016	Land Use Officers regularly inspect these areas	Repetative	Newtown Land Use Agency / CT DEEP	N/A	Ongoing	N/A

Extra space for describing above BMP activities, if needed:

BMP	
Detection of Discharge	Impaired water bodies identified by name and use impairment as defined by the most recent integrated water quality report

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

Mapping of FFH Municipal sanitary sewer system
--

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

Example attached:

Citizen River Watch Log Book							
Date	Complaint	Time	Location	Date /Time Inspected	Findings	Conductivity	Sample Y/N
	white foam in stream below twin pipes		old farm road		naturally occurring this foam no issue	N/A	N
	oil streak on road		old farm road over bridge		oil leaking from transfer during site work minimal drippings	N/A	N
	orange material in stream		Deep Brook #5		naturally occurring oxidation of iron in soil	N/A	N

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.

Attached appendices are included with this report.

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

Land Use Officer inspects and responds to the report. After a review of the information and an inspection of the concern, the Officer documents the response.

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
5 Ceadr Hill Road	Sanitarian Responded, took action to suspend the discharge and repair the probel,	None
12 Apple Blossom Lane	Sanitarian Responded, took action to suspend the discharge and repair the probel,	Minor trib along RTE 25
18 Turkey Roost Rd	Sanitarian Responded, took action to suspend the discharge and repair the probel,	None

3.7 IDDE reporting metrics

Metrics	
Estimated or actual number of MS4 outfalls	1,211

Estimated or actual number of interconnections	9000
Outfall mapping complete	100%
Interconnection mapping complete	100%
System-wide mapping complete (detailed MS4 infrastructure)	20%
Outfall assessment and priority ranking	TBD
Dry weather screening of all High and Low priority outfalls complete	TBD
Catchment investigations complete	TBD
Estimated percentage of MS4 catchment area investigated	50%

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).

Staff attends the NEIWPCC annual conference and logs at least 10 hours of renewal training.

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

This minimum control measure outlines procedures for minimizing polluted stormwater runoff from activities that disturb one or more acres of land. In Newtown, this is determined on a site by site basis OR collectively as part of a larger plan.

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	On - Going	Officers regularly check the site before and after C/O	Responses received by agencies	Land Use	Jul 1, 2019	Completed	Part of the Zoning and IWC Regulations

4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	On - Going	Land Use agency use shared doc program	Responses received by agencies	Land Use, Health, FM, PW	Ongoing	Completed	Adoption of this process allowed by state statute
4-3 Review site plans for stormwater quality concerns	On - Going	Land Use coordinates review of designs	Memo recorded for application	Land Use, and Engineering	Ongoing	Completed	Adopted as part of approval process
4-4 Conduct site inspections	On - Going	Land Use and Engineer inspect site	Records of inspections sometimes result in actions	Land Use, and Engineering	Ongoing	Completed	Part of the Zoning and IWC Regulations
4-5 Implement procedure to allow public comment on site development	On - Going	Public comment allowed during approval process	Letter of concern on record for site plans	Land Use	Ongoing	Completed	Part of the Zoning and IWC Regulations
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	On - Going	Generating conta at the end of approvals	None	Land Use	Ongoing	Completed	Land Use contacts DEEP

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

Part of the Zoning and IWC Regulations Article X

5. Post-construction Stormwater Management (Section 6(a)(5) / page 27)

This minimum control measure outlines Netown's program to address stormwater runoff from new or re-development projects that disturb one or more acres of land.

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		Completed		Land Use, IWC & P/Z Commissions	N/A	Completed	

	Regulations have been drafted for zoning and subdivision regulation amendments						
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	Ongoing and implemented	All projects are reviewed for LID and stormwater Management		WEO, ZEO, LUEO, Road Construction	N/A		
5-3 Identify retention and detention ponds in priority areas	Pending. On target to meet deadline	Pending					
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures	implemented	Catch basin cleaning and street sweeping have been occurring for many years.		WEO DPW	Ongoing		
5-5 DCIA mapping	ongoing	COG is helping with mapping			Jul 1, 2021		
5-6 Address post-construction issues in areas with pollutants of concern	Ongoing				Not specified		

Extra space for describing above BMP activities, if needed:

BMP	
	Mitigate the long-term impacts of new and re-development projects on water quality through proper use of low impact development and runoff reduction practices.

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

Newtown will develop a maintenance plan for retention / detention ponds and stormwater treatment structures that it owns or over which it holds an easement or other authority and that are located in the town's priority areas to ensure their long-term effectiveness. This plan will require an annual inspection of those retention / detention ponds and stormwater treatment structures and removal of accumulated sediment and pollutants in excess of 50% design capacity.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics	
Baseline (2012) Directly Connected Impervious Area (DCIA)	TBD
DCIA disconnected (redevelopment plus retrofits)	0
Retrofits completed	0
DCIA disconnected	0
Estimated cost of retrofits	0
Detention or retention ponds identified	0

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

Newtown will follow guidance provided by DEEP and UConn CLEAR to calculate the Directly Connected Impervious Area (DCIA) that contributes stormwater runoff to each of its MS4 outfalls. Progress on this task will be documented in each Annual Report until completion.

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	implemented	The DPW and Parks and Recreation have a formal training program in place		Various	Ongoing		
6-2 Implement MS4 property and operations maintenance	implemented	The Parks and Recreation Dept. have a plan in place as does the DPW. We are currently working with the BOE and PD to have their plans in place		Parks and Recreation Dept.	Ongoing		
6-3 Implement coordination with interconnected MS4s	implemented	Town currently works with DOT		DPW, Zoning, Wetlands	Ongoing		
6-4 Develop/implement program to control other sources of pollutants to the MS4	implemented and ongoing	IDDE protocol in place, education and good housekeeping			Ongoing		
6-5 Evaluate additional measures for discharges to impaired waters*	implemented and ongoing				Not specified		

6-6 Track projects that disconnect DCIA	implemented and ongoing				Ongoing		
6-7 Implement infrastructure repair/rehab program	implemented and ongoing	DPW currently repairs and replaces CB and CMP when reconstruction of roads occurs, and as needed. Asks for funding in Capital budgets yearly.		DPW	Jul 1, 2021		
6-8 Develop/implement plan to identify/prioritize retrofit projects	implemented and ongoing as funding allows	Asks for funding in Capital budgets yearly.	Town Engineer reviews needed repairs	DPW	Jul 1, 2021		
6-9 Implement retrofit projects to disconnect 2% of DCIA	implemented and ongoing as funding allows	Implementing as funding allows. Asks for funding in Capital budgets yearly.		DPW	Jul 1, 2022		
6-10 Develop/implement street sweeping program	Implemented	Street sweeping occurs annually in the spring.	Measured material and linear feet of road tracked	DPW	Ongoing		
6-11 Develop/implement catch basin cleaning program	Implemented	Catch basin cleaning has been occurring for many years.	Measured material and number of basins tracked	DPW	Ongoing		

6-12 Develop/implement snow management practices	Implemented	Changed to salt on roads, sand only when needed. Proper storage of winter materials. DEEP approved wash facility for vehicles.		DPW	Ongoing		
--	-------------	--	--	-----	---------	--	--

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

Street sweeping and catch basin will continue as an annual activity. Public Works asks for funding for storm water management and infrastructure improvements in their Capital budget annually. Has had the budget requests cut significantly every year due to many factors.

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics	
Employee training provided for key staff	Y - Ongoing
Street sweeping	
Curb miles swept	550 miles
Volume (or mass) of material collected	500 tons
Catch basin cleaning	
Total catch basins in priority areas	3100
Total catch basins in MS4	9000
Catch basins inspected	4500
Catch basins cleaned	4500
Volume (or mass) of material removed from all catch basins	75 tons
Volume removed from catch basins to impaired waters (if known)	10 tons
Snow management	
Type(s) of deicing material used	Treated Salt
Total amount of each deicing material applied	2,895 tons
Type(s) of deicing equipment used	Spreaders
Lane-miles treated	550 miles
Snow disposal location	Curb

Staff training provided on application methods & equipment	Y - Ongoing
Municipal turf management program actions (for permittee properties in basins with N/P impairments)	
Reduction in application of fertilizers (since start of permit)	20%
Reduction in turf area (since start of permit)	0
Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)	
Cost of mitigation actions/retrofits	\$40,000

6.4 Catch basin cleaning program

Provide any updates or modifications to your catch basin cleaning program

The Highway department uses a Vactor Truck to clean basins beginning in the spring annually. Other basins are inspected and/or replaced during road projects or as identified as necessary.

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.

Annually we track tasks in our storm water section of our work management system and prepare our budget request based upon that knowledge. We have been primarily funded under road work where we repair and replace and add BMPs when budget monies allow. Other funds are provided in miscellaneous storm drainage where project selection is based on major preventative or reconstruction projects within our budget.

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

Know first the number from WestCog. Have reductions during any road project by narrowing the impervious surface when appropriate, enforcement of land use/ordinances and BMPs.

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

Same as the previous section. Further education and enforcement for any work in the Town's ROW.

Part II: Impaired waters investigation and monitoring

1. Impaired waters investigation and monitoring program

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

Nitrogen/ Phosphorus X ☒ 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.

Water quality programs for Newtown's major waterways has been underway with 24 sampling points for the past 16 years. We are adapting this program for the MS4 stormwater quality program.

Attached are the past three years sampling results from the sampling points