



STORMWATER MANAGEMENT PLAN

2018 Annual Report

**DEPARTMENT OF PUBLIC WORKS
ENGINEERING DEPARTMENT**

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MS4 General Permit
Town of Easton 2018 Annual Report
New MS4 Permittee
Permit Number GSM 000108
[January 1, 2018 – December 31, 2018]

This report documents the Town of Easton's efforts to comply with the conditions of the MS4 General Permit to the maximum extent practicable (MEP) from January 1, 2018 to December 31, 2018.

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		Post BMP on Town's website.		Dir. D.P.W.	Jul 1, 2019		See 2016 Stormwater Annual Report
1-2 Address education/ outreach for pollutants of concern*		Storm Water posters are posted at the Public Works facility for the public to see.		Dir. D.P.W.	Jul 1, 2019		See 2016 Stormwater Annual Report
		Brochures are located at Town Hall, Land Use Office and Library has new bookmarks at the front desk printed for 2018					See photos

Stormwater and the Construction Industry

Protect Natural Features



Construction Phasing



Vegetative Buffers



Silt Fencing



Site Stabilization



Maintain your BMPs!

www.epa.gov/maintainbmps

Construction Entrances



Slopes



Dirt Stockpiles



Storm Drain Inlet Protection



02/01/2018

Figure 1 LOCATED ON WALL AT PUBLIC WORKS FACILITY

Stormwater and the Construction Industry

Planning and Implementing Erosion and Sediment Control Practices

Developing and Implementing a Plan

1. Site Evaluation and Design Development

- Determine the site's location and size.
- Determine the site's topography and soil conditions.
- Determine the site's existing and proposed land use.
- Determine the site's existing and proposed stormwater management practices.

2. Control Selection and Plan Design

- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.

3. Implementing and Maintaining a Plan

- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.

4. Certification and Notification

- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.

5. Completing the Project: Final Substitution and Termination of the Plan

- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.

6. Final Report

- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.
- Determine the site's existing and proposed stormwater management practices.

Visit www.epa.gov/npdes/stormwater for more information.

02/01/2018

Figure 2 LOCATED ON WALL AT PUBLIC WORKS FACILITY

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

Stormwater 2017 Management Plan can be found on the Town website along with Annual Reports for 2017 and 2018.

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.
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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	Done		Yes	D.P.W. Bruce E. Bombero, Sr., P.E.L.S.	Apr 3, 2017	March 31, 2017	See 2016 Stormwater Annual Report
2-2 Comply with public notice requirements for Annual Reports			Yes	D.P.W.	Mar. 29, 2018		
Household Hazardous Waste Collection	On Going	Will post notice in newspaper	Yes	D.P.W.			

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

More bookmarks were printed and are available to the public at the front desk in the Library. Brochures on BMP are displayed at the Department of Public Works and at the Easton Town Hall by the Building and Zoning Offices. Also, on the Easton website in a section for SPECIAL ITEM DISPOSAL; PAINT, HOLIDAY TREES AND LEAVES, HAZARDOUS WASTE, OIL AND ANTI-FREEZE AND DISPOSAL OF ELECTRONICS.

2.3 Public Involvement/Participation reporting metrics

Metrics	Implemented	Date	Posted
Availability of the Stormwater Management Plan announced to public	Y	March 1, 2019	Town Clerk's Website - eastonct.gov
Availability of Annual Report announced to public	Y	March 29, 2018	Town Clerk's Website - eastonct.gov

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

3.1 BMP Summary		Status	Activities in current reporting period	Measurable goal	Department / Person Responsible	Due	Date completed or projected completion date	Additional details
BMP								
3-1 Develop written IDDE program					D.P.W., Health Dept.	Jul 1, 2019		See 2016 Stormwater Annual Report
3-2 Develop list and maps of all MS4 stormwater outfalls in priority areas					D.P.W.	Jul 1, 2020		See 2016 Stormwater Annual Report
3-3 Implement citizen reporting program					D.P.W	Jul 1, 2017		
3-4 Establish legal authority to prohibit illicit discharges					D.P.W., Health Dept.	Jul 1, 2019		See 2016 Stormwater Annual Report
3-5 Develop record keeping system for IDDE tracking					D.P.W., Health Dept.	Jul 1, 2017		See 2016 Stormwater Annual Report
3-6 Address IDDE in areas with pollutants of concern					D.P.W	Not specified		See 2016 Stormwater Annual Report

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

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)
11 Sport Hill Parkway	Unknown	Mill River	Septic System in R.O.W. 10' from U Drain	Previous owner installed septic system without a permit.	Oct. 2017. Removed septic system and relocated to rear of property.	

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

When catch basins are cleaned, if any discharge into basin that has a smell is referred to a supervisor. When the Town workers sweep the road or do repairs, any illicit discharge is reported to a supervisor.

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
Septic System at 11 Sport Hill Parkway located too close to U drain.	The Health Dept. was notified. A new septic system was installed and old one removed.	The Mill River

3.7 IDDE reporting metrics

Metrics

Estimated or actual number of MS4 outfalls	# 361
Estimated or actual number of interconnections	#
Outfall mapping complete	100%
Interconnection mapping complete	0%
System-wide mapping complete (detailed MS4 infrastructure)	0%
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). Public Works employees are trained to report any illicit discharge as they work on sweeping the roads and repairing catch basins and curbing.

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	Draft Regs.	On review by Town Attorney	Draft	Planning & Zoning	Jul 1, 2020	Regulations have been in draft since 2015.	See 2016 Stormwater Annual Report Copy of section in reg. changes are in the back of this report
4-2 Develop/Implement plan for interdepartmental coordination in site plan review and approval	The Town has been doing this since 2005	We currently review site plans	Yes since 2005	P & Z, Town IWWC, Town Eng.	Jul 1, 2017	Ongoing since 2005	
4-3 Review site plans for stormwater quality concerns	Has been done		Since 2005	P & Z, IWWC, Town Eng.	Jul 1, 2017	Since 2005	
4-4 Conduct site inspections	Ongoing Site Inspection	With development of property	Since 2005	P & Z, IWWC, Town Eng.	Jul 1, 2017	Since 2005	
4-5 Implement procedure to allow public comment on site development	On going		Since 2005	P & Z, IWWC, Town Eng.	Jul 1, 2017	Since 2005	See 2016 Stormwater Annual Report
4-6 Implement procedure to notify developers about DEEP construction stormwater permit	On going		Since 2005	P & Z, IWWC, Town Eng.	Jul 1, 2017	Since 2005	See 2016 Stormwater Annual Report

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

One drainage crossing on Everett Road to be upgraded to add more pipes to reduce flooding over the roadway. Silt bags are used to control silt from dewatering.

Replace bridge on South Park Ave. Use of silt bags and silt fence to control silt from getting into river from dewatering.

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 draft of new P & Z Regs.	Under review by Town Attorney		Planning & Zoning	Jul 1, 2022	Feb. 2016	Regs. under review
5-2 Enforce LID/runoff reduction requirements for development and redevelopment projects	In draft of new P & Z Regs.	Under review by Town Attorney		P & Z Commission	Jul 1, 2022	Feb. 2016	Regs. under review
5-3 Identify retention and detention ponds in priority areas	Completed	Done		P & Z, Dir. D.P.W.	Jul 1, 2020	Jan. 2005	On going
5-4 Implement long-term maintenance plan for stormwater basins and treatment structures		On going	Yes	D.P.W. Town Eng.	Jul 1, 2020	Jan. 2005	
5-5 DCIA mapping					Jul 1, 2020		

5-6 Address post-construction issues in areas with pollutants of concern	On going	New development and new house construction	P & Z, Enforcement Officer, D.P.W.	Not specified	Jan. 2005
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5.2 Describe any Post-Construction Stormwater Management activities planned for the next year, if applicable.
 Test outfalls in areas of concern in dry weather. Do storm water monitoring at six (6) locations in areas of concern.

5.3 Post-Construction Stormwater Management reporting metrics

Metrics			
Baseline (2012) Directly Connected Impervious Area (DCIA)	14.1% developed	2,580 acres	
DCIA disconnected (redevelopment plus retrofits)		0.0258 acres this year /0.0258 acres total	
Retrofits completed		#0	
DCIA disconnected		0.001% this year /0.001 % total since 2012	
Estimated cost of retrofits		\$	
Detention or retention ponds identified		# 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			On Going	Dir. D.P.W.	Jul 1, 2019		
6-2 Implement MS4 property and operations maintenance			On Going	Dir. D.P.W.	Jul 1, 2018		
6-3 Implement coordination with interconnected MS4s			On Going	Dir. D.P.W.	Not specified		See 2016 Stormwater Annual Report
6-4 Develop/implement program to control other sources of pollutants to the MS4			On Going	P & Z, Dir. D.P.W.	Not specified		Please refer to BMP 6.12, Parks and Open Space. Please refer to BMP 6.13, Pet Waste Management and BMP 6.14, Waterfowl Management.
6-5 Evaluate additional measures for discharges to impaired waters*				Park & Rec. Dir.	Not specified		Track DCIA coverage annually, identify sites eligible for the 5-year "look back" credit, and develop a written retrofit program by July 1, 2020, with a goal by reducing overall DCIA by 2% by July 1, 2022
6-6 Track projects that disconnect DCIA				Dir. D.P.W.	Jul 1, 2017		
6-7 Implement infrastructure repair/rehab program	On going			Dir. D.P.W.	Jul 1, 2021		

6-8 Develop/implement plan to identify/prioritize retrofit projects	Dir. D.P.W., Town Eng.	Jul 1, 2020	Identify required repairs, and keep an inventory of required repairs, and document when repairs have been made.
6-9 Implement retrofit projects to disconnect 2% of DCIA		Jul 1, 2022	
6-10 Develop/implement street sweeping program	Dir. D.P.W.	Jul 1, 2018	
6-11 Develop/implement catch basin cleaning program	Dir. D.P.W.	Jul 1, 2020	
6-12 Develop/implement snow management practices	Dir. D.P.W.	Jul 1, 2018	The Town shall develop and implement a written snow and ice management plan, including protocols for staff training and record maintenance and updated standard operating practices. The Town shall also document in its Annual Report the results of its snow removal program, including details on methods, materials used, lane-miles treated, staff training, program changes, and snow disposal methods.

6.14 Parks & Rec.

Park & Rec. Dir.

Jul. 2018

The Town shall continue to follow existing optimization procedures for the application of fertilizers and proper disposal of grass clippings and leaves for Town-owned and-operated facilities, and document method of storage and quantities of fertilizer used.

6.15 Pet Waste Management

Park & Rec. Dir.

Jul. 2018

The Town shall identify locations within the community where pet waste threatens receiving water quality, and shall implement and enforce targeted management efforts to mitigate the impacts of pet waste. The Town will install education signage, pet waste baggies, and/or recreational locations within the Town where dog walking is allowed.

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

6.3 Pollution Prevention/ Good Housekeeping reporting metrics

Metrics

Employee training provided for key staff

Y
D. Treadwell , 1977
B. Bantle, 2007
K. Schwartz, 2009
M. Alves, 2011

Street sweeping

Curb miles swept
Volume (or mass) of material collected

1,852 tons – Chip
stone

Catch basin cleaning

Total catch basins in priority areas

633

Total catch basins in MS4

1,805

Catch basins inspected

46

Catch basins cleaned

46

Volume (or mass) of material removed from all catch basins

46.2 tons c.u.y.d.

Volume removed from catch basins to impaired waters (if known)

Snow management

Type(s) of deicing material used

Salt and Sand

Total amount of each deicing material applied

1,274 tons of Salt, 613
tons of Sand

Type(s) of deicing equipment used

Trucks with sanders

Lane-miles treated

3,394 lane miles

Snow disposal location

Shoulder of roads

Staff training provided on application methods & equipment

Yes 12/9/2016

Municipal turf management program actions (for permittee properties in basins with N/P impairments)

Reduction in application of fertilizers (since start of permit)

lbs or %

Reduction in turf area (since start of permit)

acres

Lands with high potential to contribute bacteria (dog parks, parks with open water, & sites with failing septic systems)

Cost of mitigation actions/retrofits

\$

6.4 Catch basin cleaning program

Briefly describe the method used to optimize your catch basin inspection and cleaning schedule.

New catch basin sheets are used to give more information about the basins noting the following: if new pipe is installed without a permit and it any illegal discharges are evidenced.

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 2019 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?
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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
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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, 2021.

Outfall	Sample Date	Parameter(s)	Results	Name of Laboratory (if used)
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DRAFT

Part III: Additional IDDE Program Data [This section required beginning with 2019 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
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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 storm water 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
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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
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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
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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 sanitation 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
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3.3 Wet weather investigation outfall sampling data

Outfall ID	Sample date	Ammonia	Chlorine	Surfactants
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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
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Part IV: Certification

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

Chief Elected Official or Principal Executive Officer

Print name: Adam Dunsby, First Selectman

Signature / Date:

Document Prepared by

Print name: Bruce E. Bombero Sr. PE, LS

Signature / Date:

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."

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Print name: Bruce E. Bombero Sr. PE, LS

Signature / Date: