

**Year 1 Annual Report**  
**Massachusetts Small MS4 General Permit**  
**Reporting Period: May 1, 2018-June 30, 2019**

*\*\*Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form\*\**

*Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed.*

**Part I: Contact Information**

Name of Municipality or Organization: Town of Millis

EPA NPDES Permit Number: MAR041137

**Primary MS4 Program Manager Contact Information**

Name: James McKay

Title: Director, Department of Public Works

Street Address Line 1: 900 Main Street

Street Address Line 2: na

City: Millis

State: MA

Zip Code: 02054

Email: [jmckay@millisma.net](mailto:jmckay@millisma.net)

Phone Number: (508) 376-5424

Fax Number: na

**Stormwater Management Program (SWMP) Information**

SWMP Location (web address): <http://www.millis.org/sites/millisma/files/uploads/swmp.pdf>

Date SWMP was Last Updated: June 2019

If the SWMP is not available on the web please provide the physical address and an explanation of why it is not posted on the web:

## Part II: Self Assessment

*First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4.*

**Impairment(s)**

Bacteria/Pathogens     
  Chloride     
  Nitrogen     
  Phosphorus  
 Solids/ Oil/ Grease (Hydrocarbons)/ Metals

**TMDL(s)**

*In State:*

Assabet River Phosphorus     
  Bacteria and Pathogen     
  Cape Cod Nitrogen  
 Charles River Watershed Phosphorus     
  Lake and Pond Phosphorus

*Out of State:*

Bacteria/Pathogens     
  Metals     
  Nitrogen     
  Phosphorus

Clear Impairments and TMDLs

*Next, check off all requirements below that have been completed. By checking each box you are certifying that you have completed that permit requirement fully. If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.*

### Year 1 Requirements

- Develop and begin public education and outreach program
- Identify and develop inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
  - The SSO inventory is attached to the email submission
  - The SSO inventory can be found at the following website:  
<http://www.millis.org/sites/millisma/files/uploads/swmp.pdf>
- Develop written IDDE plan including a procedure for screening and sampling outfalls
- IDDE ordinance complete
- Identify each outfall and interconnection discharging from MS4, classify into the relevant category, and priority rank each catchment for investigation
  - The priority ranking of outfalls/interconnections is attached to the email submission
  - The priority ranking of outfalls/interconnections can be found at the following website:  
<http://www.millis.org/sites/millisma/files/uploads/idde.pdf>
- Construction/ Erosion and Sediment Control (ESC) ordinance complete
- Develop written procedures for site inspections and enforcement of sediment and erosion control measures
- Develop written procedures for site plan review
- Keep a log of catch basins cleaned or inspected
- Complete inspection of all stormwater treatment structures

### Annual Requirements

- Annual opportunity for public participation in review and implementation of SWMP
- Comply with State Public Notice requirements
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- All curbed roadways have been swept a minimum of one time per year

### **Bacteria/ Pathogens** (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

#### Annual Requirements

##### *Public Education and Outreach\**

- Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Permittee or its agents disseminate educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

*\* Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

### **Chloride**

#### Annual Requirements

##### *Public Education and Outreach*

- Include an annual message in November/ December to private road salt applicators and commercial industrial site owners on the proper storage and application rates of winter deicing material, along with the steps that can be taken to minimize salt use and protect local waterbodies

### **Nitrogen** (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

#### Annual Requirements

##### *Public Education and Outreach\**

- Distribute an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers
- Distribute an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Distribute an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

*\* Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

##### *Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

- Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

##### *Potential structural BMPs*

Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H already existing or installed in the regulated area by the permittee or its agents shall be tracked and the permittee shall estimate the

- nitrogen removal by the BMP consistent with Attachment 1 to Appendix H. Document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated nitrogen removed in mass per year by the BMP in each each annual report

### **Phosphorus (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)**

#### Annual Requirements

##### *Public Education and Outreach\**

- Distribute an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release and phosphorus-free fertilizers
- Distribute an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Distribute an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

*\* Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

##### *Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

- Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

##### *Potential structural BMPs*

Any structural BMPs listed in Attachment 3 to Appendix F already existing or installed in the regulated area by the permittee or its agents shall be tracked and the permittee shall estimate the phosphorus

- removal by the BMP consistent with Attachment 1 to Appendix H. Document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP in each each annual report

### **Solids, Oil and Grease (Hydrocarbons), or Metals**

#### Annual Requirements

##### *Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

- Increase street sweeping frequency of all municipal owned streets and parking lots to a schedule to target areas with potential for high pollutant loads
- Prioritize inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Clean catch basins more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings

### **Charles River Watershed Phosphorus TMDL**

- Begin Phase 1 Phosphorus Control Plan (PCP)

### **Lake and Pond Phosphorus TMDL**

- Begin Phase 1 Lake Phosphorus Control Plan (LPCP)

Use the box below to input additional details on any unchecked boxes above or any additional information you would like to share as part of your self assessment:

Town began program of identifying the location of BMP structures. Critical structures are inspected and maintained regularly. Inspections are planned for Permit Year 2.

### Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

Yes  No

If yes, describe below, including any relevant impairments or TMDLs:

Outfalls will continue to be updated as the stormwater infrastructure map develops and inspections are completed.

### Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

#### MCM1: Public Education

Number of educational messages completed during the reporting period: 4

Below, report on the educational messages completed during the first year. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.

#### BMP: STORMWATER EDUCATION PROGRAM

Message Description and Distribution Method:

Responsible Fertilizer Use - Online

[http://www.millis.org/sites/millisma/files/uploads/stormwater\\_education\\_program.pdf](http://www.millis.org/sites/millisma/files/uploads/stormwater_education_program.pdf)

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

# of views

Message Date(s): Year 1

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

#### BMP:Protecting Water Quality from Urban Runoff

Message Description and Distribution Method:

Information on managing stormwater runoff and pollution. Online.

[http://www.millis.org/sites/millisma/files/uploads/protecting\\_water\\_quality.pdf](http://www.millis.org/sites/millisma/files/uploads/protecting_water_quality.pdf)

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

# of views

Message Date(s): Permit Year 1

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

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**BMP:Grass Clippings**

Message Description and Distribution Method:

Grass Clippings - Online

<http://www.millis.org/stormwater-management/pages/additional-documents>

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

# of views

Message Date(s): June 2019

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

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**BMP:Stormwater Utility Credit Manual**

Message Description and Distribution Method:

Information on how property owners can help improve receiving water quality

Mailer

Targeted Audience: Residents

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

% of property owners receiving message

Message Date(s): January 2019

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

Add an Educational Message

### MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) during the reporting period:

Town shared information on its Stormwater Management Program through Stormwater Utility mailers, public meetings, and by posting the information on the Town's website.

Was this opportunity different than what was proposed in your NOI? Yes  No

Describe any other public involvement or participation opportunities conducted during the reporting period: Completed the implementation of the Stormwater Utility including educating the public, finalizing the rate structure, mailing bills in November 2018, addressing appeal requests. The Department also held two meetings to develop a Credit Policy and a corresponding Credit Manual was developed. This will be mailed to residents in 2019 and posted to the DPW Stormwater Management webpage.

### MCM3: Illicit Discharge Detection and Elimination (IDDE)

#### **Sanitary Sewer Overflows (SSOs)**

*Below, report on the number of SSOs identified in the MS4 system and removed during this reporting period.*

Number of SSOs identified: 0

Number of SSOs removed: 0

*Below, report on the total number of SSOs identified in the MS4 system and removed to date. At a minimum, report SSOs identified since 2013.*

Total number of SSOs identified: 0

Total number of SSOs removed: 0

### **MS4 System Mapping**

Describe the status of your MS4 map, including any progress made during the reporting period:

MS4 mapping is near 100% complete. Outfalls were associated with their receiving water body. In the summer of 2018, the Town consolidated existing data from multiple sources and used both desktop analysis and field verification to finalize the existing GIS mapping data. The inventory and ranking will be updated as additional information from the outfall screening and catchment investigations becomes available.

### **Screening of Outfalls/Interconnections**

*If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses.*

- The outfall screening data is attached to the email submission
- The outfall screening data can be found at the following website:

<http://www.millis.org/sites/millisma/files/uploads/idde.pdf>

*Below, report on the number of outfalls/interconnections screened during this reporting period.*

Number of outfalls screened: 14

*Below, report on the percent of total outfalls/ interconnections screened to date.*

Percent of total outfalls screened: 10%

### **Catchment Investigations**

*If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.*

- The catchment investigation data is attached to the email submission
- The catchment investigation data can be found at the following website:

NA

*Below, report on the number of catchment investigations completed during this reporting period.*

Number of catchment investigations completed this reporting period: 0

*Below, report on the percent of catchments investigated to date.*

Percent of total catchments investigated: 0

*Optional: Provide any additional information for clarity regarding the catchment investigations below:*

Investigations will begin in Permit Year 2.

### **IDDE Progress**

*If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.*

- The illicit discharge removal report is attached to the email submission
- The illicit discharge removal report can be found at the following website:

<http://www.millis.org/sites/millisma/files/uploads/idde.pdf>

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed during this reporting period.*

Number of illicit discharges identified: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallons

*Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed since the effective date of the permit.*

Total number of illicit discharges identified: 0

Total number of illicit discharges removed: 0

*Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:*

**Employee Training**

Describe the frequency and type of employee training conducted during the reporting period:

IDDE training and outfall screenings were conducted on March 27 and 28, 2018.

**MCM4: Construction Site Stormwater Runoff Control**

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed during this reporting period.*

Number of site plan reviews completed:

Number of inspections completed: 218

Number of enforcement actions taken:

## **MCM5: Post-Construction Stormwater Management in New Development and Redevelopment**

### **Ordinance Development**

Describe the status of the post-construction ordinance required to be complete in year 2 of the permit term:

Complete; available online: [http://www.millis.org/sites/millisma/files/uploads/article\\_i.pdf](http://www.millis.org/sites/millisma/files/uploads/article_i.pdf)

### **As-built Drawings**

Describe the status of the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites required to be complete in year 2 of the permit term:

Review site plans through typical processes.

### **Street Design and Parking Lots Report**

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

Not started, due in 2022.

### **Green Infrastructure Report**

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

Not started, due in 2022.

### **Retrofit Properties Inventory**

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

Not started, due in 2022.

### MCM6: Good Housekeeping

#### Catch Basin Cleaning

Describe the status of the catch basin cleaning optimization plan:

The Town cleans all catch basins annually.

*If complete, attach the catch basin cleaning optimization plan or the schedule to gather information to develop the optimization plan:*

- The catch basin cleaning optimization plan or schedule is attached to the email submission
- The catch basin cleaning optimization plan or schedule can be found at the following website:

*Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins during this reporting period.*

Number of catch basins inspected:

Number of catch basins cleaned: 1024

Total volume or mass of material removed from all catch basins: 90 CY

*Below, report on the total number of catch basins in the MS4 system, if known.*

Total number of catch basins:

*If applicable:*

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

NA

#### Street Sweeping

Describe the status of the written procedures for sweeping streets and municipal-owned lots:

To be included in the Good Housekeeping Manual under development in Permit Year 2

*Report on street sweeping completed during the reporting period using one of the three metrics below.*

- Number of miles cleaned: 52
- Volume of material removed: [UNITS]
- Weight of material removed: [UNITS]

*If applicable:*

For rural uncurbed roadways with no catch basins, describe the progress of the inspection, documentation, and targeted sweeping plan:

NA

**Winter Road Maintenance**

Describe the status of the written procedures for winter road maintenance including the storage of salt and sand:

To be included in the Good Housekeeping Manual under development in Permit Year 2

**Inventory of Permittee-Owned Properties**

Describe the status of the inventory, due in year 2 of the permit term, of permittee-owned properties, including parks and open spaces, buildings and facilities, and vehicles and equipment, and include any updates:

To be included in the Good Housekeeping Manual under development in Permit Year 2

**O&M Procedures for Parks and Open Spaces, Buildings and Facilities, and Vehicles and Equipment**

Describe the status of the operation and maintenance procedures, due in year 2 of the permit term, of permittee-owned properties (parks and open spaces, buildings and facilities, vehicles and equipment) and include maintenance activities associated with each:

To be included in the Good Housekeeping Manual under development in Permit Year 2

**Stormwater Pollution Prevention Plan (SWPPP)**

Describe the status of any SWPPP, due in year 2 of the permit term, for permittee-owned or operated facilities including maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater:

To be developed in Permit Year 2

*Below, report on the number of site inspections for facilities that require a SWPPP completed during this reporting period.*

Number of site inspections completed: 0

Describe any corrective actions taken at a facility with a SWPPP:

NA

**O&M Procedures for Stormwater Treatment Structures**

Describe the status of the written procedure for stormwater treatment structure maintenance:

To be included in the Good Housekeeping Manual under development in Permit Year 2

**Additional Information**

**Monitoring or Study Results**

*Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.*

- Not applicable
- The results from additional reports or studies are attached to the email submission
- The results from additional reports or studies can be found at the following website(s):

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

NA

**Additional Information**

*Optional:* Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above:

NA

### **Activities Planned for Next Reporting Period**

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 2 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

- Complete system mapping Phase I
- Begin investigations of catchments associated with Problem Outfalls
- Develop or modify an ordinance or other regulatory mechanism for post-construction stormwater runoff from new development and redevelopment
- Establish and implement written procedures to require the submission of as-built drawings no later than two years after the completion of construction projects
- Develop, if not already developed, written operations and maintenance procedures
- Develop an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; review annually and update as necessary
- Establish a written program detailing the activities and procedures the permittee will implement so that the MS4 infrastructure is maintained in a timely manner
- Develop and implement a written SWPPP for maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater
- Enclose or cover storage piles of salt or piles containing salt used for deicing or other purposes
- Develop, if not already developed, written procedures for sweeping streets and municipal-owned lots
- Develop, if not already developed, written procedures for winter road maintenance including storage of salt and sand
- Develop, if not already developed, a schedule for catch basin cleaning
- Develop, if not already developed, a written procedure for stormwater treatment structure maintenance
- Develop a written catchment investigation procedure (*18 months*)

### **Annual Requirements**

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program

- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all uncurbed streets at least annually

Provide any additional details on activities planned for permit year 2 below:

Town will complete actions listed on the NOI and in the SWMP.

## Part V: Certification of Small MS4 Annual Report 2019

### 40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:  Title:

Signature:  Date:

*[Signatory may be a duly authorized representative]*

Analytical Laboratory Results - IDDE Samples  
 Town of Millis - March 2019

Laboratory Analytical Results	Outfall		6		D-5		Analytical Laboratory Detection Limit	Water Quality Threshold
	Sample ID	Date	Outfall #6 Up	BC1	BC2			
Lab Sample ID	3/28/2019	3/29/2019	3/29/2019	3/29/2019	3/29/2019			
	D9C2764-01	D9C2863-01	D9C2863-01	D9C2863-02	D9C2863-03			
Total Phosphorus (mg/L)	--	<0.0106	--	--	--			
Total Suspended Solids (mg/L)	--	<2.50	--	--	--			
BOD5 (mg/L)	--	<6	--	--	30			
Fecal Coliform (CFU/mL)	<10	--	190	30	> 200			
E. coli (MPN/100 mL)	<1	<1	579.4	166.4	> 235			
Ammonia (mg/L)	0.0	0.0	0.0	0.0	≥ 0.5			
Chlorine (mg/L)	0.07	0.07	0.00	0.0	≥ 0.02			
Surfactants (mg/L)	0.25	0.25	0.25	0.25	≥ 0.25			
DO (mg/L)	11.63	11.11	12.75	12.18	≥ 0.5			
Temperature (C°)	8.5	8.63	7.65	7.45	≥ 28.3			
pH (Standard Units)	8.2	7.94	7.7	7.2	≤ 6.0 or ≥ 8.5			
Salinity (ppt)	<2	<2	<2	<2	Varies			
Turbidity (NTU)	--	0.02	--	--	Varies			
Conductivity (µs/cm)	357	291	281	531	≥2,000			
Watershed	Bogastow Brook	Charles River	Bogastow Brook	Bogastow Brook	Bogastow Brook			

\* Chain of custody labeled this sample as B-8. The sample was associated with outfall B-7 and the ID was therefore corrected