

**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:

EPA NPDES Permit Number:

**Primary MS4 Program Manager Contact Information**

Name:  Title:

Street Address Line 1:

Street Address Line 2:

City:  State:  Zip Code:

Email:  Phone Number:

Fax Number:

**Stormwater Management Program (SWMP) Information**

SWMP Location (web address):

Date SWMP was Last Updated:

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:
- 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:
- 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

### **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

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:

The priority ranking of each outfall and interconnection has been completed according to criteria outlined in Chelsea's IDDE plan. The ranking has been informed by annual dry and wet weather sampling completed beginning in 2006 and updated annually. This priority ranking is attached to the email submission of this report.

The City does not own any stormwater treatment structures and therefore is not able to complete any

inspections.

The City temporarily stores catch basin cleanings and street sweepings at the DPW yard prior to sampling and disposal at a permitted solid waste landfill. The City will incorporate measures to prevent dust, erosion, and off-site migration during temporary storage when creating its SWPPP for the DPW site and its ongoing drainage redesign project.

Two IDDE training sessions are scheduled to take place on November 13, 2019 and November 15, 2019.

Public education messages encouraging the proper management of pet waste has been published to the City's official Facebook page.

The City currently sweeps all of its streets twice per week between March 1st and December 31st; targeted areas are swept more frequently. It would not be feasible for the City to additionally increase that frequency. The City is finalizing a draft catch basin cleaning optimization plan, that when finalized, will prioritize the cleaning of catch basins such that no sump shall be more than fifty percent full.

### 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:

The total number of outfalls has changed from 27 to 24. One outfall at the Chelsea River was determined not to be owned by Chelsea. One at Island End was determined to not be an outfall. One outfall at Mill Creek was determined not to be owned by Chelsea.

Additionally, the City has no known interconnections. Inter-municipal connections originating in Everett and entering Chelsea's MS4 were previously classified as "interconnections" in Annual Stormwater Monitoring Reports and Chelsea's NOI, despite not meeting this MS4 permit's definition of interconnection .

## 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:

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:Meeting**

Message Description and Distribution Method:

Continue partnership program with Chelsea GreenRoots Inc. & Mystic River Watershed Org.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

DPW and partners will conduct public forums on a yearly basis and track the number of attendees.

Message Date(s):

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:Social Media**

Message Description and Distribution Method:

The City published information to its official Facebook page with tips about stormwater management and links to additional information, including posts about proper pet waste management.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

The number of followers of the City's Facebook page is tracked.

Message Date(s):

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:

## MCM2: Public Participation

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

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:

## 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:

Number of SSOs removed:

*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:

Total number of SSOs removed:

### **MS4 System Mapping**

Describe the status of your MS4 map, including any progress made during the reporting period (phase I map due in year 2):

The City has a comprehensive map of the drainage system, including outfalls, pipes, manholes, catch basins, and inter-municipal connections originating in Everett. The map is updated annually to capture any capital improvement projects and findings from inspections and monitoring.

### **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:

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

Number of outfalls screened:

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

Percent of total outfalls screened:

### **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:

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

Number of catchment investigations completed this reporting period:

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

Percent of total catchments investigated:



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

The City of Chelsea has been performing catchment investigations, as needed, according to wet- and dry-weather sampling results since 2006. Since then, the City has initiated an investigation in every catchment with the presence of likely sewer input indicators. The catchments which have not had sewer indicators present continue to be sampled on an annual basis. The catchment investigation data therefore is based on sampling results rather than System Vulnerability Factors.

**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:

*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:

Number of illicit discharges removed:

Estimated volume of sewage removed:

*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:

Total number of illicit discharges removed:

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

The single illicit discharge removed during this reporting period was an overflow from a sewer and therefore the City was unable to provide an estimate of removed sewage volume.

Of the six illicit discharges identified but not yet removed to date, three are being pursued with the private owner, two have had investigation work performed but are awaiting follow up monitoring data analysis, and one is currently in the process of receiving proposals for CCTV work.

**Employee Training**

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

Employees have been trained on IDDE and Stormwater Management on an as-needed basis under the 2003 MS4 Permit. Annual employee trainings pursuant to this permit is scheduled to take place on November 13, 2019 and November 15, 2019.

### **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:

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:

The City currently has a Sewer and Storm Drains Ordinance which covers post-construction requirements, including language for Operation & Maintenance of stormwater management practices. During FY2020, Chelsea will seek to include more detailed language regarding the design of stormwater management BMPs, the submission of as-built drawings, and the inclusion of Low Impact Design practices.

#### **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:

Requirements for the submission of as-built drawings will be included in changes to the City's post-construction stormwater management ordinance. The new ordinance is planned to be adopted in FY2020.

#### **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:

The City will begin working on the street design and parking lots assessment in FY2022, as outlined in the NOI. The report will be complete within 4 years of the permit effective date.

#### **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:

The City will begin working on the green infrastructure report in FY 2022, as outlined in the NOI. The report will be complete within 4 years of the permit effective date.

### **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:

The City will begin working on the retrofit properties inventory in FY 2022, as outlined in the NOI. The City will identify a minimum of 5 permittee-owned properties that could be modified with BMPs within 4 years of the permit effective date.

## **MCM6: Good Housekeeping**

### **Catch Basin Cleaning**

Describe the status of the catch basin cleaning optimization plan:

The City has drafted a catch basin cleaning optimization plan that has not yet been finalized.

*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:

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

*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:

**Street Sweeping**

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

The City currently sweeps each of its streets twice per week between March 1st and December 31st; targeted areas are swept more frequently.

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

- Number of miles cleaned:
- 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:

N/A

**Winter Road Maintenance**

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

The City is working on winter road maintenance procedures that will balance the requirement to minimize the use of salts while prioritizing public safety. The procedures will be completed in FY 2020.

**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:

The City completed an inventory and performed stormwater audits of all City-owned property under the 2003 MS4 Permit. The inventory will be updated in FY 2020.

**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:

The City is working to create and implement standard operation and maintenance procedures for all municipal activities and facilities. These SOPs will be as specific as possible, following guidelines published by EPA. These written procedures will be completed in FY 2020.

### **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:

The City completed a stormwater audit for its DPW maintenance facility under the 2003 MS4 Permit. The City is working to develop a written Stormwater Pollution Prevention Plan for this facility to be completed in FY 2020, as outlined in the NOI.

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

Number of site inspections completed:

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

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

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

The City does not currently own any stormwater treatment structures. Should the City become an owner of stormwater treatment structures, it will develop O&M procedures.

## **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:

### **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:

### **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


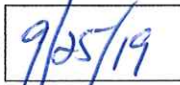
Provide any additional details on activities planned for permit year 2 below:

## 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]*