

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: City of Malden

EPA NPDES Permit Number: MAR041046

Primary MS4 Program Manager Contact Information

Name: Yem Lip

Title: City Engineer

Street Address Line 1: 17 Pleasant Street- City Hall

Street Address Line 2: Engineering Department

City: Malden

State: MA

Zip Code: 02148

Email: ylip@cityofmalden.org

Phone Number: (781) 397-7042

Fax Number: na

Stormwater Management Program (SWMP) Information

SWMP Location (web address): <https://www.cityofmalden.org/DocumentCenter/View/1969/Malden-Stormwater-Management-Program-Plan---Updated-June-2019-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) | | | |
| <input checked="" type="checkbox"/> Bacteria/Pathogens | <input type="checkbox"/> Chloride | <input type="checkbox"/> Nitrogen | <input checked="" type="checkbox"/> Phosphorus |
| <input checked="" type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals | | | |
| TMDL(s) | | | |
| In State: | <input type="checkbox"/> Assabet River Phosphorus | <input checked="" type="checkbox"/> Bacteria and Pathogen | <input type="checkbox"/> Cape Cod Nitrogen |
| | <input type="checkbox"/> Charles River Watershed Phosphorus | <input type="checkbox"/> Lake and Pond Phosphorus | |
| Out of State: | <input type="checkbox"/> Bacteria/Pathogens | <input type="checkbox"/> Metals | <input type="checkbox"/> Nitrogen |
| | | | <input type="checkbox"/> 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:

<https://www.cityofmalden.org/DocumentCenter/View/1969/Malden-Stormwater-Management-Program-Plan---Updated-June-2019-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:

<https://www.cityofmalden.org/DocumentCenter/View/1969/Malden-Stormwater-Management-Program-Plan---Updated-June-2019-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)*

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 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

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:

Public education and outreach materials were included as attachments in the SWMP Plan that has been posted on the City's Stormwater Page (<https://www.cityofmalden.org/615/Malden-Stormwater-System>) for public review and comment. Links to the public messages on proper management of pet wastes, yard wastes and fertilizer to protect surface waters will also been posted on the City's Stormwater web page. In addition, copies of the pet wastes flyers are being mailed to licensed dog owners, while hard copies of the brochure will also be made available at Trafton Dog Park, City Clerks office, the Board of Health office and at the Public Works yard. Hard copies of informational pamphlets on managing yard waste and fertilizer will also be available to the public at the offices of the City Clerk, Board of Health and Public Works. The informational brochure to septic system owners in the City will be distributed in October of 2020.

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:

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: [Message name here]

Message Description and Distribution Method:

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

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:

Educational messages were required for each of the four target audiences at least twice during the permit term. It was originally proposed the complete the messages for Residents and Developers during the first year of the permit however as outlined in the SWMP Plan, these messages will be distributed in Year 2. At least 2 messages will still be distributed to these two audiences within the permit term.

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:

A new stormwater web page was created and included as a link on the City Engineering Department web page specifically for stormwater. The web page provides an overview of the City's stormwater system and the MS4 permit program as well as a link to the completed SWMP Plan with contact information for anyone to provide comments or questions on the SWMP Plan.

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: 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:

In 2014, the firm of CDMSmith prepared a GIS map of the City's storm drain system (along with sewer and water) as an update to prior paper map(s). The City is in the process of verifying and updating the map as necessary and completing the Phase I mapping requirements by June of 2020.

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: 0

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

Percent of total outfalls screened: 0

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: 0

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 is in the process of completing the catchment investigation procedures and initial catchment delineations for each outfall identified within the City which is scheduled to be completed by December 30, 2019 and June 30, 2020 respectively. Outfall monitoring and investigations had been completed by the City during the prior permit and that data and information is being utilized to develop new catchment investigation procedures in accordance with the current permit.

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: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallon per year

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:

Since January of 2009, a total of 16 illicit discharges had been identified and removed by the City, with a total estimated quantity of 536,918 gallons per year removed during the prior permit period. The IDDE procedures have been revised in year 1 to reflect the requirements of the current permit and will be implemented in year 2 of the permit.

Employee Training

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

Two meetings were held by the City's consultant during this reporting period with the Public Works Department Director and the Utility Superintendent regarding the implementation of the IDDE Plan. The most recent meeting included a review of the updated plan that is included within the City's SWMP Plan. A review of the roles and responsibilities for the implementation of the IDDE Plan was also conducted during this reporting period by the City Engineer and the City's consultant.

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: 0

Number of inspections completed: 0

Number of enforcement actions taken: 0

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 is in the process of reviewing the existing post construction ordinance that was adopted by City

Council in April 2009 and will revise as necessary to comply with the current MS4 Stormwater Permit during year 2 of the permit.

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:

The City has included the requirement that as-built plans of all storm water system components be provided within 2 years after the completion of construction in its written site plan review procedures (City of Malden Construction Activity Land Disturbance Permit Requirements and Procedures) that are included in the SWMP Plan.

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 is scheduled to begin this task in year 2 of the permit.

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 is scheduled to begin this task in year 2 of the permit.

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 is scheduled to begin this task in year 2 of the permit. No properties have been modified or retrofitted to date.

MCM6: Good Housekeeping

Catch Basin Cleaning

Describe the status of the catch basin cleaning optimization plan:

The City and its consultant are compiling information from past catch basin cleaning activities and developing

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: 298

Number of catch basins cleaned: 150

Total volume or mass of material removed from all catch basins: 503 cubic yards

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

Total number of catch basins: 2994

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 has a regular schedule for sweeping that is included within the SWMP Plan

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: 1620.33

Tons

If applicable:

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

Winter Road Maintenance

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

Written winter road maintenance procedures for the City are included in the SWMP Plan. These procedures will be reviewed and updated on an annual basis with the public works department.

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:

Preliminary information on City owned properties and property has been compiled and this effort is scheduled for completion in year 2 of the permit.

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 gathering available resources for the completion of this task, which will be completed in year 2 of the permit.

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 and its consultant are reviewing existing conditions and are obtaining necessary information for the completion of this task in year 2 of the permit.

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:

This task is ongoing and will be completed in year 2 of the permit.

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:

Gary Christenson

Title: Mayor

Signature:



[Signatory may be a duly authorized representative]

Date:

09/27/2019