

Year 5 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2022-June 30, 2023

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form. Also ensure any websites included on this form are to publicly accessible sites

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. Please ONLY report on activities between July 1, 2022 and June 30, 2023 unless otherwise requested.

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: 215 Pleasant Street

Street Address Line 2: Room 340

City: Malden

State: MA

Zip Code: 02148

Email: ylip@cityofmalden.org

Phone Number: 781-397-7040

Stormwater Management Program (SWMP) Information

SWMP Location (publicly available web address): <https://www.cityofmalden.org/DocumentCenter/View/1969/Malden-Stormwater-Management-Program-PlanPDF>

Date SWMP was Last Updated: 09/2023

If the SWMP is not available on the web please provide the physical address:

Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: <https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state>

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)			
<i>In State:</i>	<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	
<i>Out of State:</i>	<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.

Annual Requirements

- Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- Kept records relating to the permit available for 5 years and made available to the public
- The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
 - This is not applicable because we do not have sanitary sewer
 - This is not applicable because we did not find any new SSOs
 - The updated SSO inventory is attached to the email submission
 - The updated SSO inventory can be found at the following publicly available website:
- Updated system map due in year 2 as necessary
- Provided training to employees involved in IDDE program within the reporting period
- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- All curbed roadways were swept at least once within the reporting period
- Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities

- Updated inventory of all permittee owned facilities as necessary
- O&M programs for all permittee owned facilities have been completed and updated as necessary
- Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Inspected all permittee owned treatment structures (excluding catch basins)

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

A plan to construct a salt storage facility at the Malden DPW has been prepared and is tentatively planned for 2024. A winter maintenance program (BMP 6.7) was prepared and is a part of the SWMP. The City currently has no treatment structures.

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

Annual Requirements

*Public Education and Outreach**

- Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria
 - This is not applicable because there are no septic systems present

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

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Information on proper septic system maintenance was provided to 77 listed septic system owners in September of 2023.

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

Annual Requirements

*Public Education and Outreach**

- Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers
- Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Distributed 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

- Increased 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)

Structural BMPs

- Completed the evaluation of all permittee owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under permit part 2.3.6.d or identified in the Phosphorus Source Identification Report, including: *(select the items of the evaluation that have been completed below)*
 - Next planned infrastructure, resurfacing, or redevelopment activity planned for the property (if applicable) OR planned retrofit date
 - Estimated cost of redevelopment or retrofit BMPs
 - Engineering and regulatory feasibility of redevelopment or retrofit BMPs
- Completed a listing of planned structural BMPs and a plan and schedule for implementation
 - The BMP list and implementation schedule is attached to the email submission
 - The BMP list and implementation schedule can be found at the following publicly available website:

- Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. 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 were documented.
 - No BMPs were installed
 - The above referenced BMP information is attached to the email submission
 - The above referenced BMP information can be found at the following publicly available website:

Total estimated phosphorus removed in **lbs/year** from the installed BMPs: 0

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

The phosphorus identification report will be finalized in October of 2023, following which an evaluation of City properties will be completed. It is noted that several City projects are currently in various stages of renovation planning/construction that are located within the Malden River Catchment Area (Devir Park, Roosevelt Park, MDPW Riverworks, Keirstead Park) that have incorporated structural BMPs into their design.

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads
 - The street sweeping schedule is attached to the email submission
 - The street sweeping schedule can be found at the following publicly available website:

<https://www.cityofmalden.org/262/Street-Sweeping>

- Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

Optional: If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

The City maintains a list of locations where routine catch basin cleaning is required where flooding has occurred

Optional: Use the box below to provide any additional information you would like to share as part of your self-assessment:

During Year 5, a infrastructure maintenance program involving the cleaning, removal/disposal of sediment and cctv inspection of approximately 7,000 lineal feet of drainage line was implemented by Green Mountain Pipeline Services. As of September 25, 2023 a total of 33.43 tons of sediment has been removed and this project is ongoing.

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:

Fellsmere Pond (Segment ID MA 71016) was added to the Massachusetts 303(d) list of impaired waters in 2016, which was approved by USEPA on 2 January 2020. The impairment identified for this segment is Harmful Algal Blooms.

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 this reporting period: 1

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

BMP:Pet Waste, Yard Waste and Fertilizer Use

Message Description and Distribution Method:

Informational pamphlets on pet waste, yard waste and fertilizer use are posted on the City Stormwater Page

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

The city is evaluating alternatives for quantifying the effectiveness of these measures

Message Date(s): Posted on City stormwater page

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 this reporting period:

The SWMP has been posted on the City Stormwater web page. Updates will be made and posted along with a copy of this status report.

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

Describe any other public involvement or participation opportunities conducted **during this reporting period:**

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

This SSO section is NOT applicable because we DO NOT have sanitary sewer

*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

MS4 System Mapping

Optional: Provide additional status information regarding your map:

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. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.

- No outfalls were inspected
- The above referenced outfall screening data is attached to the email submission
- The above referenced outfall screening data can be found at the following publicly available website:

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

Number of outfalls screened: 200

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

Percent of outfalls screened: 82

Optional: Provide additional information regarding your outfall/interconnection screening:

As documented in the year 4 status report over the period of May through September of 2022 Malden attempted to inspect all outfall accessible locations during dry weather conditions within the Malden River, Little Creek, Fellsmere Pond, Town Line Brook (and culvert), Lower Spot Pond Brook (and culvert), Linden Brook Culvert, West End Culvert, Forestdale Cemetery Culvert, Malden/Medford Town Line Culvert and the Saugus Branch Brook Culvert. This included a direct inspection of outfalls where accessible, or nearest upstream manholes/catch basins where tributary lines discharged into the receiving water or culvert. The City's extensive system of culverts for historic brooks and streams throughout the City required the inspection of numerous manholes and catch basins upstream of each of these culvert systems. A total of 351 inspections were attempted, with 63 locations (18%) that could not be located or accessed. Flow was identified at 28 dry weather locations and at 4 locations during a single wet weather sampling event during the inspection program. Of the 351 inspection attempts 238 were conducted in Year 5, with 38 locations that could not be located or accessed. Flow was identified at 7 dry weather inspection locations in Year 5. The final results of this inspection effort that was completed both in Year 4 and Year 5 have been attached as an email to this report, and will be appended to the City's SWMP.

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.

- No catchment investigations were conducted
- The catchment investigation data is attached to the email submission
- The catchment investigation data can be found at the following publicly available 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: 0

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

Catchment Investigations are being developed based upon the dry weather sampling results and field work is planned for implementation in the fall of 2023.

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.

- No illicit discharges were found
- The illicit discharge removal report is attached to the email submission

☐ The illicit discharge removal report can be found at the following publicly available 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 gallons/day

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 (July 1, 2018).

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 this reporting period:

Due to staffing issues, no employee training was conducted in Year 5. An employee training program is being developed and will be implemented in the Fall of 2023.

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: 3

Number of inspections completed: 1

Number of enforcement actions taken: 0

Optional: Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

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

Ordinance or Regulatory Mechanism

Date update was completed (due in year 3): 9/22/23

Website of ordinance or regulatory mechanism:

https://s3-us-west-2.amazonaws.com/municipalcodeonline.com-new/malden/ordinances/documents/1695666455_303-23%2011.28.020%20Storm%20Water%20Management%20and%20L.and%20Disturbance%20Regulation.pdf

As-built Drawings

Below, report on the number of as-built drawings received during this reporting period.

Number of as-built drawings received: 0

Optional: Enter any additional information relevant to the submission of as-built drawings:

Street Design and Parking Lots Report

Below, describe any changes made or planned to be made to local regulations and guidelines based on the report completed in Year 4:

The Street Design and Parking Lots Report is in progress and expected to be completed in October of 2023 and will be appended to the SWMP upon completion.

Green Infrastructure Report

Below, describe progress towards making green infrastructure practices allowable based on the report completed in Year 4:

The Green Infrastructure Report is in progress and expected to be completed in October of 2023 and will be appended to the SWMP upon completion.

Retrofit Properties Inventory

Below, list remaining permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas (must maintain a minimum of 5 sites in inventory until less than 5 sites remain):

- Devir Park
- Roosevelt Park
- Kierstead Park
- Malden DPW - Riverworks Project
- Amerige Park
- MacArthur Park
- Trafton Park

Below, list all properties that have been modified or retrofitted with BMPs to mitigate impervious area that were inventoried as part of 2.3.6.d of the permit. Non-MS4 owned properties that have been modified or retrofitted with BMPs to mitigate impervious area may also be listed, but must be indicated as non-MS4.

MCM6: Good Housekeeping

Catch Basin Cleaning

*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: 147

Number of catch basins cleaned: 117

Total volume or mass of material removed from all catch basins: 133.81 tons

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

Total number of catch basins: 2,994

If applicable:

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

The City maintains a list of locations where routine catch basin cleaning is required where flooding has occurred. As referenced previously, in addition to the sediment removal during catch basin cleaning approximately 33.43 tons of sediment have been removed as a part of the ongoing drainage cleaning program being completed by Green Mountain Pipeline Services.

Street Sweeping

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

- Number of miles cleaned:
- Volume of material removed: [Select Units]
- Weight of material removed: 690.51 tons

Stormwater Pollution Prevention Plan (SWPPP)

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:

Inspections of the Forestdale Cemetery Garage and the Malden DPW were completed in Year 5. Spill response kits and secondary containment structures were recommended for the Forestdale Garage. The Malden DPW inspection identified stormwater infrastructure needs that are being planned as a part of the Malden River Works project that will include particle separators, on-site bio-retention, and subsurface detention. A salt storage shed is also included in the Malden River Works Plan for the Malden DPW facility.

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 publicly available 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. If any of the above year 5 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

The City is continuing to work on addressing the requirements of the MS4 permit that had been delayed in prior years due to lack of access, necessary personnel and resources that were in part affected due to the prioritization of resources as a consequence to the pandemic.

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 6 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

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
- 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 curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities

Part V: Certification of Small MS4 Annual Report 2023

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]