

**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:

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:

**Stormwater Management Program (SWMP) Information**

SWMP Location (publicly available web address):

Date SWMP was Last Updated:

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>

<b>Impairment(s)</b>			
<input 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		
<b>TMDL(s)</b>			
<i>In State:</i>	<input type="checkbox"/>	Assabet River Phosphorus	<input type="checkbox"/>
	<input type="checkbox"/>	Bacteria and Pathogen	<input type="checkbox"/>
	<input type="checkbox"/>	Cape Cod Nitrogen	
	<input type="checkbox"/>	Charles River Watershed Phosphorus	<input type="checkbox"/>
	<input type="checkbox"/>	Lake and Pond Phosphorus	
<i>Out of State:</i>	<input type="checkbox"/>	Bacteria/Pathogens	<input type="checkbox"/>
	<input type="checkbox"/>	Metals	<input type="checkbox"/>
	<input type="checkbox"/>	Nitrogen	<input type="checkbox"/>
	<input type="checkbox"/>	Phosphorus	
<input type="button" value="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:

### **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:

BMP pollutant removals are included in the attached Phosphorous Identification Report.

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: 25.3

*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:

### **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:

Included as an appendix in the SWMP Plan, available for download at: <https://douglas-ma.gov/512/MS4-Stormwater>

- 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:

Street Sweeping - All streets were swept twice a year within the MS4 area.

Increased Sweeping for High Pollutant Loads - this was determined not to be necessary for the Town as these areas are not observed to accumulate more sediment and debris than other areas within the Town. As noted above, all streets within the MS4 area are swept twice a year.

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

### 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 Town has determined it is subject to the following additional TMDL and Impaired Waters requirements:  
- Mumford River (MA51-14), metals water quality impairments requirements (Appendix H, Part V)

Under the Environmental Protection Agency's (EPA's) 2016 National Pollutant Discharge and Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit for Massachusetts, communities located within the watershed of a nitrogen-impaired waterbody with an approved out of state Total Maximum Daily Load (TMDL) must meet the requirements outlined under Appendix F, Part B.I of the permit. Douglas is located within the Long Island Sound watershed, a waterbody with an approved TMDL for nitrogen and thus must meet these requirements. However, requirements only apply to areas of town that are both classified as an urbanized area with formalized drainage infrastructure and located within the watershed. Upon review, only a small portion of the town is located within the Long Island Sound watershed, the southwest corner of town that discharges to the Quinebaug River. Within this area only a very small portion is classified as a regulated urbanized area, the small area on the western side of High Street along the border with Webster, Massachusetts and Thompson, Connecticut. There is no drainage infrastructure along High Street; rather, all stormwater flows off of the roadway via country drainage onto the side of the road. As there is no regulated drainage infrastructure within the UA, the Town of Douglas does not have to meet Long Island Sound nitrogen TMDL requirements. However, the Town has voluntarily decided to implement select items, including the public education, stormwater management in new and redevelopment, and good housekeeping and pollution prevention requirements as outlined further in its Stormwater Management Program (SWMP) Plan. The Town will not complete a Nitrogen Source Identification Report or implement structural BMPs within the Long Island Sound watershed.

The above changes have been reflected in the Town's SWMP Plan.

## 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:**

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:Stormwater Website**

Message Description and Distribution Method:

Provided seasonal flyers on lawn care and pet waste for download on the Town's stormwater website.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Continue to update and maintain the website

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:Information Flyers**

Message Description and Distribution Method:

Provided seasonal brochures on pet waste and lawn care at the post office and public library for collection.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

40 summer pet waste flyers placed at the town hall on 7/25/22; 18 taken by 10/10/22  
25 summer pet waste flyers placed at the library on 7/25/22; 15 taken by 10/10/22

40 fall leaf litter flyers placed at the town hall on 10/10/22; 21 taken by 12/9/22  
 20 fall leaf litter flyers placed at the library on 10/10/22; 10 taken by 12/9/21

50 spring fertilizer flyers placed at the town hall on 4/7/23; 23 taken by 6/24/23  
 25 spring fertilizer flyers placed at the library on 4/7/23; 7 taken by 6/24/23

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:

[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:**

SWMP Plan for Download - The Town has posted the SWMP Plan and other relevant information on Town website along with contact information to allow for public comment.

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:

Number of SSOs removed:

### **MS4 System Mapping**

*Optional:* Provide additional status information regarding your map:

All known outfalls, stormwater BMPs, and receiving waterbodies with impairments have been mapped to date. Initial catchment delineations have also been completed based on topographic mapping and available stormwater system information. Nearly all catch basins, manholes, and pipes have also been mapped. Mapping of open channel conveyances and any newly located outfalls is ongoing. Mapping interconnections with other MS4s (e.g. DOT) is ongoing, and it is expected that this will continue as part of DOT's own mapping efforts to be completed under a future TS4 permit.

The Town has identified a number of data gaps in its drainage mapping (e.g., catch basins without piping, disconnected drainage networks, etc.) and has begun investigating these through field efforts. Any new outfalls/interconnections discovered through this process will be mapped and screened for dry weather flow.

### **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:

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

Percent of outfalls screened:

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

16 new outfalls were located and inspected for dry weather flows either at the outfalls or at the next upgradient structure, two of which were flowing. 5 additional outfall could not be located and 3 additional outfalls could not be accessed so instead screened at an upgradient structure. As/if additional outfalls are located, they are screened during dry weather for potential illicit discharges.

### **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:

*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 Town is assessing catchment investigation status during Year 6. Many catchments do not have Key Junction Manholes and/or System Vulnerability Factors; and thus inspections are complete as outfalls have been screened during dry weather.

### **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:

Number of illicit discharges removed:

Estimated volume of sewage removed:  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:

Total number of illicit discharges removed:

*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:**

An on-site IDDE training session was held on April 5, 2023 with applicable DPW staff. This session also provided training on Stormwater Pollution Prevention Plan (SWPPP) implementation and inspections at the DPW Garage and Transfer Station.

**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:

*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):

Website of ordinance or regulatory mechanism:

**As-built Drawings**

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

Number of as-built drawings received:

*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:

No changes have been made to date. To be determined pending update of Regulations and Bylaws. It is estimated the Subdivision Regulations will be updated by June 2024, Zoning Bylaws by December 2026, and General Bylaws by December 2028.

**Green Infrastructure Report**

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

No changes have been made to date. To be determined pending update of Regulations and Bylaws. It is estimated the Subdivision Regulations will be updated by June 2024, Zoning Bylaws by December 2026, and General Bylaws by December 2028.

**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):

Douglas Elementary School - Recommend the installation of two small infiltration basins on either end of the site. The basin along School Court (potentially behind the building on parcel Map T2) would connect to new catch basins constructed along the roadway to capture the sheet flow that is currently leaving the site to the northwest without passing through any drainage infrastructure. The basin on the east of the site would interconnect with the existing catch basins and concrete conveyance that runs parallel to the driveway entrance off of Davis Street. Both basins would capture runoff from adjacent parking areas.

Douglas High School - Recommend to rehabilitate and retrofit the existing infiltration/detention BMP

observed near the entrance driveway off of Davis Street. Ensure that all outlet structures draining to the BMP are fully functional and operational. Add additional catch basins and outfalls into the BMP along the steep driveway, if capture capacity of existing catch basins is inadequate. Recommend retrofitting existing BMP with treatment forebay, if one does not exist/is not functional

Douglas VFW Field - Recommend the installation of catch basins and/or trench drain that discharges to a treatment swale that runs parallel to the paved parking area. Also recommend to assess the Centerville Brook Culvert for structural integrity, as construction may be necessary to repair damage/ensure connectivity between the parking lot and Main Street.

Douglas Water Department - Recommend the installation of a constructed wetland at a low point near the rear of the paved portion of the site. The observed drainage infrastructure could be retrofitted to outfall to the constructed wetland, as it appears both overland flow and stormwater infrastructure are draining roughly towards this point. Install an oil/water separator upstream of wetland inlet.

Douglas Town Hall - Limited space is available at the site, however there is an area near the rear of the parcel within the landscaped lawn for a small infiltration basin. Recommend re-routing existing outfalls to discharge to an infiltration basin that also accommodates runoff contained within the sheet flow bypass ponding spot (also in the rear). This ponding spot could be the site of a new catch basin that discharges to the basin, or could be regraded to overland drain to the basin.

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.

No properties have been modified or retrofitted with BMPs to date.

## 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:

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.*

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:

Note, above the numbers reflect catch basin cleaning within the MS4 area only. An additional 101 catch basins were cleaned outside the MS4 area and an additional 105 cubic feet were removed from these basins.

### **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:
- Weight of material removed:

### **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:

Not applicable, no corrective actions have been taken to date.

Note, 4 quarterly inspections were completed at the Highway Department and Transfer Station Facilities for 8 inspections total.

## **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:

### **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

- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining


Provide any additional details on activities planned for permit year 6 below:

## 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]*

*Note: When prompted during signing, save the document under a new file name.*

### Annual Report Submission

*Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.*

EPA: [stormwater.reports@epa.gov](mailto:stormwater.reports@epa.gov)

MassDEP: [Stormwater.DEP@mass.gov](mailto:Stormwater.DEP@mass.gov)

### Paper Signature:

*If you did not sign electronically above, you can print the signature page by clicking the button below.*

*Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.*