

Year 3 Annual Report
Massachusetts Small MS4 General Permit
New Permittees
Reporting Period: July 1, 2020-June 30, 2021

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. Please ONLY report on activities between July 1, 2020 and June 30, 2021 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: University of Massachusetts Medical School

EPA NPDES Permit Number: MAR042049

Primary MS4 Program Manager Contact Information

Name: Jo-Ann Ranslow

Title: Environmental Health & Safety Manager

Street Address Line 1: University of Massachusetts Medical School

Street Address Line 2: 55 Lake Avenue North

City: Worcester

State: MA

Zip Code: 01655

Email: joann.ranslow@umassmed.edu

Phone Number: (508) 856-6723

Stormwater Management Program (SWMP) Information

SWMP Location (web address): <https://www.umassmed.edu/growinggreen/stormwater-management/>

Date SWMP was Last Updated: Jun 30, 2020

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

NA

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 type="checkbox"/> Phosphorus
<input type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
TMDL(s)			
<i>In State:</i>	<input checked="" type="checkbox"/> Assabet River Phosphorus	<input checked="" type="checkbox"/> Bacteria and Pathogen	<input type="checkbox"/> Cape Cod Nitrogen
	<input checked="" type="checkbox"/> Charles River Watershed Phosphorus	<input checked="" 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
<div style="border: 1px solid black; padding: 2px; display: inline-block;">Clear Impairments and TMDLs</div>			

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 3 Requirements

- ☒ IDDE ordinance or other regulatory mechanism complete and adopted
- ☒ Construction/ Erosion and Sediment Control (ESC) ordinance or other regulatory mechanism complete and adopted
- ☒ Post-construction bylaw, ordinance, or other regulatory mechanism complete and adopted
- ☒ Developed written procedures for site inspections and enforcement of sediment and erosion control measures
- ☒ Developed written procedures for site plan review
- ☒ Kept a log of catch basins cleaned and inspected

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 3 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:

No unchecked boxes

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
- ☒ 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

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual 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:

Street sweeping was completed for 3 of 4 UMass Medical campuses within the reporting period. All curbed roadways on Worcester Main, Shrewsbury South Street, and Shrewsbury Maple Avenue campuses were swept twice within the reporting period. Street sweeping was not completed on MassBiologics (Mattapan) campus.

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

** 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:

Public outreach messages related specifically to pet waste are not applicable to UMMS, as dog walking is not allowed on UMMS campuses and UMMS does not have the authority to issue dog licenses. UMMS also does not own or operate septic systems. As a non-traditional MS4, UMMS' target audiences differ slightly from those targeted by traditional (municipal) MS4s. UMMS' public education and outreach messages focus on stormwater pollutants that are most likely to be generated on UMMS properties (trash, sediment, fertilizer, leaf litter, and grass clippings).

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) that encourages the proper use and disposal of grass clippings and encourages 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)

Charles River Watershed Phosphorus TMDL

- ☐ Began Phase 1 Phosphorus Control Plan (PCP)

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:

UMMS will develop a PCP for its Mattapan MassBiologics campus. Per Appendix F requirements, UMMS will develop a legal analysis during Permit Year 4.

Lake and Pond Phosphorus TMDL

- ☐ Began Phase 1 Lake Phosphorus Control Plan (LPCP)

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:

UMMS will develop a LPCP for its Worcester Main and Shrewsbury Maple Avenue campuses. Per Appendix F requirements, UMMS will develop a legal analysis during Permit Year 4.

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

Phosphorus Annual Requirements for Public Outreach and Education:

As a non-traditional MS4, UMMS' target audiences differ slightly from those targeted by traditional (municipal) MS4s. UMMS' target audiences include the people who are most likely to affect pollution on UMMS properties, including visitors, students, staff, and contractors. The disposal of grass clippings and leaf litter as well as use of fertilizer on UMMS campuses is a responsibility of UMMS facilities maintenance staff. UMMS will develop facility O&M procedures, including procedures for open spaces and lawn maintenance, as part of UMMS' O&M Plan in Permit Year 4. Public outreach messages related specifically to pet waste are not applicable to UMMS, as dog walking is not allowed on UMMS campuses.

Phosphorus Annual Requirements for Street Sweeping:

Enhanced street sweeping was completed for 2 of 3 UMass Medical campuses subject to Permit part 2.3.7.a.iii.(c). All curbed roadways on Worcester Main and Shrewsbury Maple Avenue campuses were swept twice within the reporting period. Street sweeping was not completed on MassBiologics (Mattapan) campus.

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? 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>

☒ Yes

☐ No

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

SWMP was updated to reflect final 2016 303(d) Impaired Waters List (enterococcus impairment added for receiving water Lake Quinsigamond (MA51125); receiving water Mill Pond (MA51105) segment name and segment ID updated to West Brook (MA51-43)).

Part IV: Minimum Control Measures

*Part IV includes some of the metrics that will be required in upcoming annual reports. For this annual report, **please report on MCM1 and MCM2 and any other metrics below that have an asterisk (*), along with any other metrics that you have started within this reporting period. Other than the metrics with an asterisk, the rest of the metrics are optional for new permittees. Then, proceed to Part V.***

***MCM1: Public Education**

Number of educational messages completed **during this reporting period:** 3

*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:1-2 Web Page

Message Description and Distribution Method:

Maintained stormwater management page located on Growing Green website. The webpage includes stormwater pollution prevention tips, links to ThinkBlue Massachusetts videos and educational materials, and information about UMMS' stormwater management program.

<https://www.umassmed.edu/growinggreen/stormwater-management/>

Targeted Audience: Visitors, students, staff

Responsible Department/Parties: Environment Health & Safety Office, Sustainability

Measurable Goal(s):

Website page typically viewed by approximately 50 people per permit year.

Message Date(s): June 2021

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:

NA

BMP:1-3 Growing Green Newsletter

Message Description and Distribution Method:

Maintained "Only Rain Down the Drain" stormwater article on UMMS Growing Green newsletter website about stormwater pollution prevention.

<https://www.umassmed.edu/growinggreen/newsletter/stormwater-plan-2019/>

Targeted Audience: Visitors, students, staff

Responsible Department/Parties: Environmental Health & Safety Office, Sustainability

Measurable Goal(s):

Number of people on Growing Green newsletter distribution list is 11,000.

Message Date(s): June 2021

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:

NA

BMP: N/A

Message Description and Distribution Method:

NA

Targeted Audience: NA

Responsible Department/Parties: NA

Measurable Goal(s):

NA

Message Date(s): NA

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:

NA

BMP:1-5 Contractor Education

Message Description and Distribution Method:

Developed pamphlet to provide to contractors with each new purchase order to educate them on UMMS procedures and best practices, including stormwater management.

Targeted Audience: Contractors

Responsible Department/Parties: Environmental Health & Safety Office, Sustainability

Measurable Goal(s):

No pamphlets were distributed to new contractors this year, but the pamphlet is available to contractors online and hard copies were sent to the Facilities Engineering Department for distribution.

Message Date(s): June 2021

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:

NA

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:**

Posted SWMP online on the Growing Green Stormwater Management webpage to allow for ongoing public review of the SWMP: <https://www.umassmed.edu/growinggreen/stormwater-management/>

Provided an email address (stormwater@umassmed.edu) to submit comments or request more information.

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:**

No other public events were held during this reporting period due to COVID-19.

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

*Below, report on the total number of SSOs identified in the MS4 system and removed to date. At a minimum, report SSOs identified **since the effective date of the permit (July 1, 2018)**.*

Total number of SSOs identified: 0

Total number of SSOs removed: 0

MS4 System Mapping

Below, check all that apply.

The following elements of the Phase I map have been completed:

- ☐ Outfalls and receiving waters
- ☐ Open channel conveyances
- ☐ Interconnections
- ☐ Municipally-owned stormwater treatment structures
- ☐ Waterbodies identified by name and indication of all use impairments
- ☐ Initial catchment delineations

Describe any additional progress you made on your map during this reporting period or provide additional status information regarding your map:

Completed GIS map of MS4 system of the Worcester main campus. Contracted with a consultant firm to develop a GIS map of the MS4 system of the Shrewsbury Maple Avenue and Shrewsbury South Street campuses.

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

NA

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

Number of outfalls screened: 0

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

Percent of outfalls screened: 0

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

NA

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 website:

NA

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

Number of catchment investigations completed this reporting period: 0

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

Percent of total catchments investigated: 0

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

NA

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 website:

NA

*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:

NA

Employee Training

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

Developed a Stormwater Awareness training module that is now incorporated into the Off-Site/Powerplant Facilities online training including information on MS4 permit requirements, good housekeeping and sources of stormwater pollution. In addition, UMMS employees within Environmental Health & Safety, Facility Engineering & Construction, Facilities Maintenance Services, and MassBiologics complete an annual Spill Prevention, Control and Countermeasure (SPCC) training on the anniversary of their hire date.

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: 31

Number of enforcement actions taken: 0

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

UMMS requires contractors to perform site inspections in accordance with EPA's stormwater CGP requirements.

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

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:

UMMS developed a post-construction stormwater management guidance document for contractors, which includes the requirement to submit as-built drawings to UMMS.

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment including any planned or completed changes to local regulations and guidelines:

Not started at this time.

Green Infrastructure Report

Describe the status of the green infrastructure report including the findings and progress towards making the practice allowable:

Not applicable - Non-traditional MS4s do not need to meet the requirements of part 2.3.6.c.

Retrofit Properties Inventory

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

Not started at this time.

MCM6: Good Housekeeping

***Catch Basin Cleaning**

Describe the status of the catch basin cleaning optimization plan:

Collected data using UMMS' mobile data collection form for catch basin inspections. Contracted with a consu



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:

NA

*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: 263

Number of catch basins cleaned: 96

Total volume or mass of material removed from all catch basins: 41 cubic yards

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

Total number of catch basins: 339

If applicable:

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

NA

***Street Sweeping**

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

Street sweeping procedures will be included in pending O&M plan.

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

☐ Number of miles cleaned:

☒ Volume of material removed: 24.8 cubic yards

☐ Weight of material removed: [Select Units]

If applicable:

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

NA

O&M Procedures and Inventory of Permittee-Owned Properties

Below, check all that apply.

The following permittee-owned properties have been inventoried:

- ☐ Parks and open spaces
- ☐ Buildings and facilities
- ☐ Vehicles and equipment

The following O&M procedures for permittee-owned properties have been completed:

- ☐ Parks and open spaces
- ☐ Buildings and facilities
- ☐ Vehicles and equipment

Winter Road Maintenance

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

Winter road maintenance procedures will be included in pending O&M plan.

Stormwater Pollution Prevention Plan (SWPPP)

Describe the status of any SWPPP 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:

NA

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

Number of site inspections completed: 0

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

NA

O&M Procedures for Stormwater Treatment Structures

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

Stormwater treatment structure maintenance procedures will be included in the pending O&M plan.

Part V: 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):

NA

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

NA

Additional Information

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

Nothing to report

COVID-19 Impacts

Optional: If any of the above year 3 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:

Due to COVID-19, Earth Day events on campus were held virtually. Stormwater education materials were unable to be distributed as usual (BMP 1-4). E-waste recycling events were also not held this year due to COVID-19.

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

Yes, I agree ☒

- Identify and develop inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
- Identify each outfall and interconnection discharging from MS4, classify into the relevant category, and priority rank each catchment for investigation
- Develop written IDDE plan including a procedure for screening and sampling outfalls
- Develop written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites and add these procedures to the SWMP
- Develop written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment and added these procedures to the SWMP
- Develop an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment and added this inventory to the SWMP
- Complete a written program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Develop written SWPPPs, included in the SWMP, for all of the following permittee owned or operated facilities: 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

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
- Continue public education and outreach program
- Sweep all curbed roadways at least once within the reporting period
- Provide training within the reporting period to employees involved in IDDE program
- Clean catch basins in accordance with catch basin cleaning procedures to ensure that no catch basin is greater than 50% full

Provide any additional details on activities planned for permit year 4 below:

Plan to complete IDDE Plan, MS4 Infrastructure O&M Plan, catch basin cleaning optimization plan, and PCP/LPCP legal analyses.

Part VI: Certification of Small MS4 Annual Report 2021*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:

John Baker

Title:

Associate Vice Chancellor

Signature:



Date:

9/29/2021

[Signatory may be a duly authorized representative]