

Year 4 Annual Report
Massachusetts Small MS4 General Permit
New Permittees
Reporting Period: July 1, 2021-June 30, 2022

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, 2021 and June 30, 2022 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: University of Massachusetts Lowell

EPA NPDES Permit Number: MAR042054

Primary MS4 Program Manager Contact Information

Name: Glenn MacDonald Title: Exec. Director, Environmental Health & Safety

Street Address Line 1: University of Massachusetts - Lowell

Street Address Line 2: 600 Suffolk Street, Suite 212

City: Lowell State: MA Zip Code: 01854

Email: glenn_macdonald@uml.edu Phone Number: (978) 934-2632

Stormwater Management Program (SWMP) Information

SWMP Location (web address): Directions for requesting a copy of the SWMP can be found at: <https://www.uml.edu/eem/policies-and-procedures/>

Date SWMP was Last Updated: May 2022

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

The document has not been posted to the website due to the need to make the SWMP compliant with the Americans with Disabilities Act prior to posting, but a copy of the SWMP can be requested by calling or emailing the University's Storm Water Coordinator, Carl Shreder, at 978-934-2672 or Carl_Shreder@uml.edu, respectively, or by emailing ehs@uml.edu. In addition, hard copies of the document may be reviewed at the Lydon Library Circulation Desk, O'Leary Library Circulation Desk, and the Environmental Health and Safety Department, located at Wannalancit Suite 212.

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)			
<i>In State:</i>	<input type="checkbox"/> Assabet River Phosphorus	<input 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
<div>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 4 Requirements

- ☒ Identified and developed an 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:

No SSOs have been identified on campus in the last 5 years.
- ☒ Identified each outfall and interconnection discharging from MS4, classified into the relevant category, and priority ranked 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:

The priority ranking of outfalls/interconnections will be submitted in future permit years.
- ☒ Developed written IDDE plan including a procedure for screening and sampling outfalls
- ☐ Developed written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites and added these procedures to the SWMP
- ☒ Developed written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment and added these procedures to the SWMP
- ☒ Developed 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
- ☒ Completed a written program for MS4 infrastructure maintenance to reduce the discharge of pollutants
 - Developed 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
- ☒ Enclosed or covered storage piles of salt or piles containing salt used for deicing or other purposes

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:

At the end of Permit Year 4, the University hired an outside consultant to develop a written IDDE plan outlining procedures for screening and sampling outfalls, conducting catchment investigations, and isolating and abating illicit discharges. A draft of the University's "IDDE Program Manual" was completed in September 2022, and included preliminary outfall and interconnection priority rankings based on available infrastructure data. These priority rankings will be refined during Permit Year 5, and will continue to be updated as dry weather outfall screening commences.

The University has not developed written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites. The University does not have the authority to prepare its own development requirements, as all construction on campus is management by the State.

In Permit Year 4, the University finalized a Clean Water Best Practices Manual that documents written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment. The Manual also includes an inventory of all permittee owned facilities and applicable best practices for each facility, as well as Standard Operating Procedures (SOPs) for winter road maintenance, catch basin cleaning, street sweeping, and stormwater treatment structure inspections.

The University reviewed the need to develop and implement SWPPPs at University owned and operated facilities in accordance with Permit Part 2.3.7.b. These facilities included their maintenance garages at 8 James Street and 1485 Middlesex Street in Lowell. The University determined that SWPPPs are not needed since these facilities conduct vehicle servicing indoors and do not discharge pollutants from these activities to the MS4 or waterbodies.

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
- ☒ 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

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 University conducted general stormwater management program, pollution prevention best practices, and illicit discharge identification training during Permit Year 4. These trainings are described in more detail in the MCM3/Employee Training section of this report.

The University currently does not have an active street sweeping program. The University does not use sand for winter road maintenance operations, and annual catch basin inspections show low amounts of sediment entering and settling in catch basins each year. The University will continue to evaluate their catch basin inspection results to identify whether street sweeping operations should be conducted on a regular basis in the future. The City of Lowell conducts their own street sweeping program which encompasses the public

roadways that run adjacent to the University's owned and leased properties. The University periodically sweeps their parking lots and garages. The University stores and disposes of street sweepings in accordance with applicable rules and regulations.

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:

The University finalized a policy regarding pets on campus in Summer 2021, which outlines the potential negative impacts pet waste can have on stormwater quality and makes pet owners and handlers responsible for managing their own pet's waste. Students that are approved to have a service or emotional support animal on campus are required to agree to this policy in writing, and to utilize either of the designated animal relief areas located on the University's east and south campuses. Maps of these relief areas are provided to pet owners during the service/emotional support animal approval process.

The University does not have any septic systems on campus, and therefore does not provide septic system messaging to students, faculty, employees, or contractors.

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)

Potential structural BMPs

- 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.
- ☐ The BMP information is attached to the email submission
 - ☐ The BMP information can be found at the following website:

Phosphorus removal calculations will be conducted in future permit years.

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 University's staff resources were limited during the 2021-2022 school year due to COVID-19. As a result, no fertilizer or leaf litter educational messages related to Total Phosphorus receiving water impairments were distributed during Permit Year 4.

As discussed in the Bacteria/Pathogens section of this report, pet waste messaging is distributed to pet owners during the service/emotional support animal approval process.

As discussed in the Annual Requirement section of this report, the University currently does not have an active street sweeping program. The University periodically sweeps their parking lots and garages. The University stores and disposes of street sweepings in accordance with applicable rules and regulations.

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 to target areas with potential for high pollutant loads
- ☐ 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 indicate 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:

As discussed in the Annual Requirement section of this report, the University currently does not have an active street sweeping program. The University periodically sweeps their parking lots and garages.

In Permit Year 4, the University finalized their catch basin cleaning optimization SOP. This SOP is incorporated as part of the University's Clean Water Best Practices Manual.

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

The University is a new, non-traditional MS4 permittee and as such is subject to delayed implementation of many of the permit requirements. The University is proactively advancing some of these requirements before their respective deadlines.

During Summer 2021, the University completed a 2,300 square-foot green roof garden for the O'Leary Learning Commons in South Campus. This project was a collaboration between the University's Office of Sustainability and the Lowell-based urban farming nonprofit Mill City Grows. The roof garden features approximately 500 new flower, herb, and vegetable plantings, and is located in a highly visible space on campus. Student employees from the Office of Sustainability will gain hands-on learning experiences by helping harvest and maintain the gardens. An article discussing the project and its benefits can be found at: <https://www.uml.edu/News/stories/2021/OLeary-rooftop-garden.aspx>

The University's Rist Institute for Sustainability and Energy hosted the annual northeast Sustainability Student Leaders Symposium in Spring 2022. During this symposium, a Rist-funded student team presented their research on expanding rooftop gardens across the University, and the power of these installations to retain stormwater and reduce CO2 emissions through building temperature regulation. The student research was presented at other smaller events across campus during Permit Year 4 to raise awareness about the multiple benefits of these installations.

The University took a leadership role in a comprehensive redesign of the Pawtucket Street corridor, a major arterial roadway that connects the University's two main campus hubs. Today, the corridor is completely paved from edge-to-edge of the right-of-way, and the roadway mostly connects to paved front yards used by land owners as makeshift driveways. In partnership with the City of Lowell, the University worked to advance a new design for Pawtucket Street that integrates landscaped planting beds for stormwater retention and infiltration. During Permit Year 4, the redesign of the roadway was formally approved and accepted for funding through the regional Transportation Improvement Plan overseen by Northern Middlesex Council of Governments.

The University's Weed Hall Plaza was redesigned in September 2021. The project resulted in a net reduction of 4,855 square feet of impervious land cover in the plaza.

The University's Greenhouse and Urban Agriculture Farm uses all organic growing methods without use of synthetic fertilizers or pesticides. The University has planted raised berms with Rhubarb to divert stormwater runoff to the existing drainage system onsite. Rainwater collected through the gutter system is funneled to an 1,800-gallon storage tank inside the greenhouse and is used to irrigate plants. Interpretive signage is located outside of the greenhouse to inform the public of the University's work to promote and implement sustainable stormwater management.

All leaf waste collected on campus is shredded and either used on the University's Urban Agriculture Farm or sent to Mill City Grows "Big Farm" Urban Farm location at 1001 Pawtucket Boulevard in Lowell.

UML has installed three pollinator habitats on campus in the past five years. Utilizing a native wildflower mix, these areas have significantly reduced the University's irrigation and maintenance needs while promoting the campus's unique approach to grounds management in an urban setting. In addition, the University's Director of Sustainability, Ruairi O'Mahony, is a member of the State of Massachusetts Pollinator Habitat Working Group.

The University applies fertilizers around campus four times per year. To reduce the impacts on stormwater runoff quality, the University selected a product that contains 0% phosphorus, 50% organic materials, and total nitrogen of approximately 3.5 pounds per 1,000 square feet.

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:

In accordance with the Massachusetts Year 2018/2020 Integrated List of Waters, the following changes have been made to the receiving waterbody impairments documented in the University's NOI:

-Merrimack River (MA84A-01): "Fish Passage Barrier" impairment added

-Merrimack River (MA84A-02): "Fish Passage Barrier" impairment added

These changes have been made in the University's latest Stormwater Management Plan Update and IDDE Program Manual. The inclusion of these impairments do not change any Appendix H requirements that are currently being completed as part of other bacteria/pathogen related impairment requirements.

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:**

*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:1A - Website Updates for General Public

Message Description and Distribution Method:

The University's Stormwater Program webpage currently includes educational information relevant to students, faculty, the general public, businesses, industries, and contractors. Examples of topics currently covered on the web page include: what is stormwater pollution?; why is stormwater runoff pollution a problem?; impaired waterbodies surrounding the campus; what causes stormwater runoff pollution?; why is the University addressing stormwater runoff?; what is the University doing?; what can you do to help?; and contact information for the University's Facilities Service Desk and Environmental Health and Safety Department to report any drainage or potential pollution issues.

In future Permit Years, the University plans to update the website to include additional educational messages for each of the four target audiences and include links to the EPA's MS4 Permit website and other informational web pages to increase general knowledge of the permit and stormwater quality.

The stormwater web page can be found at: <https://www.uml.edu/eem/ehs/storm-water-management/>

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:

BMP:1C - Storm Water Coordinator

Message Description and Distribution Method:

The UML Director of EHS appointed Carl Shreder as the University's Storm Water Coordinator to serve as a point of contact for information about UML's stormwater program and volunteer opportunities. Carl's contact information is included on the University's stormwater web page. This information will be updated annually to reflect any changes in the Storm Water Coordinator position.

The Storm Water Coordinator's contact information can be found at: <https://www.uml.edu/eem/ehs/storm-water-management/stormwater-contact.aspx>

Targeted Audience: Students, Faculty, Contractors, General Public

Responsible Department/Parties: UML Director of Environmental Health & Safety

Measurable Goal(s):

Post Storm Water Coordinator name and contact information on the University's stormwater webpage and update annually.

Message Date(s): Ongoing

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:1D - Brochures/Pamphlets

Message Description and Distribution Method:

The University finalized a policy regarding pets on campus in Summer 2021, which outlines the potential negative impacts pet waste can have on stormwater quality and makes pet owners and handlers responsible for managing their own pet's waste. Students that are approved to have a service or emotional support animal on campus are required to agree to this policy in writing, and to utilize either of the designated animal relief areas located on the University's east and south campuses. Maps of these relief areas are provided to pet owners during the service/emotional support animal approval process.

During the 2021-2022 school year, 26 students were approved for service/emotional support animals and were required to agree to the terms of the University's pet policy.

Targeted Audience: Students, Faculty, Employees, General Public

Responsible Department/Parties: UML Director of Environmental Health & Safety

Measurable Goal(s):

Publish/distribute annual message on pathogen controls (pet waste).

Message Date(s): Ongoing

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 University's SWMP can be requested by calling or emailing the University's Storm Water Coordinator or may be reviewed at the Lydon Library Circulation Desk, O'Leary Library Circulation Desk, and the Environmental Health and Safety Department, located at Wannalancit Suite 212.

During this Permit Year, the University's Director of Health and Safety planned to host a public meeting on stormwater to allow for students and the general public to comment on the SWMP. This meeting was not held this Permit Year because of COVID-19.

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:**

The University typically works with the UML Outdoor Recreation Program, Mass Sierra Club, and the Merrimack River Watershed Council to host an annual Merrimack River clean-up. The event, which was held for three years running in 2017, 2018, and 2019, did not happen in 2020, 2021, or 2022 as a result of COVID-19.

UML has established a Catch Basin Stenciling/Marking Program where University staff and student volunteers can stencil a message next to catch basins or install storm drain markers reminding people not to dump anything down the storm drains. Catch basin stenciling/marketing sends a clear message to all University employees, faculty, and students to keep trash, debris, leaf litter, and pollutants out of the storm drainage system. Currently, most of the University's catch basins have a "no dumping" message stenciled on, or near, their grate. Ways to get involved in the University's Stenciling/Marking Program are detailed at this web page: <https://www.uml.edu/EEM/EHS/Storm-Water-Management/Catch-Basin-Stenciling.aspx>

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:

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:

Total number of SSOs removed:

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:

The University has a base map of stormwater infrastructure which includes pipes, manholes, catch basins, and outfalls. This map is updated regularly as new information becomes available. A complete Phase I map will be prepared by the end of Permit Year 5, in accordance with MS4 Permit requirements for Non-Traditional Permittees.

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:

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: 0

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

As a new non-traditional Massachusetts MS4 Permittee, the University is not required to complete dry weather outfall screening until Permit Year 6.

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:

No catchments were investigated in Permit Year 4.

*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:

As a new non-traditional Massachusetts MS4 Permittee, the University is not required to completed problem area catchment investigations until Permit Year 10.

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:

*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:

Total number of illicit discharges removed:

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

To be conducted in future permit years upon verification of an illicit discharge.

Employee Training

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

The University's Storm Water Coordinator Carl Shreder conducted a total of 9 safety trainings during this Permit Year. Participants included a total of 117 Facilities Operations and Services staff members. Carl Shreder discussed the University's stormwater management program, pollution prevention best practices, and illicit discharge identification. Dates of the trainings and the number of staff at each session are as follows: 12 trainees on February 23, 2022; 13 trainees on March 30, 2022; 12 trainees on April 7, 2022; 15 trainees on April 12, 2022; 13 trainees on April 14, 2022; 15 trainees on April 20, 2022; 9 trainees on April 21, 2022; 13 trainees on April 26, 2022; and 15 trainees on April 27, 2022.

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:

The University is subject to State regulations and does not have the authority to develop ordinances for development on campus.

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:

The University does not have the authority to prepare its own development requirements, as all construction on campus is management by the State.

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:

As a new non-traditional Massachusetts MS4 Permittee, the University is not required to complete the Street Design and Parking Lots Report until Permit Year 6.

Green Infrastructure Report

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

The University is a non-traditional Massachusetts MS4 Permittee and is therefore not required to prepare a Green Infrastructure Report to meet the requirements of Section 2.3.6.C of the MS4 Permit.

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:

As a new non-traditional Massachusetts MS4 Permittee, the University is not required to complete the Street Design and Parking Lots Report until Permit Year 6.

The University completed two projects in Permit Year 4 to reduce the amount of impervious area on campus and retrofit existing infrastructure. The University's O'Leary Learning Commons Green Roof and Weed Hall Plaza projects are discussed in the Self Assessment section of this report.

MCM6: Good Housekeeping

***Catch Basin Cleaning**

- ☐ The catch basin cleaning optimization plan or schedule is not complete
- ☒ The catch basin cleaning optimization plan or schedule is attached to the email submission
- ☐ The catch basin cleaning optimization plan or schedule can be found at the following website:

*Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins **during this reporting period**.*

Number of catch basins inspected:

Number of catch basins cleaned:

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

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

Total number of catch basins:

If applicable:

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

If necessary, schedule adjustments will be made to prioritize catch basins located at known problem areas (low spots) and near construction activities (roadway construction, residential, commercial, or industrial development). If inspections and maintenance activities indicate excessive sediment and debris loading (i.e. the sump is more than 50% full during two consecutive routine inspections/cleanings), these catch basins will be marked for more frequent cleaning. Where necessary, street sweeping will be utilized to aid in minimizing catch basin sediment loading.

***Street Sweeping**

- ☐ The written procedures for sweeping streets and municipal-owned lots is not complete
- ☒ The written procedures for sweeping streets and municipal-owned lots is attached to the email submission
- ☐ The written procedures for sweeping streets and municipal-owned lots can be found at the following website:

*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:

If applicable:

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

The UML campus does not contain any rural uncurbed roadways with no catch basins.

The University currently does not have an active street sweeping program. The University does not use sand for winter road maintenance operations, and annual catch basin inspections show low amounts of sediment entering and settling in catch basins each year. The University will continue to evaluate their catch basin inspection results to identify whether street sweeping operations should be conducted on a regular basis in the future. The City of Lowell conducts their own street sweeping program which encompasses the public roadways that run adjacent to the University's owned and leased properties. The University periodically sweeps their parking lots and garages. The University stores and disposes of street sweepings in accordance with applicable rules and regulations. In May 2022, the University swept their East Parking Garage, Hall Street Garage, North Parking Garage, and the South Parking Garage and removed 5.6 cubic yards of material.

***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**

- ☐ The written procedures for winter road maintenance including the storage of salt and sand is not complete
- ☒ The written procedures for winter road maintenance including the storage of salt and sand is attached to the email submission
- ☐ The written procedures for winter road maintenance including storage of salt and sand can be found at the following website:

***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:

The University reviewed the need to develop and implement SWPPPs at University owned and operated facilities in accordance with Permit Part 2.3.7.b. These facilities included their maintenance garages at 8 James Street and 1485 Middlesex Street in Lowell. The University determined that SWPPPs are not needed since these facilities conduct vehicle servicing indoors and do not discharge pollutants from these activities to the MS4 or waterbodies.

During Permit Year 4, the University continued updating campus maps for Spill Pollution Control and Countermeasure (SPCC) planning. The University's SPCC plan was updated and now identifies oil storage locations on campus, the types of containment systems in place at each location, and best practices for protecting stormwater.

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):

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:

COVID-19 Impacts

Optional: If any of the above year 4 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 University's staff resources were limited during the 2021-2022 school year due to COVID-19. As a result, no educational messages related to Total Phosphorus receiving water impairments or contractor/business operations were distributed during Permit Year 4. However, the University works closely with Facilities Project Management to attend all project kick off meetings and provide instruction to contractors to ensure they comply with their Stormwater Management program

In Permit Year 5, the University plans to deliver the following educational materials:

--Letters to contractors and businesses outlining the potential impacts to stormwater from contractor and business operations.

--A spring brochure encouraging general stormwater pollution prevention regarding car washing, illegal

dumping into storm drain, and proper lawn maintenance.

--A summer brochure encouraging the proper management of pet waste.

--A fall brochure encouraging the proper disposal of leaf litter.

During this Permit Year, the University's Director of Health and Safety planned to host a public meeting on stormwater to allow for students and the general public to comment on the SWMP. This meeting was not held this Permit Year because of 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 ☒

- Complete IDDE ordinance
- Complete Construction/ Erosion and Sediment Control (ESC) ordinance
- Develop written IDDE plan including a procedure for screening and sampling outfalls
- Develop a written catchment investigation procedure and added the procedure to the SWMP

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 5 below:

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:

Thomas Miliano

Title:

Assoc. Vice Chancellor

Signature:



Date:

9/27/22

[Signatory may be a duly authorized representative]