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 Amherst

EPA NPDES Permit Number: MAR042056

Primary MS4 Program Manager Contact Information

Name: Theresa Wolejko Title: Asst Dir, Environmental Health and Safety

Street Address Line 1: 117 Draper Hall

Street Address Line 2: 40 Campus Center Way

City: Amherst State: MA Zip Code: 01003

Email: twolejko@umass.edu Phone Number: (413) 545-2682

Stormwater Management Program (SWMP) Information

SWMP Location (web address): https://ehs.umass.edu/umass-storm-water-management-plan

Date SWMP was Last Updated: 9 /24/2021

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.

Impairment(s)

☐ Bacteria/Pathogens ☐ Chloride ☐ Nitrogen ☐ Phosphorus
☐ Solids/ Oil/ Grease (Hydrocarbons)/ Metals

TMDL(s)

In State: ☐ Assabet River Phosphorus ☐ Bacteria and Pathogen ☐ Cape Cod Nitrogen
☐ Charles River Watershed Phosphorus ☒ Lake and Pond Phosphorus

Out of State: ☐ Bacteria/Pathogens ☐ Metals ☒ Nitrogen ☐ Phosphorus

Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. ***By checking each box you are certifying that you have completed that permit requirement fully.*** *If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.*

Year 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:

For FY21, catch basins were not inspected and cleaned due to Covid 19 manpower and budgetary restrictions. They were cleaned in FY20. The Oil water separators and vortech TSS separator were pumped 4 times.

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:

Nitrogen (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 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 listed in Table 3 of Attachment 1 to Appendix H already existing or installed in the regulated area by the permittee or its agents was tracked and the nitrogen removal by the BMP was estimated consistent with Attachment 1 to Appendix H. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated nitrogen 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:

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:

Several BMPs have been identified, the removal calculations will be documented in FY22

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:

Started a baseline chart for Phosphorous loading. Discussions with UMass, Friends of Lake Warner, and the town of Amherst for a potential constructed wetland

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? 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:

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**: 15

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: PE-4 Hold training classes for Physical Plant

Message Description and Distribution Method:

PE-4 Training classes for SPCC, Storm Water Pollution Prevention, Emergency Response Procedures

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Environment Department

Measurable Goal(s):

In person classes were not allowed on campus for most of FY21 because of Covid restrictions, so training was greatly reduced. 10 classes were held, 5 in person and 5 zoom classes

Message Date(s): trainings held between 7/1/20 through 6/30/21

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: PE-5 Preconstruction classes for contractors

Message Description and Distribution Method:

Safety Orientation Video for contractors to include stormwater management, SPCC, chemical storage and various other environmental precautions

Targeted Audience: Developers (construction)

Responsible Department/Parties: Environment Department

Measurable Goal(s):

Contractors on campus must watch the EHS Contractor Safety Training Annually if working on campus

Message Date(s): trainings held between 7/1/20 through 6/30/21

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:

In person training classes were not allowed on campus because of Covid restrictions.

BMP: #1 Think Blue Connecticut River Website

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Residents, business/institutional/commercial, developers, and industrial

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

A total of 3,196 people visited the Think Blue Connecticut River website during Year 3 and spent an average of 1minute, 38 seconds on viewing a total of 3,940 pages on stormwater best practices.

Message Date(s): July 1, 2020 through June 30, 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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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BMP: #2 Cigarette butts

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Residents

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

Decals on Public Works vehicles and public spaces had a roughly estimated 40,000 views per month in each community. Stormwater Committee members counted views of decals using a simple Excel calculator tool that PVPC developed based on methodology from the outdoor advertising sector (see calculator tool in table next page). Several members commented that the calculator seems to yield high numbers.

The Facebook advertisement reached 17,720 people identified as "smokers" and was shown 31,937 times; 152 smokers clicked on the link to check out the landing pages and there were 62 reactions. Facebook estimates that 4,330 viewers recall the campaign advertisement.

The posting on PVPC's Facebook page shows 20 shares that include Stormwater Committee members, the Connecticut River Conservancy, and Massachusetts Audubon Society's Arcadia Sanctuary.

The Springfield Republican, which printed an article and followed with an editorial estimates its audience at 83,000 readers.

Message Date(s):

The press release to local media was published in the Springfield Republican in their Business Section on August 3, 2020, and then picked up as an editorial in the same paper on August 6, 2020. See above weblink

Decals were displayed throughout Year 3 in each member municipality.
Facebook ad ran for 9 days, from May 20 to 28, 2021

PVPC's Facebook post went up on May 21, 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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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BMP:#3. Dumpster waste and avoiding contaminated flows

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

An e-mail about Think Blue Connecticut River resources on dumpsters for Boards of Health went to the full membership of the Massachusetts Health Officers Association, 650 people.

Analytics from the Think Blue Connecticut River website show a total of 84 people retrieved PDF resources posted on dumpster waste.

Message Date(s): The article went to the 650 members of the MHOA on March 24, 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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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BMP: #4. New MS4 development standards and erosion and sediment control

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Developers (construction)

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

Think Blue Connecticut River Booth Summary
Total Visits 71
Documents Viewed 68
Videos Viewed 7
Document (Views)
1-rhode-island-handbook-excerpt-on-project-phasing-pdf1602957915.pdf (11)
2-epa-construction-industry-brochure-pdf1602957934.pdf (14)
3-site-inspection-checklist-for-use-by-pioneer-valley-municipalities-pdf1602957970.pdf (16)
4-construction-and-post-construction-requirements-excerpt-from-ma-ms4-permit-and-recent-settlement-agreement-pdf1602958004.pdf (13)
5-low-impact-development-checklist-for-use-by-pioneer-valley-municipalities-pdf1602958025.pdf (14)
Video (Views)
PVPC MS4 Permit Presentation (7)
Tab (Clicks)
Think Blue Massachusetts (6)
Think Blue Connecticut River (5)

Message Date(s): October 21, 2020

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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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BMP: #5. Fleet maintenance to avoid spills and leaks

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Industrial facilities

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

Mailing to 126 MSGP permittees in the region.

Message Date(s): April 16, 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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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BMP: #6. Proper disposal of leaf litter

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Residents

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

Google ad that had a total of 78,056 impressions and which drew 110 clicks to the website landing page.

There were 244 views of the Leaf Hero landing page with analytics indicating that the average time spent by visitors on that resource page was an average of 3 minutes and 10 seconds. There were a total of 192 clicks to download posted PDF resources.

Message Date(s): Google ad ran from October 28 to November 4; PVPC Facebook posts began on October 29 and ran through November 4.

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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education

and Outreach to the University and surrounding community

BMP: #7. Importance of soil test, proper use of fertilizers, disposal of grass clippings

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Residents

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

The Facebook ad reached 38,160 individuals in Stormwater Committee communities who match “gardening,” “home improvement,” or “do it yourself” identifiers. Of this number, Facebook estimates that 7,200 people will recall the ad. Ninety-nine people clicked on the “Learn More” button to go the Think Blue Connecticut River landing page on lawn care.

The Facebook post in the region was shared by several Stormwater Committee communities, helping to drive the number of views on the website landing page to a total of 161 with analytics indicating that the average time spent by visitors on that resource page was 1 minute and 42 seconds. There were a total of 132 downloads on the posted PDF resources.

Message Date(s): Facebook ad ran for 6 days, from June 25th to June 30th; PVPC posted the regional Facebook message on June 23.

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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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BMP: #8. Proper management of pet waste

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Residents

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

The Google ad placed at time of licensing reached 19,227 people identified as dog owners in targeted communities with 34 people clicking through to the pet waste pick up pledge. It is not clear yet whether this poorer performance in Year 3 compared to Year 2 has to do with the difference between Google and Facebook or advertising versus boosting posts by zip code (with 4 Facebook posts boosted by zip code in Year 2, we

reached 15,552 people who followed through with 406 clicks).

PVTA estimates that the bus panels displayed through a three-month period have produced more than 1.5 million impressions.

Numbers from the supplemental Facebook ad are not yet available.

During Year 3, Think Blue Connecticut River pet waste page on the website had 700 page views with the analytics indicating that the average time spent by visitors on that resource page was 2 minutes and 3 seconds. Of the total 390 people who clicked on the pet waste pledge, there were about 100 new people who made the commitment to pick up pet waste in Year 3. PVPC's social media consultant has recommended a few adjustments to the pledge form to help increase likelihood of people pledging: better explain why important to pledge, and how data requested will be used. These changes have been made for Year 4.

Message Date(s): Time of licensing, Google ad ran for 11 days, February 8 through 19, 2021
PVTA bus ads ran late June to September 2021
Facebook ad ran week of September 13 through 17, 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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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BMP: #9. Proper septic system care

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Residents

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

Facebook posts drew a total of 20 "shares." There were a total of 42 views of the Think Blue Connecticut River website septic system landing page with people spending an average of 50 seconds. Of that total, 32 people clicked to the septic system infographic to learn more.

Message Date(s): September 16 and September 17, 2020

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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

BMP: #10. Proper disposal of leaf litter

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

Mailing to 150 professional land care companies operating in Stormwater Committee member municipalities

Message Date(s): October 30, 2020

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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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BMP: #11. Importance of soil test, proper use of fertilizers, disposal of grass clippings

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

80 lawn care professionals from across MA attended the session

Message Date(s): March 26, 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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

BMP: #12. Proper management of pet waste - businesses

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Connecticut River Stormwater Committee

Measurable Goal(s):

See number 8 above. Also, Google analytics from the Think Blue Connecticut River website also indicate that businesses and institutions continued to access "There is no Poop Fairy," materials produced in Year 2, with 72 downloads of the template and the quotes provided to produce the sign.

Message Date(s): Time of licensing, Google ad ran for 11 days, February 8 through 19, 2021
PVTA bus ads ran late June to September 2021
Facebook ad ran week of September 13 through 17, 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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

BMP: #13. Fowl Water messaging through state-wide campaign

Message Description and Distribution Method:

See: https://thinkblueconnecticutriver.org/wp-content/uploads/2021/09/CT-River-SWC-Annual-Report-Narrative-MCM-1-Year-3.pdf

Targeted Audience: Businesses, institutions and commercial facilities, residents

Responsible Department/Parties: Think Blue Massachusetts and Water Words that Work

Measurable Goal(s):

Water Words that Work reports that within the Connecticut River Stormwater Committee region the campaign resulted in an estimated:
211,881 Facebook and Instagram impressions
471,252 YouTube ad impressions
83,101 Spanish language impressions

Message Date(s): May 17 to June 4, 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:

The University partnered with the connecticut River Stormwater Committee to enhance our Public Education and Outreach to the University and surrounding community

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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**:

PI-1 Provided the opportunity for the public to review and comment on the SWMP as posted on our website
PI-3 Website content for handling of hazardous, universal and solid waste is posted
PI-4 We handled 4,180 hazardous waste pickup requests from the UMass community

Covid impacted a lot of normal involvement as most faculty and staff were not on campus and we also had limited staff that were on campus only for essential operations. Some research did occur and FY22 has started to open things back up.
- We encourage students to be members of committees.
- A lot of new and innovative ideas come from our professors and students.
- Students and staff have partner with Facilities and Campus Planning as well as Physical Plant during design as well as during construction.

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**:

Our faculty and staff are great resources for soil testing, composting, water quality.
The University is a living classroom!
Faculty, Students, Staff and the Friends of Lake Warner looking into the potential for a constructed wetland to help with phosphorous loading on Tan Brook. Zoom meetings held on 11/17/20 and 3/29/21

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:

We did not make any improvements on maps because of Covid furloughs, layoffs and budgetary constraints

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:

Outfall screening scheduled for October 2021, note no email submission, cant uncheck above

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:

Outfall screening scheduled for October 2021

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:

We are mapping catchment delineations using contour maps in FY22

*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:

We are mapping catchment delineations using contour maps in FY22

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:

Outfall screening scheduled for October 2021

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed **during this reporting period**.*

Number of illicit discharges identified: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallons/day

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

Total number of illicit discharges identified: 0

Total number of illicit discharges removed: 0

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

Employee Training

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

Training is part of FY22 prior to outfall screening

MCM4: Construction Site Stormwater Runoff Control

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed **during this reporting period**.*

Number of site plan reviews completed: 0

Number of inspections completed: 0

Number of enforcement actions taken: 0

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

Due to Covid, there were no construction projects that exceeded 1 acre.
Plan review and inspections after rain events for Transit Parking Lot were performed with no issues.

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:

All projects on campus are under the control of a UMass or UMass affiliated project manager. As built drawings are required as part of the bid specification under Section 017700 Contract Close out . As built drawings are maintained electronically on the FCP OCE drive.

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:

Street design and parking lot modifications are planned and managed by the University.

Green Infrastructure Report

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

In 2010, the university created the Green Building Guidelines, which provide a framework for approaching new construction and major renovation projects on campus. The guidelines, developed and updated by students, faculty, and staff, encourage active conversations between designers, stakeholders, and building users. It requires that all new design and major renovations be certified LEED Silver plus.
One of the University's 6 key over arching principals is to Control Stormwater Runoff.
See https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1006&context=cp_reportsplans
Landscape Design:
Creation of low mow, no now, and meadows in the campus landscape, which include a balanced blend of fine fescue grasses in no mow combines each variety's individual characteristics to create a turf that:
• Grow to form a dense sod
• Thrive in full sun to partial shade
• Require little if any fertilization
• Need minimal watering (only during extended dry periods)
• Resist most turf grasses diseases
• Biologically reduce weed growth
• Reduce lawn maintenance dramatically
• Serve as an ecological alternative to traditional high maintenance lawns
Please see the attached email for Green infrastructure BMPs on campus which includes, bioswales, biocells and a green roof.

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:

Transit parking lot asphalt was removed and replaced. As part of this project an Oil Water Separator was added to stop any potential spills from the diesel and gas pumps.

MCM6: Good Housekeeping

***Catch Basin Cleaning**

Describe the status of the catch basin cleaning optimization plan:

Storm drains are inspected twice a year, and cleaned out as required. See SWMP section 12.

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:

https://ehs.umass.edu/umass-storm-water-management-plan

*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: 0

Number of catch basins cleaned: 0

Total volume or mass of material removed from all catch basins: 0 [Select Units]

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

Total number of catch basins: 3,600

If applicable:

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

***Street Sweeping**

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

UMass Landscaping Operates a street sweeper. All University owned roads are swept in the spring and fall with additional sweeping of streets and parking lots performed during non winter conditions as needed. Records can be found at EH&S

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

- ○ Number of miles cleaned:
- ◉ Volume of material removed: 195.6 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:

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:

Landscape Services uses a brine solution of rock salt and water to pretreat hardscape surfaces ahead of a storm (protects against ice formation, but uses only one quarter of the salt normally used.)
Salt is stored in the covered Salt Storage Building on Tilson Farm Road

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:

The Campus SWPPP is scheduled to be developed in FY22

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:

O&M Procedures for Stormwater Treatment Structures

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

The O&M Procedures for various operations on campus exist. Required PMs are listed in the Universities Workplace Management System, Tririga.

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:

Phosphorous samples from Tan brook

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 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:

As noted above, for FY21, catch basins were not inspected and cleaned due to Covid 19 manpower and budgetary restrictions. They were cleaned in FY20.

***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:

*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:	Theresa M Wolejko	Title:	Asst Dir, Env Health & Safety
Signature:	Theresa Wolejko Digitally signed by Theresa Wolejko Date: 2021.09.27 11:12:39 -04'00'	Date:	09/27/21

[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 MassDEP: laura.schifman@mass.gov

Paper Signature:

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

Print Signature Page

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.

Lock Form