Year 6 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2023-June 30, 2024

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

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2023 and June 30, 2024 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: Bridgewater State University

EPA NPDES Permit Number: MAR042027

Primary MS4 Program Manager Contact Information

Name: Karen Jason Title: Vice President of Operations

Street Address Line 1: Division of Operations

Street Address Line 2: Boyden Hall, 131 Summer Street, Room 216

City: Bridgewater State: MA Zip Code: 02325

Email: kjason@bridgew.edu Phone Number: (508) 531-2750

Stormwater Management Program (SWMP) Information

SWMP Location (publicly available web address): https://www.bridgew.edu/office/stormwater-management

Date SWMP was Last Updated: 6/30/2024

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

Office of Environmental Health and Safety (Operations Center), 200 Great Hill Drive, Room 221

Part II: Self-Assessment

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

Impairment(s)

☒ 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.*

Annual Requirements

☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements

☒ Kept records relating to the permit available for 5 years and made available to the public

☒ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented

- ○ This is not applicable because we do not have sanitary sewer
- ◉ This is not applicable because we did not find any new SSOs
- ○ The updated SSO inventory is attached to the email submission
- ○ The updated SSO inventory can be found at the following publicly available website:

☒ Updated system map due in year 10 with information from completed catchment investigations

☒ Provided training to employees involved in IDDE program within the reporting period

☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters

☒ All curbed roadways were swept at least once within the reporting period

☒ Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt

☒ Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities

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

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

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

Annual Requirements

*Public Education and Outreach**

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

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

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

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)

Structural BMPs

☒ Installed a structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries. The type of BMP installed is (*e.g. biofiltration)*:

Infiltration Trench

☒ Any structural BMPs listed in Attachment 3 to Appendix F 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 3 to Appendix F. 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.

- ○ No BMPs were installed
- ◉ The above referenced BMP information is attached to the email submission
- ○ The above referenced BMP information can be found at the following publicly available website:

Total estimated nitrogen removed in lbs/year from the installed BMPs: 0.02

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 information for the installed BMP as required can be found in the attachments referring to Outfall 27B.

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

Annual Requirements

*Public Education and Outreach**

☒ Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers

☒ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

☒ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

☒ Increased street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

Structural BMPs

☒ Installed a structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries. The type of BMP installed is (*e.g. biofiltration)*:

Infiltration Trench

☒ Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP, and the estimated phosphorus removed in mass per year by the BMP were documented.

- ○ No BMPs were installed
- ◉ The above referenced BMP information is attached to the email submission
- ○ The above referenced BMP information can be found at the following publicly available website:

Total estimated phosphorus removed in **lbs/year** from the installed BMPs: 0.0004

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 information for the installed BMP as required can be found in the attachments referring to Outfall 27B.

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

Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

- (●) Yes
- ( ) No

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

Under the 2018/2020 and 2022 303(d) list, Town River (MA62-13) impairments include Non-native Aquatic Plants, Benthic Macroinvertebrates, and Enterococcus and have been elevated to a category 5.
The list also indicates Taunton River (MA62-02) Phosphorus and Nitrogen are elevated to a category 5 and Phosphorus has been added to the pre-existing Enterococcus and Fecal Coliform.
Impairments to Mount Hope Bay and South Brook remain unchanged. BSU was tracked the 303(d) list updates and has made adjustments to MS4 permit documents as needed to reflect the Final 2022 303(d) list.

Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

MCM1: Public Education

Number of educational messages completed **during this reporting period**: 5

*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:Electronic Brochures / Handouts

Message Description and Distribution Method:

Email and pamphlets with educational material on stormwater management, nitrogen, and pathogen-related maintenance practices for stormwater management sent in BSU's Community Announcements to all faculty and staff

Targeted Audience: Faculty, Staff, and Students

Responsible Department/Parties: EH&S - Patricia Delaney

Measurable Goal(s):

Insspection of campus grounds during routine maintenance by Facilities Management staff will be used to assess the overall effectiveness of the educational program

Message Date(s): 10/12/2023, 10/24/2023, 11/2/2023, 11/19/2023, 3/19/2024, 3/28/2024, 4/4/2024, 4/16/2024, 4/25/2024

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 messages were updated to reflect the phosphorus impairment and include language on how the target audience can help reduce phosphorus in the watershed.

BMP:School Curricula/Programs

Message Description and Distribution Method:

BIOL117 - Fall and Spring
CHEM489 - Spring
GEOG130 - Summer, Fall, Spring
GEOG194 - Summer, Fall, Spring
SUST101 - Fall and Spring

Targeted Audience: Students

Responsible Department/Parties: Faculty

Measurable Goal(s):

The frequency and registration of classes will be used to assess the overall effectiveness of the educational program.

Message Date(s): School year 2023 - 2024

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:Public Outreach Class

Message Description and Distribution Method:

The Watershed Access Lab offers a class module called "Does This Parking Lot Look Green to You?". Educators can bring their middle school or high school students to learn about hydrology, stormwater runoff, and the use of low impact design for improving water quality. Several hundred students attend each year mostly from southern Massachusetts.

Targeted Audience: Visitors

Responsible Department/Parties: Watershed Access Lab, Faculty

Measurable Goal(s):

The number of classes scheduled by educators each school year will be used to assess the overall effectiveness of the educational program.

Message Date(s): 56 workshops, 1344 students

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:

This public education outreach opportunity was shared during a Stormwater Committee meeting.

BMP:Webpage

Message Description and Distribution Method:

Educational information on stormwater issues and management provided on dedicated stormwater webpage on BSU's website. Note: All web content needs to be universally accessible prior to posting. Website will be continually updated with additional content as it becomes finalized.

Targeted Audience: Faculty, Staff, Students, and Visitors

Responsible Department/Parties: EH&S - Patricia Delaney

Measurable Goal(s):

A webpage visits tracker will be used to assess the overall effectiveness of the educational program.

Message Date(s): Webpage launched in June 2019 and updated throughout each reporting period.

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:Workshop

Message Description and Distribution Method:

Workshop targeting stormwater issues and the Stormwater Management Program presented on campus.

Targeted Audience: Faculty, Staff, Students, and Visitoors

Responsible Department/Parties: EH&S - Patricia Delaney

Measurable Goal(s):

The number of attendees will be used to assess the overall effectiveness of the educational program.

Message Date(s): 4/23/2024

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 workshop was incorporated with the Public Outreach and Participation Meeting to provide background information about why managing stormwater is important prior to reviewing elements of the SWMP and opening the meeting to questions and comments. This format was determined to be more efficient and effective to provide a more comprehensive experience for the attendees.

BMP: Mandela Washington Fellowship

Message Description and Distribution Method:

The cohort of Fellows hosted by Bridgewater State University will be part of a group of 700 Mandela Washington Fellows hosted at 28 educational institutions across the United States.
After their Leadership Institutes, Fellows will participate in the Mandela Washington Fellowship Summit, where they will take part in networking and panel discussions with each other and with U.S. leaders from the public, private, and nonprofit sectors.

Targeted Audience: Young African Leaders Initiative (YALI)

Responsible Department/Parties: Karen Jason, Division of Operations

Measurable Goal(s):

Panel discussion on educating youth leaders of the importance of proper stormwater management and the MS4 permit.

Message Date(s): July 24, 2023

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:

This opportunity was proposed in a Stormwater Committee meeting.

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**:

BSU held a public presentation on April 23, 2024. The presentation was held in person on campus and also hosted virtually via zoom. The presentation educated the public on stormwater runoff and how it effects local and regional waterbodies, the purpose of the MS4 permit, and the steps BSU has taken to achieve the permit goals. In addition, the presentation focused on ways the community can get involved through efforts such as earth day cleanup and manging pet waste.

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

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

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

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

*Below, report on the number of SSOs identified in the MS4 system and removed **during this reporting period**.*

Number of SSOs identified: 0

Number of SSOs removed: 0

MS4 System Mapping

Percent of Phase II map complete: 99

Optional: Provide additional status information regarding your map:

BSU's Stormwater Map is continually updated based on field observations and system changes (either maintenance or new construction).

Screening of Outfalls/Interconnections

If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.

◉ No outfalls were inspected

○ The above referenced outfall screening data is attached to the email submission

○ The above referenced outfall screening data can be found at the following publicly available website:

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

Number of outfalls screened: 0

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

Percent of outfalls screened: 100

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

Formal outfall screening and dry weather monitoring in previous permit years.

Catchment Investigations

If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.

◉ No catchment investigations were conducted

○ The catchment investigation data is attached to the email submission

○ The catchment investigation data can be found at the following publicly available website:

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

Number of catchment investigations completed this reporting period: 0

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

Percent of total catchments investigated: 100

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

The catchment assessments including dry weather screening and SVF review were refined in year 4 and investigations of identified catchments were performed in year 5. Wet weather screening is intended to be performed in year 7.

IDDE Progress

If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.

- (•) No illicit discharges were found
- ( ) The illicit discharge removal report is attached to the email submission
- ( ) The illicit discharge removal report can be found at the following publicly available website:

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

Number of illicit discharges identified: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallons/day

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

Total number of illicit discharges identified: 0

Total number of illicit discharges removed: 0

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

Wet weather screening is intended for year 7.

Employee Training

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

Employee training was performed in person on April 23, 2024.

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:

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

Ordinance or Regulatory Mechanism

Date update was completed (due in year 3): June 2024 (Revised)

Website of ordinance or regulatory mechanism: https://www.bridgew.edu/office/stormwater-management

As-built Drawings

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

Number of as-built drawings received: 0

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

Street Design and Parking Lots Report

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

BSU is a non-traditional MS4; per Section 5.1.3. of the Permit non-traditional MS4s do not need to meet the requirements of part 2.3.6., which includes the assessment of local regulations. BSU is subject to the design standards of the Town of Bridgewater for site and stormwater design and continues to coordinate with local officials on MS4 related matters. BSU's Stormwater Policy includes erosion control, low impact development techniques, and stormwater design criteria for campus projects including campus roadways and parking lots.

Green Infrastructure Report

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

BSU is a non-traditional MS4; per Section 5.1.3. of the Permit non-traditional MS4s do not need to meet the requirements of part 2.3.6., which includes the assessment of local regulations. BSU is subject to the design standards of the Town of Bridgewater for site and stormwater design and continues to coordinate with local officials on MS4 related matters.
BSU's Stormwater Policy encourages Green Infrastructure and low impact development techniques.

Retrofit Properties Inventory

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

Spring Street parking lot is located off Plymouth Street in the northwest corner of campus and is used for BSU’s commuter students. There is currently a wet basin on the northern border of the Spring Street parking lot. To capture and remove more nitrogen from BSU’s MS4 system, the wet basin could be converted into a gravel wetland.

Harrington Hall and Woodward Hall are located on the southwest corner of BSU’s campus. These buildings border an expansive parking lot for the students, faculty, and staff. The parking lot is also bordered by a wetland at its southwest corner. Bioretention basins are being considered to integrate into the new parking lot layout as islands, slowing down both traffic and stormwater runoff.

Another gravel wetland is being considered on the current Burrill Office Complex site located central to campus off Burrill Ave. The building is slated to be demolished and the offices relocated to another building. Because the site is in a low-lying flat area surrounded by wetlands with poorly draining soils, a gravel wetland is being considered to allow for the natural wetlands to encroach and renew some ecological and hydrologic value in the site.

The Burnell Hall parking lot is located in the northern portion of campus off Hooper Street. This site was chosen for a BMP retrofit opportunity because it has an above average nitrogen loading rate due to its above

average imperviousness. In this case, the existing wet pond at Burnell is proposed to be rehabilitated and expanded to treat runoff from the parking lots and some roof area.

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

The Maxwell Library downspouts were redirected to a stormwater retrofit (crushed stone infiltration trench).

MCM6: Good Housekeeping

Catch Basin Cleaning

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

Number of catch basins inspected: 175

Number of catch basins cleaned: 2

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.

Total number of catch basins: 175

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 a catch basin sump was more than 50% full during two consecutive routine inspections, this information was shared with BSU to clean the catch basin and monitor the area to determine the cause of sediment accumulation.

Additional Note - The total number of Catch Basins between year 5 and year 6 differs. Mapping is continuously updated and the number of catch basins has been refined. The maintenance reporting maps were updated accordingly and will be further updated in Year 7.

Street Sweeping

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

- (●) Number of miles cleaned: 17.5
- ( ) Volume of material removed: [Select Units]
- ( ) Weight of material removed: [Select Units]

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: 2

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

No corrective actions were necessary.

Additional Information

Monitoring or Study Results

Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.

- (●) Not applicable
- ( ) The results from additional reports or studies are attached to the email submission
- ( ) The results from additional reports or studies can be found at the following publicly available website(s):

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

Additional Information

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

Year 7

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

Yes, I agree ☒

- Complete investigations of catchments associated with Problem Outfalls
- Complete investigations of catchments where any information gathered on the outfall/interconnection identifies sewer input

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction

bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining

Provide any additional details on activities planned for permit year 7 below:

Wet weather screening is slated for Year 7 to fulfill the requirements of the IDDE Plan.

Part V: Certification of Small MS4 Annual Report 2023

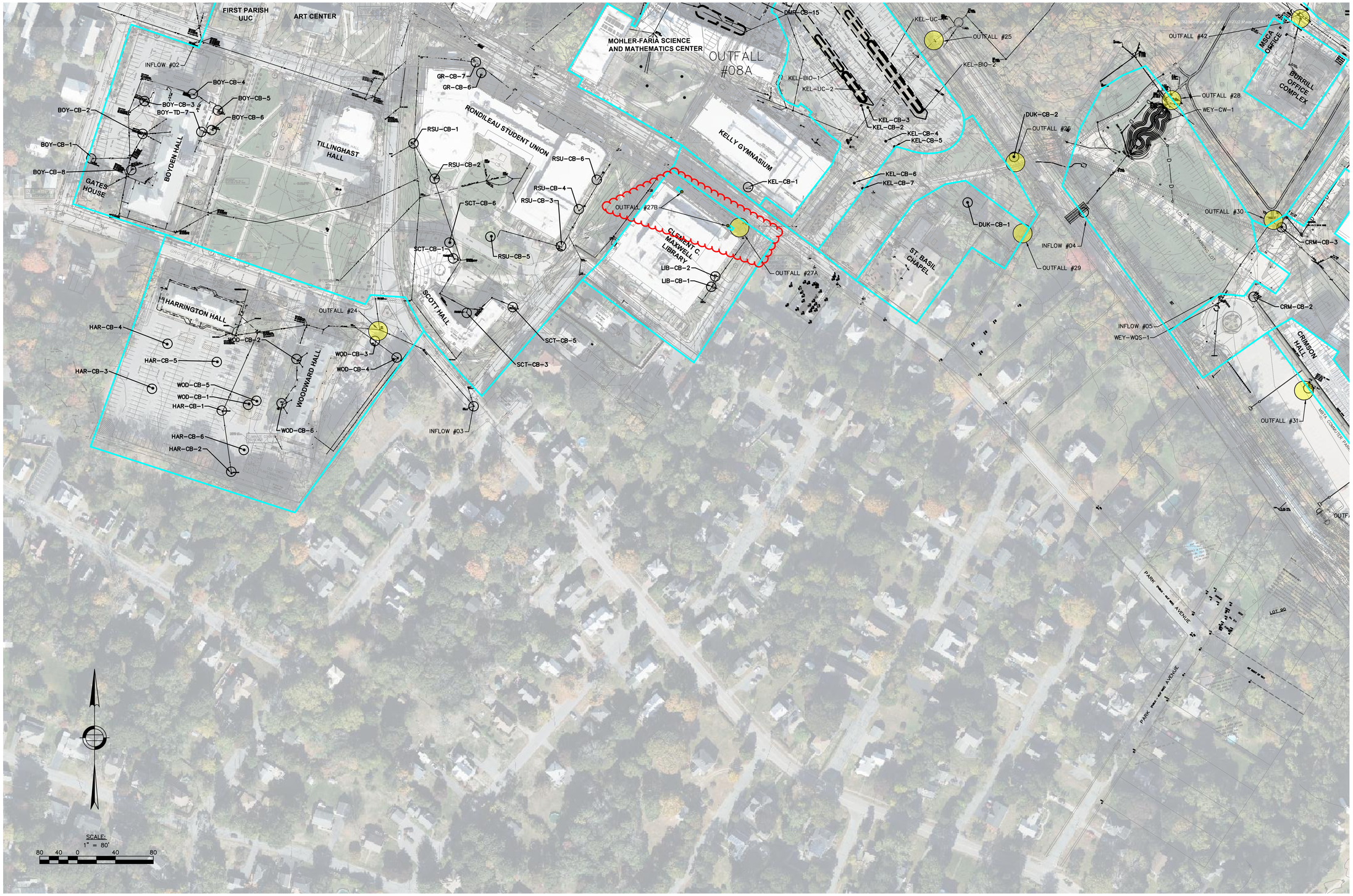
40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: KAREN W. JASON Title: VICEPRESIDENT FOR OPERATIONS

Signature: Date: 9/23/24

[Signatory may be a duly authorized representative]



Nitsch Engineering

www.nitscheng.com
2 Center Plaza, Suite 430
Boston, MA 02108
T: (617) 338-0063
F: (617) 338-6472

- Civil Engineering
- Land Surveying
- Transportation Engineering
- Structural Engineering
- Green Infrastructure
- Planning
- GIS

NITSCH PROJECT #	11917
FILE:	11917.DWG
SCALE:	1"=80'
DATE:	05/8/2024
PROJECT MANAGER:	JLJ
SURVEYOR:	
DRAFTED BY:	BJB
CHECKED BY:	JLJ

REV.	COMMENTS	DATE
	REVISIONS	

OUTFALL AND BMP MAPPING - SOUTHWEST

BRIDGEWATER STATE UNIVERSITY
131 SUMMER ST. BRIDGEWATER, MA 02324

PREPARED FOR:

BRIDGEWATER STATE UNIVERSITY
131 SUMMBER ST. BRIDGEWATER, MA 02324

SHEET: 4

1.3

OF 5 REV.

Bridgewat	Treatment Credit and Adjusted Load											Retrofit Opportunities							
OUTFALL NUMBER	Constructed BMP Type	BMP Name	Non BMP Outfall	Nitrogen & Phosphorous Removal Category	% N Load Reduction by BMP Type (Est. 1" runoff treated)***	Adjusted N Load (lb/yr)	Adjusted Avg N Load (lb/ac/yr)	Soil Type	% P Load Reduction by BMP Type (Est. 1" runoff treated)	Adjusted P Load (lb/yr)	Adjusted Avg P Load (lb/ac/yr)	Retrofit BMP Type	Nitrogen Removal Category	% N Load Reduction by BMP Type (Est. 1" runoff treated)*	Adjusted N Load (lb/yr)	Adjusted Avg N Load (lb/ac/yr)	% P Load Reduction by BMP Type (Est. 1" runoff treated)**	Adjusted P Load (lb/yr)	Adjusted Avg P Load (lb/ac/yr)
1	Wet Basin	SPR-WB-1		Stormwater Treatment	33%	9.6	6.0		53%	0.8	0.5								
2	Wet Basin	SPR-WB-2		Stormwater Treatment	33%	10.9	7.3		53%	0.9	0.6	Gravel Wetland	Stormwater Treatment	68%	5.2	3.5	61%	0.7	0.5
3	Wet Basin	SPR-WB-2		Stormwater Treatment	33%	30.5	8.9		53%	2.5	0.7	Gravel Wetland	Stormwater Treatment	68%	14.6	4.3	61%	2.1	0.6
4	Wet Basin	SPR-WB-3		Stormwater Treatment	33%	1.8	8.5		53%	0.2	0.7								
5	Wet Basin	SPR-WB-3		Stormwater Treatment	33%	5.5	7.7		53%	0.5	0.6								
6	Infiltration Basin	DMF-INF-1		Runoff Reduction	56%	1.6	2.8	A	97%	0.0	0.0								
7A	None	None	DMH	None	0%	5.6	10.5		0%	0.6	1.2								
7B	None	None	DMH	None	0%	158.1	9.0		0%	18.1	1.0								
7C	Underground Chamber	DMF-UC-1		Runoff Reduction	56%	3.8	3.9	A	96%	0.0	0.0								
8A	Underground Chamber	DMF-UC-2		Runoff Reduction	56%	20.4	5.1	C	92%	0.4	0.1								
8B	None	None		None	0%	8.5	12.6		0%	1.0	1.5								
9	None	None	DMH	None	0%	52.8	10.3	C	0%	6.1	1.2	Bioretention	Runoff Reduction	32%	35.9	7.0	53%	2.9	0.6
10	None	None	DMH	None	0%	10.5	11.0		0%	1.2	1.3								
11	Infiltration Basin	HOOP-INF-1		Runoff Reduction	56%	6.3	6.1	C	93%	0.1	0.1								
12	Wet Basin	HOOP-WB-2		Stormwater Treatment	33%	8.9	9.0		53%	0.7	0.7								
13	Wet Basin	HOOP-WB-2		Stormwater Treatment	33%	3.8	4.7		53%	0.3	0.4								
14	None	None		None	0%	18.8	6.0	B	0%	2.1	0.7	Gravel Wetland	Stormwater Treatment	68%	6.0	1.9	61%	0.8	0.3
15	None	None		None	0%	166.4	6.7	C	0%	18.5	0.7	Permeable Pavement	Runoff Reduction	76%	39.9	1.6	75%	4.6	0.2
16	Underground Chamber	TIN-UC-2		Runoff Reduction	56%	8.9	4.2	C	92%	0.2	0.1								
17	Wet Basin	BUR-WB-1		Stormwater Treatment	33%	13.4	7.2		53%	1.1	0.6								
18	None	None		None	0%	14.1	8.8		0%	1.6	1.0								
18A	Wet Basin	TIN-WB-1		Stormwater Treatment	33%	9.1	4.0		53%	0.7	0.3								
19	Wet Basin	TIN-WB-2		Stormwater Treatment	33%	12.3	6.0		53%	1.0	0.5								
20	Infiltration Basin	GRT-INF-1		Runoff Reduction	56%	7.6	2.0	B	95%	0.1	0.0								
21	Infiltration Basin	GRT-INF-2		Runoff Reduction	56%	6.1	1.9	B	95%	0.1	0.0								
22	Swale	GRT-SW-2		Runoff Reduction	56%	3.6	2.6		21%	0.7	0.5								
23	Swale	GRT-SW-3		Runoff Reduction	56%	4.7	2.2		21%	0.9	0.4								
24	None	None	CB	None	0%	67.2	11.9	C	0%	7.9	1.4	Bioretention	Runoff Reduction	32%	45.7	8.1	53%	3.7	0.7
25	Underground Chamber, Infiltration Basin	KEL-UC-1, 2; KEL-BIO-1,2		Runoff Reduction	56%	16.3	5.1	B	94%	0.3	0.1								
26	None	None	CB	None	0%	5.5	4.7		0%	0.6	0.5								
27A	None	None	DMH	None	0%	23.6	12.4		0%	2.8	1.5								
27B	Infiltration Trench	LIB-INF-1 & 2		Runoff Reduction	56%	0.02	6.6	C	92%	0.0004	0.1								
28	Wet Basin	WEY-CW-1		Stormwater Treatment	33%	9.5	3.0		53%	0.7	0.2								
29	None	None	None	None	0%	7.7	6.3		0%	0.9	0.7								
30	None	None		None	0%	124.8	8.2		0%	14.2	0.9								
31	None	None	DMH	None	0%	6.2	11.1		0%	0.7	1.3								
32A	None	None	DMH	None	0%	22.0	10.2		0%	2.6	1.2								
32B	None	None		None	0%	11.7	7.6		0%	1.3	0.9								
33	None	None	DMH	None	0%	30.8	7.5		0%	3.5	0.8								
34	None	None	DMH	None	0%	3.6	11.9		0%	0.4	1.4								
35	None	None	DMH	None	0%	4.9	9.1		0%	0.6	1.0								
36	None	None	DMH	None	0%	15.3	13.8		0%	1.8	1.6								
37	Wet Basin	Wey-WB-1		Stormwater Treatment	33%	13.5	8.2		53%	1.1	0.7								
38	Infiltration Basin	SHD-INF-1, SHD-INF-2		Runoff Reduction	56%	25.5	4.1	C	93%	0.5	0.1								
39	Wet Basin	OPS-WB-1		Stormwater Treatment	33%	27.7	6.8		53%	2.3	0.6								
40	Wet Basin	OPS-WB-2		Stormwater Treatment	33%	47.1	7.1		53%	3.8	0.6								
41	None	None	DMH	None	0%	1.1	4.9		0%	0.1	0.5								
42A	None	None	DMH	None	0%	18.7	6.1		0%	2.1	0.7								
42B	None	None	DMH	None	0%	8.0	12.2	C	0%	0.9	1.4	Gravel Wetland	Stormwater Treatment	68%	6.0	2.0	61%	0.4	0.6
43	None	None	DMH	None	0%	5.9	13.2		0%	0.7	1.6								
44	Dry Well	M&D-DW-1 thru 5		Runoff Reduction	56%	4.0	1.8	C	93%	0.1	0.0								
45	None	None	DMH	None	0%	23.8	15.0		0%	2.8	1.8								
Totals						**12**	**1,128**	**384**		**18**	**113**	**37**				**153**	**28**		**15.2**	**3.3**
Average						**0.2**	**21.7**	**7.4**		**0.3**	**2.2**	**0.7**				**21.9**	**4.0**		**2.2**	**0.5**