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1 Introduction

MassBay Community College is one of a number of non-traditional Small Municipal Separate Storm Sewer Systems (MS4s) regulated under the Environmental Protection Agency’s (USEPA) National Pollutant Discharge Elimination System (NPDES) Phase II rule (40 CFR 122). The rule requires regulated operators of MS4s to develop a Stormwater Management Program (SWMP) and Best Management Practices (BMPs) to reduce the impacts of stormwater discharges. The requirements are outlined in the NPDES General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts, which was signed on April 4, 2016, with an effective date of July 1, 2018, hereinafter referred to as the 2016 MS4 Permit.

This SWMP Plan describes and details the activities and measures that will be implemented to meet the terms and conditions of the permit.

1.1 Regulatory Background

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in the United States Environmental Protection Agency’s effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring operators of Small Municipal Separate Storm Sewer Systems in urbanized areas, through the use of National Pollutant Discharge Elimination System permits, to implement programs and practices to control polluted stormwater runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Under the Phase II rule all MS4s with stormwater discharges from Census designated Urbanized Area are required to seek NPDES permit coverage for those stormwater discharges.

On May 1, 2003, EPA Region 1 issued its Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2003 MS4 Permit) consistent with the Phase II rule. The 2003 MS4 Permit covered "traditional" (i.e., cities and towns) and "non-traditional" (i.e., certain Federal and state agencies and/or facilities) MS4 Operators located in the states of Massachusetts and New Hampshire. This permit expired on May 1, 2008 but remained in effect until operators were authorized under the USEPA’s 2016 NPDES General Permit for Stormwater Discharges from MS4 in Massachusetts, hereafter referred to as the “2016 Massachusetts MS4 Permit”, “2016 Permit”, “MS4 Permit, and/or “2016 MS4 Permit” which replaces the 2003 MS4 Permit.

The 2016 Massachusetts MS4 Permit was signed on April 4, 2016 with an original effective date of July 1, 2017, however was postponed by 1 year to a new effective date of July 1, 2018. The permit was cosigned by the Massachusetts Department of Environmental Protection (MassDEP) and thus is jointly regulated by EPA and MassDEP for Massachusetts permittees.
The following sections outline how MassBay Community College, hereafter referred to as “MassBay College” or “MassBay” will meet Phase II regulatory and schedule requirements.

### 1.2 MS4 Program

As required by the 2016 MS4 Permit, MassBay College submitted a Notice of Intent (NOI) and required accompanying information, including endangered species, historic preservation, and an outfall map to EPA Region 1 by the September 29, 2018 deadline (Appendix A) requesting authorization to discharge under the new permit. MassBay received official authorization to discharge stormwater from its MS4 on February 14, 2019. Authorization to discharge expires at June 30, 2022.

This Stormwater Management Program Plan has been developed by MassBay College to address the requirements of the 2016 MS4 Permit as a follow-up to the NOI. This SWMP Plan documents MassBay College’s program, including Best Management Practices, plans, activities, and measures that have been implemented to date, those that are ongoing, and those proposed for the future to comply with the 2016 MA MS4 Permit. This is a “living” document and should be updated and/or modified as required during the permit term as the permittee's activities are modified, changed or updated to meet permit conditions during the permit term.

This permit in part requires that each permittee, or regulated community, address 6 Minimum Control Measures. These measures include the following:

1. Public Education and Outreach;
2. Public Involvement and Participation;
3. Illicit Discharge Detection and Elimination Program;
4. Construction Site Stormwater Runoff Control;
5. Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management); and
6. Good Housekeeping and Pollution Prevention for Permittee Owned Operations.

In addition to the 6 MCMs above, permittees must also address water quality impacts from waterbodies with approved Total Maximum Daily Loads (TMDLs) and certain impairments, generally known as water quality limited waterbodies.

It should be noted that MassBay College is a very small regulated entity, a small fraction of the size of a typical city or town regulated under the permit. Consequently, MassBay has far smaller public education and outreach needs, comparatively little stormwater infrastructure, and very minimal regulatory authority for which to meet some of the permit requirements. This SWMP Plan will note BMPs that cannot be met in their entirety due to MassBay’s status as a “non-traditional” permittee and/or propose alternate efforts as outlined in the NOI.
1.3 **Regulated Area**

Requirements of the 2016 MS4 Permit are limited to a regulated area, defined as the College’s Urbanized Areas (UAs) which generally constitute the largest and most dense areas of settlement in a region. The Bureau of the Census determines UAs by applying a detailed set of published UA criteria to the latest decennial census data. Although the full UA definition is complex, the Bureau of the Census’ general definition of a UA, based on population and population density, is provided below:

“An urbanized area (UA) is a densely settled core of census tracts and/or census blocks that have population of at least 50,000, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. It is a calculation used by the Bureau of the Census to determine the geographic boundaries of the most heavily developed and dense urban areas.”

The most recent UA maps are based on the 2010 which covers the entirety of the college in Wellesley. Also note that although MassBay College operates 3 separate campuses statewide, only the campus in Wellesley is regulated under the MS4 Permit. Thus, this plan only applies to the Wellesley location.

1.4 **How to Use this Plan**

For the purposes of the 2016 MS4 Permit and ease of use, the College’s SWMP encompasses 3 separate written documents:

1. SWMP Plan (this document);
2. Discharge Detection and Elimination (IDDE) Plan; and

Both the IDDE Plan and Operation and Maintenance Plan are prepared as separate standalone documents to this SWMP Plan. This SWMP Plan is divided into several sections and includes the following components:

**Section 2** **College Characteristics** – Section 2 provides an overview of relevant characteristics, focusing on those aspects related to stormwater runoff and the water quality of surface waters.

**Section 3** **MCM 1: Public Education and Outreach** – regulated operators of MS4s are required to implement a public education program.

**Section 4** **MCM 2: Public Participation and Involvement** – regulated MS4s are required to obtain public participation throughout the stormwater management program.

**Section 5** **MCM 3: Illicit Discharge, Detection, and Elimination** – regulated MS4s must develop and implement an illicit discharge detection and
elimination program and develop a regulation to prohibit illicit discharges to the storm drain system.

Section 6  
**MCM 4: Construction Site Stormwater Runoff Control** – regulated MS4s are required to implement and enforce a program to reduce pollutants in stormwater runoff from construction activities that disturb 1 or more acres. Permittees are also responsible for inspections and enforcement.

Section 7  
**MCM 5: Stormwater Management in New Development and Redevelopment** – regulated MS4s are required to develop and enforce a program to require treatment of stormwater at sites where construction activities disturb 1 or more acres. The controls must also be maintained over the long-term.

Section 8  
**MCM 6: Good Housekeeping and Pollution Prevention** – regulated MS4s must review their operations at specific facilities and those that occur throughout the College (i.e., catch basin cleaning and street sweeping) and make improvements where needed to minimize pollution to stormwater runoff.

Section 9  
**TMDL and Impaired Waters Controls** – regulated MS4s are required to evaluate and address stormwater contributions to impaired waters.

Section 10  
**Annual Reporting** – Section 10 provides a summary of annual reporting requirements in order to meet the 2016 MS4 Permit.

Section 11  
**Implementation of Best Management Practices** – Section 11 provides a summary of proposed BMPs outlined in Sections 3 through 9 in a concise plan for easy reference.

### 1.5 Program Responsibilities

This plan is intended to be used by MassBay College staff whose job involves administering the MS4 permit and associated requirements. The College’s MS4 program will be headed by the following:

**Table 1-1. MS4 Responsible Personnel**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title, Department</th>
<th>Contact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joseph DeLisle</td>
<td>Director of Facilities</td>
<td>(781) 239-2571</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:jdelisle@massbay.edu">jdelisle@massbay.edu</a></td>
</tr>
</tbody>
</table>

**Table 1-1** provides a list of responsible departments and their general responsibilities within the MS4 program. The responsible person is the most senior person (e.g. department head, administrator, senior elected official, etc.) within each department listed below.
<table>
<thead>
<tr>
<th>Department / Division</th>
<th>General Responsibilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Department</td>
<td>Public education and participation</td>
</tr>
<tr>
<td>Facilities Department</td>
<td>Public education and participation; system mapping; IDDE program creation and implementation; employee training; regulation development; site plan review and inspection procedures; as-built submittal; target properties to reduce impervious areas and for BMP retrofit; inventory buildings and facilities; develop operation and maintenance procedures; SWPPP development and implementation; catch basin cleaning and street sweeping; road salt optimization program; BMP inspections and maintenance; TMDL and water quality limited requirements</td>
</tr>
</tbody>
</table>
2 College Characteristics

This section provides some background information on MassBay College, Massachusetts, useful in understanding the College’s characteristics and resources to develop a tailored Stormwater Management Plan. College characteristics are described below.

2.1 Community Information

Founded in 1961, MassBay College is 1 of 15 publicly-funded community colleges in Massachusetts and serves approximately 6,000 full-time and part-time commuter students from the greater Boston and MetroWest region on 3 campuses – Wellesley Hills, Framingham, and Ashland. The subject of this SWMP, the Wellesley Hills campus is located in eastern Massachusetts in Norfolk County. Wellesley Hills is bordered to the east by Newton, the north by Weston, the west by Natick, and the south by Needham and Dover. Though located in the Town of Wellesley, MassBay College operates under its own MS4 permit and thus is not included in Wellesley’s town program. Note that Wellesley occupies approximately 6,700 acres MassBay’s campus occupies 84 acres, or only 1.3% of Wellesley’s total land area.

2.2 Demographics

Demographics play a role in developing a public education program that targets the appropriate audience through the most appropriate means. All students at MassBay College commute to campus so the public education program is targeted towards commuter students. Other target audiences include college campus operations and developers.

2.2 Land Use

The land uses within the regulated area of MassBay College are shown on Figure 2-1 and provided below. Impervious area is shown on Figure 2-2.

- Undeveloped forest and wetland 81% (68 acres)
- Impervious 12% (10 acres)
- Grass 7% (6 acres)

As noted previously, MassBay occupies only 84 acres, of which approximately 81% is undeveloped. The majority of MassBay’s impervious area (approximately 7 acres of the 10 acres total) is disconnected, discharging to either leaching structures or sheet flowing onto undeveloped areas, with only an estimated 3 acres of impervious area discharging via closed drainage systems through conventional stormwater outfalls.

2.3 303(d) Impaired Waterbodies

The ultimate goal of this Stormwater Management Plan is to outline a program to effectively maintain the College’s stormwater infrastructure and to improve the water quality of receiving waters (waters which receive stormwater discharges from the MS4) in compliance
with the 2016 MS4 Permit. 303(d) impaired waters are those surface waters identified by the MassDEP as priority waters that do not meet water quality criteria. As part of the 2016 MS4 Permit, communities must implement BMPs to address all 303(d) waters and specifically address those that have a completed TMDL study. Though no impaired waters are located within the boundaries of MassBay College, it is located within the phosphorus-impaired Charles River (MA72-07). As noted in the NOI (Appendix A), MassBay College will meet portions of the Upper/Middle Charles River phosphorus TMDL requirements on an abbreviated level as outlined further in Section 9, as some of the requirements are not applicable to the college and MassBay's required total phosphorus reduction is expected to be minimal.

2.4 **Endangered Species Act Determination**

In order to be eligible to discharge stormwater under the 2016 MS Permit, MassBay College must certify that its stormwater system is not impacting federally listed rare or endangered species habitat or other critical environmental locations. This was completed in the summer of 2018 as meeting “Criterion C” on the Notice of Intent with the results documented in Appendix A. The Northern Long-eared Bat (*Myotis septentrionalis*) was the only species identified as potentially being present within MassBay College’s regulated area. No critical habitats were identified.

2.5 **National Historic Preservation Act Determination**

Regulated MS4s must also evaluate whether its discharges have the potential to affect historic properties. The MS4 Permit typically authorizes discharges from existing facilities and requires control of the pollutants discharged from the facility, however, EPA does not anticipate effects on historic properties from the pollutants in the authorized discharges. Thus, to the extent EPA’s issuance of the MS4 General Permit authorizes discharges of such constituents, confined to existing channels, outfalls or natural drainage areas, the permitting action does not have the potential to cause effects on historical properties. If there have been no relevant changes in operation of the MS4 since the 2003 MS4 General Permit, the discharge can still be considered to have no potential to have an effect on historic properties. This has been documented as “Criterion A” on the Notice of Intent (Appendix A) and thus no additional information is required for documentation.

Where there is disturbance of land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. In these cases, such as during future construction of structural stormwater BMPs, the College will need to ensure that historic properties will not be impacted by their activities, or that they are in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative that outlines all measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties. This will be completed as required during a later date(s).
3 MCM 1: Public Education and Outreach

3.1 Summary of Permit Requirements

3.1.1 Core Permit Requirements

Under MCM 1, permittees must develop an educational program, define educational goals, express specific messages, define the targeted audience for each message, and identify responsible parties for program implementation. At a minimum, the program must provide information concerning the impact of stormwater discharges on water bodies within the community, especially those waters that are impaired or identified as priority waters. The program must identify steps and/or activities that the public can take to reduce the pollutants in stormwater runoff and their impacts to the environment.

The College must address 4 core target audiences, unless 1 of these audiences is not present in the MS4 community:

1. Residents;
2. Businesses, Institutions, and Commercial facilities;
3. Developers and Construction; and
4. Industrial facilities.

As noted in the NOI (Appendix A), MassBay Community College has unique public education requirements that do not follow the typical 4 audiences as categorized by EPA. The College has no "Residents" in the traditional sense, as there is no on-campus housing. For the sake of this permit, "Residents" has been replaced by "Students". Additionally, as the College has no "Industrial" audience, this audience has been omitted from the Public Education and Outreach measure. At least 2 educational messages must be distributed to the remaining audiences over the permit term spaced at least a year apart. See sections below for more information.

3.1.2 TMDL & Impaired Waters Requirements

Public education and outreach programs must also address impaired waterbodies or those identified as priority waters. In MassBay, the only waterbody impairments listed as having specific requirements under the 2016 MS4 Permit is phosphorus under the Charles River, however does not require supplementary public education.

3.2 Objectives and Goals

MassBay College will implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area, increase knowledge, and change behavior of the public so that pollutants in stormwater are reduced.
3.3 Existing Public Education Program

In response to requirements under the 2003 permit, MassBay has enacted a multifaceted approach to stormwater public education and outreach. The following summarizes MassBay’s current public education activities that will be continued under the 2016 MS4 Permit:

- **Stormwater Flyers** – distribute educational flyers on water quality and stormwater BMPs at various public locations.

- **Stormwater Websites** – maintain a web presence with information and helpful links relating to stormwater management and Best Management Practices.

3.4 Proposed Public Education Program

The following sections outline how MassBay will meet the requirements of the 2016 MS4 Permit by completing targeted outreach to the 3 remaining audiences. As noted previously and in the NOI filing, the “Residential” audience has been replaced by “Students”. Additionally, “Industrial” audiences are not present in MassBay and will not be targeted.

3.4.1 Students

**Informational Topics**
The following topics will be addressed under the Students public education and outreach program:

- Illicit storm drain dumping;
- Hazardous waste disposal;
- Use of environmentally friendly products;
- Effects of outdoor activities such as lawn care (use of pesticides, herbicides, and fertilizers) on water quality;
- Proper management of pet waste; and
- Maintenance of septic systems.

Note that many of the above requirements mirror those for the typical “Residential” audience, however, some change have been made to more closely tailor outreach materials to students.

**Educational Message and Methods of Distribution**
The following table shows the proposed educational messages and methods of distribution for the above topics, along with responsible parties and measurable goals.
Table 3-1. BMP Description – Student Outreach

<table>
<thead>
<tr>
<th>Message</th>
<th>Method of Distribution</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stormwater flyers and brochures</td>
<td>Distribute flyers regarding stormwater awareness and healthy lawns and landscapes, detailing pet waste disposal, lawn care, and the minimization or elimination of pesticide and fertilizer use.</td>
<td>Facilities Department</td>
<td>Continue to provide information at various campus locations. Distribute brochures to students.</td>
</tr>
<tr>
<td>Web page</td>
<td>Provide information related to illicit storm drain dumping, private septic system and well maintenance, proper hazardous waste disposal, and use of detergents, fertilizers, etc., and use of environmentally friendly products.</td>
<td>Facilities Department, Marketing Department</td>
<td>Continue to update and maintain the websites to include relevant stormwater information</td>
</tr>
<tr>
<td>Social media outreach</td>
<td>Provide relevant information to different audiences via various social media platforms</td>
<td>Marketing Department</td>
<td>Follow statewide “Think Blue” campaign on social media platforms</td>
</tr>
</tbody>
</table>

Schedule
Topics will be made available continuously via brochures, website, and social media.

3.4.2 Businesses, Institutions, and Commercial Facilities

Informational Topics
The following topics will be addressed under the Business, Institutions, and Commercial public education and outreach program:

- Illicit storm drain dumping;
- Hazardous waste disposal;
- Use of environmentally friendly products;
- Effects of outdoor activities such as lawn care (use of pesticides, herbicides, and fertilizers) on water quality; and
- Proper management of pet waste.

Note that many of the above requirements mirror those for the typical topics, however, some change have been made to more closely tailor outreach materials to college-related areas.

Educational Message and Methods of Distribution
The following table shows the proposed educational messages and methods of distribution for the above topics, along with responsible parties and measurable goals. All informational topics will be addressed on the College’s website.
Table 3-2. BMP Description – Businesses, Institutions, and Commercial Outreach

<table>
<thead>
<tr>
<th>Message</th>
<th>Method of Distribution</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web page</td>
<td>Provide information related to illicit storm drain dumping, proper hazardous waste disposal, and use of detergents, fertilizers, etc., and use of environmentally friendly products.</td>
<td>Facilities Department, Marketing Department</td>
<td>Continue to update and maintain the websites to include relevant stormwater information</td>
</tr>
<tr>
<td>Social media outreach</td>
<td>Provide relevant information to different audiences via various social media platforms</td>
<td>Marketing Department</td>
<td>Follow statewide “Think Blue” campaign on social media platforms</td>
</tr>
</tbody>
</table>

Schedule
Information pertaining to the Business, Institutions, and Commercial public education and outreach program will be made available continuously on the website and via social media.

3.4.3 Developers and Construction

Informational Topics
As required for all communities under the 2016 MS4 Permit, the following topics will be addressed under the Developers and Construction public education and outreach program:

- Proper sediment and erosion control management practices;
- Information about Low Impact Development (LID) principles and technologies; and
- Information about EPA’s construction general permit (CGP).

Educational Message and Methods of Distribution
The following table shows the proposed educational messages and methods of distribution for the above topics, along with responsible parties and measurable goals. All informational topics will be addressed on the College’s website and via erosion control and fact sheets provided to developers when applying for applicable permits.

Table 3-3. BMP Description – Developers and Construction Outreach

<table>
<thead>
<tr>
<th>Message</th>
<th>Method of Distribution</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web page</td>
<td>Provide information on website related to illicit storm drain dumping, proper hazardous waste disposal, and use of detergents, fertilizers, etc., and use of environmentally friendly products.</td>
<td>Facilities Department, Marketing Department</td>
<td>Continue to update and maintain the websites to include relevant stormwater information</td>
</tr>
<tr>
<td>Social media outreach</td>
<td>Provide relevant information to different audiences via various social media platforms</td>
<td>Marketing Department</td>
<td>Follow statewide “Think Blue” campaign on social media platforms</td>
</tr>
</tbody>
</table>
Schedule
Information pertaining to the Developers and Construction will be made available continuously on the website and via social media.

3.5 Measuring Public Education Program Effectiveness

During completion of MassBay College’s annual report as detailed further under Section 10, the college will review the effectiveness of each message and the overall education program. Effectiveness is expected to vary by message, however will generally be measured based on quantities of materials distributed and feedback from students and employees based on observations in their area of work. Educational messages and/or distribution techniques will be modified as needed, should program managers determine that they are ineffective.
4 MCM 2: Public Participation & Involvement

4.1 Summary of Permit Requirements

Under MCM 2, permittees must provide annual opportunities for public participation in the review and implementation of the College’s SWMP as part of a public education and involvement program. All public involvement activities must comply with state public notice requirements. The SWMP and annual reports must also be made available so that the public has opportunities to review and comment.

4.2 Objectives and Goals

MassBay will implement a public participation and involvement program that provides opportunities for review and implementation of the College’s SWMP. This will help support public education and outreach items under MCM 1.

4.3 Public Participation and Involvement Opportunities

MassBay College has provided multiple public participation opportunities each year, however has opted not to carry over any existing items under the 2016 MS4 Permit. The following outlines how MassBay will meet permit requirements to provide the public with opportunities to participate in reviewing and implementing the SWMP.

4.3.1 Make Documents Publicly Available for Comment

MassBay will make this written SWMP Plan and annual reports available for review and comment via the College’s website, along with the name, email address and/or phone number of a contact person from the College government to request additional information or submit comments. This will allow the public to comment on the program at least once per year. An updated SWMP Plan will be posted to the website as additional tasks are completed. The following table shows the proposed BMP, responsible parties and measurable goals.

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make SWMP Plan Available on Website</td>
<td>Facilities Department, Marketing Department</td>
<td>Annual review of stormwater management plan and posting on website. Allow public to comment on the plan at least annually.</td>
</tr>
</tbody>
</table>
5  **MCM 3: Illicit Discharge, Detection, and Elimination**

### 5.1 Summary of Permit Requirements

Under MCM 3, permittees must implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its MS4 and implement procedures to prevent such discharges. A summary of the required IDDE activities and timelines are provided below. See sections below for more information.

#### 5.1.1 Legal Authority

The IDDE program shall include adequate legal authority in the form of a currently effective ordinance, bylaw, or other regulatory mechanism to prohibit, investigate, and eliminate illicit discharges.

#### 5.1.2 Sanitary Sewer Overflow

Regulated communities must identify all known locations where sanitary sewer overflows (SSOs) have discharged to the MS4 during the previous 5-years and update it annually.

#### 5.1.3 System Mapping

Regulated communities must complete a comprehensive map of their stormwater system in 2 phases. Phase 1 must be completed within 2 years and include infrastructure such as outfalls and preliminary catchment delineations, waterbodies, open channel conveyances, interconnections with other MS4s, and structural stormwater BMPs. Phase 2 must be completed within 10 years and include information such as outfalls with high accuracy GPS location and refined catchment delineations, catch basins, manholes, pipe connectivity, and sanitary or combined sewer systems as available/applicable.

#### 5.1.4 Illicit Discharge, Detection, and Elimination Program

The 2016 MS4 Permit requires preparation of a comprehensive written IDDE Program or IDDE Plan that provides detailed procedures for assessment and priority ranking of outfalls and interconnections, dry and wet weather outfall sampling, catchment investigation procedures, system vulnerability factor (SVF) assessment, identification of an illicit discharge, illicit discharge removal, and ongoing screening requirements. The written IDDE Program must be prepared as a standalone IDDE Plan separate from this SWMP Plan.

### 5.2 Objectives and Goals

MassBay College will implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its MS4 and implement procedures to prevent such discharges. The ultimate goal is to remove sources of pollution and improve water quality in receiving waterbodies.
5.3 Existing IDDE Program

MassBay College has completed some program measures related to mapping in response to implementing its IDDE program.

- **Stormwater Infrastructure Mapping** – completed select stormwater infrastructure mapping, including outfalls, catch basins, manholes, and connecting pipes as feasible based on personnel availability to improve infrastructure maps.

5.4 Proposed IDDE Program

The following sections outline how MassBay will meet the requirements of the 2016 MS4 Permit to implement an IDDE program to locate, eliminate, and prohibit illicit discharges.

5.4.1 Establish Legal Authority

Permittees must develop an ordinance, bylaw or regulatory mechanism to prohibit illicit discharges, investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system, and implement appropriate enforcement procedures and actions. As noted in the NOI (Appendix A), MassBay Community College has no regulatory authority, and thus no bylaws, ordinances, or other legal regulatory mechanisms will be enacted in response to the 2016 MS4 Permit.

5.4.2 Complete System Mapping

Requirements

The 2016 MS4 Permit requires the storm system map to be updated in 2 phases. Phase I mapping must be completed within 2 years of the effective date of the permit (July 1, 2020) and include the following information:

- Outfalls and receiving waters (previously required by the MS4-2003 permit);
- Open channel conveyances (swales, ditches, etc.);
- Interconnections with other MS4s and other storm sewer systems;
- College-owned stormwater treatment structures;
- Waterbodies identified by name with a list of impairments as identified on the most recent EPA approved Massachusetts Integrated List of Waters report; and
- Initial catchment delineations based on topography or contributing structures.

Phase II mapping must be completed within 10 years of the effective date of the permit (July 1, 2028) and include the following information:

- Outfall locations (latitude and longitude with a minimum accuracy of +/-30 feet);
- Pipe connectivity;
- Manholes;
- Catch basins;
- Refined catchment delineations based on updated mapping information;
• College-owned sanitary sewer system; and
• College-owned combined sewer system.

Work to be Performed
MassBay College has largely completed mapping its stormwater system, however, will continue to update its stormwater mapping in GIS format by the required deadlines to include the above information. Where applicable, GIS information can be exported into other formats, such as Microsoft Excel, for use with annual reporting or tracking. Current stormwater mapping is provided in Appendix B. The following table shows the proposed BMPs, responsible parties and measurable goals.

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phase I Storm Sewer System Map</td>
<td>Facilities Department</td>
<td>Complete preliminary system map within 2 years of effective date of permit</td>
</tr>
<tr>
<td>Phase II Storm Sewer System Map</td>
<td>Facilities Department</td>
<td>Complete full system map 10 years after effective date of permit</td>
</tr>
</tbody>
</table>

5.4.3 Complete Sanitary Sewer Overflow Inventory

The 2016 MS4 Permit requires permittees to prohibit illicit discharges, including SSOs, to the separate storm sewer system. SSOs are discharges of untreated sanitary wastewater from a permittees’ sanitary sewer that can contaminate surface waters, cause serious water quality problems and property damage, and threaten public health. MassBay’s campus relies on septic systems for wastewater management. Therefore, SSO considerations do not apply to the College's program, as noted in the NOI (Appendix A).

5.4.4 Develop and Implement Written IDDE Program

Requirements
MassBay College must develop an IDDE Program, the majority of which is contained in a written Illicit Discharge, Detection, and Elimination Plan, a standalone document separate from this SWMP Plan. The IDDE Plan must include a statement of responsibilities and detailed written procedures for the following:

• Assessment and priority ranking of outfalls and interconnections;
• Dry and wet weather outfall sampling;
• Catchment investigation procedures;
• System vulnerability factor (SVF) assessment;
• Identification of an illicit discharge;
• Illicit discharge removal; and
• Ongoing screening requirements.
Work to be Performed
MassBay has developed a written IDDE Plan as a separate standalone document to address
the illicit discharge requirements of the 2016 MS4 Permit. MassBay will work towards
implementing the IDDE Plan and program, according to the schedule set forth in the permit.
The following table shows the proposed BMPs, responsible parties and measurable goals.

Table 5-2. BMP Description – Written IDDE Program and Program Implementation

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written IDDE Program</td>
<td>Facilities Department</td>
<td>Create written IDDE program within 1 year of the effective date of the permit and update periodically</td>
</tr>
<tr>
<td>Outfall Inventory and Ranking</td>
<td>Facilities Department</td>
<td>Classify and rank outfalls and interconnections within 1 year of the effective date of the permit.</td>
</tr>
<tr>
<td>Implement IDDE Program</td>
<td>Facilities Department</td>
<td>Implement catchment investigations and complete within 10 years of the effective date of the permit.</td>
</tr>
</tbody>
</table>

5.4.5 Perform Dry and Wet Weather Outfall Screening

Requirements
Outfalls and contributing catchment areas must be categorized into Problem, High, Low, and Excluded outfalls and then ranked within each category. The 2016 MS4 Permit then requires all outfalls classified as High and Low to be inspected for the presence of dry conditions within 3 years of the permit effective date. While completing screening, permittees must also document various physical indicators of the outfall and sample flowing outfalls. Additionally, outfalls with at least 1 SVF must also be sampled during wet weather. Depending on the results, additional screening and sampling may be required further up into the contributing catchment. Once dry and wet weather sampling is complete, additional ongoing screening shall be performed once every 5 years in accordance with the catchment prioritization and ranking. Both dry and wet weather outfall screening must be conducted in accordance with screening procedures outlined in the written IDDE Plan. All sampling results shall be reported in the permittee’s annual report.

Work to be Performed
MassBay College does not currently have a formal outfall sampling program in place. Thus, a program will be created to perform dry and wet weather screening on College outfalls, including those with SVFs where applicable. The program will be performed in accordance with the written procedures and schedules in the IDDE Plan. The following table shows the proposed BMP, responsible parties and measurable goals.
<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Weather Screening</td>
<td>Facilities Department</td>
<td>Complete in accordance with outfall screening procedure within 3 years of the effective permit date</td>
</tr>
<tr>
<td>Wet Weather Screening</td>
<td>Facilities Department</td>
<td>Complete in accordance with outfall screening procedure within 10 years of the effective permit date</td>
</tr>
<tr>
<td>Ongoing Screening</td>
<td>Facilities Department</td>
<td>Conduct ongoing dry and wet weather outfall screening upon completion of the IDDE program</td>
</tr>
</tbody>
</table>

## 5.4.6 Perform Annual IDDE Training

The 2016 MS4 Permit requires annual IDDE training to be provided to all employees involved in the IDDE program. Therefore, MassBay will provide annual training that will at a minimum include information on how to identify illicit discharges and may also include additional training specific to the functions of particular personnel and their function within the framework of the IDDE program. The Facilities Department will be the sole department responsible for implementing the IDDE program, and thus training will focus on these departments. Frequency and type(s) of training will be included in the annual report. The following table shows the proposed BMP, responsible parties and measurable goals.

### Table 5-4. BMP Description – Perform Annual IDDE Training

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perform IDDE Training</td>
<td>Facilities Department</td>
<td>Complete annual training</td>
</tr>
</tbody>
</table>

## 5.5 Measuring IDDE Program Effectiveness

The success of the IDDE Program will be evaluated according to the following parameters:

- Storm system mapping progress;
- Number of illicit discharges identified and removed;
- Number of catchments evaluated using the catchment investigation procedures;
- Updated SVF and catchment inventory and ranking;
- Dry weather and wet weather screening and sampling results;
- Estimated volume or quantity of sewage removed; and
- Number of employees successfully trained on IDDE.

The above will be tracked throughout the year and reported as part of each annual report submitted to EPA each year by September 29.
6 MCM 4: Construction Site Stormwater Runoff Control

6.1 Summary of Permit Requirements

Under MCM 4, permittees are required to implement and enforce a program to reduce pollutants in stormwater runoff discharged to the MS4 from all construction activities that result in a land disturbance of greater than or equal to 1 acre within the regulated area. This program shall also regulate disturbances less than 1 acre if they are part of a larger common plan of development or sale that would disturb 1 or more acres. A summary of the required Construction Site Stormwater Runoff Control Program activities and timelines are provided below:

6.1.1 Legal Authority

The Construction Site Stormwater Runoff Control Program shall include adequate legal authority in the form of a currently effective ordinance, bylaw, or other regulatory mechanism to require the use of sediment and erosion control practices at construction sites, and include controls for other wastes on construction sites.

6.1.2 Construction Site Stormwater Runoff Control Program

The 2016 MS4 Permit requires preparation of a written Construction Site Stormwater Runoff Control Program procedures that includes pre-construction site plan review and onsite construction inspections. Permittees must also establish requirements for developers to implement a Sediment and Erosion Control Program as part of its Construction Site Stormwater Runoff Control Program that includes BMPs to reduce pollutant sources from construction sites. This program should also include requirements for controlling other wastes during construction.

6.2 Objectives and Goals

MassBay College will implement an effective construction stormwater runoff control program to minimize or eliminate erosion and maintain sediment onsite so that it is not transported in stormwater and allowed to discharge to a water of the U.S through the permittee’s MS4.

6.3 Existing Construction Site Stormwater Runoff Control Program

MassBay College has provided some program measures to satisfy construction site stormwater runoff requirements, however has opted not to carry over any existing items under the 2016 MS4 Permit.
6.4 Proposed Construction Site
Stormwater Runoff Control Program

The following sections outline how MassBay will meet the requirements of the 2016 MS4 Permit to establish a Construction Site Stormwater Runoff Control Program.

6.4.1 Establish Legal Authority

Permittees must develop an ordinance, bylaw or regulatory mechanism to require the use of sediment and erosion control practices at construction sites and include controls for other wastes on construction sites. As noted in the NOI (Appendix A), MassBay Community College has no regulatory authority, and thus has no bylaws, ordinances, or other legal regulatory mechanisms will be enacted in response to the 2016 MS4 Permit.

6.4.2 Establish Written Procedures for Site Plan Review

Requirements
The 2016 MS4 Permit requires establishing written procedures for pre-construction plan review of the site design, planned operations, planned BMPs during the construction phase, and planned BMPs to manage runoff after development that includes the following:

- Potential water quality impacts;
- Consideration of information submitted by the public; and
- Evaluation of opportunities for use of LID and green infrastructure (GI).

Work to be Performed
The College will reassess its current site plan review program for compliance with the 2016 MS4 Permit and make changes as required. MassBay College works closely with the Massachusetts Department of Capital Asset Management and Maintenance (DCAMM) on all construction projects that occur on-campus and thus will cooperate with DCAMM to develop and implement written procedures for site plan review. In addition, procedures must be established to track the number of site reviews, and will be done as part of the annual reporting requirements. Due to infrequent development that occurs at the college (less than 1 project per year), these requirements are expected to be minimal. The following table shows the proposed BMP, responsible parties and measurable goals.

Table 6-1. BMP Description – Establish Site Plan Review Procedures

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures for Site Plan Review</td>
<td>Facilities Department</td>
<td>Establish procedures for site plan review within 1 year of the effective date of the permit</td>
</tr>
</tbody>
</table>
6.4.3 Establish Procedures for Site Inspections and Enforcement

Requirements
The 2016 MS4 Permit requires the development of written procedures for site inspections and enforcement actions to take place both during construction of BMPs and after construction of BMPs is completed to ensure they are working as described in the approved plans. Procedures must define the following:

- Who is responsible for site inspections;
- Qualifications necessary to perform inspections;
- Who has authority to implement enforcement procedures;
- Ability to impose sanctions to ensure program compliance;
- The use of standardized inspection forms (if appropriate); and
- How to track the number inspections and enforcement actions for reporting in the Annual Report.

Work to be Performed
As noted previously, MassBay College works closely with DCAMM on construction projects and thus will cooperate with DCAMM to develop and implement an inspection process within 1 year of the effective date to provide formal inspection procedures. The following table shows the proposed BMP, responsible parties and measurable goals.

Table 6-2. BMP Description – Establish Site Inspections and Enforcement Procedures

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site Inspections and Enforcement</td>
<td>Facilities Department</td>
<td>Establish procedures for site inspections and enforcement within 1 year of the effective date of the permit</td>
</tr>
</tbody>
</table>

6.4.4 Establish a Sediment and Erosion Control Program

Requirements
Permittees must establish requirements for construction site operators performing land disturbance activities within the MS4 jurisdiction that result in stormwater discharges to the MS4 to implement a sediment and erosion control program that includes BMPs appropriate for the conditions at the construction site. Examples of sediment and erosion control measures for construction sites include local requirements to:

1. Minimize the amount of disturbed area and protect natural resources;
2. Stabilize sites when projects are complete or operations have temporarily ceased;
3. Protect slopes on the construction site;
4. Protect all storm drain inlets and armor all newly constructed outlets;
5. Use perimeter controls at the site;
6. Stabilize construction site entrances and exits to prevent off-site tracking;
7. Inspect stormwater controls at consistent intervals.
**Work to be Performed**

MassBay College will work with DCAMM to develop a sediment and erosion control program for compliance with the 2016 MS4 Permit within 1 year of the effective date in order to reduce the erosion of sediments on construction sites. The following table shows the proposed BMP, responsible parties and measurable goals.

**Table 6-3. BMP Description – Develop an Erosion and Sediment Control Program**

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Procedures for Erosion and Sediment Control</td>
<td>Facilities Department</td>
<td>Establish procedures for development of an erosion and sediment control program within 1 year of the effective date of the permit</td>
</tr>
<tr>
<td>Develop Procedures for Waste Control</td>
<td>Facilities Department</td>
<td>Establish requirements to control construction site wastes within 1 year of the effective date of the permit</td>
</tr>
</tbody>
</table>
7  MCM 5:  
Stormwater Management in New Development and Redevelopment

7.1  Summary of Permit Requirements

Under MCM 5, permittees shall develop, implement, and enforce a program to address post-construction stormwater runoff from new development and redevelopment sites that disturb 1 or more acres and discharge into an MS4 system. This program shall also regulate disturbances less than 1 acre if they are part of a larger common plan of development or sale that would disturb 1 or more acres. A summary of the required Stormwater Management in New Development and Redevelopment, also known as Post Construction Stormwater Management, activities and timelines are provided below:

7.1.1  Legal Authority

The Post Construction Stormwater Management Program shall include adequate legal authority in the form of a currently effective ordinance, bylaw, or other regulatory mechanism to require LID site planning and design strategies, meet many of the requirements of the Massachusetts Stormwater Handbook and stormwater standards, and incorporate runoff volume storage and/or pollutant removal requirements. Updates must be made within 2 years of the effective permit date.

7.1.2  As-Built Submittals

The permittee must require the submission of as-built drawings within 2 years after completion of construction projects and include structural and non-structural controls.

7.1.3  Operation and Maintenance

The program must include procedures to ensure adequate long-term operation and maintenance of BMPs are established after completion of a construction project, along with a dedicated funding source within 2 years of the effective permit date.

7.1.4  Regulatory Assessment

The permittee must complete an assessment of existing regulations that could affect creation of impervious cover to determine if changes are required to support LID. Additionally, the permittee must assess current regulations to ensure that green infrastructure is allowable. Any required changes must be completed within 4 years of the effective permit date.

7.1.5  Inventory of Potential Retrofit Sites

The permittee must complete an inventory within 4 years of the effective permit date to determine at least 5 permittee-owned properties that could be modified or retrofitted with stormwater BMP improvements.
7.2 **Objectives and Goals**

MassBay College will implement and enforce a program to reduce pollutants in stormwater runoff discharged to the MS4 from all construction activities that result in a land disturbance greater than or equal to 1 acre within the regulated area.

7.3 **Existing Post Construction Stormwater Management**

MassBay College has provided some program measures to satisfy post-construction stormwater management requirements, however has opted not to carry over any existing items under the 2016 MS4 Permit.

7.4 **Proposed Post-Construction Stormwater Management Program**

The following sections outline how MassBay will meet the requirements of the 2016 MS4 Permit to establish a Post-Construction Stormwater Management Program.

7.4.1 **Establish Legal Authority**

Under the 2016 MS4 Permit, permittees shall develop or modify an ordinance, bylaw, or other regulatory mechanism within 2 years of the effective date of the permit to require LID site planning and design strategies, meet many of the requirements of the Massachusetts Stormwater Handbook and stormwater standards, and incorporate runoff volume storage and/or pollutant removal requirements. As noted in the NOI (**Appendix A**), MassBay Community College has no regulatory authority, and thus has no bylaws, ordinances, or other legal regulatory mechanisms will be enacted in response to the 2016 MS4 Permit.

7.4.2 **Require Submittal of As-Built Plans**

The permittee must require the submission of as-built drawings that include structural and non-structural stormwater controls within 2 years after completion of construction projects. MassBay College will work with DCAMM to require the submission of any as-built drawings. The following table shows the proposed BMP, responsible parties and measurable goals.

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Require Stormwater As-Built Plan Submittal</td>
<td>Facilities Department</td>
<td>Require submittal of as-built plans for completed projects within 2 years of completion</td>
</tr>
</tbody>
</table>
7.4.3 Require Long Term Operation and Maintenance

As part of its Post Construction Stormwater Management Program, MassBay College will work with DCAMM to develop procedures to ensure that the adequate long-term operation and maintenance of BMPs is accounted for at the conclusion of a construction project, along with a dedicated funding source, within 2 years of the effective permit date. The following table shows the proposed BMP, responsible parties and measurable goals.

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Require Long Term Operation and Maintenance</td>
<td>Facilities Department</td>
<td>Require submittal of operation and maintenance plans and dedicated funding to ensure long term maintenance within 2 years of the effective date of the permit</td>
</tr>
</tbody>
</table>

7.4.4 Complete Regulatory Assessment

Requirements

The 2016 MS4 permit requires permittees to complete a report that assesses current street design, parking lot guidelines, and other local requirements that could affect creation of impervious cover to determine if changes to existing design standards are required to support LID. If the assessment indicates that changes can be made, the assessment shall include recommendations and proposed schedules to incorporate policies and standards into relevant documents and procedures to minimize impervious cover. Any required changes to reduce mandatory creation of impervious cover in support of LID should be made within 4 years of the effective permit date.

Additionally, the permittee must complete a report that assesses current regulations to determine the feasibility of allowing green roofs, infiltration practices, porous/pervious pavement, and water harvesting/storage devices where feasible. The assessment must indicate if the practices are allowed in the MS4 area and under what circumstances they are allowed. If the practices are not allowed, the permittee shall determine what hinders the use of these practices, what changes in local regulations may be made to make them allowable, and provide a schedule for implementation of recommendations. Any required changes to allow for these BMPs must be completed within 4 years of the effective permit date.

Work to be Performed

Although MassBay College does not have legal authority to establish a bylaw, ordinance, or other regulatory mechanism, it can enforce regulations for development on campus. Although no known barriers to LID and GI are known, MassBay College will work with DCAMM to review and update relevant regulations within 4 years of the effective permit date to meet permit requirement. The following table shows the proposed BMP, responsible parties and measurable goals.
Table 7-3. BMP Description – Complete LID and GI Regulatory Updates

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allow green infrastructure facilities</td>
<td>Facilities Department</td>
<td>Complete regulatory updates within 4 years of the effective date of the permit</td>
</tr>
<tr>
<td>Street design and parking lot guidelines</td>
<td>Facilities Department</td>
<td>Complete regulatory updates within 4 years of the effective date of the permit</td>
</tr>
</tbody>
</table>

7.4.5 Complete Inventory of Potential BMP Retrofit Sites

Requirements
Permittees must complete an inventory of at least 5 existing permittee-owned properties that could be modified or retrofitted with structural stormwater BMP improvements to reduce the frequency, volume, and pollutant loads within 4 years of the effective permit date. The inventory provided in Appendix C should include properties with significant impervious cover such as parking lots, buildings, and maintenance yards, along with infrastructure such as existing rights-of-way, outfalls and stormwater conveyances such as swales or detention practices. The permittee should address potential site constraints that could hinder BMP construction, such as subsurface conditions, depth to water table, and utility impacts, and should ideally allow opportunities for public education. In addition, the inventory must consider BMPs to reduce phosphorus discharges because of the phosphorus impairment to the Charles River.

Beginning with the fifth annual report, should BMPs at 1 or more sites be constructed, the inventory should be updated so that it always contains at least 5 sites in the inventory for potential improvement. Additionally, the permittee must report on all properties that have been modified or retrofitted to mitigate impervious area.

Work to be Performed
As noted in the NOI, the entire campus is owned by MassBay Community College. Instead of identifying 5 facilities, MassBay will identify 5 potential areas on campus that could be suitable for structural BMP modification or retrofit, along with a review of existing site conditions within 4 years of the effective date. This inventory (Appendix C) will be updated continuously starting in Year 5. The following table shows the proposed BMP, responsible parties and measurable goals.

Table 7-4. BMP Description – Complete Inventory of Properties for BMP Retrofit

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Target properties to reduce impervious areas</td>
<td>Facilities Department</td>
<td>Complete inventory within 4 years of the effective date of the permit and update annually on retrofitted properties</td>
</tr>
</tbody>
</table>
8 MCM 6: Good Housekeeping and Pollution Prevention

8.1 Summary of Permit Requirements

Under MCM 6, permittees shall develop and implement an operations and maintenance program to reduce stormwater pollution from permittee activities. This includes optimizing existing activities related to parks and open space, buildings and facilities, vehicles and equipment, and stormwater infrastructure maintenance. A summary of the required Good Housekeeping and Pollution Prevention for Permittee Owned Operations activities and timelines is provided below.

8.1.1 Operations and Maintenance Programs

Permittees shall develop written operations and maintenance procedures for parks and open space, buildings and facilities, vehicles and equipment, winter road maintenance, stormwater infrastructure, and structural stormwater BMPs within 2 years of the effective permit date. This program shall also optimize catch basin cleaning and street sweeping, along with establishing proper storage techniques for cleaning residuals. All maintenance activities, inspections, and training shall be logged for annual reporting.

8.1.2 Stormwater Pollution Prevention Plans

Develop and implement Stormwater Pollution Prevention Plans (SWPPPs) for permittee-owned maintenance garages within 2 years of the effective permit date.

8.2 Existing Good Housekeeping and Pollution Prevention Program

MassBay College has completed a number of existing program measures to satisfy good housekeeping and pollution prevention program requirements. The following summarizes MassBay’s current activities that will be continued under the 2016 MS4 Permit:

- **Catch Basin Cleaning** – clean all catch basins at least every other year and repair as needed. MassBay also prepared a Catch Basin Optimization Plan that outlines the plans, procedures, and schedules for establishing a goal that sumps are never more than 50% full. The plan can be found as Appendix D.

8.3 Proposed Good Housekeeping and Pollution Prevention Program

The following sections outline how MassBay will meet the requirements of the 2016 MS4 Permit to establish a Good Housekeeping and Pollution Prevention Program.
8.3.1 Complete Facilities O&M Procedures

Requirements
The permittee must complete an inventory of all parks and open space, buildings and facilities where pollutants are exposed to stormwater runoff, including those coming from vehicles and equipment, within 2 years of the permit effective date. The inventory must be reviewed annually and updated as necessary. Upon completion, the permittee must establish written procedures as part of an Operation and Maintenance Plan within 2 years of the permit effective date for the following items:

Parks and Open Space
- Proper use, storage, and disposal of pesticides, herbicides, and fertilizers;
- Lawn maintenance and landscaping activities to protect water quality, such as reducing mowing, lawn clippings handling, and use of alternative materials;
- Pet waste handling collection and disposal locations at all locations where pets are permitted, including signage;
- Control of waterfowl in areas where they congregate to reduce waterfowl droppings from entering the MS4s;
- Management of trash containers; and
- Addressing erosion or poor vegetative cover, particularly near a surface waterbody.

Buildings and Facilities
- Use, storage, and disposal of petroleum products and other potential pollutants.
- Materials handling training to applicable employees;
- Ensuring that Spill Prevention, Control, and Countermeasures (SPCC) Plans are in place if needed (aboveground petroleum storage greater than 1,320 gallons or underground petroleum storage greater than 42,000 gallons);
- Dumpsters and other waste management equipment; and
- Sweeping parking lots and keeping facility areas clean to reduce pollutants in runoff.

Vehicles and Equipment
- Storage of vehicles to prevent fluid leaks to stormwater;
- Fueling area evaluation, including feasibility of fueling under cover; and
- Preventing vehicle wash waters from entering surface waters or the MS4.

Work to be Performed
Although MassBay College does not have formal park areas, remaining items above, including open space and other campus green areas, will be incorporated into a detailed written Operation and Maintenance Plan, a standalone document separate from this SWMP Plan, to cover applicable College-owned facilities. This document will also include the inventory of relevant College-owned properties. The following table shows the proposed BMP, responsible parties and measurable goals.
Table 8-1. BMP Description – Complete Written Facilities O&M Procedures

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inventory open spaces, buildings and facilities, and vehicles and equipment</td>
<td>Facilities Department</td>
<td>Complete inventory of open spaces, buildings and facilities, and vehicles and equipment within 2 years of the effective date of the permit</td>
</tr>
<tr>
<td>Establish Operation and Maintenance Procedures</td>
<td>Facilities Department</td>
<td>Create written O&amp;M Plan for open spaces, buildings and facilities, and vehicles and equipment within 2 years of the effective date of the permit</td>
</tr>
</tbody>
</table>

8.3.2 Complete Infrastructure O&M Procedures

Requirements
The permittee must establish written procedures as part of an Operation and Maintenance Plan within 2 years of the permit effective date to ensure that MS4 infrastructure is maintained in a timely manner to reduce the discharge of pollutants from the MS4 for the following items:

**Catch Basin Cleaning**
- Prioritization of catch basins located near construction activities for more frequent inspection and maintenance;
- Establishing a schedule with a goal that at the time of maintenance, no catch basin is more than 50% full;
- For catch basins that are more than 50% full during 2 consecutive inspections or cleaning events, methods for investigating the contributing drainage area for sources of excessive sediment loads; and
- Establishing a plan for optimizing catch basin cleaning, inspections, and documentation (Appendix D).

**Street Sweeping**
- Sweeping all streets and permittee-owned parking lots, with the exception of rural uncurbed roads with no catch basins or high-speed limited access highways at least 1 per year in the spring following winter sanding events;
- More frequent sweeping of targeted areas based on inspections, land use, or known water quality impacts;
- For rural uncurbed roadways with no catch basins or limited access highways, either an evaluation to meet the minimum frequencies above or development and implementation of an inspection, documentation, and targeted sweeping plan within 2 years of the effective date and submitted with the Year 1 annual report.

**Catch Basin and Street Sweeping Residuals Management**
- Ensure proper storage of catch basins cleanings and street sweepings prior to disposal or reuse such that they will not be discharged to receiving waters based on available MassDEP policies.
Winter Operation and Maintenance
- Establish and implement procedures for winter road maintenance including the use and storage of salt and sand
- Minimizing use of sodium chloride and other salts and evaluation of opportunities to use alternative materials; and
- Ensuring that snow disposal activities do not result in disposal of snow into waters of the United States.

Work to be Performed
The College recently updated its existing street sweeping, catch basin cleaning, and winter O&M procedures in order to meet permit requirements. Street sweeping is expected to continue under the existing Street Sweeping Prioritization Plan provided in the O&M Plan, with possible expansion in Year 4 and beyond in response to Charles River TMDL requirements as outlined further in Section 9. Catch basin prioritization will be completed according to the methodology and schedule outlined in the Catch Basin Optimization Plan provided in Appendix D. The following table shows the proposed BMP, responsible parties and measurable goals.

Table 8-2. BMP Description – Complete Written Infrastructure O&M Procedures

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Review Infrastructure O&amp;M Procedures</td>
<td>Facilities Department</td>
<td>Create written O&amp;M Plan for stormwater infrastructure within 2 years of the effective date of the permit</td>
</tr>
<tr>
<td>Catch Basin Cleaning</td>
<td>Facilities Department</td>
<td>Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually</td>
</tr>
<tr>
<td>Street Sweeping</td>
<td>Facilities Department</td>
<td>Sweep all streets and parking lots at least annually</td>
</tr>
<tr>
<td>Road salt optimization program</td>
<td>Facilities Department</td>
<td>Implement salt use optimization during winter maintenance operations</td>
</tr>
</tbody>
</table>

8.3.3 Stormwater Pollution Prevention Plans

Requirements
The permittee must establish written Stormwater Pollution Prevention Plans for certain permittee-owned or operated facilities, such as maintenance garages or similar areas where pollutants are exposed to stormwater as determined by the permittee. SWPPPs must address a number of components, including the following:

- Pollution Prevention Team and facility description;
- Identification of potential pollutant sources, and stormwater controls;
- Stormwater management practices, spill prevention and response, erosion and sediment control, management of runoff, salt storage, employee training; and
- Procedures for site inspections and sampling.
Work to be Performed
MassBay College does not have any formal facilities as outlined in the permit, however, areas of the college, such as the salt storage shed and surrounding area, may fit the intent of the permit. If so, MassBay College will complete an abbreviated SWPPP meeting applicable permit requirements by Year 2 of the permit. Note that the College has no other maintenance garages or waste handling facilities. The following table shows the proposed BMP, responsible parties and measurable goals.

Table 8-3. BMP Description – Prepare SWPPPs for Regulated Facilities

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assess regulated facilities to determine SWPPP eligibility</td>
<td>Facilities Department</td>
<td>Complete facilities assessment within 2 years of the effective date of permit.</td>
</tr>
<tr>
<td>Develop SWPPPs for applicable facilities</td>
<td>Facilities Department</td>
<td>Complete and implement within 2 years of the effective date of the permit</td>
</tr>
<tr>
<td>Spill Prevention and Response Training</td>
<td>Facilities Department</td>
<td>Train employees involved with spill prevention and response annually</td>
</tr>
</tbody>
</table>

8.3.4 Structural Stormwater BMP Inspections

Requirements
The permittee must establish and implement written inspection and maintenance procedures and frequencies for all stormwater treatment structures, such as infiltration and detention basins, proprietary stormwater treatment structures, gravel wetlands, etc. at least annually.

Work to be Performed
MassBay College will perform an inventory (Appendix E) of known structural stormwater BMPs by the end of Year 2 as required by MCM 3, mapping requirements. Once an inventory has been completed, the College will develop appropriate inspection and maintenance procedures for the various types of BMPs located within the College’s regulated area. The O&M Plan will also document logs for BMP inspection and maintenance. The following table shows the proposed BMP, responsible parties and measurable goals.

Table 8-4. BMP Description – Inspect Structural BMPs Annually

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establish BMP O&amp;M Procedures</td>
<td>Facilities Department</td>
<td>Create written O&amp;M Plan for stormwater BMPs within 2 years of the effective date of the permit</td>
</tr>
<tr>
<td>Inspect and maintain stormwater BMPs</td>
<td>Facilities Department</td>
<td>Inspect and maintain treatment structures annually</td>
</tr>
</tbody>
</table>

BMP inspection Standard Operating Procedures (SOPs) and results will be tracked under the standalone O&M Plan under separate cover.
9 TMDL and Impaired Waters Controls

9.1 Permit Requirements

The 2016 MS4 Permit requires regulated operators of MS4s to determine whether stormwater discharges from their MS4 contribute to any impaired waterbodies, including those subject to an approved TMDL and certain water quality limited waterbodies. Water quality limited waters are any waterbodies that do not meet applicable water quality standards, including waterbodies listed in categories “4a” and “5” on the Massachusetts Integrated List of Waters, also known as the “303(d) List”. MassDEP is responsible for preparing TMDLs for many of these listed waters to identify the problem pollutant and establish water quality goals. TMDLs are prepared based on the priority assigned to the waterbody and are being completed over the course of several years.

As outlined in Section 2.3, MassBay College is subject to the following TMDL and impaired waters requirements:

<table>
<thead>
<tr>
<th>Waterbody Name</th>
<th>Impairment</th>
<th>2016 Permit Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles River</td>
<td>Phosphorus</td>
<td>Appendix F, Part A.I</td>
</tr>
</tbody>
</table>

Thus, MassBay College must implement control measures for discharges to approved TMDL waters and to impaired waters without a TMDL as summarized in the sections below.

9.2 Charles River Phosphorus TMDL Requirements

To address the discharge of phosphorus from its MS4, MassBay College must develop a Phosphorus Control Plan (PCP) designed to reduce the amount of phosphorus in stormwater discharges from its MS4 to the Charles River and its tributaries. This Plan shall be completed in 3 phases and should be fully implemented as soon as possible but no later than 20 years after the permit effective date. The timing of each phase over 20 years from the permit effective date is outlined in the following table.

<table>
<thead>
<tr>
<th>Years 1-5</th>
<th>Years 6-10</th>
<th>Years 11-15</th>
<th>Years 16-20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create Phase 1 Plan</td>
<td>Implement Phase 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Create Phase 2 Plan</td>
<td>Implement Phase 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Create Phase 3 Plan</td>
<td>Implement Phase 3</td>
<td></td>
</tr>
</tbody>
</table>

The following provides a brief summary of permit requirements to be implemented:
9.2.1 Phase 1 Requirements

The Phase 1 Plan of the MassBay PCP will contain the following elements by the following required milestones:

**Item 1 Legal Analysis** – Identify regulatory mechanisms that may be necessary to implement the PCP, complete a legal analysis within 2 years of the permit effective date, and adopt changes by the end of the permit term.

**Item 2 Funding Source Assessment** – Identify funding mechanisms that will be used to fund PCP implementation, describe the steps to be taken in implementing the funding plan, and complete funding source assessment within 3 years of permit effective date.

**Item 3 Define PCP Scope, Baseline Load, Reduction Requirement, and Allowable Load** – Determine whether to implement the PCP College wide or only in the UA and select the corresponding Baseline Phosphorus Load, Stormwater Phosphorus Reduction Requirement and Allowable Phosphorus Load. Note that MassBay College does not have specifically published values, so these will need to be determined based off of Wellesley’s requirements. This requirement should be completed within 4 years of permit effective date.

**Item 4 Non-Structural Controls** – Determine non-structural stormwater controls to help reduce phosphorus, including planned measures, areas where measures will be implemented, and expected annual phosphorus reductions within 5 years of effective permit date. Non-structural BMPs fully implemented within 6 years of the permit effective date.

**Item 5 Structural Controls** – Priority rank areas and infrastructure where potential structural phosphorus controls could be implemented, including an assessment of site suitability for phosphorus control measures based on soil types and other factors, within 5 years of effective permit date.

**Item 6 Operation and Maintenance Program** – Establish an O&M Program for current and planned structural BMPs, including an inspection and maintenance schedule with program or department responsible within 5 years of effective permit date.

**Item 7 Written Plan** – Prepare a written plan to determine implementation cost estimate, and schedule that addresses the above items within 5 years of the effective permit date.

**Item 8 Implementation and Performance Evaluation** – Structural BMPs must be designed and constructed per the 8 and 10-year milestones outlined in the permit. Phase 1 shall be fully implemented no later than 10 years after the
effective date of permit. Phosphorus loading increases and reductions must be evaluated annually.

9.2.2 Phase 2 Requirements

Phase 2 requirements generally follow much of Phase 1 as follows:

- Item 1 – Legal Analysis must be completed as necessary
- Item 4 – Non-Structural Controls, Item 5 – Structural Controls, Item 6 – O&M Program, and Item 7 – Written Plan must be completed within 10 years of the effective permit date.
- Item 8 – Implementation and Performance Evaluation must follow the schedule outlined above, adding 5 years onto each milestone for implementation.

9.2.3 Phase 3 Requirements

Phase 2 requirements generally follow much of Phase 1 as follows:

- Item 1 – Legal Analysis must be completed as necessary
- Item 4 – Non-Structural Controls, Item 5 – Structural Controls, Item 6 – O&M Program, and Item 7 – Written Plan must be completed within 15 years of the effective permit date.
- Item 8 – Implementation and Performance Evaluation must follow the schedule outlined above, adding 10 years onto each milestone for implementation.

9.2.4 Reporting

MassBay College shall include a progress report in each Annual Report on the planning and implementation of the PCP. Once the PCP has started implementation 5 years after the permit effective date, the Annual Report shall also include the following:

- Non-structural control measures implemented during the reporting year along with the calculated phosphorus reduction;
- Structural control measures implemented during the reporting year with location information, calculated phosphorus reduction, ad date of last inspection and maintenance;
- Phosphorus load increases due to development; and
- Estimated yearly phosphorus export rate accounting for development and implementation of both non-structural and structural BMPs.

Work to be Performed

As noted in the NOI, MassBay College is not specifically listed in the 2016 NPDES MS4 Permit, the Upper/Middle Charles River nutrient TMDL, or the Lower Charles River phosphorus TMDL as having to meet any TMDL requirements under the permit. However, the Town of Wellesley (where MassBay College is located in its entirety) is required to achieve a 46% reduction in phosphorus, or 661 kg/yr, and it is assumed that this same reduction percentage will apply to MassBay College. Thus, MassBay College will meet components of Appendix F, Part I on an abbreviated level as applicable to the college, as
some of the requirements of the PCP will not apply (e.g. legal requirements) and MassBay's required total phosphorus reduction is expected to be minimal.

Wellesley occupies a total of approximately 6,700 acres, and per the Town of Wellesley Tax Assessor, MassBay College occupies a total of 84 acres, or 1.3% of Wellesley's total land area. Of the 84 total acres, approximately 10 acres are impervious cover, 6 acres are grass, and the remaining 68 acres are undeveloped forest and wetland area. The majority of MassBay's impervious area (approximately 7 acres of the 10 acres total) is disconnected, discharging to either leaching structures or sheet flowing onto undeveloped areas, with only an estimated 3 acres of impervious area discharging via closed drainage systems through conventional stormwater outfalls. Furthermore, existing swales present at the end of 2 of the 5 outfalls will help meet PCP requirements, and may address them in their entirety after minor improvements.

Actual required phosphorus reductions, along with non-structural and structural BMP requirements will be determined at a later date as part of an abbreviated PCP under Appendix F, Part I. Requirements for meeting the Charles River TMDL requirements will be performed according to the schedule in the 2016 Permit.

Table 9-3. TMDL Requirements – Charles River Phosphorus

<table>
<thead>
<tr>
<th>BMP Description</th>
<th>Responsible Parties</th>
<th>Measurable Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>TMDL Requirements – Charles River Phosphorus</td>
<td>Facilities Department</td>
<td>Adhere to requirements in part A.I of Appendix F</td>
</tr>
</tbody>
</table>
10 Annual Reporting

The permittee shall submit annual reports each year of the permit term. The reporting period will be a one-year period commencing on the permit effective date, and subsequent anniversaries thereof, except that the first annual report under this permit shall also cover the period from May 1, 2018 to the permit effective date. The annual report is due 90 days from the close of each reporting period, or by September 29 of each year. The annual reports must contain the following relevant information which should be tracked throughout the year, and should be filed within Appendix F:

- A self-assessment review of compliance with the permit terms and conditions.
- An assessment of the appropriateness of the selected BMPs.
- The status of any plans or activities, including:
  - Identification of all discharges determined to be causing or contributing to an exceedance of water quality standards and description of response;
  - For discharges subject to TMDL or water quality limited waterbody requirements, identification of BMPs used to address the impairment and assessment of the BMPs effectiveness;
  - For discharges to water quality limited waters a description of each BMP and any deliverables required.
- An assessment of the progress towards achieving the measurable goals and objectives of each of the 6 minimum measures:
  - Evaluation of the public education program including a description of the targeted messages for each audience; method and dates of distribution; methods used to evaluate the program; and any changes to the program.
  - Description of the activities used to promote public participation including documentation of compliance with state public notice regulations.
  - Description of IDDE activities including: status of mapping and results of the ranking and assessment; identification of problem catchments; status of all IDDE Plan components; number and identifier of catchments evaluated; number and identifier of outfalls screened; number of illicit discharges located and removed; gallons of flow removed; identification of tracking indicators and measures of progress; and employee training.
  - Evaluation of construction runoff management including number of project plans reviewed; number of inspections; and number of enforcement actions.
  - Evaluation of stormwater management for new and redevelopment including status of bylaw development; review and status of the street design and barriers to green infrastructure assessment; and inventory status.
  - Status of the O&M Programs.
  - Status of SWPPPs, including inspection results.
- All outfall screening and monitoring data during the reporting period and cumulative for the permit term; and a description of any additional monitoring data received by the permittee during the reporting period.
- Description of activities for the next reporting cycle.
- Description of any changes in identified BMPs or measurable goals.
- Description of activities undertaken by any entity contracted for achieving any measurable goal or implementing any control measure.
11 Implementation of Best Management Practices

For consistency with the 6 MCMs and impaired water requirements, the BMPs are broken down into 7 categories:

1. Public Education and Outreach;
2. Public Participation and Involvement;
3. Illicit Discharge Detection and Elimination;
4. Construction Site Stormwater Runoff Control;
5. Stormwater Management in New Development and Redevelopment;
6. Good Housekeeping and Pollution Prevention; and
7. TMDL and Water Quality Limited Waterbodies Controls

The BMP tables also outline the measurable goals for each BMP to gauge permit compliance, the responsible party(ies) for implementing each BMP, and an implementation schedule to be used throughout the permit period. In addition to the implementation activities outlined in this plan, the College will also perform the following activities throughout the duration of the permit:

1. **Program Evaluation** – conduct annual evaluations of the Stormwater Management Program for compliance with permit conditions. The evaluation must include a determination of the appropriateness of the selected BMPs in efforts towards achieving the measurable goals.

2. **Record Keeping** – maintain records that pertain to the Stormwater Management Program for a period of at least 5 years. Records need to be made available to the public and the College may charge a reasonable fee for copying. Records need not be submitted to EPA or MassDEP unless specifically requested.

3. **Reporting** – submit an annual report to EPA and MassDEP, including the information as noted in Section 10.

Refer to the following link for a copy of the 2016 MA MS4 Permit:
https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit
Figure 2-1, Land Use

MassBay Community College
Stormwater Structures
Wellesley, MA

Legend
- MassBay Catch Basin
- MassBay Leaking Catch Basin
- MassBay DMH
- MassBay, Old
- Interconnections
- Town Cul
- Town DMH
- Town Outfall
- Catch Plane
- Lagoon Dike Pipe
- Town Gravity Main
- Town Culvert Line

Comprehensive Environmental Incorporated
Data Sources: GIS, MassGIS, MassBay Community College
Figure 2-2, Impervious Area

MassBay Community College
Stormwater Structures
Wellesley, MA

Comprehensive Environmental Incorporated

Data Source: GIS, MassGIS, MassBay Community College
Appendix A

Notice of Intent
Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part I: General Conditions

General Information

Name of Municipality or Organization: MassBay Community College  State: MA

EPA NPDES Permit Number (if applicable): MAR043003

Primary MS4 Program Manager Contact Information

Name: Joseph DeLisle  Title: Director of Facilities

Street Address Line 1: 50 Oakland Street


Email: jdelisle@massbay.edu  Phone Number: (781) 239-2571

Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed):

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Yes

National Historic Preservation Act (NHPA) Determination Complete? Yes

Eligibility Criteria (check all that apply):

☐ A  ☐ B  ☑ C

☐ A  ☐ B  ☐ C

☐ A  ☐ B  ☐ C

Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete? (Part II, III, IV or V, Subpart B.3.(a) of 2003 permit) 90%

If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY): 06/30/19

Web address where MS4 map is published:

If outfall map is unavailable on the Internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted? (Part II, III, IV or V, Subpart B.3.(b) of 2003 permit) No

Effective Date or Estimated Date of Adoption (MM/DD/YY):

Construction/Erosion and Sediment Control (ESC) Authority Adopted? (Part II, III, IV or V, Subpart B.4.(a) of 2003 permit) No

Effective Date or Estimated Date of Adoption (MM/DD/YY):

Post-Construction Stormwater Management Adopted? (Part II, III, IV or V, Subpart B.5.(a) of 2003 permit) No

Effective Date or Estimated Date of Adoption (MM/DD/YY):
Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part II: Summary of Receiving Waters

Please list the waterbody segments to which your MS4 discharges. For each waterbody segment, please report the number of outfalls discharging into it and, if applicable, any impairments.


Check off relevant pollutants for discharges to impaired waterbodies (see above 303(d) lists) without an approved TMDL in accordance with part 2.2.2.a of the permit. List any other pollutants in the last column, if applicable.

<table>
<thead>
<tr>
<th>Waterbody segment that receives flow from the MS4</th>
<th>Number of outfalls into receiving water segment</th>
<th>Chloride</th>
<th>Chlorophyll-a</th>
<th>Dissolved Oxygen/DO Saturation</th>
<th>Nitrogen</th>
<th>Oil &amp; Grease/PAH</th>
<th>Phosphorus</th>
<th>Solids/TSS/Turbidity</th>
<th>E. coli</th>
<th>Enterococcus</th>
</tr>
</thead>
<tbody>
<tr>
<td>None (not applicable)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Click to lengthen table*
**Notice of Intent (NOI) for coverage under Small MS4 General Permit**

### Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMs). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and an applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals, and the year the BMP will be employed (public education and outreach BMPs also requires a target audience). **Use the drop-down menus in each table or enter your own text to override the drop down menu.**

#### MCM 1: Public Education and Outreach

<table>
<thead>
<tr>
<th>BMP Media/Category</th>
<th>BMP Description</th>
<th>Targeted Audience</th>
<th>Responsible Department/Parties</th>
<th>Measurable Goal</th>
<th>Beginning Year of BMP Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brochures/Pamphlets</td>
<td>Distribute flyers regarding stormwater awareness and healthy lawns and landscapes, detailing pet waste disposal, lawn care, and the minimization or elimination of pesticide and fertilizer use.</td>
<td>Students</td>
<td>Facilities Department</td>
<td>Continue to provide information at various campus locations. Distribute brochures to students.</td>
<td>2018</td>
</tr>
<tr>
<td>Web Page</td>
<td>Provide information on website related to illicit storm drain dumping, private septic system and well maintenance, proper hazardous waste disposal, and use of detergents, fertilizers, etc., and use of environmentally friendly products.</td>
<td>Students</td>
<td>Facilities Department, Marketing</td>
<td>Continue to update and maintain the websites.</td>
<td>2018</td>
</tr>
<tr>
<td>Web Page</td>
<td>Provide information on website related to illicit storm drain dumping, proper hazardous waste disposal, and use of detergents, fertilizers, etc., and use of environmentally friendly products.</td>
<td>Businesses, Institutions, and Commercial Facilities</td>
<td>Facilities Department, Marketing</td>
<td>Continue to update and maintain the websites.</td>
<td>2018</td>
</tr>
<tr>
<td>----------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------</td>
<td>-------------------------------------</td>
<td>-----------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Web Page</td>
<td>Provide information on website related to erosion and sediment control, Low Impact Development, and the Construction General Permit.</td>
<td>Developers (construction)</td>
<td>Facilities Department, Marketing</td>
<td>Continue to update and maintain the websites.</td>
<td>2018</td>
</tr>
<tr>
<td>Social Media</td>
<td>Provide relevant stormwater information to different audiences via social media.</td>
<td>Students, Businesses, Institutions, Con</td>
<td>Marketing</td>
<td>Follow statewide &quot;Think Blue&quot; campaign on social media platforms.</td>
<td>2019</td>
</tr>
</tbody>
</table>
## Notice of Intent (NOI) for coverage under Small MS4 General Permit

### Part III: Stormwater Management Program Summary (continued)

### MCM 2: Public Involvement and Participation

<table>
<thead>
<tr>
<th>BMP Categorization</th>
<th>Brief BMP Description (enter your own text to override the drop down menu)</th>
<th>Responsible Department/Parties (enter your own text to override the drop down menu)</th>
<th>Additional Description/Measurable Goal</th>
<th>Beginning Year of BMP Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Review</td>
<td>SWMP Review</td>
<td>Facilities Department, Marketing</td>
<td>Allow annual review of stormwater management plan and posting of stormwater management plan on website.</td>
<td>2018</td>
</tr>
<tr>
<td>Public Participation</td>
<td>Upload SWMP to the College website and provide a link to contact info</td>
<td>Facilities Department, Marketing</td>
<td>Allow public to comment or stormwater management plan annually.</td>
<td>2018</td>
</tr>
<tr>
<td><strong>BMP Categorization</strong> (enter your own text to override the drop down menu)</td>
<td><strong>BMP Description</strong> (enter your own text to override the drop down menu)</td>
<td><strong>Responsible Department/Parties</strong></td>
<td><strong>Measurable Goal</strong> (all text can be overwritten)</td>
<td><strong>Beginning Year of BMP Implementation</strong></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>SSO inventory</td>
<td>Develop SSO inventory in accordance of permit conditions</td>
<td>Facilities Department</td>
<td>Complete within 1 year of effective date of permit</td>
<td>2018</td>
</tr>
<tr>
<td>Storm sewer system map</td>
<td>Create map and update during IDDE program completion</td>
<td>Facilities Department</td>
<td>Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit</td>
<td>2018</td>
</tr>
<tr>
<td>Written IDDE program</td>
<td>Create written IDDE program</td>
<td>Facilities Department</td>
<td>Complete within 1 year of the effective date of permit and update as required</td>
<td>2018</td>
</tr>
<tr>
<td>Implement IDDE program</td>
<td>Implement catchment investigations according to program and permit conditions</td>
<td>Facilities Department</td>
<td>Complete 10 years after effective date of permit</td>
<td>2020</td>
</tr>
<tr>
<td>Employee training</td>
<td>Train employees on IDDE implementation</td>
<td>Facilities Department</td>
<td>Train annually</td>
<td>2018</td>
</tr>
<tr>
<td>Conduct dry weather screening</td>
<td>Conduct in accordance with outfall screening procedure and permit conditions</td>
<td>Facilities Department</td>
<td>Complete 3 years after effective date of permit</td>
<td>2019</td>
</tr>
<tr>
<td>Conduct wet weather screening</td>
<td>Conduct in accordance with outfall screening procedure</td>
<td>Facilities Department</td>
<td>Complete 10 years after effective date of permit</td>
<td>2024</td>
</tr>
<tr>
<td>Ongoing screening</td>
<td>Conduct dry weather and wet weather screening (as necessary)</td>
<td>Facilities Department</td>
<td>Complete ongoing outfall screening upon completion of IDDE program</td>
<td>2024</td>
</tr>
</tbody>
</table>
# Notice of Intent (NOI) for coverage under Small MS4 General Permit

## Part III: Stormwater Management Program Summary (continued)

**MCM 4: Construction Site Stormwater Runoff Control**

<table>
<thead>
<tr>
<th>BMP Categorization</th>
<th>BMP Description</th>
<th>Responsible Department/Parties</th>
<th>Measurable Goal (all text can be overwritten)</th>
<th>Beginning Year of BMP Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site inspection and enforcement of Erosion and Sediment Control (ESC) measures</td>
<td>Complete written procedures of site inspections and enforcement procedures</td>
<td>Facilities Department</td>
<td>Complete within 1 year of the effective date of permit</td>
<td>2018</td>
</tr>
<tr>
<td>Site plan review</td>
<td>Complete written procedures of site plan review and begin implementation</td>
<td>Facilities Department</td>
<td>Complete within 1 year of the effective date of permit</td>
<td>2018</td>
</tr>
<tr>
<td>Erosion and Sediment Control</td>
<td>Adoption of requirements for construction operators to implement a sediment and erosion control program</td>
<td>Facilities Department</td>
<td>Complete within 1 year of the effective date of permit</td>
<td>2018</td>
</tr>
<tr>
<td>Waste Control</td>
<td>Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes</td>
<td>Facilities Department</td>
<td>Complete within 1 year of the effective date of permit</td>
<td>2018</td>
</tr>
</tbody>
</table>
### Notice of Intent (NOI) for coverage under Small MS4 General Permit

#### Part III: Stormwater Management Program Summary (continued)

**MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment**

<table>
<thead>
<tr>
<th>BMP Categorization (enter your own text to override the drop down menu or entered text)</th>
<th>BMP Description (enter your own text to override the drop down menu)</th>
<th>Responsible Department/Parties</th>
<th>Measurable Goal (all text can be overwritten)</th>
<th>Beginning Year of BMP Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>As-built plans for on-site stormwater control</td>
<td>The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP.</td>
<td>Facilities Department</td>
<td>Require submission of as-built plans for completed projects</td>
<td>2018</td>
</tr>
<tr>
<td>Target properties to reduce impervious areas</td>
<td>Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually.</td>
<td>Facilities Department</td>
<td>Complete 4 years after effective date of permit and report annually on retrofitted properties</td>
<td>2020</td>
</tr>
<tr>
<td>Allow green infrastructure</td>
<td>Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist.</td>
<td>Facilities Department</td>
<td>Complete 4 years after effective date of permit and implement recommendations of report</td>
<td>2020</td>
</tr>
<tr>
<td>Street design and parking lot guidelines</td>
<td>Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.</td>
<td>Facilities Department</td>
<td>Complete 4 years after effective date of permit and implement recommendations of report</td>
<td>2020</td>
</tr>
<tr>
<td>BMP Categorization</td>
<td>BMP Description</td>
<td>Responsible Department/Parties</td>
<td>Measurable Goal</td>
<td>Beginning Year of BMP Implementation</td>
</tr>
<tr>
<td>--------------------</td>
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</tr>
<tr>
<td>O&amp;M procedures</td>
<td>Create written O&amp;M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment</td>
<td>Facilities Department</td>
<td>Complete and implement 2 years after effective date of permit</td>
<td>2019</td>
</tr>
<tr>
<td>Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment</td>
<td>Create inventory</td>
<td>Facilities Department</td>
<td>Complete 2 years after effective date of permit and implement annually</td>
<td>2019</td>
</tr>
<tr>
<td>Infrastructure O&amp;M</td>
<td>Establish and implement program for repair and rehabilitation of MS4 infrastructure</td>
<td>Facilities Department</td>
<td>Complete 2 years after effective date of permit</td>
<td>2019</td>
</tr>
<tr>
<td>Stormwater Pollution Prevention Plan (SWPPP)</td>
<td>Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities</td>
<td>Facilities Department</td>
<td>Complete and implement 2 years after effective date of permit</td>
<td>2019</td>
</tr>
<tr>
<td>Catch basin cleaning</td>
<td>Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule</td>
<td>Facilities Department</td>
<td>Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually</td>
<td>2018</td>
</tr>
<tr>
<td>Street sweeping program</td>
<td>Sweep all streets and permittee-owned parking lots in accordance with permit conditions</td>
<td>Facilities Department</td>
<td>Sweep all streets and permittee-owned parking lots once per year in the spring</td>
<td>2018</td>
</tr>
<tr>
<td>Road salt use optimization program</td>
<td>Establish and implement a program to minimize the use of road salt</td>
<td>Facilities Department</td>
<td>Implement salt use optimization during deicing season</td>
<td>2018</td>
</tr>
<tr>
<td>Inspections and maintenance of stormwater treatment structures</td>
<td>Establish and implement inspection and maintenance procedures and frequencies</td>
<td>Facilities Department</td>
<td>Inspect and maintain treatment structures at least annually</td>
<td>2018</td>
</tr>
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</tbody>
</table>
Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)
Actions for Meeting Total Maximum Daily Load (TMDL) Requirements

Use the drop-down menus to select the applicable TMDL, action description to meet the TMDL requirements, and the responsible department/parties. If no options are applicable, or more than one, **enter your own text to override drop-down menus**.

<table>
<thead>
<tr>
<th>Applicable TMDL</th>
<th>Action Description</th>
<th>Responsible Department/Parties (enter your own text to override the drop down menu)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Adhere to requirements in part A.I of Appendix F</td>
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<td>Adhere to requirements in part A.I of Appendix F</td>
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<td></td>
<td>Adhere to requirements in part A.I of Appendix F</td>
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</tr>
</tbody>
</table>
Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

Actions for Meeting Requirements Related to Water Quality Limited Waters

Use the drop-down menus to select the pollutant causing the water quality limitation and enter the waterbody ID(s) experiencing excursions above water quality standards for that pollutant. Choose the action description from the dropdown menu and indicate the responsible party. If no options are applicable, or more than one, enter your own text to override drop-down menus.

| Pollutant | Waterbody ID(s) | Action Description | Responsible Department/Parties (enter your own text to override the drop down menu) |
|-----------|----------------|--------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|
|           |                |                    |                                                                |                                                                |
|           |                |                    |                                                                |                                                                |
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|           |                |                    |                                                                |                                                                |
Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1 and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary. Also, provide any additional information about your MS4 program below.

MassBay Community College obtained an official species list for threatened and endangered species via the IPaC system (Consultation Code: 05E1NE00-2018-SLI-2799) within the regulated urbanized area. Per the IPaC system, one species exists within the MS4 regulated area: the Northern Long-eared Bat (Myotis septentrionalis). Based on the habitat of this species, it is our opinion that the current stormwater discharges will have “no effect” on the listed species. As no construction is being conducted, there will be no disturbances to terrestrial habitats of the Long-eared Bat. Existing stormwater discharges will have no effect on these habitats, as they are to aquatic areas. If structural Best Management Practices (BMPs) not identified on the NOI are proposed for installation or construction during the course of the permit term, MassBay Community College agrees to conduct endangered species screening for the proposed site and contact USFWS if it is determined that the new activity “may affect” or is “not likely to adversely affect” listed species or critical habitat under jurisdiction of the USFWS.

MassBay Community College has unique public education requirements that do not follow the typical 4 audiences as categorized by EPA. The College has no "Residents" in the traditional sense, as there is no on-campus housing. For the sake of this permit, "Residents" has been replaced by "Students". Additionally, as the College has no "Industrial" audience, this audience has been omitted from the Public Education and Outreach measure.

MassBay Community College has no regulatory authority, and thus has no bylaws, ordinances, or other regulatory mechanisms.

For the BMP "SSO inventory", MassBay Community College has no sanitary sewer or sanitary sewer overflows (SSOs).

For the BMP "Target properties to reduce impervious areas", the entire campus is owned by MassBay Community College. Instead of identifying 5 facilities, MassBay will identify 5 potential areas on campus that could be suitable for structural BMP modification or retrofit.
Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part V: 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:  
David Podell, Ph.D

Title:  
President

Signature:  
David Podell  
Digitally signed by David Podell  
Date: 2018.09.18 14:24:11 -04'00'

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Note: When prompted during signing, save the document under a new file name
In Reply Refer To:
Consultation Code: 05E1NE00-2018-SLI-2799
Event Code: 05E1NE00-2018-E-06552
Project Name: MassBay Community College MS4 Endangered Species Review

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.
A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 et seq.), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541
Project Summary

Consultation Code: 05E1NE00-2018-SLI-2799

Event Code: 05E1NE00-2018-E-06552

Project Name: MassBay Community College MS4 Endangered Species Review

Project Type: LAND - DRAINAGE

Project Description: Determination of impact of stormwater discharges and discharge related activities to threatened and endangered species per Appendix C of the MA MS4 General Permit. Stormwater discharge occurs from pre-existing outfalls within the regulated zone, as shown on the map.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.31206665252408N71.26241112593092W

Counties: Norfolk, MA
Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

<table>
<thead>
<tr>
<th>NAME</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern Long-eared Bat Myotis septentrionalis</td>
<td>Threatened</td>
</tr>
</tbody>
</table>

No critical habitat has been designated for this species.

Species profile: [https://ecos.fws.gov/ecp/species/9045](https://ecos.fws.gov/ecp/species/9045)

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.
February 14, 2019

David Podell, Ph.D
President

And;

Joseph DeLisle
Director of Facilities
50 Oakland Street
Wellesley Hills, MA. 02481
jdelisle@massbay.edu

Re: National Pollutant Discharge Elimination System Permit ID #: MAR043003, MassBay Community College

Dear Joseph DeLisle:

The 2016 NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (MS4 General Permit) is a jointly issued EPA-MassDEP permit. Your Notice of Intent (NOI) for coverage under this MS4 General Permit has been reviewed by EPA and appears to be complete. You are hereby granted authorization by EPA and MassDEP to discharge stormwater from your MS4 in accordance with the applicable terms and conditions of the MS4 General Permit, including all relevant and applicable Appendices. This authorization to discharge expires at midnight on June 30, 2022.

For those permittees that certified Endangered Species Act eligibility under Criterion C in their NOI, this authorization letter also serves as EPA’s concurrence with your determination that your discharges will have no effect on the listed species present in your action area, based on the information provided in your NOI.

As a reminder, your first annual report is due by September 30, 2019 for the reporting period from May 1, 2018 through June 30, 2019.
Information about the permit and available resources can be found on our website: https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit. Should you have any questions regarding this permit please contact Newton Tedder at tedder.newton@epa.gov or (617) 918-1038.

Sincerely,

[Signature]

Thelma Murphy, Chief
Stormwater and Construction Permits Section
Office of Ecosystem Protection
United States Environmental Protection Agency, Region 1

and;

[Signature]

Lealdon Langley, Director
Wetlands and Wastewater Program
Bureau of Water Resources
Massachusetts Department of Environmental Protection
Mapping Status

<table>
<thead>
<tr>
<th>Requirement Summary</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase I – Must be Complete by July 1, 2020</strong></td>
<td></td>
</tr>
<tr>
<td>1. Outfalls and receiving waters</td>
<td>100% Complete</td>
</tr>
<tr>
<td>2. Open channel conveyances</td>
<td>Not started</td>
</tr>
<tr>
<td>3. Interconnections with other MS4s</td>
<td>Not started</td>
</tr>
<tr>
<td>4. Municipally owned structural BMPs</td>
<td>Not started</td>
</tr>
<tr>
<td>5. Waterbody names and impairments</td>
<td>Complete</td>
</tr>
<tr>
<td>6. Initial catchment delineations by topography</td>
<td>Complete (updates ongoing)</td>
</tr>
<tr>
<td><strong>Phase II – Must be Complete by July 1, 2028</strong></td>
<td></td>
</tr>
<tr>
<td>1. Outfalls with spatial accuracy +/-30 feet</td>
<td>Complete</td>
</tr>
<tr>
<td>2. Pipe connectivity</td>
<td>Complete (updates ongoing)</td>
</tr>
<tr>
<td>3. Manholes</td>
<td>Complete</td>
</tr>
<tr>
<td>4. Catch basins</td>
<td>Complete</td>
</tr>
<tr>
<td>5. Refined catchment delineations</td>
<td>Not started</td>
</tr>
<tr>
<td>6. Municipal sanitary system</td>
<td>Not applicable</td>
</tr>
<tr>
<td>7. Municipal combined sewer system</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
Appendix C

Inventory of Stormwater Retrofit Sites
Appendix D

Catch Basin Optimization Plan
Plan for Optimizing Catch Basin Cleaning - MassBay College

1. Introduction ........................................................................................................... 1
2. Permit Requirements ................................................................................................ 1
3. Existing Catch Basin Management Program ......................................................... 2
4. Plans to Refine Catch Basin Cleaning Optimization .............................................. 2
   4.1 Optimization Methodology .............................................................................. 2
   4.2 Catch Basin Cleaning Standard Operation Procedure (SOP) ............................. 2
   4.3 Catch Basin Cleanings Storage and Disposal .................................................... 2

List of Appendices

Appendix A. Map of Drainage Infrastructure
Appendix B. Standard Operating Procedures for Catch Basin Cleaning and Inspection
1 Introduction

This Catch Basin Cleaning Optimization Plan has been prepared by MassBay Community College to address the catch basin inspection, cleaning and maintenance requirements of the United States Environmental Protection Agency’s (USEPA’s) 2016 National Pollutant Discharge Elimination System (NPDES) General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts, hereafter referred to as the “2016 MS4 Permit.”

The 2016 MS4 Permit requires the permittee to document its plan for optimizing catch basin cleaning, inspections, or its schedule for gathering information to develop the optimization plan. This plan documents the Town’s existing catch basin cleaning program and its plans for gathering additional information to refine its program to meet the requirements of the permit.

2 Permit Requirements

This Catch Basin Cleaning Optimization Plan addresses Section 2.3.7.1.a.iii.2 of the 2016 MS4 Permit (Infrastructure Operations and Maintenance), which includes the following requirements:

- Establish a schedule with the goal that the frequency of routine cleaning will ensure that no catch basin at any time will be more than 50 percent full1;

- Prioritize inspection and maintenance for catch basins:
  - located near construction activities2. These should be cleaned more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings;
  - discharging to impaired waters where the pollutant of concern is E. coli or enterococcus; and
  - with sumps more than 50% full during consecutive inspections.

- Establish proper documentation of catch basin inspections to include:
  - the location and total number of catch basins;
  - the location and total number of catch basins cleaned or inspected; and
  - the total volume or mass of material removed from catch basin

- Develop an optimization plan for catch basin cleaning, inspection plans, or a schedule for gathering information to develop the optimization plan in the first annual report and in the SWMP.

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1 A catch basin sump is more than 50 percent full if the contents within the sump exceed one half the distance between the bottom interior of the catch basin to the invert of the deepest outlet of the catch basin.
2 Roadway construction; residential, commercial, or industrial development or redevelopment.
3 Existing Catch Basin Management Program

MassBay has approximately 40 catch basins to clean and maintain. Refer to the map in Appendix A. Given the expense of cleaning, all catch basins are cleaned approximately every other year by an outside contractor. Of the 40 known catch basins, approximately half are leaching structures with no overflow device. The contractor is responsible for disposing of materials offsite.

4 Plans to Refine Catch Basin Cleaning Optimization

4.1 Optimization Methodology

the college will continue to implement its existing catch basin cleaning schedule. During this time, it will collect data on the sump depth and sediment depth in each catch basin and evaluate leaching basins, but priority will be given to standard catch basins regarding inspections and maintenance activities. A spreadsheet will be used to track sediment depth at each location. The catch basin inspection form included with the standard operating procedure (SOP) in Appendix B will be used to document data collected during cleaning.

A minimum of two years of data will be collected and evaluated to determine the status of the catch basins and whether the sump was more than half full. The catch basins that are more than 50% full will be evaluated for potential factors that may have contributed to it being 50% full (i.e., smaller sump, nearby construction, etc.) The evaluation will be used to identify catch basins that require more frequent inspection and/or cleaning and to develop an optimization plan that prioritizes these structures accordingly.

4.2 Catch Basin Cleaning Standard Operation Procedure (SOP)

All catch basins will be inspected and cleaned following the standard operating procedures (SOP) provided in Appendix B.

4.3 Catch Basin Cleanings Storage and Disposal

MassBay College uses an outside contractor for catch basin cleanings and the contractor is responsible for removal, storage, and disposal of all materials. MassBay will explore possible beneficial uses for its collected catch basin cleanings.
Appendix A

Map of Drainage Infrastructure
Appendix B

Standard Operating Procedures for Catch Basin Cleaning and Inspection
Permit Requirements

As required by the 2016 MS4 Permit, catch basin inspection and cleaning requirements include the following:

- **Inspect and clean catch basins** to ensure that no catch basin is not more than 50 percent full;
- **Prioritize inspection and maintenance** for catch basins:
  - located near construction activities;
  - discharging to impaired waters; and
  - with sumps more than 50% full during consecutive inspections.
- **Establish proper documentation** of catch basin inspections; and
- **Develop an optimization plan** for catch basin cleaning and inspection.

Before Cleaning and/or Inspection

- **Notify residents and business** of catch basin cleaning schedule to restrict parking that could obstruct catch basin cleaning operations.
- **Gather** all required forms and maps.
  - Catch Basin Inspection Form; and
  - Maps of area to be cleaned/inspected

Cleaning and Inspection during Cleaning

1. Clean sediment and trash off of grate.
2. Remove grate.
3. Fill out **Catch Basin Inspection Form** with basin-specific information:
   - **Before cleaning**:
     - Do a visual inspection of outside of grate.
     - Do a visual inspection of the inside of the catch basin to determine cleaning needs and structural issues.
     - Measure depth from rim of catch basin to top of sediment.
     - Measure depth from rim of catch basin to the top of the outlet pipe.
     - Take photo of catch basin.
   - **Clean catch basin**:
     - For manual removal, place removed material in a location protected from potential runoff and place cleanings in a vehicle for transport to designated disposal area.
     - OR use a high-powered vac truck to remove sediment.
   - **After cleaning**: 
SOP. MI-2  Catch Basin Cleaning and Inspection

- Measure depth from rim to bottom of catch basin.
- Measure depth of sump (outlet pipe to bottom of catch basin).
- Note if the catch basin is more than 50% full with sediment.
- Note if the catch basin requires maintenance or if there are pollutants present.
- Take photo of catch basin.

4. **Storage:** Bring cleanings to designated location.

5. If any illicit discharges are observed or suspected, notify supervisor.

**Interim Inspection between Cleaning Cycles**

1. Clean sediment and trash off grate.
2. Remove grate.
3. Fill out **Catch Basin Inspection Form** with basin-specific information:
   - Do a visual inspection of outside of grate.
   - Do a visual inspection of the inside of the catch basin to determine cleaning needs and structural issues.
   - Measure depth from rim of catch basin to top of sediment.
   - Using sump depth collected during previous cleaning, note if the catch basin is more than 50% full with sediment.
   - Note if the catch basin requires maintenance or if there are pollutants present.
4. If any illicit discharges are observed or suspected, notify supervisor.
### Catch Basin Inspection Form

#### Inspection Information
- **Catch Basin ID**
- **Street Location**
- **GPS Location**
- **Inspector’s Name**
- **Date of Inspection**
- **Time of Inspection**
- **Weather (circle)**: Dry, Light Rain, Heavy Rain, Snow

#### Catch Basin Information

<table>
<thead>
<tr>
<th>Location</th>
<th>Surface Type</th>
<th>Grate</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Road/Curb</td>
<td>- Asphalt</td>
<td>__inches x __inches</td>
</tr>
<tr>
<td>- Alley</td>
<td>- Gravel</td>
<td>Material:</td>
</tr>
<tr>
<td>- Ditch</td>
<td>- Concrete</td>
<td>Shape:</td>
</tr>
<tr>
<td>- Parking Lot</td>
<td>- Grass/Dirt</td>
<td>Other:______</td>
</tr>
<tr>
<td>- Driveway</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Sidewalk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other:______</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Catch Basin Condition
- **CB Damage:** No, Yes
- **Comment:**
- **Materials (circle):** Cast Iron, Brick, Concrete, Aluminum, Fiberglass
- **Condition (circle):** Poor, Fair, Good, Excellent

#### Sediment Depth and IDDE (inches)
- **A. Depth from Rim to Top of Sediment:** ________
- **B. Depth from Rim to Bottom of Basin (after vac):** _______________
- **C. Sump Depth:** ___________________________
- **D. Depth of Sediment (B-A):** _________________
- **E. More than 50% Full of Sediment? (D/C):** _____

#### CB Cleaned?** No, Yes
- **Suspected illicit discharge?** No, Yes

**Check those Present:**
- _Sanitary Waste/Smell
- _Excessive Sediment
- _Oil Sheen
- _Floatables/Trash
- _Pet Waste:
- Other:_________________
- **Potential Source:** _________
Appendix E

List of Stormwater BMPs