APPENDIX J
New Permittee Requirements to Reduce Pollutants to the Maximum Extent Practicable

This MS4 Permit is a reissuance of the 2016 permit, and therefore permit requirements are carried forward or advanced. New permittees seeking authorization for the first time under this reissuance are expected to need additional time to complete prior requirements and catch their SWMP up to existing permittees. For those permittees not covered under the MS4-2003 permit or the MS4-2016 permit, this Appendix supersedes the requirements contained in Part 2.3. in its entirety in the permit, all other parts of the permit remain applicable to all permittees. For non-traditional new permittees, Part 3.0 of the permit also applies in full.

2.3. Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP)

The permittee shall reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP) as detailed in Appendix J Parts 2.3.2 through 2.3.7 below.

2.3.1. Control Measures

a. Implementation of one or more of the minimum control measures described in Parts 2.3.2- 2.3.7 or other permit requirements may be shared with another entity (including another interconnected MS4) or the other entity may fully implement the measure or requirement, if the following requirements are satisfied:
   i. The other entity, in fact, implements the control measure.
   ii. The particular control measure or component thereof undertaken by the other entity is at least as stringent as the corresponding permit requirement.
   iii. The other entity agrees to implement the control measure on the permittee's behalf. The annual reports must specify that the permittee is relying on another entity to satisfy some of its permit obligations and specify what those obligations are.
   iv. If the permittee is relying on another governmental entity regulated under 40 CFR § 122 to satisfy all of its permit obligations, including the obligation to file annual reports, the permittee shall note that fact in its NOI, but is not required to file annual reports.
   v. The permittee remains responsible for compliance with all permit obligations if the other entity fails to implement the control measures (or component thereof). The permittee may enter into a legally binding agreement with the other entity regarding the other entity's performance of control measures, but the permittee remains ultimately responsible for permit compliance.

2.3.2. Public Education and Outreach

The permittee shall implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program is to increase knowledge and change behavior of the

public so that pollutants in stormwater are reduced.

a. The educational program shall define educational goals, express specific messages, define the targeted audience for each message, and identify responsible parties for program implementation. If appropriate for the target audience, materials may be developed in a language other than English. At a minimum, the program shall 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 shall identify steps and/or activities that the public can take to reduce the pollutants in stormwater runoff and their impacts to the environment.

b. The educational program shall include education and outreach efforts that at a minimum distribute five (5) messages over the permit term:

   i. **4 messages to specific audiences**: The permittee shall distribute a minimum of one educational message over the permit term to each of the following audiences: (1) residents, (2) businesses, (3) institutions (churches, hospitals), and (4) commercial facilities, unless one of these audiences is not present in the MS4 community. In such a situation, the MS4 must document in the SWMP which audience is absent from the community and an educational message to that audience is not required. These messages can be in any outreach format (see Table J-1 for examples).

   ii. **1 active and interactive message to any audience(s):** The permittee shall distribute a minimum of 1 message during the permit term that is active and interactive. Active and interactive messages are messages that allow for a two-way flow of information, are engaging, inspire immediate calls to action, and/or encourage audience participation (see the "Active and Interactive Outreach" column in Table J-1 for examples).

c. The permittee shall determine the top three non-English languages in their MS4 area. If appropriate for the target audience, materials shall be developed in the 3 identified languages, along with English. If there are fewer than three non-English languages spoken in the MS4 area, the permittee shall develop materials in as many languages as present, along with English.[1]

d. The permittee may use existing materials if they are appropriate for the messages the permittee chooses to deliver or the permittee may develop its own educational materials. The permittee may partner with other MS4s, community groups, or

[1] Resources such as the "Languages Spoken in Massachusetts" tab found here: https://mass-eoeea.maps.arcgis.com/apps/MapSeries/index.html?appid=535e4419dc0545be980545a0eeaf9b53 may be utilized to determine top languages in the MS4 area.

watershed associations to implement the education program to meet this permit requirement.

e. The permittee shall track progress toward the defined educational goals of the program and the objective of changing behaviors and increasing knowledge. The permittee shall identify the methods they will use to evaluate the effectiveness of each of the educational messages and the overall educational program. The permittee shall note any ineffective messages or distribution techniques to either improve upon in the future or not repeat.

f. The permittee shall document in each annual report the number of messages completed that year and for each message, the theme or title of the message, the type of message (active and interactive or passive), the audience, the method of distribution, the measures/methods used to assess the effectiveness of the messages, and the language(s) the message was distributed in.

Table J-1: Education and Outreach Activities

Active and Interactive Outreach	Passive Outreach
• Ongoing social media program • Ongoing advertisement/promotion of a stormwater hotline number or other method to report an illicit discharge • Distribute rain barrels • Participate in or sponsor a water festival or environmental event • Organize, participate in, or sponsor a water clean-up and trash removal event • Participate in or sponsor a stormwater related presentation • Participate in or sponsor a service project related to stormwater and/or watershed health • Participate in or sponsor a household hazardous waste event • Participate in or sponsor an Adopt-a-Street program • Participate in or sponsor an Adopt-a-Waterway program • Participate in or sponsor an Adopt-a-Storm Drain program • Stormwater booth at a community event • Storm drain marking program performed by the community/ public	• Publish article (hardcopy or electronic) • Distribute educational materials by brochure or fact sheet • Distribute educational materials by utility bill insert • Ongoing newsletter (hardcopy or electronic) • Distribute promotional items or giveaways with a stormwater related message • Develop/update stormwater page(s) on town website • Stormwater related signage: Post signage at municipally-owned green infrastructure sites that describe the function and importance of the infrastructure, along with contact information and/or website for more information • Storm drain marking performed by town staff • Newspaper advertisement • Radio/ television/ movie theater advertisement • Bus shelter/ bench advertisement • Billboard advertisement

• Install and maintain a minimum of two new pet waste stations with signage in heavily trafficked areas • Develop or present stormwater materials to schools • Implement a stormwater demonstration project to show a control measure, including educational signage • Produce a stormwater pollution themed mural, storm drain art, or other artwork at a well trafficked area within the MS4 area • Develop a program incentivizing street leaf cleanup by residents	• Promote existing local stormwater/ environmental events or program that helps protect water quality

2.3.3. Public Involvement and Participation

The permittee shall provide opportunities to engage the public to participate in the review and implementation of the permittee's SWMP.

a. All public involvement activities shall comply with state public notice requirements (MGL Chapter 30A, Sections 18-25). The SWMP and all documents submitted to EPA in accordance with Appendix F and Appendix H shall be available to the public online.

b. The permittee shall annually provide the public an opportunity to participate in the review and implementation of the SWMP. EPA encourages permittees to provide communities with environmental justice concerns within the MS4's regulated area opportunities for meaningful public participation.

c. The permittee shall report on the activities undertaken to provide public participation opportunities including compliance with Part 2.3.3.a. of this appendix in each annual report.

2.3.4. Illicit Discharge Detection and Elimination (IDDE) Program

The permittee shall implement an IDDE program to systematically find and eliminate sources of non-stormwater discharges to its municipal separate storm sewer system and implement procedures to prevent such discharges.

a. The IDDE program shall include adequate legal authority consisting of an ordinance, by-law, or other regulatory mechanism to prohibit illicit discharges; investigation of suspected illicit discharges; elimination of illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implementation of appropriate enforcement procedures and actions.

For new permittees the ordinance, by-law, or other regulatory mechanism shall be in place within 2 years of the permit effective date.

b. The permittee shall prohibit illicit discharges and sanitary sewer overflows (SSOs), defined in Appendix A, to its MS4 and require removal of such discharges consistent with Parts 2.3.4.c and 2.3.4.e of this appendix below.

c. Elimination of Illicit Discharges

   i. Upon detection of an illicit discharge, the permittee shall locate, identify and eliminate the illicit discharge as expeditiously as possible. Upon identification of the illicit source the MS4 must notify all responsible parties for any such discharge and require immediate cessation of improper disposal practices in accordance with its legal authorities. Where elimination of an illicit discharge within 60 days of its identification as an illicit discharge is not possible, the permittee shall establish an expeditious schedule for its elimination and report the dates of identification and schedules for removal in the permittee's annual reports. The permittee shall immediately commence actions necessary for elimination. The permittee shall diligently pursue elimination of all illicit discharges. In the interim, the permittee shall take all reasonable and prudent measures to minimize the discharge of pollutants to and from its MS4.

   ii. The period between identification and elimination of an illicit discharge is not a grace period. Discharges from an MS4 that are mixed with an illicit discharge are not authorized by this Permit (Part 1.3.a) and remain unlawful until eliminated.

d. Non-Stormwater Discharges

   i. The permittee may presume that the sources of non-stormwater listed in Part 1.4 of this permit need not be addressed. However, if, during the course of implementing the IDDE program, the permittee, MassDEP, or EPA finds that any of these sources as significant contributors of pollutants to the MS4, then the permittee shall implement measures to control these sources so they are no longer significant contributors of pollutants, and/or eliminate them entirely, consistent with Part 2.3.4.

e. Sanitary Sewer Overflows (SSO)

   i. Upon detection of an SSO the permittee shall eliminate it as expeditiously as possible and take interim mitigation measures to minimize the discharge of pollutants to and from its MS4 until elimination is completed.

   ii. The permittee shall identify all known locations where SSOs have discharged to the MS4 within the previous five (5) years. This shall include SSOs resulting, during dry or wet weather, from inadequate conveyance capacities, or where interconnectivity of the storm and sanitary sewer infrastructure allows for communication of flow between the systems. Within four (4) years of the effective date of the permit, the permittee shall develop an inventory of all

identified SSOs indicating the following information, if available and the permittee shall update the SWMP annually with this information:

1. Location (approximate street crossing/address and receiving water, if any);
2. A clear statement of whether the discharge entered a surface water directly or entered the MS4;
3. Date(s) and time(s) of each known SSO occurrence (i.e., beginning and end of any known discharge);
4. Estimated volume(s) of the occurrence;
5. Description of the occurrence indicating known or suspected cause(s);
6. Mitigation and corrective measures completed with dates implemented; and
7. Mitigation and corrective measures planned with implementation schedules.

iii. In accordance with Paragraph B.12 of Appendix B of this permit, upon becoming aware of an SSO to the MS4, the permittee shall provide oral notice to EPA within 24 hours. Additionally, the permittee shall provide written notice to EPA and MassDEP within five (5) days of becoming aware of the SSO occurrence and shall include the information in the updated inventory. The notice shall contain all of the information listed in Part 2.3.4.4.b. Where common notification requirements for SSOs are included in multiple NPDES permits issued to a permittee, a single notification may be made to EPA as directed in the permittee's wastewater or CSO NPDES permit and constitutes compliance with this part.

iv. The permittee shall include the updated SSO inventory in its annual report, including the status of mitigation and corrective measures implemented by the permittee to address each SSO identified pursuant to this part. The permittee shall also report the number of SSOs identified and SSOs removed during the reporting period in each annual report.

iv. The period between detection and elimination of a discharge from the SSO to the MS4 is not a grace period. Discharges from an MS4 that are mixed with an SSO are not authorized by this Permit (see Part 1.3.a) and remain unlawful until eliminated.

f. System mapping

i. The system mapping shall include a depiction of the permittee's separate storm sewer system in the permit area, intended to facilitate the identification of key infrastructure and factors influencing proper system operation, and the potential for illicit sanitary sewer discharges. The permittee shall update the SWMP annually with this information.

ii. Phase 1: The system map shall be updated within two (2) years of the permit effective date to include the following information:

1. Outfalls and receiving waters;
2. Open channel conveyances (swales, ditches, etc.);
3. Interconnections with other MS4s and other storm sewer systems;
4. Municipally-owned stormwater treatment structures (e.g., detention and retention basins, infiltration systems, bioretention areas, water quality swales, gross particle separators, oil/water separators, or other proprietary systems);
5. Waterbodies identified by name and indication of all use impairments as identified on the most recent EPA approved Massachusetts Integrated List of waters report pursuant to Clean Water Act section 303(d) and 305(b); and
6. Initial catchment delineations. Any available system data and topographic information may be used to produce initial catchment delineations. For the purpose of this permit, a catchment is the area that drains to an individual outfall or interconnection.

iii. Phase II: The system map shall be updated annually as the following information becomes available during implementation of catchment investigation procedures in Appendix I and Part 2.3.4.8. This information must be included in the map for all outfalls within ten (10) years of the permit effective date:

1. Outfall spatial location (latitude and longitude with a minimum accuracy of +/-30 feet);
2. Pipes;
3. Manholes;
4. Catch basins;
5. Refined catchment delineations. Catchment delineations shall be updated to reflect information collected during catchment investigations;
6. Municipal sanitary sewer system (if available); and
7. Municipal combined sewer system (if applicable).

iii. Recommended elements to be included in the system map as information becomes available:
1. Storm sewer material, size (pipe diameter) and age;
2. Sanitary sewer system material, size (pipe diameter) and age;
3. Privately-owned stormwater treatment structures;
4. Where a municipal sanitary sewer system exists, properties known or suspected to be served by a septic system, especially in high-density urban areas;
5. Area where the permittee's MS4 has received or could receive flow from septic system discharges (e.g., areas with poor soils, or high ground water elevations unsuitable for conventional subsurface disposal systems);
6. Seasonal high water table elevations impacting sanitary alignments;
7. Topography;

8. Orthophotography;
9. Alignments, dates, and representation of work completed (with legend) of past illicit discharge investigations (e.g., flow isolation, dye testing, CCTV); and
10. Locations of suspected, confirmed and corrected illicit discharges (with dates and flow estimates).

iv. The mapping may be produced by hand or through computer-aided methods (e.g. GIS). The required scale and detail of the map shall be appropriate to facilitate a rapid understanding of the system by the permittee, EPA, and the state. In addition, the mapping shall serve as a planning tool for the implementation and phasing of the IDDE program and demonstration of the extent of complete and planned investigations and corrections. The permittee shall update the mapping as necessary to reflect newly discovered information and required corrections or modifications.

v. The permittee shall report on the progress towards the completion of the system map in each annual report.

g. Written Illicit Discharge Detection and Elimination Program: The IDDE program shall be recorded in a written (electronic) document. The IDDE program shall include each of the elements described in Appendix I. The written IDDE program shall be completed within three (3) years of the effective date of the permit and updated in accordance with the milestones of this part. The permittee shall implement the IDDE program in accordance with the goals and milestones contained in this part. The permittee shall update the SWMP annually with this information.

i. The written IDDE program shall include a reference or citation of the authority the permittee will use to implement all aspects of the IDDE program.

ii. Statement of IDDE Program Responsibilities—The permittee shall establish a written (hardcopy or electronic) statement that clearly identifies responsibilities with regard to eliminating illicit discharges. The statement shall identify the lead municipal agency(ies) or department(s) responsible for implementing the IDDE Program as well as any other agencies or departments that may have responsibilities for aspects of the program (e.g., board of health responsibilities for overseeing septic system construction; sanitary sewer system staff; inspectional services for enforcing plumbing codes; town counsel responsibilities in enforcement actions, etc.). Where multiple departments and agencies have responsibilities with respect to the IDDE program specific areas of responsibility shall be defined and processes for coordination and data sharing shall be established and documented.

iii. Program Procedures—The permittee shall include in the written IDDE program all written procedures developed in accordance with the requirement of Appendix I and the timelines below.

h. Assessment and Priority Ranking of Outfalls/Interconnections: The permittee shall assess and priority rank the outfalls in terms of their potential to have illicit discharges and SSOs and the related public health significance. This ranking will determine the priority order for screening of outfalls and interconnections, catchment investigations for evidence of illicit discharges and SSOs, and provides the basis for determining permit milestones of this part.

i. Outfall/Interconnection Inventory and Initial Ranking: An initial outfall and interconnection inventory and priority ranking to assess illicit discharge potential based on existing information shall be completed within two (2) years from the effective date of the permit; an updated inventory and ranking will be provided in each annual report thereafter. The inventory shall be updated annually to include data collected in connection with the dry weather screening and other relevant inspections conducted by the permittee. The permittee shall update the SWMP annually with this information.

The outfall and interconnection inventory will identify each outfall and interconnection discharging from the MS4, record its location and condition, and provide a framework for tracking inspections, screenings and other activities under the permittee's IDDE program. Outfall and Interconnection inventory and ranking shall be done consistent with Part 1 of Appendix I with the following exception: outfalls/interconnections with known or suspected contributions of illicit discharges based on existing information shall be designated as Problem Outfalls. This shall include any outfalls/interconnections where previous screening indicates likely sewer input[2] Problem Outfalls need not be screened pursuant to Part 2.3.4.h.i. below and shall be ranked with the highest priority for catchment investigation pursuant to Part 2.3.4.k. below.

i. Dry Weather Outfall and Interconnection Screening and Sampling: All outfalls/interconnections (excluding Problem and excluded Outfalls) shall be inspected for the presence of dry weather flow within five (5) years of the permit effective date. The permittee shall screen all High and Low Priority Outfalls in accordance with their initial ranking developed at Part 2.3.4.h above.

[2] Likely sewer input indicators include, but are not limited to, the following:

- Olfactory or visual evidence of sewage,
- Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and bacteria levels greater than the water quality criteria applicable to the receiving water, or
- Ammonia ≥ 0.5 mg/L, surfactants ≥ 0.25 mg/L, and detectable levels of chlorine.

i. Written procedure: The permittee shall develop an outfall and interconnection screening and sampling procedure to be included in the IDDE program within three (3) years of the permit effective date. This procedure shall include the following procedures and ensure proper implementation of Part 2 of Appendix I:
   - Sample collection;
   - Use of field kits;
   - Storage and conveyance of samples (including relevant hold times); and
   - Field data collection and storage

   An example and sampling protocol (*EPA New England Bacterial Source Tracking Protocol*) can be found on EPA's website.

ii. Screening requirements: For each outfall/interconnection the permittee shall conduct outfall screening consistent with Part 2.1 of Appendix I.

iii. The permittee shall submit all screening data used in compliance with this part in its Annual Report.

j. Follow-up Ranking of Outfalls and Interconnections:

   i. The permittee's outfall and interconnection ranking shall be updated to reprioritize outfalls and interconnections based on information gathered during dry weather screening).

   ii. Outfalls/interconnections where relevant information was found indicating sewer input to the MS4 or sampling results indicating sewer input shall be considered highly likely to contain illicit discharges from sanitary sources, and such outfalls/interconnections shall be ranked at the top of the High Priority Outfalls category for investigation. At this time, permittees may choose to rank other outfalls and interconnections based on any new information from the dry weather screening.

   iii. The ranking can be updated continuously as dry weather screening information becomes available, but shall be completed within five (5) years of the effective date of the permit.

k. Catchment Investigations: The permittee shall develop a systematic procedure to investigate each catchment associated with an outfall or interconnection within their MS4 system.

   i. Timelines for Catchment Investigations:
      1. A written catchment investigation procedure shall be developed within three (3) years of the permit effective date and contain all the elements identified in Part 3 of Appendix I.

2. Investigations of catchments associated with Problem Outfalls shall begin no later than four (4) years from the permit effective date.
3. Investigations of catchments associated with High and Low Priority Outfalls shall follow the priority ranking of outfalls
4. Investigations of catchments associated with Problem Outfalls shall be completed with seven (7) years of the permit effective date
5. Investigations of catchments where any information gathered on the outfall/interconnection identifies sewer input shall be completed within seven (7) years of the permit effective date.
6. Investigations of catchments associated with all Problem, High- and Low-Priority Outfalls shall be completed within ten (10) years of the permit effective date.

For the purposes of these milestones, an individual catchment investigation will be considered complete if all relevant procedures in Part 3 of Appendix I have been completed.

ii. Requirements for each catchment investigation associated with an outfall/interconnection:
For each catchment, the permittee must follow the procedures in Part 3 of Appendix I to systematically inspect each catchment for the presence of illicit discharges. For each catchment being investigated, the permittee shall review relevant mapping and historic plans and records to identify areas within the catchment with higher potential for illicit connections and determine the need for wet weather screening and sampling. The permittee shall identify and record the presence of any **System Vulnerability Factors (SVFs)** for each catchment area and associated outfall or interconnection in accordance with Part 2 of Appendix I. All data collected as part of the catchment investigations shall be recorded and reported in each annual report.

l. Illicit Discharge Removal: The permittee shall exercise its authority as necessary to require removal of all identified illicit discharges pursuant to Part 2.3.4.d or 2.3.4.e.

i. Confirmatory outfall or interconnection screening shall be conducted within one year of removal of all identified illicit discharges within a catchment area. The confirmatory screening shall be conducted in dry weather unless System Vulnerability Factors have been identified, in which case both dry weather and wet weather confirmatory screening shall be conducted in accordance with part 2 of Appendix I. If confirmatory screening indicates evidence of additional illicit discharges, the catchment shall be scheduled for additional investigation.
ii. For each confirmed source the permittee shall include in the annual report the following information:
1. The location of the discharge and its source(s);

2. A description of the discharge;
3. The method of discovery;
4. The date of discovery;
5. The date of elimination, mitigation, or enforcement action OR planned corrective measures and a schedule for completing the illicit discharge removal; and
6. An estimate of the volume of flow removed.

iii. Indicators of IDDE Program Progress

The permittee shall define or describe indicators for tracking program success and evaluate and report on the overall effectiveness of the IDDE program in each annual report. At a minimum the permittee shall document in each annual report:

1. The number of SSOs and illicit discharges identified and removed;
2. The number and percent of total outfall catchments served by the MS4 evaluated using the catchment investigation procedure;
3. All dry weather and wet weather screening and sampling results; and
4. The volume of sewage removed.

m. Ongoing Screening

i. Upon completion of all catchment investigations and illicit discharge removal and confirmation (if necessary) pursuant to Part 2.3.4.j, each outfall or interconnection shall be reprioritized for screening in accordance with part 2.3.4.i and scheduled for ongoing screening once every five years. Ongoing screening and sampling shall consist of the following elements:

1. Dry weather screening and sampling shall be completed in accordance with procedures in Part 2 of Appendix I.
2. Wet weather screening and sampling shall be required at outfalls where wet weather screening was required due to SVFs and shall be conducted in accordance with Part 2 of Appendix I.
3. Catchment investigations shall be scheduled for where screening indicates evidence of additional illicit discharges. Each catchment investigation shall be completed in accordance with Part 3 of Appendix I.

ii. All sampling results shall be reported in the permittee's annual report.

n. Training

i. Beginning the second year following the effective date of the permit, the permittee shall, at a minimum, provide annual training to employees involved in IDDE program about the program, including how to recognize illicit discharges and SSOs. The permittee shall report on the frequency and type of employee training in the annual report.

2.3.5. Construction Site Stormwater Runoff Control

An effective construction stormwater runoff control program must minimize or eliminate erosion and maintain sediment on site so that it is not transported in stormwater and allowed to discharge to a water of the U.S through the permittee's MS4. The construction site stormwater runoff control program required by this permit is a separate and distinct program from EPA's Construction General Permit (CGP) and EPA's Dewatering and Remediation General Permit (DRGP) in that the CGP and DRGP are implemented by construction site operators to comply with the terms and conditions of EPA's general permits and this program is implemented by the MS4 operator to ensure that runoff from construction sites discharging to the MS4 are controlled consistent with the MS4's applicable requirements.

a. Permittees shall implement and enforce a program to reduce pollutants in any stormwater runoff discharged to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre within the regulated area. The permittee's program shall include construction activities that result in disturbances less than one acre if that disturbance is part of a larger common plan of development or sale that would disturb one or more acres.

b. The permittee is not required to apply its construction program requirements to projects that receive a waiver from EPA under the provisions of 40 CFR § 122.26(b)(15)(i).

c. The construction site runoff control program must include the elements in Paragraphs i. through iii. of this part:

    i. An ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites including a requirement to control other site wastes such as demolition debris, litter, and sanitary wastes. The ordinance or regulatory mechanism shall provide that the permittee may, to the extent authorized by law, impose sanctions to ensure compliance with the local program. The ordinances or regulatory mechanism shall be completed as soon as possible, but no later than two (2) years from the permit effective date.

    ii. Written procedures for site plan review, site inspections, and enforcement of sediment and erosion control measures by the permittee. If not already existing, the procedures for site plan review and inspection and enforcement shall be completed within three (3) years from the effective date of this permit. Permittees must report on the compliance with site plan reviews, inspections, and necessary enforcement of sediment and erosion control measures in the annual report required by Part 4.4 of the Permit.

        1. The site plan review procedure must include:

- Pre-construction review by the permittee of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and plans to address post-construction stormwater runoff in compliance with Part 2.3.6 of this Appendix;
- Consideration of potential water quality impacts;
- Procedures for the receipt and consideration of information submitted by the public; and
- Incorporation of Low Impact Development (LID) site planning and design strategy rubric to evaluate use of designs in site design, unless such practices are infeasible.

2. The site inspection and enforcement procedures must include:
   - Who is responsible for site inspections and the necessary qualifications for performing inspections, as well as who has authority to implement enforcement procedures;
   - Requirement that inspections of soil and erosion control BMPs occur both during and after construction of BMPs to ensure they are working as described in the approved plans;
   - Use of mandated inspection forms, if appropriate; and
   - Procedure for tracking the number of site reviews, inspections, and enforcement actions.

iii. 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 SCMs appropriate for the conditions at the construction site. At a minimum, SCMs should be consistent with the requirements of EPA's CGP. The program may include references to the requirements of EPA's CGP and DRGP (including the development of a SWPPP) to the extent they are consistent with the program requirements of this part. The program may include references to SCM design standards in state manuals, such as the Massachusetts Stormwater Handbook, or design standards developed by the MS4. EPA supports and encourages the use of design standards in local programs. Examples of appropriate 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. Control wastes that may be discharged, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes (these wastes may not be discharged to the MS4); and
8. Inspect stormwater controls at consistent intervals.

2.3.6. Stormwater Management in New Development and Redevelopment

Stormwater management must minimize post-construction water quality impacts of stormwater runoff from new development and redevelopment projects.

a. Permittees shall develop, implement, and enforce a program to address post-construction stormwater runoff from all new development and redevelopment sites that disturb one or more acres and discharge into the permittees MS4 at a minimum. The permittee's new development/redevelopment stormwater management program shall include sites less than one acre if the site is part of a larger common plan of development or redevelopment which disturbs one or more acre.

b. The permittee shall develop or modify, as appropriate, an ordinance or other regulatory mechanism within two (2) years of the effective date of the permit to contain provisions that are as least as stringent as the following requirements:

   i. Low Impact Development (LID) site planning and design strategies must be implemented unless infeasible in order to reduce the discharge of stormwater from development sites.

   ii. Stormwater management systems design shall be consistent with, or more stringent than, the requirements of the Massachusetts Stormwater Handbook.

   iii. Stormwater management systems on new development shall be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 60% of the average annual load of Total Phosphorus (TP) related to the total post-construction impervious surface area on the site. Average annual pollutant removal requirements shall be achieved through one of the following methods:
      1. Installing SCMs that meet the pollutant removal percentages based on calculations developed consistent with the methodology described in Attachment 3 to Appendix F; or
      2. Retaining the volume of runoff equivalent to, or greater than, one (1.0) inch multiplied by the total post-construction impervious surface area on the new development site; or

3. Meeting a combination of retention and treatment that achieves the above standards; or
4. Utilizing offsite mitigation that meets the above standards within the same USGS HUC12 as the new development site.

iv. Stormwater management systems on redevelopment sites shall be designed to meet an average annual pollutant removal equivalent to 80% of the average annual post-construction load of Total Suspended Solids (TSS) related to the total post-construction impervious area on the site AND 50% of the average annual load of Total Phosphorus (TP) related to the total post-construction impervious surface area on the site. Average annual pollutant removal requirements shall be achieved through one of the following methods:
   1. Installing SCMs that meet the pollutant removal percentages based on calculations developed consistent with the methodology described in Attachment 3 to Appendix F; or
   2. Retaining the volume of runoff equivalent to, or greater than, 0.8 inch multiplied by the total post-construction impervious surface area on the redeveloped site; or
   3. Meeting a combination of retention and treatment that achieves the above standards; or
   4. Utilizing offsite mitigation that meets the above standards within the same USGS HUC12 as the redevelopment site.

v. Redevelopment activities that are exclusively limited to maintenance and improvement of existing roadways that increase the amount of impervious area on the redevelopment site by greater than or equal to a single lane width shall meet the requirements of Part 2.3.6.b.iv. Roadway widening or improvements including widening less than a single lane, adding shoulders, correcting substandard intersections, improving existing drainage systems, and repaving projects shall improve existing conditions unless infeasible and are exempt from Part 2.3.6.b.iv.

c. The permittee shall require, at a minimum, the submission of as-built drawings no later than two (2) years after completion of construction projects. The as-built drawings must depict all on site controls, both structural and non-structural, designed to manage the stormwater associated with the completed site, and quantify removal of total suspended solids and total phosphorus consistent with Part b, above. The new development/redevelopment program shall have procedures to ensure adequate long-term operation and maintenance of stormwater management practices that are put in place after the completion of a construction project. These procedures may include the use of dedicated funds or escrow accounts for development projects or the acceptance of ownership by the permittee of all privately owned SCMs. These procedures may also include the development of

maintenance contracts between the owner of the SCM and the permittee. Alternatively, these procedures may include the submission of an annual certification documenting the work that has been done over the last 12 months to properly operate and maintain the stormwater control measures. The procedures to require submission of as-built drawings and ensure long term operation and maintenance shall be a part of the SWMP. The permittee shall report in the annual report on the measures that the permittee has utilized to meet this requirement and the average annual pounds of total phosphorus and total suspended solids removed on new and redevelopment sites during the reporting period.

d. Green Street Design Standards

i. Within four (4) years of the effective date of this permit, the permittee shall develop a report assessing current street design and parking lot guidelines and other local requirements that affect the creation of impervious cover. This assessment shall be used to provide information to allow the permittee to determine if changes to design standards for streets and parking lots can be made to support low impact design options. 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 attributable to parking areas and street designs. The permittee shall implement all recommendations, in accordance with the schedules, contained in the assessment. The local planning board and local transportation board should be involved in this assessment. This assessment shall be part of the SWMP and the SWMP should be updated annually with this information. The permittee shall report in each annual report on the status of this assessment including any planned or completed changes to local regulations and guidelines.

ii. Within four (4) years from the effective date of the permit, the permittee shall develop a report assessing existing local regulations to determine the feasibility of making, at a minimum, the following practices allowable when appropriate site conditions exist:
    1. Green roofs;
    2. Infiltration practices such as rain gardens, curb extensions, planter gardens, porous and pervious pavements, and other designs to manage stormwater using landscaping and structured or augmented soils; and
    3. Water harvesting devices such as rain barrels and cisterns, and the use of stormwater for non-potable uses.

    The assessment should indicate if the practices are allowed in the MS4 jurisdiction and under what circumstances are they 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. The permittee shall implement all recommendations, in accordance with the schedules, contained in the assessment. The permittee shall report in each annual report on its findings and progress towards making the practices allowable. (Information available at: http://www.epa.gov/region1/npdes/stormwater/assets/pdf/AddressingBarrier2LID.pdf and http://www.mapc.org/resources/low-impact-dev-toolkit/local-codes-lid)

iii. Within six (6) years of the effective date of the permit, the permittee shall develop and implement an applicable street design ordinance, policies and/or standards to promote use of green infrastructure and incorporate updated street design policies and standards into relevant documents and procedures applicable to transportation projects, parking areas, and rights-of-way. At a minimum, the ordinance shall require project planners to evaluate incorporating green infrastructure during the design phase of projects in rights-of way and parking areas. When drafting the ordinance, the permittee shall ensure that no existing ordinances prohibit the use of green infrastructure in transportation projects, parking areas, and rights-of-way. The municipal planning board, municipal transportation board, and municipal stormwater management staff should be involved in reviewing and implementing updated street design standards, including evaluation of green infrastructure during the project design phase. Green infrastructure designs suitable for streets and parking areas include, but are not limited to, vegetated swales, rain gardens/planters, curb extensions, tree pits and trenches, and permeable surfaces. Street design standards should address new and redevelopment of rights-of-way and parking lots, as well as capital improvement projects within existing rights-of way and parking areas, and should include flood management considerations (see Part 2.3.7 of this Appendix). The permittee shall report on the status of street designs upgrades in the Year 6 annual report.

2.3.7. Good House Keeping and Pollution Prevention for Permittee Owned Operations

The permittee shall implement an operations and maintenance program for permittee-owned operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee-owned operations.

a. Within two (2) years of the effective date of this permit, the permittee shall develop an inventory of all permittee owned facilities within the following categories: parks and open space; buildings and facilities where pollutants are exposed to stormwater runoff; and vehicles and equipment. The permittee shall include the inventory in the SWMP and annually review the inventory and update as necessary.

b. Within three (3) years from the effective date of the permit, the permittee shall develop, if not already developed, written operations and maintenance procedures for each of the categories of permittee owned properties. These written procedures shall be included as part of the SWMP and include the following:

   i. Procedures for Parks and Open Space shall, at a minimum:
      1. Address the proper use, storage, and disposal of pesticides, herbicides, and fertilizers including minimizing the use of these products in accordance with statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns and only in accordance with the manufacturer's instruction.
      2. Evaluate lawn maintenance and landscaping activities to ensure practices are protective of water quality including reduced mowing frequencies, proper disposal of lawn clippings, and use of alternative landscaping materials (e.g., drought resistant planting).
      3. Establish pet waste handling collection and disposal locations at all parks and open space where pets are permitted, including the placing of proper signage concerning the proper collection and disposal of pet waste, and proper cleaning schedules for all disposal receptacles.
      4. Establish procedures to address waterfowl congregation areas where appropriate to reduce waterfowl droppings from entering the MS4.
      5. Establish procedures for management of trash containers at all parks and open space. At a minimum, procedures must include proper cleaning schedules and sufficient number of containers.
      6. Establish procedures to address erosion or poor vegetative cover when the permittee becomes aware of it, especially if the erosion is within 50 feet of a surface water.

   ii. Procedures for Buildings and Facilities where pollutants are exposed to stormwater runoff, including schools (to the extent they are permittee-owned or operated), town offices, police, and fire stations; municipal pools and parking garages; and other permittee-owned or operated buildings or facilities shall, at a minimum:
      1. Evaluate the use, storage, and disposal of petroleum products and other potential stormwater pollutants.
      2. Provide employee training as necessary so that those responsible for handling petroleum products and other potential stormwater pollutants know proper handling procedures.
      3. Ensure that Spill Prevention Plans are in place, if applicable, and coordinate with the fire department as necessary.
      4. Develop management procedures for dumpsters and other waste management equipment including a schedule for cleanings to avoid overfilling.
      5. Establish parking lot sweeping frequencies to reduce runoff of pollutants.

i. Procedures for vehicles and equipment shall, at a minimum:
   1. Establish procedures for the storage of permittee vehicles. Vehicles with fluid leaks shall be stored indoors or containment shall be provided until repaired.
   2. Evaluate fueling areas owned or operated by the permittee, place fueling areas under cover in order to minimize exposure.
   3. Establish procedures to ensure that vehicle wash waters are not discharged to the municipal storm sewer system or to surface waters. This permit does not authorize such discharges.

c. Asset Management

i. The permittee shall develop an asset management system to track attributes, maintenance schedules, and pollutant reductions for critical assets. A system shall be implemented within seven (7) years of the effective date of the permit and updated to include all existing critical assets (described in 1, below) and SCMs (in 2, below) within eight (8) years of the effective date of the permit. The integrated management system must track all activities, pollutant loads, and schedules necessary to comply with this Permit for the purposes of annual reporting. At a minimum, the management system shall include the following:
   1. Critical Assets
      The management system shall include an inventory of critical assets to include, at a minimum, the key infrastructure components included in the Phase I and Phase II system mapping (to the extent the information is available) and catch basin inventory. In the SWMP, the Permittee shall document the basis and assumptions used to define critical assets (e.g., relative to the overall performance of the system). The inventory shall, at a minimum, include basic information about the assets, including:
      - Location
      - Age
      - Condition
      - Date of last maintenance
      - Whether the physical extent of the asset intersects with the FEMA Special Flood Hazard Area (SFHA) or the 1% chance storm in 2030 MC-FRM ("current" conditions)
      - Whether the physical extent of the asset intersects with the FEMA X (shaded) or B zones or the 0.2% chance storm in 2030 MC-FRM ("future" conditions)
      - Catch basin sump levels during routine cleaning and whether a catch basin sump is more than 50 percent full during two consecutive routine inspections/cleaning events, to the extent the information is available. See Part 2.3.7.e of this Appendix.
   2. Stormwater Control Measures
      The management plan shall include an inventory of stormwater control measures (SCMs) such as water quality swales, retention/detention basins,

infiltration structures, proprietary treatment devices or other similar structures.

- The management plan shall include an inventory of existing SCMs. The inventory shall include, at a minimum, basic information about the SCMs including:
  - Location
  - Age
  - Condition
  - Date of last maintenance
  - Whether the SCM intersects with the FEMA SFHA or the 1% chance storm in 2030 MC-FRM.
  - Whether the SCM intersects with the FEMA X (shaded) or B zones or the 0.2% chance storm in 2030 MC-FRM.
  - The estimated pollutant reduction achieved by the SCMs based on the methodology described in Attachment 3 to Appendix F of this Permit if applicable.
- The management plan shall track all new stormwater assets and control measures installed by the permittee or stormwater treatment devices discharging to the MS4. At a minimum, the management plan shall include the following information for new SCMs:
  - Date of installation
  - Location (street address or GPS location with accuracy of +/- 30 feet
  - Ownership and party responsible for maintenance
  - Type of treatment device consistent with the naming convention found (if applicable)
  - Impervious area in acres draining to the treatment device
  - Land use(s) of drainage area draining to the treatment device
  - Design Storage Volume of the treatment device (if applicable)
  - TP and TN removed by the treatment device in pounds per year (lb/yr). Calculations for pollutant removal must be consistent with the methodology described in Attachment 3 to Appendix F of this Permit.
  - Date of last maintenance activity for the treatment device
  - Whether the SCM intersects with the FEMA SFHA zone or the 1% chance storm in 2030 MC-FRM
  - Whether the SCM intersects with the FEMA X (shaded) or B zones or the 0.2% chance storm in 2030 MC-FRM

3. Inspection and Maintenance
   The management plan shall track inspection and maintenance frequencies and procedures for all stormwater assets and control measures. All permittee-owned stormwater assets and SCMs (excluding catch basins) shall be inspected annually or more frequently in accordance with design and manufacturer specification.

d. Retrofit on Permittee-owned Property

i. Six (6) years from the effective date of this permit, the permittee shall identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with SCMs designed to reduce the pollutant loads of stormwater discharges to and from its MS4 consistent with, or more stringent than, the requirements of the Massachusetts Stormwater Handbook. The permittee shall maintain an inventory of a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with SCMs.

ii. Beginning within eight (8) years after the effective date of the permit, the permittee shall retrofit a minimum of one (1) permittee owned property per year with SCMs, until such a time where all identified permittee-owned sites have been retrofitted.
   1. At a minimum, the permittee shall consider municipal properties with significant impervious cover (including parking lots, buildings, and maintenance yards) that could be modified or retrofitted with an SCM to enhance pollutant removal and/or address other operational or maintenance issues such as drainage failure caused by flooding. MS4 infrastructure to be considered includes existing rights-of-way, outfalls and conventional stormwater conveyances and controls (including swales and detention practices) that could be readily modified or retrofitted to provide reduction in frequency, volume and pollutant loads of such discharges.
   2. In prioritizing the schedule for modifying or retrofitting particular permittee-owned properties with SCMs, the permittee shall consider properties that are vulnerable to flooding during major storm or flood events and/or with high pollutant loads, and, whether the property is located within a flood zone under current and future conditions as defined in Part 2.3.7.c.ii.1, above. The permittee shall also consider factors such as schedules for planned capital improvements to storm and sanitary sewer infrastructure and paving projects; current storm sewer level of service; and control of discharges to water quality limited waters, first or second order streams, public swimming beaches, drinking water supply sources and shellfish growing areas.
   3. Beginning eight (8) years after the effective date (i.e, in the year eight (8) annual report) of the permit the permittee shall report the number and location(s) of new SCMs installed by the permittee during the reporting year and the factor(s) considered in prioritizing the retrofit. Permittees shall also report the total amount of TP and TN (in pounds per year) removed by all treatment structures tracked in the integrated management system.

e. Catch Basins

The Asset Management System shall include inspection, maintenance and replacement schedules and procedures for catch basins, including the following:

i. Cleaning, Inspection and Maintenance

Cleaning, inspection, and maintenance procedures shall be implemented such that the following conditions are met:

1. Prioritize inspection and maintenance for catch basins located near construction activities (roadway construction, residential, commercial, or industrial development or redevelopment). Clean catch basins in such areas more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings.
2. Prioritize inspection and maintenance for catch basins that experience flooding in major storm and flood events (as defined in Appendix A).
3. Establish and update as necessary a schedule with a goal that the frequency of routine cleaning will ensure that no catch basin at anytime will be more than 50 percent full. 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.
4. If a catch basin sump is more than 50 percent full during two consecutive routine inspections/cleaning events, the permittee shall document that finding, investigate the contributing drainage area for sources of excessive sediment loading, and to the extent practicable, abate contributing sources. The permittee shall describe any actions taken in its annual report.
5. Drainback water resulting from catch basin cleaning shall be discharged to the sanitary sewer, other facility designed for the treatment and disposal of catch basin drainback water, or a permittee-owned infiltration SCM. No catch basin cleaning drainback water shall be discharged to the MS4 unless discharge to a sanitary sewer or treatment facility is infeasible; such a determination shall be documented in the SWMP and each annual report.
6. The permittee shall update the catch basin inventory included in the Asset Management System when catch basins are cleaned or inspected. This inventory shall be updated as part of the SWMP. At a minimum, this inventory shall include the sump depth, last cleaning or maintenance, estimated volume of sediment removed at last cleaning, and whether the catch basin is located within a flood zone under current and future conditions as defined in Part 2.3.7.c.ii.1.
7. The permittee shall report in each annual report the total number of catch basins inspected, number cleaned, and the total volume or mass of material removed from all catch basins during the reporting year.

ii. Catch Basin Upgrade and Replacement

Within six (6) years of the effective date of the permit the permittee shall develop a Catch Basin Upgrade and Replacement Prioritization Program for all catch basins in the permittee's MS4 that are not designed in compliance with Volume 2 Chapter 2 of the Massachusetts Stormwater Handbook. The permittee shall upgrade or replace 20% of the permittee's total catch basins in need of an upgrade within ten (10) years of the effective date of the permit. The upgrade

and replacement program shall rank all catch basins needing an upgrade or replacement. The permittee shall first prioritize upgrading and replacing catch basins according to the following criteria:

1. Catch basins that are a part of upcoming planned capital improvement projects or that are in need of minimal upgrade such as installation of a hood.
2. Catch basins observed to be more than 50% full during two consecutive routine inspections/cleaning events.
3. Catch basins that are prone to flooding during major storm and flood events or that are located within a flood zone under current and future conditions as defined in Part 2.3.7.c.ii.1.
4. Catch basins located in areas with high proportion of impervious cover relative to the total MS4 area.
5. In lieu of replacing a catch basin in need of an upgrade or replacement, the permittee may elect to install a SCM, or series of SCMs, within the catch basin catchment area that achieves water quality improvements and additional benefits (e.g., reduction in peak flow, alleviates flooding, provides co-benefits to a community with environmental justice concerns) such that the performance of the SCM, accounting for additional benefits, is greater than that of a catch basin designed in compliance with the Massachusetts Stormwater Handbook. A permittee may install any of the infiltration-based SCMs listed in Attachment 3 to Appendix F in lieu of replacing a catch basin and may receive credit for nutrient reductions achieved by the SCM. All SCMs must be inspected and maintained according to the frequencies and procedures determined in permit Part 2.3.7.c.3.
6. Where it is determined that a catch basin replacement consistent with the requirements of the Massachusetts Stormwater Handbook is infeasible and an alternative SCM cannot be installed, the permittee shall document the information that supports the infeasibility determination and design the replacement catch basin consistent with Volume 2 Chapter 2 of the Massachusetts Stormwater Handbook to the maximum extent feasible. All information on infeasibility of catch basin replacement shall be included SWMP.
7. The permittee shall report on the number of catch basins upgraded or replaced per year in each annual report, including the number and estimated performance of SCMs installed in lieu of a catch basin replacement, and the number of catch basins where it was determined fully meeting the requirements of the Massachusetts Stormwater Handbook and an additional SCM installation was infeasible, along with the justification.

f. Street Sweeping and Winter Maintenance

i. Street Sweeping

The permittee shall develop procedures for sweeping and/or cleaning permittee-

owned streets, and parking lots within four (4) years of the effective date of the permit and include the following (at a minimum):

1. All permittee-owned streets with the exception of rural uncurbed roads with no catch basins or high speed limited access highways shall be swept and/or cleaned a minimum of twice per year; once in the spring (following winter activities such as sanding) and once in the fall fallowing leaf fall.
2. The procedures shall include more frequent sweeping of targeted areas determined by the permittee on the basis of pollutant load reduction potential, based on inspections, pollutant loads, catch basin cleaning or inspection results, land use, water quality limited or TMDL waters, or other relevant factors as determined by the permittee.
3. The permittee shall report in each annual report the average number of times roadways were swept that reporting year, and the number of miles cleaned or the volume or mass of material removed.
4. Rural uncurbed roadways with no catch basins and limited access highways, shall either meet the minimum frequencies above, or the permittee shall update and implement its targeted sweeping plan for such roadways. The targeted sweeping plan for uncurbed roads with no catch basins and limited access highways shall be documented in the SWMP.

ii. Winter Road Maintenance

1. The permittee shall update and implement procedures for winter road maintenance including the use and storage of salt and sand in order to minimize the use of sodium chloride and other salts. The permittee shall adopt temperature dependent deicing procedures and salt application rates including the use of pre-wetting procedures and alternative deicing materials.
2. The permittee shall annually train employees who are responsible for implementing winter road maintenance procedures. At a minimum the training must include information related to the proper storage and handling of deicing chemicals, proper application rates based on temperature, the use of brines or other pre-wetting solutions, the use of salt alternatives (if applicable), and other factors to minimize deicer use.
3. The permittee shall report the total tons of salt used per year on municipal roadways and parking lots in each annual report.
4. The permittee shall ensure that snow disposal activities do not result in disposal of snow into waters of the United States.
5. For purposes of this MS4 Permit, salt shall mean any chloride-containing material used to treat paved surfaces for deicing, including sodium chloride, calcium chloride, magnesium chloride, and brine solutions.

g. Stormwater Pollution Prevention Plan (SWPPP)

No later than four (4) years from the effective date of the permit, the permittee shall

develop and implement a SWPPP for each of the following permittee-owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater as determined by the permittee. If facilities are located at the same property, the permittee may develop one SWPPP for the entire property. The SWPPP is a separate and different document from the SWMP required in Part 1.10. A SWPPP does not need to be developed for a facility if the permittee has either developed a SWPPP or received a no exposure certification for the discharge under the Multi-Sector General Permit, or the discharge is authorized under another NPDES permit.

i. For new facilities built or acquired by the permittee after year four (4) of the permit, the permittee shall develop and implement a SWPPP for those facilities no later than one (1) year from the date the facility or building was acquired. The permittee shall develop and implement a written SWPPP for the facilities described above. The SWPPP shall be signed in accordance with the signatory requirements of Appendix B – Subparagraph 11.

ii. The SWPPP shall contain the following elements:
    1. Pollution Prevention Team
        - Identify the staff on the team, by name and title. If the position is unstaffed, the title of the position should be included and the SWPPP updated when the position is filled. The role of the team is to develop, implement, maintain, and revise, as necessary, the SWPPP for the facility.
    2. Description of the facility and identification of potential pollutant sources
        - The SWPPP shall include a map of the facility and a description of the activities that occur at the facility. The map shall show the location of the stormwater outfalls, receiving waters, and any structural controls. Identify all activities that occur at the facility and the potential pollutants associated with each activity including the location of any floor drains. These may be included as part of the inventory required by Part 2.3.7.a.
    3. Identification of stormwater control measures
        - The permittee shall select, design, install, and implement the BMPs detailed in Section 2.3.7.g.ii.4 below to prevent or reduce the discharge of pollutants from the permittee owned facility.
        - The selection, design, installation, and implementation of BMPs shall be in accordance with good engineering practices and manufacturer's specifications and take into consideration whether control measures are located within a flood zone under current and future conditions as defined in Part 2.3.7.c.ii.1. The permittee shall also take all reasonable steps to control or address the quality of discharges from the site that may not originate at the facility.
        - If the discharge from the facility is to a water quality limited water and the facility has the potential to discharge the pollutant identified as causing the water quality limitation, the permittee shall identify the

control measures that will be used to address this pollutant at the facility so that the discharge meets applicable water quality standards.

4. Best Management Practices
   - Minimize or Prevent Exposure: The permittee shall to the extent practicable either locate materials and activities inside, or protect them with storm-resistant coverings in order to prevent exposure to rain, snow, snowmelt and runoff (although significant enlargement of impervious surface area is not recommended). Materials do not need to be enclosed or covered if stormwater runoff from affected areas will not be discharged directly or indirectly to surface waters or to the MS4 or if discharges are authorized under another NPDES permit.
   - Good Housekeeping: The permittee shall keep clean all exposed areas that are potential sources of pollutants, using such measures as sweeping at regular intervals. Ensure that trash containers are closed when not in use, keep storage areas well swept and free from leaking or damaged containers, and store leaking vehicles needing repair indoors.
   - Preventative Maintenance: The permittee shall regularly inspect, test, maintain, and repair all equipment and systems to avoid situations that may result in leaks, spills, and other releases of pollutants in stormwater to receiving waters. Inspections shall occur at a minimum once per quarter.
   - Spill Prevention and Response: The permittee shall minimize the potential for leaks, spills, and other releases that may be exposed to stormwater and develop plans for effective response to such spills if or when they occur. At a minimum, the permittee shall have procedures that include:
     - Preventive measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling.
     - Response procedures that include notification of appropriate facility personnel, emergency agencies, and regulatory agencies, and procedures for stopping, containing, and cleaning up leaks, spills and other releases. Measures for cleaning up hazardous material spills or leaks shall be consistent with applicable Resource Conservation and Recovery Act (RCRA) regulations at 40 CFR section 264 and 40 CFR section 265. Employees who may cause, detect, or respond to a spill or leak shall be trained in these procedures and have necessary spill response equipment available. If possible, one of these individuals should be a member of the Pollution Prevention Team; and
     - Contact information for individuals and agencies that shall be notified in the event of a leak, spill, or other release. Where a leak, spill, or other release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under 40 CFR section 110, 40 CFR section 117, or 40 CFR section 302, occurs

during a 24-hour period, the permittee shall notify the National Response Center (NRC) at (800) 424-8802 in accordance with the requirements of 40 CFR section 110, 40 CFR section 117, and 40 CFR section 302 as soon as the permittee has knowledge of the discharge. Permittees must immediately call MassDEP's Emergency Response line at: 888-304-1133 in the event of an oil spill or leak, the release of hazardous materials, the contamination of drinking water, or other threats to the public health, safety, or the environment. Local requirements may necessitate additional reporting of spills or discharges to local emergency, public health or drinking water supply agencies, and owners of public drinking water supplies. Contact information shall be in locations that are readily accessible and available.

- Erosion and Sediment Control: The permittee shall use structural and non-structural control measures at the facility to stabilize and contain runoff from exposed areas and to minimize or eliminate onsite erosion and sedimentation. Efforts to achieve this may include the use of flow velocity dissipation devices at discharge locations and within outfall channels where necessary to reduce erosion.
- Management of Runoff: The permittee shall manage stormwater runoff from the facility to prevent or reduce the discharge of pollutants. This may include management practices which divert runoff from areas that are potential sources of pollutants, contain runoff in such areas, or reuse, infiltrate or treat stormwater to reduce the discharge of pollutants.
- Salt Storage Piles or Piles Containing Salt: For storage piles of salt or piles containing salt used for deicing or other purposes (including maintenance of paved surfaces) for which the discharge during precipitation events discharges to the permittee's MS4, any other storm sewer system, or to a Water of the US, the permittee shall prevent exposure of the storage pile to precipitation by enclosing or covering the storage piles. The permittee shall implement appropriate measures (e.g., good housekeeping, diversions, containment) to minimize exposure resulting from adding to or removing materials from the pile. The permittee is encouraged to store piles in such a manner as not to impact surface water resources, ground water resources, recharge areas, and wells.
- Employee Training: The permittee shall, at a minimum, provide annual training to employees who work in areas where materials or activities are exposed to stormwater, or who are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance personnel), including all members of the Pollution Prevention Team. Training shall cover both the specific components and scope of the SWPPP and the control measures required under this part, such as spill response, good housekeeping, material management practices, any best

management practice operation and maintenance. The permittee shall document the following information for each training in the SWMP:
    - The training date, title and training duration;
    - List of municipal attendees;
    - Subjects covered during training
- Maintenance of Control Measures: The permittee shall maintain all control measures required by this permit in effective operating condition. The permittee shall keep documentation onsite that describes procedures and a regular schedule for preventative maintenance of all control measures and discussions of back-up practices in place should a runoff event occur while a control measure is off-line. Nonstructural control measures shall also be diligently maintained (e.g., spill response supplies available, personnel trained).

iii. The permittee shall conduct the following inspections:

1. Site Inspections: Inspect all areas that are exposed to stormwater and all stormwater control measures. Inspections shall be conducted at least once each calendar quarter. More frequent inspections may be required if significant activities are exposed to stormwater. Inspections shall be performed when the facility is in operation. At least one of the quarterly inspections shall occur during a period when a stormwater discharge is occurring. The permittee shall document the following information for each facility inspection:
    - The inspection date and time;
    - The name of the inspector;
    - Weather information and a description of any discharge occurring at the time of the inspection;
    - Identification of any previously unidentified discharges from the site;
    - Any control measures needing maintenance or repair;
    - Any failed control measures that need replacement.
    - Any SWPPP changes required as a result of the inspection.
2. If during the inspections, or any other time, the permittee identifies control measures that need repair or are not operating effectively, the permittee shall repair or replace them before the next anticipated storm event if possible, or as soon as practicable following that storm event. In the interim, the permittee shall have back-up measures in place.
3. The permittee shall report the findings from the Site Inspections in the annual report.

iv. The permittee must keep a written record of all required activities including but not limited to maintenance, inspections, and training. The permittee shall maintain all records associated with the development and implementation of the SWPPP required by this part consistent with the requirements of Permit Part 4.2.

v. The permittee shall report in the annual report on the status of all operation and maintenance programs and SWPPPs required by this part including the maintenance activities and other reporting requirements associated with each. The permittee shall maintain, consistent with Part 4.2.a, all records associated with maintenance and inspection activities required by this part.

h. Flood Management

The permittee may identify ways to ensure that new flood management projects related to MS4 operations assess the impacts on water quality and examine existing flood management projects for incorporating additional water quality protection devices or practices. EPA encourages permittees to coordinate with flood control managers for the purpose of identifying and addressing water quality impacts from flood management projects.