United States Environmental Protection Agency (EPA)
National Pollutant Discharge Elimination System (NPDES)

GENERAL PERMITS FOR STORMWATER DISCHARGES FROM SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEMS IN MASSACHUSETTS

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act (CWA), as amended (33 U.S.C. §1251 *et seq.*), and the Massachusetts Clean Waters Act, as amended (M.G.L. Chap.21 §§ 26-53), any operator of a small municipal separate storm sewer system whose system:

- Is located in the areas described in Part 1.1;
- Is eligible for coverage under Part 1.2 and Part 1.9; and
- Submits a complete and accurate Notice of Intent in accordance with Part 1.7 of this permit and EPA issues a written authorization

is authorized to discharge in accordance with the conditions and the requirements set forth herein.

The following appendices are also included as part of these permits:
Appendix A – Definitions, Abbreviations, and Acronyms;
Appendix B – Standard permit conditions applicable to all authorized discharges;
Appendix C – Endangered Species Act Eligibility Guidance;
Appendix D – National Historic Preservation Act Eligibility Guidance;
Appendix E – Information required for the Notice of Intent (NOI);
Appendix F – Requirements for MA Small MS4s Subject to Approved TMDLs;
Appendix G – Impaired Waters Monitoring Parameter Requirements;
Appendix H – Requirements related to discharges to certain water quality limited waterbodies;
Appendix I – EPA New England Bacterial Source Tracking Protocol

These permits become effective on **[insert date X months from FR publication]**.

These permits and the authorization to discharge expire at midnight, **[five years from permit effective date]**.

Signed this day of

_____

Ken Moraff, Director
Office of Ecosystem Protection
United States Environmental Protection Agency
5 Post Office Square – Suite 100
Boston, Massachusetts 02109-3912

Signed this day of

_____

David Ferris, Director
Division of Watershed Management
Department of Environmental Protection
One Winter Street
Boston, Massachusetts 02108

Table of Contents

1.0. Introduction

This document consists of three (3) general permits listed in Part 1.1. Each general permit is applicable to a particular type of municipal system within Massachusetts. Many of the permit terms and conditions are applicable across all regulated entities, and therefore are presented just once in Parts 1-2, Part 4, and Appendices A through E. Other conditions are applicable to a particular set of authorized entities; these terms and conditions are included in Parts 3, and 5 and Appendices F through H. Throughout the permit, the terms "this permit" or "the permit" will refer to the three general permits.

1.1. Areas of Coverage

This permit covers small municipal separate storm sewer systems (MS4s) located in the Commonwealth of Massachusetts:

- Traditional Cities and Towns (NPDES Permit No. MAR041000)
- State, federal, county and other publicly owned properties (Non-traditional) (MAR042000)
- State transportation agencies (except for MassDOT- Highway Division) (MAR043000)

1.2. Eligibility

The MS4 shall meet the eligibility provisions described in Part 1.2.1 and Part 1.9 to be eligible for authorization under this permit.

1.2.1. Small MS4s Covered

This permit authorizes the discharge of stormwater from small MS4s as defined at 40 CFR § 122.26(b) (16). This includes MS4s described in 40 CFR §122.32(a) (1) and (a) (2). An MS4 is eligible for coverage under this permit if it is:

- A small MS4 within the Commonwealth of Massachusetts;
- Not a large or medium MS4 as defined in 40 CFR §§122.26(b)(4) or (7);
- Located either fully or partially within an urbanized area as determined by the latest Decennial Census by the Bureau of Census as of the effective date of this permit (the 2010 Census); or
- Located in a geographic area designated by EPA as requiring a permit.

If the small MS4 is not located entirely within an urbanized area, only the portion of the MS4 that is located within the urbanized area is regulated under 40 CFR §122.32(a) (1).

A small municipal separate storm sewer system means all separate storm sewers that are:

- Owned or operated by the United States, a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to state law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States.

- Not defined as large or medium municipal separate storm sewer systems pursuant to 40 CFR § 122.26(b) (4) and (b) (7) or designated under 40 CFR § 122.26(a) (1) (v).
- This term includes systems similar to separate storm sewer systems in municipalities such as systems at military bases, large hospitals or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings.

1.3. Limitations on Coverage

This permit does not authorize the following:

a. Stormwater discharges mixed with sources of non-stormwater unless such non-stormwater discharges are:
- Authorized under a separate NPDES permit; or
- A non-stormwater discharge as listed in Part 1.4.

b. Stormwater discharges associated with industrial activity as defined in 40 CFR §122.26 (b) (14) (i)-(ix) and (xi).

c. Stormwater discharges associated with construction activity as defined in 40 CFR §122.26(b) (14) (x) or (b) (15).

d. Stormwater discharges currently authorized under another NPDES permit, including discharges covered under other regionally issued general permits.

e. Stormwater discharges or discharge related activities that are likely to adversely affect any species that are listed as endangered or threatened under the Endangered Species Act (ESA) or result in the adverse modification or destruction of habitat that is designated as critical under the ESA. The permittee shall follow the procedures detailed in Appendix C to make a determination regarding eligibility. The permittee shall certify compliance with this provision on the submitted NOI.

f. Stormwater discharges whose direct or indirect impacts do not prevent or minimize adverse effects on any Essential Fish Habitat.

g. Stormwater discharges, or implementation of a stormwater management program, which adversely affects properties listed or eligible to be listed on the National Register of Historic Places. The permittee shall follow the procedures detailed in Appendix D to make a determination regarding eligibility. The permittee shall certify compliance with this provision on the submitted NOI.

h. Stormwater discharges prohibited under 40 CFR § 122.4.

i. Stormwater discharges to the subsurface subject to state Underground Injection Control (UIC) regulations. Although the permit includes provisions related to infiltration and groundwater recharge, structural controls that dispose of stormwater into the ground may be subject to UIC regulation requirements. Authorization for such discharges shall be obtained from Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program, Underground Injection Control, One Winter Street, Boston, MA 02108 – phone 617-348-4014.

j. Any Non-traditional MS4 facility that is a "new discharger" and discharges to a waterbody listed in category 5 or 4b on the Massachusetts Integrated Report of waters listed pursuant to Clean Water Act section 303(d) and 305(b) due to nutrients (nitrogen or phosphorus), metals, solids, bacteria/pathogens, chloride or oil and grease (hydrocarbons), or discharges to a waterbody with an approved TMDL for any of those pollutants.

1.4. Non-Stormwater Discharges

The following categories of non-stormwater discharges are allowed under this permit unless the permittee, EPA, or the MassDEP identifies any category or individual discharge of non-stormwater discharge in Part 1.4.a-r as a significant contributor of pollutants to the MS4, then that category or individual discharge is not allowed under Part 1.4, but rather shall be deemed an "illicit discharge" under Part 2.3.4.1, and the permittee shall address that category or individual discharge as part of the Illicit Discharge Detection and Elimination (IDDE) Program described in Part 2.3.4 of this permit.

a. Water line flushing
b. Landscape irrigation
c. Diverted stream flows
d. Rising ground water
e. Uncontaminated ground water infiltration (as defined at 40 CFR § 35.2005(20))
f. Uncontaminated pumped ground water
g. Discharge from potable water sources
h. Foundation drains
i. Air conditioning condensation
j. Irrigation water, springs
k. Water from crawl space pumps
l. Footing drains
m. Lawn watering
n. Individual resident car washing
o. Flows from riparian habitats and wetlands
p. De-chlorinated swimming pool discharges
q. Street wash waters
r. Residential building wash waters without detergents

Discharges or flows from firefighting activities are allowed under this permit need only be addressed where they are identified as significant sources of pollutants to waters of the United States.

1.5. Permit Compliance

Non-compliance with any of the requirements of this permit constitutes a violation of the permit and the CWA and may be grounds for an enforcement action and may result in the imposition of injunctive relief and/or penalties.

1.6. Continuation of this Permit

If this permit is not reissued prior to the expiration date, it will be administratively continued in accordance with the Administrative Procedure Act and remain in force and effect for discharges that were authorized prior to expiration. If a small MS4 was granted permit

authorization prior to the expiration date of this permit, it will automatically remain authorized by this permit until the earliest of:

- Authorization under a reissued general permit following timely and appropriate submittal of a complete and accurate NOI requesting authorization to discharge under the reissued permit; or
- Issuance or denial of an individual permit for the MS4's discharges; or
- Authorization or denial under an alternative general permit.

If the MS4 operator does not submit a timely, appropriate, complete, and accurate NOI requesting authorization to discharge under the reissued permit or a timely request for authorization under an individual or alternative general permit, authorization under this permit will terminate on the due date for the NOI under the reissued permit unless otherwise specified in the reissued permit.

1.7. Obtaining Authorization to Discharge

1.7.1. How to Obtain Authorization to Discharge

To obtain authorization under this permit, a small MS4 shall:

- Be located in the areas listed in Part 1.1. of this permit;
- Meet the eligibility requirements in Part 1.2. and Part 1.9.;
- Submit a complete and accurate Notice of Intent (NOI) in accordance with the requirements of Part 1.7.2; and
- EPA issues a written authorization.

1.7.2. Notice of Intent

a. Operators of Small MS4s seeking authorization to discharge under the terms and conditions of this permit shall submit a Notice of Intent that contains the information identified in Appendix E. This includes operators of small MS4s that were previously authorized under the May 1, 2003 small MS4 general permit (MS4-2003 permit).

b. The NOI shall be signed by an appropriate official (see Appendix B Subparagraph 11).

c. The NOI shall contain the following 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 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.*
Print the name and title of the official, followed by signature and date.

d. The NOI shall be submitted within 90 days of the effective date of the permit. If EPA notifies an MS4 that it is designated under 40 CFR §122.32(a) (2) or

(b), the NOI shall be submitted within 180 days of receipt of notice unless granted a longer period of time by EPA.

1.7.3. Submission of Notice of Intent

a. All small MS4s shall submit a complete and accurate Notice of Intent to EPA-Region 1 at the following address:

United States Environmental Protection Agency
Stormwater and Construction Permits Section (OEP06-1)
Five Post Office Square, Suite 100
Boston, MA 02109

b. All small MS4s shall also submit a copy of the NOI to the MassDEP at the following address:

Massachusetts Department of Environmental Protection
One Winter Street -5th Floor
Boston, Massachusetts 02108
ATTN: Frederick Civian, Stormwater Coordinator

c. Late notification: A small MS4 is not prohibited from submitting a NOI after the dates provided in Part 1.7.2.d. However, if a late NOI is submitted, authorization is only for discharges that occur after permit authorization is granted. EPA and MassDEP reserve the right to take enforcement actions for any unpermitted discharges.

1.7.4. Public Notice of NOI and Effective Date of Coverage

a. EPA will provide a public notice and opportunity for comment on the contents of the submitted NOIs. The public comment period will be a minimum of 30 calendar days.

b. Based on a review of a small MS4's NOI or other information, EPA may grant authorization, extend the public comment period, or deny authorization under this permit and require submission of an application for an individual or alternative NPDES permit. (See Part 1.8) A small MS4 will be authorized to discharge under the terms and conditions of this permit upon receipt of written notice of authorization from EPA.

c. Permittees whose authorization to discharge under the MS4-2003 permit, which expired on May 1, 2008, has been administratively continued in accordance with the Administrative Procedure Act (5 U.S.C. § 558(c) and 40 CFR §122.6, who wish to obtain coverage under this permit, must submit a new NOI requesting permit coverage in accordance with the requirements of Part 1.7 of this permit to EPA within 90 days after the effective date of this permit. Permittees whose authorization to discharge under the expired MS4-2003 permit was administratively continued, who fail to submit a timely, complete and accurate NOI or an application for an individual NPDES permit within 90 after the effective date of this permit will be considered to be discharging without a permit (see 40 CFR §122.28(b)(3)(iii)).

1.8. Individual Permits and Alternative General Permits

a. EPA may require a small MS4 to apply for and obtain authorization under either an individual NPDES permit or an alternative NPDES general permit. Any interested person may petition EPA in accordance with the provisions of 40 CFR §122.26(f) to require a small MS4 to apply for and/or obtain authorization under either an individual NPDES permit or an alternative NPDES general permit. If EPA requires a small MS4 to apply for an individual or alternative NPDES permit, EPA will notify the small MS4 in writing that a permit application is required. This notification will include a brief statement of the reasons for this decision and will provide application information and an application deadline. If a small MS4 is authorized under the MS4-2003 permit or this permit and fails to submit an individual NPDES or an alternative general permit NPDES permit application as required by EPA, then the authorization under the MS4-2003 permit or this permit to the small MS4 is automatically terminated at the end of the date specified by EPA as the deadline for application submittal. EPA reserves the right to take enforcement action for any unpermitted discharge.

b. A small MS4 may request to be excluded from this general permit by applying for an individual permit or authorization under an alternative general permit. In such a case, a small MS4 shall submit an individual permit application in accordance with the requirements of 40 CFR §122.33(b) (2) (i) or §122.33(b) (2) (ii), with reasons supporting the request, to EPA at the address listed in Part1.7.3 of this permit. The request may be granted by issuance of an individual permit or authorization under an alternative general permit if EPA determines that the reasons stated by the small MS4 are adequate to support the request. (See 40 CFR § 122.28(b) (3)).

c. When an individual NPDES permit is issued, or a small MS4 is authorized to discharge under an alternative NPDES general permit, authorization under this permit automatically terminates on the effective date of the individual permit or the date of authorization of coverage under the alternative general permit.

1.9. Special Eligibility Determinations

1.9.1. Documentation Regarding Endangered Species

The small MS4 shall certify eligibility regarding endangered species in the NOI required by Part 1.7.2. The Stormwater Management Program (SWMP) shall include documentation supporting the permittee's eligibility determination with regard to federal Endangered and Threatened Species and Critical Habitat Protection, including:

- Results of the Appendix C U.S. Fish and Wildlife Service endangered species screening determination; and
- If applicable, a description of the measures the small MS4 shall implement to protect federally listed endangered or threatened species, or critical habitat, including any conditions imposed by the U.S. Fish and Wildlife Service. If a permittee fails to document and implement such measures, the permittee's discharges are ineligible for coverage under this permit.

1.9.2. Documentation Regarding Historic Properties

The small MS4 shall certify eligibility regarding historic properties on the NOI required by Part 1.7.2. The SWMP shall include documentation supporting the small MS4's eligibility determination with regard to Historic Properties Preservation, including:

- Information on whether the permittee's stormwater discharges, allowable non-stormwater discharges, or stormwater discharge-related activities would have an effect on a property that is listed or eligible for listing on the National Register of Historic Properties (NRHP);
- Where such effects may occur, any documents received by the permittee or any written agreements the permittee has made with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other Tribal representative to mitigate those effects;
- Results of the Appendix D historic property screening investigations; and
- If applicable, a description of the measures the permittee shall implement to avoid or minimize adverse impacts on places listed, or eligible for listing, on the NRHP, including any conditions imposed by the SHPO or THPO. If the permittee fails to document and implement such measures, those discharges are ineligible for coverage under this permit.

1.10. Stormwater Management Program (SWMP)

a. The permittee shall develop and implement a written SWMP. The SWMP shall be signed in accordance with Appendix B, Subsection 11, including the date of signature. A signature and date is required for initial program preparation and for any significant revision to the program, which shall be in writing. The written SWMP shall be completed within one (1) year of the effective date of the permit.

The SWMP is the document used by the permittee to describe and detail the activities and measures that will be implemented to meet the terms and conditions of the permit. The SWMP shall accurately describe the permittees plans and activities. The document should be updated and/or modified during the permit term as the permittee's activities are modified, changed or updated to meet permit conditions during the permit term.

b. Permittees authorized by the MS4-2003 permit shall modify or update their existing Best Management Practices (BMPs) and measurable goals to meet the terms and conditions of Part 2.3 of this permit within one (1) year of the effective date of the permit. These modifications and updates shall be reflected in the written SWMP. Permittees authorized by the MS4-2003 permit shall continue to implement their existing SWMP until the program has been updated.

c. The permittee is encouraged to maintain an adequate funding source for the implementation of this program. Adequate funding means that a consistent source of revenue exists for the program. (Some funding information can be found at: http://www.epa.gov/region1/npdes/stormwater/assets/pdfs/FundingStormwater.pdf)

1.10.1. Stormwater Management Program Availability

a. The permittee shall retain a copy of the current SWMP required by this permit at the office or facility of the person listed as the program contact on the submitted Notice of Intent (NOI). The SWMP shall be immediately available to representatives from EPA, MassDEP, U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) at the time of an onsite inspection or upon request.

b. The permittee shall make the SWMP available to the public during normal business hours. The permittee shall also post the SWMP online if the permittee has a website on which to post the SWMP.

1.10.2. Contents of the Stormwater Management Program

The SWMP shall contain the following:

- Identification of names and titles of people responsible for program implementation. If a position is currently unfilled, list the title of the position and modify the SWMP with the name once the position is filled;
- Listing of all receiving waterbody segments, their classification under the applicable state water quality standards, any impairment(s) and associated pollutant(s) of concern, applicable TMDLs and WLAs, and number of outfalls from the MS4 that discharge to each waterbody. In addition to the receiving water, the permittee shall document in the SWMP all surface public drinking water sources that may be impacted by MS4 discharges;
- Listing of all interconnected MS4s and other separate storm sewer systems receiving a discharge from the permitted MS4, the receiving waterbody segment(s) ultimately receiving the discharge, their classification under the applicable state water quality standards, any impairment(s) and associated pollutant(s) of concern, applicable TMDLs and WLAs, and the number of interconnections;
- Documentation of compliance with Part 1.9.1;
- Documentation of compliance with Part 1.9.2;
- Documentation of authorization of all new or increased discharges granted by MassDEP in compliance with Part 2.1.2;
- The map of the separate storm sewer system required by Part 2.3.4.6, once complete;
- Listing of all discharges identified pursuant to Part 2.1.1.c and description of response;
- Description of practices to achieve compliance with Part 2.2.1 (TMDL requirements) including:
  - The person(s) or department responsible for the measure;
  - The BMPs for the control measure or permit requirement;
  - The measurable goal(s) for each BMP. Each measurable goal shall include milestones and timeframes for its implementation and have a quantity or quality associated with its endpoint. Each goal must have an associated measure of assessment.
- Description of practices to achieve compliance with Part 2.2.2 (discharges to impaired waters without a TMDL) including:
  - The person(s) or department responsible for the measure;
  - The BMPs for the control measure or permit requirement;
  - The measurable goal(s) for each BMP. Each measurable goal shall include milestones and timeframes for its implementation and have a quantity or quality associated with its endpoint. Each goal must have an associated measure of assessment.
- Description of any other practices to achieve compliance with Part 2.1 (water quality based requirements);
- Description of practices to achieve compliance with Part 2.3 (MEP requirements);

  For each permit condition in Part 2.3 identify:

- The person(s) or department responsible for the measure;
- The BMPs for the control measure or permit requirement;
- The measurable goal(s) for each BMP. Each measurable goal shall include milestones and timeframes for its implementation and have a quantity or quality associated with its endpoint. Each goal shall have a measure of assessment associated with it.

- Description of measures to avoid or minimize impacts to surface public drinking water supply sources. The permittee is also encouraged to include provisions to notify public water supplies in the event of an emergency. Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program, One Winter Street, Boston, MA 02108 – phone 617.292.5770. Description of activities to achieve compliance with Part 3.0.;
- Annual program evaluation (Part 4.1.). Update annually and maintain copies.

1.10.3. Requirements for New Permittees

Permittees seeking authorization for the first time shall meet all deadlines contained in this permit except the following:

- Timelines for public education requirements in Part 2.3.2.c shall be extended by one (1) year;
- Outfall Inventory under Part 2.3.4.5 shall be completed within two (2) years of the permit effective date;
- Outfall mapping under Part 2.3.4.6 shall be completed within four (4) years of the permit effective date. The permittee shall include its best available mapping with its SWMP while mapping requirements are being completed;
- All other timelines of the IDDE Program, program development, monitoring, and IDDE Program Implementation Goals and Milestones under Part 2.3.4 shall be extended by two (2) years;
- The ordinances, by-laws, or other regulatory mechanisms required by Parts 2.3.4, 2.3.5 and 2.3.6 shall be completed as soon as possible, but no later than three (3) years from the permit effective date; and
- Timelines for discharges to water quality limited waters without a TMDL under Part 2.2.2 shall be extended by two (2) years.

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2.0. Non-Numeric Effluent Limitations

The permittee shall develop, implement, and enforce a program to reduce the discharge of pollutants from the MS4 to the maximum extent practicable; to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act and the Massachusetts Water Quality Standards.

2.1. Water Quality Based Effluent Limitations

Pursuant to Clean Water Act 402(p)(3)(B)(iii), this permit includes provisions to ensure that discharges from the permittee's small MS4 do not cause or contribute to an exceedance of water quality standards, in addition to requirements to reduce the discharge of pollutants to the maximum extent practicable. The requirements found in this Part and Part 2.2 constitute appropriate water quality based effluent

limits of this permit. Requirements to reduce the discharge of pollutants to the maximum extent practicable are set forth in Part 2.3.

2.1.1. Requirement to Meet Water Quality Standards

a. The permittee shall reduce the discharge of pollutants such that the discharges from the MS4 do not cause or contribute to an exceedance of water quality standards.

b. If there is a discharge from the MS4 to a waterbody (or its tributaries in some cases) that is subject to an approved TMDL identified in Part 2.2.1, the permittee is subject to the requirements of Part 2.2.1 and Appendix F of this permit and the permittee shall comply with all applicable schedules and requirements in Appendix F. A permittee's compliance with all applicable requirements and BMP implementation schedules in Appendix F applicable to it will constitute compliance with Part 2.1.1.a. of the Permit.

c. If there is a discharge from the MS4 to a waterbody (or its tributaries in some cases) that is water quality limited (see definition in Appendix A) due to nutrients (nitrogen or phosphorus), metals, solids, bacteria/pathogens, chloride or oil and grease (hydrocarbons) and is not subject to an approved TMDL, or the MS4 is located within a municipality listed in Part 2.2.2.a.-b., the permittee is subject to the requirements of Part 2.2.2 and Appendix H of this permit and the permittee shall comply with all applicable schedules and requirements in Appendix H. A permittee's compliance with all applicable requirements and BMP implementation schedules in Appendix H applicable to it will constitute compliance with Part 2.1.1.a. of the Permit.

d. Except where a discharge is subject to the requirements of Part 2.2.1 and/or Part 2.2.2 of this permit and the permittee is complying with all applicable requirements of Part 2.2.1 and Appendix F and/or 2.2.2, and Appendix H, if there is a discharge from the MS4 that is causing or contributing to a violation of applicable water quality standards (including numeric and narrative water quality criteria) for the receiving water (applicable water quality standards are the state standards that have been federally approved as of the effective date of this permit and are compiled at http://www.epa.gov/waterscience/standards/wqslibrary/), the permittee shall, as expeditiously as possible, but no later than 60 days of becoming aware of the situation, eliminate the condition causing or contributing to an exceedance of water quality standards.

2.1.2. Increased Discharges

a. Any increased discharge (including increased pollutant loadings) through the MS4 to waters of the United States is subject to Massachusetts antidegradation regulations at 314 CMR 4.04. The permittee shall comply with the provisions of 314 CMR 4.04 including information submittal requirements and obtaining authorization for increased discharges where appropriate[1]. Any authorization of an increased discharge by MassDEP shall be incorporated into the permittee's SWMP. If an applicable MassDEP approval specifies additional conditions or requirements, then those requirements are incorporated into this permit by reference. The permittee must comply with all such requirements.

b. There shall be no increased discharges from the MS4 to impaired waters listed in categories 5 or 4b on the most recent Massachusetts Integrated Report of waters listed pursuant to Clean Water

[1] Contact MassDEP for guidance on compliance with 314 CMR 4.04

Act section 303(d) and 305(b) unless the permittee demonstrates that there is no net increase in loading from the MS4 to the impaired water of the pollutant(s) for which the waterbody is impaired. The permittee may demonstrate compliance with this provision by *either:*

i. Documenting that the pollutant(s) for which the waterbody is impaired is not present in the MS4's discharge and retain documentation of this finding with the SWMP; or

ii. Documenting that the total load of the pollutant(s) of concern from the MS4 to any impaired portion of the receiving water will not increase as a result of the activity and retain documentation of this finding in the SWMP.

c. The requirements of this section are independent of permit conditions requiring reduction in discharges of pollutants as set forth in Parts 2.1.1 and 2.2 (water quality based requirements) and 2.3 (requirements to reduce discharge of pollutants to the maximum extent practicable). Permittees remain subject to requirements to reduce the discharge of pollutants from the MS4 as set forth in those Parts.

2.2. Discharges to Certain Impaired Waters

The permittee shall identify in the SWMP and Annual Reports all MS4 discharges, including both outfalls and interconnections to other MS4s or other separate storm sewer systems, that:

- Are subject to Total Maximum Daily Load (TMDL) related requirements as identified in Part 2.2.1.
- Are subject to additional requirements to protect water quality as identified in Part 2.2.2.

The discharge location from an interconnection shall be determined based on the receiving water of the outfall from the interconnected system.

2.2.1. Discharges Subject to Requirements Related to an Approved TMDL

a. "Approved TMDLs" are those that have been approved by EPA as of the effective date of this permit

b. The MS4s specified below discharge to waters within Massachusetts that are subject to TMDLs, or in some cases, to tributaries of such waters, and shall comply with the requirements of Appendix F, Part A. Appendix F identifies, by section, the provisions the permittee shall implement to be consistent with the terms of the approved TMDL. Alternatively, EPA may notify the permittee that an individual permit application is necessary in accordance with Part 1.8.a.

i. The following is a list of municipalities in the Charles River Watershed:

1.

Arlington	Mendon
Ashland	Milford
Bellingham	Millis
Belmont	Natick
Brookline	Needham

Cambridge	Newton
Dedham	Norfolk
Dover	Sherborn
Foxborough	Walpole
Franklin	Waltham
Holliston	Watertown
Hopedale	Wayland
Hopkinton	Wellesley
Lexington	Weston
Lincoln	Westwood
Medfield	Wrentham
Medway	

Permittees that operate regulated MS4s located in municipalities listed above that discharge to the Charles River or its Tributaries shall meet the requirements of Appendix F, Part A.I with respect to the reduction of phosphorus discharges from their MS4.

ii. The following is a list of municipalities that contain a lake or pond subject to an approved lake or pond phosphorus TMDL in the Northern Blackstone Basin, Chicopee Basin, Connecticut Basin, French Basin, Millers Basin or in the watershed of Bare Hill Pond, Flint Pond, Indian Lake, Lake Boon, Lake Quinsigamond, Leesville Pond, Salisbury Pond, White Island Pond, Quaboag Pond or Quacumquasit Pond.

1.

Ashburnham	Millbury
Auburn	Oxford
Charlton	Plymouth
Dudley	Shrewsbury
Gardner	Spencer
Grafton	Springfield
Granby	Stow
Hadley	Templeton
Harvard	Wareham
Hudson	Westminster
Leicester	Winchendon
Ludlow	Wilbraham

Permittees that operate regulated MS4s in the above municipalities that discharge to waterbodies listed on Table F-5 in Appendix F or their tributaries, and any other MS4 that discharges to waterbodies listed on Table F-5 in Appendix F or their tributaries, shall meet the requirements of Appendix F, Part A.II with respect to reduction of phosphorus discharges from their MS4.

iii. The following is a list of municipalities that contain waters subject to an approved TMDL for bacteria or pathogens.

1.

Abington	Marion
Acushnet	Mashpee
Amesbury	Mattapoisett
Andover	Medfield
Arlington	Medway
Ashland	Melrose
Attleboro	Mendon
Avon	Middleborough
Barnstable	Milford
Bedford	Millis
Bellingham	Milton
Belmont	Nahant
Berkley	Natick
Beverly	Needham
Billerica	New Bedford
Bourne	Newton
Brewster	Norfolk
Bridgewater	North Andover
Brockton	Norton
Brookline	Norwood
Burlington	Orleans
Cambridge	Peabody
Canton	Plainville
Chatham	Plympton
Cohasset	Quincy
Concord	Randolph
Danvers	Raynham
Dartmouth	Reading
Dedham	Rehoboth
Dennis	Revere
Dighton	Rockport
Dover	Salem
East Bridgewater	Sandwich
Eastham	Saugus

Easton	Seekonk
Essex	Sharon
Everett	Sherborn
Fairhaven	Somerset
Fall River	Somerville
Falmouth	Stoneham
Foxborough	Stoughton
Franklin	Swampscott
Freetown	Swansea
Gloucester	Taunton
Halifax	Tewksbury
Hamilton	Wakefield
Hanson	Walpole
Harwich	Waltham
Holliston	Wareham
Hopedale	Watertown
Hopkinton	Wayland
Ipswich	Wellesley
Lakeville	Wellfleet
Lawrence	Wenham
Lexington	West Bridgewater
Lincoln	Weston
Lynn	Westport
Lynnfield	Westwood
Malden	Whitman
Manchester	Wilmington
Manchester-by-the-Sea	Winthrop
Mansfield	Wrentham
Marblehead	Yarmouth

The operators of MS4s located in municipalities listed above that discharge to a waterbody segment listed on Table F-6 in Appendix F and any other MS4 that discharges directly to a waterbody segment listed on Table F-6 in Appendix F shall meet the requirements of Appendix F, Part A.III with respect to reduction of bacteria/pathogens discharges from their MS4.

iv. The following is a list of municipalities located in the Cape Cod Watershed and Buzzards Bay Watershed.

1.

Bourne
Barnstable
Chatham
Falmouth
Harwich
Mashpee
Orleans
Sandwich
Brewster

Permittees that operate regulated MS4s located in the municipalities above that discharge to waterbodies found on Table F-7 in Appendix F or their tributaries and any other MS4 that discharges to waterbodies found on Table F-7 in Appendix F or their tributaries shall meet the requirements of Appendix F, Part A.IV with respect to reduction of nitrogen discharges from their MS4.

v. The following is a list of municipalities located in the Assabet River Watershed:

1.

Acton	Harvard
Berlin	Hudson
Bolton	Littleton
Boxborough	Marlborough
Boylston	Maynard
Carlisle	Northborough
Clinton	Shrewsbury
Concord	Stow
Grafton	Westborough
Harvard	Westford

Permittees that operate regulated MS4s located in the municipalities above that discharge to the Assabet River or its tributaries shall meet the requirements of Appendix F Part A.V with respect to reduction of phosphorus discharges from their MS4.

c. The MS4s specified below discharge to waters, or tributaries of waters, that have been identified in an adjacent state's approved TMDL as being impaired due, in part, to MS4 stormwater discharges in Massachusetts, and shall comply with the requirements of Appendix F, Part B. Appendix F identifies, by section, the provisions the permittee shall implement to be consistent with the reasonable assumptions related to Massachusetts MS4 discharges. Alternatively, EPA may notify the permittee that an individual permit application is necessary in accordance with Part 1.8.a.

i. The following is a list of municipalities in Massachusetts located in the watershed of Long Island Sound, which has an approved TMDL for nitrogen.

1.

Adams	North Adams

Agawam	Northampton
Amherst	Oxford
Ashburnham	Palmer
Ashby	Paxton
Auburn	Pelham
Belchertown	Pittsfield
Charlton	Richmond
Cheshire	Russell
Chicopee	Rutland
Dalton	South Hadley
Douglas	Southampton
Dudley	Southbridge
East Longmeadow	Southwick
Easthampton	Spencer
Gardner	Springfield
Granby	Sturbridge
Hadley	Sutton
Hampden	Templeton
Hatfield	Ware
Hinsdale	Webster
Holyoke	West Springfield
Lanesborough	Westfield
Leicester	Westhampton
Lenox	Westminster
Longmeadow	Wilbraham
Ludlow	Williamsburg
Millbury	Winchendon
Monson	

Permittees that operate regulated MS4s located in the municipalities above that discharge to a water within the Connecticut River Watershed, the Housatonic River Watershed, or the Thames River Watershed shall meet the requirements of Appendix F Part B. I with respect to nitrogen discharges from their MS4.

ii. The following is a list of municipalities in Massachusetts identified in a TMDL as containing MS4s contributing phosphorus to waterbody segments that have out of state approved TMDLs for phosphorus:

1.

Attleboro
North Attleborough
Plainville
Rehoboth
Seekonk

Swansea

Permittees that operate regulated MS4s located in the municipalities above that discharge to a waterbody found on Table F-10 in Appendix F or its tributaries shall meet the requirements of Appendix F Part B. II with respect to phosphorus discharges from their MS4.

iii. The following is a list of municipalities in Massachusetts identified in a TMDL as containing MS4s contributing bacteria/pathogens to waterbody segments that have out of state approved TMDLs for bacteria/pathogens:

1.

Attleboro
North Attleborough
Plainville
Rehoboth
Seekonk

Permittees that operate regulated MS4s located in the municipalities above that discharge to a waterbody found on Table F-10 in Appendix F or its tributaries shall meet the requirements of Appendix F Part B. III with respect to bacteria/pathogens discharges from their MS4.

iv. The following is a list of of municipalities in Massachusetts identified in a TMDL as containing MS4s contributing metals (cadmium, lead, aluminum, iron) to waterbody segments that have out of state approved TMDLs for metals (cadmium, lead, aluminum, iron):

1.

Attleboro
North Attleborough
Plainville
Seekonk

Permittees that operate regulated MS4s located in the municipalities above that discharge to a waterbody found on Table F-10 in Appendix F or its tributaries shall meet the requirements of Appendix F Part B. IV with respect to metals discharges from their MS4.

2.2.2. Discharges to Certain Water Quality Limited Waters Subject to Additional Requirements

For purposes of this permit, a 'water quality limited water body' is any water body that does not meet applicable water quality standards, including but not limited to waters listed in categories 5 or 4b on the Massachusetts Integrated Report of waters listed pursuant to Clean Water Act section 303(d) and 305(b).

If there is a discharge from the MS4 to a water quality limited waterbody where pollutants typically found in stormwater (specifically nutrients (nitrogen or phosphorus), solids, bacteria/pathogens, chloride, metals and oil and grease (hydrocarbons)) are the cause of the impairment and there is not

an approved TMDL, or the MS4 is located in a town listed in Part 2.2.2.a.-b. the permittee shall comply with the provisions in Appendix H applicable to it.

In the absence of a defined pollutant reduction target and where no approved TMDL has been established, this permit Part and Appendix H define an iterative approach addressing pollutant reductions to waterbodies where the permittee's discharge is causing or contributing to an excursion above water quality standards due to nutrients (nitrogen or phosphorus), solids, bacteria/pathogens, chloride, metals or oil and grease (hydrocarbons).

a. Discharges to water quality limited waterbodies where nitrogen is the cause of the impairment, or their tributaries

i. The requirements of this Part are applicable to:

1. Permittees (including traditional and non-traditional MS4s) that own or operate an MS4 in the following municipalities. Discharges from MS4s within these municipalities are to waterbodies that are impaired due to nitrogen, or their tributaries.

Abington	Mendon
Acushnet	Middleborough
Attleboro	Milford
Auburn	Millbury
Avon	Millville
Barnstable	New Bedford
Bellingham	North Attleborough
Berkley	Northbridge
Blackstone	Norton
Bourne	Oxford
Boylston	Paxton
Bridgewater	Peabody
Brockton	Pembroke
Carver	Plainville
Dartmouth	Plymouth
Dighton	Plympton
Douglas	Raynham
East Bridgewater	Rehoboth
Easton	Rochester
Fairhaven	Salem
Fall River	Seekonk
Foxborough	Sharon
Franklin	Shrewsbury

Freetown	Somerset
Grafton	Stoughton
Halifax	Sutton
Hanson	Swansea
Holbrook	Taunton
Holden	Upton
Hopedale	Uxbridge
Hopkinton	Wareham
Kingston	West Boylston
Lakeville	West Bridgewater
Leicester	Westport
Lynnfield	Whitman
Mansfield	Wrentham
Marion	Yarmouth
Mattapoisett	

2. Any other permittee that, during the permit term, becomes aware that its discharge is to a waterbody that is impaired due to nitrogen, or a tributary of such water.

ii. Permittees subject to Part 2.2.2.a.i above shall meet the requirements of Appendix H Part I with respect to the control of nitrogen discharges from their MS4;

b. Discharges to water quality limited waterbodies where phosphorus is the cause of the impairment, or their tributaries

i. The requirements of this Part are applicable to:

1. Permittees (including traditional and non-traditional MS4s) that own or operate an MS4 in the following municipalities. Discharges from MS4s within these municipalities are to waterbodies that are impaired due to phosphorus, or their tributaries.

Abington	Lynn
Acushnet	Lynnfield
Andover	Malden
Arlington	Mansfield
Ashburnham	Marlborough
Ashland	Mashpee
Auburn	Medfield
Avon	Medford
Ayer	Melrose

Barnstable	Mendon
Bedford	Methuen
Belchertown	Millbury
Belmont	Millville
Billerica	Milton
Blackstone	North Andover
Bolton	Northbridge
Brewster	Norton
Bridgewater	Norwood
Brockton	Oxford
Burlington	Peabody
Cambridge	Pembroke
Canton	Pepperell
Carlisle	Pittsfield
Carver	Quincy
Chelmsford	Randolph
Chelsea	Reading
Clinton	Revere
Concord	Rockland
Dalton	Salem
Dedham	Scituate
Douglas	Seekonk
Dover	Sharon
Dracut	Shirley
Dunstable	Shrewsbury
East Bridgewater	Somerville
Eastham	Southampton
Easthampton	Spencer
Everett	Springfield
Falmouth	Stoneham
Fitchburg	Stoughton
Foxborough	Sudbury
Framingham	Sutton
Gloucester	Taunton
Grafton	Tewksbury
Granby	Townsend
Groton	Tyngsborough
Halifax	Upton

Hanover	Uxbridge
Hanson	Wakefield
Harvard	Walpole
Haverhill	Wareham
Hinsdale	Watertown
Hopkinton	Wayland
Hudson	West Bridgewater
Lancaster	Westfield
Lawrence	Westminster
Leicester	Westwood
Lenox	Whitman
Leominster	Wilmington
Lexington	Winchendon
Littleton	Winchester
Lowell	Winthrop
Lunenburg	Woburn
Lynn	

2. Any other permittee that, during the permit term, becomes aware that its discharge is to a waterbody that is water quality limited due to phosphorus, or to a tributary of such water.

ii. The permittees subject to Part 2.2.2.b.i. above shall meet all requirements of Appendix H Part II with respect to the control of phosphorus discharges from the MS4.

c. Discharges to water quality limited waterbodies where bacteria or pathogens is the cause of the impairment

i. The requirements of this Part are applicable to:

1. Any MS4 discharging directly to a water quality limited waterbody where bacteria or pathogens is the cause of the water quality limitation.

ii. The permittees subject to Part 2.2.2.c.i. shall meet all requirements of Appendix H Part III with respect to reduction of bacteria or pathogens discharges from the MS4.

d. Discharges to water quality limited waterbodies where chloride is the cause of the impairment

i. The requirements of this Part are applicable to:

1. Any MS4 discharging directly to a water quality limited waterbody where chloride is the cause of the impairment.

ii. The permittees subject to Part 2.2.2.d.i. shall meet all requirements of Appendix H Part IV with respect to reduction of chloride discharges from the MS4.

e. Discharges to water quality limited waterbodies where oil and grease (hydrocarbons), solids or metals is the cause of the impairment

i. The requirements of this Part are applicable to:

1. Any MS4 discharging directly to a water quality limited waterbody where solids, oil and grease (hydrocarbons) or metals is the cause of the impairment.

ii. The permittees subject to Part 2.2.2.d.i. shall meet all requirements of Appendix H Part V with respect to reduction of solids, oil and grease (hydrocarbons) or metals discharges from the MS4.

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 Part 2.3.2 through 2.3.6.

2.3.1. Control Measures

a. Permittees authorized under the MS4-2003 permit shall continue to implement their existing SWMPs while updating their SWMPs pursuant to this permit. This permit does not extend the compliance deadlines set forth in the MS4-2003 permit.

b. 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:

- The other entity, in fact, implements the control measure.
- The particular control measure or component thereof undertaken by the other entity is at least as stringent as the corresponding permit requirement.
- 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.
- 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.
- 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.

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2.3.2. Public Education and Outreach

Objective: 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 permittee shall continue to implement the public education program required by the MS4-2003 permit by distributing educational material to the MS4 community. 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 for the following four audiences: (1) residents, (2) businesses, institutions (private colleges, private schools, hospitals), and commercial facilities, (3) developers (construction), and (4) industrial facilities.

c. Beginning the first year of the permit the permittee shall distribute a minimum of two (2) educational messages over the permit term to each audience identified in Part 2.3.2.b. (The permittee shall distribute at least eight educational messages during the permit term). The distribution of materials to each audience shall be spaced at least a year apart. Educational messages may be printed materials such as brochures or newsletters; electronic materials such as websites; mass media such as newspaper articles or public service announcement (radio or cable); targeted workshops on stormwater management, or displays in a public area such as town/city hall. The permittee may use existing materials if they are appropriate for the message the permittee chooses to deliver or the permittee may develop its own educational materials. The permittee may partner with other MS4s, community groups or watershed associations to implement the education program.

Some EPA educational materials are available at: http://cfpub.epa.gov/npstbx/index.html.

d. The permittee shall, at a minimum, consider the topics listed in Part 2.3.2.d.i. – iv when developing the outreach/education program. The topics are not exclusive and the permittee shall focus on those topics most relevant to the community.

i. Residential program: effects of outdoor activities such as lawn care (use of pesticides, herbicides, and fertilizers) on water quality; benefits of appropriate on-site infiltration of stormwater; effects of automotive work and car washing on water quality; proper disposal of swimming pool water; proper management of pet waste; maintenance of septic systems. If the small MS4 area has greater than thirty percent of its residents serviced by septic systems, the permittee shall include maintenance of septic systems as part of its education program.

ii. Business/Commercial/Institution program: proper lawn maintenance (use of pesticides, herbicides and fertilizer); benefits of appropriate on-site infiltration of stormwater; building maintenance (use of detergents); use of salt or other de-icing and anti-icing materials (minimize their use); proper storage of salt or other de-

icing/anti-icing materials (cover/prevent runoff to storm system and contamination to ground water); proper storage of materials (emphasize pollution prevention); proper management of waste materials and dumpsters (cover and pollution prevention); proper management of parking lot surfaces (sweeping); proper car care activities (washing of vehicles and maintenance); and proper disposal of swimming pool water by entities such as motels, hotels, and health and country clubs (discharges must be dechlorinated and otherwise free from pollutants).

iii. Developers and Construction: 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). This education can also be a part of the Construction Site Stormwater Runoff Control measure detailed in Part 2.3.5.

iv. Industrial program: equipment inspection and maintenance; proper storage of industrial materials (emphasize pollution prevention); proper management and disposal of wastes; proper management of dumpsters; minimization of use of salt or other de-icing/anti-icing materials; proper storage of salt or other de-icing/anti-icing materials (cover/prevent runoff to storm system and ground water contamination); benefits of appropriate on-site infiltration of stormwater runoff from areas with low exposure to industrial materials such as roofs or employee parking; proper maintenance of parking lot surfaces (sweeping); and requirements for coverage under EPA's Multi-Sector General Permit.

e. The program shall show evidence of focused messages for specific audiences as well as evidence that progress toward the defined educational goals of the program has been achieved. The permittee shall identify methods that it will use to evaluate the effectiveness of the educational messages and the overall education program. Any methods used to evaluate the effectiveness of the program shall be tied to the defined goals of the program and the overall objective of changes in behavior and knowledge.

f. The permittee shall modify any ineffective messages or distribution techniques for an audience prior to the next scheduled message delivery.

g. The permittee shall document in each annual report the messages for each audience; the method of distribution; the measures/methods used to assess the effectiveness of the messages, and the method/measures used to assess the overall effectiveness of the education program.

2.3.3. Public Involvement and Participation

Objective: 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 – effective 7/10/2010). The SWMP and all annual reports shall be available to the public.

b. The permittee shall annually provide the public an opportunity to participate in the review and implementation of the SWMP.

c. The permittee shall report on the activities undertaken to provide public participation opportunities including compliance with Part 2.3.3.a. Public participation opportunities pursuant to Part 2.3.3.b may include, but are not limited to, websites; hotlines; clean-up teams; monitoring teams; or an advisory committee.

2.3.4. Illicit Discharge Detection and Elimination (IDDE) Program

Objective: 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. During the development of the new components of the IDDE program required by this permit, permittees authorized by the MS4-2003 permit must continue to implement their existing IDDE program required by the MS4-2003 permit to detect and eliminate illicit discharges to their MS4.

2.3.4.1.- Definitions and Prohibitions

The permittee shall prohibit illicit discharges and sanitary sewer overflows (SSOs) to its MS4 and require removal of such discharges consistent with Parts 2.3.4.2 and 2.3.4.4 of this permit.

An SSO is a discharge of untreated sanitary wastewater from a municipal sanitary sewer.

An illicit discharge is any discharge to a municipal separate storm sewer that is not composed entirely of stormwater, *except*:

1. discharges authorized under a separate NPDES permit that authorize a discharge to the MS4
2. non-stormwater discharges allowed by Part 1.4

2.3.4.2. – Elimination of Illicit Discharges

a. Upon detection of an illicit discharge, the permittee shall eliminate the illicit discharge as expeditiously as possible. The MS4 shall identify and 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.

b. 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.

2.3.4.3. – Non-Stormwater Discharges

The permittee may presume that the sources of non-stormwater listed in Part 1.4 of this permit need not be addressed. However, if the permittee identifies 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.

2.3.4.4. – Sanitary Sewer Overflows

a. 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.

b. The permittee shall identify all known locations where SSOs have discharged to the MS4 within the previous five 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 120 days of the effective date of the permit, the permittee shall develop an inventory of all identified SSOs indicating:

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

The permittee shall maintain the inventory as a part of the SWMP and update the inventory annually.

c. 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.

d. The permittee shall include and update the 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.

e. The period between identification 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 (Part 1.3.a) and remain unlawful until eliminated.

2.3.4.5. – Outfall/Interconnection Inventory

The permittee shall develop an outfall and interconnection inventory that identifies each outfall and interconnection discharging from the MS4, records its location and condition, and provides a framework for tracking inspections, screenings and other activities under the permittee's IDDE program.

a. An outfall means a point source as defined by 40 CFR § 122.2 as the point where the municipal separate storm sewer discharges to waters of the United States. An outfall

does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels or other conveyances that connect segments of the same stream or other waters of the United States and that are used to convey waters of the United States. (40 CFR § 122.26(b)(9)). However, it is strongly recommended that a permittee inspect all accessible portions of the system as part of this process. Culverts longer than a simple road crossing shall be included in the inventory unless the permittee can confirm that they are free of any connections and simply convey waters of the United States. An interconnection means the point where the permittee's MS4 discharges to another MS4 or other storm sewer system, through which the discharge is conveyed to waters of the United States or to another storm sewer system and eventually to a water of the United States.

b. The permittee shall complete its outfall and interconnection inventory no later than one (1) year from the effective date of the permit and shall include the inventory in each annual report. The inventory shall be updated annually to include data collected in connection with the dry weather screening under Part 2.3.4.7.d. and other relevant inspections conducted by the permittee. The permittee shall physically label all MS4 outfall pipes (excluding interconnections) with their unique identifier by the end of the permit term.

c. The inventory shall include the following information: unique identifier, receiving water, date of most recent inspection, dimensions, shape, material (concrete, PVC), spatial location (latitude and longitude with a minimum accuracy of +/-30 feet, physical condition and indicators of potential non-stormwater discharges (including presence or evidence of suspect flow and sensory observations such as odor, color, turbidity, floatables, or oil sheen) as of the most recent inspection.

2.3.4.6. – System mapping

The permittee shall develop a revised and more detailed map than was required by the MS4-2003 permit. This revised map of the MS4 shall be completed within two (2) years of the effective date of this permit. This permit does not provide additional time for completion of the mapping that was required by the MS4-2003 permit.

a. The mapping shall include a depiction of the permittee's separate storm sewer system in the permit area. The mapping is intended to facilitate the identification of key infrastructure and factors influencing proper system operation, and the potential for illicit sanitary sewer discharges. The map shall include the required infrastructure and water resources information as indicated in Part 2.3.4.6.a.i, and shall include the information in Part 2.3.4.6.a.ii where available. EPA also recommends the inclusion of additional items as indicated in Part 2.3.4.6.a.iii.

i. Required mapping elements

- Municipal separate storm sewer system
  - outfalls and receiving waters (required by MS4-2003 permit)
  - pipes
  - open channel conveyances (swales, ditches, etc)
  - catch basins
  - manholes
  - interconnections with other MS4s and other storm sewer systems
  - 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)
- Catchment delineations. For the purpose of this permit, a catchment is the area that drains to an individual outfall or interconnection, for use in priority rankings required in Part 2.3.4.7.c, prioritizing BMP retrofits or installation required by Appendix H Part I or Part II, and calculating phosphorus loads in accordance with Appendix F Part A. II (if discharge covered by a lake or pond phosphorus TMDL).
- Waterbodies identified by name and indication of all use impairments as identified on the most recent EPA approved Massachusetts Integrated Report of waters report pursuant to Clean Water Act section 303(d) and 305(b)..

ii. Elements required where available
- Municipal sanitary sewer system;
- Municipal combined sewer system, if applicable

iii. Recommended elements
- Storm sewer material, size and age.
- Sanitary sewer system material, size and age
- Where a municipal sanitary sewer system exists, properties known or suspected to be served by a septic system, especially in high-density urban areas
- 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)
- Seasonal high water table elevations impacting sanitary alignments
- Topography
- Orthophotography
- Alignments, dates and representation of work completed (with legend) of past illicit discharge investigations (e.g., flow isolation, dye testing, CCTV)
- Locations of suspected, confirmed and corrected illicit discharges (with dates and flow estimates)

b. 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.

c. The permittee shall report on the progress towards the completion of the map required by this permit in each annual report.

2.3.4.7. – Written Illicit Discharge Detection and Elimination Program

The IDDE program shall be recorded in a written document. The IDDE program shall include each of the elements described in Parts 2.3.4.7 (a-h), unless the permittee provides a written explanation within the IDDE program as to why a particular element is not applicable to the permittee.

Notwithstanding the permittee's explanation, EPA may at any time determine that a particular element is in fact applicable to the permittee and require the permittee to add it to the IDDE program. The written IDDE program shall be completed within one (1) year of the effective date of the permit. The permittee shall implement the IDDE program in accordance with the goals and milestones set forth in Part 2.3.4.8.

a. Legal Authority - The IDDE program shall provide that the permittee has adequate legal authority to accomplish the following tasks: 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. Adequate legal authority consists of a currently effective ordinance, by-law, or other regulatory mechanism. For permittees authorized by the MS4-2003 permit, the ordinance, by-law, or other regulatory mechanism was a requirement of the MS4-2003 permit and was required to be effective by May 1, 2008. 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.

b. Statement of IDDE Program Responsibilities - The permittee shall establish a written 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.

c. Assessment and Priority Ranking of Catchments –The permittee shall assess and priority rank the catchments, delineated as required by Part 2.3.4.6.a.i., 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 pursuant to Part 2.3.4.7.d., catchment investigations for evidence of illicit discharges and SSOs pursuant to Part 2.3.4.7.e., and provides the basis for determining permit milestones pursuant to Part 2.3.4.8.

i. The permittee shall classify each catchment into one of the following categories:

- Excluded catchments: Catchments with no potential for illicit discharges may be excluded from the IDDE program. This category is limited to roadway drainage in undeveloped areas with no dwellings and no sanitary sewers; drainage for athletic fields, parks or undeveloped green space and associated parking without services; cross-country drainage alignments (that neither cross nor

are in proximity to sanitary sewer alignments) through undeveloped land.

- Problem Catchments: Catchments with known or suspected contributions of illicit discharges based on existing information shall be designated as Problem Catchments. This shall include any catchments where previous outfall/interconnection screening indicates sewer input based on olfactory/visual evidence or sampling results (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). Problem Catchments need not be screened pursuant to Part 2.3.4.7.d, and shall be scheduled for catchment investigation pursuant to Part 2.3.4.7.e. Problem catchments shall be identified during the initial ranking of catchments and subsequent rankings shall not add any catchments to the Problem Catchment category.
- High Priority Catchments: Catchments that have not been classified as Problem Catchments and that are discharging to an area of concern to public health due to proximity of public beaches, recreational areas, drinking water supplies or shellfish beds; catchments determined by the permittee as high priority based on outfall/interconnection screening under Part 2.3.4.7.d. and catchment characteristics assessment under Part 2.3.4.7.c.ii. Any catchment where outfall/interconnection screening indicates sewer input based on olfactory/visual evidence or sampling results (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) shall be ranked at the top of the High Priority Catchments category and scheduled for catchment investigation pursuant to Part 2.3.4.7.e.
- Low Priority Catchments: Catchments determined by the permittee as low priority based on outfall/interconnection screening under Part 2.3.4.7.d. and catchment characteristics assessment under Part 2.3.4.7.c.ii.

ii. The permittee shall priority rank catchments within each category (except for excluded catchments), based on screening factors. The permittee shall, at a minimum, consider the following screening factors:

- Past discharge complaints and reports.
- Poor dry weather receiving water quality- the following guidelines are recommended to identify waters as having a high illicit discharge potential: exceeding water quality standards for bacteria; ammonia levels above 0.5 mg/l; surfactants levels greater than or equal to 0.25 mg/l.
- Density of generating sites - Generating sites are those places, including institutional, municipal, commercial, or industrial sites, with a potential to generate pollutants that could contribute to illicit discharges. Examples of these sites include, but are not limited to, car dealers; car washes; gas stations; garden centers; and industrial

manufacturing areas.

- Age of surrounding development and infrastructure – Industrial areas greater than 40 years old and areas where the sanitary sewer system is more than 40 years old will probably have a high illicit discharge potential. Developments 20 years or younger will probably have a low illicit discharge potential.
- Sewer conversion – Catchments that were once serviced by septic systems, but have been converted to sewer connections may have a high illicit discharge potential.
- Historic combined sewer systems – Catchments that were once serviced by a combined sewer system, but have been separated may have a high illicit discharge potential.
- Density of aging septic systems – Septic systems thirty years or older in residential land use areas are prone to have failures and may have a high illicit discharge potential.
- Culverted streams – any river or stream that is culverted for distances greater than a simple roadway crossing may have a high illicit discharge potential.

The permittee may also consider as priorities for evaluation for illicit discharges, although not necessarily indicators of the presence of illicit connections or discharges:

- Water bodies that receive a discharge from the MS4 and are drinking water supplies, shell fishing areas, beaches or waters used for contact recreation.
- Water quality limited waterbodies that receive a discharge from the MS4 or waters with approved TMDLs applicable to the permittee, where illicit discharges have the potential to contain the pollutant identified as the cause of the water quality impairment.

The permittee may add additional relevant factors, including location-specific screening factors; if so, the permittee shall include the additional factors in its written IDDE program.

iii. An initial illicit discharge potential assessment and priority ranking based on existing information shall be completed within one (1) year from the effective date of the permit. The permittee shall update its assessment and priority ranking annually based on catchment delineations pursuant to Part 2.3.4.6, the results of screening pursuant to Part 2.3.4.7.d, and other new relevant information. The permittee shall provide a listing of all catchments and the results of the ranking for each catchment in each annual report. For each catchment being investigated the permittee shall also provide in its annual report (1) a summary of evidence of known or suspected illicit discharges and SSOs; (2) completed, ongoing or planned corrective measures addressing confirmed illicit discharges and SSOs; and (3) a schedule for completing and verifying measures correcting the confirmed illicit discharges and SSOs.

d. Outfall and Interconnection Screening and Sampling – The IDDE program shall include a written procedure for screening and sampling of outfalls and interconnections from the

MS4 in dry and wet weather for evidence of illicit discharges and SSOs. This screening procedure shall be used for:

- baseline outfall and interconnection screening pursuant to Part 2.3.4.7.d.iii (dry weather);
- confirmatory screenings pursuant to Part2.3.4.7.f (dry and/or wet weather depending on catchment characteristics);
- follow-up screening pursuant to Part 2.3.4.7.g (dry and/or wet weather depending on catchment characteristics).

i. The screening and sampling procedure shall include procedures for sample collection, use of field kits, storage and conveyance of samples (including relevant hold times). The permittee shall adopt a screening and sampling protocol consistent with *EPA New England Bacterial Source Tracking Protocol* (Draft, January 2012) (Appendix I).

ii. If an outfall is inaccessible or submerged, the permittee shall proceed to the first accessible upstream manhole or structure for the observation and sampling and report the location with the screening results. If an interconnection is inaccessible or submerged, interconnection screening shall occur at the first accessible location within the permittee's system upgradient of the interconnection.

iii. Dry weather screening and sampling shall proceed only when no more than 0.1 inches of rainfall has occurred in the previous 24-hour period. When a flow is observed, a sample of the flow shall be collected and analyzed for the parameters listed in Part 2.3.4.7.d.v. If no dry weather flow is observed, the permittee shall record the condition of the outfall and other relevant information (see Part 2.3.4.5). If no flow is observed, but evidence of dry weather flow exists, the permittee shall revisit the outfall during dry weather within one week of the initial observation, if practicable, to perform a second dry weather screening and sample any observed flow. The permittee shall identify in the annual report any other necessary follow-up actions to identify the source of any apparent intermittent flow not sampled.

iv. Wet weather screening and sampling, which shall be conducted at an outfall and/or within the catchment area in accordance with Part 2.3.4.7.e.ii.(b), shall proceed during or after a storm event of sufficient depth or intensity to produce a stormwater discharge but only during the spring (March to June) when groundwater levels are relatively high. The permit does not require a minimum rainfall event prior to wet weather screening. However, the purpose of wet weather screening and sampling under the IDDE program is to identify illicit discharges that may activate or become evident during wet weather. Permittees may incorporate provisions that assist in targeting such discharges, including avoiding sampling during the initial period of discharge ("first flush") and/or identifying minimum storm event intensities likely to trigger sanitary sewer interconnections.

v. Samples shall be analyzed at a minimum for ammonia, chlorine, conductivity, salinity, *E. coli*. (freshwater receiving water) or enterococcus (saline or brackish receiving water), surfactants (such as MBAS), and temperature. All analyses with the exception of indicator bacteria can be performed with field test kits or field instrumentation. In addition, where the discharge is directly into a water quality limited water or a water subject to an approved TMDL as indicated in Appendix F, the sample shall be analyzed for the pollutants identified as the cause of the

impairment as specified in Appendix G. Sampling for pollutants of concern shall be conducted using the analytical methods found in 40 CFR §136, or alternative methods approved by EPA in accordance with the procedures in 40 CFR §136. Other IDDE screening parameters shall be considered field screening and are not subject to 40 CFR Part 136 requirements.

vi. Catchments where there is relevant information indicating sewer input to the MS4 or sampling results where 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 alternatively, ammonia ≥ 0.5 mg/l, surfactants ≥ 0.25 mg/l, and detectable levels of chlorine) shall be considered highly likely to contain illicit discharges from sanitary sources, and such catchments shall be ranked at the top of the High Priority Catchments category for investigation.

e. Catchment Investigation Procedure - The permittee shall develop a written systematic procedure for catchment investigation that includes (1) a review of mapping and historic plans and records for the catchment; (2) a manhole inspection methodology; and (3) procedures to isolate and confirm sources of illicit discharges, as set forth below.

i. For each catchment being investigated, the permittee shall review relevant mapping and historic plans and records to the extent available, including but not limited to plans related to the construction of the storm drain and of sanitary sewers in the catchment, prior work performed on the storm drain or sanitary sewers, board of health or other municipal data on septic system failures or required upgrades, and complaint records related to SSOs, sanitary sewer surcharges, and septic system breakouts. This review shall be used to identify areas within the catchment with higher potential for illicit connections and System Vulnerability Factors that indicate a risk of sanitary or septic system inputs to the MS4 under wet weather conditions. The permittee shall identify and record the presence of any of the following specific System Vulnerability Factors:

- History of SSOs, including, but not limited to, those resulting from wet weather, high water table, or fat/oil/grease blockages;
- Sewer pump/lift stations, siphons, or known sanitary sewer restrictions where power/equipment failures or blockages could readily result in SSOs;
- Inadequate sanitary sewer level of service (LOS) resulting in regular surcharging, customer back-ups, or frequent customer complaints;
- Common or twin-invert manholes serving storm and sanitary sewer alignments;
- Common trench construction serving both storm and sanitary sewer alignments;
- Crossings of storm and sanitary sewer alignments;
- Sanitary sewer alignments known or suspected to have been constructed with an underdrain system;
- Sanitary sewer infrastructure defects such as leaking service laterals, cracked, broken, or offset sanitary infrastructure, directly piped connections between storm drain and sanitary sewer infrastructure, or other vulnerability factors identified through

Inflow/Infiltration Analyses, Sanitary Sewer Evaluation Surveys, or other infrastructure investigations.

- Areas formerly served by combined sewer systems;
- Any sanitary sewer and storm drain infrastructure greater than 40 years old in medium and densely developed areas;
- Widespread code-required septic system upgrades required at property transfers (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance);
- History of multiple Board of Health actions addressing widespread septic system failures (indicative of inadequate soils, water table separation, or other physical constraints of the area rather that poor owner maintenance);

The permittee shall document the presence or absence of System Vulnerability Factors for each catchment, retain this documentation as part of its IDDE program, and report this information in Annual Reports. Where System Vulnerability Factors are present, the catchment shall be investigated pursuant to Part 2.3.4.7.e.ii.(b) below.

ii. The manhole inspection methodology shall describe a storm drain network investigation that involves systematically and progressively observing, sampling (as required below) and evaluating key junction manholes (see definition in Appendix A) in the MS4 to narrow the location of suspected illicit discharges or SSOs to an isolated pipe segment between two manholes, locate evidence of illicit discharges or SSOs that may not be evident at the outfall under all circumstances, and confirm or identify potential system vulnerability factors. The written catchment investigation procedures shall detail how the permittee will further isolate and identify potential illicit discharges as indicated by field kit detections equal to or greater than the threshold values listed in Part 2.3.4.7.d.vi and Appendix I. The permittee is responsible for selecting key junction manholes in a manner such that the distance between key junction manholes is appropriate to ensure a thorough assessment of its system.

The manhole inspection methodology may either start from the outfall and work up the system or start from the upper parts of the catchment and work down the system or be a combination of both practices. Either method must, at a minimum, include an investigation of each key junction manhole within the MS4, even where no evidence of an illicit discharge is observed at the outfall. The Catchment Investigation Procedure must describe the method the permittee will use.

(a) Dry weather investigation - Key junction manholes shall be opened and inspected for visual and olfactory evidence of illicit connections (e.g., excrement, toilet paper, gray filamentous bacterial growth, or sanitary products present). If flow is observed, the permittee shall sample the flow at a minimum for ammonia, chlorine and surfactants and can use field kits for these analyses. Additional indicator sampling may assist in determining potential sources (e.g. bacteria for sanitary flows, conductivity to detect tidal backwater, etc.). Where sampling results or visual or olfactory evidence indicate potential illicit discharges or SSOs, the area draining to the junction manhole shall be

flagged for further investigation, through upstream junction manhole investigation and/or isolation and confirmation of sources pursuant to Part 2.3.4.7.e.ii.

Manhole inspections in all areas shall also include identifying System Vulnerability Factors including common (twin invert) manholes, directly piped connections between storm drains and sanitary sewer infrastructure, common weir walls, sanitary sewer underdrain connections and other structural vulnerabilities where sanitary discharges could enter the storm drain system during wet weather. Where present, such System Vulnerability Factors shall be investigated pursuant to paragraph (b) below.

(b) Wet weather investigation – Where the review of mapping and historic plans and records and/or manhole inspections indicate the presence of one or more System Vulnerability Factors as listed in Part 2.3.4.7.e.i. above, the permittee shall also inspect and sample under wet weather conditions to the extent necessary to determine whether wet weather-induced high flows in sanitary sewers or high groundwater in areas served by septic systems result in discharges of sanitary flow to the MS4. The permittee shall conduct at least one wet weather screening and sampling at the outfall for any catchment where one or more System Vulnerability Factors are present. This sampling can be done upon completion of any dry weather investigation but must be completed before catchment investigation is marked as complete. All data shall be recorded and reported in each annual report.

iii. Isolation and Source Verification Procedures – The permittee shall develop procedures to be used to isolate and confirm sources where manhole investigations or other physical evidence or screening has identified MS4 alignments to be influenced by illicit discharges or SSOs. These shall include isolation of the drainage area for implementation of more detailed investigations, inspection of additional manholes along the alignment to refine the location of potential contaminant sources, and methods such as caulk damns, targeted internal plumbing inspections, dye testing, video inspections, or smoke testing to isolate and confirm the sources.

f. Removal and Confirmation - When the source of an illicit discharge or SSO is identified and confirmed, the permittee shall exercise its authority as necessary to require its removal pursuant to Part 2.3.4.2 or 2.3.4.3. For each confirmed source the permittee shall include in the annual report the following information: the location of the discharge and its source(s), a description of the discharge, the method of discovery, date of discovery, date of elimination, mitigation or enforcement action; and estimate of the volume of flow removed.

Within one year of removal of all identified illicit discharge and SSO sources within a catchment area, confirmatory outfall or interconnection screening shall be conducted. The confirmatory screening shall be conducted in dry weather unless System Vulnerability Factors have been identified in the catchment pursuant to Part 2.3.4.7.e.i., in which case both dry weather and wet weather confirmatory screening shall be conducted. If confirmatory screening indicates evidence of additional illicit discharges, the catchment shall be scheduled for additional investigation. Confirmatory screening is not required in catchments where no illicit discharges or system vulnerability factors have been identified and no previous screening indicated suspicious flows.

g. Follow-up Screening – Upon completion of catchment investigation pursuant to paragraph e. and illicit discharge removal and confirmation (if necessary) pursuant to paragraph f., the catchment outfall or interconnection shall be scheduled for follow-up screening within five years, or sooner as determined by the permittee based on the catchment's illicit discharge priority. Follow-up screening shall consist of dry weather screening and sampling except that wet weather screening and sampling shall also be required in catchments where wet weather screening was required by Part 2.3.4.7.e.ii.(b).

h. Illicit Discharge Prevention Procedures - The permittee shall develop and implement mechanisms and procedures designed to prevent illicit discharges and SSOs, such as: spill response and prevention procedures including identification of spills, reporting procedures, containment procedures, and documentation; public awareness (this may be a part of the education program required by Part 2.3.2); reporting (hotlines) and training of public employees involved in the IDDE program on ways to identify potential illicit discharges and SSOs.

2.3.4.8 - IDDE Program Implementation Goals and Milestones

The permittee shall implement the IDDE Program to meet the following goals and milestones:

a. The permittee shall complete dry weather screening and sampling (where flowing) of every MS4 outfall and interconnection (except Excluded and Problem Catchments) no later than three years from the permit effective date. The permittee may rely on screening conducted under the MS4-2003 permit, pursuant to an EPA enforcement action, or by the state or EPA to the extent that it meets the requirements of Part 2.3.4.7. All data shall be reported in each annual report. Permittees that have conducted substantially equivalent monitoring to that required by Part 2.3.4.7.d. as part of an EPA enforcement action can request an exemption from the requirements of Part 2.3.4.7.d. by submitting a written request to EPA and retaining exemption approval from EPA as part of the SWMP. Until the permittee receives formal written approval of the exemption from Part 2.3.4.7.d. from EPA the permittee remains subject to all requirements of Part 2.3.4.7.d.

b. The permittee shall begin investigations using the procedure developed in accordance with Part 2.3.4.7.d. within three months of investigation procedure finalization and no later than 15 months (1 year and 3 months) from the effective date of the permit and shall make continued progress each year toward meeting the milestones of Part 2.3.4.8.c. below. In accordance with Part 2.3.4.a., the permittee shall continue investigation, including Problem Catchments, using its existing IDDE program until such time as the procedure under Part 2.3.4.7.e is developed.

c. The permittee shall implement the Catchment Investigation Procedure in every catchment of the MS4, even where dry weather screening does not indicate evidence of illicit discharges. The permittee shall begin implementation of the procedure in Problem Catchments and those catchments with the highest ranking in the Assessment of Priority Catchments pursuant to Part 2.3.4.7.c. Implementation of the Catchment Investigation Procedure shall comply with the following milestones. For purposes of these milestones, a catchment investigation is considered complete if a permittee has completed all elements of Part 2.3.4.7.e.

i. The permittee shall complete the Catchment Investigation Procedure in a minimum of 80% of the MS4 area served by Problem Catchments within three years of the permit effective date and 100% of Problem Catchments within five years of the permit effective date.

ii. The permittee shall complete the Catchment Investigation Procedure in every catchment of the MS4 where information indicates sewer input including outfall/interconnection screening that indicates sewer input based on olfactory/visual evidence or sampling results (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) within five (5) years of the permit effective date.

iii. The permittee shall complete the Catchment Investigation Procedure in 40% of the area served by all MS4 catchments within five (5) years of the permit effective date, and in 100% of the area served by all MS4 catchments within ten (10) years of the permit effective date. The permittee may count the area of low priority catchments only if the Catchment Investigation has been started in all other MS4 catchments. For the purposes of this Part, catchment investigations that have been started include those where provisions of Part 2.3.4.7.e.i.-ii. have been completed.

d. Where catchments do not contain junction manholes, the dry weather screening and sampling shall be considered as meeting the manhole inspection requirement. In these catchments, dry weather screenings that indicate potential presence of illicit discharges shall be further investigated pursuant to Part 2.3.4.7.e.iii. Investigations in these catchments may be considered complete where dry weather screening reveals no flow; no evidence of illicit discharges or SSOs is indicated through sampling results or visual or olfactory means; and no wet weather System Vulnerability Factors are identified.

e. The permittee shall track progress towards these milestones in each annual report.

2.3.4.9. – Indicators of IDDE Program Progress

The permittee shall define or describe indicators for tracking program success. At a minimum, indicators shall include measures that demonstrate efforts to locate illicit discharges, the number of SSOs and illicit discharges identified and removed, the percent and area in acres of the catchment area served by the MS4 evaluated using the catchment investigation procedure, and volume of sewage removed. The permittee shall evaluate and report the overall effectiveness of the program based on the tracking indicators in the annual report.

2.3.4.10. – Training

The permittee shall, at a minimum, annually provide 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

Objective: The objective of an effective construction stormwater runoff control program is to minimize or eliminate erosion and maintain sediment on site so that it is not transported in stormwater and allowed to discharge directly or indirectly to a water of the U.S.

The construction site stormwater runoff control program required by this permit is a separate and distinct program from EPA's stormwater construction permit program. (http://cfpub1.epa.gov/npdes/stormwater/cgp.cfm)

a. Permittees shall implement and enforce a program to reduce pollutants in any stormwater runoff discharged to the MS4 from all 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 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. Permittees authorized under the MS4-2003 permit shall continue to implement and enforce their existing program and modify as necessary to meet the requirements of this part.

b. The permittee does not need 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 permittee shall develop and implement a construction site runoff control program that includes the elements in Paragraphs i. through v. of this Part:

i. An ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on constructions sites such as demolition debris, litter and sanitary wastes. Development of an ordinance or other regulatory mechanism was a requirement of the MS4-2003 permit (See Part II.B.4 and Part IV.B.4).The ordinance or other regulatory mechanism required by the MS4-2003 permit shall have been effective by May 1, 2008.

ii. Written procedures for site inspections and enforcement of sediment and erosion control measures. If not already existing, these procedures shall be completed within one (1) year from the effective date of the permit. The procedures shall clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. The program shall provide that the permittee may, to the extent authorized by law, impose sanctions to ensure compliance with the local program. These procedures and regulatory authorities shall be documented in the SWMP.

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 BMPs appropriate for the conditions at the construction site. The program may include references to BMP design standards in state manuals, such as the Massachusetts Stormwater Handbook[2], 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] The handbook is available at: http://www.mass.gov/dep/water/laws/policies.htm#storm

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.

iv. Requirements for construction site operators within the MS4 jurisdiction to control wastes, 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.

v. Written procedures for site plan review and inspection and enforcement. If not already existing, the procedures for site plan review and inspection and enforcement shall be completed within one (1) year from the effective date of the permit. The site plan review procedure shall include a pre-construction review by the permittee of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development. The review procedure shall incorporate procedures for the consideration of potential water quality impacts, and procedures for the receipt and consideration of information submitted by the public. The site plan review procedure shall also include evaluation of opportunities for use of low impact design and green infrastructure. When the opportunity exists, the permittee shall encourage project proponents to incorporate these practices into the site design. The procedures for site inspections conducted by the permittee shall include the requirement that inspections occur during construction of BMPs as well as after construction of BMPs to ensure they are working as described in the approved plans, clearly defined procedures for inspections including qualifications necessary to perform the inspections, the use of mandated inspection forms if appropriate, and procedure for tracking the number of site reviews, inspections, and enforcement actions. This tracking information shall be included as part of each annual report required by Part 4.4.

2.3.6. Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management)

Objective: The objective of this control measure is to reduce the discharge of pollutants found in stormwater through the retention or treatment of stormwater after construction on new or redeveloped sites.

a. Permittees shall develop, implement, and enforce a program to address post-construction stormwater runoff from all new development and redevelopment projects that disturb one or more acres and discharge into the permittees MS4 at a minimum. Permittees authorized under the MS4-2003 permit shall continue to implement and enforce their program and modify as necessary to meet the requirements of this Part.

i. The permittee's new development/ redevelopment program shall include projects less than one acre if the project is part of a larger common plan of development or redevelopment which disturbs one or more acre.

ii. 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:

(a) Stormwater management systems on new and re-developed sites shall be designed to either:

1. Retain the first one (1) inch of runoff from all impervious surfaces on site. OR
2. Provide the level of pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration on the first one (1) inch of runoff from all impervious surfaces on site. This standard shall be met through a combination of practices designed to retain runoff on site (environmentally sensitive site design, low impact development techniques) where technically feasible, and stormwater BMPs designed to treat the remainder of runoff that cannot be retained on site due to site constraints. The level of pollutant removal from BMPs shall be calculated consistent with EPA Region 1's BMP Performance Extrapolation Tool.[3]

(b) Stormwater management systems designed on sites with documented soil contamination or management systems designed on industrial sites shall not include BMPs that promote infiltration and shall instead require the use of treatment BMPs on site.

(c) Stormwater management systems designed to include infiltration near environmentally sensitive areas, including public water supplies and any other sensitive area as determined and documented by the permittee, shall incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event[4].

(d) All BMPs installed as part of the site's stormwater management system shall be constructed in accordance with The Massachusetts Stormwater Handbook Volume 2 Chapter 2.

(e) The stormwater management system shall include the development of a long term operation and maintenance plan to inspect and repair installed BMPs to ensure they are functioning according to manufacturer or design specifications.

(f) Stormwater management systems shall be designed to avoid disturbance of areas susceptible to erosion and sediment loss. The permittee's new development/ redevelopment program may include requirements to preserve areas in the municipality that provide important water quality benefits; requirements to implement measures for flood control; and requirements to protect the integrity of natural resources as determined by the permittee.

[3] The BMP Performance Extrapolation tool, instructions and background can be found here: http://www.epa.gov/region1/npdes/stormwater/

[4] In order to protect these resources, EPA also encourages the permittee to require any stormwater management system designed to infiltrate stormwater near environmentally sensitive areas to provide the level of pollutant removal equal to or greater than the level of pollutant removal provided through the use of biofiltration of the same volume of runoff to be infiltrated, prior to infiltration.

iii. The permittee shall require, at a minimum, the submission of as-built drawings no later than one year 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 (post construction stormwater management). 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 BMPs. These procedures may also include the development of maintenance contracts between the owner of the BMP 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.

b. Within three (3) 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. 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.

c. 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:

i. Green roofs;
ii. 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
iii. 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)

d. Directly Connected Impervious Area

i. The permittee shall estimate the annual increase or decrease in the number of acres of impervious area (IA) and directly connected impervious area (DCIA) discharging stormwater to its MS4[5] from the initial base line provided by EPA or determined by the permittee and report those estimates in each annual report. If the permittee does not use the baseline provided by EPA, the permittee shall report the tabulated results and its estimation methodology in the first annual report. The permittee shall tabulate its estimates by sub-basins it has delineated pursuant to Part 2.3.4.6 (a)(i) of this permit or an alternative delineation of sub-basins. To facilitate the permittee's implementation of this permit requirement, EPA will provide for the permittee's use initial estimates of IA and DCIA for each regulated small MS4. (http://www.epa.gov/region1/npdes/stormwater/ma.html)

For the purposes of this part, IA includes conventional pavements, sidewalks, driveways, roadways, parking lots, and rooftops . DCIA is the portion of IA with a direct hydraulic connection to the permittee's MS4 or a waterbody via continuous paved surfaces, gutters, pipes and other impervious features. DCIA typically does not include isolated impervious areas with an indirect hydraulic connection to the MS4 or that otherwise drain to a pervious area.

ii. Beginning with the second year annual report and in each subsequent annual report, the permittee shall estimate for each sub-basin identified pursuant to Part 2.3.4.6.a. the number of acres of IA and DCIA discharging stormwater to its MS4 that have been added or removed during the prior year. The permittee shall include in its estimates the additions or reductions resulting from development, redevelopment, or retrofit projects undertaken directly by the permittee; or by private developers and other parties in a voluntary manner or in compliance with the permittee's ordinance or bylaw pursuant to Part 2.3.6.a. of this permit.

iii. Four (4) years from the effective date of this permit, the permittee shall complete an inventory and priority ranking of permittee-owned property and existing infrastructure that could potentially be modified or retrofitted with BMPs designed to reduce the frequency, volume, and pollutant loads of stormwater discharges to and from its MS4 through the reduction of impervious area. Properties and infrastructure for consideration shall include those with the potential for reduction of on-site IA and DCIA, as well as those that could provide reduction of off-site IA and DCIA. 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. MS4 infrastructure to be considered includes existing street right-of-ways, outfalls and conventional stormwater conveyances and controls (including

[5] At a minimum, the areas reported shall include those portions located within the urbanized area of the MS4, but may also include the total area within the relevant municipal boundaries.

swales and detention practices) that could be readily modified or retrofitted to provide reduction in frequency, volume or pollutant loads of such discharges through reduction of impervious cover.

The inventory and priority ranking is a screening level ranking that should be based on existing or readily available data. In determining the potential for modifying or retrofitting particular properties, the permittee shall consider factors such as access for maintenance purposes; subsurface geology; depth to water table; proximity to aquifers and subsurface infrastructure including sanitary sewers and septic systems; and opportunities for public use and education. In determining its priority ranking, the permittee shall 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.

iv. Beginning with the fifth year annual report and in each subsequent annual report, the permittee shall report on those MS4 owned properties and infrastructure inventoried pursuant to Part 2.3.6.d.ii that have been modified or retrofitted with BMPs to mitigate IA and DCIA. The permittee may also include in its annual report non-MS4 owned property that has been modified or retrofitted with BMPs to mitigate IA and DCIA.

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

Objective: 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. Operations and Maintenance Programs

i. Within one (1) year from the effective date of the permit, the permittee shall develop, if not already developed, written operations and maintenance procedures for the municipal activities listed below in Part 2.3.7.a.ii. These written procedures shall be included as part of the SWMP.

ii. Within one (1) year of the effective date of this permit, the permittee shall develop an inventory of all permittee owned facilities within the categories listed below. The permittee shall review this inventory annually and update as necessary.

(a)Parks and open space: Establish procedures to address the proper use, storage, and disposal of pesticides, herbicides, and fertilizers including minimizing the use of these products and using only in accordance manufacturer's instruction. Evaluate lawn maintenance and landscaping activities to ensure practices are protective of water quality. Protective practices include reduced mowing frequencies, proper disposal of lawn clippings, and use of alternative landscaping materials (e.g., drought resistant planting). Establish pet waste handling collection and disposal locations at all parks and open space including the placing of proper signage concerning the proper collection and disposal of pet waste. Establish procedures for management of trash containers at parks and open space (scheduled cleanings; sufficient number).

(b)Buildings and facilities where pollutants are exposed to stormwater runoff: This includes 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. Evaluate the use, storage, and disposal of petroleum products and other potential stormwater pollutants. Provide employee training as necessary so that those responsible for handling these products know proper procedures. Ensure that Spill Prevention Plans are in place, if applicable, and coordinate with the fire department as necessary. Develop management procedures for dumpsters and other waste management equipment. Sweep parking lots and keep areas surrounding the facilities clean to reduce runoff of pollutants.

(c)Vehicles and Equipment: Establish procedures for the storage of permittee vehicles. Vehicles with fluid leaks shall be stored indoors or containment shall be provided until repaired. Evaluate fueling areas owned or operated by the permittee. If possible, place fueling areas under cover in order to minimize exposure. 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.

iii. Infrastructure Operations and Maintenance

(a) The permittee shall establish within one (1) year of the effective date of the permit a written program detailing the activities and procedures the permittee will implement so that the MS4 infrastructure is maintained in a timely manner to reduce the discharge of pollutants from the MS4. If the permittee has an existing program to maintain its MS4 infrastructure in a timely manner to reduce or eliminate the discharge of pollutants from the MS4, the permittee shall document the program in the SWMP.

(b) The permittee shall optimize routine inspections, cleaning and maintenance of catch basins such that the following conditions are met:

- 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.
- Establish a schedule that the frequency of routine cleaning will ensure that no catch basin at anytime will be more than 50 percent full.
- 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.
- For the purposes of this part, an excessive sediment or debris loading is a catch basin sump 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.
- The permittee shall document in the SWMP and in the first annual report its plan for optimizing catch basin cleaning, inspection plans, or

its schedule for gathering information to develop the optimization plan. Documentation shall include metrics and other information used to reach the determination that the established plan for cleaning and maintenance is optimal for the MS4. The permittee shall keep a log of catch basins cleaned or inspected.

- The permittee shall report in each annual report the total number of catch basins, number inspected, number cleaned, and the volume or mass of material removed from each catch basin draining to water quality limited waters and the total volume or mass of material removed from all catch basins.

(c) The permittee shall establish and implement procedures for sweeping and/or cleaning streets, and permittee-owned parking lots. All 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 once per year in the spring (following winter activities such as sanding). The procedures shall also 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. The permittee shall report in each annual report the number of miles cleaned and the volume or mass of material removed.

For rural uncurbed roadways with no catch basins and limited access highways, the permittee shall either meet the minimum frequencies above, or develop and implement an inspection, documentation and targeted sweeping plan within one year of the effective date of the permit, and submit such plan with its year one annual report.

(d) The permittee shall ensure proper storage of catch basin cleanings and street sweepings prior to disposal or reuse such that they do not discharge to receiving waters.

(e) The permittee shall establish and implement procedures for winter road maintenance including the use and storage of salt and sand; minimize the use of sodium chloride and other salts, and evaluate opportunities for use of alternative materials; and ensure that snow disposal activities do not result in disposal of snow into surface waters.

(f) The permittee shall establish and implement inspection and maintenance frequencies and procedures for the storm drain systems and for all stormwater treatment structures such as water quality swales, retention/detention basins, infiltration structures, proprietary treatment devices or other similar structures. All permittee-owned stormwater treatment structures (excluding catch basins) shall be inspected annually at a minimum.

iv. The permittee shall report in the annual report on the status of the inventory required by this part and any subsequent updates; the status of the O&M programs for the permittee-owned facilities and activities in Parts 2.3.7.a.ii. of this section; and the maintenance activities associated with each.

v. The permittee shall keep a written record of all required activities including but not limited to maintenance activities, inspections and training required by Part 2.3.7.a. The permittee shall maintain, consistent with Part 4.2.a., all records associated with maintenance and inspection activities required by Part 2.3.7.a.

b. Stormwater Pollution Prevention Plan (SWPPP)

The permittee shall develop and fully 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. No later than two years from the effective date of the permit, 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:

(a) 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.

(b) 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.

(c) Identification of stormwater controls
The permittee shall select, design, install, and implement the control measures detailed in paragraph iv below to prevent or reduce the discharge of pollutants from the permittee owned facility.

The selection, design, installation, and implementation of the control measures shall be in accordance with good engineering practices and manufacturer's specifications. 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 does not cause or contribute to a violation of a water quality standard.

(d) The SWPPP shall include the following management practices:

1. 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.

2. 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.

3. 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.

4. 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 Part 264 and 40 CFR Part 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 Part 110, 40 CFR Part 117, or 40

CFR Part 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 Part 110, 40 CFR Part 117, and 40 CFR Part 302 as soon as the permittee has knowledge of the discharge. State or local requirements may necessitate reporting 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.

5. 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.

6. 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.

7. 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. Such piles shall be enclosed or covered within two (2) years of the permit effective date. 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.

8. Employee Training: The permittee shall regularly train 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, including spill response, good housekeeping, material management practices, any best management practice operation and maintenance, etc. EPA recommends annual training.

   The permittee shall document the following information for each training:

- The training date, title and training duration;
- List of municipal attendees
- Subjects covered during training

9. 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:

(a) 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.

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.

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 required by Part 2.3.7.b.The permittee shall maintain all records associated with the development and implementation of the SWPPP required by this section consistent with the requirements of Part 4.2.

3.0. Additional Requirements for Discharges to Surface Drinking Water Supplies and Their Tributaries

a. Permittees which discharge to public surface drinking water supply sources (Class A and Class B surface waters used for drinking water) or their tributaries should consider these waters a priority in the implementation of the SWMP.

b. Permittees should provide pretreatment and spill control measures to stormwater discharges to public drinking water supply sources or their tributaries to the extent feasible.

c. Direct discharges to Class A waters should be avoided to the extent feasible.

4.0. Program Evaluation, Record Keeping, and Reporting

4.1. Program Evaluation

a. The permittee shall annually self-evaluate its compliance with the terms and conditions of this permit. The permittee shall maintain the annual evaluation documentation as part of the SWMP.

b. The permittee shall evaluate the appropriateness of the selected BMPs in achieving the objectives of each control measure and the defined measurable goals. The permittee may change BMPs in accordance with the following provisions:

- Changes adding (but not subtracting or replacing) components or controls may be made at any time.
- Changes replacing an ineffective or infeasible BMP specifically identified in the SWMP with an alternative BMP may be made as long as the basis for the changes is documented in the SWMP by, at a minimum:
    - An analysis of why the BMP is ineffective or infeasible;
    - Expectations on the effectiveness of the replacement BMP; and
    - An analysis of why the replacement BMP is expected to achieve the defined goals of the BMP to be replaced.

The permittee shall indicate BMP modifications along with a brief explanation of the modification in each Annual Report.

c. EPA or MassDEP may require the permittee to add, modify, repair, replace or change BMPs or other measures described in the annual reports as needed:

- To address impacts to receiving water quality caused or contributed to by discharges from the MS4; or
- To satisfy conditions of this permit

Any changes requested by EPA or MassDEP will be in writing and will set forth the schedule for the permittee to develop the changes and will offer the permittee the opportunity to propose alternative program changes to meet the objective of the requested modification.

4.2. Record Keeping

a. The permittee shall keep all records required by this permit for a period of at least five years. EPA may extend this period at any time. Records include information used in the development of any written program required by this permit, any monitoring results, copies of reports, records of

screening, follow-up and elimination of illicit discharges; maintenance records; inspection records; and data used in the development of the notice of intent, SWMP, SWPPP, and annual reports. This list provides examples of records that should be maintained, but is not all inclusive.

b. Records other than those required to be included in the annual report, Part 4.4, shall be submitted only when requested by the EPA or the MassDEP.

c. The permittee shall make the records relating to this permit, including the written stormwater management program, available to the public. The public may view the records during normal business hours. The permittee may charge a reasonable fee for copying requests. The permittee is encouraged to satisfy this requirement by posting records online.

4.3. Outfall Monitoring Reporting

a. The permittee shall monitor and sample its outfalls at a minimum through sampling and testing at the frequency and locations required in connection with IDDE screening under Part 2.3.4.7.d. through 2.3.4.7.g. The monitoring program may also include additional outfall and interconnection monitoring as determined by the permittee in connection with assessment of SWMP effectiveness pursuant to Part 4.1; evaluation of discharges to water quality limited waters pursuant to Part 2.2; assessment of BMP effectiveness pursuant to Part 2.2 or 2.3; or otherwise.

b. The permittee shall document all monitoring results each year in the annual report. The report shall include the date, outfall or interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results of all analyses. The annual report shall include all of this information and data for the current reporting period and for the entire permit period.

c. The permittee shall also include in the annual report results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period. If such monitoring or studies were conducted on behalf of the permittee, or if monitoring or studies conducted by other entities were reported to the permittee, a brief description of the type of information gathered or received shall be included in the annual report(s) covering the time period(s) the information was received.

4.4. Annual Reports

a. 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, [year of final permit issuance] to the permit effective date. The annual report is due ninety days from the close of each reporting period.

b. The annual reports shall contain the following information:

i. A self-assessment review of compliance with the permit terms and conditions.

ii. An assessment of the appropriateness of the selected BMPs.

iii. The status of the any plans or activities required by Part 2.1 and/ or Part 2.2, including:

- Identification of all discharges determined to be causing or contributing to an exceedance of water quality standards and description of response including all items required by Part 2.1.1.c;
- For discharges subject to TMDL related requirements, identification of specific BMPs used to address the pollutant identified as the cause of impairment and assessment of the BMPs effectiveness at controlling the pollutant (Part 2.2.1. and Appendix F) and any deliverables required by Appendix F;
- For discharges to water quality limited waters a description of each BMP required by Appendix H and any deliverables required by Appendix H.

iv. An assessment of the progress towards achieving the measurable goals and objectives of each control measure in Part 2.3 including:

- Evaluation of the public education program including a description of the targeted messages for each audience; method of distribution 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 the activities related to implementation of the IDDE program including: status of the map; status and results of the illicit discharge potential ranking and assessment; identification of problem catchments; status of all protocols described in Parts 2.3.4.(program responsibilities and systematic procedure); number and identifier of catchments evaluated; number and identifier of outfalls screened; number of illicit discharges located; number of illicit discharges removed; gallons of flow removed; identification of tracking indicators and measures of progress based on those indicators; and employee training.
- Evaluation of the construction runoff management including number of project plans reviewed; number of inspections; and number of enforcement actions.
- Evaluation of stormwater management for new development and redevelopment including status of ordinance development and review; status of the street design assessment; and information on directly connected impervious area reductions.
- Status of the O&M Programs required by Part 2.3.7.a.
- Status of SWPPP required by Part 2.3.7.b. including inspection results.
- Any additional reporting requirements in Part 3.0.

v. All outfall screening and monitoring data collected by or on behalf of the permittee during the reporting period and cumulative for the permit term, including but not limited to all data collected pursuant to Parts 2.3.4. The permittee shall also provide a description of any additional monitoring data received by the permittee during the reporting period.

vi. Description of activities for the next reporting cycle.

vii. Description of any changes in identified BMPs or measurable goals.

viii. Description of activities undertaken by any entity contracted for achieving any measurable goal or implementing any control measure.

c. Reports shall be submitted to EPA at the following address:

United State Environmental Protection Agency
Stormwater and Construction Permits Section (OEP06-1)
Five Post Office Square, Suite 100
Boston, MA 02109

Massachusetts Department of Environmental Protection
One Winter Street – 5th Floor
Boston, MA 02108
ATTN: Frederick Civian

5.0. Non-Traditional MS4s

Non-traditional MS4s are MS4s owned and operated by the Commonwealth of Massachusetts, counties or other public agencies within the Commonwealth of Massachusetts, and properties owned and operated by the United States (Federal Facilities) within the Commonwealth of Massachusetts. This section addresses all non-traditional MS4s except MS4s that are owned or operated by transportation agencies, which are addressed in Part 6.0 below

5.1. Requirements for Non-Traditional MS4s

All requirements and conditions of Parts 1 – 4 above apply to all Non-traditional MS4s, except as specifically provided below:

5.1.1. Public education:

For the purpose of this permit, the audiences for a Non-traditional MS4 include the employees, clients and customers (including students at education MS4s) or visitors to the property, and any contractors working at the facility where the MS4 is located. The permittee may use some of the educational topics included in Part 2.3.2.d. as appropriate, or may focus on topics specific to the MS4. The permittee shall document the educational topics for each target audience in the SWMP and annual reports.

5.1.2. Ordinances and regulatory mechanisms:

Some Non-traditional MS4s may not have authority to enact an ordinance, by-law, or other regulatory mechanisms. MS4s without the authority to enact an ordinance shall ensure that written policies or procedures are in place to address the requirements of Part 2.3.4.5., Part 2.3.4.7.b-h. and Part 2.3.6.a.

5.1.3. Assessment of Regulations:

Non-traditional MS4s do not need to meet the requirements of Part 2.3.6.c. Non-traditional MS4s shall instead evaluate opportunities to manage and reduce stormwater discharges by including green infrastructure practices in new development and redevelopment at their facilities. Non-traditional

MS4s shall evaluate opportunities to manage and reduce stormwater discharges by reducing the amount of impervious cover due to parking areas and walkways and create an implementation plan and schedule for implementation of practices to reduce impervious area. The permittee shall complete the implementation plan on the schedule the permittee creates as part of the plan. Non-traditional MS4s shall report on these efforts in each annual report. The permittee shall also ensure adequate long-term operation and maintenance of stormwater management practices installed by the non-traditional MS4 or its agents.

5.1.4. New Dischargers

New MS4 facilities are subject to additional water quality-based requirements if they fall within the definition of "new discharger" under 40 CFR § 122.2: "A new discharger is any building, structure, facility or installation (a) from which there is or may be a 'discharge of pollutants' (b) that did not commence the 'discharge of pollutants' at a particular 'site' prior to August 13, 1979; (c) which is not a 'new source'; and (d) which never received a finally effective NPDES permit for discharges at that 'site.' The term "site" is defined in § 122.2 to mean "the land or water area where any 'facility or activity' is physically located or conducted including adjacent land used in connection with the facility or activity."

Consistent with these definitions, a Non-traditional MS4 is a "new discharger" if it discharges stormwater from a new facility with an entirely new separate storm sewer system that is not physically located on the same or adjacent land as an existing facility and associated system operated by the same MS4.

Any Non-traditional MS4 facility that is a "new discharger" and discharges to a waterbody listed in category 5 or 4b on the Massachusetts Integrated Report of waters listed pursuant to Clean Water Act section 303(d) and 305(b) due to nutrients (nitrogen or phosphorus), metals, solids, bacteria/pathogens, chloride or oil and grease (hydrocarbons), or discharges to a waterbody with an approved TMDL for any of those pollutants, is not eligible for coverage under this permit and shall apply for an individual permit.

Any Non-traditional MS4 facility that is a "new discharger" and discharges to a waterbody that is in attainment is subject to Massachusetts antidegradation regulations at 314 CMR 4.04. The permittee shall comply with the provisions of 314 CMR 4.04 including information submittal requirements and obtaining authorization for new discharges where appropriate[6]. Any authorization of new discharges by MassDEP shall be incorporated into the permittee's SWMP. If an applicable MassDEP approval specifies additional conditions or requirements, then those requirements are incorporated into this permit by reference. The permittee must comply with all such requirements.

6.0 Requirements for MS4s Owned or Operated by Transportation Agencies

This section applies to all MS4s owned or operated by any state or federal transportation agency (except Massachusetts Department of Transportation –MassDOT- Highway Division, which is subject to a separate individual permit). All requirements and conditions of this permit apply with the following exceptions:

6.1 Public education:

[6] Contact MassDEP for guidance on compliance with 314 CMR 4.04

For the purpose of this permit, the audiences for a transportation agency education program include the general public (users of the roadways), employees, and any contractors working at the location. The permittee may use some of the educational topics included in Part 2.3.2.d. as appropriate, or may focus on topics specific to the agency. The permittee shall document the educational topics for each target audience.

6.2 Ordinances and regulatory mechanisms:

The transportation agency may not have authority to enact an ordinance, by-law or other regulatory mechanisms. The agency shall ensure that written agency policies or procedures are in place to address the requirements of Part 2.3.4.5., Part 2.3.4.7.b-h. and Part 2.3.6.a.

6.3 Assessment of regulations:

The requirements of Part 2.3.6.c. do not apply. The agency shall instead evaluate opportunities to manage and reduce stormwater discharges by including green infrastructure practices in new development and redevelopment at the facility. The agency shall evaluate opportunities to manage and reduce stormwater discharges by reducing the amount of impervious cover due to parking areas and walkways and create an implementation plan and schedule for implementation of practices to reduce impervious area. The permittee shall complete the implementation plan on the schedule the permittee creates as part of the plan. The permittee shall report on these efforts in each annual report. The permittee shall also ensure adequate long-term operation and maintenance of stormwater management practices installed by the agency or its agents.

6.4 New Dischargers

New MS4 facilities are subject to additional water quality-based requirements if they fall within the definition of "new dischargers" under 40 CFR § 122.2: "A new discharger is any building, structure, facility or installation (a) from which there is or may be a 'discharge of pollutants' (b) that did not commence the 'discharge of pollutants' at a particular 'site' prior to August 13, 1979; (c) which is not a 'new source'; and (d) which never received a finally effective NPDES permit for discharges at that 'site.' The term "site" is defined in § 122.2 to mean "the land or water area where any 'facility or activity' is physically located or conducted including adjacent land used in connection with the facility or activity."

Consistent with these definitions, a new transportation MS4 is a "new discharger" if it discharges stormwater from a new facility with an entirely new separate storm sewer system that is not physically located on the same or adjacent land as an existing facility and associated system operated by the same MS4.

Any transportation MS4 facility that is a "new discharger" and discharges to a waterbody listed as impaired in category 5 or 4b on the Massachusetts Integrated Report of waters listed pursuant to Clean Water Act section 303(d) and 305(b) due to nutrients (nitrogen or phosphorus), metals, solids, bacteria/pathogens, chloride or oil and grease (hydrocarbons), or discharges to a waterbody with an approved TMDL for any of those pollutants, is not eligible for coverage under this permit and shall apply for an individual permit.
Any transportation MS4 facility that is a "new discharger" and discharges to a waterbody that is in attainment is subject to Massachusetts antidegradation regulations at 314 CMR 4.04. The permittee shall comply with the provisions of 314 CMR 4.04 including information submittal requirements and obtaining authorization for new discharges where appropriate[7]. Any authorization of new discharges by MassDEP shall be incorporated into the permittee's SWMP. If an applicable MassDEP approval specifies additional conditions or requirements,

[7] Contact MassDEP for guidance on compliance with 314 CMR 4.04

then those requirements are incorporated into this permit by reference. The permittee must comply with all such requirements.