

**FACT SHEET FOR THE SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM
(MS4) DRAFT GENERAL PERMIT FOR MASSACHUSETTS NORTH COASTAL
WATERSHEDS**

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I. INTRODUCTION AND PROGRAM BACKGROUND

The Director of the Office of Ecosystem Protection EPA-Region 1, is proposing to reissue three (3) National Pollutant Discharge Elimination System (NPDES) general permits for the discharge of stormwater from Small Municipal Separate Storm Sewer Systems (MS4s) to waters within the Commonwealth of Massachusetts. The draft general permit consists of the following parts:

Part 1: Introduction

Part 2: Non-Numeric Effluent Limitations

Part 3: Outfall Monitoring Requirements

Part 4: Additional State Requirements

Part 5: Program Evaluation, Record Keeping and Reporting

Part 6: Requirements for State and Federal Non-Traditional MS4s

Part 7: Requirements for State Transportation Agencies

Appendices:

A: Definitions, Abbreviations, and Acronyms;

B: Standard permit conditions applicable to all authorized discharges (40 CFR § 122.41);

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C: Areas covered by this permit;

D: Endangered Species Act (ESA) Eligibility Guidance;

E: National Historic Preservation Act (NHPA);

F: Information required for the Notice of Intent (NOI);

G: Requirements for Small MS4s subject to Approved Total Maximum Daily Loads (TMDLs);

H: Analytical Methods for Impaired Waters Monitoring; and

I: Instrumentation and Field Measurements

A. Program Background

The conditions in the draft permit are established pursuant to Clean Water Act (CWA) § 402(p)(3)(B)(iii) to ensure that pollutant discharges from small municipal separate storm sewer systems (MS4s) are reduced to the maximum extent practicable (MEP), protect water quality, and satisfy the appropriate water quality requirements of the CWA. Small municipal separate storm sewer system is defined at 40 CFR §122.26(b)(16) as follows:

Small separate storm sewer system means all separate storm sewers that are:

“(i) 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, 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 United States.

(ii) Not defined as “large” or “medium” municipal separate storm sewer systems pursuant to 40 CFR § 122.26(b)(4) or (b)(7) or designated under 40 CFR § 122.26(a)(1)(v).

(iii) This term includes systems similar to separate storm sewer systems in municipalities such as military bases, large hospital or prison complexes, and highways and other thoroughfares. The term does not include separate storm sewers in very discrete areas, such as individual buildings. For example, an armory located in an urbanized area would not be considered a regulated small MS4.”

Part 2.4 of the draft permit sets forth the requirements for the MS4 to “reduce pollutants in

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discharges to the maximum extent practicable, including management practices, control techniques, and system, design and engineering methods...” (See Section 402(p) (3) (B) (iii) of the CWA). Maximum extent practicable (MEP) is the statutory standard that describes the level of pollutant reductions that MS4 operators must achieve, but also includes a recognition that the requirements may be increased under some circumstances, EPA believes implementation of best management practices (BMPs) designed to control storm water runoff from the MS4 is generally the most appropriate approach for reducing pollutants to satisfy the technology standard of MEP. Pursuant to 40 CFR § 122.44(k), the draft permit requires permittees to control stormwater discharges through BMPs, including development and implementation of a comprehensive stormwater management program (SWMP) as the mechanism to achieve the required pollutant reductions.

Section 402(p) (3) (B) (iii) of the CWA also authorizes EPA to include in an MS4 permit “such other provisions as [EPA] determines appropriate for control of ...pollutants.” EPA believes that this provision forms a basis for imposing water quality-based effluent limitations (WQBELs), *see Defenders of Wildlife v. Browner*, 191 F.3d 1159 (9th Cir. 1999); *see also* EPA’s preamble to the Phase II regulations, 64 Fed. Reg. 68722, 68753, 68788 (Dec 8, 1999). Accordingly, Parts 2.1, 2.2 and 2.3 of the draft permit contain the water quality-based effluent limitations, also expressed in terms of BMPs, which EPA has determined are necessary and appropriate under the CWA.

EPA – Region 1 issued its first final general permit to address stormwater discharges from small MS4s on May 1, 2003 (MS4-2003). The MS4-2003 general permit required small MS4s to develop and implement stormwater management programs (SWMP) designed to control pollutants to the MEP and protect water quality. This draft general permit builds on the requirements of the previous general permit.

Neither the CWA nor the stormwater regulations provide a specific definition of MEP. The lack of a detailed definition is to allow flexibility in MS4 permitting. Small MS4s need flexibility to optimize reductions in stormwater pollutant loads on a location-by-location basis. The process of

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optimization will include consideration of factors such as receiving waters, specific local concerns, size, climate, and other aspects of the MS4. Pollutant reductions that represent MEP may be different for each small MS4 given the unique hydrologic and geologic concerns or features that may exist.

EPA views the MEP standard in the CWA as an iterative process. MEP should continually adapt to current conditions and BMP effectiveness. EPA believes that compliance with the requirements of this draft permit will meet the MEP standard. The iterative process of MEP consists of a municipality developing a program consistent with specific permit requirements, implementing the program, evaluating the effectiveness of BMPs included as part of the program, revising those parts of the program that are not effective at controlling pollutants, implementing the revisions, and then evaluating again. This process continues until the goal of meeting water quality requirements is achieved. The changes contained in the draft general permit from the previous permit reflect the iterative process of MEP. Accordingly, the draft general permit contains more specific tasks and details than the MS4-2003. These specific changes are discussed later in the fact sheet.

B. Consideration of Other Federal Programs

When EPA undertakes an action, such as the reissuance of an NPDES permit, that action must be consistent with other federal laws and regulations. Regulations at 40 CFR §122.49 contain a listing of Federal laws that may apply to the issuance of NPDES permits. This section discusses four federal Acts that apply to the reissuance of these general permits: the Endangered Species Act (ESA), the National Historic Preservation Act (NHPA), Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA which addresses Essential Fish Habitat (EFH)), and the Coastal Zone Management Act. The requirements of these Acts and EPA's obligations with regard to them are discussed in the following paragraphs. Executive Orders and other administrative laws that may apply to the issuance of NPDES are discussed in Part IV of this fact sheet.

Endangered Species

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The ESA of 1973 requires federal agencies, such as EPA to ensure in consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (also known collectively as the Services), that any actions authorized, funded or carried out by the Agency are not likely to jeopardize the continued existence of any federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species (see 16 U.S.C 1536(a)(2), 50 CFR § 402 and 40 CFR§ 122.49(c)).

The draft general permit contains five criteria for eligibility certification. These criteria are contained in Appendix D of the draft general permit. In order to be eligible for this draft general permit, permittees must certify that none of their stormwater discharges, allowable non-stormwater discharges, or discharge related activities are likely to affect a threatened or endangered species. The permittee must document its eligibility determination based on one of the criteria and maintain the documentation as part of the stormwater management program. The permittee must also certify eligibility as part of the NOI requirements. Failure to certify eligibility will result in denial of permit authorization.

In order to meet its obligations under the CWA and the ESA, and to promote the goals of those Acts, EPA seeks to ensure the activities regulated by these general permits are not likely to adversely affect endangered and threatened species and critical habitat. Small MS4s applying for permit authorization must assess the impacts of their storm water discharges and discharge-related activities on federally listed endangered and threatened species (“listed species”) and designated critical habitat (“critical habitat”) to ensure that the goals of ESA are met. Prior to obtaining general permit authorization, small MS4s must meet the ESA eligibility provisions of this permit. EPA strongly recommends that small MS4s follow the guidance in Appendix D of the general permit at the earliest possible stage to ensure eligibility requirements for general permit authorization are complete upon NOI submission.

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Small MS4s also have an independent ESA obligation to ensure that their activities do not result in any prohibited “takes” of listed species¹. Many of the measures required in this general permit and in the instructions of Appendix D to protect species may also assist in ensuring that the MS4’s activities do not result in a prohibited take of species in violation of section 9 of the ESA. If the permittee has plans or activities in an area where endangered and threatened species are located, it may wish to ensure that they are protected from potential takings liability under ESA section 9 by obtaining an ESA section 10 permit or by requesting formal consultation under ESA section 7. Small MS4s that are unsure whether to pursue a section 10 permit or a section 7 consultation for takings protection should confer with the appropriate USFWS office or the NMFS office.

There are four species of concern for small MS4s applying for permit authorization, namely the dwarf wedgemussel, the shortnose sturgeon, the bog turtle, and the northern red-bellied cooter. The shortnose sturgeon is listed under the jurisdiction of NMFS and the dwarf wedge mussel, the bog turtle and the northern red-bellied cooter are listed under the jurisdiction of the USFWS.

The federally-listed endangered dwarf wedgemussel (*Alasmidonta heterodon*) is found in the following areas:

- Connecticut River from North Cumberland to Dalton, New Hampshire (Coos County)
- Connecticut River from Lebanon to North Walpole, New Hampshire (Grafton and Sullivan Counties)
- Ashuelot River from the Surry Mountain Flood Control Project in Surry to Swanzey, New Hampshire (Cheshire County)
- South Branch of the Ashuelot River in East Swanzey, New Hampshire (Cheshire County)
- Mill River from Whately to Hatfield, Massachusetts (Hampshire County)
- Fort River in Amherst, Massachusetts (Hampshire County)
- Mill River south of State Route 10 in Northampton, Massachusetts (Hampshire County)

¹ Section 9 of the ESA prohibits any person from “taking” a listed species (e.g. harassing or harming it) unless: (1) the taking is authorized through an “incidental take statement” as part of completion of formal consultation according to ESA section 7; (2) where an incidental take permit is obtained under ESA section 10 (which requires

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The federally-listed endangered shortnose sturgeon (*Acipenser brevirostrum*) is found in the following areas in Massachusetts:

- Merrimack River from the Essex Dam in Lawrence, Massachusetts to the Merrimack River's mouth (Essex County)
- Connecticut River from Turner's Falls, Massachusetts (Franklin, Hampshire, and Hampden Counties) to the Connecticut River's mouth, Connecticut (Hartford, Middlesex and New London, Counties).

The federally-listed threatened bog turtle (*Chemmys muhlenbergii*) is found in the following areas of Massachusetts:

- Bodies of water in the Towns of Egremont and Sheffield (Berkshire County), Massachusetts

The federally-listed endangered northern red-bellied cooter (*Pseudemys rubriventris*) is found in the following areas in Massachusetts:

- Bodies of water occurring within the following boundaries of the Towns of Plymouth and Carver (Plymouth County), Massachusetts, west of Route 3 and north of Route 25; east of Route 58 and south of Route 44
- Bodies of water in the Towns of Bourne and Sandwich, MA (Barnstable County), and
- Bodies of water in the Town of Raynham, MA (Bristol County)

Maps are available at: <http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm>

Any small MS4 that is discharging to these waters and is seeking authorization under this general permit must consult with the Services. EPA is authorized to designate non-federal representatives for the general permit for the purpose of carrying out informal consultation with NMFS and USFWS (See 50 CFR §402.08 and §402.13). By terms of this permit, EPA has automatically designated small MS4 operators as non-federal representatives for the purpose of conducting informal consultations. Permit authorization is only available if the small MS4 contacts the Services to determine that discharges and discharge related activities are not likely to adversely affect listed species or critical habitat and informal consultation with the Services has been concluded and results in written concurrence by the Services that the discharge is not likely to adversely affect an endangered or threatened species.

the development of a habitat conversion plan; or (3) where otherwise authorized or exempted under the ESA. This prohibition applies to all entities including private individuals, businesses, and governments.

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Before submitting a NOI for authorization under this permit, a small MS4 must determine whether it meets the ESA eligibility criteria by following the steps in Section D of Appendix D. Small MS4s that cannot meet any of the eligibility criteria must apply for an individual permit.

The paragraphs below are the ESA eligibility criteria contained in Appendix D of the permit. A MS4 must meet one of the criteria to be eligible for this permit.

The ESA eligibility requirements of this permit may be satisfied by documenting that one or more of the following criteria has been met.

Criterion A: No endangered or threatened species or critical habitat is in proximity to the storm water discharges or discharge related activities.

Criterion B: In the course of a separate federal action involving the small MS4, formal or informal consultation with FWS and/or NMFS under Section 7 of the ESA has been concluded and that consultation (1) addressed the effects of the stormwater discharges and discharge related activities on the listed species and critical habitat; and (2) the consultation resulted in either a no jeopardy opinion or a written concurrence by USFWS and/or NMFS on a finding that the stormwater discharges and discharge related activities are not likely to adversely affect listed species or critical habitat.

Criterion C: The activities are authorized under Section 10 of the ESA and that authorization addresses the effects of the stormwater discharges and discharge related activities on listed species and critical habitat.

(Eligibility under this criterion is not likely.) This criterion involves a municipality's activities being authorized through the issuance of a permit under section 10 of the ESA where that authorization addresses the effect of the municipality's stormwater discharges and discharge related activities on listed species and designated critical habitat. Municipalities must follow

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USFWS and/or NMFS procedures when applying for an ESA section 10 permit (see 50 CFR §17.22(b) (1) for USFWS and §222.22 for NMFS). Application instructions for section 10 permits can be obtained by accessing the appropriate websites (www.fws.gov and www.nmfs.noaa.gov) or by contacting the appropriate regional office.

Criterion D: Using the best scientific and commercial data available, the effect of the stormwater discharge and discharge related activities on listed species and critical habitat have been evaluated. Based on those evaluations a determination is made by the permittee and affirmed by EPA that the stormwater discharges and discharge related activities are not likely to adversely affect any federally threatened or endangered listed species or designated critical habitat.

Criterion E: The stormwater discharges and discharge related activities were already addressed in another operator's certification of eligibility that includes the small MS4's stormwater discharges and discharge related activities.

Criterion F: Eligibility under this criterion is restricted to a small MS4 that discharges to an area listed in Section A of Appendix D with federally listed species.

Section 7 of the ESA provides for formal and informal consultation with the Services. For NPDES permits issued by EPA, draft permits and fact sheets are routinely submitted to the Services for informal consultation prior to issuance. EPA will initiate an informal consultation with the Services during the public notice period of the general permit.

This general permit authorizes stormwater discharges from municipal separate storm sewer systems. The discharges consist of runoff from precipitation events that is collected from streets, parking lots, sidewalks and other impervious areas and discharged to a surface water.

Stormwater from small MS4s may contain bacteria, nutrients, and heavy metals. The general permit excludes authorization to small MS4s whose discharges are likely to adversely affect any species that is listed as endangered or threatened under the ESA or result in the adverse

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modification or destruction of habitat that is designated as critical under the ESA. The proposed permit requirements are sufficiently stringent to assure protection of aquatic life. The requirements in this permit are consistent with information previously provided by the Services to EPA during the development of other recently issued general permits.

Small MS4 discharges that are located in areas in which listed endangered or threatened species may be present are not automatically covered under this general permit. Small MS4s discharging into areas where these species are found must ensure and document eligibility. Small MS4s unable to document eligibility must apply for an individual permit. Applicants with discharges to those locations listed previously in this fact sheet must contact the Services to determine whether additional consultation is needed.

EPA has requested concurrence from the Services on the draft general permit.

Essential Fish Habitat

Under the 1996 Amendments (PL 104-267) to the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA)(16 USC Sections 1801 et seq. (1998)), EPA is required to consult with NMFS if EPA's action or proposed actions that it funds, permits or undertakes, “may adversely impact any essential fish habitat.” (16 USC Section 1855(b)). The Amendments broadly define "essential fish habitat" (EFH) as “waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.” (16 USC Section 1802(10)). Adverse impact means any impact that reduces the quality and/or quantity of an EFH (50 CFR Section 600.910(a)). Adverse effects may include direct (e.g., contamination or physical disruption), indirect (e.g., loss of prey, reduction in species' fecundity), site-specific or habitat-wide impacts, including individual, cumulative or synergistic consequences of actions.

An EFH is only designated for fish species for which federal Fisheries Management Plans exist. 16 USC Section 1855(b) (1) (A). EFH designations for New England were approved by the U.S. Department of Commerce on March 3, 1999. In a letter dated October 10, 2000 to EPA, NOAA Fisheries Service agreed that for projects authorized through the NPDES permit process, EPA may use its existing procedures regarding consultation/ environmental review to satisfy the

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requirements of the MSFCMA. According to the agreement between NOAA/NMFS and EPA, EFH notification for purposes of consultation can be accomplished in the EFH Section of the fact sheet for the draft permit or *Federal Register* notice.

EPA's EFH assessment must contain the following information: description of the proposed action; an analysis of individual and cumulative effects of the action on EFH, the managed species, and associated species (such as major prey species), including all affected life history stages; EPA's determination regarding effects on EFH and a discussion of proposed mitigation, if applicable. The following section details EPA's EFH assessment.

Proposed Action: EPA is proposing to reissue the NPDES general permit for the discharge of stormwater from Small Municipal Separate Storm Sewer Systems located in the areas listed in Appendix C of the draft general permit.

Resources: The draft general permit lists specific discharges excluded from authorization (see Part 1.3 of the permit) including discharges whose direct or indirect impacts do not prevent or minimize adverse effects on any Essential Fish Habitat. EPA's EFH assessment considers all 40 federally managed species with designated EFH in the coastal and inland waters of Massachusetts and New Hampshire.

Analysis of Effects and EPA's Opinion of Potential Impacts: Discharges from small MS4s contain stormwater runoff from urban environments including areas such as rooftops, driveways, sidewalks, and roads. Typical pollutants in urban stormwater runoff include sediments, nutrients, bacteria and oil & grease. EPA expects that EFH will be protected through the following permit conditions:

- MS4s are required to implement SWMPs designed to reduce pollutants to the maximum extent practicable and protect water quality. Implementation of a program to these standards should ensure the protection of aquatic life and maintenance of the receiving water as an aquatic habitat. Implementation of the SWMP includes, among other things, a public education program, a program to remove sources of non-stormwater from the

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separate storm sewer system, and an operations and maintenance program for municipal operations. Details of the program are in Part 2.4 of the draft permit and discussed in Part II.E of this fact sheet.

- The non-numeric effluent limitations of the draft permit are sufficiently stringent to assure that state water quality standards will be met. The draft permit prohibits violations of these standards.
- The draft permit excludes authorization of discharges that do not prevent or minimize adverse effects to EFH.

EPA concludes that adherence to the terms and conditions of the permit will prevent or minimize adverse effects to EFH species, their habitat and forage. EPA will seek written concurrence from the National Marine Fisheries Service on this assessment.

Proposed Mitigation: Mitigation for unavoidable impacts associated with issuance of the draft permit is not warranted at this time because it is EPA's opinion that impacts will be negligible if permit conditions are followed. Authorization to discharge under the general permit can be revoked if any adverse impacts to federally managed or protected species or their habitats do occur either because of noncompliance or from unanticipated effects from this activity. Should new information become available that changes the basis for EPA's assessment, then consultation with NMFS under the appropriate statute(s) will be reinitiated.

Historic Preservation

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of federal "undertakings" on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term federal "undertaking" is defined in the NHPA regulations to include a project, activity, or program of a federal agency including those carried out by or on behalf of a federal agency, those carried out with federal financial assistance, and those requiring a federal permit, license or approval. See 36 CFR § 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for

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inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR § 800.16(1).

EPA's reissuance of the Small MS4 General Permit is a federal undertaking within the meaning of the NHPA regulations. To address any issues relating to historic properties in connection with reissuance of the general permit, EPA has included eligibility criteria in Appendix E of the draft permit for permittees to certify that potential impacts of their activities covered by this permit on historic properties have been appropriately considered and addressed. Although individual NOIs for authorization under the general permit do not constitute separate federal undertakings, the screening criteria and certifications provide an appropriate site-specific means of addressing historic property issues in connection with EPA's reissuance of the general permit. MS4s seeking authorization under this general permit are thus required to make certain certifications regarding the potential effects of their stormwater discharge, allowable non-stormwater discharge, and discharge-related activities on properties listed or eligible for listing on the National Register of Historic Places.

A permittee must meet one or more of the following four criteria (A-D) to be eligible for authorization under this permit:

Criterion A: Stormwater discharges and allowable non-stormwater discharges do not have the potential to have an effect on historic properties and the permittee is not constructing or installing stormwater control measures that cause more than 1 acre of subsurface disturbance; or

Criterion B: Discharge-related activities (e.g., construction and/or installation of stormwater control measures that involve subsurface disturbance) do not have the potential to affect historic properties; or

Criterion C: Stormwater discharges, allowable non-stormwater discharges, and discharge-related activities have the potential to have an effect on historic properties, and the permittee has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative that outlines all measures the permittee will carry out to mitigate or prevent any adverse effects on historic properties; or

Criterion D: The permittee has contacted the State Historic Preservation Officer, Tribal Historic Preservation Officer, or other tribal representative and EPA in writing informing them that the permittee has the potential to have an effect on historic properties and the permittee did not receive a response from the SHPO, THPO, or tribal representative within 30 days of receiving the permittee’s letter.

Authorization under the general permit is available only if the applicant certifies and documents permit eligibility using one of the eligibility criteria listed above and in Appendix E of the general permit. Permittees are reminded that they must comply with applicable State, Tribal, and local laws concerning protection of historic properties and include documentation supporting the determination of permit eligibility in the Stormwater Management Program.

Electronic listings of National and State Registers of Historic Places are maintained by the National Park Service - <http://www.nps.gov/nr/> and Massachusetts Historical Commission - <http://www.sec.state.ma.us/mhc/>

Coastal Zone Management Act

The Coastal Zone Management Act (CZMA), 16 U.S.C Sections 1451 et seq. and its implementing regulations (15 CFR Part 930) require that any federally licensed activity affecting a state’s coastal zone be consistent with the enforceable policies of approved state management programs. In the case of general permits, EPA is responsible for making the consistency determination and submitting it to the state for concurrence.

EPA must certify that the activities authorized by this permit comply with the enforceable policies of the state’s approved program and that the activities authorized by the permit will be conducted in a manner consistent with the program. The Mass CZM program has established enforceable polices that address natural, cultural, social, and economic resources. Mass CZM has eight categories of enforceable policies: water quality, habitat, protected area, coastal hazard, port and harbor infrastructure, public access, energy and ocean resources. A complete description of the enforceable policies is available at <http://www.mass.gov/czm>. EPA believes

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that the conditions in the draft general permit are consistent with the enforceable policies because they require MS4s to develop and implement a program that controls pollutants to the MEP and also protects water quality. The permit contains requirements to address water quality (Parts 2.1, 2.2 and 2.3) and requirements to control pollutants to the MEP through non-numeric effluent limitations (Part 2.4). EPA has requested concurrence from Mass CZM with this determination.

C. General Permit Authority

Section 301(a) of the Act, 33 U.S.C. § 1311(a), prohibits the discharge of pollutants into waters of the United States, except in compliance with certain sections of the Act including, among others, Section 402 of the Act, 33 U.S.C. § 1342. Section 402 of the Act provides that the Administrator of EPA may issue NPDES permits for discharges of any pollutant into waters of the United States according to such specific terms and conditions as the Administrator may require. Although such permits are generally issued to individual discharges, EPA's regulations authorize the issuance of "general permits" to cover one or more categories or subcategories of discharges, including stormwater point source discharges, within a geographic area (see 40 CFR §122.28(a)(1) and (2)(i)). EPA issues general permits under the same CWA authority as individual permits. Violations of a general permit condition constitute a violation of the CWA and may subject the discharger to the enforcement remedies provided in Section 309 of the Act, including injunctive relief and penalties.

D. Notice of Intent (NOI) Requirements

Before a small MS4 can be authorized to discharge stormwater under a general permit, it must submit a written notice of intent (NOI). The specific contents of the NOI are included in Appendix F of the draft general permit.

The regulations at 40 CFR §122.33 require small MS4s who apply for a general permit to submit information on BMPs and measurable goals designed to meet the minimum control measures required by 40 CFR § 122.34(d). The NOI requirements of this draft general permit are slightly different than the NOI for the MS4-2003. The 2003 NOI required the regulated small MS4s to submit an overview of their planned SWMP which contained BMPs and measurable goals to meet the control measures of the MS4-2003. The permittee developed the SWMP over the first

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permit term. The NOI requirements of this draft permit are based on the assumption that the programs outlined in the 2003 NOI are now developed and are being implemented and build on the programs that were developed for the MS4-2003. Small MS4s not authorized by the MS4-2003 will be required to submit information on their NOIs similar to the information that was initially required by the 2003 NOI.

All NOIs must be submitted to EPA-Region 1 and Mass DEP by **90 days from the effective date of the permit.**

EPA will place all NOIs on public notice for a minimum of 30 days. NOIs will be posted on the Region 1 Stormwater website: <http://www.epa.gov/region1/npdes/stormwater/index.html>.

During that time, EPA will accept comment from the public concerning the content of the NOI.

Following the close of the comment period, EPA will either authorize the discharges or require additional information. EPA may also deny authorization under the general permit and require an MS4 to obtain authorization under an alternative general permit or an individual permit.

The draft general permit states that a small MS4 is not authorized to discharge until receipt of written authorization from EPA. The draft permit also states that a small MS4 remains authorized under the MS4 2003 and will remain authorized for a period of 180 days from the effective date of the new permit or until granted authorization under the new permit or upon issuance or denial of an alternative permit or an individual permit.

II. BASIS FOR CONDITIONS OF THE DRAFT NPDES GENERAL PERMIT

A. Statutory Requirements

Section 301(a) of the Act, 33 USC 1311(a), makes it unlawful to discharge pollutants to waters of the United States without a permit. Section 402 of the Act, 33 USC 1342, authorizes EPA to issue NPDES permits allowing discharges that will meet certain specified requirements. Section 402(p) (3) (B) (ii) and (iii) of the CWA, and implementing regulations in 40 CFR §§ 122.26 and 122.34, require NPDES permits for stormwater discharges from MS4s to effectively prohibit non-stormwater discharges into the sewer system; and to require controls to reduce pollutant discharges to the maximum extent practicable including BMPs and other provisions as EPA

determines to be appropriate for the control of such pollutants. EPA interprets this latter clause to authorize the imposition of water quality based effluent limitations.

B. Authorization Under the Permit

This permit is three (3) separate general permits: one for systems owned by cities and towns; one for systems owned by a state, county or the United States; and one for systems owned by state transportation agencies. Each general permit is applicable to particular entities within a geographic area. The geographic areas of coverage are listed in Appendix C. Many of the permits contain identical language and conditions that are applicable across all regulated entities, and therefore are presented just once in Parts 1 through 5 and Appendices A through F and Appendix H. Other conditions are specific to a particular set of eligible entities; these terms and conditions are included in Parts 6 and 7 and Appendices G and I.

These draft general permits authorize stormwater discharges from small municipal separate storm sewer systems meeting the definition of “small municipal separate storm sewer system” at 40 CFR § 122.26(b) (16) and described in 40 CFR § 122.32(a) (1) (applicable to small MS4s located in an urbanized area) or designated by EPA as needing a permit pursuant to 40 CFR §122.32(a) (2) or 40 CFR §122.26(f).

Most small MS4s that will be authorized by this permit are located entirely within an urbanized area as defined by the Bureau of the Census. On March 15, 2002, the Census Bureau published final criteria used to define urbanized areas for the 2000 census. An urban area encompasses a densely settled territory that consists of core census block groups or blocks that have a population of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. Urbanized areas are not divided along political boundaries. Because of this non-political division, a community may be entirely in an urbanized area or partially in an urbanized area. The Phase II regulations require a small MS4 to implement its program in the urbanized area. If a small MS4 is only partially within the urbanized area, the MS4 may decide to implement the SWMP within its entire jurisdiction, or just in the urbanized area. Both approaches are acceptable under EPA’s regulations. However,

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EPA encourages MS4s to implement the SWMP in the entire jurisdiction, especially for areas subject to approved total maximum daily loads (TMDLs).

The regulations at 40 CFR § 122.32(a)(1) state that an MS4 is regulated if the MS4 is located in an urbanized area as determined by the latest Decennial Census by the Bureau of the Census unless granted a waiver by the permitting authority. The next Decennial Census will be conducted in 2010. MS4s located in an urbanized area as determined by the 2010 Census will be subject to the stormwater requirements for small MS4s. Once the final census criteria are available, EPA anticipates providing notification to any MS4 affected by the 2010 Census. If there is a change in the reach of “urbanized area” because of a change in census data, “...a small MS4 that is automatically designated into the NPDES program for stormwater under an urbanized area calculation for any given Census year will remain regulated regardless of the results of subsequent urbanized area calculations.” (64 FR 68751)

As stated previously, the draft permit applies to small MS4s located in urbanized areas and those determined by EPA to need a permit. EPA has authority under the CWA to regulate sources other than those that are specifically identified by the stormwater regulations when necessary to protect water quality or remedy localized water quality impacts. This could include small MS4s not in an urbanized area, including MS4s owned by the state, a tribe, or the federal government. If EPA decides to regulate additional sources, EPA will evaluate whether a stormwater discharge results in, or has the potential to result in exceedances of water quality standards, including impairments of designated uses, impacts to habitats, or biological impacts. Consistent with guidance found at 40 C.F.R. §123.35 (b) (1) (ii), EPA will make a determination concerning water quality impacts from a non-regulated small MS4 using a balanced consideration of the sensitivity of a watershed, the growth potential of an area, the population density, the contiguity to an urbanized area, and the effectiveness of protection of water quality by other programs. If EPA decides to designate additional MS4s, EPA will provide public notice and an opportunity to comment on the designation.

Limitations on Permit Coverage

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This draft permit does not authorize the following:

- a. Stormwater discharges that are mixed with sources of non-stormwater unless the non-stormwater discharges are in compliance with a separate individual or other general NPDES permit. The draft permit requires illicit (non-stormwater) discharges to be prevented and eliminated except for the categories of non-stormwater discharges listed in 40 CFR §122.34(b)(3) and identified in Part 1.4 of the draft permit. These categories need not be addressed unless they are determined by the permittee or EPA to be significant contributors of pollutants to the MS4.
- b. Stormwater discharges that are subject to other permits. This includes industrial stormwater discharges described at 40 CFR § 122.26(b) (14) (i)-(ix) and (xi); stormwater discharges related to construction described in either 40 CFR § 122.26(b) (14) (x) or 40 CFR § 122.26(b) (15); or discharges subject to an individual permit or alternative general permit for stormwater.
- c. Stormwater discharges, or discharge related activities, that are likely to adversely affect any species that are listed as threatened or endangered 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 must follow the procedures detailed in Appendix D of the permit to make a determination regarding permit eligibility. A more detailed discussion of the Endangered Species Act and EPA's obligation under that Act are contained in another section of this fact sheet.
- d. Stormwater discharges whose direct or indirect impacts do not prevent or minimize any adverse effects on any Essential Fish Habitat (EFH). This topic is addressed in another section of this fact sheet.
- e. Stormwater discharges or implementation of a stormwater management program that would adversely affect properties listed or eligible to be listed on the National Register of Historic Places. The permittee must follow the procedures in Appendix E of the permit to make a determination regarding eligibility. This topic is addressed in another section of this fact sheet.
- f. Stormwater discharges to territorial seas, the contiguous zone and the oceans. (Territorial seas are waters located between the mean low water line and a line approximately twelve

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nautical miles from the mean low water line. The contiguous zone is from the edge of the territorial sea up to 24 nautical miles from the mean low water line.)

- g. Discharges that are prohibited under 40 CFR § 122.4.
- h. Stormwater discharges to the subsurface subject to Underground Injection Control (UIC) regulations. Although the permit includes provision related to stormwater infiltration and groundwater recharge, structural controls that dispose of stormwater into the ground may be subject to UIC regulation requirements or other state regulations. Authorization for such discharges must be obtained from the relevant authority depending on the location of the discharge and/or conform to state regulations.
- i. Stormwater discharges that cause or contribute to an instream exceedance of a water quality standard, including jeopardizing public and private drinking water sources.
- j. New and increased discharges to waters designated as tier 3 for anti-degradation purposes under 40 CFR §131.12(a)(3).

Non-Stormwater Discharges

The draft permit lists sources of non-stormwater discharges described in 40 CFR § 122.34(b) (3) (iii). If the permittee determines that these sources are significant contributors of pollutants to the MS4, the permittee must control or prohibit these sources of non-stormwater as part of its illicit discharge detection and elimination (IDDE) program. The draft permit does not require any action regarding these discharges if the permittee determines that these sources are not significant contributors of pollutants to the MS4. Other than language contained in the CWA regarding non-stormwater sources, the legislative history of the stormwater regulations is essentially silent on the issue of non-stormwater discharges which makes determination of Congress' expectations regarding non-stormwater discharges subject to agency interpretation. EPA expects MS4s to examine the sources of non-stormwater discharges as categories and examine their potential to contribute pollutants to the MS4. For example, potable water may not contribute pollutants that affect the MS4 discharges because the source is associated with the water supply. However, foundation drains and crawl spaces may be associated with residential basements and the type of pollutants associated with the non-stormwater discharge may be unknown. In this situation, the MS4 may want to establish a registration program for the

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discharge, including education about storage of household chemicals, or the MS4 may prohibit the discharge due to the unknown nature of the pollutants. The permittee must document its determinations on the categories of non-stormwater in its SWMP and must prohibit any sources identified as a significant contributor of pollutants. In accordance with 40 CFR § 122.34(b)(3)(iii), discharges or flows from fire fighting activities are excluded from the effective prohibition against non-stormwater and need only be addressed where they are identified as significant sources of pollutants to waters of the United States.

Permit Compliance

Part 1.5 of the draft permit states that any failure to comply with the conditions of this permit constitutes a violation of the CWA. For provisions specifying a time period to remedy non-compliance, the initial failure constitutes a violation of the permit and the CWA, and subsequent failure to remedy such deficiencies within the specified time periods constitutes an independent and additional violation of the CWA.

EPA notes that it retains its authority to take enforcement action for non-compliance associated with the MS4-2003.

Continuation of the Permit

Part 1.6 of the draft permit describes the procedure that applies if EPA does not reissue the permit by its expiration date. If this permit is not reissued or replaced prior to its expiration date, existing discharges are authorized under an administrative continuance, in accordance with the Administrative Procedure Act and 40 CFR §122.6, and the conditions of the permit remain in force and in effect for discharges authorized prior to expiration. If authorization is provided to a permittee prior to the expiration of this permit, the permittee is automatically authorized by this permit until the earliest of: (1) the authorization under a reissuance or replacement of this permit, following timely and appropriate submittal of a complete NOI; (2) issuance of denial or an individual permit for the permittee's discharge; or (3) formal permit decision by EPA not to reissue this general permit, at which time the permittee must seek authorization under an alternative general permit or an individual permit.

Obtaining Authorization to Discharge

To obtain authorization to discharge, the operator of a small MS4 must submit a complete and accurate NOI containing the information in Appendix F of the draft permit. The NOI must be signed in accordance with the requirements of Appendix B-Sub-Paragraph 11 of the draft permit. The NOI must be submitted within 90 days of the effective date of the final permit. The effective date of the permit will be specified in the Federal Register publication of the notice of availability of the final permit. Any small MS4 designated by EPA as needing a permit must submit a NOI for a permit within 180 days from the date of notification, unless otherwise specified. A small MS4 must meet the eligibility requirements of the permit found in Part 1.2 and Part 1.9 prior to submission of the NOI. A small MS4 will be authorized to discharge under this permit upon the effective date of authorization which is upon receipt of written notice by EPA following a public notice of the NOI.

The draft permit provides interim authorization for permittees authorized by the MS4-2003 and whose authorization was effective upon the expiration of that permit (May 1, 2008). For those discharges authorized by the MS4-2003, authorization under the MS4-2003 is continued automatically for an interim basis of up to 180 days from the effective date of the final permit. Interim authorization will terminate earlier than the 180 days when a complete and accurate NOI has been submitted by the small MS4 and authorization is either granted or denied. If a permittee was covered under the MS4-2003 and submitted a complete and accurate NOI in a timely manner, and notification of authorization under the final permit has not occurred within 180 days of the effective date of the final permit, the permittee's authorization under the MS4-2003 can be continued beyond 180 days on an interim basis. Interim authorization will terminate after authorization under this permit, an alternative permit, or denial.

EPA will provide an opportunity for public comment on each NOI that is submitted. Following the public notice, EPA will authorize the discharge, request additional information, or require the MS4 to apply for an alternative or individual permit. EPA can also deny authorization.

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Alternative Permits

Any owner or operator of a small MS4 authorized by a general permit may request to be excluded from authorization under a general permit by applying for an individual permit (40 CFR§ 122.33(b)(2)(i) or (ii)). This request shall be made by submitting a NPDES permit application together with reasons supporting the request. The Director may require any permittee authorized by a general permit to apply for and obtain an individual permit. Any interested person may petition the Director to take this action (40 CFR §122.28(b)(3))

However, individual permits will not be issued for sources authorized by the general permit unless it can be clearly demonstrated that inclusion under the general permit is inappropriate. The Director may consider the issuance of individual permits when:

- a. The discharger is not in compliance with the terms and conditions of the general permit;
- b. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;
- c. Effluent limitations guidelines are subsequently promulgated for the point sources covered by the general NPDES permit;
- d. A Water Quality Management Plan or Total Maximum Daily Load (TMDL) containing requirements applicable to such point sources is approved;
- e. Circumstances have changed since the time of the request to be covered so that the discharger is no longer appropriately controlled under the general permit, or either a temporary or permanent reduction or elimination of the authorized discharge is necessary; and
- f. The discharge(s) is a significant contributor of pollutant or in violation of state water quality standards for the receiving water.

In accordance with 40 CFR §122.28(b) (3) (iv), the applicability of the general permit is automatically terminated on the effective date of the individual permit.

Additionally, any interested person may petition the Director to require a NPDES permit for a

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discharge composed entirely of stormwater which contributes to a violation of a water quality standard or is a significant contributor of pollutants to waters of the United States pursuant to 40 CFR §122.26(f).

C. Stormwater Management Program (SWMP)

The Stormwater Management Program is a written document required by the permit. The SWMP is a mechanism used to document the practices the permittee is implementing to meet the terms and conditions of the permit.

The draft permit requires that the SWMP be a written document and signed in accordance with Appendix B-sub-paragraph 11. The SWMP must be available at the office or facility of the person identified on the NOI as the contact person for the SWMP. The SWMP must be immediately available to EPA, the FWS, NMFS, and Mass DEP. The permittee must also make the SWMP available to any member of the public who makes a request in writing. EPA encourages the permittee to post the SWMP on-line or make it available at a public location such as the library or town/city hall.

The SWMP must contain the following:

- The name and title of people responsible for implementation of the SWMP. If a position is currently unfilled, list the title of the position and modify with the name once the position is filled.
- Listing of all receiving waters, their classification under the applicable state water quality standards, any impairments and the number of outfalls that discharge to each water. In addition to the receiving water, the permittee is encouraged to document in the SWMP all public drinking water sources including both surface water and groundwater that may be impacted by MS4 discharges.
- Documentation of permit eligibility regarding ESA. This must include information and any documents supporting the criteria used by the permittee to determine eligibility.
- Documentation of permit eligibility regarding NHPA. This must include information and any documents supporting the criteria used by the permittee to determine eligibility.

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- The map of the separate storm sewer system required by Part 2.4.4.6 of the draft permit. The map may be a hard copy map or one that is available on a geographic information system. If available on a GIS system, the web address shall be included in the SWMP.
- For each permit condition listed in Part 2.1 and Part 2.2 of the draft permit, the permittee must identify a person responsible for ensuring implementation of the condition. The permittee must identify specific BMPs to address the permit condition and the measurable goals associated with the BMP.
- For each control measure listed in Part 2.4 of the draft permit, the permittee must identify a person responsible for ensuring its implementation. The permittee must identify specific actions or BMPs to address each control measure. The permittee must also identify measurable goals associated with the control measure.
- Description of measures to avoid or minimize impacts to public drinking surface water and groundwater. The permittee is encouraged to include provisions to notify public water suppliers in the event of an emergency. (For more information or assistance, contact: Massachusetts Department of Environmental Protection, Bureau of Resource Protection, Drinking Water Program, One Winter Street, Boston, MA 02108 – phone 617-292-5770.)
- Documentation of compliance with Part 3.0 – outfall monitoring requirements.
- Documentation of compliance with Part 4.0 – state requirements.
- An annual evaluation of the SWMP that contains the information required by Part 5.1 of the draft permit. The annual evaluation must be updated annually and maintained as part of the SWMP.

EPA believes that a written program provides a central accessible source for all information relating to the SWMP. The SWMP required by this draft permit builds on the requirements of the MS4-2003. While updating the SWMP required by this draft permit, the permittee must continue to implement the SWMP that was required by the MS4-2003. This permit does not provide additional time for completing the requirements of the MS4-2003. Permittees covered by the MS4-2003 must update their SWMP within 120 days from the date of authorization under the permit to address the terms of this permit.

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The draft permit requires that the permittee reduce the discharge of pollutants from the MS4 to the maximum extent practicable, protect water quality, and satisfy the requirements of the CWA. The SWMP must document the actions the permittee has taken or will take to demonstrate compliance with the control measures and other conditions of the permit. EPA believes that implementation of the permit conditions required by Part 2.4 of this draft permit will meet the MEP standard of the CWA. EPA believes that implementation of the permit conditions required by Parts 2.1, 2.2 and 2.3 of the draft permit will be protective of water quality.

The draft permit encourages the permittee to maintain adequate funding to implement the SWMP. Adequate funding ensures that monies will be available to the permittee for implementation of the permit conditions. Adequate funding is the availability of a consistent and reliable revenue source.

EPA does not require a specific funding mechanism or funding alternative. There are several options available to permittees. One funding mechanism is the use of a service fee; another alternative is a stormwater utility. Fees are usually based on the size of the property and the amount of impervious area associated with that property. Typically, fees are one rate for residential homes and are varied for commercial and industrial facilities based on the property. Stormwater utilities exist in many parts of the country. A few stormwater utilities are beginning to appear in the Northeast. Massachusetts municipalities have express legal authority to develop stormwater utilities under state law. A second available funding mechanism is the general fund of the MS4. The revenue in the general fund usually comes from property taxes. This method of funding depends on varying demands within a municipality and may result in funding levels that are inconsistent from year to year and that may not keep pace with increases in the cost of SWMP implementation. Finally, stormwater projects may be eligible for grants or low interest loans. The State Revolving Fund may be a source of funding for stormwater projects. Additional information on funding can be found at: National Association of Flood and Stormwater Management Agencies, *Guidance for Municipal Stormwater Funding* (<http://www.nafsma.org/pdf/Guidance%20Manual%20Version%202X.pdf>) and Indiana

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University-Purdue University Indianapolis, *An Internet Guide to Financing Stormwater Management* (<http://stormwaterfinance.urbancenter.iupui.edu>).

Qualifying Local Program (QLP)

The Phase II stormwater program is designed to be flexible and build on existing state and local programs. Specifically, 40 CFR § 122.34(c) allows EPA to reference a state program that the municipality is already subject to as meeting the requirements of one or more of the control measures described in the draft permit. When recognized by EPA, compliance with the state requirement would constitute compliance with the requirements of the control measures.

Mass DEP has incorporated the Massachusetts Stormwater Standards (the Standards) into the Wetlands Protection Act Regulations (310 CMR 10.05(6)(k)) and the Water Quality Certification Regulations (314 CMR 9.06(6)(a)). There are 10 standards that apply to stormwater discharges within the Commonwealth. The program is typically implemented by the local conservation commissions. EPA has not specially identified this state program as a QLP due to differences in the jurisdictional reach of applicable federal and state regulations. However, EPA has included those Standards that address the management of post construction stormwater runoff in new development and redevelopment into the permit. This is discussed later in this fact sheet.

Requirements for New Permittees

The draft permit provides different deadlines for MS4s not authorized by the MS4-2003. The different deadlines recognized that the MS4s authorized by the MS4-2003 have been implementing stormwater controls for over five years while new permittees need additional time to understand and implement new requirements. New permittees have until year three of the permit to complete the map required by the permit as part of the illicit discharge detection program and have until year four to begin the monitoring program required by Part 3.0. EPA believes it is practical to have completed the map of the system prior to beginning outfall monitoring. The timeframe in 40 CFR §122.34(a), allow EPA to provide up to the full permit term for MS4s to develop and implement the ordinances or other regulatory mechanisms required by Parts 2.4.4 (Illicit Discharges); 2.4.5 (Construction Runoff Management) and 2.4.6 (

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Stormwater Management in New Development). New permittees must meet all other deadlines as specified in the draft permit. However, due to the availability of existing examples and templates of ordinances and other regulatory mechanisms, EPA is requiring development of local ordinances by the end of year four (4) of the permit term.

D. Water Quality Based Effluent Limitations

Water Quality Standards

This draft permit includes provisions designed to protect water quality. The provisions in Parts 2.1, 2.2, and 2.3 constitute the water quality based effluent limitations of this permit. The purpose of these parts is to establish the broad inclusion of water quality-based effluent limitations for those discharges requiring additional controls in order to achieve water quality standards and other water quality-related objectives, consistent with 40 CFR § 122.44(d). The water quality-based effluent limitations supplement the permit's non-numeric effluent limitations. The non-numeric effluent limitation requirements of this permit are expressed in the form of control measures and BMPs (see Part 2.4) and are discussed later in this fact sheet.

If an MS4 discharges into waters that are not impaired, the draft permit employs a presumptive approach in assessing whether a permittee's MS4 discharges do not cause or contribute to exceedances of water quality standards. The Phase II stormwater regulations require the permittee to develop, implement and enforce a stormwater management program designed to reduce the discharge of pollutants from a regulated MS4 to the MEP, protect water quality, and satisfy the appropriate requirements of the CWA. Absent evidence to the contrary, EPA presumes that a small MS4 that implements the minimum control measures does not require more stringent limitations to meet water quality standards (64 FR 68752, December 8, 1999).

EPA considers this presumptive approach valid since, despite ongoing discharges from the permittee's MS4 and other potential sources, these waters have not been categorized as impaired. Since the issuance of the MS4-2003, permittees have implemented SWMPs to comply with the conditions of the MS4-2003 general permit. This draft permit requires the permittees to implement an augmented SWMP to comply with several additional and strengthened permit

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conditions. Therefore, EPA presumes that implementation of an augmented SWMP will at least maintain at present levels the contributions of pollutants from MS4s discharging to unimpaired waters, thereby not causing or contributing to an exceedance of water quality standards. The permittee should use any available information and add or modify BMPs in its SWMP to abate pollutants sufficiently to meet applicable water quality standards in the event that EPA's presumption proves to be incorrect.

The draft permit requires permittees to identify to EPA and Mass DEP any additional or modified BMPs to be implemented to address any discharge from its MS4 in the event the permittee becomes aware that the discharge causes or contributes to an exceedance of applicable water quality standards. The draft permit provides 60 days for the permittee to eliminate the situation which is causing or contributing to the exceedances of water quality standards. If elimination is not feasible in 60 days, the permittee shall document in the SWMP measures taken or planned to be taken to address the situation and the estimated timeframe for elimination.

Section 401(a)(1) of the CWA states that EPA may not issue a permit until a certification is granted or waived by the state in which the discharge originates or will originate. The 401 certification affirms that the conditions of the general permit will be protective of the water quality standards and satisfy other appropriate requirements of state law. The 401 certification may also include additional conditions more stringent than those in the draft permit which the state finds necessary to meet the requirements of appropriate laws. Regulations governing state certification are set forth in 40 CFR §§ 124.53 and 124.55. Concurrent with the public notice of this general permit, EPA will request 401 Water Quality Certification from Mass DEP.

Water Quality Impaired Waters

Impaired waters include those waters that MassDEP has identified pursuant to Section 303(d) of the CWA as not meeting applicable state water quality standards. Impaired waters encompass both those with approved TMDLs and those for which TMDL development has been identified as necessary, but for which a TMDL has not yet been approved.

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Each state must develop a list of water bodies that are not meeting the applicable water quality standards. This list, the “303(d) List”, refers to the section of the CWA that requires the listing of the water bodies. The 303(d) list is part of an overall assessment of the water quality called the Integrated Report. The Integrated Report includes both the 303(d) list and the assessment required by section 305(b) of the CWA. States must update these lists every two years. EPA approved the most recent listing (303(d) and 305(b)) for Massachusetts in May 2009.

EPA’s regulations require that TMDLs be developed for water bodies not meeting applicable standards (see 40 CFR § 130.7 for the regulations associated with TMDLs). A TMDL specifies the maximum amount of a pollutant that a water body can receive and still meet water quality standards. The TMDL allocates pollutant loadings to the impaired waterbody from all point and non-point pollutant sources. Regulations at 40 CFR §130.2 define the TMDL as “the sum of the individual wasteload allocations (WLA) for point sources and load allocations (LAs) for non-point sources.” Mathematically, a TMDL is expressed as:

$$\text{TMDL} = \sum \text{WLA} + \sum \text{LA} + \text{MOS}$$

The MOS (margin of safety) takes into account any lack of knowledge concerning the relationship between effluent limitations and water quality in determining an acceptable load of pollutants to a water. In addition to the MOS, WLAs and LAs make up portions of a receiving water’s loading capacity. The TMDL forms the basis for an implementation plan to meet the loading capacity of the water body. Implementation of the plan should result on the achievement of water quality standards.

The TMDL may establish a specific waste load allocation (WLA) for a specific source, or may establish an aggregate WLA that applies to numerous sources. Typically stormwater sources are expressed as an aggregate in a WLA. The draft permit contains specific additional measures which an MS4 must implement to achieve the aggregate WLA specified in the approved TMDL. The permittee’s demonstration of meeting the requirements of the WLA should focus on evidence that shows that the BMPs are implemented properly and adequately maintained. This demonstration may be an iterative process. Information on approved TMDLs can be found at:

<http://www.epa.gov/region1/eco/tmdl/index.html>

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Information on the 303(d) lists can be found at:

<http://www.epa.gov/region1/eco/tmdl/impairedh2o.html>

Information on Massachusetts TMDLs can be found at:

<http://www.mass.gov/dep/water/resources/tmdls.htm>

For MS4 discharges into impaired waters for which there is an EPA approved TMDL as of the effective date of the permit, the draft permit includes, pursuant to 40 CFR §122.44(d)(vii)(B), effluent limits that are consistent with the assumptions and requirements of an available WLA included in the TMDL for the MS4 discharges. As of the date of issuance of this draft permit for north coastal watersheds in Massachusetts, there is one approved TMDL for nutrients (phosphorus) for the Lower Charles River Basin, one approved TMDL for pathogens for the Charles River Basin, and two approved TMDLs for bacteria, one for the Neponset River Basin and one for the Shawsheen River Basin. Each TMDL report contains an individual waterbody description, problem assessment and recommended BMPs and actions in the form of a TMDL implementation plan to reduce the specific pollutant such that the discharges are consistent with established WLAs. TMDLs are supplemented with implementation plans which, while not a formal component of the TMDL does serve as a road map to implementation. EPA did consider the implementation plans in development of the conditions included in the draft permit that EPA considers necessary to achieve the relevant WLA. Non-numeric effluent limitations, expressed in terms of BMPs that support the achievement of the WLA for each of these waterbodies, are included in the permit and summarized in Appendix G – Tables G-1, G-3 and G-4 of the draft permit, for the Charles River Basin, the Neponset River Basin and the Shawsheen River Basin, respectively.

Charles River Basin Nutrient (Phosphorus) TMDL

This TMDL was approved by EPA on October 15, 2007. The TMDL was developed to address the water quality impairments resulting from nutrients and nuisance aquatic plants. These impairments also create associated water quality impairments including water clarity impairments, turbidity, taste, odor, color, and to some extent organic enrichment. The Charles River is has a water quality classification of Class B. Class B waters are designated as a habitat

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for fish, other aquatic life, and wildlife including their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation.

The sources of phosphorus to the Lower Charles River include both point source and non-point source stormwater discharges, illicit sanitary discharges, combined sewer overflows (CSOs), waste water treatment facilities (WWTFs) and sources such as ground water inflow. The TMDL implementation plan requires an overall 54 percent reduction in the existing phosphorus load in the watershed. Appendix G – Table G-2 of the draft permit contains a listing of municipalities subject to the TMDL and the expected phosphorus load reduction for each municipality calculated based on an analysis of land use. The TMDL implementation plan recommends enhanced storm water control measures in the implementation of SWMPs by MS4s. Actions to reduce phosphorus loads in stormwater to achieve the WLA of the TMDL are addressed in the permit. The draft requires the permittee to develop a Phosphorus Control Plan (PCP). The PCP must be completed no later than four years from the effective date of the permit. The PCP requires the permittee to identify and rank areas within the municipality suitable for implementation of phosphorus control practices. The permittee must identify both structural and non-structural controls that will be or have been implemented to address phosphorus control. The permittee must account for increases and decreases in the phosphorus load from the MS4 since January 2000. The permittee must identify potential funding sources for the implementation of the PCP; any local regulatory needs; any assistance needed from either EPA or Mass DEP; and finally any third parties who will be participating in the implementation of the PCP. Other permit conditions related to phosphorus control require a comprehensive inventory of sources of phosphorus; increased mapping elements directly related to control of phosphorus; public education requirements concerning phosphorus; an enhanced illicit detection and elimination program; and good housekeeping activities for municipal parks, open spaces and roadway maintenance. The specific measures to address the TMDL implementation for each of the different control measure are discussed in later sections of the fact sheet.

The draft permit requires the permittee to develop and begin to implement the PCP within four (4) years of the effective date of the permit. The permittee shall complete implementation of the

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PCP as soon as possible, but no later than ten (10) years from the effective date of the permit. EPA and MassDEP are aware that the watershed-wide reduction of stormwater pollutants from MS4s is a new, comprehensive, and challenging undertaking for permittees. The steps in this process may include establishing new funding sources, obtaining funding, analyses of site suitability for structural and non-structural BMPs, coordinating work on MS4 properties, and/or the development of new ordinances or other regulatory mechanisms. Implementation in some communities will also involve coordination with private property owners. These actions are likely to require multiple years for permittees to implement particularly where these steps require municipal legislative approvals through town meeting or city councils. Due to the complexities of development and implementation of a system wide PCP, EPA believes 10 years is a maximum reasonable period of time for achievement of the WLA and represents a timeframe that is “as soon as possible”, but permittees are required to implement the plans more quickly if possible.

The draft permit provides four (4) years for planning, targeting pollutant sources, establishing the municipal structure, and articulating the MS4’s approach in a written PCP. EPA and MassDEP are seeking input from MS4s regarding the MS4’s anticipated needs from EPA and MassDEP regarding incentives, regulatory assistance or guidance in order to successfully develop and implement an effective PCP. Specifically, Part 2.2.1(d) (ix) of the draft permit requires that within two (2) years of the effective date of the permit each MS4 report on these anticipated needs. Based on those items, EPA and MassDEP anticipate evaluating whether additional actions are necessary by EPA or MassDEP that would be most effective in assisting MS4 permittees.

Currently, EPA, MassDEP and others have already developed or are developing assistance tools. One example is the GIS mapping available on EPA’s website at <http://www.epa.gov/ne/npdes/stormwater> that provides the estimated amount and percentage of directly connected impervious area in each land use parcel in each subcatchment of each regulated MS4. This can be used to target areas of likely high pollutant loading and track pollutant load reductions achieved through reductions in directly connected impervious area. A second example is the BMP guidance, *Stormwater Best Management Practices (BMP)*

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Performance Analysis, also available on EPA’s website. This BMP analysis provides long-term cumulative pollutant reduction performance estimates of eight structural stormwater BMPs based on capacity and various loading rates.

Other assistance tools are being developed in the context of EPA’s use of residual designation authority (RDA) for certain properties greater than two (2) acres in the Massachusetts towns of Bellingham, Franklin and Milford in the Charles River watershed. In December 2008, EPA issued a preliminary residual designation decision that, once finalized, will require owners and operators of large impervious surfaces in those municipalities to obtain NPDES permits. These permits will be designed to control phosphorus loads to the Charles River. EPA anticipates that other areas in the Charles River watershed will also be designated in the future. MS4s are encouraged in the permits to coordinate the efforts of designated property owners in controlling phosphorus discharges. EPA believes that a stormwater control effort that is organized on the municipal level can be an effective way to achieve the phosphorus load reductions required by the TMDL.

The draft permit provides the following PCP milestones:

- A PCP development status report must be submitted within two (2) years of the effective date of the permit as described in Part 2.2.1(d);
- The PCP must be completed and maintained as part of the overall SWMP within four (4) years of the effective date of the permit, and
- The PCP must be implemented within ten (10) years of the effective date of the permit.

EPA invites comments on this proposed PCP schedule. EPA also invites comments on whether the accelerated milestones should be applied to the three towns subject to the RDA with the expectation that the results of the planning in these three towns will be beneficial for the other MS4s.

Charles River Watershed Pathogen TMDL

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This TMDL was approved by EPA on May 21, 2007. The TMDL is designed to support the reduction of waterborne disease causing organisms, known as pathogens, to reduce public health risk. Pathogens can cause a risk to public health due to gastrointestinal illness through exposure via ingestion and primary contact with recreational waters, ingestion of drinking waters and consumption of filter feeding shellfish. There are many sources of pathogens. These include stormwater runoff, leaking sewer pipes, failing septic systems, wildlife including birds, CSOs, and wastewater treatment facilities. Other sources of pathogens, though typically not regulated under the NPDES program, are agricultural sources such as manure field applications, runoff from grazing areas and deposits from poorly managed livestock operations directly into streams.

Pets and wildlife are also sources of pathogens. Geese and ducks are a major source of pathogens at many lakes and ponds. In the Charles River Watershed, there are approximately 90,000 dogs. Dogs produce approximately 0.5 pounds of feces per day (approximately 45,000 lbs/day in aggregate). Uncollected pet waste may be flushed into water bodies from yards, parks and beaches which in turn degrades water quality.

The WLA target of the TMDL is based on the water quality standard for the affected receiving water. The Charles River is a Class B water. The bacteria levels for these waters are as follows: at bathing beaches, using E.Coli as an indicator, the geometric mean of the five most recent samples taken during the same bathing season shall not exceed 126 colonies /100ml and no single sample taken during the bathing season shall exceed 235 colonies/100 ml. For other waters and during non-bathing season, using E.Coli as an indicator, the geometric mean of all E.coli samples taken with the most recent six months shall not exceed 126 colonies/100 ml (typically based on a minimum of five samples) and no single sample shall exceed 235 colonies/100 ml. Instead of a numeric limitation for bacteria, the draft permit includes requirements for MS4s to provide education to pet owners and owners of septic systems, to implement a comprehensive illicit discharge detection and elimination program that addresses not only sources of pathogens but also sources of phosphorus, and to implement programs to address water fowl. In addition, although entitled “Phosphorus Control Plan” most of the actions

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needed to develop and implement a successful PCP are also effective in supporting the achievement of the WLA for the Charles River pathogen TMDL.

Neponset River Basin Bacteria TMDL

This TMDL was approved on May 31, 2002. The TMDL applies to the Neponset River as well as 20 stream segments within the watershed. The Neponset River is 29.5 miles long and drains approximately 117 square miles. The most southern location is tidally influenced (the Baker Dam in Milton to its confluence with Dorchester Bay in Boston). The river is Class B and SB. Class B waters are designated as a habitat for fish, other aquatic life and wildlife including their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. The water is not currently supporting the uses for primary contact, secondary contact, and shell fish harvesting due to elevated levels of pathogens, such as fecal coliform. Fecal coliforms exist in the intestinal tract of warm-blooded mammals. The presence of fecal coliform in surface waters is an indication of fecal contamination due to sewage and/or the feces of warm-blooded wildlife.

The TMDL set the target for the WLA at the water quality standard for the water's classification at the time of approval of the TMDL. Since approval of the TMDL, Massachusetts has adopted a water quality standard which uses E. Coli and enterococcus rather than fecal coliform, depending on whether the receiving water is fresh water or salt water. At the time of the TMDL development, the Class B standard for fecal coliform was the geometric mean ≤ 200 organisms/100 ml and 90 percent of the samples ≤ 400 organisms/ 100ml. For Class SB waters the standard was the geometric mean ≤ 88 organisms/100 ml and 90 percent ≤ 260 organisms/100 ml. Although the standard has changed, the goal of the TMDL remains unchanged. The goal of the TMDL is "...to improve water quality and protect human health by reducing indicator bacteria loadings from all sources, including deteriorating pipes, illicit sanitary connections to storm drains, inadequate on-site disposal systems, and stormwater runoff, and ultimately restore the beneficial uses of the Neponset River and tributaries."² In order to achieve the goal of the TMDL, the TMDL implementation plan includes recommendations for

² Final Total Maximum Daily Loads for Bacteria for the Neponset River Basin – May 2002- pg 9

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MS4s in the implementation of their SWMPs. These recommendations include prohibition of the following sources: sewer connections to the storm drain, leaking sewers, and sanitary sewer overflows. Failing septic systems are sources of non-point runoff and although not covered by the NPDES program must be addressed through other programs, usually administered by the local board of health. Consistent with the recommendation of the TMDL, the draft permit includes provision to prohibit the discharge from sewer connections to the storm drain and sanitary sewer overflows. The TMDL implementation plan also includes the following recommendations for the SWMP:

- Increased frequency of street sweeping;
- Increased frequency of catch basin cleaning;
- Public education program;
- Adoption of pet waste pick up laws; and
- Diversion of runoff to pervious areas for infiltration, whenever possible.

Each of these recommendations is addressed in the draft permit provisions and listed in Appendix G -Table G-3.

Shawsheen River Basin Bacteria TMDL

This TMDL was approved on September 12, 2002. The TMDL applies to the Shawsheen River and stream segments. The Shawsheen River is 25 miles long and drains approximately 78 square miles. The river is a Class B water. Class B waters are designated as a habitat for fish, other aquatic life and wildlife including their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation. The river has recreational impairments due to bacterial contamination. The TMDL target for the WLA is set at the water quality standard for Class B waters. Since approval of the TMDL, Massachusetts has adopted a water quality standard which uses E. Coli and enterococcus rather than fecal coliform. At the time of the TMDL development the Class B water quality standard for fecal coliform was the geometric mean ≤ 200 organisms/100 ml and 90 percent of the samples ≤ 400 organisms/ 100ml. The WLA for prohibited discharges was set for zero. Prohibited discharges include, but are not limited to the following: sewer connections to the storm drain, leaking sewers, and sanitary sewer overflows. The TMDL identifies both dry and wet weather sources. The dry weather

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sources include sewer line leaks, illicit connections, failing septic systems, and direct deposits from waterfowl and livestock. The wet weather sources include urban runoff and overflows. In order to achieve the reductions necessary in the TMDL, 100 percent of the illicit connections to storm sewers must be eliminated.

As noted above, not all impaired waters are subject to a TMDL. The permit addresses discharges to impaired waters without an approved TMDL by imposing requirements that such discharges do not contribute to water quality standards violations. This is consistent with the general requirement that the permit does not allow any such discharges, regardless of whether the water meets or does not meet state standards. The requirements that assure that discharges to impaired waters do not contribute to water quality standards imposes an obligation on the MS4 to assess all such discharges and to implement BMPs to appropriately control such discharges. For MS4-2003 permittees this will in most instances require continuation of control measures already implemented and enhancement of those control measures to assure their effectiveness in meeting standards.

Increased Discharges

The permit also addresses instances where an MS4 increases the amount of pollutants it discharges which will generally occur through an increase in the amount of impervious areas within the MS4. The permit defines an increased discharge as one that commences after the effective date of this permit and results from the creation of one or more acres of new impervious surfaces. The permit uses a one acre threshold in the definition of increased discharge to be consistent with the other acreage thresholds in the stormwater regulatory program, such as the threshold for construction general permits and for post construction stormwater discharges from new development and redevelopment as regulated in the MS4 context.

The permit assures that such increased discharges do not contribute to water quality standards violations in impaired waters by imposing additional or enhanced controls. With respect to impaired waters without a TMDL, the permit requires that an MS4 enhance or add BMPs to secure offsets such that the net result is a decrease in pollutant load when the existing discharge

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and increased discharge are viewed in combination. Because an MS4 must control its existing discharges so that they do not contribute to water quality standards violations in impaired waters, any increased discharge necessarily requires a commensurate or an increased level of control. The permit requires a net decrease in combined loads to introduce a margin of safety in assessing the effectiveness of new controls or offsets.

An MS4 can achieve an increased level of control through additional BMPs, enhancement of existing BMPs or through securing offsets, to the extent the offsets are consistent with law and EPA policy and assure a greater than one-to-one decrease in pollutant loads to the waterbody.

These same requirements apply to an increased discharge into a waterbody with a TMDL with respect to those pollutants causing an impairment that are not addressed by the TMDL. With respect to those pollutants addressed by a TMDL, increased discharges must be controlled so that the waste load reductions required by the TMDL are achieved. Above and beyond the TMDL-mandated reduction, any increased load must be controlled to achieve a net reduction in loads from the increased discharge. This can be achieved by addition to or enhancement of existing BMPs or by securing an offset where consistent with law and EPA policy.

New Dischargers

The NPDES regulations impose strict requirements on “new dischargers” in 40 CFR § 122.4. The definition of “new discharger” and terms within that definition are found in 40 CFR § 122.2. “New Discharger” means “any building, structure, facility, or installation (a) from which there is or may be a ‘discharge of pollutant’; (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 has never received a final effective NPDES permit for discharges at that ‘site.’” The term “site” is defined 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.” “Facility or activity” is defined to mean “any NPDES ‘point source’ or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.” Finally, the “discharge of pollutants” means “(a) any addition of any ‘pollutant’... to

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‘waters of the United States’ from any ‘point source’ ...” This definition includes additions of pollutants into waters of the United States from surface water collected and channelized by man; discharges through pipes, sewers or other conveyances owned by a State, municipality, or other person which do not lead to treatment works.

Under the permit, when a traditional MS4 discharges stormwater from newly created impervious surfaces within its jurisdiction, EPA views it as appropriate to treat such discharge as an increased discharge by the MS4 rather than as a new discharger. This reasoning is based on a broad reading of the terms “site” and “activity” to apply to an MS4’s entire system, including portions of the system constructed in the future. Such a reading is consistent with how traditional MS4s are currently permitted (i.e., authorization is not limited to discharges or outfalls in existence at the time of the filing of an NOI).

The same logic applies when an MS4 creates a new outfall within its jurisdiction. In this situation, that additional outfall is treated in the permit as an expansion of the existing MS4 system and does not constitute a “new discharger.”

Similar to a traditional MS4, a non-traditional MS4 might add new stormwater discharges to its existing system through the expansion of its facility. For example, an existing highway may be expanded from two lanes to four lanes, increasing impervious cover and generating new stormwater that would be discharged through its existing system (or a connected expansion of that existing system). There is no reason to distinguish between traditional and non-traditional MS4s in this circumstance. In both cases, such expansions of the “facility” at the “site” would result in an increased discharge, not a new discharger.

Non-traditional may also engage in the development of entirely new separate storm sewer systems that are not connected to their existing systems. For example, a state may construct a new college campus, the federal government may construct a new military base or a state highway department may construct a new highway alignment, all with associated separate storm sewer systems. Such a discharge should be considered a “new discharger” for purposes of 40

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CFR§ 122.4(i) where the new system is geographically separate from the owner’s existing system(s). The basis for this position is that such a new separate storm sewer system is a new “facility” at a new “site” from which it has not previously discharged. In determining whether a discharge is geographically separate and, thus, subject to the requirements for a “new discharger” EPA thinks it is appropriate to consider a new system to be a new discharger where it is not physically located on the same or contiguous land as an existing system. Using the examples above, a new separate storm sewer system associated with a state college or highway expansion onto contiguous property would not be considered a new discharger, while a new system associated with an expansion on land that is not contiguous to the owner’s previously permitted facility would be considered a “new discharger.” This approach relies on the common understanding of the word “adjacent” as used in the definition of “site” to share a common border.

In assessing when a new discharge should be treated as a new discharger, EPA would find it reasonable for an MS4 to use, as a determining date, the effective date of the permit rather than August 13, 1979. The “new discharger” category of discharges was created by a regulation promulgated on June 7, 1979 and it used, as a determining date for the definition, October 18, 1972, the date of enactment of the Federal Water Pollution Control Act, the predecessor to the CWA. EPA changed the determining date for “new discharger” when it amended 40 CFR §122.4 on September 1, 1983. That amendment was in response to industry petitioners who argued that with the creation of the “new discharger” category on August 13, 1979, the Agency was imposing stricter requirements on existing facilities that had been in operation for years but that had never received permits, even though applications had been filed. A similar logic applies to the application of the “new discharger” requirements under this MS4 permit. In setting a requirement that is more stringent than that previously applied to an existing discharge, it is logical to define “new” as a discharge that begins after the new requirement is effective. Otherwise, an existing discharge that commenced between 1979 and the effective date of the permit, but that is legally required to obtain an NPDES permit for the first time under this permit, would be subject to the prospectively-focused requirements of a new discharger under 40 CFR §122.4(i).

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New discharges from an MS4 to impaired waters without an approved TMDL are not eligible for authorization under this permit. A permittee must apply for an individual permit for any such discharge.

Consistent with 40 CFR §122.4(i), the permit states that new dischargers from the MS4 to impaired waters with an approved TMDL are not eligible for authorization under this permit unless the permittee submits to EPA documentation before the effective date of authorization that:

- There are sufficient remaining pollutant load allocations in all TMDLs applicable to the discharges;
- The existing discharges to the waterbody are subject to compliance schedules designed to bring the waterbody into attainment with water quality standards; and
- Retains such documentation in the SWMP; or
- To the extent consistent with law and EPA policy, establishes an offset for the discharge of the pollutant identified in the TMDL. The permittee shall retain any relevant documentation with the SWMP; and
- Receives an affirmative determination from EPA that the new discharger meets the requirements of this paragraph.

This permit condition is structured to accommodate potential future changes in the requirements of 40 CFR § 122.4.

As currently proposed, EPA is treating the non-traditional MS4s (state departments of transportation or state owned properties) the same as traditional MS4s (cities and towns) in addressing new discharges to impaired waters. Alternatives to this approach include requiring notification to EPA for a determination of whether a discharge is new or increased. Another alternative, based on the scope of an expansion or creation of impervious surface, is treating the expansions as new discharges instead of increased discharges. Examples might include changing agricultural land at a university into a dormitory complex or a significant highway expansion. EPA invites comments on this.

Anti-degradation

NPDES regulations require states to promulgate anti-degradation regulations that apply to new and increased discharges. These policies are meant to maintain and protect existing uses and high quality waters. A permittee is required to notify EPA and MassDEP a minimum of sixty (60) days prior to commencement of a new or increased discharge with a description of the discharge and documentation demonstrating that the discharge will satisfy the anti-degradation provisions of the state water quality standards. The permittee must take into account in its anti-degradation analysis that Massachusetts evaluates whether a water is a “high quality” water on a pollutant-by pollutant basis. Thus, for anti-degradation purposes, a water may be high quality for some pollutants and not high quality for others.

For new or increased discharge to any surface water, the permittee must demonstrate that the level of water quality necessary to protect existing uses will be maintained and protected. For any new or increased discharges to tier II waters, defined by 314 CMR 4.04 to mean high quality waters, the permittee shall demonstrate that the discharge does not have the potential to cause any significant lowering of water quality by documenting one or more of the following:

- The discharge is not significant because it is de minimis as defined by state policy;
- The discharge is not significant because it is temporary in nature and that upon completion of the discharge period the existing water uses and water quality will be equal to or better than that which existing prior to the commencement of the discharge;
- The discharge does not cause a significant lowering of water quality because the effluent will be of a quality equal to or better than the existing water quality of the receiving water or
- Stormwater controls are designed such that there is no discharge of stormwater from the volume associated with a 1 inch storm event. The volume of stormwater to be controlled is determined by multiplying the amount of developed (impervious) area by 1 inch.

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Under this permit, EPA and Mass DEP reserve the right to consider a discharge meeting the requirements above to be significant for reasons additional to or different from those relied upon by the permittee including where the cumulative effect of the discharge and previously or contemporaneously approved discharges produce a significant lowering of water quality.

If the permittee cannot demonstrate and document that its new or increased discharge to a tier II water is insignificant according to the above criteria, it may attempt to obtain a variance from Mass DEP pursuant to 314 CMR 4.04(4).

A new or increased discharge to outstanding resource waters or special resource waters are not authorized under this permit and the permittee must seek authorization under an individual permit after satisfying the Massachusetts anti-degradation requirements. In such an instance, a permittee is advised to review the Massachusetts anti-degradation provisions at 314 CMR 4.00 and any related state policy.

E. Non- Numeric Effluent Limitations

Non-Numeric Effluent Limitations (MEP)

When EPA has not promulgated effluent limitation guidelines for a category of discharges, or if an operator is discharging a pollutant not covered by an effluent limitation guideline, permit limitations may be based on the best professional judgment (BPJ) of the agency or permit writer. For this permit, effluent limits are based on BPJ. The BPJ limits in this permit are in the form of non-numeric control measures, commonly referred to as best management practices (BMPs). Non-numeric limits are employed under limited circumstances, as described in 40 CFR § 122.44(k). EPA has interpreted the CWA to allow BMPs to take the place of numeric effluent limitations under certain circumstances. 40 CFR § 122.44(k), provides that permits may include BMPs to control or abate the discharge of pollutants when: “(1)[a]uthorized under section 304(e) of the CWA for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) [a]uthorized under section 402(p) of the CWA for the control of stormwater discharges; (3) [n]umeric effluent limitations are infeasible; or (4) [t]he practices are reasonable to achieve effluent limitations and standards or to carry out the purpose of the CWA.” The

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permit regulates stormwater discharges with BMPs. Due to the variability associated with stormwater, EPA believes the use of BMPs is currently the most appropriate method to regulate discharges of stormwater from municipal systems in accordance with the above referenced regulation.

Control Measures

The draft permit requires MS4s to continue to control stormwater discharges from the municipal system in a manner designed to reduce pollutants to the maximum extent practicable, and to protect water quality and to satisfy the appropriate water quality requirements of the CWA. The MS4-2003 permit required that “[a]ll elements of the storm water management program must be implemented by the expiration of the permit”³ This permit does not extend the compliance deadlines set forth in the MS4-2003. Further, permittees authorized under the MS4-2003 must continue to implement their existing SWMPs while updating their SWMPs pursuant to this new permit.

Implementation of the SWMP involves the identification of BMPs to address the control measures and the identification of measurable goals for the BMP. The draft permit identifies the long-term objective of each control measure. The long-term objective of the control measure may not be completely met at the end of the permit term, but the permittee should be able to demonstrate progress towards the defined long-term objective. The permittee must implement the control measures described in the draft permit and document actions in the SWMP demonstrating progress towards achievement of the objective of the control measure. The permittee must identify interim goals as steps towards achievement of the long-term objective. This process represents the iterative nature of MEP.

Goals identified as part of the SWMP must be measurable. A “measurable goal” is a goal for which progress can be tracked or measured. A well-defined goal will have an outcome associated with it. Goals can be expressed as short term, mid-range or long term. The permittee must evaluate the success of a goal. The permittee can evaluate the success of the goals using a variety

³ MS4-2003 Parts IIA.2; IIIA.2; IVA.2; and V.A.2

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of indicators including programmatic, social, physical, hydrological, or environmental changes. Recognizing that implementation of the SWMP is an on-going and iterative process, subsequent program goals will be more difficult to achieve than initial program goals.

Measurable goals may be expressed either quantitatively or qualitatively. The method used to assess whether a goal has been met should be measurable, reliable, relevant, and an actual measure of the outcome. There are various methods to measure outcome. These includes confirmation or documentation that a task has been completed; tracking an absolute number or value of something; surveying to determine the knowledge or awareness of a group; inspections to make actual observations of an event; and monitoring to obtain an actual measurement of a pollutant in-stream or in an outfall. In some instances, the draft permit identifies specific measurement methodologies. In others, the permittee may select a method of evaluation that satisfies the discussions above.

Relying on Another Entity (Part 2.4.1)

In accordance with 40 CFR§122.35, the draft general permit allows an MS4 to rely on another entity for implementation of all or part of a permit condition or control measure. The permittee may rely on the other entity if the other entity is actually implementing the control measure or permit condition. The other entity must agree to implement the measure or condition for the MS4. EPA requires the use of a legal agreement as documentation. This agreement must be included as part of the SWMP. If the other party fails to implement the measure or permit condition, the permittee is ultimately legally responsible for its implementation.

As noted previously, EPA has notified certain types of discharges in the Charles River watershed of their need to obtain an NPDES permit to control the discharge of phosphorus. The MS4 is encouraged to coordinate efforts of these parties to develop a comprehensive plan to achieve the necessary reductions in phosphorus for the MS4.

Public Education and Outreach (Part 2.4.2)

The MS4 must implement a public education program to distribute educational materials to the

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populations within the MS4 or conduct other outreach activities about the impacts of stormwater discharges on water bodies within the MS4 jurisdiction and steps the public can take to reduce pollutants in stormwater runoff. The education program must be specific to the MS4 and include a focus on the pollutants of concern associated with impaired waters affected by discharges from the small MS4. The draft permit describes four audiences that must be considered in the public education program. The audiences are residents, industrial facilities, commercial/business facilities, and the construction/development industry. The overall long-term goal of an effective education program is to change an identified behavior and increase the knowledge of the community. EPA recognizes that the goal may take more than one permit term to achieve.

EPA expects an education program to have a defined and targeted message for each of the different audiences and to include methods to evaluate effectiveness of the educational messages. Based on review of annual reports from the MS4-2003, EPA found that some of the education programs developed by MS4s did not reflect these expectations. In order to achieve the objective of this measure, the draft permit includes detailed expectations for educating the public.

As stated previously, the draft permit defines target audiences and requires the permittee to provide educational materials to each. The draft permit includes topics for consideration for all audiences. The permittee may use those topics listed or may focus on other topics specific to the small MS4. The permittee must distribute a minimum of two educational messages to each audience during the permit term (a minimum total of eight). The messages must be spaced at least a year apart. The time in between the distribution of the educational material will allow the municipality to evaluate the effectiveness of the message. Any method the permittee uses to measure the effectiveness of the education should be linked to the established measurable goals. Some examples include surveys to gauge changes in behavior or awareness. Quantifiable data such as the number of brochures distributed, the number of hits on a website, or the number of public attendees at MS4 sponsored events can be tracked. The permittee may identify a specific behavior the program is targeting and track metrics which show the adaptation of that behavior. The educational messages should reflect the needs and characteristics of the area served by the

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MS4. This may include distribution of materials in a language other than English, as appropriate. Permittees can form partnerships with other organizations to assist in the implementation of its education and outreach programs. These partnerships may include other MS4s in a watershed, environmental groups, watershed associations, or other civic organizations.

The draft permit has mandatory topics for those MS4s located in areas with approved TMDLs (Appendix G of the draft permit). For MS4s subject to the Lower Charles River phosphorus TMDL, the residential education program must address fertilizer use, methods of recycling or disposal of lawn clippings, information about detergents and phosphates, and information about septic system maintenance. The industrial and commercial education programs must address fertilizer use and the benefits of street sweeping. For MS4s subject to either a pathogen or bacteria TMDL, the residential education program must provide information to dog owners about proper management of pet waste and education material to residents with septic systems about septic system maintenance.

During the previous permit term, various groups developed comprehensive public education programs for use by regulated small MS4s. For example, the SuAsCo (Sudbury-Assabet-Concord) Watershed Associated developed a program called “Water Matters.” The program provides educational tools for small MS4s to distribute in their communities. The program is available to any community, not just those in the Su-As-Co watersheds. Additional information on the program is available at: <http://www.stormwatermatters.org/home.html>. Similarly, the Massachusetts Bays Program has supported the development of a program called Think Blue Massachusetts. Information is available at www.thinkagainthinkblue.org. Another source of information is the UNHSC-NEMO (University of New Hampshire Stormwater Center – Non-Point Source Education for Municipal Officials) – <http://www.erg.unh.edu/lid/index.asp>.

Public Involvement and Participation (Part 2.4.3)

This control measure is closely related to the public education and outreach control measure. EPA supports the concept that when the public is given an opportunity to understand and participate in a stormwater protection program, the public generally will become supportive of

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the program. The objective of this measure is to provide and engage the public with opportunities to participate in the review and implementation of the SWMP. The draft permit requires that public participation opportunities, at a minimum, comply with the public notice requirements of the state. However, permittees are encouraged to provide more interactive opportunities for public participation. Examples include volunteer water quality monitoring, community clean up days, hazardous waste collection days, and adopt a drain/adopt a stream programs.

The draft permit requires that the permittee annually provide an opportunity for the public to participate in the implementation of the SWMP. Participation efforts should attempt to engage all groups serviced by the MS4. This effort may include creative public information messages such as announcements in neighborhood newsletters, use of television spots on the local cable channel, or announcements or displays at civic meetings. One goal of public participation is to involve a diverse cross-section of people and businesses in the community to assist in development of a stormwater management program that meets the needs of the permittee and the community serviced by the MS4.

Illicit discharge detection and elimination (Part 2.4.4)

The MS4-2003 required that the “permittee must develop, implement, and enforce a program to detect and eliminate illicit discharges.”⁴ The MS4-2003 also provided that “[a]ll elements of the stormwater management program must be implemented by the expiration date of the permit.”⁵ While this draft permit builds upon the requirements set forth in the MS4-2003, it does not extend the deadlines applicable to the illicit discharge detection and elimination minimum measure imposed by the MS4-2003.

This measure requires the MS4 to detect and eliminate illicit discharges from its municipal separate storm sewer system. The regulations at 40 CFR §122.26(b)(2) define an illicit discharge as “...any discharge to a municipal separate storm sewer system that is not composed entirely of stormwater except discharges pursuant to a NPDES permit (other than the NPDES permit for discharges from the municipal separate storm sewer) and discharges resulting from fire fighting

⁴ MS4-2003 Parts II.B.3; III.B.3; IV.B.3; and V.B.3

activities.”

Some illicit discharges enter the storm system directly, such as incorrectly connected wastewater discharge lines, while others may enter indirectly, such as through infiltration from cracked sanitary lines or spills collected by drain outlets. Both types of discharges can contribute pollutants to the system that in turn affect water quality. An illicit discharge is, with limited exceptions any discharge to a municipal separate storm sewer system that is not stormwater. The draft permit contains a list of sources of non-stormwater that permittees must evaluate to determine whether they are significant contributors of pollutants. EPA expects small MS4s to address the non-stormwater sources as categories and not as individual sources. MS4s should examine the potential sources as categories and examine the potential of those sources to contribute pollutants to the MS4. For example, potable water may not contribute pollutants that affect the MS4 discharges because the source is associated with the water supply. However foundation drains and crawl spaces may be associated with residential basements and the type of pollutants may be unknown. In this situation, the MS4 may want to establish a registration program and incorporate an educational message about proper storage of household chemicals, or the permittee may prohibit this source of non-stormwater due to the unknown nature of the pollutants. The permittee must document its determinations on the categories of non-stormwater in its SWMP and must prohibit any sources identified as significant contributor.

The draft permit describes required components of an illicit discharge detection and elimination program. The draft permit includes elements that are listed as guidance in 40 CFR §122.34(b)(3) and the information and procedures included in Illicit Discharge Detection and Elimination – A Guidance Manual for Program Development and Technical Assessment by the Center for Watershed Protection and Dr. Robert Pitt. EPA has found that aggressive, thorough, and systematic illicit discharge investigations and removal have resulted in improvements to water quality. This determination is based on illicit detection work done by communities located in the Charles River and Mystic River watersheds.

⁵ See footnote 1

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The MS4-2003 required each MS4 to develop and implement an IDDE program. Since the MS4-2003, EPA, Mass DEP, and MS4s have gained an improved and more comprehensive understanding of the nature of illicit discharge connections; the extent of the problem; effective technologies and procedures to detect and verify illicit connections; and the best practices to reduce discharges of contaminated stormwater due to the presence of illicit connections.

Collaborative programs such as the Clean Charles Initiative have demonstrated IDDE can be a key contributor to improved water quality. In light of the demonstrated results and practical experience gained from these efforts, the draft permit requires more specific BMPs than the MS4-2003. For example, the draft permit requires MS4s to develop a written IDDE protocol that includes specific requirements and procedures for implementation of the IDDE program. Examples of these requirements are a detailed map, a written prioritization of areas with a potential of illicit, dry weather screening, wet weather outfall monitoring, record keeping, and thorough and complete storm drain network investigations that systematically and progressively evaluate manholes in the storm system to narrow the location of a suspected illicit connection or discharge to an isolated pipe segment. These comprehensive requirements are described in the following paragraphs.

Sanitary Sewer Overflows – SSOs (Part 2.4.4.5)

The draft permit specifically prohibits discharges from SSOs. The permittee must identify any SSOs that have not been eliminated or for which an underlying cause has not been identified or corrected. The draft permit requires the permittee to have an inventory of all SSOs including the suspected causes and planned corrective measures. This information must be included as part of the SWMP and the annual report.

System Mapping (Part 2.4.4.6)

The MS4-2003 required MS4s to develop a map that, at a minimum, depicted the locations of the stormwater outfalls and names and locations of all waters that receive discharges from those outfalls. That map must have been completed by May 1, 2008. The draft permit requires that additional detail be added to the existing map. In addition to outfalls and receiving waters, the map must now include the locations of catch basins, manholes, pipes, treatment facilities

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associated with the stormwater system, and water resource areas (beaches, drinking water sources, critical habitats). The permittee may choose to include additional useful information on the map such as data regarding land use (zoning information) and the amount of impervious area on a parcel or in a catchment. The draft permit does not require a specific tool for the mapping however, a map generated using a Geography Information System (GIS) is EPA's preferred method. The draft permit defines an outfall as a point source (as defined in 40 CFR § 122.2) at the location where the municipal separate storm sewer system 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 U.S. and that are used to convey waters of the U.S.

There are additional mapping requirements for MS4s located in the Charles River Watershed. These MS4s are subject TMDLs for both phosphorus and pathogens. The maps for small MS4s located in the areas listed in Appendix G – Table G-1 must contain the elements listed in Part 2.4.4.6 (d) of the draft permit. Pathogens and phosphorus are pollutants whose sources are often associated with illicit connections (sanitary lines, washwaters, and failing septic systems). In order to identify the potential sources of pathogens and phosphorous and achieve the required load reductions required by the TMDL, permittees must have a thorough understanding of their system and the factors that affect it. The enhanced mapping requirements include infrastructure, water resources, operations and capital projects, and identification of potential sources of phosphorus. The phosphorus mapping elements are also a part of the phosphorus control plan required by Part 2.2.1c. These enhanced requirements support the achievement of the WLA of the phosphorus TMDL.

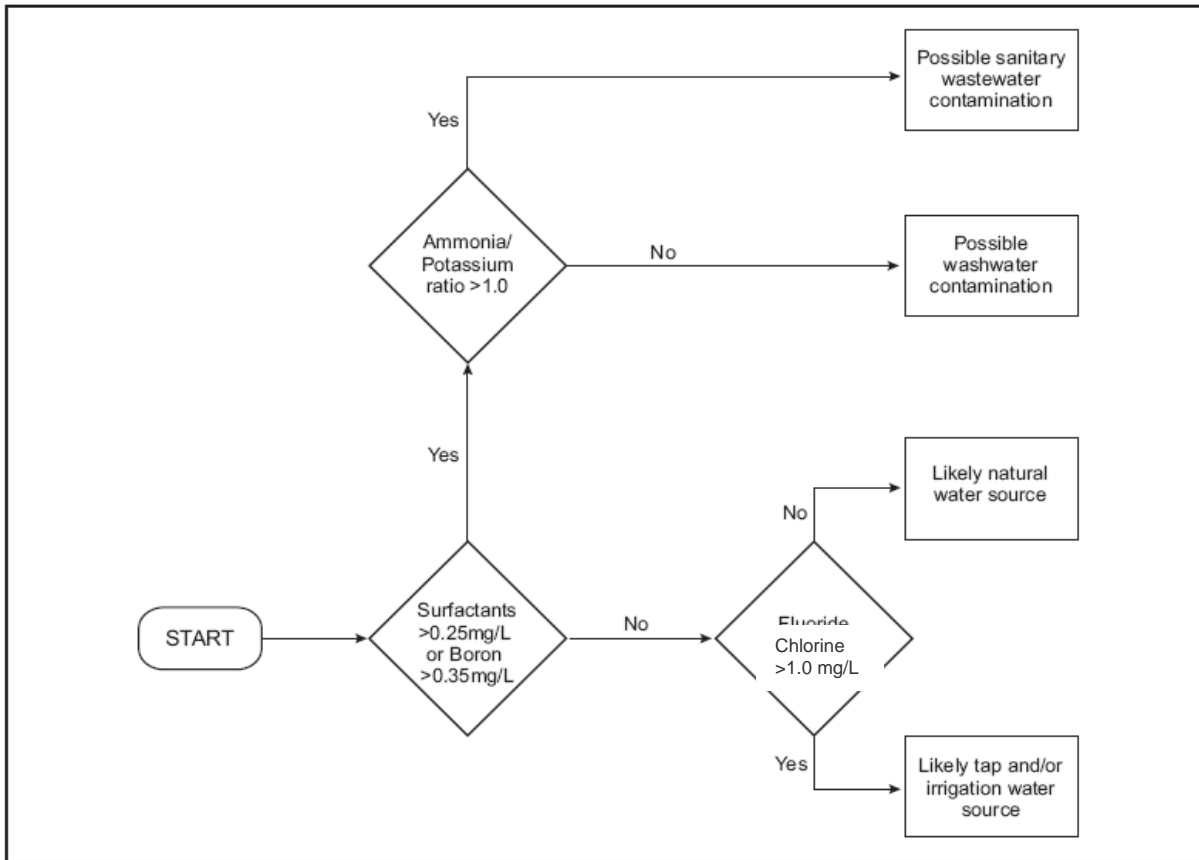
The draft permit provides two (2) years for all MS4 to complete the additional mapping elements required by the draft permit. The draft permit does not provide any additional time for the completion of the map of outfalls and receiving waters that was required in the previous permit. The initial system map must have been complete by May 1, 2008. The two year timeframe for mapping in the draft permit is based on the expectation that the permittee has completed the mapping required by the MS4-2003.

Outfall Inventory (Part 2.4.4.7)

If not completed under the MS4-2003, the draft permit requires the MS4 to conduct an outfall inventory. The purpose of the outfall inventory is to verify outfall information. The outfall inventory should include walking all stream miles within the MS4 boundary and locating or verifying the location of all outfalls that discharge from the MS4. EPA recognizes that due to topography and private property issues, exactly locating each outfall may not always be feasible. In situations where locating the actual outfall is not feasible, the permittee should identify the nearest point within the system that can be safely and legally documented and record it as part of the outfall inventory. The permittee should use existing maps and verify them based on actual field observations. The permittee must complete the inventory during dry weather. The permittee should use the definition of “point source” found at 40 CFR § 122.2 for purposes of identifying outfalls. For each outfall, the permittee must observe the outfall and record specific information. The outfall information that must be recorded includes: the dimensions, shape, material, and spatial location; and the physical condition of the outfall. Each outfall must have a unique identifier such as a number or name. In addition to the physical observations, the permittee must also record any sensory observations. This includes color, odor, floatables, oil sheens or evidence of flow. If flow is observed at an outfall, a sample must be taken and the source of the dry weather flow determined. The flow must be analyzed for conductivity, turbidity, pH, chlorine, temperature, surfactants (as MBAS), potassium, ammonia, and *E. Coli* or enterococcus (as appropriate depending on whether the discharge is to a fresh water or a marine water). The following flow chart can be used by the permittee as a screening tool to help determine the source of a potential illicit discharge.

Flow Chart - Determining Likely Source of Discharge (Adapted from Pitt, 2004)

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If the source is not readily determined, a more intensive investigation must be undertaken.

If an outfall has evidence of flow, but there is not an actual flow during the outfall inventory, there may be a transitory or an intermittent discharge. Transitory discharges are often one time events that could be the result of a spill or illegal dumping. Identification of a transitory discharge often rests on being in the right place at the right time. Since these discharges may only occur once, they are difficult to track. Intermittent discharges can occur at anytime for any given period (a few hours to a few days). There are monitoring techniques an MS4 can use to detect a suspected intermittent discharge. These techniques include: collecting samples during non-business hours; optical brightener monitoring (OBM) traps; caulk dams; pool sampling; and toxicity monitoring.

Non-business hours include early mornings, weekday evenings and weekends. OBM traps have an absorbent unbleached cotton pad or fabric swatch and an anchoring devise. Traps are placed

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in an outfall suspected of an intermittent discharge and then collected after several days of dry weather. When an OBM is placed under fluorescent light, it will indicate exposure to detergents, an indicator for wash waters. A caulk dam creates a low barrier inside the pipe allowing for sampling of trapped intermittent flows. Pool sampling involves sample collection directly below the area where an outfall discharges and at the same time sample collection upstream in a location not affected by the outfall. The samples are analyzed and compared. Finally, toxicity monitoring involves monitoring for toxicity in the pool below the outfall of a suspected intermittent discharge. Due to the complexities associated with toxicity testing, this method is not recommended unless the municipality has prior experience or an indication of the suspected source.

Elements of the Illicit Discharge Detection and Elimination Program (Part 2.4.4.8)

The MS4 must have adequate legal authority to implement the following activities as part of the IDDE program: prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges and enforce the IDDE program. The MS4-2003 required development of an ordinance or other regulatory mechanism to address the required program components. The ordinance must have been in place and effective by May 1, 2008. The MS4 must reference the authority to implement this measure in the IDDE program. The IDDE program is part of the overall SWMP.

The MS4-2003 required the permittee to “develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, into the system.” The MS4-2003 established the required elements of the plan.⁶ As required by the MS4-2003, this plan must have been developed and implemented by May 1, 2008. The draft permit does not extend this deadline.

The draft permit builds on the requirements of the MS4-2003 by detailing additional required components of an illicit discharge detection and elimination program. One component is a written protocol that clearly identifies responsibilities with regard to eliminating illicit

⁶ MS4-2003 Parts II.B.3(c); III.B.3(c); IV.B.3(c); and V.B.3(c)

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connections. A second component is an assessment and ranking of the catchments within the MS4 for their potential to have illicit discharges. The final component is a written systematic protocol for locating and removing illicit connections. Each of these components is discussed in the following paragraphs.

The permittee must have in place a written protocol that clearly identifies methodologies and responsibilities with regard to detecting and eliminating illicit discharges. The protocol must identify who is responsible to pay for removal of an illicit connection/discharge. The permittee may incur the initial costs and seek partial or complete reimbursement from the owner of the illicit connection depending on the specifics of the situation and local and state law. EPA does not require a specific methodology, only that one exists and that the staff responsible for locating and removing illicit connections is familiar with it. The protocol must also define appropriate methods for removal of the illicit discharge or connection. The protocol must identify appropriate procedures or methodologies for confirmation of removal of illicit discharges or connections. The responsibilities protocol must be completed by the end of year one of the permit and be maintained as part of the written IDDE program.

The permittee must assess the illicit discharge potential for all areas that discharge to the MS4. The assessment consists of three steps: (1) delineation of catchments or drainage units; (2) evaluation of existing data that provides information concerning the potential for illicit discharges or connections for the delineated catchments or drainage unit and (3) ranking each catchment or drainage unit for its potential to have illicit discharges as “low”, “medium” or “high”. The ranking is based on EPA and/or permittee defined screening factors. The screening factors that the permittee must consider are listed in the draft permit. (Part 2.4.4.8(c)(ii)). The permittee must consider all applicable factors and may add other factors that are relevant to the municipality. The permittee must complete the assessment and the ranking by the end of the first year of the permit, document the results of the assessment and ranking and maintain them as part of the SWMP. The permittee must also report this information as part of the annual report. (See Part II - Section G of this fact sheet.) The ranking is intended to identify areas with the greatest potential for illicit connections.

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Alternatively, if the permittee has prior knowledge or data regarding illicit connections or the potential for an illicit discharge for a catchment or drainage unit, the permittee need not complete the ranking of such a catchment or drainage unit using the factors identified in Part 2.4.4.8(c)(ii). Instead the permittee may identify these catchments as Problem Catchments. Once the permittee has identified a catchment as a Problem Catchment, the permittee shall begin to implement the systematic procedure required by Part 2.4.4.8(d) in the catchment. If the permittee used the ranking detailed in Part 2.4.4.8(c)(ii) and (iii) and did not identify any Problem Catchments, the permittee must begin implementation of the systematic illicit detection protocol in areas identified with the highest ranking. The permittee must continue to implement the protocol in all MS4 areas until all areas have been evaluated. The permittee must justify in the SWMP any decisions not to focus efforts in areas identified with the highest ranking or identified as Problem Catchments.

The permittee must develop a written procedure that details a systematic approach for locating and removing illicit discharges. There are two procedures in the draft permit. One described in Part 2.4.4.d (i-v) is for all small MS4s except for those in the Charles River Watershed. The other, described in Part 2.4.4.d.(vi), applies to small MS4s located in the areas listed in Appendix G- Table G-1. The written procedure must be completed by the end of year one of the permit. The systematic procedure includes: dry weather screening of outfalls which can be performed during the outfall inventory; systematic investigation of the system; tracking a discharge to a source; and finally, removal of the source. Each of these parts is discussed in the paragraphs below.

A storm drain network investigation involves systematically and progressively opening and inspecting junction manholes in the system to narrow the location of an illicit discharge to an isolated pipe segment between two manholes. The permittee shall inspect junction manholes for visual evidence of illicit connections or discharges (e.g. excrement, toilet paper, or sanitary products). When flow is observed in the manhole, the permittee shall sample for ammonia and surfactants. Ammonia is a useful indicator of sewage. The concentration of ammonia is higher

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in sewage than in ground water or tap water. Surfactants are the active ingredient in most commercial detergents. Surfactants are typically measured as Methyl Blue Active Substances (MBAS). These are a synthetic replacement for soap. The presence of surfactants is an indicator of sewage and wash waters. There are other indicator parameters the permittee could use such as fluoride. Municipalities typically add fluoride to drinking water supplies, and its presence is an indicator of tap water. Potassium is another indicator that has relatively high concentrations in sewage. When the concentration of potassium is evaluated in combination with the concentration of ammonia, the ratio of the two can help distinguish wash waters from sanitary wastes. In addition to the use of indicators to help identify the source of an illicit connection or discharge, the permittee may use dye testing, video testing, smoke testing or other appropriate methods to locate illicit connections or discharges.

In addition to determining what indicators to use to determine if a manhole is “clean” or “dirty,” the permittee must also determine where in a particular catchment to begin the investigation of manholes for illicit connections. The permittee must begin investigations in catchments identified with the highest priority ranking or identified as Problem Catchments. The permittee must decide whether the systematic investigations will be from the outfall working progressively up into the system (bottom up) or from the upper parts of the catchment working progressively down (top down). Either method or a combination of both methods may be used. Any method that is used by the permittee must include a systematic inspection of representative junction manholes to locate and isolate sources. The permittee must document the chosen procedure in the protocol required by Part 2.4.4.8(d). EPA believes that in systems that are complex and service large populations, the top down approach is the most effective for locating illicit discharges.

The permittee must begin its systematic investigation of catchments upon completion of the protocol. The permittee must address any illicit connections found prior to completion of the protocol in accordance with Part 2.4.4.2 of the draft permit. The permittee shall continue the investigations until the permittee has evaluated all areas of the MS4.

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The draft permit requires the permittee to either remove or eliminate the illicit discharge or take appropriate enforcement action within six (6) months of detection. The permittee must also track the progress of the IDDE program implementation. The permittee must identify indicators for tracking the effectiveness of the program. Appropriate tracking indicators are those that demonstrate elimination of a pollutant source and/or water quality improvements. For example, if a permittee has a beach that has closures due to bacteria, an appropriate indicator for tracking progress would be a decrease in the frequency of beach closures or water quality monitoring that indicates that the water is meeting standards. Other examples include the number of reported illicit discharges, the number of illicit connections located, and the number of illicit connections repaired or removed.

In addition to detecting and removing illicit discharges, the permittee must also develop and implement mechanisms and procedures for preventing illicit discharges. This includes training to inform public employees, businesses, and the general public of the hazards associated with illegal discharges. The requirement to prevent illicit discharges can be incorporated into the public education and public participation control measures. Examples of mechanisms to prevent illicit discharges include identification of opportunities for pollution prevention or source control; distribution of information concerning car washing or swimming pool draining; routine maintenance activities; and inspections of facilities particularly municipal drains undergoing work by private parties.

Construction site stormwater runoff control (Part 2.4.5)

The MS4-2003 required that the “permittee ... develop, implement and enforce a program to reduce pollutants in any stormwater runoff to the MS4 from construction activities that result in land disturbance equal to or greater than one acre [and] less than one acre if part of a larger common plan.”⁷ While this draft permit builds upon the requirements set forth by the MS4-2003, it does not extend the deadlines applicable to the construction site stormwater runoff control minimum measure imposed by the MS4-2003.

⁷ MS4-2003 Parts II.B.4; III.B.4; IV.B.4; and V.B.4

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MS4s are required to continue to review and enforce a program to reduce pollutants in stormwater runoff from construction activities that result in a land disturbance equal to or greater than one acre that discharge to the MS4. The overall objective of an effective construction runoff management program is to have a program that minimizes or eliminates erosion and maintains sediment on site.

The construction program required by the draft permit is different from EPA's program that is implemented through the Construction General Permit (CGP), although there is some overlap. EPA's CGP applies to construction projects that have one or more acres of disturbed land and discharge directly to a water body or indirectly to a water body through an MS4. The MS4 construction program must address the discharges from construction projects within its jurisdiction that discharge directly to the MS4. A project may need a CGP from EPA as well as be regulated under the permittee's construction program. Discharges from a construction project to a combined sewer system and construction projects that do not discharge at all, are not subject to the CGP (see 40 CFR §122.26(a)(7)). A permittee is not required to regulate any construction project that receives a waiver from EPA in accordance with 40 CFR § 122.26(b) (15) (i).

The permittee must have an ordinance or other regulatory mechanism requiring proper sediment and erosion control. The requirement to develop the ordinance was part of the previous permit. The ordinance must have been in place and effective by May 1, 2008. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on construction sites such as demolition debris, litter and sanitary wastes. EPA encourages permittees to include design standards in local regulations for sediment and erosion control BMPs. The draft permit includes a list of controls that could be included as part of the local program. The draft permit provides an example of a design standard that requires the control the volume of a specific size storm event, but the permit does not require the MS4 to include the design standard as part of the program.

The construction program must have written procedures for pre-construction review and approval of site plans. Permittees should make every effort to ensure that qualified personnel

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review plans. The plan review procedures must include consideration of water quality impacts. Site plan review must include consideration of comments from the public.

The construction program must have procedures for site inspections and enforcement. Qualified personnel should perform inspections. Qualified personnel are those who possess the knowledge and the skills to assess conditions and activities that could impact stormwater quality and who can also evaluate the effectiveness of stormwater control measures. Inspections should occur during construction as well as after construction to ensure that BMPs are installed and operating as described in approved plans. The permittee shall have clearly defined procedures regarding who is responsible for inspections at construction sites and what aspects of the construction site are to be inspected. The permittee must have authority to impose sanctions if construction projects are found not to be in compliance with local ordinance. Sanctions can include monetary penalties, stop work orders, or other remedies authorized by law.

MS4s should review existing procedures in the community that apply to these activities (plan reviews and inspections). Often construction plans are seen by the planning board that may not have the technical expertise or engineering staff to evaluate them. An MS4 should look at the various components of the local government, and whenever possible, optimize coordination between municipal offices and other MS4s as appropriate to ensure adequate review of plans and other documents associated with a construction project.

The draft general permit includes information about Qualifying Local Programs (QLP) for construction. According to 40 CFR §122.44(s), for stormwater discharges described in 40 CFR§122.26(b)(15) or 40 CFR§122.26(b)(14)(x), EPA may incorporate by reference local programs into the EPA construction general permit if EPA determine that the local program contains the elements described in the regulation. At this time, EPA has not incorporated any local programs into the CGP. This is included in the permit for informational purposes rather than as a permit requirement.

Stormwater Management in New Development and Redevelopment (Part 2.4.6)

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The MS4-2003 required that the “permittee must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre and discharge to the municipal system [and] less than one acre if the project is part of a larger common plan of development which disturbs greater than one acre.” The permit also set forth required elements of the post construction program.⁸ This draft permit builds upon the requirements set forth in the MS4-2003, but does not extend the deadlines applicable to the post construction storm water management in new development and redevelopment minimum measures imposed by the MS4-2003.

This measure was called Post Construction Stormwater Management in New Development and Redevelopment under the MS4-2003. The name of the measure was changed to more accurately reflect EPA’s expectations with regard to implementation of the measure. EPA strongly encourages practices that manage stormwater on site and maintain or improve site hydrology. Permit requirements as well as examples of practices that support maintaining or improving hydrology are discussed in the following paragraphs.

This measure applies in areas of new development and redevelopment one acre or more in size. The long-term objective of this measure is to have the hydrology associated with new development closely mirror the pre-development hydrology and to improve the hydrology of redevelopment sites. Planning and design for the minimization of pollutants in post construction stormwater discharges is the most cost-effective approach to stormwater quality management. Post construction stormwater runoff may cause two types of impacts. One is an increase in the type and the quantity of pollutants. The alteration of the land by development can increase the discharge of pollutants such as oil and grease, heavy metals, and nutrients. Another impact occurs with an increase in the quantity of stormwater that is delivered to water bodies during storm events. Increases in impervious area decrease the amount of precipitation that naturally infiltrates into the ground. The lack of natural infiltration increases the volume of stormwater runoff into water bodies. The increased flows and increase in sediment discharges can cause stream bank scouring, impacts to aquatic habitat, and flooding.

⁸ MS4-2003 Parts II.B.5; III.B.5; IV.B.5; and V.B.5

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This control measure requires the MS4 to continue to review and enforce a program to address post construction stormwater runoff from areas of new development and redevelopment that disturb one or more acres. The MS4 must implement an ordinance or other regulatory mechanism to manage post construction stormwater runoff from new development and redevelopment. This ordinance was required under the previous permit and must have been effective by May 1, 2008.

The permit requires MS4s to modify existing ordinances within two (2) years of the effective date of the permit to include requirements that implement provisions of the Massachusetts Stormwater Standards (the Standards) throughout the municipality if this has not already been done by an MS4. The Standards are currently applicable in areas subject to Massachusetts Wetlands and River Acts. Although there are ten Standards, the draft permit focuses on Standards 3 through 7. The reason for this is either because some of the standards are addressed in other parts or requirements of the draft permit or because the actions which are regulated by the Standard may not be authorized by the CWA for coverage under the NPDES permit program.

The draft permit contains requirements to reduce stormwater impacts on water quality. Stormwater impacts are due to a variety of factors including volume, frequency, intensity, and quality. Stormwater can contain any pollutant that is on the ground and transported with the stormwater as it moves across an area. These pollutants may include bacteria, nutrients, metals and sediments. Large volumes of stormwater can cause erosion along stream banks and result in altered habitats. Studies from the Center for Watershed Protection (CWP) have shown that impairments from stormwater runoff can be observed in watersheds with as little as 10 percent impervious cover. Impervious cover includes roads, sidewalks, driveways, roof tops, and other surfaces that do not allow for infiltration. The requirements in the draft permit focus on critical waters and small streams. The permit requires the permittee to reduce the frequency and volume of stormwater to these critical waters. The draft permit encourages the management of the first one inch of rainfall from a 24 hour storm. Data developed by Tetra-Tech for EPA indicates that for the annual average rainfall in the Boston area, 90 percent of the storm events are one inch or

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less. If the stormwater volume associated with storms of that size is effectively managed, there should be a significant decrease in overall stormwater volume that is discharged from a site.

The draft permit requires the permittee to assess current street and parking lot designs that affect the creation of impervious cover. The objective of this assessment is to determine if changes in design standards can be made to accommodate Low Impact Development (LID) options. Some of the street and parking lot design standards and requirements a MS4 would want to consider in this assessment include flexibility in road design standards (the width of the road and placement of sidewalks) and flexibility in design of parking lots (shared and multi-level lots, and flexibility in the number of parking spaces). If the assessment indicates that changes in design standards or requirements are practicable, the MS4 must develop recommendations and a schedule for implementing the changes.

Management of stormwater on-site can be accomplished in many ways. LID focuses on using practices that imitate the natural water cycle. Rather than directing stormwater to a pipe or conveyance, the stormwater is managed on-site. LID practices can work at the site level as well as the watershed level. The draft permit requires the permittee to evaluate the existing local regulations and make determinations as to whether the existing local regulations allow LID practices and what changes would be necessary for LID practices to occur. Some of the LID practices that the municipality should consider are green roofs; infiltration practices, such as porous pavement and rain gardens; and water harvesting devices, such as rain barrels and cisterns.

Another method a permittee can use to management stormwater is to adopt a Master Plan based on smart growth principles that directs development towards suitable areas and away from important natural resources. The draft permit does not require the permittee to adopt a Master Plan, but EPA encourages MS4s to consider smart growth because it can be a powerful tool to effectively manage resources. However, the plan alone may not be sufficient to address post construction stormwater runoff. Implementation of a Master Plan includes the adoption of zoning, subdivision ordinances, or other regulations that implement the smart growth principles

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in the Master Plan. Through these principles and regulations, permittees can encourage compact development and redevelopment, and discourage the development of more pristine areas. This will minimize the amount of new impervious surfaces and the generation of stormwater runoff and protect water quality.

Directly Connected Impervious Area (Part 2.4.6.9)

The draft permit requires the permittee to estimate the amount of directly connected impervious area (DCIA) tributary to its MS4. EPA will provide permittees with an initial estimate of the DCIA for its MS4. The permittee shall inventory properties and infrastructure within its jurisdiction that have the potential to be retrofitted with BMPs designed to reduce the frequency and intensity of stormwater discharges. Although not a pollutant, impervious cover can be used as a surrogate for pollutants when addressing stormwater discharges. In the simplest terms, reductions in the amount of impervious cover within a watershed should result in reductions of stormwater quantities. Reductions in stormwater quantities should result in improvements to water quality.

Where it is practicable to reduce the amount of existing impervious cover, properties often can be retrofitted with low impact development techniques that remove direct, hard connections that drain the property's impervious surface to the MS4. These techniques include swales, rain gardens, bioretention basins, porous pavement, and collection and infiltration systems for roof runoff. Because of the effectiveness of reducing stormwater pollution by decreasing directly connected impervious area (DCIA), the draft permit contains provisions to track the amount of DCIA in each sub-watershed within the jurisdiction of the MS4. The draft permit requires the permittee to report this estimate annually and to evaluate the feasibility of reducing the DCIA on permittee-owned properties. The draft permit encourages the reduction of DCIA through retrofit technologies. The permittee is required to track the number of acres of impervious cover that have been added or removed annually.

Pollution Prevention/Good Housekeeping (Part 2.4.7)

The MS4-2003 required that the “permittee must develop and implement a program with a goal

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of preventing and/or reducing pollutant runoff from municipal operations” and set forth required elements of the pollution prevention and good housekeeping program.⁹ While this draft permit builds upon the requirements of the MS4-2003, it does not extend the deadlines applicable to this minimum measure imposed by the MS4-2003.

This measure requires small MS4s to develop and implement an operation and maintenance program that includes an employee training component. The ultimate goal of this measure is to prevent or reduce pollutant runoff from all municipal operations. The draft permit includes more detailed requirements than the MS4-2003 for the implementation of this control measure. The permittee must develop an inventory of municipal buildings and facilities and update it annually. Permittees are required to develop an operations and maintenance plan for the following permittee-owned activities or facilities: parks and open spaces; buildings and facilities; vehicles and equipment maintenance; and infrastructure (roadways and storm sewer systems). The permittee must develop and implement operation and maintenance plans by the end of the first year of the permit.

For management of open space and parks, the draft permit requires an evaluation of the use, storage, and disposal of pesticides and of fertilizer practices to ensure that they are protective of water quality. The permittee must also ensure that lawn maintenance and landscaping activities are protective of waterbodies. MS4s located in the Charles River Watershed must optimize the use of fertilizer on public lands as well as develop standard procedures for handling, storing, applying and disposing of pesticides, herbicides and fertilizers. Permittees must also establish effective management practices for leaf litter collection and disposal. MS4s subject to pathogen or bacteria TMDLs must effectively manage pet waste and implement measures to control water fowl.

The permittee must consider all buildings it owns for the evaluation of buildings and facilities. The permittee shall evaluate the use and storage of petroleum products, management of dumpsters, and other wastes at police and fire stations, schools, and other permittee owned

⁹ MS4-2003 Parts II.B.5; III.B.5; IV.B.5 and V.B.5

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buildings. As stated in the objective of this measure, the permittee must implement good housekeeping and pollution prevention measures at these places. In areas where permittee-owned vehicles are stored, the permittee must establish procedures to ensure that vehicles that are leaking or require maintenance are stored indoors to the extent practicable. Municipal fueling areas must be covered unless impracticable. Washwaters from permittee-owned vehicles must not be discharged to the MS4 or directly to a water of the United States.

The draft permit requires the permittee to either establish or continue the implementation of a program to repair and rehabilitate its infrastructure in a timely manner. The draft permit requires the MS4 to maintain its streets, roads and rights of way in such manner as to minimize the discharge of pollutants from the MS4. Rather than a specific frequency for cleaning catch basins, the draft permit requires the MS4 to optimize its frequency of routine cleaning with a goal that no basin shall be greater than 50 percent full. The municipality must track the amount of material removed from each basin and increase the frequency of cleaning if evidence suggests that material is accumulating more quickly than in other basins. Basins in priority areas may also require more frequent cleaning.

The draft permit requires street sweeping to occur at least twice per year. One sweeping should occur in the spring to collect road sand from the previous winter and the other sweeping in the fall to collect fallen leaves. The use of a high efficiency vacuum sweeper is encouraged by EPA but is not required by the permit.

The permittee must establish procedures for winter activities. This includes evaluation of salt and sand use. Permittees are encouraged to minimize the amount of salt used and to evaluate opportunities for the most cost effective and environmentally acceptable management practices. The permittee must ensure that snow removal practices do not result in the discharge of snow to a water of the United States.

The permittee must establish and implement maintenance schedules and inspection frequencies for all permittee-owned BMPs.

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In addition to the operation and maintenance plans required for permittee-owned operations, the permittee must develop a Stormwater Pollution Prevention Plan (SWPPP) for municipal maintenance garages, public works facilities, transfer stations, or other waste management facilities. If a facility is already covered by EPA's Multi-Sector General Permit (MSGP), the SWPPP required by the MSGP will satisfy this requirement. The SWPPP required by the MSGP shall be referenced in the MS4's SWMP.

The permittee must develop a SWPPP that consists of the following elements: (1) a pollution prevention team – this team is responsible for the development, implementation and revision of the SWPPP; (2) a description of the facility and identification of potential pollutant sources; (3) identification of any stormwater controls at the facility; and (4) implementation of specific management practices at the facility. The conditions contained in this section are similar to the conditions contained in the Multi-Sector General Permit for Stormwater Discharges Associated with Industrial Activities (MSGP). They consist of pollution prevention activities such as preventing exposure, good housekeeping practices, and preventative maintenance. The draft permit requires procedures for spill prevention and response and management of runoff. All salt piles or piles that contain salt must be covered or enclosed if stormwater runoff from that pile has the potential to discharge to a water of the United States.

State specific requirements (Part 4.0)

The draft permit encourages the consideration of infiltration and ground water recharge when implementing the minimum measures, not just post construction. While the draft permit encourages consideration of infiltration and groundwater recharge in implementing the minimum measures, including design and implementation of a SWMP, permittees should be aware that groundwater discharges may trigger other regulatory requirements designed to protect underground sources of drinking water. Stormwater discharges that are infiltrated through injection wells are subject to the Safe Drinking Water Act and EPA's Underground Injection Control (UIC) Program at 40 CFR Part 144. Mass DEP implements the federal UIC program. More information about UIC requirements, including state program contacts is available at:

http://www.epa.gov/region1/eco/drinkwater/pc_groundwater_discharges.

F. Outfall Monitoring Program (Part 3.0)

On January 8, 2008, EPA hosted a meeting at its Boston office to examine monitoring for small MS4s. Over 100 people participated. EPA presented monitoring options as well as examples of monitoring requirements of other states. Participants were invited to share their experience with monitoring. Additional information on the meeting is available at:

www.epa.gov/region1/topics/water/stormwater.html. Many participants were not opposed to monitoring, but most expressed the need for any monitoring to be flexible and meaningful. EPA has included monitoring in this draft general permit. The monitoring in the draft permit is related to the implementation of the illicit discharge detection and elimination program.

The draft permit requires dry weather screening of all outfalls. Dry weather screening involves field observations, field screening analytical techniques and when dry weather discharges are detected, analytical monitoring. The permittee must implement dry weather screening as part of the IDDE program. The permittee must begin to screen outfalls each year in the second year of the permit. Screening operations may involve visiting an outfall more than once. Based on observations collected during fieldwork, the permittee may find evidence of an illicit discharge, but no flow. These outfalls must continue to be evaluated to assess the source of any potential illicit discharge.

Dry weather discharges must be analyzed for the following pollutants: conductivity, turbidity, pH, chlorine, temperature, surfactants (as MBAS), potassium, ammonia and *E. Coli* or enterococcus (as appropriate depending on whether the discharge is to a fresh water or a marine water). The municipality must determine the source of the dry weather discharge, and if determined to be an illicit discharge, remove it.

Certain pollutants provide an indication of potential illicit sources. For example, ammonia is an indicator of sewage, boron is often found in detergents and soaps, surfactants are indicators of washwaters, and chlorine may indicate tap water because it is often used as a disinfectant.

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The draft permit also requires the municipality to monitor outfalls during wet weather. The outfalls monitored during wet weather in a particular year should be the same outfalls monitored during dry weather, to the extent practicable. Wet weather flows shall be monitored for: chlorine; potassium; ammonia; pH; surfactants (as MBAS); temperature; turbidity; conductivity and *E.Coli* or enterococcus (as appropriate depending on whether a discharge is to fresh or marine water). The permit details specific conditions that would allow a permittee forgo wet weather monitoring for a particular outfall. Wet weather monitoring is not required if the permittee conducted wet weather monitoring under the MS4-2003 and has supporting documentation. Wet weather monitoring is not required in Problem Catchments. If the area draining to a particular outfall has less than 10 percent impervious cover; drains one acre or less; or the land use is low density residential or forest/pasture, wet weather monitoring is not required. The permit also includes an option that does not require individual outfall sampling, but rather that allows the permittee to conduct wet and dry weather in-stream monitoring in water segments with “representative outfalls”. “Representative outfalls” are outfalls that are in proximity to one another; have similar catchment areas with similar pollutants; and discharge to the same water segment.

EPA invites comments on the scope of the outfall monitoring program.

If an outfall discharges directly to a water that is impaired, (see the Massachusetts 303(d) list referenced above) the permittee must also sample for the pollutant identified as the cause of impairment provided a test method for the pollutant is included in 40 CFR part 136 (also see Appendix H of the permit). If the pollutant is present, the permittee must implement procedures for the control measures required by Part 2.4 of the permit to address or eliminate the pollutants.

G. Evaluation, Record Keeping and Reporting

Program Evaluation (Part 5.1)

The permittee must periodically evaluate its SWMP for the following: compliance with the terms of the permit, the appropriateness of the identified BMPs, and progress towards achieving the

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objective of the control measure and the permittee's measurable goals. The permittee may need to change its selected BMPs identified in the SWMP based on this evaluation process in order to ensure compliance with the terms of the permit, including water quality-based requirements.

Record Keeping (Part 5.2)

The permittee must keep all records required by this permit for a period of five years from the date the record is generated. The permittee must submit records only when requested by EPA. The SWMP must be available to members of the public who request a copy.

Reporting (Part 5.3)

The permittee must submit an annual report. The reporting year is July 1 through June 30 and annual reports are due August 1. The due date for the annual report in the draft permit is a change from the annual report due date of MS4-2003. EPA is proposing this change to more closely conform to the fiscal year of many municipalities. EPA invites comment on this proposed change. The report must include a self-assessment regarding compliance with the terms of the permit, the appropriateness of selected BMPs, and the progress towards achieving the permittee identified measurable goals. The report must also contain a summary of any information that has been collected and analyzed. This includes all data. The permittee must also indicate what activities are planned for the next reporting cycle and discuss any changes to either BMPs or measurable goals. The report must indicate if any control measure or measurable goal is the responsibility of another entity.

The draft permit contains more detailed reporting requirements than in the previous permit. Reports must contain sufficient information to enable EPA to assess the permittee's compliance with the permit.

The following is list of some key milestones within the draft permit:

Within 90 days of the effective date:

- Submit NOI

Within 120 days of authorization:

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- Written and updated SWMP and BMP goals

Within six (6) months of the effective date of the permit

- Complete inventory of all permittee-owned facilities

End of year one of the permit

- Begin distribution of at least two (2) educational messages to one or more of the targeted audiences. Total of eight message by end of the permit term.
- Completion of illicit discharge potential assessment and ranking
- Completion of written protocol regarding responsibility for fixing illicit connections and discharges, confirming their removal and tracking program process
- Complete written systematic protocol for locating and removing illicit connections
- Estimation of impervious cover in each delineated sub-watershed
- Written Operations and Maintenance procedures for municipal operations.
- Written Stormwater Pollution Prevention Plan for maintenance garages and waste handling facilities

End of year two of the permit

- Complete status of PCP (see Part 2.2.1(d)(ix))
- Complete map of separate storm sewer system
- Complete report which assesses street design guidelines and parking requirements
- Implement monitoring program
- Inventory and monitor 25 percent of outfalls during both wet and dry weather (this continues annually for the remainder of the permit term)

End of year three of the permit

- Complete implementation of systematic procedure for locating and removing illicit connections in 50 percent of MS4 area

End of year four of the permit

- Begin implementation of PCP

End of year five of the permit

- Complete implementation of the systematic protocol for locating and removing illicit connections in 100 percent of MS4 area

Annual activities

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- Provide at least one opportunity for public participation
- Provide employee training
- Complete comprehensive site evaluations at the permittee's facilities with a SWPPP

Reports are due annually on August 1 and must be submitted to the address provided in the permit.

H. Standard Permit Conditions

40 CFR §§ 122.41 and 122.42 establish requirements that must be in all NPDES permits. Appendix B of the draft general permit includes these requirements.

I. 401 Water Quality Certification

Section 401 of the CWA provides that no Federal license or permit, including NPDES permits, to conduct any activity that may result in any discharge into navigable waters shall be granted until the State in which the discharge originates certifies that the discharge will comply with the applicable provisions of Sections 301, 302, 303, 306, and 307 of the CWA. The Section 401 certification process is for this process is currently underway by Massachusetts Department of Environmental Protection. Specific 401 certification requirements are contained in Part 4.0 of the draft permit.

III. INFORMATION AND RESOURCES

EPA has developed several tools to assist MS4s in the development of their stormwater management programs. The following is a non-inclusive list of some of the available resources:

1. MS4 Program Evaluation Guidance and the Illicit Discharge Detection and Elimination Guidance Manual is available from EPA's publications website:
http://cfpub1.epa.gov/npdes/pubs.cfm?program_id=6
2. Menu of BMPs available at: <http://www.epa.gov/npdes/menuofbmps/menu.htm>
3. Measurable Goals Guidance available at:
<http://cfpub1.epa.gov/npdes/stormwater/measurablegoals/index.cfm>

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4. EPA Stormwater Home page: <http://www.epa.gov/npdes/stormwater> contains links to stormwater publications including the Illicit Discharge Detection and Elimination guidance manual; model ordinances; and educational materials including EPA stormwater webcast series.
5. Source Water Practices Bulletin. Managing Stormwater Runoff to Prevent Contamination of Drinking Water: <http://www.epa.gov/safewater/swp/stormwater.pdf>
6. Center for Watershed Protection: <http://www.cwp.org>
7. Financing Stormwater Management: <http://stormwaterfinance.urbancenter.iupui.edu>
8. Low Impact Development : <http://www.lowimpactdevelopment.org> and Low Impact Development Urban design tools: <http://www.lid-stormwater.net>
9. TMDL information is available at: <http://www.epa.gov/region1/eco/tmdl/approved.html>
10. Water Quality Standards: <http://www.epa.gov/waterscience/standards/wqslibrary/>
11. Stormwater Center: www.stormwatercenter.net
12. New England Interstate Water Pollution Control Commission: www.neiwpcc.org
13. Smart Growth: www.smartgrowth.org and <http://www.epa.gov/smartgrowth/>
14. EPA Region I, Drinking Water Program: Drinking Water and Underground Injection Control <http://www.epa.gov/region01/eco/drinkwater/epacontacts.html>

IV. OTHER LEGAL REQUIREMENTS

A. Environmental Impact Statement Requirements

The draft general permits do not authorize discharges from any new sources as defined under 40 CFR §122.2. Therefore, the National Environmental Policy Act, 33 U.S.C. Sections 4321 *et seq.*, does not apply to the issuance of these general NPDES permits.

B. Section 404 Dredge and Fill Operations

This draft permit does not constitute authorization under 33 USC Section 1344 (Section 404 of the Clean Water Act) of any discharge of dredged or fill material into waters of the United States.

C. Executive Order 12866

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EPA has determined that this draft general permit is not a “significant regulatory action” under the terms of Executive Order (EO) 12866 (58 FR 51735, October 4, 1993) and is therefore not subject to review under the EO.

D. Paperwork Reduction Act

The information collection requirements of this draft permit were previously approved by the Office of Management and Budget(OMB) under the provisions of the Paperwork Reduction Act, 44 USC 3501 *et seq.* and assigned OMB control number 2040-0086 (NPDES permit application) and 2040-0004 (Monitoring Reports).

E. Regulatory Flexibility Act

The Regulatory Flexibility Act (RFA), 5 U.S.C. 601 *et seq.*, requires that EPA prepare a regulatory flexibility analysis for rules subject to the requirements of 5 U.S.C. 553(b) that have a significant impact on a substantial number of small entities. The permit proposed today, however is not a rule subject to the requirements of 5 U.S.C. 553(b) and is therefore not subject to the RFA.

F. Unfunded Mandates Reform Act

Section 201 of the Unfunded Mandates Reform Act (UMRA), Public Law 104-4, generally requires Federal agencies to assess the effects of their “regulatory actions” on tribal, state, and local governments and the private sector. The UMRA defines “regulatory actions” to include proposed or final rules with Federal mandates. The draft permit proposed today, however, is not a “rule” and is therefore not subject to the requirements of UMRA.