Summary of Major Changes between 2003 General Permit for Stormwater Discharges from Small MS4s (MS4-2003) and 2010 Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts North Coastal Watersheds

2003 Final Permit	2010 Draft Permit
Area of Coverage	
Small MS4s in the: • Commonwealth of Massachusetts; • State of New Hampshire; • Indian Country lands within the States of Connecticut, Massachusetts, and Rhode Island; and • Federal Facilities within the State of Vermont.	Small MS4s owned by: • cities and towns, • a state, a county, or the United States, and • state transportation agencies located in the Northern Coastal Watersheds as shown here: http://www.epa.gov/region1/npdes/stormwater/ma/MA_PermitType.pdf .
Notice of Intent Requirements	
• Name and contact information of person responsible for SWMP coordination; • Name of the permittee and location; • Legal status of the operator of the MS4; • Names of all known waters that receive a discharge from the MS4. If known, indicate the number of outfalls discharging to each water; • Describe how the eligibility criteria for listed species/critical habitat and historic properties have been met; • Identify BMPs for each MCM ; • Identify measurable goals for each BMP including implementation time frames and contact person; and • NOI signed by an appropriate official and contain certification statement.	In addition to NOI requirements from MS4-2003, small MS4s covered must also submit: • Responsible party email; • Location of SWMP; • Status of outfall map; • Status of Bylaws/Ordinances; • Number of outfalls contributing to each receiving water; and • Summary and assessment of 2003 SWMP. Small MS4s not covered by the May 1, 2003 small MS4 general permit (MS4-2003) must use the form designated by the MassDEP. NOI due to EPA and MassDEP 90 days from the effective date of the permit.
Stormwater Management Program (SWMP)	
Develop a program implementing the six MCMs. For each MCM, identify the BMPs for the MCM, identify responsible party, measurable goals, and timelines and milestones for implementation.	Permittees must develop written SWMP within 120 days of date of authorization. Permittees covered by the MS4-2003 shall modify or update their existing SWMP to meet the terms and conditions of this permit.

Summary of Major Changes between 2003 General Permit for Stormwater Discharges from Small MS4s (MS4-2003) and 2010 Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts North Coastal Watersheds

2003 Final Permit	2010 Draft Permit
	SWMP must be signed and dated by appropriate official as defined in Appendix B. Any significant revisions shall also be signed and dated by appropriate official defined in Appendix B. SWMP must contain: • Names and titles of people responsible for program implementation. • List of all receiving waters, their classification under the applicable state water quality standards, any impairments, and number of outfalls that discharge to each water. • Documentation of ESA compliance; • Documentation of NRHP compliance; • MS4 system map; • Description of practices to achieve compliance with Water Quality Based Effluent Limitations, discharges to impaired waters, and new and increased discharges. This includes development of a Phosphorus Control Plan (PCP). • Documentation of compliance with MCMs. Identify BMPs for each MCM, the person(s) or department responsible for the measure, measurable goal(s) for each BMP (include milestones and timeframes for its implementation and have a quantity or quality associated with its endpoint. Each goal shall have a measure of assessment associated with it) • Description of measures to avoid or minimize impacts to public drinking surface water and groundwater. • Documentation of outfall monitoring program • Documentation of compliance with additional state requirements • Annual program evaluation

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2003 Final Permit	2010 Draft Permit
Discharge to Impaired Waters *with* an Approved TMDL	
Determine whether the approved TMDL is for a pollutant likely to be found in storm water discharges from the MS4 and if TMDL includes a pollutant waste load allocation (WLA), BMP recommendations or other performance requirements for storm water discharges. Assess whether the WLA is being met through implementation of existing stormwater control measures or if additional control measures are necessary. Describe in SWMP and annual reports all measures to control pollutants of concern identified in approved TMDL(s). Include a schedule of implementation for all planned controls. Document the assessment which demonstrates that the WLA will be met including any calculations, maintenance log books, or other appropriate controls.	Comply with approved TMDL and permit provisions to ensure that discharges from the small MS4 do not cause or contribute to an exceedance of water quality standards. Implement specific BMPs and other permit requirements to meet WLA that applies to MS4 discharges Permittees that operate regulated MS4s located within municipalities that discharge to the Charles River or within its tributary watershed must reduce phosphorus loading to support achievement of the WLA included in the approved TMDLs for nutrients. For this purpose, the permittee shall develop a Phosphorus Control Plan (PCP) that describes measures necessary to reduce the amount of phosphorus in discharges from its MS4 to the Charles River and its tributaries to achieve consistency with the WLA for the phosphorous loadings published in the *Final TMDL for Nutrients in the Lower Charles River Basin* (June 2007, CN 301.1). Permitees that have small MS4s located in the Neponset River Watershed or the Shawsheen River Basin that are subject to an approved TMDL for bacteria shall highlight in their annual report all control measures implemented during the reporting period or planned to be implemented in the upcoming reporting period to control the pollutants identified in the approved TMDLs. The permittee shall include in the annual report and the SWMP the basis supporting the permittee's determination that such controls are adequate to meet the waste load reductions required by the TMDL.
Discharge to Impaired Waters *without* an Approved TMDL	
Determine whether storm water discharges from any part of the MS4 contribute, either directly or indirectly, to a 303(d) listed water body.	Comply with requirements to meet state water quality standards (Part 2.1.1).

Summary of Major Changes between 2003 General Permit for Stormwater Discharges from Small MS4s (MS4-2003) and 2010 Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts North Coastal Watersheds

2003 Final Permit	2010 Draft Permit
SWMP include description of how the program will control the discharge of the pollutants of concern and ensure that the discharges will not cause an instream exceedance of the water quality standards. Identify control measures and BMPs that will control the discharge of the pollutant(s) of concern.	Address in SWMP and annual reports how the MS4 discharges which contribute to pollutant loads and/or conditions identified as causing the impairment will be controlled such that they do not cause or contribute to the impairment. This includes assessing the potential for discharges from the MS4 to the impaired waters to contribute the pollutant(s) of concern;. identifying BMPs in addition to or modified from those already existing in the SWMP to ensure that discharges do not cause or contribute to the impairment; and implementing identified additional BMPs and include the appropriateness of each BMP in each annual report.
SWMP - Minimum Control Measures	
Develop a program implementing the six MCMs. All elements of the SWMP must be implemented by permit expiration date of May 1, 2008. Can share implementation with another entity.	If covered under the MS4-2003, continue to implement existing SWMP developed under MS4-2003 while updating SWMP pursuant to the new permit. Compliance deadlines set forth in the MS4-2003 are not extended. MCM implementation can be shared with another entity or other entity may fully implement measure. A legally binding written agreement concerning this obligation is required. Cooperation between interconnected municipal separate storm sewer systems is strongly encouraged. MS4 system map required as part of the IDDE program must show interconnections.
Public Education and Outreach	
Develop education program to distribute educational material to the community. Provide information concerning the impact of storm water discharges on water bodies and steps/actions the public can take to reduce the	At a minimum, provide information concerning the impact of stormwater discharges on water bodies within the community, especially those waters that are impaired or identified as priority waters. The program shall identify steps and/or activities that the public can take to reduce the pollutants in stormwater runoff and their impacts to the environment.

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2003 Final Permit	2010 Draft Permit
pollutants in runoff.	Educational program must include education and outreach efforts to (1) residents, (2) businesses, institutions, and commercial facilities, (3) developers (construction), and (4) industrial facilities. Distribute a minimum of two educational messages over the permit term to each of the four audiences, for a total of at least eight educational messages. Space distribution at least a year apart. Educational program must express specific messages, define the targeted audience for each message, and identify responsible parties for program implementation. Focus on pollutants of concern for impaired waters and priority waters (such as beaches, shell fishing areas, and drinking water supplies) within the MS4. For MS4s submitted to approved TMDLs (as listed in Appendix G, Tables G-1, G-3 and G-4), additional requirements apply.
Public Participation and Involvement	
Comply with state public notice requirements. Provide opportunities for the public to participate in implementation and review of SWMP program.	Comply with state public notice requirements (Massachusetts General Laws Chapter 39 Section 23B). Make the SWMP and all annual reports available to the public. Annually provide the public an opportunity to participate in the review and implementation of the stormwater management program Report on the activities undertaken to provide public participation opportunities.
Illicit Discharge Detection and Elimination (IDDE) Program	
Develop, implement, and enforce a program to detect and eliminate illicit discharges.	During the development of the new components of the IDDE program required by this permit, permittees authorized by the MS42003 shall continue to implement the IDDE program required by the MS4-2003.

Summary of Major Changes between 2003 General Permit for Stormwater Discharges from Small MS4s (MS4-2003) and 2010 Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts North Coastal Watersheds

2003 Final Permit	2010 Draft Permit
Develop a MS4 map showing location of all outfalls and receiving waters and names. Effectively prohibit, through a bylaw/ordinance, non-storm water discharges into the MS4 and implement appropriate enforcement procedures and actions. Develop and implement a plan to detect and address non-storm water discharges including illegal dumping, into the MS4. Plan must include procedures to identify priority areas; locate illicit discharge; locate the source of the discharge; remove the source; and document actions and evaluate impacts of removal on MS4. Inform the public employees, businesses, and general public of hazards of illicit discharges and improper waste disposal. Address any allowable non-storm water discharges if they are determined to be significant contributes of pollutants to the MS4.	Prohibit Sanitary Sewer Overflows (SSOs) and all other illicit discharges to MS4 and require removal of such discharges. Upon detection of an illicit discharge, eliminate an illicit discharge as expeditiously as possible. Identify all responsible parties for such a discharge and require immediate cessation of improper disposal practices in accordance with its legal authorities. Where elimination of an illicit discharge within 30 days of its confirmation is not possible, establish an expeditious schedule for its elimination. No later than 6 months after its confirmation such discharge shall be eliminated or appropriate enforcement actions shall be initiated by the permittee against any party responsible for the discharge. At a minimum, the owner of the illicit connection shall be notified in writing about the illicit connection and expected remedy of the situation. In the interim, take all reasonable and prudent measures to minimize the discharge of pollutants to its MS4. Implement control measures to address any allowable non-storm water discharges if they are determined to be significant contributes of pollutants to the MS4. Upon detection, eliminate SSOs immediately and take all interim mitigation measures to minimize the discharge of pollutants into and from its MS4 until elimination is completed. Identify all known SSOs that have not yet been eliminated or for which the underlying cause has not yet been identified or corrected and develop an inventory these SSOs. Update inventory annually. Document in SWMP and annual reports. Provide written notice to EPA and MassDEP of new SSOs.

2003 Final Permit	2010 Draft Permit
	Develop a paper or GIS map of the entire MS4 including catch basins, interconnections to other small MS4s, treatment structures associated with the separate storm sewer system, any other structures associated with the system, and outfalls and receiving waters. The map shall provide a comprehensive depiction of key infrastructure and factors influencing proper system operation and the potential for illicit sanitary sewer discharges. Update map as necessary and report on progress in annual reports. Additional mapping requirements apply to MS4s located in areas listed in Appendix G, Table G-1 of the permit, including additional infrastructure, operation and maintenance, investigations, remediation, and capital projects and PCP mapping requirements. Conduct an outfall inventory for each stream mile within regulated jurisdiction that receives a discharge from the MS4, beginning with the priority catchments. Label each outfall in the field with a unique identifier and record dimensions, shape, material, spatial location (GPS), physical condition and sensory observations (such as odor, color, turbidity, floatables, or oil sheen). If flow is observed at the outfall during the inventory, a sample of the flow shall be collected and analyzed for conductivity, turbidity, pH, chlorine, temperature, surfactants (as MBAS), potassium, ammonia and *E.coli* or enterococcus. Develop written IDDE program that includes: • Documentation of adequate legal authority (ordinance/bylaw) to prohibit illicit discharges, • Protocol for IDDE program responsibilities; • Assessment of priority catchments and problem catchments; • Systematic procedure for locating and removing illicit connections;

2003 Final Permit	2010 Draft Permit
	• Illicit discharge prevention procedures; • Indicators of IDDE program progress; and • Annual training program. Delineate the small MS4 into catchments and evaluate each catchment for potential illicit discharges. Include catchments on map. Identify Problem Catchments. Using specific screening factors that are reflective of existing conditions of the MS4, rank each catchment not designated as a Problem Catchment as "high," "medium", or "low" for its potential to have illicit discharges. Document results in written IDDE program, in SWMP, and in annual report. Identify and provide information on Problem Catchments in annual report. Develop a written systematic procedure for locating and removing illicit connections that includes dry weather outfall screening, wet weather outfall monitoring, determining the potential source of any illicit connections or discharge, and documenting the elimination of the illicit connection or discharge. Complete systematic implementation of the illicit discharge detection procedure. Document in SWMP and annual reports. Additional requirements apply to MS4s located in areas listed in Appendix G, Table G-1. Develop and implement mechanisms and procedures designed to prevent illicit discharges and SSOs. Define or describe indicators for tracking program success. Evaluate and report the overall effectiveness of the program based on the tracking indicators in the annual report. Comply with required IDDE milestones.

Summary of Major Changes between 2003 General Permit for Stormwater Discharges from Small MS4s (MS4-2003) and 2010 Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts North Coastal Watersheds

2003 Final Permit	2010 Draft Permit
	At a minimum, annually train employees about the IDDE program including how to recognize illicit discharges and SSOs. Document in the SWMP and in the annual report.
Construction Site Stormwater Runoff Control	
Develop, implement and enforce a program to reduce pollutant from construction projects disturbing one or more acres (or projects less than one acre if they are part of a larger common plan of development that will disturb one or more acres). Program must include: • A bylaw/ordinance to require sediment and erosion control at construction sites; • Sanctions to ensure compliance with the program, including monetary and non-monetary penalties; • Requirements for construction site operators to implement a sediment and erosion control program; • Requirements for control of wastes, including but not limited to discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes; • Procedures for site plan review which incorporate consideration of potential water quality impacts and include procedures for preconstruction review; • Procedures for receipt and consideration of information submitted by the public; and • Procedures for inspections and enforcement of control measures at construction sites.	Continue to implement and enforce a program to reduce pollutants in any stormwater runoff discharged to the MS4 from construction activities that result in a land disturbance of greater than or equal to one acre (or disturbances less than one acre if that disturbance is part of a larger common plan of development or sale). Program must include: • An ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites; • Written procedures for site inspections and enforcement of sediment and erosion control measures at construction sites. Clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures; • Requirements for construction site operators performing land disturbance activities within the MS4 jurisdiction that result in stormwater discharges to the MS4 to implement a sediment and erosion control program that includes BMPs appropriate for the conditions at the construction site; • Requirements for construction site operators within the MS4 jurisdiction to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes; and • Written procedures for site plan review, including a review of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development. Incorporate procedures for the consideration of potential water quality impacts; procedures for pre-construction review; and

2003 Final Permit	2010 Draft Permit
	procedures for receipt and consideration of information submitted by the public. Also include evaluation of opportunities for use of low impact design and green infrastructure. Track the number of site reviews, inspections, and enforcement actions in the SWMP and include in each annual report.
Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management)	
Develop, implement and enforce a program to address run off from new development and redevelopment projects which disturb one or more acres (or projects less than one acre if they are part of a larger common plan of development that will disturb one or more acres). The program must include: • A bylaw/ordinance to address post construction runoff in new development and redevelopment; • Procedures to ensure long term operation and maintenance of best management practices; and • Procedures to ensure controls will prevent or minimize impacts to water quality.	Continue to implement and enforce a program to address stormwater runoff from new development and redevelopment projects that disturb one or more acres (or disturbances less than one acre if that disturbance is part of a larger common plan of development or sale) and discharge into the municipal stormwater system. The program must include: • An ordinance/bylaw that regulates runoff from new development and redevelopment projects; • Amend or modify, as appropriate, the ordinance or other regulatory mechanism to contain provisions related the Massachusetts Stormwater Management Standards; • Procedures to ensure that any stormwater controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality; • Requirements for submission of as-built drawings within 90 days of completion of construction projects; • Procedures to ensure adequate long-term operation and maintenance of stormwater management practices that are put in place after the completion of a construction project. Develop a report assessing current street design and parking lot guidelines and other local requirements that affect the creation of

2003 Final Permit	2010 Draft Permit
	impervious cover. If the assessment indicates that changes can be made, the assessment shall include recommendations and proposed schedules to incorporate policies and standards into relevant documents and procedures to minimize impervious cover attributable to parking areas and street designs. Report on assessment in SWMP and annual reports. Develop a report assessing existing local regulations to determine the feasibility of making green roofs, infiltration practices, and water harvesting practices allowable when appropriate site conditions exist. Estimate changes in the number of acres of impervious area (IA) and directly connected impervious area (DCIA) tributary to the MS4 from the initial base line provided by EPA or determined by the permittee, tabulated by sub-basins or catchments. Report acres of DCIA that have been added or removed during the prior year in annual reports. Complete an inventory and priority ranking of MS4-owned property and infrastructure (including public right-of-way) that may have the potential to be retrofitted with BMPs designed to reduce the frequency, volume, and peak intensity of stormwater discharges to and from its MS4 Report on MS4 owned properties and infrastructure that have been retrofitted with BMPs designed to reduce the frequency, volume, and peak intensity of stormwater discharges, and also report on their pollutant loadings.
Good Housekeeping and Pollution Prevention	
Develop and implement program with goal of preventing and/or reducing pollutant runoff from municipal operations. Train employees about stormwater.	Develop written operations and maintenance procedures for the municipal activities related to parks and open space, buildings and facilities, and vehicles and equipment.

Summary of Major Changes between 2003 General Permit for Stormwater Discharges from Small MS4s (MS4-2003) and 2010 Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts North Coastal Watersheds

2003 Final Permit	2010 Draft Permit
Develop and implement maintenance activities and schedules for parks and open space; fleets; buildings; new construction and land disturbance; road way drainage and stormwater systems. Develop inspection procedures and schedules for long term structural controls.	Develop an inventory of all permittee owned facilities. Review this inventory annually and update as necessary. Establish or continue an existing program to repair and rehabilitate its MS4 infrastructure in a timely manner to reduce or eliminate the discharge of pollutants from the MS4. Optimize routine cleaning and maintenance of catch basins. Establish procedures for sweeping and/or cleaning streets, sidewalks, and permittee-owned parking lots. Establish procedures for winter road maintenance including the use and storage of salt and sand. Establish inspection and maintenance frequencies and procedures for the storm drain systems and for all structural stormwater BMPs such as swales; retention/detention basins or other structures. Report on good housekeeping and pollution prevention in the annual report and keep written records of all required activites. Develop and implement a SWPPP for each of the permittee-owned facilities, unless facility is covered by a currently effective Multi-Sector General Permit or other NPDES permit. For MS4s submitted to approved TMDLs (as listed in Appendix G, Tables G-1, G-3 and G-4), additional requirements apply.
Outfall Monitoring Program	
None required.	For permittees covered by the MS4-2003 permit, implement an outfall monitoring program no later than the beginning of the second year of the permit. Start monitoring of outfalls in highest priority areas. Conduct at least one dry weather screening and analytical monitoring

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2003 Final Permit	2010 Draft Permit
	and at least one wet weather analytical monitoring of each outfall within 5 years of the effective date of this permit (with some exceptions). Conduct field screening and analytical monitoring at locations where stormwater from the MS4 is transferred to another MS4 (interconnected monitoring). For permittees not covered by the MS4-2003, monitoring requirements shall commence by the beginning of year four of the permit, unless system map required as part of IDDE program is completed sooner.
Program Evaluation	
Annual evaluation of SWMP compliance with permit conditions. Evaluate appropriateness of selected BMPs in efforts towards achieving the defined measureable goals.	Annual self-evaluation of permit compliance. Include annual self-evaluation in SWMP. Evaluate the appropriateness of the selected BMPs in achieving the objectives of each control measure and the defined measurable goals.
Record Keeping	
All records required by the permit must be kept for at least five years. Records include information used in the development of the SWMP, any monitoring, copies of reports, and all data used in the development of the NOI. All records related to the permit, including the SWMP, must be available to the public.	All records required by the permit must be kept for a period of at least five years. EPA may extend this period at any time. Records include, but are not limited to: information used in the development of any written program required by this permit, any monitoring results, copies of reports, records of screening, follow-up and elimination of illicit discharges; maintenance records; inspection records; and data used in the development of the notice of intent, SWMP, SWPPP, and annual reports. All records relating to the permit, including the SWMP, must be available to the public.

Summary of Major Changes between 2003 General Permit for Stormwater Discharges from Small MS4s (MS4-2003) and 2010 Draft General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4s) in Massachusetts North Coastal Watersheds

2003 Final Permit	2010 Draft Permit
Reporting	
Submit an annual report due each year by May 1, covering the activities of the previous calendar year. Annual report contains: • self assessment; • BMP appropriateness assessment; • assessment of progress towards achieving measurable goals; • summary of information collected an analyzed including data; • activities for next reporting cycle; • discussion of SWMP and BMP changes; and • identification of reliance on other entities. Annual report format allows for optional metrics	Submit an annual report each year by August 1, covering the activities of the previous July 1 through June 30. Annual report contains: • self-assessment; • BMP appropriateness assessment; • status of the any plans or activities required by Part 2.2.1 and/ or Part 2.2.2 (Discharges to Impaired Waters); • assessment of the progress towards achieving the measurable goals and objectives for each of the MCMs and any additional state reporting requirements; • outfall monitoring data that has been collected and analyzed, including data collected as part of the outfall inventory required in Part 2.4.4 and as part of the outfall monitoring program described in Part 3.0; • for discharges to impaired waters, identification of specific BMPs used to address the pollutant identified as the cause of impairment and the BMPs effectiveness at controlling the pollutant. • activities for next reporting cycle; • discussion of SWMP and BMP changes; and • identification of reliance on other entities.
Requirements for State and Federal Non-Traditional MS4s and Requirements for State Transportation Agencies	
Parts IV and V of MS4-2003	State non-traditional MS4s are properties owned and operated by the Commonwealth of Massachusetts. All requirements and conditions of Parts 1 – 5 above apply to these MS4s with exceptions or adjustments related to public education, ordinances and regulatory mechanisms, assessment of regulations, and federal development and redevelopment projects.