

Part I: General Conditions

General Information

Name of Municipality or Organization: State:

EPA NPDES Permit Number (if applicable):

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Fax Number:

Other Information

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

Eligibility Determination

Endangered Species Act (ESA) Determination Complete?

Eligibility Criteria (check all that apply): A B C

National Historic Preservation Act (NHPA) Determination Complete?

Eligibility Criteria (check all that apply): A B C

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

MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete? If 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published:
If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted? Effective Date or Estimated Date of Adoption (MM/DD/YY):
(Part II, III, IV or V, Subpart B.3.(b.) of 2003 permit)

Construction/Erosion and Sediment Control (ESC) Authority Adopted? Effective Date or Estimated Date of Adoption (MM/DD/YY):
(Part II, III, IV or V, Subpart B.4.(a.) of 2003 permit)

Post- Construction Stormwater Management Adopted? Effective Date or Estimated Date of Adoption (MM/DD/YY):
(Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit)

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

Part II: Summary of Receiving Waters

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

Massachusetts list of impaired waters: [Massachusetts 2014 List of Impaired Waters- http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf](http://www.mass.gov/eea/docs/dep/water/resources/07v5/14list2.pdf)

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment										Other pollutant(s) causing impairments
		Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	
MA-84A-03 Merrimack River	18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mercury, PCB
MA-84A-04 Merrimack River	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Mercury and PCB
MA83-19 Shawsheen River	6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fecal Coliform
MA84A-10 Spicket River	54	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Debris, Physical substrate, Aquatic Macroinverts, Copper, Mercury
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

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Part III: Stormwater Management Program Summary

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

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

MCM 1: Public Education and Outreach

BMP Media/Category (enter your own text to override the drop down menu)	BMP Description	Targeted Audience	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal	Beginning Year of BMP Implementation
Mailing	Consumer Confidence Report	Residents	Water and Sewer	Deliver Annually - Track Numbers Distributed	2018
Mailing	Consumer Confidence Report	Businesses, Institutions and Commercial Facilities	Water and Sewer	Deliver Annually- Track Numbers Distributed	2018
Brochures/Pamphlets	During Building Permit	Developers (construction)	Water and Sewer	Deliver during building permit- Track Numbers Distributed	2018
Mailing	Consumer Confidence Report	Industrial Facilities	Water and Sewer	Deliver Annually- Track Numbers Distributed	2018
Web Page	Spring Fertilizer, Summer Pet Waste, and Fall Leaf Pick-up	Residents	Water and Sewer	Post Annually- Track Likes	2018
Web Page	Spring Fertilizer, Summer Pet Waste, and Fall Leaf Pick-up	Businesses, Institutions and Commercial Facilities	Water and Sewer	Post Annually- Track Likes	2018
Brochures/Pamphlets	During Building Permit	Developers (construction)	Water and Sewer	- Track Numbers Distributed	2018
Web Page	Spring Fertilizer, Summer Pet Waste, and Fall Leaf Pick-up	Industrial Facilities	Water and Sewer	Post Annually- Track Likes	2018
Brochures/Pamphlets	During Dog Licensing	Residents	Water and Sewer	Deliver during dog licensing	2018

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Part III: Stormwater Management Program Summary (continued)

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP Categorization (enter your own text to override the drop down menu)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
SSO inventory	Develop SSO inventory in accordance of permit conditions	Water and Sewer	Complete within 1 year of effective date of permit	2018
Storm sewer system map	Create map and update during IDDE program completion	Water and Sewer	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2018
Written IDDE program	Create written IDDE program	Water and Sewer	Complete within 1 year of the effective date of permit and update as required	2018
Implement IDDE program	Implement catchment investigations according to program and permit conditions	Water and Sewer	Complete 10 years after effective date of permit	2018
Employee training	Train employees on IDDE implementation	Water and Sewer	Train annually	2018
Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions	Water and Sewer	Complete 3 years after effective date of permit	2018
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	Water and Sewer	Complete 10 years after effective date of permit	2018
Ongoing screening	Conduct dry weather and wet weather screening (as necessary)	Water and Sewer	Complete ongoing outfall screening upon completion of IDDE program	2018

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

Part III: Stormwater Management Program Summary (continued)

MCM 4: Construction Site Stormwater Runoff Control

BMP Categorization <small>(enter your own text to override the drop down menu or entered text)</small>	BMP Description	Responsible Department/Parties <small>(enter your own text to override the drop down menu)</small>	Measurable Goal <small>(all text can be overwritten)</small>	Beginning Year of BMP Implementation
Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement procedures	Engineering	Complete within 1 year of the effective date of permit	2018
Site plan review	Complete written procedures of site plan review and begin implementation	Engineering	Complete within 1 year of the effective date of permit	2018
Erosion and Sediment Control	Adoption of requirements for construction operators to implement a sediment and erosion control program	Engineering	Complete within 1 year of the effective date of permit	2018
Waste Control	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	Engineering	Complete within 1 year of the effective date of permit	2018

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

Part III: Stormwater Management Program Summary (continued)

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

BMP Categorization (enter your own text to override the drop down menu or entered text)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP	Engineering	Require submission of as-built plans for completed projects	2018
Target properties to reduce impervious areas	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually	Engineering	Complete 4 years after effective date of permit and report annually on retrofitted properties	2018
Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	Engineering	Complete 4 years after effective date of permit and implement recommendations of report	2020
Street design and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.	Engineering	Complete 4 years after effective date of permit and implement recommendations of report	2020

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

Part III: Stormwater Management Program Summary (continued)

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP Categorization <small>(enter your own text to override the drop down menu or entered text)</small>	BMP Description	Responsible Department/Parties <small>(enter your own text to override the drop down menu)</small>	Measurable Goal <small>(all text can be overwritten)</small>	Beginning Year of BMP Implementation
O&M procedures	Create written O&M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment	DPW Operations	Complete and implement 2 years after effective date of permit	2018
Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory	DPW Operations	Complete 2 years after effective date of permit and implement annually	2018
Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	Water and Sewer	Complete 2 years after effective date of permit	2018
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	Water and Sewer	Complete and implement 2 years after effective date of permit	2019
Catch basin cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule	Water and Sewer	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually	2018
Street sweeping program	Sweep all streets and permittee-owned parking lots in accordance with permit conditions	DPW Operations	Sweep all streets and permittee-owned parking lots once per year in the spring	2018
Road salt use optimization program	Establish and implement a program to minimize the use of road salt	DPW Operations	Implement salt use optimization during deicing season	2018

Part IV: Notes and additional information

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

Click to add text

Part V: Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:

Title:

Signature: 

Date:

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

Note: When prompted during signing, save the document under a new file name

BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
6.5	Conduct site inspection procedures consistent with SWPPP for maintenance garages, public works yards, transfer stations, and waste handling facilities	2.3.7.b.iii.	Inspect all areas exposed to stormwater and all stormwater control measures at each facility at least once per calendar quarter and report findings in annual report.	Once per quarter upon completion of BMP 6.3, document annually.
6.6	Conduct employee training program consistent with SWPPP	2.3.7. h.	Conduct employee training consistent with SWPPP.	Every other Permit Year

1.2 WATER QUALITY STANDARDS

1.2.1 Impaired Waters

Discharges to waterbodies with approved Total Maximum Daily Load (TMDL) or to water quality limited water bodies, or discharges causing or contributing to impairments have additional requirements in parts 2.1 and 2.2 of the MS4 General Permit. According to MassDEP's 2014 Integrated List of Waters, the City of Lawrence MS4 discharges to waterbodies that have an approved TMDL and waterbodies that are considered impaired but do not have an approved TMDL. A list of impaired waters that are within the City of Lawrence and their impairments causes is provided in Table 1-1 in this section. A map showing MassDEP's 2014 Integrated List of Waters for the City of Lawrence is provided in Appendix C of this SWMP.

Additional Requirements for Discharges to Impaired Waterbodies with an Approved TMDL

City of Lawrence is located within the Merrimack River watershed. As noted in Table 1-1, the City discharges to the Shawsheen River, which has a TMDL. There are additional requirements for areas that discharge into this waterbody segment in the General Permit, and they are discussed in this Section.

Shawsheen River TMDL for Fecal Coliform

The following is a summary of the additional requirements associated with the Shawsheen River Fecal Coliform TMDL, per Appendix F Part A.III of the General Permit:

- Enhancement of BMPs required by part 2.3 of the permit that will be implemented during this permit term:
 - Public Education and Outreach
 - Once per year, the City will produce a message to pet owners, encouraging the proper management of pet waste. Educational materials will be distributed to dog owners at the time of issuance or renewal of a dog license, or other appropriate time. Education materials will describe the detrimental impacts of improper management of pet waste, requirements for waste collection and disposal, and penalties for non-compliance.
 - Once per year, the City will provide information to owners of septic systems in catchments that discharge to the Shawsheen River, about proper maintenance (as applicable). There are very limited, if any, septic systems within the City.
 - Illicit Discharge
 - Catchments draining the Shawsheen River will be designated either Problem Catchments or HIGH

priority in implementation of the IDDE program.

Additional Requirements for Discharges to Impaired Waterbodies Without an Approved TMDL

For direct discharges to impaired waterbody segments without an approved TMDL, there are additional control measures or BMPs that have been established, as required by parts 2.1 and 2.2 of the MS4 General Permit. Among the impairment causes are the following:

- Total Phosphorus
- Bacteria or pathogens (i.e. Escherichia Coli)
- Aquatic Macroinvertebrate Bioassessments
- Copper
- Polychlorinated biphenyls (PCBs) in Fish Tissue
- Mercury in Fish Tissue
- Mercury in Water Column

Therefore, some of the requirements of Appendix H in the General Permit apply. A description of the permit requirements and BMPs related to impaired waters, and measurable goal(s) for each BMP have been integrated into Section 1.1 of this SWMP. The schedule for distribution of educational and public outreach notifications is listed below, as well as in the City's Outreach and Education Plan. The following is a summary of these additional permit requirements, per Appendix H of the General Permit:

For the areas that discharge to waters impaired by **Total Phosphorus** but have no approved phosphorus TMDL (Merrimack River):

- Public Education and Outreach
 - The City will supplement annual messages to the public in the springtime (March/April) on disposal of yard waste and fertilizer use.
 - The City will supplement annual messages to the public in the summertime (June/July) on pet waste management.
 - The City will supplement annual messages to the public in the fall (September/October) on proper disposal of leaf litter.
- Stormwater Management in New Development and Redevelopment
 - The City will require that new development or redevelopment stormwater management BMPs be optimized for phosphorus removal.
 - Consider BMPs that infiltrate stormwater where feasible in retrofit inventory and priority ranking of municipal properties/infrastructure.
- Good House Keeping and Pollution Prevention
 - The City will establish housekeeping procedures to manage grass cuttings and leaf litter on municipal property.
 - The City will increase street sweeping frequencies on municipally owned streets and parking lots.
- Phosphorous Source Identification Report
 - Within four years of the permit effective date, the City will develop a Phosphorous Source

Identification Report (that will be submitted to EPA as part of the year 4 annual report) that includes:

- Calculation of total MS4 area draining to the water quality limited receiving water segments or their tributaries
 - Incorporation of updated mapping of the MS4 and catchment delineations produced pursuant to part 2.3.4.5
 - All screening and monitoring results pursuant to part 2.3.4.7.b., targeting the receiving water segment(s)
 - Impervious area and DCIA for the target catchment
 - Identification, delineation and prioritization of potential catchments with high phosphorus loading
 - Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment, including the removal of impervious area
- Potential Structural BMPs
 - Within five years of the permit effective date, the City will evaluate all of its properties identified as presenting retrofit opportunities or areas for structural BMP installation under permit part 2.3.6.d.ii or identified in the Phosphorus Source Identification Report that are within the drainage area of the water quality limited water or its tributaries. The evaluation will include:
 - The next planned infrastructure, resurfacing or redevelopment activity planned for the property (if applicable) OR planned retrofit date
 - The estimated cost of redevelopment or retrofit BMPs
 - The engineering and regulatory feasibility of redevelopment or retrofit BMPs.
 - The City will provide a listing of planned structural BMPs and a plan and schedule for implementation in the year five annual report.
 - The City will plan and install a minimum of one structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries within six years of the permit effective date. The demonstration project will be installed targeting a catchment with high phosphorus load potential.
 - The City will install the remainder of the structural BMPs in accordance with the plan and schedule provided in the year five annual report.

For the areas that discharge to waters impaired by **bacteria or pathogens** but have no approved bacteria TMDL (Merrimack River and Spicket River):

- Public Education and Outreach
 - The City will supplement residential public education and outreach program with an annual message encouraging the proper management of pet waste and proper maintenance of septic systems.
- IDDE Program
 - Designate catchments draining to any waterbody impaired for bacteria or pathogens as either Problem or High Priority catchments in implementation of the IDDE program.

For the areas that discharge to waters impaired by **solids, oils, and grease (hydrocarbons), or metals**, but have no approved TMDL (Spicket River):



- Stormwater Management in New Development and Redevelopment:
 - The City will ensure that stormwater management systems designed on commercial and industrial land use area draining to the water quality limited waterbody will incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency spill or other unexpected event.
- Good House Keeping and Pollution Prevention
 - The City will increase street sweeping frequency of all municipal owned streets and parking lots to target areas with potential for high pollutant loads. This may include, but is not limited to, increased street sweeping frequency in commercial areas and high-density residential areas, or drainage areas with a large amount of impervious area.
 - The City will prioritize inspection and maintenance for catch basins to ensure that no sump will be more than 50 percent full.

Table 1-1: Impaired Waters in Lawrence, MA (Based on Approved Integrated List – 2014)

Segment ID	Name	Impairment Category Classification	Impairments	EPA TMDL No.	Pollutant of Concern Sampling Requirements
Waterbodies in the Merrimack Watershed:					
MA84A-03 MA84A-04	Merrimack River	Category 5	Escherichia coli	NA	- E. coli
			PCB in Fish Tissue (only for segment MA84A-03)	NA	- NMR*
			Phosphorus (total)	NA	- Phosphorus, Total
			Mercury in Fish Tissue	NA	- NMR
MA83-19	Shawsheen River	Category 5	Fecal Coliform	2587	- Fecal Coliform
			Oxygen, Dissolved	NA	- Dissolved oxygen - BOD5 - Temperature - Total Phosphorus (fresh water)** - Total Nitrogen (marine water)***
MA84A-10	Spicket River	Category 5	(Debris/Floatables/Trash)	NA	- NMR
			(Physical substrate habitat alterations*)	NA	- NMR
			Aquatic Macroinvertebrate Bioassessments	NA	- Contact MassDEP
			Copper	NA	- Copper, Total
			Escherichia coli	NA	- E. coli
			Mercury in Water Column	NA	NMR unless potentially present such (e.g., salvage yards crushing vehicles with Hg switches)

*Sampling Requirements listed are per Appendix G of 2016 MS4 General Permit. NMR: No Monitoring Required

** "Total Phosphorus (freshwater)" indicates monitoring required for total phosphorus where stormwater discharges to a water body that is freshwater

*** "Total Nitrogen (marine water)" indicates monitoring required for total nitrogen where stormwater discharges to a water body that is a marine or estuarine water

Note: Reissuance and/or approval of the Massachusetts Integrated List of Waters may necessitate modifications to this Plan to maintain compliance with applicable requirements.