

Stormwater Management Program (SWMP)

Town of Tewksbury, MA

EPA NPDES Permit Number MA-041226

Certification

Authorized Representative (Optional): All reports, including SWPPPs, inspection reports, annual reports, monitoring reports, reports on training and other information required by this permit must be signed by a person described in Appendix B, Subsection 11.A or by a duly authorized representative of that person in accordance with Appendix B, Subsection 11.B. If there is an authorized representative to sign MS4 reports, there must be a signed and dated written authorization.

The authorization letter is:

Attached to this document (document name listed below)

Publicly available at the website below

<https://www.tewksbury-ma.gov/stormwater>

"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 gathered and evaluated 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, 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."

Printed Name

Richard A. Mantuoci

Signature

Richard A. Mantuoci

Date

6/26/19

[Click Here for Revisions](#)

Background

Stormwater Regulation

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted stormwater runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Under the Phase II rule all MS4s with stormwater discharges from Census designated Urbanized Area are required to seek NPDES permit coverage for those stormwater discharges.

Permit Program Background

On May 1, 2003, EPA Region 1 issued its Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2003 small MS4 permit) consistent with the Phase II rule. The 2003 small MS4 permit covered "traditional" (i.e., cities and towns) and "non-traditional" (i.e., Federal and state agencies) MS4 Operators located in the states of Massachusetts and New Hampshire. This permit expired on May 1, 2008 but remained in effect until operators were authorized under the 2016 MS4 general permit, which became effective on July 1, 2018.

Stormwater Management Program (SWMP)

The SWMP describes and details the activities and measures that will be implemented to meet the terms and conditions of the permit. The SWMP accurately describes the permittees plans and activities. The document should be updated and/or modified during the permit term as the permittee's activities are modified, changed or updated to meet permit conditions during the permit term. The main elements of the stormwater management program are (1) a public education program in order to affect public behavior causing stormwater pollution, (2) an opportunity for the public to participate and provide comments on the stormwater program (3) a program to effectively find and eliminate illicit discharges within the MS4 (4) a program to effectively control construction site stormwater discharges to the MS4 (5) a program to ensure that stormwater from development projects entering the MS4 is adequately controlled by the construction of stormwater controls, and (6) a good housekeeping program to ensure that stormwater pollution sources on municipal properties and from municipal operations are minimized.

Town Specific MS4 Background (optional)

The Town of Tewksbury, along with 13 other neighboring communities, is part of the Northern Middlesex Stormwater Collaborative (NMSC), which is a regional stormwater collaborative that undertakes many of the public education, procurement, management and administrative tasks necessary for managing Stormwater in the Northern Middlesex region.

Website: www.nmstormwater.org

Small MS4 Authorization

The NOI was submitted on

The NOI can be found at the following (document name or web address):

Authorization to Discharge was granted on

The Authorization Letter can be found (document name or web address):

Stormwater Management Program Team

SWMP Team Coordinator

Name	Brian Gilbert	Title	Director of Public Works
Department	Public Works Department		
Phone Number	19786404440 x 233	Email	bgilbert@tewksbury-ma.gov
Responsibilities	Oversight of the operations and budget of the Stormwater Management Program		

SWMP Team

Name	Kevin Hardiman	Title	Town Engineer
Department	Public Works Department - Engineering Division		
Phone Number	19786404440 x 257	Email	khardimann@tewksbury-ma.gov
Responsibilities	Manages the operations, budget and implementation of the Stormwater Management Program		

Name	Arthur G. Markos	Title	Project Manager
Department	Public Works Department - Engineering Division		
Phone Number	19786404440 x 237	Email	amarkos@tewksbury-ma.gov
Responsibilities	Manages the implementation the Stormwater Management Program		

Name	Chester Cheng	Title	Project Manager
Department	Public Works Department - Engineering Division		
Phone Number	19786404440 x 246	Email	ccheng@tewksbury-ma.gov
Responsibilities	Manages the GIS Mapping of Stormwater infrastructure		

Add SWMP Member

Receiving Waters

The following table lists all receiving waters, impairments and number of outfalls discharging to each waterbody segment.

OR

The information can be found in the following document or at the following web address:

https://www.tewksbury-ma.gov/sites/tewksburyma/files/uploads/tewksbury_drainagesystem_and_receivingwaters.pdf

Waterbody segment that receives flow from the MS4	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Shawsheen River (MA83-13)	16	<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, Mercury in Fish Tissue (TMDL for Coliform)
Strongwater Brook (MA83-07)	12	<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"/>	Fecal Coliform (TMDL for Coliform)
Pinnacle Brook (Unamed Tributary to Meadow Brook) (MA83-15)	3	<input checked="" 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"/>	Fecal Coliform (TMDL for Coliform)
Merrimack River (MA84A-03)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mercury in Fish Tissue, PCB in Fish Tissue
Wetland Draining to Concord River (MA82A-08)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Eurasian Water Milfoil, Myriophyllum spicatum*), (Non-native Aquatic Plants*) Mercury in Fish Tissue
Log Pond (MA83010)	4	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Exces Algal growth, Secchi disk transparency
Ames Pond (MA83001)	4	<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"/>	Mercury in Fish Tissue

|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

			Chloride	Chlorophyll-a	Dissolved Oxygen/ DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Small Pond behind Walmart	2		<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"/>	
Wetland near Brown Street draining to Shawsheen River	1		<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"/>	
Mud Pond	6		<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"/>	
Wetland near Dakota Road	1		<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"/>	
Small Wetland near Decoris Drive draining to Shawsheen River	1		<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"/>	
Waterbody segment that receives flow from the MS4	Number of outfalls into receiving water segment		<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"/>	
Pond in front of Market Basket	1		<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"/>	
Wetland to Shawsheen River along Redgate Road	7		<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"/>	
Ponds in the Country Club	18		<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"/>	
Wetland near John Street	5		<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"/>	
Wetlands connecting the Unnamed Tributary between Stronwater River and Round Pond and Heath Brook	21		<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"/>	
Wetland near Victor Drive	4		<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"/>	
Wetland near Lucille Drive	1		<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"/>	
Wetland behind Lumber Lane	1		<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"/>	
Wetland near Judique Road	1		<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"/>	
Wetland through Tewksbury Center	10		<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"/>	
Wetland along Cayuga Road	1		<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"/>	
Wetland along Catamount Road	2		<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"/>	
Wetland near Lancaster Drive	2		<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"/>	
Wetland between Windsor Drive and Merston Street	5		<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"/>	
Wetlands along Farwood Road	7		<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"/>	
Wetland near Bopete Lane	2		<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"/>	

Waterbody segment that receives flow from the MS4	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Wetlands in Melvin Rogers Park	2	<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"/>	
Wetland draining to Ames Pond	1	<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"/>	
Wetland near Beech Street	1	<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"/>	
Wetland near East Street and Maple Street	2	<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"/>	
Wetlands around Jennies Way	5	<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"/>	
Small Wetland between Strong Water Brook and Round Pond, near Henry J. Drive	5	<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"/>	
Small wetland around Patten Road	4	<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"/>	
Small wetland tributary to Shawsheen River between Kearsage and Lowe Street	5	<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"/>	
Wetlands near Bruce Street	4	<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"/>	
Wetlands near Thorndike Lane	2	<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"/>	
Wetland tributary to Trull Brook	3	<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"/>	
Wetlands near Sawyers Lane	2	<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"/>	
Wetlands around Fiske Street	10	<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"/>	
Wetland around Andover Street	3	<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"/>	
Pond near Apache Way (North/East)	8	<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"/>	
Pond near Apache Way (North)	4	<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"/>	
Waterbody segment that receives flow from the MS4	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Pond near Apache Way (South)	4	<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"/>	
Stream behind Bonnie Lane	4	<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"/>	
Wetland to Pinnacle Brook	1	<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"/>	

Eligibility: Endangered Species and Historic Properties

*Reminder: The proper consultations and updates to the SWMP must be conducted for construction projects related to your permit compliance where Construction General Permit (CGP) coverage, which requires its own endangered species and history preservation determination, is NOT being obtained.

Attachments:

- The results of Appendix C U.S. Fish and Wildlife Service endangered species screening determination
- The results of the Appendix D historic property screening investigations
- If applicable, any documents from the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other Tribal representative to mitigate effects

These attachments are required within one year of the permit effective date and are:

- Attached to this document (document names listed below)

- Publicly available at the website listed below

https://www.tewksbury-ma.gov/sites/tewksburyma/files/uploads/noi_approval_from_epa.pdf

Under what criterion did permittee determine eligibility for ESA?

- Criterion A Criterion B Criterion C

Under what criterion did permittee determine eligibility for Historic Properties?

- Criterion A Criterion B Criterion C

Below add any additional measures for structural controls that you're required to do through consultation with U.S. Fish and Wildlife Service (if applicable):

Below add any additional measures taken to avoid or minimize adverse impacts on places listed, or eligible for listing, on the NRHP, including any conditions imposed by the SHPO or THPO (if applicable):

MCM 1

Public Education and Outreach

Permit Part 2.3.2

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

Examples and Templates:

[EPA's Stormwater Education Toolbox](#)

[MassDEP's Stormwater Outreach Materials](#)

Other templates relevant to MCM 1 can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#peo>

BMP: Dedicated Town Web Page

BMP Number (Optional) _____

Document Name and/or Web Address:

Description:

Continued maintenance and updates the Town's stormwater webpage to provide information to residents on stormwater management. Includes all targeted messages and documents for public viewing.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Amount of visitors per permit period

Message Date(s):

BMP: "All About Stormwater" Brochure Distribution

BMP Number (Optional) _____

Document Name and/or Web Address:

Description:

Tri-fold brochure "All About Stormwater" to be available for download and viewing on the website and to be disturbed at displays at following public buildings:

- Library
- Town Hall (2 Locations)
- Senior Center
- Police Station
- Public Works Building

Brochure will be further distributed at various public awareness events around town

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Track number of copies distributed during permit year

Message Date(s):

BMP: Resident Salt Use Public Awareness Message

BMP Number (Optional) PAM #1

Document Name and/or Web Address:

Description:

Public Awareness Message for Alternatives for De-Icing At Your Home or Business.

The message is to distributed town-wide on our website, posted to facebook, twitter and broadcast though the town local access tv station.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Amount of visitors per page permit period. Amount of views on facebook, twitter and amount of runs on local access tv station

Message Date(s):

BMP: Commercial and Contractor Road Salt Use Public Awareness Message

BMP Number (Optional) PAM # 2

Document Name and/or Web Address:

Description:

Public Awareness Message for Snow Removal and Salt/Sand Contractors.

The message is to distributed town-wide on our website, posted to facebook, twitter and broadcast though the town local access tv station.

Additionally the message will be delivered annual in Town Plow Packet for private contractors working under the town's sanding, salting and snow removal contact

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Amount of visitors per page during permit period. Amount of views on facebook, twitter and amount of runs on local access tv station

Message Date(s):

BMP: Pest Waste Disposal Public Awareness Message

BMP Number (Optional) PAM #3

Document Name and/or Web Address:

Description:

Public Awareness Message for proper disposal of pet wastes.

The message is to distributed town-wide on our website, posted to facebook, twitter and broadcast though the town local access tv station.

A messages is included in the text of all new and renewed dog permits

Additionally a message via door hanger in problem area where pet waste has been discovers in the grated catch basins or wetland/wooded areas

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Amount of visitors per page during permit period. Amount of views on facebook, twitter and amount of runs on local access tv station

Reduction of imporper pet disposal in identified problem areas

Message Date(s):

BMP: Lawn Maintenance and Yard Waste Tips Public Awareness Message

BMP Number (Optional) PAM #4

Document Name and/or Web Address:

Description:

Public Awareness Message for Tips abut lawn maintenance and yard waste.

The message is to distributed town-wide on our website, posted to facebook, twitter and broadcast though the town local access tv station.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Amount of visitors per page during permit period. Amount of views on facebook, twitter and amount of runs on local access tv station

Increase in leaf pick up volumes

Message Date(s): Bi-annually between April - July and September - November of Permit Year

BMP: Septic Systems Maintenance Public Awareness Message

BMP Number (Optional) PAM #5

Document Name and/or Web Address: www.tewksbury-ma.gov/stormwater

Description:

Public Awareness Message for Tips for homeowners about maintaining there septic system and what do do if its failing.

The message is to distributed town-wide on our website, posted to facebook, twitter and broadcast though the town local access tv station.

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

Amount of visitors per page during permit period. Amount of views on facebook, twitter and amount of runs on local access tv station

Increase in homes/business connecting to town sewer

Message Date(s): Annually between April - July and September - November of Permit Year

BMP:Swimming Pool Draining Tips

BMP Number (Optional) PAM #6

Document Name and/or Web Address: www.tewksbury-ma.gov/stormwater

Description:

Public Awareness Message for home owners driang there swimming pools into the streets and catchbasins

The message is to distributed town-wide on our website, posted to facebook, twitter and broadcast though the town local access tv station.

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

Amount of visitors per page during permit period. Amount of views on facebook, twitter and amount of runs on local access tv station

Decrease in reports of resident draining chlorinated pools into the town stormwater sydstem

Message Date(s): Annually September - November of Permit Year

BMP: Stormwater Pollution Prevention for Industrial Sites Brochure Distribution

BMP Number (Optional) _____

Document Name and/or Web Address: https://www.tewksbury-ma.gov/sites/tewksburyma/files/uploads/industrial_sites_stormwater_brochure.pdf

Description:

Stormwater Pollution Prevention for Industrial Sites brochure to be available for download and viewing on the website and to be disturbed at the Public Works Building

Brochure to be distributed by mail to all properties in town classified as industrial facilities or sites

Targeted Audience: Industrial facilities

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track the amount of Brochures distributed and mailed.

Decrease amount of pollution and illicit discharge incidents at industrial sites

Message Date(s): Annually between April - July and September - November of Permit Year

BMP: Licensed Drain Layers Construction Site BMP's Mailing

BMP Number (Optional) _____

Document Name and/or Web Address: <https://www.tewksbury-ma.gov/stormwater>

Description:

List of Stormwater Best Management Practices (BMPs) for Construction Sites to be available on the website and to be disturbed at the Public Works Building

List to be distributed by mail to all Licensed Drain Layers during license renewal

Targeted Audience: Developers (construction)

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track the amount mailed annually

Decrease in number of silting and stowmwater pollution incidents per year from sites of Licensed Drain Layers

Message Date(s): Annually at Liscence Renewal in January

BMP: Business Owners Stormwater Tips Mailing

BMP Number (Optional) _____

Document Name and/or Web Address: <https://www.tewksbury-ma.gov/stormwater>

Description:

Brochure to be distributed by mail to all properties in town classified as businesses or commercial sites

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track the amount mailed annually

Decrease in number of silting and stowmwater pollution incidents per year from sites of in around town's businesses.

Message Date(s): Annually in April-July

BMP:Special Events and Presentaions

BMP Number (Optional) _____

Document Name and/or Web Address: <https://www.tewksbury-ma.gov/stormwater>

Description:

Staff a booth at Town-wide public events and provide educational information about pet waste, car washing, yard care and stormwater impacts to local residents.

Provide educational stormwater presentation to tips to various groups in towns (students, groups) and track dates and amount of attended

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track dates and quantity of any materials that are distributed

Message Date(s): July 1, 2018 to Present Day

BMP:Consumer Confidence Report (CCR)

BMP Number (Optional) _____

Document Name and/or Web Address: Consumer Confidence Report (CCR) - Water Treatment Plant

Description:

Annual Newsletter that is distributed to entire town will include Stormwater Information

Targeted Audience: Residents, Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Track dates and quantity of any materials that are distributed

Message Date(s): _____

BMP:Catchbasin Stenciling

BMP Number (Optional) _____

Document Name and/or Web Address: _____

Description:

Coordinate with volunteer groups and supply them with location maps, paint and safety equipment for catch basin stenciling

Targeted Audience: Residents

Responsible Department/Parties: Engineering

Measurable Goal(s):

Track dates, locations and quantity of catch basin stenciled

Message Date(s):

Add BMP

MCM 2
Public Involvement and Participation
Permit Part 2.3.3

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

BMP: Public Review of Stormwater Management Program

BMP Number (Optional) _____

Location of Plan and/or Web Address:

Responsible Department/Parties:

Measurable Goal(s):

Stormwater Management Plan is publicly available. Allow for public review of the SWMP annually. Post the SWMP and annual reports on the Town's website.

BMP: Public Participation in Stormwater Management Program Development

BMP Number (Optional) _____

Description:

Provide public notice for stormwater committee meetings and allow public access to stormwater meeting schedule and meeting minutes on town website.

Responsible Department/Parties:

Measurable Goal(s):

Measure amount of public involvement and input annually

BMP: Cleanups - Roadside/General

BMP Number (Optional) _____

Document Name and/or Web Address:

Description:

Continue to encourage public participation in clean-up days and zero waste days, including Earth Day. Continue to facilitate and support annual cleanups.

Responsible Department/Parties:

Measurable Goal(s):

Measure amount of public involvement and input annually.
Track volume of materials gathered annually at events

BMP: Hazourdous Waset and Oil Drop Off

BMP Number (Optional) _____

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

BMP: Used Battery Drop Off

BMP Number (Optional) _____

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

MCM 3

Illicit Discharge Detection and Elimination (IDDE) Program

Permit Part 2.3.4

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

Examples and Templates:

[IDDE Program Template and SOPs](#)

Other templates relevant to IDDE can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#idde>

BMP: IDDE Legal Authority

BMP Number (Optional) _____

Completed (by May 1, 2008)

Ordinances Link or Reference:

Department Responsible for Enforcement:

BMP: Sanitary Sewer Overflow (SSO) Inventory

BMP Number (Optional) _____

Completed (by year 1)

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

SSO Reporting:

In the event of an overflow or bypass, a notification must be reported within 24 hours by phone to MassDEP, EPA, and other relevant parties. Follow up the verbal notification with a written report following MassDEP's Sanitary Sewer Overflow (SSO)/Bypass notification form within 5 calendar days of the time you become aware of the overflow, bypass, or backup.

<p>The MassDEP contacts are:</p> <p>Northeast Region (978) 694-3215 205B Lowell Street Wilmington, MA 01887</p> <p>Central Region (508) 792-7650 8 New Bond Street Worcester, MA 01606</p> <p>Southeast Region (508) 946-2750 20 Riverside Drive Lakeville, MA 02347</p> <p>Western Region (413) 784-1100 436 Dwight Street Springfield, MA 01103</p> <p>24-hour Emergency Line 1-888-304-1133</p>	<p>The EPA contacts are:</p> <p>EPA New England (617) 918-1510 5 Post Office Square Boston, MA 02109</p>
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BMP: Map of Storm Sewer System

BMP Number (Optional) _____ **Phase I Completed** **Phase II Completed**
(by year 2) (by year 10)

Document Location and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

BMP: IDDE Program

BMP Number (Optional) _____ **Written Document Completed** (by year 1)

Document Name and/or Web Address:

Description:

Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts, hereafter referred to as the "2016 Massachusetts MS4 Permit" or "MS4 Permit."

Responsible Department/Parties: Engineering

Measurable Goal(s):

Conduct 100% of outfall screening on High and Low Priority Outfalls within 3 years of the permit's effective date. Complete catchment investigations for 100% of the Problem Outfalls within 7 years of the permit's effective date. Complete 100% of all catchment investigations within 10 years of the permit's effective date.

The outfall/interconnection inventory and initial ranking and the dry weather outfall and interconnection screening and sampling results can be found:

BMP: Employee Training

BMP Number (Optional) _____

Description:

Yearly Stormwater and IDDE training to all employees who work in the field or perform regular inspections. Training aimed to help employees identify types and sources of illicit discharges.

Responsible Department/Parties: Engineering

Measurable Goal(s):

Training occurs annually.

BMP: Dry Weather Screening

BMP Number (Optional) _____

Completed

Document Name and/or Web Address:

Description:

Conduct dry weather outfall screening and sampling in accordance with permit conditions.

Responsible Department/Parties: Engineering

Measurable Goal(s):

Complete within 3 years of permit effective date.

BMP:Wet weather screening

BMP Number (Optional) _____

Completed

Document Name and/or Web Address:

Description:

Conduct wet weather sampling at outfalls/interconnections in catchments where System Vulnerability Factors are present in accordance with permit conditions.

Responsible Department/Parties:

Measurable Goal(s):

Complete within 10 years of permit effective date.

BMP: Ongoing screening

BMP Number (Optional) _____

Completed

Document Name and/or Web Address:

Description:

Conduct dry weather and wet weather screening (as necessary)

Responsible Department/Parties:

Measurable Goal(s):

Complete ongoing outfall screening upon completion of IDDE investigations.

BMP:Priority Ranking

BMP Number (Optional) _____

Completed

Document Name and/or Web Address:

Description:

Assess and rank the potential for all catchments to have illicit discharges. Identify catchments with System Vulnerability Factors that will necessitate wet weather sampling

Responsible Department/Parties: Engineering

Measurable Goal(s):

Complete within 1 year of permit effective date

BMP:Follow-up Ranking

BMP Number (Optional) _____ **Completed**

Document Name and/or Web Address: _____

Description:

Update catchment prioritization and ranking as dry weather screening information becomes available.

Responsible Department/Parties: Engineering

Measurable Goal(s):

Complete within 3 years of permit effective date.

BMP:Catchment Investigation Procedures

BMP Number (Optional) _____ **Completed**

Document Name and/or Web Address: Included in IDDE Plan

Description:

Develop written catchment investigation procedures and incorporate into IDDE Plan

Responsible Department/Parties: Engineering

Measurable Goal(s):

Complete within 18 months of permit effective date

BMP: Monitor Septic Systems

BMP Number (Optional) _____ **Completed**

Document Name and/or Web Address: Records of Failing Title 5 Septics are Kept by Health Department

Description:

Continue to allow for reports of failing septic systems and connect to Town Sewer System when septic fails

Responsible Department/Parties: Health Department

Measurable Goal(s):

Continue to monitor reports and conduct remediation when possible. Record number of issues addressed through this program.

Add BMP

MCM 4

Construction Site Stormwater Runoff Control

Permit Part 2.3.5

Objective: The objective of an effective construction stormwater runoff control program is to minimize or eliminate erosion and maintain sediment on site so that it is not transported in stormwater and allowed to discharge to a water of the U.S. through the permittee's MS4.

Examples and Templates:

Examples and templates relevant to MCM 4, including model ordinances and site inspection templates, can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#csrc>

BMP: Sediment and Erosion Control Ordinance

BMP Number (Optional) _____

Completed (by May 1, 2008)

Ordinances Link or Reference:

Department Responsible for Enforcement:

BMP: Site Plan Review Procedures

BMP Number (Optional) _____

Written procedures completed (by year 1)

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

BMP: Site Inspections and Enforcement of Sediment and Erosion Control Measures Procedures

BMP Number (Optional) _____

Completed (by year 1)

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

BMP: Waste Control

BMP Number (Optional) _____

Completed

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

MCM 5

Post Construction Stormwater Management in New Development and Redevelopment

Permit Part 2.3.6

Objective: The objective of an effective post construction stormwater management program is to reduce the discharge of pollutants found in stormwater to the MS4 through the retention or treatment of stormwater after construction on new or redeveloped sites and to ensure proper maintenance of installed stormwater controls.

Examples and Templates:

Examples and templates relevant to MCM 5, including model ordinances and bylaw review templates and guidance can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#pcsm>

BMP: Post-Construction Ordinance

BMP Number (Optional) _____

Completed (by year 2)

Town Ordinances Link or Reference:

Department Responsible for Enforcement:

BMP: Street Design and Parking Lot Guidelines Report

BMP Number (Optional) _____

Completed (by year 4)

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

BMP: Green Infrastructure Report

BMP Number (Optional) _____

Completed (by year 4)

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

BMP: List of Municipal Retrofit Opportunities

BMP Number (Optional) _____

Completed (by year 4)

Document Name and/or Web Address:

Description:

Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce frequency, volume, and pollutant loads associated with sotrmwater discharges, and update annually

Responsible Department/Parties:

Measurable Goal(s):

The list is completed by July 1, 2022 and updated as needed.

BMP: Ensure stormwater controls or management practices for new development and redevelopment

BMP Number (Optional) _____

Completed

Document Name and/or Web Address:

Description:

Section 19.120 of the Town's General Bylaws currently requires compliance with the Massachusetts Stormwater Management Standards, and includes retention and treatment requirements for post-construction stormwater controls. Review existing regulatory requirements and update as needed to ensure full compliance with permit conditions.

Responsible Department/Parties:

Measurable Goal(s):

Complete within two years of permit effective date.

Add BMP

MCM 6

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Permit Part 2.3.7

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

Examples and Templates:

Examples and templates relevant to MCM 6, including SOP templates for catch basin cleaning, street sweeping, vehicle maintenance, parks and open space management, winter deicing, and Stormwater Pollution Prevention Plans can be found here: <https://www.epa.gov/npdes-permits/stormwater-tools-new-england#gh>

PERMITTEE OWNED FACILITIES

BMP: Parks and Open Spaces Operations and Maintenance Procedures

BMP Number (Optional) _____

Written Document Completed (by year 2)

Document Name and/or Web Address: <https://www.tewksbury-ma.gov/engineering-division/webforms/stormwater-operations-and-maintenance-plans>

Description:

Update existing O&M procedures as needed to include all requirements for parks and open spaces

Responsible Department/Parties: Engineering

Measurable Goal(s):

Implement the SOP listed above on 100% of the parks and open spaces.

Properties List (Optional):

BMP: Buildings and Facilities Operations and Maintenance Procedures

BMP Number (Optional) _____

Written Document Completed (by year 2)

Document Name and/or Web Address: <https://www.tewksbury-ma.gov/engineering-division/webforms/stormwater-operations-and-maintenance-plans>

Description:

Update existing O&M procedures as needed to include all requirements for buildings and facilities, and vehicles and equipment.

Responsible Department/Parties: Engineering

Measurable Goal(s):

Implement the SOP listed above on 100% of buildings and facilities.

Properties List (Optional):

SCHOOLS
Heath Brook School
John F Ryan School
John W Wynn School
Public Library
Loella Dewing School

Louise Davey Trahan School
High School

FIRE STATIONS

Central Fire Station
North Fire Station
South Fire Station

MUNICIPAL BUILDINGS

Police Station
Senior Center
Town Hall
Town Hall Annex
Water Treatment Plant
Department of Public Works Building

BMP: Vehicles and Equipment Operations and Maintenance Procedures

BMP Number (Optional) _____

Written Document Completed (by year 2)

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

Properties List (Optional):

INFRASTRUCTURE

BMP: Infrastructure Operations and Maintenance Procedures

BMP Number (Optional) _____

Written Procedure Completed (by year 2)

Document Name and/or Web Address:

Description:

Update existing O&M procedures as needed to include all requirements for repair and rehabilitation of MS4 infrastructure

Responsible Department/Parties: Engineering

Measurable Goal(s):

100% of infrastructure is maintained to ensure proper function in accordance with the procedures above.

BMP: Catch Basin Cleaning Program

BMP Number (Optional) _____

Written Procedure Completed (by year 1)

Document Name and/or Web Address: Catchbasin Cleaning Program - SOP

Description:

Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule

Responsible Department/Parties: Engineering

Measurable Goal(s):

All catch basins are cleaned in accordance to the document above such that no catch basin is more than 50% full at any given time. Clean catch basins on established schedule and report number of catch basins cleaned and volume of material removed annually

BMP: Street Sweeping Program

BMP Number (Optional) _____

Written Procedure Completed (by year 1)

Document Name and/or Web Address: Street Sweeping Program - SOP

Description:

Sweep all streets and permittee-owned parking lots in accordance with permit conditions

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Annually sweep 100% of all streets and 50% of all municipal parking lots in accordance with the schedule listed above. Sweep all streets and permittee-owned parking lots once per year in the spring. Sweep selected streets a second time in the fall to meet requirements specific to impaired waters

BMP: Winter Road Maintenance Program

BMP Number (Optional) _____

Written Procedure Completed (by year 1)

Document Name and/or Web Address: Winter Road Maintenance Program - SOP

Description:

Establish and implement a program to minimize the use of road salt

Responsible Department/Parties: DPW Operations

Measurable Goal(s):

Evaluate at least one salt/chloride alternative for use in the municipality.

BMP: Stormwater Treatment Structures Inspection and Maintenance Procedures

BMP Number (Optional) _____

Completed (by year 1)

Document Name and/or Web Address: Stormwater Treatment Structures - SOP and Inspection Form

Description:

Establish and implement inspection and maintenance procedures and frequencies

Responsible Department/Parties: Engineering

Measurable Goal(s):

Inspect and maintain 100% of treatment structures to ensure proper function. Inspect and maintain treatment structures at least annually. Report number of structures inspected and cleaned annually.

BMP: SWPPP

BMP Number (Optional) _____

Completed (by year 2)

Document Name and/or Web Address: <https://www.tewksbury-ma.gov/engineering-division/webforms/stormwater-operations-and-maintenance-plans>

Description:

Continue to implement SWPPPs developed for the Town's DPW facility at 999 Whipple Road and the water treatment plant at 71 Merrimac Drive. Review existing SWPPPs and update as needed to meet permit requirements.

Responsible Department/Parties: Engineering

Measurable Goal(s):

Develop and implement SWPPPs for 100% of facilities.

BMP:

BMP Number (Optional) _____

Completed

Document Name and/or Web Address:

Description:

Responsible Department/Parties:

Measurable Goal(s):

Add BMP

Annual Evaluation

Year 1 Annual Report

Document Name and/or Web Address:

Year 2 Annual Report

Document Name and/or Web Address:

Year 3 Annual Report

Document Name and/or Web Address:

Year 4 Annual Report

Document Name and/or Web Address:

Year 5 Annual Report

Document Name and/or Web Address:

Year X Annual Report

Document Name and/or Web Address:

Add a Year

TMDLs and Water Quality Limited Waters

Select the applicable Impairment(s) and/or TMDL(s).

Impairment(s)

- Bacteria/Pathogens Chloride Nitrogen Phosphorus
 Solids/oil/grease (hydrocarbons)/metals

TMDL(s)

In State:

- Assabet River Phosphorus Bacteria and Pathogen Cape Cod Nitrogen
 Charles River Watershed Phosphorus Lake and Pond Phosphorus

Out of State:

- Bacteria and Pathogen Metals Nitrogen Phosphorus

Clear Impairments and TMDLs

Bacteria/Pathogens

Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Shawsheen River (MA83-18) (APPROVED TMDL)	Bacteria/Pathogens	<input type="button" value="+"/> <input type="button" value="-"/>
Strong Water Brook (MA83-07) (APPROVED TMDL)	Bacteria/Pathogens	<input type="button" value="+"/> <input type="button" value="-"/>
Pinnacle Brook (Unnamed Tributary to Meadow Brook) (MA83-15) (APPROVED TMDL)	Bacteria/Pathogens	<input type="button" value="+"/> <input type="button" value="-"/>
Trull Brook (MA84A-14)	E. Coli	<input type="button" value="+"/> <input type="button" value="-"/>

Annual Requirements Beginning Year 1

Rank outfalls to these receiving waters as high priority for IDDE implementation in the initial outfall ranking

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

Public Education and Outreach

(Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information))

Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

-Dedicated Town Web Page
 -"All About Stormwater" Brochure Distribution
 -Public Awareness Message (PAM #3) - Pest Waste Disposal Public Awareness Message which is also featured on Dog Licenses issued by the office of the Town Clerk.

Permittee or its agents disseminate educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

-Dedicated Town Web Page

- "All About Stormwater" Brochure Distribution
- Public Awareness Message (PAM #3) - Pest Waste
- Disposal Public Awareness Message which is also featured on Dog Licenses issued by the office of the Town Clerk.

Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

- Dedicated Town Web Page
- "All About Stormwater" Brochure Distribution
- Public Awareness Message (PAM #5) - Septic Systems Maintenance Public Awareness Message

Chloride

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Pinnacle Brook (Unnamed Tributary to Meadow Brook) (MA83-15)	Chloride	<input type="button" value="+"/> <input type="button" value="-"/>
Unnamed Tributary to Shawsheen River (MA83-20)	Chloride	<input type="button" value="+"/> <input type="button" value="-"/>

Annual Requirements Beginning Year 1

Public Education and Outreach

(Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information))

Include an annual message in November/December to private road salt applicators and commercial industrial site owners on the proper storage and application rates of winter deicing material, along with the steps that can be taken to minimize salt use and protect local waterbodies

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

- Dedicated Town Web Page
- "All About Stormwater" Brochure Distribution
- Public Awareness Message (PAM #1) - Resident Salt Use Public Awareness Message
- Public Awareness Message (PAM #2) - Commercial and Contractor Road Salt Use Public Awareness Message

Requirements Due by Year 3

Develop a Salt Reduction Plan

The document name (if attached) and/or web address is/are:

Requirements Due by Year 4

Continue implementation of the Salt Reduction Plan

Requirements Due by Year 5

Fully implement the Salt Reduction Plan

Phosphorus

Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies)	TMDL Name (if applicable)	Add/Delete Row
Merrimack River (MA84A-03)	Phosphorous	<input type="button" value="+"/> <input type="button" value="-"/>
Concord River (MA82A-08)	Phosphorous	<input type="button" value="+"/> <input type="button" value="-"/>
Long Pond (MA83010)	Phosphorous	<input type="button" value="+"/> <input type="button" value="-"/>

Annual Requirements Beginning Year 1

Public Education and Outreach

(Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information))

 Distribute an annual message in the spring (April/May) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release and phosphorus-free fertilizers

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

-Dedicated Town Web Page
 -"All About Stormwater" Brochure Distribution
 -Public Awareness Message (PAM #4) - Lawn Maintenance and Yard Waste Tips Public Awareness Message

 Distribute an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

-Dedicated Town Web Page
 -"All About Stormwater" Brochure Distribution
 -Public Awareness Message (PAM #3) - Pest Waste
 -Disposal Public Awareness Message which is also featured on Dog Licenses issued by the office of the Town Clerk.

 Distribute an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

-Dedicated Town Web Page
 -"All About Stormwater" Brochure Distribution

-Public Awareness Message (PAM #4) - Lawn Maintenance and Yard Waste Tips Public Awareness Message

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

Street Sweeping Program

Establish procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

Public Awareness Message (PAM #4) - Lawn Maintenance and Yard Waste Tips Public Awareness Message

Stormwater Management in New Development and Redevelopment

Retrofit inventory and priority ranking under 2.3.6.1.b. shall include consideration of BMPs to reduce phosphorus discharges

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

List of Municipal Retrofit Opportunities

Phosphorus Reduction Tracking BMP

Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H already existing or installed in the regulated area by the permittee or its agents shall be tracked and the permittee shall estimate the phosphorus removal by the BMP consistent with Attachment 1 to Appendix H.

The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in pass per year by the BMP is found in the following document or website and is updated yearly at a minimum:

Requirements Due by Year 2

Stormwater Management in New Development and Redevelopment

The requirement for adoption/amendment of the permittee's ordinance or other regulatory mechanism shall include a requirement that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

Post-Construction Ordinance

Requirements Due by Year 4

Complete a Phosphorus Source Identification Report

The document name (if attached) and/or web address is/are:

Stormwater Management in New Development and Redevelopment

Retrofit inventory and priority ranking under 2.3.6.1.b. shall include consideration of BMPs that infiltrate stormwater where feasible

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

List of Municipal Retrofit Opportunities

Requirements Due by Year 5

Potential Structural BMPs

Evaluate all permittee-owned 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 impaired water or its tributaries

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

Complete a listing of planned structural BMPs and a plan and schedule for implementation

The relevant BMP number(s) listed above in the Stormwater Management Program OR the description of implementation actions and document location(s) are:

List of Municipal Retrofit Opportunities