



Stormwater Management Program (SWMP)

Town of Sterling

EPA NPDES Permit Number: MAR041222

Updated 2023

Prepared for:

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STORMWATER MANAGEMENT PROGRAM (SWMP)



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Abbreviations

ABBREVIATIONS

2022 ILW	Massachusetts 2022 Integrated List of Waters
BMP	Best Management Practice
CFR	Code of Federal Regulations
DCR	Department of Conservation and Recreation
DPW	Department of Public Works
ESC	Erosion and Sediment Control
GI	Green Infrastructure
IDDE	Illicit Discharge Detection and Elimination
IPaC	Information, Planning, and Consultation System
LID	Low Impact Development
MassDEP	Massachusetts Department of Environmental Protection
MCM	Minimum Control Measure
MS4	Municipal Separate Storm Sewer System
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
PSA	Public Service Announcement
SMP	Stormwater Management Permit
SSO	Sanitary Sewer Overflow
SWMP	Stormwater Management Program
SWPPP	Stormwater Pollution Prevention Plan
TMDL	Total Maximum Daily Load



STORMWATER MANAGEMENT PROGRAM (SWMP)

Abbreviations

US EPA, EPA

United States Environmental Protection Agency

USFWS

U.S. Fish and Wildlife Service



STORMWATER MANAGEMENT PROGRAM (SWMP)

Certification

1.0 CERTIFICATION

Authorized Representative: 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 of the Permit or by a duly authorized representative of that person in accordance with Appendix B, Subsection 11.B of the Permit. If there is an authorized representative to sign MS4 reports, there must be a signed and dated written authorization.

"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: Andrew Parker, Chairman, Department of Public Works Board

Signature: 

Date: 10-12-23



STORMWATER MANAGEMENT PROGRAM (SWMP)

Background

2.0 BACKGROUND

2.1 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.

2.2 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.

2.3 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 permittee's 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.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Background

2.4 STERLING SPECIFIC MS4 BACKGROUND

The Town of Sterling, located within an Urbanized Area as identified by the latest Decennial (2010) census and designated as a regulated community, applied for coverage under NPDES General Permit for Stormwater Discharges and was authorized on July 30, 2019.

The Town was permitted under the 2003 Small MS4 Permit. During that Permit term, the Town created a SWMP, addressed storm system mapping, and submitted Annual Reports. Beyond addressing minimum regulatory requirements, the Town developed additional mapping that included locations of drainage culverts.

The Town has completed many activities to address the education and outreach requirements of the 2003 Permit, including posting educational information on their website, providing information about nearby biennial household hazardous waste collection days via its website and brochures, and broadcasting public service announcements (PSAs) regarding oil leaks and fertilizer use on the Town's public access cable station. In this Permit term, the Town will continue to distribute educational materials and will work to enhance the program.

The Town has demonstrated their commitment to public involvement and participation in the program by providing residents with access to the stormwater management plan.

The Town developed and administered an IDDE Program as part of the 2003 Permit, which included developing a stormwater map showing outfalls and receiving waters, adopting a Storm Drains Bylaw regulating illicit connections and discharges to the storm drain system, and dry weather screening of outfalls. The IDDE plan is one of the most demanding tasks in the 2016 Permit, and the Town will continue to advance efforts from the 2003 Permit term.

To properly manage and enforce construction site stormwater runoff, the Town adopted a Storm Drains Bylaw which became effective in 2009. The Town will review the Bylaw to determine whether changes are needed to fully address new requirements.

The Town has an operations and maintenance program that already meets many of the Permit requirements for catch basin cleaning, street sweeping and management, employee training, and BMP maintenance.

The Town has demonstrated successful stormwater management through their adherence to the 2003 Permit. Although some updates and additions are necessary, the Town has a substantial stormwater management program ready for the new Permit.

The Town has been submitting an MS4 Annual Report to the US EPA since the 2003 Permit term. This yearly reporting requirement will continue, and as described in Section 8, residents will have an opportunity to review and comment on progress every year. In addition, this SWMP is not meant to be a static document, and as the Town's efforts progress and evolve, so too will this program. The SWMP will be updated continuously and the most up to date version of this program will be made available to residents through the Town's website.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Small MS4 Authorization

3.0 SMALL MS4 AUTHORIZATION

A Notice of Intent (NOI) was submitted to EPA on September 28, 2018. The EPA requested additional information, and a response was provided May 31, 2019. The NOI and follow-up response can be found in Appendix A.

An Authorization to Discharge was granted on July 30, 2019 and the authorization letter can be found in Appendix B.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Stormwater Management Program Team

4.0 STORMWATER MANAGEMENT PROGRAM TEAM

The SWMP Team is responsible for MS4 program implementation.

4.1 SWMP TEAM COORDINATOR

Andrew Parker, Chairman, Department of Public Works Board
Department of Public Works (DPW) Offices
171 Worcester Road,
Sterling, MA 01564

4.2 SWMP TEAM

Ryan Mouradian, Superintendent
Department of Public Works (DPW) Offices
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Sterling, MA 01564

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STORMWATER MANAGEMENT PROGRAM (SWMP)

Receiving Waters

5.0 RECEIVING WATERS

Receiving waters located within the Town's urbanized area according to the 2010 United States Census¹ were analyzed.

Table 1 lists the number of town-owned outfalls discharging to receiving waters within the Town's urbanized area that are included in the Massachusetts Year 2022 Integrated List of Waters (2022 ILW), produced by MassDEP every two years. The 2022 ILW evaluates the capacity of rivers, lakes, and coastal waters to support designated uses as defined in the Massachusetts Surface Water Quality Standards. Where possible, causes and sources of use impairment are identified.

The Permit states that "An outfall means a point source as defined by 40 CFR § 122.2 as the point where the municipal separate storm sewer discharges to waters of the United States. An outfall does not include open conveyances connecting two municipal separate storm sewers or pipes, tunnels or other conveyances that connect segments of the same stream or other waters of the United States and that are used to convey waters of the United States. (40 CFR § 122.26(b)(9)). However, it is strongly recommended that a permittee inspect all accessible portions of the system as part of this process. Culverts longer than a simple road crossing shall be included in the inventory unless the permittee can confirm that they are free of any connections and simply convey waters of the United States."

Table 1: Receiving Waters Listed in the Massachusetts Year 2022 Integrated List of Waters

Waterbody Segment that Receives Flow from the MS4	No. Outfalls into Receiving Water Segment	Pollutants Causing Impairments	Category ¹
Waushacum Brook (MA81-47)	1	Dissolved Oxygen	5
Connelly Brook (MA81-57)	1	None	2
East Waushacum Pond (MA81035)	2	None	3
West Waushacum Pond (MA81153)	0	(Brittle Naiad, Najas Minor*), (Non-Native Aquatic Planys*)	4c
The Quag (MA81170)	1	(Brittle Naiad, Najas Minor*), (Non-Native Aquatic Planys*)	4c
TOTAL:	5		

¹ Category 2 includes waters found to support the uses for which they were assessed, but other designated uses were not assessed
Category 3 includes waters for which insufficient or no information was available to assess any uses
Category 4c includes waters for which impairments are not caused by a pollutant
Category 5 includes waters requiring a TMDL

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



STORMWATER MANAGEMENT PROGRAM (SWMP)

Receiving Waters

Table 2 lists the number of town-owned outfalls discharging to receiving waters within the Town's urbanized area that are not included in the Massachusetts Year 2022 Integrated List of Waters. This list primarily contains inland outfalls discharging to wetlands.

Table 2: Receiving Water Not Listed in the Massachusetts Year 2022 Integrated List of Waters

Waterbody that Receives Flow from the MS4	Number of Outfalls into Receiving Water Segment
Muddy Pond	1
Unnamed Wetland	59
TOTAL:	60

There are no Total Maximum Daily Load (TMDL) requirements for the surface waters that receive stormwater discharge from the Town's drainage system outfalls.

Two (2) outfalls are Excluded because there is no potential for illicit discharges based on meeting the Permit criteria for roadway drainage in undeveloped areas with no dwellings and no sanitary sewers.

Fifteen (15) discharge points are believed to direct stormwater to areas that are contained on site, where storage, evaporation, and infiltration of collected stormwater occurs. These discharge points do not convey stormwater to waters of the United States, and therefore do not fit within the Permit definition of an outfall. These discharge points are noted on the Storm Drainage Map provided in the IDDE Plan. The Town will continue to monitor these areas to ensure that overflows do not occur and/or that these areas do not contribute surface flow to nearby waterbodies.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Special Eligibility Determinations

6.0 SPECIAL ELIGIBILITY DETERMINATIONS

6.1 ENDANGERED SPECIES

The results of U.S. Fish and Wildlife Service endangered species screening determination are required within one year of the permit effective date and are provided in Appendix A with the NOI. The Town certified eligibility according to USFWS Criterion C. In order to meet the documentation requirements for Criterion C, Appendix C includes a copy of the IPaC Official Species List and the USFWS consultation letter dated September 27, 2018 for certifying under eligibility Criterion C.

The IPaC Official Species List indicates there are twenty-one (21) Threatened Species of migratory birds that are potentially present at the permitted site. The USFWS consultation letter states that Permit activities may affect, but are not likely to adversely affect, certain species when specific conditions are met. The Town has reviewed the specific conditions and confirms they are met.

6.2 HISTORIC PROPERTIES

The results of the historic property screening investigations are required within one year of the permit effective date and are provided with the NOI in Appendix A. The Town certified eligibility for Criterion A because there is no MS4 work proposed, including construction, that would affect historic properties.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.0 MINIMUM CONTROL MEASURES (MCM)

7.1 MCM 1: PUBLIC EDUCATION AND OUTREACH

The Permit requires that “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.”

The educational program shall include education and outreach efforts for the following four audiences:

- (1) Residents,
- (2) Businesses, institutions (churches, hospitals), and commercial facilities,
- (3) Developers (construction), and
- (4) Industrial facilities

7.1.1 Update Stormwater Webpage

BMP Number	BMP 1-01
BMP Description	Update the Stormwater Webpage, including adding links to Think Blue Massachusetts
Link to Website	https://www.sterling-ma.gov/dept-public-works/pages/stormwater-information https://www.thinkbluemassachusetts.org/
Targeted Audience	Residents
Responsible Department	DPW Operations
Measurable Goals	One-time update. <i>Completed 9/13/2019</i>

7.1.2 DCR Partnership – Residents

BMP Number	BMP 1-02
BMP Description	Distribute Department of Conservation and Recreation (DCR) Household Stormwater Pollution Prevention Brochures
Targeted Audience	Residents



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

Responsible Department	DPW Operations/partnership with DCR
Measurable Goals	Brochures will be distributed two times per year at the Household Hazardous Waste events, as well as being available at the DPW and Town Hall Receptions. <i>Copies of DCR brochures that address a range of stormwater issues specific to homeowners are available at Town Hall. This is ongoing throughout the Permit term.</i>

Many MS4 control measures are now being addressed cooperatively by area communities through efforts of the Central Massachusetts Regional Stormwater Coalition. The DCR Division of Watershed Management continues to work on its own and with communities to address stormwater issues. The following additional public education efforts are also applicable to Sterling:

- Sterling DPW Open House 5/6/2023. DCR attended and set up a display table and passed out educational material on road salt use and its impact in the watershed.*
- DCR Rangers and education staff provide educational programs to students and the general public throughout the year that address a variety of topics including stormwater issues. Stormwater pollution prevention public service announcements are read by Ranger staff at all public interpretive programs.*

7.1.3 DCR Household Stormwater Pollution Prevention Brochures for Businesses, Institutional and Commercial Facilities

BMP Number	BMP 1-03
BMP Description	Coordinate with Sterling Business Association to distribute DCR Household Stormwater Pollution Prevention Brochures
Targeted Audience	Businesses, Institutions, and Commercial Facilities
Responsible Department	DPW Operations/partnership with DCR
Measurable Goals	<i>Copies of DCR brochures that address a range of stormwater issues specific to businesses are available at Town Hall. This is ongoing throughout the Permit term.</i>

7.1.4 DCR Car Wash Fundraiser Brochures

BMP Number	BMP 1-04
BMP Description	Distribute DCR Car Wash Fundraiser Brochures



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

Targeted Audience	Businesses, Institutions, and Commercial Facilities
Responsible Department	DPW Operations
Measurable Goals	One distribution per year (early summer; June/July) to all schools, churches, and non-profits, and available at DPW and Town Hall receptions.

7.1.5 Builder's Guide to LID Brochure

BMP Number	BMP 1-05
BMP Description	Distribute the Builder's Guide to Low Impact Development (LID) brochure developed by DEP or similar
Targeted Audience	Developers
Responsible Department	DPW Operations
Measurable Goals	One distribution per year

7.1.6 Stormwater Pollution Prevention Brochure for Developers

BMP Number	BMP 1-06
BMP Description	Distribute the EPA Stormwater Pollution Prevention for Small Residential Construction Sites brochure
Targeted Audience	Developers
Responsible Department	DPW Operations/partnership with DCR
Measurable Goals	<i>Copies of DCR brochures that address a range of stormwater issues specific to developers are available at Town Hall. This is ongoing throughout the Permit term.</i>

7.1.7 Stormwater Website Updates

BMP Number	BMP 1-07
BMP Description	Add content (MassDEP brochure for Stormwater Pollution prevention for Industrial Sites) to stormwater page



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

Targeted Audience	Industrial Facilities
Responsible Department	DPW Operations
Measurable Goals	Make content available on webpage

7.1.8 Stormwater Pollution Prevention Brochure for Industrial Facilities

BMP Number	BMP 1-08
BMP Description	Distribute the Stormwater Pollution Prevention for Industrial Sites brochure
Targeted Audience	Industrial Facilities
Responsible Department	DPW Operations
Measurable Goals	One distribution per year mailed to all owners of industrial sites



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.2 MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION

The Permit states that “The permittee shall provide opportunities to engage the public to participate in the review and implementation of the permittee’s SWMP.”

Table 3 provides a summary of required BMPs related to public involvement and participation with the SWMP, with associated due dates. The table will be updated annually to track progress.

Table 3: MCM 2 Summary of Permit Requirements

BMP Number	BMP	Date Due	Date Completed	Updated
2-01	SWMP Posted on website	July 1, 2019	September 27, 2019	2023
2-01	Annual SWMP Comments	July – Ongoing	Ongoing	
2-02	Public Participation	Ongoing	Ongoing	

7.2.1 Public Review of Stormwater Management Program

BMP Number	BMP 2-01
Location of SWMP	https://www.sterling-ma.gov/dept-public-works/pages/stormwater-information-0
Measurable Goals	The SWMP is available on the Town’s website.

7.2.2 Public Participation in Review and Implementation of the SWMP

BMP Number	BMP 2-02
BMP Description	The Town will conduct two collections of household hazardous waste and used oil per year to reduce the amount of hazardous material entering the environment.
Measurable Goals	Two collections held per year



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.3 MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE) PROGRAM

The Permit states that “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.”

Table 4 provides a summary of required BMPs related to the IDDE program with associated due dates. The table will be updated annually to track progress.

Table 4: MCM 3 Summary of Permit Requirements

BMP Number	BMP Description	Date Due	Status/Date Completed
NA	SSO Inventory	July 1, 2019	Not Applicable (NA)
3-01	Phase I System Mapping	July 1, 2020	January 2020
3-01	Phase II System Mapping	July 1, 2028	Ongoing
3-02	Written IDDE Plan	July 1, 2019	September 2019
3-02	Assessment and Initial Priority Ranking of Outfalls/ Interconnections	July 1, 2019	September 2019
3-02	Follow-up Ranking	July 1, 2021	June 2021
3-02	Written Catchment Investigation Procedure	January 1, 2020	January 2020
3-03	Catchment Investigations for Problem Outfalls	Begin by July 2020/ Finish by July 2025	NA – None identified
3-03	Catchment Investigations with Potential Sewer Input	Begin after Problem Outfall Investigations/ Finish by July 2025	NA – None identified
3-03	Catchment Investigations for High and Low Priority Outfalls	Begin after Problem Outfall Investigations/ Finish by July 2028	Ongoing
3-04	Training	Annually	Annual
3-05	Dry Weather Screening and Sampling	July 1, 2021	October 2021
3-06	Wet Weather Sampling	Complete during Catchment Investigations	NA – no SVFs identified



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.3.1 IDDE Legal Authority

The Town of Sterling adopted an IDDE Authority on 10/15/2007 through the adoption of a Storm Drains Bylaw. The Storm Drains Bylaw is administered by the Department of Public Works. The Town reviewed the 2007 Storm Drains Bylaw in 2021 and determined that it was sufficient to meet requirements of the 2016 MS4 Permit.

Link to Storm Drains Bylaw: <https://ecode360.com/12404466>

7.3.2 Sanitary Sewer Overflow (SSO) Inventory

SSOs are discharges of untreated sanitary wastewater from a municipal sanitary sewer that can contaminate surface waters, cause serious water quality problems and property damage, and threaten public health. SSOs are not applicable in the Town of Sterling because there is no municipal sanitary sewer system.

7.3.3 Map of Storm Sewer System

BMP Number BMP 3-01

The Permit includes the following requirements for MS4 mapping:

- Phase I (complete by year 2; June 30, 2020): Map 100% of outfalls and receiving waters, open channel conveyances, interconnections with other MS4s and other storm sewer systems, municipally-owned stormwater treatment structures, waterbodies identified by name and indication of all use impairments, and initial catchment delineations within 2 years of the permit's effective date. *The Town completed Phase I mapping requirements January 2020. The Phase I Map is provided as an attachment to the IDDE Plan.*
- Phase II (completed by year 10; June 30; 2028): Map 100% of outfall spatial locations, pipes, manholes, catch basins, refined catchment delineations, municipal sanitary sewer system (if available), and municipal combined sewer system (if applicable) within 10 years of the permit's effective date. Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit.

7.3.4 Written IDDE Program

BMP Number BMP 3-02

The Permit requires a written IDDE Plan to be developed by year 1 (June 30, 2019). The IDDE Plan must include the following elements:

- Outfall/interconnection inventory and initial ranking
- Written procedures for dry weather outfall screening and sampling



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

- Written procedures for catchment investigations (due January 1, 2020)

The IDDE Plan and Priority Ranking were developed September 2019 and updated January 2020 and June 2023. They are included in Appendix D.

7.3.5 Implement IDDE Program

BMP Number BMP 3-03

The Town will implement catchment investigations according to the Town's IDDE Plan and MS4 Permit conditions.

7.3.6 Employee Training

BMP Number BMP 3-04

The Town of Sterling will continue to provide annual stormwater training to employees, including IDDE implementation. Training records are provided in Appendix E.

7.3.7 Dry Weather Screening

BMP Number BMP 3-05

The Town of Sterling completed required dry weather outfall screening July through October 2021, in accordance with the outfall screening procedures identified in the IDDE Plan and permit conditions.

7.3.8 Wet Weather Screening

BMP Number BMP 3-06

The Town of Sterling will conduct wet weather screening, if required, in accordance with the outfall screening procedures identified in the IDDE Plan and permit conditions within 10 years after effective date of permit (6/30/2028).

7.3.9 Ongoing Screening

BMP Number BMP 3-07

The Town of Sterling will conduct dry weather and wet weather screening as necessary according to permit conditions upon completion of IDDE program catchment investigations.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.4 MCM 4: CONSTRUCTION SITE STORMWATER RUNOFF CONTROL

The Permit states that “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.”

The Town of Sterling adopted a Construction/Erosion and Sediment Control (ESC) Authority on May 11, 2009 through the adoption of a Stormwater Management Bylaw. On April 14, 2010 the Town approved Stormwater Regulations based on the Bylaw. The Conservation Commission is responsible for enforcement. The Town has reviewed the Bylaw and Regulations and confirmed they meet the new requirements of the Permit for MCM 4, however updates were made in 2022 to comply with MCM 5.

Link to Stormwater Management Bylaw: <https://ecode360.com/15005467>

Table 5: MCM 4 Summary of Permit Requirements

BMP Number	BMP Description	Date Due	Date Completed
	Sediment and Erosion Control Ordinance	May 1, 2008	5/11/2009
4-01	Site Inspection Procedures	June 30, 2019	4/14/2010
4-02	Site Plan Review Procedures	June 30, 2019	4/14/2010
4-03	Erosion and Sediment Control	June 30, 2019	4/14/2010
4-04	Waste Control	June 30, 2019	4/14/2010

7.4.1 Site Inspections and Enforcement of Sediment and Erosion Control Measures Procedures

BMP Number BMP 4-01

Description: Complete written procedures of site inspections and enforcement procedures. The procedures shall clearly define who is responsible for site inspections as well as who has authority to implement enforcement procedures. The program shall provide that the permittee may, to the extent authorized by law, impose sanctions to ensure compliance with the local program.

Responsible Department/Parties: Conservation Commission

Measurable Goals: Complete within 1 year of the effective date of permit.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

This requirement is met through the Town's Stormwater Management Bylaw adopted May 11, 2009 and Stormwater Regulations approved April 14, 2010.

Site inspection and enforcement procedures are documented in the Town's Stormwater Regulations. The Stormwater Regulations are enforced by the Conservation Commission. Procedures for Construction Site Inspections are defined in Section 10.0 and Enforcement is defined in Section 13.0 of the Stormwater Regulations.

7.4.2 Site Plan Review Procedures

BMP Number BMP 4-02

Description: Complete written procedures of site plan review and begin implementation. The site plan review procedure will include a pre-construction review by the permittee of the site design, the planned operations at the construction site, planned BMPs during the construction phase, and the planned BMPs to be used to manage runoff created after development. The review procedure will incorporate procedures for the consideration of potential water quality impacts, and procedures for the receipt and consideration of information submitted by the public. The site plan review procedure will also include evaluation of opportunities for use of low impact design and green infrastructure. When the opportunity exists, project proponents will be encouraged to incorporate these practices into the site design. The procedures for site inspections will include the requirement that inspections occur during construction of BMPs as well as after construction of BMPs to ensure they are working as described in the approved plans, clearly defined procedures for inspections including qualifications necessary to perform the inspections, the use of mandated inspection forms if appropriate, and procedure for tracking the number of site reviews, inspections, and enforcement actions.

Responsible Department/Parties: Conservation Commission

Measurable Goals: Complete within 1 year of the effective date of permit.

This requirement is met through the Town's Stormwater Management Bylaw adopted May 11, 2009 and Stormwater Regulations approved April 14, 2010.

7.4.3 Erosion and Sediment Control

BMP Number BMP 4-03

Description: Adoption of 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. The program will include BMPs appropriate for the conditions at the construction site.

Responsible Department/Parties: Conservation Commission

Measurable Goals: Complete within 1 year of the effective date of permit.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

This requirement is met through the Town's Stormwater Management Bylaw adopted May 11, 2009 and Stormwater Regulations approved April 14, 2010.

The Town requires submission of a Stormwater Management Permit (SMP) for all new development and redevelopment, as well as other activities that will increase the amount of stormwater runoff or pollutants from a parcel of land, or any activity that will alter the drainage characteristics of a parcel of land. The SMP must include an Erosion and Sediment Control Plan describing erosion control measures and structural practices. Section 7.0 requires all projects to comply with the most recent version of the MassDEP Stormwater Handbook, and requires implementation of controls that prevent erosion, control sediment movement, and stabilize exposed soils to prevent pollutants from moving offsite or entering wetlands or water.

7.4.4 Waste Control

BMP Number BMP 4-04

Description: Adoption of requirements to control wastes, including but not limited to discarded building materials, concrete truck wash-out, chemicals, litter, and sanitary wastes, which may not be discharged to the MS4.

Responsible Department/Parties: Conservation Commission

Measurable Goals: Complete within 1 year of the effective date of permit.

This requirement is met through the Town's Stormwater Management Bylaw adopted May 11, 2009 and Stormwater Regulations approved April 14, 2010.

As part of the SMP Erosion and Sediment Control Plan, the Town requires the following:

- *Identification of locations for construction wastes,*
- *Description of construction and waste materials expected to be stored on-site,*
- *Description of controls including storage practices to minimize exposure of the materials to stormwater,*
- *Description of measures to prevent the discharge of solid materials, including building materials, to waters of the United States.*



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.5 MCM 5: POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT

The Permit states that “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.”

The Town of Sterling adopted a Post Construction Stormwater Authority on May 11, 2009 through the adoption of a Stormwater Management Bylaw. The Conservation Commission is responsible for enforcement. The Town reviewed the 2009 Storm Drains Bylaw in 2021 and made revisions to meet requirements of the 2016 MS4 Permit. Revisions to the Bylaw were approved during the May 2022 Town Meeting.

On April 14, 2010 the Town approved Stormwater Regulations to effectuate the purposes of the Stormwater Management Bylaw. The Stormwater Management Bylaw and Regulations apply to all new development and redevelopment. Town reviewed the Regulations in 2021 and drafted revisions to meet requirements of the 2016 MS4 Permit. Due to Conversation Commission staff turnover the regulations have not been approved but anticipated to be approved during Permit Year 6.

Link to Stormwater Management Bylaw: <https://ecode360.com/15005467>

Table 6: MCM 5 Summary of Permit Requirements

BMP Number	BMP Description	Date Due	Date Completed
5-01	Post-Construction Regulations Update	July 1, 2020	5/2/2022
5-02	List of Retrofit Opportunities	July 1, 2022	4/20/2022
5-03	GI Design Opportunities Report	July 1, 2022	6/30/2022
5-04	Street Design Assessment Report	July 1, 2022	6/30/2022

7.5.1 Stormwater Controls and Management Practices Compliance

BMP Number BMP 5-01

BMP Description: Ensure any stormwater controls or management practices for new development and redevelopment meet the retention or treatment requirements of the permit and all applicable requirements of the Massachusetts Stormwater Handbook. Establish procedures to require submission of as-built drawings for completed projects; and ensure long term operation and maintenance will be a part of the SWMP.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

Measurable Goals: Consists of adoption, amendment, or modification of a regulatory mechanism to meet requirements. Complete 2 years after effective date of permit.

These requirements are addressed through the Town's Stormwater Management Bylaw adopted May 11, 2009 and revised May 2022, and Stormwater Regulations approved April 14, 2010.

7.5.2 List of Municipal Retrofit Opportunities

BMP Number BMP 5-02

BMP Description: Identify at least five (5) permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually.

Measurable Goal: Complete 4 years after effective date of permit and report annually on retrofitted properties.

Retrofit opportunities were identified during Year 4. The five (5) Town-owned parcels includes the Fire Department, DPW Facility, Light Department, Light Plant Operations, and Police Department.

7.5.3 Green Infrastructure (GI) Report

BMP Number BMP 5-03

BMP Description: Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist.

Measurable Goal: Complete 4 years after effective date of permit and implement recommendations of report.

A Green Infrastructure assessment was completed during Year 4.

7.5.4 Street Design and Parking Lot Guidelines Report

BMP Number BMP 5-04

BMP Description: Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to facility design standards for streets and parking lots can be modified to support low impact design options.

Measurable Goal: Complete 4 years after effective date of permit and implement recommendations of report.

The Street Design and Parking Lot assessment was completed during Year 4.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.6 MCM 6: GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS

The Permit states that “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.”

Table 7: MCM 6 Summary of Permit Requirements

BMP Number	BMP Description	Date Due	Date Completed
6-01	Written O&M Procedures	July 1, 2020	June 2020
6-01	Written Property Inventory	July 1, 2020	June 2020
6-02	Infrastructure O&M Procedures	July 1, 2020	June 2020
6-03	SWPPPs	July 1, 2020	June 2020
6-04	Catch Basin Cleaning Program	July 1, 2019	Documented in SWMP 2019
6-05	Street Sweeping Procedures	July 1, 2019	
6-06	Winter Road Maintenance Program	July 1, 2019	
	Stormwater Treatment Structures Inspection and Maintenance Procedures ¹	July 1, 2019	Not Applicable
	Employee Training	Annual	Ongoing
	Site Inspections	Quarterly	Ongoing

¹ The Town does not own any stormwater treatment structures

7.6.1 Inventory and Operations and Maintenance Procedures

BMP Number BMP 6-01

Description: Inventory all permittee-owned facilities and create written Operation and Maintenance (O&M) procedures for municipal activities at these facilities. Facility categories include the following:

- Parks and open spaces,
- Buildings and facilities,
- Vehicles and equipment.

Responsible Department/Parties: Engineering

Measurable Goals: Inventory and written document completed and implemented within 2 years after effective permit date.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

Completed June 2020.

7.6.2 Infrastructure Operations and Maintenance Procedures

BMP Number BMP 6-02

Description: Establish and implement program for repair and rehabilitation of MS4 infrastructure.

Responsible Department/Parties: DPW Operations

Measurable Goals: Complete 2 years after effective date of permit.

Completed June 2020.

7.6.3 Stormwater Pollution Prevention Plan (SWPPP)

BMP Number BMP 6-03

BMP Description: Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities.

Measurable Goal: Complete and implement two (2) years after effective date of permit.

Completed June 2020. SWPPPs were developed for five (5) Town-owned properties including the Fire Department, DPW Facility, Light Department, Light Plant Operations, and Police Department.

7.6.4 Catch Basin Cleaning Program

BMP Number BMP 6-04

BMP Description: Continue cleaning and maintenance of catch basins; and establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule.

Measurable Goal: Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually. *Catch basins are cleaned annually in the fall. Individual catch basins are cleaned as needed by the Highway Division. A catch basin cleaning truck is part of the Highway Division fleet.*

7.6.5 Street Sweeping Program

BMP Number BMP 6-05

BMP Description: Sweep all streets and permittee-owned parking lots in accordance with permit conditions.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

Measurable Goal: Sweep all streets and permittee-owned parking lots once per year in the spring. *The Highway Division sweeps Town-owned sidewalks and streets annually in the spring.*

7.6.6 Winter Road Maintenance Program

BMP Number BMP 6-06

BMP Description: Establish and implement a program to minimize the use of road salt.

Measurable Goal: Implement salt use optimization during deicing season. *The Town has minimized the use of road salt by using more sand, and by using sectional plow blades which are more effective and reduce the need for salt. A tree crew also provides trimming which improves sunlight and natural snowmelt.*



STORMWATER MANAGEMENT PROGRAM (SWMP)

Annual Evaluation

8.0 ANNUAL EVALUATION

Each annual report will include the Town's activities and progress with regards to this SWMP from the previous year. The EPA plans to distribute an annual report template for each year of the Permit. The Town plans to utilize the template to provide updates with regards to applicable MCMs and BMPs completed within the prior year. Annual reports are provided on the Town's website.

8.1 YEAR 1 ANNUAL REPORT

Report Due Date: September 28, 2019

8.2 YEAR 2 ANNUAL REPORT

Report Due Date: September 28, 2020

8.3 YEAR 3 ANNUAL REPORT

Report Due Date: September 28, 2021

8.4 YEAR 4 ANNUAL REPORT

Report Due Date: September 28, 2022

8.5 YEAR 5 ANNUAL REPORT

Report Due Date: September 28, 2023



9.0 REFERENCES

United States Environmental Protection Agency (EPA). 2020. *Massachusetts Small MS4 General Permit*. <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>. Accessed 2023.

United States Environmental Protection Agency (EPA). 2003. *General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems*. https://www3.epa.gov/region1/npdes/permits/permit_final_ms4.pdf Accessed June 2019.

Commonwealth of Massachusetts. 2022. *Massachusetts Year 2022 Integrated List of Waters*. <https://www.mass.gov/doc/final-massachusetts-integrated-list-of-waters-for-the-clean-water-act-2022-reporting-cycle/download>. Accessed 2023.

Massachusetts Stormwater Management Plan Template v1.2. United States Environmental Protection Agency, Accessed June 2019.

Massachusetts Department of Environmental Protection. February 2008. *Massachusetts Stormwater Handbook*. <https://www.mass.gov/guides/massachusetts-stormwater-handbook-and-stormwater-standards>. Accessed June 2019.



APPENDIX A

Notice of Intent (October 2018)

Requested Additional Information (May 2019)

APPENDIX B

Authorization to Discharge

APPENDIX C

IPaC Official Species List and USFWS Consultation Letter

APPENDIX D

IDDE Plan and Priority Ranking

APPENDIX E

Training Records