



**Stormwater Management Program
(SWMP)**

Town of Belmont

19 Moore Street 1st Fl. Belmont, MA 02478

EPA NPDES Permit Number: MAR041074

REVISED: 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
DO	Dissolved Oxygen
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



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Abbreviations

TMDL	Total Maximum Daily Load
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.

The authorization letter is attached to this document in Appendix A.

"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: Patrice Garvin, Town Administrator

Signature: 

Date: 10-30-23



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.

The SWMP also includes activities the Town will implement to address requirements of Appendix F and H of the MS4 Permit for waterbodies with existing Total Maximum Daily Loads (TMDLs) and/or waterbody impairments.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Background

2.4 BELMONT SPECIFIC MS4 BACKGROUND

The Town of Belmont, located within an Urbanized Area as identified by the latest Decennial (2010) census and designated as a regulated community, has applied for coverage under NPDES General Permit for Stormwater Discharges.

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.

The Town has completed many activities to address the education and outreach requirements of the 2003 Permit, including posting educational information on their website and providing information about yard and household hazardous waste collection days. 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 via the Town's stormwater web page.

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 Stormwater Management and Erosion Control Bylaw regulating illicit connections and discharges to the storm drain system, and dry weather screening of outfalls. Additionally, the Town has completed IDDE investigations in association with a 2017 Order on Consent. The work has included significant CCTV inspections and subsequent lining of the sewer and drain systems and service laterals throughout the Town. 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 and the 2017 Order on Consent.

To properly manage and enforce construction site stormwater runoff, the Town adopted a Stormwater Management and Erosion Control Bylaw which became effective in 2014. The Town will review the Bylaw to determine whether changes are needed to fully address new requirements.

The Town has completed operations and maintenance services that already meet many of the Permit requirements for catch basin cleaning, street sweeping, and stormwater BMP maintenance.

The Town has demonstrated successful stormwater management through their adherence to the 2003 Permit. Although 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 are able to review the Town's progress. 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 an updated NOI was provided. The updated NOI can be found in Appendix B to this SWMP.

An Authorization to Discharge was granted on March 5, 2019 and the authorization letter can be found in Appendix C to this SWMP.



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

Jay Marcotte, Director of Public Works
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4.2 SWMP TEAM

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Homer Municipal Building
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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 receiving waters within the Town's urbanized area that are included in the Final Massachusetts Year 2022 Integrated List of Waters (2022 ILW), produced by MassDEP. 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.

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

Waterbody Segment	Impairments (ATTAINS Action ID)	Category ^A	Appendix
Little River (MA71-21)	E. coli (R1_MA_2019_01) DO, Total Phosphorus, transparency/clarity (R1_MA_2020_5a) Chloride, Copper in sediment, enterococcus, flocculant masses, Lead in sediment, odor, Oil and Grease, PCBs in Fish Tissue, scum/foam, trash, (Debris*), (Water Chestnut*)	5	H
Clay Pit Pond (MA71011)	Chlordane in Fish Tissue	5	NA
Little Pond (MA71024)	Harmful Algal Blooms, (Water chestnut*)	5	NA
Spy Pond (MA71040)	Chlordane in Fish Tissue, DDT in Fish Tissue, DO, Harmful Algal Blooms, Total Phosphorus (Curly-leaf Pondweed*), (Eurasian Water Milfoil, Myriophyllum Spicatum*), (Water chestnut*)	5	H
Winn Brook (MA71-09)	E. coli (R1_MA_2019_01) (Physical substrate habitat alterations*)	4a	NA
Beaver Brook (MA72-28)	Algae, DO, Organic Enrichment (Sewage) Biological Indicators, Total Phosphorus (40317) E. coli (32379) Chloride, Sedimentation/Siltation, (Flow regime modification*), (other anthropogenic substrate*), (Water chestnut*)	5	F, H

^A Category 4a includes impaired waters with a completed TMDL. Category 5 includes impaired waters requiring one or more TMDLs.

*TMDL not required (non-pollutant)

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)

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 B with the NOI. The Town certified eligibility according to USFWS Criterion C. In order to meet the documentation requirements for Criterion C, Appendix D includes a copy of the IPaC Official Species List and the USFWS consultation letter dated June 22, 2021, for certifying under eligibility Criterion C.

The IPaC Official Species List indicates there is one (1) Threatened Species of mammal, the Northern Long-eared Bat, 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. 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*

**The Town of Belmont does not have any industrial facilities, so this target audience is not applicable*

7.1.1 Develop and Update Stormwater Webpage

BMP Number	BMP 1-01
BMP Description	Develop a Stormwater Web Page on the Town’s website, including posting relevant information and adding links to Think Blue Massachusetts
Link to Website	Stormwater Management Program (SWMP) belmontma (belmont-ma.gov)
Targeted Audience	Residents
Responsible Department	DPW, Office of Community Development, Town Webmaster
Measurable Goals	Develop the webpage (Completed in 2014) and update on a regular basis

7.1.2 Post Information on Town Hall Bulletin Boards

BMP Number	BMP 1-02
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STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

BMP Description	Education information regarding stormwater issues and pollution prevention will be posted on the Town Hall bulletin boards and on the Town's Stormwater Web Page.
Targeted Audience	Residents
Responsible Department	DPW, Office of Community Development, Town Webmaster
Measurable Goals	These publications will be tracked and updated annually with the most recent and relevant information.

7.1.3 Distribute Educational Flyers with Community Newsletter

BMP Number	BMP 1-03
BMP Description	Educational Stormwater Flyers will be distributed to residences and will address the topics of pet waste disposal, yard waste disposal, septic system maintenance, and lawn fertilizer use.
Targeted Audience	Residents
Responsible Department	DPW, Office of Community Development
Measurable Goals	Flyers will be distributed on a quarterly basis to residences.

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

BMP Number	BMP 1-04
BMP Description	Distribute DCR Household Stormwater Pollution Prevention Brochures to the target audiences
Targeted Audience	Businesses, Institutions, and Commercial Facilities
Responsible Department	DPW, Office of Community Development
Measurable Goals	One distribution per year



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.1.5 Stormwater Basins and Routine Maintenance Brochures for Businesses, Institutions, and Commercial Facilities

BMP Number	BMP 1-05
BMP Description	Distribute Stormwater Basins and the Importance of Routine Maintenance Brochures developed by DCR or similar
Targeted Audience	Businesses, Institutions, and Commercial Facilities
Responsible Department	DPW, Office of Community Development
Measurable Goals	One distribution per year

7.1.6 Builder's Guide to LID Brochure

BMP Number	BMP 1-06
BMP Description	Distribute the Builder's Guide to Low Impact Development (LID) brochure developed by DEP or similar
Targeted Audience	Developers
Responsible Department	DPW
Measurable Goals	One distribution at the time of permit application.

7.1.7 Stormwater Pollution Prevention Brochure for Developers

BMP Number	BMP 1-07
BMP Description	Distribute the EPA Stormwater Pollution Prevention for Small Residential Construction Sites brochure
Targeted Audience	Developers
Responsible Department	DPW, Office of Community Development
Measurable Goals	One distribution at the time of permit application.



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 2 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 2: MCM 2 Summary of Permit Requirements

BMP Number	BMP	Date Due	Date Completed	Updated
2-01	SWMP Posted on website	July 1, 2019	September 2021	September 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
BMP Description	Allow annual review of the SWMP to the public and open a public comment period.
Measurable Goals	Post SWMP on the Stormwater Web Page to obtain public input.

7.2.2 A-B-C Stormwater Flooding Board

BMP Number	BMP 2-02
BMP Description	The A-B-C Stormwater Flooding Board, consisting of members from Arlington, Belmont, and Cambridge, will work to address flooding and other hazards in the Little River and Alewife Brook areas.
Responsible Department	Board of Selectmen and Town’s Webmaster
Measurable Goals	Execute the Environmental Joint Powers Agreement developed by the A-B-C Board, meet throughout the permit term, and update information regarding the Board’s activities on the Town Web Page.



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 3 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 3: MCM 3 Summary of Permit Requirements

BMP Number	BMP Description	Date Due	Date Completed
3-01	SSO Inventory	July 1, 2019	2019/Annually
3-02	Phase I System Mapping	July 1, 2020	2019
3-02	Phase II System Mapping	July 1, 2028	Ongoing
3-03	Written IDDE Plan	July 1, 2019	2019
3-03	Assessment and Initial Priority Ranking of Outfalls/ Interconnections	July 1, 2019	2019
3-03	Follow-up Ranking	July 1, 2021	2022
3-03	Written Catchment Investigation Procedure	January 1, 2020	2022
3-04	Catchment Investigations for Problem Outfalls	Begin by July 2020/ Finish by July 2025	Ongoing
3-04	Catchment Investigations with Potential Sewer Input	Begin after Problem Outfall Investigations/Finish by July 2025	Ongoing
3-04	Catchment Investigations for High and Low Priority Outfalls	Begin after Problem Outfall Investigations/Finish by July 2028	Ongoing
3-05	Training	Annually	Annually
3-06	Dry Weather Screening and Sampling	July 1, 2021	September 2022
3-07	Wet Weather Sampling	Complete during Catchment Investigations	Ongoing



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

Table 4: MCM 3 Implementation Schedule

IDDE Program Requirement	Estimated Completion Date from July 1, 2018 (Effective Date of 2016 Permit)						Status
	1 Year	1.5 Years	2 Years	3 Years	7 Years	10 Years	
Written IDDE Program	X						Complete
SSO Inventory	X						Complete
Written Catchment Investigation Procedure		X					Complete
Phase I Mapping			X				Complete
Phase II Mapping						X	Ongoing
IDDE Regulatory Mechanism or Bylaw				X			Complete
Dry Weather Outfall Screening				X			Complete
Follow-up Ranking of Outfalls and Interconnections				X			Complete
Catchment Investigations – Problem Outfalls					X		Ongoing
Catchment Investigations – High and Low Priority Outfalls						X	Ongoing

7.3.1 IDDE Legal Authority

The Town of Belmont adopted an IDDE Authority on 9/29/2014 through the adoption of a Stormwater Management and Erosion Control Bylaw (link: [Town of Belmont, MA Buildings and Construction \(ecode360.com\)](http://www.ecode360.com)).

Department Responsible for Enforcement: Office of Community Development

The Town reviewed the Bylaw and updated it in 2022 to meet new requirements of the Permit. The Town will work through the Office of Community Development to update rules and regulations as needed.

7.3.2 Sanitary Sewer Overflow (SSO) Inventory

BMP Number BMP 3-01

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.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

The Town of Belmont and their DPW Operations team developed an SSO inventory in accordance with permit conditions and it is updated annually and submitted with the annual report.

7.3.3 Map of Storm Sewer System

BMP Number BMP 3-02

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 has completed the Phase I mapping requirements, including mapping outfalls and receiving waters. The Map is included as an Appendix to the IDDE Plan.*
- Phase II (complete 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 3-03

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

The Town's IDDE Plan was developed for the Order on Consent and was updated in 2022 to meet MS4 Permit requirements.

7.3.5 Implement IDDE Program

BMP Number BMP 3-04

The Town of Belmont will implement catchment investigations according to the Town's IDDE Plan and MS4 Permit conditions to be completed within 10 years of effective permit date. *Ongoing. The Town has performed IDDE Investigations primarily in the Mystic River watershed for the Order on Consent and will continue to complete IDDE investigations in accordance with the MS4 Permit.*



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.3.6 Employee Training

BMP Number BMP 3-05

The Town of Belmont will provide annual stormwater training to employees, including IDDE implementation and SSOs.

In-person training has been provided annually since spring 2022.

7.3.7 Dry Weather Screening

BMP Number BMP 3-06

The Town of Belmont will conduct dry weather screening in accordance with the outfall screening procedures identified in the IDDE Plan, and permit conditions.

Measurable Goals: Complete 3 years after effective date of permit.

The Town completed dry weather outfall screening including pollutants of concern September 2022.

7.3.8 Wet Weather Screening

BMP Number BMP 3-07

The Town of Belmont will conduct wet weather screening in accordance with the outfall screening procedures identified in the IDDE Plan, and permit conditions.

Measurable Goals: Complete 10 years after effective date of permit

Not Started.

7.3.9 Ongoing Screening

BMP Number BMP 3-08

The Town of Belmont will conduct dry weather and wet weather screening as necessary according to permit conditions.

Measurable Goals: Complete ongoing outfall screening upon completion of IDDE program

Not Started.



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 Belmont adopted a Construction/Erosion and Sediment Control (ESC) Authority on September 29, 2014 through the adoption of a Stormwater Management Bylaw (link: [Town of Belmont, MA Buildings and Construction \(ecode360.com\)](http://www.townofbelmont.com/ma-buildings-and-construction-ecode360-com)). The Office of Community Development is responsible for enforcement. The Town has reviewed the Bylaw and Regulations and confirmed they meet the new requirements of the Permit.

Table 5: MCM 4 Summary of Permit Requirements

BMP Number	BMP Description	Date Due	Date Completed	Updated
	Sediment and Erosion Control Ordinance	May 1, 2008	9/29/2014	
4-01	Site Inspection Procedures	June 30, 2019	9/29/2014	
4-02	Site Plan Review Procedures	June 30, 2019	9/29/2014	
4-03	Erosion and Sediment Control	June 30, 2019	9/29/2014	
4-04	Waste Control	June 30, 2019	9/29/2014	

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: DPW Operations

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

This requirement is met through the Town’s Stormwater Management and Erosion Control Bylaw adopted September 29, 2014.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

7.4.2 Site Plan Review Procedures

BMP Number BMP 4-02

Description: Complete written procedures of site plan review and begin implementation.

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: Engineering

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

This requirement is met through the Town's Stormwater Management and Erosion Control Bylaw adopted September 29, 2014.

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: Engineering

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

This requirement is met through the Town's Stormwater Management and Erosion Control Bylaw adopted September 29, 2014.

7.4.4 Waste Control

BMP Number BMP 4-04



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

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: Engineering

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

This requirement is met through the Town's Stormwater Management and Erosion Control Bylaw adopted September 29, 2014.



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 Belmont adopted a Post Construction Stormwater Authority, as required by the MS4 Permit, through the adoption of the Stormwater Management and Erosion Control Bylaw on May 8, 2013 (approved October 9, 2013). The Office of Community Development is responsible for administration of the ByLaw. Through this ByLaw, the Select Board adopted Stormwater Rules and Regulations on November 27, 2013.

The Town revised the Stormwater Bylaw to meet requirements of the 2016 MS4 Permit. The revisions were approved by the Town Select Board on May 2, 2022 and approved by the Attorney General September 26, 2022

Link to Stormwater Management Bylaw: <https://ecode360.com/28106009>

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	Bylaw: Revised May 2022 Regs: In Development Fall 2023
5-02	List of Retrofit Opportunities	July 1, 2022; annually report progress	June 2023
5-03	GI Design Opportunities Report	July 1, 2022; annually report progress	June 2023
5-04	Street Design Assessment Report	July 1, 2022; annually report progress	June 2023

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



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

drawings for completed projects; and ensure long term operation and maintenance will be a part of the SWMP.

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 and Erosion Control Bylaw adopted May 8, 2013 and the Stormwater Regulations adopted November 27, 2013. The Town reviewed the Bylaw and revised it to meet the intent of the 2016 MS4 Permit. Revisions were approved during the May 2022 Belmont Town Meeting. The regulations are currently under review and will also be updated to meet requirements of the 2016 MS4 Permit (anticipated Fall 2023).

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 5 in coordination with requirements of Appendix H to the MS4 Permit.

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 5.

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.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

Street Design and Parking Lot assessment was completed during Year 5.

7.5.5 As-Built Plans for On-Site Stormwater Control

BMP Number BMP 5-05

BMP Description: This procedure will require the submission of as-built drawings in order to ensure long term operation and maintenance as a component of the SWMP.

Measurable Goal: Require submission of as-built plans for completed projects.

This requirement is met through the Town's Stormwater Management and Erosion Control Bylaw adopted September 29, 2014.



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	Status
6-01	Written O&M Procedures	July 1, 2020	Complete 2022
6-01	Written Property Inventory	July 1, 2020	Complete 2022
6-02	Infrastructure O&M Procedures	July 1, 2020	Complete 2022
6-03	SWPPPs	July 1, 2020	Complete 2022
6-04	Catch Basin Cleaning Program	July 1, 2019	In Development
6-05	Street Sweeping Procedures	July 1, 2019	Complete
6-06	Winter Road Maintenance Program	July 1, 2019	Complete
	Stormwater Treatment Structures Inspection and Maintenance Procedures ¹	July 1, 2029	Complete
	Employee Training	Annual	Annual
	Site Inspections	Quarterly	Ongoing

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.

Completed 2022.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

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 2022.

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.

A SWPPP was developed for the Town's DPW Facility during 2022.

7.6.4 Catch Basin Cleaning Program

BMP Number BMP 6-04

BMP 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.

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 and maintained annually by a DPW-hired sub-contractor. Additional information about amount of debris removed will be collected during 2023 in order to complete the CB optimization plan.

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.

Measurable Goal: Sweep all streets and permittee-owned parking lots once per year in the spring.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Minimum Control Measures (MCM)

The Highway Division sweeps all municipal roadways 3-5 times per year, typically twice in the spring to clear winter debris and twice in the fall. In addition, three business districts are swept weekly from the spring through December. Two (2) mechanical sweepers are part of the Town's fleet for this program.

7.6.6 Winter Road Maintenance and Salt Optimization 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 and perform routine inspections of salt storage sites to ensure salt pile is properly covered.

The Town has reduced the use of common road salt by applying sand to roads instead as the end of storms approach.



STORMWATER MANAGEMENT PROGRAM (SWMP)

TMDLS and Water Quality Limited Waters

8.0 TMDLS AND WATER QUALITY LIMITED WATERS

8.1 ACTIONS FOR MEETING TMDL REQUIREMENTS

Due to past and current conditions, specific water bodies have been identified as impaired by MassDEP and by EPA with regards to certain pollutants. The 2016 Permit includes additional requirements for such water bodies with impairments and TMDLs. The Town of Belmont must abide by two (2) TMDLs approved by the EPA. The portion of the Charles River within Belmont is subject to a TMDL for phosphorus. Additionally, as a contributor to the watershed, the Town is subject to the Bacteria/Pathogen TMDL for the Charles River Watershed. The applicable TMDLs are summarized in Table 8.

Table 8: Applicable TMDLs in the Town of Belmont

Applicable TMDL	Waterbody Segment	Impairment
TMDL for Nutrients in the Lower Charles River Basin, Massachusetts	Beaver Brook MA72-28	Phosphorus
Pathogen TMDL for the Charles River Watershed	Beaver Brook MA72-28	Bacteria/Pathogens

8.1.1 Charles River Watershed Phosphorus TMDL Requirement

The EPA approved TMDL for Nutrients in the Lower Charles River on October 17, 2007, and a portion of the Town of Belmont is within this watershed. As a result, the Town must adhere to Part A.1 of Appendix F of the 2016 Permit for Beaver Brook (MA 72-28), which discharges to the Charles River. The Town will develop a Phosphorus Control Plan (PCP) designed to reduce the amount of phosphorus in stormwater discharges. The PCP will be completed in three phases based upon existing data and considering resources from the U.S. EPA Region 1, and relevant training materials prepared by other organizations. The Town will add the PCP as an attachment to this SWMP upon completion.

Table 9: PCP Timeline

1-5 years after Permit effective date (July 1, 2023)	5-10 years after Permit effective date (July 1, 2028)	10-15 years after Permit effective date (July 1, 2033)	15-20 years after Permit effective date (July 1, 2038)
Create Phase 1 Plan	Implement Phase 1 Plan		
	Create Phase 2 Plan	Implement Phase 2 Plan	



STORMWATER MANAGEMENT PROGRAM (SWMP)

TMDLS and Water Quality Limited Waters

1-5 years after Permit effective date (July 1, 2023)	5-10 years after Permit effective date (July 1, 2028)	10-15 years after Permit effective date (July 1, 2033)	15-20 years after Permit effective date (July 1, 2038)
		Create Phase 3 Plan	Implement Phase 3 Plan

The Draft Phase 1 PCP was developed during Permit Year 5 and was made available to the public for comment on 6/27/2023. No comments were received within the posted comment period (6/27/2023 – 7/7/2023)

8.1.2 Bacteria and Pathogen TMDL Requirements

The EPA approved the Final Pathogen TMDL for the Charles River Watershed in January 2007. As a contributing community to the Charles River Watershed, Belmont must comply with Part A. III of Appendix F of the Permit. To comply with the permit, the Town must include enhanced BMPs as part of their public education program. Belmont must distribute annual messaging informing the public about the proper management of pet waste and the detrimental impacts of improper management. In addition, the Town must provide information to owners of septic systems regarding proper maintenance.

The Town addressed this requirement in Section 7.1 as part of MCM 1 and it is reiterated below in Section 8.2.2. Additionally, during the development and implementation of the IDDE Plan, catchments draining to the Charles River were designated as High Priority Catchments. The IDDE Plan is included in Appendix E to this SWMP.

8.2 ACTIONS FOR MEETING WATER QUALITY LIMITED WATERS REQUIREMENTS

Three (3) waterbodies within the Town have impairments without a TMDL identified in the 2022 ILW that trigger requirements of Appendix H of the MS4 Permit as summarized in Table 10.

Table 10: Waterbodies with MS4 Permit Appendix H Impairments

Waterbody Segment	Phosphorus	Bacteria	Chloride	Oil & Grease, Metals, Solids
Little River (MA71-21)	X	X	X	X
Spy Pond (MA71040)	X			
Beaver Brook (MA72-28)			X	X



STORMWATER MANAGEMENT PROGRAM (SWMP)

TMDLS and Water Quality Limited Waters

8.2.1 Appendix H Part II – Phosphorus

The Town of Belmont has two waterbody segments with impairments that require adherence to Part II of Appendix H of the Permit. Little River (MA 71-21) and Spy Pond (MA71040) are classified as impaired for phosphorus without a TMDL. Due to this impairment, the Town will adhere to the following requirements:

- The Town will include annual messages for proper disposal of grass clippings in March or April, annual messages for the proper management of pet waste in June or July, and an annual message for proper disposal of leaf litter in August, September, or October. These messages were included as part of MCM 1.
- The Town's stormwater regulations will be amended to include a requirement that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal.
- The Town developed a Phosphorous Source Identification Report during Permit Year 5.
- The Town identified potential structural BMPs as part of the retrofit properties inventory completed under MCM 5, including consideration of BMPs that infiltrate stormwater where feasible.

In January 2020 EPA and the MassDEP released the Mystic River Watershed Alternative TMDL Development for Phosphorus Management-Final Report. It is anticipated that future NPDES Permits will include additional measures for management of Total Phosphorous in the Mystic Watershed.

8.2.2 Appendix H Part III – Bacteria

The Town of Belmont has one waterbody segment with impairments that require adherence to Part III of Appendix H of the Permit. Little River (MA 71-21) is impaired for bacteria (E. coli) without a TMDL. Due to this impairment, the Town will adhere to the following requirements:

- Beginning in Year 1, as part of the IDDE program, outfalls discharging to Little River are designated as high priority in the initial outfall ranking.
- As described in Section 5.1, the Town is required to include annual messaging encouraging the proper management of pet waste. In addition to distributing the messaging to pet owners, the Town will continue to post signage at dog parks where pet waste is collected.
- The Town of Belmont has identified properties with septic systems and will provide information regarding proper maintenance to those residences.

8.2.3 Appendix H Part IV – Chloride

The Town of Belmont has two waterbody segments with impairments that require adherence to Part IV of Appendix H of the Permit. Little River (MA 71-21) and Beaver Brook (MA 72-28) are impaired for chloride without a TMDL. The chloride impairment is new as of the 2018/2020 MA Integrated List of Waters



STORMWATER MANAGEMENT PROGRAM (SWMP)

TMDLS and Water Quality Limited Waters

(finalized Feb 2022). The Town must develop a Salt Reduction Plan within three (3) years of becoming aware of the impairment (June 30, 2025) and the plan must be fully implemented by five (5) years (June 30, 2027). The Salt Reduction Plan requirements are outlined in Part IV.4 of Appendix H of the Permit. Updates on the development of the Salt Reduction Plan will be included in each Annual Report hereafter until it is completed.

8.2.4 Appendix H Part V – solids/oil and grease/metals

The Town of Belmont has two waterbody segments with impairments that require adherence to Part V of Appendix H of the Permit. Little River (MA71-20) is impaired for oil and grease and metals (copper and lead in sediment) and Beaver Brook (MA72-28) is impaired for solids (sedimentation/siltation). Due to these impairments, the Town will adhere to the following requirements:

- Additional requirements for new and redevelopment projects draining to the Little River and Beaver Brook. Stormwater management systems designed on commercial and industrial land use areas must incorporate designs that allow for shutdown and containment where appropriate to isolate the system in the event of an emergency or spill or another unexpected event.
- Street sweeping frequency must be increased for all municipal-owned streets and parking lots to a schedule determined by the Town to target areas with potential for high pollutant loads. The Town must also prioritize inspection and maintenance of catch basins to ensure no sump is more than 50 percent full and clean catch basins more frequently if excessive sediment or debris loadings are identified.



STORMWATER MANAGEMENT PROGRAM (SWMP)

Annual Evaluation

9.0 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.

9.1 YEAR 1 ANNUAL REPORT

Report Due Date: September 28, 2019

9.2 YEAR 2 ANNUAL REPORT

Report Due Date: September 28, 2020

9.3 YEAR 3 ANNUAL REPORT

Report Due Date: September 28, 2021

9.4 YEAR 4 ANNUAL REPORT

Report Due Date: September 28, 2022

9.5 YEAR 5 ANNUAL REPORT

Report Due Date: September 28, 2023



10.0 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 May 2021.

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 2021.

Massachusetts Department of Environmental Protection. February 2008. *Massachusetts Stormwater Handbook*. <https://www.mass.gov/guides/massachusetts-stormwater-handbook-and-stormwater-standards>. Accessed 2022.



APPENDIX A

Letter Approving Authorized Representative

APPENDIX B

Notice of Intent (September 2018)

Requested Additional Information (December 2018)

Updated Notice of Intent

APPENDIX C

Authorization to Discharge

APPENDIX D

IPaC Official Species List

APPENDIX E

IDDE Plan and Initial Priority Ranking