



TOWN OF WINTHROP



STORMWATER MANAGEMENT PROGRAM PLAN UPDATED JUNE 2022



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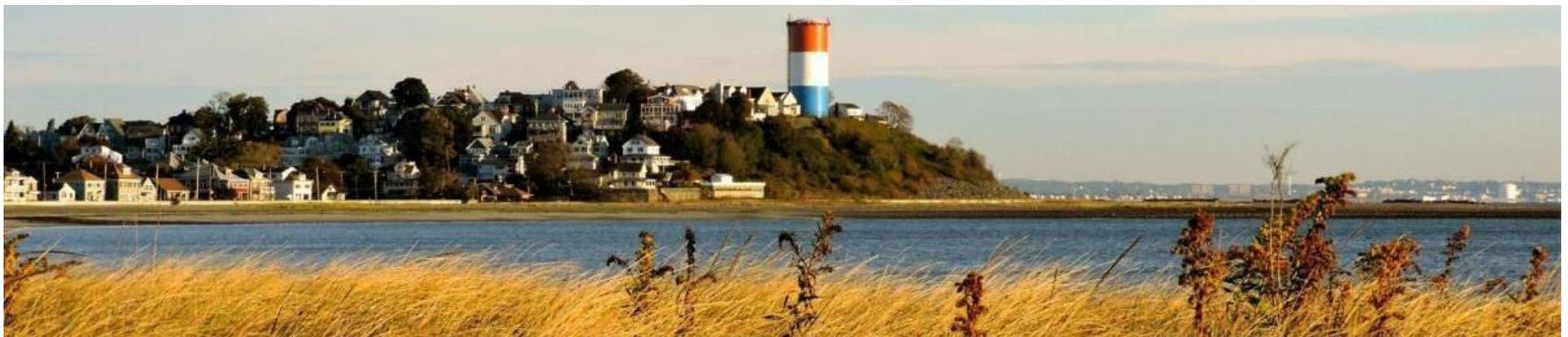
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1. STORMWATER PROGRAM OVERVIEW

WHY IS THIS IMPORTANT?

Stormwater runoff frequently transports pollutants through municipal separate storm sewer systems (MS4s), where it is discharged, often untreated, into local water bodies. To the public, the MS4 is more commonly known as a stormwater drainage system or simply as the “drain.” These stormwater drains have been constructed in developed areas to reduce the risk of flooding and damage to our infrastructure. Unfortunately, stormwater drainage systems carry pollution during rain events and snow melt – this can include oil, trash, and any other materials found on lawns, streets, and parking lots.

In the Town of Winthrop, stormwater runoff discharges that are conveyed by the MS4 to the environment are regulated under the Clean Water Act and require a Permit. Winthrop is one of thousands of communities and institutions across the country that must comply with these regulations. The stormwater drainage system discharge Permit is known as the “MS4 General Permit” and is issued and managed jointly by the U.S. Environmental Protection Agency (EPA) and the State of Massachusetts Department of Environmental Protection (MassDEP).

WHAT DOES WINTHROP HAVE TO DO?

The Town of Winthrop has had MS4 Permit coverage since 2003. As part of the Permitting requirements, Winthrop is required to develop a written Stormwater Management Program (SWMP). This SWMP (or Plan) is a “living” reference document that will guide the Town’s implementation of requirements within the Permit. Winthrop is required to keep records of, and report on, the activities and measures that are implemented and consistent with this Plan. MS4 General Permit requirements are summarized (and simplified) as follows:



Implement public education programs to help Town residents, business owners, and developers understand their role in keeping stormwater clean.



Engage the public in decision-making throughout the program.



Find and fix leaky or unauthorized sanitary sewer lines that might be discharging into the drainage system.



Ensure that construction projects do not pollute runoff with sediments and debris.



Ensure that new development and redevelopment control and treat runoff before it leaves the property.



Engage in pollution prevention actions like road and parking area best practices (cleaning drainage systems and sweeping pavements), and ensure that municipal activities like vehicle washing, lawn maintenance, and materials storage do not contribute to stormwater pollution.



The Town is a coastal community surrounded by the Belle Isle Inlet and Boston Harbor to the West and Broad Sound and the Atlantic Ocean to the East. Winthrop Department of Public Works maintains over 23 miles of drainage pipe, over 1,000 drainage structures (catch basins and manholes), and discharges stormwater to the environment in approximately 100 locations. Winthrop continues to strive at making improvements to its stormwater management program every year to protect its water resources. A map of Winthrop's water resources is shown in Appendix C of this Plan.

1.1 CONTROL MEASURES AND MEASUREABLE GOALS

The MS4 General Permit is structured around the following six control measures (CMs).

1. Public Education and Outreach
2. Public Involvement/Participation
3. Illicit Discharge Detection and Elimination (IDDE)
4. Construction Site Stormwater Runoff Control
5. Post-Construction Stormwater Management
6. Pollution Prevention/Good Housekeeping

Permittees are required to prepare a SWMP describing specific actions they will implement to reduce stormwater pollution that align with the Permit requirements for each CM. These actions, called Best Management Practices (BMPs), are described in this Plan, along with the measurable goal for each BMP and deadline for development and implementation. Section 1.5 of this SWMP identifies the person(s) or department(s) responsible for the BMPs identified in this SWMP.

The Permit Year (PY) referenced within this document corresponds to each regulatory year starting on July 1, 2018. Updates to the original version of this SWMP, dated September 10, 2018, have been incorporated into this document to reflect the Town of Winthrop's stormwater management program achievements through PY 4 (ending June 30, 2022). A revision log tracking these updates is located in Appendix E.

The original SWMP and this most recent SWMP amendment are available for public access on the Town's website.



CM 1: Public Education and Outreach (Permit Part 2.3.2)

Objective: Implement an education program that addresses stormwater issues of significance. The ultimate objective of a public education program is to increase knowledge of and help change behaviors of the public so that pollutants in stormwater are reduced. The “public” as defined in the MS4 General Permit are residents, businesses/institutions, developers/contractors, and industrial facilities.

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
1.1	Develop public education program plan (Education and Outreach Plan)	2.3.2.a	<p>Develop an Education & Outreach (E&O) program which will outline an implementation approach that is inclusive of all education requirements across the Permit and for all impaired waters’ special provisions.</p> <ul style="list-style-type: none"> • Develop educational messages to be distributed to target audiences, considering the topics listed in Part 2.3.2.d of the MS4 General Permit. • Develop educational messages specific to the areas that discharge to priority waters, impaired waters, and drinking water supplies (where applicable). • Plan to provide educational web content and other publicly accessible resources. • Consider needs specific to the community: language, types of businesses, etc. • Develop methods to evaluate effectiveness of the messages and overall education program. 	End of Permit Year (PY) 1
1.2	Deliver targeted/timed educational messages	2.3.2.c	Post educational messages on the Town website and/or Facebook page. Maintain educational content throughout the Permit term.	End of PY 1
			<p>Distribute a minimum of 2 educational messages to each of the 4 target audiences (residents, commercial, construction, industrial) on Permit-specified topics during the Permit term. Ensure that messages to each audience are at least 1 year apart.</p> <ul style="list-style-type: none"> • Suggested residential topics: <ul style="list-style-type: none"> ○ Lawn care effects on water quality (pesticide/herbicide/fertilizer application); ○ Benefits of onsite stormwater infiltration; 	Through-out Permit Term



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
			<ul style="list-style-type: none"> ○ Vehicle/equipment washing effects on water quality; ○ Proper disposal of swimming pool water; ○ Proper management of pet waste; and ○ Septic system maintenance. • Suggested Business/Commercial/Institutional topics: <ul style="list-style-type: none"> ○ Lawn care effects on water quality (pesticide/herbicide/fertilizer application); ○ Benefits of onsite stormwater infiltration; ○ Use of detergents in building maintenance, vehicle/equipment washing; ○ Use of de-icing/anti-icing materials, including proper storage; ○ Proper storage of materials/waste/dumpster maintenance; ○ Proper management of parking lot surfaces; and ○ Proper disposal of swimming pool water. • Suggested Developer/Construction topics: <ul style="list-style-type: none"> ○ Proper sediment and erosion control practices; ○ Use of low impact development; and ○ Information about the EPA Construction General Permit. • Suggested Industrial topics: <ul style="list-style-type: none"> ○ Equipment inspection/maintenance; ○ Proper storage of materials; ○ Dumpster management; ○ Use of de-icing/anti-icing materials, including proper storage; ○ Benefits of onsite stormwater infiltration; and ○ Information about the EPA Multisector General Permit. 	
1.3	Deliver supplemental educational messages in areas that discharge to bacteria or pathogen impaired waterbodies (Lynn Harbor – Segment ID: MA93-53, Boston	2.2.2.c.i.1, Appendix F Part III &	For areas that discharge to bacteria or pathogen impaired water bodies, provide educational materials to dog owners at the time of issuance or renewal of a dog license, or other appropriate time. These education materials describe the detrimental impacts of improper management of pet waste, requirements for waste collection and disposal, and penalties for noncompliance, noting any existing regulations where appropriate.	Through-out Permit term



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
	Harbor – Segment ID: MA70-01, and Belle Isle Inlet – Segment ID: MA71-14)	Appendix H Part III	For areas that discharge to bacteria or pathogen impaired water bodies, provide educational materials to owners of septic systems about proper maintenance (as applicable).	Annual
1.4	Assess educational program and modify if needed	2.3.2.e	Assess effectiveness of the educational program and modify messages if needed. Modify ineffective messages, if any, prior to next message delivery.	Annual

CM 2: Public Involvement and Participation (Permit Part 2.3.3)

Objective: Provide opportunities to engage the public in the review and implementation of the SWMP.

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
2.1	Conduct public participation activities	2.3.3.b	Allow public participation in the implementation of the SWMP, annually. All public involvement activities shall comply with state public notice requirements. Document and report on activities.	Annual
2.2	Provide opportunity for public to review SWMP	2.3.3.b & c	Allow public participation in review of the SWMP annually. Facilitate public review of SWMP, annually. Allow public to comment on SWMP, annually. All public involvement activities shall comply with state public notice requirements. Document public review and public comments.	Annual
2.3	Make program documents available to the public	2.3.3.a	Post the SWMP and all Annual Reports on Town website (following public notice requirements).	Annual



CM 3: Illicit Discharge Detection and Elimination (IDDE) (Permit Part 2.3.4)

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

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.1	Conduct Sanitary Sewer Overflow (SSO) reporting and inventory	2.3.4.4	<p>After identifying new SSOs, notify EPA within 24 hours and provide written notice to EPA and MassDEP within 5 days.</p> <ul style="list-style-type: none"> Document and file SSO reports and corrective measures implemented for annual reporting. Maintain database or summary of SSOs through Permit term. 	Throughout Permit term
			<p>Obtain and assess historic SSO reports.</p> <ul style="list-style-type: none"> Develop inventory of all identified SSOs (discharged to the MS4 within the past 5 years) indicating location, date/time, volume, suspected causes, and corrective measures. 	Complete
3.2	Continue MS4 system mapping	2.3.4.5	<p>Phase I – Update the system map required by the MS4-2003 Permit to include: outfalls and receiving waters, open channel conveyances, interconnections with other MS4s and other storm sewer systems, municipally-owned stormwater treatment structures, waterbodies (name and use impairments), and initial catchment delineations.</p>	Complete
			<p>Phase II – Update separate storm sewer system map annually, include information for all MS4 outfalls (catchments) within 10 years of the Permit effective date.</p> <ul style="list-style-type: none"> Update the system map annually as the following information becomes available during implementation of catchment investigation procedures: outfall spatial location, pipes, manholes, catch basins, refined catchment delineations, municipal sanitary sewer, and combined sewer systems (if available or applicable). 	<p>Update: Annual</p> <p>Info for all drainage infrastructure: End of PY 10</p>



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.3	Develop written IDDE Program Manual	2.3.4.6	Develop a written IDDE Program document that includes at a minimum: <ul style="list-style-type: none"> • Legal authority, statement of responsibilities, outfall/interconnection inventory and initial priority ranking, outfall/interconnection screening and sampling procedures, follow-up ranking, catchment investigation procedures, illicit discharge confirmation and removal procedures, indicators or IDDE Program progress, ongoing screening, and training. 	Complete
		2.3.4.7.a & Appendix H Part III	Designate catchments draining to any waterbody impaired for bacteria or pathogens as either Problem or High Priority catchments in implementation of the IDDE program. Also prioritize catchments that drain to surface public drinking water supplies and waterbodies with recreational use as High Priority.	Complete
		2.3.4.8	Outline Catchment Investigation Procedures: Develop a written systematic procedure to investigate each catchment associated with an outfall or interconnection within the MS4 system, that: <ul style="list-style-type: none"> • Identifies maps, historic plans and records, and other sources of data that will be used in identifying system vulnerability factors (SVFs) within each catchment. • Includes a description of manhole inspection methodology that involves systematically and progressively observing, sampling, and evaluating key junction manholes to determine location of suspected illicit discharges and SSOs. • Establishes procedures to isolate and confirm sources of illicit discharges. Available data to be used for System Vulnerability Factors (SVF) shall be listed in the IDDE Program Manual.	Complete



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.4	Conduct dry weather Outfall/ Interconnection screening and sampling	2.3.4.7.b	<p>Conduct dry-weather Outfall/Interconnection screening annually to meet Permit requirement of all outfalls screened by the end of PY3.</p> <ul style="list-style-type: none"> Town operates approximately 100 outfalls. Complete approximately 33 dry-weather inspections per Permit year starting in PY 1. Provide data annually. <p>Dry weather screening and sampling (no more than 0.1" of rainfall in past 24 hours):</p> <ul style="list-style-type: none"> Record condition and information for inventory and priority ranking. If flow, sample for ammonia, chlorine, conductivity, salinity, E. coli (freshwater) or enterococcus (salt water), surfactants, temperature, and pollutants of concern. If no flow but evidence of illicit flow exists, revisit within one week to perform screening/sampling. 	Complete
3.6	Reprioritize Outfalls and Interconnections	2.3.4.7.c	<p>Update outfall and interconnection ranking (2.3.4.7.a) based on information gathered during dry weather screening. Ranking can be updated continuously as new screening information becomes available.</p> <p>Update IDDE Program Manual with refined prioritization for catchment investigations based on dry weather screening results collected through PY 3.</p>	Complete
3.7	Conduct catchment investigations	2.3.4.8	<p>For each catchment, conduct investigations consistent with IDDE Program Manual; inspect key junction manholes and refine mapping information on the location of pipes, manholes, and extent of catchment.</p> <ul style="list-style-type: none"> Dry weather investigation in manholes: if flow, sample for ammonia, chlorine, and surfactants. If no flow, but visual/olfactory evidence of illicit discharges are present, conduct sandbag placement during dry weather. Return to verify presence or absence of flow. Sample as needed. Town operates approximately 100 outfalls and has ten years (2017-2027) to complete all investigations. Conduct approximately 10 catchment investigations per year beginning in PY 2. Provide data annually. 	<ul style="list-style-type: none"> Complete investigation of problem outfalls by end of PY 7 Investigate all catchments by end of PY 10



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.5	Conduct wet weather Outfall/Interconnection screening and sampling	2.3.4.8	Conduct wet-weather Outfall/Interconnection screening in catchments with System Vulnerability Factors prior to initiation of catchment investigation. Provide data annually. <ul style="list-style-type: none"> Wet weather screening and sampling shall be conducted during or after a precipitation event of sufficient intensity to produce a discharge. Recommended in the Spring. Sample for ammonia, chlorine, conductivity, salinity, E. coli or enterococcus, surfactants, temperature, and pollutants of concern. 	Complete all wet-weather screening in identified catchments by end of PY 7
3.9	Evaluate the overall effectiveness of the IDDE Program	2.3.4.9	Evaluate the overall effectiveness of the IDDE Program using the indicators for tracking program success as defined in the IDDE Program Manual. Indicators include: number of SSOs and illicit discharges identified and removed, number and percent of total catchments investigated, dry and wet weather screening and sampling results, and volume of sewage removed. <ul style="list-style-type: none"> Provide evaluation of IDDE program annually via annual report. 	During Permit term, document annually
3.10	Ongoing screening	2.3.4.10	Reprioritize each outfall and interconnection upon completion of all catchment investigations (2.3.4.8) and schedule ongoing screening once every 5 years that includes dry weather screening and sampling. Ongoing wet weather screening and sampling is also required at outfalls where previous wet weather screening was required due to SVFs. <ul style="list-style-type: none"> Conduct outfall screening once every 5 years upon completion of all catchment investigations. 	Upon completion of all catchment investigations, then ongoing screening once every 5 years
3.11	Conduct employee training	2.3.4.11	Provide annual training (at a minimum) to employees involved in the IDDE Program. Report on the frequency and type of employee training in annual report.	Annually (at a minimum)



CM 4: Construction Site Stormwater Runoff Control (Permit Part 2.3.5)

Objective: The objective of an effective construction stormwater runoff control program is to minimize or eliminate erosion on regulated construction sites within the regulated MS4 area and to ensure that sediments and other pollutants are not transported in stormwater from construction sites and allowed to discharge to a water of the U.S. through the MS4.

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
4.1	Ensure construction stormwater runoff control ordinances, local site development, and wetland protection Permit application process are consistent with MS4 General Permit	2.3.5.c.i.	<p>Review Town Stormwater Control Ordinance/Bylaw and regulations, wetland protection, and local Permit application process to ensure that site development applicants meet Construction General Permit obligations.</p> <ul style="list-style-type: none"> Continue to implement an effective construction stormwater runoff control program. An ordinance or other regulatory mechanism that requires the use of sediment and erosion control and waste management practices at construction sites that disturb greater than one acre (or common plan of development) was required to be in place by May 1, 2008 under the MS4-2003 Permit. Continue to require construction site operators performing land disturbance activities that exceed one acre (or common plan of development) to implement an erosion and sediment control program consistent with the Construction General Permit. 	Complete
4.2	Develop written construction site stormwater runoff control program procedures	2.3.5.c.ii. & 2.3.5.c.v.	<p>Develop written Construction and Post-Construction Program Manual (Manual) or independent documentation for the following procedures.</p> <ul style="list-style-type: none"> Procedures and workflow for site plan review, pre-construction review, receipt and consideration of information submitted by the public, inspections, responsible parties, and data tracking. Procedures for enforcement of sediment and erosion control measures. Procedures to consider potential water quality impacts to impaired waters, construction waste handling, and evaluation of opportunities for use of LID and green infrastructure. <p>Include references to local ordinance/bylaw and regulations.</p>	End of PY 1
4.3	Track, inspect, and document applicable construction projects	2.3.5.c.v.	Track the number of erosion and sediment control plan reviews, construction site inspections, and enforcement actions and include in annual report.	Throughout Permit term, annually



CM 5: Stormwater Management in New Development and Redevelopment (Post-Construction Stormwater Management) (Permit Part 2.3.6)

Objective: The objective of this control measure is to reduce the discharge of pollutants found in stormwater through the retention or treatment of stormwater on regulated new or redevelopment sites within the regulated MS4 area.

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
5.1	Develop written post-construction stormwater runoff program procedures	2.3.6.a	<p>Develop written Construction and Post-Construction Program Manual (Manual) or independent documentation meeting the following requirements:</p> <ul style="list-style-type: none"> • Include references to Town Stormwater Control Ordinance/Bylaw and regulations. • Document procedures and workflow for site plan review, post-construction installation inspections, responsible parties, and stormwater control structure tracking. • During development of the Manual or independent procedures: <ul style="list-style-type: none"> - Review Town Stormwater Control Ordinance/Bylaw and regulations, wetland protection, and local Permit application process to ensure that site development applicants meet Post-Construction General Permit obligations consistent with Permit requirements in Part 2.3.6.a (see BMP 5.2) and provisions related to management of Phosphorus in discharges to impaired waters. - Evaluate the effectiveness of Town Stormwater Control Ordinance/Bylaw related to Permit Part 2.3.6.a.iii requirements (see BMP 5.2). - Recommend and implement changes to Ordinance/Bylaw (or Regulations), as necessary. 	Complete
5.2	Update Local Ordinance/Bylaw (or regulations) on Stormwater Management in New & Redevelopment.	2.3.6.a.ii	<p>Based on outcome of BMP 5.1, update the Ordinance/Bylaw or other regulatory mechanism (as needed).</p> <ul style="list-style-type: none"> • Require LID site planning and design strategies be implemented to the maximum extent feasible. • Require that design of stormwater management systems be consistent with, or more stringent than, the requirements of the 2008 Massachusetts Stormwater Handbook. 	End of PY 3



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
			<ul style="list-style-type: none"> Require that stormwater management systems on new development sites be designed to meet an average annual pollutant removal equivalent to 90% of the average annual load of 90% of Total Suspended Solids (TSS) and 60% of Total Phosphorus (TP) generated from the total post-construction impervious area on the site. Require that stormwater management systems on redevelopment sites be designed to meet an average annual pollutant removal equivalent to 80% of the average annual load of TSS and 50% of TP generated from the total post-construction impervious area on the site. Provide options for offsite mitigation meeting the same standards as the new/redevelopment sites within the same United States Geological Survey (USGS) Hydrologic Unit Code 12 (HUC12) as the new/redevelopment site. 	
		2.3.6.a.iii	<ul style="list-style-type: none"> Require the submission of as-built drawings no later than 2 years after completion of construction projects. Document in the Annual Report the measures/procedures utilized to meet this requirement. Establish a mechanism to ensure that long-term operation and maintenance (O&M) of BMPs occur. This can be accomplished by establishing dedicated accounts or funds, maintenance contracts, annual certification or assumed ownership of the BMPs. Document in the Annual Report the measures/procedures utilized to meet this requirement. 	
5.3	Assess Local Standards	2.3.6.b	<p>During review of Ordinance/Bylaw (or other regulatory mechanism) in PY 3 (See BMP 5.2).</p> <ul style="list-style-type: none"> Evaluate existing zoning or other municipal standards to determine if the requirements are stormwater-friendly, per Permit Part 2.3.6.b and 2.3.6.c. Recommend changes to zoning or other municipal standards. <p>Street Design and Parking Lot Requirements Assessment.</p> <ul style="list-style-type: none"> Develop a report assessing street design and parking lot requirements that affect the creation of impervious cover. Involve the local planning board and local transportation board and include recommendations for policies that will minimize impervious area 	<p>End of PY 3</p> <p>End of PY 4, document status annually</p>



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
			(IA) attributable to parking areas and street designs, schedules for implementing recommendations, and subsequent assessment. <ul style="list-style-type: none"> • Document status of the assessment and planned or completed changes to local regulations/guidelines in annual report. 	
		2.3.6.c	Assessment of local regulation's effect on integration of infiltration/water reuse practices: <ul style="list-style-type: none"> • Develop a report assessing how local regulations affect the ability of development to include infiltration practices (e.g. green roofs, rain gardens, curb extensions, planter gardens, and porous & pervious pavement) and water harvesting devices (e.g. rain barrels and cisterns) that promote the use of stormwater for non-potable uses. • Create a schedule for revising regulations, if necessary. • Include this schedule, assessment findings, and progress towards making infiltration and water harvesting practices feasible in annual report. 	End of PY 4, document status annually



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
5.4	Identify BMP Retrofits for Reduction of Impervious Area (IA)	2.3.6.d	<p>During municipal facility inventory conducted in PY 2 (BMP 6.1), identify sites with likely reconstruction activity during the Permit term. Where appropriate, these facilities with planned reconstruction shall include stormwater control measures.</p> <ul style="list-style-type: none"> • Complete an inventory of at least 5 municipal properties/ roadways that could be modified through the reduction of IA by end of PY4 and include in annual report. • Retrofits to municipal properties with significant IA should be considered at a minimum. • Conduct retrofit assessment on facilities without planned improvements and within impaired watersheds (as applicable) in PY 4. Also see Section 1.2.1 Impaired Waters. • Continue to identify additional municipal properties/infrastructure that could be retrofitted such that a minimum of 5 sites are maintained in the inventory, until such a time as when there are less than 5 sites remaining. Update inventory annually beginning with PY 5 annual report. • Report on inventoried MS4 properties that have been retrofitted with BMPs that mitigate IA. Non-MS4 retrofitted properties may also be included. Report on retrofits annually beginning with PY 5 annual report. 	End of PY 4, document status annually



CM 6: Pollution Prevention and Good Housekeeping for Municipal Operations (Permit Part 2.3.7)

Objective: To implement a *Pollution Prevention & Good Housekeeping Program* for municipal operations that has a goal of preventing or reducing pollutant runoff and protecting water quality from all municipal operations and municipal facilities.

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
6.1	Develop Operations & Maintenance (O&M) Program documentation	2.3.7.a	Develop written O&M procedures per Part 2.3.7.a of the Permit. <ul style="list-style-type: none"> • Develop Clean Water Best Practices Manual, inclusive of all Town facilities, drainage system operations activities, inspection obligations, and including specific impaired waters provisions. Program procedures shall include the following: <ul style="list-style-type: none"> - Municipal facilities/equipment inventory - Proper use, storage, and disposal of potential stormwater pollutants such as pesticides, herbicides, fertilizers, and petroleum products - Pet waste management - Waterfowl congregation area management - Management of trash receptacles - Vehicle and equipment maintenance, including wash water management - Municipal infrastructure maintenance: street sweeping and catch basin cleaning - Road salt use and optimization - Stormwater treatment structures O&M - Landscape maintenance (including grass clippings and leaf litter) • Report on status of inventory and program documentation. 	Complete
6.2	Implement O&M Program	2.3.7.a	Report on status of O&M programs, maintenance activities, best practices, and provide documentation in annual report consistent with reporting requirements outlined in 2.3.7.a.	Complete, document status annually



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
6.3	Develop/Refine Stormwater Pollution Prevention Plan (SWPPP) for maintenance garages, public works yards, transfer stations, and waste handling facilities	2.3.7. b	Develop SWPPP (and SPCC as needed) for maintenance garage, public works yard, transfer station, and waste handling facilities. SWPPP shall include the elements listed in 2.3.7.b. ii. Keep all records associated with the development and implementation of the SWPPP. Report status of SWPPP annually.	Complete, document annually thereafter
6.4	Conduct site inspection procedures consistent with SWPPP for maintenance garages, public works yards, transfer stations, and waste handling facilities	2.3.7.b.iii.	Inspect all areas exposed to stormwater and all stormwater control measures at each facility at least once per calendar quarter and report findings in annual report.	Once per quarter upon completion of BMP 6.3, document annually.
6.5	Conduct employee training program consistent with SWPPP	2.3.7. h.	Conduct employee training consistent with SWPPP.	Every other Permit Year



1.2 WATER QUALITY STANDARDS

1.2.1 Impaired Waters

Discharges to waterbodies with approved Total Maximum Daily Load (TMDL) or to water quality limited water bodies, or discharges causing or contributing to impairments have additional requirements in Parts 2.1, 2.2, and Appendix F of the MS4 General Permit. According to MassDEP's 2018/2020 Integrated List of Waters, the Town of Winthrop's MS4 discharges to waterbodies that have an approved TMDL and waterbodies that are considered impaired but do not have an approved TMDL. A list of impaired waters that are within the Town of Winthrop and their TMDL/impairments causes is provided in Table 1-1 in this Section. A map showing MassDEP's 2018/2020 Integrated List of Waters located in the Town of Winthrop is provided in Appendix C of this SWMP.

Additional Requirements for Discharges to Impaired Waterbodies with an Approved TMDL

As noted in Table 1-1, the Town discharges to the Lynn Harbor, which has a TMDL. There are additional requirements for areas that discharge into this waterbody segment in the General Permit, which are discussed in this Section.

Lynn Harbor TMDL for Fecal Coliform

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

- Enhancement of BMPs required by Part 2.3 of the permit that shall be implemented during this permit term:
 - Public Education and Outreach
 - Once per year, the Town will produce a message to pet owners, encouraging the proper management of pet waste. Educational materials will be distributed to dog owners at the time of issuance or renewal of a dog license, or other appropriate time. Education materials will describe the detrimental impacts of improper management of pet waste, requirements for waste collection and disposal, and penalties for non-compliance, noting any existing regulations where appropriate.
 - Once per year, the Town will provide information to owners of septic systems in catchments that discharge to the Lynn Harbor about proper maintenance.
 - Illicit Discharge
 - Catchments draining to the Lynn Harbor will be designated either Problem Catchments or HIGH priority in implementation of the IDDE program.



Additional Requirements for Discharges to Impaired Waterbodies Without an Approved TMDL

For the areas within the Town that directly discharge to impaired waterbody segments without an approved TMDL, there are additional BMPs that have been established in Parts 2.1, 2.2, and Appendix H of the MS4 General Permit. Among the impairment causes are bacteria or pathogens (i.e. Escherichia Coli, Enterococcus, or Fecal Coliform) and PCB in fish tissue. A description of the permit requirements and BMPs related to impaired waters and measurable goal(s) for each BMP have been integrated into Section 1.1 of this SWMP and are summarized below:

For the areas that discharge to waters impaired by **bacteria or pathogens** but have no approved bacteria TMDL (Boston Harbor, Winthrop Bay, and Belle Isle Inlet):

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

Table 1-1: Impaired Waters in Winthrop, MA (Based on Approved 2018/2020 Integrated List)

Segment ID	Name	Impairment Category Classification	Impairment Cause	Impairment Source	EPA TMDL No.	Pollutant of Concern Sampling Requirements
MA93-53	Lynn Harbor	Category 4a	Fecal Coliform	Combined Sewer Overflows Discharges from MS4 Sanitary Sewer Overflows (collection system failures)	50122	- Fecal Coliform
MA70-01	Boston Harbor	Category 5	Fecal Coliform	Unknown Discharges from MS4	NA	- Fecal Coliform
			Cause Unknown [Contaminates in Fish Tissue]	Contaminated Sediments Discharges from Biosolids (Sludge) Storage Upstream Source Wet Weather Discharges	NA	- NA



Segment ID	Name	Impairment Category Classification	Impairment Cause	Impairment Source	EPA TMDL No.	Pollutant of Concern Sampling Requirements
MA70-01	Boston Harbor	Category 5	PCB in Fish Tissue	Contaminated Sediments Upstream Source Wet Weather Discharges	NA	- NMR*
MA70-10	Winthrop Bay	Category 5	Enterococcus	Unknown Discharges from MS4	NA	- Enterococcus
			Fecal Coliform	Unknown Discharges from MS4	NA	- Fecal Coliform
			[Cause Unknown [Contaminates in Fish Tissue]	Contaminated Sediments Discharges from Biosolids (Sludge) Storage Upstream Source Wet Weather Discharges	NA	- NA
			PCB in Fish Tissue	Contaminated Sediments Upstream Source Wet Weather Discharges	NA	- NMR*
MA71-14	Belle Isle Inlet	Category 5	Fecal Coliform	Unknown	NA	- Fecal Coliform
			[Cause Unknown [Contaminates in Fish Tissue]	Unknown	NA	- NA
			PCB in Fish Tissue	Unknown	NA	- NMR*

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

Future reissuance and/or approval of the Massachusetts Integrated List of Waters may necessitate additional modifications to this Plan to maintain compliance with applicable requirements.



1.2.2 Surface Public Drinking Water Supplies

The Town of Winthrop has no active surface public drinking water supply sources, according to available MassGIS data. A list of all known waterbody segments that receive discharge from Winthrop's MS4 is included in the Town's MS4 General Permit Notice of Intent (NOI) submission to the EPA dated September 27, 2018, which can be accessed on the EPA's website. As detailed in the NOI, there are no known direct discharges to public surface drinking water supplies. Any updates to the waterbody segments receiving discharge from Winthrop's MS4 will be included in future revisions of this document, if necessary.

1.2.3 Increased Discharges

The Town of Winthrop shall comply with the provisions of 314 CMR 4.04 including information submittal requirements and obtaining authorization for increased discharges where appropriate. Any authorization of an increased discharge by MassDEP shall be incorporated within this SWMP.

There shall be no increased discharges, including increased pollutant loading(s) from the MS4 to impaired waters listed in categories 5 or 4b on the most recent Massachusetts Integrated Report of waters listed pursuant to Clean Water Act Section 303(d) and 305(b) unless the discharger demonstrates that there is no net increase in loading from the MS4 to the impaired water of the pollutant(s) for which the waterbody is impaired.

Unless otherwise determined by the U.S. EPA or by MassDEP, compliance with the Part 2.2.2 and 2.3.6 requirements of the MS4 General Permit, including all reporting and documentation requirements, are considered as demonstrating no net increase or increased discharge. Part 2.2.2 and 2.3.6 requirements have been included in the BMPs outlined in Section 1.1 of this SWMP.

If necessary, the Town of Winthrop will demonstrate compliance with this provision by either:

- Documenting that the pollutant(s) for which the waterbody is impaired is not present in the MS4's discharge and retaining documentation of this finding with the SWMP; or
- Documenting that the total load of the pollutant(s) of concern from the MS4 to any impaired portion of the receiving water will not increase as a result of the activity and retaining documentation of this finding in the SWMP.

1.3 SPECIAL ELIGIBILITY DETERMINATIONS

Consistent with Part 1.9 of the 2016 MS4 General Permit, the Town of Winthrop has completed an assessment of both Endangered Species and Historic Properties. The Information, Planning and Conservation (IPaC) online system process was completed, and it appears that there is potential presence of the Northern Long-Eared Bat, Piping Plover, Red Knot, and Roseate Tern in Winthrop. The necessary consultation was conducted with the United States Fish and Wildlife Service (USFWS). Since the action area contains one or more of the species listed in Appendix C Part B Step 2 for determination of Criteria B and it has been determined that discharges from the Town of Winthrop's MS4 are "not likely to adversely affect" the Northern Long-Eared Bat, Piping Plover, Red Knot, and Roseate Tern, Criterion B is applicable. Therefore, the stormwater discharges and discharge related activities are "not likely to adversely



affect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the USFWS.

Appendix D of the MS4 General Permit was consulted for guidance regarding the National Historic Preservation Act. It was determined that Criterion A is applicable: The discharges authorized under this permit do not have the potential to cause effects on historic properties.

If during the course of Permit implementation, the Town initiates a project that will result in ground or vegetation disturbance, additional consultation with the appropriate agencies will be initiated. See Appendix B for determination letters.

1.4 ANNUAL PROGRAM SELF-EVALUATION, RECORD KEEPING & ANNUAL REPORTING

Covered entities are required to collect and report information about the development and implementation of their Stormwater Management Program (SWMP). The Town of Winthrop conducts annual evaluations of its program compliance, the appropriateness of its identified Best Management Practices (BMPs), meeting new Permit requirements, and progress towards achieving its identified measurable goals, which include reducing the discharge of pollutants to the maximum extent practicable (“MEP”).

The Town of Winthrop will keep records required by the MS4 General Permit for at least five (5) years after they are generated. Records include but are not limited to: information used in the development of written (hardcopy or electronic) program required by this Permit, monitoring results, copies of reports, records of screening, follow-up and elimination of illicit discharges; maintenance records; inspection records; and data used in the development of the notice of intent, SWMP, SWPPP, and annual reports. Records will be available for public observation upon request. Records will be submitted to the EPA or MassDEP as requested.

Annual reports are due to the EPA and MassDEP each year within 90 days of the close of the Permit year on June 30 (September 28). The annual reports shall include the following content:

- Self-assessment review of compliance with Permit conditions;
- An assessment/evaluation of:
 - The appropriateness of the identified BMPs
 - Progress towards achieving the statutory goal of reducing the discharge of pollutants to the MEP
 - The identified measurable goals for each of the CMs
- All outfall screening and sampling results;
- Summary of stormwater activities planned to be undertaken during the next reporting cycle;
- Any change in identified BMPs or measurable goals and justification for those changes; and
- The information specified under the reporting requirements for each CM.



Changes to the Town's stormwater permit compliance program do not need to be updated in their NOI, however, this information will be included in the Town's annual reports and SWMP updates. Annual reports are also made available for public access on the Town's and the EPA's website.

1.5 RESPONSIBLE PARTIES FOR STORMWATER PROGRAM IMPLEMENTATION

Title/ Position of Responsible Person	Name of Responsible Person	Role/Program Element(s)
Director of Public Works	Steve Calla	CM 1, 2, 3, 5, 6
Commissioner of Inspectional Services	Al Legee	CM 1 (Erosion and Sediment Control Handout)
Conservation Agent	*Position Currently Vacant*	CM 4 and 5 (These will temporarily be the responsibility of the Conservation Commission while the Agent position remains vacant)
Planning and Community Development Director	Rachel Kelly	CM 4 and 5



2. PROGRAM DOCUMENTS: PLANS, PROCEDURES, INVENTORIES, AND MAPS

The General Permit requires certain documents to be included in the SWMP. These documents will be developed consistent with the schedule outlined in Section 1.1. This Section provides information on where these documents can be accessed. Some of these documents have been appended to this SWMP, while others are provided in a location external to the SWMP due to size or complexity. All compliance documents will be maintained at the Department of Public Works, or as detailed in the sections below.

2.1 IDDE PROGRAM

2.1.1 IDDE Program Manual

The Town has developed a written IDDE Program Manual consistent with the requirements of Part 2.3.4.6 of the MS4 General Permit. The IDDE Program Manual includes:

- Responsible parties
- Regulatory authority
- Dry-weather and wet-weather outfall screening and sampling procedures
- Interconnection screening procedures
- Initial assessment and priority ranking of outfalls/interconnections
- Catchment investigation procedures
- Enforcement procedures
- Training resources and modules

The IDDE Program Manual can be accessed at the Department of Public Works.



2.1.2 Separate Storm Sewer System Map

The Town has developed a Separate Stormwater Sewer System Map consistent with the requirements of Part 2.3.4.5.a of the MS4 General Permit. The maps, provided in Appendix A and Appendix C of this SWMP, includes the following information:

- 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 per the most recent Massachusetts Integrated List of Waters report
- Initial catchment delineations
- Drain pipes, manholes and catch basins

The map will be updated annually and/or upon receipt of new information relating to the MS4 drainage network.

2.1.3 SSO Inventory

The Town has developed a Sanitary Sewer Overflow Inventory consistent with the requirements of Part 2.3.4.4 of the MS4 General Permit. The inventory can be accessed at the Department of Public Works and is included in the Town's Annual Report.

2.1.4 Receiving Waterbodies

Consistent with the requirements of Part 1.10.2 of the MS4 General Permit, a list of all Integrated List waterbody segments that receive discharge from the Town's MS4 is provided in Table 1-1. The Town's MS4 General Permit Notice of Intent submission to the EPA, dated September 27, 2018, included the estimated number of outfalls that discharge directly to each Integrated List waterbody segment. A copy of the original NOI can be accessed on the EPA's website. Any updates to the numbers reported in the NOI will be included in future revisions of this document, if necessary.

2.1.5 Interconnected Separate Storm Sewer Systems

Consistent with requirements of Part 1.10.2 of the MS4 General Permit, a list of all known interconnected MS4s and other separate storm sewer systems receiving a discharge from the Town's MS4, as well as the waterbody segment(s) that ultimately receive the discharge, are shown on the updated Separate Storm Sewer System Map in Appendix A.



2.2 CONSTRUCTION AND POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM

2.2.1 Site Plan Review, Site Inspection, and Erosion & Sediment Control Procedures

Consistent with the requirements of Part 2.3.5 of the MS4 General Permit, the Town has developed written procedures for site plan review, site inspections, and enforcement of sediment and erosion control measures. These procedures are detailed in the Town's Land Development Program Manual, which can be accessed at the Department of Public Works.

2.2.2 New Development/Redevelopment Ordinance

Consistent with the requirements of Part 2.3.6.a.iii of the MS4 General Permit, the Town has some of the required elements in place and is revising and consolidating its regulatory mechanism to comply with construction and post-construction phase Permit requirements. This SWMP amendment will be updated when the regulatory mechanism is finalized by the Town Council.

2.2.3 Street Design and Parking Lot Report

Consistent with the requirements of Part 2.3.6.b and 2.3.6.c. of the MS4 General Permit, the Town will develop a report assessing current street design, parking lot guidelines, and other "code" requirements to ensure that the creation of impervious cover is minimized, and that innovative stormwater management is not constrained by local code. This report will be developed in Permit Year 4.

2.2.4 Green Infrastructure Report

Consistent with the requirements of Part 2.3.6.c of the MS4 General Permit, the Town will develop a report assessing how local regulations affect the ability of development projects to include infiltration practices (e.g. green roofs, rain gardens, curb extensions, planter gardens, and porous and pervious pavement) and water harvesting devices (e.g. rain barrels and cisterns) that promote use of stormwater for non-potable uses. This report will be developed in Permit Year 4.

2.2.5 Retrofit Properties Inventory

Consistent with the requirements of Part 2.3.6.d of the MS4 General Permit, the Town will develop a report assessing their existing stormwater BMPs, identifying sites where impervious areas can be reduced, and assessing the likelihood and potential impacts of completing such retrofits. This report will be developed in Permit Year 4.



2.3 MUNICIPAL FACILITIES AND OPERATIONS PROGRAMS

2.3.1 Clean Water Best Practices Manual

The Town has developed a Clean Water Best Practices (CWBP) Manual consistent with the requirements of Part 2.3.7.a.ii of the MS4 General Permit. The objectives of the CWBP Manual are to provide a general guidance document to the Town detailing ways to reduce stormwater-transported pollution during typical activities on municipally owned properties and to promote behavior that will improve water quality in the Town of Winthrop. The manual includes general best practices for managing the following assets:

- Parks and open space
- Vehicles and equipment
- Buildings and facilities
- MS4 infrastructure

The CWBP Manual can be accessed at the Department of Public Works.

2.3.2 Municipal Facility Inventory

The Town has developed a Municipal Facility Inventory consistent with the requirements of Part 2.3.7.a.ii of the MS4 General Permit. The inventory includes all municipally owned facilities with the potential for stormwater polluting activities, including, but not limited to:

- Parks and open space
- Buildings where pollutants are exposed to runoff (e.g., schools, town offices, fire stations, garages, etc.)
- Vehicle and equipment storage areas

The Municipal Facility Inventory is located in Appendix A of the CWBP Manual, which can be accessed at the Department of Public Works.

2.3.3 O&M Standard Operating Procedures

The Town has developed written Operations and Maintenance (O&M) Standard Operating Procedures (SOPs) consistent with the requirements of Part 2.3.7.a of the MS4 General Permit. The objectives of the O&M SOPs are to establish procedures for MS4 infrastructure maintenance that will help reduce the discharge of pollutants from municipally owned facilities. The O&M SOPs include:



-
- Winter road maintenance procedures targeting minimal use and proper storage of sodium chloride and other salts
 - Catch basin inspection, cleaning, and maintenance procedures, and a plan for optimization of these routine activities
 - Street sweeping and cleaning procedures to ensure all Town-owned roadways are swept at least once per year
 - Management and disposal of catch basin cleanings and street sweepings to avoid discharge into receiving waters
 - Stormwater treatment structure inspections and maintenance procedures

The O&M SOPs are located in Appendix B of the CWBP Manual, which can be accessed at the Department of Public Works.

2.3.4 Stormwater Pollution Prevention Plan

The Town has developed a written Stormwater Pollution Prevention Plan (SWPPP) for the Department of Public Works Facility consistent with the requirements of Part 2.3.7.b of the MS4 General Permit. The SWPPP includes:

- Pollution and prevention team
- Description of the facility and identification of potential pollutant sources
- Identification of stormwater controls
- Material exposure prevention, good housekeeping, preventative maintenance, spill prevention and response, erosion and sediment control, management of runoff, salt storage pile or salt-containing pile management, employee training, and maintenance of control measure practices

The SWPPP can be accessed at the Department of Public Works.



CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly 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."

Signature

Date

Name



Appendices



APPENDIX A: SEPARATE STORM SEWER MAP



APPENDIX B: SPECIAL ELIGIBILITY DETERMINATION LETTERS



APPENDIX C: IMPAIRED WATERS AND SPECIAL RESOURCE WATERS



APPENDIX D: DEFINITIONS



Definitions, Abbreviations and Acronyms

Best Management Practices (BMPs) - Schedules of activities, practices (and prohibitions of practices), structures, vegetation, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the United States. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Common Plan of Development - A "larger common plan of development or sale" is a contiguous area where multiple separate and distinct construction activities may be taking place at different times on different schedules under one plan. For example, if a developer buys a 20-acre lot and builds roads, installs pipes, and runs electricity with the intention of constructing homes or other structures sometime in the future, this would be considered a larger common plan of development or sale. If the land is parceled off or sold, and construction occurs on plots that are less than one acre by separate, independent builders, this activity still would be subject to stormwater Permitting requirements if the smaller plots were included on the original site plan.

Control Measure - Refers to any BMP or other method (including effluent limitations) used to prevent or reduce the discharge of pollutants to waters of the United States.

Discharge - When used without qualification, means the "discharge of a pollutant."

Discharge of a Pollutant - Any addition of any "pollutant" or combination of pollutants to "waters of the United States" from any "point source". This includes additions of pollutants into waters of the United States from surface runoff which is collected or channeled by man; or discharges through pipes, sewers, or other conveyances, leading into privately owned treatment works.

Discharge-related Activities - Activities which cause, contribute to, or result in stormwater and allowable non-stormwater point source discharges, and measures such as the siting, construction and operation of BMPs to control, reduce, or prevent pollution in the discharges.

Disturbance - Action to alter the existing vegetation and/or underlying soil of a site, such as clearing, grading, site preparation (e.g., excavating, cutting, and filling), soil compaction, and movement and stockpiling of top soils.

Existing Discharger - An operator applying for coverage under this Permit for discharges covered previously under an NPDES general or individual Permit.

Facility or Activity - Any NPDES "point source" or any other facility or activity (including land or appurtenances thereto) that is subject to regulation under the NPDES program.

Illicit Discharge - Any discharge to a municipal separate storm sewer that is not composed entirely of stormwater except discharges pursuant to a NPDES Permit (other than the NPDES Permit for discharges from the municipal separate storm sewer) and discharges resulting from firefighting activities.



Impaired Water - A water is impaired if it does not meet one or more of its designated use(s). For purposes of this Permit, "impaired" refers to categories 4 and 5 of the five- part categorization approach used for classifying the water quality standards attainment status for water segments under the TMDL program. Impaired waters compilations are also sometimes referred to as "303(d) lists." Category 5 waters are impaired because at least one designated use is not being supported or is threatened and a TMDL is needed. Category 4 waters indicate that at least one designated use is not being supported but a TMDL is not needed (4a indicates that a TMDL has been approved or established by EPA; 4b indicates other required control measures are expected in result in the attainment of water quality standards in a reasonable period of time; and 4c indicates that the non- attainment of the water quality standard is the result of pollution (e.g. habitat) and is not caused by a pollutant). See USEPA's 2006 Integrated Report Guidance, July 29, 2005 for more detail on the five part categorization of waters [under EPA National TMDL Guidance <http://www.epa.gov/owow/tmdl/policy.html>]).

Impervious Surface - Any surface that prevents or significantly impedes the infiltration of water into the underlying soil. This can include but is not limited to: roads, driveways, parking areas and other areas created using non porous material; buildings, rooftops, structures, artificial turf and compacted gravel or soil.

Industrial Activity - The ten categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity," as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi).

Industrial Stormwater - Stormwater runoff associated with the definition of "stormwater discharges associated with industrial activity."

Interconnection - The point (excluding sheet flow over impervious surfaces) where the Permittee's MS4 discharges to another MS4 or other storm sewer system, through which the discharge is eventually conveyed to a water of the United States. Interconnections shall be treated similarly to outfalls throughout the Permit.

Junction Manhole - For the purposes of this plan, a junction manhole is a manhole or structure with two or more inlets accepting flow from two or more MS4 alignments. Manholes with inlets solely from private storm drains, individual catch basins, or both are not considered junction manholes for these purposes.

Key Junction Manhole - For the purposes of this plan, key junction manholes are those junction manholes that can represent one or more junction manholes without compromising adequate implementation of the illicit discharge program. Adequate implementation of the illicit discharge program would not be compromised if the exclusion of a particular junction manhole as a key junction manhole would not affect the Permittee's ability to determine the possible presence of an upstream illicit discharge. A Permittee may exclude a junction manhole located upstream from another located in the immediate vicinity or that is serving a drainage alignment with no potential for illicit connections.

Municipal Separate Storm Sewer - A conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man- made channels, or storm drains):

- (i) Owned or operated by a State, Town, town, borough, county, parish, district, association, or other public body (created by or pursuant to State



law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under Section 208 of the CWA that discharges to waters of the United States;

- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a combined sewer; and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

Municipal Separate Storm Sewer System (MS4) - Means all separate storm sewers that are defined as "large" or "medium" or "small" municipal storm sewer systems pursuant to paragraphs 40 CFR 122.26 (b)(4) and (b)(7), or designated under paragraph 40 126.26(a) (1)(v). For the purposes of this Permit "MS4" may also refer to the Permittee with jurisdiction over the sewer system.

New Development - Any construction activities or land alteration resulting in total earth disturbances greater than 1 acre (or activities that are part of a larger common plan of development disturbing greater than 1 acre) on an area that has not previously been developed to include impervious cover. (see Part 2.3.6. of the Permit)

Outfall Catchment - The land area draining to a single outfall or interconnection. The extent of an outfall's catchment is determined not only by localized topography and impervious cover but also by the location of drainage structures and the connectivity of MS4 pipes.

Owner or Operator - The owner or operator of any "facility or activity" subject to regulation under the NPDES program.

Point Source - Any discernible, confined, and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel, or other floating craft from which pollutants are or may be discharged. This term does not include return flows from irrigated agriculture or agricultural stormwater runoff.

Pollutant - Dredged spoil, solid waste, incinerator residue, filter backwash, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial, municipal and agricultural waste discharged into water.

Pollutant of Concern - A pollutant which causes or contributes to a violation of a water quality standard, including a pollutant which is identified as causing an impairment in a State's 303(d) list.

Redevelopment - For the purposes of this plan, any construction, land alteration, or improvement of impervious surfaces resulting in total earth disturbances greater than 1-acre (or activities that are part of a larger common plan of development disturbing greater than 1 acre) that does not meet the definition of new development (see above).

Site - For the purposes of this plan, the area extent of construction activities, including but not limited to the creation of new impervious cover and



improvement of existing impervious cover.

Stormwater - Stormwater runoff, snow melt runoff, and surface runoff and drainage.

Stormwater Discharges Associated with Construction Activity - A discharge of pollutants in stormwater runoff from areas where soil disturbing activities (e.g., clearing, grading, or excavating), construction materials, or equipment storage or maintenance (e.g., fill piles, borrow areas, concrete truck washout, fueling), or other industrial stormwater directly related to the construction process (e.g., concrete or asphalt batch plants) are located. (See 40 CFR 122.26(b)(14)(x) and 40 CFR 122.26(b)(15).

Total Maximum Daily Loads (TMDLs) - A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive and still meet water quality standards, and an allocation of that amount to the pollutant's sources. A TMDL includes waste load allocations (WLAs) for point source discharges, load allocations (LAs) for nonpoint sources and/or natural background and must include a margin of safety (MOS) and account for seasonal variations. (See Section 303(d) of the Clean Water Act and 40 CFR 130.2 and 130.7).

Urbanized Area - US Census designated area comprised of a densely settled core of census tracts and/or census blocks that meet minimum population density requirements, along with adjacent territory containing non-residential urban land uses as well as territory with low population density included to link outlying densely settled territory with the densely settled core. For the purposes of this Permit, Urbanized Areas as defined by any Census since 2000 remain subject to stormwater regulation even if there is a change in the reach of the Urbanized Area because of a change in more recent Census data.

Water Quality Limited Water - for the purposes of this Permit, a water quality limited water is any waterbody that does not meet applicable water quality standards, including but not limited to waters listed in categories 5 or 4b on the Massachusetts Integrated Report of waters listed pursuant to Clean Water Act Section 303(d) and 305(b).

Water Quality Standards - A water quality standard defines the water quality goals of a water body, or portion thereof, by designating the use or uses to be made of the water and by setting criteria necessary to protect the uses. States and EPA adopt WQS to protect public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act (See CWA Sections 101(a)2 and 303(c)).



Abbreviations and Acronyms

BMP – Best Management Practice CGP – Construction General Permit

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)

DCIA – Directly Connected Impervious Area EPA – U. S. Environmental Protection Agency ESA – Endangered Species Act

USFWS – U. S. Fish and Wildlife Service IA – Impervious Area

IDDE – Illicit Discharge Detection and Elimination LA – Load Allocations

MOS – Margin of Safety

MS4 – Municipal Separate Storm Sewer System MSGP – Multi-Sector General Permit

NHPA – National Historic Preservation Act NMFS – U. S. National Marine Fisheries Service NOI – Notice of Intent

NPDES – National Pollutant Discharge Elimination System NRHP – National Register of Historic Places

PCP – Phosphorus Control Plan (pertaining to Charles River Watershed phosphorus

POTW – Publicly Owned Treatment Works

SHPO – State Historic Preservation Officer

SPCC – Spill Prevention, Control, and Countermeasure SWMP – Stormwater Management Program

SWPPP – Stormwater Pollution Prevention Plan TMDL – Total Maximum Daily Load

USGS – United States Geological Survey

WLA – Wasteload Allocation

WQS – Water Quality Standard



APPENDIX E: REVISION LOG



Revision No.	Revision Date	Section of SWMP	Revision(s) Made/Reasoning
00	9/10/2018	--	--
01	6/30/2020	1.2.1	Note added to address how the approved 2016 Massachusetts List of Integrated Waters will be incorporated into this SWMP
		1.2.2	Revised language to reflect that receiving waterbodies are listed in the Town's MS4 General Permit NOI submission to the EPA
		1.4	Added language to reflect that changes to the information submitted in the Town's NOI shall be addressed in the Annual Report and SWMP updates
		1.5	Revised Responsible Parties table to reflect personnel changes
		2.1.4	Revised language to reflect that receiving waterbodies are listed in the Town's MS4 General Permit NOI submission to the EPA
		2.2.1	Revised language to reflect that a Land Development Program Manual has been completed
		2.2.4	NEW SECTION: Added language to reflect that the Town will develop a Green Infrastructure Report in PY4
		2.2.5	NEW SECTION: Added language to reflect that the Town will develop a Retrofit Properties Inventory in PY4
		2.3.1	NEW SECTION: Added language to reflect that the Town has developed a Clean Water Best Practices Manual
		2.3.2	Revised language to reflect that a Municipal Facility Inventory has been completed
		2.3.3	Revised language to reflect that O&M SOPs have been completed
		2.3.4	NEW SECTION: Added Language to reflect that the Town has developed a SWPPP for its Department of Public Works Facility
		Appendix A	Revised Separate Storm Sewer Map
02	6/25/2021	1.1	Revised BMP 5.2 language to reflect MS4 General Permit modifications effective January 6, 2021
		1.2.1	Revised section text and Table 1-1 to reflect any changes between the MassDEP's 2014 and 2016 Integrated List of Waters
		Appendix A	Revised Separate Storm Sewer Map
		Appendix C	Revised Impaired Waters and Special Resource Waters Map
03	6/24/2022	1.2.1	Revised section text and Table 1-1 to reflect any changes between the MassDEP's 2018/2020 Integrated List of Waters
		1.5	Updated the "Responsible Parties for Stormwater Program Implementation" table to reflect staff changes within the Town.
		Appendix A	Revised Separate Storm Sewer Map
		Appendix C	Revised Impaired Waters and Special Resource Waters Map