



# TOWN OF MARBLEHEAD



## STORMWATER MANAGEMENT PROGRAM PLAN UPDATED JUNE 2025





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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 snowmelt – this can include oil, trash, and any other materials found on lawns, streets, and parking lots.

In the Town of Marblehead, stormwater runoff discharges that are conveyed by the MS4 to the environment are regulated under the Clean Water Act and require a permit. Marblehead 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 MARBLEHEAD HAVE TO DO?

The Town of Marblehead has had MS4 permit coverage since 2003. As part of the permitting requirements, Marblehead is required to develop a written Stormwater Management Program (SWMP). This SWMP (Plan) is a “living” reference document that will guide the town’s implementation of requirements within the permit. Marblehead 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 of Marblehead is located within Essex County and has a population of over 20,000, according to the 2020 census. The Town of Marblehead is located within the North Coastal watershed and discharges into the Forest River, Marblehead Harbor, Salem Harbor, and Salem Sound. Marblehead is a coastal community, bordered to the north by the Salem Harbor and Forest River and bordered to the east by Salem Sound and Marblehead Harbor. All of these waters are impaired, which means that they have some pollutant concentrations, at times, that exceed state and federal standards. Salem Harbor, Salem Sound, and Marblehead Harbor are all utilized by the community for fishing, boating, and swimming. Marblehead Department of Public Works maintains almost 50 miles of drainage pipe, thousands of drainage structures, and discharges of stormwater to the environment in hundreds of locations. Marblehead continues to strive to make improvements to its stormwater management program every year to protect its water resources.

## 1.1 PURPOSE OF THIS PLAN

According to the EPA, stormwater is defined as water that is generated from rain and snowmelt events. Stormwater runoff flows over land or impervious surfaces, such as paved streets, parking lots, and building rooftops, and does not infiltrate into the ground. The concern with runoff is that it picks up pollutants like trash, chemicals, oils, and dirt/sediment. These pollutants are harmful to our rivers, streams, lakes, and coastal waters. To protect these resources, communities, construction companies, general industry, and others, use stormwater controls, known as Best Management Practices (BMPs). These BMPs filter out pollutants and/or prevent pollution by controlling it at its source<sup>1</sup>.

This Stormwater Management Plan (SWMP) was developed to reduce the adverse impacts of stormwater within the Town. The SWMP is required by the U.S. Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts ("Small MS4 General Permit"). The SWMP defines BMPs that will be implemented by the Town to reduce stormwater pollution. The SWMP will be continuously updated during the permit term as the Town's activities are modified to meet the conditions of the permit.

## 1.2 REGULATORY REQUIREMENTS: OVERVIEW OF EPA'S NPDES MS4 PROGRAM

The EPA is authorized by the Clean Water Act established the NPDES permit program. Through this program, the EPA regulates the stormwater that is discharged into the waters of the U.S. by means of MS4s. An MS4 is defined as a conveyance or system of conveyances that is:

- Owned by a state, city, town, village, or other public entity that discharges to waters of the U.S.,
- Designed or used to collect or convey stormwater (e.g., storm drains, pipes, ditches),
- Not a combined sewer, and
- Not part of a sewage treatment plant, or publicly owned treatment works (POTW).

The MS4 program was developed in two phases:

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<sup>1</sup> US EPA



1. Phase 1: Regulation was enacted in 1990 and requires medium and large cities or certain counties with populations of 100,000 or more to obtain NPDES permit coverage for their stormwater discharges.
2. Phase 2: Regulation was enacted 1999 and requires small MS4s in urbanized areas, as well as MS4s designated by the permitting authority, to obtain NPDES permit coverage for their stormwater discharges. Phase II also includes non-traditional MS4s such as public universities, departments of transportation, hospitals, and prisons.

In Massachusetts, the EPA Region 1 and the MassDEP jointly administer the municipal stormwater program. In 2003, the Town was authorized by EPA and MassDEP to discharge stormwater under a NPDES General Permit for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems, known as the “2003 General Permit.” Under this permit, the Town has developed and implemented a Stormwater Management Program to reduce the contamination potential of stormwater runoff. The 2003 General Permit expired in May 2008; however, it remained in effect until the 2016 General Permit. The reissued NPDES 2016 General Permit for Stormwater Discharges from Small MS4s in Massachusetts substantially increases stormwater management requirements and mandates specific timelines for compliance. The new 2016 General Permit is intended to be more prescriptive than the 2003 General Permit, and to build upon the regulations already in place. The new 2016 General Permit substantially increases stormwater management requirements and mandates specific timelines for compliance.

### **1.3 SUMMARY OF MARBLEHEAD STORMWATER MANAGEMENT PROGRAM UNDER THE 2003 GENERAL PERMIT**

On March 26, 2012, the Census Bureau published the final listing of urbanized areas (also known as “regulated areas”) for the 2010 census. According to EPA Region 1, the urbanized areas defined in either the 2000 census or the 2010 census are regulated by the EPA under the MS4 program. As Marblehead lies within this census designated urbanized area, the entire Town meets EPA’s regulatory threshold for Phase II of the MS4 program, and therefore, is required to be managed under a NPDES permit for its stormwater discharges from the MS4 in its Urbanized Area. The Town is required by the EPA to operate and maintain its MS4 to manage stormwater runoff, as well as to protect public health and safety, preserve environmental resources, and safeguard town character.

As noted above, prior to March of 2022, urbanized areas were defined by the latest U.S. decennial census. However, the Census Bureau will no longer provide mapping information for urbanized areas. In June of 2023 EPA clarified that new small MS4 designations will be based on whether the previously unregulated MS4s are located in urban areas with a population of 50,000 or more people. The clarification was necessary because the designation criteria in the Phase II regulations had previously been based on the location of “urbanized areas” (defined as densely settled core of census tracts and/or census blocks with a population of 50,000 or more people). While the Census will no longer define urbanized areas, previous determinations remain applicable to existing MS4 communities.



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## 1.4 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 implementing 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 13, 2018, have been incorporated into this document to reflect the Town of Marblehead's stormwater management program achievements through PY 7 (ending June 30, 2025). 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.

Marblehead has provided public education related to stormwater, water conservation and hazardous waste. The Town also provides recycling information on the Town website. This includes a question and answer webinar on hazardous waste disposal to promote and evaluate household waste recycling programs. Additionally, the Board of Health holds an annual household hazardous waste collection day. The residents can bring motor oil to the Transfer Station for recycling with all materials collected and processed regularly by the Recycling Center. The Town continues to post stormwater brochures at the Town Hall about topics including: “The Importance of Streamside Buffers” and “Pet Waste and Bathing Beaches – Guidelines for Pet Owners.” Outreach materials continue to be available on the Town’s website as well. The Animal Control Bylaw prohibits disposal of dog waste on beaches, sidewalks, streets, parks, in Town storm drains, and on public beaches. The Police continued to enforce the bylaw by patrolling beaches, parks, recreational areas and cemeteries. The Board of Health also promotes compliance with the bylaw and educates residents and visitors about this bylaw. Signage on streets entering the Town alerting visitors of the animal control bylaw is maintained by the Town. The Department of Public Works (DPW) has also provided properties within known problem areas with letters pertaining to dog waste disposal in catch basins. The Town also works with non-profit groups such as Sustainable Marblehead and Salem Sound Coastwatch to provide educational events.

BMP ID #	BMP Description	Permit Section 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 &amp; Outreach (E&amp;O) program which will outline an education approach that is inclusive of all education requirements across the permit and for impaired waters.</p> <ul style="list-style-type: none"> <li>• Develop educational messages to be distributed to target audiences, considering the topics listed in Part 2.3.2.d of the MS4 General Permit.</li> <li>• Develop educational messages specific to the areas that discharge to priority waters, impaired waters, and drinking water supplies.</li> <li>• Plan to provide educational web content and other publicly accessible resources.</li> <li>• Consider needs specific to community based on language, types of businesses, etc.</li> <li>• Develop methods to evaluate effectiveness of the messages and overall education program.</li> </ul>	End of PY 1



BMP ID #	BMP Description	Permit Section Reference	Measurable Goal(s)	Deadline(s)
1.2	Deliver targeted/timed educational messages	2.3.2.c	Prepare seasonal educational messages for the Department of Public Works Quarterly newsletter. Maintain and refine educational content throughout the permit	End of PY 1
			Distribute a minimum of 1 educational message to each of the 4 target audiences (residents, commercial, construction, industrial.)	End of PY 2
			Distribute a minimum of 1 additional educational message to each of the 4 target audiences. (Ensure that messages to each audience are at least 1 year apart.)	End of PY 5
1.4	Deliver supplemental educational messages in areas that discharge to bacteria or pathogen impaired waterbodies (Marblehead Harbor, Salem Harbor, Salem Sound)	2.2.2.c.i.1 & Appendix H 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.	Throughout Permit Term
			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
1.5	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 to participate in the review and implementation of the SWMP.

The Conservation Commission continues to meet twice a month on the second and fourth Tuesdays to discuss drainage and stormwater management issues as related to the Wetland Protection Act and related state and local laws. These meetings are open to the general public. The Town works with Sustainable Marblehead to establish an “Adopt-a-Drain” program that encourages residents to keep catch basins clear of debris and report any structural defects.

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.

The Town currently has an IDDE program that consists of a plan that includes a bylaw for stormwater management. The IDDE program has legal authority to prohibit illicit discharges, investigate suspected illicit discharges, eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions.

The IDDE bylaw was first authorized by the MS4-2003 permit and enacted in 2007. The bylaw was updated and passed in May 2021. The updates included the following:

- Require LID site planning and design be used to the maximum extent feasible.
- Require that design of treatment and infiltration systems follows guidance in the Massachusetts Stormwater Handbook Vol. 2 or other approved BMP design guidance.
- Require that new development sites meet Massachusetts Stormwater Handbook Standards 1, 2, 3, 5, 6, and 9 and retain the first inch of runoff from all impervious surfaces AND/OR remove 90% of Total Suspended Solids (TSS) and 60% of Total Phosphorus (TP) generated from all impervious surfaces.
- Require that redevelopment sites meet Massachusetts Stormwater Handbook Standards 1, 2, 3, 5, and 6 and improve existing conditions by retaining the first 0.8 inch of runoff from all impervious surfaces AND/OR removing 80% of TSS and 50% of TP generated from all impervious surfaces.
- 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.

A map of storm sewer system (outfalls, catch basins, and other drainage structures), located in Appendix A, exists in the form of a Geographic Information System (GIS) layer. Connectivity, where known, is included on the map.

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	After identifying new SSOs, notify EPA within 24 hours and provide written notice to EPA and MassDEP within 5 days. Document and file SSO reports and corrective measures implemented for annual reporting. Maintain database or summary of SSOs through permit term.	Throughout permit term
			Obtain and assess historic SSO reports. 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.	End of PY 1



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.2	Continue MS4 system mapping	2.3.4.5	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.	End of PY 2
			Phase II – Update separate storm sewer system map annually, include information for all MS4 outfalls (catchments) within 10 years of the permit effective date. <ul style="list-style-type: none"> <li>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).</li> </ul>	Update: Annual  Info for all drainage infrastructure: End of PY 10
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"> <li>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.</li> </ul>	End of PY 1
		2.3.4.7.a & Appendix H	Conduct initial prioritization of catchments and include in IDDE Program document. Designate catchments draining to any waterbody impaired for bacteria or pathogen (Marblehead Harbor, Salem Harbor, Salem Sound) as either Problem or High Priority catchments. Also prioritize catchments that drain to waterbodies with recreational use as High Priority.	End of PY 1



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.3	Develop written IDDE Program Manual	2.3.4.8	<p>Outline Catchment Investigation Procedures: Develop a written systematic procedure to investigate each catchment associated with an outfall or interconnection within the MS4 system, that:</p> <ul style="list-style-type: none"> <li>Identifies maps, historic plans and records, and other sources of data that will be used in identifying system vulnerability factors (SVFs) within each catchment.</li> <li>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.</li> <li>Establishes procedures to isolate and confirm sources of illicit discharges.</li> </ul> <p>Available data to be used for System Vulnerability Factors (SVF) shall be listed in the IDDE Program Manual.</p>	End of PY 1
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"> <li>Town operates approximately 75 outfalls. Complete approximately 25 dry-weather inspections per permit year starting in PY 1. Provide data annually.</li> </ul> <p>Dry weather screening and sampling (no more than 0.1" of rainfall in past 24 hours):</p> <ul style="list-style-type: none"> <li>Record condition and information for inventory and priority ranking.</li> <li>If flow, sample for ammonia, chlorine, conductivity, salinity, E. coli or enterococcus, surfactants, temperature, and pollutants of concern.</li> <li>If no flow but evidence of illicit flow exists, revisit within one week to perform screening/sampling.</li> </ul>	All outfalls screened by end of PY 3
3.5	Reprioritize outfalls and interconnections	2.3.4.7.c	<p>Update IDDE Program Manual with refined prioritization based on applicable dry weather screening results in PY 3.</p> <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>	Update prioritization by end of PY 3



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.6	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"> <li>• 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.</li> <li>• Town operates approximately 75 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Complete investigation of problem outfalls by end of PY 7</li> <li>• Investigate all catchments by end of PY 10</li> </ul>
3.7	Conduct wet weather Outfall/Interconnection screening and sampling	2.3.4.8	<p>Conduct wet-weather Outfall/Interconnection screening in catchments with System Vulnerability Factors prior to initiation of catchment investigation. Provide data annually.</p> <ul style="list-style-type: none"> <li>• 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.</li> </ul>	Complete all wet-weather screening in identified catchments by end of PY 7
3.8	Conduct expeditious removal of verified sources of illicit discharge or SSO, and confirmatory screening	2.3.4.8	<p>Upon verification of an illicit discharge, locate, identify, and eliminate the illicit discharge as expeditiously as possible. Where elimination of an illicit discharge within 60 days is not possible, establish an expeditious schedule and report the dates of identification and schedule for removal in annual report.</p> <p>☐ Confirm removal of verified illicit discharges through dry (and/or wet) bracket sampling.</p>	During permit term, document annually
3.9	Evaluate the overall effectiveness of the IDDE Program	2.3.4.9	<p>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 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.</p> <ul style="list-style-type: none"> <li>• Provide evaluation of IDDE program annually via annual report.</li> </ul>	During permit term, document annually



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.10	Ongoing screening	2.3.4.10	<p>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.</p> <ul style="list-style-type: none"><li>• Conduct outfall screening once every five years upon completion of all catchment investigations.</li></ul>	Upon completion of all catchment investigations, then ongoing screening once every 5 years
3.11	Conduct employee training	2.3.4.11	<p>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.</p>	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.

Included in the bylaw with the general IDDE program there is an ordinance or regulatory mechanism that requires the use of sediment and erosion control practices at construction sites. In addition to addressing sediment and erosion control, the ordinance must include controls for other wastes on construction sites such as demolition debris, litter and sanitary wastes. The ordinance or regulatory mechanisms shall provide that the permittee may, to the extent authorized by law, impose sanctions to ensure compliance with the local program. Development of an ordinance or other regulatory mechanism was a requirement of the MS4-2003 permit (See part II.B.4 and part IV.B.4). The ordinance or other regulatory mechanism required by the MS4-2003 permit shall also have been effective by May 1, 2008.

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 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"><li>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.</li><li>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.</li></ul>	End of PY 1



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
4.2	Develop written construction site stormwater runoff control program procedures	2.3.5.c.ii. & 2.3.5.c.v.	Develop written Construction and Post-Construction Program Manual. <ul style="list-style-type: none"><li>• Include references to local ordinance/bylaw and regulations.</li><li>• Include 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.</li><li>• Include procedures for enforcement of sediment and erosion control measures. Include procedures to consider potential water quality impacts to impaired waters, construction waste handling, and evaluation of opportunities for use of LID and green infrastructure.</li></ul>	End of PY 1
4.3	Track, inspect, and document applicable construction projects	2.3.5.c.v.	Track the number of site plan reviews, site inspections, and enforcement actions and include in annual report.	Throughout permit term, annually



### CM 5: Post-Construction Stormwater Management in New Development and Redevelopment (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.

Post-construction bylaw, ordinance, or other regulatory mechanism was updated and adopted consistent with permit requirements. The submission of as-builts and development of O&M plans and ongoing maintenance of post-construction storm water controls are currently required by the Town of Marblehead's Stormwater Management and Erosion Control Bylaw and Regulations. As-built Drawings Describe the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites.

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	Develop written Construction and Post-Construction Program Manual (Manual) or standalone documentation to meet the following requirements: <ul style="list-style-type: none"> <li>• Include references to Town Stormwater Bylaw and regulations.</li> <li>• Document procedures and workflow for site plan review, inspections, responsible parties, and stormwater control structure tracking.</li> <li>• During development of the Manual or independent procedures:               <ul style="list-style-type: none"> <li>- Review Town Stormwater Control Ordinance/Bylaw and regulations and 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 those related to management of Phosphorus and Bacteria in discharges to impaired waters.</li> <li>- Evaluate the effectiveness of Town Stormwater Control Bylaw related to permit Part 2.3.6.a.iii requirements (see BMP 5.2).</li> <li>- Recommend and implement changes to Bylaw (or Regulations), as necessary.</li> </ul> </li> </ul>	End of PY 1



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
5.2	Update Local Bylaw (or regulations) on Stormwater Management in New & Redevelopment	2.3.6.a.ii	<p>Based on outcome of BMP 5.1, update the Bylaw or other regulatory mechanism (as needed).</p> <ul style="list-style-type: none"> <li>Require LID site planning and design strategies be implemented to the maximum extent feasible.</li> <li>Require that design of stormwater management systems be consistent with, or more stringent than, the requirements of the Massachusetts Stormwater Handbook Vol. 2 or other approved BMP design guidance.</li> <li>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 Total Suspended Solids (TSS) and 60% of Total Phosphorus (TP) generated from the total post-construction impervious area on the site.</li> <li>Require that stormwater management systems on redevelopment sites be designed to meet Massachusetts Stormwater Handbook Standards 1, 2, 3, 5, and 6 and improve existing conditions by retaining the first 0.8 inch runoff from all impervious surfaces and/or removing 80% TSS and 50% of TP generated from all impervious surfaces.</li> </ul>	End of PY 3
		2.3.6.a.iii & Appendix H part II	<ul style="list-style-type: none"> <li>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.</li> <li>Establish a mechanism to ensure that long-term operation and maintenance (O&amp;M) of BMPs will occur. This can be accomplished by establishing dedicated accounts or funds, maintenance contracts, or assumed ownership of the BMPs. Document in the Annual Report the measures/procedures utilized to meet this requirement.</li> </ul>	



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
5.3	Assess Local Standards		During review of Bylaw (or other regulatory mechanism) in PY 2 (see BMP 5.2). <ul style="list-style-type: none"> <li>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.</li> <li>Recommend changes to zoning or other municipal standards.</li> </ul>	End of PY 2
		2.3.6.b	Street Design and Parking Lot Requirements Assessment. <ul style="list-style-type: none"> <li>Develop a report assessing street design and parking lot requirements that affect the creation of impervious cover.</li> <li>Involve the local planning board and local transportation board and include recommendations for policies that will minimize impervious area (IA) attributable to parking areas and street designs, schedules for implementing recommendations, and subsequent assessment.</li> <li>Document status of the assessment and planned or completed changes to local regulations/guidelines in annual report.</li> </ul>	End of PY 4, document status annually
		2.3.6.c	Assessment of local regulation's effect on integration of infiltration/water reuse practices: <ul style="list-style-type: none"> <li>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 &amp; pervious pavement) and water harvesting devices (e.g. rain barrels and cisterns) that promote the use of stormwater for non-potable uses.</li> <li>Create a schedule for revising regulations, if necessary.</li> <li>Include this schedule, assessment findings, and progress towards making infiltration and water harvesting practices feasible in annual report.</li> </ul>	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"> <li>• 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.               <ul style="list-style-type: none"> <li>○ Retrofits to municipal properties with significant IA should be considered at a minimum.</li> </ul> </li> <li>• 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.</li> <li>• 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.</li> <li>• 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.</li> </ul>	<p>End of PY 4</p> <p>Annually starting PY 5</p>



## CM 6: Pollution Prevention and Good Housekeeping in 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.

The Town has developed written Stormwater Pollution Prevention Plans (SWPPPs) town owned facilities (DPW, Parks and Rec, Transfer Station, Light Department) that have a potential for stormwater pollutants. SWPPP requirements of part 2.3.7.b of the MS4 General Permit include:

- 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 SWPPPs can be accessed at the DPW. The DPW inspects catch basins and other stormwater system components throughout Town, as needed. According to the Town, all catch basins are cleaned once a year or when they are full. The DPW sweeps arterial roadways, which includes those near beaches and in the downtown areas, as needed throughout the summer season (May through September, or later, depending on weather). Training on stormwater elements and how to detect and eliminate illicit connections is held on an annual basis for the Conservation Commission, Fire Department, Water & Sewer Department, Department of Health, and DPW.

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"> <li>• 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"> <li>- Municipal facilities/equipment inventory by watersheds/catchments</li> <li>- Identify sites with likely reconstruction activity during the permit term. Where appropriate, these facilities with planned reconstruction shall include stormwater control measures.</li> <li>- Municipal infrastructure maintenance: street sweeping and catch basin cleaning</li> <li>- Road salt use and optimization</li> </ul> </li> </ul>	End of PY 2



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
			<ul style="list-style-type: none"> <li>- Stormwater treatment structures O&amp;M</li> <li>- Landscape maintenance (including grass clippings and leaf litter)</li> <li>• Report on status of inventory and program documentation.</li> </ul>	
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.	End of PY 2, document status annually
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 Spill prevention, control, and countermeasure, or 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.	End of PY 2, 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



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## 1.5 WATER QUALITY STANDARDS

### 1.5.1 Impaired Waters

Discharges to waterbodies with approved TMDL or to water quality limited water bodies, or discharges causing or contributing to impairment have additional requirements in Parts 2.1, 2.2, and Appendix F of the MS4 General Permit. The Town of Marblehead's MS4 discharges to waterbodies that are considered impaired, according to MassDEP's 2022 Integrated List of Waters, one of which has an approved TMDL (North Coastal Watershed). A list of impaired waters that are within the Town of Marblehead and their impairment causes is provided in Table 1-1 on the following page. A map showing MassDEP's 2022 Integrated Waters located in the Town of Marblehead is provided in Appendix C of this SWMP.

Among the impairment causes are dissolved oxygen supersaturation, bacteria/pathogens (enterococcus and fecal coliform) and estuarine bioassessments. 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 Plan and are summarized below:

For the areas that discharge to waters that are impaired by bacteria or pathogens but do not have an approved TMDL (Salem Harbor, Marblehead Harbor, Salem Sound):

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

#### 1.5.1.1 Applicable TMDLs

Currently, only one TMDL is established for the Town. The Final Pathogen TMDL for the North Coastal Watershed (2012) includes the following water bodies in the Town: Marblehead Harbor (MA93-22), Salem Sound (MA93-56), and Salem Harbor (MA93-54). Please note that Salem Harbor's applicable TMDL includes just fecal coliform and a TMDL is still required for estuarine bioassessments. Therefore, Salem Harbor remains a category 5 water.



**Table 1-1: Impaired Waters in Marblehead, MA (Based on Approved 2022 Integrated List)**

Waterbody	MassDEP Segment ID	TMDL	Category	Impairment Cause	Analytical Method as required under Appendix D of 2016 MS4 General Permit
Forest River	93-10	Yes	5	Dissolved Oxygen Supersaturation	3.65.1; 365.2; 365.3 (or handheld meter- contact EPA)
Salem Harbor	93-54	Yes	5	Enterococcus	IDEXX Enterolert (MPN) 9222D
				Estuarine Bioassessments	Contact MassDEP
				Fecal Coliform	SM9222D
Marblehead Harbor	93-22	Yes	5	Estuarine Bioassessments	Contact MassDEP
				Fecal Coliform	SM9222D
Salem Sound	93-56	Yes	5	Estuarine Bioassessments	Contact MassDEP
				Fecal Coliform	SM9222D

### 1.5.2 Northern Coastal Watershed Pathogen TMDL

As described in Section 2.2.3 of the SWMP, a final TMDL for pathogens has been developed for the North Coastal Watershed. This TMDL requires that Towns discharging to the impaired waterways within the North Coastal Watershed comply with requirements in Appendix F of the 2016 General Permit.

### 1.5.3 Additional Requirements for Discharges to Surface Public Drinking Water Supplies and Their Tributaries

According to Section 3.0 of the 2016 Small MS4 General Permit, MS4s that discharge to public surface drinking water supply sources or their tributaries should consider these waters a priority in the implementation of the SWMP. The Town’s drinking water is supplied by two sources. The first source, Gravelly Pond (MassDEP Source ID# 3166000– 01S), is a surface water reservoir, which is located off Chebacco Road in Hamilton, MA. The second source is the Lincoln Street Well (MassDEP Source ID# 3166000-01G) located next to the Manchester/Essex Regional Junior/ Senior High School on Lincoln Street in the Town. Therefore, there are no surface drinking water supplies within the Town.



### **1.5.4 Increased Discharges**

The Town of Marblehead 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 Marblehead 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.

## **1.6 SPECIAL ELIGIBILITY DETERMINATIONS**

### **1.6.1 ENDANGERED SPECIES**

The Town of Marblehead completed the National Endangered Species Eligibility Determination screening process in accordance with Part 1.9.1 and Appendix C of U.S. EPA's NPDES General Permits for MS4s, effective July 1, 2018, and determined that the Town meets Criterion C, where informal consultation with U.S. Fish and Wildlife Service (USFWS) resulted in a finding that the stormwater discharges and discharge related activities will have "no affect" on listed species or critical habitat. Please refer to Appendix II of the SWMP for supporting information, including the USFWS IPaC Official Species List for the project area and the Endangered Species Act Certification.

### **1.6.2 HISTORIC PROPERTIES**

The Town completed the National Historic Preservation Act Eligibility Determination screening process in accordance with Part 1.9.2 and Appendix D of U.S. EPA's NPDES General Permits for Stormwater Discharges from MS4s, effective July 1, 2018, and determined that the Town meets Criterion A, where the discharges do not have the potential to cause effects on historic properties. Refer to Appendix III of the SWMP for supporting information, including a list of the federal- and state-listed historic areas, buildings, burial grounds, objects, and structures in downloaded from the Massachusetts Cultural Resource Information System (MACRIS).



### 1.6.3 AUTHORIZATION FOR THE TOWN TO DISCHARGE STORMWATER

As required by the General Permit, a NOI was submitted by the Town within 90 days of the effective date of the permit on September 25, 2018. A copy of the NOI is included in Appendix I. Along with documentation of the Town Authorization to Discharge by the EPA. This written SWMP must be finalized within one year of the effective date of the permit.

### 1.7 ANNUAL PROGRAM SELF-EVALUATION, RECORD KEEPING & ANNUAL REPORTING

Covered entities are required to collect and report information about the development and implementation of their SWMP. The Town of Marblehead 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 Marblehead 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.

The Town may update or revise the SWMP as needed as the Town’s activities are modified, changed, or updated to meet permit conditions during the permit term. A SWMP amendment log and additional certification statements are in Appendix VII. The Town should follow this procedure to formalize the changes:

- Keep a log with a description of the modification, the date, and the name and signature of the person making it; and
- Re-sign and date the certification statement in Section 6 of this SWMP.



## 1.8 RESPONSIBLE PARTIES FOR STORMWATER PROGRAM IMPLEMENTATION

Title/ Position of Responsible Person	Name of Responsible Person	Role/Program Element(s)
Department of Public Works	Amy McHugh	CM 1, 2, 3, 5, 6, with below additions
Conservation Commission	David VanHoven	CM 4 and 5 (administration of the bylaw)
Highway Department – Director of Public Works	Amy McHugh	CM 6 (street sweeping and road salt optimization)
Water and Sewer Commission	Amy McHugh	CM 1 and 3



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

The 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. Hard copies of the following documents can be found at the Department of Public Works, unless otherwise noted below.

### 2.1 IDDE PROGRAM

#### 2.1.1 IDDE Program Manual

The Town of Marblehead 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 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 and documentation of implementation can be accessed at the Department of Public Works.

#### 2.1.2 Separate Storm Sewer System Map

The Town of Marblehead 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
- Regulated urbanized area

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 of Marblehead has developed a Sanitary Sewer Overflow Inventory consistent with the requirements of part 2.3.4.4 of the MS4 General Permit. The complete document can be found at the Department of Public Works office.



## **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 NOI submission to the EPA dated September 24, 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 the 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 Marblehead'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 of Marblehead 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 office.

### **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 of Marblehead has developed a regulatory mechanism to require submission of as-built drawings and ensure long-term operation and maintenance of post-construction stormwater BMPs. The complete document can be found at Department of Public Works office.

### **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 of Marblehead developed 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 can be accessed at the Department of Public Works office.

### **2.2.4 Green Infrastructure Report**

Consistent with the requirements of Part 2.3.6.c of the MS4 General Permit, the Town developed 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 can be accessed at the Department of Public Works office .

## 2.2.5 Retrofit Properties Inventory

Consistent with the requirements of Part 2.3.6.d of the MS4 General Permit, the Town developed 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 can be accessed at the Department of Public Works office .

## 2.3 MUNICIPAL FACILITIES AND OPERATIONS PROGRAMS

### 2.3.1 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 office .

### 2.3.2 Infrastructure O&M Program Plan

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

- 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 office.



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## 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**



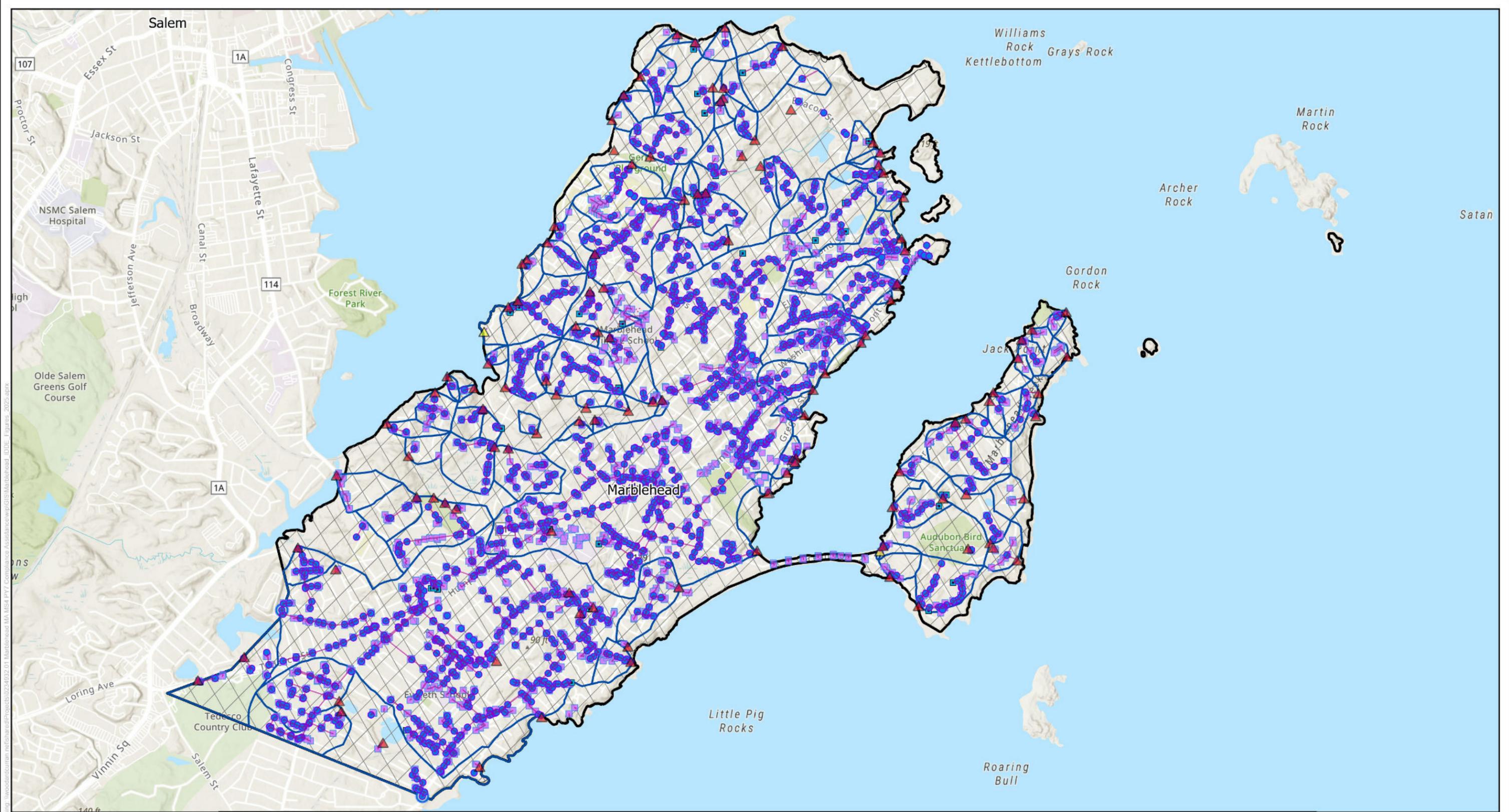
# Appendices



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## APPENDIX A: SEPARATE STORM SEWER MAP

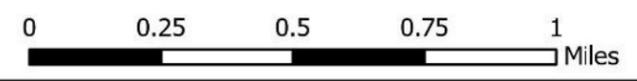




# Stormwater Collection System Overview

Marblehead, MA

Legend	
▲ Outfall	● Drainage Manhole
▲ Private Outfall	● Drainage Interconnection
	■ Drainage Inlet
	■ Catch Basin
	— Drainage Gravity Main
	▭ Stormwater Catchments
	▭ Marble Head Urban Areas 2020 US Census
	▭ Marblehead Town Boundary



N

Project #: 0234932.01  
Map Created: June 2025

Figure Exported: 8/12/2025 By: ilandm Using: \woodardcurran\external\Projects\0234932.01 Marblehead MA MSA PY7 Compliance Assessment\wp\GIS\Marblehead\_ID.DWG Figures: 2025.aprx

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. Data Sources: Town of Marblehead, MA, Woodard & Curran, Esri



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## APPENDIX B: SPECIAL ELIGIBILITY DETERMINATION LETTERS



TOWN OF MARBLEHEAD

**Water and Sewer Commission**

**P.O. BOX 1108**

Office: 100 Tower Way, Building #11, Marblehead, MA 01945

781 631-0102 (Water)

781 631-2694 (Sewer)

781 631-2670 (FAX)

From:

Zach Henderson on behalf of the Town of Marblehead, MA and EPA  
41 Hutchins Drive  
Portland, Maine 04102

To: U.S. Fish and Wildlife Service  
Attn: David Simmons  
New England Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301

August 20, 2018

Re: Project Review Request, Marblehead, MA MS4 Permit Compliance  
Consultation Code: 05E1NE00-2018-SLI-2793  
Event Code: 05E1NE00-2018-E-06536

We have reviewed the referenced project using the Environmental Protection Agency's (EPA) project review process for our Municipal Separate Storm Sewer System (MS4) and have followed all guidance and instructions in completing the review. We completed our review on August 20, 2018 and are submitting our project package in accordance with the instructions for further review. The U.S. Fish and Wildlife Service's (Service) Information for Planning and Consultation (IPaC) species list indicated these species may be present in the project area: Northern Long-Eared Bat, Roseate Tern, but no critical habitats. We are submitting this letter as a non-Federal representative of the EPA pursuant to the requirements of the EPA's process for NPDES/MS4 permits.

The proposed stormwater program activities are a continuation of previous permitted activities and include non-structural management of stormwater runoff as required by the Massachusetts MS4 General Permit. The objective of the program is to reduce or eliminate sources of pollution in stormwater runoff, and through implementation, to improve the viability and functionality of near shore habitat and aquatic diversity. Program activities include public education, non-destructive investigation, and pollutant source control on existing municipal facilities and roadways. The location action area is identified on the attached Species List.

Permit implementation will begin in the fall of 2018 and the permit has an expiration date of June 30, 2022.

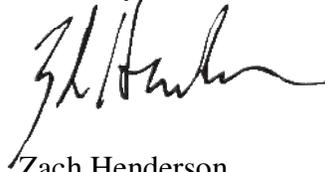
This is a request for review by the Service pursuant to section 7 of the Endangered Species Act. We determined that the project may affect, but is not likely to adversely affect the above listed

species, because these activities will not disturb terrestrial vegetation or require excavation. Therefore, we believe our programmatic activities will have “no affect” on the Northern-Long Eared Bat and that stormwater discharges from Marblehead are “not likely to adversely affect” the other listed species. The town’s stormwater discharges are direct discharges into coastal waters and, while they may contain some level of pollution, the immediate dilution and mixing of these discharges are not likely to adversely affect the listed bird species. Marblehead will continue to reduce the possibility of polluted discharges through the use of stormwater best management practices.

The enclosed project package provides the information about the species and/or critical habitat considered in our review, and we identified our determinations for the resources that may be affected by the project. We request you concur with our determination that the project may affect, but is not likely to adversely affect the species described above.

For additional information, please contact Zach Henderson at the address listed above, by phone at 207.650.2576, or [zhenderson@woodardcurran.com](mailto:zhenderson@woodardcurran.com).

Sincerely,

A handwritten signature in black ink, appearing to read 'Zach Henderson', written in a cursive style.

Zach Henderson  
Technical Manager  
Woodard & Curran, Inc.

Cc: Amy McHugh, Town of Marblehead, MA

Enclosures:

- 1) Official Species List



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
New England Ecological Services Field Office  
70 Commercial Street, Suite 300  
Concord, NH 03301-5094  
Phone: (603) 223-2541 Fax: (603) 223-0104  
<http://www.fws.gov/newengland>

In Reply Refer To:

August 17, 2018

Consultation Code: 05E1NE00-2018-SLI-2793

Event Code: 05E1NE00-2018-E-06536

Project Name: Marblehead Stormwater Management Plan

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

## Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**New England Ecological Services Field Office**

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

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## Project Summary

Consultation Code: 05E1NE00-2018-SLI-2793

Event Code: 05E1NE00-2018-E-06536

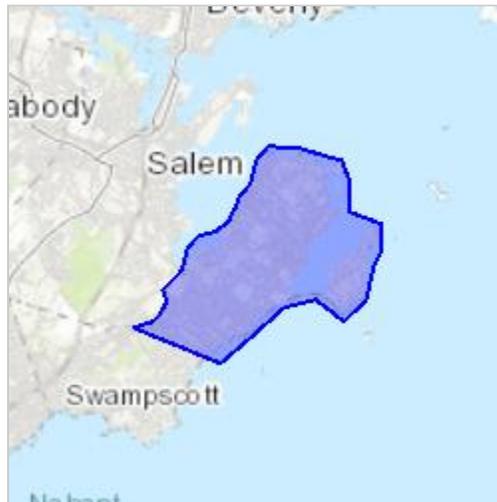
Project Name: Marblehead Stormwater Management Plan

Project Type: Regulation Promulgation

Project Description: The Town of Marblehead will be complying with the 2016 MS4 General Permit. This EPA issued NPDES permit requires the community to implement a variety of non-structural activities that will improve stormwater quality from its discharges into nearby waters. No earth disturbance will take place without additional consultation with appropriate agencies. The term of the permit is 5-years.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/42.49968968912451N70.8581325962576W>



Counties: Essex, MA

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## Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/9045">https://ecos.fws.gov/ecp/species/9045</a>	Threatened

### Birds

NAME	STATUS
Roseate Tern <i>Sterna dougallii dougallii</i> Population: northeast U.S. nesting pop. No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2083">https://ecos.fws.gov/ecp/species/2083</a>	Endangered

### Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# United States Department of the Interior



## FISH AND WILDLIFE SERVICE

New England Field Office  
70 Commercial St, Suite 300  
Concord, NH 03301-5087  
<http://www.fws.gov/newengland>

September 24, 2018

To whom it may concern:

The U.S. Fish and Wildlife Service (USFWS) reviewed the stormwater discharge activities associated with the 2016 National Pollutant Discharge and Elimination System (NPDES) Massachusetts (MA) Small Municipal Separate Storm Sewer System (MS4) general permit (MA MS4 General Permit) issued by the Environmental Protection Agency (EPA). We determined those activities may affect, but are not likely to adversely affect, certain species listed under the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) when specific conditions are met. When these conditions are met, we do not need to review individual projects. These comments are provided in accordance with section 7 of the ESA and complement existing 2016 MA MS4 General Permit Appendix C Guidance. We understand the applicant is acting as a non-Federal representative of the EPA for the purpose of consultation under section 7. **This letter provides additional guidance for meeting Criterion B and should be submitted as part of your application package to the EPA.**

If the USFWS Information for Planning and Consultation website (<https://ecos.fws.gov/ipac/>) indicates your MA MS4 General Permit project action area may contain one or more of the following federally listed endangered species: roseate tern (*Sterna dougallii*), northern red-bellied cooter (*Pseudemys rubriventris*), dwarf wedgemussel (*Alasmidonta heterodon*), rusty patched bumble bee (*Bombus affinis*), northeastern bulrush (*Scirpus ancistrochaetus*), or American chaffseed (*Schwalbea americana*); threatened species: piping plover (*Charadrius melodus*), bog turtle (*Glyptemys muhlenbergii*), Puritan tiger beetle (*Cicindela puritana*), northeastern beach tiger beetle (*Cicindela dorsalis*), or red knot (*Calidris canutus rufa*); or their federally designated critical habitat; and the specific conditions listed below are met, you may submit this letter to complete the **MA MS4 General Permit Appendix C: Step 4** in place of a concurrence letter for informal consultation as documentation of ESA eligibility for **USFWS Criterion B**.

In addition, this letter also satisfies the requirement in the **MA MS4 General Permit Appendix C: Step 2 (3)** to contact the USFWS and obtain a concurrence letter, if you have not yet done so. If your project action area includes one or more of the above-listed species *and* one or more of the

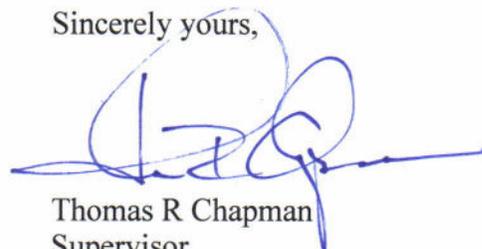
species listed under **Criterion C**,<sup>1</sup> you may still use this letter to certify under **Criterion B**. All existing guidance regarding requirements for certifying eligibility according to the USFWS Criterion A, B, or C for coverage by the 2016 MS4 Permit (see MA MS4 General Permit Appendix C – Endangered Species Guidance) remains unchanged.

We have determined that proposed stormwater discharge activities covered under the 2016 MS4 Permit *may affect, but are not likely to adversely affect*, the above-listed species and the species' critical habitat when the following are true:

1. all stormwater discharges are pre-existing or previously permitted by EPA;
2. any planned operations and maintenance work covered by this permit will only affect previously disturbed areas where stormwater controls are already installed. In these situations the chance of encountering any of the subject species is discountable;
3. the project implements EPA MS4 Best Management Practices (BMPs) and meets Clean Water Act and Massachusetts Water Quality Standards. Although permitted discharges may reach the environment used by these species, BMPs reduce pollutants to the extent that discharges are not known to have measurable impacts on these species or their habitat;
4. no new construction or structural BMPs are proposed under this permit at this time; and
5. you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the Notice of Intent (NOI), you will re-initiate consultation with the USFWS as necessary (see **MA MS4 General Permit Appendix C: Step 2 (5)**).

If the above criteria are met, further consultation with the USFWS under section 7 of the ESA is not required at this time; however, if the proposed action changes in any way such that it may affect a listed species in a manner not previously analyzed or if new information reveals the presence of additional listed species that may be affected by the project, the applicant or the EPA should contact us immediately and suspend activities that may affect those species until the appropriate level of consultation is completed with our office. Thank you for your cooperation, and please contact David Simmons of this office at (603) 227-6425 if you have questions or need further assistance.

Sincerely yours,



Thomas R Chapman  
Supervisor  
New England Field Office

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<sup>1</sup> Criterion C includes guidance for project action areas that may contain species for which EPA has already made a determination. These species include the northern long-eared bat (*Myotis septentrionalis*), sandplain gerardia (*Agalinis acuta*), small whorled pogonia (*Isotria medeoloides*), and/or American burying beetle (*Nicrophorus americanus*) (MA MS4 General Permit Appendix C: Step 3 – Determine if You Can Meet Eligibility USFWS Criterion C).



TOWN OF MARBLEHEAD

**Water and Sewer Commission**

**P.O. BOX 1108**

Office: 100 Tower Way, Building #11, Marblehead, MA 01945

781 631-0102 (Water)

781 631-2694 (Sewer)

781 631-2670 (FAX)

September 25, 2018

Newton Tedder

US Environmental Protection Agency

Stormwater and Construction Permits Section (OEP06-1)

Five Post Office Square, Suite 100

Boston, MA 02109

The Town of Marblehead (MS4 permittee) has determined that the discharges regulated under this permit do not have the potential to cause effects on Historic Properties in Marblehead, MA.

The implementation of this Stormwater Management Plan (SWMP) will require development of standards of practice, compliance documentation, investigation and operations of existing drainage facilities, local regulatory policies and other studies. The SWMP does not obligate the Town of Marblehead to undertake any activity involving subsurface land disturbance and program implementation will only take place on existing municipal separate storm sewer systems that have been previously authorized for coverage under the MS4 General Permit.

If during the course of MS4 General Permit program implementation, the Town of Marblehead anticipates subsurface land disturbance as a result of this General Permit, the Town will prepare a complete information submittal to the State Historic Preservation Office.

Sincerely,

Amy McHugh, Superintendent Water and Sewer Commission  
Town of Marblehead, MA



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## APPENDIX C: IMPAIRED WATERS AND SPECIAL RESOURCE WATERS

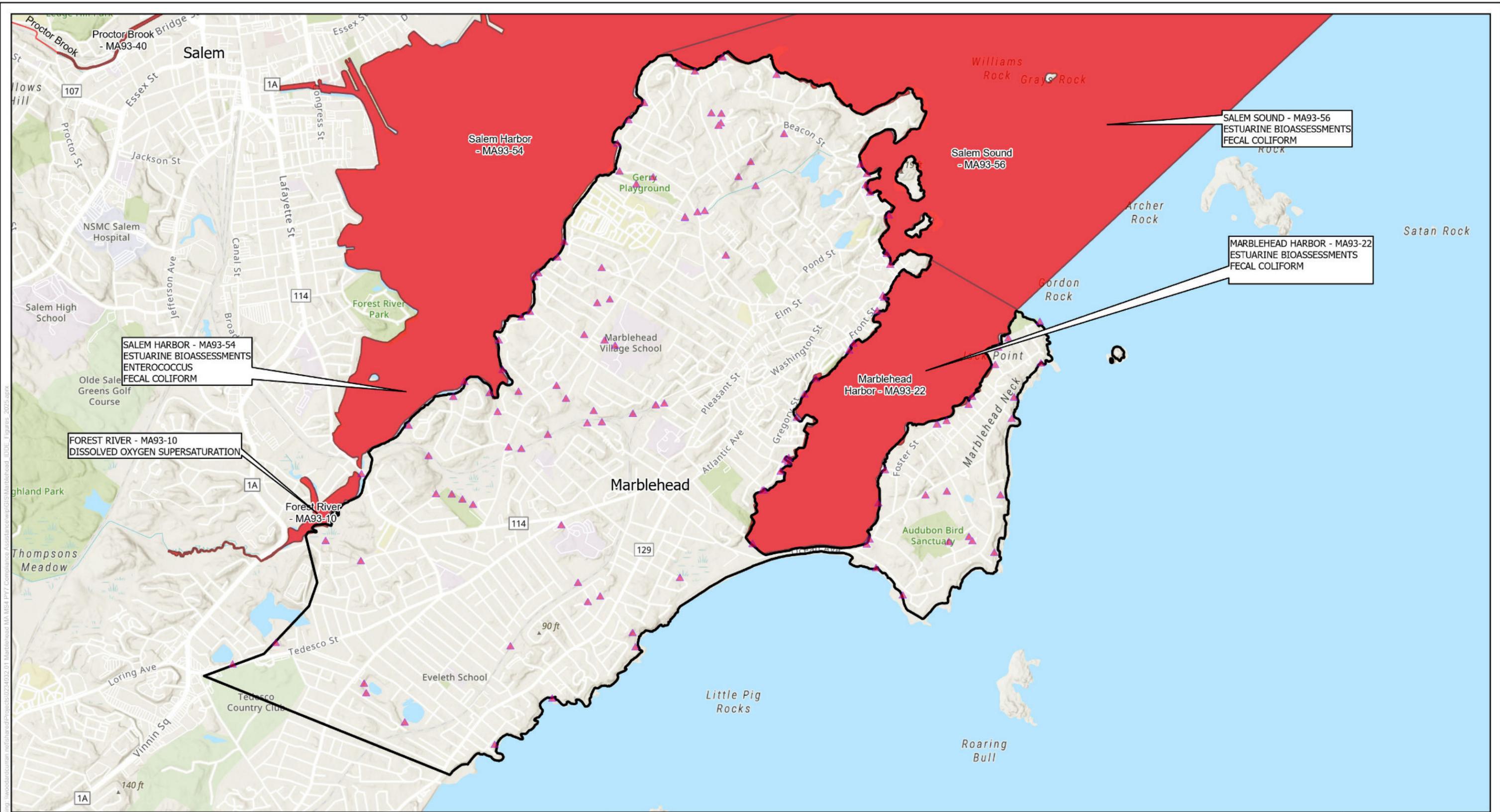


Figure Exported: 8/12/2025 10:12:20 AM By: ilandini Using: \woodardcurran\external\Projects\0234932.01 Marblehead MA MSA PY7 Compliance Assessment\wp\GIS\Marblehead\_ID.DWG Figures: 2025.sbx

## Town of Marblehead Water Resources

Marblehead, MA

- Legend**
- Drainage Outfall
  - Marblehead Town Boundary

**2022 Integrated List Data -305(b)/303(d)**

Category

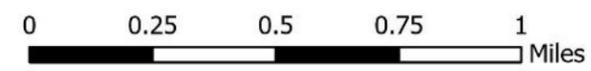
- 2 - Attaining some uses; other uses not assessed

- 3 - No uses assessed
- 4A - Impaired - TMDL is completed

- 4C - Impairment not caused by a pollutant
- 5 - Impaired - TMDL required

Drainage Outfall

- Drainage Outfall



**Woodard & Curran**

Project #: 0234932.01  
Map Created: June 2025

Third Party GIS Disclaimer: This map is for reference and graphical purposes only and should not be relied upon by third parties for any legal decisions. Any reliance upon the map or data contained herein shall be at the users' sole risk. Data Sources: Town of Marblehead, MA, Woodard & Curran, Esri



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## 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 topsoil.

**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, city, 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).

**Urban Area** - A US Census designated area that represents densely developed territory, and encompasses residential, commercial, and other nonresidential urban land uses. Each urban area must encompass at least 2,000 housing units or at least 5,000 people.



**Urban Area with a Population of at least 50,000** – based on the 2020 Census.

**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	10/26/2018	--	--
01	6/30/2020	1.4	Added Language to reflect that the Town has developed a SWPPP for its Department of Public Works and Transfer Station Facilities
		1.5.1	Note added to address how the approved 2016 Massachusetts List of Integrated Waters will be incorporated into this SWMP
		1.5.1	Revised language to reflect that receiving waterbodies are listed in the Town's MS4 General Permit NOI submission to the EPA
		1.7	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
		1.8	Revised Responsible Parties table to reflect personnel changes
		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	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
		Appendix A	Revised Separate Storm Sewer Map
02	6/25/2021	1, 1.4, 2, 2.1.1, 2.1.3, 2.2.1, 2.2.2, 2.2.3, 2.2.4, 2.2.5, 2.3.1, 2.3.2	Changed Water and Sewer Commission to Department of Public Works
		1.5.1	Update the 2014 Integrated list of waters to 2016
		1.5.1	Add Enterococcus to Salem Harbor Impairment list
		1.5.1	Change Category of Salem Harbor from Cat 4/5 to just Category 5
		1.8	Change chart to have Department of Public Works at the top
		1.8	Change role of DPW to "CM 1, 2, 3, 5, 6 with below additions"
		1.8	Change role of Water and Sewer Commission to "CM 1 and 3"
05	12/12/2023	All sections	Update to Woodard & Curran formatting
		1.5.1	Update the 2018/2020 Integrated list of waters to 2022
		Revision Log	Revised sections corresponding to revisions based on updated SWMP formatting
		1.3	Updated urbanized area determination language per the June 2023 Final Rule ( <a href="#">Urban Area Maps for NPDES MS4 Phase II Stormwater Permits   US EPA</a> )
		1.8	Updated name of responsible person for Conversation Commission, Highway Department, and Water and Sewer Commission
06	6/12/2025	1	Updated population to reflect 2020 census
		1.4	Updated date of work up through PY7 (June 30, 2025)



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		Appendix A	Revised Separated Storm Sewer Map
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