



# TOWN OF HUDSON

STORMWATER MANAGEMENT PROGRAM PLAN  
UPDATED SEPTEMBER 2023



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## STORMWATER PROGRAM OVERVIEW

### WHY IS THIS IMPORTANT?

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

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

The Town of Hudson has had MS4 Permit coverage since 2003. As part of the Permitting requirements, Hudson is required to develop a written Stormwater Management Program (SWMP). This SWMP (or Plan) is a “living” reference document that will guide the Town’s implementation of requirements within the Permit. The Town 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.



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Waterbodies regulated by the Clean Water Act are located throughout the Town. The Town is located within the Assabet River watershed, with the river running directly through it. The Assabet River has played a significant role in Hudson's history, from colonial times to present, where portions of the river are currently part of a National Wildlife Refuge. Hudson also contains the Danforth Brook and Fort Meadow Brook and has several ponds, including Fort Meadow Reservoir, which contains the Centennial Park swimming beach, portions of Boons Pond, and Tripp Pond.

The Hudson Department of Public Works maintains over 60 miles of drainage pipe, thousands of drainage structures (catch basins and manholes), and discharges stormwater transported by this infrastructure to the environment in many locations. Hudson continues to strive at making improvements to its stormwater management program every year to protect its water resources.

## **1.1 CONTROL MEASURES AND MEASUREABLE GOALS**

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

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

Permittees are required to prepare a SWMP describing specific actions they will implement to reduce stormwater pollution that align with the Permit requirements for each CM. These actions, called Best Management Practices (BMPs), are described in this Plan, along with the measurable goal for each BMP and deadline for development and implementation. Section 1.5 of this SWMP identifies the person(s) or department(s) responsible for 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 10, 2018, have been incorporated into this document to reflect the Town of Hudson's stormwater management program achievements through PY 3 (ending June 30, 2021). A revision log tracking these updates is located in Appendix E.

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



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

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

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



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
			<ul style="list-style-type: none"> <li>• Suggested Business/Commercial/Institutional topics:               <ul style="list-style-type: none"> <li>○ Lawn care effects on water quality (pesticide/herbicide/fertilizer application);</li> <li>○ Benefits of onsite stormwater infiltration;</li> <li>○ Use of detergents in building maintenance, vehicle/equipment washing;</li> <li>○ Use of de-icing/anti-icing materials, including proper storage;</li> <li>○ Proper storage of materials/waste/dumpster maintenance;</li> <li>○ Proper management of parking lot surfaces; and</li> <li>○ Proper disposal of swimming pool water.</li> </ul> </li> <li>• Suggested Developer/Construction topics:               <ul style="list-style-type: none"> <li>○ Proper sediment and erosion control practices;</li> <li>○ Use of low impact development; and</li> <li>○ Information about the EPA Construction General Permit.</li> </ul> </li> <li>• Suggested Industrial topics:               <ul style="list-style-type: none"> <li>○ Equipment inspection/maintenance;</li> <li>○ Proper storage of materials;</li> <li>○ Dumpster management;</li> <li>○ Use of de-icing/anti-icing materials, including proper storage;</li> <li>○ Benefits of onsite stormwater infiltration;</li> <li>○ Information about the EPA Multisector General Permit.</li> </ul> </li> </ul>	
1.3	Deliver supplemental educational messages in areas that discharge to Total Phosphorus impaired waterbodies. (Assabet River – Segment ID: MA82B-04 and MA82B-05 and Fort Meadow Reservoir: MA82042)	2.2.2.b.i.1	For areas that discharge to waterbodies with a Total Phosphorus impairment, distribute 1 educational message in March/April timeframe of each Permit year that pertains to proper disposal of grass clippings and use of slow-release and phosphorus-free fertilizer.	Annual (March/April)
		&	For areas that discharge to waterbodies with a Total Phosphorus impairment, distribute 1 educational message in the June/July timeframe of each Permit year that pertains to proper pet waste management, noting any existing regulations where appropriate.	Annual (June/July)
		Appendix F Part A.V.	For areas that discharge to waterbodies with a Total Phosphorus impairment, distribute 1 educational message in Aug./Sept./Oct. timeframe of each Permit Year that pertains to proper disposal of leaf litter.	Annual (Aug/Sept/Oct)



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
1.4	Deliver supplemental educational messages in areas that discharge to bacteria or pathogen impaired waterbodies (Assabet River – Segment ID: MA82B-04 and MA82B-05)	2.2.2.c.i.1 &	For areas that discharge to bacteria or pathogen impaired water bodies, provide educational materials to dog owners at the time of issuance or renewal of a dog license, or other appropriate time. These education materials describe the detrimental impacts of improper management of pet waste, requirements for waste collection and disposal, and penalties for noncompliance, noting any existing regulations where appropriate.	Through-out Permit term
		Appendix H Part III	For areas that discharge to bacteria or pathogen impaired water bodies, provide educational materials to owners of septic systems about proper maintenance (as applicable).	Annual
1.5	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 in the review and implementation of the SWMP.

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
2.1	Conduct public participation activities	2.3.3.b	<p>Allow public participation in the implementation of the SWMP, annually. All public involvement activities shall comply with state public notice requirements. The SWMP will be displayed at public events for input including "HudsonFest" which generally occurs annually in October.</p> <p>Document and report on activities.</p>	Annual
2.2	Provide opportunity for public to review SWMP	2.3.3.b & c	<p>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.</p> <p>Document public review and public comments.</p>	Annual
2.3	Make program documents available to the public	2.3.3.a	Post the SWMP and all Annual Reports on Town website (following public notice requirements).	Annual





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

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

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.1	Conduct Sanitary Sewer Overflow (SSO) reporting and inventory	2.3.4.4	After identifying new SSOs, notify EPA within 24 hours and provide written notice to EPA and MassDEP within 5 days. <ul style="list-style-type: none"> <li>Document and file SSO reports and corrective measures implemented for annual reporting. Maintain database or summary of SSOs through Permit term.</li> </ul>	Throughout Permit term
			Obtain and assess historic SSO reports. <ul style="list-style-type: none"> <li>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.</li> </ul>	End of PY 1
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



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
		2.3.4.7.a & Appendix H	Designate catchments draining to any waterbody impaired for bacteria or pathogens as either Problem or High Priority catchments in implementation of the IDDE program. Also prioritize catchments that drain to surface public drinking water supplies and waterbodies with recreational use as High Priority.	End of PY 1
		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 and SSOs.</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>Complete dry-weather inspections annually 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 (freshwater) or enterococcus (salt water), 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/ Interconnections screened by end of PY 3



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.6	Reprioritize Outfalls and Interconnections	2.3.4.7.c	<p>Update outfall and interconnection ranking (2.3.4.7.a) based on information gathered during dry weather screening. Ranking can be updated continuously as new screening information becomes available.</p> <p>Update IDDE Program Manual with refined prioritization for catchment investigations based on dry weather screening results collected through PY 3.</p>	Update prioritization by end of PY 3
3.7	Conduct catchment investigations	2.3.4.8	<p>For each catchment, conduct investigations consistent with IDDE Program Manual; inspect key junction manholes and refine mapping information on the location of pipes, manholes, and extent of catchment.</p> <ul style="list-style-type: none"> <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 has ten years (2017-2027) to complete all investigations. Conduct catchment investigations annually 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>
3.5	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> <ul style="list-style-type: none"> <li>Confirm removal of verified illicit discharges through dry (and/or wet) bracket sampling.</li> </ul>	During Permit term, document annually



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
3.9	Evaluate the overall effectiveness of the IDDE Program	2.3.4.9	Evaluate the overall effectiveness of the IDDE Program using the indicators for tracking program success as defined in the IDDE Program Manual. Indicators include: number of SSOs and illicit discharges identified and removed, number and percent of total catchments investigated, dry and wet weather screening and sampling results, and volume of sewage removed. <ul style="list-style-type: none"> <li>• Provide evaluation of IDDE program annually via annual report.</li> </ul>	During Permit term, document annually
3.10	Ongoing screening	2.3.4.10	Reprioritize each outfall and interconnection upon completion of all catchment investigations (2.3.4.8) and schedule ongoing screening once every 5 years that includes dry weather screening and sampling. Ongoing wet weather screening and sampling is also required at outfalls where previous wet weather screening was required due to SVFs. <ul style="list-style-type: none"> <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	Provide annual training (at a minimum) to employees involved in the IDDE Program. This includes highway, engineering, and wastewater divisions of the Department of Public Works. Report on the frequency and type of employee training in annual report.	Annually (at a minimum)



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

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

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
4.1	Ensure construction stormwater runoff control ordinances, local site development, and wetland protection Permit application process are consistent with MS4 General Permit	2.3.5.c.i.	<p>Review Town Stormwater Control Ordinance/Bylaw and regulations, wetland protection, and local Permit application process to ensure that site development applicants meet Construction General Permit obligations.</p> <ul style="list-style-type: none"> <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
4.2	Develop written construction site stormwater runoff control program procedures	2.3.5.c.ii. & 2.3.5.c.v.	<p>Develop written Construction and Post-Construction Program Manual (Manual) or independent documentation for the following procedures.</p> <ul style="list-style-type: none"> <li>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>Procedures for enforcement of sediment and erosion control measures.</li> <li>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> <p>Include references to local ordinance/bylaw and regulations.</p>	End of PY 1
4.3	Track, inspect, and document applicable construction projects	2.3.5.c.v.	Track the number of erosion and sediment control plan reviews, construction site inspections, and enforcement actions and include in annual report.	Throughout Permit term, annually





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

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

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
5.1	Develop written post-construction stormwater runoff program procedures	2.3.6.a	<p>Develop written Construction and Post-Construction Program Manual (Manual) or independent documentation meeting the following requirements:</p> <ul style="list-style-type: none"> <li>• Include references to Town Stormwater Control Ordinance/Bylaw and regulations.</li> <li>• Document procedures and workflow for site plan review, post-construction installation 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, wetland protection, and local Permit application process to ensure that site development applicants meet Post-Construction General Permit obligations consistent with Permit requirements in Part 2.3.6.a (see BMP 5.2) and provisions related to management of Phosphorus in discharges to impaired waters.</li> <li>- Evaluate the effectiveness of Town Stormwater Control Ordinance/Bylaw related to Permit Part 2.3.6.a.iii requirements (see BMP 5.2).</li> <li>- Recommend and implement changes to Ordinance/Bylaw (or Regulations), as necessary.</li> </ul> </li> </ul>	End of PY 1
5.2	Update Local Ordinance/Bylaw (or regulations) on Stormwater Management in New & Redevelopment	2.3.6.a.ii	<p>Based on outcome of BMP 5.1, update the Ordinance/Bylaw or other regulatory mechanism (as needed).</p> <ul style="list-style-type: none"> <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 2008 Massachusetts Stormwater Handbook.</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</li> </ul>	End of PY 3



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
			<p>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.</p> <ul style="list-style-type: none"> <li>Require that stormwater management systems on redevelopment sites be designed to meet an average annual pollutant removal equivalent to 80% of the average annual load of TSS and 50% of TP generated from the total post-construction impervious area on the site.</li> <li>Provide options for offsite mitigation meeting the same standards as the new/redevelopment sites within the same United States Geological Survey (USGS) Hydrologic Unit Code 12 (HUC12) as the new/redevelopment site.</li> </ul>	
		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, annual certification or assumed ownership of the BMPs. Document in the Annual Report the measures/procedures utilized to meet this requirement.</li> <li>Require that new development or redevelopment stormwater management BMPs be optimized for Phosphorus removal for areas that discharge to waterbodies with a Total Phosphorus impairment.</li> </ul>	
5.3	Assess Local Standards	2.3.6.b	<p>During review of Ordinance/Bylaw (or other regulatory mechanism) in PY 3 (see BMP 5.2).</p> <ul style="list-style-type: none"> <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> <p>Street Design and Parking Lot Requirements Assessment.</p> <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</li> </ul>	<p>End of PY 3</p> <p>End of PY 4, document status annually</p>



BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
			<p>parking areas and street designs, schedules for implementing recommendations, and subsequent assessment.</p> <ul style="list-style-type: none"> <li>Document status of the assessment and planned or completed changes to local regulations/guidelines in annual report.</li> </ul>	
		2.3.6.c	<p>Assessment of local regulation's effect on integration of infiltration/water reuse practices:</p> <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
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.</li> <li>Retrofits to municipal properties with significant IA should be considered at a minimum.</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>	End of PY 4, document status annually



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

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

BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
6.1	Develop Operations & Maintenance (O&M) Program documentation	2.3.7.a	<p>Develop written O&amp;M procedures per Part 2.3.7.a of the Permit.</p> <ul style="list-style-type: none"> <li>Develop a 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</li> <li>Proper use, storage, and disposal of potential stormwater pollutants such as pesticides, herbicides, fertilizers, and petroleum products</li> <li>Pet waste management</li> <li>Waterfowl congregation area management</li> <li>Management of trash receptacles</li> <li>Vehicle and equipment maintenance, including wash water management</li> <li>Municipal infrastructure maintenance: street sweeping and catch basin cleaning</li> <li>Road salt use and optimization</li> <li>Stormwater treatment structures O&amp;M</li> <li>Landscape maintenance (including grass clippings and leaf litter)</li> </ul> </li> <li>Report on status of inventory and program documentation.</li> </ul>	End of PY 2
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 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



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BMP ID #	BMP Description	Permit Part Reference	Measurable Goal(s)	Deadline(s)
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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## 1.2 WATER QUALITY STANDARDS

### 1.2.1 Impaired Waters

Discharges to waterbodies with approved Total Maximum Daily Load (TMDL) or to water quality limited water bodies, or discharges causing or contributing to impairments have additional requirements in Parts 2.1, 2.2, and Appendix F of the MS4 General Permit. According to MassDEP's 2022 Integrated List of Waters, the Town of Hudson's MS4 discharges to waterbodies that have an approved TMDL and also to waterbodies that are considered impaired but do not have an approved TMDL. A list of impaired waters that are within the Town of Hudson and their TMDL/impairment causes is provided in Table 1-1 in this Section. A map showing MassDEP's 2022 Integrated List of Waters located in the Town of Hudson is provided in Appendix B of this SWMP.

#### ***Additional Requirements for Discharges to Impaired Waterbodies with an Approved TMDL***

Town of Hudson is located within the Concord River drainage basin, also known as the SuAsCo watershed. As noted in Table 1-1, the Town discharges to the following waterbodies with approved TMDLs: Assabet River and Boons Pond. There are additional requirements for areas that discharge into these waterbody segments in the General Permit, which are discussed in this Section.

#### Assabet River TMDL for Total Phosphorus

The following is a summary of the additional requirements associated with the Assabet River Phosphorus TMDL, per Appendix F Part A.V of the General Permit:

- Enhancement of BMPs required by Part 2.3 of the General Permit that shall be implemented during this Permit term. These obligations have been included in BMPs in Section 1.1 of this Plan:
  - Distribute an annual message in the March/April timeframe that encourages the proper use and disposal of grass clippings and the proper use of slow-release and phosphorus-free fertilizers and deliver an annual message on this topic.
  - Distribute an annual message in the June/July timeframe encouraging the proper management of pet waste and deliver an annual message on this topic, noting any existing regulations where appropriate.
  - Distribute an annual message in the August/September/October timeframe encouraging the proper disposal of leaf litter and deliver an annual message on this topic.
  - Require new development and redevelopment BMPs be optimized for phosphorus removal.
  - Establish a program to properly manage grass cuttings and leaf litter.
  - Provide street sweeping a minimum of twice per year on all Town-owned streets, once in the spring and once in the fall.



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### Boons Pond TMDL for Phosphorus

The following is a summary of the additional requirements associated with the Lake and Pond Phosphorus TMDL, per Appendix F Part A.II of the General Permit. Given the specific nature of these General Permit requirements. The following obligations have not been explicitly included in the BMPs outlined in Section 1.1. The Boons Pond Lake Phosphorus Control Plan will be implemented separately and then referenced in this Plan.

- Develop a Lake Phosphorus Control Plan (LPCP) designed to reduce the amount of phosphorus in stormwater discharges from its MS4 to the impaired waterbody or its tributaries with a phosphorus load reduction of 28%. The LPCP should be completed and all of the control measures in the LPCP shall be fully implemented as soon as possible but no later than 15 years after the effective date of the Permit. The following elements are due within this 5-year Permit term:
  - Complete a written LPCP with the following components by end of PY 5:
    - Legal Analysis – Identify existing regulatory mechanisms to implement the LPCP (by end of PY 2).
    - Funding Source Assessment – Assess known and anticipated funding mechanisms to implement the LPCP (by end of PY 3).
    - Scope of the LPCP Area – Define the area where LPCP will be implemented (LPCP Area), including calculation of a Baseline Phosphorus Load, Phosphorus Reduction Requirement, and Allowable Phosphorous Load for the LPCP Area (by end of PY 4).
    - Description of planned non-structural controls – Describe non-structural stormwater controls to support achievement of phosphorus milestones (by end of PY 5).
    - Description of planned structural controls – Develop a priority ranking of areas and infrastructure for potential implementation of structural controls (includes annual P reduction calculations from structural BMPs). (By end of PY 5.)
    - Description of Operation & Maintenance program for structural controls – Establish an O&M program for all structural BMPs being claimed for phosphorus reduction credits (by end of PY 5).
    - Implementation Schedule – Develop an implementation schedule for all planned components of the LPCP (by end of PY 5).
    - Cost Assessment – Estimate the cost of implementing non-structural and structural controls and the associated O&M plan (by end of PY 5).
  - Provide a progress report in each Annual Report on the planning and implementation of the LPCP (each Permit Year).
    - Post all progress reports and LPCP documentation to the Town website annually.
- Additional action items are required for years 6-20 related to LPCP review, development, implementation, and reporting that are not summarized here but will be included in SWMP refinement upon conclusion of the LPCP in PY5.



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### Boons Pond TMDL for Mercury (Northeast Regional Mercury TMDL)

Although Boons Pond is also subject to a TMDL for Mercury, there are no explicit additional requirements for this TMDL in the General Permit.

### ***Additional Requirements for Discharges to Impaired Waterbodies Without an Approved TMDL***

For the areas within the Town that directly discharge to impaired waterbody segments without an approved TMDL, there are additional BMPs that have been established in Parts 2.1, 2.2, and Appendix H of the MS4 General Permit. Among the impairment causes are Total Phosphorus and bacteria or pathogens (i.e. Escherichia Coli, Enterococcus, or Fecal Coliform). 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 impaired by **Total Phosphorus** where stormwater is the cause of the nutrient impairment but have no approved phosphorus TMDL (Fort Meadow Reservoir):
  - Supplement public education and outreach program with annual timed messages on specific topics such as disposal of yard waste, fertilizer use, and pet waste management, noting any existing regulations where appropriate.
  - Require that new development or redevelopment stormwater management BMPs be optimized for phosphorus removal.
  - Consider BMPs that infiltrate stormwater where feasible in retrofit inventory and priority ranking of municipal properties/infrastructure.
  - Establish housekeeping procedures to manage grass cuttings and leaf litter on municipal property.
  - Increase street sweeping frequencies on municipally owned streets and parking lots.
  - Develop a Phosphorous Source Identification Report.
  - Evaluate potential structural BMPs at municipal properties.
  - Develop a listing of planned structural BMPs at municipal properties and a plan and schedule for implementation.
  - Install at least one structural BMP as a demonstration project by end of Permit Year 6 (and the tracking of its phosphorous removal).
- For the areas that discharge to waters impaired by bacteria or pathogens but have no approved bacteria TMDL (Assabet River):
  - Supplement residential public education and outreach program with an annual message encouraging the proper management of pet waste and proper maintenance of septic systems, noting any existing regulations where appropriate.
  - Designate catchments draining to any waterbody impaired for bacteria or pathogens as either Problem or High Priority catchments in implementation of the IDDE program.



This section will be updated to incorporate additional Appendix H requirements associated with excess algal growth, dissolved oxygen, and/or nutrient/eutrophication biological indicators if these impairments are identified in receiving waterbodies during future iterations of the Massachusetts Integrated List of Waters and the impairment source is stormwater related. The Town will continue to analyze samples for these parameters during outfall and interconnection screening activities, as needed.

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

Segment ID	Waterbody	Impairment Category Classification	Impairment Cause	Impairment Source	EPA TMDL Control No.	Pollutant of Concern Sampling Requirements (Permit Appendix G)
MA82011	Lake Boon	Category 4A	Algae	Discharges from MS4 On-Site Treatment Systems Rural (Residential Areas) Unknown	2353 (TMDL of Phosphorus for Boons Pond)	- Total Phosphorus
			Mercury in Fish Tissue	Unknown Atmospheric Deposition - Toxics	33880 (Northeast Regional Mercury TMDL)	- NMR
			Non-Native Aquatic Plants	Intro of Non-Native Organisms	--	- NMR
			Fanwort	Intro of Non-Native Organisms	--	- NMR
MA82042	Fort Meadow Reservoir	Category 5	Total Phosphorus	Unspecified Urban Stormwater	--	- Total Phosphorus
			Chlordane in Fish Tissue	Unknown	--	- NMR
			Eurasian Water Milfoil, <i>Myriophyllum spicatum</i>	Intro of Non-Native Organisms	--	- NMR
			Non-Native Aquatic Plants	Intro of Non-Native Organisms	--	- NMR
			Fanwort	Intro of Non-Native Organisms	--	- NMR
MA82B-04	Assabet River	Category 5	Dissolved Oxygen	Unknown Municipal Point Source Discharge Impacts from Hydrostructure Flow Reg/Mod	35106 (Assabet River TMDL for Total Phosphorus)	- Dissolved Oxygen - Temperature - BOD5 - Total Phosphorus
			Algae	Unknown Municipal Point Source Discharge Impacts from Hydrostructure Flow Reg/Mod	35106 (Assabet River TMDL for Total Phosphorus)	- Total Phosphorus
			Fecal Coliform	Municipal Point Source Discharge	--	- Fecal Coliform
			E. Coli	Municipal Point Source Discharge	--	- E. Coli
MA82B-04	Assabet River	Category 5		Unknown	35106	



Segment ID	Waterbody	Impairment Category Classification	Impairment Cause	Impairment Source	EPA TMDL Control No.	Pollutant of Concern Sampling Requirements (Permit Appendix G)
			Total Phosphorus	Municipal Point Source Discharge Impacts from Hydrostructure Flow Reg/Mod	(Assabet River TMDL for Total Phosphorus)	- Total Phosphorus
			Aquatic Plants (Macrophytes)	Unknown Municipal Point Source Discharge Impacts from Hydrostructure Flow Reg/Mod	35106 (Assabet River TMDL for Total Phosphorus)	- NMR
			<i>Benthic Macroinvertebrates</i>	<i>Municipal Point Source Discharge Impacts from Hydrostructure Flow Reg/Mod</i>	--	--
			<i>Fish Bioassessments</i>	<i>Municipal Point Source Discharge Impacts from Hydrostructure Flow Reg/Mod</i>	--	--
			Nutrient/Eutrophication Biological Indicators	Municipal Point Source Discharge	--	
			Water Chestnut	Intro of Non-Native Organisms	--	- NMR
MA82B-05	Assabet River	Category 5	Dissolved Oxygen	Municipal Point Source Discharge Impacts from Hydrostructure Flow Reg/Mod	35107 (Assabet River TMDL for Total Phosphorus)	- Dissolved Oxygen - Temperature - BOD <sub>5</sub> Total Phosphorus
			Algae	Municipal Point Source Discharge	35107 (Assabet River TMDL for Total Phosphorus)	- Total Phosphorus
			Fecal Coliform	Unknown	--	- Fecal Coliform
			E. Coli	Unknown	--	- E. Coli
			Nutrient/Eutrophication Biological Indicators	Municipal Point Source Discharge	35107 (Assabet River TMDL for Total Phosphorus)	- Total Phosphorus
			Curly Leaf Pondweed	Intro of Non-Native Organisms	--	- NMR
			Eurasian Water Milfoil, <i>Myriophyllum Spicatum</i>	Intro of Non-Native Organisms	--	- NMR
			Fanwort	Intro of Non-Native Organisms	--	- NMR





Segment ID	Waterbody	Impairment Category Classification	Impairment Cause	Impairment Source	EPA TMDL Control No.	Pollutant of Concern Sampling Requirements (Permit Appendix G)
MA82B-05	Assabet River	Category 5	Water Chestnut	Intro of Non-Native Organisms	--	- NMR
			Total Phosphorus	Unknown Municipal Point Source Discharge Impacts from Hydrostructure Flow Reg/Mod	35107 (Assabet River TMDL for Total Phosphorus)	- Total Phosphorus
			Odor	Municipal Point Source Discharge	--	- NMR
			Trash	Municipal Point Source Discharge	--	- NMR
			Debris	Municipal Point Source Discharge	--	- NMR



Segment ID	Waterbody	Impairment Category Classification	Impairment Cause	Impairment Source	EPA TMDL Control No.	Pollutant of Concern Sampling Requirements (Permit Appendix G)
MA82B-05	Assabet River	Category 5	Aquatic Plants (Macrophytes)	Municipal Point Source Discharge	35107 (Assabet River TMDL for Total Phosphorus)	- NMR
			Debris/Floatables/Trash	Municipal Point Source Discharge	--	- NMR
			Non-Native Aquatic Plants	Intro of Non-Native Organisms	--	- NMR
			Taste and Odor	Municipal Point Source Discharge	--	- NMR

\*Note: Items in grey, italicized font may require consultation from MassDEP, per Appendix G of 2016 MS4 General Permit. NMR: No monitoring required.

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

### 1.2.2 Surface Public Drinking Water Supplies

The Town of Hudson has no active surface public drinking water supply sources, according to available MassGIS data. However, White Pond, located in the Towns of Hudson and Maynard, is designated as an Outstanding Resource Water. White Pond's watershed is a surface water supply watershed, as shown on the figure in Appendix B. MassGIS data indicated that White Pond is a public Emergency Surface Water supply source. There are no known direct stormwater discharges (<350') to public surface drinking water supplies from Hudson's MS4. The Town will continue to take measures to minimize impacts to surface public drinking water supply sources through the implementation of the BMPs discussed in Section 1.1 and 1.2 of this SWMP. In addition, the Town's IDDE Program Plan prioritizes investigating the potential for illicit stormwater discharges proximate to drinking water supplies.

### 1.2.3 Increased Discharges

The Town of Hudson 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 Hudson will demonstrate compliance with this provision by either:



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

### 1.3 SPECIAL ELIGIBILITY DETERMINATIONS

Consistent with Part 1.9 of the 2016 MS4 General Permit, the Town of Hudson has completed an assessment of both Endangered Species and Historic Properties. The Information, Planning, and Conservation (IPaC) online system process was completed and the Northern Long-Eared Bat was identified in Hudson. However, since the action area does not contain one or more of the species listed in Appendix C, Part B, Step 2 for determination of Criterion B, and discharges from the Town's MS4 are not likely to adversely affect the Northern Long-Eared Bat habitat, Criterion C is applicable. Therefore, the stormwater discharges and discharge-related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the United States Fish and Wildlife Service (USFWS).

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

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

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

Covered entities are required to collect and report information about the development and implementation of their Stormwater Management Program (SWMP). The Town of Hudson 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 Hudson 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.



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## 1.5 RESPONSIBLE PARTIES FOR STORMWATER PROGRAM IMPLEMENTATION

Title/ Position of Responsible Person	Name of Responsible Person	Role/Program Element(s)
Department of Public Works – Director	Eric Ryder	CM 1, 2, 3, Individual BMPs in 4 and 5, 6
Department of Public Works – Stormwater Manager	Maeghan Dos Anjos	CM 1-6
Conservation Agent/Planner	Pam Helinek	CM 4, 5
Planning & Community Development – Director	Kristina Johnson	CM 4, 5



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

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

### 2.1 IDDE PROGRAM

#### 2.1.1 IDDE Program Manual

The Town has developed a written IDDE Program Manual consistent with the requirements of Part 2.3.4.6 of the MS4 General Permit in Permit Year 1. The IDDE Program Manual includes:

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

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

#### 2.1.2 Separate Storm Sewer System Map

The Town has developed a Separate Stormwater Sewer System Map consistent with the requirements of Part 2.3.4.5.a of the MS4 General Permit. The map, provided in Appendix A 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 latest *Massachusetts Integrated List of Waters* report
- Initial catchment delineations
- Drain pipes, manholes, and catch basins

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





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### **2.1.3 SSO Inventory**

The Town has developed a Sanitary Sewer Overflow Inventory consistent with the requirements of Part 2.3.4.4 of the MS4 General Permit in Permit Year 1. The inventory can be found at the Department of Public Works and is included in the Town's Annual Report.

### **2.1.4 Receiving Waterbodies**

Consistent with the requirements of Part 1.10.2 of the MS4 General Permit, a list of all Integrated List waterbody segments that receive discharge from the Town's MS4 is provided in Table 1-1. The Town's MS4 General Permit Notice of Intent submission to the EPA dated September 19, 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 the Town's MS4, as well as the waterbody segment(s) that ultimately receive the discharge, are shown on the updated Separate Storm Sewer System Map in Appendix A.

## **2.2 CONSTRUCTION AND POST-CONSTRUCTION STORMWATER MANAGEMENT PROGRAM**

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

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

### **2.2.2 New Development/Redevelopment Ordinance**

Consistent with the requirements of Part 2.3.6.a.iii of the MS4 General Permit, the Town has a regulatory mechanism to require submission of as-built drawings. The Town, however, does not yet have a mechanism to ensure the long-term operation and maintenance of post-construction stormwater BMPs. The Town of Hudson is revising and consolidating its regulatory mechanism to comply with all construction and post-construction phase Permit requirements.

### **2.2.3 Street Design and Parking Lot Report**

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



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## 2.2.4 Green Infrastructure Report

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

## 2.2.5 Retrofit Properties Inventory

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

## 2.3 MUNICIPAL FACILITIES AND OPERATIONS PROGRAMS

### 2.3.1 Clean Water Best Practices Manual

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

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

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

### 2.3.2 Municipal Facility Inventory

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

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

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



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### 2.3.3 O&M Standard Operating Procedures

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

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

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

### 2.3.4 Stormwater Pollution Prevention Plan

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

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

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



### 3. STORMWATER UTILITY

On May 1, 2023, the Town of Hudson passed a Stormwater Utility and a Stormwater Bylaw. The revenue from the utility will assist in MS4 Permit compliance, and infrastructure improvements. The billing is currently scheduled to begin in Permit Year 6. Public meetings will be held in September 2023 to discuss the utility and address any concerns. Information about the stormwater bill will be posted on the back of the November 2023 water and sewer bills. Language for the back of the bills have been developed.

#### 3.1 Rate Structure

The rate structure is based off of impervious area per parcel. Specific rates will be posted on the website<sup>1</sup> and the *Rules and Regulations*. The website is currently being developed. The rate structure involved is shown on Table 3-1 below.

**Table 3-1 Stormwater Utility Rate Structure**

Property Type	Impervious Area (square feet)	Quarterly Fee
Any Property	0-499	\$0
Single-family Residential	500-5,000	\$19.75
Single-family Residential <sup>1</sup>	5,001-10,000	\$29.75
Non-single-family residential	500 or greater	Total Impervious Area/3400 (24.75)

<sup>1</sup> Billing units for single-family residential properties with >10,000 square feet of impervious area are calculated as non-single-family residential properties.

#### 3.2 Impervious Area Calculation

The Town of Hudson performs a town-wide analysis of impervious surfaces areas. The analysis determined the median surface area per single family residential contains 3,400 square feet of impervious areas. The analysis will be used as part of the billing moving forward and will be reviewed when new materials are received through locally-issued permits, or when a new aerial is developed by MassGIS.

#### 3.3 Stormwater Bylaw and Rules and Regulations

The Stormwater Bylaw was approved on May 1, 2023 and is currently in review by the Attorney General's Office. Once the Bylaw is authorized, it will be posted to the codes via the Town Clerk. It will also be posted on the stormwater website<sup>1</sup> when it goes live. Rules and Regulations will be developed by the Stormwater Manager.

<sup>1</sup> [www.townofhudson.org/stormwater](http://www.townofhudson.org/stormwater)

## CERTIFICATION

"I Certify under the 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 9/28/23

Eric M. Ryder  
\_\_\_\_\_  
Name

\_\_\_\_\_  
Date 9/28/23



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# Appendices

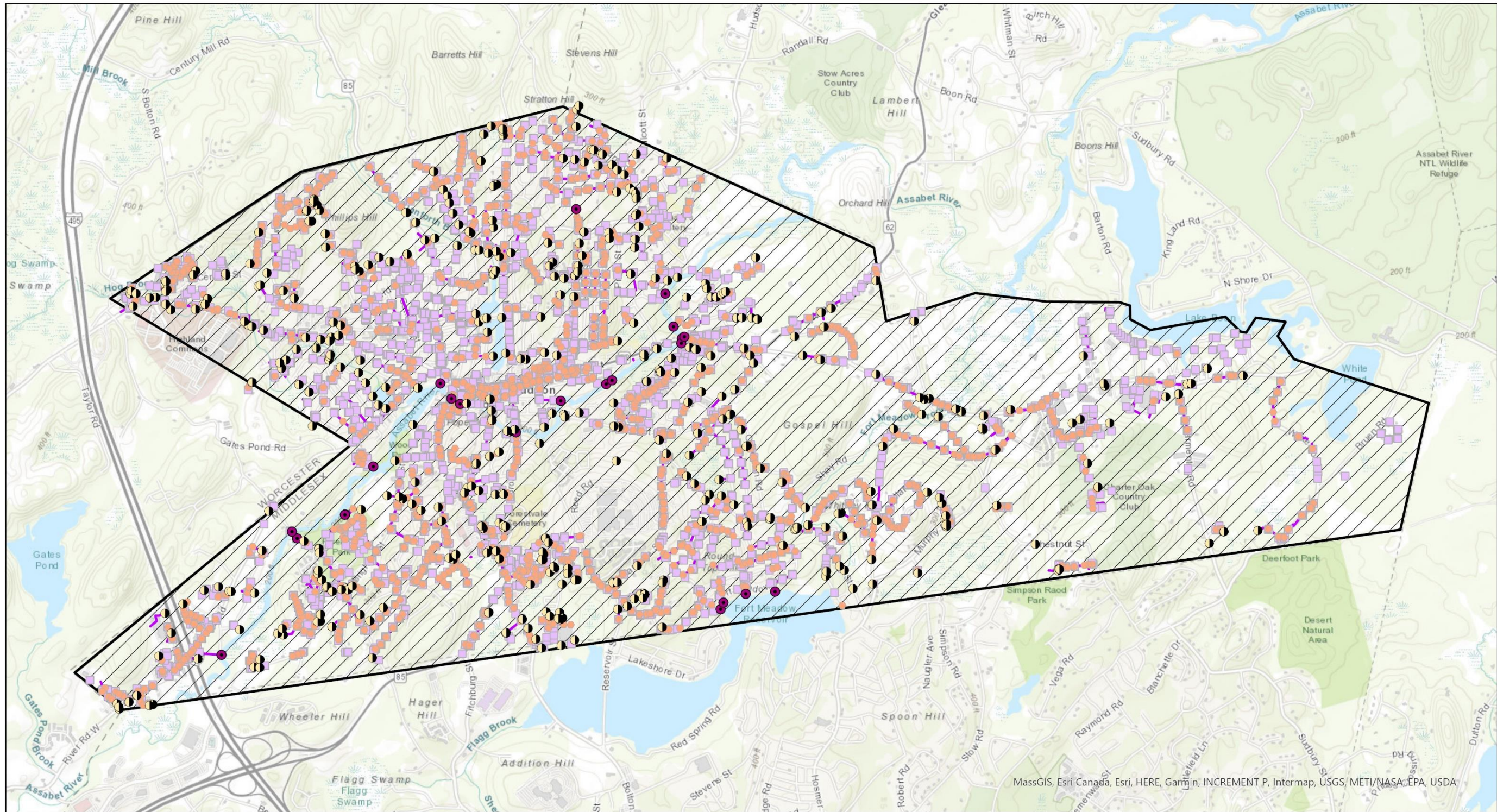




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## APPENDIX A: SEPARATE STORM SEWER MAP



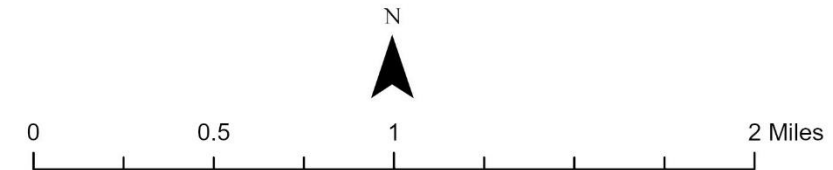


9/20/2023



Disclaimer: This map was made for geographical purposes and is not intended for engineering and legal decisions, or for third parties.

# Stormwater System Overview



Legend	
	Outlets
	Drainage Manhole
	Outfalls
	Catch Basins
	Drainage Pipes
	Urbanized Area

MassGIS, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA

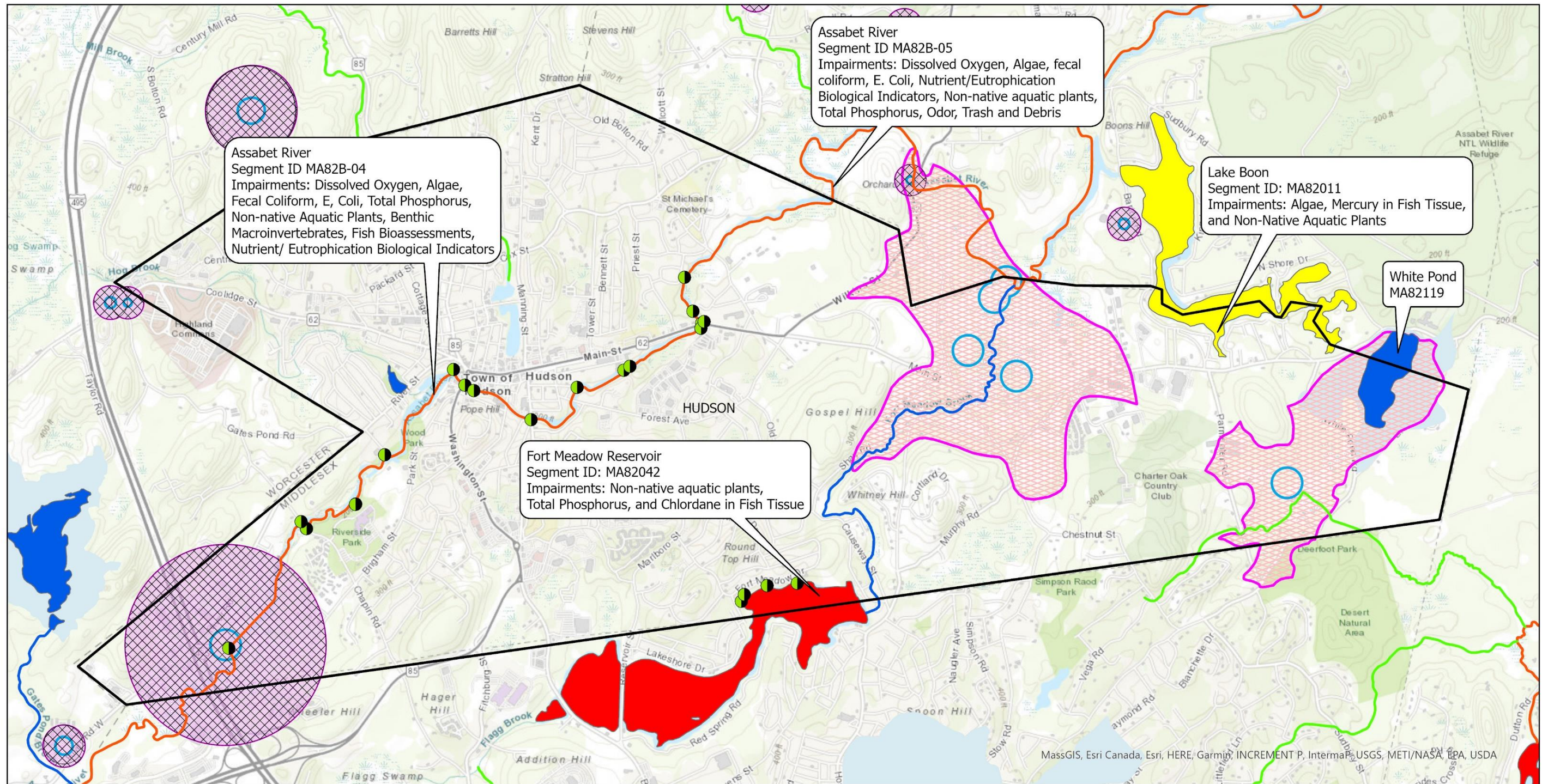




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## APPENDIX B: IMPAIRED WATERS AND SPECIAL RESOURCES MAP

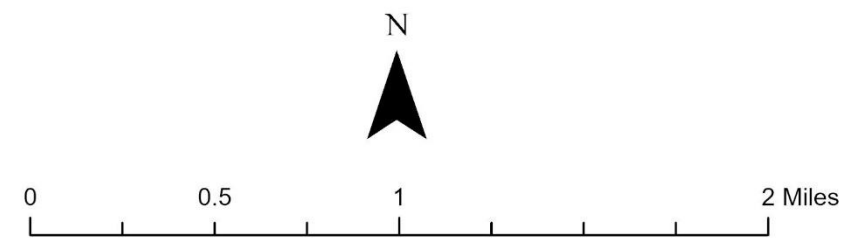




9/21/2023

Disclaimer: This map was made for geographical purposes, and is not intended for engineering and legal decisions, or for third parties.

### Impaired Waters and Special Resources



**Legend**

2022 Integrated List CATEGORY	5 Waters requiring a TMDL
2 Attaining some uses; other uses not assessed	Interm Wellhead Protection Area
3 No uses assessed	Zone 1 Wellhead
4A TMDL completed	Zone II Wellhead
4C Impairment not caused by a pollutant	IWPA
	Outstanding Resource Waters
	Outfalls





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## APPENDIX C: SPECIAL ELIGIBILITY DETERMINATION LETTER



TOWN OF HUDSON  
DEPARTMENT OF PUBLIC WORKS  
1 MUNICIPAL DRIVE  
HUDSON, MA 01749  
TEL. 978 562 9333  
FAX. 978 568 9612

June 14, 2021

MEMO TO FILE

Re: Documentation for delegation of "Authorized Representative" for NPDES 2016 Massachusetts Small Municipal Separate Storm Sewer System (MS4) General Permit

This document serves to affirm that Eric Ryder, Director of Public Works, has responsibility for the operation of the MS4 and is hereby designated as an authorized person for signing all reports including but not limited to the Stormwater Management Plan (SWMP), Stormwater Pollution Prevention Plans (SWPPPs), inspection reports, annual reports, monitoring reports, reports on training, and other information required by the General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts for the Town of Hudson. This authorization cannot be used for signing a NPDES permit application (e.g., Notice of Intent (NOI)) in accordance with 40 CFR 122.22.

By signing this authorization, I confirm that I meet the following requirements to make such a designation as set forth in Part B.11 of Appendix B of the Small MS4 General Permit:

*For a municipality, state, federal, or other public agency: By either a principal executive officer or ranking elected official.*

"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."

  
Thomas Gregory  
Executive Assistant

6/25/21  
[Date]





TOWN OF HUDSON  
DEPARTMENT OF PUBLIC WORKS  
1 MUNICIPAL DRIVE  
HUDSON, MA 01749  
TEL. 978 562 9333  
FAX. 978 568 9612

August 29, 2018

Newton Tedder  
US Environmental Protection Agency  
Stormwater and Construction Permits Section (OEP06-1)  
Five Post Office Square, Suite 100  
Boston, MA 02109

Re: Endangered Species Determination for Hudson, MA Associated with the MA MS4  
General Permit

Dear Mr. Tedder:

The Town of Hudson, MA is a non-federal representative designated by the Environmental Protection Agency (EPA) for conducting formal or informal consultation with the U.S. Fish and Wildlife Service.

I have evaluated the United States Fish & Wildlife Service iPAC Biological and Conservation Data System files in response to new regulation promulgation under the 2016 Massachusetts Municipal Separate Sewer System (MS4) General Permit. The objective of this review is to determine the presence of endangered or threatened species within the program implementation area in Hudson, MA.

Our review evaluated the area of impact of required program activities, analysis of these program activity areas within the iPAC database, examining maps, other sources of information, and the personal knowledge of staff or cooperating experts.

According to the information currently in the iPAC database, there are two threatened species within the proposed project area (Northern Long-Eared Bat) and no critical habitat. Please see Attachment 1 as the official species list.

The proposed stormwater program activities are a continuation of previous permitted activities and include non-structural management of stormwater runoff as required by the MA MS4 General Permit. These activities will include education, investigation, and pollutant source control on existing municipal facilities and roadways and will not disturb terrestrial vegetation. The listed species is sensitive to land disturbance and as the program implementation will not disturb vegetation we have therefore determined that our programmatic activities will have “no affect” on the listed species.

If during the course of the permit term we plan to install structural stormwater treatment practices or engage in other land disturbing activities as a result of compliance with the MS4 General Permit, the Town of Hudson will initiate further informal or formal consultation with the USFWS.

Based on this review and an evaluation of determination requirements outlined in Appendix C of the MA MS4 General Permit, we have determined that we meet Criterion C. We request EPA's concurrence of this determination for inclusion in our Stormwater Management Program Plan.

Please do not hesitate to contact me if you have further questions about Hudson's stormwater management program.

Sincerely,



Eric Ryder  
Public Works Director  
Town of Hudson  
978-562-9333  
eryder@townofhudson.org



## 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 21, 2018

Consultation Code: 05E1NE00-2017-SLI-1366

Event Code: 05E1NE00-2018-E-06630

Project Name: Hudson MA

Subject: Updated 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: 05E1NE00-2017-SLI-1366

Event Code: 05E1NE00-2018-E-06630

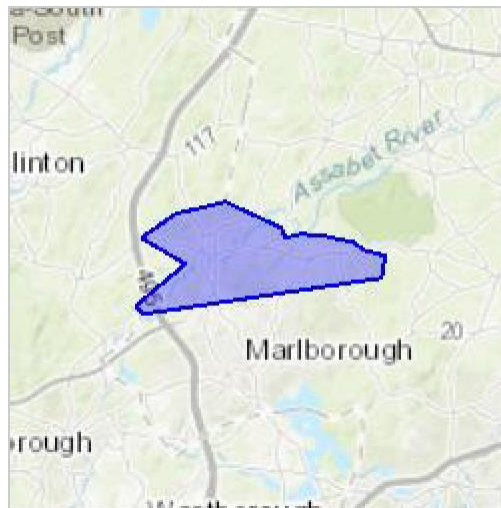
Project Name: Hudson MA

Project Type: Regulation Promulgation

**Project Description:** The proposed stormwater program activities are a continuation of previous permitted activities and include non-structural management of stormwater runoff as required by the MA MS4 General Permit. These activities will include education, investigation, and pollutant source control on existing municipal facilities and roadways and will not disturb terrestrial vegetation. Existing stormwater discharge water quality will be improved through the implementation of the permit program.

### Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/42.389483325040715N71.52963020742018W>



Counties: Middlesex, MA | Worcester, MA

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## Endangered Species Act Species

There is a total of 1 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

## Critical habitats

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

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TOWN OF HUDSON  
DEPARTMENT OF PUBLIC WORKS  
1 MUNICIPAL DRIVE  
HUDSON, MA 01749  
TEL. 978 562 9333  
FAX. 978 568 9612

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 Hudson (MS4 permittee) has determined that the discharges regulated under this permit do not have the potential to cause effects on National Register of Historic Properties.

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 Hudson 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 Hudson anticipates subsurface land disturbance as a result of this General Permit, the City will prepare a complete information submittal to the State Historic Preservation Office.

Sincerely,

Eric Ryder  
Public Works Director  
Town of Hudson  
978-562-9333  
eryder@townofhudson.org



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## APPENDIX D: DEFINITIONS



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## **Definitions, Abbreviations and Acronyms**

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

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

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

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

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

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

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

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

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

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



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

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

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

**Industrial Stormwater** - Stormwater runoff associated with the definition of “stormwater discharges associated with industrial activity.”

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

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

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

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

- (i) Owned or operated by a State, 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).



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

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

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

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

### Abbreviations and Acronyms

BMP – Best Management Practice CGP – Construction General Permit  
CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)  
DCIA – Directly Connected Impervious Area EPA – U. S. Environmental Protection Agency ESA – Endangered Species Act  
USFWS – U. S. Fish and Wildlife Service IA – Impervious Area  
IDDE – Illicit Discharge Detection and Elimination LA – Load Allocations  
MOS – Margin of Safety  
MS4 – Municipal Separate Storm Sewer System MSGP – Multi-Sector General Permit  
NHPA – National Historic Preservation Act NMFS – U. S. National Marine Fisheries Service NOI – Notice of Intent  
NPDES – National Pollutant Discharge Elimination System NRHP – National Register of Historic Places  
PCP – Phosphorus Control Plan (pertaining to Charles River Watershed phosphorus)  
POTW – Publicly Owned Treatment Works  
SHPO – State Historic Preservation Officer  
SPCC – Spill Prevention, Control, and Countermeasure SWMP – Stormwater Management Program  
SWPPP – Stormwater Pollution Prevention Plan TMDL – Total Maximum Daily Load  
USGS – United States Geological Survey WLA – Waste load Allocation  
WQS – Water Quality Standard



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## APPENDIX E: REVISION LOG





Revision No.	Revision Date	Section of SWMP	Revision(s) Made/Reasoning
00	9/10/2018	--	--
01	6/30/2020	1.2.1	Note added to address how the approved 2016 Massachusetts List of Integrated Waters will be incorporated into this SWMP; reference added related to updates for potential future additional Appendix H requirements for nutrient related impairments during future Massachusetts Integrated List of Waters issuances.
		1.4	Added language to reflect that changes to the information submitted in the Town's NOI shall be addressed in the Annual Report and SWMP updates
		2.1.1	Revised language to reflect that an IDDE Program Manual has been completed
		2.1.3	Revised language to reflect that the Town has developed an SSO Inventory
		2.1.4	Revised language to reflect that receiving waterbodies are listed in the Town's MS4 General Permit NOI submission to the EPA
		2.2.1	Revised language to reflect that a Land Development Program Manual has been completed
		2.2.4	NEW SECTION: Added language to reflect that the Town will develop a Green Infrastructure Report in PY4
		2.2.5	NEW SECTION: Added language to reflect that the Town will develop a Retrofit Properties Inventory in PY4
		2.3.1	NEW SECTION: Added language to reflect that the Town will develop a Clean Water Best Practices Manual in Permit Year 3
		2.3.2	Revised language to reflect that a Municipal Facility Inventory will be developed in Permit Year 3
		2.3.3	Revised language to reflect that an O&M Program Plan will be developed in Permit Year 3
		2.3.4	NEW SECTION: Added Language to reflect that the Town has developed SWPPPs for its Department of Public Works and Transfer Station
		Appendix A	Revised Separate Storm Sewer Map
02	6/22/2021	1.1	Revised BMP 5.2 language to reflect MS4 General Permit modifications effective January 6, 2021
		1.2.1	Revised section text and Table 1-1 to reflect any changes between the MassDEP's 2014 and 2016 Integrated List of Waters
		2.3.1 – 2.3.4	Updated all municipal facilities and operations program descriptions to reflect that these documents are completed and can be accessed at the Department of Public Works
		Appendix A	Revised Separate Storm Sewer Map
		Appendix C	Revised Impaired Waters and Special Resource Waters Map
03	9/21/2023	1.2.1	References to 2016 Integrated List of Waters was updated to reflect the current list "2022 Integrated List of Waters."
		1.5	Updated the responsible parties table given a new hire of the Stormwater Manager.
		3	NEW SECTION: added to discuss the Stormwater Utility.
		Appendix A	Revised Separate Storm Sewer Map
		Appendix C	Appendix B and C were switched. Revised Impaired Waters and Special Resource Waters Map, which is now Appendix B.