

STORMWATER MANAGEMENT PROGRAM (SWMP) YEAR 3

TOWN OF PELHAM, NEW HAMPSHIRE

6 VILLAGE GREEN

PELHAM, NEW HAMPSHIRE



Prepared for:

Pelham NEW HAMPSHIRE

Prepared by:



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COPY # _____

June 30, 2021
PERMIT YEAR 3

LIST OF SWMP REVISIONS

NUMBER	DATE	DESCRIPTION OF REVISION	COMPLETED BY
0.	06/28/2019	Development of Year 1 SWMP	GeolInsight, Inc.
1.	06/30/2019	Minor Edits per Town & Eng Review	GeolInsight, Inc.
2.	06/30/2020	Year 2 SWMP Updates	Town of Pelham
3.	06/30/2021	Year 3 SWMP Updates	Town of Pelham
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HOLDERS OF THE SWMP

COPY #	DEPARTMENT/ ORGANIZATION	NAME	INITIALED ACCEPTANCE	DATE
0.	SWMP Coordinator / Planning Department	Jenn Beauregard		06/30/2021
1.	Town Administrator	Brian McCarthy		06/30/2021
2.	Board of Selectmen	Robert Haverty, Chair		06/30/2021
3.	Highway Department & Transfer Station	Craig Hoffman	CPH	06/30/2021
4.	Parks and Recreation	Brian Johnson		06/30/2021
5.	Nashua Regional Planning Commission			06/30/2021
6.	SWMP Stakeholder Advisory Group			06/30/2021
7.	Geolnsight, Inc.			06/30/2021
8.	Environmental Regulation Compliance Specialist	Dena Hoffman	DMH	06/30/2021
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SWMP Certification

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Name: Brian McCarthy

Title: Town Administrator

(Printed)

Signature: 

Date: 6/25/21

EXECUTIVE SUMMARY

WHAT IS AN MS4 PERMIT AND WHY PELHAM?

Local drainage systems, whether natural or constructed, are important features that carry stormwater runoff away from developed areas to undeveloped areas, waterbodies, and wetlands. Although these drainage systems help to manage stormwater in our built environment, they are also a primary source of untreated pollutants in receiving waters including bacteria, nutrients, oil, trash, and many other contaminants. In general, stormwater runoff is defined by the U.S. Environmental Protection Agency (EPA) as “nonpoint source pollution”, meaning that the source of the pollution may not be directly attributable to a single spatial point or polluter. Stormwater runoff from a variety of sources including streets, parking lots, and lawns picks up and carries pollution contaminants as it moves across ground surfaces before entering local drainage systems and receiving waters.

A municipal separate storm sewer system (MS4) is a man-made conveyance of stormwater that includes stormwater collection and outfall structures within a city or town. These structures include (but are not limited to) catch basins, drain manholes, culverts, piping, stormwater basins, stormwater treatment practices, swales, and ditches. As with approximately sixty other municipalities in NH, many of the Town of Pelham’s MS4s are regulated under the EPA Clean Water Act (CWA) and requires a permit for discharges to the environment.

The “*General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in New Hampshire*” (the Permit) is administered by the EPA to authorize municipalities to discharge stormwater from their regulated MS4s under the EPA National Pollutant Discharge Elimination System (NPDES) and the over-arching CWA.

The conditions of the Permit direct permittees to properly manage potential pollution in stormwater. The Permit does not cover non-stormwater discharges such as industrial or wastewater sources. Such discharges require separate and/or individual permitting from the EPA. The EPA’s New Hampshire MS4 General Permit covers New Hampshire small cities and towns under the EPA NPDES Permit No. NHR041000 (*Part 1.1*).

In 2003, the Town of Pelham (the Town) became subject to MS4 permitting in Phase II of the EPA NPDES program, where previously only cities having populations over 100,000 were regulated. The 2003 permit required newly regulated municipalities to begin to develop and implement pollution reduction measures in stormwater discharges from their regulated MS4s. The current Permit (2017) continues the EPA’s phased approach requiring the permittee to develop an initial written Storm Water Management Program (SWMP) and add specific elements each year over the term of the Permit, and beyond.

This written Storm Water Management Program (SWMP) describes the activities and Best Management Practices (BMPs) that the Town intends to implement to meet the requirements of the Permit as outlined in the Town’s submitted and EPA-approved Notice of Intent (NOI). Each Permit Year (July 1 to June 30) the SWMP is updated to document the Town’s plans to continue

to meet the Permit's phased schedule and requirements.

PERMIT REQUIREMENTS

Permit Effective/Start Date: July 1, 2018

Modifications Effective/Start Date: January 6, 2021

Notice of Intent (NOI) Due September 28, 2018 (*Part 1.7.2*)

The Town submitted (mailed) a NOI to the EPA on September 24, 2018, that:

- identified local receiving waters and impairments under the 2012 NHDES Surface Water Quality List (303(d) list);
- outlined the Town's current baseline BMPs to manage stormwater and measures intended to meet the current (2017) Permit water quality requirements;
- certified that the Town intends to comply with the Permit requirements; and
- requested authorization to discharge stormwater from its MS4 regulated area under the 2017 Permit.

EPA authorization to discharge under the Permit was received by the Town on March 18, 2019.

Special Eligibility Determinations (*Part 1.9*)

The Town must annually certify the findings of endangered species and historic property screenings per *Appendices C & D* of the Permit and document resulting agency consultations (if required).

Stormwater Management Program – Due June 30, 2019 (*Part 1.10*), *updated annually*

The permittee shall develop, implement, and enforce a written SWMP...The initial written SWMP shall be completed within one (1) year of the effective date of the permit and be updated as necessary to include necessary elements to ensure compliance with schedules and requirements contained in this permit. (US Environmental Protection Agency, 2017)

The over-arching goal of the Stormwater Management Program (SWMP) is to reduce the discharge of pollutants to receiving waters to the "maximum extent practicable" (MEP), to protect the overall water quality of town, state and federal water resources, and comply with the requirements of the CWA.

As the Town was previously covered under the 2003 permit, applicable written requirements for the SWMP are outlined in *Part 1.10.2* of the 2017 Permit. These overall requirements include:

- program responsibility assignments;
- water resource and impairment documentation;
- special eligibility documentation;
- mapping of the Town's MS4s;
- listing of measures intended to comply with water quality standards;

- protection of water supplies; and
- annual program assessment, review, updates, and reporting.

An important requirement of the Permit is to identify responsible parties within the Town to oversee, manage, implement, and document/report the activities of the SWMP. MS4 drainage conveyances refer to structures that carry stormwater from collection (catch basins) to outfalls and includes piping, culverts, ditches, and swales. The inspection and maintenance of MS4 structures is provided within the Town's Highway Department, while oversight and reporting are managed by the Town Planning Department. See Section 3.0 for *Pelham SWMP Organization Chart* for details on specific SWMP responsibilities.

The most significant part of the SWMP includes a framework for stormwater management defined as the "Six Minimum Control Measures" (MCMs) that outlines how the Town will "*reduce Pollutants to the Maximum Extent Practicable (MEP)*" (US Environmental Protection Agency, 2017). The requirements for each of the six MCMs are detailed in the Permit sub-parts:

Part 2.3.2 MCM1 Public Education and Outreach

Part 2.3.3 MCM2 Public Involvement and Participation

Part 2.3.4 MCM3 Illicit Discharge Detection and Elimination Program

Part 2.3.5 MCM4 Construction Site Stormwater Runoff Control

Part 2.3.6 MCM5 Stormwater Management in New Development and Redevelopment
(Post Construction) Stormwater Management

Part 2.3.7 MCM6 Good Housekeeping and Pollution Prevention for Municipal Operations

Each MCM has specific phased requirements under the Permit and are described in further detail in Sections 5 through 10 of this SWMP.

Enhanced BMPs to address Impaired Waters are additional requirements for Towns that have been identified in the Permit for certain water impairments or for waterbodies that have a formal EPA-approved Total Maximum Daily Load plan (TMDL) for pollutants of concern as outlined in *Part 2.1.1* and *Appendix H, Part II*.

For Pelham, the Permit identifies that enhanced BMPs are required within the Town's regulated area under the statewide Bacteria TMDL (*Part 2.2.1.e* and *Appendix F*), and for phosphorus impairments (*Part 2.2.2.b* and *Appendix H*) as detailed in Section 11.

Annual Reporting - Due annually by September 28 (*Part 4.0*)

Each year the Town is required to submit an annual compliance report to the EPA for (July 1 through June 30 is the reporting period) each Permit year. The report must include a self-assessment of the program, discussion of progress made toward BMP measured goals, updates on the status of water quality for receiving waters per the current EPA-approved NHDES impaired waters lists (303(d) and 305(b)), adjustments/updates to the BMPs, collected outfall screening and sampling data, and descriptions of future planned activities and goals for the next reporting period.

Progressive Annual Requirements

The Permit intends for the written SWMP to be a 'living document' to be reviewed and updated annually.

Annually

At a minimum, for the SWMP the Town must:

- review and update the SWMP as a whole (*Part 1.10.2.9*);
- review and update who is responsible for SWMP program implementation (*Part 1.10.2.1*);
- update of endangered species and historic properties special eligibility supporting documentation and resulting agency consultations, if any (*Part 1.9*);
- review and update listing of all receiving waters and state-listed impairments within the Town's regulated area (*Part 1.10.2.2*);
- implement and document Public Education and Public Participation programs (MCM1 and MCM2) per Permit requirements (*Parts 2.3.2 and 2.3.3*);
- continue the Illicit Discharge Detection and Elimination Program (IDDEP) including investigations and documentation of possible and suspected violations, as applicable (*Part 2.3.4*);
- review and update MS4 mapping and outfall ranking based on dry-weather screening and sampling, as well as adding new development and other physical changes within the MS4 regulated area (*Part 2.3.4.5.b*);
- revise/update outfall inventory and ranking based on field data, dry-weather screening, sampling, and catchment investigations (*Part 2.3.4.7.a*);
- complete annual IDDEP staff training (*Part 2.3.4.11*);
- continue catch basin cleaning program and provide annual report and documentation of implemented program (*Part 2.3.7.1.d.ii*);
- continue street sweeping program, including additional sweeping in areas draining to nutrient (phosphorus) impaired waters, and provide annual report and documentation of implemented program (*Part 2.3.7.1.d.iii*);
- continue to implement winter road maintenance plan with the goal to reduce and minimize the use of road salts and sand (*Part 2.3.7.1.d.v*);
- provide applicable staff training for SWPPPs and O&Ms (*Part 2.3.7*); and
- submit an Annual Report with all required documentation to EPA no later than September 28 following each Permit Year (*Part 4.4*).

Under each MCM, at a minimum, the permittee must:

- list each baseline BMP, with responsible party, measurable goals, and planned milestones (*Part 1.10*); and
- identify a plan for verifying progress of each goal (*Part 1.10*).

Year 1 Requirements

As prepared for Year 1 of the Permit, requirements included:

- initial endangered species and historic properties special eligibility supporting documentation and resulting agency consultations, if any required (*Part 1.9*);
- identifying who is responsible for SWMP program implementation (*Part 1.10.2.1*);
- initial listing of all receiving waters and impairments within the MS4 regulated area (*Part 1.10.2.2*);
- mapping of the MS4s, specifically locating all outfalls and identifying receiving waters (*Part 2.3.4.5.a*);
- preparing a written IDDEP, initial outfall ranking, and dry-weather screening program (*Parts 2.3.4.6, 2.3.4.7.a, and 2.3.4.7.b.i*);
- providing written procedures for construction inspections for erosion and sedimentation controls, construction site plan reviews, and enforcement (*Part 2.3.5.3.b and 2.3.5.3.e*);
- developing a schedule for catch basin cleaning no less than once annually, provide annual report documentation of implemented program (*Part 2.3.7.1.d.ii*);
- preparing a winter road maintenance plan to address storage, and reduce and minimize the use of road salts and sand (*Part 2.3.7.1.d.v*);
- providing written procedures for annual inspections and maintenance of existing/constructed stormwater structures (*Part 2.3.7.1.d.vi*); and
- describing measures to protect drinking water sources (*Part 3.2*).

Year 2 Requirements and Summary of Progress and Accomplishments

As prepared for Year 2 of the Permit, requirements include (but were not specifically limited to):

- complete mapping of the MS4s, including piping, treatment structures, interconnections, and catchment delineations (*Part 2.3.4.5.a*);

The majority of this mapping requirement has been completed in Year 2. Outstanding items include GPS location verification of Town-owned/managed stormwater treatment facilities (i.e. treatment ponds), and final catchment delineations which are in progress and approximately 80-percent complete. The Town expects to add both outstanding items to the MS4 mapping prior to the Year 2 Annual report submission.

- prepare written Catchment Investigation Procedures (*Part 2.3.4.8*);

The Catchment Investigation Procedures were completed and posted to the Town's Stormwater web page in December of 2019.

- continue dry-weather screening program (*Part 2.3.4.7.b*);

For Year 2, dry-weather screening was started in June of 2020 and is expected to be completed this summer (2020).

- review and develop stormwater regulations updated to meet Permit requirements (*Parts 2.3.5.3.a and 2.3.6.a.ii*);

Although adequate regulations were in place for Year 1, the Town has completed the development of a draft stand-alone Stormwater Regulation as well as draft redline edits

to the existing Land Use Regulations as an alternative that address the requirements of MCM 4 and MCM 5 in more depth. These draft plans are in the process of consideration by the Town's Planning Board which will include a public hearing process that will invite public comment. Advancement and implementation of either set of regulation updates is expected to occur by the end of the 2021 calendar year.

- update Land Use Application Review Procedures (SOP) to include Permit requirements (*Part 1.10.2.b*);

The Town is in the process of updating written internal procedures to reflect proposed Land Use Regulation changes and to include requirements of the Permit. The Town expects these procedures to be completed and implemented subsequent to the Planning Board public hearings and vote to modify the existing Land Use Regulations Draft modifications to include Post-Construction Stormwater Management requirements or alternatively the Board will adopt the draft stand-alone Post Construction Stormwater Management Regulations by the end of the 2021 calendar year.

- develop a property inventory for all Town-owned properties, including listing all materials that may be exposed to stormwater (*Part 2.3.7.1*);

During Year 2, an inventory of Town property was compiled per the Permit requirements and in coordination with the development of the SWPPPs and O&Ms. The completed inventory is included in Volume 3 of this SWMP as updated for Year 2. The Town expects to continue to add data and improve this inventory over the course of the Permit term.

- prepare Stormwater Pollution Prevention Plans (SWPPPs) and Operations & Maintenance Plans (O&Ms) for all Town-owned properties in accordance with Permit requirements (*Parts 2.3.7.1 and 2.3.7.2*);

During Year 2, the Town prepared six (6) written SWPPPs for the following Town-owned facilities:

- Cemetery Department (Gibson Cemetery);
- Highway Department (Highway Maintenance Yard);
- Town of Pelham School District (Elementary, Memorial, and High Schools); and
- Town Transfer Station.

The completed SWPPPs are included in Volume 3 of this SWMP as updated for Year 2. The Town also completed annual SWPPP training for staff in June of 2020.

- develop written procedures for O&M activities (for town properties) (*Part 2.3.7.1*);

During Year 2, the Town prepared a written town-wide O&M program for the following Town-owned property types:

- Parks and Open Spaces;
- Buildings and Facilities;
- Vehicles and Equipment; and
- Stormwater Treatment Structures.

The completed O&M is included in Volume 3 of this SWMP as updated for Year 2. The Town also completed annual O&M training for staff in June of 2020.

- describe MEP measures and progress for groundwater recharge and infiltration practices (*Part 3.1*);
- The Town's current and proposed Land Use Regulations reference the NHDES Stormwater Manual and NHDES Alteration of Terrain rules. Both references discuss the requirements for groundwater recharge, as well as the design and maintenance of infiltration practices. Additionally, the Town's proposed Land Use Regulation revisions currently in process of Town review specifically promote groundwater recharge and infiltration practices for all development and redevelopment projects.
- describe considerations and progress for channel protection and peak runoff control (*Part 3.1*). The Town's current and proposed Land Use Regulations reference the NHDES Stormwater Manual and NHDES Alteration of Terrain rules. Both references discuss the requirements for channel protection and management of peak runoff control. Additionally, the Town's current and proposed Land Use Regulations specifically address both the management of peak runoff rates and peak runoff volume from development and redevelopment projects.

Year 3 and 4 Requirements

The following is a summary of the minimum Permit requirements expected to be undertaken in Permit Years 3 and Year 4:

- complete dry-weather outfall screening and revised outfall ranking (*Part 2.3.4.7.b*);
- start catchment investigations (*Part 2.3.4.8.a*);
- prepare a report assessing Town street and parking lot design requirements relative to the creation of impervious cover (*Part 2.3.6.c*);
- prepare a report assessing Town regulations and zoning to include and encourage green infrastructure practices (*Part 2.3.6.d*);
- prepare a Town inventory and priority ranking of existing town-owned infrastructure that can be retrofitted to reduce the volume and pollutant loading of stormwater discharges. (*Part 2.3.6.e*); and
- prepare a Phosphorus Source Identification Report.

SWMP Availability (*Part 1.10.1*)

The permittee shall retain a copy of the current SWMP required by this permit at the office or facility of the person listed as the program contact on the submitted Notice of Intent (NOI). The SWMP shall be immediately available to representatives from EPA; a State agency; the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) at the time of an onsite inspection or upon request.

The SWMP must be made available to the public in hard copy and should also be available online for download or electronically by request.

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APPENDIX A	2017 New Hampshire (NH) Small MS4 General Permit
APPENDIX B	Notice of Intent and USEPA Authorization to Discharge
APPENDIX C	Special Eligibility Documentation
APPENDIX D	Illicit Discharge Detection and Elimination Plan and Stormwater System Mapping
APPENDIX E	Highway and Planning Standard Operating Procedures (SOPs)
APPENDIX F	Impaired Waters - Statewide Bacteria TMDL
VOLUME 2	SWMP PLAN AND IDDEP DATA
	IDDEP Reports, Investigations, and Elimination Documentation (none for Year 3)
	Dry-weather Screening Report and Data (Year 3)
	Wet-weather Sampling Data (none for Year 3)
VOLUME 3	TOWN-OWNED PROPERTY GOOD HOUSEKEEPING
	Town-Owned Property Inventory
	Town Facility Stormwater Pollution Prevention Plans
	Cemetery Department (Gibson Cemetery)

Highway Department (Highway Maintenance Yard)
Town of Pelham School District (Elementary, Memorial, and High Schools)
Town Transfer Station

Town Property Operations & Maintenance Procedures
Parks and Open Spaces
Buildings and Facilities
Vehicles and Equipment
Stormwater Treatment Structures

Nomenclature and conventions of this manual include:

<i>Part x.x</i>	Refers to the specific sections of the 2017 NH Small MS4 General Permit (the Permit)
<i>text in italics</i>	is text taken directly from the reference source (primarily the Permit).
MCM	Minimum Control Measure
IDDEP	Illicit Discharge Detection and Elimination Program is a sub-manual within this Stormwater Management Plan

1.0 BACKGROUND

1.1 STORMWATER REGULATION

The *Stormwater Phase II Final Rule* (Phase II) was promulgated in 1999 and was the next step after the *1987 Phase I Rule* in the U.S. Environmental Protection Agency's (EPA) effort to preserve, protect, and improve the nation's water resources from polluted stormwater runoff. The Phase II program expanded the Phase I program by requiring additional operators of Municipal Separate Storm Sewer Systems (MS4s) in urbanized areas and operators of small construction sites to implement programs and practices to control polluted stormwater runoff (through the National Pollutant Discharge Elimination System (NPDES) permits).

Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated "nonpoint" sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Under the Phase II rule, all MS4s with stormwater discharges from the U.S. Census Bureau designated Urbanized Areas are required to seek NPDES permit coverage for those stormwater discharges.

1.2 MS4 PERMIT PROGRAM BACKGROUND

On May 1, 2003, EPA Region 1 issued its Final General Permit for Stormwater Discharges from New Hampshire (NH) MS4s consistent with the Phase II rule. The 2003 NH MS4 permit covered "operators" of "traditional" (i.e., cities and towns) and "non-traditional" (i.e., federal and state agencies) MS4s located in the states of Massachusetts and New Hampshire. This permit expired on May 1, 2008 but has remained in effect until operators were authorized under the current 2017 NH Small MS4 General Permit, which became effective on July 1, 2018. A copy of the 2017 NH Small MS4 General Permit is included in Appendix A.

1.3 HISTORY OF SMALL MS4 FOR TOWN OF PELHAM

The Town of Pelham obtained coverage under the 2003 small MS4 permit and operated under this permit until the new permit became effective in 2018. Several programs and measurable goals were achieved under Pelham's 2003 small MS4 permit program.

Pelham actively advanced and met the goals of the 2003 permit BMPs as shown in their annual reporting from 2003 through 2018. Below is a summary of the BMPs implemented under each of the 2003 Permit's six Minimum Control Measures (as summarized from annual reports).

TABLE 1.1 Pelham 2003 MS4 BMPs	
MCM1 Public Education and Outreach	
BMPs:	Achievements:
Plan and research public education programs and plan for funding	
MCM2 Public Involvement and Participation	
BMPs:	Achievements:
Solicit public as to type of involvement of participation	Links on bacteria-related illnesses added to Town website
Conduct public programs	
Hold hazardous waste collection days	
	Up to seven (7) hazardous waste collection days held
	Land acquisitions by Town for conservation
MCM3 Illicit Discharge Detection and Elimination Program	
BMPs:	Achievements:
Plan and fund mapping of UA (MS4 regulated areas)	Town recycling facility received awards from USEPA
Develop ways to remove possible pollutants from stormwater discharges	
Develop stormwater by-law	
Dry-weather screening of outfalls	
Develop policy for elimination of illicit discharges	

TABLE 1.1 Pelham 2003 MS4 BMPs

	Town recycling facility added yard waste, increase receipts of waste oil
MCM4 Construction Site Stormwater Runoff Control	
BMPs:	Achievements:
Review existing subdivision and site plan review regulations	
Revise existing subdivision and site plan review regulations	
Approval process for existing subdivision and site plan review regulations	Inspection of all residential and commercial sites on an ongoing basis – reports of inspections on file in Planning Department project binders
Implement existing subdivision and site plan review regulations	Erosion controls mandated and inspected multiple times during all construction projects
Site Inspections	Building permits revised to add additional erosion control requirements to checklist
Independent engineering company reviewing site plans and stormwater controls	New pre-construction meeting checklist established with additional emphasis on erosion controls, inspections, and post storm event SWPPPS
	Independent reviews of all proposed development projects conducted by licensed engineer with emphasis on drainage, stormwater infrastructure, wetland impacts
	Reclamation plans prepared when Wetlands Conservation District is disturbed
	Construction compliance inspections
MCM5 Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management)	
BMPs:	Achievements:
Review current structural BMPs	

TABLE 1.1 Pelham 2003 MS4 BMPs

Review current non-structural BMPs	Regular road inspections and maintenance
Seek approval of new BMPs	Drainage measures installed select roads
Incorporate BMPs into regulations	Structural drainage measures inspected and repaired
	Staff training
MCM6 Good Housekeeping and Pollution Prevention for Municipal Operations	
BMPs:	Achievements:
Complete Spill Prevention Control & Countermeasure Plan (SPCCP)	Annual street sweeping initiated and collected sediments are transferred to outside facility
Train employees on SPCCP	New Good Housekeeping plan developed
Review existing P2 and Good Housekeeping policies and practices	Annual catch basin cleaning initiated
Revise and implement P2 and Good Housekeeping policies and practices	Employees regularly trained
Street Sweeping	
Catch basin cleaning	
Implement integrated pest management at Town facilities	The Town has monthly inspections and treatment by a pest control professional for all Town buildings. The School SAU manages their own pest control in a similar manner.
TMDL (Statewide Bacteria – Long Pond)	
BMP:	Achievement:
Investigate if Pelham's stormwater is causing water quality violations	Outfalls on Beaver Brook investigated
Non-TMDL Impaired Waters (Phosphorus)	
BMP:	Achievement:
Investigate if Pelham's stormwater is causing water quality violations	Outfalls on Beaver Brook investigated

TABLE 1.1 Pelham 2003 MS4 BMPs	
Additional Requirements	
BMPs:	Achievements:
Groundwater Recharge and Infiltration	Language included in Land Use Regulations
Public Drinking Water Supply	Well Ordinance enacted and updated

2.0 INTRODUCTION AND PERMIT COVERAGE

The Town of Pelham (the Town) is in Hillsborough County, south central New Hampshire, along the Massachusetts border, and east of the City of Nashua. Abutting New Hampshire towns include Salem to the east, Windham north, and Hudson at the west. In Massachusetts, the towns of Methuen, Dracut, and Tyngsborough border to the south of Pelham. According to the 2010 U.S. Census, Pelham's population is reported to be just under 13,000 residents in 4,500 households with an owner-occupied housing rate of 89% (2017 U.S. Census).

The Town covers approximately 26.8 square miles, which includes roughly 0.6 square miles (383 acres) of surface waters, or 2.2% of open water coverage¹. Two streams flow into the Town from the north; Beaver Brook and Golden Brook. Beaver Brook flows entirely through the Town into Dracut, Massachusetts at the southern town line. Golden Brook enters the Town from Windham as a tributary that joins Beaver Brook in the central part of the Town. Harris Brook, the outlet to Harris Pond, is in the southeast quadrant of Pelham and flows southeast into Methuen, Massachusetts as a tributary to the Spicket River. Other streams include Bartlett Brook and Musquash Brook that flow into Massachusetts and eventually outfall to the Merrimack River; and Frost Brook, Gumpas Pond Brook, New Meadow Brook, and Tony's Brook, are all located entirely within the Town.

Pelham also includes five ponds: Gumpas Pond; Harris Pond; Ivers Pond; Little Island Pond; and Long Pond; all of which are fully located within the Town except for Long Pond that extends into the towns of Dracut and Tyngsborough, Massachusetts.

Figure 2.1 shows Pelham's location in New Hampshire and with respect to adjacent towns both in New Hampshire and Massachusetts. For detailed waterbody mapping of the Town, see Town MS4 mapping referenced in Section 7.0, *MCM3, Illicit Discharge Detection & Elimination Program* and in Appendix DB.

Pollution in stormwater runoff can come from many sources and leads to impaired water quality in local and downstream waterbodies. Protection of these waters from pollution is a priority for the Town and residents but is also the law as required by the EPA. The Town's 2018 stormwater mapping project identified 1763 catch basins, and 418 outfalls town-wide². Table 2.1 shows the distribution of the mapped stormwater inventory with respect to both town-wide areas and within the Town's MS4 regulated area as updated for Year 3.

TABLE 2.1 Pelham Stormwater Inventory				
	Total (2018 Mapping)	MS4 Regulated Area	Percent in Regulated Area	Regulated MS4 Outfalls (Year 3) within 300-ft / 150-ft receiving water / wetland
Outfalls	438	313	72%	134
Catch Basins	1763	1310	75%	491
Interconnections	7	7	100%	4

¹ Per GIS analysis of 2016 USGS National Land Cover Database

² Town of Pelham MS4 Asset Inventory, 2018-2019

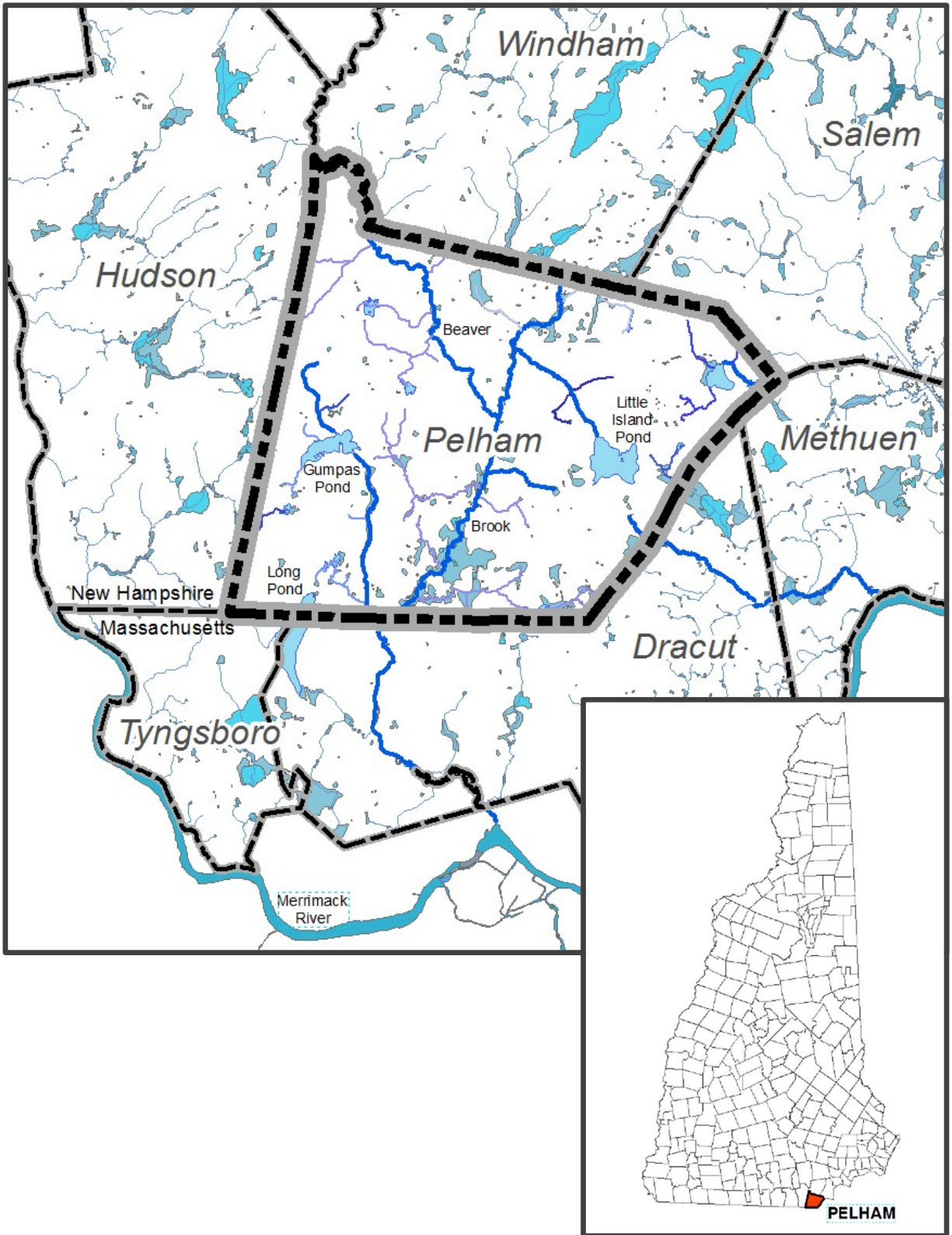


Figure 2.1 Pelham Locus and Adjacent Towns

Source: NH GRANIT and MA OLIVER GIS

2.1 LIMITATIONS OF COVERAGE

Several sources of stormwater discharges are not covered under the 2017 NH Small MS4 General Permit including:

- a. non-stormwater mixed with stormwater;
- b. stormwater associated with industrial activity;
- c. stormwater associated with construction activity;
- d. stormwater covered under another NPDES permit, including other regionally issued general permits;
- e. any stormwater discharges or discharge related activities that are likely to adversely affect any species listed as endangered or threatened under the Endangered Species Act (ESA) or may result in the adverse modification or destruction of habitat that is designated as critical under the ESA;
- f. stormwater discharges whose direct or indirect impacts do not prevent or minimize adverse effects on any Essential Fish Habitat;
- g. stormwater discharges or stormwater discharge-related activities that have an effect on a property that is listed or eligible for listing on the National Register of Historic Properties (NRHP);
- h. stormwater discharges to oceans;
- i. stormwater discharges prohibited under 40 CFR § 122.4 (Prohibitions under the NPDES program); and
- j. stormwater discharges to the subsurface subject to state Underground Injection Control (UIC) regulations.

Refer to *Part 1.3* of the Permit for detailed coverage limitations.

2.2 ALLOWABLE NON-STORMWATER DISCHARGES

In general, the following are considered allowable non-stormwater discharges under the Permit:

- a. water line flushing;
- b. landscape irrigation;
- c. diverted stream flows;
- d. rising ground water;
- e. uncontaminated groundwater infiltration;
- f. uncontaminated pumped groundwater;
- g. discharge from potable water sources;
- h. foundation drains;
- i. air conditioning condensation;
- j. irrigation water, springs;
- k. water from crawl space pumps;
- l. footing drains;
- m. lawn watering;

- n. individual resident car washing;
- o. flows from riparian habitats and wetlands;
- p. de-chlorinated swimming pool discharges;
- q. street wash waters;
- r. residential building wash waters without detergents; and
- s. discharges or flows from fire-fighting activities.

Refer to *Part 1.4* of the Permit for detailed coverage limitations.

2.3 CONTINUATION OF PERMIT

If the Permit is not reissued prior to the expiration date (June 30, 2023), it will be *"administratively continued in accordance with the Administrative Procedure Act and remain in force and effect for discharges that were authorized prior to expiration. If a small MS4 was granted permit authorization prior to the expiration date of this permit, it will automatically remain authorized by this permit until the earliest of:*

- *Authorization under a reissued general permit following timely and appropriate submittal of a complete and accurate NOI requesting authorization to discharge under the reissued permit; or*
- *Issuance or denial of an individual permit for the MS4's discharges; or*
- *Authorization or denial under an alternative general permit.*

If the MS4 operator does not submit a timely, appropriate, complete, and accurate NOI requesting authorization to discharge under the reissued permit, or a timely request for authorization under an individual or alternative general permit, authorization under this permit will terminate on the due date for the NOI under the reissued permit unless otherwise specified in the reissued permit." (Part 1.6)

2.4 SMALL MS4 AUTHORIZATION

The 2017 NH Small MS4 General Permit authorizes the discharge of stormwater from the Town's urbanized areas. As required by the EPA, the Town of Pelham filed a Notice of Intent (NOI) for coverage under the 2017 New Hampshire Small MS4 General Permit, mailed to the EPA on September 24, 2018.

Notification of acceptance of the NOI and authorization to discharge under Permit ID NHR041025 was received from the EPA Region 1 Office (Boston MA) on March 18, 2019.

The effective dates of the Permit are July 1, 2018, through June 30, 2023 (five-year term).

A copy of the NOI and EPA authorization letter is included in Appendix B.

2.5 SPECIAL ELIGIBILITY

2.5.1 AREAS OF COVERAGE

The 2017 NH Small MS4 General Permit applies to areas defined by the U.S. Census as “urbanized” based on the most current census data. Also referenced as “regulated areas”, an urbanized area is defined as “a densely settled core of census tracts that have a population of at least 50,000” (US Environmental Protection Agency, 2012). The urbanized areas are not defined by town, county, or state boundaries, and may or may not include entire towns. These regulated areas define the minimum spatial limits of the Permit requirements.

For the Town of Pelham, the 2010 census regulated urbanized areas includes a large band of area approximately through the center third and the northeast quarter of the Town, covering about 60% of Pelham’s land area. A copy of the EPA map of the “Automatically Designated MS4 Areas” for the Town of Pelham is included as Figure 2.2.

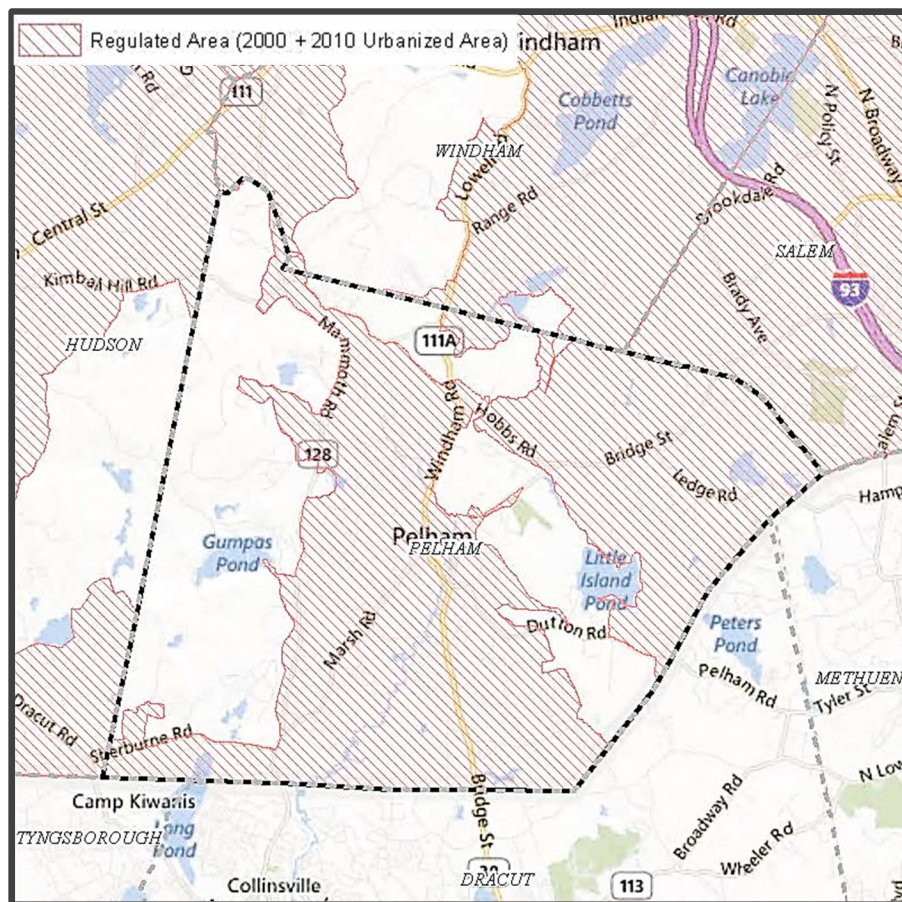


Figure 2.2 Town of Pelham MS4 Regulated Area³

³ Source: “NPDES Phase II Stormwater Program, Automatically Designated MS4 Areas, Pelham NH”, US EPA Region 1 GIS Center Map #8824, 11/19/2012.

2.5.2 ENDANGERED SPECIES

The SWMP must include documentation supporting the Town's eligibility determination regarding the federal Endangered and Threatened Species and Critical Habitat Protection Act. Documentation must include information as defined in the Permit's *Appendix C* including copies of the results of the U.S. Fish & Wildlife *IPaC online screening tool*⁴, a certification of eligibility based on one of three criteria, and agency consultation if required.

The USFWS screening tool identified one listed species, the northern long-eared bat, that may be present in Pelham NH. Based on additional research, and online guidance relative to this listed species, the Town of Pelham is determined to be eligible under **Criterion C**, with no additional agency consultation required at this time.

*Reminder: The proper consultations and updates to the SWMP must be conducted for future construction projects related to the Permit, and where Construction General Permit (CGP) coverage is NOT being obtained.

Documentation of this certification of eligibility is provided in Appendix C.

2.5.3 HISTORIC PROPERTIES

The SWMP must include documentation supporting the Town's eligibility determination regarding historic properties. Documentation must include information as defined in the Permit's *Appendix D* including copies of consultation with the State Historic Preservation Office, if applicable.

Per instructions in the Permit's *Appendix D*, the Town of Pelham is continuing previous coverage of their 2003 MS4 permit and is eligible under **Criterion A**, with no additional agency consultation required at this time.

*Reminder: The proper consultations and updates to the SWMP must be conducted for future construction projects related to the Permit, and where Construction General Permit (CGP) coverage is NOT being obtained.

Documentation of this certification of eligibility is provided in Appendix C.

2.6 STORMWATER MANAGEMENT PROGRAM (SWMP)

The SWMP describes and details the activities and measures that will be implemented to meet the terms and conditions of the Permit. This document should be updated and/or modified during the Permit term as the permittee's activities are modified, changed, or updated to meet

⁴ Information, Planning, and Conservation system mapping tool: <http://ecos.fws.gov/ipac/>

Permit conditions. The main elements of the SWMP are:

- (1) a public education program to affect public behavior regarding potential causes of stormwater pollution;
- (2) an opportunity for the public to participate and provide comments on the stormwater program;
- (3) a program to effectively locate and eliminate illicit discharges within the Town's MS4 regulated area;
- (4) a program to effectively control construction site stormwater discharges to Town MS4s;
- (5) a program to ensure that stormwater from development projects entering MS4s is adequately controlled by the construction of stormwater controls; and
- (6) a good housekeeping program to ensure that stormwater pollution sources on municipal properties and from municipal operations are minimized.

2.7 SWMP AVAILABILITY

The permittee shall retain a copy of the current SWMP required by this permit at the office or facility of the person listed as the program contact on the submitted Notice of Intent (NOI). The SWMP shall be immediately available to representatives from EPA; a State agency; the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) at the time of an onsite inspection or upon request.

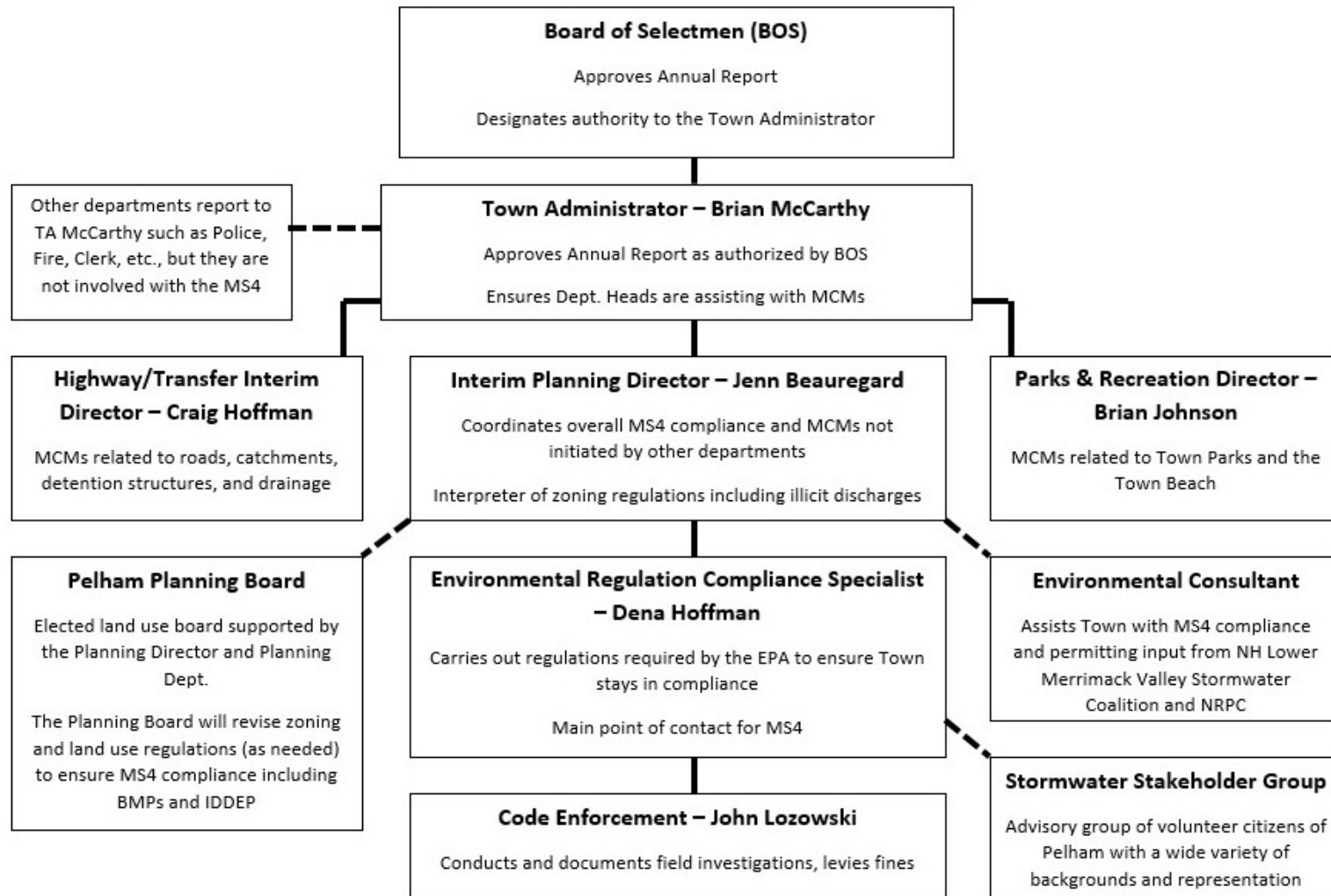
The SWMP must be made available to the public in hard copy and should also be available online for download or electronically by request.

2.8 SWMP REVISIONS

This SWMP is expected to be a dynamic document to be updated as needed to accurately depict the Town's ongoing stormwater management goals, achievements, efforts, procedures, schedule, and phased requirements of the Permit. A page to document revisions and identify all the holders of the SWMP that should receive updated pages, as applicable, is in the front pages of this manual.

3.0 STORMWATER MANAGEMENT PROGRAM TEAM

Town of Pelham, NH MS4 Organizational Chart – Permit Year 3 (2020-2021)



4.0 PELHAM WATER RESOURCES AND IMPAIRED WATERS

4.1 RECEIVING WATERS

The following table lists all receiving waters, impairments, and number of regulated MS4 outfalls within each waterbody segment as identified in the EPA-approved 2018 NHDES 303(d) and 305(b) lists and updated for Year 3.

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody Segment (Impairment Category)		Number of Regulated MS4 outfalls into receiving water segment (UA) ⁵	Chloride	Chlorophyll-a	Dissolved Oxygen / DO Saturation	Nitrogen	Oil & Grease / PAH	Phosphorus	Solids / TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments (Category 4 or 5)
Impaired Waterbodies in the MS4 Regulated Area with a TMDL (Statewide Bacteria TMDL, 2010)												
BEAVER BROOK (Category 5-P)	NHRIV700061203-22	32 3 (IC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Benthic- Macroinvertebrate Bioassessments (Streams)
BEAVER BROOK - TONYS BROOK (Category 5-P)	NHRIV700061205-01	8 1 (IC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Benthic- Macroinvertebrate Bioassessments (Streams), Habitat Assessment (Streams)
LONG POND – TOWN BEACH (Category 5-M)	NHLAK700061205-02-02	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cyanobacteria hepatotoxic microcystins

⁵ Year 3 updated

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody Segment (Impairment Category)		Number of Regulated MS4 outfalls into receiving water segment (UA) ⁵	Chloride	Chlorophyll-a	Dissolved Oxygen / DO Saturation	Nitrogen	Oil & Grease / PAH	Phosphorus	Solids / TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments (Category 4 or 5)
Impaired Waterbodies in the MS4 Regulated Area without a TMDL (Phosphorus Impairment)												
LONG POND (Category 5-P)	NHLAK700061205-02-01	3	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Cyanobacteria hepatotoxic microcystins
Impaired Waterbodies in the MS4 Regulated Area without a TMDL (other Impairment)												
BEAVER BROOK (Category 5-M)	NHRIV700061203-21	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH
LITTLE ISLAND POND (Category 5-M)	NHLAK700061204-02	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH, Cyanobacteria hepatotoxic microcystins
Impaired Waterbodies Outside of the MS4 Regulated Area												
FROST BROOK – TO GUMPAS POND (Category 5-M)	NHRIV700061205-05	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH
GUMPAS POND (Category 4A-M)	NHLAK700061205-01	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	pH
Waterbodies in the MS4 Regulated Area without Impairment and/or TMDL												
BEAVER BROOK	NHRIV700061205-02	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BEAVER BROOK	NHRIV700061205-04	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BEAVER BROOK - UNNAMED BROOK	NHRIV700061205-13	5 1 (IC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody Segment (Impairment Category)		Number of Regulated MS4 outfalls into receiving water segment (UA) ⁵	Chloride	Chlorophyll-a	Dissolved Oxygen / DO Saturation	Nitrogen	Oil & Grease / PAH	Phosphorus	Solids / TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments (Category 4 or 5)
BEAVER BROOK - UNNAMED BROOK	NHRIV700061205-14	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
BURNS ROAD DAM	NHIMP700061205-02	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GOLDEN BROOK	NHRIV700061204-03	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GUMPAS POND BROOK	NHRIV700061205-06	5 2 (IC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HARRIS BROOK - UNNAMED BROOK	NHRIV700061102-26	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
HARRIS POND	NHLAK700061102-05	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
IVERS POND	NHIMP700061204-04	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
GOLDEN BROOK - ISLAND POND BROOK	NHRIV700061204-04	12	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
MUSQUASH BROOK	NHRIV700061206-20	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
NEW MEADOW BROOK	NHRIV700061205-03	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SPRING STREET DAM	NHIMP700061207-01	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061102-25	11	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061102-31	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061204-11	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061204-18	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061205-10	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody Segment (Impairment Category)		Number of Regulated MS4 outfalls into receiving water segment (UA) ⁵	Chloride	Chlorophyll-a	Dissolved Oxygen / DO Saturation	Nitrogen	Oil & Grease / PAH	Phosphorus	Solids / TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments (Category 4 or 5)
UNNAMED BROOK	NHRIV700061205-11	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061205-15	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061205-16	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061205-17	5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061207-01	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK - GOING INTO MASS.	NHRIV700061207-02	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Waterbodies Outside of the MS4 Regulated Area without Impairment and/or TMDL												
UNNAMED BROOK	NHRIV700061205-07	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061205-08	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061205-09	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
UNNAMED BROOK	NHRIV700061206-33	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Watersheds Adjacent to Pelham Receiving Runoff from Pelham MS4 Regulated Area)												
Bartlett Brook (2) Dracut MA (MADEP Category 5)	MA84A-36	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody Segment (Impairment Category)		Number of Regulated MS4 outfalls into receiving water segment (UA) ⁵	Chloride	Chlorophyll-a	Dissolved Oxygen / DO Saturation	Nitrogen	Oil & Grease / PAH	Phosphorus	Solids / TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments (Category 4 or 5)
Beaver Brook Dracut MA (MADEP Category 5, Pathogen TMDL)	MA84A-11	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Substrate Habitat Alterations, Benthic- Macroinvertebrate Bioassessments, Debris/Trash, Odor
Harris Brook Methuen MA (not impaired)	Harris Brook (MA)	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Long Pond Dracut MA and Tyngsborough MA (MADEP Category 5)	MA84032	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Non-Native Aquatic Plants, Algal Blooms
Moeckel Pond Windham NH (not impaired)	NHLAK700061204-04	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Peppermint Brook Dracut MA (MADEP Category 5)	MA84A-35	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Debris/Trash

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody Segment (Impairment Category)		Number of Regulated MS4 outfalls into receiving water segment (UA) ⁵	Chloride	Chlorophyll-a	Dissolved Oxygen / DO Saturation	Nitrogen	Oil & Grease / PAH	Phosphorus	Solids / TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments (Category 4 or 5)
Policy Brook- Porcupine Brook Salem NH (NHDES Category 5-P, Chloride TMDL)	NHRIV700061102-18	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Arsenic, Benthic- Macroinvertebrate Bioassessments (Streams), Habitat Assessment (Streams), Iron, pH
Unnamed Brook Methuen MA (not impaired)	NHRIV700061102-30	0	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
SOURCES:		New Hampshire Department of Environmental Services 2018 EPA Approved 305(b) and 303(d) Lists										
		Massachusetts Department of Environmental Protection 2016 EPA Approved 305(b) and 303(d) Lists										

4.2 INTERCONNECTIONS WITH OTHER MS4s

The Permit defines an interconnection as: *the point where the permittee's MS4 discharges to another MS4 or other storm sewer system, through which the discharge is conveyed to waters of the United States or to another storm sewer system and eventually to a water of the United States.* Table 4.2 lists interconnections to and from Pelham with MS4s in adjacent municipalities.

TABLE 4.2 Pelham MS4 Interconnections						
INTER-CONNECT ID	FROM MS4	TO MS4	RECEIVING WATER NAME	RECEIVING WATER ID	CROSS-ROAD NAMES	IN MS4 AREA
1	PELHAM	NHDOT	Gumpas Pond Brook	NHRIV700061205-06	Greely Road - Mammoth Road	Y
2	PELHAM	NHDOT	Beaver Brook	NHRIV700061203-22	Holsten Road - Mammoth Road	Y
3	PELHAM	NHDOT	Beaver Brook	NHRIV700061203-22	Monument Hill Road - Mammoth Road	Y
4	PELHAM	NHDOT	Beaver Brook	NHRIV700061203-22	Valley Hill Road - Mammoth Road	Y
5	PELHAM	NHDOT	Beaver Brook - Unnamed Brook	NHRIV700061205-13	Doris Ave - Bridge Street	Y
6	PELHAM	NHDOT	Beaver Brook - Tonys Brook	NHRIV700061205-01	Livingston Road - Atwood Road/ Bridge Street	Y
7	PELHAM	NHDOT	Gumpas Pond Brook	NHRIV700061205-06	Jones Farm Road - Mammoth Road	Y
8	NHDOT	PELHAM	Beaver Brook	NHRIV700061203-22	Mammoth Road - Mt Vernon Drive	Y
9	NHDOT	PELHAM	Beaver Brook - Tonys Brook	NHRIV700061205-01	North Rotary At Marsh Road	Y

Interconnections table updated for Year 3 by desktop analysis only to be field verified.

4.3 IMPAIRED WATERS

- The Town of Pelham discharges stormwater into impaired waters identified in the NHDES *Section 305(b) Surface Water Quality Report (2012)* and updated *Section 303(d) Surface Water Quality List (2018)*. The report and lists are compiled under the EPA Clean Water Act and describe the quality of surface waters and analyzes “the extent to which all such waters provide for the protection and propagation of a balanced population of shellfish, fish, and wildlife, and allow recreational activities in and on the water”, and include surface waters that are:
 - impaired or threatened by a pollutant or pollutant(s);
 - not expected to meet water quality standards within a reasonable time even after application of best available technology standards for point sources or best management practices for nonpoint sources; and
 - require development and implementation of a comprehensive water quality study (a Total Maximum Daily Load (TMDL) study) which is designed to meet water quality standards.

Per Appendix A of the MS4 Permit, the definition of an impaired water is:

“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.” (2017 MS4 PERMIT Appendix A – Definitions)

Appendix F describes the Statewide Bacteria TMDL and how it applies to the Town of Pelham.

Table 4.3 below provides general descriptions of the NHDES 303(d) list impairment categories that apply to the impaired waterbodies located within Pelham (non-impaired categories 2 and 3 are not shown but can be reviewed on the NHDES Surface Water Quality Program website⁶).

Table 4.4 presents the waterbodies in Pelham that are listed by the NHDES (2018) as having Category 4 and/or 5 impairments, and includes each pollutant contributing to the

⁶ <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/r-wd-19-04.pdf>

impairment. The overall impairment category for any waterbody is defined by the highest level of any pollutant impairment.

TABLE 4.3 NHDES Impaired Waters Category Descriptions	
NHDES Category	General Description (This table is intended to give an overview of the NHDES Categories. See <i>Table 3-6</i> in the <i>2014 Consolidated Assessment and Listing Methodology [CALM]</i> for more detail)
SEVERE: NOT SUPPORTING, SEVERE	
5-P	There is an impairment per the CALM by a parameter which is a pollutant that requires a TMDL. The impairment is more severe and causes poor water quality as defined in DES sub-category 4A-P above.
4A-P	There is an impairment per the CALM by a parameter which is a pollutant and an EPA-approved TMDL has been completed. However, the impairment is more severe and causes poor water quality conditions.
4C-P	There is a parameter which is not considered a pollutant but is causing impairment per the CALM. The impairment is more severe and causes poor water quality as defined in DES sub-category 4A-P above.
POOR: NOT SUPPORTING, MARGINAL	
5-M	There is an impairment per the CALM by a parameter which is a pollutant that requires a TMDL. The impairment is marginal as defined in DES sub-category 4A-M above.
4A-M	There is an impairment per the CALM by a parameter which is a pollutant and an EPA-approved TMDL has been completed. However, the impairment is relatively slight or marginal.

TABLE 4.4 Town of Pelham MS4 Impaired Waters			
2018 NHDES 303(d) LIST IMPAIRMENT ASSESSMENT OUTCOME			
SEVERE: NOT SUPPORTING, SEVERE (5-P)			
Indicator contributing to Impairment	BEAVER BROOK NHRIV700061203-22	BEAVER BROOK - TONYS BROOK NHRIV700061205-01	LONG POND NHLAK700061204-02
Benthic-Macroinvertebrate Bioassessments (Streams)	5-P	5-P	
Chlorophyll-a			
Cyanobacteria hepatotoxic microcystins			5
Dissolved oxygen saturation			5
Dissolved Oxygen			
Escherichia coli (E. coli)	4A-M	4A-P	
Habitat Assessment (Streams)*		4C-P	
Mercury**	4A-M	4A-M	4
Phosphorus (Total)			
POOR: NOT SUPPORTING, MARGINAL (5-M and 4A-M)			
Indicator contributing to Impairment	BEAVER BROOK NHRIV700061203-21	LITTLE ISLAND POND NHLAK700061204-02	LONG POND NHLAK700061204-02
Cyanobacteria hepatotoxic microcystins		5-M	5
Mercury**	4A-M	4A-M	4
pH	5-M	4A-M	

* TMDL not required for this parameter

**Completed TMDL does not apply to NH MS4 General Permit (per Part 2.2.1.c)

4.4 INCREASED DISCHARGES

Discharges to surface waters are subject to NHDES antidegradation regulations including NH Code Section Env-Wq 1700. Any increased discharges to surface waters must receive prior authorization from the NHDES and all such authorizations shall be tabulated in this SWMP. If a NHDES approval specifies additional conditions or requirements in the authorization, then those requirements are incorporated into the Permit by reference.

No new or increased discharges are permitted to impaired waters listed in categories 5 or 4b on the most recent EPA-approved New Hampshire Integrated Report of waters listed per the Clean Water Act Sections 303(d) and 305(b) unless the permittee demonstrates that there is no net increase in loading to the impaired water for the pollutant(s) for which the waterbody is impaired.

A proposal having new or increased discharges to impaired waters may be allowed providing either:

1. documentation that the pollutant(s) for which the waterbody is impaired is not present in the new or increased discharge; or
2. documentation that the total load of the pollutant(s) of concern to any impaired portion of the receiving water does not cause an overall increase because of the proposed increased discharges.

For the Town of Pelham, controlling discharges from sites and maintaining water quality is regulated through the Town's public education program under the Permit, Land Use Regulations, and municipal Good Housekeeping Program as outlined in this SWMP.

Pelham Land Use Regulations provide stormwater management requirements for all phases of all development and redevelopment sites. These regulations include (but are not limited to):

Design, Review, and Approval Phase

- temporary and permanent stormwater management controls for both quantity and quality of off-site discharges that meet or exceed NH rules and complies with the Permit;
- lot sizing for adequate space and buffers to allow for stormwater management;
- groundwater recharge to the maximum extent practical;
- consideration to implement Low Impact Design features;
- covered salt storage;
- providing buffers for environmentally sensitive areas such as public water supplies and wetlands designated by the Town and NHDES as 'prime'; and
- an integrated Site Plan Review process that provides checks to ensure conformance with the Land Use Regulations including an approved erosion and sediment plan for all proposed construction sites.

Construction Phase

- temporary stormwater erosion and sediment controls for all construction activity; and
- performing on-site inspections and enforcement of erosion and sediment control requirements at construction sites.

Post-Construction Phase

- construction of permanent stormwater management controls that meet or exceed NH rules and complies with the Permit;
- submittal of long-term Operations and Maintenance Plans for all constructed stormwater treatment device/facilities; and
- submittal of georeferenced as-built plans for all stormwater treatment devices, facilities, structures, and systems.

The Town's Municipal Good Housekeeping Program includes (but are not limited to) the following stormwater management practices:

- an Operations and Maintenance Plan (O&M) for town-owned properties and stormwater infrastructure including inspections;
- Stormwater Pollution Prevention Plans (SWPPPs) for town facilities where materials and activities may be exposed to stormwater including spill response, covered salt storage, regular facility inspections and maintenance, and staff training; and
- written Standard Operating Procedures (SOPs) for town activities that relate to and provide water quality protections including (but not limited to) infrastructure inspections, catch basin cleaning, street sweeping, winter road maintenance, and yard waste management.

4.5 GROUNDWATER AND PUBLIC WATER SUPPLY PROTECTION

The Permit includes additional requirements for the State of New Hampshire that provides for the protection of local groundwater and public water supplies. Table 4.5 shows NHDES identified wells as public water supply. Pelham does not have any surface water supplies within the Town.

TABLE 4.5 Public Water Supplies within 300-Feet of a Regulated MS4 Outfall			
WATER SUPPLY NAME	ADDRESS	POPULATION SERVED	OUT_ID (IC_ID*)
HILLSIDE COUNTRY STORE/DELI	869 MAMMOTH RD	40	(4)
LONG POND WOODS	14 SAGEWOOD DR	45	1
PELHAM HIGH SCHOOL	85 MARSH RD	704	363 365
PELHAM PLAZA	150 BRIDGE ST, RTE 38	100	(6)
Other Public Water Supplies within the MS4 Regulated Area			
DYNAMIC FOUNDATION FOR CHILDREN	90 BRIDGE ST	60	415
GARLAND WOODS	101 GROUSE RUN	27	392
KIELEYS CATERING		8	157
MCDONALDS RESTAURANT	113 BRIDGE ST, ROUTE 38	900	407 430
NORTHWOOD PLAZA	116 BRIDGE ST	100	407 430
NORTHWOOD PLAZA	116 BRIDGE ST	100	407 430
PELHAM INDUSTRIAL PARK I	1 INDUSTRIAL PARK DR ROUTE 128	100	395
PERFECT PLACE FOR CHILDREN	125 MAIN ST UNIT A	54	329
TOWN OF PELHAM MUNICIPAL COMPLEX	6 VILLAGE GREEN	25	113
WAKEFIELD THERMAL SOLUTIONS	33 BRIDGE ST, RTE 38	200	417
WILLOWS PLAZA	1 WILLOW ST	25	411

* OUT_ID GIS Outfall ID

** (IC_ID) GIS Interconnection ID

Source: NHDES GIS Well and Water Supply Dataset (2019) updated for Year 3.

Water supply in Pelham, both public and private, is dependent on groundwater. The Town's Well Ordinance and Land Use Regulations require a minimum protection radius from septic systems, stormwater systems, roadways, and property lines, and all new wells must be tested to meet water quality standards.

Other ways that the Town is protecting local groundwater, and in turn water supply includes (but is not limited to):

- all stormwater system installations must meet the minimum requirements of *NH Env-Wq 1500, Alteration of Terrain*, which includes setbacks from water supply sources;
- requirements related to the inclusion of water quality BMPs in designs for new development and redevelopment sites; and
- appropriate lot sizing to allow for adequate area for site services (septic, stormwater, and well radii);
- encouraging on-site groundwater recharge with pre-treatment if within the protective radii;
- increasing vertical separation between the bottom of infiltration practices and seasonal high-water table when located within well setbacks per *Env-Wq 1500*;
- disallowing infiltration floor drains within protective radii;
- preference to landscaping plans that do not require significant watering;
- public education regarding good housekeeping within protection radii for well owners including material storage and handling, and spill response plans;
- continuing land conservation purchases and donations throughout the town;
- conservation easements at public water supplies;
- holding local hazardous waste collections program;
- existing municipal procedures (emergency management/fire department) to notify public water suppliers in the event of an emergency which has the potential to impact a water supply.

As shown in Table 4.6, the New Hampshire Groundwater Protection Act (RSA 485-C) identifies several potential sources for water supply contamination that should be considered when reviewing the installation of new wells.

TABLE 4.6 Potential Contamination Sources¹	
<ul style="list-style-type: none"> • Vehicle service and repair shops • General service and repair shops • Metalworking shops • Manufacturing facilities • Underground and above-ground storage tanks • Waste and scrap processing and storage • Transportation corridors • Septic systems (at commercial and industrial facilities) • Laboratories and certain professional offices (medical, dental, veterinary) 	<ul style="list-style-type: none"> • Use of agricultural chemicals² • Salt storage and use • Snow dumps • Stormwater infiltration ponds or leaching catch basins • Cleaning services • Food processing plants • Fueling and maintenance of earthmoving equipment • Concrete, asphalt, and tar manufacture • Cemeteries • Hazardous waste facilities
¹ As identified in New Hampshire's Groundwater Protection Act (RSA 485-C) ² Subject to BMPs developed and administered by N.H. Dept. of Food, Agriculture, and Markets	

Other potential threats to groundwater can come from more scattered and singular sources such as leaking/failed underground storage tanks (such as heating fuel), storage and use of HPFs (herbicides, pesticides, and fertilizers), older and failing residential septic systems, or rock blasting activities.

Future groundwater and water supply protections that the Town may consider include:

- developing excavation regulations;
- creating a voluntary facility inspection/evaluation program for high-load or properties as sources of potential contamination to groundwater;
- adopting an Aquifer Protection Zone above priority aquifer resources in Pelham;
- developing a Groundwater Protection Ordinance; and
- Groundwater Reclassification through the NH Groundwater Protection Act.

4.6 GROUNDWATER RECHARGE

The Permit includes additional requirements for the State of New Hampshire that provides for the implementation of groundwater recharge to the 'maximum extent practical'. The Town of Pelham requires infiltration practices through their Land Use Regulations for both Subdivision and Site Plan Review. These regulations include (but are not limited to):

- all proposed stormwater management must meet the minimum requirements of *NH Env-Wq 1500 Alteration of Terrain and the NH Stormwater Manual*, which includes provisions for groundwater recharge;
- proposed applications that do not include groundwater recharge must provide an explanation and demonstrate why it is not feasible for the site;
- requirements for site design that implement Low Impact Design features that use infiltration for discharge of collected stormwater;
- requirements related to the inclusion of infiltration and (bio)filtration water quality BMPs in proposed designs for new development and redevelopment sites;
- an integrated Site Plan Review process that provides checks to ensure conformance with the Land Use Regulations including an infiltration practice; and
- temporary stormwater management through infiltration is encouraged as appropriate.

Although infiltration and groundwater recharge are highly encouraged, infiltration under the following conditions or sites is to be prohibited:

- where stormwater flows originate from gasoline dispensing areas and at locations with state registered underground storage tanks (UST) and above ground storage tanks (AST);
- within identified groundwater protection areas;
- within areas that have contaminants in groundwater above the NH ambient groundwater quality standards (*Env-Or 600*); or
- when stormwater originates from land uses considered a "high load area" as shown in Table 4.7.

TABLE 4.7 High Load Areas per Env-Wq 1502.26
Industrial facilities subject to the NPDES Multi-Sector General Permit
Petroleum storage facilities
Petroleum dispensing facilities
Vehicle fueling facilities
Vehicle service, maintenance, and equipment cleaning facilities
Fleet storage areas
Public works storage areas
Road salt facilities
Commercial nurseries
Non-residential facilities having uncoated metal roofs with a slope flatter than 20%
Facilities with outdoor storage, loading, or unloading of hazardous substances, regardless of the primary use of the facility
Facilities subject to chemical inventory under Section 312 of the Superfund Amendments and Reauthorization Act of 1986 (SARA)

All subsurface disposal of stormwater shall be in accordance with NHDES applicable groundwater, source water protection, and underground injection control requirements.

5.0 MCM 1 - PUBLIC EDUCATION AND OUTREACH (*Part 2.3.2*)

5.1 MCM 1 OBJECTIVE

Objective: The permittee shall implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced.

Under the general requirements of the Permit, a minimum of two (2) educational messages are to be delivered to each audience over the term of the permit term (5 years) and are to be spaced at least one year apart. The four intended audiences are:

- residential;
- commercial/institutional;
- developers/construction; and
- industrial.

A minimum of eight messages are to be provided during the permit term. However, MS4s with an approved TMDL waterbody or Water Quality Impaired Waters under *Section 2* of the Permit must complete additional MCM 1 messages. See also Section 11 of this manual.

For Pelham, additional messages are required for the Statewide TMDL for Bacteria Impaired Waters, 2010 for:

- Long Pond Town Beach;
- Beaver Brook; and
- Tony's Brook.

Pelham also falls under additional requirements for Water Quality Impaired Waters for Total Phosphorus impairment where supplemental messages are required relative to reducing overall non-point phosphorus loading.

As active members of the New Hampshire Lower Merrimack Valley Stormwater Coalition (NHLMVSC), several resources for public outreach messages are available to the Town on the NHLMVSC web page⁷.

Suggested topics for distribution by audience are presented in Table 5.1. Although each topic can be applied across multiple audiences, messages must be focused and prepared to address the specific issues with each individual group.

Table 5.2 and Table 5.3 show the public outreach requirements and timing for Pelham.

⁷ <https://www4.des.state.nh.us/nh-ms4/>

TABLE 5.1 MCM 1 Suggested Public Education and Outreach Topics

Education Topics	Residential	Business/ Commercial/ Institution	Developers/ Construction	Industrial
Information about stormwater and water quality	X	X	X	X
Information about illicit discharges with hotline number	X	X	X	X
Information on Pelham's impaired waters	X	X	X	X
lawn care products	X	X	X	X
pet waste management	X	X		
maintenance of septic systems	X	X	X	X
infiltration benefits and practices	X	X	X	X
effects of vehicle washing/maintenance on local water quality	X	X	X	X
disposal of swimming pool water	X			
salt and deicing materials and storage	X	X	X	X
building maintenance	X	X		X
hazardous materials storage		X	X	X
waste management		X	X	X
parking lot maintenance (sweeping)		X		X
erosion & sediment controls			X	
low-impact development			X	
equipment maintenance			X	X
EPA Construction General Permit			X	
EPA Multi-Sector General Permit				X

5.2 MCM 1 BMPs

Year 1 BMPs are taken directly from the Town's 2018 NOI and must be reviewed and updated annually.

MCM 1: PUBLIC EDUCATION AND OUTREACH							
	BMP Title	BMP Description	Permit Cross-Reference	Target Audience	Responsible Department/Party	Measurable Goal	Year to Start Implementation
1.1	Web Page and Other Info Materials	Use NH Stormwater Coalition outreach materials and guidance - implementing outreach for relevant impairments city wide.	<i>Part 2.3.2.1.c.i</i>	Residents	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	1) Increased awareness of how fertilizer works. 2) Increased awareness of pet waste impacts to water quality. 3) Increased awareness of yard waste impacts to water quality.	Yearly
1.2	Brochures/ Pamphlets/ Letters	Use NH Stormwater Coalition outreach materials and guidance - implementing outreach for relevant impairments city wide.	<i>Part 2.3.2.1.c.iv</i>	Businesses, Institutions, and Commercial Facilities	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	1) Increased awareness of how fertilizer works. 2) Increased awareness of pet waste impacts to water quality. 3) Increased awareness of yard waste impacts to water quality.	2019

MCM 1: PUBLIC EDUCATION AND OUTREACH							
	BMP Title	BMP Description	Permit Cross-Reference	Target Audience	Responsible Department/Party	Measurable Goal	Year to Start Implementation
1.3	Promo Materials/ Letters/ Social Media	Use NH Stormwater Coalition outreach materials and guidance for developers audience.	<i>Part 2.3.2.1.c.v</i>	Developers (construction)	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Local developers aware of federal stormwater regulations.	2019
1.4	Promotional Materials	No industrial facilities in MS4 OR: Use NH Stormwater Coalition outreach materials and guidance for industrial facilities.	<i>Part 2.3.2.1.c.vi</i>	Industrial Facilities	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Increased awareness of industrial facilities permits.	2020
1.5	Promotional Materials	Use NH Stormwater Coalition outreach materials and guidance for developers audience.	<i>Part 2.3.2.1.c.v</i>	Developers (construction)	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Local developers aware of local stormwater regulations.	2022

MCM 1: PUBLIC EDUCATION AND OUTREACH							
	BMP Title	BMP Description	Permit Cross-Reference	Target Audience	Responsible Department/Party	Measurable Goal	Year to Start Implementation
1.6	Brochures/Pamphlets	Use NH Stormwater Coalition outreach materials and guidance - implementing outreach for relevant impairments city wide.	<i>Part 2.3.2.1.c.iv</i>	Businesses, Institutions, and Commercial Facilities	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Businesses, Institutions, and Commercial Facilities are aware of best management practices and stormwater regulations.	Yearly
1.7	Brochures/Pamphlets	Use NH Stormwater Coalition outreach materials and guidance for developers audience.	<i>Part 2.3.2.1.c.v</i>	Developers (construction)	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Local developers aware of local stormwater regulations.	Yearly

MCM 1: PUBLIC EDUCATION AND OUTREACH							
	BMP Title	BMP Description	Permit Cross-Reference	Target Audience	Responsible Department/Party	Measurable Goal	Year to Start Implementation
1.8	Promotional Materials	No industrial facilities in MS4 OR: Use NH Stormwater Coalition outreach materials and guidance for industrial facilities.	<i>Part 2.3.2.1.c.vi</i>	Industrial Facilities	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Increased awareness of industrial facility stormwater permits.	2023

5.3 MCM 1 IMPLEMENTATION PLAN / SCHEDULE

Table 5.2 MCM 1 Public Education Messages Requirement Schedule by Message Type						
AUDIENCE	NUMBER MESSAGES BY PERMIT YEAR					
	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	TOTAL
MS4 Permit Minimum Requirement (MS4 Regulated Area or Town-wide)						4
Residents	Replaced by TMDL & WQLW Requirements					
Business/ Institutional/ Commercial	Replaced by TMDL & WQLW Requirements					
Developers/ Construction		1		1		2
Industrial			1		1	2
Phosphorus Impairment (Long Pond) See Table 5.3 below						15
Residents and Business/ Institutional/ Commercial*	3	3	3	3	3	15
Bacteria TMDL (Long Pond – Town Beach, Beaver Brook, Tony's Brook) See Table 5.3 below						10
Residents**	1	1	1	1	1	5
ALL Audiences**	1	1	1	1	1	5

*One message of each: fertilizer, pet waste, and yard waste. Replaces MCM 1 minimum requirements.

**One message of each: septic systems and pet waste. Replaces MCM 1 minimum requirements.

Table 5.3 MCM 1 Message Timing for Impaired Waters	
Message Type	Issue Timing
Grass and Fertilizer	April/May
Pet Waste	With Dog Licensing And June/July
Yard Waste	Aug-Oct
Septic System Maintenance	annual

5.4 MCM 1 GOALS, MEASURES, AND PROGRESS

Public education and outreach goals expect to:

- increase awareness of how stormwater and stormwater pollution affect water quality;
- change behaviors toward the value of stormwater quality over time;
- improve local ordinance and regulations compliance;
- increase awareness of federal stormwater regulations and individual discharge permits; and
- increase awareness of best management practices and low impact design measures/methods.

Materials and messages may be publicized through direct-mailings, emails, web pages, public postings, and events.

Measurement of the progress of the MCM 1 BMPs may include:

- maintaining records of the number of:
 - mailings (direct and email);
 - visits to a web site or public event booth;
 - social media reach and interactions; amount of publicly posted flyers/brochures;
- provide annual surveys regarding stormwater knowledge and reported behaviors; and
- track improved maintenance efforts over time (i.e., less pet waste found in public spaces).

5.5 MCM 1 DOCUMENTATION

Annual reporting as well as regular review and updates to this SWMP, BMPs, and goals will rely on organized and proper documentation. The following items are recommended documentation for MCM 1:

- ☐ copies of all messages provided to the public and dates sent;
- ☐ message/materials distribution lists and number recipients; and
- ☐ copies of surveys and summarized results including number of surveys sent/returned.

6.0 MCM 2 - PUBLIC INVOLVEMENT AND PARTICIPATION (*Part 2.3.3*)

6.1 MCM 2 OBJECTIVE

Objective: The permittee shall provide opportunities to engage the public to participate in the review and implementation of the permittee's SWMP.

Public involvement and participation are expected to be developed through several opportunities that include, but are not limited to:

- town committees holding public events;
- the SWMP stakeholder group comprised of town committee representatives, representatives from local lake/pond associations, and other interested members of the public;
- public notice (formal and informal) of an annual comment, review, and revision period of the SWMP;
- public opportunities for volunteerism such as cleanup days or waste drop-offs; and
- public surveys.

6.2 MCM 2 BMPs

Year 1 BMPs 2.1 and 2.2 are taken from the Town's 2018 NOI. BMP 2.3 was added in this SWMP. All BMPs must be reviewed and updated annually.

MCM 2: PUBLIC INVOLVEMENT AND PARTICIPATION						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
2.1	Public Review	SWMP Review: SWMP will be posted on the town/city website for public review.	<i>Part 2.3.3.1</i>	Environmental Regulation Compliance Specialist and environmental consultant	Allow annual review of stormwater management plan and posting of stormwater management plan on website.	Year 2
2.2	Public Participation	The SWMP will be presented or communicated by a "memo" annually to the Town's Board of Selectmen.	<i>Part 2.3.3.2</i>	Environmental Regulation Compliance Specialist and environmental consultant	Allow public to comment on stormwater management plan annually.	Year 2
2.3	Stormwater Stakeholder Group	Continue group, hold quarterly meetings, invite public members. Group to provide review, assessment, and recommend revisions for SWMP.	<i>Part 2.3.3.2</i>	Environmental Regulation Compliance Specialist and Planning Director	To provide regular opportunities for involvement in the SWMP processes.	2019

6.3 MCM 2 GOALS, MEASURES, AND PROGRESS

Public participation goals aim to:

- provide regular opportunities for involvement in the SWMP processes;
- increase public knowledge regarding stormwater and water quality through participation opportunities; and
- encourage public volunteerism for local water quality improvement projects.

Opportunities for public involvement will be posted at least 30 days in advance of each event. Postings may be through direct-mailings, emails, web pages, public notices in local news sources, and other public places.

Measurement of the progress of the MCM 2 BMPs may include:

- tracking the number of participants at events and meetings; and
- tracking quantity removed/drop-off items.

6.4 MCM 2 DOCUMENTATION

Annual reporting as well as regular review and updates to this SWMP, BMPs, and goals will rely on organized and proper documentation. The following items are recommended documentation for MCM 2:

- ☐ dates and copies of notices for annual public review of this SWMP;
- ☐ dates and minutes from stormwater stakeholder meetings;
- ☐ dates and copies of notices for volunteer opportunities;
- ☐ dates and copies of notices for drop-off or pickup events; and
- ☐ number of participants at events and meetings.

7.0 MCM 3 -ILLICIT DISCHARGE DETECTION AND ELIMINATION PROGRAM (IDDEP) (PART 2.3.4)

7.1 MCM 3 OBJECTIVE

Objective: The permittee shall 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.

An “illicit discharge” is any discharge to a drainage system that is not composed entirely of stormwater (except for discharges authorized under separate NPDES permits other than the MS4 Permit, and discharges resulting from fire-fighting activities).

Illicit discharges can contribute high levels of pollutants, such as heavy metals, toxics, oil, grease, solvents, nutrients, and pathogens to surface waters.

Illicit discharges may take a variety of forms and may enter the drainage system through direct or indirect connections. Direct connections may be relatively obvious, such as connections from non-stormwater sources found in a piped drain system. Indirect illicit discharges may be more difficult to detect or address, such as failing septic systems that discharge untreated sewage to a ditch, or a sump pump that discharges contaminated water on an intermittent basis.

Some illicit discharges are intentional, such as: dumping used oil (or other pollutants) into catch basins; a resident or contractor illegally tapping into a storm drainage pipe or structure; illegal dumping of yard wastes into surface waters, including wetlands; improper discharges of floor drains connected to stormwater systems; and legally connected sump systems disposing of non-allowed pollutants.

The primary goal of the IDDEP is the elimination of all non-allowed stormwater discharges to the Town’s MS4s. The IDDEP is intended to provide the basis of a long-term assessment and improvement program under the SWMP by systematic investigation and identification of pollution sources.

Per the Permit, at a minimum, the complete written IDDEP is provided in Appendix D and includes:

- Legal authority to access, inspect, direct the termination of an identified pollution source, suspend access to an MS4, provide municipal intervention, disallow non-stormwater or increased discharges to an MS4, and/or levy fines. (See also IDDEP Appendix DA).
- MS4 Permit system mapping that aims to spatially locate waterbodies, known impairments, outfalls, watersheds, catchments, municipally owned stormwater treatment structures (detention basins, culverts, catch basins, infiltration areas, etc.), and interconnections with other MS4s. (See IDDEP Section D3 and Appendix DB).

- Statement of responsibilities that identifies the lead municipal departments and personnel responsible for implementing and enforcing the IDDEP. (See SWMP Organization Chart in Section 3 and IDDEP in Appendix D).
- Standard operating procedures required under the IDDEP (See IDDEP appendices).
- A continuous assessment and ranking methodology for prioritizing outfall investigations (See IDDEP Appendix DC).
- Dry and wet weather screening and sampling programs.
- Written catchment investigation program.
- A description of a municipal training plan.
- Continuous data maintenance and progress assessment and reporting.

7.2 MCM 3 BMPs

BMPs are taken directly from the Town's 2018 NOI and must be reviewed and updated annually. Year 2 progress and accomplishments are noted below each BMP, as applicable.

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
3.1	Storm sewer system map	Create mapping and update annually	Part 2.3.4.5	Planning Director working with Road Agent and environmental consultant	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit.	2003 on-going
	YEAR 3	Mapping has been refined to reduce regulated outfall list to only those discharging within 300-feet of a waterbody or 150-feet of a wetland. This refinement reduced the MS4 outfall inventory from 313 outfalls to 134 outfalls and 7 interconnections (desktop identification only, field verification needed). The interconnection inventory was revised using desktop analysis and online NHDOT data. Impairment data (2018 NHDES 303(d) list) was checked and SWMP tables and IDDEP mapping was updated as necessary. Mapping is planned to be continued to include locating Town-maintained stormwater treatment structures and facilities and on-going data improvements and refinement. Field verification of the MS4 mapping is on-going.				
3.2	Written IDDE program development	Create written IDDEP and update annually	Part 2.3.4.6	Planning Director working with Road Agent and environmental consultant	Complete within 1 year of effective date of permit and update as required.	2019 on-going

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
	YEAR 3	The IDDEP (Appendix D) has been reviewed and updated based on Year 3 work. No IDs were reported or found suspect in Year 3.				
3.3	Implement IDDEP catchment investigations	Implement catchment investigations according to program and permit conditions	Part 2.3.4.8	Environmental Regulation Compliance Specialist working with Highway Department and environmental consultant	Complete 10 years after effective date of permit.	2022
	YEAR 3	Catchment investigations are scheduled to be started in Year 5.				
3.4	Employee Training	Train employees on IDDEP implementation	Part 2.3.4.11	Environmental Regulation Compliance Specialist with advice from environmental consultant	Train Annually.	on-going
	YEAR 3	IDDEP training for Town staff was completed on May 19, 2021.				
3.5	Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions	Part 2.3.4.7.b	Environmental Regulation Compliance Specialist, Highway Department, and environmental consultant	Complete 3 years after effective date of permit.	2019 on-going
	YEAR 3	Dry-weather screening and sampling was completed in Year 3 . 307 outfalls located in the Town's MS4 were screened. 7 outfalls were not able to be located. No outfalls were observed to have dry-weather flow. The updated inventory (Year 3) has added 8 additional outfalls and 7 interconnections that will need to be screened in Year 4.				

MCM 3: ILLICIT DISCHARGE DETECTION AND ELIMINATION (IDDE)						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
3.6	Conduct wet weather screening	Conduct in accordance with outfall screening procedure and permit conditions	Part 2.3.4.8.c.ii.2 Part 2.3.4.8.e.ii	Environmental Regulation Compliance Specialist and environmental consultant	Complete 10 years after effective date of permit.	2020
	YEAR 3	No outfalls were found to have dry-weather flow or any SVFs, therefore no wet-weather sampling has been required.				
3.7	Ongoing screening/sampling	Conduct in dry weather and wet weather screening/sampling (as necessary)	Part 2.3.4.10	Environmental Regulation Compliance Specialist, Highway Department, and environmental consultant	Complete ongoing outfall screening on completion of IDDE program.	2021
	YEAR 3	An annual sampling plan that includes wet-weather sampling has been completed in Year 3 for all MS4 regulated outfalls that discharge within 300-feet of an impaired water. Implementation of the sampling plan is expected to be started in Year 4.				
3.8	Assessment and Ranking of Outfalls/ Interconnections	Make initial priority ranking of all outfalls discharging from the regulated area and update ranking as applicable following screenings	Part 2.3.4.7.a	Environmental Regulation Compliance and environmental consultant	Complete initial ranking within 1 year after effective date of permit.	2019/2021
	YEAR 3	The initial Year 1 ranking was reassessed and revised in Year 3.				

7.3 MCM 3 IMPLEMENTATION PLAN / SCHEDULE

The Town will implement this IDDEP under the following schedule:

Year 1 (Due June 30, 2019) (COMPLETED)

- Refine mapping of receiving waters, impaired waters, and outfalls (initial mapping completed under the 2003 MS4 Permit).
- Complete initial outfall ranking and prioritization.
- Complete written IDDEP.
- In annual reporting, provide statement of Permit compliance, summary of work and updated plans completed in the Permit year, and summary of program progress.

Year 2 (Due June 30, 2020) (COMPLETED)

- Update mapping to include catchment delineations.
- Complete written catchment investigation procedures. (Due December 31, 2019). _{COMPLETED}.
- Begin dry weather prioritized outfall screening and catchment investigations. _{COMPLETED}.
- Employee training.
- In annual reporting, provide statement of Permit compliance, summary of work and updated plans completed in the Permit year, and summary of program progress..

Year 3 (Due June 30, 2021) (COMPLETED)

- Continue to update mapping based on screening and sampling as applicable.
- Complete updated outfall ranking.
- Complete initial dry weather outfall screening
- Develop screening/sampling plan for regulated outfalls that discharge directly to impaired waters.
- Employee training.
- In annual reporting, provide statement of Permit compliance, summary of work and updated plans completed in the Permit year, and summary of program progress. (Due September 28, 2021).

Year 4 through Year 9

- Continue to update mapping including adding upstream outfall infrastructure (engineered swales and other treatment practices). (In progress).
- Continue dry weather outfall screening per updated ranking.
- Implement annual outfall screening/sampling plan.
- Begin catchment investigations.
- Employee training.
- In annual reporting, provide statement of Permit compliance, summary of work and updated plans completed in the Permit year, and summary of program progress. (Due annually).

Year 10

- Complete Phase II mapping.
- Complete outfall screening/sampling.
- 100% catchment investigations complete.
- Employee training.
- In annual reporting, provide statement of Permit compliance, summary of work and updated plans completed in the Permit year, and summary of program progress. (Due September 28, 2029).

See also *2017 MS4 Permit IDDEP Schedule* in the IDDEP provide in Appendix D.

7.4 MCM 3 GOALS, MEASURES, AND PROGRESS

The goal of the IDDEP is the elimination of all non-allowed stormwater discharges within the MS4 regulated area. However, it is important to define interim milestones to properly assess the progress and success of the program over time.

Key interim milestones/goals for the IDDEP are:

1. Complete dry weather screening for all outfalls by the end of Year 3. (COMPLETED)

Dry-weather screening of 307 outfalls was completed in Year 3.

Milestones include:

- a summary of the number of outfalls screened; and
- a summary report of the screening results.

2. Complete catchment investigations by the end of Year 10.

The Town currently has 134 outfalls and 7 interconnections identified in the MS4 regulated area (ranked both "High" and "Low"). Although outfalls may be excluded based on the results of dry weather screening (no suspected illicit discharges), outfall catchments are expected to be fully investigated. Investigations are expected to begin in Year 5 with the goal of completing roughly 30 catchments per year thorough Year 10.

Investigation periods can again be set in six month increments with measured indicators to include:

- summaries of the number and percent of catchments investigated;
- the number of associated structures in each catchment;
- the estimated acreage of each catchment investigated;
- the number and percentage of rescreened/resampled outfalls from previous investigation periods;
- the number of illicit discharges identified and eliminated or notes regarding the

- on-going removal process; and
- the estimated illicit discharge volume removed from the MS4 regulated area.

7.5 MCM 3 DOCUMENTATION

At a minimum, the following must be documented in each annual report with respect to the IDDEP:

- ☐ number and percent of catchments investigated during the reporting period (Permit year);
- ☐ the number of illicit discharges identified and eliminated during the reporting period (Permit year);
- ☐ all dry and wet weather screening and sampling results; and
- ☐ the estimated illicit discharge volume removed from the MS4 regulated area.

Additional documentation that will be useful in the management and reporting of the IDDEP includes:

- ☐ logs/records of reported calls and complaints regarding suspected illicit discharges;
- ☐ zoomed in mapping of more complex catchments investigated;
- ☐ notes regarding the on-going illicit discharge removal processes (when not completed, i.e., letters sent, fines levied, court filings, etc.);
- ☐ applicable inspection and maintenance records; and
- ☐ employee training opportunities; type, dates, number attended.

8.0 MCM 4 - CONSTRUCTION SITE STORMWATER RUNOFF CONTROL (Part 2.3.5)

8.1 MCM 4 OBJECTIVE

Objective: The objective of an effective construction stormwater runoff control program is to minimize or eliminate erosion and maintain sediment on construction sites so that it is not transported in stormwater and allowed to discharge to a water of the U.S. through the permittee's MS4.

MCM 4 provides the basis for regulating stormwater runoff during planning, design, and construction phases, to protect local natural resources from degradation and prevent adverse impacts to adjacent and downstream land, property, facilities, and infrastructure.

Standards to regulate discharges from stormwater and runoff from land development projects and other construction activities aim to control and minimize increases in stormwater runoff rates and volumes, site soil erosion, stream channel erosion, and nonpoint source pollution associated with construction-related stormwater runoff.

Primary components of the Construction MCM include providing:

- A regulatory mechanism that requires the use of erosion and sediment controls (ESC) at construction sites, and controls construction wastes.
- Procedures for site plan review by the Town (Planning Department) of all proposed new and re-development projects to ensure proposed use of appropriate and adequate ESC measures, and review proposed post-development design of stormwater treatment and controls in conformance with the Permit requirements, including requiring groundwater recharge when feasible, and water supply protection.
- Requirements for developers and construction site contractors to implement ESC during construction activities.
- Requirements to control construction-related waste, including no untreated or waste discharges to Town MS4s.
- Procedures for construction site inspection and enforcement by the Town (Planning/Zoning Department) of ESC measures.

8.2 MCM 4 BMPs

Year 1 BMPs are taken directly from the Town's 2018 NOI and must be reviewed and updated annually.

MCM 4: Construction Site Stormwater Runoff Control						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
4.1	Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement.	<i>Part 2.3.5.3.b</i>	Planning Director and Planning Board	Complete within 1 year of effective date of permit.	2019
	YEAR 3	Draft SOPs have been completed. Town departments and boards are in process of review.				
4.2	Site Plan Review	Complete written procedures of site plan review and begin implementation.	<i>Part 2.3.5.3.e</i>	Planning Director and Planning Board	Complete within 1 year of effective date of permit.	2019
	YEAR 3	Draft SOPs have been completed. Town departments and boards are in process of review.				
4.3	Erosion and sediment control	Adoption of requirements for construction operators to implement a sediment and erosion control program.	<i>Part 2.3.5.3.c</i>	Planning Director and Planning Board	Complete within 1 year of effective date of permit.	2019
	YEAR 3	Previously completed.				
4.4	Waste control	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes.	<i>Part 2.3.5.3.d</i>	Planning Director and Planning Board	Complete within 1 year of effective date of permit.	2019
	YEAR 3	Draft regulation edits have been completed. Town departments and boards are in process of review.				

8.3 MCM 4 IMPLEMENTATION PLAN / SCHEDULE

The Town has previously implemented all MCM 4 BMPs due in Permit Year 1 per Table 8.1.

For Year 2 and Year 3, the Town has completed the development of a draft stand-alone Stormwater Regulation as well as draft redline edits to the existing Land Use Regulations as an alternative that address the requirements of MCM 4 in more depth. These draft plans are in the process of consideration by the Town's governing boards which may also include a period for public input. Advancement and implementation of either set of updates is in progress.

TABLE 8.1 MCM 4 Crosswalk of 2017 Permit Requirements with Pelham Land Use Regulations		
9.0 MCM 4 - Construction Site Stormwater Runoff Control (<i>Part 2.3.5</i>)		
MS4 TOPIC	MUNICIPAL REFERENCE	
9.1 Objective	307-25-4 Conditional Use Requirements	Adequate area is provided for the installation of onsite stormwater systems or low impact development techniques as described within the Pelham Site Plan Regulations.
	307-13 Additional Lot Size and Street Access Requirements	The intent is to provide for an area that accommodates the building site including all utilities, water supply, sewage disposal for on-site septic tanks and leach fields, drainage retention.
	307-37 Purpose and Intent	Prevent the development of structures and land uses on naturally occurring or compensatory wetlands which will contribute to pollution of surface and groundwater.
	203-5 Design and Construction Standards for Drainage & Stormwater Management Facilities	To ensure that permanent stormwater measures meet or exceed NHDES and Town standards.
	307-48-1 Purpose and Intent	To comply with state and federal statutes and regulations relating to stormwater discharges.
9.2 Sediment and Erosion Control Ordinance	203-6 Design and Construction Standards for the Control of Erosion & Sedimentation	To ensure that temporary stormwater measures meet or exceed NHDES and Town standards.
	303-3 Landscape and Buffering Requirements	

TABLE 8.1 MCM 4 Crosswalk of 2017 Permit Requirements with Pelham Land Use Regulations		
9.0 MCM 4 - Construction Site Stormwater Runoff Control (<i>Part 2.3.5</i>)		
	303-4 Design & Construction Standards for Drainage and Stormwater Management Facilities	To ensure that permanent stormwater measures meet or exceed NHDES and Town standards.
	307-93 Purpose	To reduce erosion and sedimentation by retaining existing vegetation.
9.3 Site Plan Review Procedures	Site Plan Review Application Form	Provides guidance to applicants for the submittal of required material for temporary and permanent development requirements.
	Section 302 – Application Procedures & Requirements	
9.4 Site Inspections and Enforcement of Sediment and Erosion Control Measures Procedures	305-2 Performance Guarantee Requirements and Procedures	Provides a mechanism for the Town to enforce temporary and permanent development requirements.
	305-3 Inspection Requirements and Procedures	
	Building Permit Process	
9.5 BMPs	203-6 Design and Construction Standards for the Control of Erosion & Sedimentation	To ensure that temporary stormwater measures meet or exceed NHDES and Town standards.
	303-4 Design & Construction Standards for Drainage and Stormwater Management Facilities	To ensure that permanent stormwater measures meet or exceed NHDES and Town standards.
	303-6 General Site Design Standards	

8.4 MCM 4 GOALS, MEASURES, AND PROGRESS

The goal of these standards is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public. This regulation seeks to meet that goal through the following objectives:

1. Minimize increases in stormwater runoff from any development to reduce flooding, siltation, streambank erosion, and maintain the integrity of stream channels.
2. Minimize increases in nonpoint source pollution caused by stormwater runoff from construction that would otherwise degrade local water quality.
3. Minimize the total volume of surface water runoff that flows from any specific site during and following development to not exceed the pre-development hydrologic condition to the maximum extent practicable as allowable by site conditions.
4. Reduce stormwater runoff rates and volumes, soil erosion and nonpoint source pollution, wherever possible, through stormwater management controls and to ensure that these management controls are properly maintained and pose no threat to public safety or cause excessive municipal expenditures.
5. Protect the quality of groundwater resources, surface water bodies, and wetlands.

Indicators of progress and success of MCM 4 BMPs include:

- inspection of 100% of all construction sites for ESC;
- a reduction in the number of Planning Board resubmittals to the Town to address stormwater treatment and control measures; and
- a reduction in the number of construction site ESC violations or directives by Town inspections.

8.5 MCM 4 DOCUMENTATION

At a minimum, the following documentation is suggested:

- ☐ number of site plan reviews tracked;
- ☐ number of site inspections;
- ☐ number of site inspection enforcement actions issued; and
- ☐ copies and dates of all proposed, adopted, and implemented changes to the Land Use Regulations to comply with Permit requirements.

9.0 MCM 5 - POST CONSTRUCTION STORMWATER MANAGEMENT IN NEW DEVELOPMENT AND REDEVELOPMENT (*Part 2.3.6*)

9.1 MCM 5 OBJECTIVE

Objective: The objective of this control measure is to minimize the water quality impact from new development and reduce the water quality impact due to stormwater runoff from a redeveloped site.

MCM 5 provides the basis for regulating stormwater runoff in post-construction to protect local natural resources from degradation and prevent adverse impacts to adjacent and downstream land, property, facilities, and infrastructure.

Standards to regulate discharges from stormwater and runoff from development and redevelopment projects aim to control and minimize increases in stormwater runoff rates and volumes, site soil erosion, stream channel erosion, and nonpoint source pollution associated with urban land conversion and associated stormwater runoff.

At a minimum, primary components of the Permit Post-Construction MCM that apply to development and redevelopment projects that disturb one or more acres (total of all phases) include:

- A regulatory mechanism that requires projects be designed with Low Impact Development (LID) site planning strategies to the maximum extent practicable (MEP).
- A regulatory mechanism that requires commercial and industrial sites to have covered salt storage, provide treatment for all runoff from salt storage, loading areas, and snow storage areas prior to discharge to an MS4 or infiltration to groundwater.
- Regulate new development and redevelopment projects "to be at least as stringent as Section 4 Element C and Element D of the *Southeast Watershed Alliance's Model Stormwater Standards for Coastal Watershed Communities (SWA Model Standards)*"⁸.to provide:
 - treatment and infiltration practices of stormwater runoff; and
 - for new development, BMPs that remove 80% of the average annual load of Total Suspended Solids (TSS) and 50% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious area.
- for redevelopment projects to:

⁸ Model Stormwater Standards for Coastal Watershed Communities, Southeast Watershed Alliance, December 2012. https://www.unh.edu/unhsc/sites/default/files/media/swa_stormwater-ord.pdf

- i. implement measures on-site that result in disconnection or treatment of at least 30% of the existing impervious cover as well as 50% of the additional proposed impervious surfaces and pavement areas through the application of filtration media;
OR
 - ii. implement other LID techniques onsite to the maximum extent practicable to provide treatment for at least 50% of the entire site area.
- Require submission of as-built drawings in less than two-years of project completion.
- Require submission of long-term operational and maintenance plans for all stormwater devices and practices.
- Provide procedures for long-term inspections of all constructed stormwater devices and practices, including responsibilities for inspections, operations, and maintenance. This component may also include financial assurance mechanisms.
- Complete an assessment of Town street and parking design requirements relative to reducing impervious cover within the MS4 regulated area.
- Complete an assessment of Town regulations relative to implementing green infrastructure practices within the MS4 regulated area.
- Complete an inventory of all Town-owned property and infrastructure that can be retrofitted with stormwater reduction measures from impervious areas.

9.2 MCM 5 BMPs

Year 1 BMPs 5.1 through 5.5 are taken from the Town's 2018 NOI. BMP 5.6 and 5.7 were added in this SWMP to meet Permit requirements. All BMPs must be reviewed and updated annually.

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
5.1	As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operations and maintenance	<i>Part 2.3.6.b</i>	Planning Director and Planning Board	Require submission of as-built plans for completed projects.	2021
	YEAR 3	Draft regulation edits have been completed. Town departments and boards are in process of review.				
5.2	Target properties to reduce impervious areas	Complete an inventory and priority ranking of permittee-owned property and existing infrastructure that could be retrofitted with BMPs designed to reduce the frequency, volume, and pollutant loads of stormwater discharges to its MS4s through the mitigation of impervious area	<i>Part 2.3.6.e</i>	Planning Director and Planning Board	Complete 4 years after effective date of permit and report annually on retrofitted properties.	2021

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
5.3	Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	<i>Part 2.3.6.d</i>	Planning Director and Planning Board	Complete 4 years after effective date of permit and implement recommendations of report.	2021
5.4	Street design and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. This assessment will help to determine if changes to design standards for streets and parking lots can be modified to support low impact design options	<i>Part 2.3.6.c</i>	Planning Director and Planning Board	Complete 4 years after effective date of permit and implement recommendations of report.	2021

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
5.5	Ensure any stormwater controls or management practices for new development and redevelopment meet requirements of the Permit	Adoption, amendment, or modification of a regulatory mechanism to meet permit requirements	<i>Part 2.3.6.a.ii</i>	Planning Director and Planning Board	Complete 3 years after effective date of permit.	2021
	YEAR 3	Draft regulation edits have been completed. Town departments and boards are in process of review.				
5.6	Infiltration Practices	Require groundwater recharge the maximum extent practicable (site specific) in accordance with NH Stormwater Manual	<i>Part 2.3.6.a.ii.c 3.1.1.3</i>	Planning Director and Planning Board	Complete 3 years after effective date of permit.	2021
	YEAR 3	Draft regulation edits have been completed. Town departments and boards are in process of review.				
5.7	Groundwater Protection	Provide regulatory protections for groundwater/water supply protection	<i>Part 3.2</i>	Planning Director and Planning Board	Complete 3 years after effective date of permit.	2021 (Existing Ordinance/Land Use Regulations)

9.3 MCM 5 IMPLEMENTATION PLAN / SCHEDULE

The Town has previously implemented all MCM 5 BMPs due in Permit Year 1 per Table 9.1.

For Year 2 and Year 3, the Town has completed the development of a draft stand-alone Stormwater Regulation as well as draft redline edits to the existing Land Use Regulations as an alternative that address the requirements of MCM 5 in more depth. These draft plans are in the process of consideration by the Town's Planning Board which will include a public hearing process allowing for public input. Advancement and implementation of either set of regulation updates is expected to occur by the end of the 2021 calendar year.

TABLE 9.1 MCM 5 Crosswalk of 2017 Permit Requirements with Pelham Land Use Regulations	
10.0 MCM 5 - Post Construction Stormwater Management in New Development and Redevelopment (<i>Part 2.3.6</i>)	
10.1 Objective	
10.2 Post-Construction Regulations	Occupancy Permit Approval
	204-2 Performance Guarantee Requirements and Procedures
	204-3 Inspection Requirements and Procedures
	305-2 Performance Guarantee Requirements and Procedures
	305-3 Inspection Requirements and Procedures
10.3 Street Design and Parking Lot Guidelines Report	303-2, Table 203.4, Figure 203-4.1, and Figure 203-4.2 To be reviewed by Year 4
10.4 Green Infrastructure Report	To be reviewed by Year 4
10.5 List of Municipal Retrofit Opportunities	Capital Improvement Plan for 2017 - 2023
	Master Plan

9.4 MCM 5 GOALS, MEASURES, AND PROGRESS

The goal of these standards is to establish minimum stormwater management requirements and controls to protect and safeguard the general health, safety, and welfare of the public. This regulation seeks to meet that goal through the following objectives:

1. Minimize increases in stormwater runoff from any development to reduce flooding, siltation, and streambank erosion, and maintain the integrity of stream channels.
2. Minimize increases in nonpoint source pollution caused by stormwater runoff from development which would otherwise degrade local water quality.

3. Minimize the surface water runoff that flows from any specific site following development to not exceed the pre-development hydrologic condition to the maximum extent practicable as allowable by site conditions.
4. Reduce stormwater runoff rates and volumes, soil erosion, and nonpoint source pollution, wherever possible, through stormwater management controls and ensure that these management controls are properly maintained and pose no threat to public safety or cause excessive municipal expenditures over time.
5. Protect the quality of groundwater resources, surface water bodies, and wetlands.

Indicators of progress and success of MCM 5 BMPs include demonstrating a progressive increase in:

- applications using LID and green infrastructure;
- proposed treatment devices and practices that reduce TSS and TP loading (MEP) into the MS4 regulated area;
- submissions of as-built stormwater practices;
- submissions of long-term O&M of as-built stormwater practices;
- number of developments that manage salt and snow in compliance with the Permit; and
- 100% annual inspections and/or annual certifications of installed development stormwater devices.

9.5 MCM 5 DOCUMENTATION

At a minimum, the following documentation is suggested:

- ☐ tracked number of applications using LID and green infrastructure;
- ☐ number and percentage of new and redeveloped projects that manage salt and snow in compliance with the Permit;
- ☐ tracked number of proposed treatment devices and practices that reduce TSS and TP loading (MEP) into the MS4 regulated area;
- ☐ number and percentage of submissions of as-built stormwater practices;
- ☐ submissions of long-term O&M of as-built stormwater practices;
- ☐ number and percentage of annual inspections and/or annual certifications of stormwater devices; and
- ☐ copies and dates of all proposed, adopted, and implemented changes to the Land Use Regulations to comply with Permit requirements.

Beginning with the Year 5 annual report and in each annual report thereafter, the Town will report on Town-owned properties and infrastructure that have been retrofitted with BMPs to mitigate impervious area.

10.0 MCM 6 - GOOD HOUSEKEEPING AND POLLUTION PREVENTION FOR PERMITTEE OWNED OPERATIONS (*Part 2.3.7*)

10.1 MCM 6 OBJECTIVE

Objective: The permittee shall implement an operations and maintenance program for permittee operations that include a training component and has a goal of preventing or reducing pollutant runoff and protecting water quality from all permittee operations.

MCM 6 focuses on the municipal operations and maintenance (O&M) of Town-owned properties and infrastructure through the implementation of proactive pollution prevention measures. Primary components of municipal good housekeeping include:

- A completed inventory of all municipally owned properties (Year 2):
 - parks and open space;
 - buildings and facilities where pollutants are exposed to stormwater runoff; and
 - vehicles and equipment.
- Written O&M Programs for municipally owned properties and facilities (Year 2).
- Written O&M Programs for municipal MS4 infrastructure (Year 2).
- Implement catch basin cleaning and inspection schedule and procedures (Year 1).
- Implement street cleaning and sweeping schedule and procedures (Year 1).
- Written winter road maintenance procedures (Year 2).
- Implement stormwater treatment inspection and maintenance schedule and procedures (Year 2).
- Development of Stormwater Pollution Prevention Plans (SWPPPs) for each municipally owned facility where pollutants may be exposed to stormwater (Year 2).
- Annual staff training.

10.2 MCM 6 BMPs

Year 1 BMPs 6.1 through 6.8 are taken from the Town's 2018 NOI. BMP 6.9 and 6.10 were added in this SWMP to meet Permit requirements. All BMPs must be reviewed and updated annually.

MCM 6: Municipal Good Housekeeping and Pollution Prevention						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
6.1	O&M Procedures	Create written O&M procedures including all requirements contained in 2.3.7.1 for park and open spaces, buildings and facilities, and vehicles and equipment.	Part 2.3.7.1	Department of Public Works	Complete and implement 2 years after effective date of permit.	2020 COMPLETED
6.2	Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory.	Part 2.3.7.1	Department of Public Works	Complete 2 years after effective date of permit and implement annually.	2020 COMPLETED Review and update annually
6.3	Infrastructure O&M	Establish and implement program for maintenance and upkeep of MS4 infrastructure.	Part 2.3.7.1.d.i	Department of Public Works	Complete 2 years after effective date of permit.	2020 COMPLETED
6.4	Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities.	Part 2.3.7.2	Department of Public Works	Complete 2 years after effective date of permit.	2020 COMPLETED

MCM 6: Municipal Good Housekeeping and Pollution Prevention						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
6.5	Catch basin cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule.	<i>Part 2.3.7.1.d.ii</i>	Department of Public Works	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually.	2020 Annual
6.6	Street sweeping program	Sweep all streets and permittee-owned parking lots in accordance with permit conditions.	<i>Part 2.3.7.1.d.iii</i>	Department of Public Works	Sweep all streets and permittee-owned parking lots once per year in the spring.	2020 Annual 2021 COMPLETED
6.7	Road salt use optimization program	Establish and implement a program to minimize the use of road salt.	<i>Part 2.3.7.1.d.v</i>	Department of Public Works	Implement salt use optimization during deicing season.	2020
6.8	Inspections and maintenance of stormwater treatment structures	Establish and implement inspections and maintenance procedures and frequencies.	<i>Part 2.3.7.1.d.vi</i>	Department of Public Works	Inspect and maintain treatment structures at least annually.	2021 Annual
6.9	Employee Training	Train employees on Good Housekeeping implementation.	<i>Part 2.3.7.2.b.iv</i>	Department of Public Works	Train Annually.	2020 Annual 2021 COMPLETED
6.10	Groundwater Protection	Provide procedures for groundwater/water supply protection	<i>Part 3.2</i>	Planning Director and Planning Board	Complete 2 years after effective date of permit.	2020 COMPLETED as part of O&M

10.3 MCM 6 IMPLEMENTATION PLAN / SCHEDULE

Annual catch basin cleaning and street sweeping, which are established Town procedures, were completed in Year 3. Other BMPs for MCM 6 were completed as noted in the Section 10.2 BMP table.

10.4 MCM 6 GOALS, MEASURES, AND PROGRESS

The goal of development of O&M and SWPPP programs is to provide proactive pollution prevention for Town properties and respective employee training. Indicators of BMP success would include:

- ☐ 100% catch basins cleaned and inspected;
- ☐ 100% streets cleaned;
- ☐ 100% stormwater treatment facilities inspected;
- ☐ Reduction in winter salt use over time; and
- ☐ 100% employee training and a reduction in emergency repairs of infrastructure, and a reduction in reported O&M and/or SWPPP incidents.

10.5 MCM 6 DOCUMENTATION

Documentation of MCM6 compliance includes:

- ☐ completed Town-owned property inventory;
- ☐ completed O&Ms and SWPPPs for each property and MS4 infrastructure;
- ☐ number and percentage of catch basins cleaned and inspected, and volume of material removed;
- ☐ miles and percentage of streets cleaned and swept, and volume of material removed;
- ☐ description of disposal of catch basin cleaning and street sweeping materials;
- ☐ number and percentage of stormwater treatment practices inspected;
- ☐ total tons of salt used in winter road maintenance; and
- ☐ number of training opportunities offered, and total number of employees trained.

11.0 TMDLs AND WATER QUALITY LIMITED WATERS (WQLW)

The Town of Pelham discharges stormwater into impaired waters identified in *Part 2.2.1.e*, *Part 2.2.2.b*, and *Table F-1* of the Permit with an approved Total Maximum Daily Load (TMDL) and impaired waters requiring a TMDL (i.e., NHDES Category 4 and Category 5). The applicable impaired waters are listed in Table 11.1 below. The Town of Pelham will comply with the permit conditions for these waterbodies as required in *Appendix F* and *Appendix H* of the Permit and as listed in the following additional BMPs.

TABLE 11.1 NHDES Pelham TMDLs and Water Quality Limited Waters	
2017 MS4 PERMIT SECTION 2.2.1 New Hampshire Statewide TMDL for Bacteria Impaired Waters September 2010⁹ (Escherichia coli)	2017 MS4 PERMIT SECTION 2.2.2 WATER QUALITY LIMITED WATERS (Phosphorus)
BEAVER BROOK NHRIV700061203-22	LONG POND NHLAK700061205-02-01
BEAVER BROOK - TONYS BROOK NHRIV700061205-01	
LONG POND - TOWN BEACH NHLAK700061205-02-02	

11.1 BACTERIA/PATHOGENS

The Town of Pelham is identified in *Part 2.2.1.e* and *Table F-1* of the Permit for an Escherichia coli impairment in Long Pond Town Beach, Beaver Brook, and Tony's Brook which have an EPA approved TMDL. Therefore, under the Permit the Town is to comply with conditions described in *Appendix F Part II.1* of the Permit for regulated stormwater discharges to these waterbodies and as described in Table 11.2 below.

⁹ <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/final-bacteria-tmdl-report-statewide-379.pdf>

TABLE 11.2 Loading Reductions Per NHDES Statewide Bacteria TMDL		
WATERBODY NHDES AUID	% LOAD REDUCTION GOAL	
	Single Sample	Geometric Mean
BEAVER BROOK NHRIV700061203-22	63%	21%
TONYS BROOK NHRIV700061205-01	50%	66%
LONG POND / TOWN BEACH NHLAK700061205-02-02	78%	26%

Source: *NHDES Final Report New Hampshire Statewide Total Maximum Daily Load (TMDL) for Bacteria Impaired Waters*, September 2010.

If the TMDL is modified or revised for any of the listed waterbodies, such that the EPA has approved a new TMDL for the receiving water(s) or where there is an indication that no additional stormwater controls for the control of bacteria/pathogens are necessary for the water body, the Town may be relieved of these conditions. If this occurs, the Town must document the date of new approved TMDL in the SWMP and may cease the applicable program(s).

The SWMP must annually document activities implemented in accordance with the requirements of Permit *Appendix F Part II.1.a.* to reduce bacteria/pathogen in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural BMPs.

Annual Requirements Beginning Year 1

- Enhanced public education BMPs (MCM 1) for:
 - pet waste; and
 - septic system maintenance.
- Rank all outfalls discharging to a bacteria impaired waterbody as "High" priority for dry-weather screening and catchment investigations (MCM 3). (COMPLETED)
- Provide annual wet-weather sampling of outfalls that discharge directly into an impaired waterbody and per IDDEP SOPs (MCM3). (Planned to start in Year 4)

11.2 BACTERIA/PATHOGENS BMPs

BMPs for TMDL waters are added in this SWMP. All BMPs must be reviewed and updated annually.

TABLE 11.3 Bacteria/Pathogens TMDLS						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Par ty	Measurable Goal	Year to Start Implementa tion
B.1	Public Education	Annual message to residential homes encouraging the proper management of pet waste, including noting any existing ordinances where appropriate. Education materials shall describe the detrimental impacts of improper management of pet waste, requirements for waste collection and disposal, and penalties for non-compliance.	<i>Appendix F Part II.1.a.i (referencing Part 2.3.3)</i>	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Number of educational materials to dog owners at the time of issuance or renewal of a dog license.	2019 Annual 2021 COMPLETED
B.2	Public Education	Annual message to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria or pathogens.	<i>Appendix F Part II.1.a.i (referencing Part 2.3.3)</i>	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Number of educational materials to septic systems owners.	2019 Annual 2021 COMPLETED
B.3	Illicit Discharge Program	Catchments directly discharging to a waterbody included in an approved TMDL shall be designated HIGH priority in the implementation of the IDDE program annually.	<i>Appendix F Part II.1.a.ii (referencing Part 2.3.4)</i>	Planning Director, Environmental Regulation Compliance Specialist, and environmental consultant	Identified number of HIGH priority areas.	2019 COMPLETED

11.3 PHOSPHORUS IMPAIRMENT

As identified in Table 4.4, Long Pond located within the Town of Pelham is classified as a Category 5-P impaired water for total phosphorus without a TMDL. Additionally, Little Island Pond is marginally impaired for *cyanobacteria hepatotoxic microcystins* (CHM) which is also a phosphorus-related impairment. Stormwater discharge management from the regulated areas will follow the requirements outlined in *Appendix H Part II* of the Permit and as described in Table 11.4 below.

If the receiving water and all downstream segments are determined to no longer be impaired due to phosphorus by the NHDES and the EPA, the Town may be relieved of the *Appendix H* permit conditions. Or if the EPA approves a TMDL for the receiving water or downstream receiving water indicates that no additional stormwater controls for the control of phosphorus is necessary, the Town may be relieved of the *Appendix H* permit conditions. If this occurs, the Town must document the date of the change in designation and/or approved TMDL in the SWMP and may cease the applicable program.

The SWMP must annually document activities implemented in accordance with the requirements of *Appendix H Part II.1* of the Permit to reduce phosphorus in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural BMPs. In the area of the impaired water and its tributaries these required enhancements include:

Annual Requirements Beginning Year 1

- Annual public education BMPs (MCM 1):
 - spring: add grass clippings and fertilizer use message;
 - summer: add pet waste management message; and
 - fall: add leaf litter disposal message.
- Rank all outfalls discharging to a phosphorus impaired waterbody as “High” priority for dry-weather screening and catchment investigations (MCM 3). (COMPLETED)
- Develop municipal SOPs (MCM 6) for grass clipping and leaf litter disposal, prohibit blowing organic waste into surface waters (including stormwater treatment practices), and increase street sweeping to twice per year OR provide fall yard waste collection program. (COMPLETED)
- Outfalls with existing structural BMPs that discharge directly into the impairment-listed waters shall be annually monitored and tracked, reporting on estimated mass volume of phosphorus per Appendix H of the Permit. (None currently identified for Pelham)
- Provide annual wet-weather sampling of outfalls that discharge directly into an impaired waterbody and per IDDEP SOPs (MCM3). (Planned to start in Year 4)

Requirements Due by Year 2

- Add development and redevelopment requirement for optimized phosphorus removal BMPs under MCM 5.

Draft amendment language to revise existing Land Use Regulations to incorporate development and redevelopment requirements AND a draft stand-alone development and redevelopment regulation were both drafted in 2020 and advanced to the Pelham Planning Board. It is anticipated the Planning Board will choose which path it prefers and hold the required public hearings to approve and implement the regulation by 2021.

Requirements Due by Year 4

- Develop a Phosphorus Source Identification Report (see below).
- Include consideration of infiltration practices in facility retrofitting ranking.

Requirements Due by Year 5

- Provide evaluation, plan, and schedule to retrofit structural BMPs at municipally owned properties.

Requirements Due by Year 6

- Install at least one structural BMP in a high phosphorus loading area by Year 6. Monitor and track performance, report on estimated mass volume of phosphorus removed annually.

Phosphorus Source Identification Report

The Town of Pelham must develop a Phosphorus Source Identification Report within four years of permit effective date. The report shall include the following elements:

1. Calculation of the total MS4 regulated area draining to the water quality limited receiving water segments or their tributaries, incorporating updated mapping of the MS4 regulated area and applicable catchment delineations (*Part 2.3.4.6*).
2. Screening, sampling, and monitoring results, targeting the phosphorus-impaired receiving water segment(s) (*Part 2.3.4.7.d*).
3. Impervious areas and Directly Connected Impervious Areas (DCIA) for the subject catchments.
4. Identification, delineation, and prioritization of potential catchments with high phosphorus loading.
5. Identification of potential retrofit opportunities or opportunities for the installation of structural BMPs during redevelopment, including the removal of impervious area of permittee-owned properties.

11.4 PHOSPHORUS IMPAIRMENT BMPs

BMPs for Water Quality Limited Waters are added in this SWMP. All BMPs must be reviewed and updated annually.

TABLE 11.4 Phosphorus Impairment MCM						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
P.1	Public Education	Distribute an annual message in the spring (March/April) that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release and phosphorous-free fertilizers to Residential and Business/ Commercial/ Institution target audiences.	<i>Appendix H Part II.1.a.i.1 (referencing Part 2.3.2)</i>	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Number of educational materials distributed to target audience.	2019 Annual 2021 COMPLETED
P.2	Public Education	Distribute an annual message in the summer encouraging the proper management of pet waste, including noting existing ordinances to Residential and Business/Commercial/Institution target audiences.	<i>Appendix H Part II.1.a.i.1 (referencing Part 2.3.2)</i>	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Number of educational materials distributed to target audience.	2019 Annual 2021 COMPLETED
P.3	Public Education	Distribute an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter to Residential and Business/ Commercial/ Institution target audiences.	<i>Appendix H Part II.1.a.i.1 (referencing Part 2.3.2)</i>	Environmental Regulation Compliance Specialist working with Regional Stormwater Coalition	Number of educational materials distributed to target audience.	2019 Annual 2021 COMPLETED

TABLE 11.4 Phosphorus Impairment MCM						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/ Party	Measurable Goal	Year to Start Implementation
P.4	Stormwater Management in New Development and Redevelopment	The requirement for adoption/amendment of regulations shall include a requirement that new development and redevelopment stormwater management BMPs be optimized for phosphorus removal.	<i>Appendix H Part II.1.a.i.2 (referencing Part 2.3.6)</i>	Planning Director working with environmental consultant and Planning Board	Adoption of ordinance directed at phosphorus removal.	2020 In process
P.5	Stormwater Management in New Development and Redevelopment	Retrofit inventory and priority ranking under Section 2.3.6.e. of the permit shall include consideration of BMPs that infiltrate stormwater where feasible.	<i>Appendix H Part II.1.a.i.2 (referencing Part 2.3.6)</i>	Planning Director and Environmental Regulation Compliance Specialist working with environmental consultant	Annual Report of BMPs resulting from retrofit inventory and priority ranking.	2022
P.6	Good House Keeping and Pollution Prevention for Permittee Owned Operations	Establish procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces.	<i>Appendix H Part II.1.a.i.3 (referencing Part 2.3.7)</i>	Environmental Regulation Compliance Specialist working with Highway Dept.	Adoption of procedures	2020 O&Ms (COMPLETED)

TABLE 11.4 Phosphorus Impairment MCM

	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
P.7	Good House Keeping and Pollution Prevention for Permittee Owned Operations	Increase street sweeping frequency of all municipal owned streets and parking lots to a minimum of two times per year, once in the spring (following winter activities such as sanding) and at least once in the fall (following leaf fall). OR Implement a fall leaf litter collection program to effectively minimize leaf litter on impervious surfaces and in stormwater drainage structures.	<i>Appendix H Part II.1.a.i.3 (referencing Part 2.3.7)</i>	Environmental Regulation Compliance Specialist working with Highway Dept.	Tracking of increased street sweeping on the Annual Report.	2020 Annual 2021 COMPLETED
P.8	Phosphorus Source Identification Report	Develop a Phosphorus Source Identification Report as described in Section 12.4.	<i>Appendix H Part II.1.b</i>	Environmental Regulation Compliance Specialist working with environmental consultant	Submittal of final report to USEPA in Year 4 Annual Report	2022

TABLE 11.4 Phosphorus Impairment MCM

	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
P.9	Potential Structural BMPs	<p>Evaluate all permittee-owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under permit Part 2.3.6.e or identified in the Phosphorus Source Identification Report that are within the drainage area of the water quality limited water or its tributaries. The evaluation shall include:</p> <ol style="list-style-type: none"> 1. The next planned infrastructure, resurfacing or redevelopment activity planned for the property (if applicable) OR planned retrofit date; 2. The estimated cost of redevelopment or retrofit BMPs; and 3. The engineering and regulatory feasibility of redevelopment or retrofit BMPs. 	<i>Appendix H Part II.1.c.i</i>	Planning Director and Environmental Regulation Compliance Specialist working with environmental consultant	List of planned structural BMPs and a plan and schedule for implementation in the Year 5 Annual Report to USEPA	2023

TABLE 11.4 Phosphorus Impairment MCM						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
P.10	Potential Structural BMPs	Plan and install a minimum of one structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries targeting a catchment with high phosphorus load potential. Track and estimate the phosphorus removal by the BMP consistent with Attachment 3 to Appendix F.	Appendix H Part II.1.c.ii.	Planning Director and Environmental Regulation Compliance Specialist working with environmental consultant	Document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP in each annual report	2024
P.11	Potential Structural BMPs	Install structural BMPs as described in the plan. Track and estimate the phosphorus removal by the BMP consistent with Attachment 3 to Appendix F.	Appendix H Part II.1.c.iii.	Planning Director and Environmental Regulation Compliance Specialist working with environmental consultant	Document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP in each annual report	2025

11.5 TMDL and WQLW IMPLEMENTATION PLAN / SCHEDULE

Implementation of additional Permit requirements for the Statewide Bacteria TMDL and the Phosphorus WQLW will be completed per *Appendices F and H* of the Permit, and as identified in the above BMPs. In general, and unless otherwise noted in this SWMP, these additional requirements have been assimilated into the applicable Permit MCMs.

11.6 TMDL and WQLW GOALS, MEASURES, AND PROGRESS

The goal of the additional BMPs for TMDL waters and WQLWs is to reduce the overall source loading of the subject pollutant into the impairment-listed waterbody.

Measures, and progress related to TMDLs and WQLWs are expected to fall under the screening, sampling, and catchment investigations performed under Permit MCM 3.

Indicators of progress and success of the additional BMPs will be the reduction of subject pollutant loading over time as tracked through the MCM 3 screening, sampling, and catchment investigations program, as well as a reduction in the number of NHDES closures of Long Pond Town Beach due to bacteria-related concerns or reduced CHM and algal blooms in Long Pond and Little Island Pond.

11.7 TMDL and WQLW DOCUMENTATION

The following documentation is required for annual reporting for the TMDL and WQLW program in the areas of the impairment-listed waters:

- ☐ copies of all public education messages provided to the public, dates sent, and distribution lists;
- ☐ annual certification of additional street sweeping OR fall yard waste collection program including dates implemented and last updated;
- ☐ street sweeping twice annually in the area contributing to Long Pond and its tributaries; and
- ☐ number of annually proposed phosphorus removal BMPs.

12.0 ANNUAL EVALUATIONS, RECORD KEEPING, AND REPORTING

Continuous documentation and record keeping will provide a managed basis for annual reporting and required public records. The annual reporting period is **July 1 through June 30** for each year of the Permit with the Annual Report due to the EPA 90-days (i.e., September 28) from the end of the reporting period (Permit year).

12.1 PROGRAM EVALUATION

The Town is required to provide an annual self-evaluation of the SWMP with respect to compliance with the Permit. The evaluation must also describe progress made toward identified measurable goals, the effectiveness of each BMP, and any adjustments made to the BMPs during the reporting period.

12.2 RECORD KEEPING

At a minimum, records related to the SWMP must be kept for no less than 5 years. Records to be kept include, but are not limited to:

- ☐ data used in the development of all SWMP programs;
- ☐ monitoring results;
- ☐ screening results;
- ☐ illicit discharge documentation;
- ☐ inspection and maintenance records related to stormwater practices;
- ☐ previous annual reports; and
- ☐ checklists.

All records and plans are required to be available to public.

12.3 ANNUAL REPORTING

Annual reports are due to the EPA no more than 90 days after the close of the reporting period (September 28). Each annual report shall, at a minimum include the following information:

- ☐ self-assessment of compliance with the Permit and effectiveness of BMPs;
- ☐ status and description BMPs implemented for TMDL waters and WQLWs;
- ☐ assessment of BMP progress relative to identified goals and measurements;
- ☐ description of adjusted BMPs, if any;
- ☐ evaluation of public education program (MCM 1), type of message for each audience, date, type of distribution;

- ☐ measures to promote public participation (MCM 2) and certify compliance with state requirements for public notifications;
- ☐ status of IDDEP (MCM 3); mapping, outfall ranking, catchment investigations;
- ☐ status of municipal protocols;
- ☐ number and IDs of outfalls screened, catchments investigated, illicit discharges removed, gallons of illicit flow removed;
- ☐ employee training dates, subject, length, and number attended;
- ☐ number of proposed project plans reviewed, number of construction inspections, number of enforcement actions issued (MCM 4);
- ☐ status of post construction ordinances/regulations (MCM 5);
- ☐
- ☐ volume of material removed in catch basin cleaning and street sweeping;
- ☐ status of additional state requirements for groundwater recharge and public drinking water protection regulations/BMPs;
- ☐ all outfall screening and monitoring data per the IDDEP;
- ☐ screening and monitoring data for specific pollutants identified in TMDL (E. Coli) and WQLW impaired waters (phosphorus);
- ☐ screening data dates, outfall ID, location, weather conditions, precipitation in previous 48-hours, field screening results, lab analysis results for annual reporting period;
- ☐ comparative summary for monitoring data for previous permit years;
- ☐ other water quality related studies conducted in the reporting period; and
- ☐ describe actions planned for next reporting period.

12.4 UPDATING AND MODIFYING THE SWMP

Changes to BMPs must be documented in the SWMP and annual reporting including:

- describing the ineffectiveness of the BMP and need to make the adjustment or replacement;
- goals for the replacement BMP; and
- explanation of how the adjusted/replacement BMP will be more effective.

Documentation must follow the procedure:

- complete log at front of this SWMP;
- document the changes, date, person making change; and
- re-sign and date the certification statement.