

STORMWATER MANAGEMENT PROGRAM (SWMP)

TOWN OF PELHAM, NEW HAMPSHIRE

6 VILLAGE GREEN

PELHAM, NEW HAMPSHIRE



Prepared for:

Pelham NEW HAMPSHIRE

Prepared by:



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GeoInsight, Inc.

COPY # _____

June 30, 2019
PERMIT YEAR 1

LIST OF SWMP REVISIONS

NUMBER	DATE	DESCRIPTION OF REVISION	COMPLETED BY
0.	06/28/2019	Development of Year 1 SWMP	GeoInsight, Inc.
1.	06/30/2019	Minor Edits per Town & Eng Review	GeoInsight, Inc.
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HOLDERS OF THE SWMP

COPY #	DEPARTMENT/ ORGANIZATION	NAME	INITIALED ACCEPTANCE	DATE
0.	SWMP Coordinator	Jeff Gowan		06/30/2019
1.	Town Administrator			
2.	Board of Selectmen			
3.	Planning Department			
4.	Zoning Administrator			
5.	Highway Department			
6.	Parks and Recreation			
7.	Conservation Commission			
8.	Forestry Committee			
9.	Pelham Transfer Station & Recycling Center			
10.	Building Inspector			
11.				
12.	Nashua Regional Planning Commission			
13.	NH DES, Water Division			
14.	SWMP Stakeholder Advisory Group			
16.	Long Pond Association			
17.	Gumpas Pond Association			
18.	GeolInsight, Inc.	Lorilee Mather Michael Penney		06/30/2019

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: William J. McDevitt
(Printed)

Title: CHAIRMAN OF
SELECTMAN

Signature: 

Date: 8/27/19

EXECUTIVE SUMMARY

WHAT IS AN MS4 PERMIT AND WHY PELHAM?

Local drainage systems, whether natural or constructed, are important features that generally 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 pollutants. These untreated pollutants in stormwater runoff are defined by the U.S. Environmental Protection Agency (EPA) as “nonpoint source pollution”, meaning that the source of the pollution is not directly attributable to a single spatial point or polluter. Stormwater runoff from streets, parking lots, and lawns picks up and carries contaminants as it moves across the ground surface before entering into local drainage systems.

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

The “MS4 General Permit” (the Permit) is administered together by the EPA and the State of New Hampshire Department of Environmental Services (NHDES) to authorize municipalities to discharge stormwater under the EPA National Pollutant Discharge Elimination System (NPDES) and the over-arching CWA.

The conditions of the Permit direct permittees to properly manage non-point source pollution in stormwater. The Permit does not cover point-source or non-stormwater discharges such as industrial or wastewater sources. Such discharges require individual permitting from the EPA. The New Hampshire MS4 General Permit covers 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 regulated municipalities to begin to develop and implement pollution reduction measures in stormwater discharges. The current Permit (2017) continues a 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.

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 Notice of Intent (NOI) submitted to the EPA. Following this first issue, the SWMP should be updated each year to document the Town’s plans to continue to meet the phased schedule and requirements of the permit.

PERMIT REQUIREMENTS

Permit Effective/Start Date: July 1, 2018

Notice of Intent (NOI) - Due October 2, 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 water quality requirements for listed impaired waters;
- certified that the Town intends to comply with the Permit requirements; and
- requested authorization to discharge stormwater from its MS4 under the NH General 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 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*)

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 SWMP is to reduce the discharge of pollutants to receiving waters to the "maximum extent possible" (MEP), to protect the overall water quality of the Town's, State's 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 MS4;
- 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 culverts, ditches and swales. The inspection and maintenance of the 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 outline 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.

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 approved Total Maximum Daily Load plan(s) (TMDL) as outlined in *Part 2.1.1* and *Appendix H, Part II*.

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

Annual Reporting - Due September 30 Annually (*Part 4.0*)

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

Progressive Annual Requirements (Year 1)

The Permit intends for the written SWMP to be a 'living document' to be reviewed and updated annually. As prepared for Year 1 of the Permit, requirements include:

- 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*);
- listing of all receiving waters and impairments within the MS4 (*Part 1.10.2.2*);
- mapping of the MS4, specifically locating all outfalls and identifying receiving waters (*Part 2.3.4.5.a*);
- preparing a written IDDE, 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*).

Under each MCM the permittee must:

- list each baseline BMP, with responsible party, measurable goals and milestones (*Part 1.10*);
- plan for verifying progress of each goal (*Part 1.10*);
- describe MEP measures for groundwater recharge and infiltration practices (*Part 3.1*); and
- describe considerations for channel protection and peak runoff control (*Part 3.1*).

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. [recommend password protected pdf]

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APPENDIX D Illicit Discharge Detection and Elimination Plan and
Stormwater System Mapping
APPENDIX E Highway and Planning Standard Operating Procedures (SOPs)

Nomenclature and conventions of this manual include:

- Part x.x* Refers to the specific sections of the 2017 NH Small MS4 General Permit (the Permit).
- text in italics* 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. A number of 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	Links to EPA and NHDES added to Town Website
Conduct 1 to 2 public education programs per year	Wetlands Conservation District brochure mailed and available on Town website
Save Long Pond - Cyanobacteria awareness brochure	Homeowners guide to Wetland Dos and Don'ts on Town website
Implement Stormwater Committee	Wetlands No-Disturbance Buffer Delineation Program
	Wetland Information page added to Town Website
	Broadcast EPA educational videos on Town Cable Channel
	Town participates in NHDES Volunteer Lake Assessment Program (VLAP)
	Town Stormwater Committee working with regional planning and stormwater coalition
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	Up to seven (7) hazardous waste collection days held
Hold hazardous waste collection days	Land acquisitions by Town for conservation
	Stormwater improvements at industrial site
MCM3 Illicit Discharge Detection and Elimination Program	
BMPs:	Achievements:
Plan and fund mapping of UA (MS4 regulated areas)	Town identified suspect discharges for investigation
Develop ways to remove possible pollutants from stormwater discharges	Mapping of outfalls and receiving waters completed and available on Town website
Develop stormwater by-law	By-laws reviewed
Dry-weather screening of outfalls	Select dry-weather screening completed
	Town added Code Enforcement Officer to staff
	Town recycling facility received awards from USEPA

TABLE 1.1 Pelham 2003 MS4 BMPs	
Develop policy for elimination of illicit discharges	Town recycling facility added yard waste, increase receipts of waste oil IDDE Ordinance approved by Town
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 Implement existing subdivision and site plan review regulations Site Inspections Independent engineering company reviewing site plans and stormwater controls	Subdivision and site plan review regulations revised and adopted (multiple times) Inspection of commercial sites Independent reviews of proposed projects Reclamation plans prepared when Wetlands Conservation District is disturbed LID strategies added to regulations and incorporated into Master Plan and used on Land development projects Construction compliance inspections
MCM5 Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management)	
BMPs:	Achievements:
Review current structural BMPs Review current non-structural BMPs Seek approval of new BMPs Incorporate BMPs into regulations	Regular road inspections and maintenance Drainage measures installed select roads Structural drainage measures inspected and repaired Approved project with porous pavement Staff training Conservation Development Ordinance adopted Post-construction management incorporated into regulations
MCM6 Good Housekeeping and Pollution Prevention for Municipal Operations	
BMPs:	Achievements:
Complete Spill Prevention Control & Countermeasure Plan (SPCCP) Train employees on SPCCP Review existing P2 and Good Housekeeping policies and practices Revise and implement P2 and Good Housekeeping policies and practices	Annual street sweeping initiated and collected sediments are transferred to outside facility Annual catch basin cleaning initiated

TABLE 1.1 Pelham 2003 MS4 BMPs	
Street Sweeping Catch basin cleaning Implement integrated pest management at Town facilities	Employees regularly trained
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
Additional Requirements	
BMPs:	Achievements:
Groundwater Recharge and Infiltration	Language included in Land Use Regulations under Conservation Subdivision Provisions
Public Drinking Water Supply	Well Ordinance enacted and updated

2.0 INTRODUCTION AND PERMIT COVERAGE

The Town of Pelham (the Town) is located 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 located 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 also with respect to adjacent towns both in New Hampshire and Massachusetts. For detailed waterbody mapping of the Town, see *Outfall & Impaired Waterbodies* mapping referenced in Section 7.0, *MCM3, Illicit Discharge Detection & Elimination Program* and in Appendix D2.

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.

TABLE 2.1 Pelham Stormwater Inventory			
	MS4 Regulated Area	Total	Percent in Regulated Area
Outfalls	313	438	72%
Catch Basins	1310	1763	75%

¹ Per GIS analysis of 2016 USGS National Land Cover Database

² Town of Pelham MS4 Asset Inventory, 2018-2019

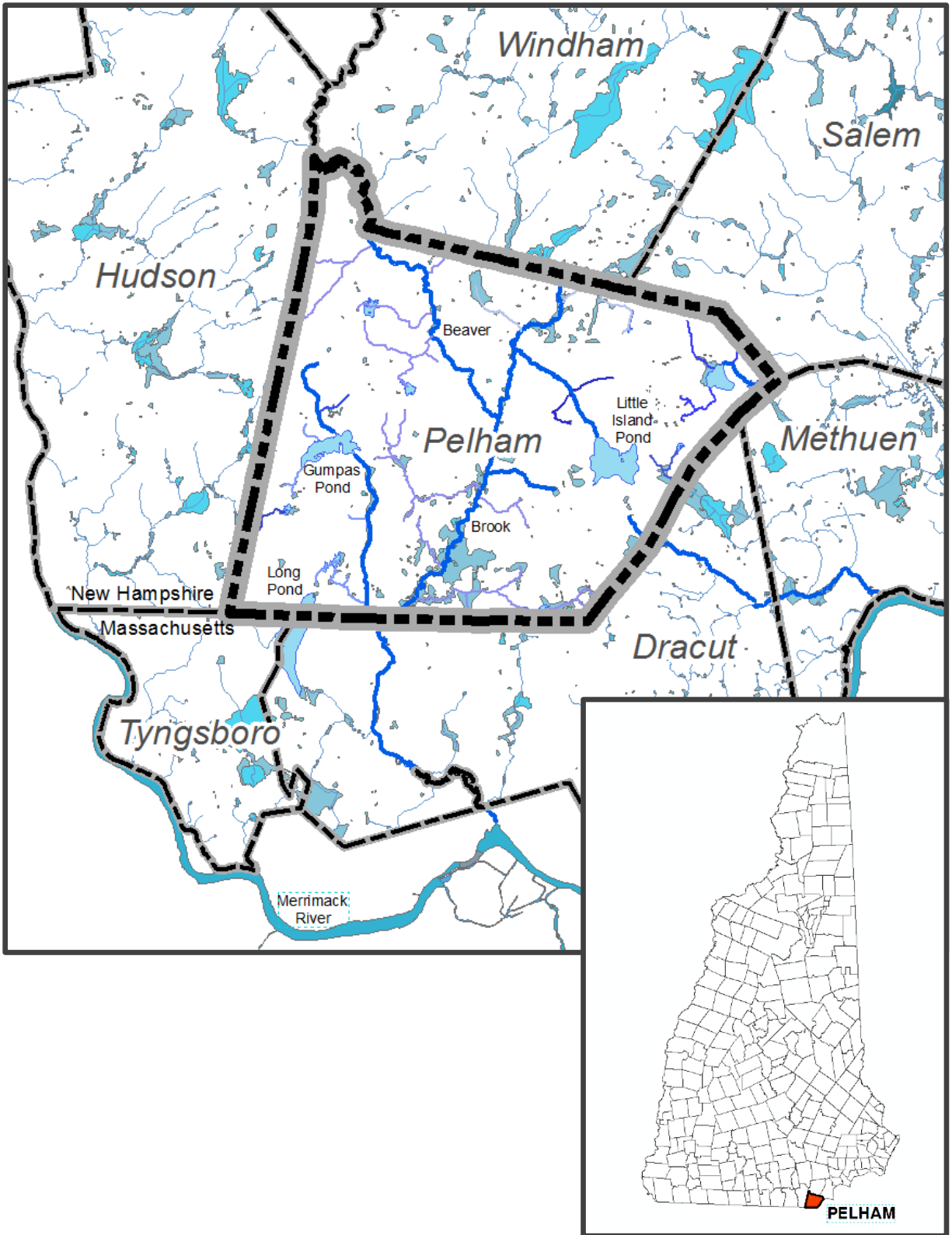


Figure 2.1 Pelham Locus and Adjacent Towns

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 (NRHPS);
- 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.

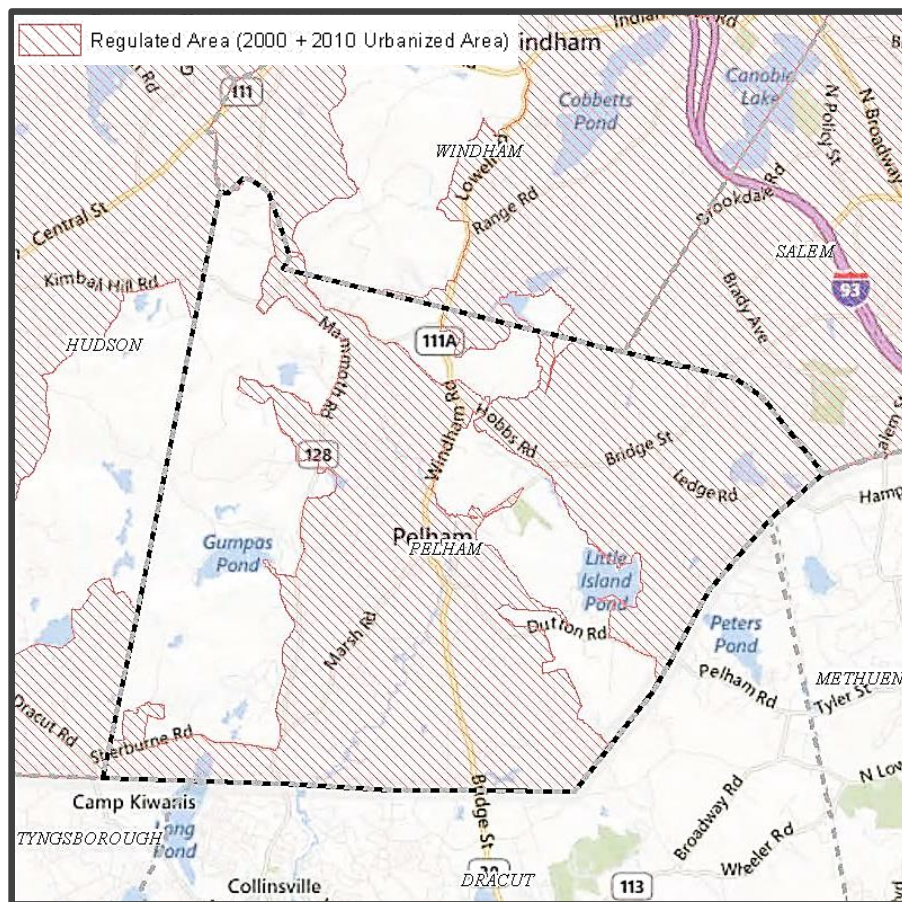


Figure 2.2 Town of Pelham MS4 Regulated Area³

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 with regard to 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 USF&W 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 with regard to 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 MS4;
- (4) a program to effectively control construction site stormwater discharges to the MS4;
- (5) a program to ensure that stormwater from development projects entering the MS4 is adequately controlled by the construction of stormwater controls; and
- (6) a good housekeeping program to ensure that stormwater pollution sources on municipal properties and from municipal operations are minimized.

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.

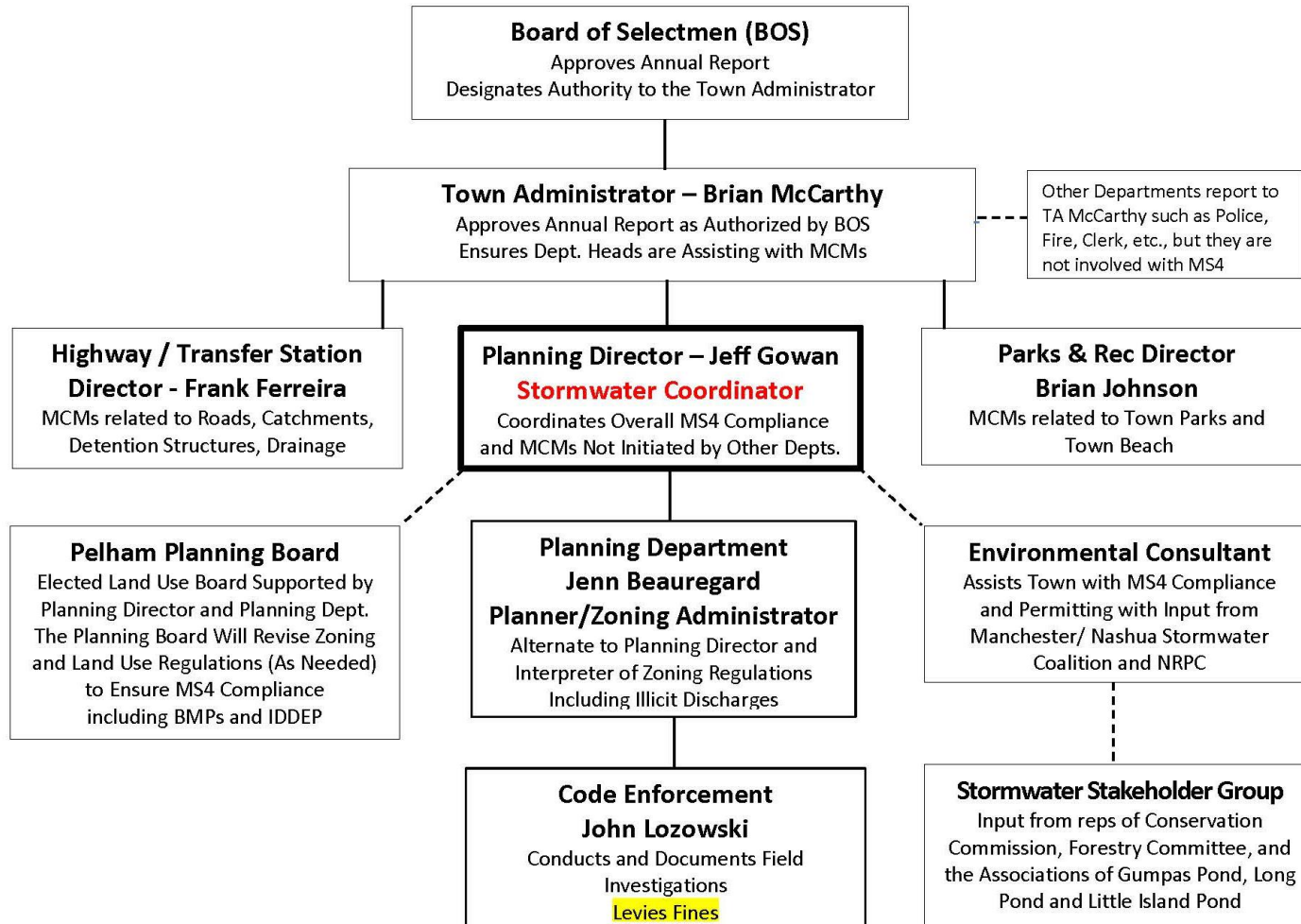
The SWMP must be made available to the public in hard copy and should also be available online for download or electronically by request. [recommend password protected pdf]

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 located in the front pages of this manual.

3.0 STORMWATER MANAGEMENT PROGRAM TEAM

Town of Pelham, NH MS4 Organizational Chart PERMIT YEAR 1 (2018-2019)



4.0 PELHAM WATER RESOURCES AND IMPAIRED WATERS

4.1 RECEIVING WATERS

The following table lists all receiving waters, impairments, and number of outfalls discharging to each waterbody segment identified in the EPA approved 2016 NH 303(d) and 305(b) lists.

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody segment that receives flow from the MS4		Number of outfalls into receiving water segment (UA)	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)
BARTLETT BROOK - UNNAMED BROOK	NHRIV700061207-01	0	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Mercury
BEAVER BROOK	NHRIV700061203-21	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"/>	Mercury, pH
BEAVER BROOK	NHRIV700061203-22	16	<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"/>	Mercury, Benthic-Macroinvertebrate Bioassessments (Streams)
BEAVER BROOK - TONY'S BROOK	NHRIV700061205-01	6	<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"/>	Mercury, Benthic-Macroinvertebrate Bioassessments (Streams), Habitat Assessment (Streams)
BEAVER BROOK	NHRIV700061205-02	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"/>	Mercury
BEAVER BROOK	NHRIV700061205-04	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"/>	Mercury

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody segment that receives flow from the MS4		Number of outfalls into receiving water segment (UA)	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	NHRIV700061205-13	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"/>	Mercury
BEAVER BROOK - UNNAMED BROOK	NHRIV700061205-14	1	<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"/>	Mercury
BURNS ROAD DAM	NHIMP700061205-02	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"/>	Mercury
FROST BROOK – TO GUMPAS POND*	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"/>	Mercury, pH
GOLDEN BROOK**	NHRIV700061204-03	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"/>	Mercury
GOLDEN BROOK - ISLAND POND BROOK	NHRIV700061204-04	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"/>	Mercury
GUMPAS POND	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"/>	Mercury, pH
GUMPAS POND BROOK	NHRIV700061205-06	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"/>	Mercury
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"/>	Mercury
HARRIS BROOK - UNNAMED BROOK	NHRIV700061102-26	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"/>	Mercury
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"/>	Mercury
LITTLE ISLAND POND*	NHLAK700061204-02	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"/>	Mercury, pH

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody segment that receives flow from the MS4		Number of outfalls into receiving water segment (UA)	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)
LITTLE ISLAND POND - CAMP RUNELS BEACH	NHLAK700061204-02-02	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"/>	Mercury, pH
LONG POND	NHLAK700061205-02-01	1	<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"/>	Mercury, Cyanobacteria hepatotoxic microcystins
LONG POND – TOWN BEACH	NHLAK700061205-02-02	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"/>	Mercury, Cyanobacteria hepatotoxic microcystins
MUSQUASH BROOK***	NHRIV700061206-20	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"/>	Mercury
NEW MEADOW BROOK	NHRIV700061205-03	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"/>	Mercury
UNNAMED BROOK	NHRIV700061102-25	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"/>	Mercury
UNNAMED BROOK	NHRIV700061102-31	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"/>	Mercury
UNNAMED BROOK	NHRIV700061204-11	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"/>	Mercury
UNNAMED BROOK	NHRIV700061204-18	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"/>	Mercury
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"/>	Mercury
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"/>	Mercury

TABLE 4.1 Pelham New Hampshire Receiving Waters												
Waterbody segment that receives flow from the MS4		Number of outfalls into receiving water segment (UA)	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*	NHRIV700061205-09	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"/>	Mercury
UNNAMED BROOK	NHRIV700061205-10	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"/>	Mercury
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"/>	Mercury
UNNAMED BROOK	NHRIV700061205-15	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"/>	Mercury
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"/>	Mercury
UNNAMED BROOK	NHRIV700061205-17	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"/>	Mercury
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"/>	Mercury
UNNAMED BROOK - SPRING STREET DAM	NHIMP700061207-01	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"/>	Mercury
UNNAMED BROOK - GOING INTO MASS.	NHRIV700061207-02	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"/>	Mercury
* Waterbody is entirely outside the MS4 Regulated area.												
** Waterbody is substantially outside of the Pelham boundary.												
*** Waterbody is both outside the MS4 Regulated area and substantially the Pelham boundary.												
		Per Part 2.2.1.c of the 2017 Permit: "the "Northeast Regional Mercury TMDL" do not specify wasteload allocations or other requirements either individually or categorically for the MS4 discharges and specify that load reductions are to be achieved through reduction in atmospheric deposition sources. No requirements related to these TMDLs are imposed on MS4 discharges under this Part."										

4.2 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 303(d) list (2016)*. 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)

Table 4.2 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 website⁵).

Table 4.3 presents the waterbodies in Pelham that are listed by NHDES (2016) as having Category 4 and/or 5 impairments, and includes each pollutant contributing to the impairment. The overall impairment category for any waterbody is defined by the highest level of any pollutant impairment.

⁵ <https://www.des.nh.gov/organization/divisions/water/wmb/swqa/index.htm>

TABLE 4.2 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 4.3 Town of Pelham Impaired Waters				
NHDES 303(d) LIST IMPAIRMENT ASSESSMENT OUTCOME				
SEVERE: NOT SUPPORTING, SEVERE (5-P and 4A-P)				
TMDL	New Hampshire Statewide TMDL for Bacteria Impaired Waters, September 2010			
Indicator contributing to Impairment	BEAVER BROOK NHRIV700061203-22	BEAVER BROOK - TONYS BROOK NHRIV700061205-01	LONG POND NHLAK700061205-02-01	LONG POND - TOWN BEACH NHLAK700061205-02-02
Benthic-Macroinvertebrate Bioassessments (Streams)	5-P	5-P		
Chlorophyll-a			5-M	
Cyanobacteria hepatotoxic microcystins			5-M	5-P
Dissolved oxygen saturation			5-M	
Escherichia coli	4A-M	4A-P		
Habitat Assessment (Streams)*		4C-P		
Mercury**	4A-M	4A-M	4A-M	4A-M
Oxygen, Dissolved			5-P	
Phosphorus (Total)			5-M	
POOR: NOT SUPPORTING, MARGINAL (5-M and 4A-M)				
Indicator contributing to Impairment	BEAVER BROOK NHRIV700061203-21		FROST BROOK - TO GUMPAS POND NHRIV700061205-05	
Mercury**	4A-M		4A-M	
pH	5-M		5-M	

* TMDL not required for this parameter

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

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 compete 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 Nashua-Manchester Regional Stormwater Coalition (NMRSC), several resources for public outreach messages are available to the Town on the NMRSC web page⁶.

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.

⁶ <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	Planning Director 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	Planning Director 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)	Planning Director 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	Planning Director 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)	Planning Director 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	Planning Director 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)	Planning Director working with Regional Stormwater Coalition		Yearly
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	Planning Director working with Regional Stormwater Coalition	Attendees to webinar.	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 Minimum Requirement (MS4 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 5.4 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 5.4 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, email, web pages, and 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;
 - publicly posted flyers/brochures taken;
- 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 is expected to be developed through several opportunities that include, but is 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 clean-up 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.	Part 2.3.3.1	Planning Director working with Road Agent 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.	Part 2.3.3.2	Planning Director working with Road Agent and environmental consultant	Allow public to comment on stormwater management plan annually.	Year 2
2.3	SWMP Stakeholder Group	Continue group, hold quarterly meetings, invite public members. Group to provide review, assessment, and recommend revisions for SWMP.	Part 2.3.3.2	Planning Director working with other town departments	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, email, web pages, and 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 (with the exception of 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 within the MS4, or a sump pump that discharges contaminated water on an intermittent basis.

Some illicit discharges are intentional, such as: dumping used oil (or other pollutant) 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 MS4. 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 the MS4, provide municipal intervention, disallow non-stormwater or increased discharges to the MS4, and/or levy fines. (See also IDDEP appendices).

- MS4 system mapping that at a minimum spatially locates waterbodies, known impairments, outfalls, watersheds, catchments, municipally owned stormwater treatment structures (detention basins, culverts, catch basins, infiltration areas, etc.), and interconnections with other MS4s. (IDDEP Section 3).
- 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).
- Standard operating procedures required under the IDDEP (IDDEP appendices).
- A continuous assessment and ranking methodology for prioritizing outfall investigations (IDDEP Section 5).
- Dry and wet weather screening and sampling programs. (IDDEP Section 6 and IDDEP appendices).
- Written catchment investigation program (due December 31, 2019). (IDDEP Section 7).
- A description of a municipal training plan (IDDEP Section 8).
- Continuous data maintenance and progress assessment and reporting (IDDEP Section 9).

7.2 MCM 3 BMPs

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

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 map and update during IDDE program completion.	<i>Part 2.3.4.5</i>	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
3.2	Written IDDE program development	Create written IDDE program.	<i>Part 2.3.4.6</i>	Planning Director working with Road Agent and environmental consultant	Complete within 1 year of effective date of permit and update as required.	2019
3.3	Implement IDDE program	Implement catchment investigations according to program and permit conditions.	<i>Part 2.3.4.8</i>	Planning Director working with Road Agent and environmental consultant	Complete 10 years after effective date of permit.	on-going
3.4	Employee Training	Train employees on IDDE implementation.	<i>Part 2.3.4.11</i>	Planning Director working with Road Agent and environmental consultant	Train Annually.	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
3.5	Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions.	<i>Part 2.3.4.7.b</i>	Planning Director working with Road Agent and environmental consultant	Complete 3 years after effective date of permit.	2019
3.6	Conduct wet weather screening	Conduct in accordance with outfall screening procedure and permit conditions.	<i>Part 2.3.4.8.c.ii.2</i> <i>Part 2.3.4.8.e.ii</i>	Planning Director working with Road Agent and environmental consultant	Complete 10 years after effective date of permit.	2020
3.7	Ongoing screening	Conduct in dry weather and wet weather screening (as necessary).	<i>Part 2.3.4.10</i>	Planning Director working with Road Agent and environmental consultant	Complete ongoing outfall screening on completion of IDDE program.	
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	<i>Part 2.3.4.7.a</i>	Planning Director working with Road Agent and environmental consultant	Complete initial ranking within 1 year after effective date of permit.	2019/2021

7.3 MCM 3 IMPLEMENTATION PLAN / SCHEDULE

The Town will implement this IDDEP under the following schedule:

Year 1 (Due June 30, 2019)

- 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. (Due September 30, 2019).

Year 2 (Due June 30, 2020)

- Update mapping to include catchment delineations, upstream outfall infrastructure (including engineered swales and other treatment practices).
- Complete written catchment investigation procedures. (Due December 31, 2019).
- Begin dry weather prioritized outfall screening and 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 September 30, 2020).

Year 3 (Due June 30, 2021)

- Continue to update mapping based on catchment investigations.
- Complete updated outfall ranking.
- Continue dry weather outfall screening and catchment investigations.
- Start wet weather outfall screening/sampling.
- 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 30, 2021).

Year 4 through Year 9

- Continue to update mapping based on catchment investigations.
- Continue wet weather outfall screening/sampling.
- Continue 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 wet weather 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 30, 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 to the MS4. 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 ranked high priority by the end of Year 3.

With 110 outfalls initially ranked as "High", and roughly 18-months to complete the dry weather screening (excluding 3 winter months and allowing 3 months to prepare Year 3 reporting and updated priority ranking prior to due date), screening should begin in the summer/fall of 2019. Outfalls can be separated into 3 six-month periods in order of ranked score, with the highest scoring outfalls screened in the first six-month period.

Six-month milestones will include:

- a summary of the number of outfalls screened;
- the total hours invested in the screening activities; and
- a summary of the screening results (i.e. number of dry weather discharges identified).

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

The Town currently has 318 outfalls identified in the MS4 (ranked both "High" and "Low"). Although many of the outfalls may become excluded based on the results of dry weather screening (no suspected illicit discharges), other outfall catchments may require additional screening and/or time to fully investigate. It is difficult to accurately estimate a number of catchment investigation per year in this initial year of the Permit; however, a plan must be established with the understanding that it will become more refined over time as more information is collected within the MS4.

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.

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.

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 the MS4.
- 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
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
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
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

8.3 MCM 4 IMPLEMENTATION PLAN / SCHEDULE

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

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 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	
	303-3 Landscape and Buffering Requirements	
	303-4 Design & Construction Standards for Drainage and Stormwater Management Facilities	
	307-93 Purpose	To reduce erosion and sedimentation by retaining existing vegetation.
9.3 Site Plan Review Procedures	Site Plan Review Application Form	

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>)		
	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	
	305-3 Inspection Requirements and Procedures	
	Building Permit Process	
9.5 BMPs	203-6 Design and Construction Standards for the Control of Erosion & Sedimentation	
	303-4 Design & Construction Standards for Drainage and Stormwater Management Facilities	
	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 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 practical (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, snow storage areas prior to discharge to the MS4 or infiltration to groundwater.
- Regulate new development projects per the New Hampshire Stormwater Manual to provide:
 - treatment and infiltration practices of stormwater runoff to contain the water quality volume; and
 - BMPs that remove 90% of the average annual load of Total Suspended Solids (TSS) and 60% of the average annual load of Total Phosphorus (TP) generated from the total post-construction impervious area.
- Regulate redevelopment projects per the New Hampshire Stormwater Manual to provide:
 - treatment and infiltration practices of stormwater runoff to contain the water quality volume; and
 - 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.

- 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 or annual certifications 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.
- Complete an assessment of Town regulations relative implementing green infrastructure practices within the MS4.
- 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 will be a part of the SWMP.	Part 2.3.6.b	Planning Director and Planning Board	Require submission of as-built plans for completed projects.	
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 MS4 through the mitigation of impervious area.	Part 2.3.6.e	Planning Director and Planning Board	Complete 4 years after effective date of permit and report annually on retrofitted properties.	

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.	
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.	

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 the retention or treatment requirements of the permit and consistent with the Nashua Stormwater Coalition and other Model Stormwater Standards.	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 2 years after effective date of permit.	
5.6	Infiltration Practices	Require groundwater recharge the maximum extent practical (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 2 years after effective date of permit.	
5.7	Groundwater Protection	Provide regulatory protections for groundwater/water supply protection	<i>Part 3.2</i>	Planning Director and Planning Board	Complete 2 years after effective date of permit.	

9.3 MCM 5 IMPLEMENTATION PLAN / SCHEDULE

The Town has implemented all MCM 4 BMPs as due in Permit Year 1 per Table 9.1.

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;
- number of developments that manage salt and snow in compliance with the Permit;
- proposed treatment devices and practices that reduce TSS and TP loading (MEP) into the MS4;
- submissions of as-built stormwater practices;
- submissions of long-term O&M of as-built stormwater practices; and
- 100% annual inspections and/or annual certifications of 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;
- ☐ 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 includes 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 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.
- 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
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
6.3	Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure.	Part 2.3.7.1.d.i	Department of Public Works	Complete 2 years after effective date of permit.	2020
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

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.	2019
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.	2019
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.	2020
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.	On-going
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.	On-going

10.3 MCM 6 IMPLEMENTATION PLAN / SCHEDULE

With the exception of catch basin cleaning and street sweeping, which are established Town procedures, all BMPs for MCM 6 will be completed in in Year 2.

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 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., Category 4A and 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 Pelham TMDLs and Water Quality Limited Waters	
2017 MS4 PERMIT SECTION 2.2.1 New Hampshire Statewide TMDL for Bacteria Impaired Waters September 2010⁷ (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.

In the event that 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

⁷ <https://www.des.nh.gov/organization/divisions/water/wmb/tmdl/categories/publications.htm>

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:
 - grass and fertilizer;
 - pet waste;
 - yard waste; and
 - septic system maintenance.
- Rank all outfalls discharging to the impaired waterbody as “High” priority for catchment investigations (MCM 3).

11.2 BACTERIA/PATHOGENS BMPs

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

TABLE 11.2 Bacteria/Pathogens TMDLS MCM						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/Party	Measurable Goal	Year to Start Implementation
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>	Planning Director working with Regional Stormwater Coalition	Number of educational materials to dog owners at the time of issuance or renewal of a dog license.	2019
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>	Planning Director working with Regional Stormwater Coalition	Number of educational materials to septic systems owners.	2019
B.3	Illicit Discharge Program	Catchments draining to any waterbody impaired for bacteria or pathogens shall be designated either Problem Catchments or HIGH priority in implementation of the IDDE program annually.	<i>Appendix F Part II.1.a.ii (referencing Part 2.3.4)</i>	Planning Director working with environmental consultant	Identified number of Problem Catchments or HIGH priority areas.	2019

11.3 PHOSPHORUS IMPAIRMENT

As identified in Table 4.3, Long Pond located within the Town of Pelham is classified as a Category 5-M impaired water for total phosphorus without a TMDL. 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 11.3 below.

In the event that 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 the impaired waterbody as “High” priority for catchment investigations (MCM 3).
- Develop municipal SOPs (MCM 5) 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.
- Outfalls with existing structural BMPs that discharge into the impairment-listed waters shall be annually monitored and tracked, reporting on estimated mass volume of phosphorus per Appendix H of the Permit.

Requirements Due by Year 2

- Add requirement for optimized phosphorus removal BMPs in MCMs 4 and 5 and include potential for infiltration practices in facility retrofitting ranking.

Requirements Due by Year 4

- Develop a Phosphorus Source Identification Report (see below).

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 area draining to the water quality limited receiving water segments or their tributaries, incorporating updated mapping of the MS4 and applicable catchment delineations (*Part 2.3.4.6*).
2. Screening, sampling, and monitoring results, targeting the receiving impairment-specific 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 11.3 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>	Planning Director working with Regional Stormwater Coalition	Number of educational materials distributed to target audience.	2019
P.2	Public Education	Distribute an annual message in the summer (June/July) 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>	Planning Director working with Regional Stormwater Coalition	Number of educational materials distributed to target audience.	2019
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>	Planning Director working with Regional Stormwater Coalition	Number of educational materials distributed to target audience.	2019
P.4	Stormwater Management in New Development and Redevelopment	The requirement for adoption/amendment of an ordinance 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	Adoption of ordinance directed at phosphorus removal.	2020

TABLE 11.3 Phosphorus Impairment MCM						
	BMP Title	BMP Description	Permit Cross-Reference	Responsible Department/ Party	Measurable Goal	Year to Start Implementation
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 working with environmental consultant	Annual Report of BMPs resulting from retrofit inventory and priority ranking.	2019
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>	Planning Director working with Highway Dept.	Adoption of procedures	2019
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>	Planning Director working with Highway Dept.	Tracking of increased street sweeping on the Annual Report.	2019
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>	Planning Director working with environmental consultant	Submittal of final report to USEPA in Year 4 Annual Report	2022

TABLE 11.3 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 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 11.3 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 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 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 Total 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 nonpoint 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.

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 30) 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 the EPA no more than 90 days after the close of the reporting period (September 30). 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 WQLQs;
- ☐ 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 proposed project plans reviewed, number construction inspections, number enforcement actions issued (MCM 4);
- ☐ status of post construction ordinances/regulations (MCM 5);
- ☐ status of municipal O&M programs (Year 2) and SWPPP programs (Year 2) (MCM 6);
- ☐ 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.