

Stormwater Management Program (SWMP)

Town of Durham, NH

Permit Year 1

EPA NPDES Permit Number NHR041000

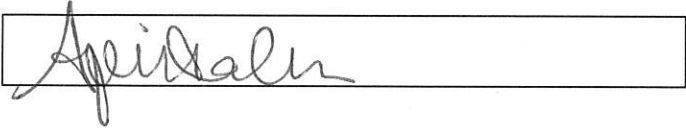
Certification

"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."

Printed Name

April Talon, P.E. Town Engineer

Signature



Date

6/30/19

Background

Stormwater Regulation

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted stormwater runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated 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 Census designated Urbanized Area are required to seek NPDES permit coverage for those stormwater discharges.

Permit Program Background

On May 1, 2003, EPA Region 1 issued its Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2003 small MS4 permit) consistent with the Phase II rule. The 2003 small MS4 permit covered "traditional" (i.e., cities and towns) and "non-traditional" (i.e., Federal and state agencies) MS4 Operators located in the states of Massachusetts and New Hampshire. This permit expired on May 1, 2008 but remained in effect until operators were authorized under the 2016 MS4 general permit, which became effective on July 1, 2018.

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. The SWMP accurately describes the permittees plans and activities. The document should be updated and/or modified during the permit term as the permittee's activities are modified, changed or updated to meet permit conditions during the permit term. The main elements of the stormwater management program are (1) a public education program in order to affect public behavior causing stormwater pollution, (2) an opportunity for the public to participate and provide comments on the stormwater program (3) a program to effectively find 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.

Town Specific MS4 Background (optional)

Small MS4 Authorization

The NOI was submitted on

The NOI can be found at the following (document name or web address):

Authorization to Discharge under the 2017 NH Small MS4 General Permit was granted on

The Authorization Letter can be found (document name or web address):

Stormwater Management Program Team

SWMP Team Coordinator:

Position/Title: Michael Lynch
Public Works Director
603-868-5578
mlynch@ci.durham.nh.us

SWMP Team:

Position/Title: April Talon, P.E.
Town Engineer
603-868-5578
atalon@ci.durham.nh.us

Position/Title: Doug Bullen
Director of Operations
603-868-5578
dbullen@ci.durham.nh.us

Receiving Waters

The list of receiving waters, impairments and number of outfalls discharging to each waterbody segment has been included in the Notice of Intent.

Eligibility: Endangered Species and Historic Properties

Endangered Species and Historic Properties eligibility information has been included in the Notice of Intent.

MCM 1
Public Education and Outreach
Permit Part 2.3.2

Requirement Year 1

BMP: Grass and Fertilizer

Description:	Mail UNH Extension Green Grass & Clear Water post card to residential addresses within MS4
Targeted Audience:	Residential &/or Business
Responsible Department/Parties:	Public Works
Measurable Goal(s):	To see an increased awareness of proper fertilizer use. The Town of Durham will collaborate with the Seacoast Stormwater Coalition's efforts to determine tracking and evaluation methods to be used.
Message Date:	June 28, 2019

BMP: Petwaste Disposal

Description:	Distribute Every Drop pet waste brochure annual message with dog license or renewal each year.
Targeted Audience:	Pet Owners
Responsible Department/Parties:	Town Clerks Office and Public Works
Measurable Goal(s):	Track the number of residents who log in and take the pledge to Scoop the Poop.
Message Date:	Summer, time of license renewal, Message posted in Durham Community Friday Updates May 17, 2019 found here http://www.ci.durham.nh.us/fridayupdate/friday-updates-may-17th-2019

BMP: Disposal of Leaf and Grass Clippings

Description:	Pass out leaf and debris brochures and information promoting the use of Fall Leaf and Brush Collection the first week of November 2019
Targeted Audience:	Residential &/or Business
Responsible Department/Parties:	Durham Public Works
Measurable Goal(s):	TBD
Message Date:	Fall

Requirement Year 2

BMP: Septic System Maintenance

Description:	TBD
Targeted Audience:	Septic System Owners
Responsible Department/Parties:	Building/Code Enforcement Office
Measurable Goal(s):	Count the number of reconstructed or eliminated septic systems.
Message Date:	Fall

BMP: Grass and Fertilizer

Description:	TBD
Targeted Audience:	Residential &/or Business
Responsible Department/Parties:	Public Works
Measurable Goal(s):	TBD
Message Date:	Spring

BMP: Petwaste Disposal

Description:	Distribute Every Drop pet waste brochure annual message with dog license or renewal each year.
Targeted Audience:	Pet Owners
Responsible Department/Parties:	Town Clerks Office and Public Works
Measurable Goal(s):	Track the number of residents who log in and take the pledge to Scoop the Poop.
Message Date:	Spring

BMP: Disposal of Leaf and Grass Clippings

Description:	TBD
Targeted Audience:	Residential &/or Business
Responsible Department/Parties:	
Measurable Goal(s):	TBD
Message Date:	Fall

BMP: TBD

Description: TBD
Targeted Audience: Developer/Construction
Responsible Department/Parties:
Measurable Goal(s): TBD
Message Date: Fall

Requirement Year 3

BMP: Grass and Fertilizer

Description: TBD
Targeted Audience: Residential &/or Business
Responsible Department/Parties:
Measurable Goal(s): TBD
Message Date: Spring

BMP: Petwaste Disposal

Description: TBD
Targeted Audience: Pet Owners
Responsible Department/Parties:
Measurable Goal(s): TBD
Message Date: TBD

BMP: Disposal of Leaf and Grass Clippings

Description: TBD
Targeted Audience: Residential &/or Business
Responsible Department/Parties:
Measurable Goal(s): TBD
Message Date: Fall

BMP: TBD

Description: TBD

Targeted Audience: Industrial

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: Fall

Requirement Year 4

BMP: Grass and Fertilizer

Description: TBD

Targeted Audience: Residential &/or Business

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: Spring

BMP: Petwaste Disposal

Description: TBD

Targeted Audience: Pet Owners

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: TBD

BMP: Disposal of Leaf and Grass Clippings

Description: TBD

Targeted Audience: Residential &/or Business

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: Fall

BMP: TBD

Description: TBD

Targeted Audience: Developer/Construction

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: Fall

Requirement Year 5

BMP: Grass and Fertilizer

Description: TBD

Targeted Audience: Residential &/or Business

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: Spring

BMP: Petwaste Disposal

Description: TBD

Targeted Audience: Pet Owners

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: TBD

BMP: Disposal of Leaf and Grass Clippings

Description: TBD

Targeted Audience: Residential &/or Business

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: Fall

BMP: TBD

Description: TBD

Targeted Audience: Industrial

Responsible Department/Parties:

Measurable Goal(s): TBD

Message Date: Fall

MCM 2
Public Involvement and Participation
Permit Part 2.3.3

BMP: Public Review of Stormwater Management Program

Location of Plan and/or Web Address:

<https://www.ci.durham.nh.us/publicworks/stormwater>

Responsible Department/Parties:

Public Works Department

Measurable Goal(s):

Stormwater Management Plan is publicly available

BMP: Public Participation in Stormwater Management Program Development

Description:

Annual public input provided

Responsible Department/Parties:

Public Works Department

Measurable Goal(s):

Annual public input provided

MCM 3
**Illicit Discharge Detection and
Elimination (IDDE) Program**
Permit Part 2.3.4

BMP: IDDE Legal Authority

See Illicit Discharge Detection and Elimination (IDDE) Plan

BMP: Sanitary Sewer Overflow (SSO) Inventory

See Illicit Discharge Detection and Elimination (IDDE) Plan

BMP: Map of Storm Sewer System

See Illicit Discharge Detection and Elimination (IDDE) Plan

BMP: IDDE Program

See Illicit Discharge Detection and Elimination (IDDE) Plan

BMP: Employee Training

See Illicit Discharge Detection and Elimination (IDDE) Plan

MCM 4
Construction Site Stormwater Runoff Control
Permit Part 2.3.5

BMP: Sediment and Erosion Control Ordinance

Completed (by May 1, 2008) ☒

Ordinances Link or Reference:

Part 3, Section 7.2 of the Town of Durham Site Plan Regulations
<https://www.ci.durham.nh.us/planning/site-plan-regulations>

Department Responsible for Enforcement:

Planning Board and Public Works Department

BMP: Site Plan Review Procedures

Written procedures completed (by year 1) ☒

Document Name and/or Web Address:

Part 2, Site Plan Review Process of the Town of Durham Site Plan Regulations
<https://www.ci.durham.nh.us/planning/site-plan-regulations>

Department Responsible for Enforcement:

Planning Board and Public Works Department

Description: Review proposed projects to ensure their conformance with applicable regulations

Measurable Goal(s): Conduct site plan review of 100% of projects according to the procedures outlined above.

BMP: Site Inspections and Enforcement of Sediment and Erosion Control Measures Procedures

Completed (by year 1) ☒

Document Name and/or Web Address:

Part 1 Article 6 of the Town of Durham Site Plan Regulations
<https://www.ci.durham.nh.us/planning/site-plan-regulations>

Department Responsible for Enforcement:

Code Enforcement Officer and Town Council through the Public Works Department

Description: Inspect construction sites to ensure their conformance with applicable regulations

Measurable Goal(s): Inspect 100% of construction sites as outlined in the above document and take enforcement actions as needed.

MCM 5
Post Construction Stormwater Management
in New Development and Redevelopment
Permit Part 2.3.6

BMP: Post-Construction Ordinance

Completed (by year 2)

Town Ordinances Link or Reference:

Part 3 Section 15.8 of the Town of Durham Site Plan Regulations
<https://www.ci.durham.nh.us/planning/site-plan-regulations>

Department Responsible for Enforcement:

Planning Board and Public Works Department

BMP: Street Design and Parking Lot Guidelines Report

Completed (by year 4)

Document Name and/or Web Address:

TBD

Department Responsible for Enforcement:

TBD

Description:

Measurable Goal(s):

Recommendations are implemented by year 4 with progress reported annually.

BMP: Green Infrastructure Report

Completed (by year 4)

Document Name and/or Web Address:

TBD

Department Responsible for Enforcement:

TBD

Description:

Measurable Goal(s):

Recommendations are implemented by year 4 with progress reported annually.

BMP: List of Municipal Retrofit Opportunities

Completed (by year 4)

Document Name and/or Web Address:

Department Responsible for Enforcement:

Description:

Measurable Goal(s):

The list is completed by year 4 and updated as needed.

MCM 6

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Permit Part 2.3.7

PERMITTEE OWNED FACILITIES

BMP: Parks and Open Spaces Operations and Maintenance Procedures

Written Document Completed (by year 2)

Document Name and/or Web Address:

Responsible Department/Parties:

Description:

Establish procedures to address the proper use, storage, and disposal of pesticides, herbicides, and fertilizers (PHF) including minimizing the use of these products in accordance with Section 2.3.7.1.a of the MS4 permit.

Measurable Goal(s):

Implement the SOP on 100% of the parks and open spaces.

BMP: Buildings and Facilities Operations and Maintenance Procedures

Written Document Completed (by year 2)

Document Name and/or Web Address:

Responsible Department/Parties:

Description:

Evaluate the use, storage, and disposal of petroleum products and other potential stormwater pollutants. Provide employee training as necessary, ensure that Spill Prevention Plans are in place. Develop management procedures for dumpsters and other waste management equipment. Sweep lots and areas surrounding the facilities clean to reduce runoff of pollutants in accordance with Section 2.3.7.1 b. of the MS4 permit.

Measurable Goal(s):

Implement the SOP on 100% of buildings and facilities.

BMP: Vehicles and Equipment Operations and Maintenance Procedures

Written Document Completed (by year 2)

Document Name and/or Web Address:

Responsible Department/Parties:

Description:

Establish procedures for the storage of permittee vehicles. Vehicles with fluid leaks shall be stored indoors or containment shall be provided. Evaluate fueling areas owned by the permittee or used by permittee vehicles. Establish procedures to ensure that vehicle wash waters are not discharged to municipal storm drains or surface waters.

Measurable Goal(s):

Implement the SOP on 100% of vehicles and equipment.

INFRASTRUCTURE

BMP: Catch Basin Cleaning Program

Written Document Completed (by year 1)

Document Name and/or Web Address:

Responsible Department/Parties:

Description:

The Town of Durham performs routine inspections, cleaning, and maintenance of the approximately 570 catch basins that are located within the MS4 regulated area. The Town of Durham will implement the following catch basin inspection and cleaning procedures to reduce the discharge of pollutants from the MS4.

- Routine inspection and cleaning of catch basins. Catch basins should be cleaned such that they are no more than 50 percent full at any time. The Town of Durham will initially inspect all catch basins within the regulated area within two (2) years of the effective date of the permit to evaluate sediment or debris accumulation and establish optimal inspection and maintenance frequencies to meet the “50 percent” goal.
- If a catch basin sump is more than 50 percent full during two consecutive routine inspections or cleaning events, the finding will be documented, the contributing drainage area will be investigated for sources of excessive sediment loading, and to the extent practicable, contributing sources will be addressed. If no contributing sources are found, the inspection and cleaning frequency will be increased.
- Catch basins located near construction activities (roadway construction, residential, commercial, or industrial development or redevelopment) will be inspected and cleaned more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings (i.e., catch basins more than 50 percent full). Priority will also be given to catch basins that discharge to impaired waters.
- The following information will be included in each annual report:
 - Any action taken in response to excessive sediment or debris loadings
 - Total number of catch basins
 - Number of catch basins inspected
 - Number of catch basins cleaned
 - Total volume or mass of material removed from catch basins.

Measurable Goal(s):

All catch basins are cleaned in accordance to the document above such that no catch basin is more than 50% full at any given time.

BMP: Street Sweeping Program

Written Document Completed (by year 1)

Document Name and/or Web Address:

Process is outlined in this SWMP document.

Responsible Department/Parties:

Public Works Department

Description:

The Town of Durham will implement the following street and parking lot sweeping procedures to reduce the discharge of pollutants from the MS4:

- All streets with the exception of rural uncurbed roads with no catch basins or high-speed limited access highways will be swept and/or cleaned a minimum of once per year in the spring (following winter activities such as sanding).
- More frequent sweeping will be considered for targeted areas based on pollutant load reduction potential, inspections, pollutant loads, catch basin cleaning or inspection results, land use, impaired waters, or other factors.
- More frequent sweeping is required for municipally-owned streets and parking lots in areas that discharge to certain nutrient-impaired waters. Sweeping must be performed in these areas a minimum of two times per year, once in the spring (following winter activities such as sanding) and at least once in the fall (Sept 1 – Dec 1; following leaf fall)
- For rural uncurbed roadways with no catch basins and limited access highways, the Town of Durham will either meet the minimum frequencies above, or develop and implement an inspection, documentation, and targeted sweeping plan outlining reduced frequencies within two (2) year of the effective date of the permit and submit such plan with its year one annual report.
- The following information will be included in each annual report:
 - Number of miles cleaned, or the volume or mass of material removed

Measurable Goal(s):

Annually sweep 100% of all streets and municipal parking lots in accordance with the schedule listed above.

BMP: Winter Road Maintenance Program

Written Document Completed (by year 1)

Document Name and/or Web Address:

Process is outlined in this SWMP document.

Responsible Department/Parties:

Public Works Department

Description:

The Town of Durham will implement the following winter maintenance procedures to reduce the discharge of pollutants from the MS4:

- Minimize the use and optimize the application of sodium chloride and other salt (while maintaining public safety) and consider opportunities for use of alternative materials.
- Optimize sand and/or chemical application rates through the use, where practicable, of automated application equipment (e.g., zero velocity spreaders), anti-icing and pre-wetting techniques, implementation of pavement management systems, and alternate chemicals. Maintain records of the application of sand, anti-icing and/or de-icing chemicals to document the reduction of chemicals to meet

established goals.

- Prevent exposure of deicing product (salt, sand, or alternative products) storage piles to precipitation by enclosing or covering the storage piles. Implement good housekeeping, diversions, containment or other measures to minimize exposure resulting from adding to or removing materials from the pile. Store piles in such a manner as not to impact surface water resources, groundwater resources, recharge areas, and wells
- Provide training for municipal employees on winter roadway maintenance procedures.

Measurable Goal(s): Evaluate at least one salt/chloride alternative for use in the municipality.

BMP: Stormwater Treatment Structures Inspection and Maintenance Procedures

Written Document Completed (by year 1)

Document Name and/or Web Address:

Responsible Department/Parties:

Description: Structural stormwater BMPs will be inspected annually at a minimum and maintained as needed.

Measurable Goal(s): Inspect and Maintain 100% of treatment structures to ensure property function.

BMP: SWPPP

Written Document Completed (by year 2)

Document Name and/or Web Address:

Responsible Department/Parties:

Description: Develop and implement a SWPPP for all municipally owned or operated facilities in accordance with Section 2.3.7.2 of the MS4 permit.

Measurable Goal(s): Develop and implement SWPPP's for 100% of municipally owned facilities.

Annual Evaluation

Year 1 Annual Report

Document Name and/or Web Address:

EPA Website. Will be updated when complete and posted.

Year 2 Annual Report

Document Name and/or Web Address:

Year 3 Annual Report

Document Name and/or Web Address:

Year 4 Annual Report

Document Name and/or Web Address: TBD

Year 5 Annual Report

Document Name and/or Web Address: TBD

Year X Annual Report

Document Name and/or Web Address: TBD

TMDLs and Water Quality Limited Waters

Bacteria/Pathogens

Combination of Impaired Waters Requirements and TMDL Requirements as Applicable

Applicable Receiving Waterbody(ies) as listed in Appendix F of the MS4 permit and provided in the most recent approved list of impaired waterbodies.	TMDL/Impairment Name (if applicable)
Reservoir Brook R-10	E. Coli
College Brook R-09	E. Coli
Oyster River – Chelsey Brook R-04	E. Coli
Littlehale Creek (Beards and Littlehale) R11	E. Coli
Beards Creek (I06)	E. Coli
College Brook R-09	Enterococcus
Oyster River-Mill Pond Dam (I04)	E. Coli
Longmarsh Brook-Beaudette Brook (R08)	E. Coli
Longmarsh Brook-Beaudette Brook (R06)	E. Coli
Oyster River (E01-03)	Enterococcus

Annual Requirements Beginning Year 1

Rank outfalls to these receiving waters as high priority for IDDE implementation in the initial outfall ranking (see IDDE Plan for ranking)

Annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate as outlined in this SWMP

Nitrogen Impairment

Applicable Receiving Waterbody(ies)	TMDL/Impairment Name (if applicable)
Oyster River (E01-03)	Total Nitrogen

Annual Requirements Beginning Year 1

Rank outfalls to these receiving waters as high priority for IDDE implementation in the initial outfall ranking (See IDDE Plan for ranking).

Distribute an annual message that encourages the proper use and disposal of grass clippings and encourages the proper use of slow-release fertilizers as outlined in this SWMP.

Distribute an annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate as outlined in this SWMP.

Distribute an annual message encouraging the proper disposal of leaf litter as outlined in this SWMP.

Establish requirements for the use of slow release fertilizers on permittee owned property currently using fertilizer, in addition to reducing and managing fertilizer use as provided in part 2.3.7.1.

Establish procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces.

Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall) as included in this SWMP.

Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H already existing or installed in the regulated area by the permittee or its agents shall be tracked and the permittee shall estimate the nitrogen removal by the BMP consistent with Attachment 1 to Appendix H.

Requirements Due by Year 2

The requirement for adoption/amendment of the permittee's ordinance or other regulatory mechanism shall include a requirement that new development and redevelopment stormwater management BMPs be optimized for nitrogen removal.

Requirements Due by Year 4

Complete a Nitrogen Source Identification Report.

The document name (if attached) and/or web address is/are: TBD

Retrofit inventory and priority ranking under 2.3.6.1.b. shall include consideration of BMPs to reduce nitrogen discharges.

Requirements Due by Year 5

Evaluate all permittee-owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under Permit part 2.3.6.d.ii or identified in the Nitrogen Source Identification Report that are within the drainage area of the impaired water or its tributaries.

Complete a listing of planned structural BMPs and a plan and schedule for implementation.

Chloride Impairment

Applicable Receiving Waterbody(ies)	TMDL/Impairment Name (if applicable)
Reservoir Brook R-10	Chloride
College Brook R-09	Chloride

Annual Requirements Beginning Year 1

Rank outfalls to these receiving waters as high priority for IDDE implementation in the initial outfall ranking (See IDDE Plan for ranking).

Requirements Due by Year 3

Develop a Salt Reduction Plan.

Requirements Due by Year 4

Continue implementation of the Salt Reduction Plan.

Requirements Due by Year 5

Fully implement the Salt Reduction Plan.