

Stormwater Management Program (SWMP)

Town of Durham, NH

Permit Year 3

EPA NPDES Permit Number NHR041006

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

Todd Selig, Town Administrator

Signature

Date

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: Richard Reine
Public Works Director
603-868-5578
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SWMP Team:

Position/Title: April Talon, P.E.
Town Engineer
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Position/Title: Sam Hewitt
Director of Operations
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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 and 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 at Durham Household Hazardous Waste Day

Targeted Audience: Residential and Business

Responsible Department/Parties: Durham Public Works

Measurable Goal(s): Materials distribution, reduction in known dumping sites

Message Date: October 26, 2019

Requirement Year 2

BMP: Septic System Maintenance

Description:	Get Pumped NH Community Brochure https://getpumpednh.com/wp-content/uploads/2019/04/get-pumped-community-brochure.pdf What's Flushable Brochure https://getpumpednh.com/wp-content/uploads/2018/10/whats-flushable.pdf
Targeted Audience:	Septic System Owners
Responsible Department/Parties:	Building/Code Enforcement Office/ Durham Public Works
Measurable Goal(s):	The Building/Code Enforcement Office reported that their files indicated 9 septic systems were reconstructed between July 1, 2019 and June 17, 2020. They also reported there are some cases where the State approved replacements that the Town did not review.
Message Date:	Brochures are available at Building/Code Enforcement Office/Public Works Office and shared on community email notification system named Friday Updates June 26, 2020 here http://www.ci.durham.nh.us/fridayupdate/friday-updates-june-26-2020 .

BMP: Grass and Fertilizer

Description:	Promoted Seabrook-Hamptons Estuary Alliance webinar on June 15, 2020, titled "Green Grass, Clear Water" co-hosted with Julia Peterson of UNH Sea Grant / Cooperative Extension
Targeted Audience:	Residential and 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:	Posted to Town of Durham NH Facebook Page June 15, 2020

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. Every Drop Online Pet Pledges from 7/1/19 – 4/8/20 = 1
Message Date:	Summer, time of license renewal, “Pooper Scooper” Town Regulation Message posted in Durham Community Friday Updates May 8, 2020 found here http://www.ci.durham.nh.us/fridayupdate/friday-updates-may-8-2020 and Friday June 19, 2020 here http://www.ci.durham.nh.us/fridayupdate/friday-updates-june-19-2020 . Posted on Town of Durham NH Facebook Page on June 24, 2020.

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 at Durham Household Hazardous Waste Day
Targeted Audience:	Residential and Business
Responsible Department/Parties:	Durham Public Works
Measurable Goal(s):	Materials distribution, reduction in known dumping sites, increase in curbside collection tonnage
Message Date:	Fall

BMP: Developer/Construction

Description:	Preconstruction meetings are held prior to construction for any project that has gone through Planning Board Review. Address stormwater and construction erosion control practices at each meeting.
Targeted Audience:	Developer/Construction
Responsible Department/Parties:	Durham Public Works
Measurable Goal(s):	TBD
Message Date:	Ongoing

Requirement Year 3

BMP: Grass and Fertilizer

Description:

Mail UNH Extension Green Grass & Clear Water post card to residential addresses within MS4 https://www4.des.state.nh.us/nh-ms4/?page_id=54.

Distribution and promotion of flyers produced by UNH Cooperative Extension and NH Sea Grant outlining simple recommendations to keep lawns healthy while reducing water quality impacts - including proper fertilizer techniques and disposal of grass clippings.



Green Grass & Clear Water

Did you know that you can have a healthy, green lawn that is both attractive and safer for the environment?

Some lawn care practices create local water quality problems. Excess nutrients (including nitrogen and phosphorus found in fertilizers) that run off our properties into nearby waterbodies can trigger harmful algal blooms.

Many of us enjoy the time we spend working on our lawns and are willing to try new practices as long as our lawns continue to look good. This information card shares simple and easy tips, customized for northern New England, that can lead to **Green Grass & Clear Water**.

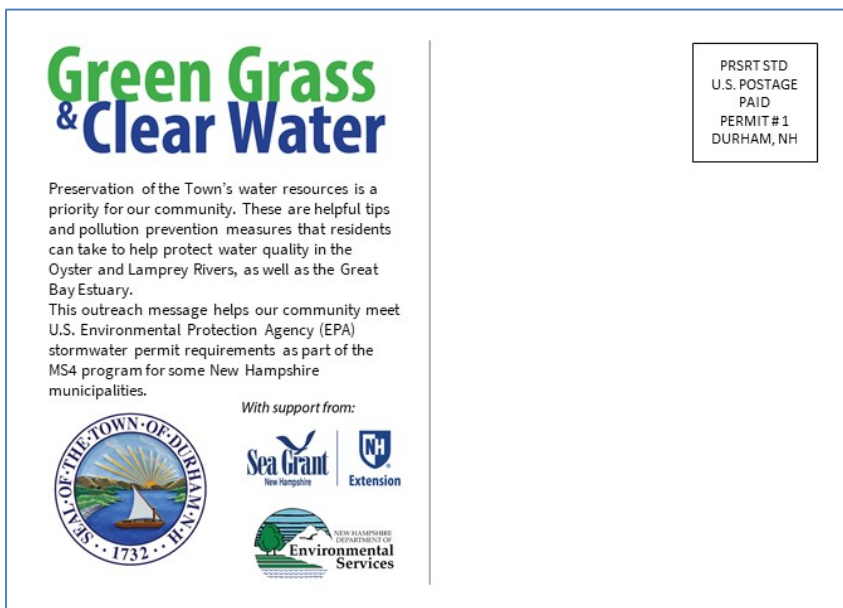
For more details about these tips and others:

extension.unh.edu/tags/home-lawn-care

- 1 Choose the right grass seed.** The best seed mixes include low maintenance varieties with higher % of fine-leaf fescues and turf- or compact-type tall fescues, and lower % of Kentucky bluegrass and perennial rye grass.
- 2 Mow smart.** Leave grass at least 3" high. Cut no more than one-third (1/3) of the blade each time you mow to encourage longer, stronger roots. Leave the grass clippings after mowing so they can return nutrients to the soil.
- 3 Don't overwater.** 1" of water per week (from rain or irrigation) is usually enough. Overwatering can cause nutrients to move out of root zones and into waterbodies or groundwater.
- 4 Have your soil tested** to learn more about specific characteristics and needs of your lawn. Contact UNH Cooperative Extension: extension.unh.edu/programs/soil-testing-services

Only if your lawn requires added nutrients from fertilizer:

- 5 Avoid overapplying.** Measure the area where you plan to apply and calculate the square footage. For lawns 10+ years old, apply half (1/2) the amount recommended for your square area one time per season. New lawns may need another application. Apply no more than 4 times per season.
- 6 Choose the right fertilizer.** Select fertilizers with zero or low phosphorus unless a soil test says otherwise. Slow release nitrogen fertilizer is generally preferable. Over-applying fertilizer (any type) can cause water quality issues.
- 7 Know when and where to apply.** Apply only after spring "green up" and before mid-September. Avoid applying in mid-summer. Never apply near waterbodies or storm drains.







Green Grass & Clear Water

Preservation of the Town's water resources is a priority for our community. These are helpful tips and pollution prevention measures that residents can take to help protect water quality in the Oyster and Lamprey Rivers, as well as the Great Bay Estuary.

This outreach message helps our community meet U.S. Environmental Protection Agency (EPA) stormwater permit requirements as part of the MS4 program for some New Hampshire municipalities.

With support from:

PRSR STD
U.S. POSTAGE
PAID
PERMIT # 1
DURHAM, NH

(*Note that Post Card was personalized for Town of Durham to recognize our connection with the Oyster River, Lamprey River and Great Bay*)

Targeted Audience:

Residential &/or Business

Responsible Department/Parties: Durham Public Works

Measurable Goal(s): Lawn care enthusiast residents understand the potential water quality impacts from fertilizer and improper disposal of grass clippings and are aware of the proper lawn care management techniques for reducing those impacts. Measurement includes quantity of materials distributed and numbers and change in visits to UNH Cooperative Extension or municipal stormwater webpages.

Following is the number of flyers that were distributed: Year 3 = 1461, Mailed on June 10, 2021. Goal was achieved.

Message Date: Also promoted in Durham Friday Updates May 21, 2021 as well as on the Town's Facebook Page. The weekly Durham Friday Updates email is sent to 4,862 email addresses (subscribers)

BMP: Petwaste Disposal

Description: Distribute "Every Drop" post cards or flyer
https://www4.des.state.nh.us/nh-ms4/?page_id=54

Targeted Audience: Pet Owners

Responsible Department/Parties: Town Clerks Office and Durham Public Works

Measurable Goal(s): Track the number of residents who log in a take the pledge.

Message Date: Spring 2021

BMP: Disposal of Leaf and Grass Clippings

Description: Distribute and promote informational flyers, pledge cards, and/or door hangers, with messaging about impacts from yard waste to waterbodies, alternatives to dumping yard waste and laws against dumping yard waste near or in waterbodies.

Track amount of leaf bags and/or tonnage of yard waste collected during Fall Leaf and Brush Curbside Collection

Targeted Audience: Residential &/or Business

Responsible Department/Parties: Durham Public Works

Measurable Goal(s): Increase the amount of fall leaf/litter collection and track participation.

Message Date: Fall

BMP: Septic System Maintenance

Description:	Distributed and promoted brochure or door hangers, directing to website to educate New Hampshire homeowners with septic systems on how to identify, locate and maintain those systems. Get Pumped NH is a collaborated effort between the New Hampshire Association of Septage Haulers (NHASH) and the New Hampshire Department of Environmental Services (NHDES).
Targeted Audience:	Residential &/or Business Septic System Owners
Responsible Department/Parties:	Code Enforcement Office/ Durham Public Works
Measurable Goal(s):	Count the number of Friday Update Subscribers that receive community notifications.
Message Date:	September 22, 2021

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:

The SWMP will be posted on the Town's website. The Town Council will announce updates to the SWMP and direct residents to the website to review the SWMP and provide comments.

Responsible Department/Parties:

Public Works Department and Town Council

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.

Description: Town of Durham has established 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 manufacturer's instructions; trash management; pet waste disposal; waterfowl management; and erosion and poor vegetative cover and as outlined in Section 2.3.7.1 a. of the MS4 permit.

Municipal Parks and Open Space Inventory

The following is a list of properties covered by these procedures and include all municipal and county facilities where fertilizers are stored, mixed, applied, recycled, or disposed of, and at municipal properties in which lawns or vegetation are mowed, trimmed, and maintained (e.g. parks, golf courses, and open space properties) located within the MS4 area. This inventory shall be updated annually during SWMP review.

Park/Open Space	Address/Location	Services Contracted	Lawn Mowing	Landscaping	Fertilizing	Pesticide/Herbicide	Trash mgmt.	Pet waste	Waterfowl mgmt.	Other maintenance:
Jackson's Landing	Old Piscataqua Road	N	Y	Y	N	N	Y	Y	Y	
Mill Pond Road Park	Mill Pond Road	N	Y	Y	N	N	N	N	Y	
Oyster River Park	Oyster River Road	N	Y	Y	N	N	Y	Y	Y	
Packers Falls Park	Bennett Road	N	Y	N	N	N	N	N	N/A	
Tot Lot	Thompson Lane	N	Y	N	N	N	N	N	N/A	
Town Landing	Old Landing Road	N	Y	Y	N	N	Y	Y	Y	

Add lines as necessary

Responsible Department/Parties: Town of Durham Public Works

Training:

Annual maintenance procedures training will be made available to employees involved in Parks and Open Spaces operations. All contractors involved in Parks and Open Spaces operations are provided the information in this section of the SWMP.

Example training video: <https://www.youtube.com/watch?v=6eD29UBINqE&feature=youtu.be>

Best Management Practices

The following best management practices (BMPs) aim to minimize the concentration of nitrogen and phosphorus in stormwater runoff:

Lawn Maintenance

Landscape Maintenance

- Mulch-mow grasses whenever possible; grass clippings are a natural fertilizer.
- Sweep grass clippings from sidewalks or streets back onto grassy areas.
- Dispose of organic wastes by composting whenever possible. When composting is not possible, dispose of organic wastes at an approved disposal facility. In both cases, ensure that runoff from sites does not enter a waterway.
- Do not wash down or dispose of lawn clippings, leaves, tree trimmings, or other landscape waste in a storm drain, drainage ditch, or open body of water.
- Consider landscape design that utilizes native, drought tolerant vegetation.
- Collect and dispose of wastes generated by cleaning equipment (e.g. grass clippings) in the trash or by composting.
- Irrigate with the minimal amount of water needed. Never water at rates that exceed the infiltration rate of the soil.
- Maintain all irrigation systems so that irrigation uses the minimum amount of water possible, is applied evenly, and does not run off. Repair broken or leaking sprinkler heads as soon as possible.
- Use automatic timers or computer-controlled systems on irrigation equipment to minimize runoff.
- Incorporate evapotranspiration rates and/or weather data into daily irrigation rates.
- Monitor daily, monthly, and yearly irrigation usage, and set goals for annual water use reduction.

Application of Fertilizers (Town does not currently fertilize)

- Properly calibrate all fertilizer application equipment to ensure proper application rate.
- Time the application of fertilizers to coincide with the manufacturer's recommendation for best results.
- Consider using fertilizers with low or no levels of phosphorus.
- Consider use slow release fertilizers.

Application of Fertilizers continued (optional)

- Train employees on proper application methods, as recommended by the equipment manufacturer.
- Base fertilizer application on soil test results to avoid excess application.
- Do not apply fertilizers when heavy rainfall or winds are expected.
- Never over-apply fertilizers.
- Use the lowest lbs/acre rate possible ("spoon feeding").
- Till fertilizers into the soil when possible (i.e. when seeding new areas or during "grow-in periods") rather than broadcasting them on the surface.
- Designate "no spray zones" and/or "buffer areas" around ponds, lakes, or streams. Avoid spraying fertilizers within 25-50 feet of any surface water or storm drainage structure (unless stricter limits apply).

- Raise mower height to >3” in buffer areas around water features to allow the vegetation to slow down and filter stormwater runoff.
- Reduce the need for chemical, algal control in ponds through proper aeration, nutrient reduction, bio-filtration, vegetation management, and/or biological controls.
- Do not apply fertilizers or pesticides in or near any drainage areas or irrigation ditches.
- Sweep or blow granular fertilizers back onto grassy areas from pavement and sidewalks.

Storage and Handling of Fertilizers

- Store and mix fertilizers inside a covered area that has an impervious (i.e. hard or paved) surface, preferably indoors, so that spills or leaks will not contact soils or waters.
- Do not handle or dispose of fertilizers, pesticides, herbicides, or fungicides in or near storm drains, irrigation ditches, or surface water.
- Dispose of excess or leftover chemicals according to the instructions on the label, preferably on the target pest, vegetated area, or as hazardous waste.
- Ensure that spill kits and absorbents are available in the event of a spill. Clean up any spills or leaks of fertilizers promptly using dry cleanup methods.
- Mix only the minimum amount of fertilizer that will be needed for the immediate job.
- Use water left over from rinsing containers or application equipment to dilute the next batch or apply left over chemicals to target areas.

Trash Management

- Routinely pick up any trash bags left along trails, parks, or streets.
- Empty trash cans and dumpsters regularly.
- Keep lids on all trash cans and dumpsters.

Pet Waste Cleanup

- Post signs in areas concerning the proper disposal of pet wastes.
- Provide pet waste bags and waste containers at all parks, trailheads, and open space properties.
- Collect pet waste in a bag, and deposit it in a trashcan or dumpster.

Waterfowl Waste Management

- Discourage waterfowl from living in stormwater infrastructure.
- Scare geese away from ponds on golf courses or parks.
- Clean and inspect storm drains regularly to prevent wildlife from living in the storm drainage system.
- Sweep and clean bike paths and paved trails under bridges and near creeks. Collect debris and dispose of in the trash; do not sweep or wash it into nearby creeks, ponds, or rivers.
- Contact local animal control, pest control, or New Hampshire and Game Department to remove wild animals from bridges, storm drainage systems, or golf courses.
- Do not feed waterfowl.

Erosion and Poor Vegetative Cover

- Install temporary sediment and erosion control stabilization measures as needed.
- Re-establish grass or native plants, especially within 50 ft of a surface water.

Measurable Goal(s): Implement the BMP’s 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: Process is outlined in this SWMP document.

Responsible Department/Parties: Durham Public Works

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.

Municipal Buildings and Facilities Inventory

The following is a list of properties covered by these procedures and include all schools, municipal offices, police and fire stations, municipal pools, parking garages, etc. located within the MS4 area. This inventory shall be updated annually during SWMP review.

Building	Address/ Location	Services Contracted	Trash mgmt.	Building Maintenance	Pollutant Storage	Petroleum Storage	Other maintenance:
Town Hall	8 Newmarket Road	N	Y	Y	N	N	
Town Library	Madbury Road	N	Y	Y	N	N	
Police Station	Dover Road	N	Y	Y	N	N	
Public Works	Stone Quarry Drive	N	Y	Y	Y	N	
Transfer Station	Durham Point Road	N	Y	Y	Y	N	
Wastewater Treatment Plant	Route 4 (Piscataqua Road)	N	Y	Y	N	N	
Dover Road Sewer Pump Station	Dover Road	N	Y	Y	N	N	
Old Concord Road Sewer Pump Station	Main St.	N	N	Y	N	N	
Oyster River Road Pump	Oyster River	N	N	Y	N	N	

Station	Road						
Lee Well	Angell Road – Lee	N	N	Y	N	N	
Spruce Hole Well, Solar Array, Gravel Pit	Packers Fall Road - Lee	N	N	N	N	N	
Foss Farm Water Tank	Foss Farm Road	N	N	N	N	N	
Beech Hill Water Tank	Beech Hill Road	N	N	N	N	N	
Depot Road Parking Lot	Depot Road	N	N	N	N	N	
Pettee Brook Parking Lot L	Pettee Brook	N	N	N	N	N	
Pettee Brook Parking Lot R	Pettee Brook	N	N	N	N	N	

Add lines as necessary

Responsible Department/Parties: Durham Public Works

Training:

Annual maintenance procedures training will be made available to employees involved in Municipal Building and Facilities operations. All contractors involved in Building and Facilities operations are provided the information in this section of the SWMP.

Best Management Practices

The following best management practices (BMPs) will be implemented at all municipally owned or operated buildings and facilities located within the MS4 area:

Handling, Storage, Transfer, and Disposal of Trash and Recyclables

All liquid and solid waste must be disposed of properly. Some of the most common sources of pollution at municipal facilities are a result of littering, improper collection of debris, and improper disposal of solid or liquid waste.

- All waste and recycling receptacles must be leak-tight with tight-fitting lids or covers.
- Keep lids on dumpsters and containers closed at all times unless adding or removing material.
- Do not locate dumpsters over or adjacent to catch basins.
- Clean up any liquid leaks or spills with dry cleanup methods.
- Arrange for waste or recycling to be picked up regularly and disposed of at approved disposal facilities.
- Never place hazardous materials, liquids, or liquid-containing wastes in a dumpster or recycling or trash container.
- Conduct periodic inspections of solid and liquid waste storage areas to check for leaks and spills.
- Place waste or recycling receptacles indoors or under a roof or overhang whenever possible.
- Locate dumpsters on a flat, paved surface and install berms or curbs Around the storage

area to prevent run-on and run-off.

- Prior to transporting waste, trash, or recycling, ensure that containers are not leaking (double bag if needed) and properly secure containers to the vehicle.
- Clean and sweep up around outdoor waste containers regularly.
- Do not wash trash or recycling containers outdoors or in parking lots.
- Conduct periodic inspections of work areas to ensure that all wastes are being disposed of properly.
- In dumpster areas, regularly pick up surrounding trash and debris and regularly sweep the area.
- In compactor areas, regularly check the hydraulic fluid hoses and reservoir to ensure that there are no cracks or leaks. Regularly sweep the area.

Building Maintenance

- Sweep parking lots and keep areas surrounding facilities clean to reduce runoff of pollutants.
- When power washing buildings and facilities, ensure that the washwater does not flow directly into the storm system. Containment or filtering systems should be provided.
- Paint and other chemicals should not be applied on the outside of buildings when it is raining or prior to expected rain.
- When sanding, painting, power washing, etc., ensure that sites are properly prepared (e.g., use tarps) and cleaned (e.g., use dry cleaning methods) especially if they are near storm drains. Protect catch basins when maintenance work is conducted upgradient of them.
- When painting, use a drop cloth and clean up any spills immediately.
- Do not leave open containers on the ground where they may accidentally tip over.
- Buildings should be routinely inspected for areas of potential leaks.
- Do not discharge chlorinated pool water into the stormwater system. Water must be properly dechlorinated and tested before it is discharged.
- Streets and parking lots surrounding municipal buildings and facilities should be swept and kept clean to reduce runoff of pollutants and debris to the stormwater system.

Storage of Petroleum Products and Potential Pollutants

- Evaluate the use, storage and disposal of petroleum products and other potential stormwater pollutants.
- Routinely inspect buildings and facilities for areas of potential discharges or leaks.
- Floor drains in storage areas should be disconnected from the stormwater system.

Spill Response

- Ensure that spill prevention plans are in place (these should be included for maintenance garages, public works yards, transfer stations and other waste handling facilities see individual SWPPPs).
 - Notify the facility's supervisor immediately and ensure that other staff and/or members of the public are aware of the spill and removed from the spill area as appropriate.
 - Coordinate with fire department as necessary.
 - For large oil spills, NHDES Petroleum Spill Response program will be notified immediately at (603) 271-3644 and an emergency response contractor would be called in.
 - Materials and equipment necessary for spill cleanup may include but are not limited to brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for the purpose.
-
- Assess the contaminant release site for potential safety issues and for direction of flow.

- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency as required by State and Local regulations.
- With proper training and personal protective equipment, complete the following:
 - Stop the contaminant release;
 - Contain the contaminant release through the use of spill containment berms or absorbents;
 - Protect all drains and/or catch basins with the use of absorbents, booms, berms or drain covers;
 - Clean up the spill;
 - Dispose of all contaminated products in accordance with applicable federal, state and local regulations.

Measurable Goal(s): Implement the BMP's 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:

Process is outlined in this SWMP document.

Responsible Department/Parties:

Durham Public Works

Description:

Establish procedures for the storage of permittee vehicles. Vehicles with fluid leaks shall be stored indoors and 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.

Description: Town of Durham has established procedures for the storage of permittee vehicles. Vehicles with fluid leaks shall be stored indoors and containment shall be provided. Evaluate fueling areas owned by the permittee or used by permittee vehicles. Procedures have been established to ensure that vehicle wash waters are not discharged to municipal storm drains or surface waters. Procedures have been established as outlined below and in accordance with Section 2.3.7.1.c of the MS4 permit.

Responsible Department/Parties:

Durham Public Works

Training: Annual maintenance procedures training will be made available to employees involved in Vehicle Equipment operations.

Best Management Practices The following best management practices (BMPs) will be implemented for all municipally owned or operated vehicles and equipment:

Vehicle Storage

- Vehicles with fluid leaks shall be stored in doors or containment shall be provided until repaired.
- Monitor vehicles and equipment for leaks and use drip pans as needed until repairs can be performed.
- When drip pans are used, avoid overtopping.
- Drain fluids from leaking or wrecked vehicles and parts as soon as possible. Dispose of fluids properly.
- Store and park vehicles on impervious surfaces and/or under cover or indoors whenever possible.

Vehicle Maintenance

- Conduct routine inspections of heavy equipment and vehicles to proactively identify maintenance needs or potential leaks.
- Perform routine preventive maintenance to ensure heavy equipment and vehicles are operating optimally.
- Recycle or dispose of waste properly and promptly.
- Sweep and pick up trash and debris as needed.
- Do not dump any liquids or other materials outside, especially near or in storm drains or ditches.

Fueling

- Fueling areas owned or operated by the municipality should be covered if possible.
- Fueling areas should be evaluated to ensure that pollutants (e.g., gasoline or oil) do not enter the MS4.

Vehicle Washing Procedures

Outdoor washing of municipal vehicles is avoided. Vehicle wash waters shall not be discharged to the MS4 or to surface waters.

Where no alternative wash system is available, and full containment of wash water cannot be achieved, adhere to the following procedures:

- Avoid discharge of any wash water directly to the storm drainage system or surface water (e.g., stream, pond, or drainage swale)
- Minimize the use of water to the extent practicable.
- Where the use of detergent cannot be avoided, use products that do not contain regulated contaminants. The use of a biodegradable, phosphate-free detergent is preferred.
- Do not use solvents except in dedicated solvent parts washer systems or in areas not connected to a sanitary sewer.
- Do not power wash, steam clean, or perform engine or undercarriage cleaning.
- Grassy and pervious (porous) surfaces may be used to promote direct infiltration of wash water, providing treatment before recharging groundwater and minimizing runoff to an adjacent stormwater system. Pervious surfaces or other infiltration-based systems should not be used within wellhead protection areas or within other protected resources.
- Impervious surfaces discharging to the storm drainage system should not discharge directly to a surface water unless treatment is provided. The treatment device should be positioned such that all drainage must flow through the device, preventing bypassing or short-circuiting.
- Periodic sweeping and/or cleaning should be completed to prevent accumulation from forming on the washing area.
- Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities.

Indoor Vehicle Washing Procedures

- Vehicles and equipment should be washed inside whenever possible to reduce runoff to the stormwater system.
- Where the use of detergent cannot be avoided, use products that do not contain regulated contaminants. The use of biodegradable, phosphate-free detergent is preferred.
- Detergents should not be used in areas where oil/water separators provide pre-treatment of drainage.
- Floor drains should be connected to a sanitary sewer or tight tank. Floor drains discharging to adjacent surface water bodies or engineered storm drain systems should be permanently plugged or otherwise abandoned before any vehicle wash activities are completed.
- Designate separate areas for routine maintenance and vehicle cleaning. This helps prevent contamination of wash water by motor oils, hydraulic lubricants, greases, or other chemicals.
- Dry cleanup methods are recommended within garage facilities. Do not wash down floors and work areas with water.
- Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities.

Heavy Equipment Washing Procedures

- Mud and heavy debris removal should occur on impervious surfaces or within a retention area.
- Maintain these areas with frequent mechanical removal and proper disposal of waste.
- Impervious surfaces with engineered storm drain systems should not discharge directly to a surface water.
- Floor drains should be connected to a sanitary sewer or tight tank. Floor drains discharging to adjacent surface waterbodies or engineered storm drain systems should be permanently plugged or otherwise abandoned before any vehicle wash activities are completed.
- Where the use of detergent cannot be avoided, use products that do not contain regulated contaminants. The use of biodegradable, phosphate-free detergent is preferred.
- Detergents should not be used in areas where oil/water separators provide pre-treatment of drainage.
- Maintain absorbent pads and drip pans to capture and collect spills or noticeable leaks observed during washing activities.

Measurable Goal(s): Implement the BMP's on 100% of the vehicles.

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 600 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:

Responsible Department/Parties:

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:

Responsible Department/Parties:

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:

Process is outlined in this SWMP document.

Responsible Department/Parties:

Public Works Department

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:

Process is outlined in this SWMP document.

Responsible Department/Parties:

Durham Public Works

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:

EPA Website. Will be updated when complete and posted.

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

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)

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.