

Stormwater Management Program (SWMP)

University of New Hampshire

Permit Year 2

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

William P Janelle

Signature



Date

2/11/19

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.

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

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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

BMP: Grass and Fertilizer

Document Name and/or Web Address:

Green Grass & Clear Water Brochure: https://www4.des.state.nh.us/nh-ms4/?page_id=54.

Description:

Distribution and promotion of four- fold flyer 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.

Targeted Audience:

Residential &/or Business and Institutions

Measurable Goal(s):

Lawn care enthusiasts' 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 materials distribution methods and numbers and change in visits to UNH Cooperative Extension or stormwater webpages as well as distributed materials and website hits on UNH Facilities materials.

Message Date:

Annually at student University Day and Faculty/Staff Benefits events and readily available at campus library.

BMP: Petwaste Disposal

Document Name and/or Web Address:

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

Description:

Distribution and promotion of "Every Drop" post cards or flyer with proper pet waste management, impacts of improper management, pet waste ordinance, and disposal requirements messaging. May include pledge to pick up pet waste to be made available during dog registration and other events or venues (veterinarians, dog training, groomers, etc.). Every Drop is a collaborative education effort with PREP, NHDES and other partners.

Targeted Audience:

Residents - Pet Owners

Measurable Goal(s):

Dog owners and/or dog walkers are aware of the potential water quality impacts from pet waste, local pet waste ordinances, and how to dispose of pet waste properly. If pledges are signed, there will be an increase of dog owners committed to picking up pet waste as well as distributed materials and website hits on UNH Facilities materials.

Message Date: Annually at student University Day and Faculty/Staff Benefits events and readily available at campus library.

BMP: Disposal of Leaf and Grass Clippings

Document Name and/or Web Address:

https://www4.des.state.nh.us/nh-ms4/?page_id=54

Description:

Distribute and promote informational flyer, pledge cards, 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.

Targeted Audience:

Residential &/or Business and Institutions

Measurable Goal(s):

Residents are aware of the water quality impacts of yard waste dumping near or in water bodies and safe alternatives for yard waste disposal as well as distributed materials and website hits on UNH Facilities materials.

Message Date:

Annually at student University Day and Faculty/Staff Benefits events and readily available at campus library.

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.unh.edu/facilities/storm-water-management>

Responsible Department/Parties:

UNH Facilities

Measurable Goal(s):

Stormwater Management Plan is publicly available

BMP: Public Participation in Stormwater Management Program Development

Description: Annual review of protocols by task force created with stakeholders from staff, faculty, and students.

Responsible Department/Parties:

ECO Task Force

Measurable Goal(s):

Annual public input sought and 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 Construction Guidelines

Updated (4/23/2015)

University Guidelines link or Reference:

<https://scholars.unh.edu/facilities/>

Department Responsible for Enforcement:

UNH Facilities

BMP: Site Plan Review Procedures

Written procedures completed Spring 2019

Document Name and/or Web Address:

<https://scholars.unh.edu/facilities/>

Department Responsible for Enforcement:

UNH Facilities

Description:

Review projects to ensure adherence to applicable guidelines.

Measurable Goal(s):

Review designs of 100% of projects according to guidelines.

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

Completed Spring 2019

Document Name and/or Web Address:

<https://www.unh.edu/facilities/storm-water-management>

Department Responsible for Enforcement:

UNH Facilities

Description:

Inspect projects to ensure adherence to applicable guidelines.

Measurable Goal(s):

Inspection of 100% of projects according to guidelines.

MCM 5

Post Construction Stormwater Management in New Development and Redevelopment

Permit Part 2.3.6

BMP: Post-Construction Guideline

Updated (4/23/2015)

University Guidelines Link or Reference:

<https://scholars.unh.edu/facilities/>

Department Responsible for Enforcement:

UNH Facilities

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 University Retrofit Opportunities

Completed (by year 4)

Document Name and/or Web Address:

TBD

Department Responsible for Enforcement:

TBD

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 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

Document Name and/or Web Address:

Responsible Department/Parties:

Description:

The University performs routine inspections, cleaning, and maintenance of the approximately 966 catch basins that are located within the MS4 regulated area. The University 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 University 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

Document Name and/or Web Address: <https://www.unh.edu/facilities/storm-water-management>

Responsible Department/Parties: UNH Facilities

Description:

The University 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 University-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 University 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 parking lots in accordance with the schedule listed above.

BMP: Winter Road Maintenance Program

Written Document Completed

Document Name and/or Web Address: <https://www.unh.edu/facilities/storm-water-management>

Responsible Department/Parties: UNH Facilities

Description:

The University 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 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

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.

Good Housekeeping and Pollution Prevention for Permittee-Owned Operations and Procedures

Permit Part 2.3.7

PERMITTEE OWNED FACILITIES

BMP: Parks and Open Spaces Operations and Maintenance Procedures

Requirements Due by Year 2

Description: University of New Hampshire 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.

University Parks and Open Space Inventory

The following is a list of properties covered by these procedures and include all university facilities where fertilizers are stored, mixed, applied, recycled, or disposed of, and at university 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 notes:
ALL UNH Green Spaces	Main St, Durham, NH 03824	N	Y	Y	Y	N	Y	N	NA	UNH staff utilize GIS maps to apply fertilizer depending on weather; location for high visibility lawns; and other best practices to minimize use.
ALL UNH Wooded Trails	Main St, Durham, NH 03824	N	NA	N	N	N	Y	Y	N	
ALL UNH Hardscapes	Main St, Durham, NH 03824	N	NA	N	N	Y	N	N	N	

Responsible Department/Parties: UNH Facilities

Training:

Annual maintenance procedures training will be made available to employees involved in Parks and Open Spaces operations.

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

- 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.
- 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.

Waterfowl Waste Management

- Discourage waterfowl from living in stormwater infrastructure.

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

Requirements Due by Year 2

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.

University Buildings and Facilities Inventory

The following is a list of properties covered by these procedures and include all schools, offices, police and fire stations, 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:
1 Leavtt Lane	1 Leavitt Lane	Y	Y	Y	N	N	
17 Leavitt Lane	17 Leavitt Lane	Y	Y	Y	N	N	
Alexander Hall	1 Commons Way	Y	Y	Y	N	N	
Alumni	9 Edgewood Rd	Y	Y	Y	N	N	

Athletic Fields	167 Main Street	Y	Y	Y	N	N	
Babcock Hall	14 McDaniel Drive	Y	Y	Y	N	N	
Barton Hall	291 Mast Road	Y	Y	Y	N	N	
Browne Center	340 Dame Road	Y	Y	Y	N	N	
Burleigh Demeritt	216 Lee Hook Road	Y	Y	Y	N	N	
Central Receiving	6 Leavitt Lane	Y	Y	Y	N	N	
Child Care	22 O'Kane Road	Y	Y	Y	N	N	
Christensen Hall	14 Evergreen Drive	Y	Y	Y	N	N	
Congreve Hall	114 Main Street	Y	Y	Y	N	N	
Dairy Bar	3 Depot Road	Y	Y	Y	N	N	
Dairy Teaching Barn	36 O'Kane Road	Y	Y	Y	N	N	
Devine Hall	11 Quad Way	Y	Y	Y	N	N	
Diamond Library	87 Main St	Y	Y	Y	N	N	
Equine Center	278 Mast Road	Y	Y	Y	N	N	
Farm Services	287 Mast Road	Y	Y	Y	N	Y	
Field House	145 Main Street	Y	Y	Y	N	N	
Gables	40 Gables Way	Y	Y	Y	N	N	
Gables A, B,C	40 Gables Way	Y	Y	Y	N	N	
Gables North & South	40 Gables Way	Y	Y	Y	N	N	
Gibbs Hall	4 Quad Way	Y	Y	Y	N	N	
Greenhouse	296 Mast Road	Y	Y	Y	N	N	
Gregg Hall	35 Colovos Road	Y	Y	Y	N	N	
Grounds and Roads	21 Waterworks Road	Y	Y	Y	N	Y	Salt/Sand
Hamilton Smith	95 Main Street	Y	Y	Y	N	N	
Head End Building	28 O'Kane Road	Y	Y	Y	N	N	
Hetzel Hall	63 Main Street	Y	Y	Y	N	N	
Holloway Commons	75 Main Street	Y	Y	Y	N	N	Food Grease Waste
Hubbard Hall	4 Evergreen Drive	Y	Y	Y	N	N	
Jackson Estuarine Lab	85 Adams Point Road	Y	Y	Y	N	N	
Jessie Doe	24 Ballard Street	Y	Y	Y	N	N	
Kingsbury Hall	33 Academic Way	Y	Y	Y	N	N	
McLaughlin Hall	32 Ballard Street	Y	Y	Y	N	N	
Memorial Union Bldg.	83 Main Street	Y	Y	Y	N	N	
Mills Hall	20 Quad Way	Y	Y	Y	N	N	
Mini Dorms	30 Demeritt Circle	Y	Y	Y	N	N	
Morse Hall	8 College Road	Y	Y	Y	N	N	
Nesmith Hall	131 Main Street	Y	Y	Y	N	N	
New Hampshire Hall	124 Main Street	Y	Y	Y	N	N	
Parsons	23 Academic Way	Y	Y	Y	N	N	
Paul College	10 Garrison Ave.	Y	Y	Y	N	N	
Perpetuity Hall	11 Leavitt Lane	Y	Y	Y	Y	N	
Peterson	17 Demeritt Circle (B)	Y	Y	Y	N	N	
Philbrook Dining Hall	29 McDaniel Drive	Y	Y	Y	N	N	Food Grease Waste
Poultry Barn	36 Colovos Road	Y	Y	Y	N	N	
Printing and Mail Service	10 West Edge Drive	Y	Y	Y	N	N	
Randall Hall	7 Quad Way	Y	Y	Y	N	N	

Ritzman Laboratory	22 Colovos Road	Y	Y	Y	N	N	
Rudman Hall	46 College Road	Y	Y	Y	N	N	
Scott Hall	36 Ballard Street	Y	Y	Y	N	N	
Sculpture Annex	5 Colovos Road	Y	Y	Y	N	N	
SERC	5 Demeritt Circle	Y	Y	Y	N	N	
Service Building	51 College Road	Y	Y	Y	N	N	
Spaulding Life Science	38 Academic Way	Y	Y	Y	N	N	
Stillings Dining Hall	20 Ballard Street	Y	Y	Y	N	N	Food Grease Waste
Stoke Hall	11 Garrison Avenue	Y	Y	Y	N	N	
Taylor Hall	59 College Road	Y	Y	Y	N	N	
Tirrell Horse Stables	288 Mast Road	Y	Y	Y	N	N	
Transportation Garage	213 Main Street	Y	Y	Y	Y	Y	
UNH Wildcat Stadium	155 Main Street	Y	Y	Y	N	N	
Water Treatment Plant	42 Waterworks Road	Y	Y	Y	Y	N	
Whittemore Arena	128 Main Street	Y	Y	Y	N	N	
Williamson Hall	24 Evergreen Drive	Y	Y	Y	N	N	
Woodman Research	70 Spinney Lane	Y	Y	Y	N	N	
Woodshop	51 College Road	Y	Y	Y	N	N	
Woodside Apartments	60 Strafford Avenue	Y	Y	Y	N	N	
Zais Hall	45 College Road	Y	Y	Y	N	N	
ZONE 4 MAINTENANCE	9 LEAVITT LN	Y	Y	Y	N	N	

Responsible Department/Parties: UNH Facilities

Training:

Annual maintenance procedures training will be made available to employees involved in 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 University 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 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 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

Requirements Due by Year 2

Description: University of New Hampshire 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 stormdrains 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: UNH Office of Business Affairs

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 University 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 University 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 University vehicles should be 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.

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.

Annual Evaluation

Year 1 Annual Report

Document Name and/or Web Address:

Will be posted on the EPA website. Link to website to be included once completed.

Year 2 Annual Report

Document Name and/or Web Address:TBD

Will be posted on the EPA website. Link to website to be included once completed.

Year 3 Annual Report

Document Name and/or Web Address:TBD

Will be posted on the EPA website. Link to website to be included once completed.

Year 4 Annual Report

Document Name and/or Web Address: TBD

Will be posted on the EPA website. Link to website to be included once completed.

Year 5 Annual Report

Document Name and/or Web Address: TBD

Will be posted on the EPA website. Link to website to be included once completed.

Year X Annual Report

Document Name and/or Web Address: TBD

Will be posted on the EPA website. Link to website to be included once completed.

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, Benthic-Macroinvertebrate Bioassessments (Streams), pH
College Brook (R-09)	E.Coli, Benthic-Macroinvertebrate Bioassessments (Streams)
Oyster River – Chelsey Brook (R-04)	E. Coli, pH
Oyster River – Unnamed Brook (R-05)	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

Phosphorus Impairment

Applicable Receiving Waterbody(ies)	TMDL/Impairment Name (if applicable)
Reservoir Brook (R-10)	Dissolved Oxygen/DO Saturation
College Brook (R-09)	Dissolved Oxygen/DO Saturation
Oyster River – Chelsey Brook (R-04)	Dissolved Oxygen/DO Saturation

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 and phosphorus-free 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 in the encouraging the proper disposal of leaf litter as outlined in this SWMP.

Increase street sweeping frequency of all University 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 outlined in this plan.

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

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

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 phosphorus removal by the BMP consistent with Attachment 1 to Appendix H. Document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in pass per year by the BMP in each annual report.

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 phosphorus removal.

Requirements Due by Year 4

Complete a Phosphorus 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 that infiltrate stormwater where feasible.

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 Phosphorus 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.

Nitrogen Impairment

Applicable Receiving Waterbody(ies)	TMDL/Impairment Name (if applicable)
Oyster River Estuary	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 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.