Year 4 Annual Report
New Hampshire Small MS4 General Permit Reporting Period: May 1, 2021-June 30, 2022

Part I: Contact Information

Name of Municipality or Organization: New Hampshire Department of Transportation
EPA NPDES Permit Number: NHR043001

Primary MS4 Program Manager Contact Information:

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Stormwater Management Program (SWMP) Information:
SWMP Location (web address): https://www.nh.gov/dot/
Date SWMP was Last Updated: July 1, 2022

Part II: Self-Assessment

The New Hampshire Department of Transportation (Department) continues to be committed to implementing a program to reduce the discharge of pollutants from the Department's regulated Small MS4s to the maximum extent practicable. The goal remains to protect water quality and satisfying the water quality requirements of the Clean Water Act and State Water Quality Standards, while providing a safe and efficient transportation system for the public.

This year the focus has been to continue implementing the effluent limitations and control measure in the 2020 modified permit and completed the Nitrogen and Phosphorus Source Identification Reports. In addition, the Department finished its MS4 catchment mapping which refines many aspects of MS4 permit compliance. The Department has completed this self-assessment and has determined that the agency is in general compliance with all permit conditions and completing measurable goals set out in the Notice of Intent.

Part III: Receiving Waters/Impaired Waters/TMDL

The Department updates its waters list each year. We are currently reporting on the 2020 EPA approved NH 303(d)/305(b) list.

Part IV: Minimum Control Measures

MCM1: Public Education

Impaired and TMDL Waters

For Waters listed as Bacteria Impaired or Bacteria TMDL
The Department maintains dog walking stations at Seabrook Welcome Center which has MS4 discharges to the CAINS BROOK - UNNAMED BROOK (NHRIV600031004-10).

For Waters Listed as Nitrogen or Phosphorous Impaired or with a nutrient related TMDL
The Department continues to educate the ACEC consulting engineers on optimizing nutrient removal when designing structural stormwater treatment facilities, specifically for the Exit 4A project where bio-retention swales are proposed at the east end of the project which has MS4 discharges to BEAVER LAKE (NHLAK700061203-02-01) and gravel wetlands that discharge to various estuaries along the seacoast.

The Department's Monthly New Employee Orientation

The Department provides monthly training to new employees to include its Environmental Policy, emphasizing its commitment to operating in compliance with all environmental regulations, policies, procedures, and instructions; minimizing the waste generated from its ongoing operations; minimizing impacts to the environment; and continuous environmental

improvement. The Department also provided trainings on the management of regulated substances at NHDOT facilities (patrol sheds, garages, storage facilities, etc.). This training discussed storage requirements, inspection requirements, spill response procedures, and spill notification requirements for the different types of chemicals and petroleum products used by the Department. Employees were provided the opportunity to ask questions and discuss the issues to better understand their roles and responsibilities in avoiding environmental impacts.

The Department's Stormwater Outreach Program

The Stormwater Outreach Table was used to discuss water quality issues and demonstrate how stormwater pollutants can impact water resources at two events from April to May 2022. The two events attended have been continually successful annual events, excepting 2020 and 2021 due to public safety and health restrictions associated with the COVID-19 pandemic. The NH Fish and Game Discover Wild NH Day kicked off the season in April and was extremely successful with almost 8,000 members of the public in attendance. This is a family event with vendors from around the State devoted to educating the public about our many wonderful natural resources and how to enjoy and protect them, which well suits the mission of the Program. The Lebanon School District Watershed Congress was held in May and was also very successful, with teachers, students and presenters enjoying participating in an educational opportunity in-person and without restrictions. The Program was particularly successful, despite only attending two events, due to the use of the new demonstration table which was funded through a STIC grant in 2019/2020. The table includes more detail, clearer mapping, and representation of additional areas of interest to the students, including forested/deforestation areas, agriculture, construction/development, a school, gas station, shopping plaza, residential development, recreational facilities, and transportation infrastructure including roads, bridges, culverts, stormwater drainage and best management practices. During all presentations, the students and members of the public remained engaged and interested in discussing stormwater pollutants generated by and/or found at the areas listed above, and the various impacts that they have on our communities, the environment and drinking water resources, as well as potential solutions and strategies for addressing water quality issues on a watershed size scale. Many other annual events which the Program would typically attend were still cancelled or otherwise modified for the 2022 season such that the display table was not an appropriate outreach tool, however, the Program hopes to attend more of the regular annual events in the future, as well continue to expand to new events as they arise.

MCM2: Public Participation

The Department has posted the Stormwater Management plan on opening www.nh.gov/dot web site in the Bureau of Environment section. Also included is a map viewer showing all the catchments the Department operates. No related comments have been received to date.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Impaired and TMDL Waters

For Waters listed as Bacteria Impaired or Bacteria TMDL
The Department has identified 13 outfalls that discharge to bacteria TMDL waters and identified them as High Priority locations to screen. They have all been screened and there are no indicators of illicit discharges.

MS4 System Mapping

MS4 mapping effort is an ongoing effort by the Department. The Department has mapped approximately 1,700 MS4 catchments within the Urbanized Area. Each catchment can be comprised of stormwater flow within pipes, ditches, channels, stormwater treatment facilities and along curb and gutters. This effort has allowed the Department to assess our entire system and provide statistics on Waste Load and Load estimates to various Waters of the United States. It also provided information on existing treatment efforts. See the NHDOT MS4 Interactive Map.

Screening of Outfalls/Interconnections Catchment Investigations

The Department suspended its IDDE program in 2021 due to Covid related workforce issues. We will organize and plan the wet weather screening over the winter of 2023.

IDDE Progress

There has been no Illicit Discharges identified or removed to date.

MCM4: Construction Site Stormwater Runoff Control

The Department is fully staffed with three (3) Environmental Coordinators overseeing four (4) active projects within the Urbanized Area that require coverage under the Construction General permit, comprising 97-point source discharges.

MCM5: Post-Construction Stormwater Management in New Development and Redevelopment

Impaired and TMDL Waters

For Waters listed as Nitrogen Impaired, and/or as Phosphorous Impaired or Phosphorous related TMDLs

The Department has completed a Nitrogen and Phosphorus Source Identification Report completed this year for discharges to:

- BELLAMY RIVER SOUTH (NHEST600030903-01-04)
- BELLAMY RIVER SOUTH CLEMENT POINT (NHEST600030903-01-03)
- OYSTER RIVER (NHEST600030902-01-03)
- SQUAMSCOTT RIVER SOUTH (NHEST600030806-01-01)

- UPPER SAGAMORE CREEK (NHEST600031001-03)
- COBBETTS POND (NHLAK700061204-01-01)

For Waters listed as Solids, Oil, Grease and Metals (SOGM) Impaired
The Department is designing a project which discharges HARRIS POND (NHLAK700061001-04-01) and BOWERS POND (NHLAK700061001-04-02) in Nashua. If appropriate, shut off gates will be added to the stormwater facility designs.

Green Infrastructure Report
The Department currently has approximately 26 projects in various stages of design within the urbanized area. These projects are being engineered in accordance with Part 2.3.6 of the permit and will include appropriate stormwater treatment facilities.

MCM6: Good Housekeeping

Impaired and TMDL Waters

For Waters listed as Chloride Impaired or Chloride TMDL
The Department has implemented best management practices as described in the Salt Management plan for discharges to the following waterbodies:

- STEVENS POND (NHLAK700060803-02)
- PARKMAN BROOK (NHRIV600030806-04)
- LOWER HODGSON BROOK (NHRIV600031001-04)
- UPPER HODGSON BROOK (NHRIV600031001-05)
- BORTHWICK AVE TRIBUTARY (NHRIV600031001-09)
- DORRS POND INLET BROOK (NHRIV700060802-13)
- HUMPHREY BROOK (NHRIV700060803-15)
- SOUTH PERIMETER BROOK (NHRIV700060804-12)
- POLICY BROOK - PORCUPINE BROOK (NHRIV700061102-18)
- UNNAMED BROOK - TO HARRIS BROOK (NHRIV700061102-21)
- UNNAMED BROOK TO WESTERN EMBAYMENT (NHRIV700061102-23)
- BEAVER BRKs (NHRIV700061203-09, NHRIV700061203-11, NHRIV700061203-16)
- DINSMORE BROOK (NHRIV700061204-01)

For Waters Listed as Nitrogen or Phosphorous Impaired or with a nutrient related TMDL
The Department has finished its catchment mapping, which includes curb and gutters that discharge to various nutrient impaired and nutrient TMDL waters The Department has implemented best management practices as described in the Operations and Maintenance plan for discharges to the following waterbodies:

- BELLAMY RIVER SOUTH (NHEST600030903-01-04)
- BELLAMY RIVER SOUTH CLEMENT POINT (NHEST600030903-01-03)

- OYSTER RIVER (NHEST600030902-01-03)
- SQUAMSCOTT RIVER SOUTH (NHEST600030806-01-01)
- UPPER SAGAMORE CREEK (NHEST600031001-03)
- COBBETTS POND (NHLAK700061204-01-01)

For Waters listed as Solids, Oil, Grease and Metals (SOGM) Impaired
The Department has finished its catchment mapping, which includes curb and gutters that discharge to various Solids, Oils, Grease and Metals (SOGM) impaired waters. The Department has implemented best management practices as described in the Operations and Maintenance plan for discharges to the following waterbodies:

- SQUAMSCOTT RIVER SOUTH (NHEST600030806-01-01)
- UPPER SAGAMORE CREEK (NHEST600031001-03)
- TAYLOR RIVER REFUGE POND (NHLAK600031003-02)
- HARRIS POND (NHLAK700061001-04-01)
- COCHECO RIVER (NHRIV600030603-06)
- GRAFTON DITCH (NHRIV600031001-06)
- BORTHWICK AVE TRIBUTARY (NHRIV600031001-09)
- SOUTH PERIMETER BROOK (NHRIV700060804-12)
- POLICY BROOK - PORCUPINE BROOK (NHRIV700061102-18)
- BEAVER BROOK (NHRIV700061203-16)

Inventory of Permittee-Owned Properties
The Department has finished its facility Stormwater Pollution Prevention Plans and has implemented effluent limitations as described for discharges from the following Patrol Sheds to their respective receiving waterbodies:

- Derry 528, BEAVER BROOK (NHRIV700061203-16)
- Dover 835, UNNAMED WETLAND
- Epping 608, UNNAMED WETLAND
- Hooksett 825, UNNAMED WETLAND
- Londonderry 512, LITTLE COHAS BROOK (NHRIV700060804-04)
- Manchester 527, UNNAMED BROOK TO MASSABESIC (NHRIV700060702-04)
- Merrimack 820, UNNAMED WETLAND
- North Hampton 612, WINNICUT RIVER (NHRIV600030901-07)
- Bedford 511, SEBBINS BROOK - POINTER CLUB BROOK (NHRIV700060804-01)
- Rochester 840, UNNAMED WETLAND
- Salem 514, HITTYTITY BROOK - UNNAMED BROOK (NHRIV700061102-32)

The Department has also finalized the Operations and Maintenance Plan and has been implementing the effluent limitations within.

Catch Basin Cleaning
The Department recorded approximately 4,903 catch basin inspections and cleanout events last year for the Patrol Sections servicing highways within the Urbanized Area. As necessary in accordance with the permit and Department's work instructions, the sediment was removed, and transported to Street Waste Storage yards for recycling.

Street Sweeping
The Department updated its sweeping maps in 2022 to incorporate the new 2020 303(d) list. Sweeping was completed along approximately 762 miles of highway within the Patrol Sections servicing highways within the Urbanized Area. Volume and weight of material removed from catch basins and curb lines was not recorded in FY 2022. However, the material was transported to our Limited Reuse Soils / Street Waste storage yards where it will be recycled for various highway uses. The Department is currently researching new technologies to improve and streamline the process for collecting, tracking, and reporting of permit-specific data since some of the street waste is comingled with material from outside the Urbanized Area.

Salt Management
The Department continually evaluates and utilizes proven technologies to address recognized concerns raised about adverse impacts that maintenance operations may have on the environment. This includes working to minimize the salt treatment used during winter maintenance operation. The Department has upgraded the winter maintenance fleet by adding telematics to plow trucks that allow the Department to track salt usage and delivery of material with more accuracy. The Department is also expanding and tracking the use of more flexible plow blades where possible to improve snow removal during plowing operations. While safety for the traveling public is of primary importance, accomplishing this in an environmentally friendly manner is also goal of the Department.

Stormwater Treatment Facilities
The Department continues to have approximately 270 stormwater treatment facilities in the MS4 Stormwater Management Program. The Department was able to inspect just a few facilities in 2022. The current assessment, ninety–two (92, 33%) of the facilities are in bypass for various reasons. The following is a breakout of the inspection criteria to be in poor condition:

- Sediment – 17
- Trash- 4
- Erosion- 8
- Structural – 21
- Flow- 33
- Vegetation – 49

Vegetation management continues to be the greatest challenge to maintain these facilities.

An example of a well-maintained vegetated treatment swale in Manchester NH, which discharges to the MERRIMACK RIVER (NHRIV700060803-14-02). Unfortunately, the embankment to the right of the photo collapsed in 2022 blocking the swale.

The Department has or will continue to complete and/or formulate corrective actions to increase the condition rating for all these facilities.

Part V: Certification of Small MS4 Annual Report 2019

40 CFR 144.32(d) 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 gather and evaluate 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, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: William J. Cass, PE

Title: Assistant Commissioner

Signature:

Date: 9/29/2022