

<p style="text-align: center;"><b>Year 3 Annual Report</b> <b>New Hampshire Small MS4 General Permit Reporting</b> <b>Period: May 1, 2020-June 30, 2021</b></p>
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**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:**

**Name:** Mark Hemmerlein  
**Title:** Water Quality Program Manager  
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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, 2021

## **Part II: Self-Assessment**

The New Hampshire Department of Transportation (Department) continues to be committed to implement a program to reduce the discharge of pollutants from the Department's regulated Small MS4s to the maximum extent practicable, with the goals of protecting 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 finish up and accomplish many of the primary tasks laid out in the 2020 modified permit. While the COVID-19 pandemic modified the way we do business at the Department, we continue to accomplish many of the milestones the permit requires. The year was primarily dominated by retooling the design process to incorporate the modified Part 2.3.6 rules into all aspects of the Department's planning, design, construction and operations. In addition, the Department made a concerted effort to finish its MS4 catchment mapping which refines many aspects of MS4 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. Note that it came to the Department's attention that the 2018 NHDES's 305(b) list was incomplete, not listing all waterbodies with TMDLs. NHDES published a separate NPDES waters list which includes impairments, ORWs (Tier 3), and TMDLs to be utilized when filing NDPS Permits on March 26, 2020. The Department reassessed its entire NPDES program with only minor adjustments to implementation of the permit effluent limitations. We expect any deficiency on reporting the status of Waters of the United States to be corrected in 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, 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 provided monthly training to new employees on the 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.

#### **ACEC Meeting**

The Bureau of Environment provided a refresher to the consulting community on MS4 compliance for design – bid- build projects as well as for the third party construction within the DOT ROW.

### **MCM2: Public Participation**

The Department has posted the Stormwater Management plan on opening [www.nh.gov/dot](http://www.nh.gov/dot) web site in the “Of Interest” 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 1,716 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, and new this year is the pavement area draining to the point source discharge. 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 2022.

### **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) projects within the Urbanized Area that require coverage under the Construction General permit, comprising one hundred and twenty-six (126) discharge points. All are currently in the planning stage but will be active shortly.

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

### **Impaired and TMDL Waters**

#### *For Waters listed as Nitrogen Impaired*

The Department is administrating the design and construction of the Dover Toll project, which discharges to Bellamy River. The design includes structural stormwater treatment to reduce nitrogen discharges to BELLAMY RIVER SOUTH CLEMENT POINT (NHEST600030903-01-03)

#### *For Waters listed as Phosphorous Impaired or Phosphorous related TMDLs*

The Department is administrating the design and construction of the Exit 4A project, which at its

easterly end discharges to Beaver Lake. The design includes structural stormwater treatment to reduce phosphorous discharges to BEAVER LAKE (NHLAK700061203-02-01)

*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 structure designs.

### **Green Infrastructure Report**

The Department currently has approximately 20 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 structures.

## **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:

- SQUAMSCOTT RIVER SOUTH (NHEST600030806-01-01)
- SQUAMSCOTT RIVER NORTH (NHEST600030806-01-02)

- OYSTER RIVER (NHEST600030902-01-03)
- BELLAMY RIVER SOUTH CLEMENT POINT (NHEST600030903-01-03)
- BELLAMY RIVER SOUTH (NHEST600030903-01-04)
- LOWER LITTLE BAY GENERAL SULLIVAN BRIDGE (NHEST600030904-06-15)
- LOWER LITTLE BAY (NHEST600030904-06-18)
- DOVER WWTF SZ-NH (NHEST600031001-01-02)
- UPPER PISCATAQUA RIVER-NH-SOUTH (NHEST600031001-01-03)
- BACK CHANNEL (NHEST600031001-05)
- WENTWORTH-BY-THE-SEA (NHEST600031001-08)
- UPPER PORTSMOUTH HARBOR-NH (NHEST600031001-11)

*For Waters listed as Solids, Oil, Grease and Metals (SOGM) Impaired*

The Department has finishing 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 finishing 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, HITTITITY BROOK - UNNAMED BROOK (NHRIV700061102-32)

The Department has also finalized the [Operations and Maintenance Plan](#) and has been implanting the effluent limitations within.

### **Catch Basin Cleaning**

The Department recorded approximately 6,413 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 completed approximately 1,434 miles of sweeping 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 2021. 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. As funding has permitted, 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 BMPs**

The Department has refined its Stormwater Structures inspection protocol. Structures inspected during the 2021 season were verified as having point source discharges to a Water of United States. This included swales, wet extended detention, dry detention, gravel wetlands. Basin types excluded were infiltration, porous pavements, and constructed wetlands. The Arc-Online / Arc Survey 1-2-3 survey tool was used to complete the inspections. The Department currently has 270 stormwater treatment structures in the MS4 Stormwater Management Program. The Department was able to inspect 263 structures in 2021. Ninety-three (93, 34%) of the structures are in bypass for various reasons. The following is a break out of the inspection criteria to be considered to be in poor condition:

- Sediment – 18
- Trash- 0

- Erosion- 8
- Structural – 21
- Flow- 37
- Vegetation – 51

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



An example of a well maintained vegetated treatment swale in Manchester NH, which discharges to the MERRIMACK RIVER (NHRIV700060803-14-02)

The Department has or will continue to complete and/or formulate corrective actions to increase the condition rating for all of 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:

A handwritten signature in blue ink, appearing to read "William J. Cass".

Date: 10/7/2021