

**Year 6 Annual Report**  
**New Hampshire Small MS4 General Permit**  
**Reporting Period: July 1, 2023-June 30, 2024**

*\*\*Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form. Also ensure any websites included on this form are to publicly accessible sites\*\**

*Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed. Please ONLY report on activities between July 1, 2023 and June 30, 2024 unless otherwise requested.*

**Part I: Contact Information**

Name of Municipality or Organization:

EPA NPDES Permit Number:

**Primary MS4 Program Manager Contact Information**

Name:  Title:

Street Address Line 1:

Street Address Line 2:

City:  State:  Zip Code:

Email:  Phone Number:

**Stormwater Management Program (SWMP) Information**

SWMP Location (publicly available web address):

Date SWMP was Last Updated:

If the SWMP is not available on the web please provide the physical address:

## Part II: Self-Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4. Make sure you are referring to the most recent EPA approved Section 303(d) Impaired Waters List which can be found here: <https://www.epa.gov/tmdl/region-1-impaired-waters-and-303d-lists-state>

**Impairment(s)**

Bacteria/Pathogens     
  Chloride     
  Nitrogen     
  Phosphorus  
 Solids/ Oil/ Grease (Hydrocarbons)/ Metals

**TMDL(s)**

Bacteria and Pathogen     
  Chloride     
  Lake and Pond Phosphorus

Clear Impairments and TMDLs

Next, check off all requirements below that have been completed. **By checking each box you are certifying that you have completed that permit requirement fully.** If you have not completed a requirement leave the box unchecked. Additional information will be requested in later sections.

### Annual Requirements

- Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- Kept records relating to the permit available for 5 years and made available to the public
- The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
  - This is not applicable because we do not have sanitary sewer
  - This is not applicable because we did not find any new SSOs
  - The updated SSO inventory is attached to the email submission
  - The updated SSO inventory can be found at the following publicly available website:
- Updated system map due in year 10 with information from completed catchment investigations
- Provided training to employees involved in IDDE program within the reporting period
- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- All curbed roadways were swept at least once within the reporting period
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Updated inventory of all permittee owned facilities as necessary
- O&M programs for all permittee owned facilities have been completed and updated as necessary

- Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Inspected all permittee owned treatment structures (excluding catch basins)

*Optional:* If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

The City is drafting a separate SWPPP for its street waste materials stored at the Drop-off facility. The Drop-off facility has a SWPPP under the MSGP program, however, the focus of this SWPPP is the trash/recycling operations, which is managed independently by different City personnel from the street wastes. We anticipate completing the street waste material SWPPP by the end of 2024.

**Bacteria/ Pathogens** (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach\**

- Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time
- Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

*\* Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

*Optional:* If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

**Chloride Impairment**

- Implemented the Salt Reduction Plan
- Reported amount of salt applied to all municipally owned and maintained surfaces using the UNH Technology Transfer Center online tool

*Optional:* If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

**Phosphorus Impairment**

Annual Requirements

*Public Education and Outreach\**

- Distributed an annual message in the spring (April/May) encouraging the proper use and disposal of grass clippings and encouraging the proper use of slow-release and phosphorus-free fertilizers
- Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate
- Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

*\* Public education messages can be combined with other public education requirements as applicable (see Appendix H and F for more information)*

*Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

- Increased 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) or swept at least once in the spring and implemented a fall leaf litter collection program

*Structural BMPs*

- Installed a structural BMP as a demonstration project within the drainage area of the water quality limited water or its tributaries. The type of BMP installed is (*e.g. biofiltration*):

- Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP were documented.

- No BMPs were installed
- The BMP information is attached to the email submission
- The BMP information can be found at the following website:

This is Appendix C to the Phosphorus Impairment Plan located at <https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Management-Program>

Total estimated phosphorus removed in **lbs/year** from the installed BMPs: 28.11

*Optional:* If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

A structural BMP (bioretention) has been designed to serve as a demonstration project at the Piscataquog Boat Ramp off of Electric Street, located in both the Namaske Lake and Merrimack River watersheds, both impaired for phosphorus. Tree box filters have also been incorporated into proposed boat ramp improvements at Stevens Pond, also within the Merrimack River watershed. These BMPs were incorporated into the City's CMOM C5 construction bid package, with an anticipated Fall 2023 construction start schedule. However, the project was delayed due to permitting delays associated with other components of this \$5.0 million contract, with the bid opening now scheduled for 10/1/24 and construction of the Piscataquog Boat Ramp and Stevens Pond BMPs to occur in 2025. Additionally, the City has a \$2.0+ million drainage improvement contract scheduled to bid in Fall 2024, which includes stormwater treatment BMPs at two schools located within the Nutt Pond and Pine Island Pond watersheds, which have phosphorus TMDLs.

**Solids, Oil and Grease (Hydrocarbons), or Metals Impairment(s)**

Annual Requirements

*Good Housekeeping and Pollution Prevention for Permittee Owned Operations*

- Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads
  - The street sweeping schedule is attached to the email submission
  - The street sweeping schedule can be found at the following publicly available website:

This is Appendix J to the SWMP located at: <https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Management-Program>

*Optional:* If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

Increased Street Sweeping - The City has impairments for lead (Black Brook-Hardy Brook), iron (Little Cohas-Unnamed Brook, South Perimeter Brook) and aluminum (Merrimack River) only. Increased sweeping was determined not to be necessary in these areas as they are not observed to accumulate more sediment and debris than other areas within the City.

**Lake and Pond Phosphorus TMDL**

Baseline phosphorus export rate from LPCP Area ( <b>lbs/year</b> )[A]:	1,413
Total phosphorus reduction from all nonstructural controls this reporting period ( <b>lbs/year</b> ) [B]:	19.16
Total phosphorus reduction from all structural controls installed this reporting period and all previous years ( <b>lbs/year</b> ) [C]:	17.87
Phosphorus load increase due to development incurred since baseline loading was calculated in <b>lbs/year</b> [D]:	0

Current phosphorus export rate from the LPCP Area in **lbs/year** [=A-(B+C)+D from above]: 1,375.97

- I certify under penalty of law that all source control and treatment Best Management Practices being claimed for phosphorus reduction credit have been inspected, maintained and repaired in accordance
- with manufacturer or design specification. I certify that, to the best of my knowledge, all Best Management Practices being claimed for a phosphorus reduction credit are performing as originally designed.
  - Implemented all nonstructural control measures **during this reporting period** and documented the measures and their phosphorus reduction. The nonstructural control measure information:
    - is attached to the email submission
    - can be found at the following publicly available website:

This is documented in the Phosphorus Impairment Plan (Section 7.2) located at <https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Management-Program>

Documented the structural control measures implemented during **this reporting period and all**  **previous years**, including location, phosphorus reduction in weight/year, and date of last completed maintenance and inspection for each control. The structural control measure information:

- is not applicable; no structural control measures were implemented
- is attached to the email submission
- can be found at the following publicly available website:

No structural control measures were implemented this reporting period. Controls implemented in previous years are documented in Appendix C to the Phosphorus Impairment Plan located at <https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Management-Program>

The LPCP: *(select one of the following options. If you submitted your LPCP last year and have an updated website, please include the website below)*

- was submitted in the Year 5 Annual Report
- is attached to the email submission
- can be found at the following publicly available website:

See Phosphorus Impairment Plan located at <https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Management-Program>

*Optional:* If you would like to describe progress made on any incomplete requirements listed above or provide any additional details, please use the box below:

The City has prepared a combined Phosphorus Source Identification Plan and Lake Phosphorus Control Plan (LPCP) titled Phosphorus Impairment Plan. These were combined due to the many overlapping requirements and because all of the LPCP waterbodies are within the watershed of the Merrimack River, which is impaired for phosphorus, but does not have a TMDL.

Phosphorus removals from non-structural controls include street sweeping, catch basin cleaning, and the use of phosphorus free fertilizer. Phosphorus removals from structural BMPs include City owned BMPs and areas where a City outfall discharges to a large pervious area that allows for an IA disconnection credit in accordance with the MS4 permit. Areas of IA disconnection were based on an initial screening process and field verification of a subset of outfalls. Additional IA disconnection credits will be evaluated in future reporting years.

No new BMPs were constructed this period, however, the City has a \$2.0+ million drainage improvement contract scheduled to bid in Fall 2024, which includes stormwater treatment BMPs at two schools located within the Nutt Pond and Pine Island Pond watersheds, which have phosphorus TMDLs.

Stormwater BMPs being claimed for phosphorous reduction credit have been evaluated in the field and/or through analysis of available design plans. Pollutant removals for BMPs with available plans have been assessed according to the provided engineering design plans to estimate pollutant reductions provided. BMPs with no available plans were instead assessed in the field according to best engineering judgment. The City cannot certify that BMPs assessed in the field are performing as originally designed, as design plans are not available. However, we feel that reasonable steps have been made to accurately quantify pollutant removals provided by existing stormwater BMPs. Additionally, the City continues to perform annual inspections of City-owned BMPs, with maintenance performed as needed so that they continue to function and provide treatment. Some maintenance is handled by City staff, however, due to limited in-house resources, the City is evaluating using an outside vendor. The City will develop a maintenance tracking log for inclusion in the

**SWMP.**

The City has not yet calculated increases in phosphorus load due to development since the baseline loading was calculated. The City will use the resources developed by the New Hampshire Stormwater Coalition. The New Hampshire Stormwater Coalition is in the process of calculating the phosphorus load increase due to development incurred since baseline loading for NH MS4 communities, which will be available in Year 7. The City will provide an update on the progress in the Year 7 Annual Report.

*Optional:* Use the box below to provide any additional information you would like to share as part of your self-assessment:

As outlined in our Year 2, 3 and 4 Annual Reports, the MS4 Permit requires the City to achieve a significant reduction in phosphorus loads (50-71%) to waters with phosphorus TMDLs, a significant portion of which comes from existing privately developed properties and Interstate 93 that discharge to the City's MS4 or directly to surface waters. The City has control of 44% of the land in its LPCP MS4 catchment areas. The existing private properties are currently not subject to stormwater permits and are not regulated to reduce their share of phosphorus contributions to TMDL waters. Instead, the City is responsible for achieving phosphorus reductions from these private developments because these developments are located within Manchester's MS4. The City continues to recommend a state or federal level stormwater permit for existing large commercial, industrial and institutional properties located within TMDL watersheds, similar to that in Vermont or that proposed for the Charles River Watershed in Massachusetts, with the same phosphorus or more stringent reduction requirements that the MS4 permitted communities are required to achieve to help mitigate impacts from existing development.

### Part III: Receiving Waters/Impaired Waters/TMDL

Have you made any changes to your lists of receiving waters, outfalls, or impairments since the NOI was submitted?

- Yes  
 No

If yes, describe below, including any relevant impairments or TMDLs:

Changes in impairments from the NOI include:

1. Black Brook-Hardy Brook (NHRIV700060801-05-01): new impairment for dissolved oxygen (DO) saturation
2. Crystal Lake-Town Beach (NHLAK700060703-02-01): no longer impaired for (DO) saturation
3. Melody Pines Day Camp Beach (NHLAK700060703-02-03): no longer impaired (DO and DO saturation)
4. Massabesic Lake (NHLAK700060702-03): wasn't included on the NOI, however, is impaired for DO, DO saturation, cyanobacteria, non-native aquatic plants and pH
5. McQuesten Brook (NHRIV700060803-16): no longer impaired for DO; new impairment for E. coli added
6. Merrimack River (NHRIV700060802-14-02): wasn't included on the NOI (extremely small portion of the river in Manchester), however, was impaired for aluminum, DO saturation, pH, E. coli at time of NOI; no longer impaired for DO saturation
7. Merrimack River (NHRIV700060803-14-02): new impairment for phosphorus
8. Saint Anselm Brook-To Piscataquog River (NHRIV700060607-35): new impairment for DO saturation and chloride

The City maintains an ongoing online GIS database of dry weather inspection results, which includes the identification and location of any new outfalls and any impairments of the receiving water. These new outfalls are also incorporated into the updated outfall priority ranking included in the IDDE Plan. The City has 704 MS4 outfalls, including 31 that discharge to a long culverted stream (e.g., watercourse that has been enclosed underground).

## Part IV: Minimum Control Measures

Please fill out all of the metrics below. If applicable, include in the description who completed the task if completed by a third party.

### MCM1: Public Education

Number of educational messages completed **during this reporting period:**

Below, report on the educational messages completed **during this reporting period**. For the measurable goal(s) please describe the method/measures used to assess the overall effectiveness of the educational program.

#### **BMP: Septic System Outreach**

Message Description and Distribution Method:

EPD leaves "What's Flushable" magnets and "Get Pumped" brochures at the WWTF front desk for septic haulers to take and distribute to their customers.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Residents are aware of water quality impacts from septic systems, the importance of maintaining septic systems, and how to maintain them. Metrics include:  
4 of 10 magnets and 11 out of 50 brochures have been picked up.

Message Date(s):

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

Education to septic owners was not specifically called out in the NOI, but does apply to a small percentage of City residents.

#### **BMP: Scoop the Poop Pet Waste Management Summer Message**

Message Description and Distribution Method:

The Scoop the Poop pledge was published in the Sunday Union Leader. The article included a link and QR code to take the Scoop the Poop pledge. The Scoop the Poop fact sheet is permanently posted at the Manchester Urban Ponds kiosks and three City kiosks located at CSO outfalls along the Merrimack River. The City also distributes an education fact sheet with dog license registration forms.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Dog owners 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. Metrics include:  
Circulation for Sunday Union Leader (27,528). Number of kiosk postings (12 postings). Number of Scoop the Poop pledges (18 pledges).

Message Date(s): Ongoing (fact sheets, kiosks). 7/16/23 (newspaper article).

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

**BMP: Rake It or Leave It Leaf Letter Fall Message**

Message Description and Distribution Method:

An article outlining proper disposal of leaf litter was published in the Sunday Union Leader.

Targeted Audience: Residents

Responsible Department/Parties: DPW-EPD

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. Metrics include:  
Circulation for Sunday Union Leader (27,528).

Message Date(s): 10/15/23 (newspaper article).

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

**BMP: Green Grass Clippings/Fertilizer Spring Message**

Message Description and Distribution Method:

An article outlining proper disposal of grass clippings and proper application of fertilizer was published in the Sunday edition of the Union Leader. It was also posted on the DPW Facebook page.

Targeted Audience: Residents

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Residents that are lawn care enthusiasts 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. Metrics include:  
Circulation for Sunday Union Leader (27,528). Number of followers, likes, comments and shares to Facebook posts (807 followers, 2 likes, 1 comments, 0 shares).

Message Date(s): 4/13/24 (newspaper article). 4/20/24 (DPW Facebook post).

Message Completed for: Appendix F Requirements  Appendix H Requirements Was this message different than what was proposed in your NOI? Yes  No 

If yes, describe why the change was made:

**BMP: Catch Basin Cleaning Message**

Message Description and Distribution Method:

A message to keep storm drains clear was posted in the Sunday Union Leader. A catch basin/stormwater drain clearing announcement was posted on the DPW Facebook page.

Targeted Audience: Residents

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Residents assist in keeping catch basins clear before storms to minimize flooding and associated damage. Metrics include:  
Circulation for Sunday Union Leader (27,528). Number of followers, likes, comments and shares to Facebook posts (807 followers, 14 likes, 2 comments, 11 shares).

Message Date(s): 10/22/23 (newspaper article). 1/8/24 (Facebook post).

Message Completed for: Appendix F Requirements  Appendix H Requirements Was this message different than what was proposed in your NOI? Yes  No 

If yes, describe why the change was made:

Catch basin cleaning education was not included as a message in the NOI, however, has been added to increase awareness of the function of the drainage system and importance of keeping it functional to prevent flooding.

**BMP: Hazardous Waste and Yard Waste Message**

Message Description and Distribution Method:

Household hazardous waste collection days posted in the Union Leader and on DPW Facebook page. Used/

discarded syringe disposal posted on DPW Facebook page.

Targeted Audience: Residents

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Residents properly dispose of HHW at scheduled collection events. Metrics include: Circulation for Sunday Union Leader (27,528). Number of followers, likes, comments and shares to HHW & Syringe DPW Facebook posts (807 followers, 3 likes, 2 comments, 37 shares). Number of followers, likes, comments and shares to HHW UPRP Facebook posts (716 followers, 5 likes, 5 comments, 2 shares).

Message Date(s): 10/8/23 & 10/12/23 (HHW newspaper article). 9/29/23 & 10/6/23 (HHW DPW Facebook post). 11/17/23 (Syringe DPW Facebook post). 9/29/23 & 5/10/24 (HHW UPRP Facebook post).

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

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### **BMP: Winter Maintenance**

Message Description and Distribution Method:

A mailing (flyer) outlining the requirements for the application of salt on private parking lots and streets, including using a certified SnowPro contractor, was sent 11/15/23 to all businesses with 10 or more parking spaces located within a chloride impaired watershed. After receiving feedback that most businesses hire a snow contractor in early Summer, a postcard reminding businesses to hire a SnowPro certified contractor was sent 6/4/24.

Targeted Audience: Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Businesses and institutions hire certified SnowPro contractors for winter parking lot and street maintenance. Metrics include: Fall flyer (411 mailings targeting 270 parcels). Spring postcard (390 mailings targeting 260 parcels).

Message Date(s): 11/15/23 (fall flyer mailing). 6/4/24 (spring postcard mailing).

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

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**BMP: Solid Waste and Recycling Message**

## Message Description and Distribution Method:

Manchester's Fall Cleanup curbside pickup schedule posted in the Union Leader. Yard waste curbside collection and Drop-off facility hours posted on DPW Facebook page. Yard waste collection post on UPRP Facebook page.

Targeted Audience: Businesses, institutions and commercial facilities, Residents

Responsible Department/Parties: DPW-EPD

## Measurable Goal(s):

Residents collect and dispose of leaves and yard waste through the curbside pickup program. Metrics include: Circulation for Sunday Union Leader (27,528). Number of followers, likes, comments and shares to yard waste and Drop-off DPW Facebook posts (807 followers, 18 likes, 0 comments, 0 shares). Number of followers, likes, comments and shares to yard waste UPRP Facebook post (716 followers, 1 likes, 0 comments, 0 shares).

Message Date(s): 10/22/23 (Fall cleanup newspaper article). 10/22/23 (yard waste curbside collection DPW Facebook post). 11/22/23 (Drop-off hours DPW Facebook post).

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

**BMP: General Lake/River Health Messages**

## Message Description and Distribution Method:

General fact sheets about lake/river health are permanently posted at the Manchester Urban Ponds kiosks and the three City kiosks located at CSO outfalls along the Merrimack River. Fact sheets include information about waterbody cleanups, the Urban Pond Restoration Program, and threats to water quality. The 2024 Urban Ponds Newsletter outlines similar information and was emailed to local press, project partners, the Mayor and Board of Aldermen, and volunteers on 3/31/24. It was also posted to the Urban Ponds Facebook page (4/1/24). Multiple other posts were made to the Urban Ponds Facebook page including posts about pond history, water quality sampling, and cleanup events. The UPRP was also featured on NH Chronicle WMUR on 5/30/2024. 2024 marked 25 years of cleanup efforts under the UPRP. Posts about restoring the Merrimack River riverbank and cleanup events were also made on the DPW Facebook page.

Targeted Audience: Residents

Responsible Department/Parties: DPW-EPD

## Measurable Goal(s):

Residents understand threats to water quality and participate in City cleanup events. Metrics include: Number of followers, likes, comments, and shares to Urban Pond Facebook posts (716 followers, 376 likes, 41 comments and 35 shares). Number of followers, likes, comments, and shares to DPW Facebook posts (807 followers, 76 likes, 9 comments and 11 shares). Newsletter emails sent (185).

7/19/23, 7/20/23, 8/16/23, 10/25/23, 1/22/24, 2/20/24, 2/24/24, 3/25/24, 4/1/24, 4/10/24,

Message Date(s): 4/14/24, 4/15/24, 4/20/24, 4/21/24, 4/23/24, 4/27/24, 5/1/24, 5/4/24, 5/6/24, 5/15/24, 5/30/24, 5/31/24, 6/12/24 (UPRP Facebook posts). 1/10/24, 4/5/24, 4/9/24, 4/11/24, 4/16/24, 4/23/24, 4/26/24, 5/3/24 (DPW Facebook posts). 3/31/24 (Newsletter emails). 5/30/24 (NH Chronicle WMUR). Ongoing (factsheets, 12 kiosks).

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

### **BMP: Industrial Outreach**

Message Description and Distribution Method:

A "Stormwater Pollution Control for Industrial Facilities" factsheet and salt reduction/Green SnowPro fact sheet were mailed to industrial facilities subject to the NPDES Multi Sector General Permit (MSGP). EPD also has a webpage with stormwater resources industrial facilities, including information on outdoor storage, proper disposal of toxic and hazardous wastes and good housekeeping to minimize contact of pollutants with stormwater runoff.

Targeted Audience: Industrial facilities

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Industrial facilities incorporate good housekeeping and best management practices to reduce pollutants in stormwater runoff. Metrics include:  
Mailing (43 industrial facilities). Website is continuously available.

Message Date(s): 11/15/23 (mailing). Ongoing (website).

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

### **BMP: Construction and Development Practices**

Message Description and Distribution Method:

EPD has a webpage with stormwater resources for site development and construction activities, including information on Construction General Permit (CGP) requirements, City stormwater and sewer regulations, and best practices for construction sites. EPD also has a stormwater regulation webpage with summaries and links to City stormwater regulations and fact sheets for site developers. A Homeowner's Guide to Managing Stormwater is also included on the webpage and handed out to homeowner's that come to Planning for smaller projects.

EPD also works with developer's engineers on development and redevelopment projects in the City to ensure

they meet the City's stormwater regulations and performs construction inspections of many properties during development.

Targeted Audience: Developers (construction), Residents

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Developers prepare NOI and SWPPPs under NPDES CGP and incorporate best management practices into construction practices. Metrics include:  
18 Homeowner's Guide fact sheets handed out. Website is continuously available.

Message Date(s): Ongoing.

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

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### **BMP: Combined Sewer Separation & WWTF**

Message Description and Distribution Method:

The progress of several sewer separation projects were posted on DPW's Facebook page along with announcements of WWTF open house. WWTF open house was also posted on the UPRP Facebook page. The Open House included a presentation on City sewer and drainage projects and a tour of the WWTF.

Targeted Audience: Residents, Businesses

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Raise awareness of the combined system and City's efforts to separate stormwater from sewer and improve wastewater discharges to river. Metrics include:

Number of followers, likes, comments and shares to DPW Facebook posts (807 followers, 81 likes, 5 comments and 12 shares). Number of followers, likes, comments and shares to UPRP Facebook posts (716 followers, 6 likes, 6 comments and 1 shares). ~50 guests at the WWTF open house.

Message Date(s): 9/15/23, 9/18/23, 9/19/23, 9/26/23, 11/28/23, 12/15/23, 6/4/24, 6/6/24, 6/7/24, 6/18/24 (DPW Facebook). 6/4/24, 6/8/24, 6/11/24 (UPRP Facebook). 6/10/24 (open house).

Message Completed for: Appendix F Requirements  Appendix H Requirements

Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

WWTF and combined sewer infrastructure improvement education was not included as a message in the NOI, however, has been added to increase awareness of the City's investment in infrastructure improvements to reduce pollutant loads from its wastewater treatment facility and combined sewer system.

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**BMP: School Tours of the WWTF**

Message Description and Distribution Method:

EPD conducted school tours of the WWTF and provided presentations on stormwater that includes information on the City's impaired waters, pollutant sources, and the stormwater program being implemented to address drainage issues and water quality.

Targeted Audience: Residents/students

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Raise awareness of stormwater issues and improvements in the younger generation. Metrics include: Attendance by 85 school students.

Message Date(s): 12/12/23 (23 students), 3/26/24 (24 students), 4/9/24 (28 students), 4/16/24 (10 students).

Message Completed for: Appendix F Requirements  Appendix H Requirements Was this message different than what was proposed in your NOI? Yes  No 

If yes, describe why the change was made:

EPD participates in a school education program offering tours of the WWTF, These tours include information on stormwater and target our future generations. They were not included in the NOI.

**BMP: BMP General Stormwater Pollution Messages**

Message Description and Distribution Method:

General information on stormwater pollution in Manchester is permanently posted at the Manchester Urban Ponds kiosks and three City kiosks located at CSO outfalls along the Merrimack River. Fact sheets posted at the City CSO kiosks are entitled "Just Remember", "What Can You Do to Reduce Stormwater Runoff and Pollution", and "Watersheds and the Basics of Stormwater". EPD also has a stormwater webpage with stormwater outreach and good practices tips for residents and businesses.

Targeted Audience: Residents, Businesses

Responsible Department/Parties: DPW-EPD

Measurable Goal(s):

Raise awareness of stormwater issues measures residents can take to improve water quality. Metrics include: Number of kiosks posted (3 City CSO kiosks and 9 UPRP kiosks). Website is continuously available.

Message Date(s): Ongoing (fact sheets, kiosks, website).

Message Completed for: Appendix F Requirements  Appendix H Requirements Was this message different than what was proposed in your NOI? Yes  No

If yes, describe why the change was made:

Add an Educational Message

## MCM2: Public Participation

Describe the opportunity provided for public involvement in the development of the Stormwater Management Program (SWMP) **during this reporting period:**

The SWMP is published on Manchester's website (<https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Management-Program>)

Was this opportunity different than what was proposed in your NOI? Yes  No

Describe any other public involvement or participation opportunities conducted **during this reporting period:**

The SWMP webpage provides a link to an EPD phone number and email encouraging residents to provide any comments/concerns on the current SWMP. No comments were received in Year 6.

## MCM3: Illicit Discharge Detection and Elimination (IDDE)

### Sanitary Sewer Overflows (SSOs)

*Check off the box below if the statement is true.*

This SSO section is NOT applicable because we DO NOT have sanitary sewer

*Below, report on the number of SSOs identified in the MS4 system and removed **during this reporting period.***

Number of SSOs identified:

Number of SSOs removed:

### MS4 System Mapping

Percent of Phase II map complete:

*Optional:* Provide additional status information regarding your map:

The City continues to investigate data gaps in its stormwater drainage infrastructure mapping (e.g., missing piping and connectivity). All field investigations and identification of data gaps are performed using an online GIS platform that allows changes identified in the field to be recorded directly into an online GIS, including more accurate outfall locations, identification of new outfalls, catch basins and pipes, and relabeling of structures misidentified as outfalls. As of the end of Year 6, the City has 704 MS4 outfalls, including 31 that discharge to a long culverted stream (e.g., watercourse that has been enclosed underground).

### **Screening of Outfalls/Interconnections**

*If conducted, please submit any outfall monitoring results from this reporting period. Outfall monitoring results should include the date, outfall/interconnection identifier, location, weather conditions at time of sampling, precipitation in previous 48 hours, field screening parameter results, and results from all analyses. Please also include the updated inventory and ranking of outfalls/interconnections based on monitoring results.*

- No outfalls were inspected
- The outfall screening data is attached to the email submission
- The outfall screening data can be found at the following publicly available website:

*Below, report on the number of outfalls/interconnections screened **during this reporting period.***

Number of outfalls screened:

*Below, report on the percent of total outfalls/ interconnections screened **to date.***

Percent of outfalls screened:

*Optional:* Provide additional information regarding your outfall/interconnection screening:

The City located and screened another 24 outfalls/interconnections this period found as part of its investigations to address data gaps in the mapping. In cases where an outfall could not be found, or was inaccessible, the upgradient catch basin or manhole was inspected for dry weather flows as a proxy for the outfall. The City has a number of long culverted streams where stormwater drainage networks discharge directly into the culvert at a junction structure such as a manhole or catch basin. The junction structure discharge points into the culverted stream are mapped as outfalls.

### **Catchment Investigations**

*If conducted, please submit all data collected during this reporting period as part of the dry and wet weather investigations. Also include the presence or absence of System Vulnerability Factors for each catchment.*

- No catchment investigations were conducted
- The catchment investigation data is attached to the email submission
- The catchment investigation data can be found at the following publicly available website:

*Below, report on the number of catchment investigations completed **during this reporting period.***

Number of catchment investigations completed this reporting period:

*Below, report on the percent of catchments investigated **to date**.*

Percent of total catchments investigated:

*Optional: Provide any additional information for clarity regarding the catchment investigations below:*

To date, the City has completed 606 catchment investigations, 92 of which were completed this period and the remainder completed during previous years, many of which include catchments that do not have key junction manholes and/or SVFs. These were not reported in previous years as the data was being reviewed to confirm completeness before reporting. The City is continuing its review of records to identify all potential catchment areas with SVFs, while progressing with sampling in areas with identified SVFs. The SVF analysis is included in the appendix to the IDDE Plan on the City's website at <https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Management-Program>.

### **IDDE Progress**

*If illicit discharges were found, please submit a document describing work conducted over this reporting period, and cumulative to date, including location source; description of the discharge; method of discovery; date of discovery; and date of elimination, mitigation, or enforcement OR planned corrective measures and schedule of removal.*

- No illicit discharges were found
- The illicit discharge removal report is attached to the email submission
- The illicit discharge removal report can be found at the following publicly available website:

*Below, report on the number of illicit discharges identified and removed, along with the volume of sewage removed **during this reporting period**.*

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed:  gallons/day

*Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed **since the effective date of the permit (July 1, 2018)**.*

Total number of illicit discharges identified:

Total number of illicit discharges removed:

*Optional: Provide any additional information for clarity regarding illicit discharges identified, removed, or planned to be removed below:*

One of the two illicit discharges identified this period was associated with the Colonial Apartments on West River Drive, which was reported in the Year 4 and Year 5 annual report. Additional testing after initial removal revealed that two of the eight apartment buildings and the separate leasing facility were still connected to the storm drain system. These were fully removed during this reporting period (refer to the attached report) with an estimated 130 gal/day removed this period. The full report is attached.

The second illicit discharge was discovered at Residences of Riverwalk at 555 South Commercial Street. The

illicit discharge was due to a crossed roof drain and sewer drain, which was corrected on 4/5/24. Twenty-six apartments were connected to that line, with an estimated 3,200 gal/day removed (based on water records). Followup sampling at the outfall revealed there may be another potential connection within or upgradient of the Riverwalk development, which is undergoing further investigation. A full report will be provided with the Year 7 annual report.

The removal report for the illicit discharge to DOU-109404 was included with the Year 2 report.

### **Employee Training**

Describe the frequency and type of employee training conducted **during this reporting period**:

Employee training was conducted on May 21, 2024 at the Manchester Highway Department offices at 475 Valley Street. Training focused on water pollution, MS4 permit requirements, IDDE program requirements, illicit discharge investigations, sanitary sewer overflows, good housekeeping, erosion and sediment controls, operations and maintenance, and management of street wastes. Nineteen city employees from DPW-EPD attended the training. The training log will be included in the next update of the Illicit Discharge Detection Plan posted on the City's Stormwater website.

Employee training was conducted on May 21, 2024 at the Bridge Street Maintenance Center. Training focused on Water Pollution, MS4 Permit Requirements, and the Stormwater Pollution Prevention Plan. Four city employees from Parks and Recreation attended the training.

### **MCM4: Construction Site Stormwater Runoff Control**

*Below, report on the construction site plan reviews, inspections, and enforcement actions completed **during this reporting period**.*

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

*Optional:* Enter any additional information relevant to construction site plan reviews, inspections, and enforcement actions:

The City completed 15 plan reviews for development/redevelopment projects with land disturbance. The City performed 182 site inspections and received 133 inspection reports prepared by third party inspectors.

When performing construction site inspections, the City discusses any observed issues with the Contractor at the time of the inspection. These are resolved through the inspection process, limiting the need for formal enforcement actions. Of the 182 site inspections performed by the City, minor issues were noted during 43 of the inspections and resolved with the Contractor. One major issue was observed and also resolved with the Contractor without the issuance of a Notice of Violation.

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

**Ordinance or Regulatory Mechanism**

Date update was completed (due in year 3):

Storm Water Ordinance updated 6/30/21 and approved November 2021  
 Storm Water Regulations Manual updated 6/30/21 and signed 9/17/21.  
 Subdivision and Site Plan Review Regulations updated 6/3/21.  
 Standard Specifications revised 6/30/21.

Website of ordinance or regulatory mechanism:

<https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Regulations>

**As-built Drawings**

*Below, report on the number of as-built drawings received during this reporting period.*

Number of as-built drawings received:

*Optional:* Enter any additional information relevant to the submission of as-built drawings:

Planning receives a certified engineer's letter documenting any changes in development from the design plans for subdivision and site plan review projects at the conclusion of construction activities. The City is working on internal protocols to improve coordination, receipt of as-builts, and tracking between departments.

**Street Design and Parking Lots Report**

Below, describe any changes made or planned to be made to local regulations and guidelines based on the report completed in Year 4:

Manchester Planning and Community Development is in the process of creating a land use code that will assemble a new zoning ordinance, new subdivision regulations, and new site-plan regulations in one document. The first public draft of the new Manchester Zoning Ordinance was released in June 2024 and incorporated the following recommendations from the MS4 LID regulatory review completed in Year 4:

- Cluster development - allows and provides criteria for cluster development and ownership and maintenance of open space.
- Driveway width - widths are now specified based on whether single-lane or double-lane driveway. The minimum width has been reduced.
- Shared driveways - allows shared driveways.
- Parking lot spaces - the minimum number of required parking spaces has been reduced for many uses.
- Parking lot landscaping requirements - lots with 20 or more parking spaces require 10% of the area to be planted with landscape with requirements on the number and spacing of shade trees. The interior landscape shall be integrated with on-site stormwater management facilities.

The first draft is currently out for public comment. Public comments are anticipated to be incorporated in Fall 2024 with adoption of the Zoning Ordinance from BMA anticipated in Winter 2024. Revisions to Subdivision & Site Plan Review Regulations will follow in future years.

**Green Infrastructure Report**

Below, describe progress towards making green infrastructure practices allowable based on the report completed in Year 4:

One MS4 LID regulatory review report was completed to address Street Design and Parking Lots and Green Infrastructure. All proposed updates are discussed under Street Design and Parking Lots Report above.

**Retrofit Properties Inventory**

Below, list remaining permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas:

The properties evaluated and identified for municipal retrofits can be found in Appendix F of the SWMP at <https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Stormwater/Stormwater-Management-Program>.

Below, list all properties that have been modified or retrofitted with BMPs to mitigate impervious area that were inventoried as part of 2.3.6.e of the permit and the type of BMP(s) implemented. Non-MS4 owned properties that have been modified or retrofitted with BMPs to mitigate impervious area may also be listed, but must be indicated as non-MS4.

No municipal properties were modified or retrofitted with BMPs this period. The City has a \$2.0+ million drainage improvement contract scheduled to bid in Fall 2024, which includes stormwater treatment BMPs at two schools. These properties were identified for municipal retrofits and are also located within the Nutt Pond and Pine Island Pond watersheds, which have phosphorus TMDLs. Beginning in FY27, the City will have \$3 million in construction funds every two years for drainage improvement projects, including infrastructure repair and replacement, and installation of stormwater treatment BMPs with priority given to failing infrastructure and safety issues. This is in addition to the \$300 million over 20 years the City is spending on sewer separation and WWTF upgrade projects to reduce pollutants to surface water from these sources.

**MCM6: Good Housekeeping**

**Catch Basin Cleaning**

*Below, report on the number of catch basins inspected and cleaned, along with the total volume of material removed from the catch basins **during this reporting period.***

Number of catch basins inspected:

Number of catch basins cleaned:

Total volume or mass of material removed from all catch basins:

*Below, report on the total number of catch basins in the MS4 system.*

Total number of catch basins:

*If applicable:*

Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

The City cleans its catch basins by Ward and there are approximately 12,000 catch basins in the City (8,611 in the MS4 and the remainder in the combined sewer area). Catch basins in the combined sewer area are also inspected and cleaned as part of the on-going program. To remain within the City's catch basin cleaning budget, approximately two Wards out of 12 are cleaned each year. The City also has designated priority areas around its urban ponds, where 558 catch basins are cleaned on a more frequent basis at a minimum of once every two years.

The City began its second round of catch basin cleaning by Ward in Year 5. Two rounds of cleaning records have been mostly collected for four Wards as of Year 6. The City plans to continue cleaning by Ward until two full rounds of data are available for the City. This data will then be analyzed to develop optimized catch basin cleaning routes within the City's budget. The data is also being evaluated to identify catch basins with no and very small sumps for potential upgrade as part of the City's paving program and drainage improvement program.

### **Street Sweeping**

*Report on the number of miles swept **during this reporting period** below.*

Number of miles cleaned:

*Report either the volume or weight of street sweeping materials collected **during this reporting period** below.*

- Volume of material removed:
- Weight of material removed:

### **Stormwater Pollution Prevention Plan (SWPPP)**

*Below, report on the number of site inspections for facilities that require a SWPPP completed **during this reporting period**.*

Number of site inspections completed:

Describe any corrective actions taken at a facility with a SWPPP:

Four inspections were completed for each facility with a SWPPP.

## **Additional Information**

### **Monitoring or Study Results**

*Results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period not otherwise mentioned above, where the data is being used to inform permit compliance or permit effectiveness must be attached.*

- Not applicable
- The results from additional reports or studies are attached to the email submission
- The results from additional reports or studies can be found at the following website(s):

<https://www.manchesternh.gov/Departments/Sewer-and-Stormwater/Pond-Restoration/Water-Quality-Data>

If such monitoring or studies were conducted on your behalf or if monitoring or studies conducted by other entities were reported to you, a brief description of the type of information gathered or received shall be described below:

Water quality testing of five Manchester ponds is performed under the State's Volunteer Lake Assessment Program (VLAP). VLAP establishes a volunteer-driven lake sampling program to assist NHDES in evaluating lake water quality, and provides volunteer monitors and lake residents with reports on lake health. Ponds tested under the program include Crystal Lake, Dorrs Pond, Nutt Pond, Pine Island Pond and Stevens Pond, which are monitored for alkalinity, Chlorophyll-a, Chloride, Color, Conductivity, Total Phosphorus, Transparency, Turbidity and pH. Annual reports of the monitoring results are posted on the City's and NHDES's websites.

### **Additional Information**

Enter any additional information relevant to your stormwater management program implementation during the reporting period. Include any BMP modifications made by the MS4 if not already discussed above.

-MCM3: SSOs - There was an increase in SSOs due to increased rain events. 16 of the 19 SSOs reported are associated with the CSO system and will be addressed with the City's CSO program. One SSO was the result of a grease backup in the sewer line (removed), one was a result of tree roots in the sewer line (removed) and one was a result of a broken pipe (repaired).

-MCM6: CB Cleaning - The reported number of catch basins inspected and cleaned under MCM6 includes catch basins within and outside of the City's MS4. The City has approximately 12,000 catch basins that it cleans on a rotating cycle. Approximately 8,611 of these are part of the MS4.

-MCM6: Street Sweeping - The reported miles of streets swept represent lane miles and include City streets within and outside of the City's MS4 and also accounts for multiple sweepings of the same road.

-Other Stormwater Programs - The City has prepared a prioritized list of maintenance and repair projects using information collected from its MS4 drainage infrastructure inspection and cleaning program and from other City initiatives to inspect and evaluate culverts and channels. The list includes: stormwater piping and outfalls in need of jetting to remove sediment; repairs to damaged catch basins, culverts, outfalls and headwalls; culvert replacements; and channel maintenance needs. Repair and maintenance of these structures can help prevent erosion, flooding and road damage that can impact water quality and cost more to address once they become a problem, while also ensuring the safety of Manchester's residents.

## Year 7

### **Activities Planned for Next Reporting Period**

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 7 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

### **Annual Requirements**

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining

Provide any additional details on activities planned for permit year 7 below:

## Part V: Certification of Small MS4 Annual Report 2024

### 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:  Title:

Signature:  Date:

*[Signatory may be a duly authorized representative]*