



**City of Nashua, NH  
2017 NPDES Phase II Small MS4  
General Permit No. NHR041021**

**2022 Annual Report**

July 1, 2021 to June 30, 2022



Prepared for:

City of Nashua  
Public Works Division  
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**Year 4 Annual Report**  
**New Hampshire Small MS4 General Permit**

**Reporting Period: July 1, 2021 - June 30, 2022**

**Nashua**

EPA NPDES Permit Number NHR041021

# Certification of Small MS4 Year 4 Annual Report

"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 Lisa Fauteux

Title Director, Division of Public Works

Signature  Daniel Hudson, P.E. for Lisa Fauteux Date 9/28/22

## Primary MS4 Program Manager Contact Information:

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# Small MS4 Authorization

The following annual report, which serves as a self-assessment, is intended to document the activities undertaken over the **reporting period from July 1, 2021 through June 30, 2022** in accordance with the Permit.

The Notice of Intent (NOI) can be found at the following (document name or web address):

<https://www.epa.gov/npdes-permits/regulated-ms4-new-hampshire-communities>

Compliance activities have been identified and described in the City of Nashua's Stormwater Management Plan (SWMP) and Illicit Discharge Detection and Elimination Plan (IDDE). Those documents and other pertinent Year 4 information can be found in submission or at the following websites, and will be referred to throughout this report:

SWMP: [www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

Date SWMP was Last Updated: 12/2021

IDDE Program Plan: [www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

SSO Inventory: The SSO inventory has been updated, including the status of mitigation and corrective measures implemented or was addressed. SSOs are reported in accordance with NPDES POTW Permit No. NH0100170.

Dry Weather Screening Data: Reference appendices of SWMP, available at [www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

Inventory and Ranking of Outfalls/Interconnections: Reference appendices of SWMP, available at [www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

Wet Weather Screening Data: Planned for YR 5. Deadline not required until YR 7.

Catchment Investigation Data: Reference appendices of SWMP, available at [www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

Illicit Discharge Removal Report: see attached submission or refer to website linked below: [www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

# Self-Assessment

Select the impairment(s) and/or TMDL(s) that are applicable to your MS4. The 2018 EPA approved Section 303(d) Impaired Waters List which was used for the Year 4 reporting period and can be found here: <https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/2018-epa-approval-20200225.pdf>.

All **Appendix F and H requirements** can be found under “Appendix F and H: Water Quality Limited Waters & TMDLs” section of this report.

## Impairment(s)

<input type="checkbox"/> Bacteria/Pathogens	<input checked="" type="checkbox"/> Chloride	<input type="checkbox"/> Nitrogen
<input type="checkbox"/> Phosphorus	<input type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals	

## TMDL(s)

<input checked="" type="checkbox"/> Bacteria and Pathogens	<input type="checkbox"/> Chloride	<input type="checkbox"/> Lake and Pond Phosphorus
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# 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

The City of Nashua has made changes to the list of receiving waters, outfalls, or impairments since the NOI submission. The following impairments and/or TMDLs have been added or delisted:

Water Quality Impaired Waters:

## Chloride Impairment

Per the EPA's letter dated February 25, 2020, within the section entitled, "*Waters which are not listed on New Hampshire's 2018 section 303(d) list*", EPA stated:

### "Chloride for Aquatic Life Integrity

#### Nashua River- Mine Falls Dam Pond (NHIMP700040402-02)

*This assessment unit was originally listed as impaired for chloride in 2006 based on data collected at station MINNASD which was identified in 2014 as being located within the Nashua River- Canal Dike (NHIMP700040402-03) assessment unit. The location discrepancy has been corrected and the impairment data has been associated with the Nashua River-Nashua Canal Dike assessment unit which will now be listed as impaired in Category 5-M (Not Supporting-Marginal). The most recent data for Nashua River-Mine Falls Dam Pond is from 1998-1999 which is outside of the assessment period, so this assessment unit is being delisted into Category 3-ND (Insufficient Information)."*

The City of Nashua acknowledges the above-quoted change, which was made by EPA since the NOI was submitted. Information regarding the change in assessment along with a description of Nashua's measures to protect waterbodies from salt-related impacts are included in Box 2, Additional Relevant Details.

TMDL: N/A

No

The City of Nashua has not made changes to the list of receiving waters, outfalls, or impairments since the NOI submission.

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

Box 1: Incomplete Requirements:

Not Applicable

Box 2: Additional Relevant Details:

### Introduction

On June 30, 2021, a Long Term Control Plan Update – Integrated Plan was submitted to the EPA. The EPA regulations allows for consideration a comprehensive and integrated planning approach to the City's wastewater and stormwater obligations to offer the opportunity for identifying cost-effective solutions that have the greatest impact to improve water quality with implementation of the most important projects first. The plan will be used to evaluate and properly apportion financial resources to wastewater and stormwater management. The City is waiting for further guidance from the EPA.

### CSO Program

The City of Nashua is under an EPA Consent Decree (Civil Action No. 05-376-PB), dated December 26, 2005 (based on the Long Term Water Quality and Infrastructure Control Plan), to mitigate combined sewer overflows (CSOs). The oldest, most urbanized portion of the city is served by a combined sewer system. Currently, there are nine CSO outfalls that are a part of the City's sewer collection system, four that discharge to the Nashua River and five that discharge to the Merrimack River and CSOs have been identified as a probable source for the *Escherichia coli* impairment within reaches located adjacent to the city. While a statewide TMDL has been approved for all waterways impaired with *Escherichia coli*, the projects completed related to the Consent Decree will reduce CSOs being discharged into the Nashua and Merrimack Rivers.

The CSO program was designed based on the understanding that urban runoff, particularly in the urbanized areas dictated by the MS4 Permit, contains pollutants that are harmful to the waterways. In an effort to improve water quality and comply with the Consent Decree, the City adopted a hold and treat approach versus complete separation. As inner city areas are served by combined sewers, the stormwater runoff enters the sewer system and is conveyed with sanitary flow to the City's sewage treatment facilities. The system is particularly effective at treating the most polluted "first flush" that occurs with every rain event.

Projects completed to contain combined sewage, which includes urbanized runoff are:

- The 60 MGD Wet Weather Flow Treatment Facility (WWFTF), located at the Nashua Wastewater Treatment Facility (NWTF), to capture and treat combined sanitary and stormwater, continues to operate, reducing the occurrence of CSOs and the volume of combined flows discharged to the rivers. Urban stormwater runoff from approximately 30 percent of the city, which is part of the combined flow, is conveyed to the WWFTF where it is being treated before being discharged to the Merrimack River.

- The construction of a CSO storage tank located near Burke Street was completed in December 2013. This 40,000 gallon tank contains overflow up to a 2 year storm event and reduces the amount of combined sewage discharging to the Merrimack River.
- Sewer separation work completed upstream of CSO 3 has eliminated the discharge of combined sewage at CSO 3 up to a 2-year storm event. A stormwater treatment train constructed in 2006 includes a Vortechnics swirl concentrator, a detention pond and a constructed wetland allowing treated stormwater to be discharged to the Merrimack River.
- The drop over structures constructed on the North Merrimack River Interceptor continue to operate. These structures reduce discharges to the Merrimack River at CSO 005 by allowing combined sewage flow from a 2-year and higher storm event in sewer pipes on East Hollis and Crown Streets to flow directly into the larger interceptor that flows directly to the NWTF and the WWFTF where the combined flow is treated prior to discharge to the Merrimack River.
- Separation of the 60-acre combined sewered Harbor Avenue area resulted in reducing the volume of combined sewage flowing to the CSO 5 regulator on the Merrimack River.
- The Screening and Disinfection Facility (SDF) at CSOs 5 and 6, the last CSO plan element, was completed in 2015. This CSO treatment facility has the capacity to hold one million gallons of wet weather flow, containing overflow up to a 2-year storm event, and reducing the amount of combined sewage overflow discharging to the Merrimack River. In addition, this CSO treatment facility screens and disinfects combined sewer overflows that previously were discharged untreated from CSO 5, located on the Merrimack River, and CSO 6, located on the Nashua River slightly upstream of its confluence with the Merrimack River. The new outfall for this facility is located on the Merrimack River.
- The City documents the volume of combined sewer overflows discharging into the Nashua and Merrimack Rivers. An annual monitoring program provides information for the volume of discharge at each of the nine CSOs. Rainfall data is also recorded.

#### **Condition Assessment and Rehabilitation of Sanitary and Stormwater Systems**

- The remaining seven City-owned pump stations began construction during this reporting period. Some construction has been delayed due to supply delays of mechanical equipment.
- Having completed video inspection and cleaning of all eight (8) sewer siphons that serve the collection sewer system throughout the city, the project to rehabilitation the pipe was designed and advertised during this design documents were drafted for CIPP lining of the eight (8) sewer siphons. This project was bid for construction in July, 2022.
- A condition assessment focusing on the oldest and most critical infrastructure continued during the reporting period using closed circuit television (CCTV) inspection. Results are reviewed and evaluated by staff who have been trained using the Pipeline Assessment Certification Program (PACP) to rate the condition of the pipes and make recommendations for rehabilitation. During the reporting period over 50,000 feet of sewers and drains were inspected. In Nashua, where many older combined systems were converted into separated systems and the combined sewer converted to a drain, a CCTV inspection is critical in identifying remaining cross connections.

The Separated Storm Sewer System outfalls also discharge to the Nashua and Merrimack Rivers as well as numerous other waterbodies as listed in the NOI.

#### **Nashua River- Canal Dike (NHIMP700040402-03) Assessment Unit**

NHDES assessed Nashua Canal Dike as being impaired for chloride based on specific conductance data that had erroneously been attributed to Nashua River- Mine Falls Dam Pond (NHIMP700040402-02). Though surface levels of specific conductance indicate compliance with chloride water quality standards, the levels at the lower depths do not. NHDES noted that this is likely due to salinity-based stratification with the “denser saltier water sinking to the bottom.” Additionally, the [Mine Falls Hydroelectric Project Relicensing Study](#) noted low turnover and limited ability to manage water quality due to limitations on the amount of water discharged from the Mine Falls Dam Pond.

Mill Pond is bounded to the north by Mine Falls Park which does not represent a potential source of chloride to the pond. Measures taken by Nashua to manage salt usage (as described in the Appendix H section) further limit the potential for chloride containing runoff to enter the pond. The salinity associated with lower pond depths are likely due to discharges into the system prior to controls being in place compounded by the lack of flushing provided by the low flows through the pond.

#### **Public Education and Participation**

The City is a member of the New Hampshire Lower Merrimack Valley Stormwater Coalition which meets to share ideas, discuss the MS4 permit and foster a unified approach to dealing with issues in the Merrimack River watershed in which all the communities lie. During the reporting period the group met virtually eleven times and discussed community stormwater management programs and successes and challenges in addressing compliance with the MS4 regulations.

The Paulie the Pickerel “Let Only Rain Go down the Storm Drain” logo continues to be used for marketing the stormwater management program in the city. Magnets with the logo will continue to be distributed during educational presentations.

The Mine Falls Park Advisory Committee sponsored a total of six Trail Days during the reporting period. In addition to general park maintenance, trash and debris were removed from the waterways and banks of the Nashua River, Nashua Canal and Mill Pond.

As part of the annual Paving Program, catch basin frames and grates are replaced as needed with structures imprinted with “Dump No Waste Drains to Waterways”. Over 325 units were ordered during this reporting period.

Updates on stormwater issues are reported at least monthly at meetings of the Board of Public Works, Planning Board, and Conservation Commission. All meetings are public and the meetings are recorded and available for viewing/listening on the internet and broadcasted repeatedly on the government access channel. The stormwater update includes city-wide drainage issues and the

progress made on addressing them, wetland related impacts and any other items that are related to the management of stormwater. A public comment period during the meetings allows the public to address any issues related to the Stormwater Management Program (SWMP). Stormwater inquiries were also collected through phone calls and the Cartegraph work order system. Calls received are directed to the appropriate departments and addressed.

The Enviroscape Watershed model is used to discuss stormwater management in classrooms and other public gathering. On Sept 16, 2021, at Elm Street Middle School, the presentation was given five times to approximately 95 seventh grade students. On Oct 15, 2021, at World Academy, the presentation was given six times to about 115 fourth and fifth grade students. On June 18, 2022, the presentation was given approximately 12 times to about 140 people of all ages during a City-sponsored public event...

The City owns the landfill used by both residential and commercial entities. Information about the citywide soft yard waste program was distributed through flyers, the City's web site, and Solid Waste Department staff. Updates or changes to the program are also provided on the City's local cable access channel (Channel 16). The City also has a Composting Program provided through the Solid Waste Department. Residents can purchase composting bins through the department with a "How To" brochure available on the Solid Waste website.

To spread information on stormwater among local businesses, informational brochures are posted at the Building Safety Department and the Environmental Health Department. The information available to businesses who enter the Building Safety Department and the Environmental Health Department includes fact sheets and brochures including information on stormwater pollution controls for industrial facilities, management of fats, oils and grease, preventing sewer system blocking and overflows, and septic system maintenance.

Similarly, the City works to raise awareness among local industry. This is accomplished by visiting Industrial Facilities through the Industrial Pretreatment program and including information on Stormwater Awareness. City staff present to staff at industrial facilities to help them understand their industrial permit and how stormwater impacts water quality and what they can do to reduce impacts.

A small portion of the city remains on septic systems. The NHDES "Get Pumped" educational brochure on proper maintenance of a septic system, and related magnets, continued to be distributed by the Environmental Health Department to septic system owners and to septic haulers at the Wastewater Treatment Facility for distribution to their clients. These brochures were also shared with the public at City sponsored event at Greeley Park on June 18, 2022.

The City has an Animal and Dog Park Advisory Committee that was created in 2020. The mission of the Animal and Dog Park Advisory Committee is to promote responsible pet ownership in the community including education and promotion of the City's Dog Waste Clean-Up campaign. In addition, the City's Wastewater Department has flyers informing residents of items that should not be flushed down the toilet, including pet waste.

### **Construction Site and Post-Construction Runoff Control**

The Nashua Land Use Code addresses land use planning issues through a variety of provisions related to stormwater management including the protection of wetlands, floodplain regulations, landscaping requirements, impervious surface requirements, open space requirements, and designs issues discussed during the development review process. The technical review process affords an interdisciplinary review of all applications submitted for Planning Board approval. Stormwater, drainage, and improved landscaping elements are included in discussions for every site and contribute to improving the stormwater quality directly or indirectly. The open space, impervious surface, parking and other zoning provisions are addressed as part of the process as well. The current land use code (with revisions incorporated dated September 1, 2012), is routinely discussed at staff meeting, noting areas where future amendments may be warranted. The City's Land Use Code and Stormwater Management ordinances also require developers to infiltrate and restrict runoff from leaving the property. Developers design BMPs and LID practices, which are discussed with and reviewed by City staff and ultimately approved by the Planning Board.

Wetlands and wetland buffer areas are protected and proposals to impact these areas are carefully reviewed by the Nashua Conservation Commission who makes a formal recommendation to the Zoning Board of Adjustment. Wetland Buffer Markers are required to be installed in the buffer areas of impacted by site development. The purpose of the markers is to encourage residents to not dump debris in wetland areas.

The building permit process includes review of not only zoning and building issues, but proximity to local conservation lands and practical things to do or not do. For example, no construction materials shall be stored or left in the wetland buffer areas, best management practices to be followed during construction and site cleanup upon project completion. Any impacts to the wetland buffer is reported back to the Conservation Commission and is either rectified administratively or sent to the Conservation Commission for their recommendations.

Staff provides ongoing assistance to residents with flood insurance and floodplain management questions. This serves as an opportunity to educate the public about floodplain management and the relationship to stormwater management.

Staff routinely provided educational literature through the Nashua Conservation Commission and Planning Board on issues related to environmental protections such as stormwater management, erosion control and use of salt/sand in winter deicing applications.

### **Good Housekeeping**

Good housekeeping measures include the continuous city-wide street sweeping program. The City maintains four street sweepers and one sidewalk sweeper. The sweepers operate eight hours a day on weekdays from April 1 to December 1. All curbed streets are swept at least once. Winter salt and sand use is monitored and controlled. Trucks equipped with spreaders are calibrated annually, prior

to the winter season. To prevent exposure of deicing product, all salt and sand is enclosed in covered storage facilities with a capacity of 2,000 tons.

Fleet maintenance staff services vehicles for the Division of Public Works, School Dept., Health Dept., City Hall, Emergency Management and Parking. Maintenance and fluid changes occur in a covered facility. Waste oil is stored in a waste oil tank and picked up for disposal as needed. Furthermore, the City's main fuel island was recently rebuilt. This services all City vehicles. The project produced a new Spill Prevention, Control, and Countermeasure (SPCC) plan. A spill kit is kept at the fuel island, as well as a covered trash receptacle.

The Parks and Recreation Department continues Its practice of Integrated Pest Management (IPM) principles and reduced the amount of pesticides applied. The annual 2021 Pesticide Usage Report was submitted during the reporting period to the NH Department of Agriculture.

The City owns both a landfill and a wastewater treatment facility, each identified as an Industrial Facility. Both properties have their own Stormwater Management Program in place. All catch basin cleanings and street sweeping debris is deposited and managed at the landfill.

The City developed an inventory of municipally owned properties with the potential to generate stormwater pollutants, including parks and open spaces, city owned buildings and facilities, and vehicle storage and fueling areas. Operations and Maintenance Procedures were developed for the identified properties including identification of responsible parties, training procedures, and best management practices (BMPs). BMPs for parks and open spaces aimed to minimize the concentration of nitrogen and phosphorus in stormwater runoff, including practices for lawn maintenance, trash management, pet waste cleanup, waterfowl waste management, and erosion. BMPs for city owned facilities included handling, storage, transfer, and disposal of trash and recyclables, storage of petroleum products and potential pollutants, and spill response procedures. BMPs for vehicles and equipment included vehicle storage, vehicle maintenance, fueling, and vehicle and heavy equipment washing procedures. Infrastructure BMPs were also developed, including catch basin cleaning, street and parking lot sweeping procedures, winter road maintenance, stormwater treatment structures, and stormwater pollution prevention plans (SWPPPs).

Facility-specific SWPPPs were developed for city-owned maintenance garages, public works yards, and other waste handling facilities where pollutants are exposed to stormwater. These facilities included the Conant Road Fire Station, the Parks and Recreation Department, the Police Department, the Street Department, and the Nashua Transit Facility. SWPPPs for each are included as an appendix to the SWMP... Site visits were conducted at each of these facilities and on-site data and information was collected to inform development of the SWPPPs. The purpose of the SWPPP is to identify the SWPPP team at each facility, describe the facility and identify potential stormwater contaminants, describe the stormwater management control and BMPs needed to reduce pollutants from the facility in stormwater discharges, and describe the facility's monitoring plan.

The Cartegraph Operations Management System is used to track work orders which allows entering and tracking of all work orders within the Division of Public Works, many of which are related to stormwater management.

Additional activities completed during the permit period are included in Part IV of this report.

### **Stormwater Management Program (SWMP) Information**

The Stormwater Management Plan (SWMP), updated in December 2021, is publicly available on the City's website.

### **Solids, Oil and Grease (Hydrocarbons), or Metals Impairments**

There are four street sweepers and one sidewalk sweeper running city-wide eight hours a day from April 1<sup>st</sup> to December 1<sup>st</sup>, weather permitting. Approximately 500 tons of material was removed within the City this reporting period. As mentioned above winter sand use is monitored and controlled to minimize solids discharged into the MS4. All curbed areas are swept at least once with commercial areas, the urbanized downtown area, arterial and collector streets and critical streets. This includes the sub –watersheds that are identified with impairments that are also subject to enhanced BMPs per Appendix H of the NH Small MS4 General Permit. (NH MS4 GP)

The City owns and maintains a landfill. All street sweeping deposits are disposed of in the lined section of the landfill.

### **Outfall Ranking/Screening**

Dry weather outfall screening was conducted at 73 outfalls in July 2022 completing the screening of all identified outfalls. Outfall screening was conducted in accordance with the Dry Weather Outfall Screening and Sampling Procedures included in Nashua's written Illicit Discharge Detection and Elimination (IDDE) Program. Of the 73 outfalls screened, dry weather flow was observed and sampled at 7 outfalls.

# Minimum Control Measures

## MCM 1: Public Education

Total number of all MS4 related educational efforts completed ***during this reporting period***: 38 separate events, plus additional ongoing efforts as described below and in self-assessment.

### **BMP: Grass and Fertilizer**

#### **Outreach Resources:**

Green Grass & Clear Water Brochure: [https://www4.des.state.nh.us/nh-ms4/?page\\_id=54](https://www4.des.state.nh.us/nh-ms4/?page_id=54).

#### **Description:**

–Municipal Campaign:

The City educates the public on potential water quality impacts from fertilizer and improper disposal of grass clippings through the city-wide soft yard waste program. Flyers with soft waste collection guidelines are included in a packet of information about Nashua's trash and recycling programs that are handed out or mailed to residents on request. Soft waste guidelines and backyard composting brochures are also available for public access on the City website: <https://www.nashuanh.gov/467/Soft-Yard-Waste> and <https://www.nashuanh.gov/DocumentCenter/View/25999/Leaves-Guidelines?bId=1>. The City's stormwater outreach website (<https://www.nashuanh.gov/1559/Stormwater-Outreach-and-Good-Practices>) also provides links to resources on fertilizer application guidelines to help educate residents.

#### **Targeted Audience:**

Residential and/or Business and Institutions

#### **Responsible Department/ Parties:**

Solid Waste Department

#### **Measurable Goal(s):**

Lawn care enthusiast residents understand the potential water quality impacts from fertilizer and improper disposal of grass clippings and are aware of the proper lawn care management techniques for reducing those impacts. Measurement includes quantity of materials distributed.

Following is the number of flyers that were distributed ***during this reporting period***:

Year 4 = approximately 300

Following is the number of impressions the social media posts received ***during this reporting period:***

Year 4 = 18

**Goal was achieved.**

**Message Date:** March 21, 2022

## **BMP: Pet Waste Disposal**

### **Outreach Resources:**

"Every Drop" post cards or flyer [https://www4.des.state.nh.us/nh-ms4/?page\\_id=54](https://www4.des.state.nh.us/nh-ms4/?page_id=54)

### **Description:**

Distribution and promotion of "Every Drop" post cards or flyers 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.

**And**

Signs and pet waste equipment are located throughout the City at the majority of municipal parks and trails, schools and public places. The City provides "MuttMitt" bag dispensers, signs and collection cans at the majority of municipal parks and trails.

### **Targeted Audience:**

Residents - Pet Owners

### **Responsible Department/ Parties:**

Parks Department

### **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.

A flyer about "Every Drop" was posted on the City's website:

<https://nashuanh.gov/DocumentCenter/View/26000/Pet-Waste-Message?bId=>. At least 10 parks have installed equipment for City residence and visitors to collect pet waste. During the year 4

reporting period, 10,000 bags were purchased.

**Goal was achieved.**

**Message Date:** Pet waste equipment and signage was installed and monitored throughout the year.

## **BMP: Disposal of Leaf and Grass Clippings**

**Outreach Resources:**

[https://www4.des.state.nh.us/nh-ms4/?page\\_id=54](https://www4.des.state.nh.us/nh-ms4/?page_id=54)

**Description:**

The City educates the public on potential water quality impacts from fertilizer and improper disposal of grass clippings through the city-wide soft yard waste program. Flyers with soft waste collection guidelines are included in a packet of information about Nashua's trash and recycling programs that are handed out or mailed to residents on request. Soft waste guidelines and backyard composting brochures are also available for public access on the City website: <https://www.nashuanh.gov/467/Soft-Yard-Waste> and <https://www.nashuanh.gov/DocumentCenter/View/26000/Pet-Waste-Message?bidId=>

**Measurable Goal(s):**

The City provides curbside pickup of soft yard waste (defined as leaves, grass clippings, pine needles, twigs, and small sticks) to Nashua residents between April and November. Residents and commercial customers may also bring soft yard waste directly to the Four Hills Landfill/Nashua Recycling Center year-round. The total annual volume of yard waste collected at curbside by the City during this reporting period is 3,988 tons, with an estimated additional 1,500 tons brought directly to Four Hills by residents. In addition, 1,123 tons of yard waste from Nashua properties was brought to Four Hills by commercial customers. All soft yard waste is composted at Four Hills and is typically used for landfill daily cover.

**Targeted Audience:**

Residential &/or Business and Institutions

**Responsible Department/ Parties:**

Solid Waste Department

**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.

Following is the number of flyers that were distributed ***during this reporting period***:  
Year 4 = approximately 10,300 and is available on the City website for the general public to access.

**Goal was achieved.**

**Message Date:** Soft waste collection began the week of April 18, 2022

## **BMP: Septic System Maintenance**

### **Outreach Resources:**

[https://www4.des.state.nh.us/nh-ms4/?page\\_id=54](https://www4.des.state.nh.us/nh-ms4/?page_id=54)

### **Description:**

Distributed and promoted brochure or door hangers, directing to website to educate New Hampshire homeowners with septic systems on how to identify, locate and maintain those systems. Get Pumped NH is a collaborated effort between the New Hampshire Association of Septage Haulers (NHASH) and the New Hampshire Department of Environmental Services (NHDES).

### **Targeted Audience:**

Septic System Owners and Septage Haulers

### **Responsible Department/ Parties:**

Environmental Health Department and Wastewater Treatment Facility

### **Measurable Goal(s):**

Residents are aware of water quality impacts from septic systems, the importance of maintaining septic systems and how to maintain them.

Following is the number of flyers that were distributed ***during this reporting period***:

Year 4 = at least 100

**Goal was achieved.**

**Message Date:** Brochures are available throughout the year at the Wastewater Treatment Facility to septage haulers and are distributed on a routine basis by the Environmental Health Department. A link to septic management resources is also posted on the city's website:  
<https://www.nashuanh.gov/1559/Stormwater-Outreach-and-Good-Practices>

## **BMP: Construction/Developers Outreach**

### **Outreach Resources:**

[https://www4.des.state.nh.us/nh-ms4/?page\\_id=54](https://www4.des.state.nh.us/nh-ms4/?page_id=54)

### **Description:**

Review the construction checklist with developers and construction contractors prior to the beginning of construction projects (pre-construction) to identify responsible parties, erosion control practices, other best management practices, and requirements for the EPA Construction General Permit as appropriate.

### **Targeted Audience:**

Developers and Contractors

### **Responsible Department/ Parties:**

Planning Department

### **Measurable Goal(s):**

Contractors, developers, and municipal or local organizations are made aware of the updates and changes made to the EPA 2022 Construction General Permit including the requirement that those who wish to be considered a qualified person to conduct inspections must meet EPA training standards. Contractors and developers are also made aware of the need for proper erosion control practices during construction work.

Following is the number of outreach letters that were distributed to municipal or local organizations ***during this reporting period***:

Year 4 = 62

The City of Nashua held 62 pre-construction meetings, representing 99% of projects that received planning board approval and began construction ***during this reporting period***.

**Goal was achieved.**

**Message Date:** Ongoing.

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

The City of Nashua requires a pre-construction meeting for every project and maintains 99% conformity as the owner cannot start a project until the educational on-site meeting is complete.

## MCM 2: Public Participation

- Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements as described in the City of Nashua's SWMP.
- Kept records relating to the permit available for 5 years and made available to the public

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

**Description:** Updates on stormwater issues are reported at least monthly at meetings of the Board of Public Works, Planning Board, and Conservation Commission. All meetings are public and the meetings are recorded and available for viewing/listening on the internet and broadcasted repeatedly on the government access channel. The stormwater update includes city-wide drainage issues and the progress made on addressing them, wetland related impacts and any other items that are related to the management of stormwater. A public comment period during the meetings allows the public to address any issues related to the Stormwater Management Program (SWMP). Documents and records relating to the permit are retained and available for 5 years to the public at on the City's website.

**Measurable Goal(s):**

Input was received and records are maintained.

**Goal was achieved.**

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

City of Nashua has conducted the following public involvement or participation opportunities:

The Enviroscape Watershed model is used to discuss stormwater management in classrooms and other public gatherings. On Sept 16, 2021, at Elm Street Middle School, the presentation was given five times to approximately 95 seventh grade students. On Oct 15, 2021, at World Academy, the presentation was given six time to about 115 fourth and fifth grade students. On June 18, 2022, the presentation was given approximately 12 times to about 140 people of all ages during a City public event.

The City of Nashua Conservation Commission also conducts their annual walk and debris pick up around LCHIP wetlands that surround Pennichuck Lake in Northwest Nashua.

Six Household Hazardous Waste Days and a Drug Take Day were held during the reporting period for residents to dispose of hazardous materials and medicines at City sponsored events.

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

Not applicable.

# MCM 3: Illicit Discharge Detection and Elimination (IDDE)

## Sanitary Sewer Overflows (SSOs)

- This SSO section is NOT applicable because we DO NOT have sanitary sewer.
- This SSO section is NOT applicable because we DID NOT find any new SSOs.
- The SSO inventory has been updated, including the status of mitigation and corrective measures implemented or was addressed. SSOs are reported in accordance with NPDES POTW Permit No. NH0100170.

## MS4 System Mapping

- Updated system map due in Year 2 as necessary:

Provide additional status information regarding your map:

Map of storm sewer system and associated outfalls is continually updated to reflect findings and changes. The City of Nashua maintains an ArcGIS Online map city staff collaboratively update as CCTV inspections of the City's stormwater collection system are performed.

## Screening of Outfalls/Interconnections

- No outfalls were inspected for dry weather screening ***during this report period.***
- Dry weather outfall screening data can be found at the following website:  
[www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

## Dry Weather Screening

Number of outfalls screened ***during this reporting period:*** 73

Percent of total known outfalls screened to date ***during this reporting period:*** 20%

*The inventory and ranking of outfalls/interconnections was updated and the IDDE Program Plan was revised as a result. The revised inventory and ranking of outfalls/interconnections can be found in submission or found at the following website [www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management).*

## **Wet Weather Screening**

No outfalls were inspected for wet weather screening ***during this report period.***

Wet weather outfall screening data can be found in submission found at the following website:.

Number of outfalls screened ***during this reporting period:***

Percent of total outfalls screened to date ***during this reporting period:***

## **Catchment Investigations**

No catchment investigations were conducted ***during this report period.***

Catchment investigation data can be found at the following website:  
[www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

Number of catchment investigations ***during this reporting period:*** 4

CCTV inspections are used to investigate drains where the outfall has suspect discharge.

Percentage of total catchments investigated to date (Years 1 - Year 4): 1%

## **IDDE Progress**

No illicit discharges were found ***during this reporting period.***

The illicit discharges removal report can be found in submission or found at the following website  
[www.nashuanh.gov/1456/Stormwater-Management](http://www.nashuanh.gov/1456/Stormwater-Management)

Number of illicit discharges identified ***during this reporting period:*** 8

Number of illicit discharges removed ***during this reporting period:*** 6\*

Estimated gallons of flow removed ***during this reporting period:*** 1,000 (estimated) gallons/day

Total number of illicit discharges identified since the effective date of the permit (July 1, 2018):  
17

Total number of illicit discharges removed since the effective date of the permit (July 1, 2018):  
15

\*Refer to Illicit Discharge Removal Report for additional detail on actions taken in response to potential illicit discharges identified.

## Employee Training

- Provided training to employees involved in IDDE program ***during the reporting period:***

City of Nashua held an IDDE training session for municipal staff on April 20-21, 2022. In addition, as a routine, IDDE materials and training, including information on how to identify illicit discharges and SSOs are made available to applicable employees in accordance with IDDE plan. Training logs are included in Appendix F of the IDDE report.

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

**Additional Relevant Details:**

City of Nashua Wastewater Department held PACP training (NASSCO Pipeline Assessment Certification Program) for employees involved with the wastewater and storm sewer collection systems and also employees from the Engineering Department. Through this training, Nashua staff learn how to interpret CCTV footage and CCTV inspection of drain lines as part of the process of identifying illicit discharges. The City is continuing to complete condition assessments of the 295 miles of combined and separated sewers and 140 miles of stormwater drains using closed-circuit television (CCTV), prioritizing inspections based on the age of the pipes. This process has led to the identification and removal of multiple illicit discharges within the City, as discussed in the attached Illicit Discharge Removal Report. The City will continue with CCTV inspections because they provide the best opportunity to identify illicit discharges within the older piping networks that were once acceptable. The City also has developed an SSO Response and Reporting Standard Operating Procedure, which is shared with employees and reviewed as part of training for employees working in the stormwater collection system. An employee from wastewater was promoted to Foreman with responsibilities including the collection system and he had already obtained Grade 4 Collections System Certification from NEWIPCC. Additional training is offered to wastewater staff through courses at the NHDES Franklin Training Center. "On the Job" training may be the most beneficial training afforded employees in Nashua based on daily activities including complaint investigations, response to sewer backups, sanitary sewer overflows and illicit discharge reports. All of these measures were completed in addition to normal maintenance of the storm and sanitary sewers.

## MCM 4: Construction Site Stormwater Runoff Control

The following tasks are in progress in accordance with the permit.

Number of site plan reviews completed ***during this reporting period:*** 69

Number of inspections completed ***during this reporting period:*** 185

Number of enforcement actions taken ***during this reporting period:*** 10

The City of Nashua works closely with contractors to address environmental concerns for the least environmental impact.

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

All MCM4 Requirements were met. In addition, the Nashua Land Use Code addresses land use planning issues through a variety of provisions related to stormwater management including the protection of wetlands, floodplain regulations, landscaping requirements, impervious surface requirements, open space requirements, and design issues discussed during the development review process. Recent 2018 updates to Section 190-215, stormwater management standards, have been improved to better address new standards. The technical review process affords an interdisciplinary review of all applications submitted for Planning Board approval. Stormwater, drainage, and improved landscaping elements are included in discussions for every site and contribute to improving the stormwater quality directly or indirectly. The open space, impervious surface, parking and other zoning provisions are addressed as part of the process as well. The current land use code (with revisions incorporated dated September 1, 2018), is routinely discussed at staff meeting, noting areas where future amendments may be warranted. The City's Land Use Code and Stormwater Management ordinances also require developers to infiltrate and restrict runoff from leaving the property. Developers design BMPs and LID practices, which are discussed with and reviewed by City staff and ultimately approved by the Planning Board.

Wetlands and wetland buffer areas are protected and proposals to impact these areas are carefully reviewed by the Nashua Conservation Commission, which makes a formal recommendation to the Zoning Board of Adjustment. Wetland buffer markers are required to be installed to prevent future encroachment.

The building permit process includes review of not only zoning and building issues, but proximity to local conservation lands and practical things to do or not do. For example, no construction materials are allowed to be stored or left in wetland buffer areas, best management practices are defined to be followed during construction and site cleanup upon project completion.

The City of Nashua Planning Department requires all Planning Board approvals to file a stormwater easement document to be placed on file at the Hillsborough County Registry of Deeds. The document shows how all drainage devises will be maintained and in the event they are not the City can clean the area before it impacts catch basins and downstream flows. The owners or Association is then sent a bill as they are not in compliance with the easement. The Nashua Conservation Commission has recommended on cases not going to the Planning Board that a similar document be required for properties in close proximity to streams.

# MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

## Ordinance or Regulatory Mechanism

- City of Nashua has regulatory mechanism consistent with permit requirements 2.3.6.a.ii.

Date regulatory mechanism was adopted: Prior to July 1<sup>st</sup> 2021

Recent 2018 updates to Section 190-215, stormwater management standards, have been improved to better address new standards.

## As-built Drawings

Number of as-built drawings received ***during this reporting period:*** 50

The City of Nashua Planning Department has transitioned to require an as-built plan for most construction projects and is working on a Construction Affidavit for some smaller projects.

## Retrofit Properties Inventory

- Identified permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious cover

City of Nashua has identified the following permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas:

- 27 Cleveland Street
- 37 Blanchard Street
- 15 Osgood Road
- 296 East Dunstable Road
- 39 Shady Lane
- 390 Broad Street
- 17 Birch Hill Drive
- Memorial Park – Ledge Street
- 3-34 Eleventh Street
- 139-141 Ledge Street
- 177 Lake Street

- Developed a report assessing current street design and parking lot guidelines and other local requirements within the municipality that affect the creation of impervious cover, made it available as part of the SWMP, and:

- No updates were recommended.
- Updates were recommended. The anticipated date or date of completion for updates is proposed to align with the next city code update as outlined in the report.
- Developed a report assessing local regulations to determine the feasibility of making green Infrastructure practices allowable when appropriate site conditions exist, made it available as part of the SWMP, and:
  - No updates were recommended.
  - Updates were recommended. The anticipated date or date of completion for updates is proposed to align with the next city code update as outlined in the report.

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

Not Applicable.
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# MCM 6: Good Housekeeping

## Catch Basin Cleaning

- Properly stored and disposed of catch basin cleanings so they did not discharge to receiving waters
- Report on the actions taken if a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events:

If a catch basin sump is more than 50% full during two consecutive routine inspections or cleaning events, the finding is documented, the contributing drainage area is investigated for sources of excessive sediment loading, and to the extent practicable, contributing sources are addressed. If no contributing sources are found, the inspection and cleaning frequency are increased. Starting in this reporting period, the City is working towards developing use of Survey123 to automate report and tracking of catch basin inspections and cleaning.

Number of catch basins inspected ***during this reporting period:*** 200

Number of catch basins cleaned ***during this reporting period:*** 200

Total volume or mass of material removed from all catch basins ***during this reporting period:*** 361 tons

Total number of catch basins within the MS4 system: 8,850

A schedule for catch basin cleaning has been established with the goal of ensuring that a catch basin should not be more than 50% full.

## Street Sweeping

- Properly stored and disposed of street sweepings so they did not discharge to receiving waters
- All curbed roadways were swept at least once within the reporting period

Mass of swept material ***during this reporting period:*** 500 tons

## Stormwater Pollution Prevention Plan (SWPPP)

- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities

Number of site inspections completed for ***during this reporting period:*** 4

Number of corrective actions taken ***during this reporting period:*** None required

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

No corrective actions necessary

## **Operations and Maintenance (O & M) Programs**

- O&M programs for all permittee owned facilities have been completed and/or updated as noted below
- Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs
- Updated inventory of all permittee owned facilities as necessary

All permittee owned facilities, including an inventory, are included in our SWMP. There were no changes to report during Year 4.

- Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants as outlined in the SWMP
- Inspected all permittee owned treatment structures (excluding catch basins) as outlined in the SWMP
- Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt as outlined in the SWMP

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

Not Applicable.
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## Appendix F and H: Water Quality Limited Waters & TMDLs

### Bacteria/Pathogens Impairment (Appendix H) AND TMDL (Appendix F)

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

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

In prior years, the City of Nashua has disseminated educational material to dog owners at the time of issuance or renewal of dog license. However, due to significant staff turnover in the City Clerk's office this past year, there was a gap period, during which time educational information was not being disseminated. This gap has been identified and is being fixed by City staff as part of internal QA processes and educational materials will soon be issued again as normal.

### Chloride Impairment (Appendix H)

- Permittee does not have a chloride impairment
- Updated Salt Reduction Plan as necessary ***during this reporting period*** and can be found in submission.

Describe progress made on any **incomplete requirements** listed above **or** optionally provide any additional relevant details, in the box below:

The Nashua Street Department, located at 9 Stadium Drive, Nashua, NH 03062, has procedures in place to control chloride containing discharges into waterbodies including the Nashua Canal Dike (Mill Pond). Winter salt use is monitored and controlled to limit application. The construction of a brine system was completed so roads can be treated prior to icing/snowfall so that less salt can be applied during winter weather events. Municipal and residential salt stored at the Nashua Street Department

are both kept in covered facilities to minimize the runoff exposure to salt stockpiles. Additionally, the catch basins located adjacent to the salt stockpiles and fueling facility at the Nashua Street Department have been disconnected from the stormwater system and tied into the sanitary system, in order to minimize discharge of runoff to Nashua waterbodies.

### **Nitrogen Impairment (Appendix H)**

- Permittee does not have a nitrogen impairment

### **Phosphorus Impairment (Appendix H)**

- Permittee does not have a phosphorus impairment

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

- Permittee does not have a solids, oil and grease, or metals impairment(s)

### **Chloride TMDL (Appendix F)**

- Permittee does not have a chloride TMDL

### **Lake and Pond Phosphorus TMDL (Appendix F)**

- Permittee does not have a lake and pond phosphorus TMDL

# Additional Required Information

## Monitoring or Study Results

Results from all stormwater or receiving water quality monitoring or studies conducted ***during the reporting period*** and ***not otherwise mentioned above***, where the data is being used to inform permit compliance or permit effectiveness is:

- Not applicable
- The results from additional reports or studies are completed as part of the City's annual monitoring program. The program provides information for the volume of discharge at each of the nine CSOs. Rainfall data is also recorded. A plan for the Post Construction Monitoring Program for the CSO program was submitted to the EPA for comment. Included in the program is testing of the Nashua and Merrimack Rivers to determine water quality.

## Description of Any Changes in Identified BMPs or Measurable Goals

The City of Nashua made changes as noted below to the following BMPs and/or measurable goals that were outlined in the permit and identified in the SWMP.

The City of Nashua continues to implement BMPs and measurable goals as outlined in its permit and identified in the SWMP. This year, the City has adopted the Annual Report template developed by New Hampshire Lower Merrimack Valley Stormwater Coalition. That template changes the locations within the Annual Report where BMPs associated with MCM 1 and MCM 2 are reported on relative to what the City's Year 3 Report. Therefore, to assist the reader in tracking the City's efforts across years, and to further demonstrate the additional measures the City is taking on to meet MCM1 and MCM2 beyond those listed in the template, the table below documents changes to the organization of BMPs for MCM 1 and MCM 2 in the Annual Report between Years 3 and 4:

MCM	BMP in Year 3 City of Nashua Annual Report	BMP in Yr 4 NH Lower Merrimack Valley Stormwater Coalition Template	Location in Yr 4 City of Nashua Annual Report
1	Dog License Applicant & Renewals	Moved to Appendix F	Appendix F
	Pet Waste Equipment	Pet Waste Disposal (Every Drop)	MCM1
	Brochure and Presentation for Businesses	Not included	Self-assessment
	Educate Staff at Industrial Facilities	Not included	Self-assessment

MCM	BMP in Year 3 City of Nashua Annual Report	BMP in Yr 4 NH Lower Merrimack Valley Stormwater Coalition Template	Location in Yr 4 City of Nashua Annual Report
2	Student Presentations	Part of records compliance description (2 <sup>nd</sup> check box in MCM2)	MCM2
	Install Wetland Buffer Markers	Not included	Self-assessment
	Designing and Installing Stormwater BMP's and LID Practices	Not included	Self-assessment
	Grass and Fertilizer	Grass and Fertilizer	MCM1
	-	Disposal of Leaf and Grass Clippings	MCM1
	-	Septic System Maintenance	MCM1
	-	Construction/Developers Outreach	MCM1
	Public Review of Stormwater Management Program	Part of records compliance description (2 <sup>nd</sup> check box in MCM2)	MCM2
2	Public Participation in SWMP Development	Part of records compliance description (2 <sup>nd</sup> check box in MCM2)	MCM2
	Stormwater Phone/Email	Not included	Self-assessment
	Input for Stormwater Ordinance	Part of records compliance description (2 <sup>nd</sup> check box in MCM2)	MCM2
	Resident Activism for Pet Waste	Not included	Self-assessment
	Mine Fall Trail Days	Not included	Self-assessment

## Activities Planned for Next Reporting Period

The City of Nashua will continue to implement activities in accordance with the permit and SWMP.