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

2020 Annual Report

July 1, 2019 to June 30, 2020

Prepared by:
City of Nashua
Public Works Division
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City of Nashua

2017 New Hampshire Small MS4 General Permit No. NHR041021

Reporting Period: July 1, 2019 -June 30, 2020

Certification

Authorized Representative

The authorization letter is:

☒ Attached to this document (document name listed below):

Attachment A

☐ Publicly available at the website:

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Small MS4 Authorization

The following annual report is intended to document on the activities undertaken over the reporting period from July 1, 2019 – June 30, 2020 in accordance with 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). A copy of the SWMP and IDDE is filed and copies can be requested by the public. The City is currently working with its IT department to create a stormwater page on the website as a central location to keep records of the SWMP and IDDE for public access. The SWMP and IDDE will be referred to throughout this report:

Self-Assessment

Introduction

During this reporting period, the City hired a consultant to develop an Integrated Plan as the City moves forward with the next phase of a Long Term Control Plan. A comprehensive and integrated planning approach to the City's wastewater and stormwater obligations offers the opportunity for identifying cost-effective solutions that have the greatest impact to improve water quality and implementing the most important projects first. The plan will be used to evaluate and properly apportion financial resources to wastewater and stormwater management.

The City continues to do what it can to provide maintenance to culverts, wetlands, brooks, catch basins, and drain lines and capital improvements to the drainage system within its funding constraints. Need for additional dedicated funding is expected to grow given 2017 MS4 General Permit requirements.

Knowing that legal authority was given to NH municipalities in 2008 to form stormwater utilities under RSA 149-I, the City applied for and received a grant from the NH Department of Environmental Services (NHDES), and, using additional City funds, completed a stormwater utility feasibility study. The study determined that a stormwater fee is a practical and advantageous option for Nashua because it would fairly distribute the cost of stormwater management amongst property owners, provide a stable source of funds dedicated to fulfilling mandated requirements for stormwater management, and allow for proactive maintenance of and necessary improvements to the drainage infrastructure. However, establishing a stormwater fee system will require buy in from City staff, citizens, and elected officials, and it will take time to develop.

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 City continues to complete projects related to the Consent Decree, which as discussed below, are ongoing and will reduce CSOs Escherichia coli 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 wastes to the City's sewage treatment facilities. The system is particularly effective at treating the two year storm event, which is the most polluted "first flush".

Projects completed to contain urbanized runoff include:

- 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 now conveyed to the WWFTF where it is be 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 created 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. An additional benefit of this work is that localized flooding of combined sewage in the streets was eliminated.
- The Screening and Disinfection Facility (SDF) at CSOs 5 & 6, the last CSO plan element, was completed and became operational in 2015. This CSO facility has the capacity to hold one million gallons of wet weather wastewater, containing overflow up to a 2 year storm event, and reducing the amount of combined sewage discharging to the Merrimack River. In addition, this CSO 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 eight 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.
- The City completed upgrades to six (6) of the 13 (thirteen) city operated sewer pump stations which allow for better operation and with connection to the SCADA system monitored 24/7 at the wastewater plant, will result in quicker response to operational problems that could cause SSO's.
- The City completed video inspection and cleaning of all eight (8) sewer siphons that serve the collection sewer system throughout the city.

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. Many of these waters are identified with bacteria impairments and the list is included as Table 1 attached to this document.

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 ten 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 continue to be

distributed during educational presentations. Door hangers containing information about stormwater dos and don'ts were distributed during presentations and are available in public building in locations frequented by residents.

The Mine Falls Park Advisory Committee sponsored three Trail Days during the 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. These events are well attended and include families, high school groups, business teams and the general public. During 2020, three scheduled Trail Days were canceled due to the COVID-19 pandemic.

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).

Waterways continue to experience issues with invasive species. There are 5 documented invasive aquatic plants in the Nashua River, Mill Pond, and Nashua Canal. City staff collaborates with the State Exotic Species Program Coordinator to monitor invasive species and update the Long-Term Exotic Aquatic Plant Management Plan annually for these waterbodies. The dominant invasive species currently present are fanwort and milfoil; being managed with herbicide treatments. The Mill Pond and Nashua Canal are also treated with herbicide to control invasive species every other year. During summer 2017, curly leaf pondweed was identified in Sandy Pond, a 4.5 acres pond in the urban core of Nashua. During the reporting period, as detailed in the City's annual Long-Term Exotic Aquatic Plant Management Plan, annual aquatic invasive species management in performed to ensure the health of the Nashua River and Sandy Pond and reduce the threats to the ecological, aesthetic, recreational, and economic values of both water bodies. In July 2020 in the upper Nashua River and Sandy Pond, Water Chestnut was removed by hand pulling done by city staff, the local watershed association, and volunteers.

The Enviroscape presentation was given ten times to about 195 over two days in September 2019. In addition, on October 1, 2019, staff participated with students on a field trip sponsored by the Nashua River Watershed Association (NWRA) to a tributary to the Nashua River. The field trip included canoeing the river, testing for pollutants, identifying outfalls and discussing the health of the waterway. Over 215 students, teachers, and volunteers participated. The annual Public Works Day scheduled for May 2020 was cancelled due to the pandemic.

The City owns the landfill used by both residential and commercial entities. Information about the citywide soft yard waste program was distributed through brochures, 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).

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, were distributed by the Environmental Health Department to septic system owners and to septage haulers at the wastewater treatment facility for distribution to their clients. At least 250 brochures and 50 magnets were distributed.

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.

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.

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 week days 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 a covered storage facility 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 2019 Pesticide Usage Report was submitted in November 2019 to the NH Department of Agriculture. The Department has started experimenting with the use of turf growth regulators which slow down the rate of turf growth reducing mowing frequency and yard waste. The use of the growth regulator in our recreation field paint has also cut down on the amount of paint used.

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 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 is about 3,800 tons, with an estimated additional 1,500 tons brought directly to Four Hills by residents. About 1,000 tons of yard waste from Nashua properties is brought to Four Hills by commercial customers. All soft yard waste is composted at Four Hills and is typically used for landfill daily cover.

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 the MCM section of this report.

Stormwater Management Program (SWMP) Information

The SWMP was completed in June 2019 and is revised and updated as needed and is available in an electronic format and as a hard copy document. The City is revamping its web site and when practical will post the SWMP.

TMDL's and Water Quality Limited Waters

Chloride Impairment

In Section 2.2.2.d, Nashua was identified as having a waterbody where chloride is the cause of the impairment. On the 303 (d) list approved in 2006, the Nashua River- Mine Falls Dam Pond, NHIMP700040402-02 was first listed as having chloride impairment. This impairment was identified using two samples from 1998. This impairment remained on each updated 303 (d) list through 2016. This 2017 MS4 permit was written using the most current impairments on the 2016 303 (d) list.

During the reporting period, the NHDES Final 2018 303(d) List was approved by EPA on February 25, 2020. The 2018 list removed the chloride impairment from the Nashua River- Mine Falls Dam Pond, NHIMP700040402-02 due to chloride data being incorrectly attributed to the segment. From the NHDES document R-WD-19-05, titled "Impairments Removed (i.e. Delisted) from the 2018 303(d) List of Threatened or Impaired Waters (i.e. Category 5)" dated January 3, 2020:

> *The Nashua River - Mine Falls Dam Pond (NHIMP700040402-02) was originally impaired for chloride for the aquatic life integrity designated use in 2006 based on data collected at station MINNASD. In 2014, it was discovered that station MINNASD was mistakenly tied to The Nashua River - Mine Falls Dam Pond (NHIMP700040402-02), but was actually located within Nashua River - Nashua Canal Dike (NHIMP700040402-03). It has since been re-associated within the Nashua River and all the data transferred to Nashua River - Nashua Canal Dike (NHIMP700040402-03). When the data was transferred to the correct waterbody in 2014 the chloride data from 1998 and 1999, which was used to impair the Nashua River - Mine Falls Dam Pond (NHIMP700040402-02) originally, was outside of the current period and therefore not used in the assessment of Nashua River - Nashua Canal Dike (NHIMP700040402-03), hence in 2016 the AU was categorized as potentially attaining standards (3-PAS) for chloride. Because the basis for the original impairment in 2006 was based on data not within the waterbody, and there is no additional data available, NHDES has delisted the Nashua River - Mine Falls Dam Pond (NHIMP700040402-02) for chloride for the aquatic life integrity designated use.*
>
> *Because there is no other data in which to make an assessment, it has been placed in category 3-ND (no current data) for the 2018 cycle. Similarly, had the data been assigned to the correct waterbody, the Nashua River - Nashua Canal Dike (NHIMP700040402-03) would have received the impairment designation in 2006. The current data from the Nashua River - Nashua Canal Dike (NHIMP700040402-03) does not provide enough information in which to lift that impairment due to different sampling stations and sampling depths, therefore, the Nashua River - Nashua Canal Dike (NHIMP700040402-03) has been moved from 3-PAS to 5-M for chloride for the aquatic life integrity designated use.*

In order to provide data necessary to assess potential chloride impacts on the fish and aquatic life use, Nashua will perform water quality sampling on these two waterbodies as part of the Mine Falls Hydroelectric facility's relicensing process which is slated to be completed by 2023.

Additionally, winter salt use is monitored and controlled to limit application. During the reporting period, the construction of a brine system began so roads can be treated prior to icing/snowfall so that less salt can be applied during winter weather events.

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 1st to December 1st, weather permitting. Over 300 miles of streets were swept, which averages two loads a day per sweeper, containing three to six yards of material per load. 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

Outfalls to receiving waters with an impairment identified above have been ranked as high priority for screening in accordance with the IDDE requirements of the NH MS4 GP.

Activities for the Next Reporting Cycle

The City of Nashua will continue to implement activities in accordance with the approved Notice of Intent.

Minimum Control Measures

MCM1 - Public Education and Outreach

BMP: Dog License Applicant & Renewals

Document Name and/or Web Address:
Information is provided in pet license renewal letters distributed by the City Clerk. Email confirmation that the messaging was included in this year's renewals is filed.

Description:
The City's Waterways Manager collaborates with the City Clerk to add information on pet waste and stormwater protection as part of the dog license applications and renewals annually. The message below was added to the 2020 license renewal and applications.

"We Love Our Dogs! But dog waste carries harmful organisms that can make our waters unsafe for swimming or drinking. Picking it up and throwing it out properly is a small effort that can make a big difference in keeping our ponds, streams and rivers clean."

Targeted Audience:
Residents - Pet Owners

Measurable Goal(s):
Dog owners are made aware of the potential water quality impacts from pet waste and how to dispose of pet waste properly.

100% of the renewals included the messaging. **Goal was achieved.**

Message Date: License renewal sent in February 2020.

BMP: Brochure and Presentation for Businesses

Document Name and/or Web Address:
Poster and Brochures at Building Safety Department

Description:
Informational poster and brochures are posted at the Building Safety Department. The information available to businesses who enter the Building Safety Department includes information to reduce stormwater pollution.

Targeted Audience:
Industrial Facilities

Measurable Goal(s):
Businesses are made aware of stormwater pollution.

In Year 2, the City estimates that 517 of businesses received informational materials based on the number of building permits filed during the reporting year. **Goal was achieved.**

Message Date: Messaging was available to building permit applicants during the submission of their permit to the Building Safety Department.

BMP: Educate Staff at Industrial Facilities

Description:
Visit Industrial Facilities through the Industrial Pretreatment program and include information on Stormwater Awareness. Present to staff at industrial facilities to understand their industrial permit and how stormwater impacts water quality and what they can do to reduce impacts.

Targeted Audience:
Industrial Facilities that fall under the wastewater treatment plant's federally approved industrial pretreatment program are annually inspected and included is an inspection of exterior drainage and storm drains.

Measurable Goal(s):
Industrial facilities are made aware of impacts to water quality from stormwater. Implementation of BMP's is reviewed with the industries and developments of Spill Prevention, Control, and Countermeasure (SPCC) plans are encouraged for those industries that do not have one.

During the reporting period, 26 visits were made to industrial facilities with demonstration of good stormwater practices. **Goal was achieved.**

Message Date: Demonstrations provided throughout the reporting period.

BMP: Presentations

Description:
Presenting the Enviroscape Watershed Model at public events like Public Works Day and visiting middle school classrooms.

Targeted Audience:
Residents, businesses, institutions and commercial facilities

Measurable Goal(s):

The Enviroscape presentation was given ten times to about 195 over two days in September 2019. In addition, staff participated with students on a field trip sponsored by the Nashua River Watershed Association (NWRA) to a tributary to the Nashua River. Field trip included canoeing the river, testing for pollutants, identify outfalls and discussing the health of the waterway. Over 215 students, teachers, and volunteers participated. The Public Works Day scheduled for May 2020 was cancelled due to the pandemic.

Goal was achieved.

Message Date: September 4 and 5, 2019 and October 1, 2019

BMP: Install Wetland Buffer Markers

Description:
Installing wetland buffer markers encourages residents not to dump debris in wetland areas. Wetland Buffer Markers continue to be installed in the buffer areas adjacent to site development.

Targeted Audience:

Residents, businesses, institutions and commercial facilities

Measurable Goal(s):

In Year 2, five developments were required to provide wetland markers. **Goal was achieved.**

BMP: Grass and Fertilizer

Document Name and/or Web Address:
Rake and Leave It Brochure and City Soft Yard Waste program brochures

Description: The City has copies of 'Rake and Leave It' brochures at the Safety Building Department for the public to access. In addition, information about the city-wide soft yard waste program is distributed through brochures, 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).

Targeted Audience:
Residential and Business, Institutions and Commercial Facilities

Measurable Goal(s):
Lawn care enthusiasts' residents understand the potential water quality impacts from fertilizer and improper disposal of grass clippings and are aware of the proper lawn care management techniques for reducing those impacts. **Goal was achieved.**

MCM2 - Public Participation

BMP: Public Review of Stormwater Management Program

Document Name and/or Web Address:
Stormwater Management Program (SWMP)

Description:
A copy of the Stormwater Management Program (SWMP) is filed and copies can be requested by the public. The City is currently working with its IT department to create a stormwater page on the website as a central location to keep records of the SWMP for public access. Updates of stormwater issues are also reported at monthly meetings of the Board of Public Works, Planning Board meetings, and Conservation Commission meetings. A public comment period during meetings allows the public to address any issues related to the Stormwater Management Program (SWMP).

Measurable Goal(s): Input was received. **Goal was achieved.**

BMP: Public Participation in Stormwater Management Program Development

Document Name and/or Web Address:
Board of Public Works Agendas and Minutes: https://www.nashuanh.gov/AgendaCenter/Board-of-Public-Works-8

Planning Board Agendas and Minutes: https://www.nashuanh.gov/agendacenter/planning-board-

23/?#09102020-5080

Conservation Commission Agendas and Minutes:
https://www.nashuanh.gov/agendacenter/conservation-commission-16/?#09012020-5062

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).

Measurable Goal(s): Input was received and recorded in minutes. **Goal was achieved.**

BMP: Stormwater Hotline/Email

Description:

Stormwater inquiries from the public via email or phone call are received through the Public Works Division. Calls and emails received are directed to the appropriate departments and addressed.

Measurable Goal(s): Calls received/emails received were addressed. **Goal was achieved.**

BMP: Input for Stormwater Ordinance

Document Name and/or Web Address:

Stormwater ordinance on website:

https://www.ecode360.com/8733258?highlight=stormwater&searchId=23298304210457777#8733258

Description:
General provisions for ordinance adoption include public participation process and are posted in meeting minutes.

Measurable Goal(s): Input was received was recorded in meeting minutes**. Goal was achieved.**

BMP: Resident Activism for Pet Waste

Description:

"Mutt Mitt" dog convenience stations are located throughout the city in public parks, rail trails, river walks and other public space. They are monitored and refilled as needed. Signage discussing the requirement to dispose of pet waste is included.

Measurable Goal(s): All dog convenience stations are monitored and refilled. **Goal was achieved.**

MCM3 – Illicit Discharge Detection and Elimination

BMP: IDDE Legal Authority

The City has established legal authority as outlined in the IDDE plan.

BMP: Sanitary Sewer Overflow (SSO) Inventory

The municipality has developed the SSO inventory. SSOs are reported in accordance with POTW Permit No. NH0100170.

BMP: Map of Storm Sewer System

Storm sewer system and associated outfalls is mapped in accordance with the accepted NOI. The Geographic Information System (GIS) mapping is used to track and identify assets. Inaccuracies in the mapping identified during field investigations are corrected.

BMP: IDDE Program

IDDE Plan

The written IDDE plan is completed and copies of the plan can be made available to the public upon request. The City is currently working with its IT department to create a stormwater page on the website as a central location where the IDDE plan and supporting documents will be more readily accessible by the public.

Initial outfall identification, characterization and prioritization has been completed and included in the IDDE plan.

Outfall Screening

In the summer of 2017, the Nashua River Watershed Association (NRWA) was hired to train and mentor two college engineering interns in the collecting testing, documenting, and reporting of results on high priority stormwater outfalls. At least 45 outfalls were sampled and tested. In February 2020, the NRWA was contacted once again to assist the City with stormwater outfall sampling and the training of interns. In March 2020, due to the COVID -19 pandemic, city staff was directed to work remotely. The City was unable to hire college interns for the summer since the office was closed. Therefore, the sampling did not occur as planned through the end of the reporting period.

During September 2019, a USEPA representative completed Reconnaissance and Compliance Sampling Inspection (CSI) at six (6) locations in accordance with the FSB Investigations Team Stormwater Program Plan.

Catchment Investigation Procedures

The City of Nashua has adopted the catchment investigation procedures developed by the New Hampshire Lower Merrimack Valley Stormwater Coalition. In addition, the City has implemented a CCTV program for storm sewer inspection.

To develop a better understanding of the storm sewer system, the City embarked on a condition assessment the system. The City has identified approximately 830,000 linear feet of storm drains

and culverts. The storm sewers were prioritized for CCTV inspection based on several factors including conversion from combined sewers, age of system, and problematic pipe material.

A goal of approximately 40,000 linear feet of storm sewer inspection per year was set by the City and, in year one approximately 40,300 linear feet of storm sewer pipes and 136 storm sewer manholes were inspected during the reporting period.

The CCTV inspection data will inform the catchment investigations that are triggered by the results of the outfall screening.

BMP: Employee Training

Materials and training, including information on how to identify illicit discharges and SSOs, are made available to applicable employees in accordance with IDDE plan. In addition, staff attended various conferences and seminars (APWA, UNH T2, NEWEA, and NHPWA) as well as Coalition meetings where illicit discharges, water quality and other associated topics were discussed.

Wastewater employees assigned to maintenance of the sewer collection system (sanitary and storm sewers) are all certified as collection system operators through NEIWPCC and also receive on-the-job training.

MCM4 – Construction Site Stormwater Runoff Control

Ordinance §190-215 H details the requirements for erosion and sediment control on sites being developed and includes written procedures for site inspections and enforcement. Prior to receiving a certificate of occupancy, each site is inspected for compliance with the plan including checking for erosion issues and ensuring that no discarded building materials are left on site.

The following tasks are in progress in accordance with the accepted NOI.

Number of site plan reviews completed: 21

Number of inspections: 14

Number of enforcement actions: zero

MCM5 – Post Construction Stormwater Management in New Development and Redevelopment

BMP: Post-Construction Regulations and As-Built Drawings (due in year 2)

A Post-Construction Ordinance was adopted in 2018. Links and references are included in the SWMP. As-built drawings are required for all commercial projects and many other developments as part of receiving a Certificate of Occupancy.

MCM6 – Good Housekeeping and Pollution Prevention for Permittee Owned Operations

BMP: Parks and Open Spaces Operations and Maintenance Procedures

The Parks and Recreation Department has established procedures to address the proper use, storage, and disposal of pesticides, herbicides, and fertilizers (PHF) including minimizing the use of these products. The Department continues its practice of Integrated Pest Management (IPM) principles and reduced the amount of pesticides applied.

BMP: Buildings and Facilities Operations and Maintenance Procedures

Each city department is responsible to develop management procedures for dumpsters and other waste management equipment and to sweep lots and areas surrounding the facilities to reduce pollutants in stormwater runoff. Future meetings will be held to review and document these procedures.

BMP: Vehicles and Equipment Operations and Maintenance Procedures

The Street Department has established procedures for the storage of vehicles and clean up procedures for fluid leaks. The fleet maintenance staff service 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.

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 City established these procedures to ensure that vehicle fluids are not discharged to municipal storm drains or surface waters.

Several departments including Fire, Police and Transit are responsible for maintaining their own vehicles. Maintenance facilities located in areas with separated storm drains will be identified and good housekeeping and pollution prevention procedures reviewed.

BMP: Catch Basin Cleaning Program

A schedule for catch basin cleaning has been established that is practical and economically feasible, with the goal of ensuring that a catch basin sump should not be more than 50% full. The City has identified over 10,000 catch basins it is responsible to maintain and is aware of the locations that require routine maintenance. The City's extensive street sweeping program helps to limits the debris in the catch basins.

A Catch Basin Inspection Form has been developed for employee use. The City currently has procedures in place for catch basin inspections and cleanings and will be developing a Standard Operating Procedure in the next reporting period.

Catch basins are also inspected in conjunction with during the City's paving, sewer lining, sewer replacement and routine maintenance programs. As part of the paving program, approximately 100 catch basins were cleaned during the reporting period. All catch basins deposits are disposed in the City's lined landfill.

BMP: Street Sweeping Program

All curbed roadways were swept at least once during the reporting period. The downtown streets and curbs were swept on a weekly basis. The City has increased street sweeping frequency of all municipal owned streets to a schedule that targets areas with potential for high pollutant loads. There are four street sweepers and one sidewalk sweeper running eight hours a day from April 1st to December 1st, weather permitting. Over 300 miles of streets were swept, which averages two loads a day per sweeper, containing three to six yards of material per load. All street sweeping deposits are disposed of in the lined section of the City's landfill.

BMP: Winter Road Maintenance Program

A winter road maintenance program has been established with a goal of reducing salt usage. Prior to the winter season, trucks equipped with spreaders were calibrated. This is completed annually. During the reporting period, a brine system was used so roads can be treated prior to icing/snowfall so that less salt can be applied during the event. To prevent exposure of deicing product, all salt and sand is enclosed in a covered storage facility with a capacity of 2,000 tons.

BMP: Stormwater Treatment Structures Inspection and Maintenance Procedures

During the CMOM contract, 46 BMPs owned by the City of Nashua including dry ponds, wet ponds, Vortechnics swirl concentrator unit and a Plunge Pool were inspected by the consulting engineer, Hazen and Sawyer. Inspections were conducted in person between April and June 2020 and included videos, photographs, and reports. Recommendations for repairs/maintenance were summarized in reports for each BMP.

BMP: SWPPPs

The City of Nashua owns a landfill and wastewater treatment facility. Both properties have a Multi-sector General Permit which requires a development of a Stormwater Pollution Prevention Plan (SWPPP). Copies are available at their offices and inspections ae conducted according to their individual program. The Street Department facility is also in the process of developing a site specific SWPPP.

Attachment A

Authorization Letter

THE CITY OF NASHUA
Division of Public Works
Administration

"The Gate City"

September 28, 2020

Ms. Glenda Velez
US EPA- O6-1
5 Post Office Square, Suite 100
Boston, MA 02109
stormwater.reports@epa.gov

Ms. Deborah Loiselle
NHDES - Wastewater Engineering Bureau
29 Hazen Drive; PO Box 95
Concord, NH 03302-0095
Deborah.Loiselle@des.nh.gov

SENT VIA EMAIL

RE: City of Nashua, New Hampshire
2017 NPDES Phase II General Permit No. NHR041021, 2020 Annual Report

Dear Ms. Velez and Ms. Loiselle:

Please find attached the 2020 Annual Report for the period July 1, 2019 to June 30, 2020 as required under the 2017 New Hampshire Small Municipal Separate Storm Sewer Systems (MS4) General Permit City of Nashua, New Hampshire.

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.

Please contact this office if you have any questions concerning this report.

Respectfully,

for
Lisa M. Fauteux
Director of Public Works

Enc.

Cc: James Donchess, Mayor
Sarah Marchant, Director, Community Development Division
Daniel Hudson, P.E., City Engineer
David Boucher, Superintendent, Wastewater
Jon Ibarra, Superintendent, Street Department
Nicholas Caggiano, Superintendent, Parks and Recreation
Amy Prouty Gill, Senior Staff Engineer
Deborah Chisholm, Waterways Manager

Attachment B

Waterbodies in Nashua Identified as Bacteria Impaired Waters Covered by the Statewide TMDL

Table 1. Waterbodies in Nashua Identified as Bacteria Impaired Waters Covered by the Statewide TMDL

Waterbody Name	Assessment Unit #
Pennichuck Brook, Witches Brook	NHRIV700061001-07
Nashua River -Nashua Canal Dike	NHRIV700040402-03
Nashua River - Jackson Plant Dam Pond	NHIMP700040402-05
Nashua River	NHRIV700040402-08
Nashua River	NHRIV700040402-09
Merrimack River	NHRIV700061002-14
Salmon Brook - Hassell's Brook - Old Maids Brook - Hale Brook	NHRIV700061201-05
Salmon Brook	NHRIV700061201-07
Merrimack River	NHRIV700061206-24

Source: Appendix F, 2017 NH Small MS4 General Permit