

Year 1 Annual Report
New Hampshire Small MS4 General Permit
Reporting Period: May 1, 2018-June 30, 2019

Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form

Unless otherwise noted, all fields are required to be filled out. If a field is left blank, it will be assumed the requirement or task has not been completed.

Part I: Contact Information

Name of Municipality or Organization:

EPA NPDES Permit Number:

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Fax Number:

Stormwater Management Program (SWMP) Information

SWMP Location (web address):

Date SWMP was Last Updated:

If the SWMP is not available on the web please provide the physical address and an explanation of why it is not posted on the web:

Part II: Self Assessment

First, in the box below, select the impairment(s) and/or TMDL(s) that are applicable to your MS4.

Impairment(s)

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

TMDL(s)

Bacteria/ Pathogens
 Chloride
 Lake and Pond Phosphorus

Clear Impairments and TMDLs

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

Year 1 Requirements

- Develop and begin public education and outreach program
- Identify and develop inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
 - The SSO inventory is attached to the email submission
 - The SSO inventory can be found at the following website:
- Develop written IDDE plan including a procedure for screening and sampling outfalls
- IDDE ordinance complete
- Identify each outfall and interconnection discharging from MS4, classify into the relevant category, and priority rank each catchment for investigation
 - The priority ranking of outfalls/interconnections is attached to the email submission
 - The priority ranking of outfalls/interconnections can be found at the following website:
- Construction/ Erosion and Sediment Control (ESC) ordinance complete
- Develop written procedures for site inspections and enforcement of sediment and erosion control measures
- Develop written procedures for site plan review
- Keep a log of catch basins cleaned or inspected
- Complete inspection of all stormwater treatment structures

Annual Requirements

- Annual opportunity for public participation in review and implementation of SWMP
- Comply with State Public Notice requirements
- Keep records relating to the permit available for 5 years and make available to the public

- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- All curbed roadways have been swept a minimum of one time per year

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

Annual Requirements

*Public Education and Outreach**

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

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

Chloride Impairment

Annual Requirements

Public Education and Outreach

- Include an annual message in November/ December to private road salt applicators and commercial industrial site owners on the proper storage and application rates of winter deicing material, along with the steps that can be taken to minimize salt use and protect local waterbodies

Phosphorus Impairment

Annual Requirements

*Public Education and Outreach**

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

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- Increase street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.1.d.iii to a minimum of two times per year (spring and fall)

Potential structural BMPs

Any structural BMPs listed in Attachment 3 to Appendix F already existing or installed in the regulated area by the permittee or its agents shall be tracked and the permittee shall estimate the phosphorus

- removal by the BMP consistent with Attachment 1 to Appendix H. Document the BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP in each each annual report

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

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

- Increase street sweeping frequency of all municipal owned streets and parking lots to a schedule to target areas with potential for high pollutant loads
- Prioritize inspection and maintenance for catch basins to ensure that no sump shall be more than 50
- percent full; Clean catch basins more frequently if inspection and maintenance activities indicate excessive sediment or debris loadings

Lake and Pond Phosphorus TMDL

- Begin Phase 1 Lake Phosphorus Control Plan (LPCP)

Use the box below to input additional details on any unchecked boxes above or any additional information you would like to share as part of your self assessment:

Public Education and Outreach - The City has developed a comprehensive public education program, including message materials (brochures, newspaper articles and web materials) and a schedule for distribution (methods and time frames), which it will implement during Year 2. The requirement for annual messaging in November/December targeted to private road salt applicators and commercial industrial site owners for communities with a chloride impairment is a MA permit requirement. Manchester has incorporated salt use and storage information into its public information materials for distribution in Year 2.

Stormwater BMP Inspections - The City has developed an inventory of its City-owned Stormwater BMPs, along with inspection and maintenance forms and logs. DPW inspects its BMPs annually.

IDDE Training - An employee IDDE Training program will be developed during Year 2, with annual training to be performed starting in Year 2. Training will correspond with the start of outfall inspection activities.

Increased Street Sweeping - The City performs street sweeping on municipal roads at least once a year and implements a City-wide leaf collection program in lieu of a fall sweeping. The combined sweeping and leaf collection program satisfies the requirements of the permit for phosphorus impaired watersheds. Increased sweeping was determined not to be necessary for metals impaired watersheds as these areas are not observed to accumulate more sediment and debris than other areas within the City.

Potential Structural BMPs - Namaske Lake is the only phosphorus impaired water. The City does not have any structural BMPs in this watershed for which the phosphorus removal tracking requirements applies.

Lake and Pond Phosphorus TMDL - LPCP development will begin in Year 2 with the required Legal Analysis.

Part III: Receiving Waters/Impaired Waters/TMDL

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

Yes No

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

Part IV: Minimum Control Measures

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

MCM1: Public Education

Number of educational messages completed during the reporting period:

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

BMP: Septic System Outreach

Message Description and Distribution Method:

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

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Number of materials distributed.

Message Date(s):

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

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

BMP: School Tours of the WWTF

Message Description and Distribution Method:

The City of Manchester conducted school tours of the WWTF and provided a presentation on stormwater that includes the water cycle, pollutants associated with stormwater, Manchester's water bodies and impairments, what residents can do to reduce contaminants (i.e., managing pet waste, using slow release fertilizers, proper disposal of wastes, and managing erosion), and low impact development (LID).

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

Attendance by 77 school students

Message Date(s): 11/16/2018 (20 students), 3/9/2019 (20 students), 5/14/2019 (25 students), and 6/28/2019 (12 students).

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

If yes, describe why the change was made:

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

BMP: Project WET Teacher Training

Message Description and Distribution Method:

Manchester teachers attended the Project WET Teacher Training held at the Manchester Water Treatment Plant. Project WET is an interdisciplinary environmental education program which uses water as its theme. In NH, the program focuses on providing formal and non-formal K-12 educators with water education training and materials which can be used to promote awareness, appreciation, knowledge, and stewardship of water resources with youth.

Targeted Audience: Residents

Responsible Department/Parties: NHDES and Manchester Water Works

Measurable Goal(s):

Three Manchester teachers attended, including one from Webster School, one from Central High School, and one from Green Acres.

Message Date(s): March 25, 2019

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

If yes, describe why the change was made:

Manchester supports the incorporation of water education training in the school system to protect its water supply and other water resources.

BMP: NH Fourth Grade Water Science Fair and Drinking Water Festival

Message Description and Distribution Method:

The Drinking Water Festival celebrates National Drinking Water Week and encourages future leaders and scientists to learn about one of the world's most precious resources, water. Operators, scientists, consultants, artists and environmental educators from public water systems, nonprofit organizations, higher education and

local, state and federal agencies joined together to share their expertise with students. Students explored ways to keep water clean, conservation, water testing, groundwater pollution, how climate change is affecting water systems and many other topics. Manchester hosted the event at its Water Treatment Plant.

Targeted Audience: Residents, Businesses, institutions and commercial facilities

Responsible Department/Parties: NHDES and Manchester Water Works

Measurable Goal(s):

Over 400 students statewide attended the event, along with public water systems, nonprofit organizations, higher education and local, state and federal agencies.

Message Date(s): May 8, 2019

Message Completed for: Appendix F Requirements Appendix H Requirements

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

If yes, describe why the change was made:

Manchester supports the incorporation of water education training in the school system to protect its water supply and other water resources.

Add an Educational Message

MCM2: Public Participation

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

Manchester is working with in-house IT personnel to get the SWMP on its website for public review. A hard copy of the SWMP is available in the EPD office at 300 Winston Street, Manchester, NH.

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

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

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

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

Number of SSOs identified: 4

Number of SSOs removed: 2

Below, report on the total number of SSOs identified in the MS4 system and removed to date. At a minimum, report SSOs identified since 2013.

Total number of SSOs identified: 6

Total number of SSOs removed: 4

MS4 System Mapping

Describe the status of your MS4 map, including any progress made during the reporting period:

The City of Manchester has mapped outfalls and receiving waters (including impairments), City-owned stormwater treatment structures, initial outfall catchment delineations, pipes, manholes and catch basins. The City will work toward identifying open channel conveyances and interconnections with other systems in Permit Year 2 and will update maps as new information is obtained.

Screening of Outfalls/Interconnections

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

- The outfall screening data is attached to the email submission
- The outfall screening data can be found at the following website:

Not conducted in Year 1.

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

Number of outfalls screened: 0

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

Percent of total outfalls screened: 0

Catchment Investigations

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

- The catchment investigation data is attached to the email submission
- The catchment investigation data can be found at the following website:

Not conducted in Year 1.

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

Number of catchment investigations completed this reporting period: 0

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

Percent of total catchments investigated: 0

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

N/A

IDDE Progress

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

- The illicit discharge removal report is attached to the email submission
- The illicit discharge removal report can be found at the following website:

No illicit discharge reported in Year 1.

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

Number of illicit discharges identified: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 [UNITS]

Below, report on the total number of illicit discharges identified and removed to date. At a minimum, report on the number of illicit discharges identified and removed since the effective date of the permit.

Total number of illicit discharges identified: 0

Total number of illicit discharges removed: 0

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

N/A

Employee Training

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

No training was conducted during the reporting period. An employee IDDE Training program will be

developed during Year 2, with annual training to be performed starting in Year 2.

MCM4: Construction Site Stormwater Runoff Control

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

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

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

Ordinance Development

Describe the status of the post-construction ordinance required to be complete in year 2 of the permit term:

The City has a Stormwater Ordinance and Regulations that were reviewed in Year 1 to determine required updates to comply with the MS4 Permit. The City will draft a revised Ordinance and Regulations in Year 2 to comply with the Permit requirements.

As-built Drawings

Describe the status of the measures the MS4 has utilized to require the submission of as-built drawings and ensure long term operation and maintenance of completed construction sites required to be complete in year 2 of the permit term:

The City's Department of Highways Storm Water Regulations require the submission of as-builts. The City will draft a revised Ordinance and Regulations in Year 2 that includes procedures for long-term maintenance of stormwater controls.

Street Design and Parking Lots Report

Describe the status of the street design and parking lots assessment due in year 4 of the permit term, including any planned or completed changes to local regulations and guidelines:

No work completed in Year 1. To be completed in future years.

Green Infrastructure Report

Describe the status of the green infrastructure report due in year 4 of the permit term, including the findings and progress towards making the practice allowable:

No work completed in Year 1. To be completed in future years.

Retrofit Properties Inventory

Describe the status of the inventory, due in year 4 of the permit term, of permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas and report on any properties that have been modified or retrofitted:

No work completed in Year 1. To be completed in future years, upon completion of an inventory of City-owned property.

MCM6: Good Housekeeping

Catch Basin Cleaning

Describe the status of the catch basin cleaning optimization plan:

A plan for optimizing catch basin cleaning was completed and included as Appendix I to the SWMP. The Plan

If complete, attach the catch basin cleaning optimization plan or the schedule to gather information to develop the optimization plan:

- The catch basin cleaning optimization plan or schedule is attached to the email submission
- The catch basin cleaning optimization plan or schedule can be found at the following website:

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

Number of catch basins inspected:

Number of catch basins cleaned:

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

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

Total number of catch basins:

If applicable:

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

Not yet applicable, pending collection of sediment depth data in accordance with the Plan for Optimizing Catch Basin Cleaning.

Street Sweeping

Describe the status of the written procedures for sweeping streets and municipal-owned lots:

The City developed a street sweeping SOP. All City-owned streets are swept a minimum of once a year with a leaf collection program implemented in the fall. This sweeping/leaf collection program addresses phosphorus and metal impaired waters.

Report on street sweeping completed during the reporting period using one of the three metrics below.

- Number of miles cleaned:
- Volume of material removed: [UNITS]
- Weight of material removed: [UNITS]

Winter Road Maintenance

Describe the status of the written procedures for winter road maintenance including the storage of salt and sand:

The City of Manchester has an existing Ice and Snow Control SOP that meets permit requirements.

Inventory of Permittee-Owned Properties

Describe the status of the inventory, due in year 2 of the permit term, of permittee-owned properties, including parks and open spaces, buildings and facilities, and vehicles and equipment, and include any updates:

No work completed in Year 1. The City will develop an inventory by the end of Year 2.

O&M Procedures for Parks and Open Spaces, Buildings and Facilities, and Vehicles and Equipment

Describe the status of the operation and maintenance procedures, due in year 2 of the permit term, of permittee-owned properties (parks and open spaces, buildings and facilities, vehicles and equipment) and include maintenance activities associated with each:

No work completed in Year 1. To be completed in Year 2.

Stormwater Pollution Prevention Plan (SWPPP)

Describe the status of any SWPPP, due in year 2 of the permit term, for permittee-owned or operated facilities including maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater:

No work completed in Year 1. To be completed in Year 2.

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

Number of site inspections completed:

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

N/A

O&M Procedures for Stormwater Treatment Structures

Describe the status of the written procedure for stormwater treatment structure maintenance:

An inventory of all City-owned BMPs was conducted. An SOP, including inspection and maintenance procedures and forms was developed. DPW inspects BMPs annually.

Additional Information

Monitoring or Study Results

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

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

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

N/A

Additional Information

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

MCM3: SSOs - The number of SSOs reported represent the total number of SSOs that occurred during the respective periods. None were reported to enter the MS4. Two of the SSOs reported are associated with the CSO system and will be addressed with the City's CSO program.

MCM4: Inspection - When performing construction site inspections, the City discusses any observed issues with the Contractor at the time of the inspection. These are resolved through the inspection process, limiting the need for formal enforcement actions.

MCM6: CB Cleaning - The reported number of catch basins inspected and cleaned under MCM1 includes catch basins within and outside of the City's MS4. The City has over 12,000 catch basins that it cleans on a rotating cycle. About 6,900 of these are part of the MS4.

The following additional public education activities were performed during the reporting period:

1. The 1st Annual NH Stormwater Coalition Meeting and tour was hosted by EPD on 3/27/2019 with 75 attendees.

2. Manchester Water Works performs a school education program that includes a poster contest and science fair. Education is focused on protection of the water supply and its watershed, which includes pollution prevention topics.

Activities Planned for Next Reporting Period

Please confirm that your SWMP has been, or will be, updated to comply with all applicable permit requirements including but not limited to the year 2 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

- Complete system mapping Phase I
- Begin investigations of catchments associated with Problem Outfalls
- Develop or modify an ordinance or other regulatory mechanism for post-construction stormwater runoff from new development and redevelopment
- Establish and implement written procedures to require the submission of as-built drawings no later than two years after the completion of construction projects
- Develop, if not already developed, written operations and maintenance procedures
- Develop an inventory of all permittee owned facilities in the categories of parks and open space,

- buildings and facilities, and vehicles and equipment; review annually and update as necessary
- Establish a written program detailing the activities and procedures the permittee will implement so that the MS4 infrastructure is maintained in a timely manner
 - Develop and implement a written SWPPP for maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater
 - Enclose or cover storage piles of salt or piles containing salt used for deicing or other purposes
 - Develop, if not already developed, written procedures for sweeping streets and municipal-owned lots
 - Develop, if not already developed, written procedures for winter road maintenance including storage of salt and sand
 - Develop, if not already developed, a schedule for catch basin cleaning
 - Develop, if not already developed, a written procedure for stormwater treatment structure maintenance
 - Develop a written catchment investigation procedure (*18 months*)

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4 in the last 5 years
- Continue public education and outreach program
- Implement procedures for sweeping streets and municipal-owned lots
- Implement procedures for winter road maintenance
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all uncurbed streets at least annually

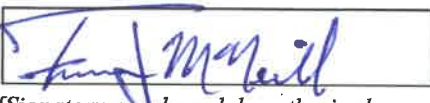
Provide any additional details on activities planned for permit year 2 below:

Part V: Certification of Small MS4 Annual Report 2019

40 CFR 144.32(d) Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: Frederick J. McNeill Title: Chief Engineer - EPD

Signature:  Date: 9/30/19

[Signatory may be a duly authorized representative]