Year 3 Annual Report
Massachusetts Small MS4 General Permit
Reporting Period: July 1, 2020-June 30, 2021

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. Please ONLY report on activities between July 1, 2020 and June 30, 2021 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: Town of Charlton

EPA NPDES Permit Number: MAR041100

Primary MS4 Program Manager Contact Information

Name: Angela Panaccione Title: Conservation Director

Street Address Line 1: 37 Main Street

Street Address Line 2: NA

City: Charlton State: MA Zip Code: 01507

Email: angela.panaccione@townofcharleton.net Phone Number: (508) 248-2247

Stormwater Management Program (SWMP) Information

SWMP Location (web address): https://www.townofcharlton.net/282/Stormwater-MS4

Date SWMP was Last Updated: 12/30/2020

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

Part II: Self-Assessment

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

Impairment(s)

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

TMDL(s)

In State: ☐ Assabet River Phosphorus ☒ Bacteria and Pathogen ☐ Cape Cod Nitrogen
☐ Charles River Watershed Phosphorus ☒ Lake and Pond Phosphorus

Out of State: ☐ Bacteria/Pathogens ☐ Metals ☒ Nitrogen ☐ 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 3 Requirements

- ☒ Inspected and screened all outfalls/interconnections (excluding Problem and Excluded outfalls)
- ☒ Updated outfall/interconnection priority ranking based on the information collected during the dry weather inspections as necessary
- ☒ Post-construction bylaw, ordinance, or other regulatory mechanism was updated and adopted consistent with permit requirements

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above year 3 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

During Year 2 the Town identified requirements of the permit we were not in compliance with due to COVID-19 impacts and due to a significant turn over in staff and prolonged vacancies. From June 2019 through February 2020, Charlton was without a dedicated Town Administrator to oversee program implementation, and the Town's primary MS4 program contact was injured on the job and his position was not filled until May 2021. These occurrences, coupled with the COVID-19 outbreak, set back the Town's MS4 program by approximately 1 year. The incompleted requirements from Year 2 are now complete and are listed below.

Phase I Mapping: Mapping of open channel conveyances, newly located outfalls, and stormwater BMPs are ongoing. Mapping interconnections with other MS4s (e.g. DOT) is ongoing, and it is expected that this will continue as part of DOT's own mapping efforts to be completed under a future TS4 permit. The Town has completed its initial catchment delineations based on topographic mapping and is available in the IDDE Report on the website..

As-Builts and Long-Term O&M: The Town has incorporated procedures for submittal of as-builts and requires long term operation and maintenance as part of its stormwater regulatory updates.

Written O&M Procedures: The Town hired a consultant to assist with completion of an Operation and Maintenance Plan that covers parks and open spaces, buildings and facilities, vehicles and equipment, and MS4 infrastructure. This Year 2 requirement was completed in September of 2020 and is available on the Town's Stormwater Website.

Facility Inventory: The Town and our consultant developed a Facility Inventory of permittee-owned facilities to accompany the O&M Plan. This Year 2 requirement was completed in September of 2020 and is available on the Town's Stormwater Website.

SWPPP: The Town had two potentially eligible facilities consisting of the Highway Garage and salt shed, however, both are located outside of the urbanized area and do not require SWPPPs. This was documented and confirmed with EPA by our consultant and new Stormwater Coordinator.

We believe we are now fully in compliance with all Year 2 & Year 3 permit requirements.

Annual Requirements

- ☒ Provided an opportunity for public participation in review and implementation of SWMP and complied with State Public Notice requirements
- ☒ Kept records relating to the permit available for 5 years and made available to the public
- ☒ The SSO inventory has been updated, including the status of mitigation and corrective measures implemented
  - ○ This is not applicable because we do not have sanitary sewer
  - ◉ This is not applicable because we did not find any new SSOs
  - ○ The updated SSO inventory is attached to the email submission
  - ○ The updated SSO inventory can be found at the following website:
- ☒ Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- ☒ Provided training to employees involved in IDDE program within the reporting period
- ☒ All curbed roadways were swept at least once within the reporting period
- ☒ Updated system map due in year 2 as necessary
- ☒ Enclosed all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- ☒ Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- ☒ Updated inventory of all permittee owned facilities as necessary
- ☒ O&M programs for all permittee owned facilities have been completed and updated as necessary
- ☒ Implemented all maintenance procedures for permittee owned facilities in accordance with O&M programs

☒ Implemented program for MS4 infrastructure maintenance to reduce the discharge of pollutants

☒ Inspected all permittee owned treatment structures (excluding catch basins)

Optional: If you would like to describe progress made on any incomplete requirements listed above, provide any additional information, and/or if any of the above annual requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

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

Annual Requirements

*Public Education and Outreach**

☒ Annual message was distributed encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

☒ Permittee or its agents disseminated educational material to dog owners at the time of issuance or renewal of dog license, or other appropriate time

☒ Provided information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria

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

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

Public Education and Outreach: The Town is a member of the statewide ThinkBlue campaign and central Mass Regional Stormwater Coalition (CMRSWC) which distributed a number of public education messages throughout the year. Targeted messages addressed topics related to pet waste collection, septic system maintenance, and other general stormwater maintenance.

Locally, the Town Clerk distributes a fact sheet with dog license registrations/renewals and the Health Department distributes a fact sheet with all Septic permits. The Conservation Commission also distributed various targeted educational messages to each of the four audiences along with approved Orders of Conditions and Requests for Determination of Applicability, including fliers on pet waste to residential applicants.

Additionally, CMRSWC hired a consultant to develop a comprehensive social media public education program. In part, this program will consist of website text with a permit overview, specific messages and topics for each of the Town's four audiences, links to external websites, and links for download for numerous outreach brochures. The Town will also be provided with relevant seasonal messages for distribution.

Nitrogen (Combination of Impaired Waters Requirements and TMDL Requirements as Applicable)

Annual Requirements

*Public Education and Outreach**

☒ Distributed 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 fertilizers

☒ Distributed an annual message in the summer (June/July) encouraging the proper management of pet waste, including noting any existing ordinances where appropriate

☒ Distributed an annual message in the fall (August/September/October) encouraging the proper disposal of leaf litter

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

☒ Increased street sweeping frequency of all municipal owned streets and parking lots subject to Permit part 2.3.7.a.iii.(c) to a minimum of two times per year (spring and fall)

Potential structural BMPs

☒ Any structural BMPs listed in Table 3 of Attachment 1 to Appendix H already existing or installed in the regulated area by the permittee or its agents was tracked and the nitrogen removal by the BMP was estimated consistent with Attachment 1 to Appendix H. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated nitrogen removed in mass per year by the BMP were documented.

- ○ The BMP information is attached to the email submission
- ◉ The BMP information can be found at the following website:

https://www.townofcharlton.net/282/Stormwater-MS4

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

BMP pollutant removal will be completed as part of the Source Identification Report to be completed by Year 4.

Solids, Oil and Grease (Hydrocarbons), or Metals

Annual Requirements

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

☒ Increased street sweeping frequency of all municipal owned streets and parking lots to a schedule that targets areas with potential for high pollutant loads

☒ Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full; Cleaned catch basins more frequently if inspection and maintenance activities indicated excessive sediment or debris loadings

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

Lake and Pond Phosphorus TMDL

☒ Completed the funding source assessment

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

A phased approach is being used to develop the LPCP. Buffumville Lake, Dresser Hill Pond, Gore Pond, Granite Reservoir, Jones Pond, Pikes Pond, and Pierpoint Meadow Pond require preparation of a complete written Lake Phosphorus Control Plan (LPCP) by Year 4 (June 30, 2022), ultimately culminating in the design and implementation of potentially multiple structural stormwater BMPs during Year 6 and beyond. To fully implement the LPCP there would need to be significant changes to local code and/or state and federal permitting as most of the roads that surround the Lakes & Ponds are private. Installation and O&M of structural and semistructural BMPs on private properties is currently only applicable to new and redevelopment projects over 1 acre that are subject to the Town of Charlton's General By-Laws Chapter 175 (Stormwater Management) and the supporting Regulations (adopted June 30, 2021) that require 90% TSS removal & 60% Phosphorus removal for new development and 80% TSS removal & 40% Phosphorus removal for redevelopment. Our regulations also allow for off site mitigation in hopes large commercial developers will consider offsite mitigation measures for Phosphorus reduction and work with the Lakes 7 Ponds Committee and local Lake Associations to develop BMP for private roadways.

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

Currently, the Town of Charlton funds stormwater management through property taxes paid into the General Fund and fee's collected under the local stormwater bylaw. Alternatives to existing funding sources consist of: Massachusetts Municipal Water Infrastructure Investment Fund, Developing Stormwater Enterprise Fund and applying for loans and grants (including Section 319 Nonpoint Source Competitive Grants, Section 604b Water Quality Management Planning Grants, Clean Water State Revolving Fund Loans, MEMA/FEMA Hazard Mitigation Grants including new Building Resilient Infrastructure and Communities (BRIC) program, Municipal Vulnerability and Preparedness Action Grant Program, Massachusetts Environmental Trust (MET) Grants, Stormwater MS4 Municipal Assistance Grant Program or a MassWorks Infrastructure Grants.

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:

Charlton has determined it is subject to the following additional TMDL and Impaired Waters requirements:
-McKinstry Brook (MA41-13), Bacteria Impaired Waters requirements (Appendix H, Part III.)
-Dresser Hill Pond (MA42014), Turbidity Impaired Waters requirements (Appendix H, Part V.)
-Gore Pond (MA42018), Turbidity Impaired Waters requirements (Appendix H, Part V.)
-Pikes Pond (MA 42044), Turbidity Impaired Waters requirements (Appendix H, Part V.)
-Sibley Pond (MA41047 and 41048), Turbidity Impaired Waters requirements (Appendix H, Part V.)

Additionally, nine outfalls (OF-5, OF-7, OF-27, OF-64, OF-67, OF-68, OF-77, OF-86, and OF-87) could not be field-located so that dry weather inspections and screening could occur. Metal detectors and a drone were used to try to locate them. Based on this we have determined they do not to exist and they have been removed from mapping.

All known outfalls and receiving waterbodies with impairments have been mapped to date. Mapping of open channel conveyances, newly located outfalls, and stormwater BMPs are ongoing. Mapping interconnections with other MS4s (e.g. DOT) is ongoing, and it is expected that this will continue as part of DOT's own mapping efforts to be completed under a future TS4 permit. The Town is currently working on completing its catchment delineations based on topographic mapping and Desktop review.

Part IV: Minimum Control Measures

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

MCM1: Public Education

Number of educational messages completed **during this reporting period**: 10

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

BMP: Cigarette butts

Message Description and Distribution Method:

Materials and messaging for this campaign to reduce cigarette butt litter were developed within the reporting period. The campaign includes:
• Image of baby bird with cigarette butt in its mouth with message
• Web page with additional information on cigarette butt litter and link to informational video from Canadian public broadcasting
• Boosted FB post to be shared with MA Audubon and the Connecticut River Conservancy and that links to resources on Think Blue Connecticut River website

Social media posts from Think Blue Massachusetts were shared on the Town of Charlton's facebook page.

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

Shared messages from Think Blue Massachusetts to the Town of Charlton's Facebook page with 534 People Reached and 6 Likes

Message Date(s): May 30, 2021

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:

Added

BMP: Annual leaf litter message - Leaf litter & brush collection

Message Description and Distribution Method:

Social media post shared on the Town of Charlton's Facebook page in the Fall encouraging the proper disposal of leaf litter. Original post from Neponset Stormwater Partnership. Also included in the Facebook post was the dates for the "Leaf Dump" at the DPW

Targeted Audience: Residents, businesses, institutions and commercial facilities

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

Shared messages from Think Blue Massachusetts to the Town of Charlton's Facebook page with 634 reaches and 9 likes. This was also promoted with the yard waste drop off held at the DPW for 4 weeks in October 2020.

Message Date(s): September & October 2020

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

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

If yes, describe why the change was made:

BMP: Annual pet waste message - Scoop the Poop & Do Your "Doody" for Clean Water

Message Description and Distribution Method:

Attached "Do your Doody" & Scoop the poop flyers to back of dog licenses announcing new local signs and local regulations on pet waste disposal. Also posted "Scoop the poop" think blue MA messaging on the Town's facebook page.

Targeted Audience: Residents

Responsible Department/Parties: Town Clerk

Measurable Goal(s):

1313 fliers were distributed by the Town Clerks office with Dog License

Message Date(s): March-June 2021

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

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

If yes, describe why the change was made:

BMP: Stop Erosion in its Tracks to Keep Our Waters Clean

Message Description and Distribution Method:

Flier was attached to every Order of Conditions the Conservation Commission issued during Year 3.

Targeted Audience: Developers (construction)

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

84 fliers were distributed

Message Date(s): July 1, 2020-June 30, 2021

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

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

If yes, describe why the change was made:

BMP: Stormwater pollution is trash, oil, cigarette butts, & dog waste.

Message Description and Distribution Method:

Think Blue Massachusetts "Fowl Water" video (https://www.thinkbluemassachusetts.org/) Advertisement on Facebook, Instagram, & YouTube.

On behalf of the members of the Central Massachusetts Regional Stormwater Coalition, Think Blue Massachusetts ran an educational advertising campaign from May 17th to June 4th, 2021. The “Fowl Water” advertisement helps viewers visualize stormwater pollution from motor oil, pet waste, and trash become stormwater pollution. We selected Facebook and Instagram sponsored video and YouTube pre-roll advertisements because these channels offer superior “bang for the buck” to cable and broadcast television. They provide granular reporting that helps demonstrate what was accomplished. This effort helps coalition members meet their requirements to “document in each annual report the messages for each audience; the method of distribution; the measures/methods used to assess the effectiveness of the messages, and the method/measures used to assess the overall effectiveness of the education program.”

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

22,094 social media impressions from residents of Charlton: 5,654 from Facebook and 14,049 YouTube views. Also 2,391 Spanish Language Impressions.

Message Date(s): May 17, 2021-June 4, 2021

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

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

If yes, describe why the change was made:

BMP: Central Massachusetts Regional Stormwater Coalition - social media messaging

Message Description and Distribution Method:

Our community is a member of the Central Massachusetts Regional Stormwater Coalition (CMRSWC). In November 2020, CMRSWC contracted Capital Strategic Solutions (CSS) to assist with messaging requirements for MCM 1. A CMRSWC Facebook page and Instagram account were created, to supplement CMRSWC's existing Twitter account. Weekly messages were distributed through social media to target audiences consisting of residents, developers, businesses, institutions, commercial and industrial facilities located in CMRSWC communities. Topics on ways to reduce water pollution included: proper disposal of hazardous wastes, how to prepare for winter conditions, proper car washing techniques, septic system maintenance, yard maintenance, pet waste disposal, etc.

Targeted Audience: Residents, developers, businesses, institutions, commercial and industrial facilities

Responsible Department/Parties: CMRSWC

Measurable Goal(s):

By June 2021, 220 posts had been added to the CMRSWC Facebook and Instagram pages with over 2,500 impressions on Facebook and over 2,200 impression on Instagram with over 1,000 engagements. CMRSWC's twitter account had over 3,000 posts with 492,400 impressions. CMRSWC's tweets had over 2,000 engagements. CMRSWC's social media posts were shared by numerous municipalities, organizations, and the EPA.

Message Date(s): November 2020 - June 2021

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:

Social media messaging is a new service being provided to CMRSWC member communities in Year 3 and, therefore, would not have previously been identified on municipality's NOIs.

BMP: Rainwater

Message Description and Distribution Method:

Rainwater that runs off roofs, streets and lawns pours into storm drains and is funneled straight into our streams and rivers without treatment. Along the way, this water collects contaminants in the form of lawn fertilizers, motor oil, pet waste and yard clippings, which can pollute our waterways and potentially make them unsafe for humans, pets and aquatic life. Did you know that each downspout on a house can drain approximately 12 gallons of water per minute during a one-inch rainfall? Fortunately, there are many things that property owners can do to put rainwater to good use while reducing the amount of stormwater runoff that ends up in local waterways. If managed properly, the water that flows off rooftops can help keep lawns and gardens green while lowering water bills during summer months. However, most downspouts direct rainwater down driveways and sidewalks to underground pipes that lead to storm drains or sanitary sewer lines. These paved surfaces increase the speed and amount of water that rushes into streams, causing stream bank erosion

and harming wildlife habitats. Downspouts that connect directly to sewer pipes increase the risk of sewer overflow and flooding. Disconnecting your downspout from a sewer intake pipe (standpipe), then redirecting the flow of water to a grassy area or garden is a simple process that makes a big difference to the environment.

Targeted Audience: Residents, Nurseries & Landscape Companies

Responsible Department/Parties: Conservation Committee

Measurable Goal(s):

Shared to Town's Facebook Page and posted on Town Website.

Message Date(s): 12/20/2020

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

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

If yes, describe why the change was made:

BMP: Annual septic maintenance message

Message Description and Distribution Method:

If you have a septic system, it is vital to keep up with it’s proper care and maintenance to avoid costly replacement and to reduce the risk of contaminating local and regional waters. Overloading your septic system with water is a leading cause of failure. Septic systems should be inspected at least every three years by a licensed contractor and your tank should be pumped generally every three to five years or as recommended by the inspector. • By maintaining your septic system, you are protecting the value of your property. A malfunctioning septic system can drastically reduce the property value, hamper the sale of your property and pose a legal liability. • A properly maintained septic system keeps your water clean and safe; it reduces the risk of contaminating our local watershed. • A malfunctioning septic system can harm the ecosystem by killing native plants and aquatic species. Learn more, visit: http://ow.ly/EQyS50CEbbV Residents

Targeted Audience: Residents

Responsible Department/Parties: Health Department

Measurable Goal(s):

77 fliers were distributed through the Health Department. Additionally, the Town shared posts on Facebook regarding Septic Smart week (September 2020) to provide information to owners of septic systems about proper maintenance.

Message Date(s): July 1, 2020 - June 30, 2021

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

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

If yes, describe why the change was made:

BMP: Annual winter deicing/salt message

Message Description and Distribution Method:

Shared Socail Media Post from CMRSWC: Traction agents help prevent slipping on ice. Sand, kitty litter, and salt hurt vegetation, and degrade aquatic habitats. Organic salt-free deicer is eco-friendly, will help to keep your walkways and driveways ice-free, and are safe for our aquatic habitats.
#BeTheSolutionToStormwaterPollution

Also Shared: Today certainly feels like the first day of winter! Remember, before applying a deicer to your sidewalk, think about the air temperature, potential for sun exposure, and how much product you'll need. Remember to follow label directions carefully and use products sparingly. It's easy to over apply deicers, but applying more than you need won't melt your ice any faster. • For Dry, Powdery Snow: Shovel or sweep snow immediately to avoid using deicer. • For Wet, Heavy Snow: Apply deicer product as soon as snow beings falling in order to prevent it from bonding. • For Sleet & Freezing Rain: Apply deicer product early on during these conditions to prevent ice from building up. • For Significant Snowfall: When more than 2 inches of snow falls, plow or shovel first and then use a deicing product to melt any underlying layers of ice that have built up due to packed down snow. The most important step is to physically remove as much ice as possible before applying salt. Use a shovel to break up the ice before you add another layer of salt to your sidewalk. Adding more salt without removing what has melted can result in over-application, meaning more salt and chemicals end up in our shared aquifers.

Targeted Audience: Residents, businesses, institutions and commercial facilities

Responsible Department/Parties: Conservation Committee & CMRSWC

Measurable Goal(s):

Shared to the Town's Facebook Page with 421 reaches & 6 likes.

Message Date(s): 12/10/2020 & 12/22/2020

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

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

If yes, describe why the change was made:

BMP: Annual message - Proper lawn maintenance

Message Description and Distribution Method:

Attached "10 Tips for an Environmentally Friendly Yard" to each Order of Conditions & Determination of Applicability issues by the Conservation Commission. Provided the Flyer to the Lakes & Ponds committee to distribute to Lake Residents with their quaterly news letters.

Targeted Audience: Residents

Responsible Department/Parties: Conservation Committee & Lakes & Ponds Committee

Measurable Goal(s):

84 Flyers were distributed with Order of Conditions issued by Con Com and an estimated 1,000 people were reached through the Lakes & Ponds committee Outreach.

Message Date(s): Spring 2021

Message Completed for: Appendix F Requirements ☒ Appendix H Requirements ☒

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

If yes, describe why the change was made:

Add an Educational Message

MCM2: Public Participation

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

Due to Covid 19 the SWMP was not reviewed during a public meeting as proposed. Instead we posted links to the SWMP on the Towns Facebook page and other community pages and gave residents a 30 day period (January 15, 2021- February 15, 2021) to provide written comment on the SWMP updates. No Comments were received.

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

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

Household Hazardous Waste Day held on June 26, 2021. Charlton BOH provided $30.00 vouchers to residents.

Charlton Earth Day Clean-up was held Saturday April 24, 2021.

The Town of Charlton's Stormwater Coordinator participated in the Central Massachusetts Regional Stormwater Coalition (CMRSWC),and the Massachusetts Statewide Municipal Stormwater Coalition (Statewide Coalition). She is the Chair of the Education sub-committee for CMRSWC and the Chair of Advocacy for the Statewide Coalition.

As a result of the COVID-19 pandemic, CMRSWC halted participation in public events from March 2020 – June 2021.

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

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

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

Number of SSOs identified: 1

Number of SSOs removed: 1

MS4 System Mapping

Optional: Provide additional status information regarding your map:

Known Outfalls within Town Boundaries: 87
Known Outfalls within the Urbanized Area: 73
Outfalls that were Attempted to Visit: 73
Outfalls that Could Not be Located: 9
Outfalls that Could Not be Accessed: 0
Structures Identified as an Outfall Found that were not an Outfall (i.e. culvert): 6
Actual Outfalls Found: 58
Outfalls Found: 58
Outfalls Found Not Flowing: 57
Outfalls Found with Evidence of Flow: 1
Found with Illicit Discharge Potential: 0
Total Not Yet Attempted to Visit: 0

Screening of Outfalls/Interconnections

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

○ No outfalls were inspected

○ The outfall screening data is attached to the email submission

◉ The outfall screening data can be found at the following website:

https://www.townofcharlton.net/282/Stormwater-MS4

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

Number of outfalls screened: 58

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

Percent of outfalls screened: 100

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

CEI observed evidence of flowing outfalls at one location. A sample was collected from this location and analyzed for the following parameters as required by the permit: ammonia, chlorine, conductivity, salinity, e.coli, surfactants, and temperature. Note that there are no pollutants of concern associated with this outfall.

Nine outfalls (OF-5, OF-7, OF-27, OF-64, OF-67, OF-68, OF-77, OF-86, and OF-87) could not be field-located so that dry weather inspections and screening could occur. Metal detectors and a drone were used to try to locate them. Based on this we have determined they do not to exist and they have been removed from mapping.

Catchment Investigations

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

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

https://www.townofcharlton.net/282/Stormwater-MS4

*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:

Outfall and Interconnections: The Town hired a consultant to assist with various IDDE permit requirements. As part of this effort, the consultant delineated outfall catchment areas and complete an initial classification and priority ranking of each.

IDDE Progress

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

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

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

Number of illicit discharges identified: 0

Number of illicit discharges removed: 0

Estimated volume of sewage removed: 0 gallons/day

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

Total number of illicit discharges identified: 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:

Employee Training

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

CEI provided an in house MS4 training for DPW employees on 5/18/2021. Nine (9) employees attended

The Stormwater Coordinator attended the MS4 Construction Site Inspection Program Webinar on May 12, 2021

Fuss & O'Neill, in partnership with the Central Massachusetts Regional Stormwater Coalition, conducted a training workshop for municipal employees of MS4-regulated communities on implementing IDDE program requirements of the MS4 Permit. The training workshop was held on May 26, 2021 remotely via GoTo Meeting. The training provided at these workshops is also intended to satisfy the MS4 Permit requirements for annual IDDE training as outlined in Section 2.3.4.11 of the MS4 Permit. While the workshop training presentation focused on IDDE program requirements, the presentation also included general information about all Six Minimum Control Measures and highlighted some of the additional permit requirements. The training presentation included detailed information on the following topics: General MS4 Information, Brief descriptions of each of the six minimum control measures, IDDE requirements, Identification of Illicit Discharges and Sanitary Sewer Overflows, Safety Considerations for IDDE program staff, IDDE Program Planning, Illicit Discharge Source Identification Methods and Catchment Investigation Planning and Execution.

The Stormwater Coordinator attended the annual IDDE training provided virtually by Central Massachusetts Regional Stormwater Coalition on May 26, 2021. A summary and recording of the training is available on the CMRSWC website.

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: 23

Number of inspections completed: 80

Number of enforcement actions taken: 12

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

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

As-built Drawings

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

Number of as-built drawings received: 2

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

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:

The Town of Charlton is on track to complete the report for Year 4 and will use several resources to help in developing the report, including EPA's technical support document entitled, "Assessing Street and Parking Design Standards to Reduce Excess Impervious Cover in New Hampshire and Massachusetts," at the following link: https://www3.epa.gov/region1/npdes/stormwater/assets/pdfs/ImperviousAssessment.pd

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:

The Town of Charlton is on track to complete this work for Year 4 and will use several resources to help in developing the report, including MassAudubon's checklist entitled, "Supporting LID in Your Community: How to Compare Local Land Use Regulations with Best Practices" at https://www.epa.gov/npdes-permits/stormwater-tools-new-england#pcsm; and guidance developed by the Pioneer Valley Planning Commission

within the Green Infrastructure Toolkit at: http://www.pvpc.org/content/green-infrastructure-toolkit.

Among these tools, there is a 2014 checklist that consolidates guidance from three excellent checklists: the Center for Watershed Protection's Code and Ordinance Worksheet, the U.S. Environmental Protection Agency's Water Quality Scorecard, and the Metropolitan Area Planning Council's Low Impact Development Toolkit Checklist for Regulatory Review.

The Stormwater Coordinator is actively working with the Planning Board to revise local bylaws that may restrict or prohibit Green Infrastructure. Additionally, the Stormwater Coordinator participated in a 8 week National Green Infrastructure Program this past March and will be taking the proctored exam this coming fall to gain national certification in Green Infrastructure design, construction and monitoring.

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:

The Town of Charlton is on track to complete this work for Year 4 and will begin with an initial screening of properties. The assessment should at a minimum consider municipal properties with significant impervious cover that could be modified or retrofitted.

Under this Task, CEI will begin with a desktop analysis of properties through GIS to identify town-owned properties with large impervious areas, and areas of open space or undeveloped land that can be used to mitigate adjacent impervious areas. CEI will also consider street right-of ways, outfalls and existing drainage conveyances for potential mitigation/retrofit opportunities based on available information. The desktop review will include an evaluation of factors such as accessibility, soil types, depth to groundwater, slopes, subsurface infrastructure, and proximity to impaired waters as available.

Based on this desktop analysis, CEI will develop a priority ranking criteria that considers the above factors, as well as potential complexity and cost of implementation. CEI will also review the Town's planned capital improvements to storm and sanitary sewer and paving projects (if any) so that scheduling of these projects can be incorporated into the priority ranking. The properties identified for potential improvements will be ranked using the criteria. CEI will prepare a memorandum report of the evaluation and proposed ranking.

MCM6: Good Housekeeping

Catch Basin Cleaning

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

Number of catch basins inspected: 380

Number of catch basins cleaned: 380

Total volume or mass of material removed from all catch basins: 17 tons

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

Total number of catch basins: 883

If applicable:

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

Street Sweeping

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

- (•) Number of miles cleaned: 5
- ( ) Volume of material removed: [Select Units]
- ( ) Weight of material removed: [Select Units]

Stormwater Pollution Prevention Plan (SWPPP)

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

Number of site inspections completed: 3

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

CEI and the Town of Charlton identified 3 different BMPs within the regulated UA that required inspections in order to meet permit requirements. Table 1 below details the locations and individual BMPs that were inspected, while Table 2 summarizes maintenance needs for each location. BMP inspection results are detailed in the attached inspection sheets attached to this report, along with representative photo documentation. At the time of the inspections, the weather was approximately 60 to 80 degrees and sunny day. Weather over a three-day period leading up to May 13th was between 50 and 80 degrees and dry. Sara Nelson of CEI performed the inspections and noted the general condition and maintenance needs.

Recommendations: In general, the BMPs are in good operating order, however, two require minor maintenance as noted below. Minor maintenance generally includes trimming back or removal of vegetation and invasive species removal and disposal. Locations will be maintained as needed and inspected annually with the next inspection occurring during Year 4 of the MS4 Permit (July 1, 2021 through June 30, 2022).

BMP-1 Jordan Way Retention Basin: Basin is in fair Condition. Maintenance during year 3 included the remove and disposal of multiflora rose in accordance with regulations.
BMP-2 Jordan Way Detention Basin: Basin is in good condition and required no during permit year 3.
BMP-3 Jayne's Way Detention Basin: Basin is in fair condition. Maintenance during year 3 included the removal of vegetation blocking outlet structures and emergency spillway.

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:

The Lakes & Ponds Committee conducts water quality sampling of several Lakes & Ponds in Town and supplies a quaterly report to the Conservation Commission. The following parameters are monitored:

Secchi and Turbidity (NTU) – Measure of the cloudiness in the water, can be caused by soil erosion, run-off, waste discharge, algal growth, boat traffic and pollen.

Temperature (C) – Measure of the temperature of water which has an impact on the dissolved oxygen, weed and algal growth, and the fish.

Dissolved oxygen (mg/L) – Measure of dissolved oxygen, colder water holds more oxygen, fish become stressed at levels below 4mg/L. At 10C – 11.3 mg/L, at 30C – 7.5mg/L

pH - Measure of the acid/alkaline relationship in a water body.

Conductivity (uS/cm) – Measure of dissolved inorganic solids such as road salt, fertilizers, or contaminants from a failed septic system.

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:

COVID-19 Impacts

Optional: If any of the above year 3 requirements could not be completed due to the impacts of COVID-19, please identify the requirement that could not be completed, any actions taken to attempt to complete the requirement, and reason the requirement could not be completed below:

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 4 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree ☒

- Develop a report assessing current street design and parking lot guidelines and other local requirements within the municipality that affect the creation of impervious cover
- Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist
- Identify a minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas

Annual Requirements

- Annual report submitted and available to the public
- Annual opportunity for public participation in review and implementation of SWMP
- Keep records relating to the permit available for 5 years and make available to the public
- Properly store and dispose of catch basin cleanings and street sweepings so they do not discharge to receiving waters
- Annual training to employees involved in IDDE program
- Update inventory of all known locations where SSOs have discharged to the MS4
- Continue public education and outreach program
- Update outfall and interconnection inventory and priority ranking and include data collected in connection with the dry weather screening and other relevant inspections conducted
- Implement IDDE program
- Review site plans of construction sites as part of the construction stormwater runoff control program
- Conduct site inspection of construction sites as necessary
- Inspect and maintain stormwater treatment structures
- Log catch basins cleaned or inspected
- Sweep all curbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- Implemented SWPPPs for all permittee owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities
- Review inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment; update if necessary
- Review O&M programs for all permittee owned facilities; update if necessary
- Implement all maintenance procedures for permittee owned facilities in accordance with O&M

programs
- Implement program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- Enclose all road salt storage piles or facilities and implemented winter road maintenance procedures to minimize the use of road salt
- Review as-built drawings for new and redevelopment to ensure compliance with post construction bylaws, regulations, or regulatory mechanism consistent with permit requirements
- Inspect all permittee owned treatment structures (excluding catch basins)

Provide any additional details on activities planned for permit year 4 below:

Part V: Certification of Small MS4 Annual Report 2021

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:	Andrew Golas	Title:	Town Administrator
Signature:	Andrew Golas Digitally signed by Andrew Golas Date: 2021.09.28 18:22:26 -04'00'	Date:	09/28/2021

[Signatory may be a duly authorized representative]