

Year 2 Annual Report

Massachusetts Small MS4 General Permit

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

****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, 2019 and June 30, 2020 unless otherwise requested.

Part I: Contact Information

Name of Municipality or Organization: City of Cambridge

EPA NPDES Permit Number: MAR041076

Primary MS4 Program Manager Contact Information

Name: Catherine Daly Woodbury Title: Senior Project Manager, Department of Public Works

Street Address Line 1: 147 Hampshire Street

Street Address Line 2: N/A

City: Cambridge State: MA Zip Code: 02139

Email: cwoodbury@cambridgema.gov Phone Number: (617) 349-4818

Stormwater Management Program (SWMP) Information

SWMP Location (web address): <http://www.cambridgema.gov/stormwater>

Date SWMP was Last Updated: Jun 29, 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 2 Requirements

- ☒ Completed Phase I of system mapping
- ☒ Developed a written catchment investigation procedure and added the procedure to the SWMP
- ☒ Developed written procedures to require the submission of as-built drawings and ensure the long term operation and maintenance of completed construction sites and added these procedures to the SWMP
- ☒ Enclosed or covered storage piles of salt or piles containing salt used for deicing or other purposes
- ☒ Developed written operations and maintenance procedures for parks and open space, buildings and facilities, and vehicles and equipment and added these procedures to the SWMP
- ☒ Developed an inventory of all permittee owned facilities in the categories of parks and open space, buildings and facilities, and vehicles and equipment and added this inventory to the SWMP
- ☒ Completed a written program for MS4 infrastructure maintenance to reduce the discharge of pollutants
- ☒ Developed written SWPPPs, included in the SWMP, for all of the following permittee owned or operated facilities: maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater

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 2 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:

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:

www.cambridgema.gov/stormwater (see Appendix C in IDDE Program)
- ☒ 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 outfall and interconnection inventory and priority ranking as needed

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:

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

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

Good Housekeeping and Pollution Prevention for Permittee Owned Operations

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

Potential structural BMPs

- ☐ Any structural BMPs already existing or installed in the regulated area by the permittee or its agents was tracked and the phosphorus removal by the BMP was estimated consistent with Attachment 3 to Appendix F. The BMP type, total area treated by the BMP, the design storage volume of the BMP and the estimated phosphorus removed in mass per year by the BMP were documented.
 - ☐ The BMP information is attached to the email submission
 - ☐ The BMP information can be found at the following website:

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:

1. Good Housekeeping and Pollution Prevention for Permittee Owned Operations: The City updated its monthly street sweeping program (April through December) to include sweeping parking lots twice per year (spring and fall) to begin in the Spring of 2020. Due to COVID-19 the Spring 2020 street sweeping and parking lot sweeping program was suspended until June, 2020. Street sweeping resumed in June, but cars were not yet required to be moved during sweeping until July 1, 2020. Resumption of the full street sweeping program began in July 2020 and included a round of parking lot sweeping that was not able to be done in the Spring of 2020 due to COVID-19 program changes. All streets were swept monthly from July 2019 to November 2019. Many streets were also swept in December 2019 but due to early snow some streets were not swept. No streets or parking lots were swept in Spring 2020.
2. Potential Structural BMPs: Cambridge is still in the process of cataloging and tracking all BMPs implemented to remove phosphorous.
 - The City created a Phosphorous cover sheet/tracking form to be used by all projects to ensure that we are capturing all of the required information from Attachment 3 Appendix F. These forms will be used to maintain a Phosphorous tracking database. The City is still evaluating the potential to include projects that were installed prior to the 2016 MS4 Permit. A copy of the Phosphorous cover sheet can be found at:

<https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement>
under "Annual Report"

- Structural BMPs installed during Year 2 include:
 - Rogers Street Park: two (2) infiltration systems designed to infiltrate 1) runoff from within the park, and 2) runoff from surrounding roadways were installed in Year 2. Record drawings and the Phosphorous tracking form will be completed when the overall project is completed (March 2022). The infiltration system designed to treat the runoff from within the park is estimated to reduce the Phosphorous loading by 0.35 lbs/yr and the change in land use cover to create a park from a formerly developed site is estimated to reduce Phosphorous loading by an additional 3.94 lbs/yr.

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:

- See note above about street sweeping and parking lots. The City has a robust program for street sweeping and sweeping of public plazas/squares in commercial areas. Parking lot sweeping was done on an as needed or requested basis. Changes made to this program in Year 2 includes the sweeping of parking lots twice per year (spring and fall) in addition to requests. Due to COVID-19 streets and parking lots were not swept spring 2020.
- The City finalized the development of a Catch Basin Optimization strategy during year 2. Implementation of the Catch Basin Optimization strategy will begin in Year 3. Data collection began in Year 1 and is ongoing. The depth of sediment is measured during the cleaning of each structure.

Charles River Watershed Phosphorus TMDL

- ☒ Completed Legal Analysis

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:

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

The City developed individual SWPPPs for each of the following six (6) permittee owned or operated facilities:

1. Alewife Staging Area
2. Cambridge Rindge and Latin School Garage – Gustave M. Solomons Transportation Career Center

3. Police Maintenance Garage
4. Fire Maintenance Garage
5. Water Department Garage
6. Cemetery Garage

Copies of the SWPPPs can be viewed at:

<https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement>
under "Annual Report"

The City is developing a set of site-specific good housekeeping procedures for three (3) facilities that the City determined, through site visits and investigations, do not discharge to the MS4:

1. Fresh Pond Golf Course Garage (This site was initially identified in our SWMP as requiring a SWPPP and is within a separated area, but upon investigation this facility did not discharge to the MS4.)
2. Department of Public Works Garage (lies within a combined sewer area)
3. Danahy Park Maintenance Garage (lies within a combined sewer area)

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:

A new outfall was opened at Talbot Street at the end of June 2020 within the Charles River (MA 72-38) section of the river. This outfall is included in the updated SWMP.

Waterbody impairments for Alewife Brook (MA 71-04), Charles River (MA 72-36) and Charles River (MA 72-38) were revised based upon the Massachusetts Year 2016 Integrated List Waters. Updates are included in the updated SWMP.

Part IV: Minimum Control Measures

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

MCM1: Public Education

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

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

BMP: Annual Message on Grass Clippings and Fertilizer (Lawn Care)

Message Description and Distribution Method:

Cambridge is participating in the Mystic River Watershed Association's (MyRWA) Mystic River Stormwater Education Collaborative (Stormwater Collaborative). Using materials supplied by Mystic River Watershed Association (www.mysticriver.org). DPW issued social media posts about testing soil, using fertilizers sparingly and composting grass clippings; and broadcasted the Mystic Watershed specific stormwater video (adapted from ThinkBlue Maine's Devil Ducky video) on local Cambridge CCTV (channels 8, 9 and 96); and through MyRWA social media posts.

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

- DPW social media (July 2019): DPW Facebook 552 people reached, 9 engaged. DPW Twitter post: 2,016 impressions, 18 engaged
- DPW social media (April 2020 - May 2020): DPW Facebook 429 people reached, 14 engaged. DPW Twitter: 3,836 impressions, 33 engaged.
- Cambridge CCTV (July 2019 - September 2019) aired the video approximately 900 times over 3 months. Viewership cannot be verified, but there are 27,000 cable subscribers
- MyRWA social media (July 2019 - September 2019) Facebook 543 reached and Youtube 57 views

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:

BMP: Annual Message on Leaf Litter

Message Description and Distribution Method:

- Using materials supplied by the MyRWA Stormwater Collaborative DPW shared social media posts on Facebook and Twitter about bagging your leaves.
- MyRWA social media posts on Facebook on behalf of the Mystic Collaborative.

- DPW issued a Tip of the Month about leaf management in an eNewsletter.
- Using materials supplied by the MyRWA Stormwater Collaborative DPW posted a poster "Be a Leaf Hero" at the front entry at DPW.

Targeted Audience: Residents

Responsible Department/Parties: DPW and MyRWA

Measurable Goal(s):

- DPW social media: DPW Facebook: 1,577 people reached, 51 engaged; DPW Twitter 4,719 impressions, 38 engaged (October - November 2019).
- MyRWA social media: Facebook, 456 people reached, 28 engagements, 6 likes, 2 comments, 1 share (October 2019)
- Cambridge Recycling eNewsletter: 9,200 received, approximately 3,100 opened (October 2019)
- 350 people (residents, business owners, developers and contractors) exposed to Leaf Hero poster posted at DPW front entryway (October 31, 2019 - December 15, 2019)

Message Date(s): October 2019 - December 2019 (see above)

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 on Pet Waste

Message Description and Distribution Method:

- DPW with assistance for the Cambridge Water Department and Cambridge Animal Commission continued to promote its Canines for Clean Water campaign (pledge form and pet waste bag dispenser giveaways, and brochure) to inform pet owners of their responsibilities regarding pet waste management.
- DPW worked with MyRWA's Stormwater Collaborative on advertising pet waste messaging on Facebook and Twitter.
- DPW posted a news release on its website about the importance of keeping pet waste out of local waterways.
- City of Cambridge (CoC) sent out an email that included information on "Keep Pet Waste out of Local Waterways"

Targeted Audience: Residents

Responsible Department/Parties: DPW and MyRWA

Measurable Goal(s):

- Canines for Clean Water: 81 pledges signed (July 2019 and September 2019)
- DPW social media (July 2019): DPW Facebook 1,416 people reached, 36 engaged; DPW Twitter 5,857 impressions, 53 engaged.
- MyRWA social media (July 2019): Facebook 436 people reaches, 17 engagements, 10 likes, 2 shares
- DPW social media (May 2020 - June 2020): DPW Facebook 1,530 people reached, 69 engaged; DPW Twitter 6,625 impressions, 61 engaged.
- DPW news release (August 2019) Keep Pet Waste Out of Our Waterways : 101 views (<https://www.cambridgema.gov/Departments/publicworks/news/2019/08/>)

keep pet waste out of four waterways canines for clean water pledge)

- CoC email lists: CityView Weekly (August 8, 2019): email sent to 4,062 recipients with a 44.8% open rate; and PIO Updates (August 5, 2019): email sent to approximately 1,400 recipients with 1,359 unique opens.

Message Date(s): July 2019 through September 2019 and May 2020 through June 2020 (see above)

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 on Septic System Maintenance

Message Description and Distribution Method:

The majority of properties in Cambridge are directly connected to the sanitary system. We were able to identify twelve (10) potential properties where the sanitary connection is unknown. A letter was mailed to these business and property owners discussing the proper care of septic systems and requesting updated information regarding a possible connection to the sanitary system.

Targeted Audience: Residents and Businesses, Institutions and Commercial Facilities

Responsible Department/Parties: DPW

Measurable Goal(s):

Ten (10) letters were mailed regarding nine (9) properties.

Message Date(s): October 2019 - November 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:

BMP: Stormwater Pollution from motor oil, pet waste and trash

Message Description and Distribution Method:

- On behalf of members various stormwater collaboratives throughout Massachusetts Think Blue Massachusetts advertisement on Facebook & YouTube "Fowl Water" video (<https://www.thinkbluemassachusetts.org/>) (July 2019 and May 2020 - June 2020) Cambridge is a member of the Charles River Stormwater Collaborative and the MyRWA Stormwater Collaborative.
- DPW hosted a link to the video clip "Fowl Water" on YouTube (<https://www.youtube.com/watch?v=ZMtmHv8dOkQ>)

Targeted Audience: Residents

Responsible Department/Parties: Massachusetts Statewide Municipal Stormwater Coalition and DPW

Measurable Goal(s):

- Think Blue "Fowl Water" (July 2019): 273,400 - 274,231 social media impressions from residents of Cambridge. Over 7 million impressions across Massachusetts
- Think Blue "Fowl Water" (May 2020 - June 2020): 263,532 - 320,122 social media impressions from residents of Cambridge. Over 13 million impressions across Massachusetts
- DPW YouTube (July 2019 - June 2020): 259 impressions, 107 views

Message Date(s): July 2019 - June 2020 (varies - see above)

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: Erosion and Sediment Control Management

Message Description and Distribution Method:

- Erosion and Sediment Control (ESC) information/requirements is attached to all issued Excavation Permits.
- DPW provided three a discussion of ESC measures to contractors and inspectors/construction project managers discussing proper ESC for construction sites.
during a weekly construction meeting.
- DPW provided one (1) ESC inspection training for DPW staff.
- DPW held weekly construction meetings from July through November 2019 and in June 2020 (virtual) providing opportunities to discuss ESC and reminders about additional measures to take prior to rain events and during dry conditions.
- DPW distributed a construction BMP flyer to contractors during a weekly construction meeting.
- DPW e-mailed contractors twice with information about construction BMPs.
- DPW posted BMP flyer at permit desk at DPW

Targeted Audience: Developers (construction)

Responsible Department/Parties: DPW

Measurable Goal(s):

- 1,081 excavation permits issued with ESC information/conditions attached to permit during this permit year.
- 66 contractors and inspectors/project managers attended a weekly construction meeting (virtual) where ESC BMPs and requirements were discussed (June 22, 2020)
- 20 DPW staff were trained in ESC procedures and inspections during a DPW Engineering staff meeting (March 4, 2020).
- 27 weekly construction meetings were held during this permit year (includes 5 remote/virtual meetings).
- 43 construction BMP flyers were distributed to attendees at a weekly construction meeting (August 26, 2019))
- 173 contractors/developers were e-mailed construction BMP information (August 27, 2019) and 185 contractors/developers were e-mailed construction BMP information (June 22, 2020).

- 290 people (residents and contractors) exposed to construction BMP flyer posted at permit desk (August 23, 2019 - March 16, 2020)

Message Date(s): varies - see above

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: Proper Use of Salts/Deicers

Message Description and Distribution Method:

- Social media posts about the proper use of salt/deicers (Facebook/Twitter/)
- Press release about proper use of salt/deicers "Use Deicers Smartly & Sparingly"
- DPW's brine pretreatment pilot program video on YouTube to reduce salt use citywide
- DPW created a door hanger about proper use of deicers and other BMPs to be distributed upon the completion of new sidewalks.
- DPW website with information about the proper use of deicers and proper snow clearing

Targeted Audience: Residents and Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW

Measurable Goal(s):

- DPW social media (December 2019): DPW Facebook 683 people reached, 60 engaged; DPW Twitter 5,108 impressions, 35 engaged.
- Use Deicers Smartly & Sparingly press release: (December 19, 2019): 306 views (<https://www.cambridgema.gov/snow/News/2019/11/brinefarm>)
- Brine video: 227 impressions, 89 views (<https://www.youtube.com/watch?v=9szEIGW2rN8>) during permit year.
- Distributed 381 door hangers (during permit year)
- Visits to DPW Snow Website: 31,604 (<https://www.cambridgema.gov/snow>) (during permit year - winter)

Message Date(s): Winter 2019/2020 and as noted above

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: Dumpster Maintenance

Message Description and Distribution Method:

- Social media posts about keeping dumpster lids closed
- Posted Dumpster Maintenance BMP poster and brochures at DPW permit desk and poster at DPW entrance

door.

Targeted Audience: Residents and Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW

Measurable Goal(s):

- DPW social media (October/November 2019): DPW Twitter 2,960 impressions, 26 engaged.
- 230 (estimated) people (residents and contractors) exposed to Dumpster Maintenance BMP flyer posted at permit desk and 63 brochures were taken. 1,150 (estimated) people (residents, contractors, businesses, developers) exposed to Dumpster Maintenance BMP poster at DPW front door (October 8, 2019 - March 16, 2020).

Message Date(s): varies (see above)

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: Parking Lot Maintenance and LID

Message Description and Distribution Method:

- DPW created an oversized postcard about proper parking lot maintenance practices and ways to reduce impervious areas that was mailed to all properties that had an outdoor parking facility.

Targeted Audience: All audiences: Residential, commercial, institutional and industrial facilities

Responsible Department/Parties: DPW

Measurable Goal(s):

- DPW mailed 432 post cards to owners and property managers of facilities with open air parking facilities.

Message Date(s): October 22, 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:

BMP: Street Sweeping messaging

Message Description and Distribution Method:

- Using information supplied by the MyRWA Stormwater Collaborative DPW displayed a street sweeping

poster at DPW entrance

- City of Cambridge (CoC) social media posts about street sweeping
- Cambridge Traffic, Parking & Transportation Department (TP&T) included a message about street sweeping "Help Keep Our Streets Clean: Importance of Street Sweeping and What You Can Do" in their resident information brochure that they give to every resident receiving a parking permit/sticker. The message also included BMPs such as pet waste pick up, deicing properly, bag and compost leaves/grass and report illegal dumping.

Targeted Audience: Residents and Businesses, institutions and commercial facilities

Responsible Department/Parties: DPW and TP&T

Measurable Goal(s):

- 700 (estimated) views of street sweeping poster at DPW entryway (July 1 - October 8, 2019).
- CoC social media post (June 2020): Twitter 6,715 impressions, 206 engaged. Facebook 4,103 reach, 164 engaged.
- TP&T distributed 30,526 resident information brochures with parking permits (January - June 2020).

Message Date(s): varies - see above

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: Cambridge Stormwater Management Program Display

Message Description and Distribution Method:

DPW developed a display on the City's stormwater management program including what the city is doing, what you can do, what is stormwater pollution, and how to report illicit dumping. This display was set up at City Hall in the central entry foyer.

Targeted Audience: All Audiences

Responsible Department/Parties: DPW

Measurable Goal(s):

The stormwater display had 480 potential views at City Hall

Message Date(s): July 1, 2019 - July 15, 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:

BMP:LID: Infiltrate stormwater on site

Message Description and Distribution Method:

Using materials supplied by Mystic River Watershed Association Stormwater Education Collaborative (www.mysticriver.org) a PSA entitled "Infiltrate Stormwater Onsite/ Replace Lawn" was broadcasted on local community television from June 2020 into permit year 3.

Targeted Audience: Residents

Responsible Department/Parties: DPW, Cambridge CCTV and MyRWA

Measurable Goal(s):

- Cambridge CCTV (June 2020) aired the video approximately 300 times during June. Viewership cannot be verified, but there are 27,000 cable subscribers and the PSA aired 10 times per day over 3 different channels (8, 9, and 96).
- MyRWA facebook page, 368 people reached, 19 engagements, 9 likes

Message Date(s): June 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:DPW Website Stormwater Information

Message Description and Distribution Method:

DPW maintains a department website that has separate pages for activities that are connected to stormwater management such as street cleaning, snow and stormwater. Each page has information on stormwater BMPs related to each topic. In addition the Stormwater page was set up to include separate pages for information specific to each target audience

Targeted Audience: all audiences

Responsible Department/Parties: DPW

Measurable Goal(s):

Street Cleaning website visits: 37,514
Snow center website visits: 31,604
Stormwater website visits: 1,506

Message Date(s): July 1, 2019 through June 30, 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:

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:**

- Cambridge's Stormwater Management Plan was updated in June 2020 and is posted on the DPW stormwater website: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement>
- Cambridge DPW set up a booth with stormwater education materials, a display that explains important elements of the City's SWMP, and an interactive stormwater drainage model at two (2) City events.
 1. PARKing Day, September 20, 2019 (750 people attended, 100 interacted with DPW booth)
 2. Bow Tie Ride, September 22, 2019 (183 people attended, 40 interacted with DPW booth)

Educational materials that were distributed included information on the Canines for Clean Water initiative (24 pledges), how to minimize fats, oils and grease in sewers to prevent SSOs (18 brochures), Dwayne the Storm Drain coloring books (63 coloring books), protecting property from floods (22 brochures) and information on household hazardous waste collections (17 brochures).

The SWMP display contains information on 2 - 6' x 2.5' double sided display panels that explains Cambridge's stormwater management program, engages people and creates conversation, connects what the City has been doing and supports future work, identifies simple best practices and encourages participation by residents and businesses, and explains why it matters

DPW created an interactive drainage model that helps people understand how the stormwater drainage system carries water to the receiving water and the difference between a separated and combined sewer systems. The model also helps the public better understand what the City is doing to address stormwater pollution and better understand what is involved during sewer separation projects.

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:**

1. Household Hazardous Waste (HHW) Collection: Cambridge sponsored three (3) HHW collection days during this permit year on September 7, 2019, November 2, 2019 and June 27, 2020. The Spring 2020 collection was canceled due to COVID-19. A total of 29 tons of waste was collected from 800 vehicles/participants.

2. Stormwater Outreach Activities for Children:

- Global Challenge student meet-up to discuss the Global water crisis: Cambridge DPW demonstrated its stormwater drainage interactive model and discussed water quality and stormwater pollution concerns on October 23, 2019. (47 students and 10 staff/teachers)
- Cambridge Public Schools (CPS): As part of the 5th grade curriculum students learn about non-source stormwater pollution and visit the Alewife Stormwater Wetland. As preparation for a visit to the Alewife Stormwater Wetland, a demonstration of the EnviroScape Watershed model is provided to most classrooms, that has a groundwater insert. The students pretend the model is of Cambridge and they discuss different types of particulates that might enter into stormwater runoff when it rains e.g. plastic, paper trash, sediments, pesticides, fertilizers, road salt, automobile waste such as gasoline and oil, animal waste.

A visit to the engineered wetland then allows students to see an engineered solution that addresses the non-point source pollution from our city streets. Students move through the wetland as water molecules would (settling over time, absorbing thru soil & plants and evaporating in the deep pool areas) leaving behind particulates they collected as runoff before they are discharged to the Little River. CPS has a goal to get all 5th grade students out to the wetland annually so they can apply their understanding to a local, real, engineered and novel application. In the fall of 2019 there were four hundred and sixteen (416) 5th grade students. Unfortunately, due to COVID-19 many of the spring visits to the wetland were cancelled. Only 85 students toured the wetland and 41 used the EnviroScape model prior to the wetland visit. However, a virtual Wetland Tour was created to use to support their virtual science learning. It was made available to all 5th grade teachers.

- Mystic River Stormwater Education Collaborative: Cambridge is a member of the Mystic River Watershed Association's (MyRWA) Stormwater Education Collaborative. As part of the MyRWA Stormwater Collaborative MyRWA staff provides educational outreach to children in member communities. Due to COVID-19 many of the programs and activities for children were cancelled. Some of the canceled programs include the Cambridge Science Festival Carnival and the Science in the City event at City Hall. MyRWA staff was able to do reach educators and children through virtual programs as follows:

- * April 15, 2020: a virtual stormwater program for teachers in Cambridge and Somerville through the Lesley STEAM Learning Lab at Lesley University. 10 teachers participated in the virtual stormwater program.

- * River Festival/Stream Festival: Climate Action Pavillion (see below for more details)

- River Festival/Stream Festival: Climate Action Pavillion (<https://www.cambridgema.gov/arts/Programs/riverfestival/climateactionpavilion>) (364 visits). Due to COVID-19 the Cambridge River Festival was cancelled, but a virtual Stream Festival was held in its place. The Stream Festival Climate Action Pavilion is a virtual celebration in honor of the 50th anniversary of Earth Day. Many organizations (including MyWRA, Charles River Watershed Association and the Charles River Conservancy), artists, and City departments created a host of activities, learning experiences, videos, arts projects, and more for people and families to participate in from home:

- * City of Cambridge Department: <https://www.cambridgema.gov/arts/Programs/riverfestival/climateactionpavilion/cityofcambridge> (51 visits)

- * Climate Action in our Watershed: <https://www.cambridgema.gov/arts/Programs/riverfestival/climateactionpavilion/climateactioninourwatersheds> (46 visits)

- * Artist and Climate Action: <https://www.cambridgema.gov/arts/Programs/riverfestival/climateactionpavilion/artistsandclimateaction> (74 visits)

3. Stormwater Wetland Tours: Cambridge DPW lead two (2) tours to the Alewife Stormwater Wetland and discussed the function of the wetland as a stormwater BMP and as a water quality and quantity control for the upstream catchment. How the wetland functions, the type of wildlife and fauna found in wetlands, and overall

pollution prevention efforts were also discussed.

- * July 15, 2019: Mayor's Summer Youth Employment Program- Team Green Sense (9 participants)
- * July 30, 2019: Cambridge CCTV education session with students participating in the Glocal Challenge (Global + Local = Glocal) (10 participants)

4. Participation in community/neighborhood events: Due to COVID - 19 there were no additional community events to report this permit year beyond those identified above.

5. Solid Waste, Recycling and Composting: DPW's waste management program has been expanding the City's efforts to reduce solid waste by expanding the composting program. The City has began expanding its curbside organics program to larger residential buildings. Buildings with 13 units or more, whom are on the City's trash collection program, are eligible for curbside organics as of Fall 2019. So far approximately, 120 large buildings with 3,300 households have signed up for the free service. Although we have had a lot of success with the curbside organics program, the program was suspended due to COVID-19. The City anticipates restarting the program in the near future.

The following is a summary of the amount (Tons) of wastes collected through the City's Solid Waste, Recycling and Compost Programs:

- * Recycling: 9,070
- * Organics (Yardwaste and Food Waste): 3,077
- * Trash: 14,238
- * Hazardous Waste: 29

MCM3: Illicit Discharge Detection and Elimination (IDDE)

Sanitary Sewer Overflows (SSOs)

Check off the box below if the statement is true.

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

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

Number of SSOs identified:

Number of SSOs removed:

MS4 System Mapping

Below, check all that apply.

The following elements of the Phase I map have been completed:

- ☒ Outfalls and receiving waters
- ☒ Open channel conveyances
- ☒ Interconnections
- ☒ Municipally-owned stormwater treatment structures
- ☒ Waterbodies identified by name and indication of all use impairments
- ☒ Initial catchment delineations

Optional: Describe any additional progress you made on your map during this reporting period or provide additional status information regarding your map:

A new outfall at Talbot Street was added and the SWMP was updated to include the additional impairments from the updated Massachusetts Year 2016 Integrated List of Waters.

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 applicable - not data to share this year

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

Number of outfalls screened:

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:

<https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement>
under "Annual Report"

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

Number of catchment investigations completed this reporting period:

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

Percent of total catchments investigated:

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

Cambridge retained SDE, Inc to assist with catchment investigations of the high priority catchment at Matignon Road (D44) and a priority catchment at Sparks Street (D31). Significant progress was made in both catchment investigations, but due to COVID-19 constraints, confirmatory screening or dye testing of suspected areas was not able to be completed. Once investigation of private properties can resumes efforts to dye test the identified addresses and remove any illicit connections identified will continue. A list of buildings for dye testing was developed.

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:

<https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement>
under "Annual Report"

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

Number of illicit discharges identified:

Number of illicit discharges removed:

Estimated volume of sewage removed: gallons/day

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

Total number of illicit discharges identified:

Total number of illicit discharges removed:

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

Three (3) illicit discharges were identified during the catchment investigations of the Matignon Road and Sparks Street drainage areas, but due to COVID-19 work in private homes was suspended. One illicit connection was removed at 9 Gray Gardens East, but confirmatory dye test is outstanding. See IDDE Report for more information.

Employee Training

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

Three training opportunities were available for DPW staff performing responsible for IDDE investigations and reporting.

January 30, 2020 (9 DPW staff attended and 2 consultants): City of Cambridge & Stantec
This training included a classroom presentation and discussion and field training.

1. Dry Weather Outfall Screening & Sampling
2. Catchment Investigations
 - Desktop Review
 - Dry Weather Manhole Inspections
 - Source Isolation and Confirmation
 - Wet Weather Outfall Screening
3. Test Kit Demonstration (classroom and in the field)

May 5, 2020 (2 DPW staff attended) and May 7, 2020 (1 DPW staff attended): Central Massachusetts Regional Stormwater Coalition & Fuss & O'Neill

Due to COVID-19 these trainings were virtual. The workshop training presentation focused on IDDE program requirements, the presentation also included general information about the Six Minimum Control Measures and highlighted some of the additional permit requirements. The training presentation included detailed information on the following topics and allowed for Q&A:

- General MS4 Information (including brief description of each of the six minimum controls)
- IDDE Requirements
- Identification of Illicit Discharges and Sanitary Sewer Overflows
- Safety Considerations for IDDE program staff
- IDDE Program Planning
- Illicit Discharge Source Identification

MCM4: Construction Site Stormwater Runoff Control

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

Number of site plan reviews completed:

Number of inspections completed:

Number of enforcement actions taken:

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

- The DPW issued 16 Stormwater Control Permits during this permit year which accounts for the 16 site plan reviews identified above. In addition to the 16 Site Plan reviews reported above an additional 239 site plans were reviewed for smaller projects not covered under the MS4 Permit requirements.
- In addition to the 56 Erosion and Sediment Control inspection reported under MCM4 above an additional 101 inspections were performed for Erosion and Sediment Control for smaller projects not covered under the MS4 Permit requirements

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

Ordinance or Regulatory Mechanism

Below, select the option that describes your ordinance or regulatory mechanism progress.

- ☐ Bylaw, ordinance, or regulations are updated and adopted consistent with permit requirements
- ☐ Bylaw, ordinance, or regulations are updated consistent with permit requirements but are not yet adopted
- ☒ Bylaw, ordinance, or regulations have not been updated or adopted

As-built Drawings

Describe 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:

Complete. Required as part of the Stormwater Control Permit and Land Disturbance Regulations adopted March 31, 2008. These documents can be viewed at:

Land Disturbance Regulations: <https://www.cambridgema.gov/~media/Files/publicworksdepartment/Engineering/Regulations/LandDisturbanceRegulations.pdf?la=en>

Stormwater Control Permit: <https://cambridgema.viewpointcloud.com/categories/1101/record-types/6712>

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:

In progress. The City will develop a report assessing current street design, parking lot guidelines, and other applicable local requirements that impact the creation of impervious cover. This report will focus on highlighting current impediments to using low impact design options, and detailing improvements for promoting the use of such options. As a precursor to this report:

- The City working with the Charles River Watershed Association completed a Green Streets Guidance Document during Year 1 for use by the City of Cambridge Department of Public Works (Public Works), other City agencies and private developers. This document provides guidance on green street implementation in space-constrained urban settings with a focus on typical residential street layouts in the City of Cambridge. This document can be found at www.cambridgema.gov/stormwater (under "Ordinances, Regulations and Best Practices")
- The City's Five Year Sidewalk and Street Reconstruction Plan, a comprehensive plan for designing and reconstructing streets, identifies stormwater management and green infrastructure as an important component of street design by the City and private entities. This document was updated in June 2019 and released in August 2019. www.cambridgema.gov/theworks/fiveyearplan
- The City's 10 Year Sewer and Drain Infrastructure Plan outlines objectives and design considerations for infrastructure improvements which include management of stormwater quality and quantity through green infrastructure. This document was developed in Year 1. www.cambridgema.gov/theworks/tenyearplan

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:

In progress. The City will develop a report assessing existing local regulations to determine how to promote the implementation of green infrastructure. In particular, the City will assess the feasibility of allowing green roofs, infiltration practices, and water harvesting devices. As a precursor and basis of this report the City has been working on the following efforts that support zoning changes and green infrastructure:

- The City is currently working on a citywide Climate Change Preparedness and Resiliency Plan (CCPR) following the issuance of two neighborhood plans for Alewife/Fresh Pond and The Port. <https://www.cambridgema.gov/CDD/Projects/Climate/climatechangeresilianceandadaptation>
- The City's Climate Resilience Zoning effort is building upon the City's 2017 Climate Change Vulnerability Assessment (CCVA) and ongoing citywide CCPR planning efforts to create development standards that can be incorporated into the Zoning Ordinance that would result in zoning changes to support green infrastructure. <https://www.cambridgema.gov/CDD/Projects/Zoning/climate resilience zoning>

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:

In progress: As part of the City's Five Year Sidewalk and Street Reconstruction Plan (<http://www.cambridgema.gov/theworks/fiveyearplan>) the City evaluates each street that is scheduled for reconstruction for green infrastructure opportunities and identifies plazas and other hardscape areas where plantings can be enhanced and pavement removed. The City is developing a tracking sheet that identifies expansion of planting beds and installation of rain gardens/biobasins during street reconstruction and landscape improvement efforts. In addition, the City is looking at opportunities within capital improvement plans for municipal properties for ways to reduce imperviousness on site during reconstruction and/or retrofit with BMPs. This Five Year Sidewalk and Street Reconstruction Plan was updated in June 2019 and released in August 2019.

Some recent/proposed retrofit projects include:

1. Rogers Street Park (71 Rogers St.): This project is in construction and will replace the pre-existing developed site with a community park, resulting in a reduction of approximately 70,534 sf of impervious surfaces. An infiltration system will treat an 8,034 Sf contributing area. An additional 3,688-cf infiltration system was installed in March, 2020 to treat runoff from the roadways surrounding the park.
2. Parking Lot 6 (38 Bishop Allen Drive): This project is still in construction, but is scheduled to be completed in early Year 3. A 3,575 cf storage infiltration system has been installed to treat stormwater runoff from a 19,000 SF contributing area of a municipal parking lot. Although the overflow from the infiltration system will still discharge to a combined sewer system, it is designed to be connected to the separated system in the future.
3. Cushing Street Plaza - in design, reconstruction of a large intersection and plaza
4. Chetwyne Road - scheduled for design in 2022, evaluate opportunity to create a shared street
5. Various expanded planting areas and impervious reduction areas: During Year 2 there was 3,697 SF in construction and 600 SF completed of impervious areas converted to expanded plantings/pervious areas, representing 8 individual sites/streets.

MCM6: Good Housekeeping

Catch Basin Cleaning

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

Number of catch basins inspected:

Number of catch basins cleaned:

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

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

Total number of catch basins:

If applicable:

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

Not yet applicable. The City began its inspection and tracking of depth of catch basin sediment in June 2019. Since then the City has inspected a total of 1,244 of its 6,100 catch basins citywide (includes non MS4 catch basins). During this reporting period 208 inspected catch basins (88 within the MS4) had sediment depths greater than 50% during this initial round of inspections. We will continue to measure and track sediment depth and take action when a catch basin sump is more than 50% full during two consecutive routine inspections/cleaning events.

Please also note: there are 6100 total municipal owned catch basins, only 3,086 are within the MS4. A total of 1,322 catch basins were cleaned citywide and a total of 1,078 catch basins were inspected during Permit Year 2. The total mass of material removed from all cleaned catch basins was 431.49 Tons.

Street Sweeping

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

- ☐ Number of miles cleaned:
- ☐ Volume of material removed: [Select Units]
- ☒ Weight of material removed:

O&M Procedures and Inventory of Permittee-Owned Properties

Below, check all that apply.

The following permittee-owned properties have been inventoried:

- ☒ Parks and open spaces
- ☒ Buildings and facilities
- ☒ Vehicles and equipment

The following O&M procedures for permittee-owned properties have been completed:

- ☒ Parks and open spaces
- ☒ Buildings and facilities
- ☒ Vehicles and equipment

Stormwater Pollution Prevention Plan (SWPPP)

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

Number of site inspections completed:

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

na. The Six (6) required SWPPPs were not finalized until the end of June 2020. The first required set of inspections will occur by September 30, 2020. The 2 site inspections identified above were the initial site inspections for preparation of two of the SWPPPs

Additional Information

Monitoring or Study Results

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

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

<https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement>
under "Annual Report" (or as noted below)

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:

1. Summary of CSO Receiving Water Quality Monitoring in Upper Mystic River/Alewife Brook and Charles River, 2019. This report was prepared by MWRA in accordance with the variances for CSO discharges to Lower Charles River/Charles Basin and the variances for CSO discharges to the Alewife Brook/Upper Mystic River Basin. MWRA is required to undertake a receiving water quality monitoring program and submit an annual report to MADEP and EPA assessing the impacts of CSO discharges. The purpose of the report is to summarize 2019 water quality in the Charles River and Alewife Brook/Upper Mystic River. The report compares sampling results to water quality standards, and shows spatial and temporal variations in water quality, and differences between wet and dry weather.

<http://www.mwra.state.ma.us/harbor/enquad/pdf/2020-05.pdf>

2. Characterizing the Variability of Phosphorus Export from Urban Stormwater for Potential Treatment Strategies, 2018-2019 Sampling Results: This study was prepared in corporation with Stantec, Inc., City of Cambridge, MA, and Northeastern University. The report focused on characterizing total phosphorus and solids concentrations associated with different particle size fractions in event stormwater runoff from select sampling sites distributed throughout the City of Cambridge, MA. Stormwater samples were collected roughly each hour during nine storm events from four different watershed with distinct land use and land cover patterns over the period June 2018 through June 2019. Results and analysis of these samples are presented in this report.

3. EPA Inspection Report 10.29.2019 and 11.20.2019: The purpose of these compliance sampling inspections was to identify illicit connections or illegal discharges within the City of Cambridge, MA Municipal Separate Storm Sewer System (MS4) and/or Combined Sewer System (CSS) that may adversely impact the water quality in the Alewife Brook. Samples were collected from five (5) locations in accordance with the FSB Investigations Team Stormwater Program Plan. Cambridge together with EPA investigated a stretch of the outfall pipe that acts as a stormwater drain and outfall, but also during Combined Sewer Overflow (CSO) events acts like a CSS and transports CSOs along this drain and discharges through this same outfall. The City of Cambridge is doing further investigations of the "separated catchment" associated with this outfall.

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:

- **MCM1: Public Education and Outreach:** The City maintains an active education and outreach program through social media, public meetings/events, website posting, direct mailings, etc. Messages and events regarding proper ways to dispose of waste (compost, litter, trash, hazardous wastes) climate change, alternative modes of transportation are numerous and also have impacts on stormwater and resident/business' understanding of these issues and behaviors. These activities and others, although relevant, are not reported under MCM 1: Public Education above.
- **MCM1: Public Education and Outreach:** DPW was invited to present and discuss its use of bioswales/raingardens in its street reconstruction projects to a group of approximately 50 residents at a meeting of the Cambridge Plant and Garden Club (January 9, 2020).
- **MCM2:** The City uses Commonwealth Connect (powered by SeeClickFix) to help residents reach the City online or via their smartphone to request services or get help fixing issues. "Dumping Into Stormdrains" is a reporting category. During year 2 there were 18 issues reported through the SeeClickFix system.
- **MCM5: Ordinance or Regulatory Mechanism:** The City's Land Disturbance Regulations govern construction, development and redevelopment requirements. These Regulations were initially adopted on March 31, 2008 and can be viewed at:
<https://www.cambridgema.gov/~media/Files/publicworksdepartment/Engineering/Regulations/LandDisturbanceRegulations.pdf?la=en>
 We did not complete our review and revision of these Regulations during Year 2 but will continue our review in Year 3 to ensure that stormwater controls or management practices for new development and redevelopment meet the retention and treatment requirements of the permit and all applicable requirements of the MA Stormwater Handbook.
- **MCM6: Stormwater Pollution Prevention Plan (SWPPP):** In the Year 1 Annual Report the City identified seven (7) facilities that require a SWPPP. Four (4) facilities were inspected during year 1. During inspections of the remaining three facilities in Year 2 it was discovered that one of the initially identified facilities, the Fresh pond Golf Course Garage, did not discharge to an MS4 and therefore did not require a SWPPP. In Year 2 the City completed final SWPPPs for the following six (6) facilities requiring SWPPPs under the MS4 Permit:
 1. Alewife Staging Area
 2. Cambridge Rindge and Latin School Garage aka 'The Gustave M. Solomons Transp. Career Center'
 3. Police Maintenance Garage
 4. Fire Maintenance Garage
 5. Water Department Garage
 6. Cemetery Garage

Copies of the SWPPPs will be attached to the Annual Report online and can be viewed at:
<https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement>
 under "Annual Report"

Although not a requirement of the MS4 Permit the City is also developing a set of site-specific good housekeeping procedures for three (3) facilities that the City determined, through site visits and investigations, do not discharge to the MS4:

1. Fresh Pond Golf Course Garage

2. Department of Public Works Garage
3. Danehy Park Maintenance Garage

- MCM6: Stormwater Pollution Prevention Plan (SWPPP): SWPPP Training

DPW held 2 training opportunities on the SWPPPs being developed for employees at the above facilities.

1. February 18, 2020: 11 employees attended
2. February 25, 2020: 12 employees attended

The agenda for these meetings included:

- Massachusetts Stormwater Regulations
 - Stormwater Pollution Prevention Plans (SWPPPs) Overview
 - Facility specific information
 - Questions
 - Facility walk through
- Charles River Phosphorous TMDL: Legal Analysis and Funding Source Assessment. Cambridge completed an initial legal analysis and although not required in Year 2 also completed an initial Funding Source Assessment. This assessment is attached to the Annual Report at:
<https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement>
 under "Annual Report"
 - This annual report is being signed by the City Engineer, an authorized representative. A copy of the Documentation for delegation of "Authorized Representative" was provided with the Year 1 annual report.

COVID-19 Impacts

Optional: If any of the above year 2 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:

- Continued progress with outfall screenings and catchment investigations that were scheduled during the spring of 2020 were delayed due to COVID-19 concerns. These screenings and investigations are expected to continue as soon as it is deemed safe to proceed.
- Many important elements of our Public Education (MCM1) and Public Participation (MCM2) work were unable to proceed this year due to COVID-19. The Cambridge Science Festival, River Festival, Fresh Pond Day, Science in the City and Rabbits Clinic were canceled. Continued disruption to these activities are anticipated into Year 3. Despite COVID-19 the City was able to fulfill its permit requirements during Year 2 and the Cambridge River Festival was able to be streamed virtually as the Stream Festival.
- Please also see page 4 and 5 of this report for other COVID-19 impacts

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

Yes, I agree ☒

- Inspect all outfalls/ interconnections (excluding Problem and Excluded outfalls) for the presence of dry weather flow

- Complete follow-up ranking as dry weather screening becomes available

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 uncurbed streets at least annually
- Continue investigations of catchments associated with Problem Outfalls
- 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

Provide any additional details on activities planned for permit year 3 below:

Part V: Certification of Small MS4 Annual Report 2020

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:

Katherine F. Watkins

Title:

City Engineer

Signature:

Date:

09/28/20

*[Signatory may be a duly authorized
representative]*

Note: When prompted during signing, save the document under a new file name.

Annual Report Submission

Please submit the form electronically via email to both EPA and MassDEP by clicking on one of the links below or using the email addresses listed below. Please ensure that all required attachments are included in the email and not attached to this PDF.

EPA: stormwater.reports@epa.govMassDEP: laura.schifman@mass.gov

Paper Signature:

If you did not sign electronically above, you can print the signature page by clicking the button below.

[Print Signature Page](#)

Optional: If you did not sign electronically above, you may lock the form by clicking the "Lock Form" button below which will prompt you to save the locked version of the form. Save this locked version under a new file name.

[Lock Form](#)