

**Year 5 Annual Report**  
**Massachusetts Small MS4 General Permit**  
**Reporting Period: July 1, 2022-June 30, 2023**

*\*\*Please DO NOT attach any documents to this form. Instead, attach all requested documents to an email when submitting the form. Also ensure any websites included on this form are to publicly accessible sites\*\**

*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, 2022 and June 30, 2023 unless otherwise requested.*

**Part I: Contact Information**

Name of Municipality or Organization:

EPA NPDES Permit Number:

**Primary MS4 Program Manager Contact Information**

Name:  Title:

Street Address Line 1:

Street Address Line 2:

City:  State:  Zip Code:

Email:  Phone Number:

**Stormwater Management Program (SWMP) Information**

SWMP Location (publicly available web address):

Date SWMP was Last Updated:

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>

<b>Impairment(s)</b>			
<input checked="" type="checkbox"/> Bacteria/Pathogens	<input checked="" type="checkbox"/> Chloride	<input type="checkbox"/> Nitrogen	<input checked="" type="checkbox"/> Phosphorus
<input checked="" type="checkbox"/> Solids/ Oil/ Grease (Hydrocarbons)/ Metals			
<b>TMDL(s)</b>			
<i>In State:</i>	<input type="checkbox"/> Assabet River Phosphorus	<input checked="" type="checkbox"/> Bacteria and Pathogen	<input type="checkbox"/> Cape Cod Nitrogen
	<input checked="" type="checkbox"/> Charles River Watershed Phosphorus	<input type="checkbox"/> Lake and Pond Phosphorus	
<i>Out of State:</i>	<input type="checkbox"/> Bacteria/Pathogens	<input type="checkbox"/> Metals	<input type="checkbox"/> Nitrogen
			<input type="checkbox"/> Phosphorus
			<input type="button" value="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.

### 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 publicly available website:

[www.cambridgema.gov/stormwater](http://www.cambridgema.gov/stormwater) (see Appendix C in IDDE Program)

- Updated system map due in year 2 as necessary
- Provided training to employees involved in IDDE program within the reporting period
- Properly stored and disposed of catch basin cleanings and street sweepings so they did not discharge to receiving waters
- All curbed roadways were swept at least once within the reporting period
- 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 or provide any additional details, please use the box below:

• "O&M programs for all permittee owned facilities have been completed and updated as necessary": A Good Housekeeping (O&M) Manual for municipal owned facilities was previously completed, but required some updates to include information on maintenance of additional BMP types including infiltration trenches, infiltration chambers, dry wells, tree box filters, membrane filter systems, and particle separators. These updates were not complete within the reporting period, but are complete at the time of this annual report.

**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
  - This is not applicable because there are no septic systems present

*\* 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:

N/A

**Chloride**

Annual Requirements

*Public Education and Outreach*

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

The following type(s) of salt were applied **during this reporting period (year 5):**

- Sodium chloride

- Calcium chloride
- Potassium chloride
- Magnesium chloride
- Brine solution

Total amount of salt applied **during this reporting period (year 5) including units:**

16,000 gallons

*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:

During this reporting period, Cambridge applied 16,000 gallons of brine solution. Cambridge also purchased 3,200 tons of sodium chloride, however Cambridge does not currently track tonnage of salt applied. Chloride was listed as a new impairment for Alewife Brook (MA71-20) in the Final 2018/2020 Massachusetts Integrated List of Waters, which was finalized in November 2021. To address this new impairment, Cambridge will develop a Salt Reduction Plan which will include measures to track salt application. Following Appendix H requirements, because Cambridge does not have a Salt Reduction Plan already in place, the Salt Reduction Plan will be completed within 3 years of becoming aware of the chloride impairment (i.e., by November 2024) and fully implemented within 5 years of becoming aware of the chloride impairment (i.e., by November 2026). Cambridge will begin reporting the amount of salt applied beginning in the year of the completion of the Salt Reduction Plan.

## **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)

#### *Structural BMPs*

- Completed the evaluation of all permittee owned properties identified as presenting retrofit opportunities or areas for structural BMP installation under permit part 2.3.6.d or identified in the Phosphorus Source Identification Report, including: *(select the items of the evaluation that have been completed below)*
  - Next planned infrastructure, resurfacing, or redevelopment activity planned for the property (if applicable) OR planned retrofit date
  - Estimated cost of redevelopment or retrofit BMPs
  - Engineering and regulatory feasibility of redevelopment or retrofit BMPs

- Completed a listing of planned structural BMPs and a plan and schedule for implementation
- The BMP list and implementation schedule is attached to the email submission
  - The BMP list and implementation schedule can be found at the following publicly available website:
 

- For sites within the Charles River watershed, see Figure 1-8 and Appendix V in the Phosphorus Control Plan available online at: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>
    - For sites within the Mystic River watershed, see Section 3 of the PSIR available online at: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>

- 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.
- No BMPs were installed
  - The above referenced BMP information is attached to the email submission
  - The above referenced BMP information can be found at the following publicly available website:
 

- For sites within the Charles River watershed, see Appendix III in the Phosphorus Control Plan available online at: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>
    - For sites within the Mystic River watershed, see Appendix C of the PSIR available online at: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>

Total estimated phosphorus removed in **lbs/year** from the installed BMPs: 109.5

*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:

"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": For BMPs within the Charles River watershed in separated areas, City-owned (28) and privately-owned (93) BMPs were tracked and phosphorus removal estimated as part of Phase 1 PCP development. This inventory was complete by June 30, 2023. For BMPs within the Mystic River watershed in separated areas, tracking and phosphorus removal estimates of City-owned (11) BMPs was not complete within the reporting period, but is complete at the time of this annual report. These inventories are included as Appendix III of the City's PCP for BMPs within the Charles River watershed and Appendix C of the PSIR for BMPs within the Mystic River watershed. Structural BMPs installed City-wide moving forward will continue to be tracked and phosphorus removal estimated as projects are completed.

## **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
  - The street sweeping schedule is attached to the email submission

- The street sweeping schedule can be found at the following publicly available website:

<https://www.cambridgema.gov/services/streetcleaning>

- 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:

"Prioritized inspection and maintenance for catch basins to ensure that no sump shall be more than 50 percent full": The City finalized the development of a Catch Basin Optimization strategy during Permit Year 2. Implementation of this Catch Basin Optimization strategy will begin with the completion of data collection for all existing catch basins within the MS4 area. The City began tracking catch basin sediment depth during inspections at the end of Permit Year 1, and through Permit Year 5 has completed an initial inspection of 2,590 out of 3,230 catch basins within the MS4. Our catch basin optimization and prioritization program will be implemented for the cleaning of sumps greater than 50% full once all existing catch basins have had an initial cleaning and inspection.

**Charles River Watershed Phosphorus TMDL**

- Completed the written Phase 1 Phosphorus Control Plan (PCP), including: *(select the items in the Phase 1 PCP that have been completed)*
  - Planned nonstructural controls
  - Planned structural controls
  - O&M program for structural controls
  - Implementation schedule
  - Cost of implementation

The Phase 1 PCP: *(select one of the following options)*

- is attached to the email submission
- can be found at the following publicly available website:

<https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>

*Below, calculate your current phosphorus export rate by first filling out the individual phosphorus loading components (labeled [A], [B], [C], and [D]) and then computing your current phosphorus export rate using the equation provided.*

Baseline phosphorus export reduction required from PCP Area, as identified in Appendix F **(lbs/year) [A]:** 1,129

- Documented the nonstructural control measures implemented during **this reporting period** and their phosphorus reduction

total phosphorus reduction from all nonstructural controls this reporting period **(lbs/year) [B]:** 8.5

- No nonstructural control measures were implemented

- The above referenced nonstructural control measures information is attached to the email submission
- The above referenced nonstructural control measures information can be found at the following publicly available website:

See Phosphorus Control Plan Appendix II found online at: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>

Documented the structural control measures implemented during **this reporting period and all previous years**, including location, phosphorus reduction in mass/year, and date of last completed maintenance and inspection for each control

total phosphorus reduction from all structural controls installed this reporting period and all previous years (**lbs/year**) [C]:

107.1

- No structural control measures were implemented
- The structural control measures information is attached to the email submission
- The structural control measures information can be found at the following publicly available website:

See Phosphorus Control Plan Appendix III found online at: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>

Phosphorus load increase due to development incurred since 2005 in **lbs/year** [D]:

1,295

Current phosphorus export rate from the PCP Area in **lbs/year** [=A-(B+C)+D from above]:

2,308.4

I certify under penalty of law that all source control and treatment Best Management Practices being claimed for phosphorus reduction credit have been inspected, maintained and repaired in accordance  with manufacturer or design specification. I certify that, to the best of my knowledge, all Best Management Practices being claimed for a phosphorus reduction credit are performing as originally designed.

All municipally owned and maintained turf grass areas are being managed in accordance with Massachusetts Regulation 331 CMR 31 pertaining to proper use of fertilizers on turf grasses

*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:

- "Completed the written Phase 1 Phosphorus Control Plan (PCP)": A Phase 1 PCP draft was complete within the reporting period except for calculations of phosphorus load increases due to development since 2005. The City used updated land use land cover data provided by the Charles River Watershed Association for this calculation, which was received on June 29, 2023. The complete Phase 1 PCP is complete at the time of this report and is posted on the City's website. The draft PCP was posted online for public comment and advertised on DPW's social media and City of Cambridge Daily Update emails.
- "Documented the structural control measures implemented during this reporting period and all previous years, including location, phosphorus reduction in mass/year, and date of last completed maintenance and inspection for each control": Location (mapped in GIS) and phosphorus reduction (calculated using the EPA BATT Tool) were documented for all structural controls (both City-owned and private). Inspection and maintenance information was documented for City-owned controls, but not for privately owned. Cambridge plans to implement a self-certification program for privately owned controls in

Permit Year 6 and the date of last completed maintenance and inspection will be tracked through this program.

- "Phosphorus load increase due to development incurred since 2005": The current phosphorus load also increased by 125 lbs/year to account for separated areas not included in EPA's baseline load calculations. This load was added to Cambridge's allowable load in the PCP, however is not reported here because this 125 lb/yr load increase is not due to development incurred since 2005.

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***NON-TRADITIONAL AND TRANSPORTATION MS4s ONLY- municipalities please skip this section:***

Describe the planned phosphorus reduction activities on site and coordination progress with the applicable municipality:

N/A

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

N/A



### 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:

• Year 2:

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 was 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. These updates were included in the updated SWMP for Year 2.

• Year 3:

A new outfall was opened at Lechmere Canal (D03D) within the Charles River (Segment MA 72-36). This outfall was included in the updated SWMP for Year 3.

• Year 4:

The listing of chloride as a new impairment to the Alewife Brook segment MA71-20 and Little River segment MA71-21 in the Final 2018/2020 §303(d) was noted, but not yet incorporated into the City's SWMP.

• Year 5:

Six (6) new outfalls were added along Lechmere Canal (D02A, D02B, D02C, D02D, D02E, and D03E) that were identified as City owned. Four (4) of these outfalls along the north side of the canal were determined to be exempt from IDDE requirements because they serve park areas only with no sanitary infrastructure nearby. Additional field investigation is required for the two (2) outfalls on the south side of the canal to determine priority ranking. These updates were incorporated into the City's SWMP and IDDE Plan in Permit Year 5.

Waterbody impairments for Alewife Brook (MA71-20), Little River (segments MA71-21 and MA71-22), Millers River (MA72-31), and Charles River (segments MA72-36 and MA72-38) were updated based upon the Final 2018/2020 Integrated List Waters. These updates were incorporated into the City's SWMP in Permit Year 5.

## 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: #1 - Annual Message on Grass Clippings**

Message Description and Distribution Method:

- Social Media Posts: Cambridge is participating in the Mystic River Watershed Association's (MyRWA) Mystic River Stormwater Education Collaborative (Stormwater Collaborative). Using materials supplied by MyRWA, DPW posted on social media (facebook and twitter) about the impact of grass clippings on water quality and proper use and disposal. MyWRA also posted these messages on their social media platforms in multiple languages including Spanish, Haitian Creole and Mandarin.
- Recycling E-Newsletter: Cambridge included a Clean Water Tip in the monthly DPW Recycling E-Newsletter on grass clippings and encouraging proper disposal by bagging for yard waste pickup.
- Additional educational messages during this reporting period also included information on the topic of grass clippings, including Rain Barrel Distribution Program (see BMP #11) and BlueBike Station Posters (see BMP #13).

Targeted Audience:

Responsible Department/Parties:

Measurable Goal(s):

- DPW Facebook Posts: 6/12 post had 191 impressions, 10 engagements and 28 video views; 6/16 post had 189 impressions, 10 engagements and 39 video views
- DPW Twitter Posts: 6/3 post had 328 impressions, 7 engagements, and 85 video views; 6/16 post had 297 impressions, 10 engagements, and 77 video views
- MyWRA Facebook Post: 93 impressions and 0 engagements
- MyWRA Twitter Posts: English 107 impressions and 0 engagements; Mandarin 109 impressions and 1 engagement; Haitian Creole 107 impressions and 0 engagements; Spanish 101 impressions and 2 engagements
- DPW Monthly E-Newsletter: sent to 9,846 subscribers; 5,723 emails opened

Message Date(s): - DPW Facebook Posts: June 12 & June 16
- DPW Twitter Posts: June 3 & June 16
- MyWRA Twitter Posts: June 16 (four total)
- MyWRA Facebook Post: June 17
- DPW Monthly E-Newsletter: June 7

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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:

NA

### **BMP: #2 - Annual Message on Fertilizer**

Message Description and Distribution Method:

- Social Media Posts: Using materials supplied by MyRWA, DPW posted on social media (facebook and twitter) about proper fertilizer application and encouraging phosphorus free fertilizer. MyWRA also posted these messages on their social media platforms.
- Outreach to Landscapers: As part of the Stormwater Collaborative, MyRWA reached out to regional landscaping companies via email to raise awareness about phosphorus in fertilizer and to ask companies to sign a no-phosphorus pledge.
- Additional educational messages during this reporting period also included information on the topic of fertilizer, including Rain Barrel Distribution Program (see BMP #11) and BlueBike Station Posters (see BMP #13).

Targeted Audience: Residents; Businesses, Institutions and Commercial Facilities

Responsible Department/Parties: DPW, MyWRA

Measurable Goal(s):

- DPW Facebook Posts: 6/1 post had 683 impressions and 19 engagements; 6/11 post had 542 impressions and 10 engagements
- DPW Twitter Posts: 6/1 post had 254 impressions and 2 engagements; 6/11 post had 423 impressions and 6 engagements
- MyWRA Facebook Post: 281 impressions and 0 engagements
- MyWRA Twitter Posts: 4/16 post had 313 impressions and 8 engagements; 5/20 post had 241 impressions and 6 engagements
- MyWRA Email to Landscapers: 23 emails sent; 9 emails confirmed opened; 1 company committed to phosphorus free pledge

- Message Date(s):
- DPW Facebook Posts: June 1 & June 11
  - DPW Twitter Posts: June 1 & June 11
  - MyWRA Facebook Post: May 20
  - MyWRA Twitter Posts: April 16 & May 20
  - MyWRA Email to Landscapers: March 8

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:

NA

### **BMP: #3 - Annual Message on Leaf Litter**

Message Description and Distribution Method:

- Social Media Posts: Using materials supplied by MyRWA, DPW posted on social media (facebook and twitter) about the impact of leaves on water quality and encouraging proper collection and disposal. MyWRA

also posted these messages on their social media platforms in both English and Spanish. The City of Cambridge also posted about leaf litter on twitter asking residents and businesses to collect leaves from sidewalks, streets, and storm drains.

- Recycling E-Newsletter: Cambridge included a Clean Water Tip in the monthly DPW Recycling E-Newsletter on leaf litter and encouraging proper disposal by bagging for yard waste pickup. In the spring, the newsletter also included a reminder for residents to collect leaves from the sidewalk and curb for yard waste collection to help prevent street flooding and reduce stormwater pollution.
- DPW News Release: DPW drafted a news release about how collecting leaves for yard waste pickup helps to protect local waterways and makes rich compost.
- Additional educational messages during this reporting period also included information on the topic of leaf litter, including BlueBike Station Posters (see BMP #13).

Targeted Audience: Residents; Businesses, Institutions and Commercial Facilities

Responsible Department/Parties: DPW, MyWRA

Measurable Goal(s):

- DPW Facebook Posts: 11/7 post had 98 impressions and 2 engagements; 11/8 post had 149 impressions, 14 engagements and 71 video views; 11/12 post had 220 impressions and 1 engagement; 11/18 post had 69 impressions and 0 engagements; 11/26 post had 129 impressions and 2 engagements
- DPW Twitter Posts: 11/7 post had 289 impressions and 5 engagements; 11/12 post had 360 impressions and 2 engagements; 11/18 post had 277 impressions and 1 engagement; 11/26 post had 453 impressions and 4 engagements
- MyWRA Facebook Posts: 10/28 English post had 69 impressions and 0 engagements; 10/28 Spanish post had 73 impressions and 0 engagements; 11/13 post had 140 impressions and 3 engagements
- MyWRA Twitter Posts: 10/26 English post had 302 impressions and 19 engagements; 10/26 Spanish post had 137 impressions and 5 engagements; 11/12 post had 297 impressions and 12 engagements
- MyWRA Instagram Post: 668 impressions and 572 people reached
- DPW Recycling E-Newsletter: 11/3 sent to 9,614 subscribers and 5,819 emails opened; 12/1 sent to 9,665 subscribers and 5,644 emails opened; 5/9 sent to 9,803 subscribers and 5,481 emails opened
- DPW News Release: 262 views

Message Date(s):

- DPW Facebook Posts: November 7, 8, 12, 18 & 26
- DPW Twitter Posts: November 7, 12, 18 & 26
- City of Cambridge Twitter Posts: November 5, 9, 12, & 19
- MyWRA Facebook Posts: October 28 (two total) & November 13
- MyWRA Twitter Posts: October 26 (two total) & November 12
- MyWRA Instagram Post: October 28
- DPW Recycling E-Newsletter: November 3, December 1, May 9
- DPW News Release: November 2

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:

NA

### Message Description and Distribution Method:

- Canines for Clean Water Campaign: DPW with assistance from the Cambridge Water Department and Cambridge Animal Commission continued to promote the Canines for Clean Water campaign to inform pet owners of their responsibilities regarding pet waste management (As part of this campaign, residents are able to receive a free pet waste bag dispenser when they sign a pledge form committing to picking up after their pet and never throwing the waste bag into a storm drain). The Water Department promoted this campaign through a passive display area with dog waste dispensers, pledge information and a poster discussing the reasons why it is important to pick up after your pet. Visitors to Cambridge Water Department/Fresh Pond were able to take dog waste bag dispensers. The Animal Commission promoted this campaign through a table at their annual rabies clinic with dog waste dispensers and pledge forms for pet owners. DPW promoted this program at public outreach events, including a Cambridge Crossing compost bin giveaway, the Ports Art Festival, Fresh Pond Day, and the Port Party.
- Social Media Posts: Using materials supplied by MyRWA, DPW posted on social media (facebook and twitter) about the impact of pet waste on water quality and encouraging proper disposal. MyWRA also posted these messages on their social media platforms.
- The Animal Commission continues to include an informational poster with each dog license sent out in the mail about the importance of picking up after pets and the impact to waterways. However, most dog licenses are now submitted and sent out electronically. The Animal Commission maintains several brochures on their website with information about proper pet waste management and how it relates to stormwater.
- DPW Recycling E-Newsletter: Cambridge included a Clean Water Tip in the monthly DPW Recycling E-Newsletter on pet waste and encouraging proper disposal by always throwing pet waste bags in the trash, and never down a storm drain.
- Additional educational messages during this reporting period also included information on the topic of pet waste, including the Rain Barrel Program (see BMP #11) and BlueBike Station Posters (see BMP #13).

Targeted Audience: Residents

Responsible Department/Parties: DPW, Animal Commission, Water Department, MyWRA

### Measurable Goal(s):

- Canines for Clean Water campaign: 57 forms signed total (10 signed at rabies clinic; 6 signed at Cambridge Crossing outreach event; 9 signed at Ports Art Festival, 21 signed at Fresh Pond Day, and 11 signed at the Port Party) and 75 dog waste dispensers taken at Fresh Pond display (indicating pledge was taken)
- DPW Facebook Posts: 4/7 had 162 impressions, 0 engagements and 49 video views; 4/21 had 119 impressions, 1 engagement and 25 video views; 5/15 had 124 impressions, 7 engagements and 36 video views
- DPW Twitter Posts: 4/7 365 impressions, 5 engagements, and 79 video views; 4/21 had 270 impressions, 3 engagements, and 48 video views; 5/15 had 427 impressions, 4 engagements, and 105 video views
- MyWRA Facebook Post: 132 impressions and 1 engagements
- MyWRA Twitter Post: 350 impressions and 6 engagements
- MyWRA Instagram Post: 457 impressions and 389 people reached
- Animal Commission Flyers on Website: 25 total views
- DPW Recycling E-Newsletter: sent to 9,803 subscribers and 5,418 emails opened

### Message Date(s):

- Canines for Clean Water campaign: Water Department Display July 2022 - June 2023; Animal Commission rabies clinic April 1; Cambridge Crossing compost bin giveaway April 11; Port Arts Festival May 21; Fresh Pond Day June 10; The Port Party June 20
- DPW Facebook Posts: April 7 & 21, May 15
- DPW Twitter Posts: April 7 & 21, May 15
- MyWRA Facebook Post: March 27
- MyWRA Twitter Post: March 26

- MyWRA Instagram Post: March 31
- Animal Commission Flyer on Website: July 2022 - June 2023
- DPW Recycling E-Newsletter: May 9

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:

NA

### **BMP: #5 - Annual Message on Septic Systems Maintenance**

Message Description and Distribution Method:

Letters were mailed to property owners and businesses where the sanitary connection is unknown discussing the proper care of septic systems and requesting updated information regarding a possible connection to the sanitary system. Note: The majority of properties in Cambridge are directly connected to the sanitary system. The City keeps an inventory of properties where the sanitary connection is unknown, which is used to identify a list of properties with the potential for septic systems. This inventory currently includes eight (8) properties: 6 residential properties, one commercial (automotive), and one institutional (cemetery).

Targeted Audience: Residents; Businesses, Institutions and Commercial Facilities

Responsible Department/Parties: DPW

Measurable Goal(s):

9 letters total. 8 letters were mailed to each of the property owners. In addition, 1 letter was mailed to the tenant of the commercial property in addition to the letter sent to the owner of the property.

Message Date(s): October 11, 2022. One letter was resent on November 8 after the address of the new property owners was received.

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:

NA

### **BMP: #6 - Annual Message on Salts and De-icers**

Message Description and Distribution Method:

- Social Media Posts: Using materials supplied by MyRWA, DPW posted on social media (facebook and twitter) about the impact of salts/de-icers on water quality and encouraging proper use. MyWRA also posted these messages on their social media platforms in English and Spanish. The City of Cambridge also posted on their social media accounts regarding snow operations, encouraging residents to clear catch basins after snow storms, and linking the DPW Snow Center website or CityView winter newsletter for more information.
- DPW Snow Center website: The City maintained the Snow Center website, which includes guidance for residents on proper snow and ice management (using minimal amount of salt/de-icer needed; not using sand

because it clogs catch basins and not using rock salt because it harms vegetation).

- City of Cambridge Daily Update Emails: The City of Cambridge included information on snow operations with a link to the DPW Snow Center website ahead of storms.
- City of Cambridge CityView newsletter: The winter edition of the CityView newsletter included information on winter snow preparation including best practices and reminding residents to clear catch basins after a storm. This newsletter was mailed to all residents and is also available online (highlights are translated into multiple languages). A link to the article on snow and ice removal was included in the City's Daily Update emails.
- DPW Website Flyer: DPW developed a flyer summarizing proper snow and ice removal to help protect local waterways (clear snow first, apply de-icer sparingly etc.) that was posted on the DPW's stormwater webpage for residents.
- Outreach to Commercial/Industrial Users: DPW mailed oversized postcards to commercial and industry property owners in the Mystic River Watershed to inform them of the impact of salt/de-icer on water quality and encouraging best practices.

Targeted Audience: Residents; Businesses, Institutions and Commercial Facilities; Industrial Facilities

Responsible Department/Parties: DPW, City of Cambridge, MyWRA

Measurable Goal(s):

- DPW Facebook Posts: 1/5 post had 249 impressions and 4 engagements; 1/18 post had 178 impressions and 5 engagements; 2/28 post had 243 impressions and 9 engagements
- DPW Twitter Posts: 1,126 impressions and 11 engagements
- MyWRA Facebook Posts: 12/9 post had 305 impressions and 4 engagements; 12/25 post had 292 impressions and 3 engagements; 1/29 post had 347 impressions and 9 engagements; 2/23 post had 2,555 impressions and 34 engagements; 3/14 post had 128 impressions and 2 engagements
- MyWRA Twitter Posts: 12/23 post had 134 impressions and 2 engagements; 1/30 post had 834 impressions and 33 engagements; 2/23 (English) had 354 impressions and 11 engagements; 2/23 (Spanish) had 129 impressions and 1 engagement; 3/13 had 342 impressions and 9 engagements
- MyWRA Instagram Posts: 12/12 had 103 impressions and 101 people reached; 12/14 had 226 impressions and 224 people reached; 12/22 had 914 impressions and 687 people reached; 2/23 had 531 impressions and 417 people reached
- DPW Snow Center Website: 21,161 views
- City of Cambridge Daily Update Emails: 12/25 email sent to 15,644 subscribers with 341 clicks on Winter Operations story; 12/16 email sent to 15,643 subscribers with 42 clicks on Winter Operations story; 1/17 email sent to 15,627 subscribers with 163 clicks on DPW Snow Center story; 1/18 email sent to 15,628 subscribers with 79 clicks on DPW Snow Center story; 1/19 email sent to 15,628 subscribers with 41 clicks on DPW Snow Center story; 3/13 email sent to 15,606 subscribers with 547 clicks on DPW Snow Center story
- CityView Winter Newsletter: mailed to 52,000 residents and 172 views online
- DPW Website Flyer: 0 views
- Outreach to Commercial/Industrial Users: 134 postcards mailed

- Message Date(s):
- DPW Facebook Posts: Jan 5 & 18, Feb 28
  - DPW Twitter Posts: Jan 18
  - MyWRA Facebook Posts: Dec 9 & 25, Jan 29, Feb 23, March 14
  - MyWRA Twitter Posts: Dec 23, Jan 30, Feb 23 (both English & Spanish), March 13
  - MyWRA Instagram Posts: Dec 12 & 14 & 22, Feb 23
  - City of Cambridge Facebook Post: March 13
  - City of Cambridge Twitter Posts: Dec 14, Feb 23 & 27, March 13
  - DPW Snow Center Website: July 2022 - June 2023
  - City of Cambridge Daily Update Emails: Dec 25, Dec 26, Jan 17, 18, & 19; March 13



- CityView Winter Newsletter: Nov 21
- DPW Salt Recommendations Flyer on website: April 18 - June 2023
- Outreach to Commercial/Industrial Users: Jan 2

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:

NA

### **BMP: #7 - Pollution Prevention for Commercial and Industrial Facilities**

Message Description and Distribution Method:

- Sites with Parking Lots: DPW mailed oversized postcards to commercial and industrial property owners whose properties contained a parking lot to inform them of pollution prevention practices to protect water quality, including regular sweeping, trash pickup, and covering dumpsters. A copy of this flyer was also posted to the stormwater webpages for businesses and industry.
- Industrial Sites: DPW mailed flyers to industrial property owners to inform them of best practices for storage and handling of chemicals and hazardous materials to protect water quality, including storing materials in covered containers, keeping sites clean and organized, labeling all materials, and checking storage areas for leaks and spills.

Targeted Audience: Businesses, Institutions and Commercial Facilities; Industrial Facilities

Responsible Department/Parties: DPW

Measurable Goal(s):

- 347 parking lot flyers were mailed
- 33 industrial site flyers were mailed

Message Date(s):

- Parking Lot Flyers: March 21 & 30
- Industrial Site Flyers: June 5

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:

NA

### **BMP: #8 - Dumpsters and Trash Pick-up**

Message Description and Distribution Method:

- Social Media Posts: Using materials supplied by MyRWA, DPW posted on social media (facebook and twitter) about ways to stormwater proof your dumpster to not contribute to pollution and also a reminder for residents to pick up trash to help keep local waterways clean. MyWRA also posted these messages about trash pick-up on their social media platforms.
- Dumpster Flyer Display: DPW displayed a flyer on how to stormwater proof your dumpster at the DPW



permit desk for visitors and staff.

Targeted Audience: Residents; Businesses, Institutions and Commercial Facilities; Developers (construction)

Responsible Department/Parties: DPW, MyWRA

Measurable Goal(s):

- DPW Facebook Posts: 9/16 had 255 impressions and 2 engagements; 9/20 had 296 impressions and 7 engagements; 10/18 had 258 impressions and 4 engagements
- DPW Twitter Posts: 9/16 had 349 impressions and 1 engagement; 9/20 had 462 impressions and 12 engagements; 10/18 had 361 impressions and 1 engagement
- MyWRA Facebook Posts: 7/28 had 128 impressions and 2 engagements; 10/3 had 233 impressions and 7 engagements; 12/21 had 103 impressions and 4 engagements; 2/14 had 239 impressions and 16 engagements
- MyWRA Twitter Posts: 12/17 had 671 impressions and 36 engagements; 2/14 had 110 impressions and 3 engagements
- Dumpster Flyer Display: estimated 5 views per day

Message Date(s):

- DPW Facebook Posts: Sept 16 & 20, Oct 18
- DPW Twitter Posts: Sept 16 & 20, Oct 18
- MyWRA Facebook Posts: July 28, Oct 3, Dec 21, Feb 14
- MyWRA Twitter Posts: Dec 17, Feb 14
- Dumpster Flyer Display: Feb 14 - June 2023

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:

NA

### **BMP: #9 - Construction Erosion and Sediment Control**

Message Description and Distribution Method:

- Annual Training: DPW holds weekly, virtual construction meetings at the beginning of each week during the construction season to discuss projects, coordination, and reminders about additional erosion and sediment control measures that need to be taken prior to rain events. During one of these meetings at the start of the 2023 construction season, DPW gave a training on the importance of erosion and sediment control on active construction sites, types of controls, and best practices for site management. The audience included contractors, utility companies, municipal staff responsible for construction management and the major universities. The presentation slides were included with the meeting minutes.
- Excavation Permits: Erosion and Sediment Control information and requirements are attached to all issued Excavation Permits.
- Construction Erosion Control Flyer Display: DPW displayed a flyer on best practices for construction sites to manage erosion and sedimentation at the DPW permit desk for visitors and staff.

Targeted Audience: Developers (construction)

Responsible Department/Parties: DPW

Measurable Goal(s):

- Annual Training: 77 people attended; 159 people were emailed the meeting minutes with the training slides.

- Excavation Permits: 1,352 permits issued
- Flyer Display: estimated 5 views per day

Message Date(s):

- Annual Training: May 8
- Excavation Permits: July 2022 - June 2023
- Flyer Display: Feb 14 - June 30

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:

NA

### **BMP: #10 - Street Sweeping Program**

Message Description and Distribution Method:

- Street Cleaning Postcards: Postcards were mailed to all residents announcing the City's street cleaning pilot where towing would not be enforced, but urging residents to continue to move parked vehicles. These cards also reminded residents that street cleaning helps reduce pollution to local waterways.
- DPW News Release: DPW drafted a news release on the City's street cleaning pilot. This included a quote from the Deputy Commissioner reminding residents the City's street cleaning program is aimed at improving the water quality of storm water discharged to the Charles River and Alewife Brook.
- City of Cambridge Daily Update Emails: The City of Cambridge included a link to the DPW News Release on street cleaning in four daily update emails. The City of Cambridge also posted a link to the DPW News Release on their social media accounts reminding residents of the importance of the street cleaning program.
- Street Cleaning Webpage: DPW maintained a street cleaning webpage, which contains information on the importance of street sweeping for water quality and the City's monthly sweeping schedule.

Targeted Audience: Residents; Businesses, Institutions and Commercial Facilities; Industrial Facilities

Responsible Department/Parties: DPW, City of Cambridge

Measurable Goal(s):

- Street Cleaning Postcards: mailed to 52,000 residents
- DPW News Release: 937 views
- City of Cambridge Daily Update Emails: 3/21 email sent to 15,591 subscribers with 455 clicks on street cleaning pilot story; 3/22 email sent to 15,590 subscribers with 105 clicks on street cleaning pilot story; 4/2 email sent to 15,584 subscribers with 114 clicks on street cleaning pilot story; 4/3 email sent to 15,589 subscribers with 25 clicks on street cleaning pilot story
- Street Cleaning Webpage: 15,153 views

Message Date(s):

- Street Cleaning Postcards: March 21
- DPW News Release: March 21
- City of Cambridge Daily Update Emails: March 21 & 22, April 2 & 3
- Street Cleaning Webpage: July 2022 - June 2023

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: #11 - Rain Barrel Distribution Program**

Message Description and Distribution Method:

- Distribution Event: DPW sponsored a discounted rain barrel program for residents with The Great American Rain Barrel Company. Advertising for the program included information for residents about how capturing rainwater for later use helps to reduce stormwater runoff and prevent localized flooding. At the event, residents who purchased a rain barrel were given an informational packet with other stormwater educational materials including information on proper lawn care (grass clippings and fertilizer use), pet waste management, and how to build a rain garden.
- DPW Recycling E-Newsletter: The DPW monthly newsletter included information on the rain barrel program and promoted the benefits of using a rain barrel including capturing rainwater to reduce runoff, lowering municipal water demand and improving residential stormwater management.

Targeted Audience: Residents

Responsible Department/Parties: DPW

Measurable Goal(s):

- Distribution Event: 32 rain barrels were distributed to 26 residents and 26 stormwater informational packets were handed out
- DPW Recycling E-Newsletter: sent to 9,719 subscribers and 5,661 emails opened

Message Date(s):

- Distribution Event: May 3
- DPW Recycling E-Newsletter: March 16

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:

NA

### **BMP: #12 - Fats, Oils, and Grease (FOG) Inspection Program**

Message Description and Distribution Method:

- Inspections: DPW completes inspections for proper management of fats, oils and grease at restaurants and other businesses with grease traps. At these inspections, DPW distributes brochures on proper management of FOG and discusses the impact of FOG management on sewer backups with businesses owners. A version of the FOG flyer is available on the City's stormwater webpage for businesses.

Targeted Audience: Businesses, Institutions and Commercial Facilities

Responsible Department/Parties: DPW

Measurable Goal(s):

- 55 inspections with brochures distributed at each

Message Date(s): June 2022 - July 2023

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:

NA

### **BMP: #13 - Stormwater Posters at BlueBike Stations**

Message Description and Distribution Method:

Working with MyWRA, DPW designed a stormwater poster outlining what is stormwater runoff, what the City is doing to help improve stormwater (focusing on the street cleaning program), and what residents can do to reduce their contribution to pollution. The poster focused on encouraging residents to pick up after their pets, use phosphorus free fertilizer, and collect grass clippings and leaf litter for yard waste pickup. These posters were printed and placed at BlueBike stations throughout the City in highly visible areas.

Targeted Audience: Residents; Businesses, Institutions and Commercial Facilities

Responsible Department/Parties: DPW, MyWRA

Measurable Goal(s):

11 posters were installed. Estimated 100 views/day at each of the 11 stations for a total of 46,200 views.

Message Date(s): May 19 - June 30, 2023

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:

NA

### **BMP: #14 - City Hall Stormwater Program Display**

Message Description and Distribution Method:

The City has a large display (approximately 6ft by 12ft) that contains information about stormwater and water quality, describes the City's stormwater management program, and educates the public on how individuals can keep the City's waters clean. This display was put up in City Hall in a high traffic hallway on the main floor for City staff and members of the public to view.

Targeted Audience: All - Residents; Businesses/Institutions/Commercial; Developers; Industrial

Responsible Department/Parties: DPW

Measurable Goal(s):

Estimated 30 views/day for 50 days, for a total of 1,500 potential views.

Message Date(s): February 13 - April 5

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:

NA

**BMP: #15 - Stormwater Website and Youtube Videos**

Message Description and Distribution Method:

- Stormwater Website: DPW maintains a stormwater management webpage that has a main page with general information about stormwater in Cambridge, the City's stormwater program and initiatives, and work completed under the MS4 Permit. The website also has separate pages for information relevant to each of the target audiences - Residents, Developers (construction), Industrial Facilities and Businesses/Institutions/Commercial facilities.
- Youtube Videos: DPW developed two (2) informational videos to highlight ongoing efforts to keep the City's receiving waters clean as part of its Stormwater Program during Year 3. Both of these videos (18 minutes and 2 minutes) are maintained on the City's stormwater website. The 18-minute video explores what happens to rain or snowmelt once it hits the ground, why it matters, and the role the city, residents, businesses, developers, contractors, and institutions play in improving water quality. The 2-minute video focuses on what the City is doing to protect waterways.

Targeted Audience: All - Residents; Businesses/Institutions/Commercial; Developers; Industrial

Responsible Department/Parties: DPW

Measurable Goal(s):

- Stormwater website main page: 2,205 views
- Youtube video (18-minutes): 535 total views
- Youtube video (2-minutes): 542 total views

Message Date(s): July 2022 - June 30

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:

NA

**BMP: #16 - Water Quality & Combined Sewer Overflows**

**Message Description and Distribution Method:**

- DPW News Releases: DPW had several news releases related to combined sewer overflows and water quality, including public health warnings after CSO events and information on the CSO Annual update.
- City of Cambridge Daily Update Emails: Two CSO public health warnings were included in the City's daily update emails.
- CSO Public Meeting: DPW, the City of Somerville and the Massachusetts Water Resources Authority held a joint virtual public meeting to discuss collaborative efforts to further reduce CSOs and water quality. The presentation was posted online prior to the meeting, and the meeting was advertised through the City's daily update emails and on DPW's social media accounts along with a CSO Plan survey available to residents.
- CSO Webpages: DPW maintains webpages with information on the CSOs and the updated CSO Control Plan and how residents can learn more about the process.

Targeted Audience: Residents; Businesses/Institutions/Commercial

Responsible Department/Parties: DPW, City of Cambridge

**Measurable Goal(s):**

- DPW News Releases: 1/26 36 views; 3/14 41 views; 4/14 91 views
- CSO Public Meeting: 177 attendees (133 excluding project team); presentation recording 57 views
- City of Cambridge Daily update emails: 12/14 email sent to 15,654 subscribers with 60 clicks on CSO Planning Update story; 5/21 email sent to 15,519 subscribers with 311 clicks on Alewife Brook CSO story, 5/22 email sent to 15,520 subscribers with 100 clicks on Alewife Brook CSO story
- DPW Facebook Posts: 12/12 post had 135 impressions and 3 engagements; 1/4 post had 84 impressions and 5 engagements (4 clicks on the CSO Plan Survey link)
- DPW Twitter Post: 333 impressions and 5 engagements
- CSO Webpages: main CSO page 1,050 views; updated CSO plan page 872 views

**Message Date(s):**

- DPW News Releases: Jan 26, March 14, April 14
- CSO Public Meeting: December 15
- City of Cambridge Daily update emails: December 14, May 21 & 22
- DPW Facebook Posts: December 12 & January 4
- DPW Twitter Post: December 15
- CSO Webpages: July 2022 - June 2023

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:

NA

**BMP: #17 - Climate Change, Resiliency, and Sustainability****Message Description and Distribution Method:**

- City of Cambridge News Release on Sustainability: "Championing Sustainability & Improving Our Community" summarized City initiatives aimed at improving sustainability, including construction of underground stormwater storage systems to reduce flooding. This news release was advertised on the City's twitter account.
- City of Cambridge News Release on Climate Resiliency Zoning: A news release announced the City's Climate Resilience Zoning proposal to set climate resilience standards for buildings and landscaping was

available for public review. The draft zoning was included in the City's Daily Update emails.

- CityView Newsletter: The summer 2023 CityView newsletter included an article on Cambridge's Sustainability Initiatives and how the city is addressing climate change and building resilience. The article included a discussion on flood-resilient infrastructure, including rain gardens, and how integrating green infrastructure into street reconstruction projects maximizes the co-benefits of flood mitigation and water quality improvements. This newsletter is mailed to all residents and a version is available online and highlights are translated into several other languages.
- Cambridge Daily Update Emails: Cambridge included a link to an article on the City's stormwater initiatives that discussed how investment in sewer and stormwater infrastructure is helping to reduce flooding, reduce sewer overflows, and improve the water quality of the Charles River and Alewife Brook.
- Charles River Climate Compact Survey: Cambridge is a member of the Charles River Climate Compact, led by the Charles River Watershed Association. DPW advertised a survey open to the public on facebook seeking input from residents on the climate compact's resilience strategic plan and priorities.

Targeted Audience: Residents; Businesses/Institutions/Commercial; Developers

Responsible Department/Parties: DPW, City of Cambridge

Measurable Goal(s):

- City of Cambridge News Release on Sustainability: number of views not reported
- City of Cambridge News Release on Climate Resiliency Zoning: 11/10 email sent to 15,661 subscribers with 282 clicks on Climate Resiliency Zoning story; 11/11 email sent to 15,619 subscribers with 24 clicks on Climate Resiliency Zoning story; 11/12 email sent to 15,653 subscribers with 4 clicks on Climate Resiliency Zoning story; 11/13 email sent to 15,650 subscribers with 16 clicks on Climate Resiliency Zoning story
- CityView Newsletter: mailed to 52,000 residents and 113 views online
- Cambridge Daily Update Emails: 7/8 email sent to 16,229 subscribers with 172 clicks on Stormwater Initiatives story; 7/9 email sent to 16,225 subscribers with 57 clicks on Stormwater Initiatives story; 7/10 email sent to 16,214 subscribers with 29 clicks on Stormwater Initiatives story; 355 total views of Stormwater Initiatives story during this reporting period
- Charles River Climate Compact Survey: 159 impressions and 2 engagements

Message Date(s):

- City of Cambridge News Release on Sustainability: July 14; Twitter Aug 18 & 28
- City of Cambridge News Release on Climate Resiliency Zoning: Nov 9; Daily update emails Nov 10 - 13
- CityView Newsletter: June 26
- Cambridge Daily Update Emails: July 8 - 10
- Charles River Climate Compact Survey: Jan 19

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:

NA

### **BMP: #18 - Green Infrastructure**

Message Description and Distribution Method:

- Social Media Posts: MyWRA posted videos on social media that explain the impact of impervious cover on stormwater runoff and how green infrastructure can help improve water quality.



• Online Flyer: DPW maintained a rain garden brochure online that discusses what rain gardens are, their benefits, and how to build one. A simplified version of this flyer was distributed at the Rain Barrel Distribution Program this year.

Targeted Audience: Residents; Businesses/Institutions/Commercial; Developers

Responsible Department/Parties: DPW, MyWRA

Measurable Goal(s):

- MyWRA Facebook Posts: 10/5 post had 190 impressions and 7 engagements; 12/17 post had 125 impressions and 0 engagements; 3/18 post had 121 impressions and 1 engagement
- MyWRA Twitter Post: 389 impressions and 31 engagements
- MyWRA Instagram Posts: 10/6 post had 83 impressions and 81 people reached; 1/6 post had 232 impressions and 230 people reached; 3/7 post had 149 impressions and 147 people reached
- DPW Online Flyer: 2 views

Message Date(s):

- MyWRA Facebook Posts: October 5, December 17, March 18
- MyWRA Twitter Post: March 12
- MyWRA Instagram: October 6, January 6, March 7
- DPW Online Flyer: July 2022 - June 2023

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:

NA

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:**

- Online Posting of the SWMP: Cambridge maintains a copy of the latest version of the SWMP on the DPW Stormwater Management webpage to allow for ongoing public review.
- Advertised Public Event: 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 model at the Port Open House on October 25, 2022. This meeting notice was posted on the City's calendar of events and DPW's website as an opportunity for the public to learn more and provide comments on the City's SWMP. Approximately 60 people attended the event, and 28 individuals engaged with the stormwater booth. Stormwater educational materials distributed included Canine's for Clean Water pet waste dispensers (6), Dwayne the Storm Drain coloring books (28), FOG brochures (3), Updated CSO Control Plan flyers (3), Household Hazardous Waste brochures (2), and Stormwater Management & Green Infrastructure brochures (5).



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**:

\*Community/Neighborhood Events: At each of these events, Cambridge DPW set up a booth with stormwater educational materials, two displays that explain the City's stormwater management program, and an interactive stormwater and drainage system model. City staff were available to answer questions on the City's drainage system and stormwater initiatives and talk with residents about pollutants impacting our local waters and actions they can take to help minimize pollution. Materials distributed included brochures on pet waste, lawn care and fertilizer, rain gardens, green infrastructure, FOG, household hazardous waste and EPA "Be Stormwater Smart". Dwayne the Drain coloring books and Canines for Clean Water pet waste dispensers were available as giveaways.

- Ports Art Festival (May 21): Over 50 people interacted with the booth and nine (9) dog owners signed the Canines for Clean Water pledge.
- Fresh Pond Day (June 10): Over 600 people attended the event, approximately 100 people interacted with the booth and 21 dog owners signed the Canines for Clean Water pledge.
- The Port Park Party (June 20): Approximately 30 people interacted with the booth and 11 dog owners signed the Canines for Clean Water pledge.

\*Outreach Activities for Children:

- DPW Roadshow (May 22): Cambridge DPW set up a station with an interactive stormwater watershed model for students that focused on showing where water goes when it rains and how pollutants can be transported to local rivers. Over 400 pre-school, pre-K, and kindergarten students from 13 schools attended the event.
- Cambridge Public Schools (May/June): As part of Cambridge 5th grade curriculum, students learn about non-point source stormwater pollution. Students visit the Alewife Stormwater Wetland to see an example of an engineered solution that addresses non-point source pollution from Cambridge streets and other impervious surfaces. Students move through the wetland as water molecules would (settling over time, absorbing through soil & plants and evaporating in the deep pool areas) leaving behind particulates they collected as runoff before they are discharged to the Little River. During this reporting period, 171 students from four (4) different elementary schools visited the wetland and learned about stormwater runoff.

\*MyWRA Activities: Cambridge is a member of the Mystic River Watershed Association's (MyRWA) Stormwater Education Collaborative. As part of the MyRWA Stormwater Collaborative, MyRWA staff provide educational outreach to children in member communities.

- Cambridge Science Festival (October 6): MyWRA, along with Green Cambridge, hosted a youth outreach program at Alewife for a Cambridge Science Festival activity that consisted of a stormwater wetland tour at Alewife Brook Reservation. Educational topics included how urban wetlands help filter pollutants out of rain and snowmelt while reducing the impacts of increased rain and flooding in cities. Students also had an opportunity to design their own climate-ready stormwater infrastructure solutions using recycled and natural materials. A total of 6 students and 6 adults attended the event.
- STEAM It Up (October 20): MyWRA led a storm drain label design activity at MLK Jr. School as part of STEAM It Up. Staff interacted with 150 students (grades K-12) and 50 adults.
- International School of Boston (April 28, May 9, 11 & 16, and June 9): MyWRA staff worked with 4th graders (45 students) to teach students about river herring ecology and take students on a field trip to Mystic Lakes Dam. MyWRA also worked with 5th graders (35 students) to talk about stormwater and complete a storm drain design project.

\*Stormwater Wetland Tour: Cambridge hosted a tour of the Alewife stormwater wetland on July 28 for MWRA, MyWRA and Save the Alewife Brook. Approximately 30 people attended.

\*Volunteer Event: Cambridge DPW helped organize a volunteer event for Vicinity Energy staff as part of Earth Day. A team of volunteers stenciled a total of 55 catch basins with "No Dumping" signs.

\*Household Hazardous Waste (HHW) Collection: Cambridge DPW sponsored four (4) HHW collection days during this reporting period (Aug 27, Nov 5, April 8, June 10). A total of 30 tons of waste was collected.

\*Solid Waste, Recycling and Compost Collection: Cambridge continued it's curbside trash, yard waste, recycling and compost programs and continued to educate residents and business owners on proper waste disposal. During this reporting period the following were collected:

- 2,058 tons of compost
- 8,327 tons of recycling
- 1,615 tons of yard waste
- 13,738 tons of trash

### **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**

*Optional: Provide additional status information regarding your map:*

A copy of the current Stormwater Catchment Area and Outfalls map (last updated June 2023) can be found online at <https://www.cambridgema.gov/stormwater> . The City maintains an online interactive sewer system map of the sewer and drain systems at <https://www.cambridgema.gov/GIS/interactivemaps/Cambridgecityviewer> showing all gravity mains, force mains, service laterals, catch basins, manholes, outfalls, underground structures, BMPs and other elements related to the sewer and drain systems.

#### **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 above referenced outfall screening data is attached to the email submission
- The above referenced outfall screening data can be found at the following publicly available website:

[www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports](https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports)

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

Number of outfalls screened:

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

Percent of outfalls screened:

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

- **Dry weather screening:** Dry weather screening was conducted for outfall D44 as part of this catchment investigation. Initial dry screening was conducted for this outfall in Year 3. Dry weather outfall screening for outfalls was completed in Year 3 and is available under "Annual Report and Information: July 2020 to June 2021" at <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>
- **Wet weather sampling:** A total of four (4) wet weather samples were collected from three (3) outfalls during this reporting period as part of catchment investigations. A sample taken in February 2023 for catchment D12 showed cleaning of the structure was required. DPW cleaned the structure and it was re-sampled in June 2023.

### **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 publicly available website:

See IDDE Investigation Progress Permit Year 5 Report available at: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>

*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:

The catchment investigation for the one (1) problem outfall was completed this reporting period (D44). Two (2) high priority catchment investigations were also completed this reporting period (D17A and D12). Catchment investigations are in progress for nine (9) high priority outfalls including D07, D19, D21, D27, D31, D33, D36, D38, and D46.

### **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 publicly available website:

See Illicit Discharge Removal Permit Year 5 Report available at: <https://www.cambridgema.gov/Departments/publicworks/Initiatives/stormwatermanagement/annualreports>

*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:

Four (4) illicit discharges identified that still require removal require work by the property owner to remove (internal re-plumbing or removing and cap of an illicit fixture). The City plans to focus on outreach to these property owners in Permit Year 6. For other illicit discharges, the City is working to address through repair of sewer mains and lining of laterals as needed.

Note: As part of the River Street project, the combined sewer main is being removed and a drainage main is being installed in the same location. This project identified and removed two (2) sewer connections during this reporting period to the combined sewer that were identified via dye testing. These laterals were connected to the existing sewer main. Because this area is currently combined, these connections are not included in the totals above.

### **Employee Training**

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

An in-person IDDE Training was held on May 3, 2023 for City employees (10 DPW staff attended, plus four (4) staff from the City's IDDE consultant team including Kleinfelder, Stantec, & SDE, Inc.). The training included a powerpoint presentation, discussion of the IDDE program and findings to date and a field test kit demonstration. Topics included the Cambridge MS4 System and MS4 Permit Overview, Cambridge IDDE Program status, types of illicit discharges and how to identify them in the field, SSOs, dry weather outfall screening protocol, catchment investigation procedures and wet weather sampling protocol.

Two (2) SWPPP trainings were held during this reporting period for City staff responsible for facility maintenance and/or quarterly SWPPP inspections. Twelve (12) employees and two (2) consultants from Kleinfelder attended the SWPPP training on March 22 and eight (8) employees and two (2) consultants from Kleinfelder attended the training on March 29, 2023. This SWPPP training covered Massachusetts Stormwater regulations, SWPPP overview, and best practices for spill response, good housekeeping, and material management for each Cambridge facility with a SWPPP. The trainings also included a practice site inspection and reviewed how to complete SWPPP inspection forms.

### **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 nine (9) Stormwater Control Permits (SWCP) during this permit year which accounts for the 9 site plan reviews identified above. In addition to Stormwater Control Permit projects, the DPW reviewed 299 Building Permit applications for projects that did not trigger a SWCP and were not jurisdictional under MS4 Permit requirements. The review of these smaller projects sought to, amongst other things, identify opportunities for smaller projects to make improvements to contribute to the goals of the MS4 Permit. Of the 299 building permits, at least 81 of them included review of a civil site plan.

In addition to the 76 inspections completed for sites with SWCPs, an additional 29 inspections were completed for smaller projects not covered under MS4 Permit requirements.

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

#### **Ordinance or Regulatory Mechanism**

Date update was completed (due in year 3):

Website of ordinance or regulatory mechanism:

#### **As-built Drawings**

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

Number of as-built drawings received:

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

Six (6) as-built drawings were received for projects with Stormwater Control Permits during the last reporting period.

### **Street Design and Parking Lots Report**

Below, describe any changes made or planned to be made to local regulations and guidelines based on the report completed in Year 4:

In Permit Year 5, Cambridge updated its Zoning Ordinance (6.30) to remove all minimum parking space requirements. This supports the goal of minimizing impervious cover attributable to parking areas and street designs.

The City also adopted new requirements in the Climate Resiliency Zoning Ordinance that include Flood Resiliency Standards (22.80) and a Green Factor Standard (22.90). The purpose of the Flood Resiliency Standards is to promote building designs that are resilient to the impacts of flood events that are likely to become more frequent and intense due to the effects of climate change. The Green Factor Standard is performance-based, and is intended to promote the inclusion of features that have a demonstrable cooling effect on buildings and sites to mitigate urban heat island effect. These requirements are intended to work in tandem with other regulations, including stormwater control regulations promulgated by the DPW.

### **Green Infrastructure Report**

Below, describe progress towards making green infrastructure practices allowable based on the report completed in Year 4:

The Green Infrastructure Report concluded that green infrastructure practices are allowable and encouraged in Cambridge. The adoption of the Green Factor Standard in Cambridge's Climate Resiliency Zoning Ordinance will further support the inclusion of green infrastructure and low impact development on sites through practices such as preserving and planting trees, green roofs, and minimum open space requirements.

### **Retrofit Properties Inventory**

Below, list remaining permittee-owned properties that could be modified or retrofitted with BMPs to mitigate impervious areas (must maintain a minimum of 5 sites in inventory until less than 5 sites remain):

Cambridge completed an initial BMP retrofit opportunities inventory in June 2022. This inventory is evaluated and updated annually. The following projects have been identified as potential sites that could be modified or retrofitted with BMPs as of Permit Year 5:

1. River Street: The River Street project consists of upgrades to all infrastructure in its corridor, including subsurface utilities, and surface elements. Sewer separation is required for a portion of the project area, and the project also includes drainage improvements to reduce flooding. Final street design is to be to complete street standards, including a separated bicycle facility, stormwater improvements and additional tree plantings. BMPs include replacement of all catch basins with deep sump catch basins with hoods and incorporation of

green infrastructure features, including a pervious asphalt bicycle lane the full length of River Street. Estimated impervious reduction is approximately 30,000 sf.

2. The Port Phases 2 & 3: The Port neighborhood project will reduce the frequency and severity of stormwater flooding and sewer backups in the neighborhood, and upgrade the neighborhood's surface infrastructure, including streets, sidewalks, shade trees, landscaping, and open spaces. Phases 2 and 3 will include completion of storm/sanitary separation in the neighborhood, construction of additional underground sanitary storage and pump stations, connections to existing storm and sewer systems for post-storm discharge, and full reconstruction of neighborhood streets including green infrastructure.

3. Inman Square: The Inman Square project will decrease impervious surfaces by approximately 7,000 SF with the installation of porous cycle tracks, permeable pavers, and planting beds. Overflow from the infiltration systems discharge to a combined sewer system, however the majority of which is planned for separation in the future. Additionally, the infiltration systems are designed to promote plant and tree growth.

4. Willard Street: The Willard Street neighborhood is a combined sewer system and has experienced flooding on several occasions. Sewer separation in this area will include replacing and/or rehabilitating the sewer and stormwater infrastructure and the construction of a new stormwater pipe and outfall at the Charles River, evaluation and implementation of stormwater best management practices, and water main replacement. Following subsurface work, the street will be reconstructed along "complete streets" principles, including traffic calming elements and improvements to bicycle and pedestrian accessibility. Planned BMPs will include deep sump catch basins with hoods for pre-treatment; tree pits with extended underground infiltration trenches; and permeable surface strips over subsurface gravel infiltration trenches. The infiltration trenches are sized to store/infiltrate runoff exceeding ½-inch across the contributing impervious area. In Longfellow Park, a subsurface infiltration system sized to infiltrate runoff from up to the 10-year storm was completed in fall 2019 and reduces stormwater inflow into the combined sewer system.

5. Triangle Park: Triangle Park will convert an unused gravel lot into a new public park, including the addition of over 400 new trees. Stormwater gardens, infiltration trenches and a subsurface chamber system will capture and infiltrate rainwater as a part of the park's stormwater management system, decreasing the rate and volume of surface runoff in all modeled storm events.

6. Binney Park: A new City park is being developed at 322 Binney Street in the East Cambridge neighborhood that will include a segment of the planned Grand Junction Greenway shared use path, a fenced dog run, and a hardscape plaza. Stormwater management includes porous pavement and infiltration systems.

7. Huron Avenue and Cushing Plaza: Huron Avenue from Fresh Pond Lane to Fresh Pond Parkway is scheduled for reconstruction as part of the City's Five-Year Street and Sidewalk Reconstruction Plan. Cushing Plaza, located within the project area at Cushing Street and Huron Avenue, is being reconstructed to allow stormwater to infiltrate and provide enhanced tree and garden planting areas. This project includes impervious cover reduction of 3,750 square feet.

8. Tobin Montessori and Vassal Lane Upper Schools: This project provides new facilities for Tobin Montessori School, Vassal Lane Upper School, Special Start and Department of Human Services Programs preschool and after school programs. The project is also addressing street flooding in the neighborhood with the installation of a 1.5 million gallon underground stormwater tank on-site. Beyond these large improvements, the City is also including a bioretention rain garden designed to treat 100,000 gallons of stormwater.

9. Park Avenue Road: Park Avenue from Huron Avenue to Holworthy Street, is being reconstructed as part of

the City's Five-Year Street and Sidewalk Reconstruction Plan. The roadway will be reconstructed to improve drainage, make sidewalks more accessible for all users, add trees and green infrastructure and make the street safe for all users. The project includes three (3) bioretention curb extension planters.

10. Danehy Park: This project is a collaboration between the Cambridge Department of Public Works and the Department of Human Service Programs Recreation Division for the construction of a new sports pavilion. The pavilion and adjacent parking lot will include two underground detention systems made up of 196 StormTech infiltration chambers, porous pavement, and several bioretention areas. This project is currently still in design, so the exact size and number of structural BMPs is not finalized.

11. Alewife Linear Park: The Cambridge Forestry Department proposed this restoration project to address the City's decline in tree canopy. The project will include the development of additional tree canopy and soil remediation and enhancement, and will evaluate opportunities for stormwater BMPs.

12. Webster Ave is scheduled for reconstruction as part of the City's Five-Year Street and Sidewalk Reconstruction Plan. 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.

13. Elm Street is scheduled for reconstruction as part of the City's Five-Year Street and Sidewalk Reconstruction Plan. 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.

14. Chestnut Street is scheduled for reconstruction as part of the City's Five-Year Street and Sidewalk Reconstruction Plan. 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.

Below, list all properties that have been modified or retrofitted with BMPs to mitigate impervious area that were inventoried as part of 2.3.6.d of the permit. Non-MS4 owned properties that have been modified or retrofitted with BMPs to mitigate impervious area may also be listed, but must be indicated as non-MS4.

The following permittee-owned properties have been modified with BMPs. Note some projects were completed before the initial BMP retrofit opportunities inventory (June 2022), but were completed after the 2018 MS4 Permit became effective.

1. King Open School: This project was completed in August 2019, and is the first Net Zero Emissions and first LEED V4 Platinum school in Massachusetts. Stormwater BMPs included four (4) bioretention areas (note two of these areas discharge to a combined sewer system and two discharge to a separated sewer system), two (2) underground infiltration systems, and a 30,000 gallon rainwater harvesting tank.

2. The Port Phase 1/Parking Lot 6: This project was completed in early 2021 and consisted of the Parking Lot 6 stormwater storage tank and pump station. In addition, the project included two (2) subsurface infiltration systems to treat stormwater runoff from a municipal parking lot. Although the overflow from the infiltration system will discharge to a combined sewer system, it is designed to be connected to the separated system in the future.

3. Timothy Toomey Jr. Park (Rogers Street Park): This project was completed in September 2021 and replaced the pre-existing developed site with a community park, resulting in a reduction of approximately



70,000 sf of impervious area. Stormwater BMPs included three (3) subsurface infiltration systems that will treat the runoff from the park as well as surrounding roadways.

4. Franklin Street: This street reconstruction project was completed in late 2021 as part of the City's Five-Year Street and Sidewalk Reconstruction Plan. Porous pavement (pervious paver strips on sidewalks) was included to treat stormwater runoff.

## 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:

During this reporting period 351 inspected catch basins within the MS4 had sediment depths greater than 50%. Since the City began tracking sediment depths during inspections in 2019, 137 catch basins within the MS4 have had sediment depths greater than 50% full during two or more consecutive inspections. These areas will be prioritized for cleaning. 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.

Note: The City began its inspection and tracking of depth of catch basin sediment in June 2019. Since then the City has completed an initial inspection of 2,590 out of 3,230 catch basins within the MS4 (80%). There are 6,129 total municipal owned catch basins, 3,230 are within the MS4 (separated areas). A total of 4,844 of 6,129 catch basins have been inspected citywide. A total of 2,156 catch basins were cleaned citywide and a total of 2,112 catch basins were inspected citywide during Permit Year 5. The total mass of material removed from all cleaned catch basins citywide was 440 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:

**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:

- Alewife Staging Area: a leaking dumpster was observed due to broken vactor truck that typically cleaned the area. Vactor truck was repaired and daily cleaning of the area resumed.
- Police Vehicle Maintenance Garage: Drain filter was cleaned. A bucket of waste oil was found on top of waste tank, which was properly disposed of in the tank and staff reminded about proper disposal.
- Solomon Maintenance Garage: Floor drains were cleaned.
- Water Department Maintenance Garage: Used oil pads were cleaned up and disposed of. Trench drain was cleaned after observed full of sediment.
- Cemetery Garage and Staging Area: Staff were notified that dry well and catch basins needed cleaning.
- Fire Station Maintenance Garage: No corrective actions identified.

**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 publicly available 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:

**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. If any of the above year 5 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:

MCM 3: The City uses Commonwealth Connect (powered by SeeClickFix) to help residents reach the City on-line or via their smartphone to request services or get help fixing issues. "Dumping in Storm Drain" is a reporting category. During this reporting period, there were 10 issues reported through the SeeClickFix system.

MCM 6: The City actively maintains city-owned sewer and stormwater infrastructure. Through several maintenance contracts, the City completed the following maintenance and improvements during this reporting period:

- 4 catch basin hoods replaced
- 66 new catch basins installed with deep sump and hoods
- 65 catch basins remodeled with deep sump and hoods
- 4 catch basin "Do Not Dump" curb markers installed
- 6 grit chambers constructed
- 127,096 linear feet of sewer pipe cleaned and TV'd
- 2,168 linear feet of sewer pipe lined
- 30 linear feet of sewer pipe installed
- 79,030 linear feet of stormwater pipe cleaned and TV'd
- 2,310 linear feet of stormwater pipe lined
- 701 linear feet of stormwater pipe installed

Additional training for City staff:

- Green, Blue, Purple Roofs for Retrofits with Recover Green Roofs (Nov 28; ~30 attendees)
- Floating Wetlands with Charles River Conservancy (March 13; ~5 attendees)

### **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 6 requirements summarized below. (Note: impaired waters and TMDL requirements are not listed below)

Yes, I agree

### **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)
- Identify additional permittee-owned properties that could potentially be modified or retrofitted with BMPs to reduce impervious areas so that the permittee maintains a minimum of 5 sites in their inventory, until such a time when the permittee has less than 5 sites remaining

Provide any additional details on activities planned for permit year 6 below:

N/A

## Part V: Certification of Small MS4 Annual Report 2023

### 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:  Title:

Signature:  Date:

*[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.gov](mailto:stormwater.reports@epa.gov)

MassDEP: [Stormwater.DEP@mass.gov](mailto:Stormwater.DEP@mass.gov)

### Paper Signature:

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

*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.*