



CITY OF  
CAMBRIDGE

**THE** CAMBRIDGE  
DEPARTMENT  
OF PUBLIC  
**WORKS**

# Self-Certification Program for Private SCM Inspections

Cambria Ung, Stormwater Program Manager  
City of Cambridge

NEWEA 2025 Annual Conference

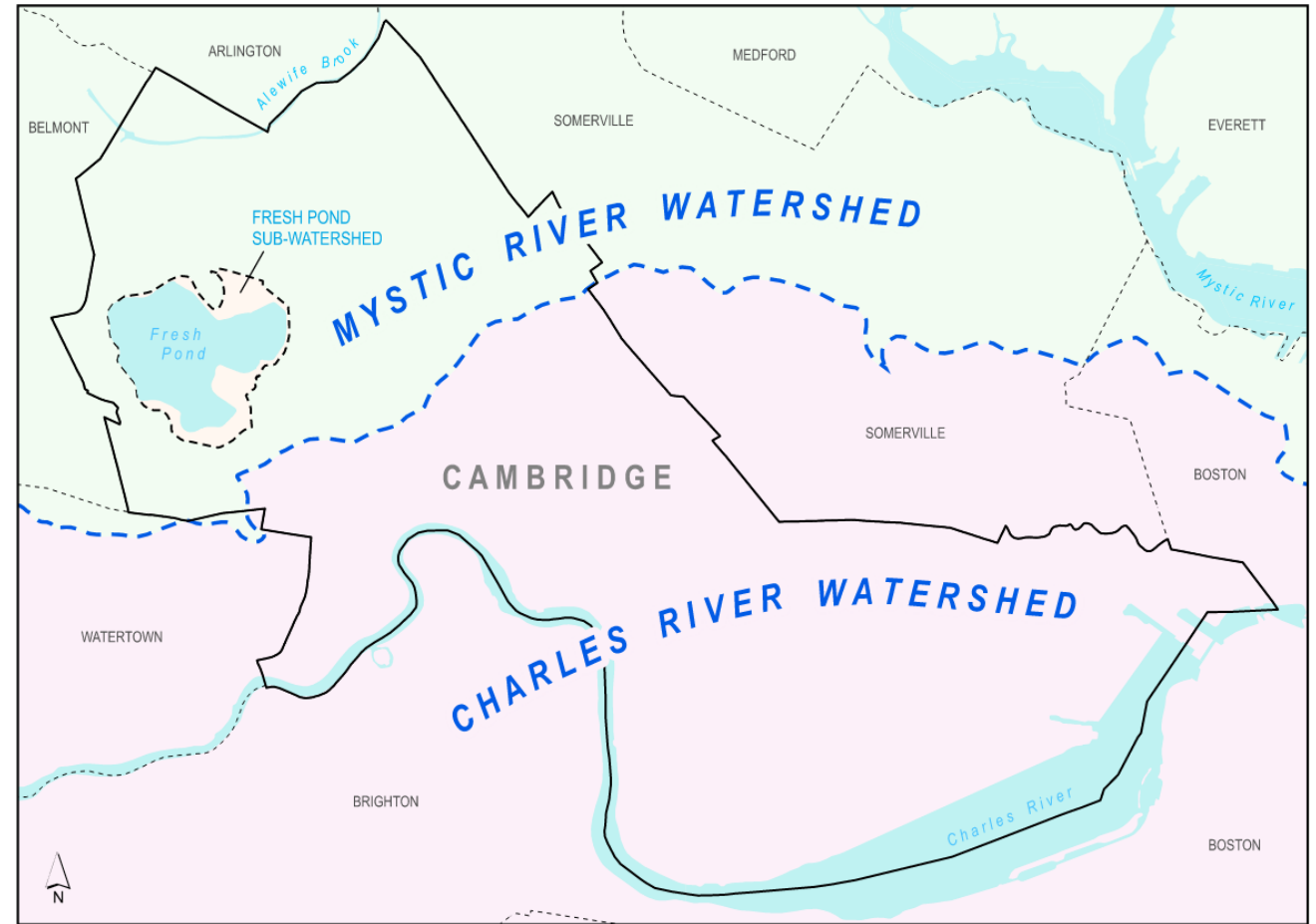
# Agenda

- Why Self-Certification
- Overview of Cambridge pilot
- Tools and templates used
- Response rates
- Lessons learned



# Cambridge Overview

- Both separated and combined sewer areas
- No stormwater utility
- Primary land uses: commercial, medium & high density residential



# Why Self-Certification

- 2020 EPA Technical Assistance Grant recommendation
- MS4 Permit nutrient reduction targets
- 2024 Pilot included:
  - Separated areas in Charles River Phosphorus Control Plan

Parcels	Owners	Stormwater Features	SCMs in PCP Inventory	Phosphorus Credit (lb/yr)
58	31	150	127	110



# Data Gathering

- Stormwater Control Measures (SCMs) mapped in GIS
- Stormwater Control Permits in OpenGov
- Cambridge Property Database
- Files saved in address specific folders
- **Goal:** Owner contact information, permit number, as-builts and O&M plans for each parcel

SWCP All (74)		
Record # ▲	Record Type ⇅	Date Submitted ⇅
105811	Stormwater Control Permit	Jan 15, 2021
106806	Stormwater Control Permit	Jan 28, 2021
108867	Stormwater Control Permit	Feb 19, 2021
109411	Stormwater Control Permit	Feb 24, 2021
111992	Stormwater Control Permit	Mar 17, 2021
1139430	Stormwater Control Permit	Oct 11, 2024
1148407	Stormwater Control Permit	Jan 13, 2025
117900	Stormwater Control Permit	Apr 27, 2021
122776	Stormwater Control Permit	May 24, 2021
127082	Stormwater Control Permit	Jun 15, 2021
127173	Stormwater Control Permit	Jun 15, 2021
128235	Stormwater Control Permit	Jun 21, 2021
132677	Stormwater Control Permit	Jul 14, 2021



# Tools and Templates

- Started with EPA recommendations and templates
- Materials developed:
  - Letter templates to property owners
    - Request for Records
    - Notice of Violation
  - Inspection form
    - Paper version
    - Online version
  - Instructions for using online inspection form

## Using a Self-Certification Process to Streamline Operation & Maintenance (O&M) of Private Stormwater Controls

### Purpose and Background

Ongoing maintenance of stormwater controls is essential for those controls to perform as intended to achieve water quality and water quantity benefits. Under the NPDES MS4 Stormwater General Permit for Massachusetts (MS4 Permit), municipalities intending to obtain credit for the phosphorus reductions achieved by stormwater controls (per Appendix F of the MS4 Permit) must ensure that ongoing maintenance is being performed. In accordance with Standard 9 of the Massachusetts Stormwater Handbook<sup>1</sup>, municipalities routinely require that applicants for stormwater, wetlands, subdivision, site plan review and special permits provide a stormwater operations and maintenance plan (O&M) in their applications. However, many municipalities find it challenging to ensure ongoing maintenance of stormwater controls occurs after a project is built by an applicant. One solution to this challenge is to require property owners annually self-certify they are inspecting and maintaining their controls. An O&M self-certification process as proposed herein would provide a reporting process that can fold directly into the municipality's MS4 Annual Report and allow the municipality to focus inspections on auditing just a small proportion of the systems each year. Read on to learn how Stormwater O&M self-certification works.

O&M self-certification emerged as an interest and a need during the [Mystic Stormwater Collaborative Project](#), which includes the communities of Cambridge, Lexington, Reading, and Watertown, and technical partners such as the Mystic River Watershed Association, University of New Hampshire Stormwater Center, and the U.S. Environmental Protection Agency (EPA). While the four participating communities understand the importance of conducting regular O&M on stormwater management controls, they expressed interest in new ways to address the challenges associated with ensuring O&M on smaller projects within existing regulatory frameworks and available resources.

### Model O&M Self-Certification Form

The O&M self-certification form should be simple and easy to complete by a property owner or their agent. A template form that communities can start with is provided in Appendix A.





# Inspection Form



## Stormwater Inspection and Maintenance Annual Self-Certification Form

Fill out the following form and return it to the Department of Public Works by April 30 of each year.

**Note one form is required for *each* stormwater feature.**

If you have a property manager who has been maintaining your site, they can complete this form. Inspections take approximately 30 minutes for systems that are regularly maintained.

**Attach photos, maintenance records (if applicable), and the site's O&M Plan if it has been revised since site plan approval. Indicate attachments to this form below.**

- ☐ Photos (required)
- ☐ Maintenance records (if applicable)
- ☐ Revised O&M Plan (if applicable)
- ☐ Other



# Inspection Form

Goal of the form is to identify:

- Is stormwater able to enter the system?
- Is stormwater able to leave the system?

Questions prompt inspector to think about potential maintenance needed:

- Is there structural damage?
- Is there sediment accumulation?
- Is there standing water?





# Online Inspection Form

Property Owner can:

- Search by GIS ID
- View map of site
- Complete form in the field
- Attach photos

The screenshot displays the 'Cambridge - Stormwater Self-Certification Form' interface. On the left, a form contains fields for 'Stormwater Feature ID\*' (D21UGS0020), 'Inspector Name\*', 'Organization\*', 'Email\*', 'Phone Number\*', and 'Inspection Date\*' (set to 1/24/2025). Below these is a section for 'Is trash or debris present?\*' with 'Yes' and 'No' radio buttons. The right side of the interface features a map of a residential area with a green polygon highlighting a specific stormwater feature. A pop-up window titled 'Stormwater Feature: D21UGS0020' is open over this feature, showing its 'Facility ID' as D21UGS0020 and its 'Type' as Infiltration System. The map includes street names like 'Dorchester' and 'Dorchester St'. The bottom of the interface has a footer with map data sources and 'Powered by Esri'.

City:

- Receives email notifying new form submitted





# Cambridge - Stormwater Self-Certification Form

Stormwater Feature ID\*

D21UGS0020

Inspector Name\*

Organization\*

Email\*

Phone Number\*

Inspection Date\*

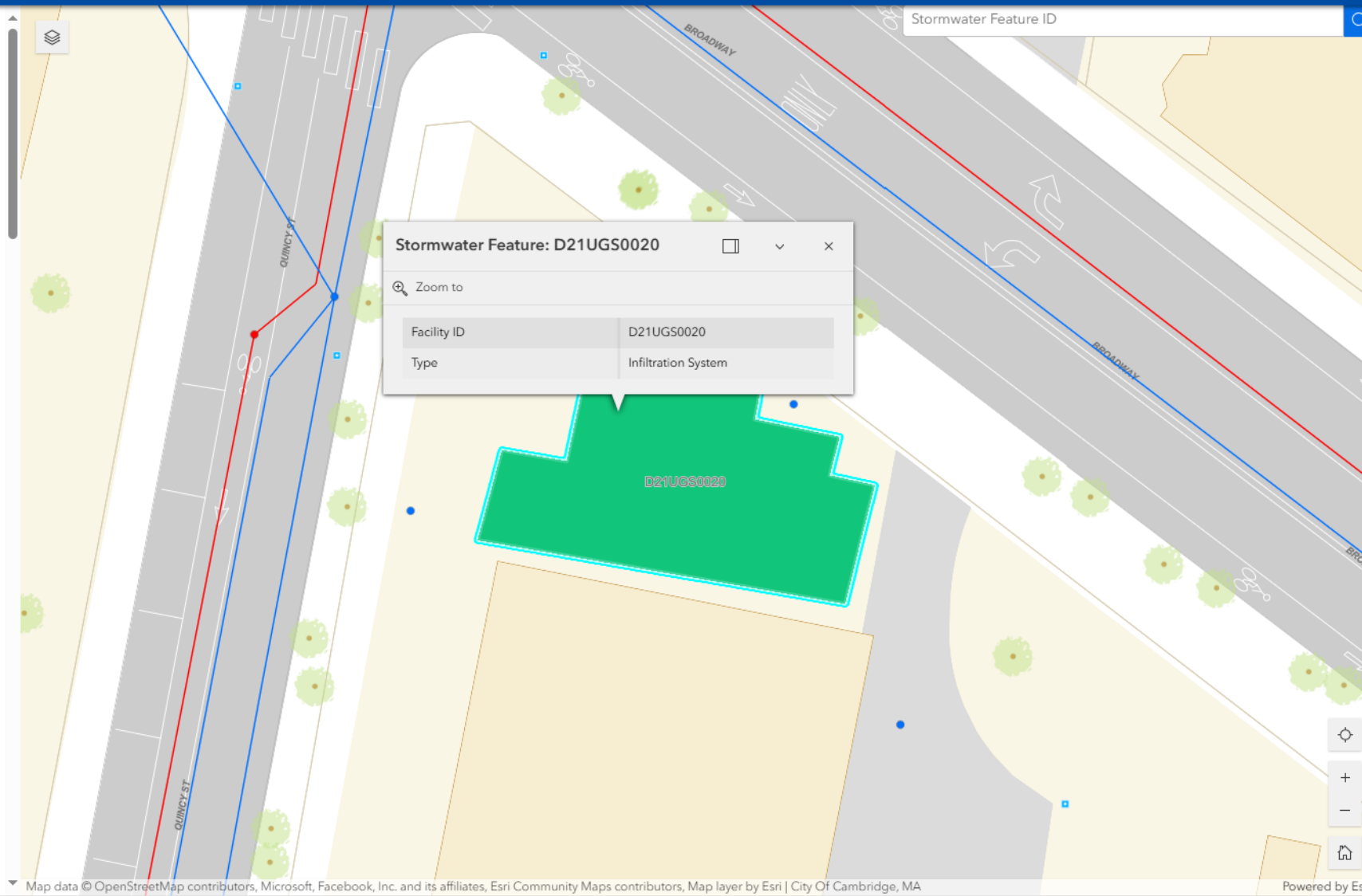
1/24/2025


Is trash or debris present?\*

Inspect surface and subsurface features for debris and trash.

☐ Yes

☐ No





**Stormwater Feature ID\***

D21UGS0020

**Inspector Name\***

**Organization\***

**Email\***


**Phone Number\***

**Inspection Date\***

1/24/2025

**Is trash or debris present?**  
Inspect surface and subsurface for trash or debris.

☐ Yes ☐ No



**Are there signs of structural damage?\***  
Review the system for components that need repair or replacement.

☐ Yes ☐ No

**Are there signs of illicit discharges or illegal dumping?\***  
Signs include oil, foam, suds, odor etc.

☐ Yes ☐ No

**Is stormwater able to enter the system as designed?\***  
Review inlets to the stormwater BMP for blockages, sediment or debris accumulation, collapsed or blocked pipes.

☐ Yes ☐ No

**Is stormwater able to leave the system as designed?\***  
Review outlets to the stormwater BMP for blockages, sediment or debris accumulation, collapsed or blocked pipes.

☐ Yes ☐ No



# Request for Records #1 Mailing

- Letter requesting records
- List of stormwater features by address
- Paper inspection form template
- Instructions for online inspection form


## Stormwater Management Features on Your Property

Address: 250 MASS AVE

The City's records indicate the following stormwater treatment features are located on this property:

- Cultec System (Stormwater Feature ID D08UGS0016)
- Cultec System (Stormwater Feature ID D08UGS0017)

**Note: one form is required for each stormwater feature listed.**



City of Cambridge  
Department of Public Works  
*Katherine F. Watkins, Commissioner*

147 Hampshire Street  
Cambridge, MA 02139  
theworks@cambridgema.gov  
Voice: 617 349 4800  
TDD: 617 499 9924

February 5, 2024

**Subject: Request for Annual Stormwater Inspection & Maintenance Records**  
**RE: 250 MASS AVE**

This letter is to request the submission of Annual Inspection & Maintenance Records for stormwater management systems on your property. Under this property's Stormwater Control Permit issued by the City of Cambridge, you are required to annually inspect and maintain stormwater systems to ensure stormwater systems are operating as designed.

The City of Cambridge is required by Federal law to ensure adequate inspection and maintenance is taking place on your property. To meet requirements of the City's stormwater discharge permit through the Environmental Protection Agency (EPA), Cambridge is implementing a self-certification program, where property owners may submit annual stormwater inspection records directly to the City. This letter is to request the submission of these records for this fiscal year.

How to Submit Stormwater Inspection & Maintenance Records  
There are two options for submitting records:

1. Online: Complete one online inspection form for each stormwater feature on your property (see list on next page) using the link below. This form may be completed using a mobile device.  
[www.cambridgema.gov/stormwater-self-certify](http://www.cambridgema.gov/stormwater-self-certify)
2. Paper Form: Complete one inspection form for each stormwater feature on your property (see list on next page). An example inspection form is included with this letter as a template.

Mail or email inspection forms and required documentation to:

Cambria Ung  
147 Hampshire Street  
Cambridge, MA 02139

OR


stormwater@cambridgema.gov

**We are requesting submission of Annual Inspection and Maintenance Records by April 30, 2024.**

Note the City performs maintenance audits each year on a percentage of stormwater systems. You may be contacted by the Department of Public Works for this purpose.

Thank you,

Cambria Ung  
Stormwater Program Manager  
Department of Public Works  
617-349-9730 / cung@cambridgema.gov



**The online form is the easiest way to submit inspections.** If you have a property manager who has been maintaining your site, they can complete this form. Inspections take approximately 30 minutes for systems that are regularly maintained.



# Request for Records #1 Mailing

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# Mailings and Outreach

- Request for Records #1 (Feb)
  - 66 letters to 58 parcels
- Request for Records #2 (April)
  - 34 letters to 18 parcels
- Notice of Violation #1 (May)
  - 17 letters to 11 parcels
- Notice of Violation #2 (June)
  - 7 letters to 5 parcels

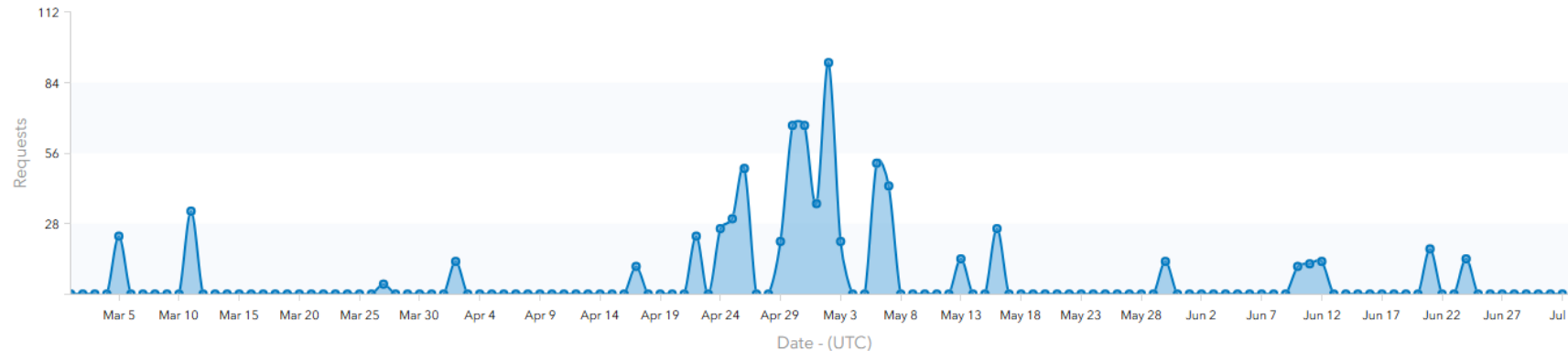




# Results

- 30 of 31 property owners responded
- 27 of 31 property owners completed all inspections
- 96 of 126 SCMs were inspected (76%)
- 68 of 96 inspections submitted online (71%)

Usage Time Series



# Tracking Responses

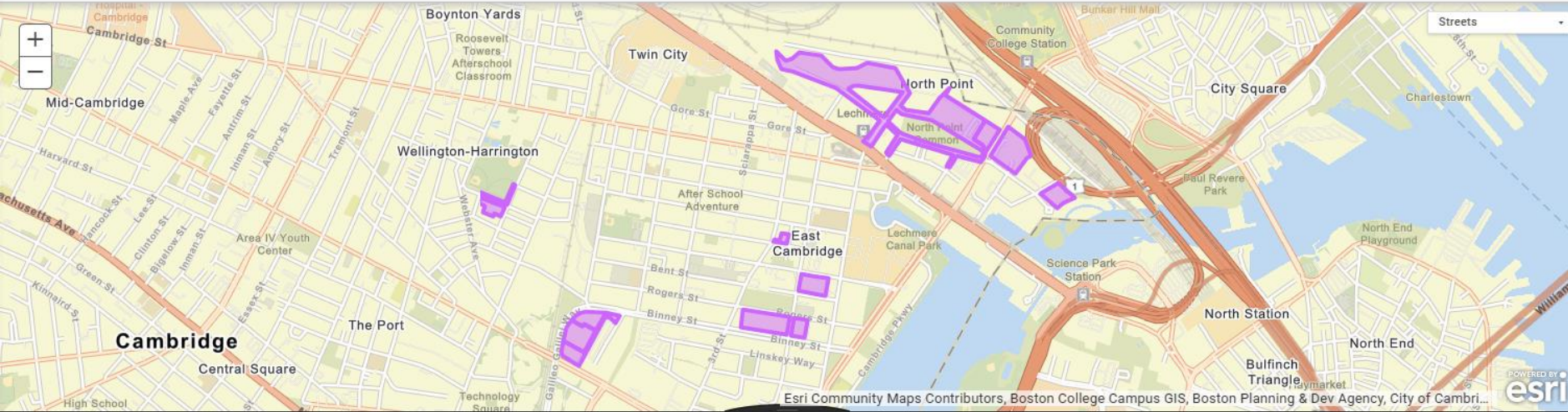
Map Filter

Search by address

Measure

Select

Streets



	Task ID	Activity	Asset	Status	Estimated Stop Date	Actual Start Date	Actual Stop Date
<input type="checkbox"/>	439071	Self-Certification Review	Private BMP Parcel 161-73	Completed	4/30/2024		6/18/2024 2:49:14 PM
<input type="checkbox"/>	439049	Self-Certification Review	Private BMP Parcel 161-58	Completed	4/30/2024		6/18/2024 2:45:46 PM
<input type="checkbox"/>	439067	Self-Certification Review	Private BMP Parcel 16-28	Completed	4/30/2024		5/30/2024 2:44:25 PM
<input type="checkbox"/>	439042	Self-Certification Review	Private BMP Parcel 94-58	Completed	4/30/2024		5/28/2024 11:16:00 AM
<input type="checkbox"/>	439040	Self-Certification Review	Private BMP Parcel 227-88	Completed	4/30/2024		5/15/2024 3:00:30 PM
<input type="checkbox"/>	439046	Self-Certification Review	Private BMP Parcel 19-10	Completed	4/30/2024		5/13/2024 2:50:08 PM
<input type="checkbox"/>	439075	Self-Certification Review	Private BMP Parcel 16-32	Completed	4/30/2024		5/6/2024 2:44:58 PM

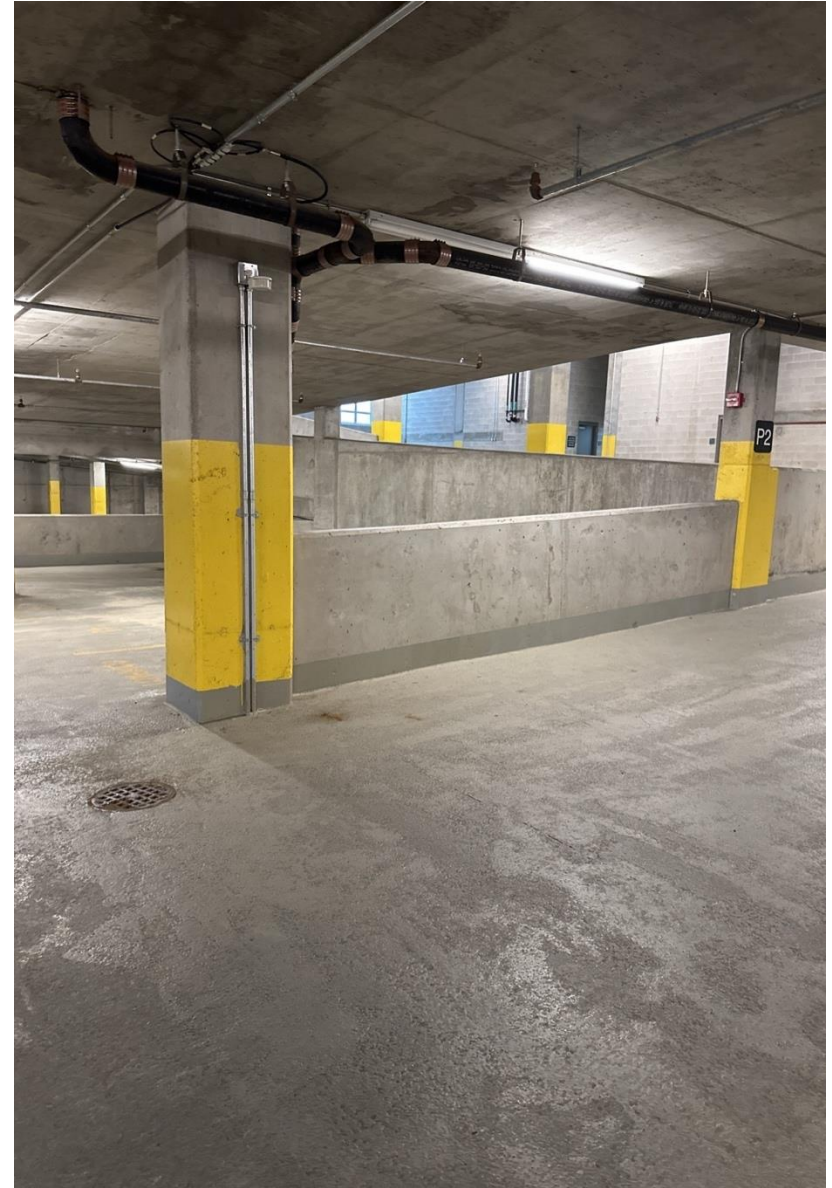


# Lessons Learned

High level of communication and follow-up needed with property owners

## Common Questions:

- Where is the stormwater system on my property?
- Why do I have a stormwater system on my property?
- How do I complete an inspection?
- Who can I hire to do this inspection?





# Lessons Learned

- Program needs to consider wide range of properties covered



tank 030 dmh 7 (3)



tank 030 dmh 7 (4)



tank 030 dmh 7 (5)



tank 030 dmh 7 (6)



tank 030 dmh 7 (7)



tank 030 dmh 7 (8)



tank 030 dmh 7 (9)



tank 030 dmh 7 (10)

# Lessons Learned

- Finding the right contact for a property is time consuming, but crucial
- Disconnect between property owners and property managers
- Contact information in O&M Plans is quickly out of date





# Lessons Learned

- Multiple formats for submission may increase response rate, but also increase complexity of program
- Requesting inspection results and photos requires more time review, but increases confidence in quality of inspections



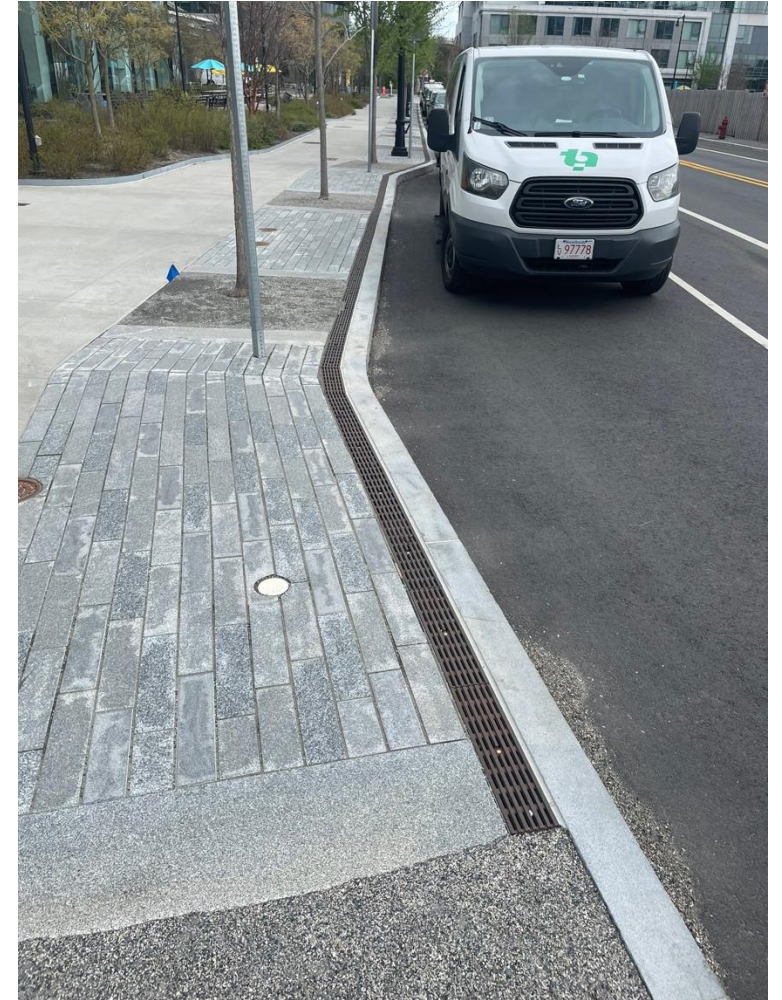


# Moving Forward

- Annual review of new SCMs constructed within past year
- Evaluate impact of RDA

## **Future considerations:**

- Expand to Mystic River Watershed
- Include SCMs in combined sewer areas
- Auditing sites



# Questions

Cambria Ung

Cambridge DPW

[cung@cambridgema.gov](mailto:cung@cambridgema.gov)

