

Close Collaboration with BWSC Leads to a Comprehensive Design-Ready Product

Boston Water and Sewer Commission Mattapan Sanitary Sewer Evaluation Survey

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01/25/2023



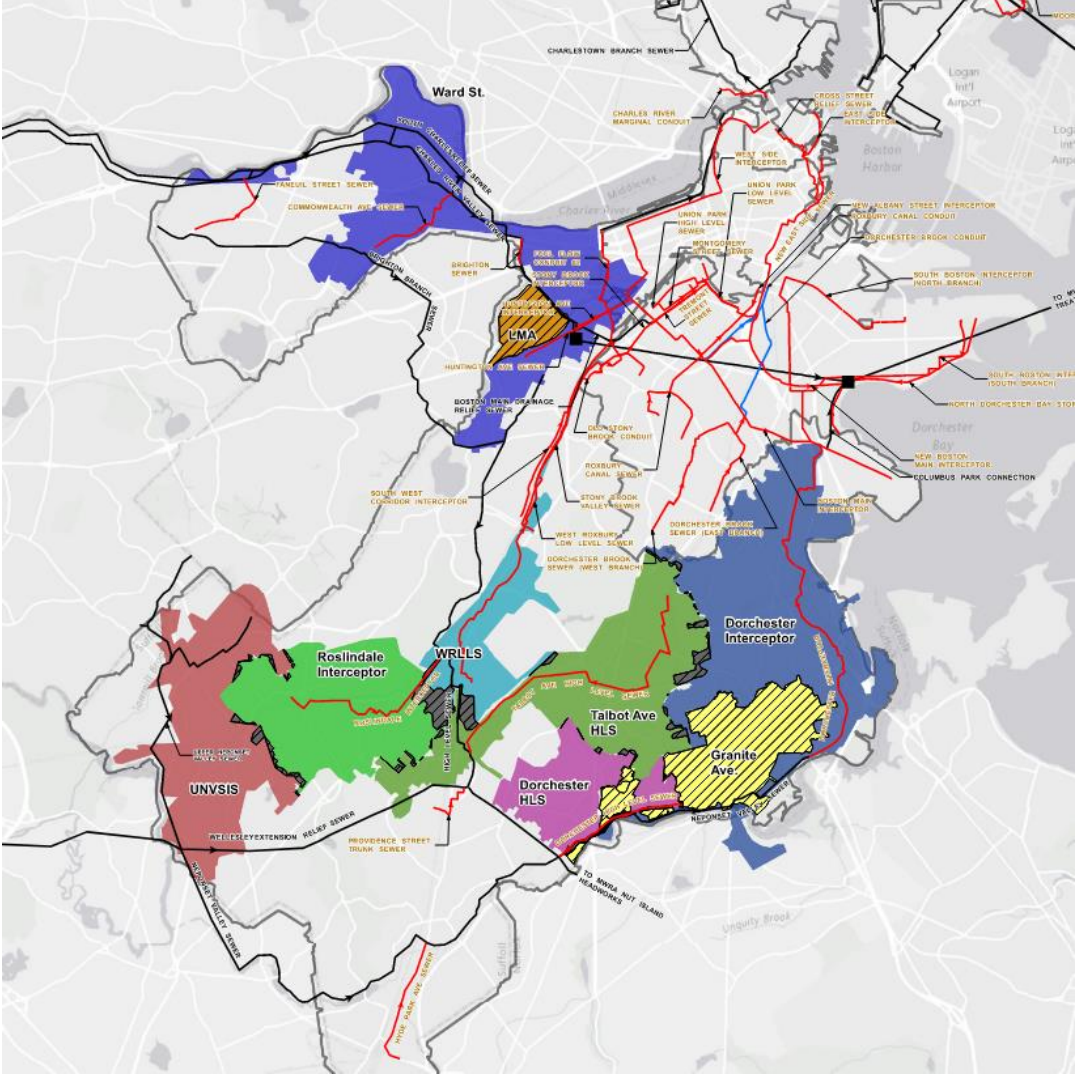
**Boston Water
and Sewer
Commission**

**CDM
Smith**



2023 Annual Conference & Exhibit
January 22-25 | Boston

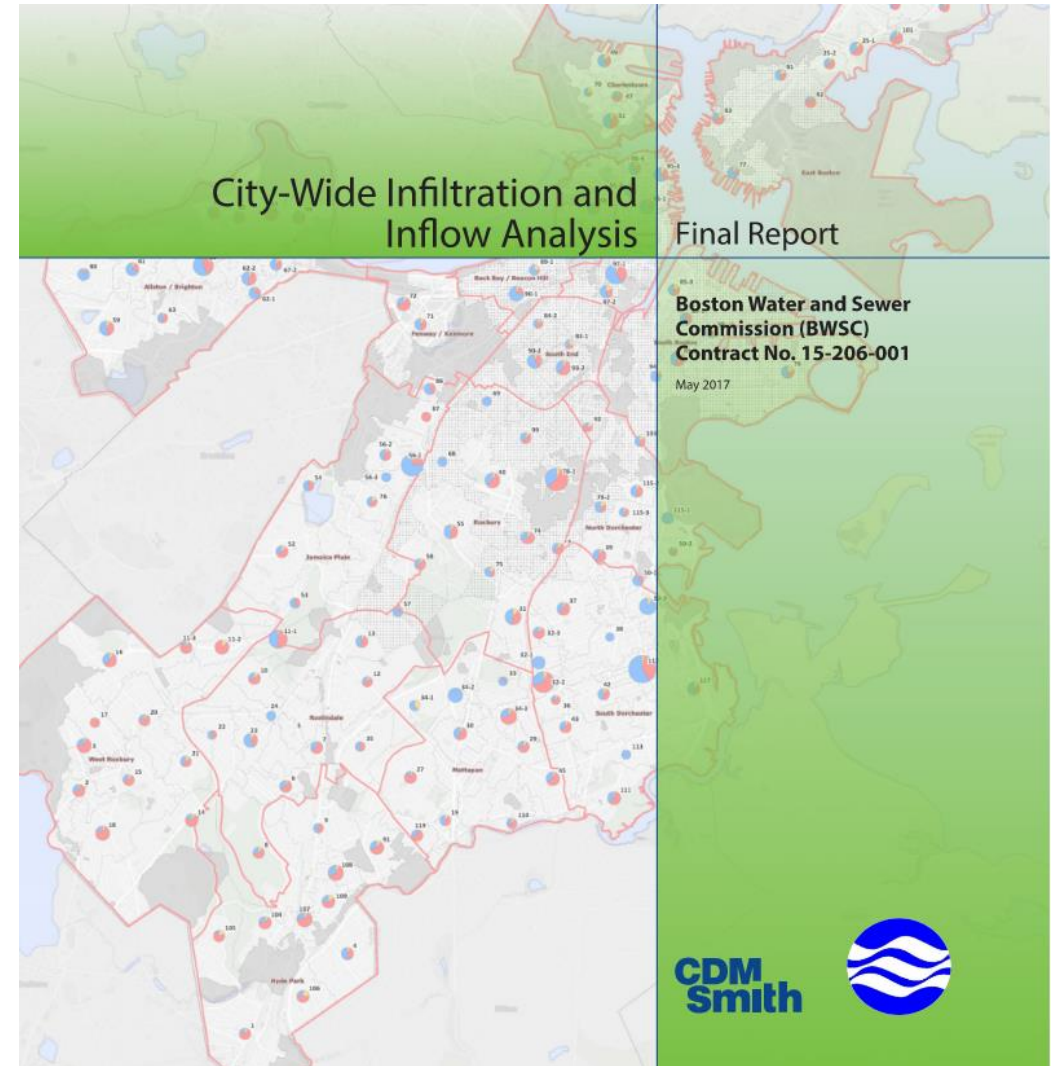
Boston Water and Sewer Commission (BWSC)



Infiltration and Inflow (I/I) Report

- City-wide report
- MassDEP 314 CMR 12.00
- Flow metering conducted in fall 2015 and spring 2016
- 4/10 study areas

2017



Previous Studies

2000

Report
Boston Water and Sewer Commission


Dorchester High Level Sewer
Infiltration/Inflow Survey

CONTRACT NO: 05-206-005
September 2006

Prepared for:
Boston Water & Sewer Commission
980 Harrison Avenue
Boston, MA 02119-2540

Weston&Sampson
Weston & Sampson Engineers, Inc.
Five Centennial Drive
Peabody, MA 01960-7985
www.westonandsampson.com
Tel: 978-532-1900 Fax: 978-977-0100

2006


 **Boston Water and Sewer Commission**

**Talbot Avenue
High Level Sewer
System Evaluation Survey**

VOLUME I

APRIL 2006

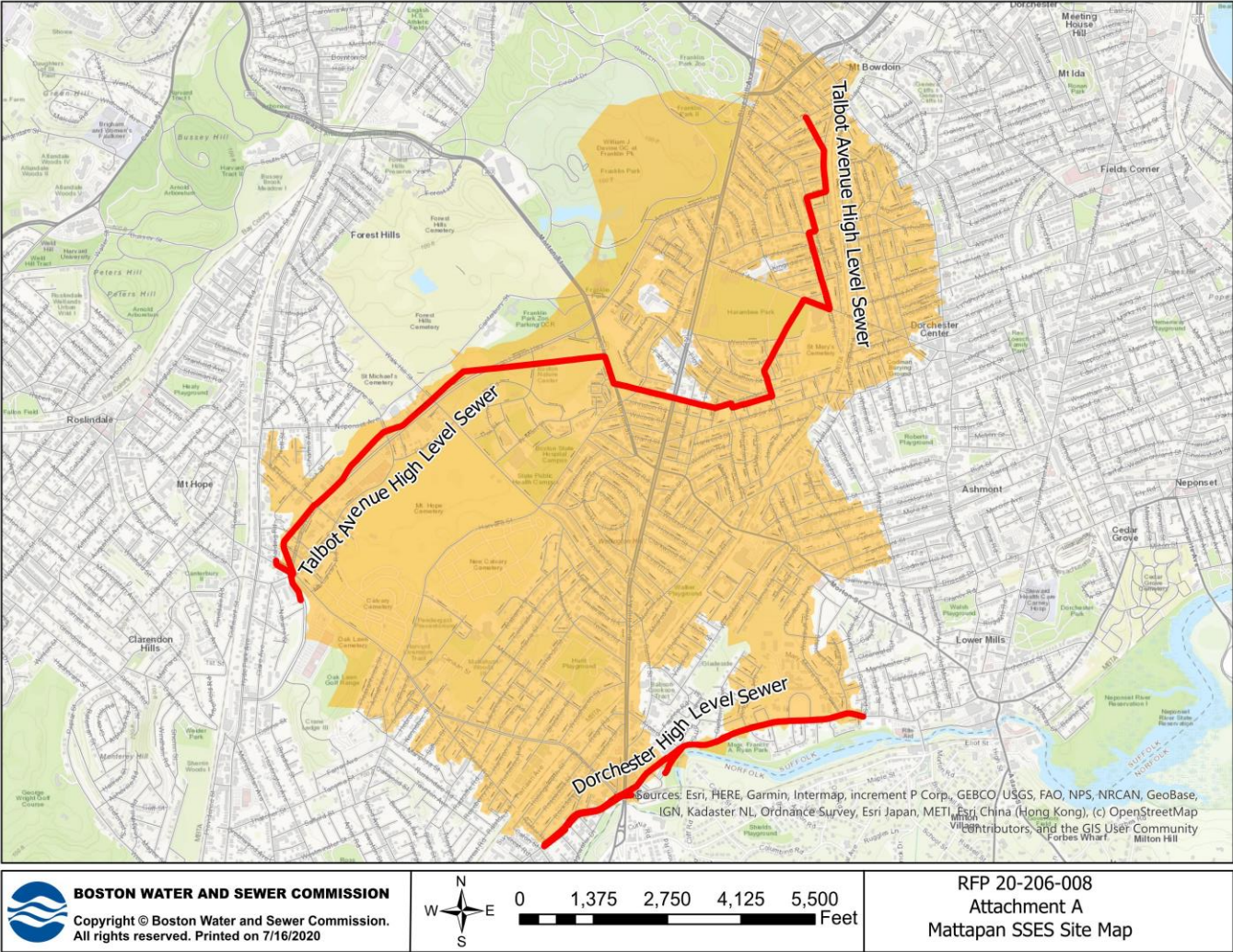
BWSC CONTRACT
No. 98-206-001



DH
Dufresne-Henry

Mattapan Neighborhood

- 2,300 acres
- 390,000 L.F. sewer



The Approach

- Targeted approach
- Adapted throughout program



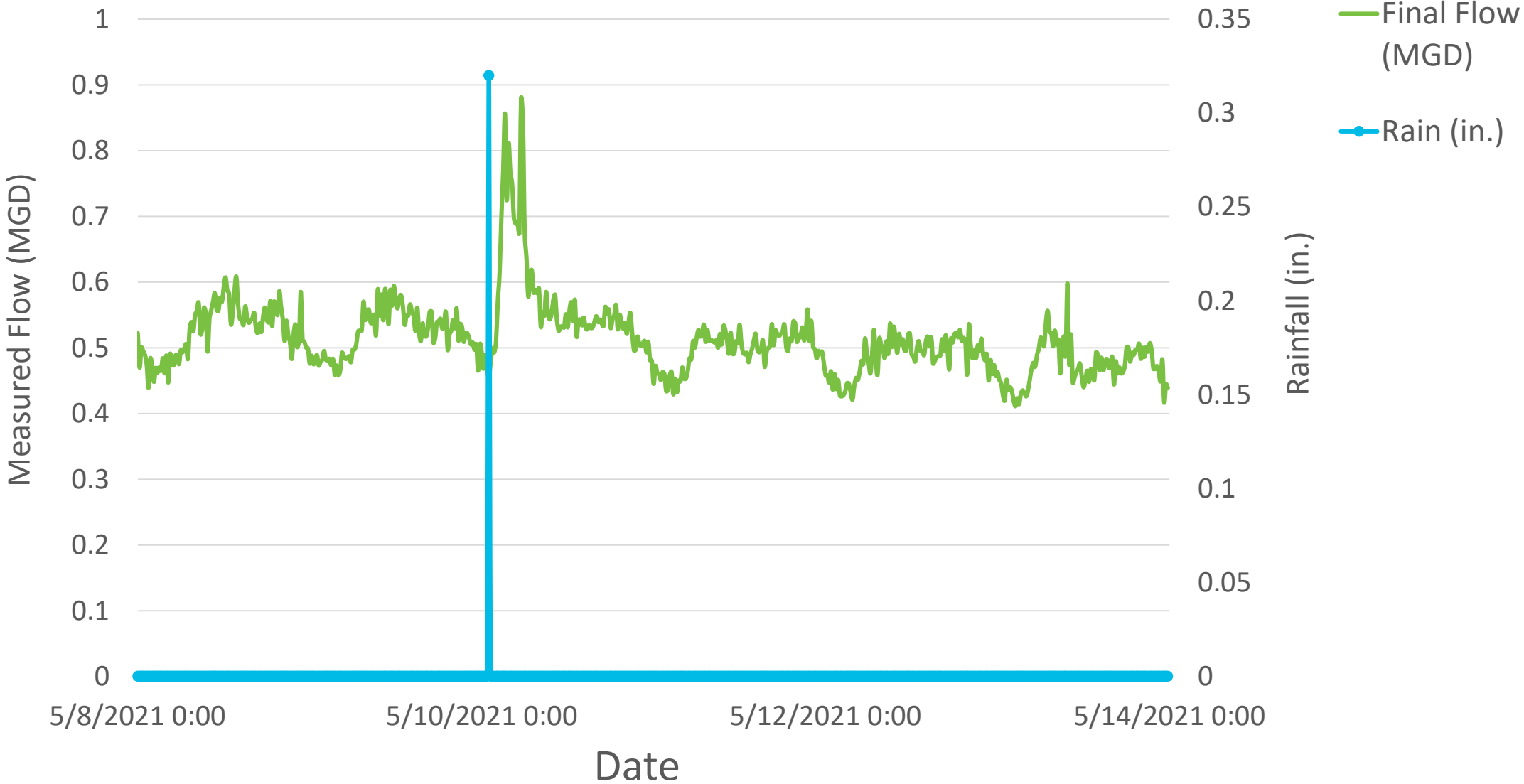
Data for Review

- Property inspections
- CMOM CCTV
- GIS
- SSOs



From GIS

Confirmatory Flow Metering (2021)

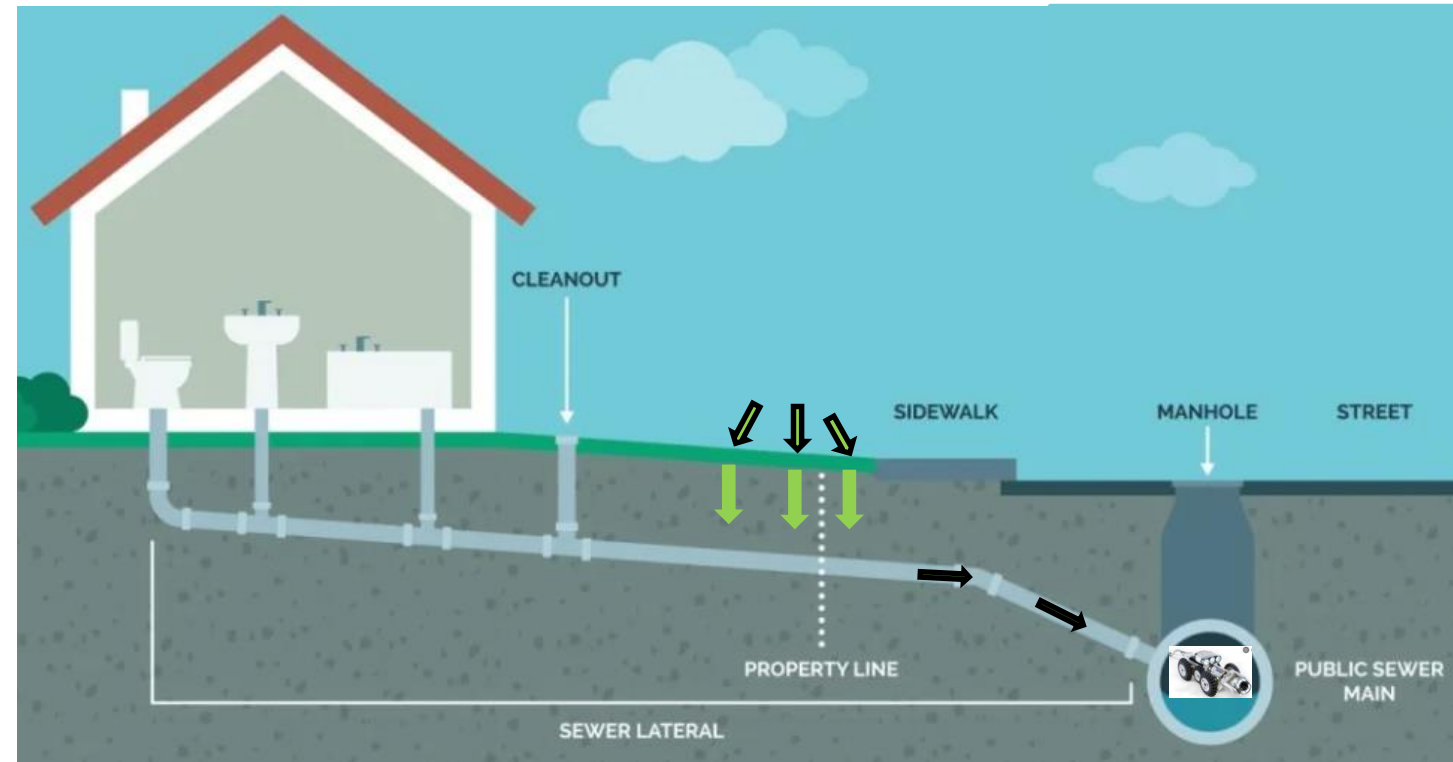


| Meter ID | Inflow Inspections | Infiltration Inspections | Inflow and Infiltration Inspections | No Inspections |
|----------|--------------------|--------------------------|-------------------------------------|----------------|
| 19 | X | | | X |
| 27 | | X | | |
| 29 | | | X | |
| 30 | X | | X | |
| 31 | | | X | |
| 32-1 | | X | | X |
| 32-2 | | X | | |
| 32-3 | | X | | |
| 33 | X | X | | |
| 34-1 | | X | X | |
| 34-2 | X | | | X |
| 34-3 | | | X | |
| 35 | | X | | X |
| 119 | | X | | |

X – Planned and X – Actual

Implementing New Field Techniques

- Pilot investigation
- CCTV camera placed in the sewer at lateral
- Dyed water poured on front yard at approximate location of lateral
- Infiltration noted





Mattapan Sanitary Sewer Evaluation Survey

Dye Water Flooding Notice

As part of the Boston Water and Sewer Commission's (BWSC) efforts to improve Mattapan's sewer system, BWSC has contracted with CDM Smith and National Water Main Cleaning Company to conduct a sewer system study for the purpose of locating sources of stormwater inflow to the sanitary sewer system in Mattapan. The overall study will attempt to locate direct and indirect connections from sources like catch basins, roof drains, broken sewer pipes, etc. One of the investigation methods being utilized is dye water flooding.

The results of the testing are for BWSC to gain a better understanding of the impacts of rainwater on the sewer system in this area. This knowledge will help prevent sewage backups and sanitary sewer overflows in your neighborhood during rain events.

During dye water flooding, dyed water will be sprayed over the front yard to simulate a rain event above the estimated location of the sewer service pipe connecting your building to the mainline sewer pipe in the street. The dye is non-toxic, non-staining, and will wash away within a few days.

You are receiving this notice because we will be in your neighborhood conducting dye water flooding within the next few weeks.

BWSC Contractors from CDM Smith and National Water Main Cleaning will be conducting testing between 10/4 – 10/15 between the hours of 9:00 AM – 5:00 PM. We would like to enter the exterior portion of your property and conduct the test, which is estimated to take approximately 30 minutes. You do not need to be home during this test. No access to any interior portion of your residence is requested or required. We will be coming back to your residence between 10/4 – 10/15 to ask for permission to enter the exterior portion of your property, sign a private property access form, and answer any questions you may have. BWSC contractors are required to carry and provide visible photo identification at all times.

BWSC thanks you in advance for your cooperation in this important matter. Please call the BWSC Communications Office at 617-989-7995 with any questions.





**Mattapan Sanitary Sewer Evaluation Survey
Property Access Permission Form**

Owners/Resident's Information:

Name: _____

Address: _____

Phone: _____

Best time to contact: _____

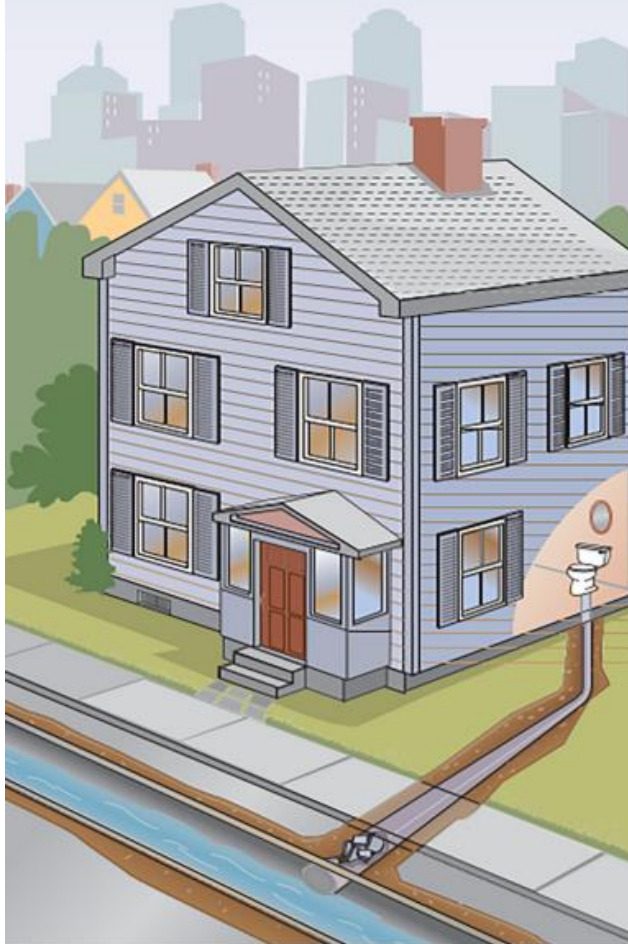
Property Being Investigated (if different than above): _____

I have received and understand the owner/resident notification letter informing me of the field investigations for the Mattapan Sanitary Sewer Evaluation Survey. With my signature below, I grant permission to the Boston Water and Sewer Commission and its agents, CDM Smith and National Water Main Cleaning Company, to enter the exterior portion of my property at the above location for the purpose of rainwater simulation tests. Clear and/or green dyed water will be used to investigate the performance of my exterior stormwater-related facilities including rain gutters, downspouts, area drains, and any other such facilities, on a single specific date in the months of July and August 2021, to be determined by the Boston Water and Sewer Commission. I understand that my presence is not required and no access to any interior portion of the residence is required.

My signature also indicates that I am the property owner and/or resident of the property where the investigation is to occur.

Owner/Resident's Signature

The Sewer Lateral Financial Assistance Program





Typical Smoke Testing

1



■ Front yard

2



■ Front yard

Smoke Testing – Interfacing with the Public

- Visited Fire Departments in advance
- Recommend Police details



Catch Basins Previously Disconnected



Final Documents

FINAL
REPORT

Boston Water and Sewer Commission
Sewer System Evaluation Survey Report
Mattapan
Contract No. 20-206-008

Boston Water and Sewer
Commission
Volume 1 of 4
February 2022



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