Welcome!

In person folks are grabbing food, expect start about 6:05pm!

OFFICE OF GREEN INFRASTRUCTURE

CITY OF BOSTON

Flood Mapping and Green Infrastructure Planning

Public Meeting #2

June 23, 2025 (hybrid meeting)

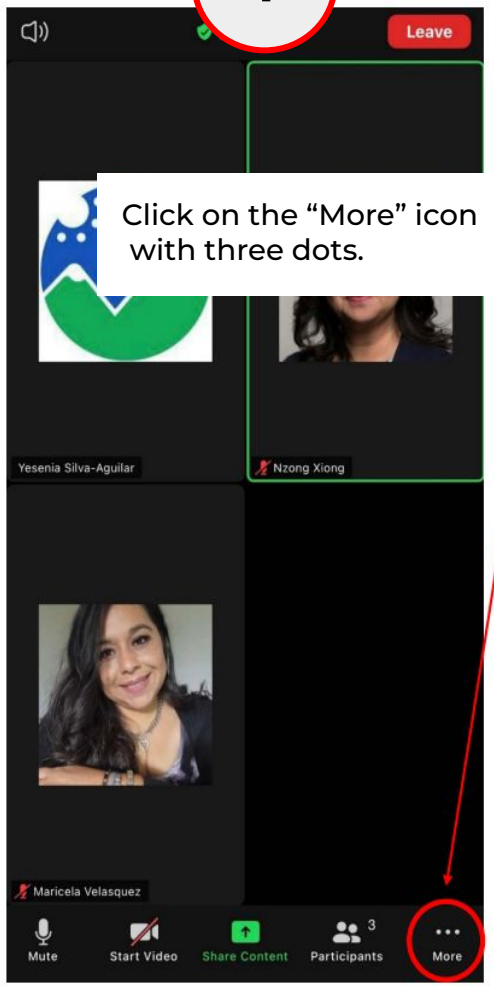
OFFICE OF GREEN INFRASTRUCTURE

CITY OF BOSTON

Zoom Interpretation Services (Credit: San Joaquin Valley Air District)

On your cellphone

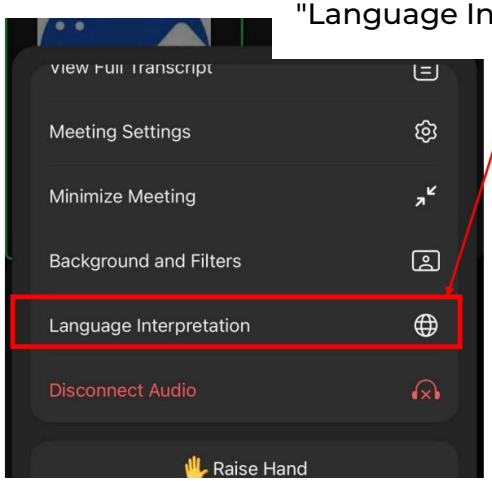
1



Click on the “More” icon with three dots.

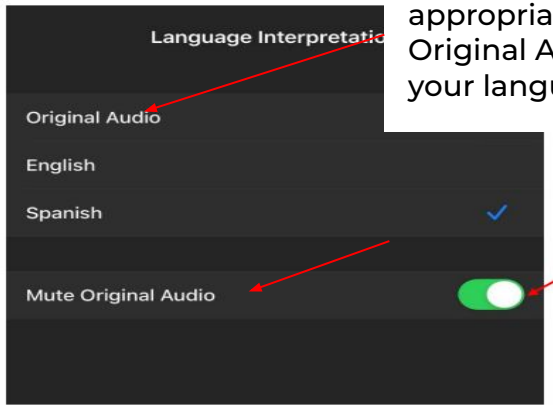
2

Look through the menu for the "Language Interpretation" option.



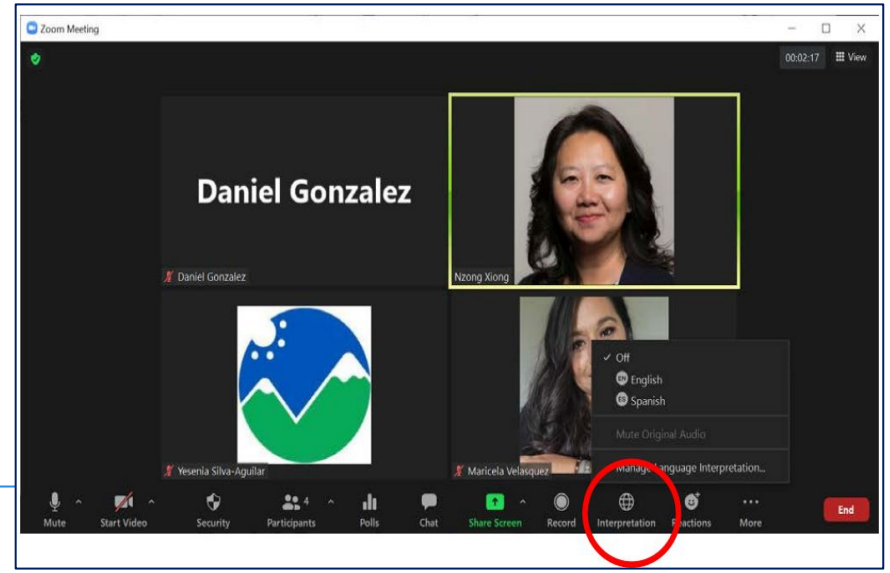
3

Click your language to go to the appropriate channel. Then, select “Mute Original Audio” to ensure you only hear your language.



On your computer

You will see the interpretation options at the bottom of the screen, as seen below. Click the interpretation icon (globe) to view language options (English, Spanish).



Welcome to Nubian Square

Nubian Square (Streets | Roxbury)

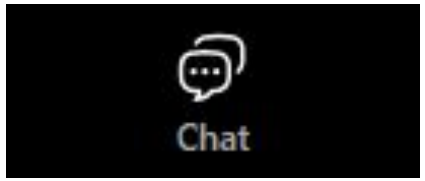
MEETING AGENDA

- WELCOME
- STORMWATER & GREEN INFRASTRUCTURE
- FLOOD SURVEY DATA
- ENGAGEMENT SUMMARY
- PRIORITY AREA SELECTION PROCESS AND RESULTS
- QUESTIONS?

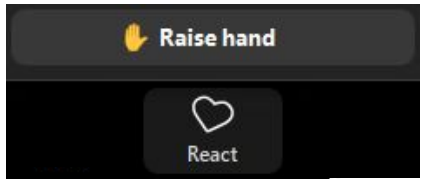
MEETING FORMAT

During the presentation, all microphones will be muted.

Once the presentation is over, we will take questions and comments in two ways:



Through the ***Chat tab*** at the bottom of your screen; or



You can ***raise your hand*** and we will take your questions in the order that hands were raised.

PROJECT TEAM

The Public

Providing flood data

- Boston residents
- Commuters
- Students
- Visitors

We want to hear from you!

City of Boston

Project Lead:
- Office of Green Infrastructure (*Kate England, Director of Green Infrastructure*)

Support:
- Office of Neighborhood Services
- Community Engagement Cabinet

Although not a direct project team member, BWSC will also be engaged

CBOs and Nonprofits

Leading outreach and engagement

Charles River Watershed Association

Mystic River Watershed Association

neponset river watershed association

CODMAN SQUARE NEIGHBORHOOD DEVELOPMENT CORP

Weston & Sampson

Supporting data aggregation and green infrastructure screening

Stormwater & Green Infrastructure

Nubian Square (Streets | Roxbury)

What is stormwater?

Stormwater is generated when rain falls on impervious surfaces, like roads, roofs, driveways or sidewalks and “runs off,” rather than absorbing into the ground.

Catch basins in our roadways capture stormwater and convey runoff to our water bodies.

Audubon Circle (Streets | Fenway)

So, what's the problem?

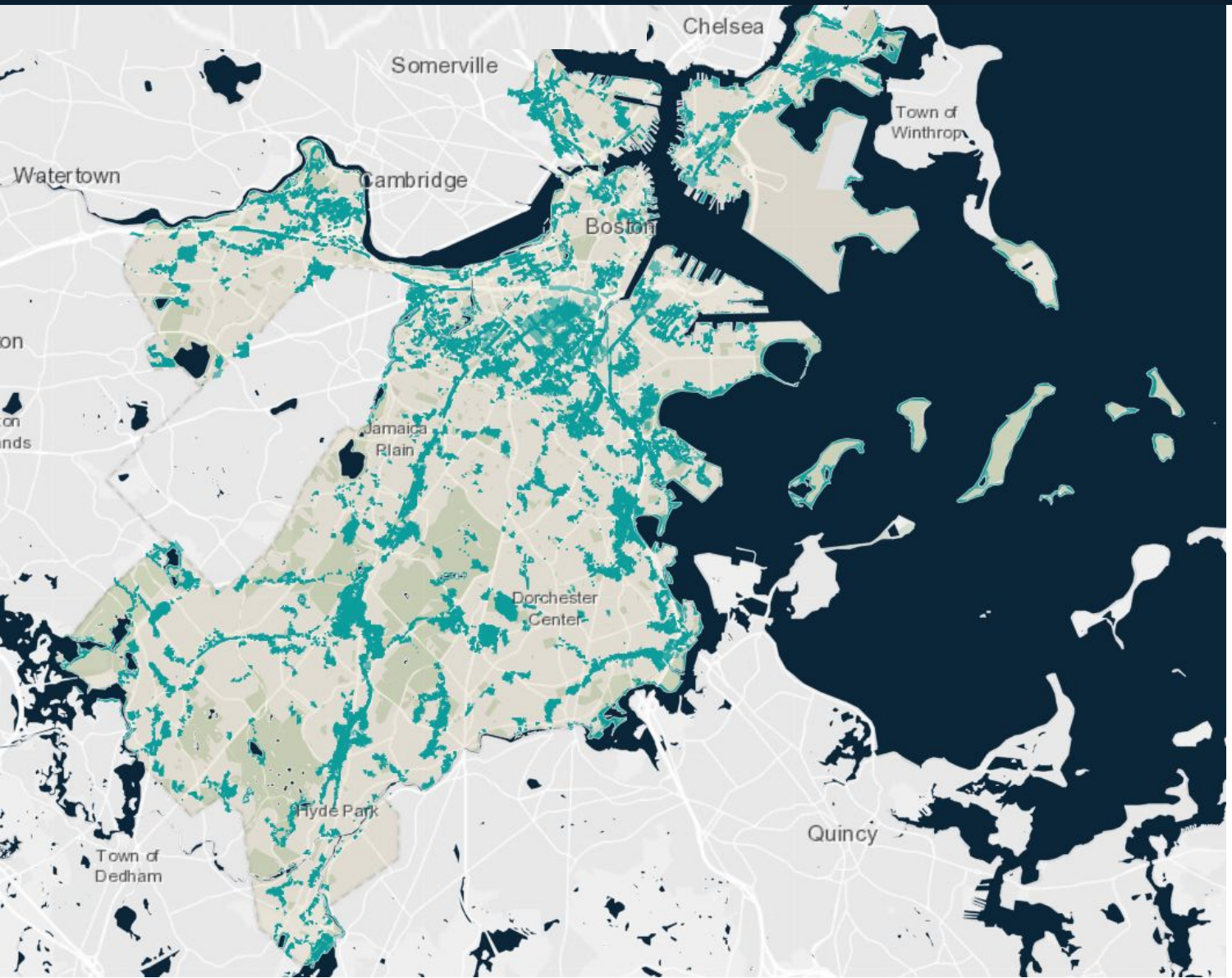
Quality

- As stormwater travels along hard, impervious surfaces, it picks up pollutants and litter along the way.
- Storm drains then release pollutant laden stormwater into receiving waters, which creates impaired water bodies, damages ecosystems and closes beaches.

Quantity

- During "typical" storm events, stormwater is largely captured and conveyed by storm drains.
- During large storm events, the storm drain system can become overwhelmed and outfalls can be blocked by storm surge and higher than normal tides, resulting in stormwater flooding.

Expected Stormwater Impacts



- Stormwater Inundation Mapping shows the projected “Long Term” impacts of stormwater
- Flooding in every neighborhood
- This affects us all!

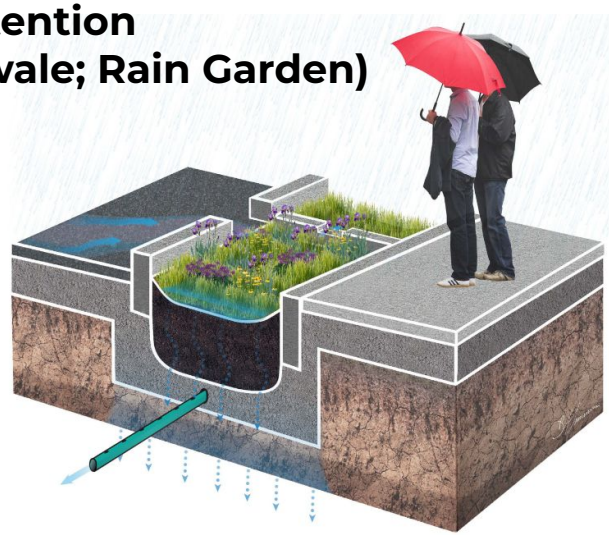
Source: Climate Ready Boston Map Explorer

Green Infrastructure ("GI") uses plants, soil and other natural materials to mimic or restore the natural water cycle. GI can capture, purify, store and infiltrate stormwater back into the ground.

Harambee Park (BPRD | Dorchester)

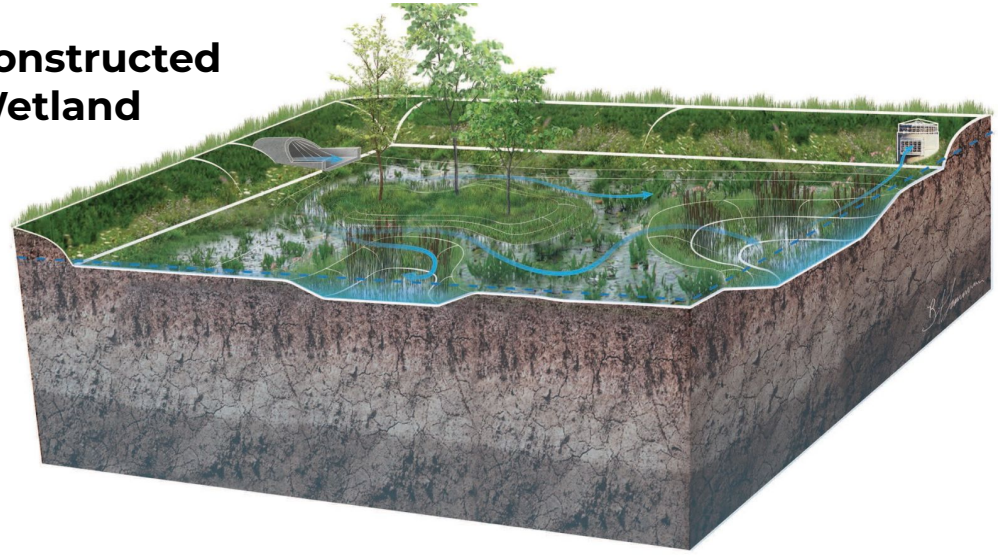
Green Infrastructure Features

Bioretention (Bioswale; Rain Garden)

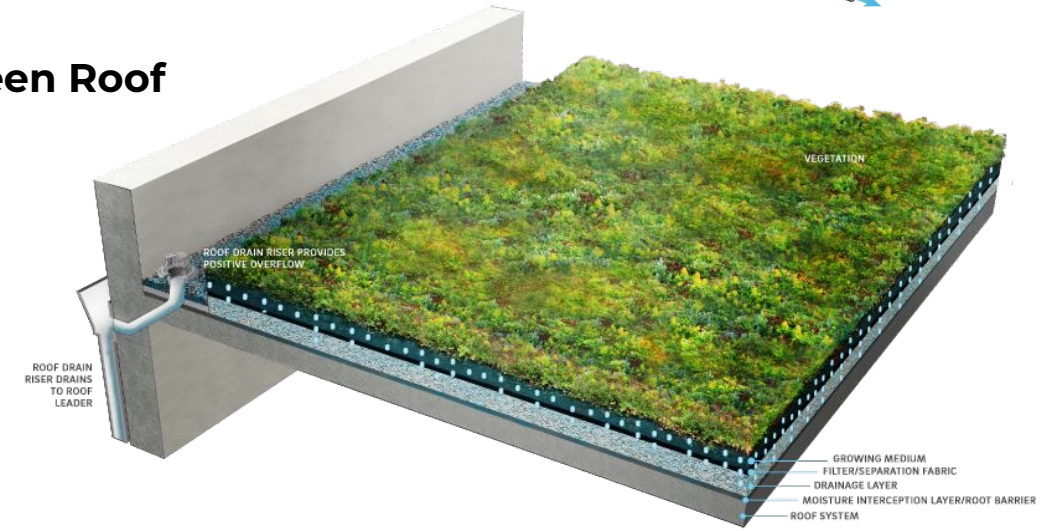


Tree Pit/Tree Trench

Constructed Wetland



Green Roof



Co-Benefits

Nubian Square (Streets | Roxbury)

- Increased urban green space / tree canopy
- Reduced urban heat island effect
- Slower streets / improved pedestrian & cyclist safety
- More biodiversity / pollinator habitat
- Reduced energy usage
- Improved Environmental Justice
  (e.g. air quality, access to nature, food security, etc.)
- Opportunities for environmental education

Green Infrastructure in Boston

Mary Ellen Welch Greenway (BPRD | East Boston)

Franklin Field (BHA | Dorchester)

New England Avenue (Streets | Dorchester)

Cassidy Playground (BPRD | Brighton)

West Street Urban Wild (BPRD | Hyde Park)

Early Education Center (BPS | East Boston)

Nubian Square (Streets | Roxbury)

PROJECT OVERVIEW

October 2024 - June 2025

July 2025 - June 2026

Inland Flooding Database

Collect data, design database

Data Display

Crowd source data, share data publicly

Site Prioritization + Initial Design

Prioritize flooding areas, design concepts, get feedback

Concept Designs

Prioritize, visit sites, collect data, refine designs, identify next steps and costs

Interactive Display + Resources

Make a data viewer, share resources

Community Engagement

Meetings and events, crowd sourcing, capacity building, survey, video

submit your data through June 2026 and beyond!

WHAT IS THE MVP PROGRAM?

Municipal Vulnerability Preparedness (MVP) is a grant program offered by the Massachusetts Executive Office of Energy and Environmental Affairs (EEA)

MVP provides support for cities and towns in Massachusetts to:

1. ***Plan for climate change*** resiliency during the Planning Grant phase of work, and
2. ***Implement priority projects*** during the Action Grant phase of work.

Boston Community-Based Flood Resilience and Green Infrastructure Planning
FY25/FY26 MVP Action Grant

Total Grant: $449,710

In-Kind Match: $14,000

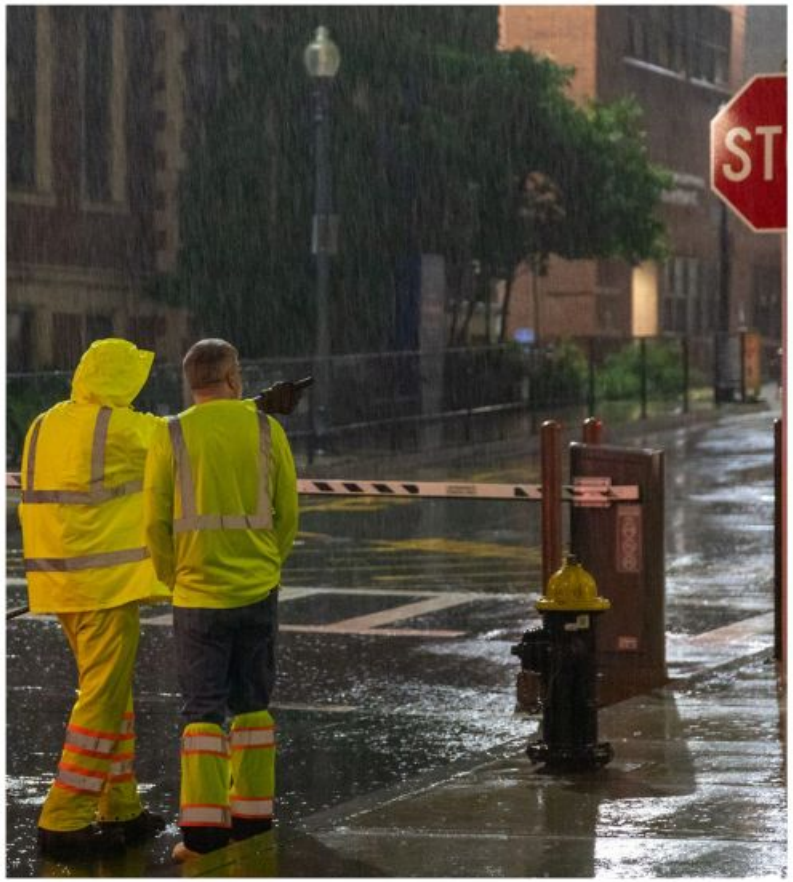
Cash Match: $36,000

Providing $90,000 of grant to community partners

Source: Municipal Vulnerability Preparedness (MVP) program | Mass.gov

Crowd-Sourcing Data

FLOODING CAN MEAN DIFFERENT THINGS TO DIFFERENT PEOPLE!



Flooding along a Boston road in 2023, during a heavy rainfall.
Photo by Weston & Sampson

King Tide flooding in Boston in 2021, blocking access to a curb cut.
Photo by Weston & Sampson

Flooding in East Boston on December 23rd, 2021
Photo by NBC Boston

WHY CROWD-SOURCED FLOOD IMPACT?

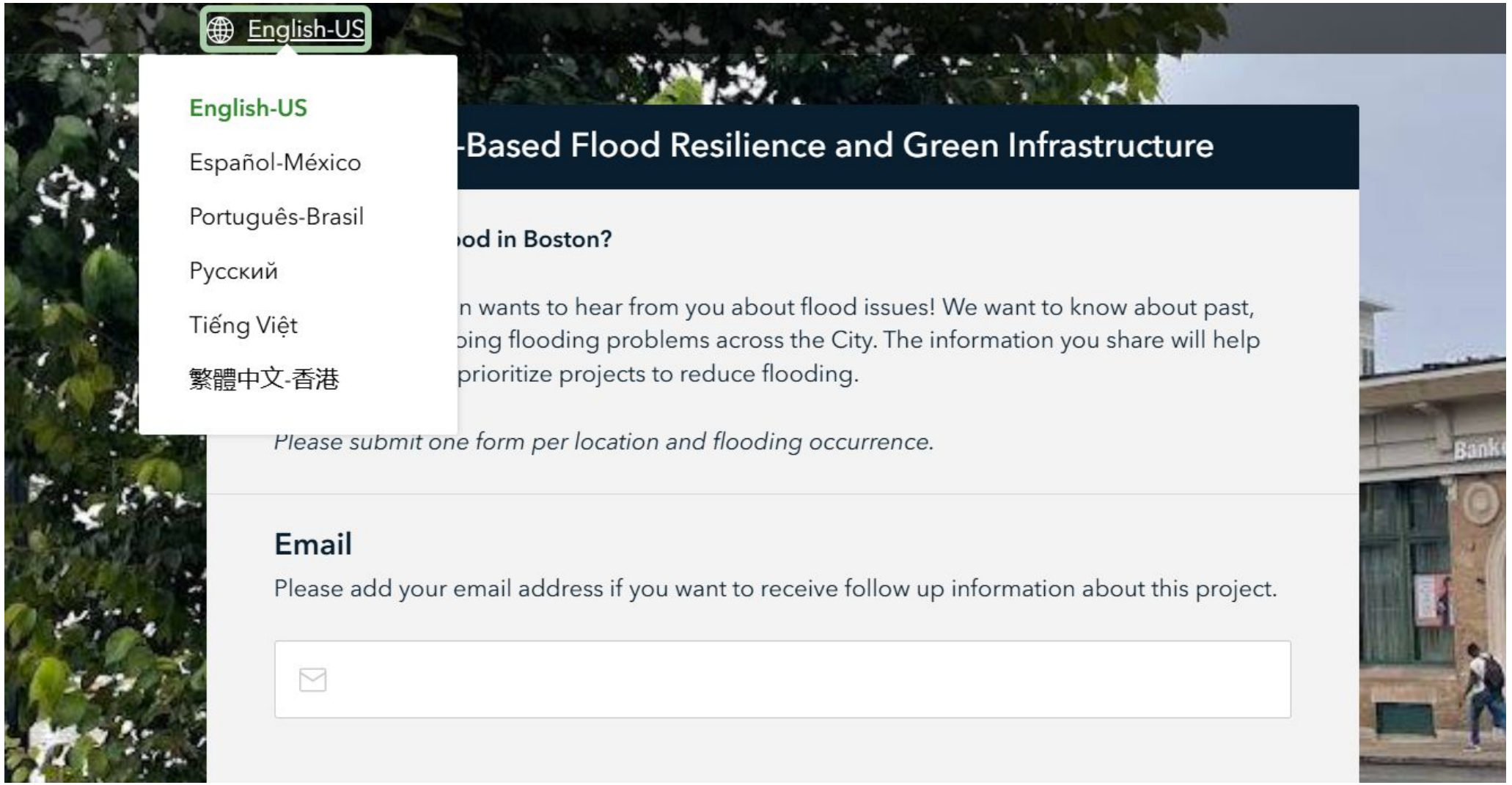
- Real-time reports
- Access local/historical knowledge
- City-wide data collection
- Engage residents, students, commuters, etc. in flood planning

Flooding along Commonwealth Avenue in January 2025. Photo recorded by survey participant.

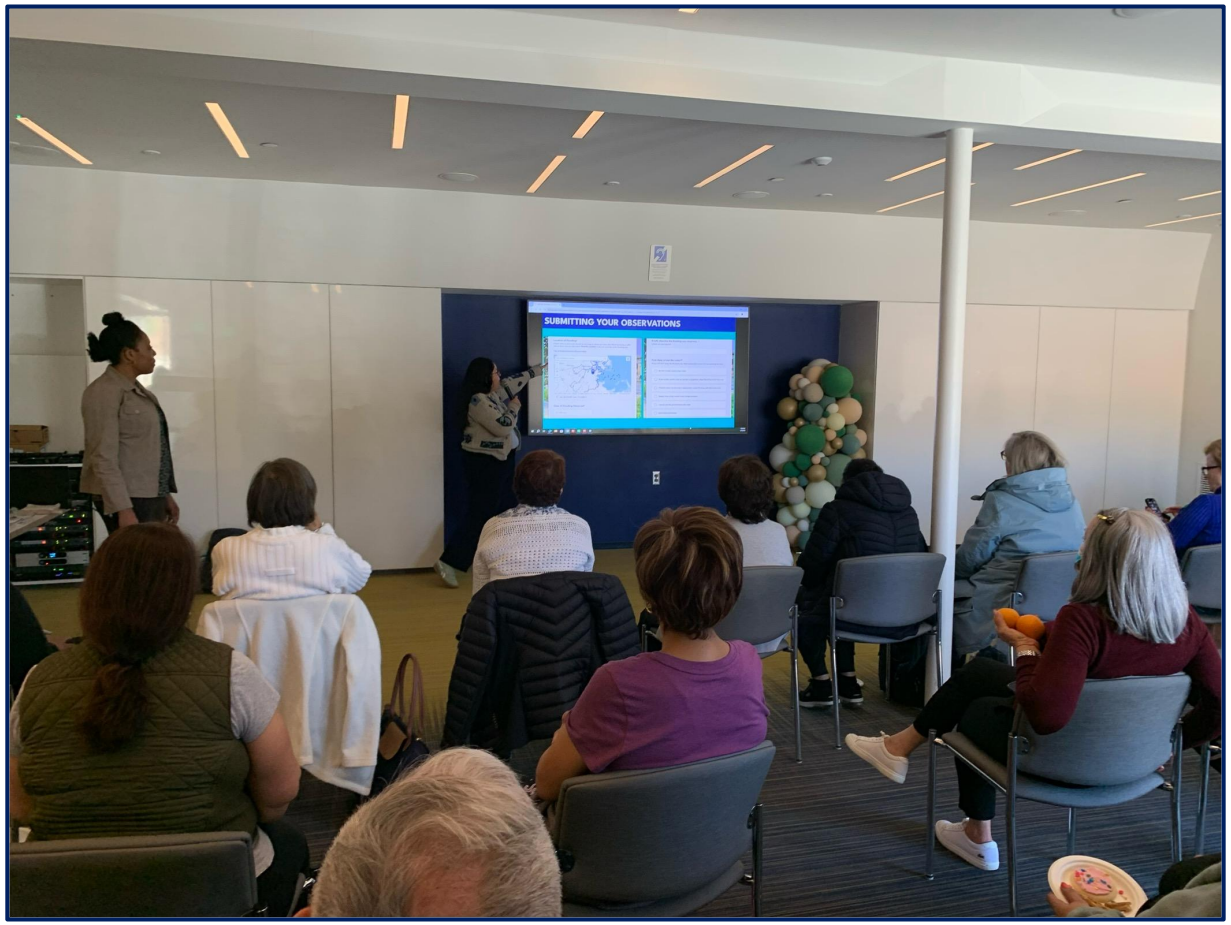
Flooding in East Boston in December 2024. Photo recorded by survey participant.

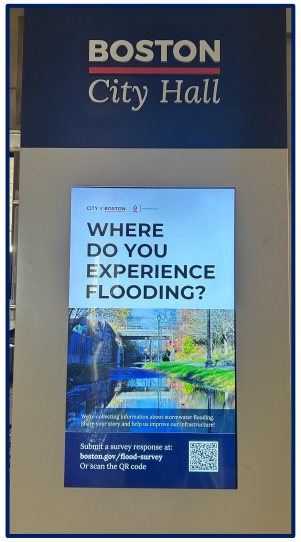
Flooding near Wellington Hill in March 2024. Photo recorded by survey participant.

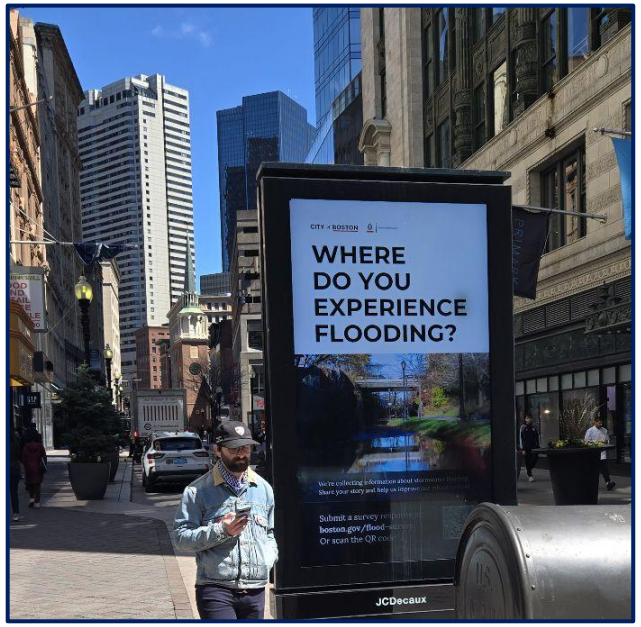
SURVEY AVAILABLE IN 7 LANGUAGES



PROMOTING IT IN THE CITY!







FEEDBACK FROM CITY LEADERS AND KEY STAKEHOLDERS

- Disability Advisory Board Executive Committee
- Age Strong Advisory Council
- 311
- Office of Climate Resilience

PROMOTING IN PRINT

THE BOSTON GUARDIAN

February 21, 2025 Vol. 9 Issu

Wu Won't Discuss Bike Lane Study

By Brandon Hill

Although announced last week, Mayor Michelle Wu's administration has not been able to answer specific questions about a 30-day study of bike and bus lanes.

The Boston Guardian inquired last Friday about the role and makeup of the study's advisory board, the streets that the study would focus on and how the public will be involved in evaluating the results.

Continued on Page 2

Group Restructure To Deal with Drugs

By Erez Ben-Akiva

A near decade old grassroots committee intended to address the drug addiction and violence at Massachusetts Avenue, Melnea Cass Boulevard (Mass and Cass) and surrounding neighborhoods is restructuring into what the groups calls a partnership between neighborhood stakeholders and city, state and representatives.

The South End, Newm Roxbury Working on Addiction, Recovery, Homelessness reorganizatio see a five-person co-chairm formed, designed to act steering group.

Continued on

There is Some Logic To Our Chaotic Streets

by Mannie Lewis

Compared to the streets of Manhattan and Washington, D.C., conveniently organized by numbers and letters, Boston's spiral of streets may appear chaotic and random to first-time residents. But there is a method to Boston's geographic madness, at least to a degree.

When Boston was first founded in 1630, it had so few residents that its streets were initially left nameless and remained that way until 1700.

The first street in Boston to receive a name was Hull Street in what is now the North End. The name was given by Hannah Hull Sewall, wife of judge, businessman and printer Samuel Sewall, in honor of her deceased parents.

Continued on Page 2

City Crowdsourcing Data on Flooding

Fenway Greenway station in

By Erez Ben-Akiva

The City of Boston is asking the public to submit reports of flooding events through a survey to better determine where it occurs.

Whether it's standing water on a road, a puddle on a sidewalk or a river overtopping, flood spotters are being told. If yo something, say something.

Continued on

THE BOSTON GUARDIAN 2 | February 21, 2025

Bike Lane

Continued from Page 1

The administration's statement instead echoed the same content and language of a public letter Mayor Wu wrote to Back Bay leaders about the removal of the Boylston Street bus lane last week. In the statement, a city spokesperson said that "All individual projects are discussed with the community," but a recently launched website critical of the city's bike infrastructure has been vocal about the lack of community input.

Behind the PedalSafeBoston website is Jay Cashman, a longtime Back Bay resident and owner of one of the largest construction and development firms in the Northeast.

Cashman said in an interview that Boston's bike infrastructure has been forced through a section at a time, disregarding feedback and without a larger vision for what connected bike infrastructure should look like citywide.

"It was a mock community process," he said, indicating that developers held summer meetings while many residents are away and installed new lanes within a matter of weeks, while not responding to community comments.

"I had a meeting, I invited 50 neighborhood associations. 33 of them showed up. When everybody had time to talk, they all said the same thing, no planning," Cashman said. "Over in Cambridge, we actually tested over there, if you have a question about the bike lanes they'll actually answer you in a couple days."

Mayor Wu seemed to acknowledge the frustration in her letter, saying, "As citywide bike infrastructure has been built out piece by piece across the last decade. These last links are often the most difficult community conversations involving significant tradeoffs. I have heard from you and other community members that the process to evaluate these tradeoffs and the varying perspectives of local neighbors and citywide commuters has at times felt rushed and predetermined."

The PedalSafeBoston website contains a page dedicated to each individual bike lane project implemented over the last several years, complete with specific criticisms that mostly come down to insufficient studies making it difficult to evaluate the safety impact. Cashman would like to see many such projects rolled back while the city undertakes a serious evaluation of its larger vision for a connected bike system.

"This is not a $10 million project. This is probably over 20 years, probably a $300- or $500 million-dollar project, and probably the first part of it is $10 million worth of planning," Cashman said.

Over the past fifteen years, Boston has incrementally developed its bike infrastructure under several administrations. The city spokesperson said that "roughly half of that total bike lanes that have been built under this administration, or are currently under construction, were designed in prior administrations." These projects have often implemented temporary measures such as plastic flex posts and painted road markings. Mayor Wu acknowledged in the letter that many such quick fixes have remained longer than anticipated and without proper review. Since 2007, of the 65 miles of bike lanes added, only 17.5 miles has been protected bike lanes.

"At this point in Boston's evolution of roadway design it is time to review what has been installed over the last fifteen years, adjust or redesign what has not been functioning well, and transition successful temporary safety fixes into permanent, beautiful infrastructure that enhances quality of life and matches the character of our neighborhoods," read Mayor Wu's letter.

Flooding

Continued from Page 1

The aim, according to the city's Office of Green Infrastructure, is to use the information collected from the survey to help identify and prioritize locations that need green infrastructure like constructions of plants, soils and other natural materials that capture water.

Those green infrastructure pieces, such as bioswales and rain gardens, are designed to allow water to be absorbed back into the ground. That's in contrast to how water runs off impervious surfaces like roads and sidewalks until it reaches a drain or catch basin.

The city's storm drains are designed to handle 5 inches of rain runoff across a period of 24 hours, according to Kate England, Boston's inaugural director of green infrastructure.

But as the climate has continued to change, Boston has experienced more rain and heavier storms.

In recent years, storms have dropped 1 to 2 inches of rain in just an hour, and the stormwater system isn't big enough to manage that amount of water at once, England said. The result is flooding.

One neighborhood at particular risk of flooding is the Back Bay, according to Michael McCord, head of the Neighborhood Association of the Back Bay's Green Committee, who said filling out the survey is a "small thing that people can do, but an important thing." That the area's sewer system gets overwhelmed during heavy rainstorms is "an early indicator of the Back Bay's inability to deal effectively with torrential rains," McCord said.

The neighborhood also abuts the Charles River, which could overflow its banks.

"I think with the combination of rising tides from global warming and the impact of horrendously huge rainstorms that we're seeing from global warming, the Back Bay is pretty vulnerable," McCord said.

More than $450,000, primarily from a state grant, is going into the project, and data from the survey will be collected until June, according to England.

"What we are trying to do is crowdsource from the people who know our neighborhoods best," England said at a January 15 public meeting. "Your understanding and knowledge of when flooding occurs, sometimes why flooding is occurring, is so valuable to the work that we are going to be doing."

Other information, like 311 calls, will also be incorporated into the evaluation, according to Jennie Moonan, a project manager for engineering consultant firm Weston & Sampson.

"This is going to be decades of building infrastructure differently, and with an awareness of the dangers of flooding," McCord said.

The flood survey can be found at boston.gov/departments/green-infrastructure/flood-survey.

Chaotic Streets

Continued from Page 1

On Beacon Hill, many of the streets are named for founding fathers and noteworthy figures in the Revolutionary War, including Hancock and Revere Streets.

The neighborhood now known as Beacon Hill was initially composed of three hills, and was referred to as Tri-mount, or Tremont. During the Revolutionary War, a beacon was placed at the top of one of the hills, to warn residents about approaching invaders, and the name stuck.

While Tremont no longer refers to a neighborhood, its name lives on as Tremont Street, which stretches from Downtown to the South End and beyond.

Many names for Boston streets originate from English towns, regions, or royalty. For instance, Charles Street takes its name from English ruler King Charles, and Cambridge Street is named after Cambridge, England.

Boston itself is named after a town in the English county of Lincolnshire, from which several prominent colonists emigrated. The word Boston is also a derivation of Botolph, the patron saint of travelers, which is where St. Botolph Street in the South End gets its name.

The street names of the Back Bay have a particularly British influence. The neighborhood's streets running from North to South each stem from a different English lord, arranged in alphabetical order.

This pattern begins with Arlington and continues all the way to Hereford on the far side of the Back Bay.

Supposedly, the goal behind the Back Bay's Anglo names was to distinguish the newly constructed neighborhood as an exclusive locale, attracting wealthy residents, since during the 19th century, at the peak of the British Empire, English culture was considered more sophisticated than American culture.

Fenway also has several streets named after alphabetized English lords, including Ipswich, Jersey, Kenmore, Lansdowne, and Miner, although these roads don't fit neatly into a North-South formation as they do in the Back Bay.

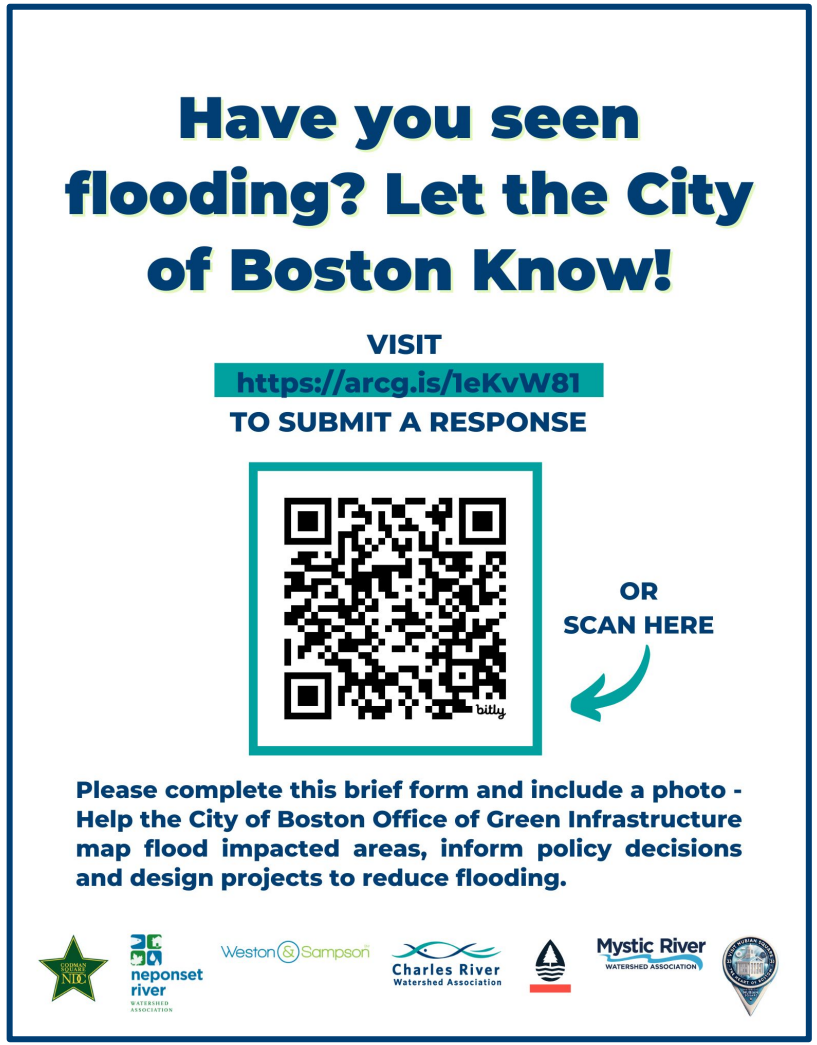
In the South End, the cross streets pull their names from Massachusetts towns, and are arranged based on their proximity to Boston.

Milford and Newton Streets can be found in the Northeast corner of the South End, while the opposite side of the neighborhood is home to Northampton and Lenox Streets.

The construction and development of Boston took place over a longer period of time than most American cities.

In fact, during the establishment of Boston's first neighborhoods, many other contemporary Boston locations such as the Back Bay and South Boston were still underwater.

Due to this staggered city planning, the logic of Boston streets operates on a strictly neighborhood-by-neighborhood basis. While this will likely be confusing for new residents, we promise you'll get the hang of it eventually.



ENGLISH

¿Ha visto inundaciones? ¡Comuníquelo a la ciudad de Boston!

VISITE
https://arcg.is/1eKvW81
PARA ENVIAR UNA RESPUESTA O ESCANEE AQUI

Por favor rellene este breve formulario e incluya una foto - Ayude a la Oficina de Infraestructura Verde de la Ciudad de Boston a cartografiar las zonas afectadas por las inundaciones, a tomar decisiones políticas y a diseñar proyectos para reducir las inundaciones.

SPANISH

Вы видели наводнение? Сообщите об этом городским властям Бостона!

ПОСЕТИТЕ
https://arcg.is/1eKvW81
ЧТОБЫ ОТПРАВИТЬ ОТВЕТ, ИЛИ ПРОСКАНИРУЙТЕ ЗДЕСЬ

Пожалуйста, заполните эту краткую форму и приложите фотографию. Помогите Управлению зеленой инфраструктуры города Бостона составить карту районов, подверженных наводнениям, обосновать политические решения и разработать проекты, направленные на снижение уровня наводнений.

RUSSIAN

Você tem visto algum alagamento? Avise a Prefeitura de Boston!

VISITE
https://arcg.is/1eKvW81
PARA ENVIAR UM AVISO OU SCANEIE AQUI

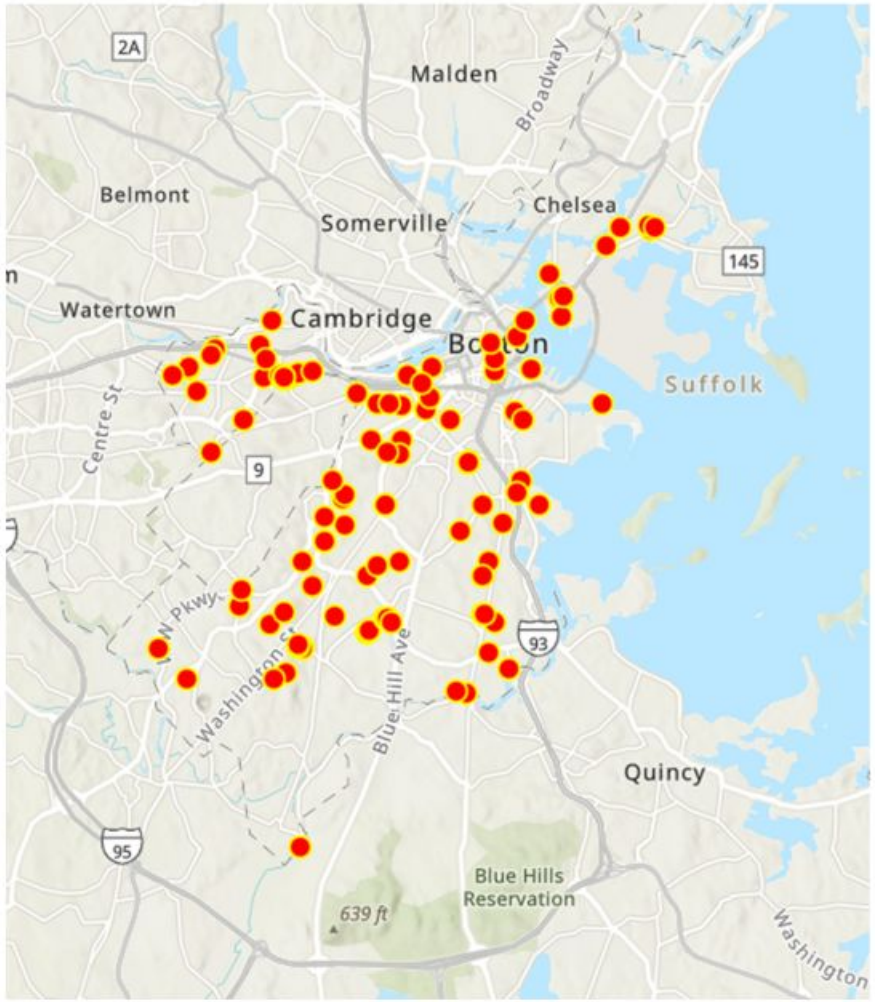
Por favor, preencha este breve formulário e inclua uma foto - Ajude o Gabinete de Infraestrutura Verde da Prefeitura de Boston a mapear as áreas afetadas, direcionar decisões políticas e fazer projetos para reduzir as inundações.

PORTUGUESE

PROMOTION SUMMARY

- 16 events and community/stakeholder meetings
- Over 350 people reached
- 2 press mentions
- 86 social media posts and counting
- 25 e-newsletters and counting
- 3 blog posts
- 1 social media video
- Lots of neighborhood flyering
- Two month-long promotional campaign on city screens (screens in downtown crossing area, at bus shelters, etc.)

OVERVIEW OF DATA REPORTING TO-DATE



Map of Inland Flooding Impact Survey responses as of June 19, 2025

138 ***survey responses*** to-date

Reported dates range from **December 2024** through ***June 2025***

Impacts of reported flooding include ***longer drive/walk times***, ***inaccessible destinations***, and ***property damage***

EXAMPLES OF DATA REPORTING

Flooding along Breed St in East Boston in December 2024. Photo by survey participant.

Flooding along Commonwealth Ave in Allston after rain event in January 2025. Photo by survey participant.

Flooding along near Wellington Hill in March of 2024. Flooding reportedly blocked a road and sidewalk. Photo by survey particpant.

EXAMPLES OF DATA REPORTING

Flooding in Dorchester reported in May 2025. Flooding covered the curb during the May Nor'easter.

Flooding downtown Boston in May of 2025. The brick plaza is reported to hold water like seen above during heavy precipitation events.

Flooding seen in July 2023 near Hyde Park. Water was reported to have flooded basements, and reached heights midway up car tires.

Identifying Flooding Hot Spots

DATA OVERVIEW

DATA COLLECTION

1. ***Flood Incident Public Survey***

2. ***Flood-related data from the City and stakeholders,*** such as 311 calls, police and fire, and existing models

3. ***Local & State-wide resources,*** such as planned roadway projects, lessons from past GSI installs, property ownership, EJ communities, urban heat islands + green deserts

USE OF EXISTING DATA

Data review

↓

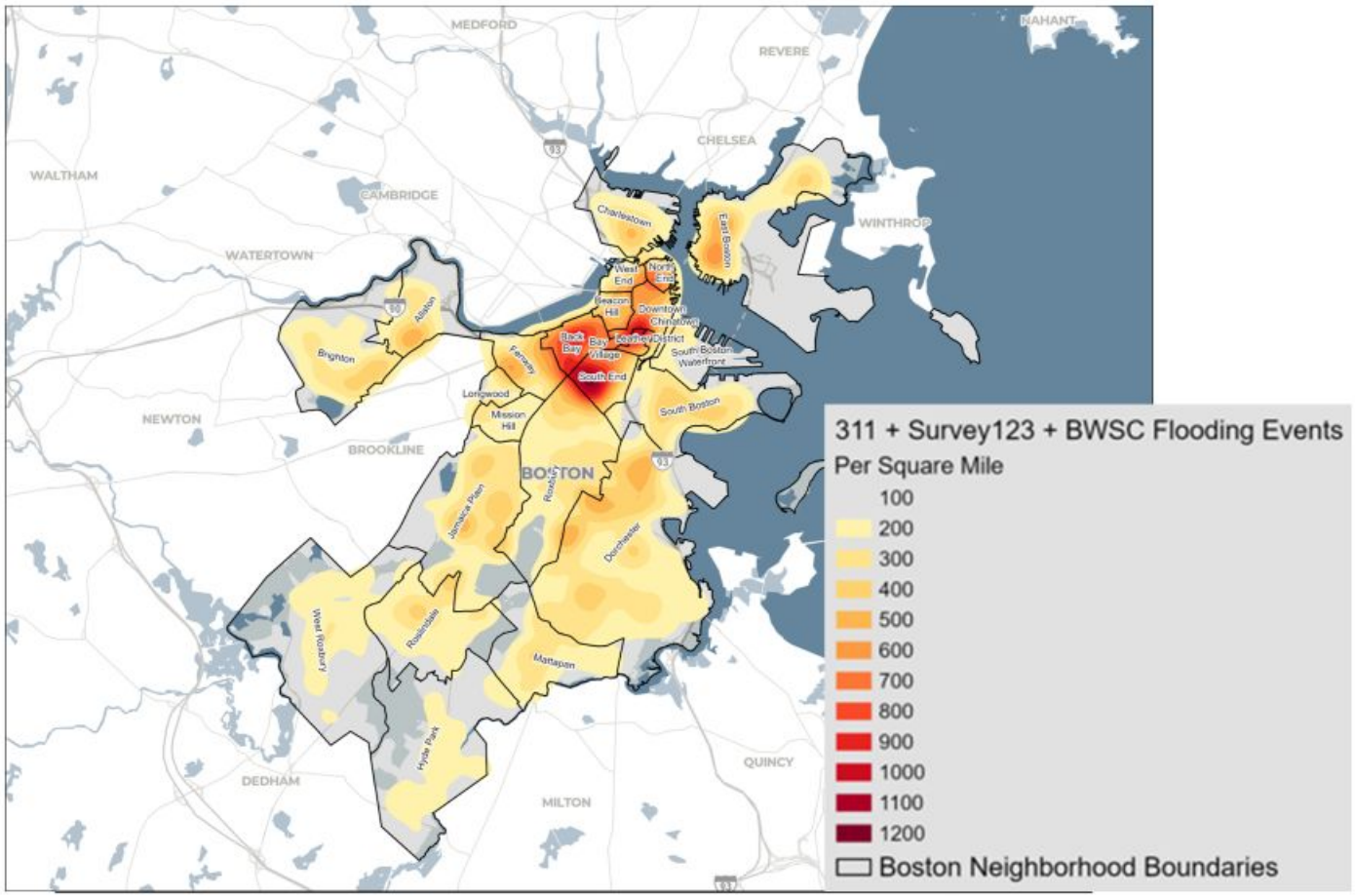
Evaluation & Prioritization

↓

Green infrastructure concepts

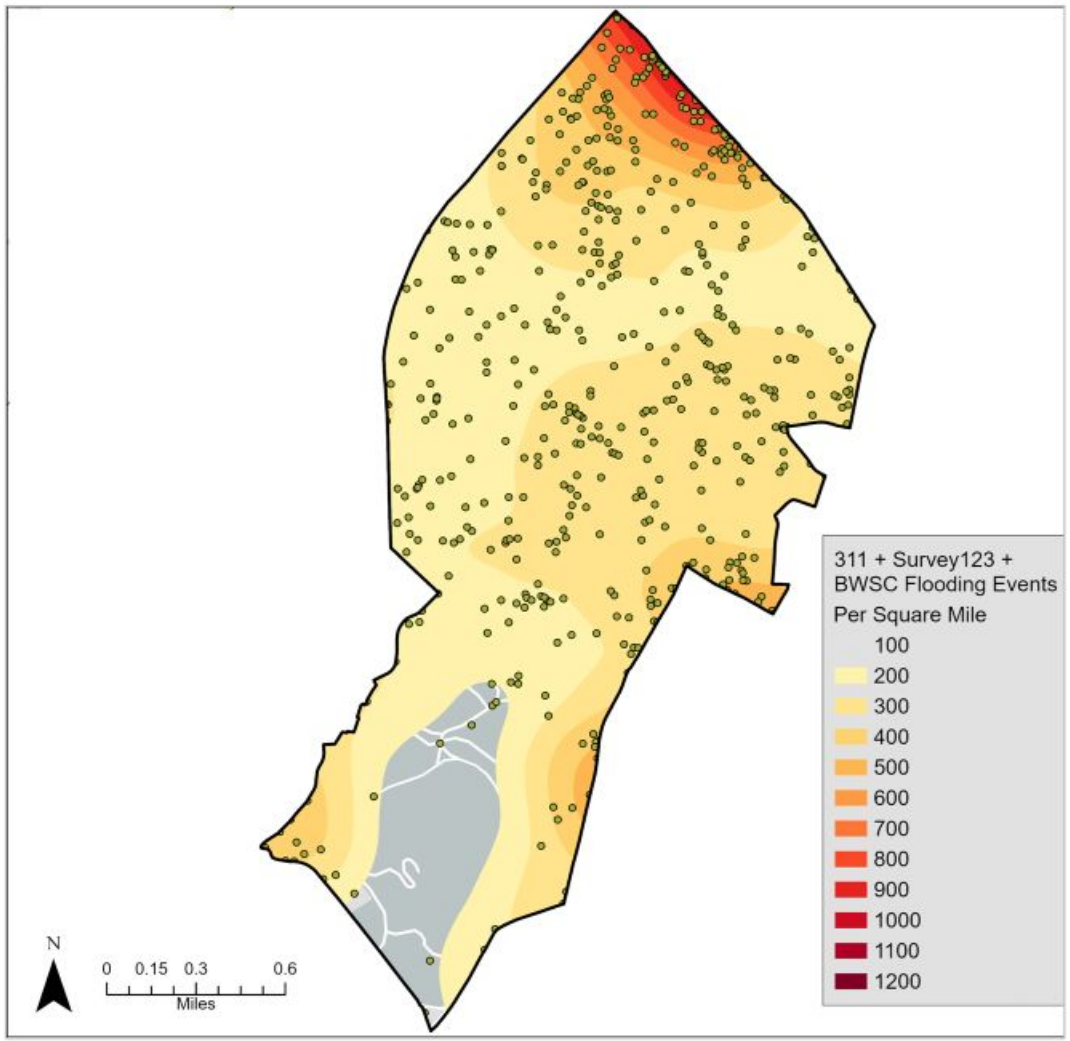
FLOODING HOT SPOTS ACROSS THE CITY

- ***Data Integration:*** Combined flooding-related data from 311 service requests, BWSC reports, public surveys, and flood modeling outputs.
- ***Data Refinement:*** Conducted thorough filtering and cleaning to ensure only relevant stormwater flooding incidents were included.
- ***Geospatial Analysis:*** Geocoded addresses and applied spatial analysis using ArcGIS Pro to identify areas with frequent flooding.
- ***Visualization:*** Created heat maps using Kernel Density tools, with report frequency used to emphasize chronic flooding locations.



Overview of Flooding Hot Spots in Boston

FLOODING HOT SPOTS IN ROXBURY



Overview of Flooding Hot Spots in Roxbury

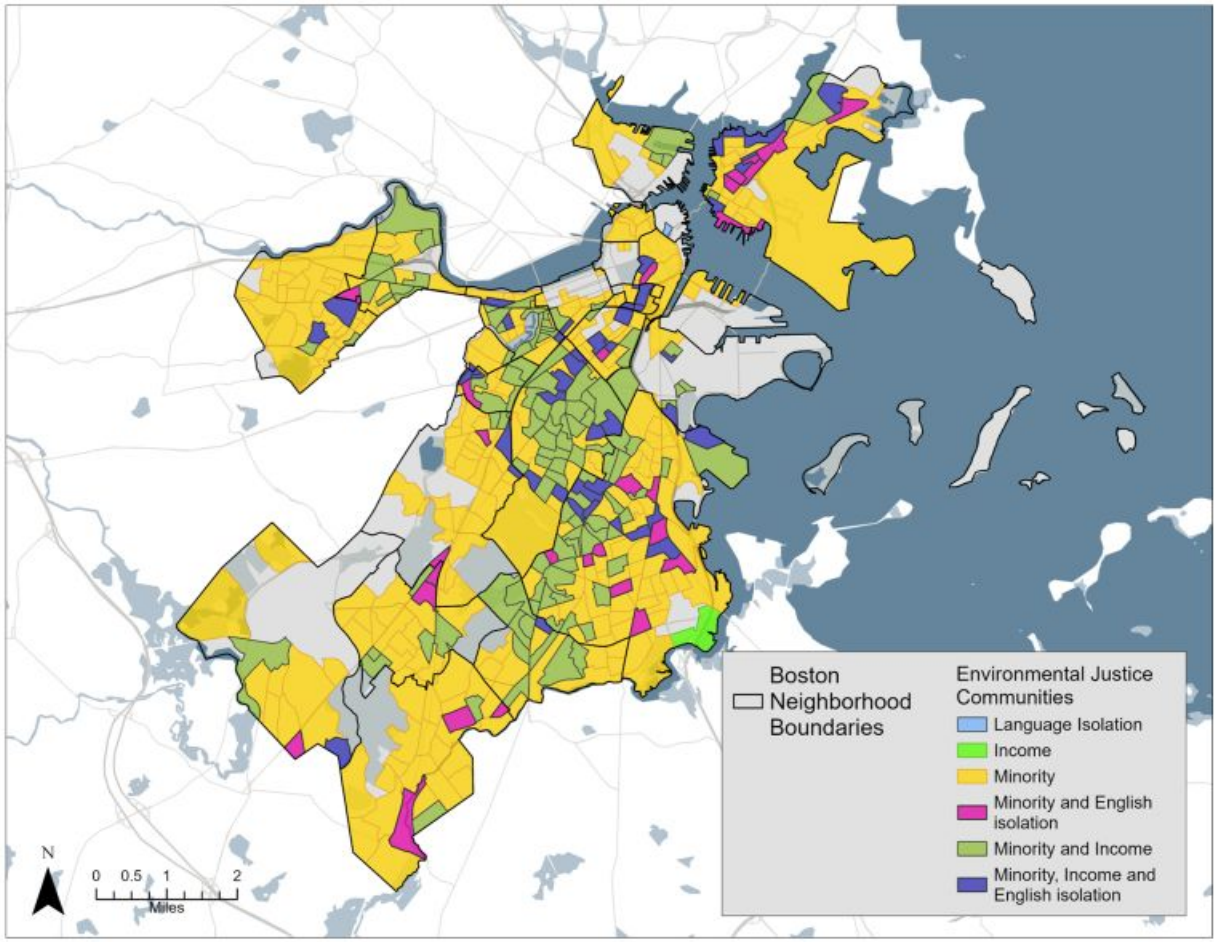
Selecting Areas for Green Stormwater Infrastructure

Goal: Identify potential GSI locations that are **located in flooding hotspots**, span **multiple neighborhoods**, are **located in Environmental Justice Communities**, and are **within discrete watersheds**

GSI IN ENVIRONMENTAL JUSTICE NEIGHBORHOODS

Neighborhoods qualify as EJ populations if **one or more** of the following criteria are met:

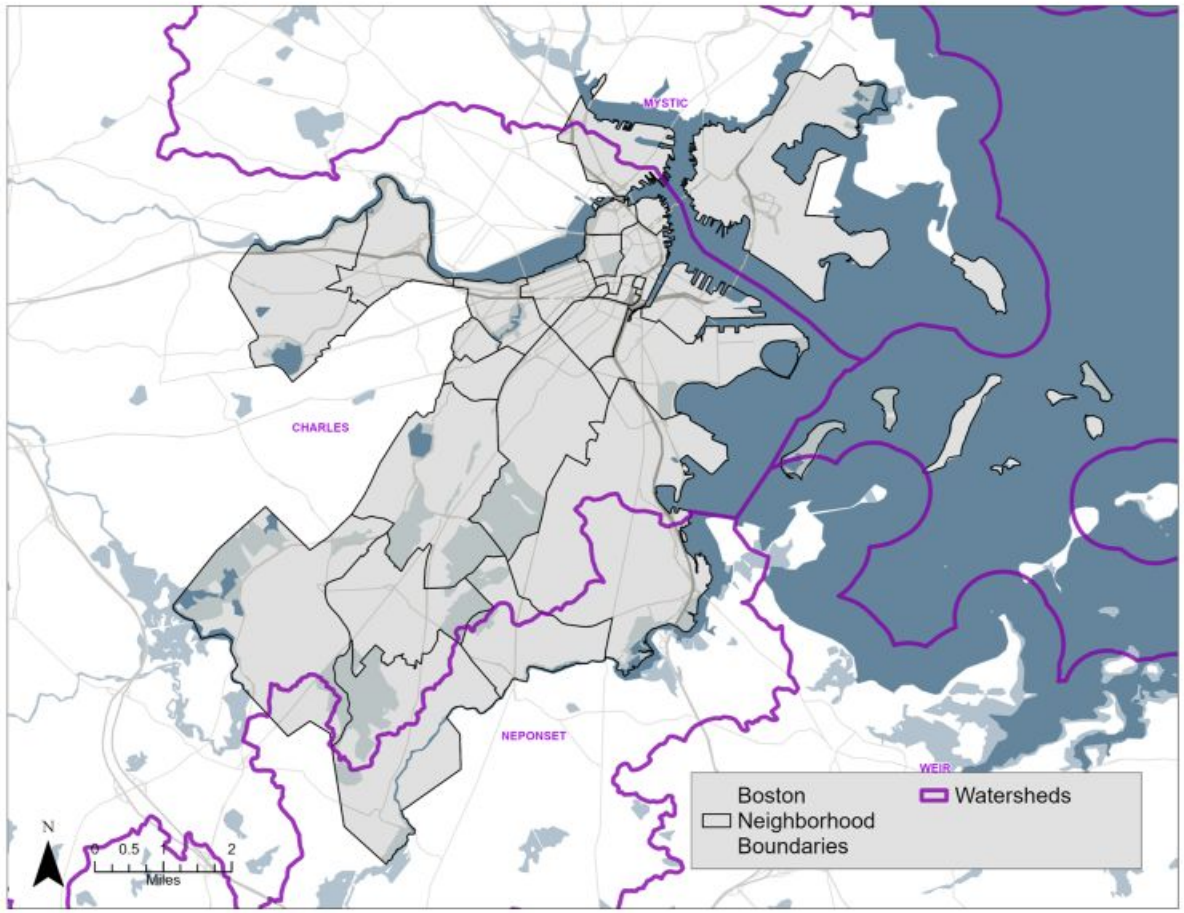
- Median household income is **≤ 65%** of the statewide median.
- **≥ 40%** of residents identify as a **racial minority**.
- **≥ 25%** of households have **limited English proficiency**.



Overview of Flooding Hot Spots in Boston

SPREADING GSI ACROSS THE CITY

- Boston is comprised of **26 neighborhoods**
- Multiple **watersheds** flow through the City limits, including **Charles River**, **Neponset River**, and **Mystic River**



Overview of Boston neighborhood and watershed boundaries

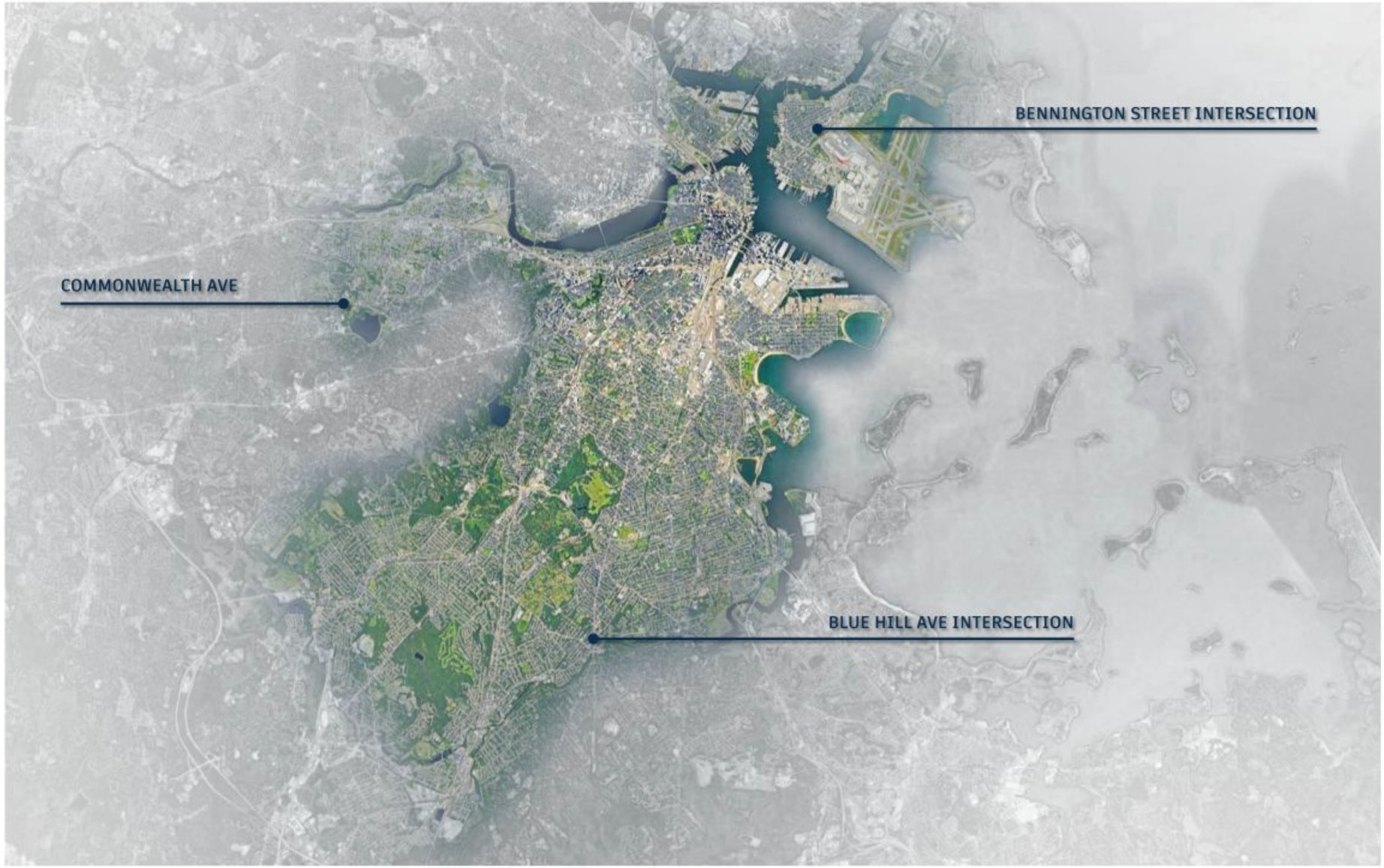
OTHER FACTORS CONSIDERED

- Existing green infrastructure in the City (BWSC and GI data)
- Current and planned City projects
  - *Transportation/roadway reconstruction*
  - *Coastal implementations*
  - *BPRD parks identified as priorities for improvement projects*
- Preference towards “high visibility areas”
  - *City bicycle network*
  - *Public transit stations*
  - *High foot traffic*
- Preference towards public parcels and rights-of-way
  - *Less coordination needed with other public or private entities*

HIGHEST PRIORITY AREAS

- Coordination with City to select top 3 areas for GSI implementation
  - *Brighton – Washington St Station: strategy-level to incorporate into Comm Ave project (currently at conceptual design phase)*
  - *Mattapan – Almont St @ Blue Hill Ave: conceptual design to tie into Blue Hill Ave project (currently in design phase)*
  - *East Boston – Bennington St @ Brooks St: conceptual design that could be incorporated into future Resilient Bennington Street and Fredericks Park project*

HIGHEST PRIORITY AREAS



HIGHEST PRIORITY AREAS

East Boston – Bennington St @ Brooks St: conceptual design that could be incorporated into future Resilient Bennington Street and Fredericks Park project

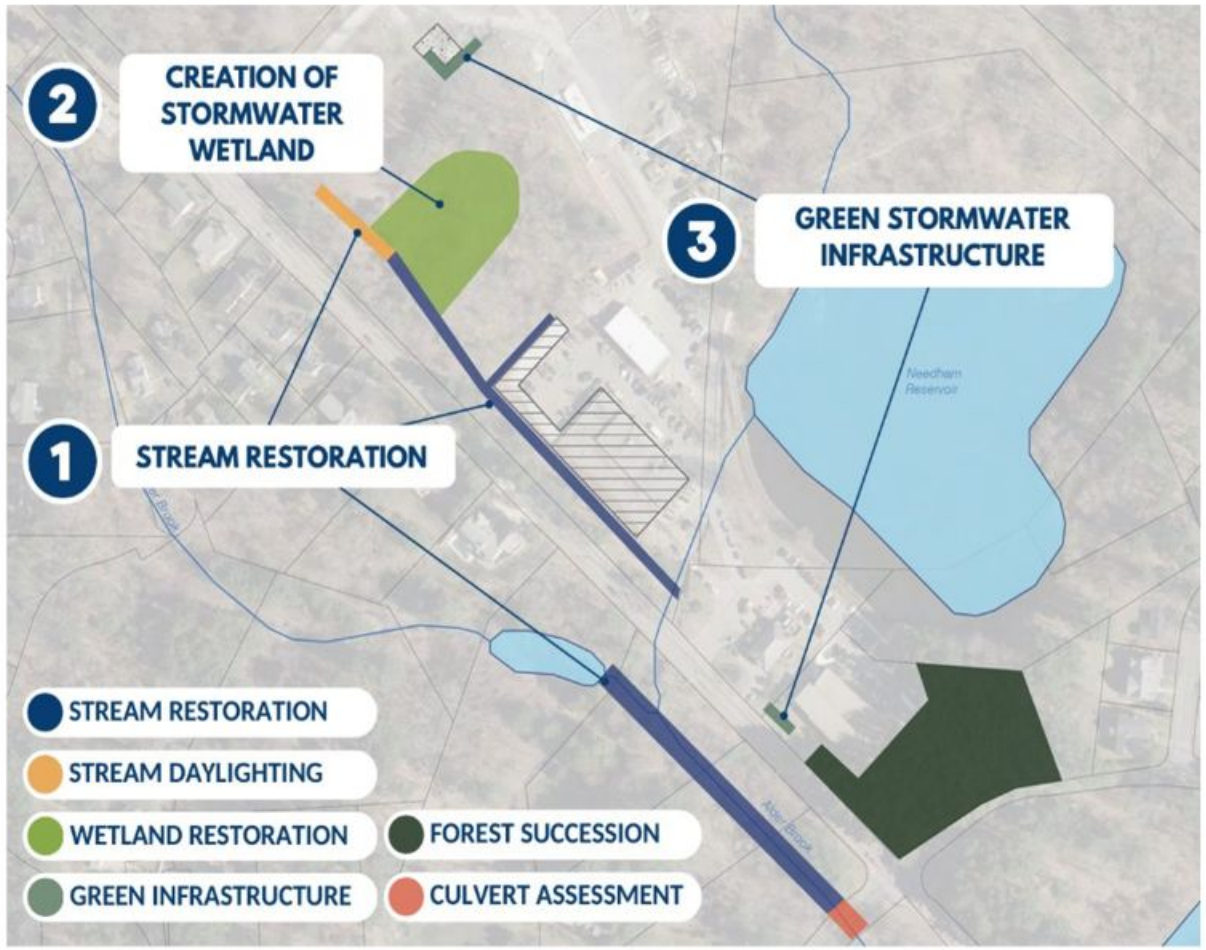
HIGHEST PRIORITY AREAS

Mattapan – Almont St @ Blue Hill Ave: conceptual design to tie into Blue Hill Ave project (currently in design phase)

HIGHEST PRIORITY AREAS

Brighton – Washington St Station: strategy-level to incorporate into Comm Ave project (currently at conceptual design phase)

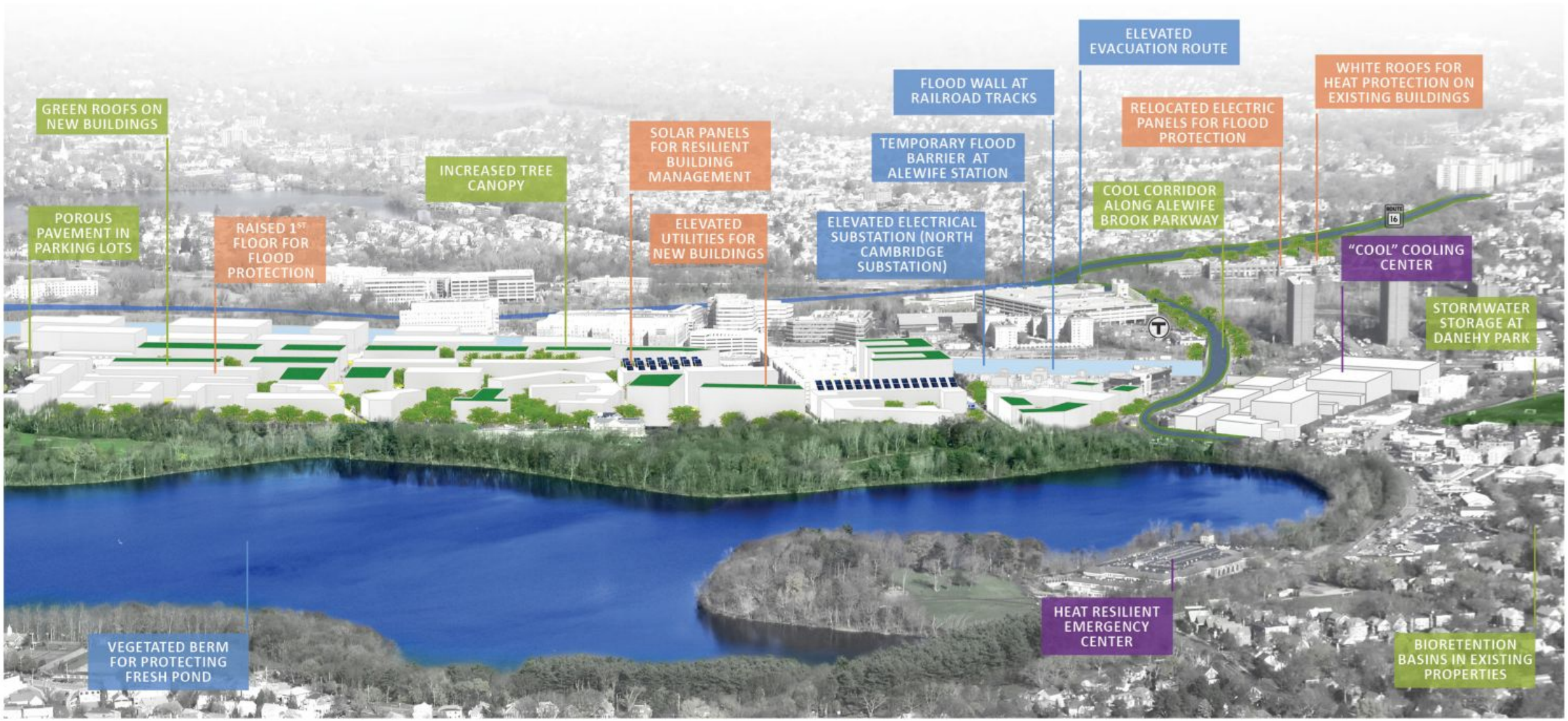
EXAMPLE GREEN INFRASTRUCTURE CONCEPTS



Site-scale green infrastructure concepts
Needham, MA

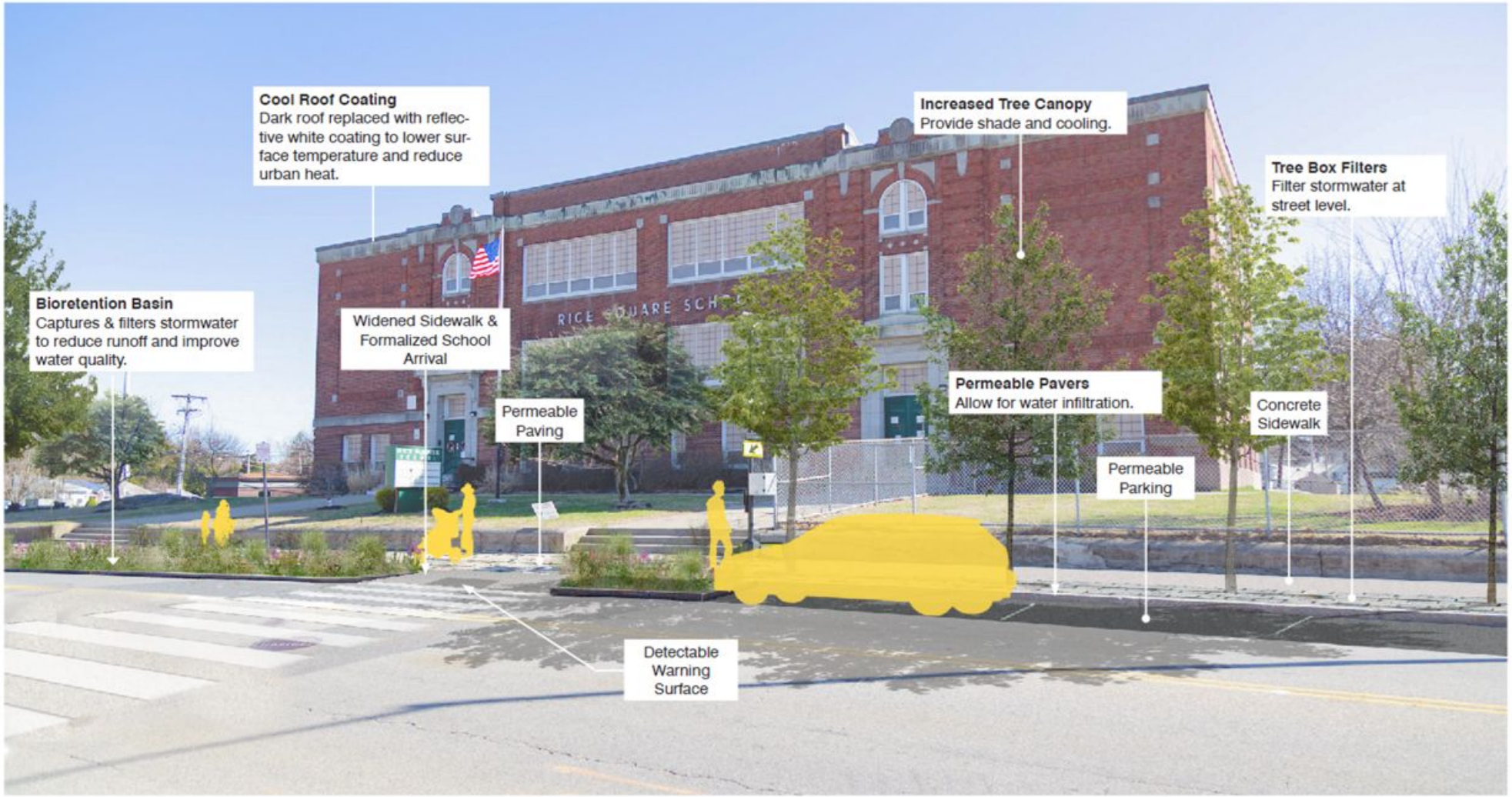
Site-scale green infrastructure concepts and roadway redesign
Fitchburg, MA

EXAMPLE GREEN INFRASTRUCUTRE CONCEPTS



HIGHEST PRIORITY AREAS - EXAMPLE

SCHOOL ARRIVAL CONCEPT SKETCH

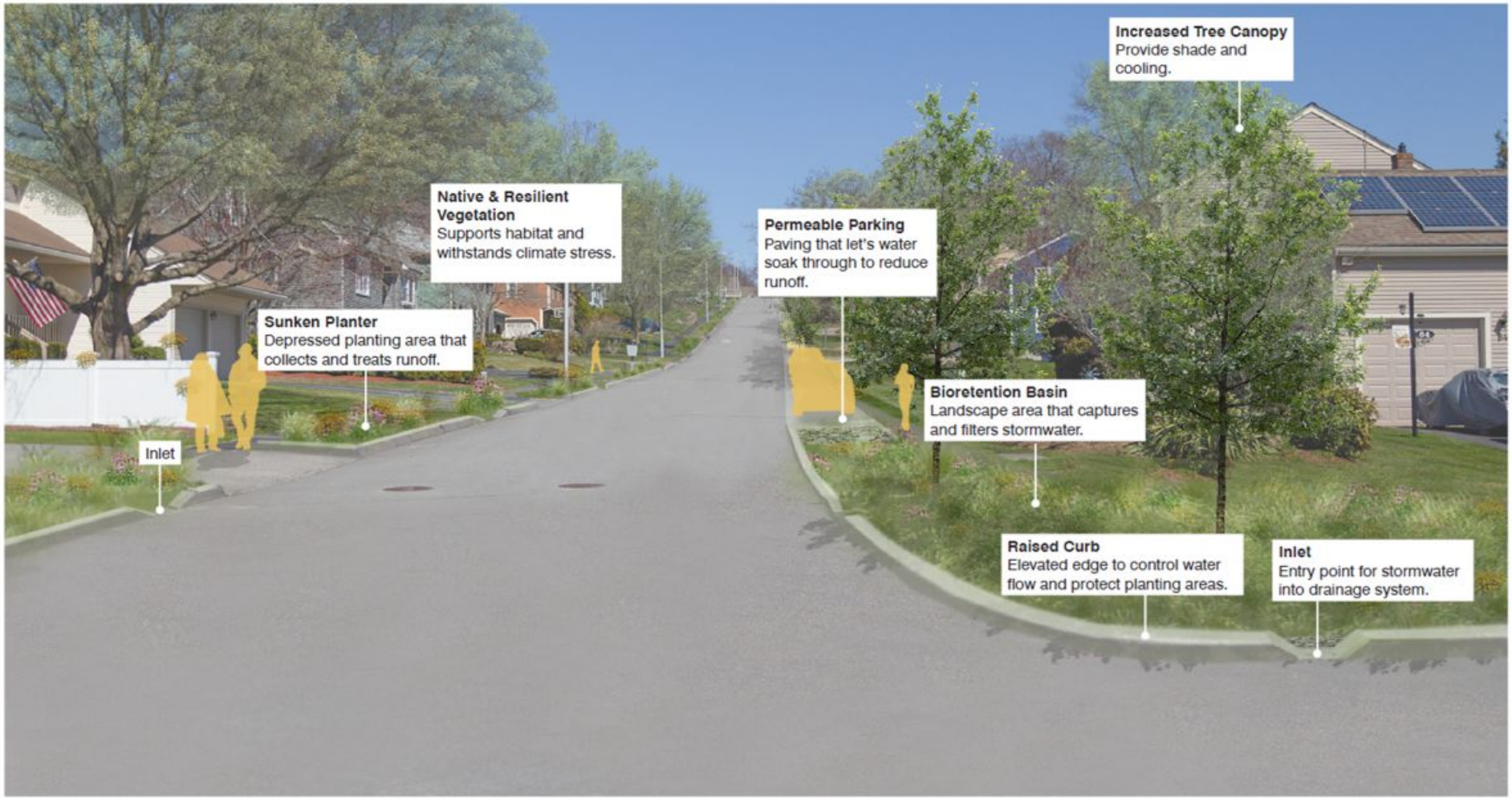


EXAMPLE GSI CONCEPTs

GREEN STREETS DESIGN CONCEPTS

HIGHEST PRIORITY AREAS - EXAMPLE

GREEN STREETS CONCEPT SKETCH

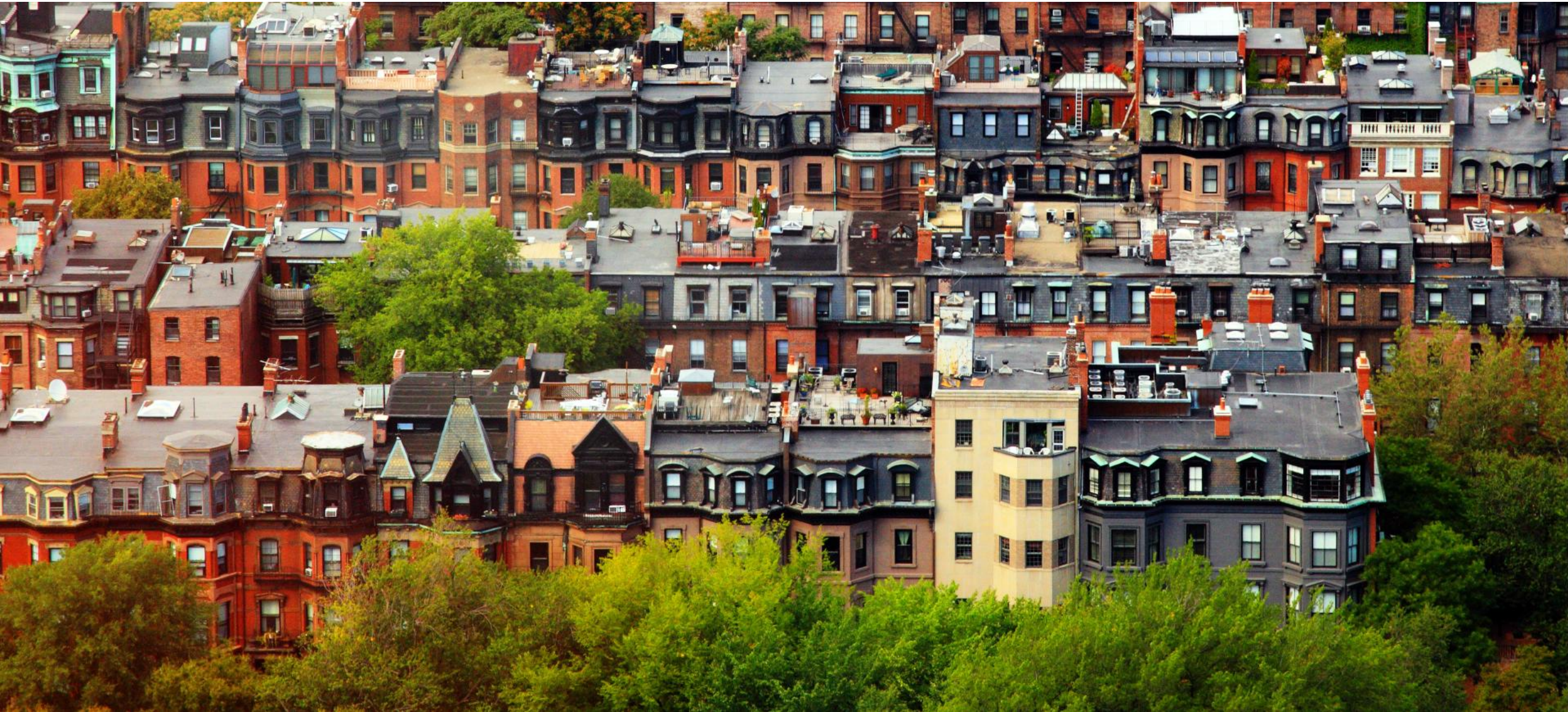


Next Steps and Staying Involved

NEXT STEPS & STAYING INVOLVED

- Continue to submit flood impact observations
- Tell your friends and neighbors to document their observations
- Take and post a flyer (or 2) in your neighborhood
- Community groups: officially join the promotion team!

THANKS FOR YOUR HELP!



QUESTIONS OR COMMENTS

THANK YOU FOR COMING! Please report your observations!

CONTACT INFORMATION

Rachel Luna, Acting Director of Green Infrastructure, rachel.luna@boston.gov
Julie Wood, Charles River Watershed Association, jwood@crwa.org
Kerry Snyder, Neponset River Watershed Association, snyder@neponset.org
Karen Groce Horan, Neponset River Watershed Association, groce-horan@neponset.org
John Frey, Weston & Sampson, Frey.John@wseinc.com
Janet Moonan, Weston & Sampson, Moonan.Janet@wseinc.com

Summary of Meeting

- In this meeting we shared how we identified flooding hotspots from survey responses and the three areas selected for Green Stormwater Infrastructure. We received input on how to help increase survey completion. Some ideas included working with youth, college credits, and reaching out to main street organizations. People were interested in how we prioritized the areas chosen for future Green Infrastructure projects and specific projects the city has going on now.

Attendees # : 37

Link to Youtube

https://youtu.be/SL0JVO__bnEc