



Bianca Bowman, Climate Justice Organizer, GreenRoots

Neighboring Environmental Justice, immigrant communities

## Chelsea, MA

- Smallest city in MA (2 sq mi)
- 50,000+ residents
- 73% ethnic minorities
- 24% below poverty line

## East Boston, MA

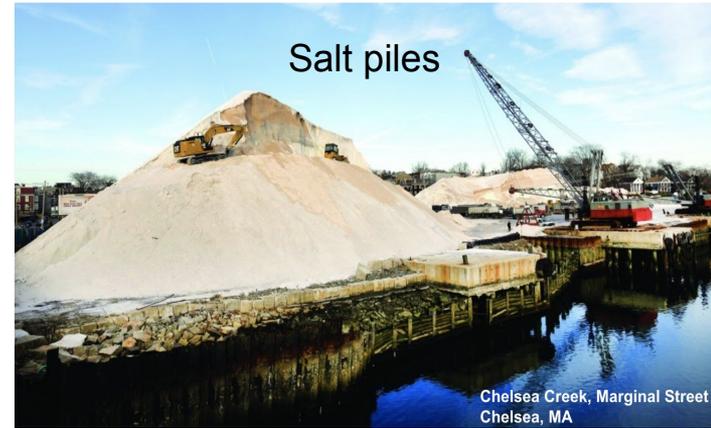
- 5 sq miles, with 3 miles used by the airport
- 55,000+ residents
- 53% Latino
- 17% below poverty line



- 100 % of Logan Airport jet fuel
- 80 % of heating fuel
- Gasoline for the Mid-Atlantic

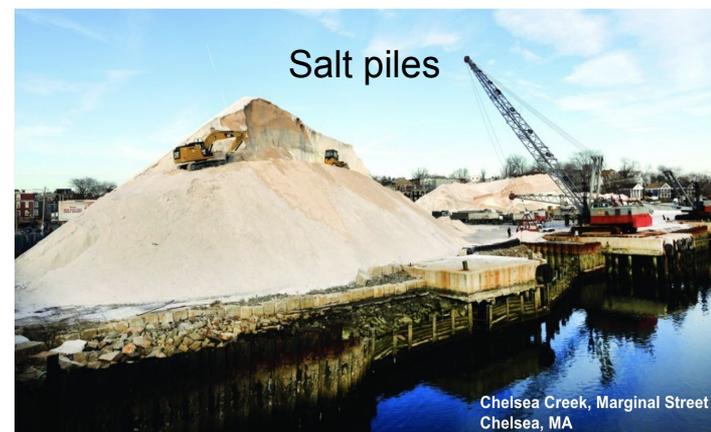
All photos taken in  
Chelsea, MA

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Chelsea, MA

- 100 % of Logan Airport jet fuel
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Salt piles

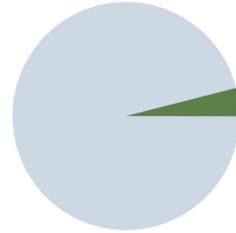
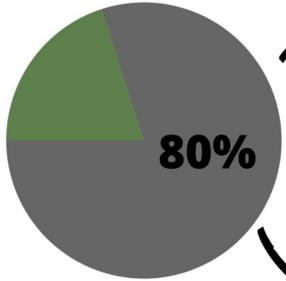
Chelsea Creek, Marginal Street  
Chelsea, MA



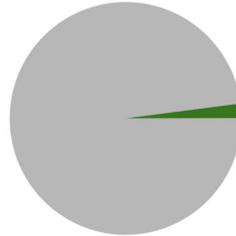
NE Produce Center

All photos taken in  
Chelsea, MA

**80% impervious surfaces**



**4% public green space**



**2% tree canopy**





## Asthma hospitalization

- 40% above Mass avg. in Chelsea
- 50% above Mass avg. in East Boston



# ENVIRONMENTAL AND SOCIAL JUSTICE





## Building decarbonization challenges and opportunities



Photo: WBUR

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- Microgrids and community-owned land (Community Land Trusts)
- If EJ communities prioritized in decarbonization, opportunity for just transition



Photo: WBUR

# Role of community based organizations



# Urban Heat Island (UHI) Analysis Findings

The City of Chelsea engaged Weston & Sampson to develop, design and implement UHI mitigation strategies in collaboration with GreenRoots. Data from the ongoing C-HEAT project sensor network were used as part of the urban heat island analysis. Ambient Air Temperature and Heat Index Maps were developed (as shown in Figure 5) and focus areas were identified for UHI mitigation in the public right-of-way and on private parcels (as shown in Figure 6).

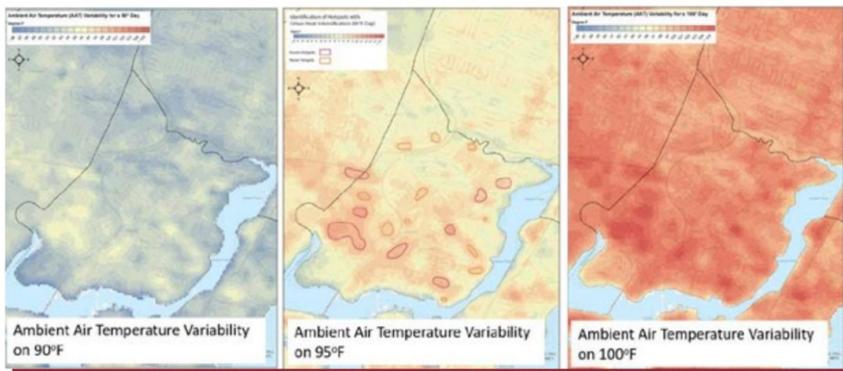


Figure 5. Ambient Air Temperature Variability on Citywide Scale on 90°, 95°, and 100° F days (Left to Right).

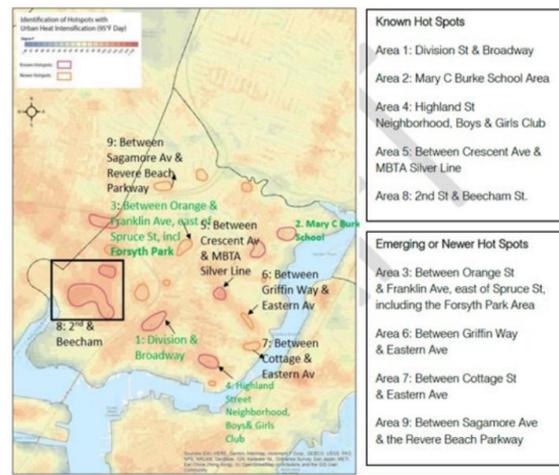


Figure 6. Locations of identified "hot spots." Red boundaries indicate existing high heat areas ("Known Hot Spots"), and orange boundaries indicate potential high heat areas ("Emerging or Newer Hot Spots")



**Do you worry about extreme heat in your home?  
 Are you concerned about your electricity bills during summer?**

# C-HEAT:

## A study of heat exposure in Chelsea and East Boston, Massachusetts

A collaborative research project between GreenRoots and the Boston University School of Public Health.

The main goal of the project is to increase the capacity for these communities to respond to extreme heat events. Our research focuses on heat exposure and related health outcomes among the most vulnerable populations in Chelsea Creek communities.

- ▶ About the Study
- ▶ Heat Vulnerabilities
- ▶ Social Vulnerabilities
- ▶ Environment
- ▶ Health Vulnerabilities

Environmental injustice is closely tied with social vulnerabilities including race and ethnicity. According to population estimates from the [2010 US Census](#), 66.9% of Chelsea residents are Hispanic or Latino. Here, we consider several variables of race and ethnicity by block group across both Chelsea and the East Boston neighborhood. Click on the **green** words below to view the map:

- Heat Vulnerability Index - Census tract score indicating heat vulnerability across three dimensions: sociodemographic, environmental/urbanicity, and elderly/social isolation, 2011.
- Language - % population speaking Spanish and little/no English (ACS 2014-2018)
- Black or African American - % African American residents (ACS 2014-2018)
- Minorities - % non-white residents (ACS 2014-2018)
- Environmental Justice Populations - areas identified as environmental justice populations, based on English Language Isolation, Income, and Percent Minority Population. As designated by the state of Massachusetts.

LEGEND

Population = 0

**Environmental Justice**

- Percent Minority >=25
- Percent Minority and Percent English Language Isolation >=25
- Percent Minority >=25% and Median Household Income <=\$40,673
- Fulfills all three criteria

City of Boston, MassGIS, Esri, HERE, Garmin, L.L. esri A Story Map

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## About Solarize Eastie

SolarizeEastie is a pilot program to increase solar panel installation and onsite battery storage in East Boston. The effort is a partnership between [GreenRoots](#) and the City of Boston's Department of Environment. We seek to bring the benefits of affordable renewable energy to residents in East Boston. This program uses a group buying model to reduce costs for residents by aggregating demand and securing a discounted price per watt. Supplemented by American Rescue Plan Act funds, the project has contracted with the team of [ACE Solar](#) to perform solar installations and [Resonant Energy](#) for accessible financing for low income residents.









# Intergenerational community-led design processes for new green spaces and cooling-focused parks



**DESIGN YOUR SPACE**  
DISEÑA TU ESPACIO

**PICK OR WRITE YOUR IDEAS BELOW**  
ESCOGE Y ESCRIBE TUS IDEAS A CONTINUACIÓN

WANT IT LO QUE QUIERO

*Need for dog friendly park with green space*

*Maybe a dog park area?*

*programming*

*could really help in summer*

**I WOULD ALSO LIKE HERE... TAMBIÉN ME GUSTARÍA AQUÍ...**

*Big Swimming Pool!*

*Parking Spaces*

*Somethings dog related x3*

*orchard*

*trails!*

*Splash pads!*

*community garden for fruit & veggies*

*seating + shade*

*+1 gathering space with play*

*sprinkler*

*water fountain*

*water table*

*picnic*

**SHADE / SOMBRA**

**PLAY / JUEGOS**

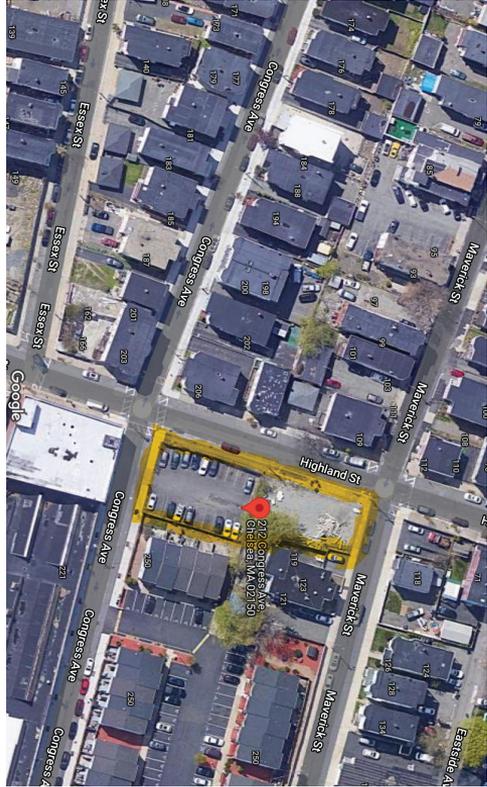
**SEATING / ASIENTOS**

*benches*

*could a table seating*

**ART**

**CHELSEA NEIGHBORHOOD VISIONING**  
VISION DEL BARRIO DE CHELSEA



# ENVIRONMENTAL AND SOCIAL JUSTICE

