

## Building Resilience

*Linking Covid-19 and Climate Change*

*June 5, 2020*



# Ready for Change: Building a Prepared Community

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*Chief Public Health Officer  
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Sustainable  
Solutions  
Lab



Quarterly Climate Adaptation Forum | June 5, 2020

# Ready for Change

## *Building a Prepared Community*

Claude A. Jacob  
Chief Public Health Officer  
Cambridge Public Health Department

CLIMATE CHANGE ADAPTATION FORUM  
JUNE 5, 2020



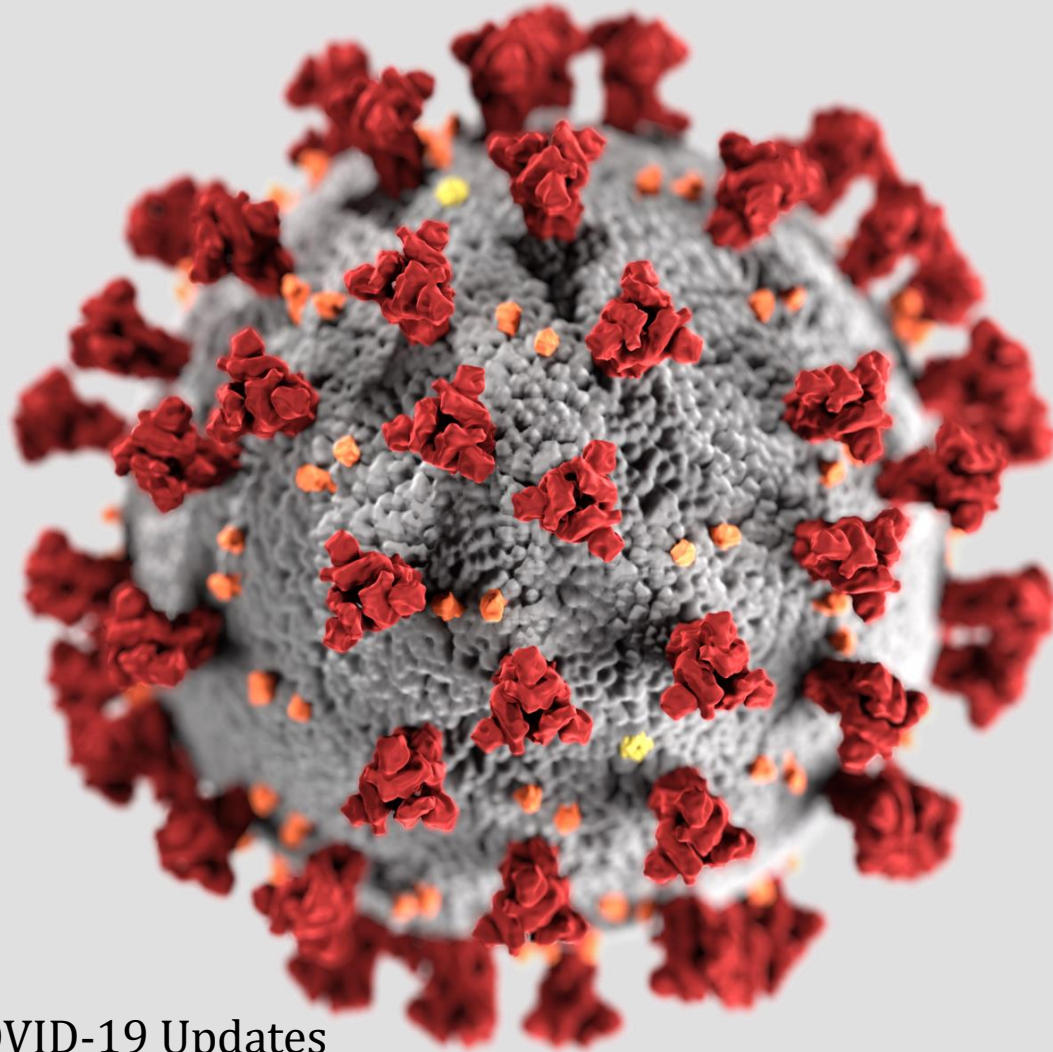
Cambridge  
Public Health  
Department



**CHA** Cambridge  
Health Alliance



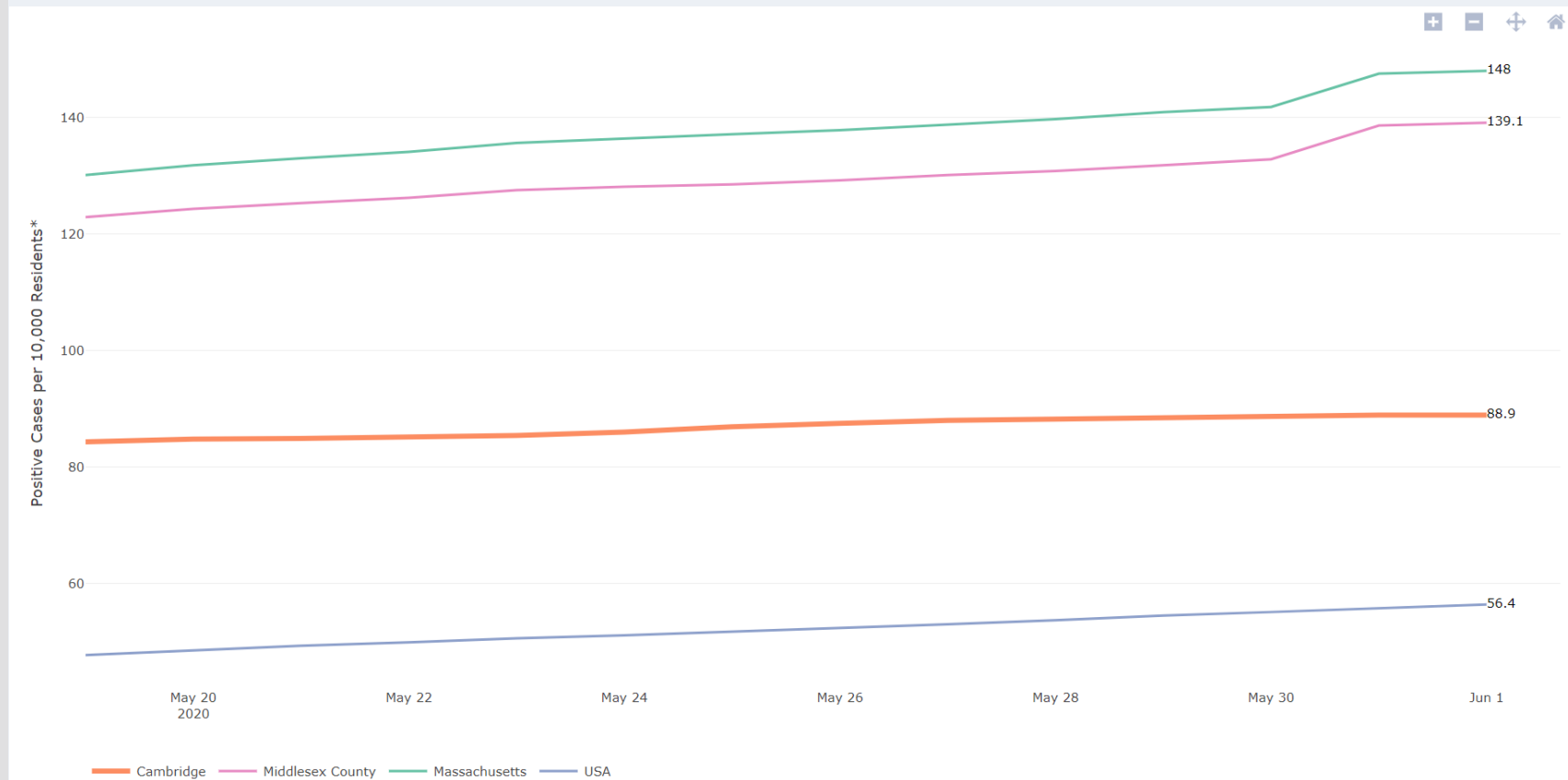
# What are we facing?



See: Cambridge COVID-19 Updates  
<https://www.cambridgema.gov/covid19>

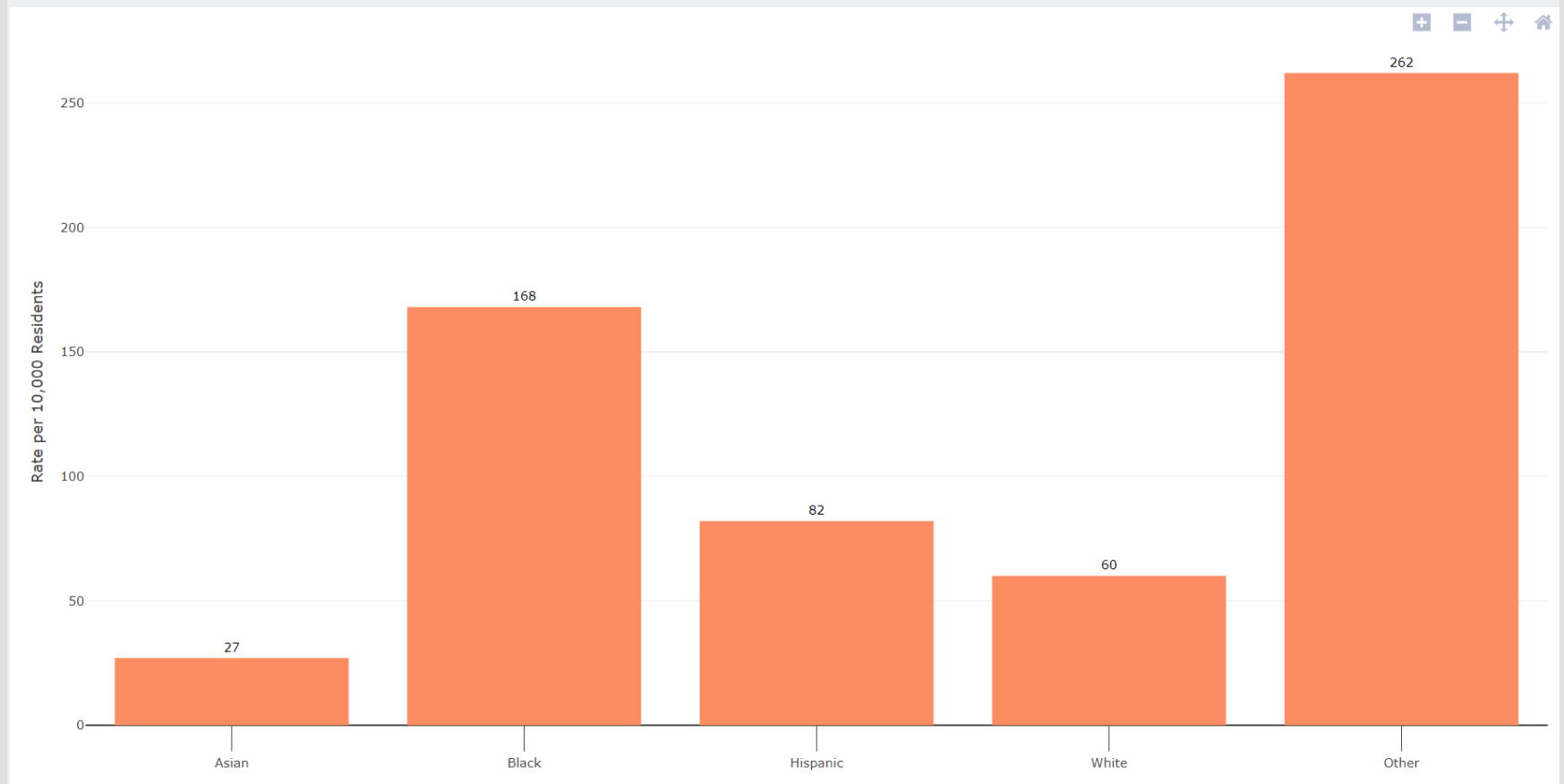
# COVID-19 Case Demographics

COVID-19 Cases Among People Living in Cambridge, Middlesex County, Massachusetts, and the U.S



# COVID-19 Case Demographics

Rate of COVID-19 Cases Among All Cambridge Residents by Race/Ethnicity

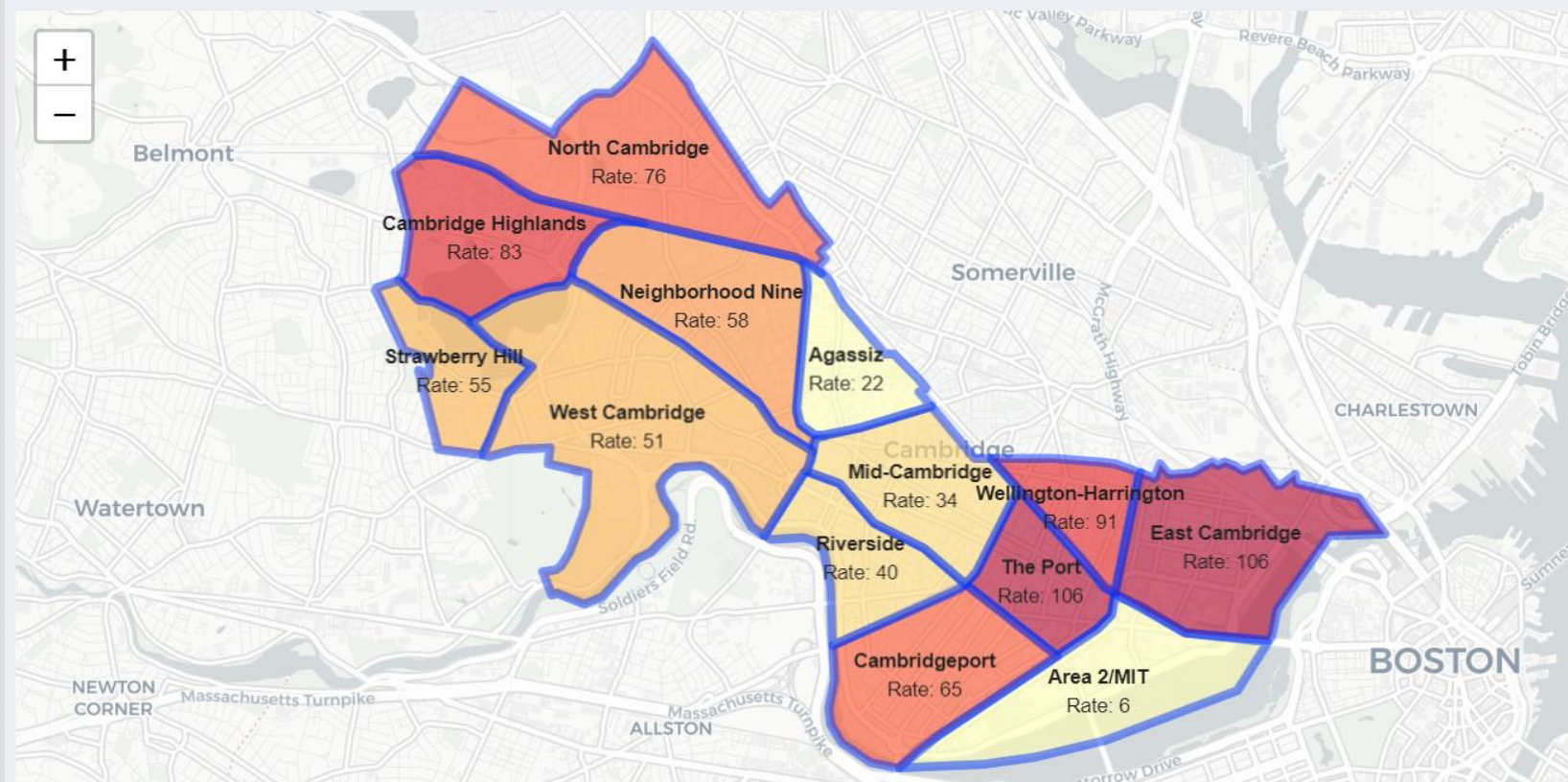


# COVID-19 Neighborhood Impacts

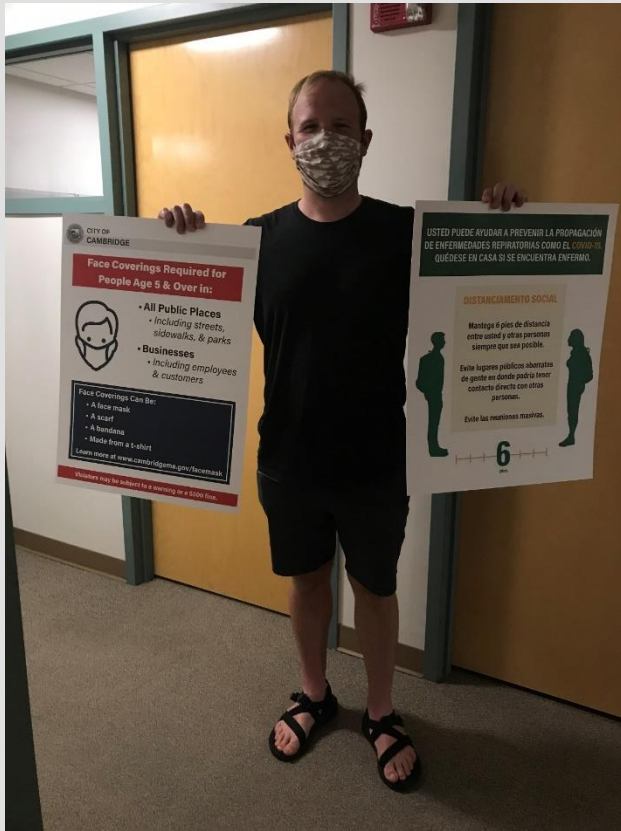
Impacts by neighborhood

– Highest Rates include The Port and East Cambridge (June 3, 2020)

## COVID-19 Cases Among Residents by Neighborhood (Rate and Count)



# CPHD COVID-19 Outreach Activities



Staff at CPHD meeting to plan community outreach

Social distance and wear masks posters



# Climate Change

## What is ahead?



See: Cambridge Climate Preparedness and Adaptation Plan

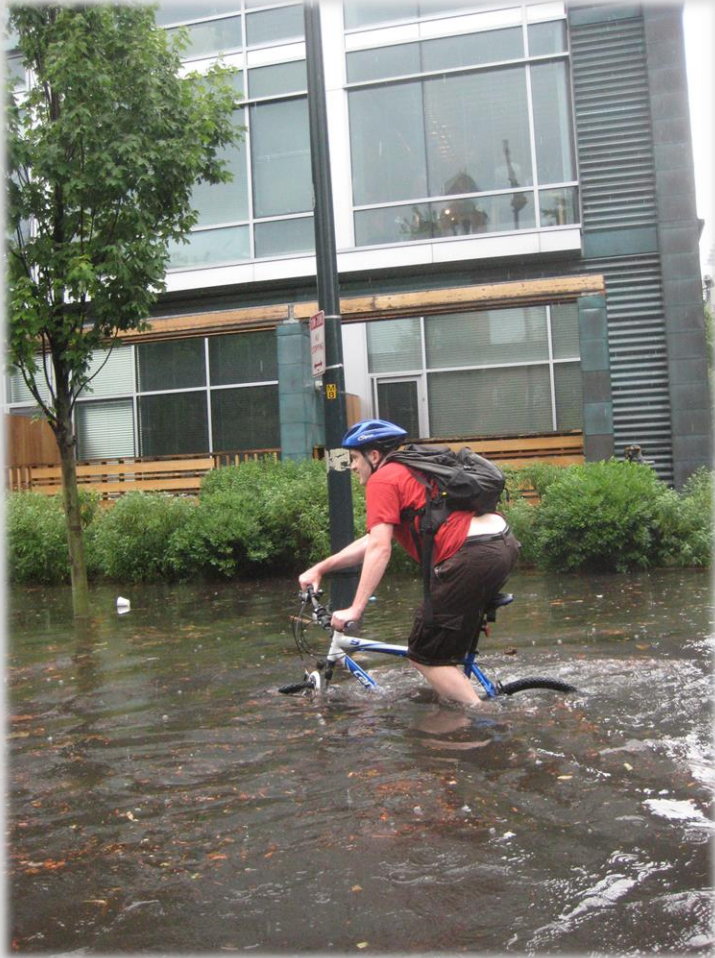
<https://www.cambridgema.gov/CDD/Projects/Climate/climatechangeresilianceandadaptation.aspx>

# Climate Change is...

Climate Change is . . .	
Affecting Health Directly	<ul style="list-style-type: none"><li>• Worsening asthma and other chronic illnesses</li><li>• Increasing heat stroke incidents and injuries</li><li>• Spreading infectious diseases</li></ul>
Spreading Disease	Increasing risk of disease spread by: Mosquitoes, ticks, and rodents Contaminated water Contaminated food
Disrupting Food Supplies and Distribution	Limiting access to safe, nutritious food
Impacting Well-Being	Increasing stress and trauma

See: Cambridge Public Health Department Climate Change and Health  
<https://www.cambridgepublichealth.org/climate-change/>

# More floods than ever before...

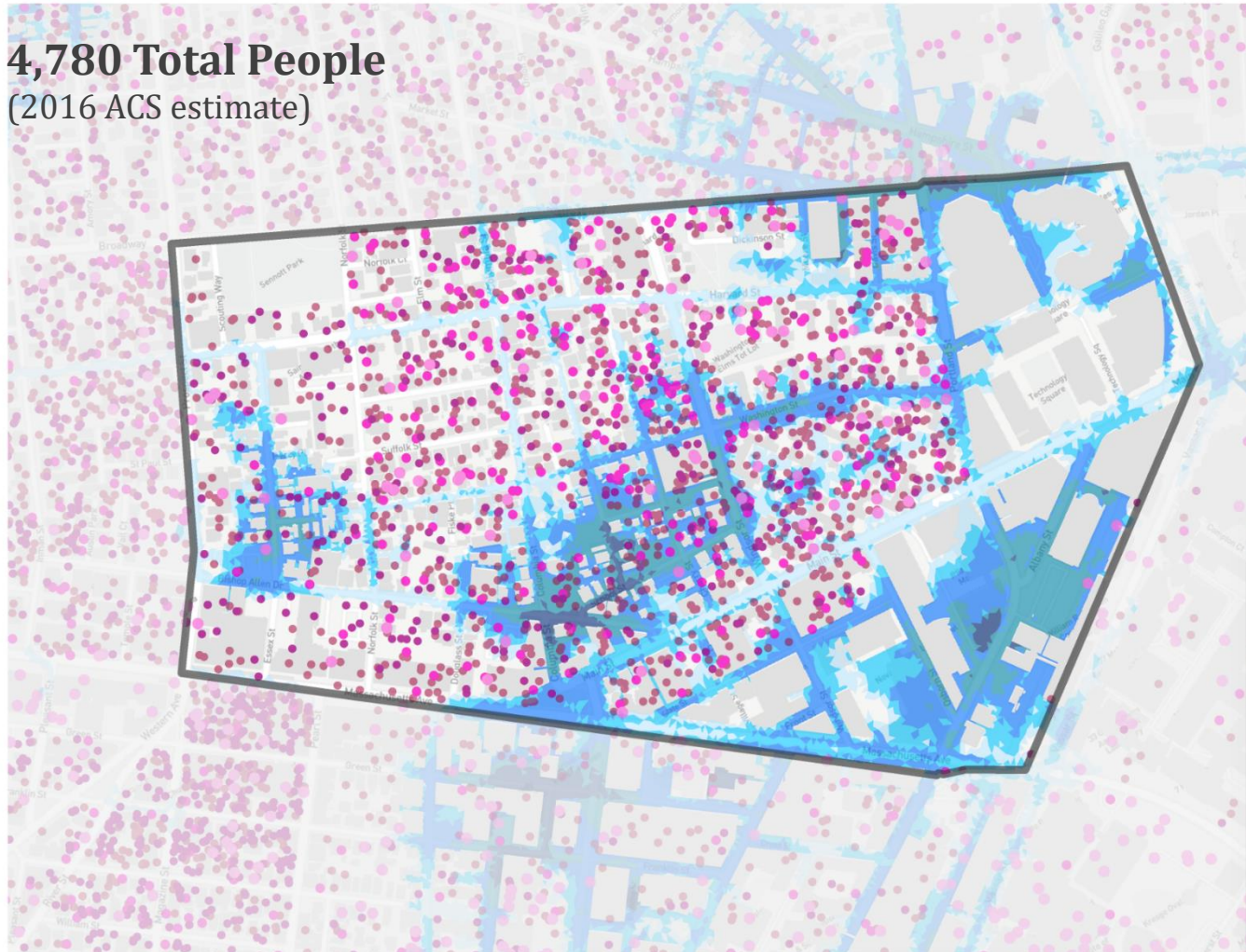


# Residents of The Port at Risk of Flooding

**4,780 Total People**  
(2016 ACS estimate)

**Percent of vulnerable populations likely to be impacted by flooding:**

70% of Non-English Speakers  
80% of Seniors Aged 65 +  
75% of Children Aged 0-5  
75% of Residents Below Poverty



- Non-English Speakers
- Individuals Aged 65+
- Individuals Aged 0-5
- Individuals Below Poverty Line

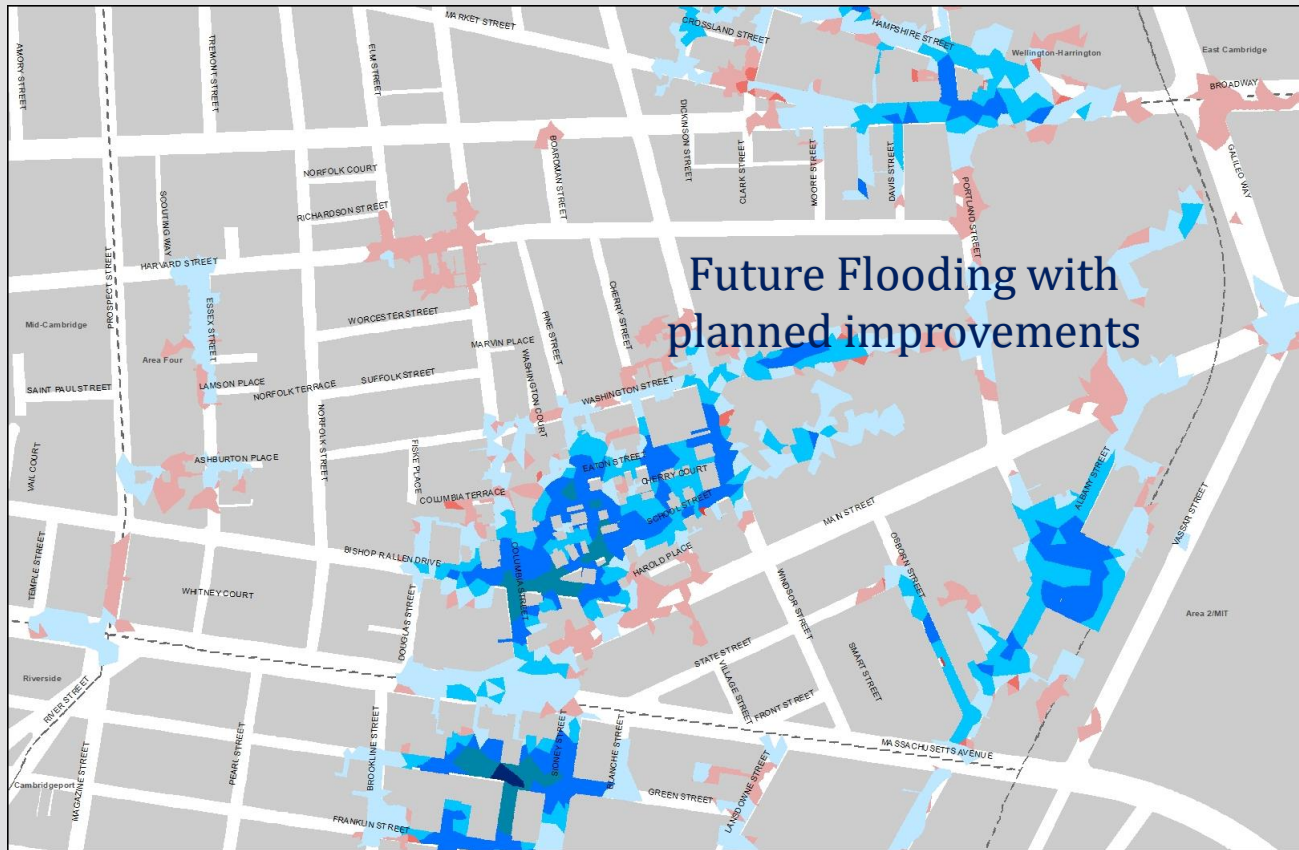
**Flood Depth (ft)**



**NEAR FUTURE LESS FREQUENT LARGER STORM (2030 100-YEAR EVENT)  
FLOODING BEFORE IMPROVEMENTS**

# The Port Adaptation

Clusters of more highly affected neighborhoods and housing mirror COVID-19

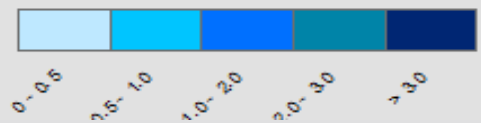


FUTURE PREDICTED FLOODING  
WITH CURRENT (2015)  
INFRASTRUCTURE



Future Flooding with  
planned improvements

Depth of flooding (ft) - Updated Baseline



# More heat waves than ever before...

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

**1971 - 2000**  
(Baseline)

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	1	2	3	4	5
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

**2015 - 2044**  
(2030)

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
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**2055 - 2084**  
(2070)

Above 90°F - Low Scenario
  Above 90°F - High Scenario
  Above 100°F - Low Scenario
  High 100°F - High Scenario

\*Summer is considered to be the 91 days of June through August

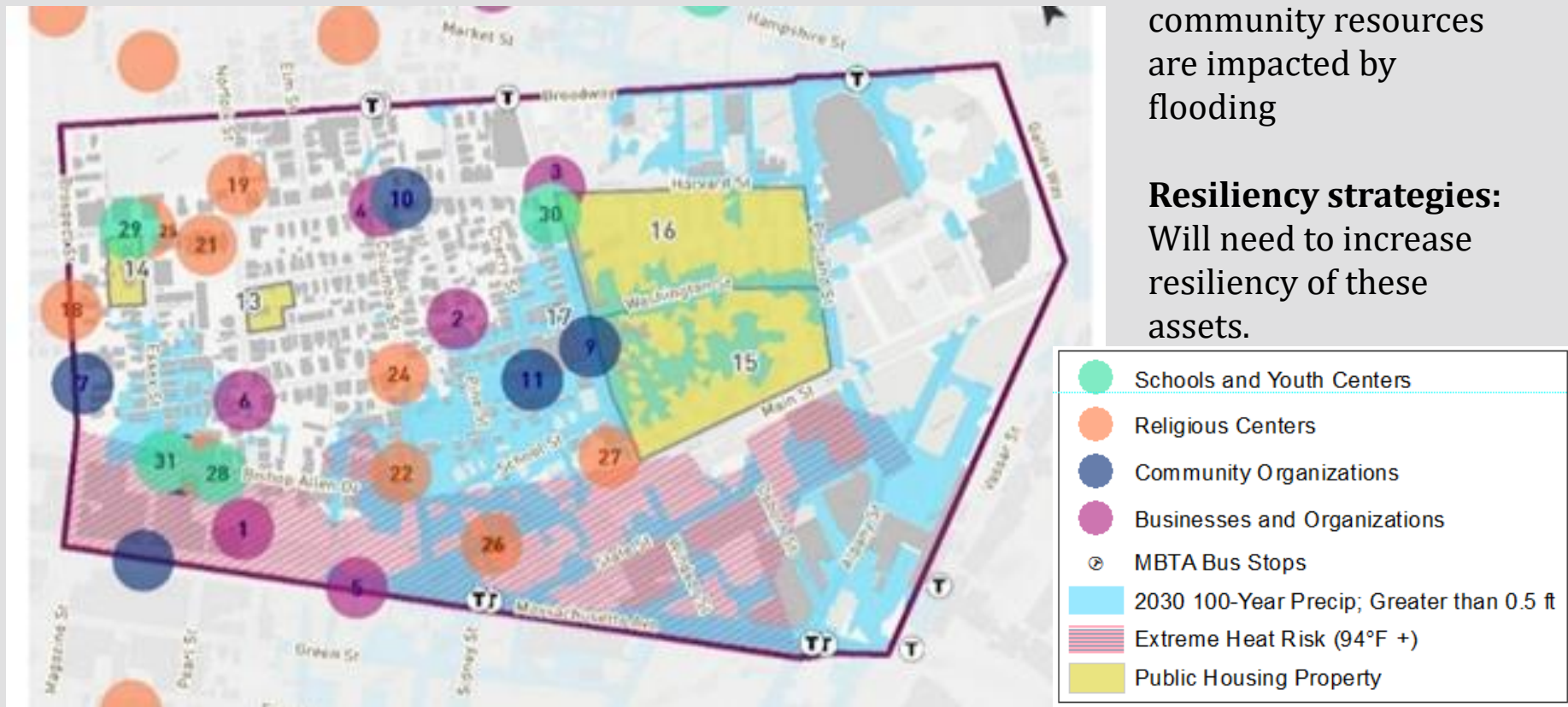
**By 2030, the number of days above 90° F could triple**

# Community Resources Are Themselves At Risk

- Services in The Port **AT RISK** FOR 2030 100-YEAR precipitation flooding and within Urban Heat Island

**Vulnerability:** 60% of community resources are impacted by flooding

**Resiliency strategies:** Will need to increase resiliency of these assets.



# 1. Asset-based Approach

**Connection among community social service organizations and residents to one another can help make sure that all residents have access to support in times of need.**

- *Make* sure that people have full access to services and spaces they need.
- *Prepare* organizations to address climate change.
- *Identify* a “resiliency hub” to strengthen community networks and work daily to increase preparedness and resilience.



Margaret Fuller House Multiservice Center Resiliency Hub



## 2. Agility on the Ground

**Building stronger relationships that provide connection among neighbors. Isolation can increase risks due to a disaster.**

- *Connect* residents to one another and local organizations.
- *Prepare* them. *Reach* them quickly during a heat or flooding event. *Support* them after an event.
- *Provide* information tailored to language and culture.
- *Inform* those who may have greater exposures to heat or flood waters, such as outdoor workers and student athletes.

Home visits to support children with asthma.

Identifying and reaching out to older adults who may be isolated.



# 3. Alignment of Efforts

**Taking actions together for the benefit of others draws people together, develops a stronger sense of community, and can help residents handle difficult situations.**

- *Work* together to improve the community.
- *Volunteer* to build individual strengths and a culture of service.
- *Participate* in actions on climate change to increase impact, build hope, and create resiliency skills.
- *Apply* the leadership of those who will be most affected by climate change for more just, appropriate strategies.



Students holding environmental justice tour.  
Source: JSI and ACE

# Engaging Residents to Prepare for Climate Change

## What we heard from residents:

- “Make it real”, i.e. explain what climate change means?
- Explain how it will impact me
- Tell me what I can do about it
- Include knowledge and vision of residents and community leaders

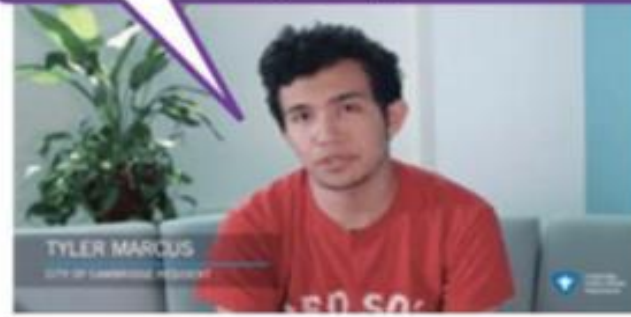


**Climate Change & Health Video**

I was born and raised here in The Port. This is a place that concerns me a lot; especially as we start thinking about climate change.



We already have a community that works together. We have the creativity, the technology—now's the perfect time to bring these things together and make a big change!

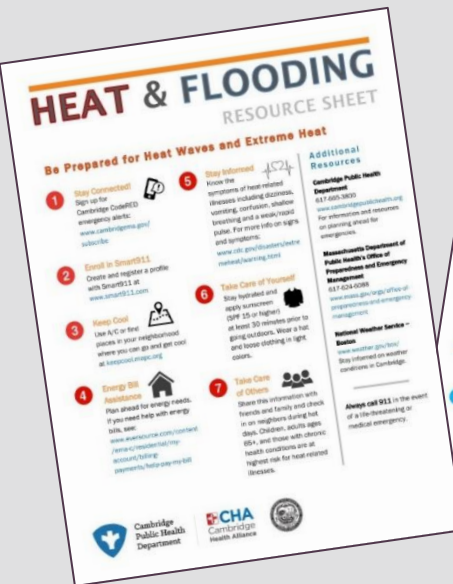


# Culturally-Tailored Approaches

The City has started to prepare materials they can share throughout the community.

And the City is looking at means to address the gaps and identify opportunities including:

- Enlist peer leaders and community organizations to help support and engage residents tailored to culture and language.
- Identify critical facilities already used and trusted by residents to be used as resiliency hubs, outreach partners, and heat shelters.
- Upgrade these sites to enhance their resiliency to flooding and extreme heat.



## MULTILINGUAL HELP

Español

Kreyòl Ayisyen

Português

বাংলা

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عربی



Cambridge  
Public Health  
Department

# Social Cohesion During COVID-19

## COVID-19 ACTION

- City-wide testing: senior centers, homeless shelters, essential workforce
- Social distancing coupled with supports for isolated seniors, workers, homeless
- Mayor's Emergency Fund
- Food for Free with restaurants/volunteers
- Increased interagency partnerships to meet resident and small business needs

City of Cambridge [Reaches More than 7,000 Residents](#) via Senior Phone Outreach Initiative

## CLIMATE RESILIENCY

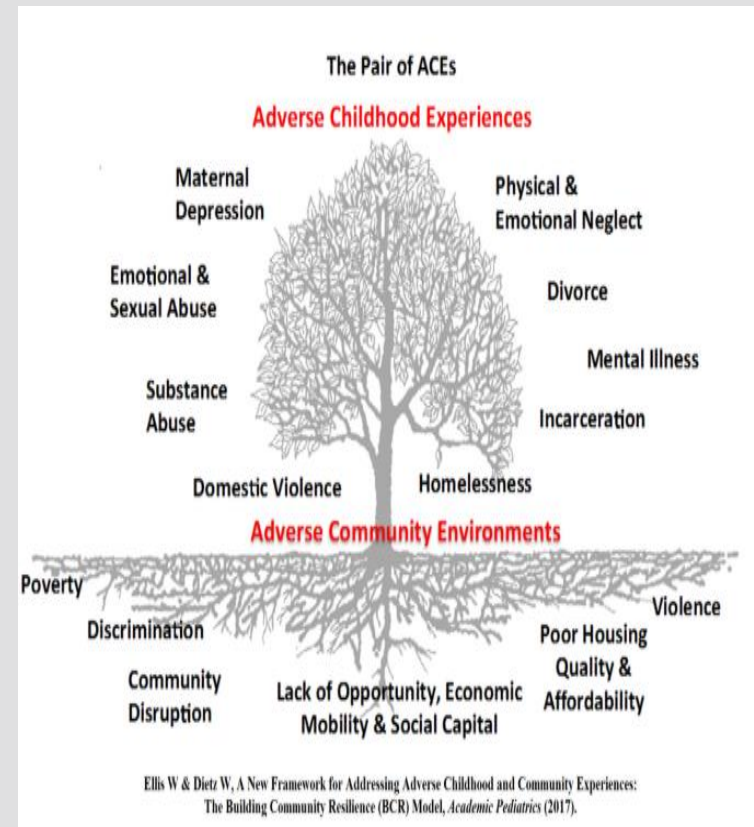
- Community-wide health promotion
- Emphasis on high-risk populations: low-income seniors and homeless
- Focus on worker exposures & economic impacts
- Cross-sector, public/private collaborations + volunteerism
- Continuity of care, medications, plan for mental/behavioral health needs

# Resilience Catalysts in Public Health



## National collaborative with 4 other LHD's nationally:

- In collaboration with George Washington University, APHA, NACCHO and supported by CDC
- Building Community Resilience (BCR) Model
- Focus: On resilience as a fundamental strategy to prevent and reduce chronic disease by addressing the root causes of adversity; namely the **Pair of ACEs** (*Adverse Childhood Experiences and Adverse Community Events*)



# Thank You!

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