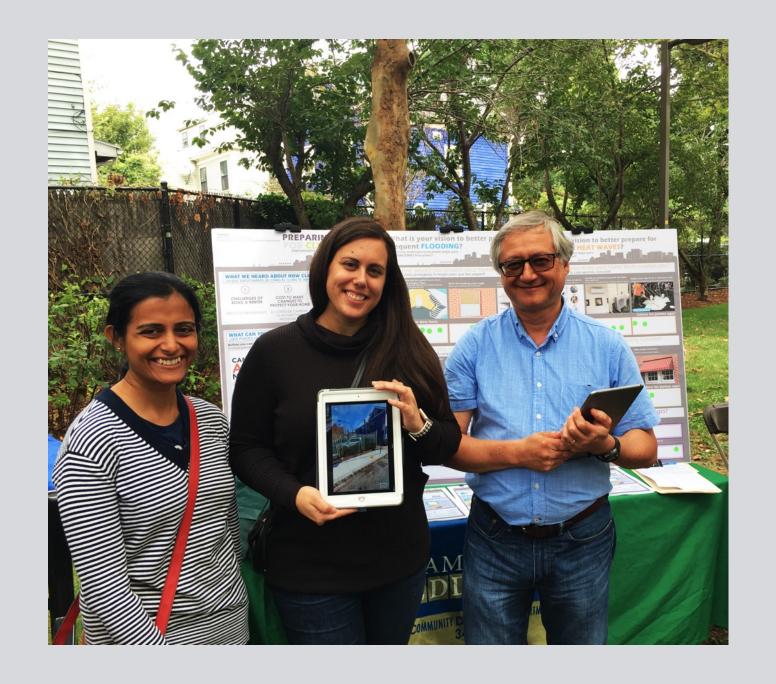
The Language of Climate Change: Shaping Public Preparedness

Case Study: Cambridge, MA

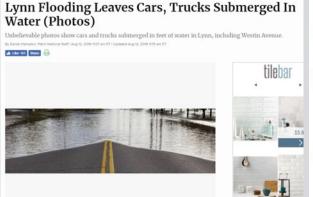


Overview

- Climate Change Planning in the City of Cambridge
- Challenges of Communicating
 Climate Change Messages
- Solutions and Examples
- Moving Forward
- Q&A



Why is this important?



Massachusetts Heat Wave Stretches into Fourth Day

Heat indices could reach triple digits on Monday, and meteorologists don't expect a reprieve until the end of the week. A heat emergency has been declared in Boston.



Nor'easter clips Maine, knocking out power, flooding roads and canceling flights



News > Local-Regional

Springfield, Vt., Sees Flash Floods

Saturday, July 28, 20

Springfield, Vt. — Heavy storms wreaked havoc on Friday in

Springfield, creating washouts, disrupting traffic, trapping vehicles
and flooding the first floor of a housing complex, according to a news release from the Springfield

Fire Chief Russ Thompson said the first floor of the Whitcomb Building, a six-story complex managed by the Springfield Housing Authority that is home to 72 income-eligible residents 62 and older or those who have a disability, quickly flooded on Friday afternoon after a nearby drainage basin clogged. The water levels in the building rose over 4 feet, Thompson said. As crews worked to divert water from the building, the water buckled the steel entry doors of the building's electrical service room and cut off the building's power.

First-floor residents were moved to a safe area, the chief said, and welfare checks were conducted throughout the building's other five floors. Two residents were trapped in an elevator but were otherwise unharmed.

ALL FROM 2018





Heat Wave to Wallop New Hampshire

Today

To

to high- 90s through Thursday, July 5,

The heat index will be pushing 100 degrees in New Hampshire on Sunday, ushering in a hot and humid Fourth of July week.

Daytime temperatures will be sticking in the 90s through Thursday, according to the National Weather Service. It will only get hotter Monday and Tuesday.

Meteorologist Derek Schroeter says there's some relief on the immediate coast but even that will come to an end Tuesday when temperatures climb into the upper 90s in some places.



Official: NH Residents Rescued From Flood Waters

Hurricane Florence's remnants have caused flash flooding in New Hampshire that resulted in some people be rescued

Sept. 18, 2018, at 11:30 a.m.



DERRY, N.H. (AP) — Hurricane Florence's remnants have caused flash flooding in southern New Hampshire that resulted in some people having to be rescued.

Chris Legro from the National Weather Service said he received reports Tuesday morning of boats being used to rescue people from rising water in Derry, New Hampshire.

He said the rainfall was fast and furious, with more than 5 inches of rain falling in Auburn, New Hampshire, in as little as six hours. To the north, some places in southern Maine saw a couple of inches. By late morning, the worst of it was over.

The death toll from the storm is at least 32 in three states, with 25 fatalities in North Carolina. The once-powerful Category 4 hurricane made landfall late last week.

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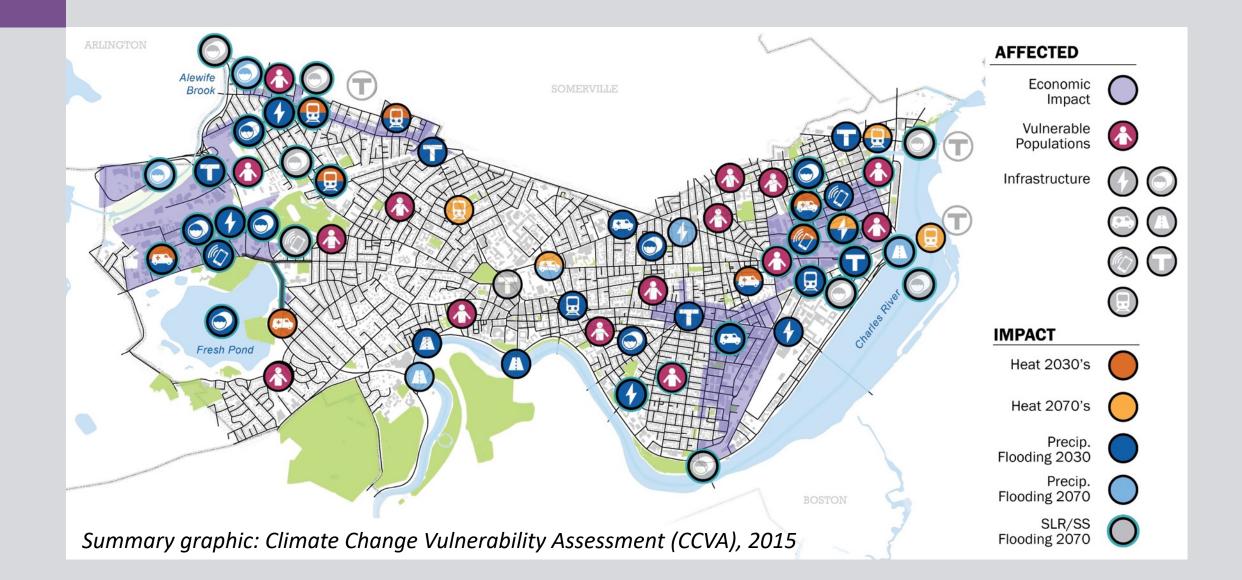
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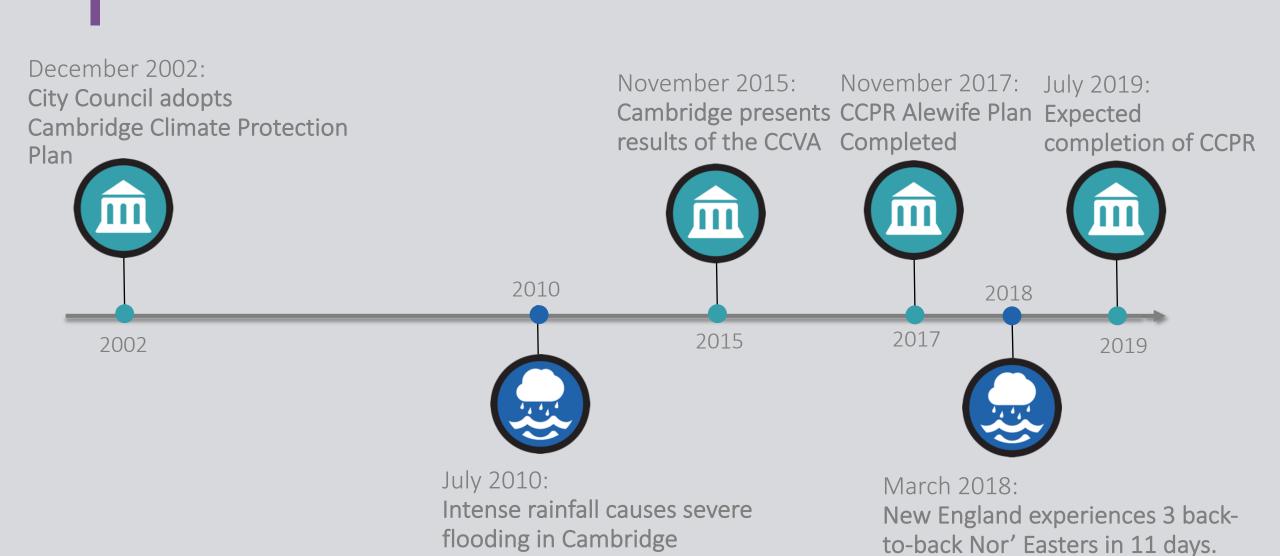
Why is communication critical?



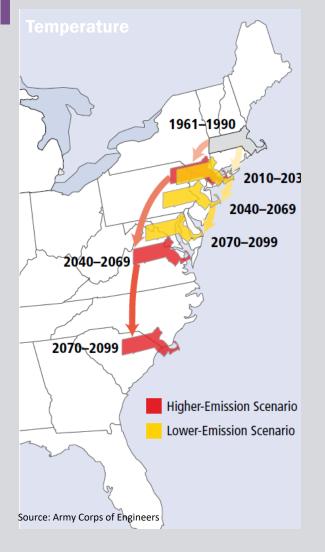
Case Study: Cambridge MA



Cambridge's Commitment to Addressing Climate Change



Cambridge Climate Change Vulnerability Assessment [CCVA] - Climate Scenarios





Bishop Allen Drive (Source: Kleinfelder)



Chicago Heat wave



Amelia Earhart Dam (Source: MaUSHarbors.com)



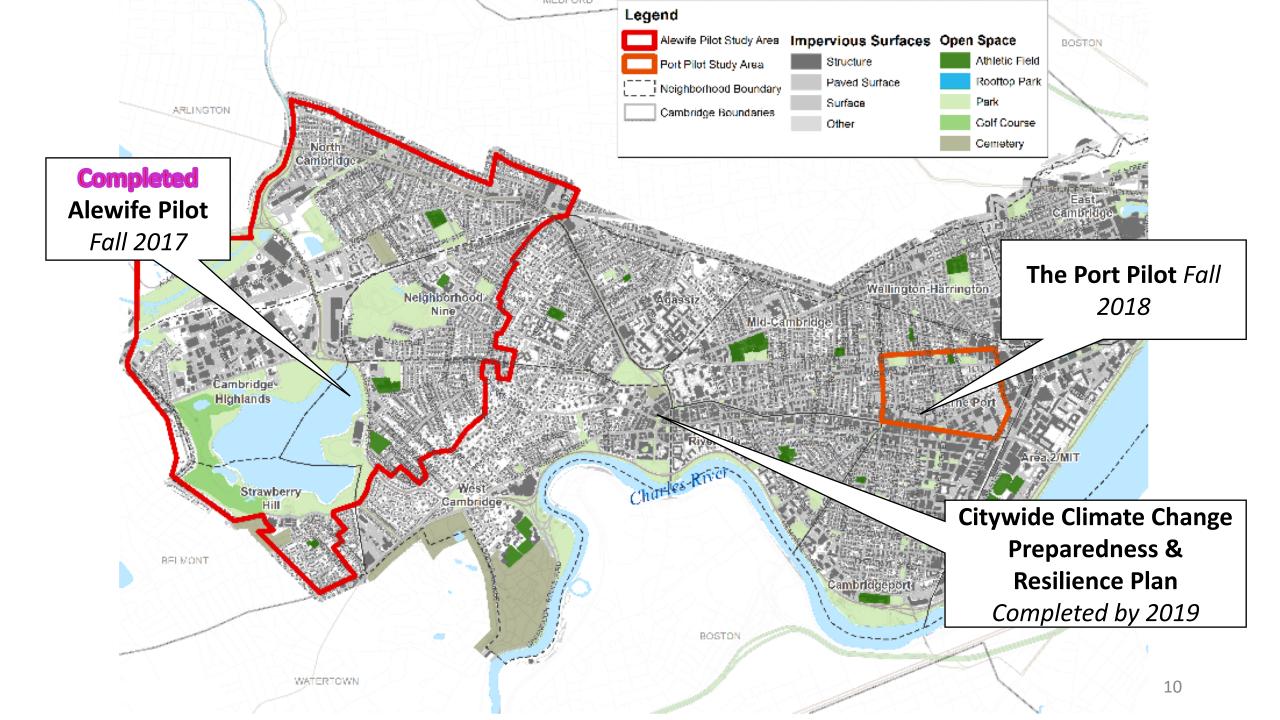
Charles River Dam (Source: New England District, US Army Corps of Engineers, 2015)

Cambridge Climate Change Preparedness & Resilience Plan Vision

- (A) Prepared Community
- (C) Resilient Infrastructure
- B Adapted Buildings
- D Resilient ecosystems

Protect the lives and livelihoods of members of the Cambridge community that are at risk from climate change impacts and, in the process, enhance the well-being of the Cambridge community.

Informed Messaging



Differences in Messaging Needs Explored Through Pilot Neighborhoods

Opportunity for redevelopment

The Port

Built out and densely populated

Alewife

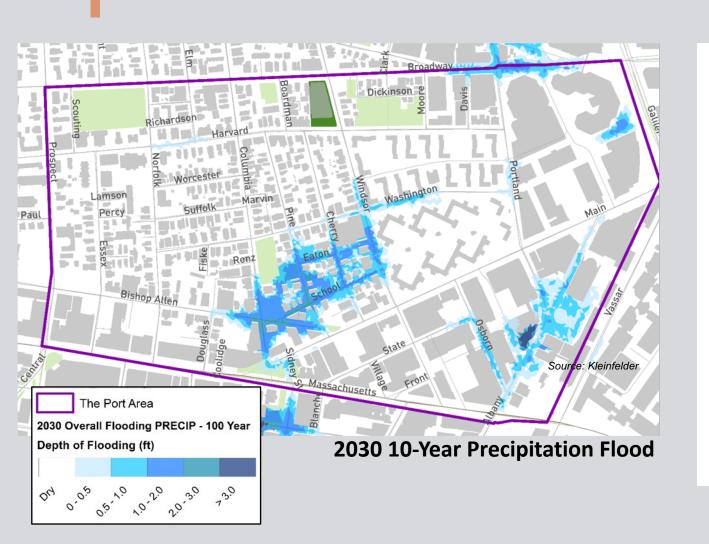
Larger parcels

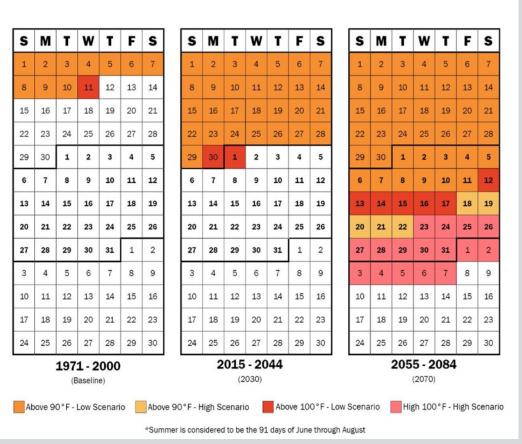
Mostly renters

Environmental justice community

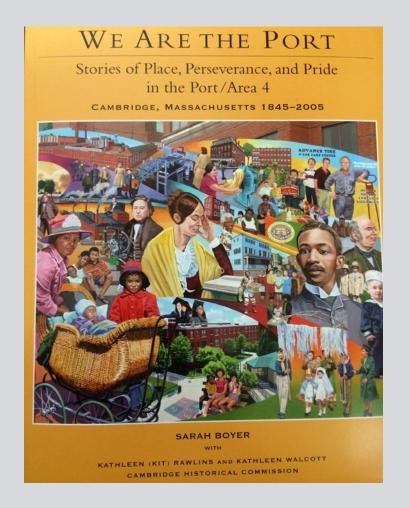
Lots of open space, both green and grey

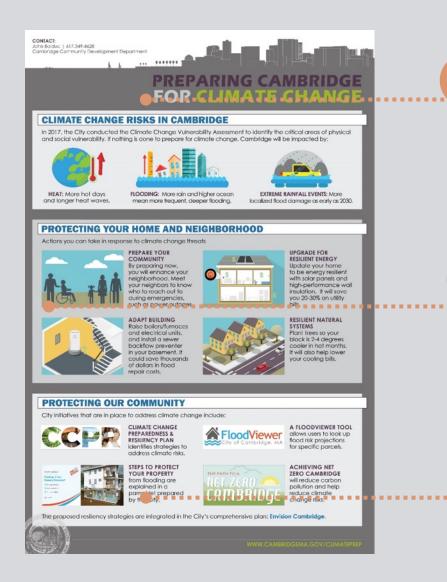
Message: Flooding from Precipitation & Heat





Research





Community
Interest
in
Climate Change

70% of Housing is Renter occupied.

Something to consider for building adaptation

Creating Multilingual tools & Communication

Already being implemented



Your Opinions: What the video gets right?

Challenges

Public Meeting Fatigue

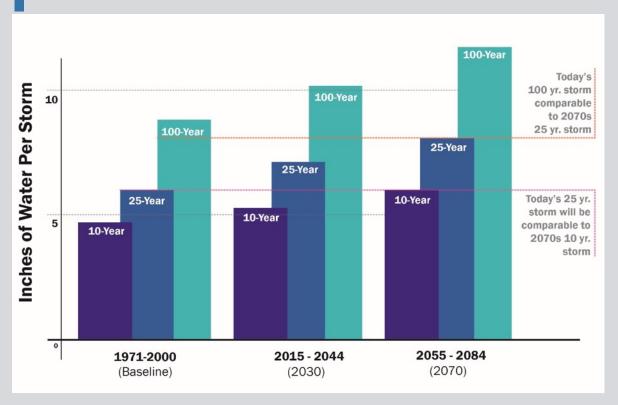


Typical Public Meeting

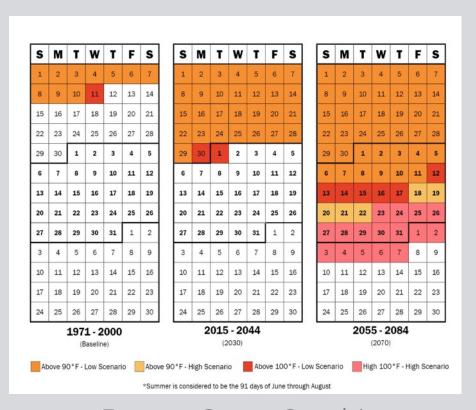


Piggyback on Community Events

Technical Language



Bar Charts



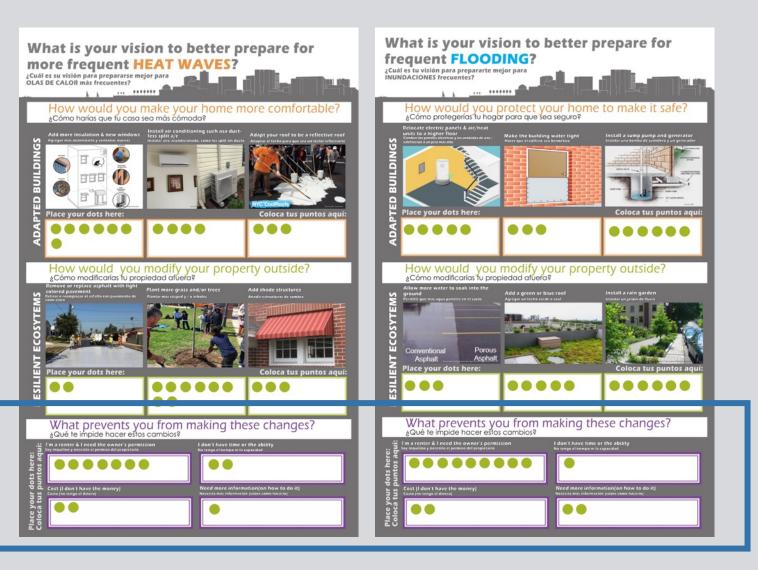
Easy to Grasp Graphics

Competing Priorities

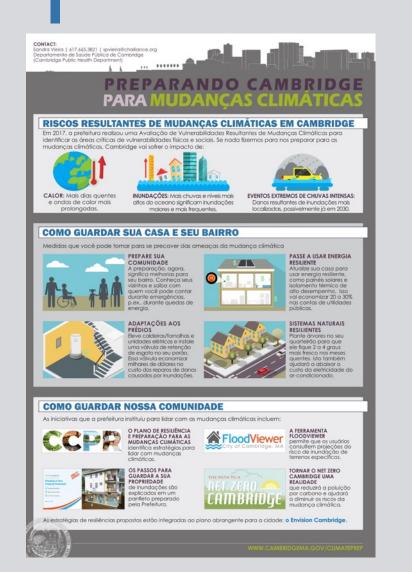
What prevents you from making these changes?

1 Answer: I'm a renter

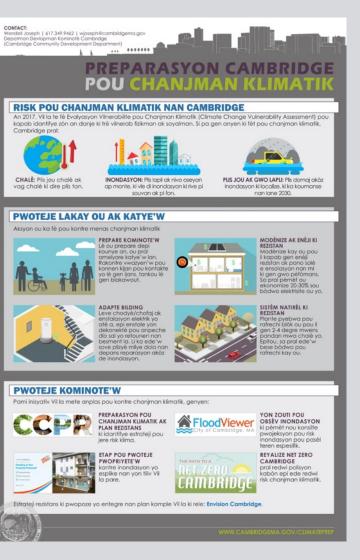
#2 Answer: Cost



Know your Audience







Assuming the City or Other Organization Will Take Care of Me



CRITICAL SERVICES AT RISK FOR 2030 100-YEAR PRECIPITATION FLOODING/HEAT

- (24) Pentecostal Tabernacle North Campus
- (25) St. Bartholomew's Episcopalian-- Union Baptist Church Christian Mission Holiness Church

Cambridge Community Foundation

- (10) Cambridge Community Outreach
- Cambridge Community Art Center
 Margaret Fuller Neighborhood House
 - (13) Tutoring Plus
 - (29) Moses Youth Center
- Fletcher Maynard Academy
 Prospect Hill Academy
 - The Algebra Project, Inc

Central Square Farmers Market (Mass Farmers Market)

- **Discovery Learning Associates**
- (4) Izzy's Restaurant & Sub Shop
- Camie's Bakery and Restaurant
 Central Square Theater / Underground Railway Theater
 - (6) The Gospel Room
- (15) (16) Washington Street Apartments
 Newtowne Court Apartments

Misconception Around Messaging of Climate Change

I'm from
Florida, this
isn't hot.

2070 is so far from now!

Solutions and Moving Forward

Consistency of Message Across Mediums

2030 annual 10% chance of flood (10 year 24hr storm)

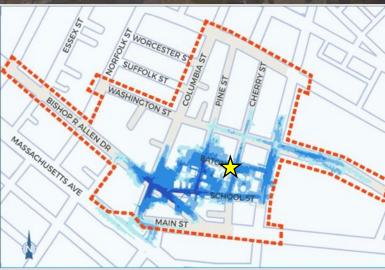


2030 improved with the construction of the **PL-6** Stormwater Tank

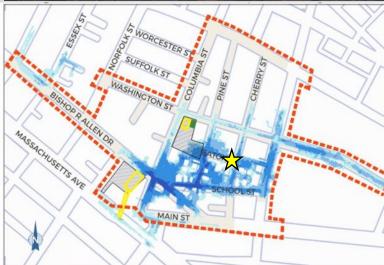


2030 annual 4% chance of flood (25 year 24hr storm)



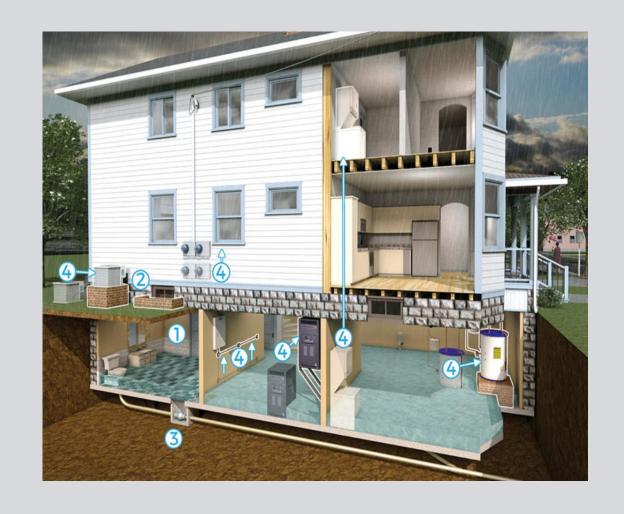




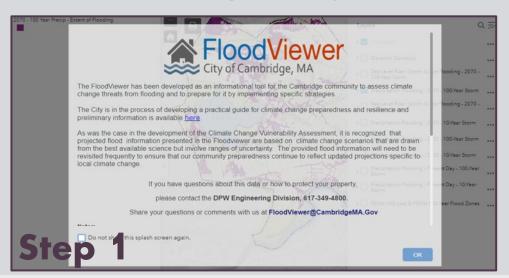


Providing Clear Guidance Materials

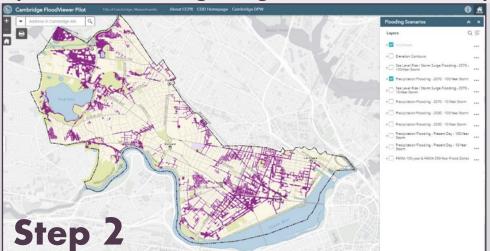
- 1. Use flood resilient materials
- **2.** Build exterior flood walls
- 3. Install backwater valves
- **4.** Elevate/relocate utilities



Providing Easy-to-Use Tools



Google: Cambridge Flood Viewer Website: http://www.cambridgema.gov/Services/FloodMap



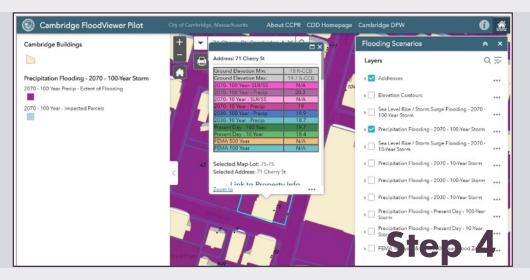
Combridge Flood/News Filot

Address St Commons M. Q.

Address St Commons M. Q.

Layers

Select Address & Storm



Design Flood 2070 – 100 Year Precipitation

Click on Property for More Info

Learn and Adapt

PROTECTING YOUR HOME AND NEIGHBORHOOD

Actions you can take in response to climate change threats



PREPARE YOUR COMMUNITY

By preparing now, you will enhance your neighborhood. Meet your neighbors to know who to reach out to during emergencies, such as power outages.



UPGRADE FOR RESILIENT ENERGY

Update your home to be energy resilient with solar panels and high-performance wall insulation. It will save you 20-30% on utility bills.



ADAPT BUILDING

Raise boilers/furnaces and electrical units, and install a sewer backflow preventer in your basement. It could save thousands of dollars in flood repair costs.



RESILIENT NATURAL SYSTEMS

Plant trees so your block is 2-4 degrees cooler in hot months. It will also help lower your cooling bills.

PROTECTING YOUR HOME AND NEIGHBORHOOD

Actions you can take in response to climate change threats



PREPARE YOUR COMMUNITY

ACTION:

 Meet your neighbors to know who to reach out to during emergencies, such as power outages.

IMPACT:

 By preparing now,you will enhance your neighborhood.



UPGRADE FOR RESILIENT ENERGY

ACTION:

- Install solar panels
- Upgrade to high performance wall installation
- Install a heat pump

IMPACT:

• It will save you 20-30% on utility bills.



ADAPT BUILDING

ACTION:

- Raise boilers/furnaces and electrical units
- Install a sewer backflow preventer in your basement.

IMPACT:

 It could save thousands of dollars in flood repair costs.



GREEN YOUR PROPERTY

ACTION:

- Plant trees
- Decrease paved areas
- Plant a garden

IMPACT:

• It will make your house cooler during a heat wave.

Questions?

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Robin Seidel, Climate Change Professional, rseidel@kleinfelder.com

https://www.cambridgema.gov/CDD/climateandenergy/climatechangeplanning

Preparing Your Community

KLEINFELDER

https://www.cambridgema.gov/Services/FloodMap

https://go.wondavr.com/SHPM2kCupP

