

# MVP Workshop #2 Objectives

- Identify strengths, vulnerabilities, and actions related to four priority hazards under infrastructural, societal, and environmental areas
- Prioritize the actions to be identified for the MVP report and the MVP Action Plan Grant

# Small Team Exercise

9:15 –12:30 Small Team Exercise

1. Team introductions and identify a spokesperson (not the facilitator).
2. Review the hazards we are focusing on.

Intense  
Storms

Flooding

Heat Waves

Drought

3. Identify community vulnerability and strengths for infrastructure, society, and environment.
  - Each table will do the two areas they did not do last week
  - Prioritize using dots. Each participant will select their top action.

12:30–12:45 Large Group Action Prioritization

4. Present the actions with the most stickers to the group.

Walk through example

Thanks for your hard work!

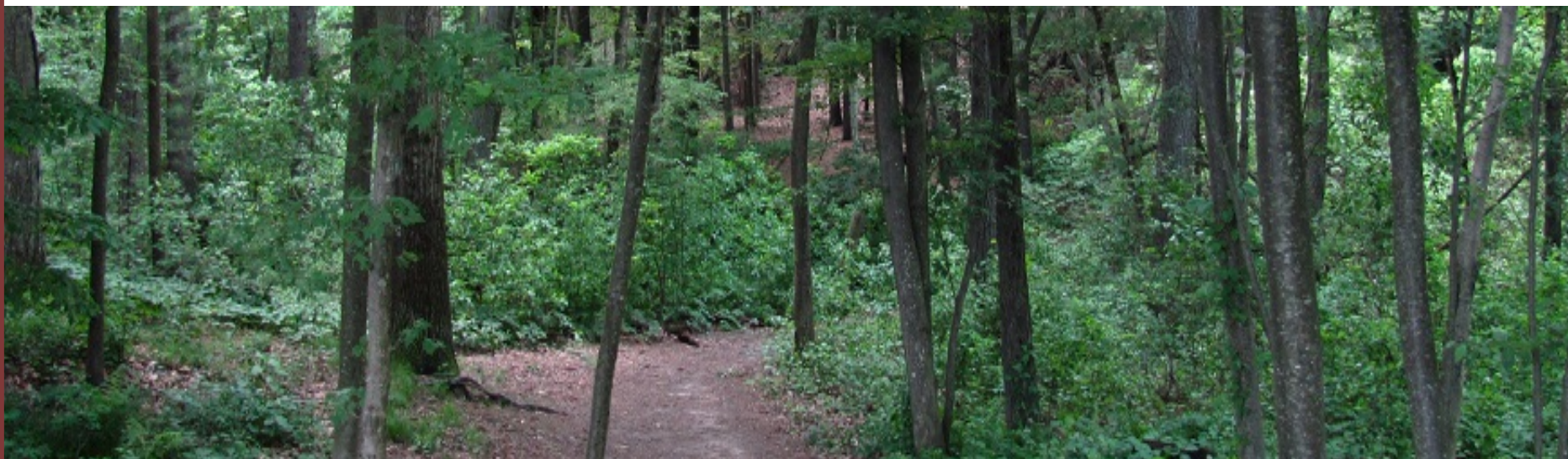




# What is our pathway to resilience?

Town of Dedham  
Listening Session  
December 12, 2018





## What does climate change look like in Dedham?

We are already seeing the impacts of climate change in our town and throughout Massachusetts through increased extreme weather events, heat waves, flooding, and drought. These hazards are projected to worsen in the future.

## What is climate resiliency?

A resilient Dedham goes beyond fortifying our infrastructure and preserving and expanding our natural resources to guard against climate impacts. It also includes a focus on socioeconomic factors and combatting the unique risks climate change poses for vulnerable populations (e.g., environmental justice communities, low-income communities, children, elderly, pregnant women, those with pre-existing conditions, etc.)



# Municipal Vulnerability Preparedness (MVP) Process

Engage Community



Identify CC impacts and hazards



Complete assessment of vulnerabilities and strengths



Develop and prioritize actions



Take Action



## Tonight's Objectives

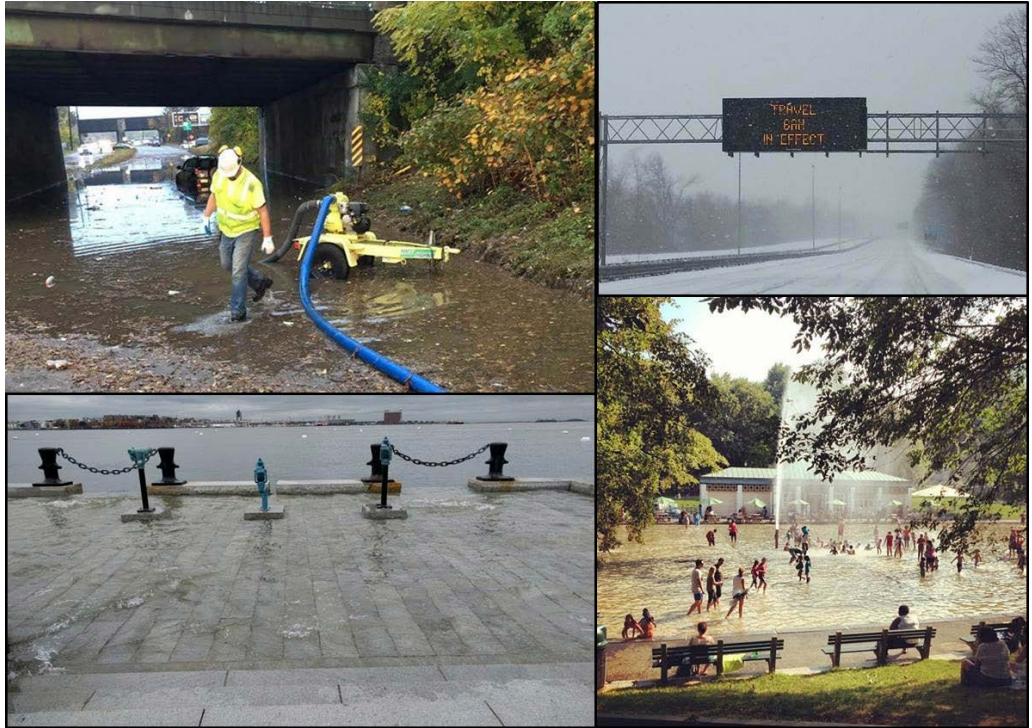
- Introduce climate related hazards
- Review solutions identified through the MVP workshops
- Understand which hazards the community is concerned about
- Identify actions to enhance resiliency



# Lived Changes Across the State

## Extreme events in MA in 2018

- Summer heat waves
- 4 nor'easters in 3 weeks
- Flash floods



# Climate Change Historical Data and Projections

Intense Storms


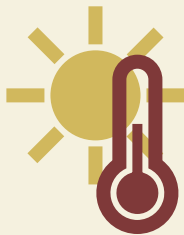


Heat Waves

Drought

Flooding



# What hazards can we expect in Dedham due to climate change?

Intense Storms	Heat Waves
 <ul style="list-style-type: none"><li>• Increase in the frequency and severity of extreme rain events</li><li>• High winds during Nor'easters and thunderstorms</li></ul>	 <ul style="list-style-type: none"><li>• Increase in the number of days with elevated temps, particularly days over 90° F</li><li>• Increase in the length and severity of heat waves</li></ul>
Drought	Flooding
 <ul style="list-style-type: none"><li>• Short- and long-term droughts, low stream flows</li><li>• Potential for more brush fires</li></ul>	 <ul style="list-style-type: none"><li>• Flash and prolonged flooding</li><li>• Increase in likelihood that rivers will overtop their banks and flood surrounding areas due to more extreme storms</li></ul>

# What are the historical trends and projected changes?

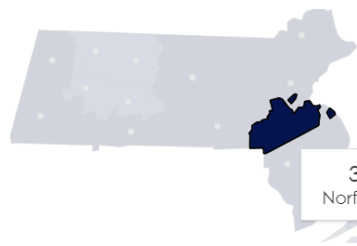
## Intense Storms



#1

The Northeast ranked first among all regions in the U.S. for largest increase in the intensity of rainfall events over the past 50 years

## Flooding



1996-2016  
38 Flooding Event(s)  
Norfolk County, Massachusetts

2

Average # annual flood events

1996-2005

2.7

Average # annual flood events

2006-2016

## Norfolk County Precipitation Projections

Average  
Annual Total  
Precipitation

46.7"

48.9"

(+2.2")

50.2"

(+3.5")

Observed  
Baseline  
1971-2000

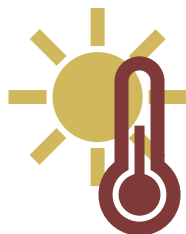
Mid-  
Century  
Projection

End of  
Century  
Projection



# What are the historical trends and projected changes?

## Heat Waves



### Norfolk County Heat Projections

Avg #  
Days  
> 90° F

8

30

44

Avg #  
Days  
< 32° F

131

105

91

Observed  
Baseline  
1971-2000

Mid-  
Century  
Projection

End of  
Century  
Projection

## Drought



52%

Of MA land was  
considered to be in  
“Exceptional Drought”  
in Oct ‘16

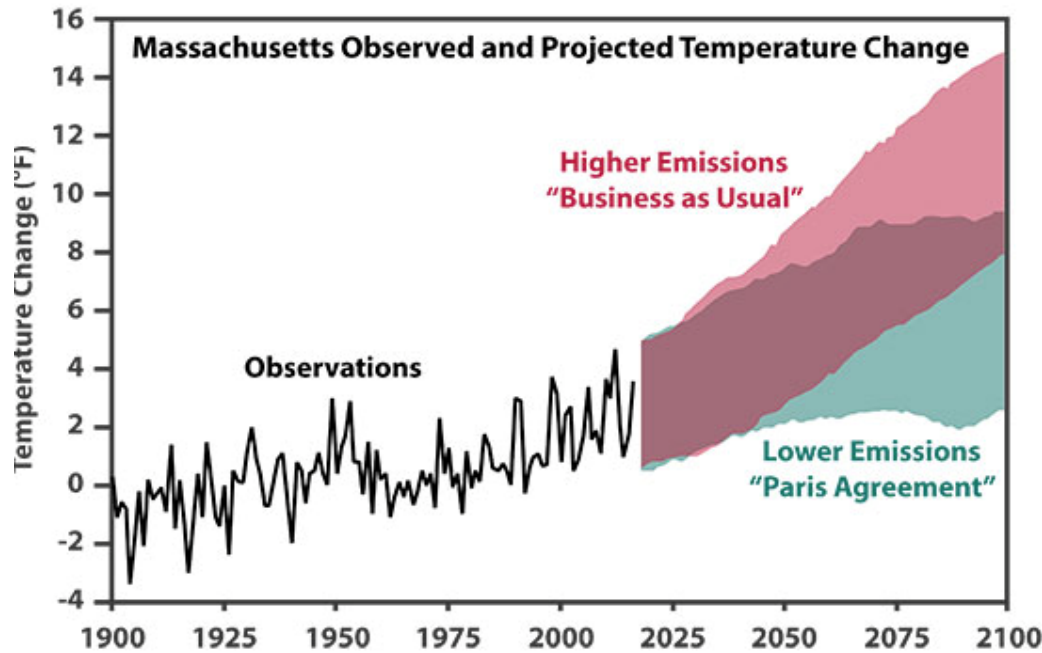
6

sites in Dedham with  
elevated risk of brush  
fires



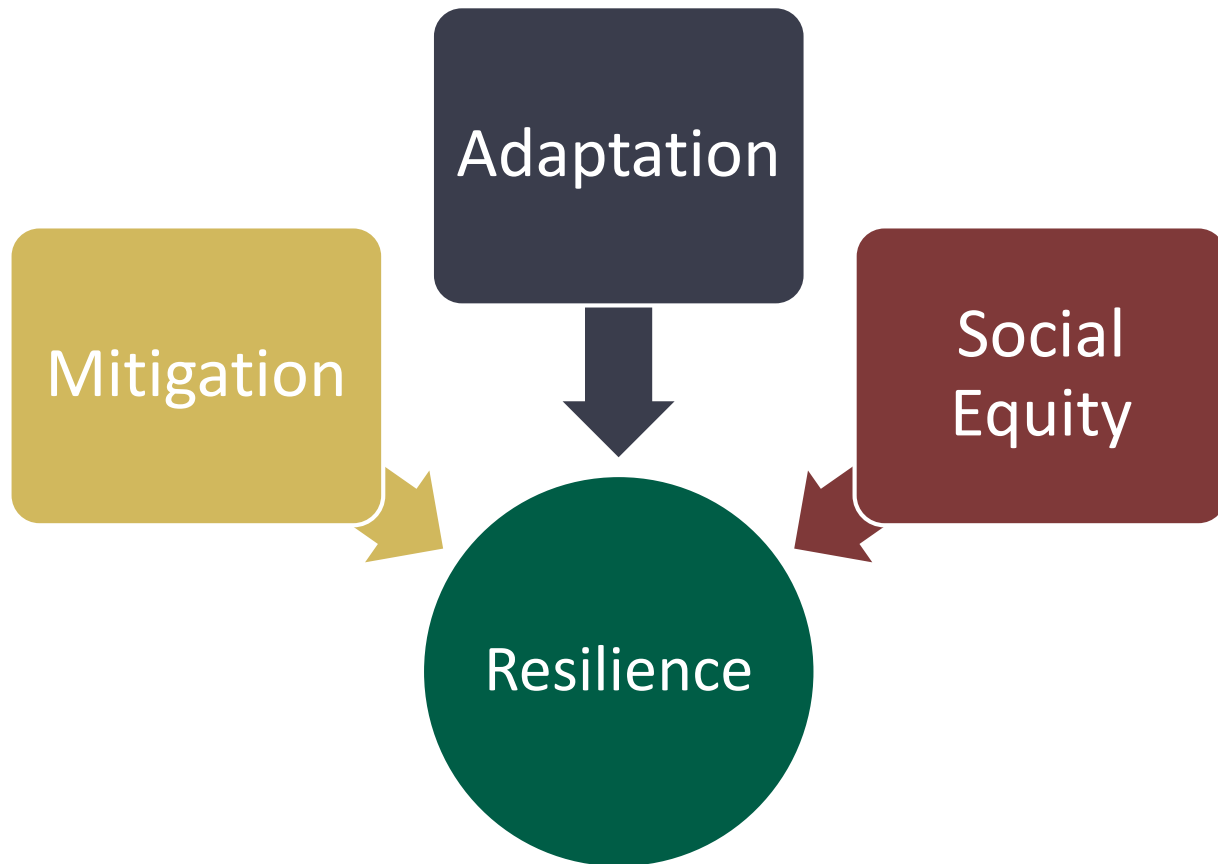
# What are the impacts?





# Mitigation Matters

# **“Manage the unavoidable and avoid the unmanageable”**



# Top Themes from Workshops

## Infrastructure

- Backup generation
- Infrastructure upgrades for resilience (e.g. green infra, stormwater)
- Water reuse, recharge, and recycle

## Social and Economic

- Preparedness education
- Resilient Zoning
- Comprehensive emergency plan

## Environmental

- Funding for natural resources
- Education on water conservation
- Coordination between Town/State/community entities

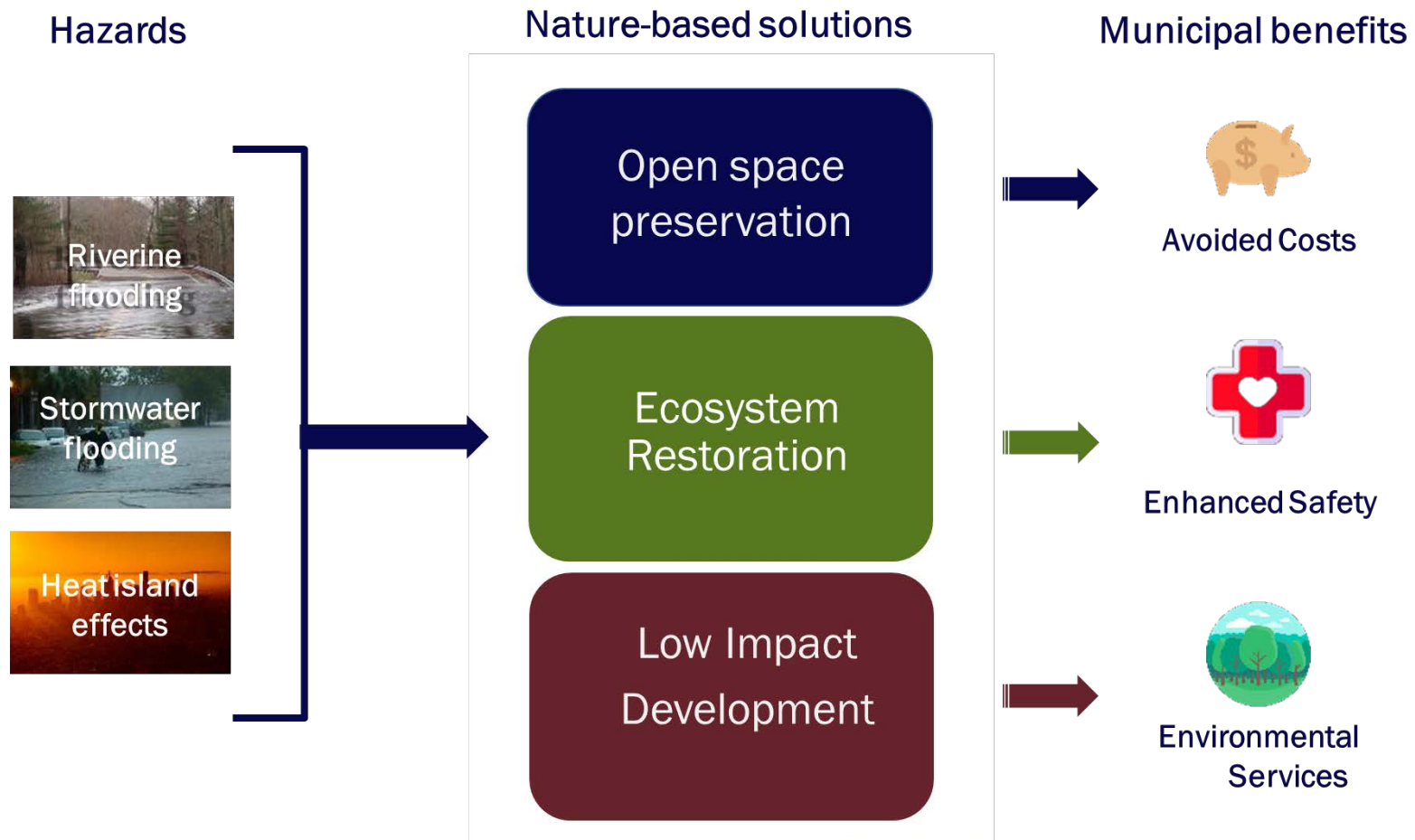
# What's next?





## Nature-Based Solutions:

*use natural systems, mimic natural processes, or work in tandem with traditional approaches to address natural hazards like flooding, erosion, drought, and heat islands.*



# Open House

**7:55– 8:25 Round Robin Discussions at Each Station**

**\*\* Recommended 7 minutes each station\*\***

Flooding

Heat Waves

Intense Storms

Drought

Thank you!



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## Appendix B

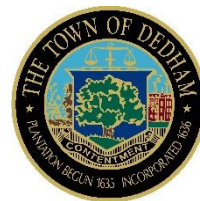
Summary of Climate Data – Historic Trends and Projected Changes

Maps of Identified Critical Assets and Infrastructure



# Town of Dedham

## Climate Change Summary



### What does climate change look like in Dedham?

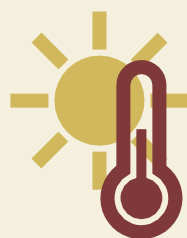
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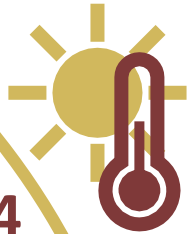
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sites in Dedham with elevated risk of brush fires



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## Flooding