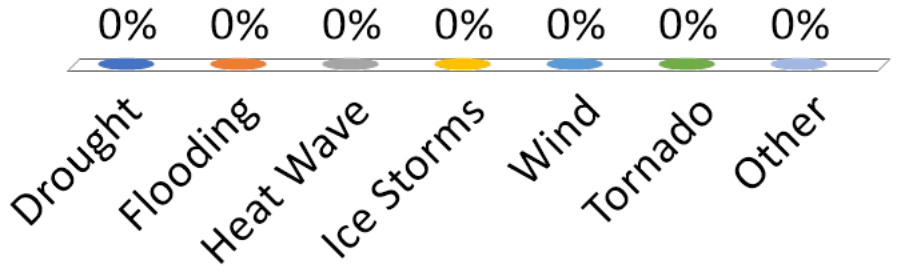
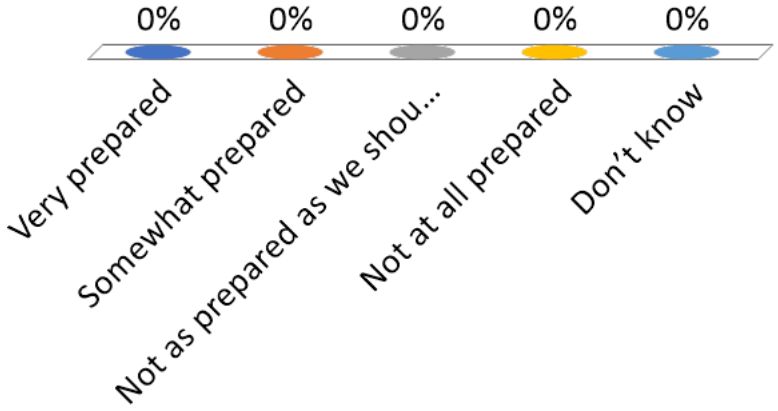
To which hazard do you think is Dedham most vulnerable?

A. Drought
B. Flooding
C. Heat Wave
D. Ice Storms
E. Wind
F. Tornado
G. Other



How prepared is your department/organization to address the impacts of climate change?

A. Very prepared
B. Somewhat prepared
C. Not as prepared as we should be
D. Not at all prepared
E. Don’t know



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

MVP Workshop #1 Objectives

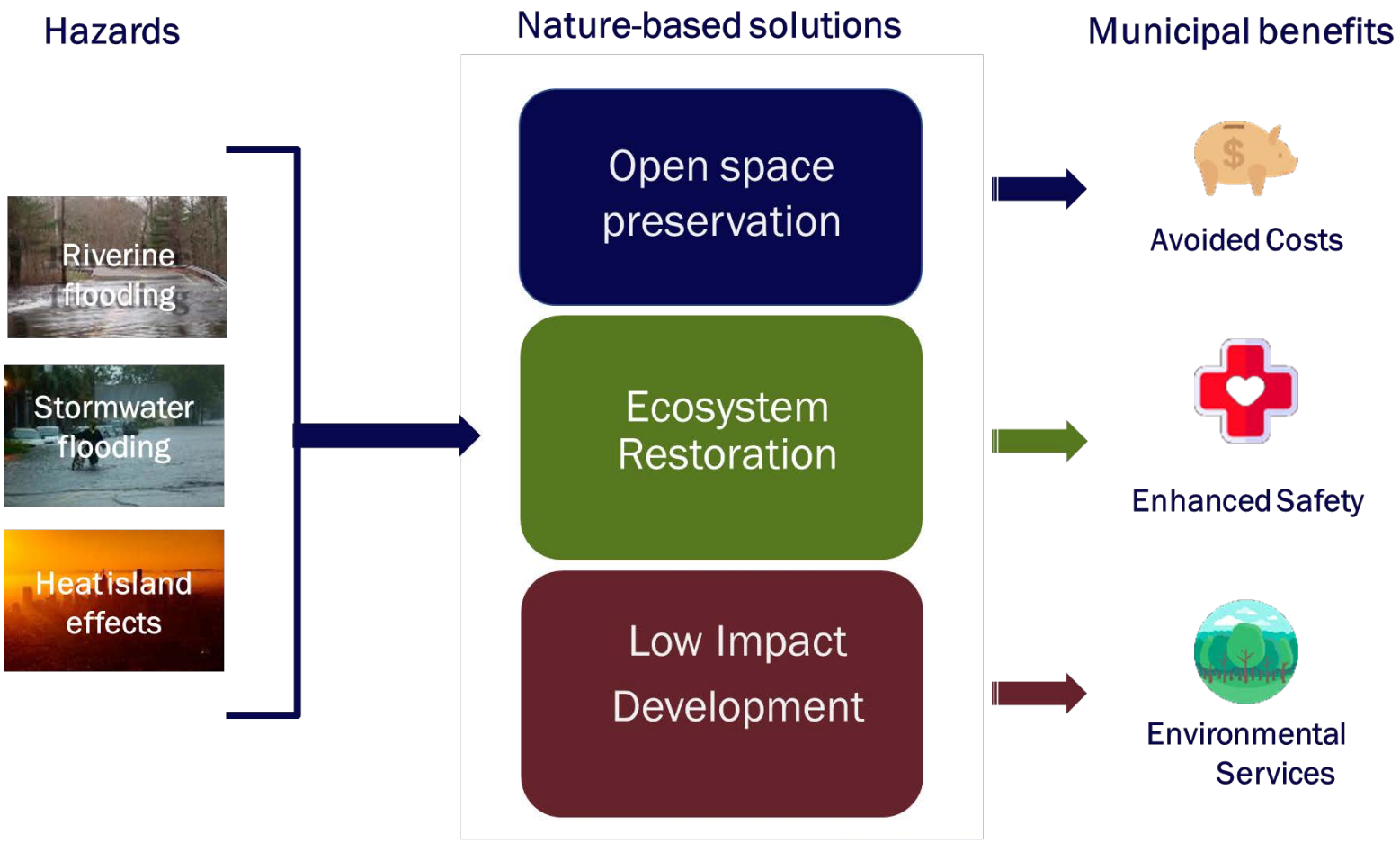
- Introduce the MVP process
- Define climate-related hazards
- Identify existing and future vulnerabilities and strengths
- Develop and prioritize actions for the community to take today in preparation for tomorrow
- Identify opportunities for the community to advance these actions, including the MVP Action Plan Grants

Community Resilience Building Framework

DURING WORKSHOP

1	Prepare for the Workshop	1. Establish a core team with goals. 2. Engage stakeholders. 3. Prepare materials for workshop. 4. Decide on participant arrangements
2	Characterize Hazards	1. Identify past, current, and future impacts. 2. Determine the highest-priority hazards.
3	Indentify Community Vulnerabilities and Strengths	1. Identify infrastructural vulnerabilities and strengths. 2. Identify societal vulnerabilities and strengths. 3. Identify environmental vulnerabilities and srengths.
4	Identify and Prioritize Community Actions	1. Identify and prioritize infrastructural actions. 2. Identify and prioritize societal actions. 3. Identify and prioritize environmental actions.
5	Determine the Overall Priority Actions	1. Identify highest-priority actions. 2. Further define urgency and timing.
6	Put It All Together	1. Generate final workshop products.
7	Move Forward	1. Continue community outreach and engagement. 2. Secure additional data and information. 3. Inform existing planning and project activities.

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.



Climate Change Historical Data and Projections

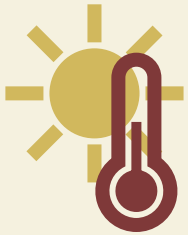
- Intense Storms
- Heat Waves
- Drought
- Flooding

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

Intense Storms

- Increase in the frequency and severity of extreme rain events
- High winds during Nor'easters and thunderstorms

Heat Waves



- Increase in the number of days with elevated temps, particularly days over 90° F
- Increase in the length and severity of heat waves

Drought

- Short- and long-term droughts, low stream flows
- Potential for more brush fires

Flooding

- Flash and prolonged flooding
- Increase in likelihood that rivers will overtop their banks and flood surrounding areas due to more extreme storms

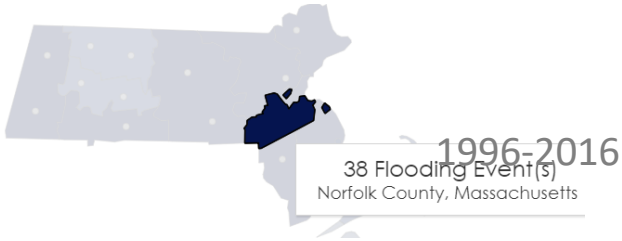
What are the historical and projected changes?

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



2 Average # annual flood events 1996-2005

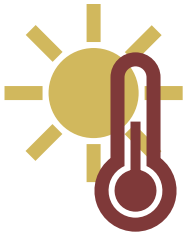
2.7 Average # annual flood events 2006-2016

Norfolk County Precipitation Projections

	Observed Baseline 1971-2000	Mid-Century Projection	End of Century Projection
Average Annual Total Precipitation	46.7”	48.9” (+2.2”)	50.2” (+3.5”)

What are the historical and projected changes?

Heat Waves



Norfolk County Heat Projections

	Observed Baseline 1971-2000	Mid-Century Projection	End of Century Projection
Avg # Days > 90° F	8	30	44
Avg # Days < 32° F	131	105	91

Drought

52% Of MA land was considered to be in "Exceptional Drought" in Oct '16

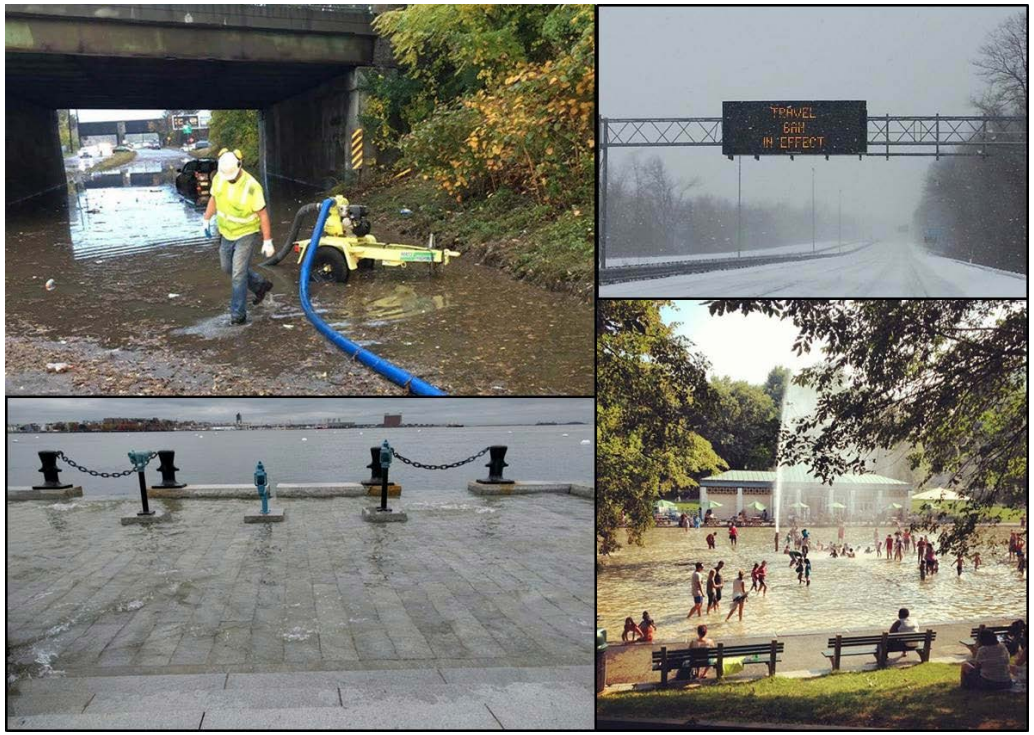
6

sites in Dedham with elevated risk of brush fires

Lived Changes Across the State

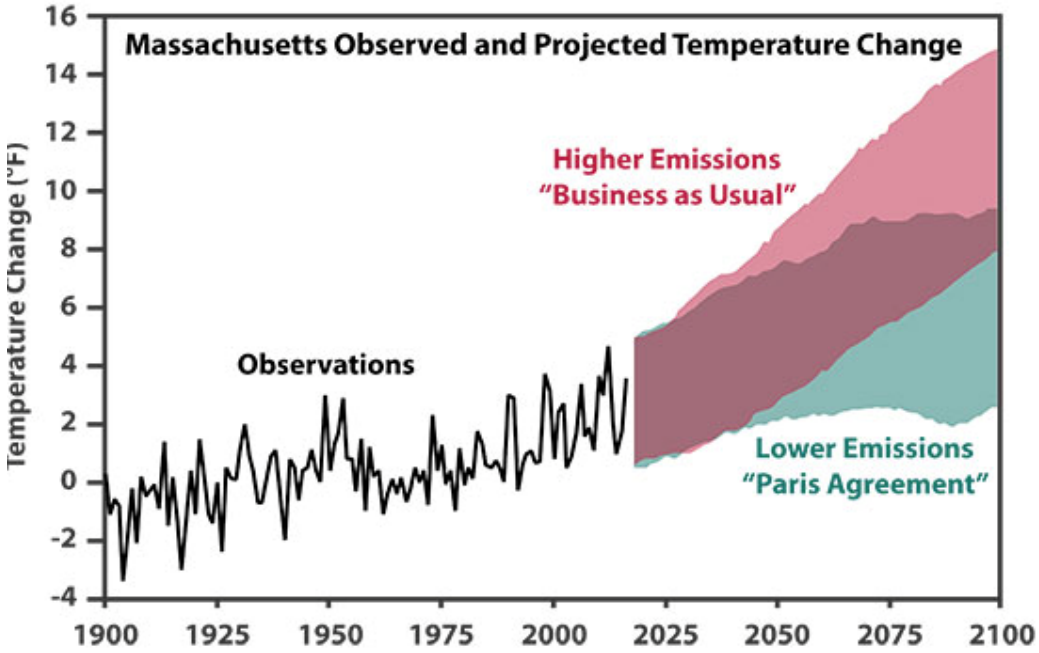
Extreme events in MA in 2018

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



What are the impacts?


Credit: State Farm (modified by crop)



Mitigation Matters

Small Team Exercise

9:55 –12:25 Small Team Exercise- Round 1

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

Intense Storms	Flooding	Heat Waves	Drought

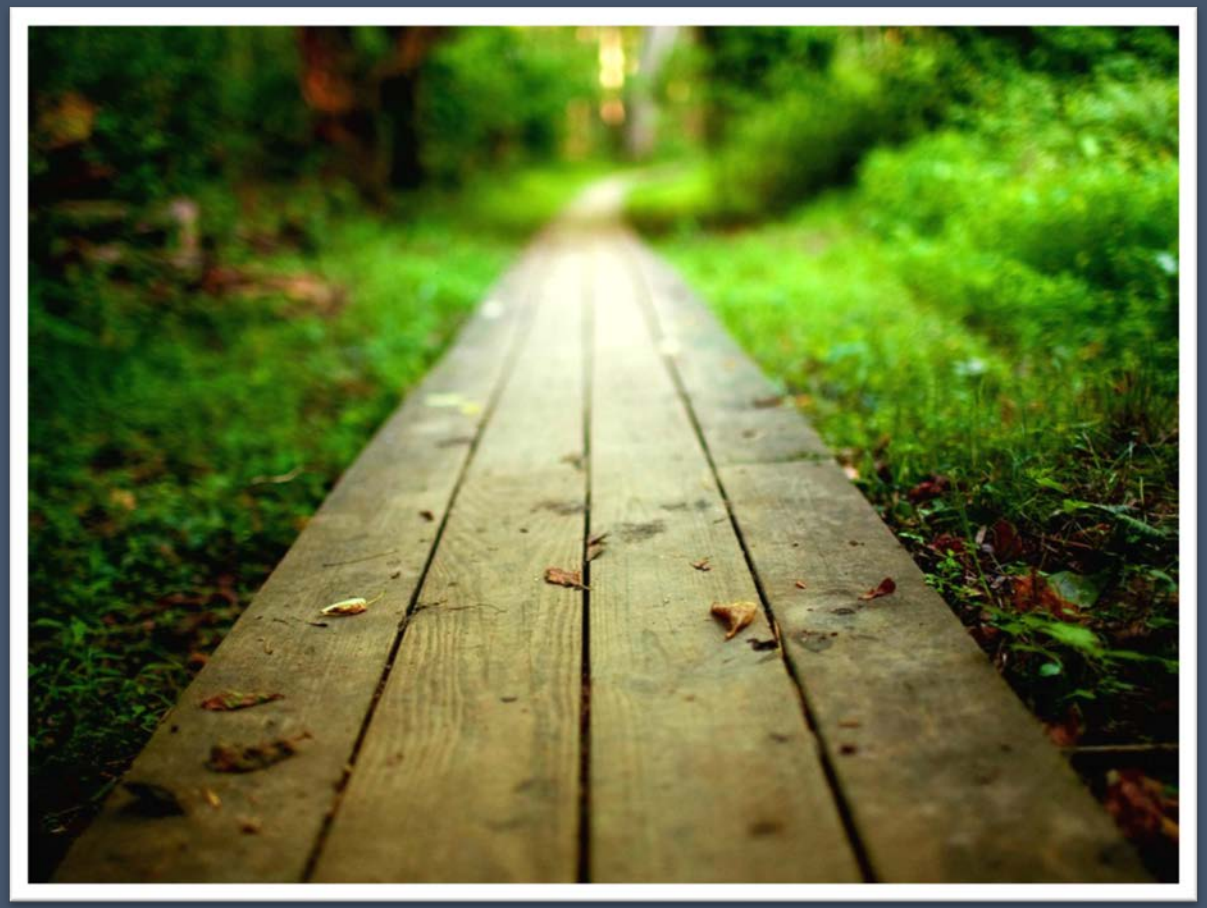
3. Identify community vulnerability and strengths for infrastructure, society, and environment.
   - Each table will be assigned a specific area to discuss today.
4. Prioritize using dots. Each participant will select their top action.

12:35–12:55 Small Team Report Out

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

Thanks for your hard work!

See you December 12th 9 am



What is our pathway to resilience?

Town of Dedham

MVP Workshop #2

December 12, 2018

Welcome Back!

1. **Introduction of new participants**
2. **Recap from last week**
3. **Group reflections**

Agenda

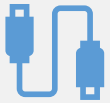
9:00 – 9:15	**Welcome Back and Refresher on Where We Left off Yesterday**
9:15 - 10:45	**Small Team Exercise- Round 2**
10:45 – 11:00	**Grab Lunch**
11:00 – 12:30	**Small Team Exercise- Round 3**
12:30 – 12:45	**Large Group Action Prioritization**
12:45 – 1:00	**Wrap up Workshop #2, Closing Remarks**

Highlighted Actions

Allocate more funds for natural resources and natural resources education

Educate/do outreach about the impacts of climate change

Upgrade the stormwater system to handle more extreme events



Install backup generators and storage systems at critical facilities- utilize solar and other renewable options as feasible