Municipal Vulnerability Preparedness Workshop
City of Newton, October 29, 2018

Jackson Homestead and Museum

Commonwealth of Massachusetts

Executive Office of Energy and Environmental Affairs

Municipal Vulnerability Preparedness Program

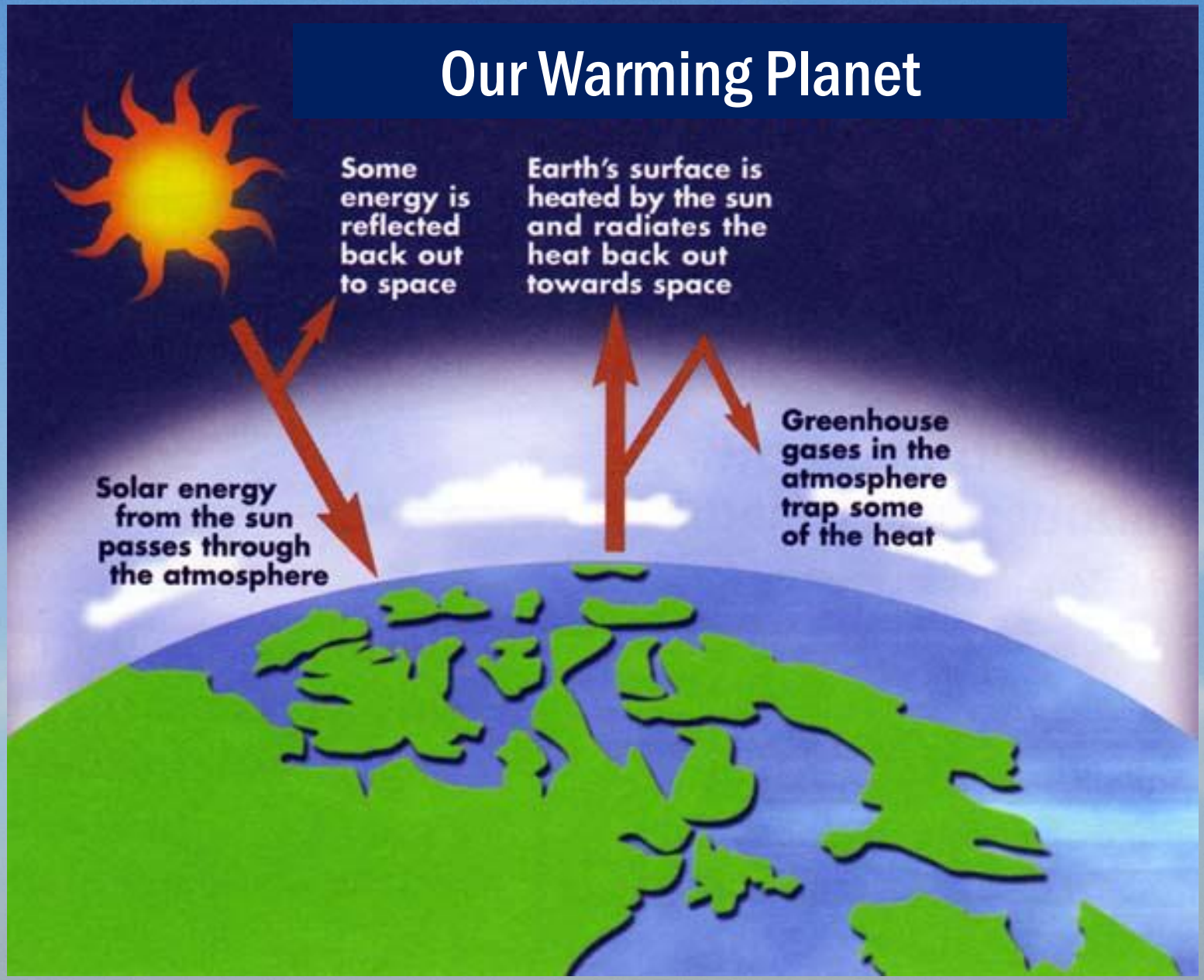
The Municipal Vulnerability Preparedness (MVP) program helps communities in Massachusetts to:

- **Define extreme weather and natural and climate related hazards**
- **Identify existing and future vulnerabilities and strengths**
- **Develop and prioritize opportunities to take action to reduce risk and build resilience**

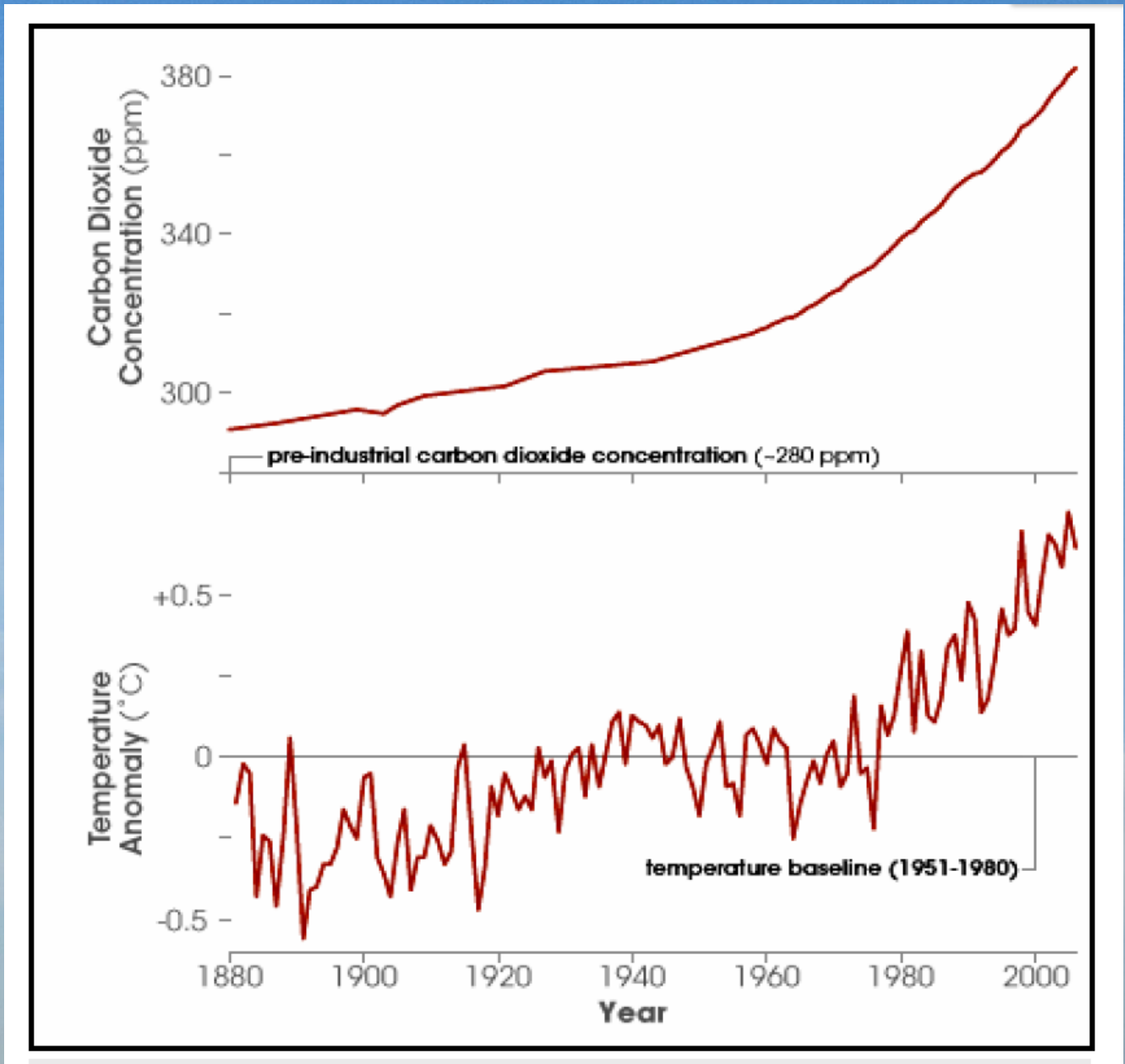
Municipal Vulnerability Preparedness Workshop
City of Newton

TIME	ACTIVITIES
5:30	Registration and Dinner
6:00	Introductions and Welcome
6:15	Overview of Workshop
6:20	Climate Change Projections
6:30	Climate Implications for Newton – Poster Review
7:00	Table Groups – Identify Top Concerns and Prioritize Action Items
8:30	Small Groups Report Out
8:55	Next Steps
9:00	Adjourn

Our Warming Planet



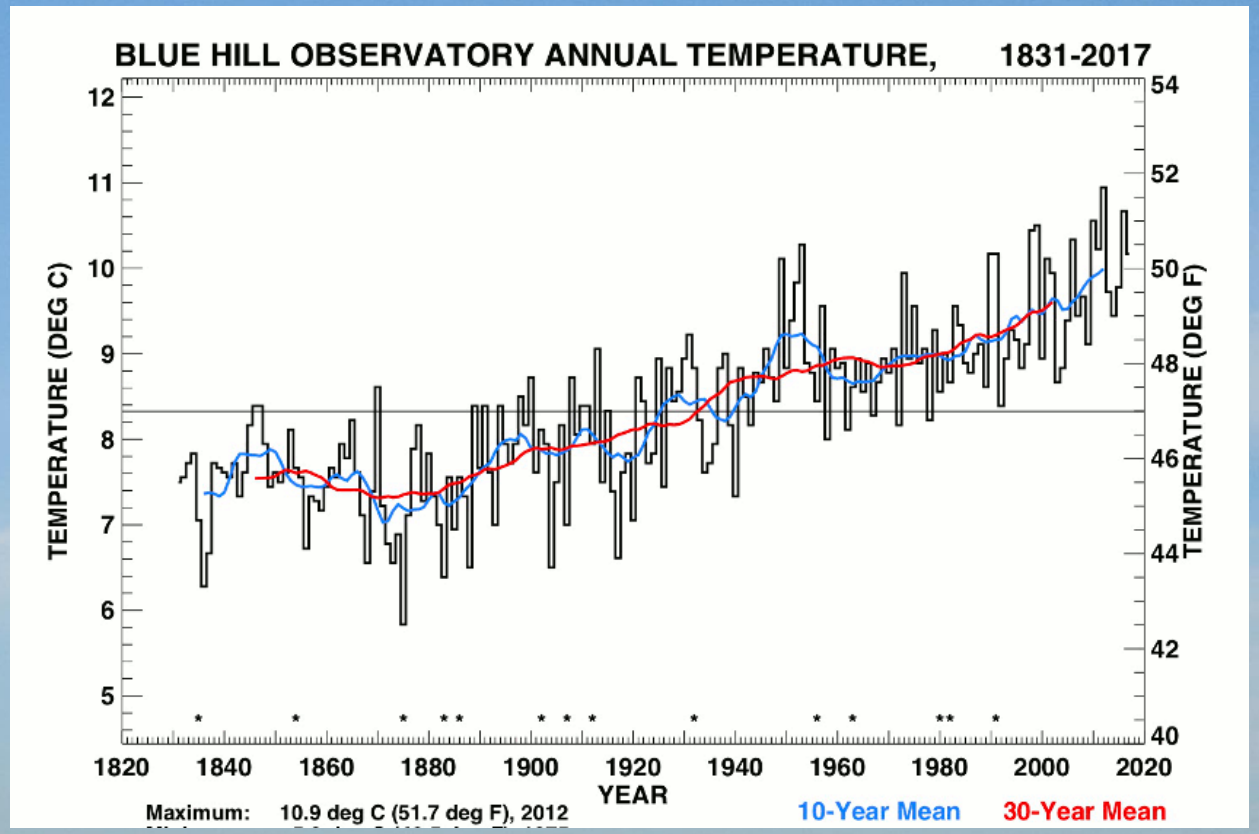
Global Temperature and CO_2 Trends



Source: MA Climate Change Adaptation Report 2011

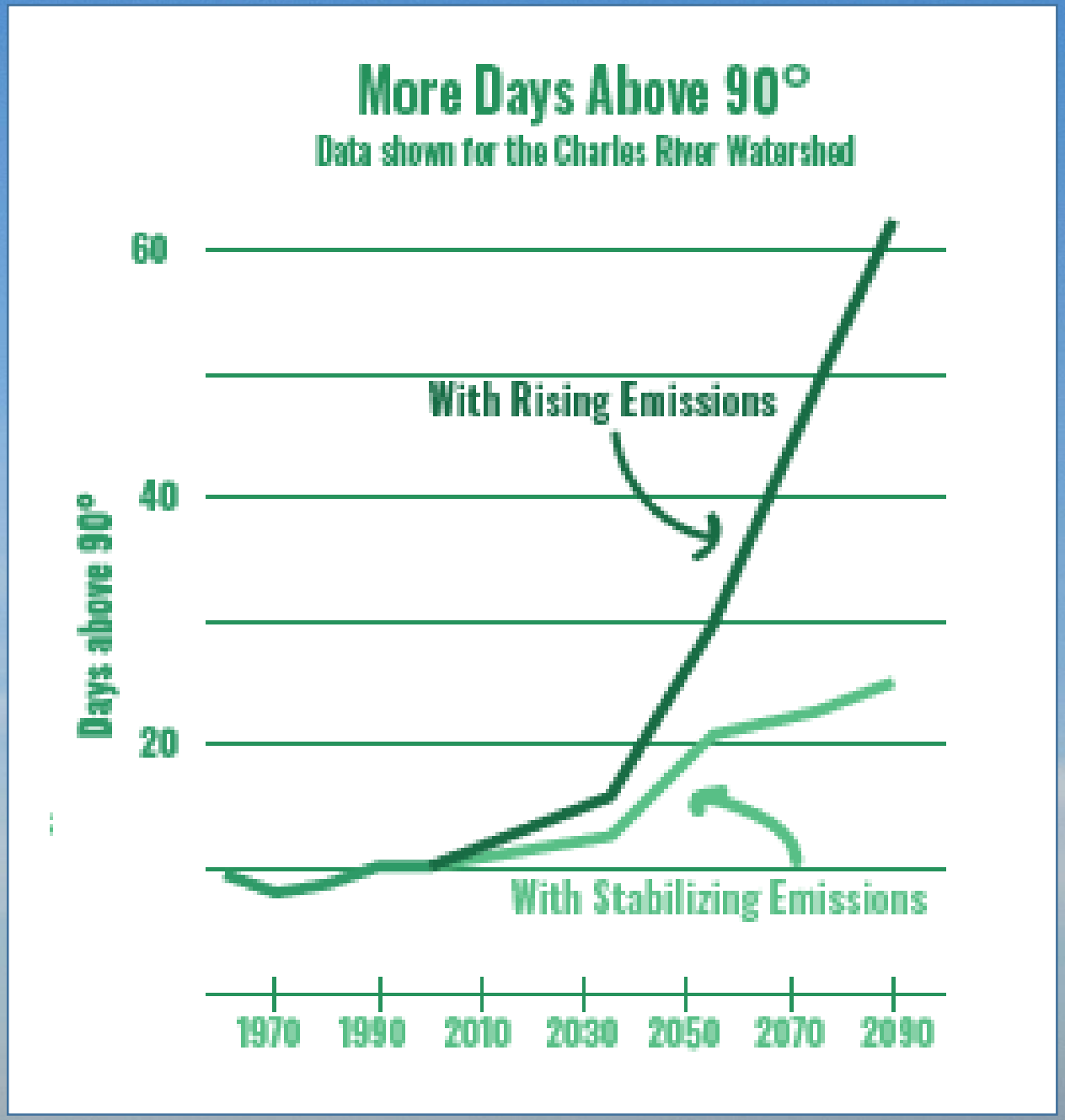
Temperature change: observed

For the Northeast United States: temperature increased by almost 2 degrees, between 1895 and 2011 (US National Climate Assessment 2014)



Blue Hill Observatory Annual Temperature, 1831-2017

Temperature change: projected

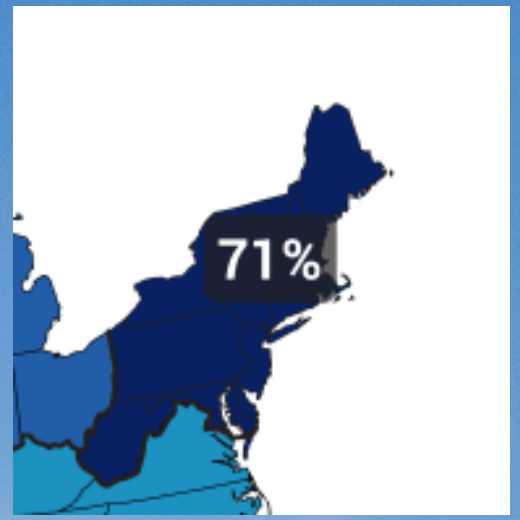


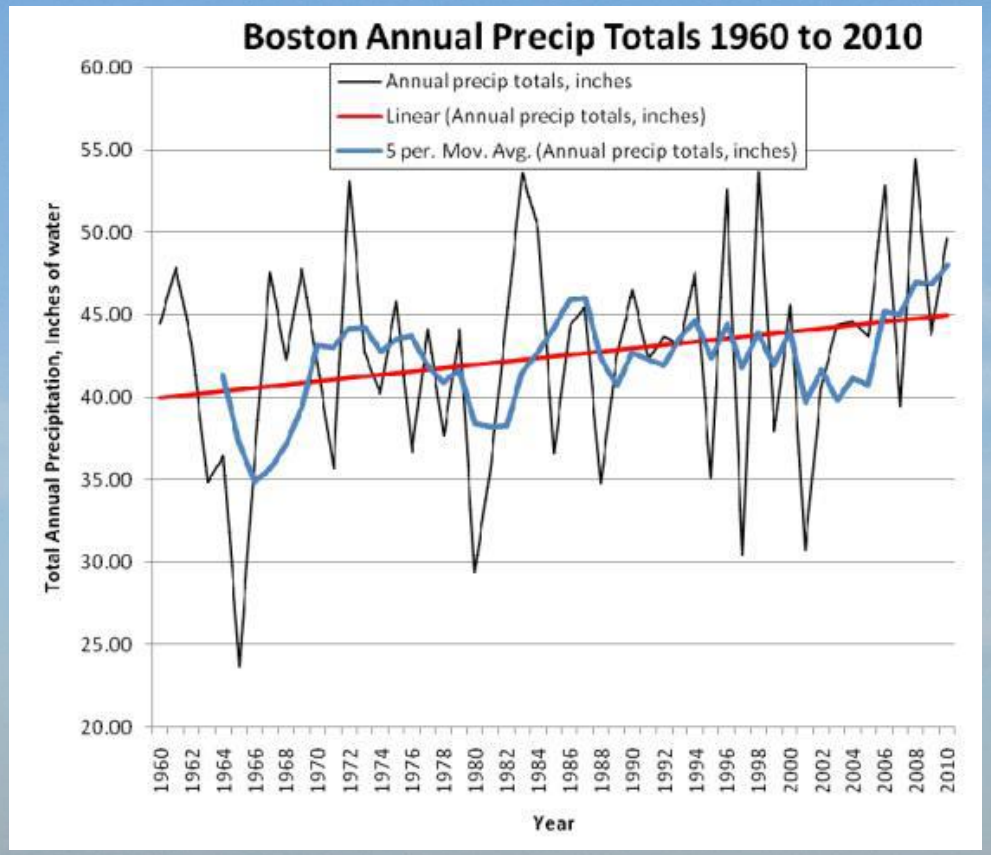
Source: Northeast Climate Science Center

Precipitation change: observed

For the Northeast United States: 71% increase in the amount of rain that falls in the top 1% events from 1958 – 2012.

Source: US National Climate Assessment 2014



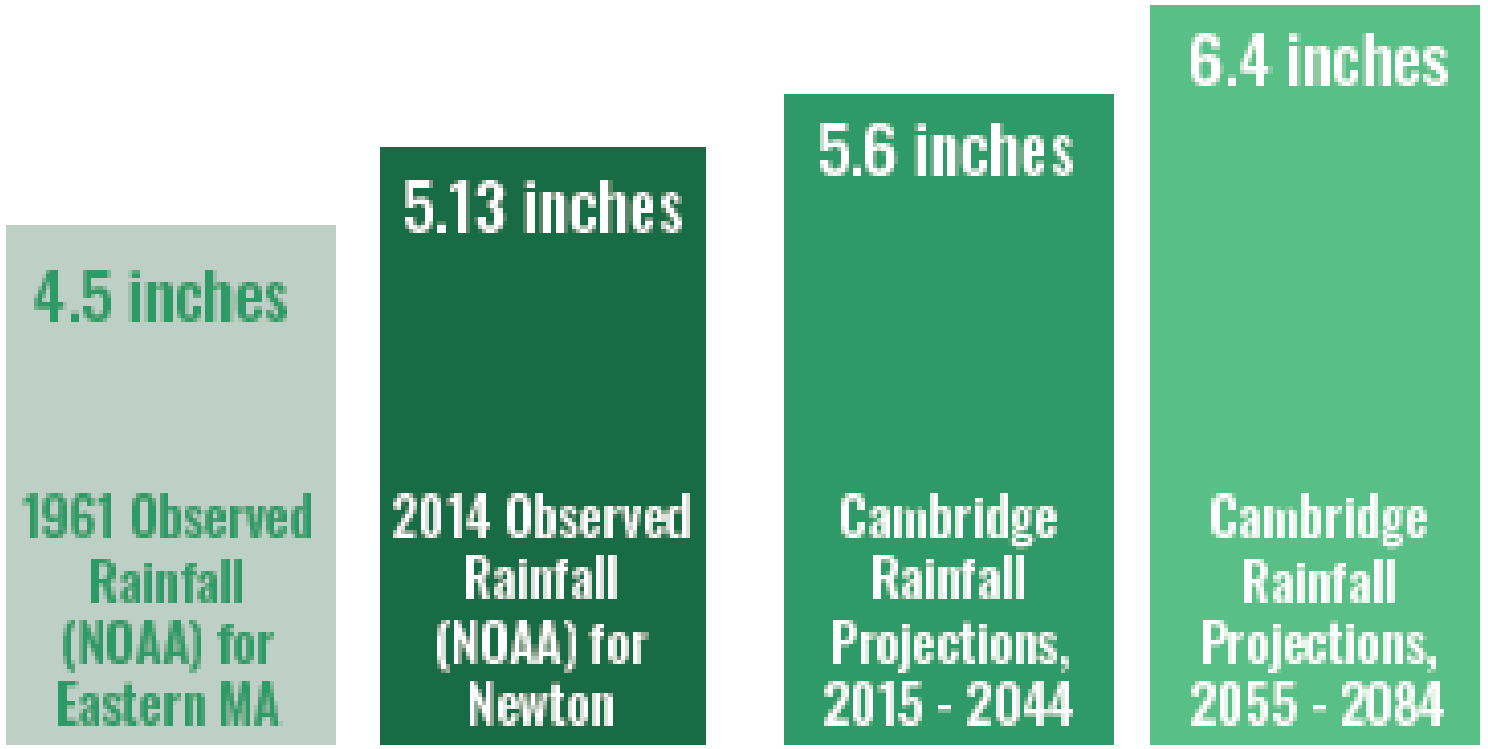


Source: MA Climate Change Adaptation Report 2011

For Boston area: 10% increase over the past 50 years

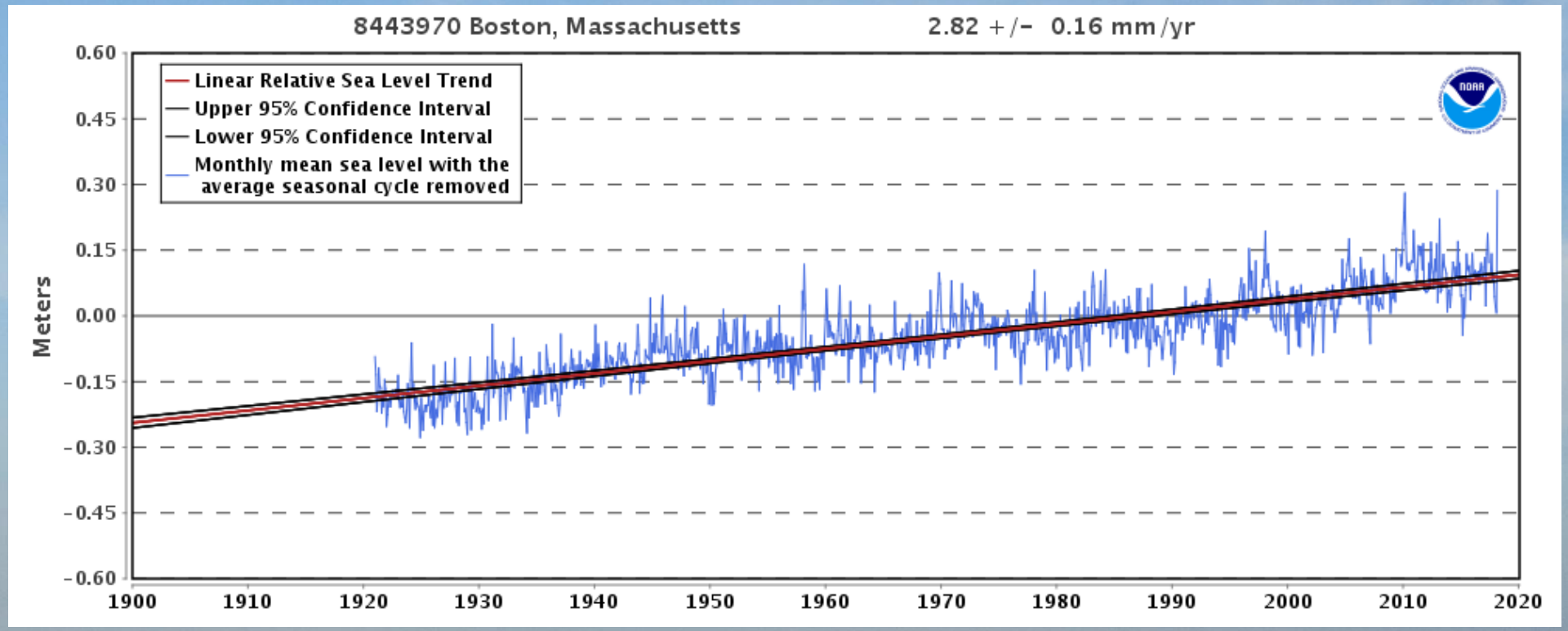
Precipitation change: projected

Expected size of a 10-year, 24-hour storm

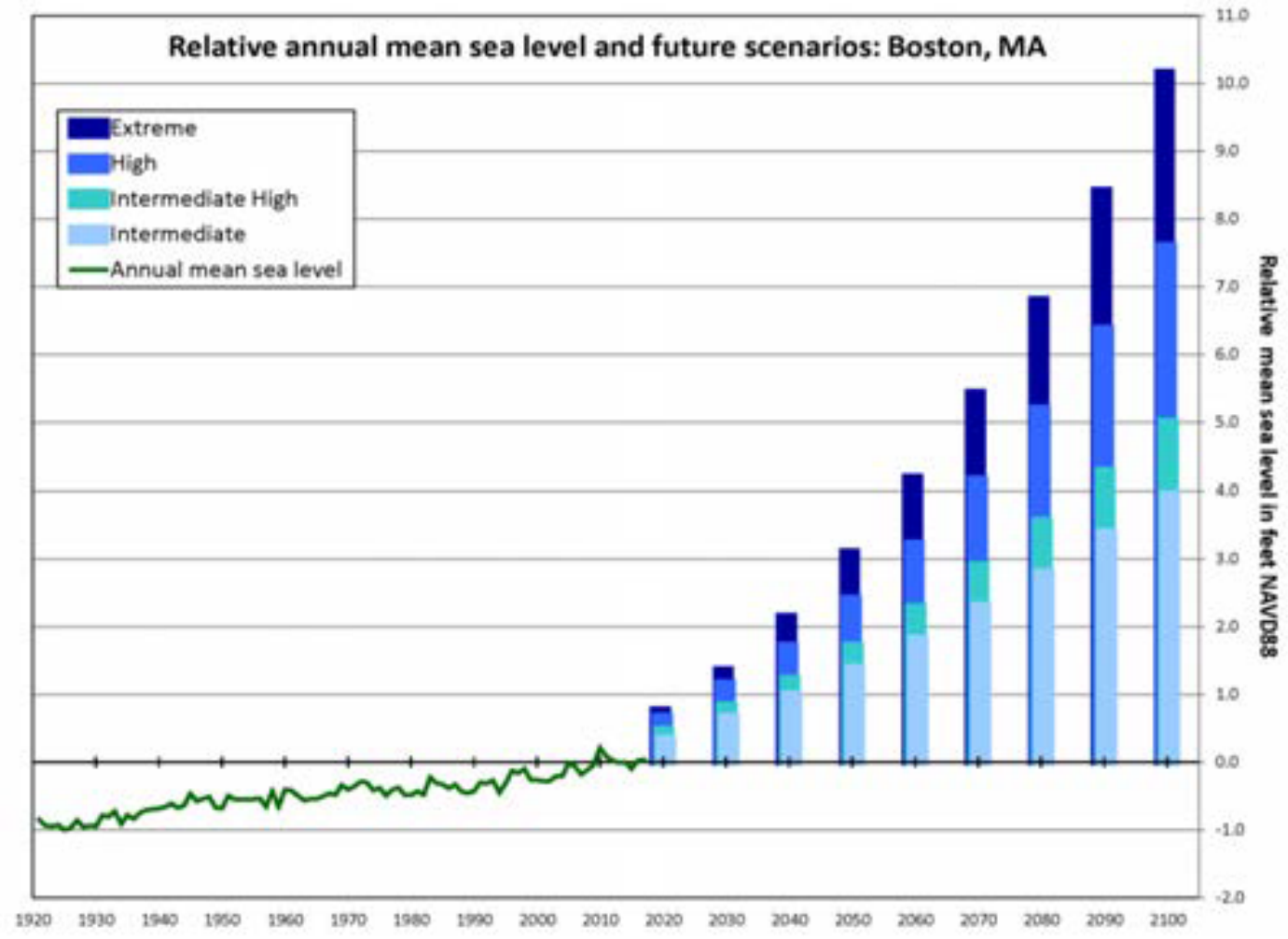


Sea level rise: observed

- Boston tide station
- Record from 1921-2017
- Equivalent to 11 inches in 100 years



Sea level rise: projected



Source: Massachusetts Hazard Mitigation Plan 2018

Projected Sea Level Rise 2070 Newton Impacts

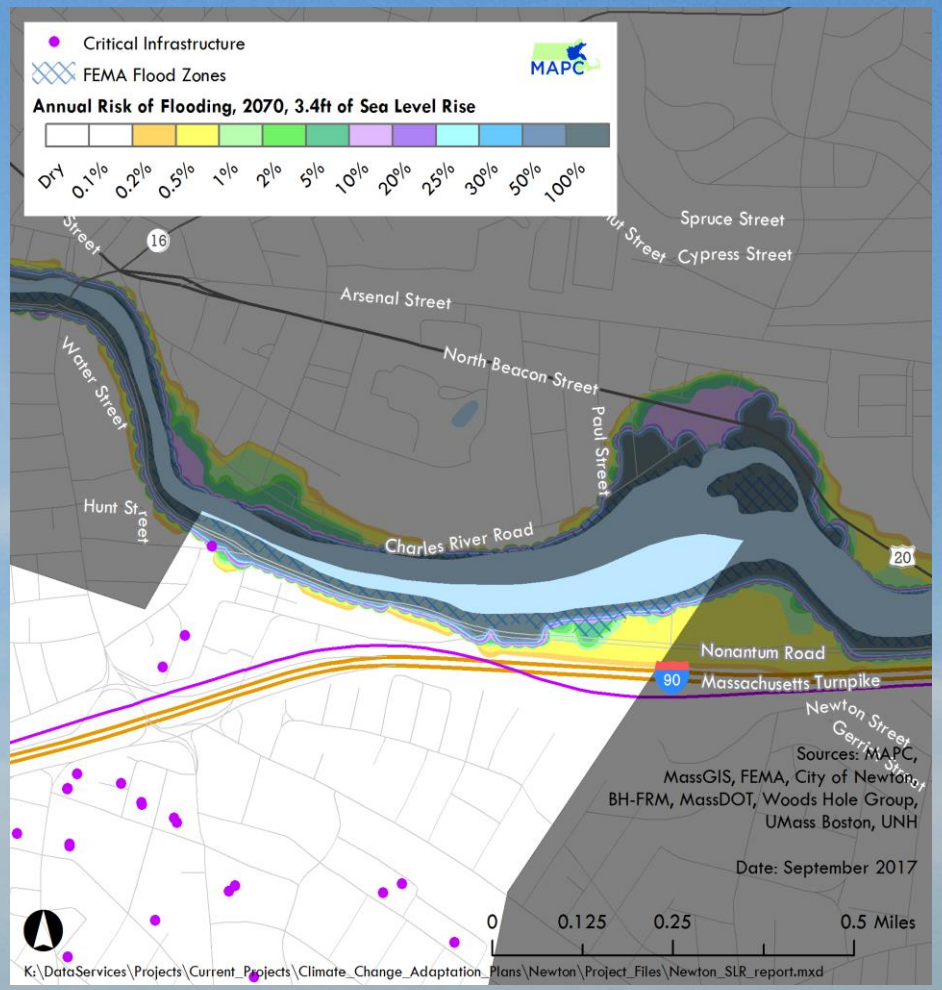


Table Groups

Newton Vulnerabilities of Greatest Concern
Natural Resources
Societal
Infrastructure

Proposed Actions	Priority
Societal	
Natural Resources	
Infrastructure	

Proposed Actions	Priority
Societal	
Communicate emergency preparedness information to linguistically isolated households.	
Develop shelter-in-place and communication strategies for residents who may not be able to evacuate during emergencies.	
Assist local businesses to develop emergency preparedness plans.	
Review the City's emergency communications infrastructure to ensure redundancy during emergencies.	
Identify gaps in services to vulnerable populations and develop strategies to address gaps. Coordinate with community partners to strengthen relations.	
Prioritize Public Health programs that address illnesses forecast to be exacerbated by climate change. Create an outreach campaign focused on the impacts of extreme heat and managing it.	
Place informational signage at recreation areas regarding tick/mosquito risk.	
Target affordable housing sites and low-income residents for flood and heat protection upgrades.	
Support facilities that serve vulnerable populations. Assess retrofit needs and emergency readiness.	
Work with local health providers to provide emergency response information to clients with physical and mental disabilities.	
Natural Resources	
Encourage de-paving and use of permeable concrete and asphalt.	
Look for stream daylighting or naturalizing opportunities to restore natural habitat.	
Incorporate climate resilience in open space planning. Consider: 1) ecological resilience and biodiversity; 2) cooling "hot spots"; 3) protecting water quality; 4) stormwater infiltration for groundwater and stream flow.	
Increase tree planting efforts to address net losses and increase tree canopy. Increase tree diversity. Focus on street-tree planting and landscaping at public facilities in "hot spot" areas.	
Infrastructure	
for training city staff, as needed, on implementing new techniques for green infrastructure.	
t and potential flooding areas to current residents, businesses, and permit applicants. Develop e materials on climate related technologies and practices.	
l properties for Low Impact Development/Green Infrastructure retrofits.	
ts and emergency planning for City facilities vulnerable to flooding and heat impacts.	
ritize energy efficiency and stormwater management in capital planning.	
o improve conditions through intensive outreach to property owners and City Green	