



Appendix A

Local Hazard Mitigation Plan Team

Acton Hazard Mitigation Plan Update Workshop

Date:	February 28, 2024	Time:	10:00 – 12:00	Location:	472 Main St, Rm #204 Acton, MA
Client:	Town of Acton	SLR Project No.:	149.14458.00007		

	SLR	Town of Acton
Attendees	<ul style="list-style-type: none"> Noah Slovin Hailey Brim Elizabeth McCarthy 	<ul style="list-style-type: none"> Andrea Becerra Corey York Alex Wahlstrom Matthew Mostoller Mike Gendron Alyssa Nichol Anita Arnum Ed Mullen Kristen Guchard Kim Kastens Douglas Sturniolo Peter Berry KJ Heather/ Julie Pierce Lauren West Matt Cross

Introduction and Overview

Andrea Becerra and Corey York (Town of Acton) welcomed meeting participants and introduced themselves. They discussed meeting objectives and prompted meeting participants to introduce themselves including name, role, and recent or current initiative tied to natural hazards.

Name / Role	Connection to Hazard Mitigation
Mike Gendron, Conservation Manager	53 River St Dam Removal
Alex Wahlstrom, Environmental Compliance with Water District	Planning for drought conditions and how it impacts water quality
Matthew Mostoller, Water District	Water resources and infrastructure, emergency response, how do natural hazards play in electrical grid and other dependencies?
Kim Kastens, Green Acton	Started to focus on stormwater, flooding, dam removal
Alyssa Nichol, Select Board, Green Acton Water Committee	Water resource advisory committee Board of health Emails received about claims from hazard damage (sent to board of health) Emails about positive response to hazards

Meeting Minutes



Name / Role	Connection to Hazard Mitigation
Anita Arnum, Fire Chief	Emergency response role to incidents of hazards Brush fires at hazardous waste site Comprehensive EMP for Acton DEP involved in recent clean up
Ed Mullen, Building Commissioner	Hazards in built environment
Kristen Guchard, Zoning Enforcement Officer, Floodplain Manager	Building in flood zone Zoning and planning – looking at ways to incorporate bylaw changes that benefit environment, stormwater, and potential ways to build more sustainably
Lauren West, Environmental analyst Sustainability Office	MVP program
Peter Berry, Associate Member of Green Advisory Board	Studies to determine impact of Dam Failure and how to safely breach the dam and begin process to plan park in its removal
KJ Herther /Julie Pierce, Acton Economic and Community Development Office	Representing local business Try to be a resource for businesses, communications (Acton Business website & Monthly Business Boost Email Newsletter) (Kj) Part of EnergizeActon.org & AB PIP STEM
Laura Ducharme, Community Services Director	Vulnerable population representation
Douglas Sturniolo, Deputy Chief for Police Department	Public safety Response to natural hazards Coordinating and response
Matt Cross, IT and facility maintenance	

Hazard Mitigation

The SLR team explained and defined hazards and mitigation measures, why planning for hazards and climate events are important, what a Hazard Mitigation Plan is and the planning process, and the benefits of Hazard Mitigation Plans including FEMA-funding eligibility.

Local Planning Workgroup

The SLR team explained the purpose of the local planning workgroup. The SLR team prompted the meeting participants to think about what role they play in regard to hazard mitigation planning and who is missing from the workgroup. Meeting participants filled out cards with information with information and discussed.

Responses to prompts are summarized below.

What is your role in Hazard Mitigation?

- **Outreach:** Develop strategies to communicate with individuals lacking access to cell phones and computers, and identify and support residents with vulnerabilities (e.g., language barriers, technology barriers, transportation issues, limited financial resources), communication with local businesses.
- **Evacuation Planning:** Plan for the evacuation of individuals without cars or with disabilities.
- **Policy and Planning:** Engage in plan review, building permits, and regulation through the building department and floodplain manager roles to ensure resilience and compliance with environmental standards.
- **Adaptation and Mitigation:** Plan for adaptation and mitigation to reduce climate change impacts, including zoning initiatives for floodplain management and stormwater management standards.
- **Infrastructure Management:** Focus on water resource issues, including supply, quality, and infrastructure management to support public health and safety. Address infrastructure water resources concerns and manage emergency responses.
- **Environmental Protection:** Attend to the impact of hazard mitigation processes on ecosystems and wildlife. Protect open spaces and enhance flooding resilience.
- **Emergency Services:** Coordinate police department activities for public safety, protect life and property, and manage emergency responses. The DPW director focuses on the upkeep of infrastructure and coordination with first responders.
- **Resource Allocation:** Manage meetings to ensure inclusive participation, connect vulnerable populations with resources, and prevent worsening climate conditions.
- **Public Awareness:** Educate the public on climate hazards, share awareness and resources, and communicate with businesses about resource sharing and grant opportunities.
- **Inspections and Reviews:** Conduct inspections across fire, building, health, and planning departments to ensure safety and compliance.
- **Energy and Climate Work:** The Energy Workgroup looks at different climate control options and recommends actions to the Select Board. Work on future development to prevent and reduce impacts of natural hazards.
- **Protection of Critical Assets:** Protect Acton Housing Authority properties and ensure access to and protection of critical facilities.

Who needs to be at the table?

- **Town Management:** Town manager, Select board, Highway department, Water department, School department, Planning department heads and consultants, Health department, Engineering (Qin Pang), Public health (social workers), Economic Development Office, and All staff (for end-of-process involvement to ensure familiarity and buy-in),
- **Emergency Services:** Fire department, Police department (including Department chief of policy, Lieutenant Ed Lawton), EMS, Emergency management.
- **Regulatory and Advisory Boards:** Board of Health (noted multiple times, indicating high importance), Conservation Commission, Commission on Disabilities, DEI office (Diversity, Equity, Inclusion), Open Space Committee (Karen O'Neil), Acton Housing Authority (Peter Berry, Commissioner), Planning Board.
- **Schools:** General representation, School District representative.
- **Conservation and Environmental Groups:** Acton Conservation Trust, Concord Water, Superfund representatives, Energize Acton (Andrea Becerra), Regional environmental groups like OARS, Environmental Justice (EJ) community members as defined by the state (including populations in North Acton, seniors, and youth).
- **Community-Based Organizations:** Housing and Climate Justice for Acton, Advocate for local businesses, Organizations working with vulnerable populations at risk in natural hazards, Council on Aging and Senior Services, Acton Collaboration and other community groups, Cultural groups, AB United Way, United Wall. Housing group for tenants. Council on Aging (COA), potentially referring to the broader representation of senior services.
- **Educational Organizations:** AB PIP STEM – ActonPip.org, Public outreach – resiliency initiatives.
- **Developers.**
- **Community members**

The SLR team then discussed how a mission statement is important for guiding the workgroup's vision for the hazard mitigation plan update. They then shared sample mission statements from Massachusetts State Hazard Mitigation Plan and sample mission statements for participants to consider.

Recent Events

Meeting participants were split into 3 small groups to discuss recent hazardous weather events in Acton including flooding in December 2023, A microburst event in September 8th, 2023 and a heatwave in July 2023.

Challenges

While discussing recent events, meeting participants highlighted different challenges that Acton faces while trying to respond to different hazards.

Power

- **Microburst Event (Sept 9, 2023):** Temporary generator placed outside a building due to an interior generator failure. Eversource's response helped address water supply district electric issues, although their response came last due to the district's existing generator.

- **Vulnerable Populations:** Concerns about the impact of power outages on vulnerable populations, especially during heatwaves. Limited shelter space and the need for identifying shelter capabilities highlighted.
- **Rolling Blackouts (2022 Heatwave):** Eversource installed generators due to a local substation failure. Concerns about reliance on a single power source and emphasis on diversifying with sustainable, green energy.
- **General Concerns:** Built environment insulation requirements to reduce energy loss, the need for staffing for the police department, and the importance of strengthening the power grid. Aging infrastructure noted, with a preference for external generators for easier service and maintenance.

Water

- **Water Supply Issues:** North Acton facility's consistent electricity issues. The facility is natural gas-powered. Concerns about water supply and infrastructure adequacy for hydrant installation, with a goal to adequately treat sewage.
- **Flood Event (December):** Requests for sandbags from the Fire Department, inundation of water supply calls from residents to pump out basements (clarified as rainstorm water, not potable). Portable pumps availability noted.

Natural Resources

- **Zoning:** Developers are moving closer to wetlands, risking altering the natural floodplain aspect and risking safety of town population

Stormwater Management

- Washout of storage tank access roads on hills, creating problems for stormwater infrastructure. An issue with an undersized culvert at Mass Ave was identified, pointing to the need for infrastructure evaluation and enhancement.
- Residents complain about neighbors "flooding."

Capacity Issues

- During the microburst event, significant coordination through the EM center was highlighted, with overwhelmed dispatch calls but positive responses to communication and coordination involving police, fire, facilities, town manager, DPW.
- 5 years ago after severe storm, trees were down and neighborhoods were in accessible because DPW didn't have the capacity/staff to remove.
- Staffing for multiple critical departments: Emergency Management, DPW, etc.
- Shelter Capacity Issues

Town-wide

- Town has declared climate emergency – climate resilience and sustainability.
- Aging infrastructure – generators in buildings are often old (easier to service and maintain if they are outside)

Actions

Participants discussed different steps to take considering the challenges and gaps the town faced during the different weather events.

Infrastructure Improvement and Resilience

- **Strengthen Power Grid:** Address aging infrastructure, replace and service old indoor generators with more accessible and maintainable options.
- **Stormwater Management:** Create a Stormwater Authority to manage and improve stormwater infrastructure, considering the review and possible revision of zoning regulations related to wetland development.

Emergency Preparedness and Response

- **Heat Preparedness Plan:** Develop a plan focusing on vulnerable populations, ensuring shelter spaces are equipped with air conditioning to counteract the effects of heatwaves and rolling blackouts.
- **Emergency Management Staffing:** Enhance staffing levels within emergency management to improve response capabilities and resilience planning.
- **Community Emergency Communication:** Increase efforts to ensure timely and effective communication with the community (residents & businesses) during emergencies.

Shelter and Community Safety

- **Identifying Shelter Space:** Tackle current challenges by identifying additional shelter spaces, ensuring they are equipped with necessary amenities like generators and showers.

Environmental and Heat Mitigation

- **Heat Pumps:** Consider the implementation of heat pumps as a strategy for heat mitigation, contributing to energy efficiency and climate resilience.

Policy, Communication, and Funding

- **Improve Communication:** Enhance communication strategies with businesses and community members, clarifying responsibilities for reporting and mitigating emergencies.
- **Grant Information and Access:** Streamline the process for accessing grant information, clarifying eligibility, application priorities, and timelines to ensure timely funding acquisition.
- **Urgency in Action:** Emphasize the need to move quickly in securing funding and implementing mitigation strategies to prevent delays in response to emerging challenges.

Goals and Objectives

SLR presented a review of the nine goals from the 2018 Hazard Mitigation Plan to meeting participants to identify new goals of the Hazard Mitigation Plan. Meeting participants shared their thoughts on each goal by walking around to different boards and posting using sticky notes. Things participants had to consider was the role their department plays in achieving the goal, existing actions/initiatives related to goal, new objectives or actions suggested for goal, and new objectives or actions suggested for goal.

Goals and responses are below.

Goal	Participant Comment
Goal #1: Prevent & reduce loss of life, injury, public health impacts, & property damage from major hazards.	<ul style="list-style-type: none"> • MA HMP mission statement includes “protect natural resources” this should also be in Acton goal #1 • Add “...and human caused to “natural hazards” • Incorporate DEI AND Equity lens in this work • Add: reduce interruption of services, utilities, normal business functions, town services • Town staff debriefing to plan ahead • Socioeconomic impacts (inability to workshop this)
Goal #2: Identify & seek funding to mitigate or eliminate each known significant flood hazard area.	<ul style="list-style-type: none"> • Town staff are good at identifying and applying for grants • Coordinate with culvert and stormwater management work with town, MassDOT, private and public property owners. • Add: Identify, prioritize, and seek funding. • Grant writer • Acton doing well on this • Way to reference all water resource impacts? Including drought, water quality degradation, ground water recharge etc?
Goal #3: Integrate hazard mitigation planning in all relevant municipal departments, committees, & boards.	<ul style="list-style-type: none"> • These efforts should align with municipal; vulnerability preparedness planning, emergency management& planning, and other relevant planning so more cohesion • Include at least annual engagement in goal language • Do not repeat “integral”/“integrate” • Integrate into budget process/goal setting
Goal #4: Prevent & reduce the damage to public infrastructure resulting from all hazards.	<ul style="list-style-type: none"> • Consider groundwater resources as part of public infrastructure • Great • How? Plan for, apply for funds and build with resilience • Team effort, funding, leverage GIS • And enhance the ability of services to, be resotred, maintained during events

Meeting Minutes



Goal	Participant Comment
Goal #5: Encourage businesses, institutions, non-profits to work with Town to develop & implement HMP.	<ul style="list-style-type: none"> • Include the general population of Acton and neighbors in goal • Please include the residents of Acton • Ensure vulnerable populations are included • Could we add developers to this group? Maybe local civil engineering firms • Include Acton Housing Authority • Include Acton Conservation Trust • Coord outreach: mailing list, contact information. Online, Discussions targeted message
Goal #6: Work with surrounding communities, state, regional, & federal agencies on cooperation & solutions.	<ul style="list-style-type: none"> • Coord periodic working group around town stuff
Goal #7: Ensure development meets fed, state, & local standards for preventing & reducing hazard impacts.	<ul style="list-style-type: none"> • I think we could take this a step further – to encourage new development standards like Natural Resource Protection zoning (cluster development) to reduce impervious surface coverage • Periodic working group meeting. Land Use/DPW/Community groups etc. • “Meets and exceeds whenever feasible” • Maybe identify “development” or “standards” building, infrastructure, laws, regulations, etc. • Go beyond standard for future mitigation
Goal #8: Take advantage of resources from FEMA & MEMA to educate staff & public about hazard mitigation.	<ul style="list-style-type: none"> • Use Acton TV for public education • Identify other funding sources that may apply i.e MVP grants • Edit to include: resources from FEMA, MEMA, and other state and federal grants about hazard mitigation and climate resilience • Grant writer/ Outreach coord • Utilize social media • Take Advantage how? Time wise, how do we set & use funds in time?

Goal	Participant Comment
Goal #9: Consider impacts of future climate change & incorporate sustainability & resiliency in HMP.	<ul style="list-style-type: none"> • New buildings are carbon free, but adverse effect on emergency response? • Build stormwater management program/funding • Current and future climate change • Remove words “potential” and “future” as these impacts are here now

Data Collection Worksheet and Final Comments

Data Collection Worksheet & Final Comments SLR provided a rapid overview of the data collection worksheet, emphasizing targeted data categories such as critical facilities, development trends, new plans/reports, regulations, and vulnerable populations. They concluded with an open discussion for final comments and outlined the subsequent stages, including public outreach through a town-facilitated event or survey, and committed to compiling the gathered data into a draft plan update for further review



Town of Acton HMP Update

Kickoff Meeting

February 27, 2024

SLRCONSULTING.COM





Agenda



Introduction & Overview



Hazard Mitigation



Local Planning Workgroup



Workshop: Recent Events



Workshop: Goals & Objectives



Data Collection: Worksheet Overview



Conclusion & Next Steps



Introductions

Would you please...

- 1) Briefly introduce yourself & your role
- 2) Recent or current initiatives tied to natural hazards



Hazard Mitigation

"Hazard mitigation planning reduces loss of life & property by minimizing the impact of disasters."

Federal Emergency Management Agency





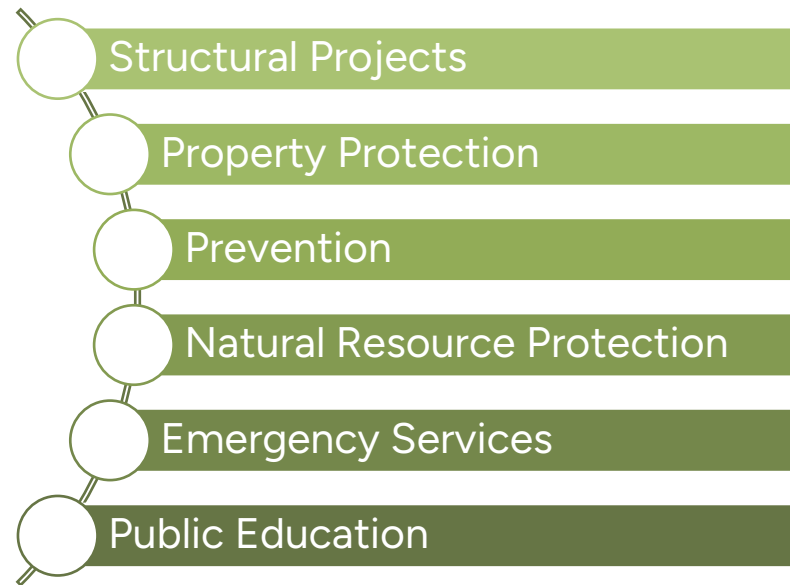
What are talking about when we say “hazard”? What is mitigation?

Hazard

- An extreme **natural** event that poses a risk to people, infrastructure, & resources
- Natural Hazards include:
 - Flooding
 - Storms
 - Earthquakes
 - Brushfires
 - Hurricanes
 - Sea Level Rise

Mitigation

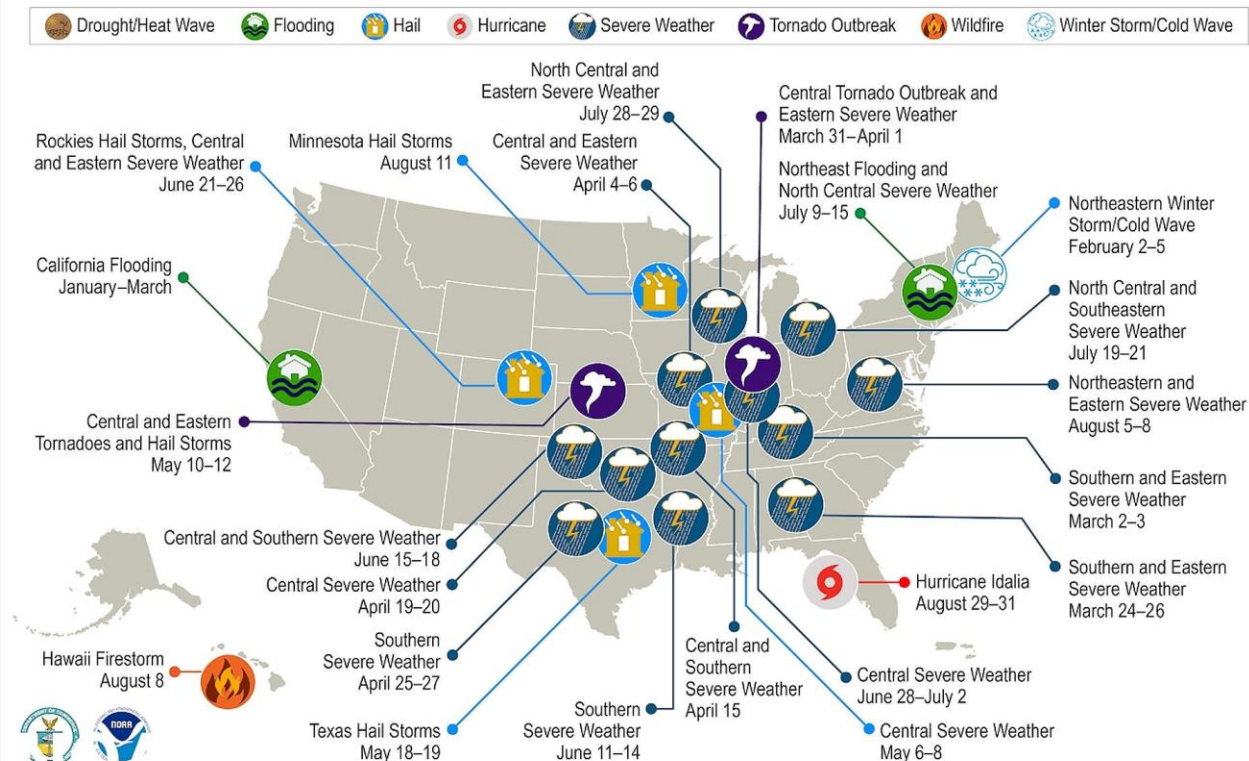
Six Categories of Mitigation





Natural Hazards

U.S. 2023 Billion-Dollar Weather and Climate Disasters



The map shows the approximate location for each of the 23 separate billion-dollar weather and climate disasters that impacted the United States through August 2023.



What is Mitigation?

FLOOD MITIGATION



STRUCTURAL PROJECTS

- Replace Bridges & Culverts
- Remove In-Stream Dams
- Remove Obstructions
- Upstream Detention
- Install Stormwater Systems
- Create Floodways
- Enlarge Channels
- Reduce Flow Resistance
- Install Levees
- Install Flood Walls

PROPERTY PROTECTION

- Wet Floodproofing
- Dry Floodproofing
- Elevate Buildings
- Relocate Buildings
- Secure Utilities
- Anchor Floatables
- Remove Hazardous Materials
- Re-Grade Properties
- Purchase Flood Insurance
- Join the Community Rating System (CRS)

PREVENTION



- Modify Zoning
- Modify POCD
- Stormwater Management Regulations
- Increase Flood Damage Prevention Standards
- Freeboard
- Low Impact Development
- Minimize Impervious Cover



What is Mitigation?

FLOOD MITIGATION

NATURAL RESOURCES

- Acquire or Preserve Floodplain Land
- Acquire & Remove Structures from Floodplains & Convert to Open Space
- Acquire or Preserve Other Lands
- Increase Wetland Storage
- Re-Connect Streams to Floodplains

EMERGENCY SERVICES

- Build Local Capacities to Respond
- Move Critical Facilities from Flood Risk Areas
- Establish Emergency Shelters
- Elevate Roads or Bridges to Ensure Egress
- Develop Community Evacuation Plans
- Develop Site-Specific Evacuation Plans
- Establish Satellite Facilities in Areas Subject to Isolation

PUBLIC EDUCATION

- Newsletters
- Community Meetings
- Information Kiosks
- Web Site with Flood Risk Maps
- Education of Municipal Staff
- Leverage State & FEMA Education Programs
- Establish a Standing Committee or Board to Oversee Outreach





Hazard Mitigation Planning Process



Identify natural hazards,
risks, & vulnerabilities



Develop long-term
strategies to protect people
& property





Overview of HMP Sections

1. Introduction

Requirements for municipalities under the Federal Disaster Mitigation Act to maintain eligibility for FEMA funding

2. Planning Process & Public Participation

Planning process focusing on local needs & priorities with public participation

3. Risk Assessment

Analyzes potential natural hazards in Acton, relationship to land use & infrastructure, & estimates potential damages

4. Hazard Mitigation Goals

Lists hazard mitigation goals aimed at reducing risks & damages from natural hazards

5. Existing Mitigation Measures

Details current hazard mitigation measures in place

6. Mitigation Measures Identified Previous Plan

Review & assess progress on mitigation measures identified in previous plan

7. Hazard Mitigation Strategies

Outlines strategies for mitigating hazards identified in the community

8. Plan Adoption & Maintenance

Covers the procedures for formal adoption & ongoing maintenance of the plan



Local Planning Workgroup





Local Planning Workgroup

Activity:
Dry-Erase Card

- Purpose & Responsibilities of the Workgroup
- Identifying the Workgroup mission:

Who does the
Workgroup serve?

What does the
Workgroup do?

Why? How?

Who is missing
from the table?



Workshop: Recent Events





Workshop: Recent Events

Prompts

Impact.

- What was the impact to department or operations?
- What was the community impact?

Mitigation.

- Have there been improvements since the event?
- What gaps or needs still need to be addressed?

Prioritization.

- Identify mitigation actions
- Prioritize suggested actions

Activity

Recent Events:

- December 2023 Flood
- September 8, 2023, Thunderstorms
- July 2023 Heatwave
- Other Hazards of Concern

1. Small group discussions (~10 minutes)
2. Mitigation strategies written on cards & placed on board in prioritized order
3. Full group discussion & share out
4. Mitigation actions identified by each small group combined on one board



Workshop: Goals & Objectives





Review Previous Goals & Identify New Goals

- 1) Prevent & reduce loss of life, injury, public health impacts, & property damage from major hazards.
- 2) Identify & seek funding to mitigate or eliminate each known significant flood hazard area.
- 3) Integrate hazard mitigation planning in all relevant municipal departments, committees, & boards.
- 4) Prevent & reduce the damage to public infrastructure resulting from all hazards.
- 5) Encourage businesses, institutions, non-profits to work with Town to develop & implement HMP.
- 6) Work with surrounding communities, state, regional, & federal agencies on cooperation & solutions.
- 7) Ensure development meets fed, state, & local standards for preventing & reducing hazard impacts.
- 8) Take advantage of resources from FEMA & MEMA to educate staff & public about hazard mitigation.
- 9) Consider impacts of future climate change & incorporate sustainability & resiliency in HMP.



Data Collection: Worksheet Overview





Targeted Data Collection



Critical Facilities



Development Trends



New Plans & Reports



New Regulations



Vulnerable
Populations



Open Discussion

Any remaining comments, thoughts, or questions?



Conclusion & Next Steps





Conclusion & Next Steps

- Set dates for public outreach events
 - Engagement 1: March/April
 - Engagement 2: May/June
- SLR will compile information & provide & update Data Collection worksheet for review
- SLR will translate the data into a Draft Plan Update for MEMA submission by June/July





Making
Sustainability
Happen

Noah Slovin

Senior Resilience Planner

M +1 617 865 2544

E nslovin@slrconsulting.com

Acton MA 2024 HMP Data Collection Worksheet

Client: Town of Acton, MA

SLR Project No.: 149.14458.00007

Data Collection: Summary of Needs

Data Needs

Community Profile

- Development and redevelopment trends
- Plans and Regulations
- Critical Facilities, Shelters, Emergency Power

Specific Hazards

- For Each Hazard:
 - Flooding and Dams
 - Brushfires
 - Extreme Temperature
 - Drought Condition
 - Winter storms
 - Geologic Hazards
 - Wind-related Hazards
 - Multi-Hazards
- Impacts of Recent Events, Loss Estimates
- Capabilities
- Areas of Risk and Vulnerabilities
- Status of Previous Actions
- New Actions
 - What can be done with **current** budgets?
 - What would be done if funding was not a concern?
 - Short-term, measurable, achievable

1. Community Profile

1.4 – Status of Developments and Developments in Progress:

Name/Location	Status	Use/Units/Size	Vulnerabilities	Notes
East Acton Village 7-29 Great Rd	Single family is construction; a portion of the commercial development has not be completed	12 single family 5 commercial		
100 Nagog Park	Construction completed	300,000 sq ft Manufacturing	23.65% in 0.2% Annual Chance	Also added solar to top of parking garage
Powdermill Pl 2-4 Powder Mill Rd		230 units in Acton 40-B, Affordable Housing	9.28% in AE 24.55% Floodway 4.96% 0.2% Annual Chance	Redevelopment; project would restore riverfront and provide river walk along property
252-256 Main St		Vacant building (Kmart) tenant fit out		renovation and minor improvements to parking lot; mixed-use zoning failed in 2016
Kelley's Corner Infrastructure Project	Under construction; estimated completion Fall 2025			Deep sump catch basins being installed to improve drainage system
146 Prospect St	completed	4-unit single-family 40-B		
184 Main St	completed	8 units, 40-B		
Martin St	completed	28 units, 40-B	5.71% in AE 2.39% in 0.2% Annual Chance	
62-68 Harris St	completed	Fire Station		
6 Post Office Sq	completed	12 units, 40-B	0.45% in 0.2% Annual Chance	
429 Great Rd	completed	Car Dealership	12.33% in 0.2% Annual Chance	
178 Great Rd	completed	Car Dealership	2.87% in AE 0.57% in Floodway	
117 Central Street		40 unit, 40-B	1.91% in AE: 0.72% 0.2% Annual Chance	
446 Mass Ave	completed	31 unit, 40-B	Elder and Disabled Populations	
362 Main St	Approved/ Pending sewer permitting	30-unit, 40-B or hotel/restaurant		
46 High Street	Under construction	Standard subdivision – 4 single family homes		
225 Newtown Road	Under construction	Pond View Way Standard subdivision – 2 single family homes		
484-486 Great Road	Under construction	Betty Estates Cluster Dev. 4 single family homes		14.76 acres to remain under conservation restriction
66 Maple Street	completed	1 new single family and renovation of an existing duplex	Portion of property in back AE	

Name/Location	Status	Use/Units/Size	Vulnerabilities	Notes
96 Newtown Road	completed	Dylan Place – 2 single family homes		
22 Elm Street	Under construction	Cluster development – 5 single family homes		5.871 acres of “common land” or open space will remain protected through the cluster dev. decision in private ownership
47 Conant Street	completed	Amanda Lane – standard subdivision 3 single family homes		
3 and 11 Fort Pond Road	Under construction	Standard subdivision 2 new single-family homes (2 existing to remain)	Portion in AE	
74 Main Street	Under construction	Standard subdivision – Hawks Crest – 7 single family homes	Portion in AE	
247 Pope Road	Under construction	Timber Way Standard subdivision – 2 single family		
279&285 Main Street	Completed	Demolition of existing commercial building for a new Bank		
50 Nagog Park	Completed	Demolition of existing building for new 119,00sf warehouse		
1&5 Nagog Park	Demo has begun	Demolition of restaurant and ½ of plaza for car dealership		
Potential Future Developments				
352 Main Street	Design Phase	Dog Park		
363 Great Road	Permitted – construction has not commenced	Grandview 40B – 86 units		
40 High Street	Permitting phase	3 additional single family		
9 Quarry Road	Permitted	PCRC amendment – added 3 addition (total 6) single family		

1.5 - Any changes to government structure

1.6 - Plans and Regulations

Plan/Document Name	Year	Status/Relevant Changes (updated, being updated soon, new hazard aspects)
Zoning	2022 2024	<ul style="list-style-type: none"> Flood Plain Overlay District updated at '22 TM to meet FEMA Regulations Updates to Powder Mill, South Acton and MBTA Communities zoning to be considered for the 2024 TM – considers better stormwater management and aligns with Climate Action Plan Updated GWPDP 2023 to include bedrock wells & Maynard's Zone II
Subdivision		
Town Code		
Inland WW Regs		
Open Space Plan	2014-2021	Update in progress, anticipated submission to State this Spring
Comprehensive Community Plan	2012	Inventory is almost complete, next plan update is expected to commence in 2025 pending funding
AWD Master Plan	2018	Update to start in 2024
Emergency Management Plan		

1.7 - Critical Facilities

Facility	Shelter	Power	Changes	FEMA Zone	Other Hazards
Department of Public Works Garage		Natural Gas			
Acton Wastewater Treatment Plant					
Pump Station 1					
Pump Station 2				AE	
Pump Station 3					
Pump Station 4					
Pump Station 5					
Pump Station 6					
Pump Station 7					
Pump Station 8					
Pump Station 9					
Pump Station 10					
School Street Water Pump Station		Propane			
Acton Water District Operations/Admin Campus		Natural Gas			
Assabet 12,2,2A Wells		Diesel			
Assabet 3 Well		Diesel			
Skyline Drive					
Hazelnut Street Ozonation Plant					
Concord Water Pump Station					
North Acton Wastewater Treatment Plant					

Facility	Shelter	Power	Changes	FEMA Zone	Other Hazards
Acorn Park Wastewater Treatment Plant					
Woodvale Wastewater Treatment Plant					
Great Road Condos Wastewater Treatment Plant				0.2%	
Robbins Brook Wastewater Treatment Plant					
Life Care Center Wastewater Treatment Plant					
Yankee Village Wastewater Treatment Plant					
Farmbrook Wastewater Treatment Plant					
Brookside Apts. Wastewater Treatment Plant					
Nagog Hill Water Tower					
Wampus Hill Water Tower					
Flagg Hill Water Tower					
Great Hill Water Tower					
Life Care Center					
Robbins Brook Assisted Living Facility					
Acton Town Hall		Diesel			
Baker-Whitney Oil Company					
Bursaw Gas and Oil					
Concord Oil					
Recreation Department	Yes	55 Audubon Drive Generator			
Windsor Green Apartments					
Audubon Hill Condominiums					
Conant School					
RJ Grey Junior High School					
Acton-Boxborough Regional High School	Yes				
Gates School			Gates & Douglas merged?		
Douglas School			""		
Merriam School					
Acton Public Safety Building		Diesel	2 Public Safety Buildings?		
West Acton Fire Station		Diesel			
Center Acton Fire Station		Diesel			

Facility	Shelter	Power	Changes	FEMA Zone	Other Hazards
South Acton Fire Station		Diesel			
Acton Public Safety Building (Fire Department Headquarters)		Diesel	2 Public Safety Buildings?		
New North Acton fire station at 62 Harris St?					
Infant Toddler Children's Center					
Acton Barn Cooperative Nursery School					
Montessori Country Day School					
Children's World Learning Center					
McCarthy-Towne School					
The Victor School					
Community Notification Center					
Library/IT		Diesel			
Haartz Auto Fabric					
RH Products					
BOC Gases					
Keyspan/Tennessee Gas Regulator Station					
Clapp Wells					Known Flood Area
Whitcomb Well					Known Flood Area
Lawsbrook and Scribner Wells		Hookup Only			Connect to School Street Pumping station under Fort Pond Brook
Christofferson Well		Propane			Known Flood Area
Conant I Well		Hookup Only			
Conant II Wellfield		Natural Gas			
Conant Bedrock Wells		Natural Gas			
Kennedy Wellfield		Natural Gas		AE	Known Flood Area
Marshall Well		Natural Gas		AE	Known Flood Area
Rte 2A Water Pump Station					
Nagog Water Treatment Plant					
Human Services and Senior Center	Yes				
Municipal Properties and Engineering					
Clapp/Whitcomb Water Treatment Plant					Known Flood Area
N. Acton Water Treatment		Natural Gas			Prone to long duration power outages
S. Acton Water Treatment		Diesel			
C. Acton Water Treatment Plant		Natural Gas			
McCarthy Village					
Colbrook High School					

Facility	Shelter	Power	Changes	FEMA Zone	Other Hazards
Cell Towers - Specific locations/concerns					
Grace Superfund Site					
NMI Superfund Site – Treatment plant at 16 Knox Trail Acton					
55+ Housing					
Private Wastewater Treatments - Specific locations/concerns?					
Pine Hill Condominium – 205 Great Road					
Avalon Bay Water Booster Pump Stations					
Solar Arrays					
Red House		Diesel	Is included in Emergency Generator List		
Battery Storage Facility (100 Discovery Way)					
Battery Storage at AB Schools for roof top solar					
Proposed Battery Storage at Twin School					

2. Flooding & Dams

2.1 - Setting/Historic Record

Recent Significant Events	Date	Impact
December Rainstorm	December 22 nd , 2023	Storm dropped 4.1 inches of rain. Flood damage was observed throughout town as well as on Conservation Lands.
Rainstorm	August 8 th , 2023	Flash flooding caused waterlogging of crops at local farm.
January 2024 Rainstorm		Heavy rains and snowmelt led to flooding of low lying areas and washout of access roads to water infrastructure

Dam	Hazard Level	EAP?	Changes	Other Notes
Assabet River Dam	Significant			
Erikson's Grain Mill Dam	Significant			
River Street Dam	?			
Ice House Pond Dam	?			
Robbins Mill Pond Dam	?			
Pencil Factory Dam	?			
Brook Street Dam	?			
Nagog Pond Dam	Significant			
Grassy Pond Brook Dam	?			
Allen Dam	Low			On state list, was not included in previous HMP
Bellows Farm Mill Dam	Low			On state list, was not included in previous HMP

2.2 – Capabilities

Capability	Notes/Changes
Town participates in the NFIP and has adopted the FIRM maps.	Updated in 2022
Ongoing DPW Drainage Improvement Program	
Wetlands Protection Bylaw and Regulations	New regulations for stormwater in jurisdictional area should be coming out soon
Massachusetts Stormwater Policy	
Erosion By-Law	
Floodplain Overlay District	
Subdivision Development Drainage Design Controls	
Site Plan Development Drainage Design Controls	
Reviews and Inspections of New Developments	
Cluster Developments	Same measures being taken as Conservation Residential Community
Conservation Residential Community	This year we embark on the Habitat for All Zoning initiative to increase preservation of natural resources, incentivize more open space an affordable housing

Groundwater Protection Overlay District	
Land Acquisition Efforts: Community Preservation Act	
Land Acquisition: Priority List of Parcels	
Public Education – NPDES Phase II	
Jones Field LID Rain Garden	
Beaver Mitigation	Looking at alternative methods to deal with beaver mitigation (beaver deceivers and mapping activity)
Drainage System Maintenance – Have 12k worth of funding, needs 1 million	
Dams	
DCR dam safety regulations	
Permits required for construction	
The Comprehensive Emergency Management Plan	

2.3 - Vulnerabilities and Risk

- Vulnerable areas along watercourses (buildings, intersections, areas, etc.)

- Private Properties
 - Changes to properties (acquisitions, new constructions) in SFHA

- Repetitive Loss Properties (notes, new RL properties, etc)

- Vulnerable Critical Facilities

2.4 - Actions

Action	Status Capability Completed Carry Forward Drop	Lead Department Department responsible for action	Notes What Happened? If dropping/ incomplete, why?
Land Acquisition/ Protect Open Space: The town will continue to purchase or protect open space to ensure that future development does not increase flooding.	Capability	Building, Conservation, Natural Resources, and Planning Mike Gendron	District Acquired 549 Main Street which provides some inland flooding mitigation, Town acquire CR
Ongoing culvert and drainage upgrades	Carry Forward with Revisions	Public Works	Any specific examples to include in this update?
More frequent maintenance of town-owned drainage facilities	Drop	Public Works	We are grouping this with the previous action
Complete GIS stormwater mapping, prepare for MS4 compliance	Carry Forward	GIS, Planning and Zoning	We have an inventory in line with MS4 compliance
Assess River Street dam, consider partial breach for safety	Complete	Emergency Management, Public Works	Dam was removed in 2023
Complete town-wide dam study – gain information from DCR	Carry Forward	Public Works, Conservation	Public Works has reached out to state agencies to get access to relevant dam data; more work is needed to determine hazard status and environmental implications as well as ownership and parties responsible for mitigating concerns
Assess Erickson's Grain Mill Dam, facilitate consideration of wider breach to reduce risk	Carry Forward	Public Works, Conservation	
Amend Stormwater Bylaw to reflect updated 10-year 24-hour rain data	Completed	Planning and Zoning	Confirm with Qin Rui

- **Other Actions Completed** (any action completed that may diminish risk. Does not have to intentionally addressed risk.)

- **New Actions** (can include structural projects, natural resource protection, specific property protection, strengthening of emergency services/response, hazard prevention, education. Can include projects currently underway but incomplete)

Action	Lead Department Department responsible for action	Notes
Seek sustainable funding options and develop a comprehensive program for stormwater management program (culvert and drainage maintenance and upgrades)	Public Works	Not enough funding for culvert and drainage upgrades so expanded on this and turning it into a new action
Specific land acquisition or open space protection projects	Conservation Agent	
New River Street Dam Action	Conservation Agent	

Beaver dam mitigation	Conservation Agent	
Other	Qin Rui, Town Engineer	
Habitat for All – Cluster Development at the “By-right” method for all new subdivision	Kristen Guichard, Planning Director	

3. Brushfires

3.1 - Setting/Historic Record

Event	Date	Impact/Size/Response
Brushfire	May 2023	Burned about four acres total of land.

3.2 - Capabilities

Capability	Changes
Open Burning permits required	
Fire Department reviews all development plans	

3.3 - Vulnerabilities and Risk

- State of previous vulnerabilities; Historic Structures; Critical Facilities; New Vulnerabilities:

3.4 - Actions

Action	Status Capability Completed Carry Forward Drop	Lead Department Department responsible for action	Notes What Happened? If dropping/ incomplete, why?
Provide education on outdoor fire regulations and risks utilizing town website	Capability	Emergency Management	

- Other Actions Completed (any action completed that may diminish risk. Does not have to intentionally addressed risk.)

--

- New Actions (include structural projects, natural resource protection, specific property protection, strengthening of emergency services/response, hazard prevention, education. Can include projects currently underway but incomplete)

Action	Lead Department Department responsible for action	Notes
Conduct outreach and promote cooling centers during heat waves	Emergency Management	
Promote water conservation measures during droughts	Acton Water District, Sustainability	
Promote sustainable landscaping that supports groundwater recharge (rain gardens, etc.) and demands less water (ie. drought-tolerant plants)	Acton Water District, Planning and Zoning, Public Works	

4. Extreme Temperatures and Drought Conditions

4.1 - Setting/Historic Record

Event (Scale)	Date	Impact
Heat Wave	July 2023	Opened the Acton Community Building for a cooling center in response to heat.
Level 3 Critical Drought	July 21, 2022	The Acton Water District (AWD) placed Outdoor Watering Restrictions
Statewide Drought	2016-2017	Drought declaration began in June 2016 with a Drought Watch which was upgraded to a Drought Warning in August 2016. The Central and Northeast regions were the most severely affected.

4.2 - Capabilities

Capability	Changes

4.3 - Vulnerabilities and Risk

- State of previous vulnerabilities; Historic Structures; Critical Facilities; New Vulnerabilities:

4.4 - Actions

Action	Status Capability Completed Carry Forward Drop	Lead Department Department responsible for action	Notes What Happened? If dropping/ incomplete, why?
Promote green and cool roofs and cooler paving products.		Planning and zoning and Public Works	

- Other Actions Completed (any action completed that may diminish risk. Does not have to intentionally addressed risk.)

- New Actions (include structural projects, natural resource protection, specific property protection, strengthening of emergency services/response, hazard prevention, education. Can include projects currently underway but incomplete)

Action	Lead Department Department responsible for action	Notes
Conduct outreach and promote cooling centers during heat waves	Emergency Management	
Promote water conservation measures during droughts	Acton Water District, Sustainability	
Promote sustainable landscaping that supports groundwater recharge (rain gardens, etc.) and demands less water (ie. drought-tolerant plants)	Acton Water District, Planning and Zoning, Public Works	

5. Winter Storms

5.1 - Setting/Historic Record

Event (Scale)	Date	Impact
Winter storm	January 6th - 7th, 2024	Heavy snow fall , 15 inches of accumulated snow
Winter Storm	March 4 th , 2023	Heavy wet snow fall, 5 inches of accumulated snow
Winter Storm	February 19 th , 2022	Heavy snow fall, 8.3 inches of accumulated snow

5.2 - Capabilities

Capability	Changes
Standard snow operations, reduced sand usage	
MassHighway clears state roads 2, 2A, and 111	
Tree maintenance by town and by NSTAR	NSTAR acquired by Eversource

5.3 - Vulnerabilities and Risk

- State of previous vulnerabilities; Historic Structures; Critical Facilities; New Vulnerabilities:

5.4 - Actions

Action	Status Capability Completed Carry Forward Drop	Lead Department Department responsible for action	Notes What Happened? If dropping/ incomplete, why?
Adopt a policy that requires snow removal from fire hydrants on private property	Carry Forward with Revisions	Planning and Zoning	There is no bylaw for this yet – edited to include fire hydrants everywhere and to be a policy since much easier to implement

- Other Actions Completed (any action completed that may diminish risk. Does not have to intentionally addressed risk.)

- New Actions (include structural projects, natural resource protection, specific property protection, strengthening of emergency services/response, hazard prevention, education. Can include projects currently underway but incomplete)

Action	Lead Department Department responsible for action	Notes
Conduct outreach and promote emergency shelters during snow storms	Emergency Management	
Improve communication on outages to the public during winter storms	Police, Town Manager's Office, Public Works	
	Anita? Carl?	

6. Geologic Hazards

6.1 - Setting/Historic Record

Event (Scale)	Date	Impact

6.2 - Capabilities

Capability	Changes
Police station is steel-framed and up to most recent building codes	
Evacuation plan outlined in CEMP	
Tanker task force available through state fire mobilization	
El Paso gas company provides training and education on hazard mitigation for its Tennessee Gas pipeline	
Slope stabilization requirements in subdivision and site plan regulations	

6.3 - Vulnerabilities and Risk

- State of previous vulnerabilities; Historic Structures; Critical Facilities; New Vulnerabilities:

Damage to structures, damage to transportation and other infrastructure, and localized road closures.

6.4 – Actions

Action	Status Completed Carry Forward Drop	Lead Department Department responsible for action	Notes What Happened? If dropping/ incomplete, why?
Construct new fire station	Completed	Planning and Zoning, Emergency Management	

- Other Actions Completed (any action completed that may diminish risk. Does not have to intentionally addressed risk.)

- New Actions (include structural projects, natural resource protection, specific property protection, strengthening of emergency services/response, hazard prevention, education. Can include projects currently underway but incomplete)

Action	Lead Department Department responsible for action	Notes

7. Wind Related Hazards

7.1 - Setting/Historic Record

Event	Date	Impact
Severe Thunderstorms	September 8 th , 2023	Tree damage across the town knocked out power to thousands of customers and caused hundreds of trees to topple.
Severe Thunderstorms	July 16 th , 2023	Triggered a tornado watch. Heavy rain and high winds

7.2 - Capabilities

Capability	Changes
Tree Maintenance Program by the Town	
Tree Maintenance Program by NSTAR	Eversource
Town buildings have hurricane resistant glass	

7.3 - Vulnerabilities and Risk

- State of previous vulnerabilities; Historic Structures; Critical Facilities; New Vulnerabilities:

7.4 - Actions

Action	Status Capability Completed Carry Forward Drop	Lead Department Department responsible for action	Notes What Happened? If dropping/ incomplete, why?
Continue to fund tree maintenance	Capability	Public Works	

- Other Actions Completed (any action completed that may diminish risk. Does not have to intentionally addressed risk.)

--

- New Actions (include structural projects, natural resource protection, specific property protection, strengthening of emergency services/response, hazard prevention, education. Can include projects currently underway but incomplete)

Action	Lead Department Department responsible for action	Notes
	Anita? Tree Warden?	

8. Multihazards

8.1 - Setting/Historic Record

Event	Date	Impact
COVID-19	March 2020 - Ongoing	Reached peak amount of cases in January 2022, 175.7 per every 100,000 residents.

8.2 - Capabilities

Capability	Changes
Multi-department review of developments	
Comprehensive Emergency Management Plan (CEMP)	
Enforcement OF State Building Code	
Regional Emergency Management Planning Committee (REPC)	
Emergency generators available for municipal facilities	
Reverse 911 and public announcements in the event of an emergency	
Emergency communications system	

8.3 - Actions Applicable to All Hazards

Action	Status Capability Completed Carry Forward Drop	Lead Department Department responsible for action	Notes What Happened? If dropping/ incomplete, why?
Upgrade communications for flexibility – finish fiber optics, explore GETS card		IT	
Upgrade Arlington Street bridge – weight restriction affects emergency response time		Public Works, Planning and Zoning, Emergency Management	
Upgrade Laws Brook Road bridge		Public Works	
Improve emergency communication, particularly with difficult to reach populations (non-English speakers, isolated individuals)	Capability	Emergency Management and Human Services Department	

- Other Actions Completed (any action completed that may diminish risk. Does not have to intentionally addressed risk.)

- New Actions (can include structural projects, natural resource protection, specific property protection, strengthening of emergency services/response, hazard prevention, education. Can include projects currently underway but incomplete)


Action	Lead Department Department responsible for action	Notes

- Notes

FW: Draft: Acton Hazard Mitigation Plan for Review**Andrea Becerra** <abecerra@acton-ma.gov>

Wed 7/31/2024 2:07 PM

To: Elizabeth McCarthy <emccarthy@slrconsulting.com>

 1 attachments (10 MB)

Acton HMP_2024 Draft.docx;

From: Andrea Becerra**Sent:** Friday, July 26, 2024 10:16 AM**To:** Anita Arnum <aarnum@acton-ma.gov>; Wanjiku Gachugi <wgachugi@acton-ma.gov>; Kristen Guichard <kguichard@acton-ma.gov>; Matt Frost <mfrost@acton-ma.gov>; Julie Pierce <jpierce@acton-ma.gov>; Kristin Alexander <kalexander@acton-ma.gov>; Edward Mullen <emullen@acton-ma.gov>; Laura Ducharme <lducharme@acton-ma.gov>; Jim Cogan <jcogan@acton-ma.gov>; Lauren West <lwest@acton-ma.gov>; Mark Hald <mhald@acton-ma.gov>; Douglas Sturniolo (dsturniolo@acton-ma.gov) <dsturniolo@acton-ma.gov>**Cc:** Corey York <cyork@acton-ma.gov>; Noah Slovin <nslovin@slrconsulting.com>; John Mangiaratti <jmangiaratti@acton-ma.gov>**Subject:** Draft: Acton Hazard Mitigation Plan for Review

Good morning,

Many of you attended the Hazard Mitigation Plan working group meeting back in February. Since then we've had two public outreach events to solicit input on the goals and actions of the Hazard Mitigation Plan. Before we circulate the plan for public comment, can you please take a look at the attached plan and provide any feedback or comments by Friday, August 2nd?

This plan assesses Acton's natural disaster risks and vulnerabilities and established mitigation goals and actions to be taken over the next five years. The updated plan will allow Acton to continue to be eligible for FEMA funding and hazard mitigation grants.

Thank you for your input.

Best,
Andrea**Andrea Becerra** ([she/her](#))*Sustainability Director*

Town of Acton, MA

(978) 929-6515

actonma.gov/sustainability



Appendix B

Public Input and Engagement

Memorandum



To: Andrea Becerra
Company: Town of Acton, MA
cc: Noah Slovin
Corey York
RE: Acton HMP Open House

From: Elizabeth McCarthy
SLR International Corporation
Date: May 16, 2024
Project No. 149.14458.00007

Attendee Sign-in Sheet

The following list displays the attendance of the Acton HMP Open House held on May 15th at 5:30 p.m. It should be noted that there were a few attendees who participated and left comments, but did not sign-in.

Name	Email	How long have you lived in Acton?
Alissa Nicol	alissanicol@actonma.gov	23 years
Mary Smith		40 years
Sharon Gruet	stgruet@gmail.com	25+
David Shoemaker	dhs@mit.edu	25+
Joe Will	Will6@earthlink.net	40 years
Kim Kastens	KimKastens@chayes.org	12 years
Heather Conkerton	hconkerton@oars3rivers.org	2.5 years
KJ Herther	kherther@comcast.net	30 years
David Martin		

Activity: Recent Storm Events and Impacts

Attendees were asked to write down impacts from recent storm events that they have observed or are aware of, as well as potential mitigation measures that may reduce the impacts of events in the future. The following is the written feedback that was received during the Open House.

Impacts

- Flooding of lawns, basements, sidewalks, driveways and roads
- Power lines down
- Trees down on roads, homes, and cars
- Extreme storm events – less storage capacity for flooding where there are dams. More pollutants going into our rivers because of increased rainfall and flooding
- Loss of electricity – we should have a better way of receiving information (understanding of what caused the outage and when it will be back on again)

Potential Mitigation Measures

- Put utility lines underground
- Solve power outages West Acton
- Electrical grid stability
- Let's remove/breach all the dams!

- Need more road sewers to help alleviate flooding

Activity: Hazard Mitigation Plan Goals

The goals from the previous 2018 Acton HMP were revised and updated for incorporation into the 2024 Plan Update. The process integrated input from municipal staff and agencies that was gathered during the 2024 HMP project kick-off meeting. The 12 updated goals were posted around the room for attendees to review and provide feedback. Attendees were encouraged to leave post-it notes on the goals, identifying potential mitigation measures or suggested additions to the goals. Goals as presented to attendees are listed below, with comments that were received at the Open House included as bullets below the relevant goal.

Goal 1: Prevent and reduce loss of life, injury, public health impacts, and quality of life impacts resulting from natural and human-caused hazards.

- It will be necessary to have a very clear definition of “human-caused” hazards
- Help people to help themselves – self-reliant and resilient
- Safety – electrical power loss ability to communicate and charge EV
- We should address increase of sodium in drinking water as a result of increased use of deicer
- Mainly related to the climate - concerned about flooding affecting roads, building, etc.
- Campaign to get more residents cell phone numbers and email addresses for emergency communications
- Research and resolve language issues for emergency communications

Goal 2: Prevent disruptions to public services, including utility services, municipal operations, and social services, from natural and human-caused hazards.

- Research and act on how to create effective incentives for Eversource to improve resilience of electric supply in Acton
- Role play with Acton Water District, town, and agencies, what would happen if a water resource type event happened again – sudden loss of 40% of Town’s water supply

Goal 3: Promote equity and environmental justice priorities throughout hazard mitigation and resilience efforts, including risk assessment and identification and implementation of mitigation measures.

- Thinking about people in apartments on upper floors enduring many more 90°F+ days each summer
- Do we have a plan for an event that would require percent of residents to be sheltered? Who would provide beds? Foods?
- Which hazard is most likely? Natural disaster like tornado, cyber security, attack that impacts power or water supply

Goal 4: Coordinate between multiple local, state, and federal initiatives, and build public-private partnerships, to secure funding for hazard mitigation projects.



Goal 5: Integrate hazard mitigation planning across municipal departments, committees, and boards; the planning documents that guide them; and the budgeting and capital improvement processes of each.

- Make sure to include Acton Water District and schools
- Be sure to specify that “municipal” includes the Action Water District, not just the Town of Acton

Goal 6: Consider the connection of different hazards and stresses to promote activities with co-benefits across hazard mitigation, water and air quality, conservation and preservation, climate and resilience, and other municipal priorities.

- Dam removal – improved climate resilience, water quality and recreational opportunities

Goal 7: Prevent and reduce damage to property, infrastructure, and natural, cultural, economic, and social resources from all hazards.

Goal 8: Work with stakeholders including Acton residents, businesses, institutions, developers, community-based organizations, land trusts, representatives of vulnerable populations, and non-profits to develop and implement hazard mitigation plan.

- Finding the big risks and planning for them is essential

Goal 9: Work with surrounding communities and state, regional, and federal agencies to promote regional cooperation and solutions for hazards affecting multiple communities.

Goal 10: Ensure that future development meets, or exceeds when feasible, federal, state, and local standards for preventing and reducing hazard impacts; explore and advance local development standards that will further reduce hazard risks in the future.

- Is there an updated floodplain map available? FEMA’s latest is a decade old based on even older data
- Require cooling capacity in new construction?

Goal 11: Conduct meaningful engagement and education with staff and members of the public about hazard mitigation using a diversity of resources and platforms.

- Encourage people to store some supplies at home to be self sufficient for a few days in an emergency (food, water, prescription, meds, first aid)
- Offer First Aid training to residents

Goal 12: Consider the impacts of climate change and incorporate climate and resiliency in hazard mitigation planning.

- Render electricity less expensive to stimulate uptake of heat pumps
 - For the long-term climate
 - For near-term low impact air conditioning
- One climate impact creates shortage elsewhere or creates shortages in Acton (coffee, chocolate, wheat, etc.)



General Comments

- Concern that some hazards were immediately being dismissed or not considered (Tornadoes, coastal hazards, earthquakes, wildfires due to dry summers) – while the hazard may not directly impact or affect Acton, what if people who are impacted start to move to Acton or need support from Acton to recover and respond?
- During previous hazards impacts and severe events, residents have to be prepared because can't count on emergency response from the town
- Leaf blowers in town
- Need to have a clear Emergency Response Plan and back-up plan for all systems, operations, and departments so that if there is an event, we are prepared for what to do
- Reverse911 needs to be more effective
- 911 and emergency response were not answering during the Sept. 2023 Microburst
 - Emergency communications (fire and police) need to have overflow
- Acton should consider contracting out for disaster recovery to avoid having some companies overcharge (snow, tree, electrician)
- During Sept 2023 Microburst, a few roads were not closed even though they were hazardous with downed trees and power lines. Charter Road and Arlington (main bus route for the school, near the High School) had wires down but could not be closed off because there were no more barricades. Disaster Management needs more supplies or back up plan for these scenarios.





Hazard Mitigation

"Hazard mitigation planning reduces loss of life & property by minimizing the impact of disasters."

Federal Emergency Management Agency





Hazard Mitigation Planning Process



Identify natural hazards,
risks, & vulnerabilities

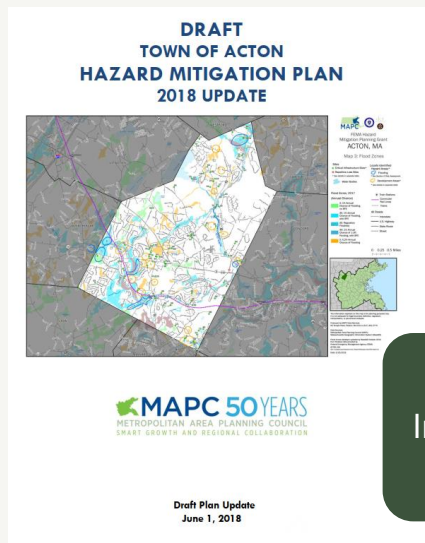


Develop long-term
strategies to protect people
& property





FEMA Hazard Mitigation Planning Process



1. Organize Planning Process and Resource

HAZARD MITIGATION PLAN PUBLIC MEETING

Natural hazards can have serious impacts on the Town of Acton and its residents



The Acton Hazard Mitigation Plan is being updated to help the town reduce its vulnerability to natural hazard events such as flooding, hurricanes and winter storms. Please join the Town for a public presentation and discussion about the update to the Acton Hazard Mitigation Plan at a public meeting of the

Monday, April 18 2018

Town Hall, Room 204
Street, Acton, MA

2. Assess the Risk

Table 6: Hazard Risks Summary

	Frequency		Severity	
	Massachusetts	Acton	Massachusetts	Acton
Flooding	High	Medium	Serious to extensive	Serious
Dam failures	Low	Low	Extensive	Extensive
Coastal Hazards	High	N/A	Serious	N/A
Hurricane/Tropical Storm	Medium	Medium	Serious	Serious
Tornadoes	Medium	Low	Serious	Minor
Thunderstorms	High	High	Minor	Minor
Nor'easter	High	High	Minor	Minor
Winter-Blizzard/Snow	High	High	Minor	Minor
Winter-Ice Storms	Medium	Medium	Minor	Minor
Earthquakes	Very Low	Very Low	Serious	Serious
Landslides	Low	Low	Minor	Minor
Brush fires	Medium	Low	Minor	Minor
Extreme Temperatures	Medium	Medium	Minor	Minor
Drought	Low	Low	Minor	Minor

Source: Massachusetts State Hazard Mitigation Plan, 2013, modified for Acton

4. Adopt and Implement the Plan

3. Develop the Mitigation Strategy

Table 36: Potential Hazard Mitigation Measures

Mitigation Action	Priority	Lead Implementation	Time Frame	Estimated Cost	Potential Funding Source
Land Acquisition/ Protect Open Space	Medium	Open Space Committee, Natural Resources	Ongoing	High	Town, CPA, gifts
Ongoing culvert and drainage upgrades	Medium	DPW, Engineering GIS	Ongoing	High	Town, FEMA, ACOE
More frequent maintenance of town-owned drainage facilities	Medium	DPW	Ongoing	Low	Town
Complete GIS stormwater mapping, review for MSD compliance	Medium	Engineering	2022	Low	Town



Overview of HMP Sections





Natural Hazards





Local Hazard Concerns



Drought

- Water supplies
- Wildfire risk



Flood

- Stormwater flooding,
- Drainage capacity



Wind

- Power outages
- Debris



Snow

- Access, egress
- Hydrant access



Emergency Response

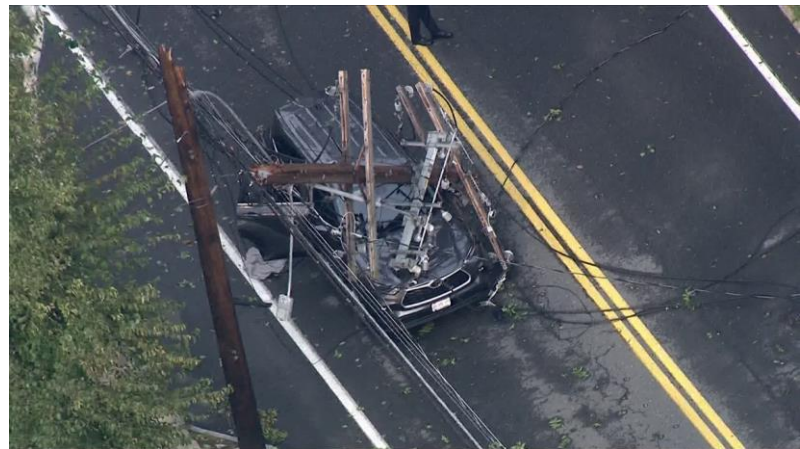
- Capacity & Staff
- Sheltering

Local Hazard Concerns

Microburst Damage



Source: CBS Boston (Sept. 8, 2023)



Source: WCVB





Local Hazard Concerns

Bellows Farm Dam





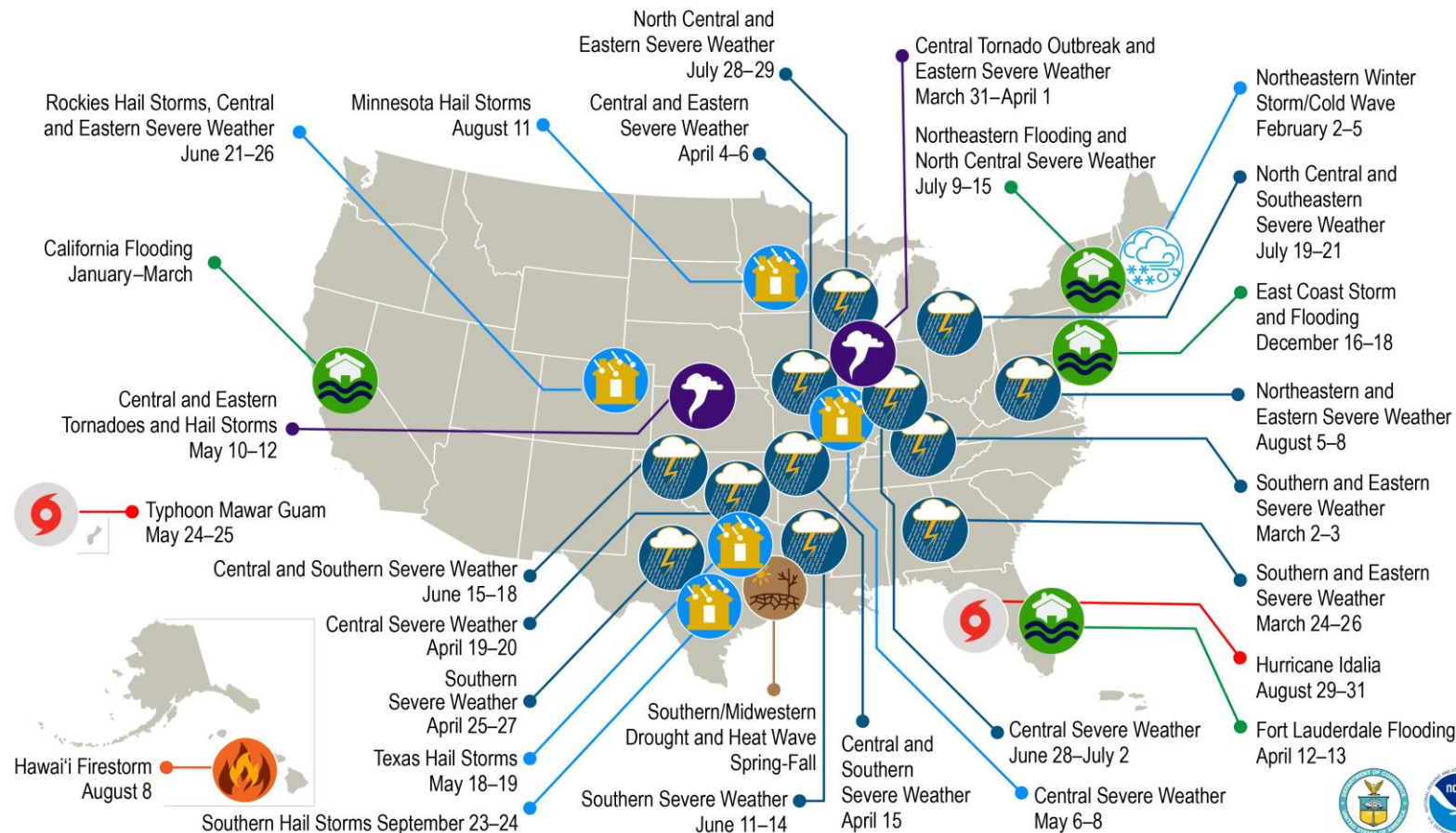
Local Hazard Concerns

Damage across Acton Conservation Lands



Source: Acton Trails (Dec. 22, 2023)

U.S. 2023 Billion-Dollar Weather and Climate Disasters



This map denotes the approximate location for each of the **28 separate billion-dollar weather and climate disasters** that impacted the United States in 2023.



Climate Projections and Impacts In Massachusetts

RISING TEMPERATURES¹



23–29 high heat days per year expected by **2050** and annual average temperature increase of **5.9 to 7.9°F**.



Those most likely to be affected from high heat include unhoused populations, those working outdoors, the elderly, infants, individuals with chronic diseases (e.g., asthma), and environmental justice and other priority populations.



Extreme temperatures are projected to increase annual transportation infrastructure maintenance costs by over **\$140 million** by the end of the century.



CHANGES IN PRECIPITATION²



By **2070**, Massachusetts is expected to receive **12–42%** more winter precipitation.

Environmental justice and other priority populations live near commercial and industrial buildings that have a



57% higher risk of flood damage than the rest of the Commonwealth.

Annual economic flood damage is estimated to increase by **\$9.3 million** by **2030** across the Commonwealth.

COASTAL FLOODING³



Massachusetts is planning for sea level rise by up to **2.5 feet by 2050** compared to 2008 if global emissions are not significantly reduced. Both tidal and storm-related flooding are projected to increase.

Risks and consequences from inundation will be more significant among sensitive assets such as hospitals, schools, prisons, care facilities, and underground and at-grade living quarters.



By 2070, coastal flooding is projected to cause over **\$52 million** in damage annually to state-owned coastal properties, a **550%** increase from 2023.

SEVERE WEATHER⁴

Includes strong winds, tornadoes, extreme precipitation, and droughts. Precipitation amounts from the heaviest storms in the Northeast have increased by **55%** since **1958**.



High winds are of particular concern to coastal areas, where wind speeds can reach **110+ miles per hour**.



Populations living or working outdoors will be increasingly exposed to dangers of more frequent and increasingly severe weather.

Lightning was responsible for **\$20.4 million** in damage in Massachusetts between 2002 and 2022.⁵



Most Urgent Priority Impacts Of Climate Change In Massachusetts



HUMAN

Health and Cognitive Effects from Extreme Heat, including premature death and learning loss in children.

Health Effects from Degraded Air Quality, including childhood asthma cases and premature death due to the climate impact on particulate matter and ozone air quality.

Emergency Service Response Delays and Evacuation Disruptions from extreme storms, leading to injuries, loss of life, and urgent need for health, safety, and traffic first responders.

Loss of life or injury due to high-vulnerability dams, hurricanes, wildfires, extreme flooding, or extreme temperatures.

Disproportionate impacts on unhoused populations from extreme temperatures or extreme flooding.



INFRASTRUCTURE

Damage to Inland Buildings from heavy rainfall and overwhelmed drainage systems.

Damage to Electric Transmission and Utility Distribution Infrastructure associated with heat stress and extreme events.

Damage to Rails and Loss of Rail/Transit Service, including flooding and track buckling during high heat events.

Damage or loss of unreinforced masonry buildings due to earthquakes.

Damage to infrastructure, utilities, and buildings in liquefaction zones due to earthquakes.

Damage or loss to homes and critical facilities in the wildland urban interface.



NATURAL ENVIRONMENT

Freshwater Ecosystem Degradation due to warming waters, drought, and increased runoff.

Marine Ecosystem Degradation because of warming, particularly in the Gulf of Maine, and ocean acidification.

Coastal Wetland Degradation from sea level rise and storm surge.

Forest Health Degradation from warming temperatures, changing precipitation, increasing wildfire frequency, and increasing pest occurrence.

Loss of biodiversity, habitats, and native species due to climate change impacts.



GOVERNANCE

Reduction in State and Municipal Revenues, including a reduced property tax base due to coastal and inland flood risk.

Increase in Costs of Responding to Climate Migration, including planning for abrupt changes in local populations.

Increase in Demand for State and Municipal Government Services, including emergency response, food assistance, and state-sponsored health care.

Inability to carry out mission and services due to damage, disruption, or loss of state assets and services.



ECONOMY

Reduced Ability to Work, particularly for outdoor workers during extreme heat, as well as commute delays due to damaged infrastructure.

Decrease in Marine Fisheries and Aquaculture Productivity from changing ocean temperatures and acidification, which leads to decreased catch and revenues and impacts on related industries.

Reduction in the Availability of Affordably Priced Housing from direct damage (e.g. flooding) and the scarcity caused by increased demand.

Damage, disruption, or loss of coastal infrastructure such as seaports, airports, and maritime industries.



What is Hazard Mitigation?





Example Actions

Flooding

- Allow Cluster Development By Right for New Subdivisions

Dam Failure

- Assess Erickson's Grain Mill Dam

Drought

- Promote landscaping to support groundwater recharge and demand less water

Extreme Temperature

- Conduct outreach to promote cooling centers in heat waves

Winter Storms

- Develop policy for snow removal from fire hydrants

All Hazards

- Upgrade Laws Brook Road bridge and Arlington Street Bridge

Example Actions

River Street Dam Removal

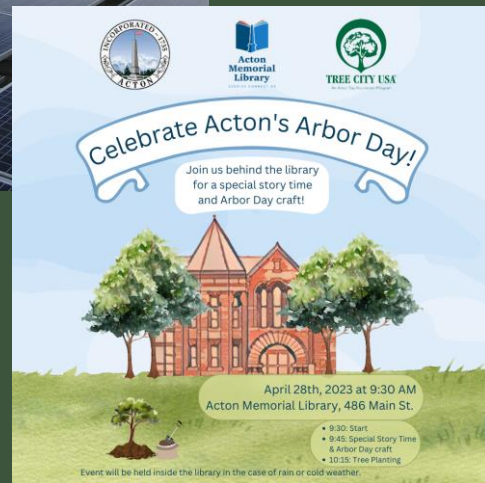


Source: John Guilfoil Public Relations



Example Actions

Tree trimming, emergency power, flood protection, education and engagement....





TELL US WHAT YOU THINK

VISIT THE OTHER STATIONS TO PROVIDE
FEEDBACK.



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The original item was published from 5/9/2024 12:47:00 PM to 5/17/2024 12:00:00 AM.

Acton Town News

Posted on: May 9, 2024

[ARCHIVED] Hazard Mitigation Plan Open House: Wednesday, May 15, 5:30-6:30PM

Is your community prepared to face natural disasters? Join us to provide your input on the goals and actions of Acton's Hazard Mitigation Plan to help reduce risk to Acton's people, economies, and natural environments. There will be snacks!

We want your input on the Hazard Mitigation Plan! Stop by any time on Wednesday, May 15, from 5:30 to 6:30 PM, for an open house at the Acton Memorial Library Meeting Room. The Hazard Mitigation Plan will assess Acton's natural disaster risks and vulnerabilities and identify proactive mitigation goals and actions to be taken over the next five years. Members of the public are welcome to stop by and ask questions and provide written or spoken input on the goals and actions for the next version of the Hazard Mitigation Plan. We will provide light (yummy) snacks.

Questions? Contact the Sustainability Office at 978-929-6515 or via email sustainability@actonma.gov.

[View the Flyer...](#)

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We want your input!



Hazard Mitigation Planning Event



Is your community prepared to face natural disasters? Join us to **provide your input** on the goals and actions of Acton's Hazard Mitigation Plan to help reduce risk to Acton's people, economies and natural environments.

Join Us on Wednesday, May 15th

Acton Memorial Library, Meeting Room
Stop by anytime from 5:30 to 6:30pm

Snacks provided!

Questions? Contact the Sustainability Office, sustainability@actonma.gov | 978-929-6515

Memorandum



To: Andrea Becerra

From: Elizabeth McCarthy

Company: Town of Acton, MA

SLR International Corporation

cc:

Date: July 31, 2024

Project No. 149.14458.00007

**RE: Climate Resilience Festival
Summary and Key Takeaways**

Acton held a Climate Resilience Festival on June 8, 2024. Acton prepared a booth at the festival dedicated to engaging event attendees on the HMP. At the booth, Town and SLR staff provided information about the HMP process, shared goals and actions identified so far, and solicited input on hazard mitigation priorities and strategies, which included taking note of local experiences concerning natural hazards. Pictures of the HMP booth are included in the following summary.

The Climate Resilience Fair was well attended (over 200 residents) and there were many visitors to the HMP booth. There were several interactive activities at the booth to encourage feedback on the HMP process. This included a map of Acton where attendees could mark the location of their house, their favorite places in Acton, or where they have observed hazard impacts in the past and are concerned about risks in the future with a blue, green, or red marker respectively.



Picture 1: Map of Acton at the HMP Booth

A poster with all twelve (12) goals developed by the Local Hazard Mitigation Plan Team and an example action for each goal. Attendees were asked to provide thoughts on the goals and actions identified so far, as well as any other concerns related to natural hazards and mitigation efforts in Acton, either by writing feedback on an index card to be collected for review or to discuss with staff at the booth who recorded comments.



Picture 2: Basket to Collect Input from Participants





Picture 3: Poster Boards of Mitigation Goals and Example Actions

The main concern expressed by attendees was minor street flooding issues. Several people mentioned natural gas leaks, which does not apply to the scope of the HMP. In general, it appeared that hazard mitigation planning was not a worry or focus for event attendees. People did not seem overly concerned, which could suggest that the community feels safe, more public education around natural hazards and climate change could be beneficial, or that these attendees have not had personal experiences with natural disasters.



ACTON CLIMATE RESILIENCE FESTIVAL



**Saturday, June 8
1 - 4pm**

Gardner Field, West Acton

bit.ly/ActonClimateFestival



MVP

Municipal Vulnerability
Preparedness

Remarks by Senator Jamie Eldridge,
Representative Danillo Sena, and Select Board Chair Fran Arsenault



ACTON CLIMATE RESILIENCE FESTIVAL



Featured Organizations and Initiatives

- Municipal Vulnerability Preparedness (MVP) 2.0
- Acton-Boxborough Farmers Market (ABFM)
- Acton Clean Energy Coaching Program
- Acton Climate Coalition
- Acton Conservation Trust
- Acton Garden Club
- Acton Houses of Worship Green Teams
- Acton Libraries
- Acton Power Choice
- Acton Water District
- Blackbird Cafe
- Boston Area Gleaners
- Energize Acton
- Green Acton
- Hazard Mitigation Plan (HMP) Update
- Mothers Out Front
- Town of Acton Sustainability Office
- Wasted* Circular Sanitation
- West Side Creamery



**Featuring music by Anderson-Gram Acoustic Duo and
AB Orquesta de la Revolución!**





Appendix C

Plan Adoption