



Community Resilience Building Workshop Summary of Findings

Final Report

April 23, 2019

Overview

Over the past several years, the Town of Auburn has been working towards implementing improved emergency response, coordination between and among departments, a centralized emergency operations center (EOC), a Community Emergency Response Team (CERT), and becoming a Green Community. Efforts have included: updating the Town's Master Plan; completing a Hazard Mitigation Plan update in 2018; constructing a new EOC in the police station and maintaining a backup EOC in the Town Hall; improving emergency communication and notification systems including Code Red; and planning for and improving emergency shelters.

The Town saw the need to engage the community as a whole in integrating climate change into town-wide resiliency planning. This Community Resilience Building Workshop, designed as part of the Municipal Vulnerability Preparedness (MVP) program, offered Auburn an opportunity to gather valuable perspectives from a diverse range of officials, volunteers, businesses, and interested residents.

In September 2016, Governor Charles D. Baker signed Executive Order 569, instructing State government to provide grant assistance to towns and cities in Massachusetts to complete climate change vulnerability assessments and resiliency planning. On April 13, 2018, the Baker Administration, through the Executive Office of Energy and Environmental Affairs, announced that applications for planning grants would be accepted through the MVP Program. On May 29, 2018 over \$2 million in grant funding was awarded to 82 towns and cities, including the Town of Auburn. Municipalities are to work with an MVP-certified provider through a community-driven process to identify key climate-related hazards, vulnerabilities and strengths, develop adaptation actions and prioritize next steps. Upon successfully completing the program, communities will be designated as a "MVP Program Community" and become eligible for follow-up action grant funding and priority status for other State grant opportunities.

Matthew Benoit, Town Planner, was originally designated as the Project Manager for this work. When he changed jobs, the new Town Planner, Adam Menard, became the Project Manager. Auburn's application included letters of support from Mass Audubon, the Blackstone River Coalition, the Blackstone River Watershed Association (BRWA), the Central Mass Regional Planning Commission, the Auburn Conservation Commission, the Auburn Open Space Committee, and the Auburn Planning Board. After Auburn was notified that it was awarded an \$18,000 grant for community resiliency planning, the Town of Auburn selected the BRWA to serve as contractor for facilitating this planning process. Ted Beauvais served as Lead for the BRWA facilitation team, who worked closely with Adam Menard and the Auburn core team, to prepare for the workshop over the next seven months.

Ted Beauvais interviewed seven key Auburn town officials from the Office of Emergency Management, Department of Public Works, Planning Division, Town Manager, School Department and Economic Development to begin the community engagement process and to learn about current and past issues related to natural hazards and disasters.

The Town issued a press release about the MVP program and workshop that was published in *The Auburn News*, the local weekly newspaper on February 8, 2019. It was also published in *The Auburn, MA Daily* on February 6, 2019. A one-day workshop was held at the Auburn Town Hall on February 28, 2019 with 27 participants from the community.

The Town issued a press release to share the key findings from the draft Summary of Findings report and invite residents to attend a listening session at the Town Hall to learn more and make comments. The Town posted the key findings and draft report on the Town's website for review.

The Town of Auburn held a public listening session the evening of April 8, 2019 at the Town Hall. The listening session was televised by Auburn Community Television. Refer to Appendix K for additional information.

Community Resilience Building Workshop Summary of Findings

The Auburn MVP workshop utilized the Community Resilience Building (CRB) framework developed by The Nature Conservancy (www.communityresiliencebuilding.com) and adopted by the State for this planning initiative. Adam Whelchel, Director of Science for The Nature Conservancy, Connecticut Office (TNC-CT), is the creator of and lead on CRB. He led the Auburn workshop as the lead facilitator and assisted in the workshop planning.

The Workshop's central objectives were to:

- Define top local natural and climate-related hazards of concern;
- Identify existing and future strengths and vulnerabilities;
- Develop prioritized actions for the Community;
- Identify immediate opportunities to collaboratively advance actions to increase resilience.

A list of workshop invitees was developed by the Auburn MVP core team and included representatives from town leadership, boards, commissions, committees, public safety and hazard mitigation, and community planning, as well as business, NGO and community organizations (the full list of participants appears later in this report).

The workshop included presentations on Massachusetts' Municipal Vulnerability Preparedness program, described the future impacts of climate change in the local area, and provided information and examples of nature-based approaches to addressing impacts of natural and climate-related hazards. All of the presentations can be seen in Appendix I. The participants, working in small groups, identified climate-related hazards, the impact of those hazards on Auburn's natural environment, infrastructure and society, and then developed recommendations to address these impacts. The recommendations are a combination of short-

term (less than 3 years), long-term (3-10 years or more) and ongoing items. Each breakout group then shared 3-5 of their highest priority recommendations with the entire group. Finally, the entire group discussed the highest recommendations from each group, categorized them and then voted to determine which were the top priorities among them.

Top Hazards and Vulnerable Areas

On September 10, 2018, the Town Board of Selectmen adopted the Auburn Hazard Mitigation Plan. Section 4.0 of this plan includes identification and analysis of natural hazards that have or could affect Auburn. The natural hazards that were identified and assessed for Auburn in this plan are: Flooding; Severe snowstorms, Ice storms, and Nor'easters; Hurricanes; Severe thunderstorms, Wind, and Tornadoes; Wildfire, and Brushfire; Earthquakes; Dam failure; Drought and Extreme Temperatures. Many of these hazards result in similar impacts to a community. For example, hurricanes, tornadoes and severe snowstorms may cause wind-related damage and significant power outages.

As part of the MVP workshop, Auburn Fire Chief, Stephen Coleman, gave a presentation on hazard identification and historical events. His presentation (see Appendix I) provided a useful context for the later discussions in the breakout groups.

The first task of the breakout groups was to consider Auburn's past, present, and future exposure to natural and climate-related hazards and to identify the hazards that will pose the greatest threat over the next decade or longer. Appendix C shows the hazards identified by each break-out group as well as those from the Town's Hazard Mitigation Plan. These are the hazards for which the breakout groups subsequently developed recommendations.

Top Hazards

- Flooding
- Damaging Winds
- Winter Snow and Ice Storms
- Heat Waves and Drought
- High Rainfall Events

In considering how these hazards may impact Auburn in the future, several areas of concern as well as specific locations were revealed.

Areas of Concern

- Vulnerable Drinking Water Supply Wells and Aquifer
- Flood-prone Areas and Infrastructure
- Major Interstate and State Highways with Aging Structures and Complex Intersections
- Dispersed Elderly and Vulnerable Residents

- Active Freight Rail Lines and Operations

Vulnerable Drinking Water Supply Wells and Aquifer

Auburn depends on about 10 wells located in five areas for drinking water. There is protected land near some of the wells, but half of them are located near I-90 and I-290. Due to the immediate proximity of these highways, some wells are now contaminated by road-salt runoff with some of the highest levels of sodium and chlorides in the State. Several wells have been taken out of service due to contamination. There are also significant concerns related to hazardous materials spills as a result of motor vehicle accidents. Consequently, aquifer protection is a major concern as is water quantity that could be imperiled by prolonged drought.

Flood-prone Areas and Infrastructure

Certain parts of Town - especially Drury Square, Auburn High School athletic fields, Rockland Road, Brook Road, and Holstrom Court – will flood when there is significant rainfall. This not only affects residents and their property, but it makes it difficult for emergency responders to reach these areas. With more major flooding, travel through the busy Drury Square area is impacted. Because the high school is the primary emergency shelter and it is located in the Drury Square flood prone area, there is a concern that it might not be usable when the surrounding roadways are flooded.

Critical infrastructure is also impacted by flooding. Notably, the sewer pump station in Holstrom Court is subject to flooding. Operation of the Worcester flood control diversion structure is a concern because although it solves a flooding problem in Webster Square in Worcester it also creates flooding problems in Auburn.

Major Interstate and State Highways with Aging Structures and Complex Intersections

Auburn is the crossroads of Central Massachusetts. Interstate Highways I-90 (Massachusetts Turnpike), I-290, and I-395 all pass through and intersect within the town. In addition, US Route 20 bisects the town as does State Route 12. Connecting all these highways is a robust network of collector and local roads. Specific concerns relate to spills of hazardous materials, particularly near public drinking water wells; use of road salt and the documented contamination of public water supplies; and traffic accidents and their impact on collateral Town roadways especially during extreme weather events. The age and condition of these major highways and bridges means that significant investments will be needed to maintain the transportation infrastructure.

Dispersed Elderly and Vulnerable Residents

The town has an aging population. According to recent census data, 27% of the Town's population is 60 or older. There is one nursing home, a memory care unit, and one assisted living facility. There are group homes and two public senior housing developments. Coordination and communication with these facilities and residents is critical to prepare for impacts from natural and climate-related hazards. For example, should an evacuation be required, suitable transport for hundreds of individuals would need to be made available.

Active Freight Rail Lines and Operations

Auburn has two rail lines that traverse the town – CSX and Providence and Worcester. The major concern is an accident resulting in a fuel spill or release of a hazardous material with impacts to the environment, infrastructure, and the population.

Current Concerns and Challenges Presented by Hazards

Auburn has been impacted by significant natural and climate-related hazards in recent decades. The major incidents the Town has faced include:

- The Blizzard of 1978 resulted in power outages and difficulty in providing emergency services
- Tropical Storm Irene, in August 2001, caused flooding and power outages.
- The October 2005 storm resulted in extensive flooding.
- Rainstorms on July 2, 2009 caused extensive flooding.
- In January 2011, heavy snow caused several roof collapses.
- The 2011 Halloween Nor'easter caused power outages.
- Superstorm Sandy, in October 2012, caused flooding and power outages.
- The drought of 2016 resulted in extended watering bans.

Specific Categories of Concerns and Challenges

Flooding has direct impacts on the areas and structures inundated and can also interrupt or block traffic flow and cause problems with emergency access. Flooding in and near the main shelter at the Auburn High School could render it unusable and require the secondary shelter at the Swanson Road Intermediate School to take over. Flooding can also cause damage to roads and drainage structures that impact the Town's budget. Important major intersections and critical infrastructure are subject to routine flooding. Currently, about 7 days a year have precipitation events of 1 inch or more. By mid-century this number is projected to increase by about 2 days a year with a consequent increase in flood frequency.

Snow and ice storms and associated winds that interrupt power have major and immediate impacts on people, businesses and public safety (traffic lights). Households with private wells also lose their water supply when the power goes out. People who depend on medical devices typically have a limited time to continue on battery backup or by switching from an oxygen machine to bottled oxygen, but if the power outage extends for days the devices will cease operation.

High winds cause old, dead, and dying trees and branches to fall and cause power outages and blockage of roads as well as damage to structures. Trees within utility rights of ways are

maintained, trimmed, or removed on a regular basis, but other trees on private property can also cause power outages. In some cases, the owners know the tree is a problem, but lack the funds to pay for removal.

With power loss, people lose heating or cooling. With mild weather this is not much of an issue, but with increasing days above 90 degrees F, and with more icy conditions in the winter, there is a strong possibility of power outages occurring when lack of heating or cooling can become life-threatening. Projections from ResilientMA indicate that days above 90 degrees F could increase from the baseline of about 4 days annually to about 14 days in the 2030's and about 22 days in the 2050's. Loss of either heating or cooling is a significant health concern – particularly for elderly people, infants, and those with chronic illnesses. The reliability and capacity of back-up power systems at emergency shelters to handle cooling during an extended heat wave needs to be assured on an ongoing basis.

Snow and ice storms also impact travel and emergency access. Vehicular accidents increase and with the heavy volume of truck traffic on the interstate and state highways and other major roadways, there is increased risk of spills of fuel and hazardous materials. This is of critical concern to the water supply wells that are in immediate proximity to these highways.

Extreme temperatures have direct health consequences for vulnerable populations and also result in higher utility bills for low income residents who have difficulty affording higher utility and fuel costs. There is a significant and dispersed population of elderly and vulnerable residents for whom a greater degree of planning and assistance is required to ensure their safety during natural hazard and climate-related emergencies.

Auburn's municipal drinking water supply is uniquely vulnerable as a result of the proximity of wellfields to major roadways. Protecting drinking water resources is complicated by the fact that these roadways are maintained by entities other than the Town.

The concentration of major highways and the traffic they carry makes Auburn's local roads vulnerable to overuse and congestion when drivers use them to avoid accidents and traffic events.

Auburn has a good legal foundation for water supply protection, development and stormwater management but additional measures such as bylaw updates, implementing regulations, and a staff person to implement them are needed.

Current Strengths and Assets

Auburn has a well-organized emergency response and communications organization. There is an Emergency Operations Center (EOC) at the police station, with a backup at the Town Hall. There is a Community Emergency Response Team (CERT) in place. All participants know their

roles and there are effective interdepartmental communications. Table-top exercises are regularly held to improve emergency planning and response.

Auburn has an effective capital improvement plan that replaces important pieces of equipment – fire trucks, police cruisers, plows, heavy equipment, etc. in a timely manner. Equipment is well maintained. In addition, other pieces of equipment that might be needed are on contract with private owners who can be activated as needed.

The Town has shelter and evacuation plans with Auburn High School designated as the primary shelter, the Swanson Road Intermediate School as the back-up shelter and the Senior Center also serving as a shelter. The Town relies on the Red Cross to assist with shelter operations. Pets are allowed at the shelters and there are designated areas for them and their owners. There are also trailers with emergency shelter supplies that can be moved where needed.

- The Town has an Emergency Communications Plan and has multiple ways to reach residents: Local Access Cable TV, Code Red, text, email, SM, phone, and AM radio.
- The Town has several public parks that provide open space and recreational opportunities. The Open Space Committee and Conservation Commission are strengths in identifying the important role of these areas in climate resilience and emergency response preparedness.
- All the dams in town are inspected regularly and maintained. One dam that needed some repairs is currently being worked on.
- Community support services like the library and food service providers, the public-school system, and faith-based populations were all identified as strengths.
- The Central Mass Mosquito Control Project across the Town reduces disease transmission.
- The availability of medical services and supplies is good, including the new Reliant Medical facility.
- Shared trailers with regional emergency response equipment are staged in Auburn.
- Mutual aid agreements are in place with other communities.
- Electronic billboards are being installed.
- The Town's Community Emergency Response Team (CERT) trains volunteers and promotes neighbors helping neighbors.

Top Recommendations to Improve Resilience

Each breakout group presented 3-5 top priority recommendations when the large group reconvened near the end of the workshop. Following their presentations there was a group discussion where similar (or identical) recommendations were grouped together. This resulted in seven groupings of recommendations that were voted on by all the participants with each person having three colored sticky dots to denote their preferences.

The three Highest Priority recommendations are: Improve Communications including outreach to senior citizens, other vulnerable populations, businesses and the public regarding emergency preparedness and response; Replace the Sword Street Culverts, a long-standing infrastructure concern for the Town in its Industrial Park; and Protect and Improve Water Quality and Quantity including flood avoidance and management, water supply protection, stormwater management and bylaws and/or regulations that should be passed to address these concerns.

The seven top priority recommendations from the Final Risk Matrix (see Appendix A) are displayed below in rank order:

Improve Communication - High Priority
Increase support and participation by improving communication about emergencies, power outages, extreme events. Focus on reaching seniors and other vulnerable residents not only in residential facilities and housing complexes but also those who are dispersed across town.
Increase participation in Code Red program and "Are You OK" program. Establish a "Neighbor to Neighbor" program.
Distribute a flyer to all households explaining all the different ways emergency communications are done. Use CERT funding.
Take full advantage of all electronic billboards in Town for emergency messaging. Work with businesses and the community to coordinate.
Review crisis and public communication policies and procedures to ensure that plans prepared by businesses are shared and communicated with the Town as well as to improve the Town's communications with residents, businesses, tourists and visitors, departments, and vulnerable populations.

Replace the Sword St. Culverts - High Priority

The request by the Town to have the State classify these four culverts as a bridge has been denied. Efforts to secure MassWorks funding have failed three times. This remains a high priority for the Town as failure of this structure impacts business in the Industrial Park and nearby residents.

Priority to secure funding is Short-Term and eventual replacement of the current structure is Long-Term.

Protect and Improve Water Quality and Quantity - High Priority

Review water quality bylaws and revise. Create overlay of water bodies and catchment areas. Address salt use in the Illicit Discharge Detection and Elimination Plan.

Update aquifer bylaws. Flood proof pumps and water purification. Protect against power loss.

Update zoning bylaws to encourage low impact development and green infrastructure based on maps and delineation. Develop rules and regs for existing bylaws including regulations to implement existing stormwater bylaw.

Hire an engineer to focus on stormwater regulations, enforcement, NPDES permits and coordination with MassDOT to improve drainage on State roads and highways.

Work with private businesses and other owners of floodway property to clear vegetation to restore and maintain flood flow capacity. Focus on high impact areas.

Purchase equipment to make and distribute brine as an alternative for ice control on roads to protect water supply. Evaluate other low impact methods of ice control on roads.

Build a Town-owned Fueling Station - Moderate Priority

Do a design and then build a facility on Town property. Include back-up generator which the current arrangement with a private vendor lacks. A study shows that this would also save the Town money.

Review Evacuation Planning and Housing Bylaws - Moderate Priority

Promote multi-family and mixed-use (town center) development to increase housing stock and increase housing density, use less land, and improve affordability. Update bylaws to promote multi-family, mixed use and nature-based green infrastructure approaches for stormwater runoff and open space. Consider a Village Overlay District.

Plan with all stakeholders for senior/disabled residents evacuation including transportation needs. Coordinate with assisted living, nursing homes and group homes and their existing plans. Plan for evacuating people with medical issues who cannot go to regular emergency shelters. Consider yearly contracts with bus companies/WRTA.

Assess Vulnerability of the Power Transmission Infrastructure - Lower Priority

Evaluate trees for proximity to lines and tree health. Look into moving some lines underground and include cost analysis.

Evaluate Back-up Power Systems at Critical Town Facilities - Lower Priority

Look at police, fire, schools, shelters, senior center to make sure existing generators have the capacity to meet the needs for cooling, refrigeration, and other demands during an extended power outage and they are maintained, tested, and operating properly.

CRB Workshop Participants

The table below shows everyone who was invited to the Community Resilience Building (CRB) workshop held on February 28, 2019. Those who attended are denoted with an asterisk to the left of their name. The group assignment by color refers to the break-out groups which were color-coded: Red, Blue, Green and Yellow.

Name	Position	Group Assignment (By Color)
*Adam Menard	Town Planner (Core Team Leader)	G
*Jeff Mitchell	DPW-Sewer (Core Team)	R
*Joe Fahey	School Facilities (Core Team)	Y

*Joe Shenette	Emergency Mgmt. (Core Team)	B
*Julie Jacobson	Town Manager (Core Team)	G
*Shannon Regan	Economic Development (Core Team)	R
*Stephen Coleman	Auburn Fire Chief (Core Team)	Y
*Todd Lemon	Auburn Police (Core Team)	R
*Deb Gremo	Town Clerk	B
*Bill Coyle	DPW Director	G
*Darlene Coyle	BOH/Health Director	B
Eileen Dyson-Alexander	BOH/Health Inspector	
*Jean Collins	Library Director	B
*Jean Boulette	Exec. Dir. Elder Affairs	R
Mike Marino	IT Director	
*Caleb Moody	Building Commissioner	Y
*Joanna Paquin	Civil Engineer	Y
Maryellen Brunelle	School Superintendent	
*Greg Morin	Auburn Fire Dept.	G
*Matt Benoit	Energy Manager	NA
Lori Brennan	Housing Authority	
Martin Reisner	Auburn Industrial Park	
Chris Bastien	Auburn Mall	
Barry Lorion	MassDOT	
Breda Broulliette	Red Cross	
Fr. Paul Bomba	St. Joseph Church	
Pastor Douglas Geeze	Faith Church	
Doreen Goodrich, Chair	Board of Selectmen	
Kenneth Holstrom, Vice-Chair	Board of Selectmen	
Daniel Carpenter	Board of Selectmen	
Lionel Berthiaume	Board of Selectmen	

Tristan LaLiberte	Board of Selectmen	
Sari Bitticks	Historic Commission	
*Michael Garland	Conservation Commission	G
Ron Brooks	Planning Board	
Tony Pellegrino	CERT	
*Gary Pray	CERT	B
Mark Maass	LEMPC/Emerg. Mgmt. Dir.	
Ann Weston	Open Space and Recreation Committee	
Eric Otterson	Board of Health	
Michael Moore	State Senator	
*Paul Frost	State Representative	NA
*Ken Smith	Auburn Water District	Y
Ed Gurries	Elm Hill Water District	
*Kevin Shaughnessy	National Grid	G
*Todd Fontanella	WRTA	R
*Eli Goldman	CMRPC	Y
Colin Novik	Greater Worcester Land Trust	
Mark Binnal	Open Space and Recreation Committee	
*Peter Peloquin	CMRPC	Y
*Wes Hutchinson	MassDOT	R
*Paul Marrone	CERT	G
TBD	Auburn Sportsman's Club	
*Ted Beauvais	BRWA Lead and Facilitator	NA
*Adam Whelchel	TNC-CT, Lead Facilitator/Presenter	NA
*Lee Dillard Adams	Resilience Partners Facilitator	R
*Pieter de Jong	BRWA Facilitator	G
*Ariel Mariano	Mass Audubon Facilitator/Presenter	Y
*Alexandra Vecchio	Mass Audubon Facilitator/Presenter	B

*Angie Davis	Auburn HS Scribe	R
*Shea Brown	Auburn HS Scribe	Y
*Emma Crowley	Auburn HS Scribe	B
*Julie Zona	Auburn HS Scribe	G
	Total Participants (Excluding the 10 Members of the Facilitation Team)	27

Citation for Summary of Findings Report

Auburn (2019). Community Resilience Building Workshop Summary of Findings. Blackstone River Watershed Association. Mass Audubon. The Nature Conservancy. Resilience Partners. Auburn, Massachusetts.

CRB Workshop Project Team

Organization	Name	Role
Town of Auburn	Adam Menard	Auburn MVP Project Coordinator Core Team Leader
BRWA	Ted Beauvais	Project Leader Facilitator Report Author
BRWA	Pieter de Jong	Break-out Group Facilitator
BRWA	Joy Trahan-Liptak	GIS Specialist
TNC-Connecticut	Adam Whelchel	Lead Facilitator MVP Project Advisor
Mass Audubon	Alexandra Vecchio	Climate Change Presenter Break-out Group Facilitator
Mass Audubon	Ariel Maiorano	Low Impact Development Presenter Breakout Group Facilitator
Resilience Partners	Lee Dillard Adams	Breakout Group Facilitator Report Reviewer

Acknowledgements

This MVP Summary of Findings was made possible by the commitment of many individuals and organizations. The lead Auburn representative and driving force behind the workshops was Adam Menard who serves as Auburn's Town Planner. Key background

information was provided via interviews early in the process by the following Auburn officials: Julie Jacobson (Town Manager), Joe Fahey (School Facilities Director), Jeff Mitchell (Assistant DPW Director), Adam Menard (Auburn Town Planner), Bill Coyle (Auburn DPW Director and Town Engineer), Shannon Regan (Economic Development Coordinator), and Joe Shenette (Deputy Director of Emergency Management). Joe Fahey, School Facilities Director, arranged for morning refreshments and lunch by the cafeteria staff. Auburn High School provided volunteer scribes to record critical workshop content from each break-out group. Adam Whelchel (TNC-CT) offered invaluable guidance throughout the planning and implementation of the workshops and served as lead workshop facilitator. Funding for the planning and implementation of the workshops as well as development of this Summary of Findings came from a grant awarded to the Town of Auburn by the Massachusetts Executive Office of Energy and Environmental Affairs.

List of Appendices

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B. Summary Base Map Showing Top Recommendations

C. Comparison of Hazards

D. Table of All Break-out Group Recommendations

E. Participatory Mapping Maps (Base Maps as Annotated by Break-out Group)

F. Break-out Group Risk Matrices

G. Supporting Risk Maps Used in Break-out Groups

H. Notes from Break-out Groups

I. PowerPoint Slide Presentations

J. Summary and Notes from Interviews

K. Summary of MVP Listening Session and Public Comments

L. Photos of CRB Workshop

M. Photos of Natural Hazards

N. Photos of Features and Infrastructure