Freetown, MA

Municipal Vulnerability Preparedness (MVP) and Community Resilience Building (CRB) Workshop Summary of Findings

May 2019

Submitted by:

Resilient Taunton Watershed Network (RTWN)

SRPEDD

The Nature Conservancy

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Overview

Freetown is a town of 8,870 residents located on the southeastern edge of Bristol County in southeastern Massachusetts, and is one of the oldest communities in the United States. The town is bordered by Berkley and Lakeville to the north, Rochester to the east, Acushnet, New Bedford, and Dartmouth to the south, and Fall River to the southwest. Freetown is approximately 12 miles northeast of Fall River, 37 miles south of Boston, and 23 miles east of Providence, RI. Throughout the 18th, 19th, and 20th centuries, Freetown functioned primarily as an industrial area; however, it later regained its rural character.

Today, Freetown is an auto-dependent suburban and rural community. The town's 38.3 square miles are divided between Freetown's two villages, East Freetown and Assonet, which are located on the town's eastern and western edges, respectively. With limited municipal water and sewer service, many residents rely on septic systems, and due to large lot size requirements, the housing stock is low density and typically single-family. Freetown is currently home to two Historic Districts: the Assonet Village Historic District and the East Freetown Historic District. A vast area of land shared by Freetown and Fall River makes up the Freetown-Fall River State Forest. Freetown also has many notable natural features, including Assonet Bay on the west side of town and Long Pond on the east side of town, as well as various brooks and streams, including Fall Brook, Quaker Brook, and Rattlesnake Brook. The town sits almost entirely within the Taunton River Watershed.

Facilitator Bill Napolitano (SRPEDD) summarizes the CRB workshop process and group results

Like other communities in southeastern Massachusetts, Freetown has grappled with its fair share of natural hazards that have impacted agriculture, public health, infrastructure, and the environment. In particular, the landscape has experienced increased stress due to increased **flooding, extreme temperatures, high winds**, and **increased drought events**. Each of these has become a growing concern for the community, and local residents see collaborative planning as an effective way to ensure a resilient community and sustain critical, shared resources, now and into the future.

To support the community in considering and prioritizing actions to improve its climate resilience, the Town of Freetown applied for and received a grant from the Massachusetts Executive Office of Energy and Environmental Affairs (EEA) to become a Designated Municipal Vulnerability Preparedness (MVP) Community. Core members of the Resilient Taunton Watershed Network (RTWN) were tasked with coordinating the workshop, specifically the Southeast Regional Planning and Economic Development District (SRPEDD), who acted as Freetown's Certified MVP Provider. Staff from The Nature Conservancy, Manomet, and Mass Audubon supported the Community Resilience Building (CRB) workshop process as Certified MVP Providers and members of RTWN. These planning workshops took place on two consecutive Fridays, April 26 and May 3, 2019 at the Council on Aging in Freetown.

Stakeholders from Freetown were present as workshop participants, including members of various town boards and departments, as well as staff from the Offices of State Representative Carole Fiola and Paul Schmid. In addition, staff from the Office of Senator Michael Rodrigues, the Massachusetts Department of Transportation, and the Freetown Council on Aging were present. Attendees were divided into two distinct groups that remained consistent in both workshops. Each group identified features in Freetown visually with a map (Appendix A), and verbally on a matrix (Appendix B). Each feature was related to hazards that the town is concerned about, and participants determined whether a particular feature was considered vulnerable to those hazards or a strength that helps Freetown mitigate them. Each item listed on a group's matrix was numbered, and corresponded to a numbered dot they placed on their map. Three colors used on the map visually represent the different feature categories of infrastructural (red), environmental (green), and societal (blue).

Through facilitated discussion, workshop attendees:

- Defined top local natural and climate-related hazards of concern;
- Identified existing and future strengths and vulnerabilities;
- Developed prioritized actions for the community;
- Identified immediate opportunities to collaboratively advance actions to increase resilience

Several recurring themes emerged from the discussion, including the need for **improved management of Long Pond/Assawompset Pond Complex** for flood control and water quality, and **stronger communications infrastructure** on the Assonet end of town so this area is not cut off from radio access during emergency events. In general, increased prioritization for **elderly populations** was determined to be of critical importance. Specifically, workshop participants cited the need for **Council on Aging building improvements** and ongoing support for the development of **Freetown and Acushnet mixed housing**.

Top Hazards and Vulnerable Areas

Participants discussed past impacts from natural hazards that they have experienced, and came to consensus on the top four concerns to their community, which were identified as:

- Flooding
- Extreme Temperatures
- Drought
- High Winds

Flooding describes the threat to Freetown's roads, forests, and water management infrastructure posed by large precipitation events. Several dams were mentioned that are in need of upgrades, as well as ongoing bridge replacement due to the problems the town faced during previous storm and flooding events. With the majority of residents relying on well and septic systems, and many roads experiencing flooding even during minor storm events, the stresses resulting from a more volatile flood/drought cycle affect all residents, businesses, and institutions in Freetown.

Extreme Temperatures refers to an increasing number of days over 90 degrees as well as cold snaps during winter and in early spring. This hazard relates somewhat to flood-drought cycle changes with distinct impacts to limited public water availability during droughts, increased presence of pests such as ticks and mosquitos, damage to native habitat from fire, and the strain on populations with limited access to seasonal heating/cooling options during extreme cold and extreme heat.

Drought conditions combined with extreme temperatures present a direct threat to Freetown because of the presence of the Freetown State Forest. During extended dry conditions, this could result in abundant dry brush thus increasing the risk of forest fires. More prolonged drought events also lead to reduced water availability, impacting both the local environment and town residents. There are some limitations on firefighting equipment in town, although the community shares supplies with surrounding localities.

High Winds are a concern because trees frequently fall as a result and limit road access for residents and emergency personnel. High wind also threatens existing power infrastructure, and though Freetown's municipal power provider responds consistently to outages and has done a great deal of active cutting and removal as preventative measures, the town would like to prevent future disruptions caused by tree fall.

Workshop participants identify their top natural hazard concerns through discussion facilitated by Sara Burns (The Nature Conservancy).

Areas of Concern

Several locations in town were identified as important strengths or notable vulnerabilities, and some, because of their complex nature, were considered to be both strengths *and* vulnerabilities. The top four natural hazards identified by Freetown workshop attendees were **flooding, extreme temperatures, drought** and **high winds**. Prioritization (high, medium, low) and time anticipated to complete each action is indicated in the digitized matrices (*Appendix C*).

Infrastructural concerns centered around water supply and management, as well as vulnerabilities of various infrastructure due to increased and persistent flooding. In addition, emergency response buildings including emergency shelters and the Fire Department were deemed to be inadequate to deal with some of the increased natural hazards that are anticipated related to climate change.

Water Supply and Management

The Freetown Water Commission (FWC) purchases water from the City of Fall River for residents who live near the Assonet/Fall River town line, and from the City of New Bedford for residents who live near the East Freetown/New Bedford town line; however, the majority of Freetown residents rely on individual wells and septic systems. These individual systems are highly vulnerable to flooding and leaching. Improving water quality and addressing key flooding challenges in Freetown would require a regional approach with nearby towns who share water sources and supply with Freetown.

Dams, Bridges, and Culverts

The Assonet River runs through the center of the town and many residents live within its floodplain. Depending on storm surges, frequency and volume of rain events, and other conditions, there exist varying flood risks to homes, Town Hall, and the fire station. Generally, the Town has been working to replace many of the bridges and culverts that were impacted by previous storms (particularly those washed away in 2010, when 10 consecutive days of persistent heavy rainfall caused widespread flooding and damages), but ongoing assessment, maintenance, and continued flood readiness were deemed to be critical. Roads of particular concern due to severe flooding impacts included the causeway leading to Assonet Bay Shores, Beach Bluff Road leading to Hemlock Point, Dr. Brailey Road, and Fall Brook at Chace Road flume. Finally, the culvert on Fall Brook at Chippeway Road was noted as a spot that consistently becomes clogged and causes localized flooding, and the Monument Dam was noted as an area that might be a good candidate for removal to restore the stream to its natural conditions, which were altered long ago for industrial use.

Emergency Preparedness Infrastructure

Currently, Freetown's Fire Department sits within in a flood zone and is too small for the population it serves. Residents noted that the fire station needs to be updated, expanded, and relocated in order to avoid future negative impacts from flooding and other natural hazards. In addition, the Council on Aging building is used as a community shelter for warming, cooling, and overnight stays, but its current backup generator (which is shared with the police station) will be lost once the new police station is finished, so a new backup generator will be needed there in the near future. Finally, Town Hall is also in need of a backup generator to ensure that communication channels continue during emergency events.

Environmental concerns focused on the increasing water levels across various surface water bodies in town, particularly Long Pond and Assawompset Pond, as well as maintaining a healthy tree population. In addition, residents expressed concerns over the increased presence of ticks and mosquitos that impact the health and wellbeing of residents.

Increased Water Levels

Increased water levels in Long Pond and the Assawompset Pond Complex present an ongoing and increasingly complex management issue for the Town of Freetown. Residents noted that a herring run goes through Long Pond, and the influx of invasive species on trailers being used to bring boats into the lake present an additional threat and management challenge. Workshop participants stressed the need for greater public education on these topics, so that residents can be proactive in monitoring water levels and helping to maintain a healthy ecosystem.

Forest Health

Freetown State Forest was a point of concern for residents because of the increased fire hazard posed by the forest under drought conditions and increasing temperatures. Residents felt that prescribed burns and ongoing caterpillar management were critical to the health of trees in the State Forest. Workshop participants also noted that diseased/dead trees contribute to flooding, so this issue is considered an exacerbation of existing threats from natural hazards like increased storms.

Ticks and Mosquitos

Increasing temperatures are leading to a higher prevalence of ticks and mosquitos in the area. Residents noted that parks have been closed in the past due to the high quantity of mosquitos. Freetown advises residents to call Bristol County and request spraying, but workshop participants noted that there is a long list and the wait time for spraying can be very long. Workshop participants noted that in addition to managing this issue, education and information-sharing with Freetown residents' needs to be a focus area in the coming years.

Societal vulnerabilities included vulnerable populations within the community, particularly the Crystal Springs School and a growing elderly population which is at high risk when natural hazards like flooding, drought, extreme temperatures, or strong winds impact the town and its infrastructure. In addition, the need for improved communication, particularly with residents on the Assonet end of town, was highlighted as a key priority for emergency preparedness and response in Freetown.

Workshop participants map strengths and vulnerabilities in Freetown

Vulnerable Populations

Freetown's population includes a large number of senior citizens, and while many resources are provided for them, the communication system is limited since many don't have computers or internet access at home. Workshop participants felt that increased efforts to enhance program support and delivery were critical in preparing this vulnerable population for emergency events. In addition, participants felt that the Council on Aging building would benefit from upgrades including increasing the building's size (and thus capacity), adding showers, and addressing electrical problems. The Crystal Springs School was also brought up as another vulnerable population, as it serves special needs students in the area. There is only one road that accesses the school and the area is extremely vulnerable to flooding, so if anything were to happen to this road, this population of residents would be stranded.

Communications and Community Education

Workshop participants felt that ongoing education about the threats posed by climate change to residents of all ages was particularly important and should be done in a regional, collaborative manner with nearby towns. Despite the town offering many services during emergency events, many Freetown residents are unaware of the options available to them, putting them at higher risk. In addition, improved communications, particularly with the Assonet end of town, was an area of high concern. Due to lower elevation in this area and the fact that the tower sits on the other side of town, radio communication can be limited or cut off. Community members felt that a town radio upgrade was needed regardless of other planned communication improvements like cell phone service tower upgrades.

Current Strengths and Assets

Freetown residents were well acquainted with the many strengths their town can leverage to manage the risks posed by natural hazards. Supporting and enhancing existing strengths and assets into the future will complement newly-identified strategies to address vulnerabilities, further helping to build local resilience. The following strengths and assets were identified as essential for adapting to the impacts of **flooding, extreme temperatures, drought**, and **high winds:**

Infrastructural Strengths

- Several bridge replacements have taken place since 2010 when many local bridges were washed away.
- A new police station is under construction now and residents believe this will increase both capability and capacity for emergency response.
- Freetown has an agreement with Lakeville to use a regional school as a shelter during emergencies. Residents felt that using the school as a shelter makes more sense than using the Council on Aging building due to its capacity.

Construction of a new police station is currently underway, and is seen as an important strength that will make Freetown more resilient to natural hazards and impacts from climate change.

Environmental Strengths

- Many cranberry bogs are spread across Freetown and provide both flood storage and open space benefits to residents. Participants did note that economic challenges for growers may influence future land use decisions.
- Ongoing solar development was referenced as a strength that can benefit the community now and into the future as the impacts of a changing climate are increasingly felt. Currently, the Town is trying to advance a solar project on top of a landfill, but there is some limitation because of significant solar development that has already occurred in the area. Grid upgrades were referenced as necessary in order to ensure the grid can sufficiently support increased solar development.
- While fallen trees along roadways were viewed as a potential vulnerability, residents noted that management planning is already underway with Eversource, and effective tree trimming practices are in place. The Town felt this proactive trimming approach was helping to remove potential hazardous power line situations.

Societal Strengths

- The Local Emergency Planning Committee was viewed as a strength and something that other communities may want to model based on Freetown's success.
- OneCall is an emergency response information system operated through Town Hall. Residents saw this as an efficient way to spread emergency messages to the community when combined with postings on the Town's website and social media. In addition, CERT trained emergency management volunteers were seen as a strength and a program that deserved ongoing funding and support.
- The senior center/Council on Aging building is used as a community shelter for warming, cooling, and overnight stays. Since the COA currently shares a backup generator with the police station, they will need a new one once the new police station is built.

Top Recommendations to Improve Resilience

Two days' worth of discussion was whittled down into three thematic priorities that workshop participants agreed were urgent for Freetown's resilience. Once actions were generated related to the list of strengths and vulnerabilities, all attendees came together to share their actions and discuss emergent themes. Facilitators then led the group in a voting exercise whereby each participant allocated three votes to their top priorities, and the three priorities with the highest number of total votes were identified. Additional discussion followed to ensure that the top priorities were consistent with overall workshop themes and small group conversations.

Participants were encouraged to consider action items that mitigated hazards through strengthening natural systems and processes, to complement technological or built fixes. An action that limits damage of natural hazards through conserving existing lands, integrating benefits of nature where they are critically needed (i.e. flood storage, water quality improvement) into ongoing construction, or restoring an ecosystem where it has been disrupted is referred to as a **Nature-based solution**. Nature-based solutions (NBS) are a category of emerging strategies in climate adaptation and their exploration is of interest to the Commonwealth of Massachusetts as a national leader in comprehensive hazard mitigation planning. Effective implementation of NBS means designing a community whose built infrastructure is reinforced by its natural environment and vice versa.

The workshops' three emergent themes included **Long Pond and Assawompset Pond Complex stewardship, town-wide communications,** and **senior housing and resource improvements.**

Long Pond and Assawompset Pond Complex Stewardship

Flooding Resilience & Septic System Management

- Review existing management plan for Assawompset Pond and conduct a study of flooding impacts on water quality while including engagement with neighboring towns.
- Consider milfoil management and partner with Lakeville for improved regulation, education, & monitoring.
- Explore grant and loan funding for septic system maintenance.

Town-Wide Communications

Emergency Communications Practices

- Examine and update town radio system while also considering an upgrade to repeater system.

- In partnership with local and regional stakeholders and advocates, develop materials and presentations appropriate for all ages regarding natural hazards and emergency preparedness measures.
- Publish emergency evacuation routes and plans on the Town website.

Senior Housing and Resource Improvements

Council on Aging Infrastructure and Senior Mixed Use Housing Development

- Consider building improvements such as developing a larger facility, adding showers, and improving electrical infrastructure.
- Ensure that 55+ housing is prioritized in zoning regulations addressing resilience issues.
- Consider repurposing the police station for social and medical daycare and emergency animal shelter.
- Continue working with Acushnet & Mass Development to solve remaining issues on the property located on Route 18 and ensure this mixed use senior housing development comes to fruition.

In making these recommendations, this cohort generated an array of potential actions that related back to the identified top priority hazards and how they impact Freetown's infrastructure, environment, and society. A complete list of actions generated by the groups, along with their prioritization (high, medium, low) and time-frame (short-term, long-term, or ongoing) can be found in *Appendix B*.

CRB Workshop Participants

Name	**Affiliation**
Chris McKay	Freetown Planning Department
Harrie Ashley	Freetown Fire Department
David Demanche	Freetown Town Administrator
Paula Dacosta	Office of Representative Carole Fiola
Jeff Chandler	Freetown Building Department
Derek Macedo	Freetown Board of Health
Chuck Macomber	Freetown Highway Department
Skylar J. Cowley	Office of Representative Paul Schmid
Jennifer Lourenco	Office of Senator Michael Rodrigues
Keven Desmarais	Planning Board / Conservation Commission
Barbara Place	Freetown Council on Aging
Jean Fox	Massachusetts Department of Transportation

Citation

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Acknowledgements

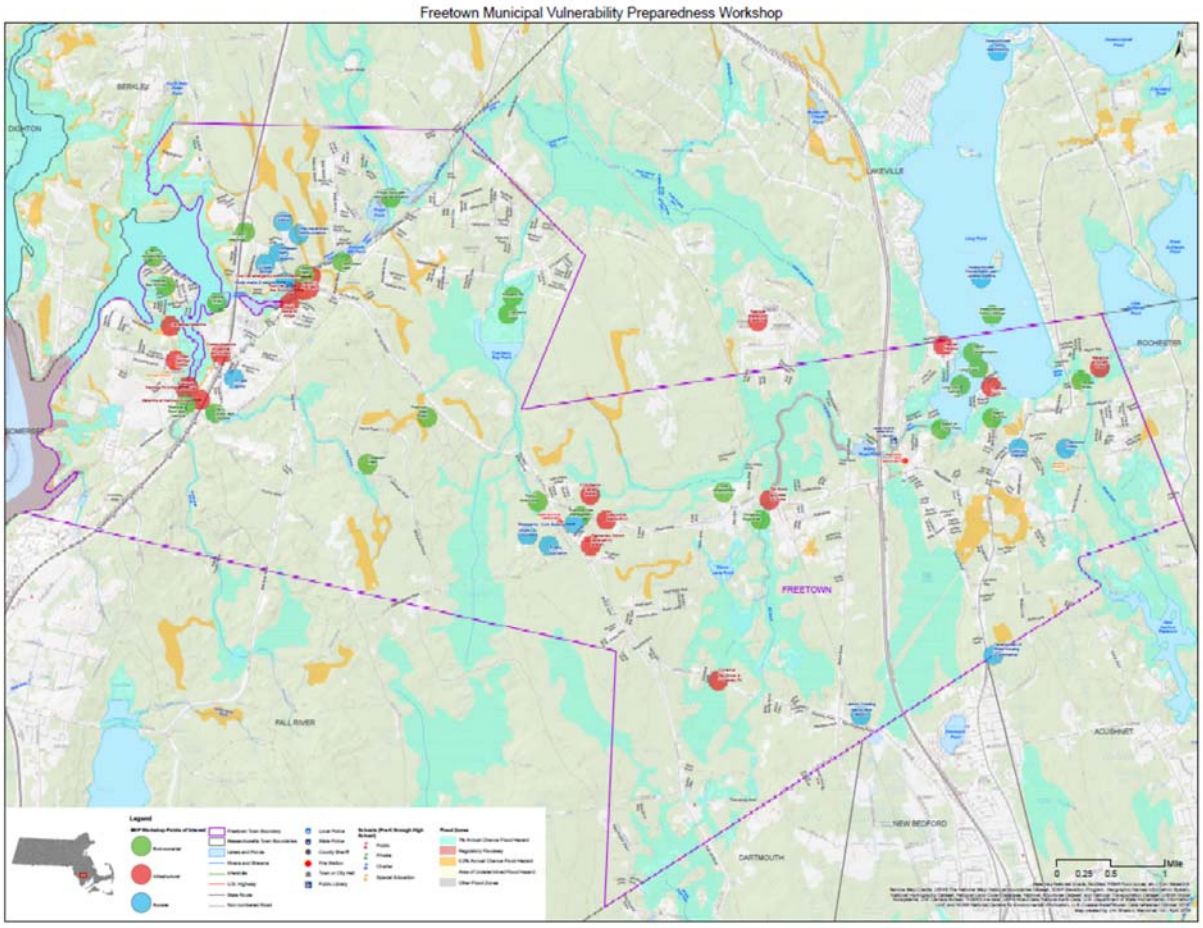
The Freetown Core Team and Facilitation Team would like to thank the following for their contributions to the MVP Workshop process: the Commonwealth of Massachusetts, EEA, Municipal Vulnerability Preparedness Program for their funding support for these workshops, and; all of those who participated in the workshops and contributed to the plan resulting from these workshops.

Appendices *show different methods of recording the same vulnerabilities and strengths named by workshop participants through mapping and prioritized lists. Small groups recorded infrastructural, environmental, and societal features in Freetown and which hazard(s) they relate to. Each feature category (infrastructure, environment, society) was documented on a separate matrix (see Appendix B complete lists). On these short lists, or matrices, action items were identified corresponding to each feature that was named. Each action was then assigned a high, medium, or low priority value and expected short-term, long-term, or ongoing time frame to complete. Completed matrices were then digitized and are found in Appendix C.*

To account for spatial relationships between features, participants simultaneously placed points on a map that corresponded to items they named on the different matrices. Infrastructural features are indicated with a red point, environmental with a green point, and societal with a blue point. Items on the map are also labeled for what they represent from the written list, but do not represent prioritization or associated action(s).

Appendix A: Strengths and Vulnerabilities Map

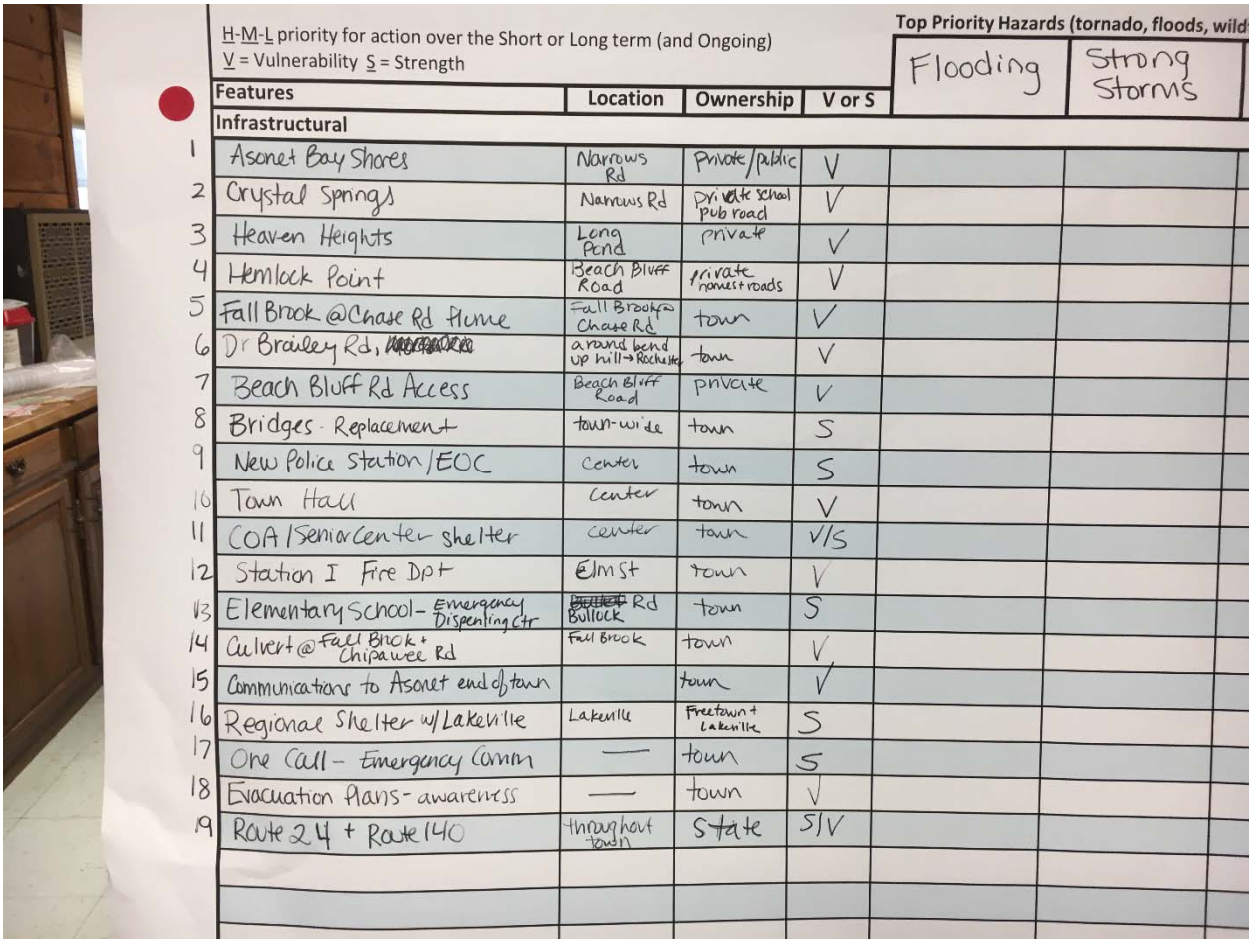
Map of Freetown. Red dots indicate infrastructural features, green dots indicate environmental features, and blue dots indicate societal features. This map combines points identified by all four small working groups.



Appendix B: Original Risk Matrices

Group 1

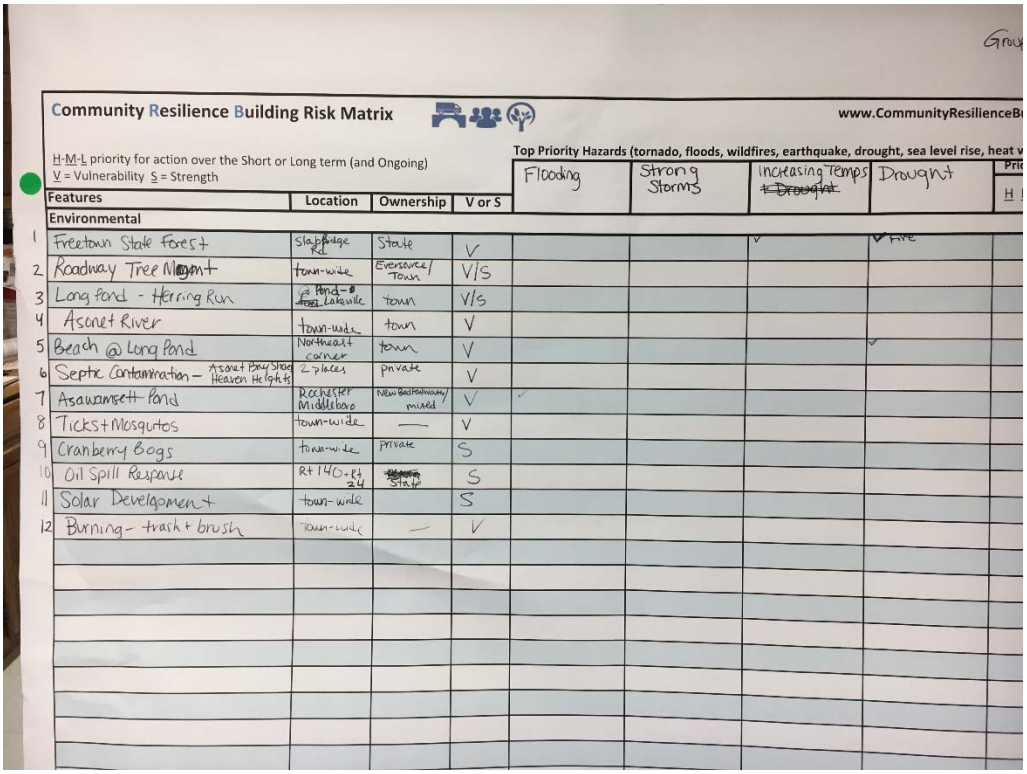
Infrastructural



H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

	Features	Location	Ownership	V or S	Top Priority Hazards (tornado, floods, wild: Flooding	Strong Storms
	Infrastructural					
1	Asonet Bay Shores	Narrows Rd	private/public	V		
2	Crystal Springs	Narrows Rd	private school pub road	V		
3	Heaven Heights	Long Pond	private	V		
4	Hemlock Point	Beach Bluff Road	private nonest roads	V		
5	Fall Brook @ Chase Rd flume	Fall Brook@ Chase Rd	town	V		
6	Dr Brailey Rd, [redacted]	around bend up hill→ Rochester	town	V		
7	Beach Bluff Rd Access	Beach Bluff Road	private	V		
8	Bridges - Replacement	town-wide	town	S		
9	New Police Station/EOC	Center	town	S		
10	Town Hall	Center	town	V		
11	COA/Senior Center shelter	center	town	V/S		
12	Station I Fire Dpt	Elm St	town	V		
13	Elementary School- Emergency Dispensing Ctr	~~Bullock~~ Bullock Rd	town	S		
14	Culvert @ Fall Brook + Chipawee Rd	Fall Brook	town	V		
15	Communications to Asonet end of town		town	V		
16	Regional Shelter w/ Lakeville	Lakeville	Freetown + Lakeville	S		
17	One Call - Emergency Comm	—	town	S		
18	Evacuation Plans - awareness	—	town	V		
19	Route 24 + Route 140	throughout town	State	S/V		

Environmental



Community Resilience Building Risk Matrix

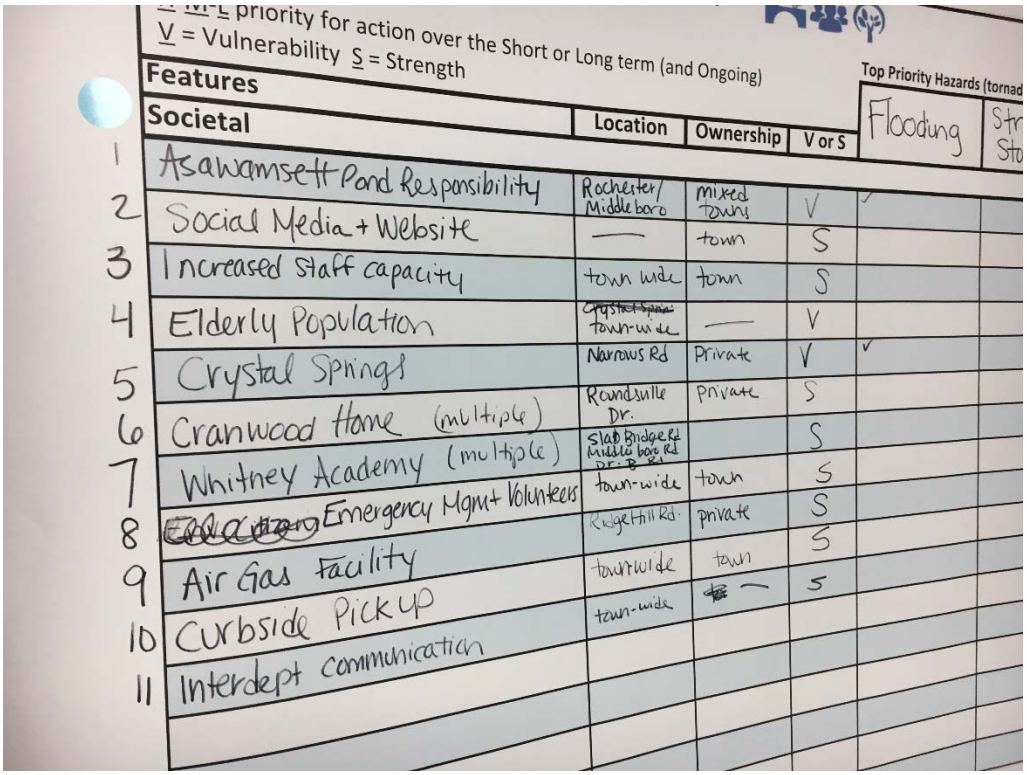
www.CommunityResilienceB

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

Top Priority Hazards (tornado, floods, wildfires, earthquake, drought, sea level rise, heat w

	Features	Location	Ownership	V or S	Flooding	Strong Storms	Increasing Temps ~~+ Drought~~	Drought	Pric H
	Environmental								
1	Freetown State Forest	Slaphridge Rd	State	V			✓	Fire	
2	Roadway Tree Mgmt	town-wide	Eversource/ Town	V/S					
3	Long Pond - Herring Run	~~Pond~~ Lakeville	town	V/S					
4	Assnet River	town-wide	town	V					
5	Beach @ Long Pond	Northeast corner	town	V				✓	
6	Septic Contamination – Assnet Bay Shore Heaven Heights	2 places	private	V					
7	Asawamsett Pond	Rochester Middleboro	New Bedford/mixed	V	✓				
8	Ticks + Mosquitos	town-wide	—	V					
9	Cranberry Bogs	town-wide	private	S					
10	Oil Spill Response	Rt 140 - Rt 24	~~State~~	S					
11	Solar Development	town-wide		S					
12	Burning – trash + brush	town-wide	—	V					

Societal



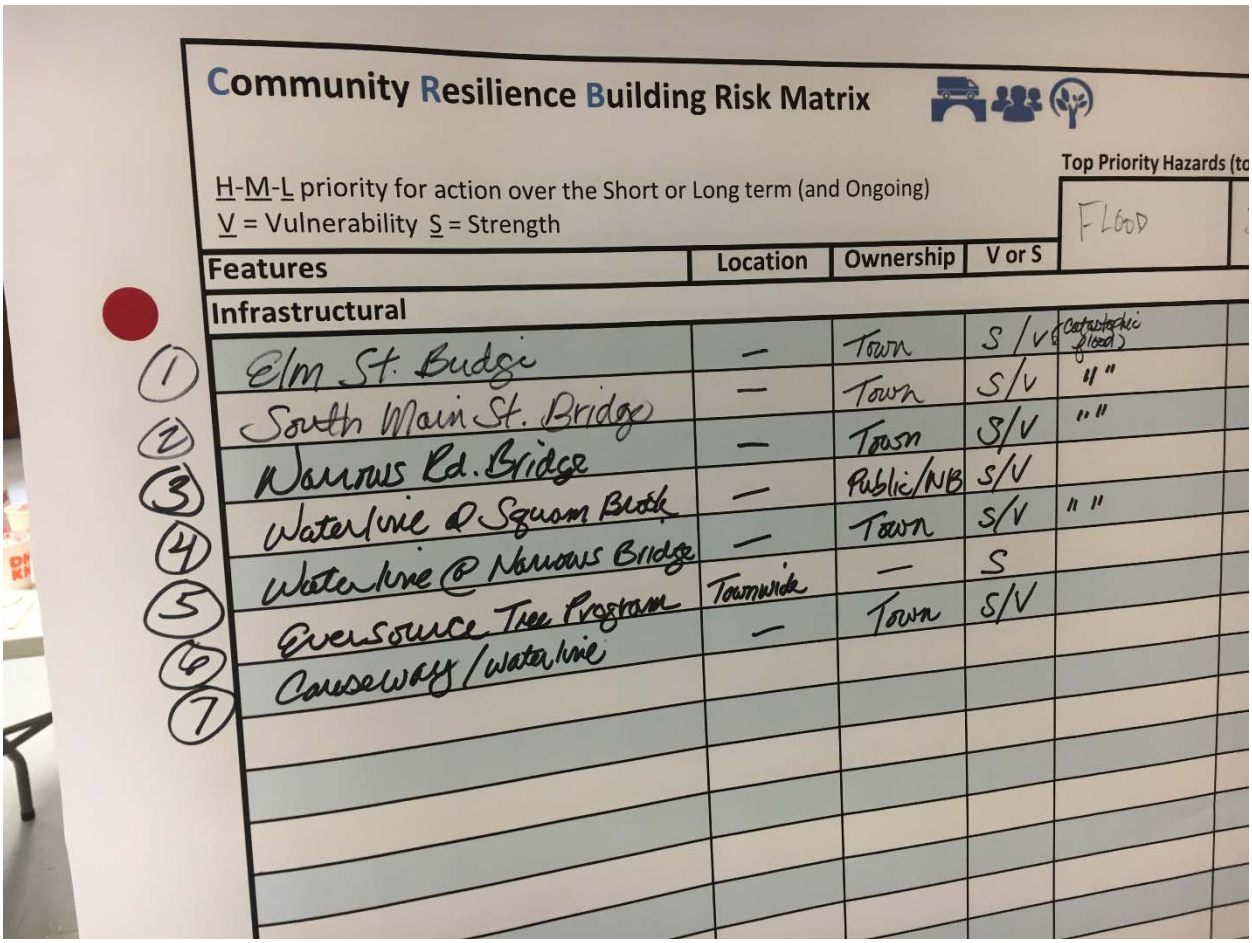
H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

Top Priority Hazards (tornad

	Features	Location	Ownership	V or S	Flooding	Str Sto
	Societal					
1	Asawamsett Pond Responsibility	Rochester/ Middleboro	mixed Towns	V	✓	
2	Social Media + Website	—	town	S		
3	Increased Staff capacity	town wide	town	S		
4	Elderly Population	~~Crystal Springs~~ town-wide	—	V		
5	Crystal Springs	Narrows Rd	Private	V	✓	
6	Cranwood Home (multiple)	Roundville Dr.	private	S		
7	Whitney Academy (multiple)	Slab Bridge Rd Middleboro Rd Dr. B Rd		S		
8	~~Education~~ Emergency Mgmt Volunteers	town-wide	town	S		
9	Air Gas Facility	Ridgehill Rd.	private	S		
10	Curbside Pickup	townwide	town	S		
11	Interdept communication	town-wide	~~the~~ —	S		

Group 2

Infrastructural

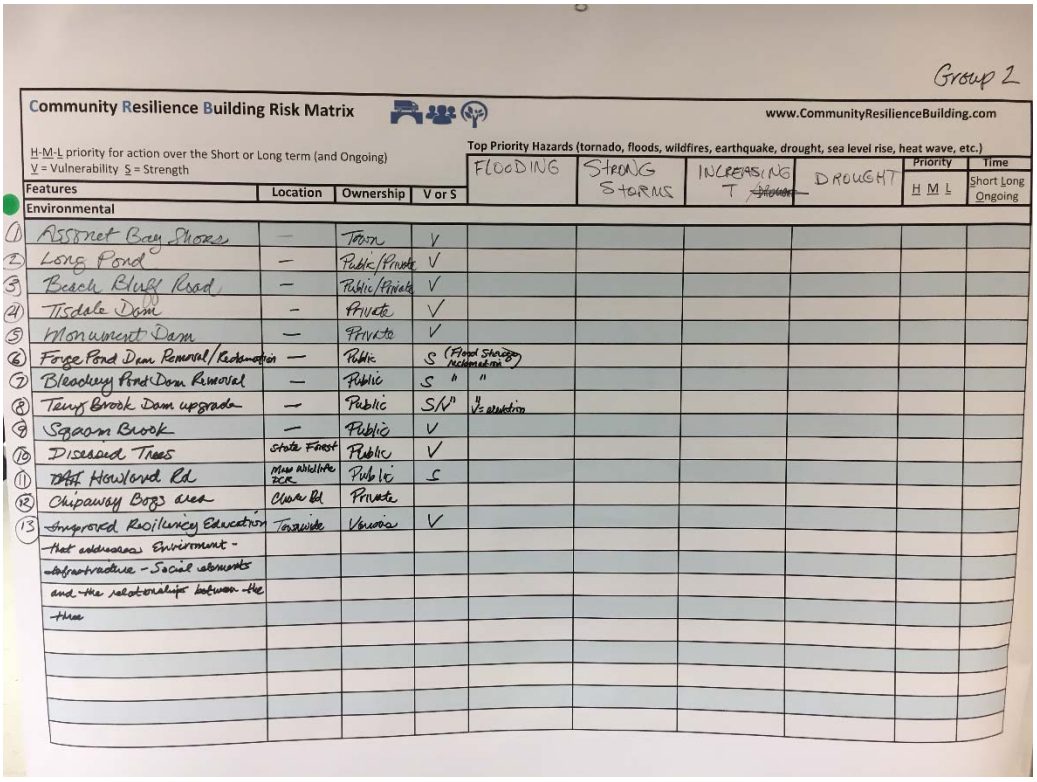


Community Resilience Building Risk Matrix

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

Features	Location	Ownership	V or S	Top Priority Hazards (to FLOOD)
Infrastructural				
(1) Elm St. Bridge	—	Town	S/V	(catastrophic flood)
(2) South Main St. Bridge	—	Town	S/V	" "
(3) Narrows Rd. Bridge	—	Town	S/V	" "
(4) Waterline @ Squam Brook	—	Public/NB	S/V	
(5) Waterline @ Narrows Bridge	—	Town	S/V	" "
(6) Eversource Tree Program	Townwide	—	S	
(7) Causeway / waterline	—	Town	S/V	

Environmental



Group 2

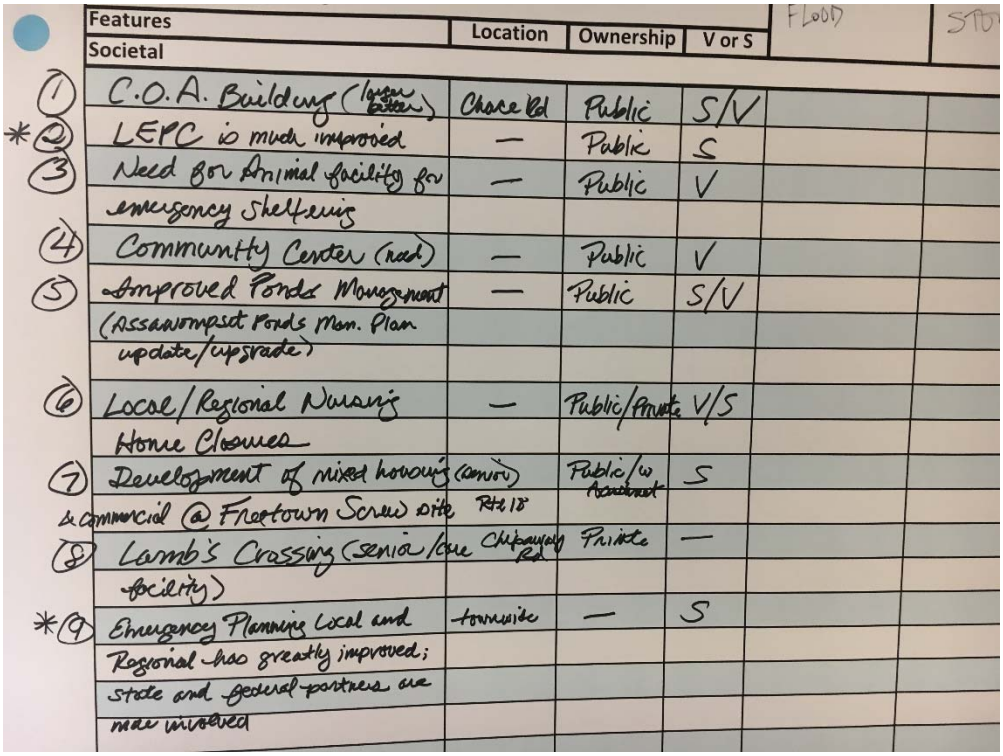
Community Resilience Building Risk Matrix — www.CommunityResilienceBuilding.com

H-M-L priority for action over the Short or Long term (and Ongoing)
V = Vulnerability S = Strength

Top Priority Hazards (tornado, floods, wildfires, earthquake, drought, sea level rise, heat wave, etc.)

Features	Location	Ownership	V or S	FLOODING	STRONG STORMS	INCREASING T	DROUGHT	Priority H M L	Time Short Long Ongoing
Environmental									
1 Assonet Bay Shores	—	Town	V						
2 Long Pond	—	Public/Private	V						
3 Beach Bluff Road	—	Public/Private	V						
4 Tisdale Dam	—	Private	V						
5 Monument Dam	—	Private	V						
6 Forge Pond Dam Removal/Restoration	—	Public	S (Flood Storage Mechanism)						
7 Bleachery Pond Dam Removal	—	Public	S " "						
8 Terry Brook Dam upgrade	—	Public	S/V " V= elevation						
9 Segaum Brook	—	Public	V						
10 Diseased Trees	State Forest	Public	V						
11 Off Howland Rd	Mass Wildlife DCR	Public	S						
12 Chipaway Bogs area	Chace Rd	Private							
13 Improved Resiliency Education that addresses Environment - infrastructure - Social elements and the relationships between the three	Townwide	Various	V						

Societal



Features	Location	Ownership	V or S	FLOOD	STO
Societal					
1 C.O.A. Building (larger Either)	Chace Rd	Public	S/V		
* 2 LEPC is much improved	—	Public	S		
3 Need for Animal facility for emergency sheltering	—	Public	V		
4 Community Center (need)	—	Public	V		
5 Improved Ponds Management (Assawompset Ponds Mgm. Plan update/upgrade)	—	Public	S/V		
6 Local/Regional Nursing Home Closures	—	Public/Private	V/S		
7 Development of mixed housing (senior) & commercial @ Freetown Screw site Rt 18		Public/w Assistance	S		
8 Lamb's Crossing (Senior/Low facility)	Chipaway Rd	Private	—		
* 9 Emergency Planning Local and Regional has greatly improved; state and federal partners are more involved	townwide	—	S		

Appendix C: Digitized Risk Matrices

Group 1

	Features	**Location**	**Owner-ship**	**V or S** (vulnera-bility or strength)	**Flood-ing**	**Strong storms**	**Increas-ing temps**	**Drought**	**Prior-ity** HML (high, med, low)	**Time** SLO (short, long, ongo-ing)
	Infrastructural									
1	Assonet Bay Shores	Narrows Rd	pri-vate/pu blic	V	continue edu on flooding + septic contamination; re-view evac plan				M	O
2	Crystal Springs	Narrows Rd	private school pub road	V	same as above				M	O
3	Heaven Heights	Long Pond	private	V	education for lakefront homes - septic breakout + what to do				L	S
4	Hemlock Point	Beach Bluff Road	private homes and roads	V	explore funding for town to buy pri-vate roads, bring up to compliance, manage amenities				M	L
5	Fall Brook @ Chase Rd flume	Fall Brook @ Chase Rd	town	V	vulnerability assessment - funding for study + implementation, explore ele-vating dip + road, add culvert				M	L
6	Dr Brailey Rd	around bend up hill -> Roches-ter	town	V	raise road @ dip before driving range, @ Rochester line; find funding				L	S/L
7	Beach Bluff Rd Access	Beach Bluff Road	private	V	see above; potential for natural barriers				M	S
8	Bridges Replace-ment	town-wide	town	S						
9	New po-lice sta-tion/EOC	center	town	S						

10	Town Hall	center	town	V	update Town Hall - energy efficiency; pursue funding, emergency power			H	L
11	COA/senior center shelter	center	town	V/S	Look into consolidating school, COA, library + Town Hall, creating regional school w/ Lakeville; need backup generator			L	L
12	Station I Fire Dept	Elm St	town	V	Relocate south of Main St industrial area to avoid flooding; need bigger station - equipment			H	L
13	Elementary School - Emergency dispensing center + shelter	Bullock Rd	town	S	see COA			L	L
14	Culvert @ Fall Brook + Chipaway Rd	Fall Brook	town	V	study issue (blockages) + upgrade			M	S
15	Communications to Asonet end of town		town	V	additional tower coming w/ police station (explore funding); examine, update town radio system, upgrade repeater system			H	L/O
16	Regional shelter w/ Lakeville	Lakeville	Freetown + Lakeville	S					
17	One Call - Emergency comm		town	S					
18	Evacuation plans - awareness		towb	V	publish routes/plans on website			L	S

19	Route 24 + Route 140	through-out town	state	S/V						
	Environmental									
1	Free-town State Forest	Slab Bridge Rd	state	V			DCR pre-scribed burns	Fire	M	O
2	Roadway tree mgmt	Town-wide	Ever-source/t own	V/S		Continue working w/ Eversource for mgmt			M	O
3	Long Pond - Herring Run	Pond - Lakeville	town	V/S	Consider milfoil mgmt; partner with Lakeville for united front/reg-ulation, educa-tion & monitor-ing				H	L
4	Asonet River	Town-wide	town	V					L	O
5	Beach @ Long Pond	North-east cor-ner	town	V	deter geese to avoid beach clo-sures				L	S/L
6	Septic contami-nation - Asonet Bay Shores, Heaven Heights	2 places	private	V	need septic updates - cost prohibitive; explore grant/loan funding for septic maintenance, expanding sewer from Stop and Shop				M	L
7	Asawam-sett Pond	Roches-ter, Mid-dleboro	New Bedford wa-ter/mixe d	V	Review existing flood mgmt + policies; conduct study - flooding + water qual-ity, engage neighboring towns				H	L
8	Ticks + mosqui-toes	town-wide		V	install bat houses in woods + continue spraying; model MassWildlife bluebird houses + edu				H	L/O
9	Cran-berry bogs	town-wide	private	S						

10	Oil spill response	Rt 140 + Rt 24	state	S	continue current program/training			L	O
11	Solar development	town-wide		S	more solar projects -> grid upgrades			L	L
12	Burning - trash + brush	town-wide		V	continue curbsie pickup			L	O
	<u>Societal</u>								
1	Asawamsett Pond responsibility	Rochester/Middleboro	mixed towns	V	see Env #7			H	L
2	Social media + website		town	S					
3	Increased staff capacity	town-wide	town	S					
4	Elderly population	town-wide		V	continue + build supportive programs (ex: handing out smoke + CO detectors); revisit/update existing service lists (ex: snow removal thru COA)			M	O
5	Crystal Springs	Narrows Rd	private	V	see Infra #2			L	O
6	Cranwood Home (multiple)	Roundsville Dr	private	S					
7	Whitney Academy (multiple)	Slab Bridge Rd, Middleboro Rd, Dr. B Rd	private	S					
8	Emergency mgmt + volunteers	town-wide	town	S	continue + strengthen volunteer program (training)			L	O

9	Air Gas facility	Ridge Hill Rd	private	S						
10	Curbside pickup	town-wide	town	S	continue, improve, get auto totes				M	O
11	Inter-dept commu-nication	town-wide		S	create all-in-one permit systems				M	O

Group 2

	Features	**Location**	**Ownership**	**V or S** (vulnerability or strength)	**Flooding**	**Strong storms**	**Increasing temps**	**Drought**	**Priority** HML (high, med, low)	**Time** SLO (short, long, ongoing)
	Infrastructural									
1	Elm St Bridge		Town	S/V (catastrophic flood)	Built to last					
2	South Main St. Bridge		Town	S/V (catastrophic flood)	(will be) "					
3	Narrows Rd. Bridge		Town	S/V (catastrophic flood)	(will be) "					
4	Water line @ Squam Beach		Public/NB	S/V	Look @ the location of the water line and how its location inhibits the flow of watr and exacerbates flooding				L	O
5 *	Water line @ Narrows Bridge		Town	S/V	" * look at armoring this submerged water line at some point				L	O
6	Eversource tree program	Town -wide		S	Cooperative forestry management and (Eversource) asset review				L	O
7	Causeway/water line		Town	S/V	see #5				L	O
	Environmental									
1	Assonet Bay Shores		Town	V	Fortify our Emergency Access Agreement with S&S				M	O
2	Long Pond		Public/private	V	Work w/ APC Pastures to revisit AP Complex Man. Plan				H	S/O
3	Beach Bluff Road		Public/private	V	Raise the access road and upgrade culverts/drainages				M/H	O
4	Tisdale Dam		Private	V	Look to assist the property owner w/ funding solutions				H	O
5	Monument Dam		Private	V	"				H	O
6	Forge Pond Dam Removal/reclamation		Public	S(flood storage reclamation)	successful outcome					

7	Bleachery Pond dam removal		Public	"	"		involve SCR & FR		
8	Terry Brook Dam upgrade		Public	"/V(elevation)	Concern is pond elevation & impact of extreme storm event			M/L	O
9	Squam Brook		Public	V	Work w/ APC to come up w/ a solution for all involved			L	O
10	Diseased trees	State forest	Public	V	Work w/ DCR to discuss more active management of the forest			L	O
11	Howland Rd	Mass Wildlife, DCR	Public	S	Example of a good project/approach (DER & partners)				
12	Chipaway Bogs area	Chace Rd	Private		Look @ a bog retirement/restoration project w/ DER & others			M	S/O
13	Improved resiliency education that addresses Environment - Infrastructure - Social elements and the relationships between the three	Town-wide	Various	V	Concerted effort w/ multi-partners, multi-agencies to produce all-ages/appropriate materials, presentations			M	O
	<u>Societal</u>								
1	C.O.A. Building (larger better)	Chace Rd	Public	S/V	Larger facility; showers; electrical issues; social & medical daycare			H	S/O
2	LEPC is much improved		Public	S					
3	Need for animal facility for emergency sheltering		Public	V	Look @ repurposing the Police Station (social & medical daycare, emergency animal shelter, etc.)				
4	Community Center (need)		Public	V	see #1			H	O

5	Improved Ponds Manage-ment (As-sawompset Ponds Man. Plan, update/up-grade)		Public	S/V	*see APC meeting to review Ponds Management Plan				H	O
6	Local/Re-gional Nursing Home clo-sures		Public/pri-vate	V/S	Much bigger regional/national issue that we have to be aware of as far as impacts				L	O
7	Develop-ment of mixed housing (senior) & commer-cial @ Freetown Screw site	Rte 18	Public w/ Acushnet	S	Working w/ Acushnet & Mass Develop-ment to resolve all remaining issues				H	O
8	Lamb's Crossing (senior care facil-ity)	Chipa way Rd	Private		We have created bylaws that allow for favorable options and flexibility to work w/ developers - we could dive deeper into this				L	O
9	Emergency Planning local and regional has greatly improved; state and federal partners are more involved	Town -wide		S						