

Appendix A

Municipal Planning Process

MEETING DATE: 7/29/2020

PROJECT: NHCOG HMP Update

MMI #: 3843-06

SUBJECT: Town of Barkhamsted

LOCATION: Virtual/Remote
Zoom

ATTENDEES:

Don Stein – First Selectman

 Debbie Brydon – Inland
wetlands/zoning officer, tree warden

Victoria Brudz – MMI

Victoria Brudz met with the Town of Barkhamsted representatives on July 29, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes/Changes
Rrdd #1	Municipal Solid Waste					
Barkhamsted East Fire Company	Fire Station	54 North Canton Road	✓			
Metropolitan District Police	Law Enforcement/Maintenance Facility	39 Beach Rock Road				
Connecticut State Police Troop B Resident State Trooper	Law Enforcement	67 Ripley Hill Road				
Pleasant Valley Volunteer Fire Department	Fire Station	44 Pleasant Valley Road	✓			
Riverton Volunteer Fire Company	Fire Station	3 Riverton Road	✓			
Barkhamsted Elementary School	School/Shelter	65 Ripley Hill Road	✓	✓		Located in dam failure inundation zone
Barkhamsted Highway Garage	Municipal Facility/Eoc	33 New Hartford Road	✓			
Town Hall	Municipal Facility	67 Ripley Hill Road	✓			Located in dam failure inundation zone

New Development Trends

- There is very little new development in town. There are only 2 to 4 new permits issued per year, and these are typically residential.¹
- There is currently a proposal for a 20-unit apartment building to be constructed in the west end of town which will house socially vulnerable populations.

Impacts of Recent Hazard Events

- A recent heavy spring rainstorm, possibly in 2018, resulted in localized issues. Park Road needed to have roughly 90 feet repaved due to washout, and culverts along the road were replaced as a result.
- The spring rainstorm also resulted in high flood waters near a residential property where the resident needed to be evacuated.

Changes to Hazard Concerns or Locations

- There are two bridges in town that are scour critical: Morgan Brook Road, which is the higher concern, and Day Road. Both bridges cross Morgan Brook. The town is concerned that a heavy or intense rain event may further jeopardize the integrity of the bridges.
- Both CT DOT and Cardinal Engineering have evaluated the bridges and prepared reports on the current state of the infrastructure.
- Old North Road has severe problems with snow drifting. Public Works often has to address the issue multiple times a day after a snow event.
- There are also sections of Route 179 that are prone to snow drifts.
- Icing is a concern along Ratlum Mountain Road at the "devil's elbow" or "dead man's curve".
- There is a stretch of Rust Road that often washes out during heavy rainstorms due to poor drainage. The town periodically regrades the road as necessary, however, it continues to be a concern.
- There is an area of concern along West River Road that is of concern to the town where they wish to pursue a bank restoration project. The project is shovel ready. The town applied for FEMA funding over 10 years ago for this project and did not receive funding. The town is looking to pursue a STEAP Grant to implement the project.
- Outages are a concern throughout town during a storm because of the rural nature of the town. There are some streets which experience outages more frequently because service lines are single strand.
- There are several roads in town that are a concern in regard to severe Emerald Ash Borer damage. The highest concerns roadways are Old North Road, Goose Green Road, Park Road, West River Road, and Wallens Hill Road.
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New Hazard Mitigation Capabilities

- The town has recently made repairs and upgrades to several bridges in town including Park Road, Legeyt Road, Ratlum Road, and East West Hill Road.

¹ Previous planning efforts conducted by MMI revealed that small commercial developments have occurred in the west end of the town along Route 44. Additional minor development or redevelopment is anticipated here.

- The town recently implemented a riverbank restoration project along Mountain Road along the Farmington River. An historic inn flooded due to the eroding banks; the restoration project worked to mitigate future problems.
- Within the past 3 years the West Hill Lake/Pond dam was repaired and reconstructed. The sluiceway was collapsing and there was erosion on the dam.
- Public works tracks and addresses flooding and other complaints.
- The town highway garage was recently rebuilt and included a new stormwater management system.
- Tree maintenance is ongoing with a tree warden and budget available.
- Public works conducts regular tree maintenance and also conducts clean ups after a storm on town roads where power lines are not an issue.
- Barkhamsted fire department, along with CT DEEP, assists with beaver dam concerns as needed.

New Goals, Objectives, and Actions

- The town would like to pursue mitigation actions regarding the scour critical bridges.
- The severity of tree damage in some areas of town poses a risk to properties and utilities; additional funding would be needed to address the level of tree work necessary.

MEETING MINUTES

#	Strategies	Who	Status	Notes	Capability	Completed	Underway	Revise	Drop
1	Visit schools and educate children about natural hazards and how to prepare for them.	Volunteer Fire Dept. and Emergency Management Director	Capability	Fire department visits schools multiple times a year for fire safety – may need more natural hazard discussion	X		X		
2	Make literature available on natural hazards and preparedness at Barkhamsted Town Hall. Provide email notifications/links on town web- site.	Emergency Management Director and First Selectman	Capability	Do town wide emails as appropriate, send out emails ahead of events also	X				
3	Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and Red Cross on community planning, preparedness, response, and training.	Emergency Management Director and First Selectman	Capability	LEOPs are maintained, town does have periodic communication with shelters, town has a Red Cross Liaison for sheltering	X				

#	Strategies	Who	Status	Notes	Capability	Completed	Underway	Revise	Drop
4	Maintain a Public Notification System (i.e. Everbridge system) to provide emergency information to residents in the entire town or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.	Emergency Management Director and First Selectman	Capability	Utilizes Everbridge for emergency situations	X				
5	Routinely inspect emergency response equipment, and train for response to natural disasters.	Volunteer Fire Dept. and Emergency Management Director	Capability	Fire department likely inspects equipment routinely, town has done desktop exercise (which coincide with state exercise) and emergency (CPR) training municipal staff	X				

#	Strategies	Who	Status	Notes	Capability	Completed	Underway	Revise	Drop
6	Cooperate with the Metropolitan District Commission in emergency response training exercises and updates of the Goodwin Dam Emergency Action Plan.	Emergency Management Director and First Selectman	Capability	Yes	X				
7	Acquire additional emergency response equipment such as communication equipment as needed.	Emergency Management Director, Fire Chief	Capability	Currently upgrading fire dept. radio systems.	X		X		
8	Promote the use of interoperable communication equipment, and the development of standard operating procedures for emergency response in the regional area.	Emergency Management Director, Fire Chief, and First Select- man	Capability	No longer a challenge with the shifts in private communication. Town does upgrade and maintain emergency communications as needed	x				X

#	Strategies	Who	Status	Notes	Capability	Completed	Underway	Revise	Drop
9	Develop a Memorandum of Understanding with schools or bus companies to utilize school buses for mass transportation during an emergency.	Emergency Management Director and First Selectman	Carry Forward with Revisions	There is a verbal understanding in place. Revise to include a documented MOU		X		X	
10	Develop basic GIS capabilities as needed for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.	Emergency Management Director, Fire Chief, and First Select- man	Completed	Town has a full GIS system.		X			
11	Implement control measures to mitigate the flooding created by beavers.	Public Works Dept.	Completed	Fire department and DEEP addresses these concerns as needed.		X			
12	Develop clean-out schedules for all catch basins and drainage facilities	Public Works Dept.	Capability	Town cleans and maintains as needed – have software that identifies location.					

#	Strategies	Who	Status	Notes	Capability	Completed	Underway	Revise	Drop
13	Review floodplain regulations and ordinances and update as necessary based on DEEP's "Model Flood- plain Management Regulations" and FEMA Guide- lines	Planning and Zoning and Inland Wetland Commissions	Carry Forward with Revision	Anticipating new digitized maps by end of 2020. Possibly include an action to revise regulations after the maps are adopted by the town.	X				
14	Identify the location of structures that are susceptible to flooding to facilitate risk assessment and potential control measures	DEMHS or DEEP	Capability	Town is continuously aware of these sites; some have been addressed.	X				
15	Pursue additional funding to supplement the municipal tree trimming program and enhance the Eversource tree program.	Public Works Dept., First Selectman	Carry forward with Revisions	The town has increased funding for tree maintenance. They have a liaison from Eversource that they work closely with. Town wishes to continue to increase budget until it has addressed Emerald Ash Borer impacts.	X	X			

#	Strategies	Who	Status	Notes	Capability	Completed	Underway	Revise	Drop
16	Maintain new generators in all town buildings, including the three firehouses	First Selectman	Capability	Complete – the town is maintaining	X	X			
17	Take an active role in siting new housing for vulnerable populations such as seniors and the elderly. Encourage housing developers to discuss proposed actions with the town prior to submitting applications.	First Selectmen, Planning & Zoning Department	Capability	Currently underway, formed a housing trust, trust is considering a 20 unit apartment building with the addition of sewers.			X		
18	Ensure adequate barricades are available to block flooded areas in flood prone areas of the town.	Public Works	Carry Forward	Carry forward, incomplete					
19	Require the location of utilities underground in new developments or during redevelopment when- ever possible.	Building Department; Planning & Zoning; Public Works	Drop	The town works to do this as much as possible where feasible. It is <i>encouraged</i> in the regulations.	X				

#	Strategies	Who	Status	Notes	Capability	Completed	Underway	Revise	Drop
20	Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	Emergency personnel; Public works	Capability	Routine tracking during storms, current protocol is to address roadways completely blocked.	X				
21	Include dam failure inundation areas in the CTAlert emergency contact database.	Emergency personnel; DEEP	Capability	There are Riverton sirens for MDC issues. Some inundation areas do not impact residential/structures. (West Hill Lake)	X				
22	Develop a plan to coordinate with the owners of privately owned dams to ensure proper maintenance.	First Selectmen; Emergency personnel; DEEP	Drop	There is only 1 dam in town that is not MDC, which is a low hazard dam.				X	
23	The Town should continue to require the installation of fire protection water in new developments.	Building Department; Planning & Zoning	Capability	Town is doing this in the regulations.	X				

MEETING DATE: 9/16/2020	ATTENDEES Ted Shafer – First Selectman
PROJECT: NHCOG HMP Update	Scott Tharau – Public Works
MMI #: 3843-06	Noah Slovin – Milone & MacBroom
SUBJECT: Town of Burlington	

Noah Slovin met with Town of Burlington representatives on September 16, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a phone conference. A worksheet was shared with participants ahead of time, and guided the discussion. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power	Shelter	SFHA	Notes/Changes
Town Hall	200 Spielman Hwy	EOC Warming/Comfort Station	✓	✓		<i>Secondary Shelter Generator is old, but still works.</i>
Volunteer Fire Department Station 1 - Headquarters	719 George Washington Tpk	Backup EOC	✓			
Resident State Trooper	200 Spielman Hwy					
Volunteer Fire Department Station 2 – Chippens Hill	120 West Chippens Hill Road					
Volunteer Fire Department Station 3 – Whigville	354 Jerome Ave					
Volunteer Fire Department Station 4 – Lake Garda	87 Monce Road					
Lewis Mills High School	26 Lyon Rd	Primary Shelter	✓	✓		
Har-Bur Middle School	24 Lyon Rd		✓			
Lake Garda Elementary School	61 Monce Rd		✓			
Town Garage	200 Spielman Hwy		✓			
Senior Center	200 Spielman Hwy		✓			

It was noted that the Town Hall serves as a backup shelter; this was not reflected in the previous HMP. No other changes to critical facilities were reported.

New Development Trends

Development occurs slowly and consistently around Town, consisting almost entirely of two to five unit single-family home subdivisions. In a relatively rare exception to this trend, a 17-unit town house development is underway at 29 Covey Road near the Town center. [The development is called the

Meadowbrook Luxury Rental Townhomes].¹ Note that focusing development close to the Town center, and increasing density even slightly with attached townhomes, helps mitigate hazard risks by avoiding development in distant, difficult-to access areas.

Impacts of Recent Hazard Events

- *Tropical Storm Isaias on August 5th, 2018, caused severe impacts to Burlington's power and communications infrastructure. The town lost electricity, energy delivery, cellular phone service, internet, and cable. The cellular towers have backup generators, but they reportedly maintained power for only about 24 hours, despite power being out for multiple days. These outages were widespread and impacted the Town's ability to respond.*
 - o **Emergency Communication:** *The Town's Everbridge System was not able to be used reliably because widespread outage prevented access both by Town officials and by members of the public. The Town's Emergency Operations Center was rendered useless because, despite having power, it had no connection to communications utilities. Burlington coordinated with the Town of Canton to operate out of the Canton EOC. The First Selectman drove to West Hartford daily in order to access internet and post information online on the Town website and Facebook account, in case any residents were able to access online information.*
 - o **Emergency Response:** *The generator at the town hall was run, and residents were invited to use it as a charging station and comfort station. Non-potable water was available at the Town Hall and Fire Houses that residents were able to bring home [assumedly to wash and flush toilets]. Food was distributed through the Town Food Bank as needed. The High School was not available for sheltering or showering (as it typically would be) because of COVID-19 concerns; the Town opened the swimming pond at the Foote Road Recreation area for public use to cool off. The Town was fortunate that the weather was warm, as a winter event (or an event during a period of extreme heat) of this magnitude would have created dangerous conditions for residents without power.*
 - o **Recovery:** *Coordination with Eversource was not effective, and the utility company was highly delayed in responding to the Town's needs.*

Changes to Hazard Concerns or Locations

- *Town is highly dependent on communication and power utility companies (electricity, cellphone reception) but has limited control over their actions.*
- *The cell phone towers serving the Town have emergency generators, but they reportedly last for a short duration; during the power outages following Tropical Storm Isaias, the generators reportedly lasted only for one day. The cell phone towers have up to three carriers on one tower (ATT, Verizon, TMobile). There is some coordination between the Town and the cellphone service carriers, but Town staff find it to be inconsistent. Town staff describe the problem as follows: they are given a contact person from the cell phone company to work with, and develop a relationship, but then after a few months that person leaves and a new person takes over, and the coordination has to start from scratch. Sometimes the companies themselves get acquired. This turnover makes long term coordination difficult. **Cell-phone reception is a high priority for the town** with regards to hazard mitigation. A new action related to improving coordination with cell providers is added.*

¹ Another set of duplex townhouses was observed (on google maps) to be under construction at 773-745 George Washington Turnpike, near the corner of Thompsons Way. This appears to be 6 units.

Hazard Mitigation Plan Update Worksheet

Status of Previous Actions

#	Action		Status	Notes
1.1	Offer low-cost or no-cost town-wide CPR training	The Town wishes to offer subsidized CPR training for residents, but needs to secure funding to do so.	<i>In Progress</i> <i>Carry Forward</i>	<i>The Town has made progress on improving its capabilities to enable residents to perform first-aid and CPR. They have received grant funding from the Main Street Community Fund (in Bristol, CT) install defibrillators around town and perform “stop the bleeding” trainings; this initiative is primarily intended to address mass incidents at schools. The Town will carry this action forward.</i>
1.2	Incorporate elements of natural hazard mitigation planning into the 2019 POCD update	The last POCD update was in 2009 and it is updated every 10 years. The Town intends to include discussions of natural hazards in the document and use the information to help formulate planning goals.	<i>Completed</i>	<i>This action has been completed. The 2020 POCD has been completed and is available through the Town website. The plan explicitly calls for implementation of HMP (Sustainability Strategies Action B.3). Additionally, the Plan addresses environmental sustainability and climate resiliency in Chapter 6: Enhance Sustainability.</i>
1.3	Develop a program to send new residents information on mitigation and preparedness	The Town wishes to inform new residents of natural hazard mitigation and preparedness strategies. This will involve developing a packet of information that can be provided to new homeowners and renters. While new homeowners can be tracked through the Assessor’s office, the Town has not determined how to track renters at this time.	<i>Carry Forward</i>	<i>Information has been made available on the town website, but has not been mailed out to residents due to budget constraints and the relatively high costs of such an effort. The Town still feels this action would be beneficial.</i>
1.4	Incorporate updated hazard mitigation information into community plan updates	Hazard mitigation information will be incorporated into future Town plan updates	<i>Completed</i>	<i>This is redundant with Action 1.2</i>

#	Action		Status	Notes
2.1	Upgrade culverts and bridges that are prone to flooding and flood damage	The Town identified roads that have been at risk of flooding for nearly a decade. These include Upson Road, Scoville Road, Prospect Street, Main Street, and the intersection of Covey and Hotchkiss Roads. The existing conveyance infrastructure needs to be upsized.	Completed New Actions Carried Forward	<p>The Town has made progress on this action:</p> <ul style="list-style-type: none"> - Scoville Road has been repaired. - Prospect Street repair is currently underway. - Main Street has been brought to 30% design. The Town intends to put the project out to bid in 2021. This project will include a drainage conveyance upgrade. - Covey and Hotchkiss Intersection has been brought to 30% design, and will also go out to bid for 2021. This project will also include a drainage conveyance upgrade. - Upson Road is still on the Town's list of roads needing improvements. Repairing this road and addressing drainage issues will be listed as a new action moving forward. <p>The Town has also identified new road and bridge projects to include in the plan moving forward. These include:</p> <ul style="list-style-type: none"> - The Foote Road Bridge over Bunnell Brook - The Alto Road and Alpine Drive culverts over the Unionville Brook north branch [unsure of name] have been assessed, and need to be replaced or repaired. - The bridge on South Main Street near Milford Street / Route 69
2.2	Repave and add storm drainage to George Washington Turnpike	The Town identified George Washington Turnpike as being in need of paving and drainage.	Carry Forward	Town is currently working on securing a grant through the Connecticut Local Transportation Capital improvement Program (LOTICIP) to fund this project in 2021 or 2022.
2.3	Review areas for potential wildfire risk by considering debris accumulation and access issues	The Town wishes to evaluate areas at greater risk of wildfires and determine mitigation measures to reduce overall risk	Recommend Carrying Forward for Town Properties	<p>A large portion of forest land in Burlington is owned by the State (Nassahegon State Forest). CT DEEP performs forest management activities in these areas, and coordinates closely with the Town. The First Selectman took a tour of Nassahegon with CT DEEP foresters in 2020 to view their management efforts.</p> <p>Additionally, the Burlington Fire Department is involved in wildfire management. The Town purchases forest-fire fighting equipment such as All-Terrain Vehicles.</p> <p>See if Fire Chief has other comments.</p>

#	Action		Status	Notes
3.1	Encourage sign-ups for the Everbridge emergency notification system	The Town recently contracted with Everbridge to provide a town-wide emergency notification system. Targeted mailings may be used to encourage signups in particularly vulnerable areas, such as special flood hazard areas and dam failure inundation areas.	Capability	Town continues to subscribe to Everbridge system. They have utilized the system to send messages, and understand how to use it and how effective it is. Residents are encouraged to sign up on town Website. This is a capability.
5.1	Equip Fire and Emergency Management vehicles with portable notebook computers and GPS units	The Town wishes to provide portable GPS and computer technology to emergency vehicles to assist with real time tracking during events.		Question to Fire Chief
5.2	Develop GIS capacity to assist in emergency planning and response	The Town wishes to use GIS technology to track natural hazard impacts and vulnerable areas and use this information to plan and respond accordingly. The Town has begun developing this technology but has not yet implemented it fully.	Capability	Town is continually updating their GIS capabilities. They currently have features including fire hydrant locations and flood zones. They will continue to upgrade in the future. This is a capability. Consider new action to add locations of homebound residents or those with mobility issues or other special needs (such as individuals requiring supplemental oxygen) to help focus emergency response and recovery efforts.
5.3	Develop a Teen CERT program to assist with emergency response	The Town has developed a CERT program, and wishes to expand it to include teenagers to assist with emergency response activities such as assisting at shelters	Carry Forward with Revisions	The Town completed this action, but the Teen CERT program has lapsed in recent years. The Town is interested in carrying forward an action to reengage the Teen CERT program, possibly in coordination with the Fire Department's youth programming.
5.4	Acquire generators to ensure the availability of backup power during outages	The Town has developed a list of generator needs. The Town Hall generator is nearly 30 years old and powers the EOC and needs replacement. The Town would also like to acquire a portable generator that can be driven around town to pump out private sewer grinder pumps during extended power outages.	Carry Forward as Separate Actions	The Town has not yet acquired generators due to budget constraints. The Town is interested in the following emergency power capabilities: - Updating the generator at the Town Hall - Updating the generator at the Town Garage - Acquiring a portable generator that can be used to power private sewer grinder pumps during extended power outages.
5.5	Conduct a tornado drill with surrounding communities	A member of the Fire Department indicated that a regional tornado drill needs to be conducted to heighten awareness and preparedness.	Carry Forward	Town has not yet completed this action due to coordination and staffing challenges. This action is carried forward, but may be best coordinated by the COG.

#	Action		Status	Notes
5.6	Participate in the statewide Water Utility Coordinating Committee process	The Connecticut DPH is preparing a Coordinated Water Supply Plan for the entire state beginning in 2016. The Town will participate to address drought-related public water supply needs throughout the community.	Completed	<i>This was completed in 2016-2018.</i>
5.7	Ensure local officials have most updated version of the Connecticut Drought Management Plan	The Connecticut Drought Management Plan is periodically updated. Local officials, land use commissions, health departments, fire departments, and local water utilities should all be made aware of updates to this plan.	Capability	<i>This is a capability. The Connecticut Drought Preparedness and Response Plan was adopted in 2018. Burlington is part of the Bristol-Burlington Health District. The Health District Sanitarian visited Burlington during the 2020 summer drought by to discuss drought mitigation and messaging to Burlington residents about water conservation measures. 4-5 weeks ago.</i>
6.1	Work with RLP property owners to mitigate RLPs upon property owner request	One repetitive loss property is located in Burlington that has experienced two flood losses. Mitigation could include acquisition/demolition, elevation, floodproofing, or other techniques.	Carry Forward	<i>Town staff report that the RL Property in Burlington is the Foote Road Recreational Center. This is a non-residential building which would have limited economic impact if flooded [let me know if this is true]. Town has not yet completed mitigation due to budget limitations. Carry forward with specific actions for this property.</i>
6.2	Update the local floodplain management ordinance to meet current model ordinance requirements	The Town of Burlington last updated this ordinance in 2008. Since that time, FEMA and the Connecticut DEEP have revised the model ordinance including recommending the increase of the freeboard requirement to two feet for new buildings and substantial improvements.	Carry Forward	<i>Floodplain management ordinance was updated most recently August 13, 2020. Floodplain regulations do not call for freeboard for residential structures. The State Building Code has been updated and now requires freeboard. Action is carried forward, as the State will require freeboard in local flood regulations to match the State Building Code..</i>

MEETING DATE: 7/27/2020, 2020

PROJECT: NHCOG HMP Update

MMI #: 3843-06

SUBJECT: Town of Canaan

LOCATION: Virtual/Remote
Zoom

ATTENDEES:

Michelle – EMD

Tim Dowde – FD

Henry Todd

Noah Slovin met with Falls Village (Town of Canaan) representatives on July 27, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A Powerpoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes/Changes
Falls Village Fire Department	35 Railroad Street	Emergency Operations Center and Primary Shelter	✓	✓	No	<i>A new Fire Department has been built at 188 Rt 7 South. It replaces the old building as the EOC and primary shelter. It has emergency power and is not in a floodplain. The old FD is now vacant and can be removed from this list.</i>
Town Hall	108 Main Street	Critical Records/ Back-up shelter	✓	✓	No	
Lee H. Kellogg School	47 Main Street	Public School			No	
Highway Garage	100 Railroad Street	Regional Emergency Support	✓		No	
Senior Center	107 Main Street	Senior Housing			No	
Falls Village Day Care Center	35 Page Road	Day Care Facility			No	
<i>Region 1 High School</i>	<i>246 Warren Turnpike</i>	<i>Public School</i>	<i>P</i>		<i>P</i>	<i>Partial Emergency Power – Kitchen Fields are in flood zone</i>

New Development Trends

- No changes in development patterns or trends.
- New developments are almost entirely single-family homes or other small developments.
- The Village Market is being developed on the first floor of the Senior Center (107 Main Street). An internet hot spot will be installed outside this location to allow for public internet access.
- There are a couple of more significant developments being explored for the future, but these are in the early stages of planning, have not yet received permits, and are not expected to change the town's risk profile within the planning period of the HMP.

Impacts of Recent Hazard Events

- Town staff reported no notable hazard events have occurred since the October storm of 2011.

Changes to Hazard Concerns or Locations

- Town staff reported no changes to locations of hazard concern or types of hazards of concern.
- Primary hazards of concern continue to be snow and high wind events.

New Hazard Mitigation Capabilities

- Falls Village has constructed a new Fire Department, which includes an updated EOC and emergency shelter.
- The Town is developing a list of resident contact information to create an emergency contact protocol, primarily focusing on those with limited access to or knowledge of internet sources.
- The Town has a Tree Warden
- First Selectman has a blog on the town website to keep residents updated on projects and issues. In June of 2020 he posted about the lack of rainfall and requested that residents limit water usage to mitigate potential impacts of a drought.
- The town is pursuing acquisition of a new fire truck
- Other new capabilities are noted in the review of previous mitigation actions, below.

New Goals, Objectives, and Actions

- Falls Village is conducting a new bridge study, which will involve inspection of every bridge in town to develop cost-estimates and prioritize repairs needed to extend their service lives. Many of the bridges were built in the 1930s and in 1955. Most bridges are believed to be in pretty good shape. Cobble Road Bridge is a specific bridge of concern.
- The town is looking at upgrading Cobble Road, including raising the road, installing culverts, and repairing the Cobble Road Bridge over the Hollenbeck River. This will be included as a new action moving forward.

MEETING MINUTES

Status of Previous Actions

Actions listed in the previous plan were reviewed, and their current status identified.

Action	Responsible Party	Status	Notes
Acquire a local emergency notification system like CTAlert and utilize it to its fullest capabilities	EMD	Underway Carry Forward with Revisions	<i>Town is currently (summer of 2020) conducting a campaign to collect emergency contact information (landlines, cell phones, and emails) from all residents to develop an emergency notification system. The system is intended to be operational in September. The town is using Mailchimp software because they have fewer than 1,000 homes. Revise action to address this specific project.</i>
Encourage residents to purchase and use NOAA weather radios with alarm features	EMD	Capability	<i>Town encourages residents to stay up to date on hazard information through any means available, which is typically internet and smart-phone applications. Town staff do not believe NOAA radios are necessary.</i>
Obtain funding to acquire backup generators for the senior center and Falls Village Day Care Center	EMD	Carry Forward with Revisions	<i>Town is converting the bottom floor of the Senior Center building into a public market. This action is revised to specifically call for installation of a generator as part of the Village Market development. Village Day Care Center does not serve as a shelter or emergency center, and does not need an emergency generator. That specific aspect of this action is dropped.</i>
Ensure that emergency information is available through several different media, such as newspaper, radio, internet and phone .	EMD	Capability	<i>Town announces emergency information through the Town Website & Social Media accounts. The emergency communication system being developed will also help accomplish this goal. Many property owners in Falls Village are second-home owners, and so spend much of the year out of town. Falls Village staff want to be able to warn those property owners about disasters, even if they aren't in town when the disaster happens, so that the property owners in turn can communicate with their property managers or other individuals to take any steps necessary to protect the property. A new action is added to create a contact list specific to second-home owners to enable targeted alerts to that population.</i>

Action	Responsible Party	Status	Notes
<p>Consider reviewing and updating the Town's Inland Wetland Regulations, which were last amended in 1975. Note that the "Flood Hazard Control Measures" section of the town ordinance is the appropriate location for incorporating the most recent DEEP Model Floodplain Management Regulations.</p>	P&Z	Partially Completed	<p><i>The Inland Wetlands Commission completed an update of the regulations in 2020. (Henry will check)</i></p> <p><i>Floodplain development is regulated through the 2018 Zoning Regulations Section 4.2 (Floodplain Overlay Zone), which references "An Ordinance Concerning Flood Hazards" (p. 15 of the Town Ordinances). The Ordinance notes local adoption of Connecticut State Building Code. The Ordinances appear to have been last updated in 2007.</i></p> <p><i>Flooding is also regulated through the 2018 Zoning Regulations in Section 3.e. regulating development in the Inner Corridor of the Housatonic River Overlay Zone.</i></p> <p><i>Model Floodplain Management Regulations have not yet been incorporated into the Town's Zoning Regulations or Ordinances. This aspect of the action is carried forward <u>as part of the following action-</u></i></p>
<p>As recommended by the POCD, review the Flood Hazard Control Measures section of the town ordinance to incorporate the most recent DEEP Model Floodplain Management Regulations.</p>	P&Z	Carry Forward	<p><i>Action has not yet been completed due to lack of funding.</i></p> <p><i>The state of Connecticut has updated its state building code to require certain standards for buildings in flood zones statewide. This action is carried forward.</i></p>
<p>Require developers to demonstrate whether detention or retention of stormwater is the best option for reducing peak flows downstream of a project and provide a design for the appropriate alternative.</p>	P&Z	Capability	<p><i>The Town requires this of larger developments. This is a capability.</i></p>
<p>Encourage property owners to purchase flood insurance under the NFIP.</p>	Building Official	Capability	<p><i>Buyers of properties located in FEMA flood zones are required to purchase flood insurance by lending banks and property insurance companies if a mortgage is in place. Town staff believe this is sufficient and additional action by the Town is not necessary.</i></p>

Action	Responsible Party	Status	Notes
Consider conducting a comprehensive evaluation of the Housatonic and Hollenbeck River watersheds study to determine appropriate flood mitigation and stabilization measures.	PW	Drop Carry Forward New Action	<p><i>Numerous studies of the Housatonic River have been completed in the past, and the river's hydrology is well understood and managed by dams. Town staff do not believe a new study is needed.</i></p> <p><i>Town staff report that flooding along the Hollenbeck River is not a significant concern for the town, and believe a watershed study is not necessary.</i></p> <p><i>Falls Village manages flooding along these rivers by restricting development within those flood areas.</i></p> <p><i>There are a couple of buildings known to be impacted by Housatonic River flooding. The Town alerts the property owners ahead of predicted flood events and encourages them to temporarily evacuate. Historically, floodwaters impact the houses and then recede, and the property owners fix any damage and remain in the properties.</i></p> <p><i>A new action to work with those property owners to mitigate flooding or relocate is suggested.</i></p>
Consider constructing a flood wall or berm around the side of the High School that is near the Housatonic River.	PW	Drop	<p><i>Town staff report that the High School building itself is not at risk of flooding; rather, the school's sports fields are located within the Housatonic floodplain. Constructing a flood wall or berm would only protect those fields, would impact flood risks up- and down-stream, and likely would not meet permitting requirements. Maintaining the sports fields as floodplains will decrease flood risk up- and downstream.</i></p> <p><i>Action is dropped.</i></p>
Compile a checklist that cross-references the bylaws, regulations, and codes related to flood damage prevention that may be applicable to a proposed project and make this list available to potential applicants.	P&Z	Complete	<p><i>Planning and Zoning Department has a checklist to help walk developers through relevant bylaws, regulations, and codes.</i></p> <p><i>Henry will check</i></p>
Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	P&Z	Carry Forward	<p><i>Town has not had the financial or staffing capacity to implement this action.</i></p> <p><i>Action is carried forward, with the specific suggestion that the Town send members of the Planning and Zoning staff to conferences and events put on by the Connecticut Association of Flood Managers.</i></p>
Pursue acquisition of additional municipal open space in SHFAs and set it aside for greenways, parks, etc.	First Selectman	Capability	<p><i>Approximately 2/3 of Town land is open space, and Town staff report that the Town has the highest percentage of protected open space of any town in Connecticut. Much of this land is state owned, and some is Federal land.</i></p>

Action	Responsible Party	Status	Notes
Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.	PW	Carry Forward with Revisions	Town has not yet implemented this action due to funding limitations. The action is merged with the next action and carried forward.
When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.	PW	Carry Forward with Revisions	Town has not yet implemented this action due to funding limitations. The action is merged with the previous action and carried forward.
Consider the use of beaver deterrent devices such as beaver stops, beaver bafflers or beaver deceivers.	PW	Capability	Town has sufficient capacity for controlling beaver activities. Primary approach is to trap and remove beavers as necessary.
Consider replacing culverts frequently impacted by beavers with free span bridges	PW	Drop	Town has not had significant challenges around beavers impacting culverts. Actions related to culverts and bridges moving forward will focus on upsizing based on updated hydrology figures (actions listed above). This specific action is dropped.
Ensure adequate barricades are available to block flooded streets in floodprone areas	PW	Capability	Town has adequate barricades.
Ensure the Emergency Management Services facility is sited outside the SFHA and 500-year flood zone as required by State law.	EMD	Completed	This is the case with the EOC
Consider conducting an ingress/egress evacuation routes analysis for the Housatonic Valley Regional High School.	EMD	Drop	Town staff report that there is no isolation risk at the High School, and there has not been any access issues in the past. This action is not considered necessary.
Develop a plan to prioritize snow removal from the roof of critical facilities and other municipal buildings each winter. Ensure adequate funding is available in the Town budget for this purpose.	PW	Capability	Town has had to clear roofs in the past and has this capability. They hire contractors as needed, or have town staff, including the Fire Department, assist. The Kellog School is one of the only buildings with a flat roof.

Action	Responsible Party	Status	Notes
The town may consider utilizing snow fencing in areas prone to snow drift	PW	Drop	<i>Town has not found it necessary to utilize snow fencing. There are few areas where snow drift is significant - near Wangum lake there are some drift areas. Town plows are able to handle drifts; fencing not needed..</i>
Consider posting the snow plowing routes in Town buildings each winter to increase public awareness.	PW	Capability	<i>Town posts the roads that will not be plowed.</i>
Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	EMD, PW	Capability	<i>Lower Barrack Road and Yelping Hill Road off Music Mountain (dirt, state forest road) are the two known areas with accessibility issues during storm events.</i>
The Building Department should provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat-roofed buildings such as heating coils.	Building Official	Capability	<i>This information is available through the state building code, enforced locally. The Town installed heating coils in the Town Hall roof.</i>
Consider preventing residential development in areas prone to collapse	P&Z	Capability	<i>Zoning regulations and state building code are sufficient to mitigate this kind of risk. Town staff were not aware of any areas in Town prone to collapse.</i>
Ensure that municipal departments have adequate backup facilities in case earthquake damage occurs to municipal buildings.	EMD, PW	Capability	<i>EOC can operate out of the Fire House (primary) or the Town Hall (secondary).</i>
Consider bracing vulnerable systems and assets inside critical facilities. This could help protect IT systems, important records and files.	EMD, PW	Capability	<i>Town has backed-up all electronic records to the cloud. The Town is currently scanning all hardcopy records from the past 30 years and backing those up to the cloud as well.</i>

Action	Responsible Party	Status	Notes
Include dam failure inundation areas in the CT Alert emergency notification system contact database	EMD	Carry Forward with Revisions	<p><i>The Town is aware of two areas with dam failure risk: downstream of Wangum Dam on the Hollenbeck River, and downstream of the First Light dam on the Housatonic River.</i></p> <p><i>The Housatonic dam is one of a series of dams on the river used for power generation; the dam and the river are heavily monitored by First Light, and the EAP in place includes alert protocols.</i></p> <p><i>The emergency notification system currently under development would be used to notify residents of a dam failure risk. Targeted alerts are possible through this system.</i></p> <p><i>Action is revised: create geographically-distinct groupings of residents within the new emergency notification system to allow for geographically-targeted alerts.</i></p>
Collect EAP's for Class B and C dams and file them with the appropriate town departments and emergency personnel	EMD	Capability	<p><i>Town has EAPs in EOC, and is aware of how to access.</i></p>
For the area of elevated wildfire risk located along the Appalachian Trail, consider a combination of all of the available methods of wildfire risk reduction.	Fire Department	Carry Forward	<p><i>Town has not experienced any notable brush fire events in recent years; the last significant wildland fire occurred 15 to 20 years ago. This action has not been completed due to limited funding and the perceived low risk.</i></p> <p><i>Action is carried forward.</i></p>
Evaluate the need for maintenance of the town fire ponds.	Fire Department	Carry Forward with Revisions	<p><i>Town has the capacity to dredge and maintain fire ponds on its own, and has done so in the past. This is a capability.</i></p> <p><i>A new action is carried forward addressing maintenance needs of a specific pond: Kellog Pond near Kellog Road and Route 126. This pond has a dry hydrant and is in need of dredging or other maintenance.</i></p>
Revise and enhance the town's website concerning the local regulatory requirements concerning Open Burning	Fire Department	Capability	<p><i>Open Burning rules are posted on the website. Anybody who wants to open burn needs a burn permit and to call the Fire Marshal before burning on any given day</i></p>
Continue to require the installation of fire protection water in new developments.	Fire Department	Capability	<p><i>This is required as necessary for new developments</i></p>

MEETING DATE:	September 22, 2020	ATTENDEES:	Tom McKeon, First Selectman
PROJECT:	NHCOG HMP Update		Chris Johnstone, Second Selectman
MMI #:	3843-06		Victoria Brudz, MMI
SUBJECT:	Town of Colebrook		
LOCATION	Virtual/Remote		
	Zoom		

Victoria met with Town of Colebrook representatives on September 22, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Colebrook Volunteer Fire Department - Forge Station	300 Colebrook River Road	Fire Station	✓			
Colebrook Volunteer Fire Department - Center Station	31 Bunnell Street	Fire Station	✓			
Town Hall	562 Colebrook Road		✓			Shared generator with the senior center
Colebrook Elementary School	452 Smith Hill Road					
Town Garage	43 Sandy Brook Road	Public Works				
Camp Jewell	6 Prock Hill Road	Back-up Shelter	✓			
Colebrook Senior Center	2 School House Road	Primary Shelter	✓	✓		

Development Trends

- Little to no new commercial development, and minimal residential with roughly one new home built a year.

Recent Events

- Tropical Storm Isaias (August 2020) resulted in town-wide damage. Outages lasted days, with Eversource taking approximately 3 days to get into town to begin restoration. The MDC property in town was out of power for 10 days.
- Within the past few years Eversource has conducted a large amount of tree trimming which the town feels helped minimize tree damage as it was not as bad as experienced during past storms. However, communication was a challenge during this storm.
- The recent August 2020 tornadoes had no impact on the town.

Hazards Discussion

- Flooding is not a significant problem in the town with no areas of concern regarding flooding.
- Snowstorms do not typically present a major issue. The town appears to get heavier snowfall due to elevation, however, DPW is very good at clearing efficiently.
- Wind and tree damage are the biggest concern in town, with many trees needing to be trimmed and removed.

Capabilities

- If a resident were to file a flooding or other natural event related complaint, they would call the First Selectman's office to report the issue.
- In recent years the town has been regrading and repaving roadways, and in the process upgrading and repairing drainage systems.
- The bridges in town that needed repairs and upgrades as identified by the state have either been already addressed or are currently undergoing work right now.
- There is a tree warden in town, and budget to do as much tree work as possible to mitigate damages.
- The town emergency email system works well and includes many residents. This system is tied into the town website and posts the notification automatically.

Goals, Objectives, and New Actions

- The town would like to pursue regular natural hazard education in schools and will work with the new superintendent to coordinate this program.
- The town would like to maintain and upgrade the natural hazard materials on the town website to ensure information is available to residents.
- While many attempts have been made to improve radio signals in town, there is still an issue that the town would like to see rectified somehow.

Status of Previous Actions

MEETING MINUTES

Strategies	Who	Status	Notes
<i>1. Continue to visit schools and educate children about natural hazards and how to prepare for them.</i>	Volunteer Fire Dept. and Emergency Management Director	Carry forward	Unsure if this outreach is done through the school as they conduct this type of education on their own. The town will pursue with the new superintendent.
<i>2. Make literature available on natural hazards and preparedness at Colebrook Town Hall.</i>	Emergency Management Director and First Selectman	Carry forward with revision	There used to be information available in the past, however, it is unclear what is still available. Revise action to include website revisions and updates.
<i>3. Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and Red Cross on community planning, preparedness, response, and training.</i>	Emergency Management Director and First Selectman	Ongoing	Town has recently worked with the regional red cross to discuss response efforts, and the EOP was recently updated and submitted to the state.
<i>4. Participate in regional Emergency Notification System coordinated through Litchfield County Dis-patch (i.e. Everbridge system) to provide emergency information to residents in the entire town or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.</i>	Emergency Management Director and First Selectman	Remove/ modify to continue coordination with first responders.	The town has their own email system that they utilize during and prior to an event. County Dispatch works with first responders but not residents directly.
<i>1. Routinely inspect emergency response equipment, and train for response to natural disasters.</i>	Volunteer Fire Dept. and Emergency Management Director	Ongoing	This is done with the EMD as well as the fire department.
<i>2. Cooperate with the Metropolitan District Commission in emergency response training exercises and updates of the Goodwin Dam Emergency Action Plan.</i>	Emergency Management Director and First Select- man	Carry forward	The fire department in the past has participated with the MDC on exercises. The MDC does communicate when issues arise. There used to be an annual meeting with CEOs, but this has not occurred in a while.

<p><i>3. Acquire additional emergency response equipment and supplies for the emergency shelter and emergency operations center.</i></p>	<p>Emergency Management Director, Fire Chief</p>	<p>Ongoing</p>	<p>The EMD works to acquire equipment as needed, so current status of equipment seems to be sufficient.</p>
<p><i>4. Acquire replacement all-terrain vehicle and trailer to support emergency response services.</i></p>	<p>Emergency Management Director, Fire Chief</p>	<p>Complete</p>	<p>The ATV is less than 5 years old and includes a fire tank on the that can be used for fire suppression. The emergency response trailer is also new.</p>
<p><i>5. Promote the use of interoperable communication equipment, written mutual aid agreements, and the development of standard operating procedures for emergency response in the regional area.</i></p>	<p>Emergency Management Director, Fire Chief, and First Selectman</p>	<p>Ongoing</p>	<p>The EMD works closely with region 5, and there are mutual aid agreements with neighboring towns. There is a radio system the town uses, however there is an ongoing issue with contacting all towns, most often Goshen is the town that can be contacted due to signal restrictions. This is an ongoing challenge and various efforts have been made such as towers to improve service.</p>
<p><i>6. Develop a Memorandum of Understanding with schools or bus companies to utilize school buses for mass transportation during an emergency.</i></p>	<p>Emergency Management Director and First Selectman</p>		<p>Town will have to follow up on the most recent contract to identify the status</p>
<p><i>7. Develop basic GIS capabilities as needed for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.</i></p>	<p>Emergency Management Director, Fire Chief, and First Selectman</p>	<p>Ongoing</p>	<p>Town is working on the GIS capabilities right now and is part of the regional effort to improve data.</p>
<p><i>1. Pursue additional funding for control measures to mitigate the flooding created by beavers.</i></p>	<p>Public Works Dept.</p>	<p>Remove</p>	<p>Not an issue in town.</p>
<p><i>2. Develop clean-out schedules for all catch basins and drainage facilities and implement with region's catch basin cleaner</i></p>	<p>Public Works Dept.</p>	<p>Ongoing</p>	<p>This is an ongoing effort.</p>

<p><i>3. Review floodplain regulations and ordinances and update as necessary based on DEEP's "Model Floodplain Management Regulations" and FEMA Guidelines</i></p>	<p>Planning and Zoning Commission</p>	<p>Underway</p>	<p>Zoning is currently undergoing an update of these regulations.</p>
<p><i>4. Pursue additional funding to supplement the municipal tree trimming program and support increased role by Eversource in tree trimming maintenance activities along roadsides.</i></p>	<p>First Selectman, Public Works Dept.</p>	<p>Carry forward/ongoing</p>	<p>Eversource has conducted major trimming in town over the last 2 years – approximately \$500k worth. The town does as much maintenance as they can, including trimming and removals. There is a tree warden in town, and this activity is budgeted for.</p>

MEETING DATE:	8/6/2020, 2020	ATTENDEES	Gordon Ridgeway
PROJECT:	NHCOG HMP Update		Diane Beebe
MMI #:	3843-06		Janell Mullen
SUBJECT:	Town of Cornwall		Noah Slovin

Noah Slovin met with Cornwall representatives on August 27, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A Powerpoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In SFHA?	Notes/Changes
West Cornwall Fire Station	289 Sharon Goshen Turnpike	Emergency Operations Center	✓		✓	<i>During Tropical Storm Irene (2011), the town reportedly experienced flooding at or near the 1% Annual-Chance Flood extent. The West Cornwall Fire Station was not impacted during that event. Generator recently replaced.</i>
Town Hall Complex (two buildings)	183 Main Street	Critical Records/ Backup Emergency Operations Center	✓			<i>Does this have a generator?</i>
Cornwall Bridge Fire Station	35 Kent Road South	Emergency Response	✓			
Cornwall Consolidated School	5 Cream Hill Road	Primary Shelter	✓	✓		
United Congressional Church	8 Bolton Hill Road	Secondary Shelter		✓		<i>Town will pursue installation of a generator at this site.</i>
Cornwall Child Center (daycare)	8 Cream Hill Road	Daycare				
Bonney Brook	Kent Road	Senior Housing				
Kugeman Village	256 Kent Road South	Housing				
Cornwall Highway Department	24 Furnace Brook Road	Regional Emergency Support	✓			
CT DOT Garage	24 Bunker Hill Road	Regional Emergency Support				
AT&T	<i>9 Cemetery Hill road</i>	Phone Switching Station	✓			<i>Address added</i>
<i>Eversource Substation</i>	<i>104 Cemetery Hill Road</i>	Power Substation				<i>This is the main power distribution center for the town</i>
<i>The Cornwall Library</i>	30 Pine Street	Comfort Center		✓		<i>Located next to Town Hall. Acted as a cooling center and charging station during power outages associated with the Tropical Storm Isaias event.</i>

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In SFHA?	Notes/Changes
East Cornwall Village Water System Pump House on valley road	Valley Road	Provides water to East Cornwall Village, including Town Hall, Library, Congregational Church.	✓			Has a generator, so able to maintain public water supply for people during power outages. During Isaias outages, town created a public water filling station at Foote Fields.

Outside of East Cornwall Village, most of the town is on private wells. These wells are susceptible to power outages.

The cellular towers in Town are important for sustaining communication through hazard events, especially as more and more people transition away from landline phone and to cell-phones. The towers are under the control of the private companies that own them. They are not located in flood hazard zones. They will not be listed as critical facilities.

The small commercial area in Cornwall Bridge includes Cornwall Country Market, which has a generator. This is not a critical facility, but is still an important asset for the Town with regards to resilience during power outages. The Cornwall Bridge Fire Station is also located in this area. The nearest gas station to town is also located in this vicinity, but is actually in the Town of Sharon. The Bonnie Brook confluence with the Housatonic is located here – this Brook presents flood risks.

New Development Trends

Cornwall has experienced very little new construction in the last 5 years. The construction that has occurred has primarily been single-family homes. Development is mostly focused on renovation.

There has been minimal development in floodplains, as the zoning regulations prevent most development in that overlay.

Impacts of Recent Hazard Events

- Tropical Storm Isaias – August 4, 2020
 - High wind event
 - Led to many downed trees, limbs, and powerlines
 - Cornwall lost power, internet, and cellphone service townwide
 - Cellphone service came back up relatively quickly
 - Power restoration didn't begin until four days after the storm. Most residents had power by 7 days. By August 27 the Town was still dealing with a couple of locations without internet. Private wells were not able to run – many people had no water. Town opened a public water filling station in Cornwall Village.
 - The response of Eversource was unsatisfactory. Communication was poor, as was the overall response.
 - Most roads in town were blocked by fallen branches and trees. Most roads were back open in 24 hours.
 - People were stuck in pockets around town.

- Town opened the Library as a cooling and charging center, but did not need to provide any overnight sheltering.
- Resulted in lost food (because of loss of refrigeration), lost work (many people are working from home on the internet), around 5 trees that landed on houses, and other economic impacts.
- Was particularly challenging on top of COVID disaster; Town has been in an emergency for the last 6 months.

Other historic events were briefly discussed for comparison purposes.

- Tornado of 1989 was more significant, but less widespread
- In the October storm of 2011, the town opened the shelter, but weren't dealing with COVID, and utility company response was better.

Wildfire:

- Reportedly the largest wildfire in CT history burned 400 acres in Cornwall in the year 2016. The fire was sparked by a lightning strike during a drought, and by the time it was noticed it had begun to burn underground, making it much more difficult to put out. The land was state land and very difficult to access, and the state did not have the resources to put the fire out. The fire reportedly burned from September to December, at which point snow was able to put it out.
- This wildfire event has made the Town more concerned about drought events.

Changes to Hazard Concerns or Locations

- The railroad runs right along the residential area in West Cornwall. During Isaias, trees and wires came down onto the railroad tracks; reportedly live wires may have temporarily energized the tracks themselves. This also creates a risk of derailment.
- The area between West Cornwall and Cornwall bridge was damaged by the tornado of 1989, which created high levels of debris, dead trees, and other fire fuel. This area has since grown back into a healthy forest and does not have higher wildfire risk than anywhere else in town.
- Town staff reported that drought events have become more of a problem, including being the cause of elevated wildfire risk, especially since the drought and wildfire of 2016.
- Town staff reported that weather seems more erratic than it has been in the past, with more extreme storms and more droughts.

New Hazard Mitigation Capabilities

The majority of floodplain property is owned by the State, or has conservation easements placed on it – there is not a lot of land for sale in hazard areas, so development potential is low.

Additionally, The Housatonic River Overlay Zone¹ delineated along the Housatonic River further limits development potential in that hazard zone.

¹ Adopted August 2014 along with other members of the Housatonic River Commission. The Inner Corridor is a relatively narrow, variable width band of land along the banks of the Housatonic River composed of 100 year flood hazard areas, soils generally not suited for development and a minimum continuous Inner Corridor width. The Inner Corridor includes limits to impervious surface extents, proximity to the river of new construction, drainage and erosion impacts, and other environmental impacts. The Outer Corridor consists of that portion of the immediate river watershed lying between the Inner Corridor and the top of the river valley ridge,

Town staff report that the ability of residents to be self-reliant during service outages (specifically loss of power) has increase over the last five years, as more residents have acquired emergency generators (possibly in response to the extended outages of 2011). At the same time, people have become more reliant on internet and cell phones, leading to two challenges:

- Power or internet outages have a greater economic impact in the form of lost work and productivity (This is particularly true since the beginning of the COVID-19 pandemic, which vastly increased the number of people working remotely from home; after Isaias, some residents reportedly had to leave town and set up in hotels or other locations with internet in order to keep their businesses going. At the same time, this remote work has also generally cut down on the need for people to travel on roads following disasters.)
- Fewer landlines make communication more challenging during power and internet outages

Town has a Tree Warden. Eversource has an active program for tree trimming, which seemed to work well until Tropical Storm Isaias.

New Goals, Objectives, and Actions

The Town is working on the following hazard mitigation efforts:

- Through mailers, encouraging residents to build capacity to be self-reliant in case of outages, road blockages.
- Making local internet service more resilient to hazards.
- Updating its emergency communications system to utilize multiple forms of communication (landline, cell phone calls and texts, emails, etc.), as opposed to the current system that only uses landlines. The Town is currently working to get residents to provide contact information.

and delineated by lines drawn from peak to peak along the ridge line. Low Impact Development and other runoff reduction measures are encouraged in the Outer Corridor.

Hazard Mitigation Plan Update Worksheet

Status of Previous Actions

#	Action	Responsible Party	Status	Notes
1	Obtain HMGP grant to replace the generator at the West Cornwall Fire House.	PW	Completed	<i>Cornwall successfully secured a grant and replaced this generator (Town is not sure whether the grant was from HMGP or not)</i>
2	Pursue standby power supplies for shelters that do not have generators.	PW	Carry Forward	<i>West Cornwall Fire House generator has been replaced. Town also has a portable generator. Town will carry action forward to install standby power at other critical facilities.</i>
3	Take an active role in siting new housing for vulnerable populations such as seniors and the elderly. Encourage housing developers to discuss proposed actions with the town prior to submitting applications.	P&Z	Carry Forward with Revisions	<i>There is very limited development in Cornwall, and none has occurred in areas of elevated risk in recent years. The Town is currently rewriting its Zoning Regulations. This action will be carried forward with revisions to indicate that the new Zoning Regulations will consider hazard exposure of new housing for vulnerable populations.</i>
4	Utilize the existing CT Alert emergency notification system to its fullest capabilities.	EM	Completed Carry Forward with Revisions	<i>Cornwall utilizes CT Alert. Town is currently working to upgrade its emergency contact service so it is able to contact residents by text message or email in addition to landlines. It is pushing hard in the month of August 2020 to get residents to provide contact information; they have sent out or posted on the website notes about the need for this information in the context of Storm Isaias and COVID-19. In addition to proactive emergency alert capabilities, the Town is interested in improving its capabilities to post information online (or otherwise) so that residents are able to find information even if power outages prevent the Town from proactively reaching out to them. Two new actions are added to this plan: 1. Upgrade the Town's emergency notification system so that it is able to contact residents and other subscribers through multiple methods, including phone call, text message, and email. 2. Develop the Town's capacity to post important information about hazard response and recovery prior to an event so that that this information will be accessible to members of the public who seek it out, even if the Town is not able to proactively contact those individuals.</i>
5	Encourage residents to purchase and use NOAA weather radios with alarm features	EM	Carry Forward	<i>The Town will add this action to its ongoing outreach efforts around improving its emergency notification capabilities.</i>

#	Action	Responsible Party	Status	Notes
6	Update the Town's Floodplain Management Ordinance to reflect the most recent recommendations from the Connecticut DEEP.	P&Z	Carry Forward with Revisions	<i>The Town is currently updating its Zoning Regulations. It will update its Flood Hazard Area Overlay Zone regulations to reflect the standards in the most recent Connecticut State Building Code and the State model floodplain regulations.</i>
7	Consider requiring new buildings constructed in floodprone areas to be protected to the highest recorded flood level regardless of being within a defined SFHA.	P&Z	Drop	<i>This action is not being pursued; the Town will instead update its Zoning Regulations to be consistent with the most recent Connecticut State Building Code.</i>
8	Consider more stringently regulating or preventing certain types of landscaping and retaining walls located in SFHAs, because these can become debris during floods.	P&Z	Carry Forward with Revisions	<i>Cornwall is currently conducting a comprehensive update of its zoning regulations. This action will be considered and addressed in that rewrite. Action will be carried forward within a single action consolidating multiple zoning-related actions into one calling for incorporation of hazard mitigation priorities into the ongoing zoning rewrite.</i>
9	Require developers to demonstrate whether detention or retention of stormwater is the best option for reducing peak flows downstream of a project and provide a design for the appropriate alternatives.	P&Z	Carry Forward with Revisions	<i>Cornwall is currently conducting a comprehensive update of its zoning regulations. This action will be considered and addressed in that rewrite. Action will be carried forward within a single action consolidating multiple zoning-related actions into one calling for incorporation of hazard mitigation priorities into the ongoing zoning rewrite.</i>
10	Consider conducting a Mill Brook watershed study to identify appropriate methods of reducing flood risks.	PW	Carry Forward with Revisions	<i>Mill Brook flows into the Housatonic at West Cornwall, and continues to be an area of concern for the Town. Given the large size of the watershed, the undeveloped nature of the watershed, and the steep and confined nature of the Brook as it flows through West Cornwall, Town staff do not believe a watershed scale study will provide actionable information. <i>Instead, a smaller-scale analysis of mitigation options within the West Cornwall neighborhood is suggested. Mitigation actions may include upsizing bridges, acquisition of land in the floodway, or flood warning systems.</i></i>
11	Conduct a comprehensive evaluation of River Road at the Housatonic River to determine appropriate flood mitigation and stabilization measures.	PW	Carry Forward	<i>Progress has not yet been made on this action due to staffing and funding limitations. <i>Bank stabilization continues to be an issue along River Road. <i>Action is carried forward.</i></i></i>

#	Action	Responsible Party	Status	Notes
12	Provide technical assistance regarding floodproofing measures to interested residents. Pursue funding for home elevations should any residents become interested.	PW	Drop	Town staff reportedly do not have the capacity to complete this action. Action is dropped and replaced with an action to provide information on the Town website and Town Hall about flood hazard and flood hazard mitigation options, including links to State and Federal resources
13	Encourage property owners to purchase flood insurance under the NFIP and to report claims when flooding damage occurs.	PW	Drop	Town staff reportedly do not have the capacity to complete this action. Action is dropped and replaced with an action to provide information on the Town website and Town Hall about flood hazard and flood hazard mitigation options, including acquisition of flood insurance
14	Evaluate floodprone properties on Furnace Brook to determine potential flood damage reduction methods.	PW	Carry Forward with Revisions	Town staff reportedly do not have the capacity to complete this action. Action is dropped and replaced with an action to identify floodprone properties on Furnace Brook and contact the property owners to offer information and assistance in pursuing flood damage reduction actions. <i>Gordon mentioned something about a 1-lane dirt road that provided alternative access north-south to Route 7. Can this be clarified?</i>
15	Consider constructing a flood wall or berm around the side of the West Cornwall Fire Station that is near Mill Brook.	PW	Drop	<i>Construction of a protective berm along Mill Brook was determined to be not feasible given permitting and funding constraints. This action is replaced with two new actions:</i> <ol style="list-style-type: none"> 1. <i>Develop a flood plan for the West Cornwall Fire Station that addresses the possible need for temporary staging areas outside of flood zones for firefighting apparatus, as well as other flood mitigation steps to be taken prior to a flood event.</i> 2. <i>Add relocation of the West Cornwall Fire Station outside the flood zone to the Town's long-range plan (Capital Improvement Plan and/or POCD)</i>
16	Compile a checklist that cross-references the bylaws, regulations, and codes related to flood damage prevention that may be applicable to a proposed project and make this list available to potential applicants. The information in Section 3.4 provides a starting point for this list.	P&Z	Carry Forward with Revisions	<i>Cornwall is currently conducting a comprehensive update of its zoning regulations. This action will be considered and addressed in that rewrite. Action will be carried forward within a single action consolidating multiple zoning-related actions into one calling for incorporation of hazard mitigation priorities into the ongoing zoning rewrite.</i>

#	Action	Responsible Party	Status	Notes
17	Provide outreach regarding home elevation and relocation, flood barriers, dry floodproofing, wet floodproofing, and other home improvement techniques (Section 3.6.2) to private homeowners and businesses with flooding problems.	P&Z	Drop	Town staff reportedly do not have the capacity to complete this action. Action is dropped and replaced with two actions previously identified: one to provide information on the Town website and Town Hall about flood hazard and flood hazard mitigation options, and the second to identify floodprone properties on Furnace Brook and contact the property owners to offer information and assistance in pursuing flood damage reduction actions.
18	Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	P&Z	Carry Forward with Revisions	<i>Town has not had the financial or staffing capacity to implement this action.</i> <i>Action is carried forward, with the specific suggestion that the Town send members of the Planning and Zoning staff to conferences and events put on by the Connecticut Association of Flood Managers.</i>
19	Pursue riverbank stabilization along River Road and the Housatonic River, potentially utilizing HMGP.	PW	Drop	<i>This action is redundant and/or conflicting with action #11, and is dropped.</i> <i>Gordon mentioned something about a 1-lane dirt road that provided alternative access north-south to Route 7. Can this be clarified?</i>
20	Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.	PW	Carry Forward with Revisions	<i>Town has upsized a culvert in recent years.</i> <i>This action is carried forward to specifically encourage reviewing all culvert replacements based on existing hydrology and Northeast Regional Climate Center guidance</i>
21	Increase the capacity of the Hollenbeck River culvert at Lake Road.	PW	Completed	<i>This culvert has been replaced with one with increased capacity.</i>
22	Ensure adequate barricades are available to block flooded streets in floodprone areas	EM	Completed	<i>Town has increased the number of barricades.</i>
23	Develop a town wide tree limb inspection and maintenance program to ensure that the potential for downed power lines is diminished.	PW	Capability	<i>Tree Warden is responsible for assessing and removing trees as needed. The Town wants to remove dead and diseased trees from ROWs as much as possible.</i>
24	Require the location of utilities underground in new developments or during redevelopment whenever possible.	P&Z	Carry Forward with Revisions	<i>Cornwall is currently conducting a comprehensive update of its zoning regulations. This action will be considered and addressed in that rewrite. Action will be carried forward within a single action consolidating multiple zoning-related actions into one calling for incorporation of hazard mitigation priorities into the ongoing zoning rewrite.</i>

#	Action	Responsible Party	Status	Notes
25	Building Department to provide literature regarding appropriate design standards for wind.	Building Official	Capability	<i>Appropriate design standards are required by building code.</i>
26	Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures to protect new buildings to a standard greater than the minimum building code requirements. Require such improvements for new municipal critical facilities.	EM, PW	Drop	<i>The State Building Code is enforced locally and has recently been updated. This is considered to be sufficient.</i>
27	Provide information on the dangers of cold-related hazards to people and property.	PW	Capability	<i>The Town provides information about cold-related hazards annually when winter approaches.</i>
28	Consider posting the snow plowing routes in Town buildings each winter to increase public awareness.	EM	Drop	<i>Town does no longer believes this action is aligned with the need to reduce losses from hazards. The Town has an effective snow clearing program.</i>
29	Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	EM	Capability	<i>Town has identified such areas (primarily steeper hills), and addresses the challenge they present by increasing winter storm preparation measures on them (such as putting down more sand/salt before ice storms).</i>
30	Building Department to provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat-roofed buildings such as heating coils.	Building Official	Capability	<i>Appropriate design standards are required by the State building code.</i>
31	Consider preventing residential development in areas prone to collapse	P&Z	Capability	<i>Steep slopes and flood areas are already protected in Zoning Regulations.</i>

#	Action	Responsible Party	Status	Notes
32	Ensure that municipal departments have backup plans and adequate backup facilities such as portable generators in place in case damage occurs to critical facilities	EM	Capability	<i>Town has a portable generator in its CERT trailer, and is able to bring it to locations in need.</i>
33	Consider bracing systems and assets inside critical facilities. This could help protect IT systems, important records and files.	EM, PW	Carry Forward with Revisions	<i>Town will pursue cloud-backup of its IT systems rather than physical bracing.</i>
34	Include dam failure inundation areas in the CTAlert emergency contact database	EM	Carry Forward with Revisions	<i>The closest dam of concern is the Falls Village dam on the Housatonic. Failure of this dam would have minimal impact in Cornwall. Town will incorporate dam failure areas into the enhanced communication system it is developing.</i>
35	Develop a long term beaver dam management plan.	PW	Carry Forward	<i>Town traps beavers when necessary, but does not have a long-term beaver dam management plan.</i>
36	Consider replacing culverts frequently impacted by beavers with free span bridges.	PW	Drop	<i>Town has determined that the cost-benefit of this action does not warrant it.</i>
37	Consider the use of beaver deterrent devices such as beaver stops or beaver bafflers	PW	Capability	<i>Town implements beaver deterrents in select locations, such as on Land Trust properties.</i>
39	For the area of elevated wildfire risk located between West Cornwall and Cornwall Bridge, the town may consider a combination of all of the available methods of risk reduction described in the plan	EM, Fire Dept	Carry Forward with Revisions	<i>Town staff report that this area is no longer considered to be at a higher risk than any other forested area of Town. It had previously been impacted by a tornado, resulting in a high level of fuel, but now is just as healthy a forest as anywhere else. The Cornwall Fire Department trains in wildland firefighting. The Town used to have a stockpile of equipment for fighting forest fires, but that is no longer the case. This action is replaced with two new ones: 1. Coordinate with DEEP to acquire forest-fire-fighting equipment to have on hand. 2. Identify and implement methods of improving wildfire early warning systems, such as acquisition of drones or installation of wildfire detection sensors.</i>

#	Action	Responsible Party	Status	Notes
39	The Town should continue to require the installation of fire protection water in new developments.	EM, Fire Dept	Capability	<i>This is a capability</i>
40	Pursue the acquisition of additional municipal open space inside SFHAs and set it aside as greenways, parks, or other nonresidential, noncommercial, or nonindustrial use.	First Selectman, P&Z	Drop	<i>Approximately 50% of the Town is located within the State Forest or a Land Trust, or held in a conservation easement. Acquisition of municipal open space is not considered necessary at this time.</i>
41	Selectively pursue conservation recommendations listed in the Plan of Conservation and Development and other open space plans	First Selectman, P&Z	Capability	<i>This is a capability</i>
42	When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.	PW	Drop	<i>Town has recently upsized a culvert. Action is redundant with Action #20, above.</i>

MEETING DATE:	August 10, 2020	ATTENDEES:	Bob Valentine, First Selectman
PROJECT:	NHCOG HMP Update		Victoria Brudz, MMI
MMI #:	3843-06		
SUBJECT:	Town of Goshen		
LOCATION	Virtual/Remote		
	Zoom		

Victoria Brudz met with Town of Goshen representatives on August 10, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

- No changes to critical facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Town Hall	42 North Street		✓	✓		
Public Works	38 Torrington Road		✓			
Woodridge Lake Sewer District Water Treatment Facility	Brush Hill Road		✓			
Goshen Fire Company	181 Sharon Turnpike	Fire Station/EMS	✓			
Goshen Center School	50 North Street		✓	✓		Same building as Town Hall

Development Trends

- Development in town has been static since the last major development in 2008.

Recent Events

- Tropical Storm Isaias resulted in power outages in over 99% of the town, with downed trees and lines blocking 32 roads in town. The town saw many large, healthy trees completely uprooted.
- The First Selectman sent out 4 or 5 emergency notifications to residents during the event.
- The storm resulted in major communication challenges. With power outages across town, along with cable and internet down, it was estimated only 43 to 48% of contacts received the notifications.

- The town's GIS mapping capabilities went down because of Isaias, ultimately eliminating any storm related capabilities.
- Recent tornadic and microburst activity in the region did not result in any significant damage. These types of events have not presented major concerns in the past, although storm associated winds are typically the challenge.

Hazards Discussion

- Flooding because of heavy precipitation is a challenge along certain roadways including:
 - East Street South at the intersection of Reservoir Road
 - Bartholomew Hill Road between Sucker Brook and Westside Road.
- Wind is often a problem town-wide, with no one particular area of concern.
- Snow drifts are a concern town-wide, however, often challenges are experienced in the following locations:
 - Bartholomew Hill Road
 - East Street South and Route 4 area
 - East Street North and Route 4 area
 - 5 ½ Mile Road
 - Sandy Beach Road
- Icing can also be a concern across town. There are some shady areas in town that tend to ice over first, but public works is capable of treating these areas.
- FEMA flood maps, and lack of delineation, has proven to be a real challenge for residents, with one mapped location reportedly having elevations several hundred feet off from actual elevations.

Capabilities

- The town has a tree warden, and budget is set aside for tree trimming and removal. This budget has double within the past 2 to 3 years.
- Flooding and other complaints or filed either with public works or directly to the First Selectman and are typically addressed soon after being made.
- The town has a comprehensive road management plan, that includes drainage infrastructure. The town utilizes the Roadsoft asset management system to track roadway and drainage conditions. The town incorporates roadway maintenance into the budget and works hard to foresee necessary repairs and address them before they are a problem.
- There are no designated evacuation routes in town because of the rural nature, however, Rout 4 and Route 63, along with other main routes, traverse the center of town, allowing for main access during a storm.
- The town uses Blackboard Connect to communicate with residents during an event.

Goals, Objectives, and New Actions

- The town would like to improve the level of communication with seasonal home-owners.
- Explore communication options for emergency notifications when outages are extensive and include power and cable/internets.
- The town would like to continue to address the drainage projects outlined in the Woodridge Lake Drainage Study.

- There are three 70"+ pipes along West Hyerdale Drive that convey the Marshhepaug Rive that need repairs. The galvanized insert is beginning to rot. The town would like to upgrade the lining to reduce the chance of collapse. The town is in the beginning phase of addressing this upgrade. They have been in contact with a contract engineer who has done a brief preliminary evaluation, and the town has also contacted DEEP fisheries to begin the process.
- Woodridge Lake community was developed roughly 50 years ago, and ultimately much of the drainage system is beginning to deteriorate and needs repairs.

Status of Previous Actions

Action	Responsible Party	Status	Notes
Objective 1 Educate the public regarding natural hazards of concern, mitigation activities, and community preparedness			
1. Visit schools and educate children about natural hazards and how to prepare for them.	Volunteer Fire Dept. and Emergency Management Director	Ongoing	Capability
2. Make literature available on natural hazards and preparedness at Goshen Town Hall.	Emergency Management Director and First Selectman	Ongoing	Capability
3. Provide outreach to seasonal home-owners on how to protect against frozen pipes and water damage during the winter with the loss of electricity, including information on automatic shut-off switches or alarms.	Emergency Management Director and First Selectman	Carry forward with revision	This is fluid, ongoing project always, town would like to improve this level of engagement.

Action	Responsible Party	Status	Notes
<p>4. Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and DEMHS Region 5 on planning, preparedness, response, recovery, and training.</p>	<p>Emergency Management Director and First Selectman</p>	<p>Ongoing</p>	<p>Capability, the town does not have a schedule for these updates as they are often made as a result of “lessons-learned”. The plans are however reviewed regularly to ensure they are up to date.</p>
<p>5. Continue to provide an Emergency Notification System to provide emergency information to residents in the town or in a specific geographic area. This System can warn of an impending situation and also provide information regarding how to prepare or respond to a particular event.</p>	<p>Emergency Management Director and First Selectman</p>	<p>Carry forward</p>	<p>Capability. Include social media as a means to communicate, town uses blackboard connect, works fairly well. The town would like to explore communication options when power and cable/internet is unavailable.</p>

Objective 2 Ensure proper functioning of critical facilities during emergency response

Action	Responsible Party	Status	Notes
<p>1. Routinely inspect emergency response equipment, and train for response to natural disasters.</p>	<p>Volunteer Fire Dept., CERT Team, and Emergency Management Director</p>	<p>Ongoing</p>	<p>This is done on a regular basis.</p>
<p>2. Acquire additional emergency response equipment including a woodchipper and 500-gallon portable water tank to enhance response capabilities</p>	<p>Emergency Management Director, Fire Chief</p>	<p>Carry forward with revision</p>	<p>Town has acquired the wood-chipper. The town has not acquired the water tank and is unsure of where exactly this would be filled. Revise to include acquire tank and explore opportunities for an agreement for filling with local water suppliers.</p>
<p>3. Promote the use of interoperable communication equipment, and the development of standard operating guidelines for emergency response in the regional area.</p>	<p>Emergency Management Director, Fire Chief, and First Select- man</p>		<p>Town already promoting communication</p>
<p>4. Consider developing a Memorandum of Understanding with schools or school bus company to utilize school buses for mass transportation during an emergency.</p>	<p>Emergency Management Director and First Selectman</p>	<p>Carry forward</p>	<p>An agreement was not developed. The town would like to pursue this action; however, bus company may be changing in the near future for the regional school system.</p>

Action	Responsible Party	Status	Notes
<p>5. Develop basic GIS capabilities as needed for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.</p>	<p>Emergency Management Director, Fire Chief, and First Selectman</p>	<p>Carry forward with revision</p>	<p>Carry forward with revisions, to include storing information more locally to avoid information going down during an outage.</p>
<p>Objective 3 Expand maintenance activities and implement specific projects that address known drainage issues within the town</p>			
<p>1. Pursue funding to implement control measures to mitigate the flooding created by beavers.</p>	<p>Public Works Dept.</p>	<p>Carry forward</p>	<p>This has been a persistent issue, causing problems with localized flooding, especially for private wells.</p>
<p>2. Develop and implement clean-out schedules for all catch basins and drainage facilities</p>	<p>Public Works Dept.</p>	<p>Ongoing</p>	<p>Capability. The town continues to improve system with development with upgrades and repairs, and to keep phosphorous out of lakes.</p>
<p>3. Review floodplain regulations and ordinances and update as necessary based on guidance from DEEP.</p>	<p>Planning and Zoning Commission</p>	<p>Ongoing</p>	<p>For this and the following action: The town is continuously watching for updates to incorporate into regulations as current mapping poses a real challenge for property owners.</p>

Action	Responsible Party	Status	Notes
<p>4. Pursue improved floodplain mapping in cooperation with federal and state authorities in order to more accurately identify the location of structures that are susceptible to flooding.</p>	<p>FEMA , DEEP, First Selectman, EMD</p>	<p>Ongoing</p>	
<p>5. Pursue additional funding to supplement the municipal tree trimming program.</p>	<p>First Selectman, Public Works Dept.</p>	<p>Ongoing</p>	<p>The town has a warden and budget, however, being heavily vegetated, tree maintenance is often a challenge.</p>
<p>6. Pursue the purchase and placement of standardized house number signs to facilitate effective emergency response to 911calls.</p>	<p>Emergency Management Director, Fire Chief, and First Selectman</p>	<p>Carry forward</p>	<p>The Woodridge Lake area has a number mailbox post regulation, however, there is no town-wide standard.</p>
<p>7. Undertake comprehensive stormwater drainage study at Woodridge Lake to address localized flooding problems.</p>	<p>First Selectman, Public Works Dept.</p>	<p>Carry forward with revision</p>	<p>The study is complete, but the town has addressed some projects, and continues to address 1 to 2 projects a year. Revise to say pursue actions outlined in the drainage study.</p>

MEETING DATE:	August 31 2020	ATTENDEES:	Magi Winslow – First Selectman
PROJECT:	NHCOG HMP Update		Janell Mullen – NHCOG
MMI #:	3843-06		Noah Slovin – Milone & MacBroom, Inc
SUBJECT:	Town of Hartland		
LOCATION	Virtual/Remote Zoom		

Noah Slovin met with Town of Hartland First Selectman Magi Winslow, as well as Janell Mullen of NHCOG, on August 31, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference. Noah began the meeting with a presentation of Hazard Mitigation Planning basics and the update planning process. Updates were then discussed. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Type	Emergency Power	Shelter	1% Chance Floodplain	Notes / Changes
Hartland Town Hall	22 South Road	Municipal				
Hartland School	30 South Road	School	X	X		<i>Can be used as a shelter, but would require cancelling school while sheltering is underway, as well as for some time afterward during shelter breakdown and cleanup. Is available as a last-resort shelter.</i>
Hartland PW Garage & Transfer Station	Welsh Road	Municipal	X			
East Hartland Volunteer Fire Department	34 South Road	Emergency Services	X			
West Hartland Volunteer Fire Department	152 Center Street	Emergency Services	X			<i>Has a small generator</i>
<i>Bethany Lutheran Church</i>	<i>Walnut Hill road</i>	<i>Primary Shelter</i>	X	X		
<i>West Hartland Community Center</i>	<i>Center Street</i>	<i>West Hartland Shelter</i>	X	X		
<i>Nellie B. West Building at Camp Alice Merritt</i>	<i>Address?</i>	<i>Secondary shelter</i>		X		<i>No backup generator</i>
<i>First Church of Hartland</i>	<i>Hartland Boulevard</i>	<i>Secondary Shelter</i>	X	X		

Development Trends

Hartland has minimal new development.

Hazards Discussion

Power Outages: After Hurricane Isaias, Town was 100% without power for 6-7 days. This type of impact from a storm is reported to be relatively common.

Access: Downed trees and blocked roads can severely limit travel east to west, making the Town isolated from surrounding communities, and fragmented east and West Hartland. Access to food, medication, etc., can become a problem. Route 20 is essential for east-west access, but backup routes through Barkhamsted exist. Route 20 is winding and precarious – the State reportedly doesn't get to it immediately.

Goodwin Dam: the risk of failure of Goodwin Dam is one of the top concerns of the Town, although the dam is in good shape and the Town participates in preparedness trainings and activities. Every year the Town participates in emergency response exercises, and every 5 years it participates in a full-day, more comprehensive emergency planning exercise. West Hartland is the area of Town at risk; residents within the dam failure area will have a 3 minute warning in the event that the dam were to fail.

Flooding: flooding is not a significant concern for Hartland. They are located in a relatively high-elevation area with small floodplains and limited development. Dam failure is reportedly the Town's primary flood-related concern.

Wildfires: have reportedly not been a problem for the Town. While there is a lot of forest land, it is largely owned by the State and by MDC, and those institutions are responsible for stewardship, including firefighting. Wildfires have not caused problems here in the past.

Winter Storms: Town reports experiencing relatively mild winters recently, so winter weather challenges have been limited. Nevertheless, the Town reportedly experiences more cold-weather hazards than other communities in Connecticut because of its high elevation. "When it's raining everywhere else it's snowing here."

Capabilities

Hartland shares a building inspector with Granby. They are able to leverage Granby's capabilities through this arrangement, as sometimes updates to building codes or building inspector practices will come to Hartland through Granby.

The Town highway crew consists of 4 people, two located in the east part of town, and two in the west.

Generally Hartland reports that it is capable of withstanding hazard events. Because the community is rural, remote, and often one of the later communities to be served by State or service-providers after storm events, they have learned to be self-reliant.

Goals, Objectives, and New Actions

The dam at Camp Alice Merritt is in need of rehabilitation. The Town has secured sufficient funding to complete the project and will pursue it this coming year.

Hartland used to operate a public recreational pond [name?], but had to stop using it for public recreation some years ago due to maintenance challenges. The Town would like to "reclaim" the pond. The pond

serves a dry-hydrant, and reclaiming the pond will improve reliability and accessibility of this firefighting water source.

The State is reviewing scour at Dalene Bridge over West Branch Salmon Brook on the east side of Town. This may lead to bridge repairs or rehabilitation.

The Town is dealing with problems from road salt impacting shallow drinking wells as well as wetlands and wildlife. The Town believes the primary source of salt is from State roads, which are reportedly treated with salt that is not mixed with sand or other materials. The Town reports that at least four private shallow wells located close to state roads are no longer usable, and more wells are at risk. Wells has failed and continue to fail. The Town treats its roads with a sand-salt mix and is not seeing salinity problems from that. A new action to address this problem may be appropriate for this plan.

Magi reported learning a few years ago that the State was no longer going to perform or pay for bridge inspections on local bridges, leaving the burden on local communities. The Town may wish to pursue a grant to perform a comprehensive bridge analysis.

Status of Previous Actions

Action	Responsible Party	Status	Notes
<p>Make literature available on natural hazards and preparedness at Hartland Town Hall.</p>	<p>EMD and OFS</p>	<p>Carry Forward</p>	<p><i>The Town publishes a list of shelters, emergency contacts, to-do lists, etc., multiple times per year in concert with other public outreach. The Town does not have literature available at town hall.</i></p> <p><i>Action is Carried Forward</i></p> <p><i>Additionally, the Town is interested in reaching out to the school and having them send information about hazard preparedness home to parents. This will be a new action.</i></p>
<p>Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force on community planning, preparedness, response, and training.</p>	<p>EMD and OFS</p>	<p>Capability</p>	<p><i>This is a Capability. Town has a board of three people for Emergency Management.</i></p>
<p>Routinely inspect emergency response equipment, and train for response to natural disasters.</p>	<p>VFD And EMD</p>	<p>Capability</p>	<p><i>Emergency response equipment is routinely inspected.</i></p> <p><i>Emergency response trainings are performed through MDC (for dam failure).</i></p> <p><i>Due to recent turnover in the Highway Department, the Town believes that it is now an appropriate time for some emergency response training.</i></p>
<p>Cooperate with the Metropolitan District Commission (MDC) in emergency response training exercises and updates of the Goodwin Dam Emergency Action Plan.</p>	<p>EMD and OFS</p>	<p>Capability</p>	<p><i>This is a capability. Town participates in annual exercises and a larger every-five year exercise.</i></p>
<p>Acquire additional emergency response equipment such as needed communication equipment. Also acquire additional sleeping cots for use at the EOC and at the Fire Stations.</p>	<p>EMD, Fire Chief</p>	<p>Carry Forward with Revisions</p>	<p><i>Equipment is old and in need of updating.</i></p> <p><i>Town has a store of emergency food, but it is out of date.</i></p> <p><i>Carry forward with a focus on updating existing equipment, especially expired items.</i></p>
<p>Promote the use of interoperable communication equipment, and the development of standard operating procedures for emergency response in the regional area.</p>	<p>EMD, Fire Chief, and OFS</p>	<p>Capability</p>	<p><i>This is a capability – Town has communication equipment and operating procedures, and reviews it regularly.</i></p> <p><i>Nevertheless, the Town would like to pursue acquisition of new hand-held radio equipment to improve communications with staff who are in the field, away from the radios in their trucks, in areas without cellphone reception. Cellphone service is inconsistent in Town.</i></p>

Action	Responsible Party	Status	Notes
Develop a Memorandum of Understanding with schools or bus companies to utilize school buses for mass transportation during an emergency.	EMD and OFS	Carry Forward	<i>This action has not yet been pursued due to staffing changes and limitations. Carry forward.</i>
Implement control measures to mitigate the flooding created by beavers.	PWD	Capability	<i>Beavers are a problem in the western part of Town; approximately once a year beavers cause an issue, but it is always minor and never a real problem. The Town calls the State hazardous animal number to have them deal with the beavers.</i>
Develop and implement clean-out schedules for all catch basins and drainage facilities.	PWD	Capability	<p><i>The Town cleans out basins twice per year.</i></p> <p><i>There is one large drainage culvert that the Town is concerned about, located on Hogback Road. Repairing or upgrading this culvert is included as a new action. The Town will not be able to raise sufficient funding to repair the culvert locally, and will require a grant to act.</i></p>
Review floodplain regulations and ordinances and update as necessary based on DEEP’s “Model Floodplain Management Regulations” and FEMA Guidelines.	PZC	-?-	<p><i>Town has not made such changes, but does not believe this action to be a high priority; they have very few floodplains in Town, and not much development within those. Additionally, the State Building Code, implemented locally, includes flood mitigation measures.</i></p> <p><i>Town staff attends floodplain management meetings.</i></p>

MEETING DATE:	August 21 2020	ATTENDEES:	Michael Criss, First Selectman
PROJECT:	NHCOG HMP Update		Scott Kellogg, Fire Chief/Deputy EMD
MMI #:	3843-06		Victoria Brudz, MMI
SUBJECT:	Town of Harwinton		
LOCATION	Virtual/Remote		
	Zoom		

Victoria Brudz met with Town of Harwinton representatives on August 21, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Harwinton Leaf Composting Facility		Municipal Solid Waste				
Connecticut State Police Troop L - Harwinton Resident State Trooper	100 Bentley Drive	Law Enforcement				
Harwinton Ambulance Association	158 Burlington Road	Ems/EOC				Also the EOC
Harwinton Volunteer Fire Department	158 Burlington Road	Fire Station				
Harwinton Westside Volunteer Fire Department	199 Scoville Hill Road	Fire Station				
Harwinton Senior Center	209 Weingart Road	Back-up Shelter	✓	✓		New from meeting
Wintergreen Housing	21 Wintergreen Circle	Elderly Housing				New from meeting
Harwinton Consolidated School	115 Litchfield Road	Primary Shelter	✓	✓		New from meeting
Harwinton Town Hall	100 Bentley Drive	Municipal Facility	✓			
Torrington WPCA		Utility	✓			New from meeting
Cell phone tower	Weingart Road	Utility	✓			New from meeting – covers roughly 70% of the town
Cell phone tower	Hungerford Lane	Utility	✓			New from meeting
Harwinton Public Works Facility	104 Locust Road	Municipal Facility			✓	

Recent Events

- Tropical Storm Isaias resulted in widespread outages from downed trees and power lines.
- Heavy windstorms, even storms with low grade winds, often result in outages throughout town.

Hazards Discussion

- Strong wind events are the biggest concern for the town with the number of dead and dying trees.
- Emerald Ash Borer has severely impacted the town, but certain areas are of bigger concern because of the risk of power outages:
 - Plymouth Road
 - Clearview Avenue
 - Harmony Hills,
 - North road
 - South Road
- The town often experiences challenges along state roads that have not had trees properly maintained, ultimately increasing the risk of outages to residents along these roads.
- Snow and ice events are a town-wide concern, with no specific areas that more prone to drifting or icing.
- There are flood concerns at the town garage on Locust Road. The site likely needs drainage upgrades and improvements.
- The Valley Road area sometimes floods because of the Army Corps releasing water nearby. There are no structures in the area at risk.
- There is a concern regarding the current state of Bull Pond dam. This dam is privately owned, and the owners may be unable to fund the necessary upgrades. The town would like to see funding made available for these repairs as this would likely mitigate some of the flooding concerns in the Locust Road area.
- Current radio communication systems are dated and need to be upgraded and replaced. This system is used by fire, police, EMS and emergency management. It is critical to upgrade this system because currently responders cannot be reached in all parts of the town. In the event of radios being out of range, responders rely on cell phones. In past events, cell phone towers have gone down, resulting in impaired communication capabilities with emergency responders.

Capabilities

- The town recently replaced a culvert in the Shingle Mill area.
- The town utilizes Everbridge for emergency notification distribution.
- There is a tree warden in town, with minimal budget for tree maintenance. However, the town does shift funds to the budget when feasible. For example, if snow removal costs are low one season, this remaining budget is shifted to tree maintenance and removal

Goals, Objectives, and New Actions

- The town would like to see some sort of collaborative effort with the state to better coordinate and work with them to maintain the trees along their roadways.
- The town would like to pursue upgrades of their municipal radio and communication system. This would help with communications within town, and with neighboring communities.
- Bull Pond dam needs repairs: the town feels funding needs to be acquired in order to execute these upgrades.
- The town would like to invest in an emergency response trailer and acquire additional emergency response equipment.
- Wintergreen elderly housing needs a back-up power source, along with the library. The two buildings are adjacent to each other, so the town would like to explore an option that feeds both buildings.

Status of Previous Actions

Objective 1 Educate the public regarding natural hazards of concern, mitigation activities, and community preparedness			
Strategies	Who	Status	Notes
1. Visit schools and educate children about natural hazards and how to prepare for them.	Volunteer Fire Dept. and Emergency Management Director team	Carry forward revise	Fire dept. does fire prevention education, but the Town would like to be more involved in natural hazard education. Efforts need to increase communication with both students and parents.
2. Make literature available on natural hazards and preparedness at Harwinton Town Hall. Provide email notifications/links on town website.	Emergency Management Director and First Selectman	Carry forward with revision	This has been improving, but still needs improvement. The town dabbled in various methods, and would like to work on being more robust overall. Town has tested notification etc., and can improve on communications and outreach. Also working to improve marketing so that the website is the first resource, which may decrease calls to the town hall. Include the link for signing up for alerts, continuously maintain the site.
3. Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and Red Cross on community planning, preparedness, response, and training.	Emergency Management Director and First Selectman	Ongoing	Capability; this update is done regularly. The Town sees an opportunity to evaluate “how well does this plan reflect what we do” with some room for improvement.
4. Maintain a Public Notification System (i.e. Everbridge system) to provide emergency information to residents in the entire town or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.	Emergency Management Director and First Selectman	Carry forward with revision	Town uses Everbridge but would like to invest in a different system like the one the school uses. This would allow more flexibility in emergency notifications sent by the town. This would allow pre-storm communications in comparison to just emergency notifications. The Everbridge has 2 databases – 911, linked to the State only for emergency; and a Second that is based on voluntary sign-up and may have some capability. Revise to include exploration of capabilities of Everbridge, and to evaluate alternative systems if necessary.

Objective 2 Ensure proper functioning of critical facilities during emergency response			
Strategies	Who	Status	Notes
<i>1. Routinely inspect emergency response equipment, and train for response to natural disasters.</i>	Volunteer Fire Dept. and Emergency Management Director	Ongoing	Gear and equipment are currently inspected and maintained continuously.
<i>2. Augment establishment of the stand-alone Emergency Operations Center in cooperation with the Harwinton Ambulance Association by acquiring additional emergency response equipment, including a generator.</i>	Emergency Management Director, Fire Chief, First Selectman	Complete	Generator has been purchased and installed at this location; town would like to pursue a new action for additional emergency response equipment.
<i>3. Promote the use of interoperable communication equipment, written mutual aid agreements, and the development of standard operating procedures for emergency response in the regional area.</i>	Emergency Management Director, Fire Chief, and First Selectman	Carry forward with revision	Town would like to increase communication with neighboring towns. DEMHS regional communications/emergency management response and capability is good.
<i>4. Develop a Memorandum of Understanding with schools or bus companies to utilize school buses for mass transportation during an emergency.</i>	Emergency Management Director and First Selectman	Carry forward	Town has not pursued but would like to continue to pursue.
<i>5. Consider developing basic GIS capabilities for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.</i>	Emergency Management Director, Fire Chief, and First Selectman	Ongoing	In process with assessor's office and NHCOC, but the town will need to invest in wrapping this project up and re-evaluating this action and project annually. Town was selected for this state action.

Objective 3 Expand maintenance activities and implement specific projects that address known drainage issues within the town			
Strategies	Who	Status	Notes
<i>1. Implement control measures to mitigate the flooding created by beavers.</i>	Public Works Dept.	Ongoing	Beaver dams have been removed, but state does not allow beaver relocation, so the town continues to work to remove where necessary.
<i>2. Continue to implement established clean-out schedule for all catch basins and drainage facilities.</i>	Public Works Dept.	Ongoing	Capability. The Town employs a new highway supervisor that works on this regularly.
<i>3. Review floodplain regulations and ordinances and update as necessary based on DEEP's "Model Floodplain Management Regulations".</i>	Planning and Zoning Commission	Carry forward	Not complete.
<i>4. Identify the location of structures that are susceptible to flooding to facilitate risk assessment and potential control measures.</i>	DEMHS or DEEP	Ongoing	The town worked with insurance because the highway department is located in a flood area, and the town need to work to address future flooding concerns. This likely includes increasing drainage capacity surrounding the facility, although addressing drainage will not ameliorate the location in the flood zone.
<i>5. Pursue funding to enhance the municipal tree trimming program and support expansion of the Eversource tree trimming program.</i>	First Selectman, Public Works Dept.	Ongoing	Continuously looking for funding. Town has tree warden – PW supervisor/director is the deputy tree warden. Private arborist in town is the primary tree warden. There is minimal tree maintenance budget. Town does redirect funding from snow plowing when capable to trimming.

MEETING DATE:	7/30/2020, 2020	ATTENDEES	Jean Speck – First Selectman Barbara Herbst – Town Treasurer David Becker – EMD Eric Epstein – Deputy Emergency Manager Joe Manley – Building Official Joyce Kearns – Administrative Assistant Rick Osborne – Highway Forman Stanley MacMillan – Fire Marshal Donna Hays – Land Use Administrator
PROJECT:	NHCOG HMP Update		
MMI #:	3843-06		
SUBJECT:	Town of Kent		

Noah Slovin met with Town of Kent representatives on July 30, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A Powerpoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	SFHA?	Notes/Changes
Kent Fire Department	28 Maple Street	EOC	✓			<i>EOC has been relocated</i>
Community House	92 North Main St	Critical Records/ Shelter for cots and food service	✗	✓		<i>No records are stored in this facility at this time. No generator. Backup shelter, but lack of generator is limiting. Building also has accessibility challenges.</i>
Templeton Farms (senior center)	16 Swifts Lane	Senior Housing/Shelter for heating and food service	✓	✗		<i>Town is moving away from sheltering people at this site to focus on running emergency food services for the Primary Shelter (Town Hall) from this site. Senior Center is close enough to Town Hall to transport food but is hard logistically.</i>
Morning Star	38 Elizabeth St	Senior Housing	✓			<i>Has a generator</i>
The Kent Nursing Home	46 Maple Street	Nursing Home	✗			<i>No longer exists - Remove</i>
Kent Center School	9 Judd Avenue	Public School			✓	
Kent School	1 Macedonia Rd	Private School	✓		*	
South Kent School	40 Bulls Bridge Road	Private School	✓		*	
Marvelwood School	476 Skiff Mountain Rd	Private School	✓		*	

Facility	Address or Location	Comment	Emergency Power?	Shelter?	SFHA?	Notes/Changes
High Watch Drug & Alcohol Rehab Center	62 Carter Road		✓			<i>Building has multiple generators</i>
Bulls Bridge Cell Tower	136 Bulls Bridge	DPS/DPW Communication Tower	✓			<i>Tower holds cell carriers as well as Litchfield County Dispatch. Has a generator.</i>
Town Garage	38 Maple Street	Emergency Response	✓			
Kent Town Hall	41 Kent Green Boulevard	Critical Records/ Shelter for cots	✓	✓		<i>New EOC Primary Shelter</i>
Kent Sewer Treatment Plant	125 Schaghticoke Rd	Public Utility	✓		✓	

*These three schools span many acres and portions of the campuses may be located within the 1% annual chance floodplain.

New Development Trends

New development trends were not discussed at the meeting, however Jean Speck provided the following notes about new developments following the meeting:

- The Kent School is putting an addition on their existing Admissions Building – it is within the floodplain, and the designs put first floor elevations of the building above the base food elevation.
- The Kent School has also added two additional faculty houses which are outside of but immediately adjacent to the currently mapped floodplain.
- The RLP on Johnson Road is putting up a deck on the back of the house. They are working with the Building Department on the design.
- An existing subdivision located outside of the floodplain has seen an increase of proposed new building.
- There is talk of a proposed new subdivision, but it is located outside of the floodplain.
- No further development in the floodplain is anticipated by the Town.

Impacts of Recent Hazard Events

- The Ice Jam of January 2018 was the most recent significant natural disaster to impact the town.
 - A buildup of ice occurred on the both sides of the Route 341 Bridge.
 - Flooding occurred upstream of the bridge because of this ice jam. Residences, parts of the Kent School, and critical facilities were impacted. Sections of Route 7 were flooded.
 - One RLP was secondarily damaged during the ice jam when power was shut off and water froze in the home's plumbing.
 - The National Weather Service Albany office sent personnel to work with Town and brief them regularly on river levels.
 - The ice jam itself posed a significant hazard. The Town had to monitor ice regularly to determine stability. The ice jam became a curiosity and drew visitors. Town had to worry

- about safety of these visitors, including people who would go out on the ice. Connecticut State Police were involved.
- Some properties were evacuated. Some residents refused to leave; Town had to expend personnel-hours and resources managing these residents.
 - Route 7 was closed for multiple weeks. After the first week of closure, the road was briefly reopened, but was flooded again and had to reclose.
 - Thunderstorms occur annually, and occasionally knock power out for some parts of Town for a few days. Outages are caused by downed trees and limbs landing on power lines, and it takes the power company time to respond. The Town did not experience much damage from the 2018 tornadoes/microbursts.
 - Snow events that occur in the late spring or early fall are the most damaging. Wet snow is heavy and sticks to things, and can take out trees and power.
 - The Town experienced a significant brush fire on Schaghticoke Mountain in the southwestern corner of town in May 2017. The fire occurred in an area with a large rattlesnake population, leading to complications in the firefighting effort.
 - Town staff report that brush fire events occur every few years. Fires are started by lightning or accidentally by Appalachian Trail hikers. Wildfire risk areas also have very difficult terrain. The biggest recent wildfire event occurred in 2011.
 - *Following the meeting, the Town experienced impacts from Tropical Storm Isaias on August 5th. Town staff reported significant loss of power and communication during the storm. The Town was working on an After Action Report (AAR). Town was considering pursuing an MOU with Verizon/ATT to install a temporary cellphone tower during outages to allow for cell service. Many residents no longer have landlines, so cellphone outages can severely impact communication capabilities.*

Changes to Hazard Concerns or Locations

- Town staff did not report any changes in hazard concerns or locations.
- The Town is thinking about expanding its emergency sheltering capabilities. Town staff want the Town to have sufficient capabilities to respond to hazards and potential displacement of residents on their own, in case outside help is not available following a disaster. The COVID-19 epidemic has shown how important it can be to have sufficient sheltering space, given social-distancing requirements.

New Hazard Mitigation Capabilities

- During the ice jam there was a concern about not having flat-bottomed boats. The Town has therefore secured a grant for the Fire Department to purchase a new flat-bottomed boat.
- The Town has updated its Zoning Regulations, and is beginning the process of updating its Subdivision Regulations
- Town staff report that the Red Cross is exploring developing a regional shelter that would serve Kent residents.
- *Town will replacing the bridge at Anderson Acres Road and Kent Hollow Road over the West Aspetuck River with an aluminum bridge.*

Hazard Mitigation Plan Update Worksheet

Status of Previous Actions

#	Action	Status	Notes
1	Utilize the existing CTAlert emergency notification system to its fullest capabilities and subscribe as many residents as possible.	Complete Carry Forward with Revision	<i>Town has instituted the Everbridge alert system. The Town has just begun a process to rebuild the database. A revised action to complete the database rebuilding is carried forward.</i>
2	Encourage residents to purchase and use NOAA weather radio with an alarm feature	Drop	<i>Town does not believe this action is necessary given the many other technologies for weather alerts.</i>
3	Pursue standby power supplies for critical facilities that do not have generators.	Completed	<i>Most critical facilities have generators. The Community House is in need of a generator; this is addressed in the next action.</i>
4	Obtain funding for a generator at the Community House.	Carry Forward	<p><i>The Town explored grant opportunities, but was not able to find grants for a generator that would be big enough for the entire building.</i></p> <p><i>This building also has accessibility issues, and so is not ideal as a primary shelter. Nevertheless, the Town is interested in expanding its sheltering capabilities, including heating and cooling centers, and so wishes to continue pursuing installation of a generator at this site. The Town will pursue generator installation options, including a generator that may only power a section of the building.</i></p> <p><i>In addition to installing a generator, the Town will have to consider personnel needs for managing the shelter. This may involve increasing the capabilities of the local CERT.</i></p> <p><i>This action is carried forward.</i></p> <p>A new action to increase the capabilities of the local CERT team to enable staffing of a secondary shelter is added to this plan.</p>
5	Update the Town's Floodplain Management Regulations to reflect the recent recommendations from CT DEEP	Carry Forward	<i>This action has not yet been pursued due to staffing limitations. Floodplain Management Regulations haven't been updated since 2001</i>
6	Consider incorporating elements of Low Impact Development into the Subdivision and Zoning Regulations.	Partially Completed Carry Forward with Revisions	<p><i>Zoning Regulations were updated in 2020 and includes LID elements.</i></p> <p><i>Subdivision Regulations update is underway.</i></p> <p><i>Action is carried forward, revised to refer only to Subdivision Regulations.</i></p>

#	Action	Status	Notes
7	Consider prohibiting new residential construction in SFHAs, or require freeboard of at least one foot.	Capability	All new construction must adhere to the State Building Code, which requires one foot of freeboard.
8	Encourage FEMA to update the Flood Insurance Study and SFHA mapping to reflect revised hydrology.	Carry Forward	Town staff attended a meeting in the past five years where they were told that the flood maps would be updated by 2020. Town does not expect this schedule to be kept. FEMA has not communicated with anybody from the Town about map updates. The current FEMA maps are dated 1980. Town staff report that this area of the state has the most out-of-date mapping. They observed that coastal areas have seen multiple updates over recent years, but despite multiple significant flood events in inland areas, no update has occurred. Town would like FEMA to prioritize this corner of the state
9	Require developers to demonstrate whether detention or retention of storm water is the best option for reducing peak flows downstream	Capability	This is a capability.
10	Evaluate the critical facilities along the Housatonic River to determine potential flood damage reduction methods.	Carry Forward	This action has not yet been completed due to funding and staffing limitations. Action is carried forward. Two new actions addressing specific facilities are added to this plan: - Complete an analysis of flood mitigation options at the Sewer Treatment Plant. This facility was at risk of failure during the 2018 ice jams event. - Work with the Kent School to address floodwater and groundwater issues. Currently the school regularly has to pump out water into the Town sewer system, which stresses the system. Explore options for circumventing the system for this pumping.
11	Evaluate RLPs mapped in the 100-year floodplain to identify appropriate methods of reducing flood risks.	Carry Forward with Revisions	Town reports that RLPs are repetitively flooded, but do not experience economic losses or notable damages during flooding; residents temporarily evacuate and then move back. This makes incentivizing mitigation challenging. Despite this, Town staff report that one homeowner has elevated utilities above flood grade. Town does not feel that identifying flood reduction methods is an appropriate action for these properties. A new RLP action, encouraging sending letters to RLP property owners to raise awareness of hazard and mitigation options, will be added to the plan.

#	Action	Status	Notes
12	Determine the address of the unidentified repetitive loss property.	Completed	<i>This property is a residence located at the end of Johnson Road. The actual address and owner's name are known to the Land Use Office.</i> <i>A new action is added to the plan to validate/correct the RL list for the town and fill out the AW-501 forms.</i>
13	Evaluate the side street flooding concerns along Kent Hollow Road and the West Aspetuck River to identify appropriate methods of reducing flood risks.	Completed	<i>Town reports that flooding in this area is caused by beaver activities. Flooding can happen during storms because beavers keep water high. Flooding is usually relatively minor, only temporarily causing road closures.</i> <i>Town traps and removes beavers on occasion. During flooding, the Town closes roads and temporarily reroutes traffic.</i> <i>Town does not believe this intermittent flooding warrants major capital expenditure.</i>
14	Provide technical assistance regarding floodproofing measures to interested residents.	Capability	<i>Town is able to assist residents as needed. No residents have requested information.</i>
15	Conduct a comprehensive evaluation of flood prone areas along Route 7 at the Housatonic River to determine appropriate flood mitigation measures.	Carry Forward	<i>Action has not yet been pursued due to funding limitations.</i>
16	Compile a checklist cross referencing ordinances and regulations and make this available to development applicants	Completed	<i>Town has a regulations checklist that is provided to developers along with permit applications.</i> <i>A Floodplain Application is available on the Town's website.</i>
17	Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	Carry Forward	<i>Land Use Administrator completed a flood-related training when she started her job.</i> <i>Town would like to have land use and road crew staff complete flood mitigation training.</i>
18	Provide outreach regarding home elevation, relocation, flood barriers, dry and wet floodproofing, and other home and business improvement techniques	Carry Forward with Revisions	<i>Town has not yet pursued this action due to staff limitations.</i> <i>Carry forward revised to specifically call for providing informational pamphlets at the Town Hall, and including hazard mitigation information on the Town website.</i>
19	Selectively pursue conservation recommendations listed in the Plan of Conservation and Development	Capability	<i>This is a capability</i>

#	Action	Status	Notes
20	Pursue acquisition of additional municipal open space in SHFAs and set it aside for greenways, parks, etc.	Drop	<i>Town has a high percentage of open space land in town, and active land conservation organizations. Development within the floodplain is already limited. Town does not believe acquisition of open space by the Town is necessary.</i>
21	Replace two culverts along Tanguay Road and the Aspetuck River	Carry Forward	<i>Action has not yet been pursued due to funding limitations and the low priority of this action with regards to hazard mitigation. Action is carried forward.</i>
22	Replace the bridge at Straight Road/Kent Hollow Road and the Aspetuck River	Completed	<i>Kent Hollow Road Bridge was replaced with a box culvert in 2017. The new culvert was rated for a 100-year storm. This is a low velocity section of the Aspetuck River and the culvert design was determined to be sufficient.</i>
23	Develop a plan for continued culvert maintenance.	Capability	<i>Town has a culvert maintenance regime in place.</i>
24	When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate stream crossing policies	Carry Forward	<i>Action has not yet been completed due to funding and staffing limitations. Action is carried forward</i>
25	Ensure adequate barricades are available to block flooded areas in flood prone areas of the town.	Capability	<i>Town has adequate barricades.</i>
26	Work with CTDOT to upgrade sections of South Kent Road in order to accommodate increased traffic when Route 7 is closed due to flooding.	Capability	<i>Town communicates with CTDOT about alternative access needs in case Route 7 is closed, and performs upgrades to South Kent Road as needed.</i>
27	Develop a town wide tree limb inspection and maintenance programs to ensure that the potential for downed power lines is diminished.	Capability	<i>Town has a tree maintenance program.</i>
28	Work with CL&P to determine the feasibility of placing non-conducting steel cables above the power lines to protect them from falling branches and trees.	Completed	<i>Eversource has increased efforts to improve power delivery reliability.</i>

#	Action	Status	Notes
29	Continue to require the location of utilities underground in new developments or during redevelopment whenever possible.	Capability	<i>Underground utilities are required, when feasible, in new developments.</i>
30	The Building Department shall provide literature regarding appropriate design standards for wind.	Capability	<i>Wind standards are provided through State Building Code</i>
31	Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures	Capability	<i>Wind standards are provided through State Building Code</i>
32	Coordinate with the three private schools in town during expansion and renovation to ensure that buildings are designed to be resilient to wind damage.	Capability	<i>State building codes are enforced for municipal buildings.</i>
33	Develop a plan to prioritize snow removal from the roof of municipal buildings (especially critical facilities) and have funding available for clearing	Capability	<i>Town has sufficient capabilities for clearing snow from municipal building roofs.</i>
34	Consider posting the snow plowing routes in municipal buildings and the town web site	Drop	<i>Town does not believe this action will improve hazard mitigation capabilities</i>
35	Identify areas that are difficult to access during winter storm events and develop contingency plans	Capability	<i>Town is aware of difficult-to access areas and takes special precautions to maintain access during emergency events.</i>
36	Provide information for mitigating icing, insulating pipes, and retrofits for flat roofed buildings	Capability	<i>Mitigation guidelines provided in State Building Code.</i>
37	Consider the hardening of utilities along North Kent Road to minimize power outages during storm events	Capability	<i>Town works closely with Eversource to ensure appropriate power hardening and redundancy measures are taken.</i>
38	Consider preventing residential development in areas prone to collapse such as below steep slopes, or in areas prone to liquefaction	Completed	<i>Steep slopes have been addressed in the updated zoning regulations.</i>

#	Action	Status	Notes
39	Ensure that municipal departments and critical facilities have adequate backup facilities in case damage occurs	Carry Forward with Revisions	<i>Previous action is vague. Carried forward to call for enabling remote-access to essential operational systems in case municipal facilities cannot be accessed.</i>
40	Consider bracing systems and assets inside critical facilities	Carry Forward with Revisions	<i>Replace action with one calling for backing-up of data and systems on the cloud (merge with new action above)</i>
41	Include dam failure areas in the CTAlert emergency contact database	Capability	Dam failure areas are included in CTAlert system
42	Develop a long term beaver dam management plan.	Capability	<i>Beaver management requires an Inland Wetlands Permit. In most cases the IWC recommends the hiring of Beaver Solutions. Removal of the beaver itself requires a DEEP permit through a licensed trapper.</i>
43	Consider replacing culverts frequently impacted by beavers with free span bridges.	Drop	<i>Town feels its beaver management activities are sufficient. Specific culvert and bridge replacement projects will be identified as actions moving forward.</i>
44	Consider the use of beaver deterrent devices such as beaver stops, beaver bafflers or beaver deceivers.	Capability	<i>See action 42</i>
45	Require insallation of fire ponds and dry hydrants in areas not served by public water, and sprinkler systems in buildings where access is limited	Capability	<i>This is a capability</i>
46	Coordinate between the Fire Department and Aquarion Water Company to identify areas of low pressure or limited fire fighting capacity	Carry Forward	Carry Forward

MEETING DATE:	September 21, 2020	ATTENDEES:	Denise Raap, First Selectwoman
PROJECT:	NHCOG HMP Update		Paul Gibb, EMD
MMI #:	3843-06		Naomi Bocci, PW Assistant Supervisor
SUBJECT:	Town of Litchfield		Victoria Brudz, MMI
LOCATION	Virtual/Remote		
	Zoom		

Victoria met with Town of Litchfield representatives on September 21, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Section of the Town	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Litchfield Leaf Compost Facility	72 Little Pitch Road	Litchfield	Municipal Solid Waste				
Bantam Fire Company	92 Doyle Road	Bantam	Ems	✓	✓		
Bantam Fire Company	92 Doyle Road	Bantam	Fire Station	✓	✓		
Connecticut State Police Troop L - Litchfield Resident State Trooper	74 West Street	Litchfield	Law Enforcement				
Connecticut State Police Troop L Barracks - Headquarters	452 Bantam Road	Litchfield	Law Enforcement				
Connecticut State Police Western District - Headquarters	452 Bantam Road Suite B	Litchfield	Law Enforcement				
Litchfield Volunteer Fire Department	258 West Street	Litchfield	Ems	✓			
Litchfield Volunteer Ambulance Association	11 East Street	Litchfield	Ems	✓			
East Litchfield Volunteer Fire Company	365 East Litchfield Road	Litchfield	Fire Station	✓			
Litchfield Volunteer Fire Department	258 West Street	Litchfield	Fire Station	✓			

Facility	Address or Location	Section of the Town	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Bantam Fuel Mart	199 West St	Litchfield	Gas Station with Generator	✓			
Northfield Volunteer Fire Company Incorporated	12 Knife Shop Road	Northfield	Ems	✓	✓		
Northfield Volunteer Fire Company Incorporated	12 Knife Shop Road	Northfield	Fire Station/Rescue	✓	✓		
Litchfield Public Works	101 Russell Street	Litchfield	Town Hall	✓			
Litchfield Town Hall Annex	80 Doyle Road	Bantam	EOC	✓			
WPCA	29 Stoddard Road	Litchfield	Utility	✓			
Litchfield High School	14 Plumb Hill Road	Litchfield	Comfort Station				<i>Potential to become shelter in the future.</i>

Recent Events

- Tropical Storms Isaias (August 2020) resulted in town-wide tree damage and power outages. It was noted that the key to being able to clear roads efficiently is working with Eversource to kill the power to lines so DPW can remove debris; this was a challenge during this storm, communication was poor, and Eversource often seemed unaware of where needed to be cleared and where crews were working.

RL Properties

- It was discussed that according to the RL list available, there appears to be one RL property in Litchfield, however, it is in Morris

Hazards Discussion

- Some properties and roadways have experienced a lot of water underground (assumed to be a high water table), but there has not been a significant amount of flooding as a result. Some properties have seen water in the basement, and 1 property has reportedly had an ongoing claim with an insurance company or other entity.
- Engineers have surveyed the area, and the town has worked to mitigate this underground water issue and addresses new concerns as they arise.
- Some roadways that have experienced flooding issues in the past include Camp Dutton Hill Road, Headquarters Road, and Milton Road. However, the town has mitigated and addressed much of the concern along these roadways.
- The Litchfield Soccer Club fields have had some minor flooding issues in the past; however, it is unclear as to whether adjacent properties have been impacted.

- High wind events in conjunction with tree deterioration is one of the biggest concerns for the town. The Town has estimated that 1,300 trees need to be removed in the near future due to Emerald Ash Borer damage.
- In recent years snow events have not presented major challenges like years past. At times, some roads were a challenge to clear during heavy snowstorms.
- The town is concerned that if there is an extended drought in the future, or droughts worsen, private well owners may experience problems with water availability. To the town's knowledge there are no current issues, however, the town is aware of the potential impacts that may occur.
- Whenever there is a NWS thunderstorm warning the town is now thinking of potential tornado or downburst activity that may occur, as frequency of these events appears to be increasing.

Capabilities

- DPW has a large stockpile of material to repair the roughly 20 miles of dirt and gravel roadways in town after a storm. Heavy precipitation events in the past have resulted in washed out roads that caused accessibility issues.
- While flooding concerns are relatively low in priority for the town, any areas that are a concern are budgeted for and addressed as quickly as possible.
- The town has upgraded many of the major bridges in town and is beginning to work on culverts.
- Residents call DPW to make a "request for service" when reporting issues such as flooding or downed trees. The DPW then works to collect resident information, assess the issue being reported, then either address the issue immediately or make a near-term plan to rectify the service requested.
- Many of the areas that were a concern for drifting snow have been addressed. Trees have been planted or removed where necessary to assist with snow control efforts.
- The town is continuously using Everbridge for emergency communication. It was most recently used several times for the COVID-19 pandemic, and Tropical Storm Isaias.
- A regional interoperability plan is being developed by ESF2 of the region 5 REPT.
- The town has programed the state's interop frequencies, including STOCS, into response vehicles and portable radios used by first responders and EM staff. An SOP is in development.
- Town has a tree warden and assistant tree warden.

Goals, Objectives, and New Actions

- Conduct a tabletop drill with the school's staff and admin regarding natural hazard response on an annual basis.

Status of Previous Actions

Litchfield Previous Actions

Table V.45: Objective 1 Educate the public regarding natural hazards of concern, mitigation activities, and community preparedness			
Strategies	Who	Status	Notes
<i>1. Visit schools and educate children about natural hazards and how to prepare for them.</i>	Volunteer Fire Dept. and Emergency Management Director	Remove	Municipal staff has not done any outreach; however, the fire department does have fire days, but nothing specifically about natural hazards. Schools have not made requests for this type of education, but the town would work with schools to conduct education if requested.
<i>2. Make literature available on natural hazards and preparedness at Litchfield Town Hall and Town Library.</i>	Emergency Management Director and First Selectman	Carry forward with revise	Some materials have been available at the town library, and there are currently resources on the EM website, possibly linked to ready.gov site. Revise to include annual review of the EM website, the listed resources, and update as necessary.
<i>3. Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force, regional emergency planning team (REPT) and Red Cross on community planning, preparedness, response, and training.</i>	Emergency Management Director and First Selectman	Ongoing, carry forward	EOP was revised in 2018, submitted in Feb 2019, and another update will be submitted in Feb 2021. REPT continues to meet at least 3 times a year, with additional meetings, as necessary. REPT steering committee meets quarterly.
<i>4. Maintain the Emergency Notification System (e.g. Everbridge system) to provide emergency information to residents in the entire town or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.</i>	Emergency Management Director and First Selectman	Ongoing	Town will be renewing contract with Everbridge in the next few months. This is an annual contract. The town used the system for COVID info and during Isaías.

Table V.46: Objective 2 Ensure proper functioning of critical facilities during emergency response

Strategies	Who	Status	Notes
<p>1. Routinely inspect emergency response equipment, and train for response tonatural disasters.</p>	<p>Volunteer Fire Dept. and Emergency Management Director</p>	<p>Ongoing, carry forward, with revision/ new action</p>	<p>The fire department is always inspecting equipment. The Dive Team recently went out to test equipment, and cots were also recently inspected. The FD has ongoing drills on weekly basis. The Town had a tabletop exercise planned in May 2020 with the schools, but this was postponed due to COVID. This is a periodic occurrence. Potential new action. Schools also conducts drills on a regular basis to practice school emergency plans, as this is required by the state, and these drills are logged.</p>
<p>2. Acquire additional emergency response equipment including communication equipment, and portable generators for Town Hall, the High School, and Elementary School.</p>	<p>Emergency Management Director, Fire Chief</p>	<p>Complete</p>	<p>Town is in the process of acquiring a message board sign, and they have acquired light towers and an amateur radio station. The town has also acquired portable generators; this is used at the repeater site on Camp Dutton Hill Road. Town has acquired 65 more shelter cots recently, and an 800 MHz portable radio which operates on the state’s trunked system.</p> <p>The town is pursuing funding for an emergency response trailer in spring 2021, this would include supplies such as cots and other materials for mass casualty events.</p>
<p>3. Promote the use of interoperable communication equipment, and the development of standard operating procedures for emergency response in the regional area.</p>	<p>Emergency Management Director, Fire Chief, and First Selectman</p>	<p>Ongoing</p>	<p>The 800 MHz radio is designed for interoperable communication and allows for communication between local EMDs. The town has programed the state’s interop frequencies, including STOCS, into response vehicles and portable radios used by first responders and EM staff. An SOP is in development. A regional interoperability plan is being developed by ESF2 of the region 5 REPT.</p>
<p>4. Consider developing a Memorandum of Understanding with schools or school bus company to utilize school buses for mass transportation during an emergency.</p>	<p>Emergency Management Director and First Selectman</p>	<p>Ongoing</p>	<p>Town does not think this exists, there is a verbal agreement that the company would make buses available if needed.</p>
<p>5. Develop regional GIS capabilities as needed for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.</p>	<p>Emergency Management Director, Fire Chief, and DEMHS</p>	<p>Complete/ongoing</p>	<p>Town has access to latest technology that appears to supersede this need. REPT is currently working to produce parcel mapping and assist with data development. DPW has acquired GIS which is being implemented and expanded upon as updates in information occur.</p>

Table V.47: Objective 3 Expand maintenance activities and implement specific projects that address known drainage issues within the town			
Strategies	Who	Status	Notes
1. <i>Implement control measures to mitigate the flooding created by beavers.</i>	Public Works Dept.	Complete/ongoing	DPW conducts weekly inspections of known beaver impacted areas. The areas that are a concern have either been budgeted for for maintenance or have been mitigated to address the problem. The Town has been able to obtain funds for this action.
2. Implement clean-out schedule for all catch basins and drainage facilities.	Public Works Dept.	Ongoing	Town just purchased a catch basin cleaner, and these are cleaned when needed.
3. <i>Monitor floodplain regulations and update as necessary based on DEEP's "Model Floodplain Management Regulations" and FEMA Guidelines.</i>	Planning and Zoning Commission		Follow up with PZ
4. <i>Identify the location of structures that are susceptible to flooding to facilitate risk assessment and potential control measures (e.g. box culvert needed at Camp Dutton).</i>	DPW, EMD, or DEEP	Ongoing	Camp Dutton Hill Road and Headquarters Road were two areas that were of concern and are being addressed. DPW is continuously identifying and addressing these concerns.
5. <i>Maintain appropriate funding to augment the municipal tree trimming program.</i>	First Selectman, Public Works Dept.	Ongoing	About 1,300 Ash trees that need to be removed in Litchfield. Money is being budgeted for tree removal. It is estimated that removals will cost ~\$1 million.
6. Develop list of vulnerable populations for quick disaster response.	Emergency Management Director, Human Services, First Selectman	Carry forward with revise	<p>There has never been a specific list that identifies residents who need power for medical purposes. Some facilities include: Wells Run – affordable housing, managed by Litchfield Housing, Bantam Falls, Bantam Village</p> <p>Town can get a list of residents who need power from Eversource, but only in an emergency – i.e. power outages, or the First Selectman has declared an emergency, or town EOP s activated. Town should work to develop this list and work with local organizations/companies to identify residents.</p>

PROJECT:	NHCOG HMP Update	PARTICIPANTS	Lew Clark
MMI #:	3843-06		Thomas Weik
SUBJECT:	Town of Morris		

Noah Slovin collected information relevant to the local planning process for the hazard mitigation plan update from Morris representatives on September 15 and October 20, 2020. A worksheet summarizing information needing to be updated was provided to Town staff prior to those dates. Road Foreman Lew Clark emailed written responses to Noah Slovin on September 15, 2020. Noah and First Selectman Thomas Weik discussed the worksheet by phone on October 20, 2020.

The following memorandum reflects information gathered on the October 20 meeting, which itself referenced feedback from Lew Clark.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power	Shelter	SFHA	Notes/Changes
Morris Town Hall	3 East Street		~			<i>Insufficient emergency generation capacity</i>
James Morris Elementary School	10 East St	Emergency Shelter				<i>Lack of generator here Working with superintendent to make it part of his master plan to put in generator here. To make emergency shelter. Water, showers, kitchen. Regional school district</i>
Town Public Works Department	9 Town Garage Road		X			
Morris Fire Company	15 South Street	Emergency Operations Center	X			
Morris Senior Center	109-21 East Street		X			

Some critical facilities, such as the Town Hall and the James Morris Elementary School, lack sufficient emergency generation capacity. The elementary school is the Town's primary shelter. The Town has previously applied for a FEMA grant to install a generator at the Morris School; however the grant was not awarded because it was determined that the Regional School District Number 6, which owns the property, was the eligible applicant, and the Town was not. The Town may work with Regional School District No. 6 on submitting a new application.

Changes to Hazard Concerns or Locations

- Flooding caused by beaver activities continues to be a management challenge for the Town. Routine trapping is performed as needed.
- Power lines in heavily forested areas are at risk of being downed by falling tree limbs.

- The area around East Shore Road has historically experienced periodic flooding due to poor drainage; the Town has improved the drainage systems in this area, and flooding is no longer a concern. Pipes were replaced under the road near the Boat Launch. The box culvert near the Town Beach is planned to be replaced in the future.

New Hazard Mitigation Capabilities

- Town has implemented the Everbridge Nixle emergency alert system locally. This system has many benefits, but people need to subscribe to receive notifications. The Town is currently actively working to get more individuals subscribed.
 - The Town utilized the Nixle system during the severe summer storms in 2020, and found it to be useful. One primary utility of the system was to inform residents of road blockages.
- The Town has improved drainage capacities in the area around East Shore Road.
- Morris has shown that it has the capability to apply for FEMA grants. The Town has previously applied for a FEMA grant to install a generator at the Morris School; however the grant was not awarded because it was determined that the Regional School District Number 6, which owns the property, was the eligible applicant, and the Town was not.
- All new structures built in the flood plain are required to be built above the base flood elevation

New Goals, Objectives, and Actions

- Replace the box culvert near the Town Beach.

Hazard Mitigation Plan Update Worksheet

Status of Previous Actions

#	Description	Dept.	Status	Notes
1.1	Visit schools and educate children about natural hazards and how to prepare for them.	VFD and EMD	Carry Forward	VFD does fire-prevention education programs, though the COVID pandemic has impacted this program. Carry forward action for broader education about natural hazard mitigation.
1.2	Make literature available on natural hazards and preparedness at Morris Town Hall (and website)	EMD and First Selectman	Carry Forward	Town wishes to carry this forward to share information in the Town Hall, on the Town Website, and on Facebook. The Town first needs to identify a good resource to share with the public. Specific sources or websites can be found at: www.ready.gov/publications portal.ct.gov/DEMHS/Emergency-Management/Resources-For-Individuals/Resources-for-Individuals portal.ct.gov/DEMHS/Emergency-Management/Resources-For-Individuals/Mitigation-Tips-for-Homeowners
1.3	Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and Red Cross on community planning, preparedness, response, and training.	EMD and First Selectman	Capability	This is a capability. Town also coordinates with the regional school district's EOP and the Red Cross.
1.4	Continue to participate in LCD's Everbridge Emergency Notification System to provide emergency information to residents in the entire town or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.	EMD and First Selectman	Capability	This is a capability. The Town participates in the LCD system; additionally, the Town has implemented the Nixle Everbridge system locally.
2.1	Routinely inspect emergency response equipment, and train for response to natural disasters.	VFD and EMD	Capability	This is a capability, performed by the Volunteer Fire Department

#	Description	Dept.	Status	Notes
2.2	Acquire additional emergency response equipment including generators for the Town Hall, Elementary School, and Town Garage.	EMD, Fire Chief	Carry Forward	<p>Progress has been made on this action. The Town Garage, Fire House and Senior Center all have generators. The Elementary School and Town Hall do not; Town applied for a FEMA grant to pay for a generator for the Elementary School without success.</p> <p>Action is carried forward as two separate actions: one to install a generator at the Town Hall, and a second to work with the regional school district to complete a FEMA grant application for a generator at the Elementary School.</p>
2.3	Promote the use of interoperable communication equipment and the development of standard operating procedures for emergency response in the regional area.	EMD, Fire Chief, and First Selectman	Complete	The Town has acquired new radios from DEMHS Region 5 through a State program to provide interoperable communication equipment for Fire Departments, EMS, EMD, and Police. Morris only has a Fire Department and EMD locally. Radios worked well in recent storms, and helped the Town stay in touch with the Region 5 coordinator and other municipal departments.
3.1	Continue to implement control measures to mitigate the flooding created by beavers.	Public Works Dept.	Capability	<p>This is a capability. Town mitigates beaver activities through culvert replacements and upgrades, beaver deceivers and related measures, and trapping and removing as needed.</p> <p>The Town has had only moderate success with beaver deceiver measures, as the beavers eventually figure out how to block them, and they pose a significant maintenance challenge.</p>
3.2	Maintain current program of clean-out schedules for all catch basins and drainage facilities	Public Works Dept.	Capability	This is a capability.
3.3	Review floodplain regulations and ordinances and update as necessary based on DEEP's "Model Floodplain Management Regulations"	Planning and Zoning Commission	Carry Forward	The State Building Code requires one foot of freeboard for construction within the floodplain; the DEEP model flood regulations have been updated to reflect this, but Morris has not yet adopted freeboard. This action is carried forward.

#	Description	Dept.	Status	Notes
3.4	Continue to identify the location of structures that are susceptible to flooding to facilitate risk assessment and potential control measures.	DEMHS or DEEP	Capability	<p><i>This is a capability.</i></p> <p><i>The only specific location of concern identified by the First Selectman is Palmer Road onto Deer Island. Residences there are at risk, and occasionally are impacted by flooding; however, as these homes are constructed and repaired they are being elevated.</i></p> <p><i>Town staff report that there is not much flood concern elsewhere in Town.</i></p>
3.5	Continue to implement the municipal tree trimming program to maintain the road right-of-way.	First Selectman and Public Works Dept.	Capability	<p><i>This is a capability.</i></p> <p><i>The Town has been aggressive with tree trimming along municipal roads (only about 26 miles of road) with a budget of about \$30,000 to 40,000 per year. Eversource has been trimming along power lines. Town reports that its tree trimming program is robust.</i></p>
3.6	Conduct drainage feasibility study of the East Shore Road area to identify corrective actions for the periodic flooding at this location	First Selectman and Public Works Dept.	Completed	<p><i>Town completed study and identified need for replacing culverts.</i></p> <p><i>Pipes under East Shore Road near the Boat Launch turnoff were have been replaced.</i></p> <p><i>The box culvert under the road near the Town Beach turnoff is planned to be replaced in the future. The Town has begun directing money toward this project through its CIP.</i></p>
3.7	Discuss requiring new buildings constructed in floodprone areas to be protected to the highest recorded flood level regardless of being within a defined Special Flood Hazard Area (SFHA).	Planning & Zoning Commission	Drop	<p><i>All new structures built in the flood plain are required to be built above the base flood elevation. Additionally, new state building code standards and floodplain zoning regulation guidelines require elevation to one or two feet above base flood elevation (freeboard). Local enforcement of the State building code suspends the need for this action.</i></p>
3.8	Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.	Public Works	Carry Forward	<p><i>This action has not yet been completed due to budget and funding limitations. Engineers working with Public works will do this action in the future.</i></p>

#	Description	Dept.	Status	Notes
3.9	Require the location of utilities underground in new developments or during redevelopment whenever possible.	Building Department; Planning & Zoning; Public Works	Drop	<i>Tow has very few new developments. This action is not required for new development, but many new subdivisions tend to do this if feasible. This action is not considered necessary.</i>
3.10	Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	Emergency personnel; Public works	Capability	<i>This is a capability.</i>
3.11	The Town should continue to require the installation of fire protection water in new developments.	Building Department; Planning & Zoning	Capability	<i>This is a capability. There is no public water system in town. Some developments have sprinkler systems – the Town Code has a requirement based on square footage of a building The Fire Department has an annual budget item for fire pond and hydrant installation, inspection, and maintenance. A fire hydrant was repaired in October of 2020. Fire hydrants are tested on a regular basis.</i>

MEETING DATE:	August 26, 2020	ATTENDEES:	Daniel Jerram, First Selectman
PROJECT:	NHCOG HMP Update		Victoria Brudz, MMI
MMI #:	3843-06		
SUBJECT:	Town of New Hartford		
LOCATION	Virtual/Remote		
	Zoom		

Victoria Brudz met with Town of New Hartford representatives on August 26, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Barkhamstead Leaf Compost Facility		Municipal Solid Waste				
New Hartford Public Safety Department	530 Main Street	Law Enforcement				
New Hartford Volunteer Ambulance Service	12b Greenwood Road	Ems				
New Hartford Fire Department Station 1	3 Greenwood Road	Fire Station				
New Hartford Fire Department Station 2 – satellite facility for station 1	3 Arrowhead Drive	Fire Station				
Pine Meadow Volunteer Fire Department	366 Main Street	Fire Station				
South End Volunteer Fire Department	20 Antolini Road	Fire Station				
Town Hall	530 Main Street	Municipal Facility	✓			
Ann Antolini School	30 Antolini Road	Shelter	✓	✓		
WWTP	232 Main Street	Utility				
DPW	9 Greenwood Road	Emergency Support	✓			

Development Trends

- There is a lot of open space in New Harford. The town has acquired various large parcels, some upwards of 100 acres.
- The average number of applications a year is between 7 and 8 for development. Many of these have been large lakeside homes resulting from knocking down and rebuilding.
- The town saw a large boom for development in the early 2000's, which slowed in '08-'09. However, the town anticipated a rise in development as demands seem to be shifting in the region.
- The town is in early discussion with a developer for a new senior housing complex. The location of this site has not yet been determined.

Recent Events

- Tropical Storm Isaias in August 2020 resulted in outages and blocked roads. There were minor challenges with pumping station generators during the weeklong outage, however, the generator was in service and maintained capacity.

RL Properties

- The previously identified RL properties in the last HMP appear to be correct. The town would like to review the latest information to better identify these areas.

Hazards Discussion

- MDC has 2 dams in town, but failure concern remains low as they are monitored and maintained constantly.
- Outages and trees are the biggest concern for the town, not just during larger storm events. Trees tend to cause outages and blocked roads during various sized storms, including summer and winter events.
- Some areas that are typically of biggest concern regarding tree damage are:
 - West Hill Road
 - Stub Hollow Road
 - Niles Road
 - Hayward Road
- Icing can be a concern and is typically storm dependent.
- However, Route 219 traveling south to the downtown can experience icing troubles, as well as Ratlum Road. Ratlum Road is often treated heavily due to high traffic during snow events with the number of people visiting Ski Sundown.
- Carpenter Road bridge overtopped once or twice a year. This bridge has been completely upgraded, but the culvert has not been increased in size.
- The Elementary school is in flood prone area. As a result, there is a flood evacuation discussion in the school emergency plans.
- RL areas in the previous plan, such as along rt 202 corridor look reasonably accurate.

Capabilities

- The town has done extensive curbing work throughout town to help move stormwater and mitigate property flooding.
- The Carpenter Road bridge was recently redone and is completely new. The town sought to increase the culvert size as well, but this was not permitted by DEEP. Old structure was a stone wall abutment without wingwalls, whereas the upgrade includes new wing walls and the stream has reportedly been restored.
- Areas of town have sewer and public water, helping avoiding losses during outages.
- There are 3 pumping stations for the WWTP, all with backup power.
- It was noted that during a heavy rain event, or other storm, upstream releases from Farmington River impoundments/dams are typically good at managing downstream flooding.
- The town works to deliver ice to residents during outages and provides free water at town facilities.
- The tree maintenance budget has gone from \$10,000 to \$50,000 in the past 6 years to help mitigate storm issues.
- The West Hill Pond dam floodgate was recently rebuilt as a joint effort between the town and Barkhamsted. This was a \$100,000 project that was partly funded by both towns, with most of the funding sourced from fundraising efforts.
- The First Selectman serves as the tree warden. There is also a deputy tree warden.
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Goals, Objectives, and New Actions

- The town would like to identify all the dams in town to allow for more straightforward outreach to owners.

Status of Previous Actions

Objective 1: Educate the public regarding natural hazards of concern, mitigation activities, and community preparedness			
Strategies	Who	Status	Notes
1. Visit schools and educate children about natural hazards and how to prepare for them.	Volunteer Fire Dept. and Emergency Management Director	Carry forward	Town finds it challenging to conduct certain types of outreach and getting into school curriculum. This action could be carried forward.
2. Make literature available on natural hazards and preparedness at New Hartford Town Hall.	Emergency Management Director and First Selectman	Remove	Town does a lot of outreach and social media presence before a storm/event. Residents seem to respond to email blasts, informational emails. Printed materials do not appear to be as utilized as in the past.
3. Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and Red Cross on community planning, preparedness, response, and training.	Emergency Management Director and First Selectman	Carry forward with revision	The town has good coordination with DEMHS, but Red Cross is typically the “weak link” and are frequently only contacted after a structure fire. The EOP is updated on a 5-year basis. Revise to target Red Cross coordination.
4. Maintain Emergency Notification System to provide emergency information to residents in the entire town or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.	Emergency Management Director and First Selectman	Remove, as other capabilities are available	The town has access to Everbridge but is finding this system not as reliable as anticipated. The town utilizes in-house systems, such as social media or emails which typically reach more residents. Town would utilize emergency first responders if necessary, during a serious situation that required immediate evacuation.

Objective 2: Ensure proper functioning of critical facilities during emergency response			
Strategies	Who	Status	Notes

<p><i>1. Routinely inspect emergency response equipment, and train for response to natural disasters.</i></p>	<p>Volunteer Fire Dept. and Emergency Management Director</p>	<p>Ongoing</p>	<p>The town has 3 fire departments that are continuously inspecting equipment and drilling for emergencies. The departments acquired roughly \$2 million worth of equipment, new trucks, and a tanker. This is separate budget from the Town's.</p> <p>These are independent departments and the town would like to see consolidation one day.</p>
<p><i>2. Cooperate with the Metropolitan District Commission in emergency response training exercises and updates of the Goodwin Dam Emergency Action Plan.</i></p>	<p>Emergency Management Director and First Selectman</p>	<p>Ongoing</p>	<p>The town attends the MDC prep meeting/drill annually. This also includes attending an intensive meeting every 5 years.</p> <p>Evacuations in 30 minutes would be challenging, and this is typically noted during these meetings/drills.</p>
<p><i>3. Acquire additional equipment and supplies for the emergency shelter at Ann Antolini School, including a generator.</i></p>	<p>Emergency Management Director, Fire Chief</p>	<p>Complete</p>	<p>Town has a generator at this site. Town has emergency road signs supplied by DEMHS, and the DEMHS emergency trailer is stationed in town at the fire department. Necessary equipment is readily available in adequate supply.</p>
<p><i>4. Promote the use of interoperable communication equipment, and the development of standard operating procedures for emergency response in the regional area.</i></p>	<p>Emergency Management Director, Fire Chief, and First Selectman</p>	<p>Carry forward with revision</p>	<p>All fire departments communicate with radio systems. The town has antennas and a short wave radio system that they can use during an emergency.</p> <p>Transmission can be difficult on Rt 44 corridor north of Jones Mountain. Verizon towers have a generator in the area, but ATT is typically not as reliable.</p> <p>Revise to include identifying areas of communication challenges and developing alternative methods.</p>
<p><i>5. Consider developing a Memorandum of Understanding with schools or school bus company to utilize school buses for mass transportation during an emergency.</i></p>	<p>Emergency Management Director and First Selectman</p>	<p>Ongoing/carry forward</p>	<p>The town has a good working relationship with schools, and Dattco is the local bus provider that would be involved.</p>

<p><i>6. Develop basic GIS capabilities as needed for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.</i></p>	<p>Emergency Management Director, Fire Chief, and First Selectman</p>	<p>Ongoing</p>	<p>This is just being initiated, the town does have basic parcel GIS, but one requirement for tier 1 town is mapping of outfalls etc. for MS4, so the town is working on upgrading this, including GPS of culverts and cross pipes.</p>
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<p>Objective 3: Expand maintenance activities and implement specific projects that address known drainage issues within the town</p>			
<p>Strategies</p>	<p>Who</p>	<p>Status</p>	<p>Notes</p>
<p><i>1. Implement control measures to mitigate the flooding created by beavers.</i></p>	<p>Public Works Dept.</p>	<p>Ongoing/case by case</p>	<p>South side of town, Bakerville Brook area, are typically the areas of concern. Resident complaints and issues go through wetlands for remediation etc., and the town assists in trapping when feasible.</p>
<p><i>2. Develop clean-out schedules for all catch basins and drainage facilities.</i></p>	<p>Public Works Dept.</p>	<p>Ongoing</p>	<p>Town has a schedule and is continuously maintaining and addressing cleaning. The town also rents necessary equipment to address the cleaning and is aware of the trouble spots.</p>
<p><i>3. Identify the location of structures that are susceptible to flooding to facilitate risk assessment and potential control measures.</i></p>	<p>DEMHS or DEEP</p>	<p>Complete/ongoing</p>	<p>The town is aware of the areas and structures at risk of flooding.</p>
<p><i>4. Replace the undersized culvert at Carpenter Road with a larger one to prevent localized flooding in this area.</i></p>	<p>Public Works Dept.</p>	<p>Remove?</p>	<p>Carpenter Road culvert was not increased per DOT, but the bridge has been upgraded. Town has applied for grant funding. Old structure was a stone wall abutment without wingwalls, and the upgrade includes new wing walls and the stream has reportedly been restored.</p>
<p><i>5. Establish a designated area for brush disposal following storm related events that generate debris.</i></p>	<p>First Selectman and Public Works Dept.</p>	<p>Complete</p>	<p>Town has a designated space. This is regional site with Barkhamsted and Winchester.</p>

<p><i>6. Relocate the New Hartford Public Works Garage out of the Farmington River Floodplain.</i></p>	<p>First Selectman and Public Works Dept.</p>	<p>Carry forward – long term goal</p>	<p>This action is in the POCD, and there is a standing offer with adjacent property to purchase if ever possible. There is reportedly no immediate threat to the facility, as water has never inundated the site, however, the towns thinks this is a possible strategy if the opportunity arose.</p>
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MEETING DATE:	August 12, 2020	ATTENDEES:	Matt Riiska, First Selectman
PROJECT:	NHCOG HMP Update		Richard Byrne, EMD
MMI #:	3843-06		Janell Mullen, NHCOG
SUBJECT:	Town of Norfolk		Victoria Brudz, MMI
LOCATION	Virtual/Remote		
	Zoom		

Victoria Brudz met with Town of Norfolk representatives on August 12, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Norfolk Transfer Station	599 Greenwoods Rd E	Municipal Solid Waste				
Norfolk Lions Club Ambulance	7 Shepard Road	EMS	✓			
Norfolk Volunteer Fire Department	20 Shepard Road	Fire Station	✓			
Georges Norfolk Garage	319 Greenwoods Rd E	Gas Station	✓			
Norfolk Sewer District	258 Greenwoods Rd W	Utility				Added from meeting
Bottelle School	128 Greenwoods Rd E	School	✓	✓		Added from meeting
Norfolk Town Hall	19 Maple Avenue	EOC/Cooling and Warming Center	✓	✓		Added from meeting
Immaculate Conception Church	4 North Street	Church		✓		Added from meeting – elderly housing is next door. Residents can easily evacuate here if need be.
State Police Communication Tower	746 Winchester Road	Communications				Added from meeting, LCD county dispatch uses this tower
ATT Cell Phone Tower	Loon Meadow Drive	Communications				Added from meeting
Town Cell Phone Tower	599 Greenwoods Rd E	Communications				Added from meeting

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Verizon Cell Phone Tower	Ashpohtag Road	Communications				Added from meeting
Public Works Garage	36 Old Colony Road	Emergency services	✓			
State DOT Garage	190 North Street	State Facility	✓			

Development Trends

- Development currently underway in town includes affordable housing

Recent Events

- Tropical Storm Isaias resulted in outages across the entire town, with almost all residents being without power.
- The tropical storm also resulted in severe tree damage along many roadways in town.
- NWS confirmed an EF0 tornado in town two days prior to Isaias. This tornado resulted in a small isolated area of damage to a forested area.
- The tropical storm resulted in outages to the sewer plant, causing severe impacts which almost resulted in plant failure.

Hazards Discussion

- Snowstorms and ice storms are not typically too severe. The town usually experiences two strong winter events a year but can quickly recover.
- The worst winter storms typically result in a maximum of 20% of the population without power.
- There are no specific areas of flood concern.
- High wind events are the biggest concern for the town with the number of trees that need trimming and removal.
- There are some concerns regarding drainage along some of the more rural roads. Public works is working to address these concerns where possible.
- Town has numerous flood control dams, DEEP needs to conduct maintenance on these.
- 3 flood control dams in town. Covered in present plan. Toby is small/deep pond.

Capabilities

- The Region purchased Crisis Track to help with emergency management and mapping critical facilities.
- The town has a tree warden, in addition to a budget for tree removal and maintenance. Public works can typically address most tree issues, but the town works with a contractor for larger jobs.
- The town has a liaison to work with Eversource. The town supplied Eversource with a trimming list to assist in maintenance, and reportedly wait months for acknowledgement of the concerns.
- Resident complaints, such as trees or flooding, go directly to town hall. These are then directed to public works, or tree contractors.

- The Fire Department has installed 10 dry hydrants in the rural areas of town.
- The State has a fiber optic system that runs to all police and fire stations; this system also goes to Litchfield County Dispatch (LCD).
- The School has fiber optic lines, along with a radio system that allows for direct communication with fire, ambulance, school bus company, and LCD. This is the back-up site for the State EOC.
- State currently working on bank stabilization project along Route 44, Blackberry River.
- The Town works to reduce salt use when capable. Affordable homeowner programs will be netzero energy usage. Implementing a solar farm near landfill site.

Goals, Objectives, and New Actions

- The town would like to install a backup power supply source at the sewer district.
- There are several bridges in town that need to be repaired and upgraded per already completed engineer analysis.

Status of Previous Actions

Table V.66: Objective 1 Educate the public regarding natural hazards of concern, mitigation activities, and community preparedness			
Strategies	Who	Status	Notes
1. Visit schools and educate children about natural hazards and how to prepare for them.	Volunteer Fire Dept. and Emergency Management Director; Botelle School Safety and Security Committee	Ongoing	Local school plan has been revised several times, a lot of education for storms is done throughout the year.
2. Make literature available on natural hazards and preparedness at Norfolk Town Hall.	Emergency Management Director and First Selectman	Ongoing	There is some printed available in town, and the town is very active on social media and online. There is an EMD-authored Facebook page.
3. Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and DEMHS Region 5 on community planning, preparedness, response, and training.	Emergency Management Director and First Selectman	Ongoing	Plans are maintained, and the LEOP was recently updated in Summer 2020.
4. Maintain the Emergency Notification System (e.g. Everbridge system) to provide emergency information to residents in the entire town or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.	Emergency Management Director and First Selectman	Remove	Town does not use Everbridge anymore, but the town can access Everbridge through LCD, and can relay messages on behalf of the town. Town is successful using social media, and likely no desire to implement a new system. There is a school alert system that provides some backup and/or redundancy.
5. Continue use of social media to enhance public notification of emergency events and appropriate emergency response procedures.	Emergency Management Director	Ongoing	Very successful program.
6. Provide information on the dangers of cold-related hazards to people and property	Emergency Management Director	Ongoing	Often distributed through social media.

7. Consider posting the snow plowing routes in Town buildings each winter to increase public awareness.	Public Works	Incomplete	Routes are Constantly changing, and therefore difficult to post. Town will look in to posting some information.
8. The Building Department should provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat- roofed buildings such as heating coils.	Building Department		Residents are often aware of the steps needed to be taken to prevent this issue.

Table V.67: Objective 2 Ensure proper functioning of critical facilities during emergency response

Strategies	Who	Status	Notes
<i>1. Routinely inspect emergency response equipment, and train for response to natural disasters.</i>	Volunteer Fire Dept.; Emergency Management Director; and Public Works	Ongoing	Town now has an emergency management trailer with backup communications system, heating and cooling, also used for a rehab trailer. This is a regional asset – but owned by the town.
<i>2. Acquire additional emergency response equipment and supplies for the emergency shelter, with the purchase of a generator being the top priority for the wastewater treatment plant.</i>	Emergency Management Director, Fire Chief	Carry forward with revision	The Town has about 150 cots for shelter, or roughly 10% of population, and has blankets/pillows/care kits. School typically has own food supply that can be utilized if need be. Town does have a “menu” of shelter/emergency items needed during an event. Public works would like to acquire a grapple, for tree removal, and needs a new firehouse.
<i>3. Promote the use of interoperable communication equipment, written mutual aid agreements, and the development of standard operating procedures for emergency response in the regional area. Integrate DEMHS Region 5 plans into local mitigation plans.</i>	Emergency Management Director, Fire Chief, and First Select- man	Ongoing	Town uses statewide mutual aid system – no towns have opted out of this, so all are included. DEMHS plans are integrated into plans.
<i>4. Consider developing a Memorandum of Understanding with the school bus transportation company to utilize school buses for mass transportation during an emergency.</i>	Emergency Management Director and First Selectman		Town does have a small bus if needed. During the school year, the company leaves buses in town, along with drivers. There has been discussion to use these during an event, this is stated in the emergency plans.

<p>5. Consider developing basic GIS capabilities for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.</p>	<p>Emergency Management Director, Fire Chief, and First Select- man</p>	<p>Ongoing/com plete</p>	<p>DEMHS recently funded a project to work with New England GEO, and parcels were updated Jan 2020. All Norfolk parcels are available to the town. Assessor and Public Information officer will work together. This development was for emergency response, and it therefore includes property owner information.</p>
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Table V.68: Objective 3 Expand maintenance activities and implement specific projects that address known drainage issues within the town

Strategies	Who	Status	Notes
<p>1. Implement control measures to mitigate the flooding created by beavers. Evaluate feasibility of replacing culverts frequently impacted by beavers with free-span bridges.</p>	<p>Public Works Dept.</p>	<p>Ongoing/remove</p>	<p>Four areas in town often impacted, and the DPW strategically addresses issues. Town has evaluated beaver systems, but strategic maintenance often solves the problem. Replacing culverts with bridges likely not necessary.</p>
<p>2. Develop clean-out schedules for all catch basins and drainage facilities.</p>	<p>Public Works Dept.</p>	<p>Ongoing</p>	<p>Capability</p>
<p>3. Review floodplain regulations and ordinances and update as necessary based on DEEP’s “Model Floodplain Management Regulations” and FEMA Guidelines.</p>	<p>Planning and Zoning Commission; Inland Wetlands Commission</p>	<p>Ongoing</p>	<p>Zoning is currently reviewing floodplain regulations. FEMA “updating” east end of town, in the Farmington River watershed – a small portion of town falls into this update</p>
<p>4. Provide landscaping along sections of State and local roadways that are prone to drifting snow and high winds (e.g. Rte 272 near Dennis Hill State Park).</p>	<p>First Selectmen, Public Works Dept.</p>		<p>A private property near Dennis Hill State Park has left vegetation which helps reduce drifting. Winchester Road, near Broadfield Farm, and on Doolittle near Husky Meadow experience drifting. Plow drivers are usually aware, and the town addresses these sites more often during snow clearing. Increasing vegetation/landscaping may be challenging working with landowners.</p>
<p>5. Pursue funding to augment the municipal tree trimming program.</p>	<p>First Selectmen, Public Works Dept.</p>	<p>Ongoing</p>	<p>Town has tree warden, work is typically passed along to contractors, there is budget set aside for removal/maintenance. Challenges in working with Eversource.</p>

6. Take an active role in siting new housing for vulnerable populations such as seniors and the elderly. Encourage housing developers to discuss proposed actions with the town prior to submitting applications.	First Selectmen, Planning & Zoning Department	Ongoing	Currently working on a development through Foundation for Norfolk Living, to promote affordable housing. Project will go through, and they are currently working on funding. Ten apartments have been complete and 25 units for senior housing.
7. Require green infrastructure (GI) as a consideration for all public works projects and significant residential and/or commercial construction, potentially using HMGP funding under climate resilient activities.	First Selectmen, Public Works Dept.,	Ongoing	Town tries to incorporate GI when feasible. City Meadow project – center of town, large catch basin where runoff from route 44 and local roads collects. Working to improve resident access wildlife viewing/boardwalk in this area also.
8. Acquire a cost-estimate for a watershed study to identify appropriate methods of reducing flood risks.	First Selectmen; Inland Wetlands Commission		Follow up with inland wetlands zoning – not a large floodplain risk

Table V.68: Objective 3 Expand maintenance activities and implement specific projects that address known drainage issues within the town			
Strategies	Who	Status	Notes
9. Conduct a comprehensive evaluation of the infrastructure at major watercourses to determine appropriate flood mitigation and stabilization measures.	First Selectmen; Public Works	Ongoing	After 1955 flood much of the infrastructure was rebuilt and has been OK since. Several bridges in town do need upgrades – there is a plan in place. 7 bridges are deemed poor/moderate. Engineers have evaluated these bridges relative to their condition.
10. Compile a checklist that cross-references the bylaws, regulations, and codes related to flood damage prevention that may be applicable to a proposed project and make this list available to potential applicants.	Building Department; Planning & Zoning		Follow up wetlands
11. Selectively pursue conservation recommendations listed in the POCD and other studies and documents.	First Selectmen; Building Department; Planning & Zoning; Inland Wetlands; Conservation Commission	Ongoing	Zoning and Wetlands use POCD as guidance for development

<p>12. Review existing groundwater maps and conduct an inventory of potential groundwater supplies, potentially using HMGP funding under climate resilient activities.</p>	<p>First Selectmen; Planning & Zoning; Inland Wetlands</p>	<p>Complete/remove</p>	<p>Town has maps of aquifer, and mapping studies have been done. No longer necessary.</p>
<p>13. Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.</p>	<p>Public Works</p>		<p>Town works on a case by case basis to upgrade/repair. Town has attempted to upgrade in the past, but has found it challenging to upgrade. Often logistical or funding limitations are present. The Town relies on engineers for larger repairs/evaluations/due diligence. Upgrades are usually done with what was already there but using updated materials.</p>
<p>14. When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.</p>	<p>Public Works</p>	<p>Ongoing</p>	<p>Major projects, town works with engineer to get correct specifications, WMC and Cardinal to assist in projects. Combine #13 and #14</p>
<p>15. Ensure adequate barricades are available to block flooded areas in flood prone areas of the town.</p>	<p>Public Works</p>	<p>Carry Forward</p>	<p>Town does have some barricades but would like to acquire additional barricades and make upgrades to current stock.</p>
<p>16. Require the location of utilities underground in new developments or during redevelopment whenever possible.</p>	<p>Building Department; Planning & Zoning; Public Works</p>	<p>Remove/revise</p>	<p>Developers are putting underground, but not required. Foundation project references above will include installing utilities underground, this will include 19 single homes. The Town could pursue to put into regulations, but not a lot of development. Topography and soil do not always allow underground utilities.</p>
<p>17. Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.</p>	<p>Emergency personnel; Public works</p>	<p>Ongoing</p>	<p>This is consistently done, PW is aware of these areas.</p>
<p>19. The Town should continue to require the installation of fire protection water in new developments.</p>	<p>Building Department; Planning & Zoning</p>	<p>Ongoing</p>	<p>The Town requires either dry hydrants or cisterns unless the development is located in the public water system owned by Aquarion.</p>

MEETING DATE:	July 23 2020	ATTENDEES:	Charlie Perotti – First Selectman
PROJECT:	NHCOG HMP Update		Dinnie Light – EMD
MMI #:	3843-06		Jeff Rondini – Building Official
SUBJECT:	Town of North Canaan		
LOCATION	Virtual/Remote		
	Zoom		

Noah Slovin met with Town of North Canaan representatives on July 23, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a phone conference. Noah began the meeting with a discussion of Hazard Mitigation Planning basics and the update planning process. Updates were then discussed. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Type	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
North Canaan Firehouse	4 East Main Street, Canaan	Regional Emergency Support	Yes		No	
Town Hall	100 Pease Street	Emergency Operations Center, secondary Shelter	Yes	1	No	
North Canaan Highway Garage	Pease Street	Regional Emergency Support	Yes		No	<i>10 Whiting Drive?</i>
North Canaan Elementary	90 Pease Street	<i>Primary Shelter</i>	Yes	2	No	
Ambulance Garage	Pease Street	Regional Emergency Support	Yes		No	<i>15 Main Street?</i>
Senior Center	Quinn Street	Senior Housing	Yes		No	
North Canaan Transfer Station	580 West Main St	Solid Waste				<i>Possible addition</i>
Connecticut State Police Troop B - North Canaan Resident State Trooper	100 Pease Street	Law Enforcement				<i>Possible addition</i>
Connecticut State Police Troop B Barracks - Headquarters	463 Ashley Falls Road	Law Enforcement				<i>Possible addition</i>

Development Trends

- No new developments were noted except for the proposed Community Health and Wellness Center.

Recent Events

- Town staff reported that the town has not experienced any significant or damaging storms in recent years.

- Town has implemented emergency response practices in the past (such as emergency alerts and opening shelters) and everything reportedly worked well.

RL Properties

- Repetitive Loss Properties were not discussed at the meeting.

Hazards Discussion

- Flooding of the Camp River is the biggest hazard concern of the Town. A culvert under Route 44 is undersized, and causes water to back up during significant precipitation events. The backed-up water floods properties adjacent to the brook. Floodwaters recede after a day or two.
- On the Blackberry River, debris has been known to block a state bridge, causing water to back up to near the Fire House. Ice jams can also be a problem at that bridge. The town reportedly contacts the state, and the state sends people to come and clean up the debris; the response is reportedly very quick and effective. Ideally a responsible party (the state?) would perform management of trees and debris sources along the Blackberry River.
- Other flood areas are believed under control.
- A significant challenge is getting emergency information to people. Phones and internet can both go down.
 - Town used to handle reverse 9-1-1 themselves. They would call residents and the residents would complain about receiving calls or messages or they wouldn't hear the message for hours.

Capabilities

- For the most part town staff feel their hazard mitigation capabilities are good.
- The town practices and does testing with the emergency alert system
- Word about emergencies gets out by social media
 - EM has facebook page with many followers

Goals, Objectives, and New Actions

- Town will review proposed Community Health and Wellness Center for flood risk concerns.

Status of Previous Actions

Action	Responsible Party	Status	Notes
Utilize the existing Alert Now/Blackboard Connect notification system to its fullest capabilities and encourage additional residents to subscribe	EMD	Capability	<i>No longer use Blackboard Connect. Town is served by the Litchfield County Dispatch, which has an alert system. The system has the capability to contact every land-line, and can be targeted to certain areas. The Town now uses that system.</i>
Encourage residents to purchase and use NOAA weather radios with alarm features	EMD	Carry Forward with Revisions	<i>Town will carry this action forward, but add encouragement to residents to download an emergency weather app on their phones. (NOAA Radios can operate during power, phone, and internet outages) Specifically, information will be put on the Town website.</i>
Review and update the Town EOP at least once annually	EMD	Capability	<i>Capability</i>
Consider requiring at least one foot of freeboard to the Floodplain Management Regulations.	P&Z	Capability	<i>Required by state building code. Town will review local regulations.</i>
Require developers to demonstrate whether detention or retention of stormwater is the best option for reducing peak flows downstream of a project and provide a design for the appropriate alternative.	P&Z	Carry Forward	<i>Development in town is minimal, and flood risks are not a result of development and impervious surface expansion. Action has not been a priority. Town will carry forward.</i>
Encourage property owners to purchase flood insurance under the NFIP and to report claims when flooding damage occurs.	Building	Carry Forward with Revisions	<i>Town is interesting in providing information about flood risk through assessor's office and maps. Town believes informing residents of flood risk is the best approach. Encouraging purchasing of flood insurance is not considered to be specifically necessary, as most banks require flood insurance to give a home loan.</i>
Consider conducting a Camp Brook watershed study to identify appropriate methods of reducing flood risks.	PW	Carry Forward	<i>Action has not yet been completed due to funding limitations. Flooding in this area appears to be the result of an undersized under State Route 44. The town cleans out the area around the culvert of debris to mitigate clogging. Culvert is under State jurisdiction.</i>

Action	Responsible Party	Status	Notes
Consider elevations or acquisitions of homes along Camp Brook that are prone to flooding	PW, First Selectman	Drop	<p><i>There are no new homes along Camp Brook. No acquisitions have been completed, and no home elevations have been pursued. Property owners appear to be installing more sump pumps.</i></p> <p><i>This action is retired while a study is performed to determine the best actions for flood mitigation (previous action).</i></p>
Evaluate properties with flood risk such as the North Canaan Firehouse to determine potential flood damage reduction methods (see also #22 below)	PW	Capability & Carry Forward with Revisions	<p><i>Town staff report that the North Canaan Firehouse is not at flood risk, although it is near the Blackberry River.</i></p> <p><i>Town reviews flood risks for new development as a capability.</i></p> <p><i>A new Community Health and Wellness Center has been proposed in the area of the Fire House, in a location that may have flood risk. The town is requiring a stormwater plan, and will review property for flood risks to determine whether a flood mitigation plan is needed. This falls under the Zoning department.</i></p>
Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	P&Z, Building	Drop	<p><i>Town staff believe they have appropriate knowledge of flood damage prevention, and that training is not needed.</i></p>
Compile a checklist that cross-references the bylaws, regulations, and codes related to flood damage prevention that may be applicable to a proposed project and make this list available to potential applicants. The information in Section 3.4 provides a starting point for this list.	P&Z	Complete	<p><i>Complete</i></p>
Provide outreach regarding home elevation and relocation, flood barriers, dry floodproofing, wet floodproofing, and other home improvement techniques (Section 3.6.2) to private homeowners and businesses with flooding problems.	Building Official	Carry Forward with Revisions	<p><i>Town has not yet pursued this action.</i></p> <p><i>The Building Official will first compile a list of all houses in the floodplain. Once that list is completed the official will put together a packet of preventative measures to distribute to those property owners.</i></p> <p><i>This is carried forward as TWO actions.</i></p>
Provide outreach regarding which types of mitigation options are appropriate for reducing flood insurance premiums	Building Official	Drop	<p><i>This action is addressed by the response to the previous action.</i></p>

Action	Responsible Party	Status	Notes
Pursue the acquisition of additional municipal open space inside SFHAs and set it aside as greenways, parks, or other nonresidential, noncommercial, or nonindustrial use.	First Selectman	Carry Forward	<i>Partially complete; the Town purchased 38 acres a few years ago. This action is carried forward for additional progress.</i>
Selectively pursue conservation recommendations listed in the Plan of Conservation and Development and other studies and documents	First Selectman	Capability	<i>Town pursues POCD actions as standard practice.</i>
Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.	PW	Drop	<i>Town replaces culverts in-kind as needed, and has found this to be sufficient. Changing the conveyance calculations is not considered necessary.</i>
When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.	PW	Drop	<i>Town replaces culverts in-kind as needed, and has found this to be sufficient. Changing the conveyance calculations is not considered necessary.</i>
Evaluate drainage problems in the town and develop a list of culverts to replace and increase capacities.	PW	Carry Forward with Revisions	<i>Town is currently working on drainage for Allendale Road. Will bring in an engineer to identify drainage needs and identify culverts that need increased capacity. Town is working to apply for state grants. Action is revised to address this specific project</i>
Work with the State to replace and increase the capacity of the Camp Brook culvert.	PW	Carry Forward	<i>Carry forward in conjunction with action to perform a study of the Camp Brook watershed.</i>
Replace and increase the capacity of the Route 44 culvert at Church Street	PW	Drop	<i>This action is addressed by previous action.</i>
Ensure adequate barricades are available to block flooded streets in floodprone areas	PW	Complete	<i>Town has a trailer full of barricades.</i>
Evaluate flood risks in the vicinity of the North Canaan Fire House. Potential mitigation actions may include constructing a berm or floodwall, floodproofing the building or relocating facilities on the site.	EMD, PW	Drop	<i>See previous action about Fire House</i>

Action	Responsible Party	Status	Notes
Develop a town wide tree limb inspection and maintenance program to ensure that the potential for downed power lines is diminished. Continue to encourage property owners to trim branches located over structures and power lines.	PW	Complete	<p><i>Tree warden and public highway supervisor review trees along city roads, and take down bad trees. Chris Toomey is tree warden.</i></p> <p><i>Town relies on power company to trim along power lines</i></p>
The Building Department should provide literature regarding appropriate design standards for wind.	Building Official	Complete	<p><i>Design standards are in the State building code.</i></p>
Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures to protect new buildings to a standard greater than the minimum building code requirements. Require such improvements for new municipal critical facilities.	PW, Building	Capability	<p><i>Town applies State Building Code (IRC and IBC).</i></p> <p><i>Recently an addition was constructed for the Ambulance Building. They had to follow stricter hurricane protection standards for the building because it is critical.</i></p>
Develop a plan to prioritize snow removal from the roof of critical facilities and other municipal buildings each winter. Ensure adequate funding is available in the Town budget for this purpose.	PW	Complete	<p><i>Completed</i></p>
Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies	EMD, PW	Completed	<p><i>Fire Company and Ambulance developed a plan for what to do when roads become dead-ended or access is difficult. The procedure is written out in the Fire Company's Emergency Operations Plan. This came out of Winter Storm Alfred.</i></p>
The town should consider utilizing snow fencing in areas prone to snow drift.	PW	Drop	<p><i>Town has used snow fencing before and it was somewhat effective; however, the wooden ones would break and the plastic ones would fall apart, so the Town did away with them. Action is no longer necessary – town has acquired improved plows that are able to clear snow-drift areas.</i></p>
The Building Department should provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat-roofed buildings such as heating coils.	Building Official	Complete	<p><i>Built into State Building Code</i></p>
Consider preventing residential development in areas prone to collapse	P&Z	Drop	<p><i>Landslides and areas prone to collapse are not an issue.</i></p>

Action	Responsible Party	Status	Notes
Ensure that municipal departments have adequate backup facilities in case earthquake damage occurs to municipal buildings.	PW, EMD	Capability	<i>Town has multiple facilities and backup capabilities.</i>
Consider bracing vulnerable systems and assets inside critical facilities. This could help protect IT systems, important records and files.	PW, EMD	Drop	<i>Unnecessary. Electronic records and files are backed-up to the cloud.</i>
Include dam failure inundation areas in the Alert Now emergency contact database	EMD	Complete	<i>There is one dam up in Canaan Valley right on the Massachusetts line, and one run-of-the-river dam on the Blackberry that does not pose a failure concern. Litchfield County Dispatch can target alerts.</i>
Provide technical assistance referrals to private dam owners regarding effective maintenance strategies	PW	Drop	<i>Not necessary.</i>
File EOPs/EAPs with town department and emergency personnel	EMD	Carry Forward	<i>Carry Forward</i>
Consider requiring a source of fire protection water, such as cisterns or dry wells when municipal water service is not available for residential or commercial building development.	Fire Department	Complete	<i>Fire Company has access to rivers and dry hydrants. They have recently updated the mutual-aid agreements with surrounding towns with tankers in order to improve access to firefighting water. Any fire calls in non-hydrant areas of town automatically go directly into the mutual-aid system. Firefighting airplanes are available through this system. <i>The Canaan Valley area is off-hydrant.</i></i>
For the areas of elevated wildfire risk, such as Canaan Mountain the town may consider a combination of all of the available methods of wildfire risk reduction	Fire Department	Complete	<i>See above</i>
Consider installing additional dry hydrants or fire ponds in outlying parts of town where public water is not readily available for firefighting, including the areas identified in Section 9.5	Fire Department	Drop	<i>See above</i>

MEETING DATE:	August 27, 2020	ATTENDEES:	Barbara Henry, First Selectman
PROJECT:	NHCOG HMP Update		Victoria Brudz, MMI
MMI #:	3843-06		
SUBJECT:	Town of Roxbury		
LOCATION	Virtual/Remote		
	Zoom		

Victoria Brudz met with Town of Roxbury representatives on August 27, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

- Emergency power at the town hall needs to be upgraded. Recent servicing during Tropical Storm Isaias (August 4, 2020) included a \$3,000 part.
- Booth free school needs emergency power source.
- The town has been working to install backup power to Bernhardt Meadows. Current power only powers community center, but not living areas. During an outage, the FD stages a truck there to ensure they do not miss an emergency or alarm which cannot be sent out without power.
- Roxbury market, and surrounding area, include some critical resources for the town. This location needs a generator.
- The town also needs emergency power at the transfer station and public works.
- Trooper office is in the town hall and can utilize the backup power source.
- The ambulance association is looking to expand the building to allow for more storage and emergency response capabilities between EMS and fire

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?
Fire Station	27 North Street	Emergency Response	✓		No
Town Hall	29 North Street	Critical Records, Emergency Operations Center, Secondary Shelter	✓	✓	No
Senior Center	7 South Street	Primary Shelter	✓	✓	No
Booth Free School	14 South Street	Tertiary Shelter		✓	No
Bernhardt Meadows	19 Bernhardt Meadow Lane	Senior Housing – Generator only supplies power to the community center in the complex	✓		No
Roxbury Market	26 North Street				No
Public Works	29 North Street	Emergency Assistance			No

Roxbury Transfer Station		Municipal Solid Waste			
Roxbury Resident State Troop	29 North Street	Law Enforcement			
Roxbury Ambulance Association	27 North Street	EMS	✓		

Development Trends

- There has been little new development in town. The only major development includes a new subdivision which is located along a state road, as well as a town road.

Recent Events

- Tropical Storm Isaias, which occurred August 4 2020, caused outages in 99.4% of the town. The town contacted Eversource repeatedly to cut power so public works could begin to clear roads to allow for emergency access. It took between 3 and 4 days for Eversource to respond.
- Bernhardt Meadows was without power for about 4 days. This raised serious health concerns given many seniors were without air conditioning and water, and their only reprieve was the community center, which during the COVID-19 pandemic raised exposure concerns.
- The town had to clear town and state roads after the tropical storm as emergency access was virtually impossible.

Hazards Discussion

- The town has applied for state administered federal money for bridge repairs and has been unsuccessful.
- A recent ice jam at the Shepaug Dam caused severe damage to an adjacent farm. This has happened on multiple occasions. The flood waters also impact Route 67 and an adjacent park.
- The town has been working to get a bridge repaired along Botsford Hill Road repaired. The state has declared this bridge as being in “poor” condition, however, the town feels it is in worse condition. It was noted that during Hurricane Floyd water completely engulfed the roadway surrounding the bridge, causing issues with school dismissal. There are two round culverts beneath the bridge that get clogged with debris during most storms causing flood concerns.
- There are numerous culverts throughout town that are at risk of failure. The town is currently working to complete a culvert replacement on Davenport Road, and the Wakeley Road culvert is also a concern.
- A few years ago, the town worked to make repairs to the center column of Wellers Bridge per the state’s recommendation. The town was recently told this bridge is now scour critical due to the changes made years ago.
- Most problems caused in town during a storm are due to trees and debris. Trees block roads impeding emergency access and egress, and quickly block culverts increasing the flood risk. During Hurricane Irene a boat rescue was required because debris blocked a culvert causing severe flooding around a residential home.
- There are several dead ends in town that make emergency access a challenge during a heavy wind event, such as Carriage Lane.

- Water and icing are a concern along all roads in town, especially along the 27 dirt roads.
- Bacon Hill road is a flood concern. During heavy precipitation events large amounts of water flow down this roadway making travel dangerous.
- The cell phone towers located at the transfer station site have not provided sufficient coverage during past events. There is backup power for these towers, however, during a recent event the source failed and none of the service providers wanted to take responsibility.
- The back area of the Booth Free school has flooded during heavy precipitation events. This impacts fields and playgrounds.

Capabilities

- There is a tree warden and deputy tree warden in town.
- Town public works does a lot of post storm clean up and tree debris removal.
- It was noted that planning and zoning are two separate commissions.

Goals, Objectives, and New Actions

- There is a structure at the transfer station that houses machinery that needs to be upgrade or replaced as it is not suitable for heavy snow loads.

#	Description	Responsible Party	Status	Notes
1	Consider providing standby power supply to Booth Free School	region 12 district	Carry forward	Ongoing effort. While the town owns the building, the region is responsible for getting the standby power The town would be willing to work to help get a grant for this.
2	Encourage Roxbury Market to install standby power.	Selectman's office	Carry forward	This town service area was without power during Isaias for day. This area includes the post office, bank, and offices above the market. It could be considered a "hub" for the town Another "hub" area includes restaurants, pizza place, liquor store, veterinarian, these are all private owned but main service area for the town and lacks backup power.
3	Utilize the Blackboard Connect and email blast emergency notification system to their fullest capabilities	EM	Ongoing	Capability, the first selectman's office uses this all the time for calls, emails and texts
4	Encourage residents to purchase and use NOAA weather radios with alarm features	EM	Remove	The town has encouraged residents to sign into blackboard for alerts, along with CT alert.
5	Review and update the Town EOP at least once annually	EM	Carry forward	Each department knows their responsibilities, but a complete overview of the EOP is due.
	FLOODING - Prevention			
6	Consider adding flood prevention regulations to the Town zoning regulations.	P&Z	Remove	Anything in floodplain deals with the building department. There is a floodplain ordinance, and the State building code.

7	Consider requiring new buildings constructed in flood prone areas to be protected to the highest recorded flood level regardless of being within a defined SFHA.	wetlands	Complete	Town already does this
8	Require developers to demonstrate whether detention or retention of stormwater is the best option for reducing peak flows downstream of a project and provide a design for the appropriate alternative.	wetlands	Complete/ongoing	This falls under the wetlands commission, anything to do with water they deal with.
FLOODING - Property Protection				
9	Evaluate flood prone properties along Tunnel Road to determine potential flood damage reduction methods such as elevating homes.	wetlands	Carry forward with revision	This is where the boat rescue was required. There will be no new development here. Remove elevation – this will likely not happen
10	Evaluate flood prone properties along Route 67 to determine potential flood damage reduction methods such as elevating homes and floodproofing businesses.	wetlands	Carry forward with revision	Most recent homes are elevated. The older homes are not. This is where some of the businesses are located.
11	Provide technical assistance regarding floodproofing measures to interested residents. Pursue funding for home elevations should any residents become interested.	wetlands	Remove	No residents have shown interest in elevation. The residents will go through the town for this action regardless.
12	Encourage property owners to purchase flood insurance under the NFIP and to report claims when flooding damage occurs.	-Selectmen		Town building department would supply information if necessary. Town ordinance does this.
FLOODING - Public Education				
13	Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	wetlands and building	Complete/ongoing	This would fall under wetlands or building. Both departments take necessary classes for this action.

14	Compile a checklist that cross-references the bylaws, regulations, and codes related to flood damage prevention that may be applicable to a proposed project and make this list available to potential applicants. The information in Section 3.4 provides a starting point for this list.	wetlands	Ongoing	This is already worked into standard operating procedures.
15	Provide outreach regarding home elevation and relocation, flood barriers, dry floodproofing, wet floodproofing, and other techniques (Section 3.6.2) to private homeowners and businesses with flooding problems.	Building	Ongoing	Standard operating procedures – building department would provide this.
FLOODING - Structural Projects				
16	Selectively remove debris from bridges (such as the fallen tree upstream of Judd’s Bridge)	PW	Ongoing	The town is always removing debris throughout town.
17	Encourage residents along Squire Road to increase conveyances under driveways to reduce the potential for future washouts.	PW	Ongoing carry forward with revision	Town wide issue. Squire road was recently redone.
18	Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.	PW	Complete	Guidance is not used, but the town hired an engineering firm to look at all culverts.
19	When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.	PW	Carry Forward	Has not worked with DOT, but worked with HVA on Botsford Hill
20	Replace the twin culverts at Botsford Hill Road and Route 67 to increase conveyance capacity and reduce future flood damage.	PW	Underway/Carry forward	This is in progress. The town is seeking funding and assistance for this project.
21	Consider paving, chip sealing, or hardening unpaved roads to reduce the incidence of washouts and erosion that can hinder access and egress.	PW	Carry forward with revision	Town has done this, but residents on dirt roads do not typically want this. The town uses calcium on the roadways to harden them up. Heavy downpours typically are challenging.

				The town does have a grader and regrades these roads when necessary.
	FLOODING - Emergency Services			
22	Ensure adequate barricades are available to block flooded streets in flood prone areas	EM & PW	Complete	Have adequate barriers
23	Work with the Children’s Station to develop a site-specific evacuation plan for the daycare facility, given its location in the flood risk zone.	EM	Remove	Business is no longer there
	WIND DAMAGE RELATED TO HURRICANES, SUMMER STORMS, AND WINTER STORMS			
24	The Building Department should provide literature regarding appropriate design standards for wind.	Building Official	Ongoing	This is being done.
25	Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures to protect new buildings to a standard greater than the minimum building code requirements. Require such improvements for new municipal critical facilities.	Building	Ongoing	This is being done.
26	Provide town wide tree limb inspection and maintenance programs to ensure that the potential for downed power lines is diminished. Continue to encourage property owners to trim branches located over structures and power lines.	PW	Ongoing	Eversource does this, as well as the first selectman. The town also hires outside tree company to maintain throughout town as well. Town works with Eversource too.
27	Pursue funding to place utilities underground in existing developed areas.	PW, First Selectman	Carry forward	The town has investigated this, but it is challenging to find funding. This would be useful around the town green.
	WINTER STORMS			

28	Develop a plan to prioritize snow removal from the roof of critical facilities and other municipal buildings each winter. Ensure adequate funding is available in the Town budget for this purpose.	PW	Remove	Town has no formal plan, but hires contractor and has PW, not worth developing a formal plan.
29	Provide information on the dangers of cold-related hazards to people and property.	EM/ selectman's office	Ongoing	During the winter, the town sends out this type of information as part of email blasts.
30	The Building Department should provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat-roofed buildings such as heating coils.	Building Official	Ongoing	Being done.
31	Consider posting the snow plowing routes in Town buildings each winter to increase public awareness.	EM	Remove	Not necessary.
32	Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	EM	Ongoing	The town is aware of these areas and has these plans if needed.
33	Develop a plan to address snow drift in the vicinity of Painter Hill Road and Painter Ridge Road. Snow fencing and certain vegetation buffers may be helpful to reduce drifting.	PW	Ongoing	The town implements snow fencing and it is likely the best option to combat the issue.
	EARTHQUAKES			
34	Consider preventing residential development in areas prone to collapse	P&Z	Remove	No areas of concern
35	Ensure that municipal departments have adequate backup facilities in case earthquake damage occurs to municipal buildings.	Selectman's office	Complete	Town has adequate back up can work remotely and has cloud back up
36	Consider bracing systems and assets inside critical facilities. This could help protect IT systems, important records and files.	EM	Remove	Facilities are adequately constructed, there is minimal concern.

	DAM FAILURE			
37	Provide technical assistance to private dam owners regarding effective maintenance strategies	EM	Remove	Not sure information is dispersed; however, wetlands would assist if necessary. The town is unable to provide necessary assistance and the owner would likely need to seek the assistance of an engineer.
38	File EOPs/EAPs with town department and emergency personnel	EM	Ongoing	EAP needs updates, 1 dam on the Shepaug, near the distillery. Failure of this dam could have impacts. This would likely add to the scour problem
39	Include dam failure inundation areas in the Blackboard Connect emergency contact database	EM	Complete	The roads and areas that would be impacted are in the database. Every road can be chosen individually.
	FIRES			
40	Continue to require the installation of fire protection water in new developments where other sources of water are distant, and installation of sprinkler systems where access is limited for fire apparatus.	Zoning	Ongoing	Likely goes through zoning and wetlands
41	Increase the availability of water sources in the town's area of high risk where the 45-acre fire occurred several years ago	Fire Department	Remove	Unsure of how to expand availability. Town does have mutual aid agreements. This needs to be brought in from other departments.
	Strategies and Actions for Implementation After the Timeframe of this Hazard Mitigation Plan but to be incorporated into CIPs and the POCD			
	FLOODING - Natural Resource Protection			

42	Pursue the acquisition of additional municipal open space inside SFHAs and set it aside as greenways, parks, or other nonresidential, noncommercial, or nonindustrial use.	First Selectman	Ongoing	The town has pursued various lands and has worked with the land trust to do so. The town has designated significant open space near water.
43	Selectively pursue conservation recommendations listed in the Plan of Conservation and Development and other studies and documents	Planning & conservation commission & selectmen	Ongoing	POCD was just upgraded in March 2020, certain groups are tasked with completing actions.

PROJECT: NHCOG HMP Update
MMI #: 3843-06
SUBJECT: Town of Salisbury Hazard Mitigation Plan Update

Critical Facilities

- *Are any facilities missing from this list?*
- *Should any facilities be removed from this list?*
- *Any changes or improvements to facility capabilities or risk profiles?*

Facility	Address or Location	Comment	Emergency Power	Shelter	In SFHA	Notes/Changes
Town Hall	27 Main Street	Critical Records/ Backup EOC			N	
Salisbury Volunteer Ambulance Facility	Under Mountain Road	EOC / secondary shelter	✓	✓	N	
Salisbury Central School	45 Lincoln City Road	Primary Shelter	✓	✓	N	
Salisbury Firehouse	4 Brook Street	Emergency Response	✓		N	
Highway Garage		Emergency Response	✓		N	

New Development Trends

- *Any significant new developments that may:*
 - a. *Present a new vulnerability because of a large new population at that site (eg. condo complex)*
 - b. *Be located in an area at risk or be susceptible to isolation if roads to the site are blocked?*

Impacts of Recent Hazard Events

- *What were the impacts of recent hazards?*
 - *High wind/tornadoes?*
 - *Flooding?*
 - *Winter Storms?*

Changes to Hazard Concerns or Locations

- *What are your top natural hazard concerns (eg: river flooding, flash flooding, downed trees, etc.)?*
- *Any specific locations of concern, or specific locations remediated?*

New Hazard Mitigation Capabilities

- *Any new capital improvement projects, regulatory changes, operational changes, that mitigate risks?*

Storm Advice one-pager can be downloaded from Emergency Services page. Includes basic, key information for preparing for storms.

New Actions

- *What new projects are you working on that will mitigation risk, if any?*
- *If you received funding, what hazard mitigation projects would you like to pursue?*

DATA COLLECTION WORKSHEET

For each of the following actions, listed in the previous plan, identify whether it is completed, underway, ongoing, or incomplete. If it is incomplete, indicate whether it will be carried forward as an action in the update, or whether it should be removed.

I have highlighted some of the most important actions that we need information about.

#	Strategies	Who	Status (completed/underway/ ongoing/carry forward/drop)	Notes/Details/Explanation (explain incomplete actions)
1	Consider subscribing to the CT Alert emergency notification system and utilize it to its fullest capabilities	EMD	Completed	<i>Town has subscribed. No information on website or in storm stuff document Town doesn't really use this. First Selectman gets alerts from Water company and Eversource.</i>
2	Encourage residents to purchase and use NOAA weather radios with alarm features	EMD	Capability	<i>In Storm Advice document hosted on Emergency Services webpage.</i>
3	Obtain standby power for the Town Hall.	EMD	Drop	<i>Town has looked into it. Historic graveyard out back. No space for generator / propane tank.</i>
4	Work with AT&T representatives to identify the most efficient way to provide backup power to the cell towers during power outages.	EMD	Drop	<i>AT&T towers are outside town's influence Power has gone out twice and ATT comes and restarts power – seems effective.</i>
5	Require developers to demonstrate whether detention or retention of stormwater is the best option for reducing peak flows downstream of a project and provide a design for the appropriate alternative.	P&Z		<i>We don't have big development projects here. 10 acre lots split into two one a year. Not much. Very strong wetlands setbacks. *built a new transfer station, stormwater was a major part of the design. There is some requirements about stormwater.</i>
6	Provide technical assistance regarding floodproofing measures to interested residents. Pursue funding for home elevations should any residents become interested.	Building official		Yes Provide technical guidance. Pursuing funding is outside scope.
7	Encourage property owners to purchase flood insurance under the NFIP and to report claims when flooding damage occurs.	Building official		Flooding has not come up in town in the last 20 years. Not necessary.

#	Strategies	Who	Status (completed/underway/ ongoing/carry forward/drop)	Notes/Details/Explanation (explain incomplete actions)
8	Consider conducting a Salmon Creek watershed study to identify appropriate methods of reducing flood risks.	PW		<p><i>Town does a lot to preserve land along this watershed. No study is necessary.</i></p> <p><i>40% of town land is preserved or wild.</i></p> <p><i>Continue to preserve undeveloped land in watersheds – this they do a lot, and is very relevant.</i></p> <p><i>Last year took conservation easements on about 1000 acres on 4 or 5 properties in headwaters of 2 villages. More effective than anything else.</i></p> <p><i>Local Land Trust, Regional land Trust, DEEP (ball Brook), TNC, Town,</i></p> <p><i>Does not appear to be completed.</i></p> <p><i>See Salmon Creek Project by trout Unlimited:</i> <i>www.tu.org/project/salmon-creek-project</i></p>
9	Compile a checklist that cross-references the bylaws, regulations, and codes related to flood damage prevention that may be applicable to a proposed project and make this list available to potential applicants.	P&Z		<i>Not a high priority</i>
10	Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	P&Z, Building		<p><i>Capability.</i></p> <p><i>New P&Z admin</i></p> <p><i>New Building inspector.</i></p> <p><i>Work together, Very well informed.</i></p>
11	Consider the creation of a separate Inland Wetlands Agency, which would allow the Conservation Commission to focus on issues or preservation and stewardship which are distinct when contrasted with the regulatory authority vested in inland wetland agencies.	First Selectman	<i>Completed</i>	<i>Done</i>
12	Pursue the acquisition of additional municipal open space inside SFHAs and set it aside as greenways, parks, or other nonresidential, noncommercial, or nonindustrial use.	First Selectman	Completed	<i>Many.</i>
13	Selectively pursue conservation recommendations listed in the Plan of Conservation and Development and other studies and documents	First Selectman	<i>Capability</i>	<p><i>This is a capability</i></p> <p><i>New POCD scheduled for 2022.</i></p>

#	Strategies	Who	Status (completed/underway/ ongoing/carry forward/drop)	Notes/Details/Explanation (explain incomplete actions)
14	Conduct maintenance on the two bridges along Riga Road that have issues with scouring that may lead to instability.	PW	Completed	Continued maintenance. Capability
15	Consider installing spillways on Lakeville Lake and Twin Lakes to allow for a more controlled release of water.	PW	Drop	<p>Too expensive – not feasible.</p> <p>Both gate systems where road functions as a dam – would require taking out road and building bridge.</p> <p>If someone wants to pay for it they would try it.</p> <p>Twin: ds is a big farm and preserved wetlands.</p> <p>Lakeville Lake drains into Lakeville. There is sometimes flooding in low lying houses but not because of Lakeville lake, just because of flood zone. Spillways might even make it worse – hold less water.</p> <p>Gates give more control – currently gate system.</p> <p>Would not provide improved mitigation.</p>
16	Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.	PW		<i>Note that these two actions call for conveyance analysis using the same data</i>
17	When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.	PW		<p><i>We have the HVA plan. We haven't replaced any culverts. If it comes up and we can do it, we will.</i></p> <p><i>We've done a lot of bridgework in recent years. No particular culverts need replacement.</i></p> <p><i>Would love to do this though, if one comes up.</i></p>
18	Identify and prioritize areas along the Housatonic River where riverbank stabilization is needed.	PW		None have been identified. 2 places along town roads that might be in need – already pretty stabilized. Continue doing these.
19	Ensure adequate barricades are available to block flooded streets in floodprone areas	PW		Have plenty
20	Develop a town wide tree limb inspection and maintenance program to ensure that the potential for downed power lines is diminished. Continue to encourage property owners to trim branches located over structures and power lines.	PW	Capability	<i>Managed by the Highway Department Do this</i>

#	Strategies	Who	Status (completed/underway/ ongoing/carry forward/drop)	Notes/Details/Explanation (explain incomplete actions)
21	Continue requiring the location of utilities underground in new developments or during redevelopment whenever possible. Pursue funding to place them underground in existing developed areas.	P&Z	Capability	No new developments.
22	Consider placing above ground utilities underground if possible to reduce impacts from wind and storm damage.	P&Z	Carry Forward	Did in academy street in Salisbury. Very effective. Would like to keep doing but too expensive.
23	The Building Department should provide literature regarding appropriate design standards for wind.	Building Official		Follow building codes.
24	Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures to protect new buildings to a standard greater than the minimum building code requirements. Require such improvements for new municipal critical facilities.	PW, Building		Follow building codes.
25	Develop a plan to prioritize snow removal from the roof of critical facilities and other municipal buildings each winter. Ensure adequate funding is available in the Town budget for this purpose.	PW		Don't need a plan. Do this. Bought snow blower for flat firehouse roof after 2011.
26	Provide information on the dangers of cold-related hazards to people and property	EMD		Rural town. People are aware of these hazards
27	Consider posting the snow plowing routes in Town buildings each winter to increase public awareness.	PW	Drop	8 different routes, 8 different trucks. 2 hr run on big storm, then go do it again. Routes never change.
28	Consider utilizing snow fencing in areas prone to snow drift.	PW	Capability	Have not had significant drift issues, haven't had to use. Can use if necessary
29	The Building Department should provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat-roofed buildings such as heating coils.	Building Official	Capability	Can help people figure out. Tech assistance. No literature
30	Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	EMD, PW	Capability	Yes we know that. Only reason we have trouble is trees down, power lines. Waiting for power lines to be made safe is a challenge.
31	Consider preventing residential development in areas prone to collapse	P&Z		All single home development. We don't even zone for multifamily density. Not an issue. But yes, we prevent that.

#	Strategies	Who	Status (completed/underway/ ongoing/carry forward/drop)	Notes/Details/Explanation (explain incomplete actions)
32	Ensure that municipal departments have adequate backup facilities in case earthquake damage occurs to municipal buildings.	PW, EMD		2 villages, spread out. Answer yes on this.
33	Consider bracing vulnerable systems and assets inside critical facilities. This could help protect IT systems, important records and files.	PW, EMD		We do a lot of backup on the cloud. All records, things like that.
35	Collect EAP's for Class B and C dams and file them with appropriate town departments and emergency personnel.	EMD		We have these.
36	Include dam failure inundation areas in the CT Alert emergency contact database when obtained	EMD		Not sure. EAP have list of property owners at risk.
37	Revise and enhance the town's website concerning the local regulatory requirements concerning Open Burning.	FD	Completed	<i>Information available on website salisburyct.us/livinginsalisbury/burnpermits</i> We are more conservative about allowing brush fires than state is.
38	For the areas of elevated wildfire risk identified in the plan, the town may consider a combination of all of the available methods of wildfire risk reduction	FD	Capability	Confident in firefighting abilities
39	Consider requiring a source of fire protection water, such as cisterns or dry wells when municipal water service is not available for residential or commercial building development	FD		
40	Consider installing dry hydrants or fire ponds in outlying parts of town where public water is not readily available for firefighting	FD		

No new actions.

Biggest hazard is trees down, blocking roads. Solution is cut trees or widen roads, but we like our narrow roads and trees.

MEETING DATE:	9/22/2020, 2020	ATTENDEES	Jamie Casey – Land Use Administrator, Sanitarian
PROJECT:	NHCOG HMP Update		Tom Bartram – Civil Preparedness Coordinator
MMI #:	3843-06		
SUBJECT:	Town of Sharon		Noah Slovin - MMI

Noah Slovin met with Sharon representatives on September 22, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a phone conference. Attendees followed an open discussion format. Discussion topics are grouped below.

While the Sharon Fire Marshal Stanley MacMillan was not able to attend the meeting, he reviewed the list of data collection needs and provided feedback ahead of the meeting to Jamie Casey, who ensured his input was considered during the meeting.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power	Shelter	SFHA	Notes/Changes
Sharon Fire House	24 West Main St	Primary Shelter / EOC	✓	✓		
American Legion Hall	15 New Street	Back-up shelter	✓	✓		
Sharon Hospital	50 Hospital Hill Rd	Emergency Services	✓			
Sharon Health Care Center	27 Hospital Hill Rd	Emergency Services	✓			
Town Hall	63 Main Street	Municipal Facility				
Sharon Center School	80 Hilltop Road	School				
Highway Garage	29 Sharon Station Rd	Municipal Facility	✓		✓	<i>The Town has completed an Elevation Certificate for the Town Garage.</i>
Water Treatment Facility	147 Calkinstown Rd	Municipal Facility	✓*			
Trinity Glen	149 West Cornwall Rd	Substance abuse treatment facility	✓		✓	<i>Trinity Glen has completed an Elevation Certificate for its facility. A new permanent emergency generator has been installed. This is a year-round residential facility.</i>
Silver Lake Conference Center	223 Low Road	Church based camp – year-round operation	✓			
Wastewater Treatment Plant	96 King Hill Road	Municipal Facility	✓*		✓	

* WWTP and Water Treatment Facility have one mobile generator shared between both facilities; they do not have permanent generators installed. During Tropical Storm Isaias in 2020 a second portable generator was borrowed to power the facilities. Both portable generators failed before power was restored.

New Development Trends

Development in town is minimal. Much of the development that occurs is single-family homes, often second homes for people living in New York City. The Town reports seeing some migration to the Town from urban areas during the COVID pandemic as people move out of high population centers.

The Town has reviewed and processed some applications for new multifamily dwellings [where are these dwellings located?].

Impacts of Recent Hazard Events

- Tropical Storm Isaias led to widespread power outages and blocked roads. The Town prepared a report for PURA summarizing Eversource's response to Isaias. Town staff report that local residents tend to be self-reliant and were able to manage through the outage. The main problem isn't the outage itself, but the blocked roads, which prevent residents from accessing fuel for their generators, and hinder emergency response.
- The Town reports that it hasn't had a major rain or flood event in many years. It has experienced short, strong bursts of precipitation that cause flash flooding in areas that have not been flooded in the past, away from rivers and streams.

Changes to Hazard Concerns or Locations

- None were reported

New Hazard Mitigation Capabilities

- The Town posts information about civil preparedness and sheltering on the Town website
- The Town has formed a Local Emergency Planning Committee consisting of:
 - Civil Preparedness Coordinator
 - Chief and EMS Captain of Sharon Fire Department
 - Building Official / Fire Marshal
 - First Selectman
 - Highway Foreman
 - The Town is working with Sharon Hospital to add a Sharon Hospital Facilities Management representative to the LEPC
- The Town of Sharon has been formally designated as a NOAA Weather-Ready Nation Ambassador. As a WRN Ambassador, the Town has committed to:
 - Promoting Weather-Ready Nation messages and themes to their stakeholders
 - Engaging with NOAA personnel on potential collaboration opportunities
 - Sharing their success stories of preparedness and resiliency
 - Serving as an example by educating employees on workplace preparedness
- The Town's current building inspector is also its floodplain manager. The building inspector is therefore very knowledgeable about floodplain management and flood mitigation requirements and strategies, and is strict about requiring properties in flood zones to follow the State Building Code with regards to flood mitigation, and to secure elevation certificates.
- Sharon staff report that new buildings, including accessory structures, must be built outside of any mapped floodplain, or else elevated above the Base Flood Elevation, in order to be permitted. The State Building Code further requires that new or improved structures in floodplains be built with a freeboard buffer above the base flood elevation.

Hazard Mitigation Plan Update Worksheet

Status of Previous Actions

#	Description	Dept.	Status	Notes
1	Obtain a grant to acquire a local emergency notification system like CodeRed.	EMS EMD	Carry Forward with Revisions	<p>The Town is currently able to send notifications using Constant Contact, the Town website, and Facebook. A link to sign-up for Constant Contact is posted on the Town Website. The Town also participates in the statewide CT Alert system.</p> <p>The Town is able to utilize the Reverse-911 run through Litchfield County Dispatch in Torrington, which is able to target alerts to specific areas.</p> <p>During Tropical Storm Isaias, the Town utilized Facebook for emergency communications, and found it to be insufficient. The Town has also found coordination with LCD to be burdensome. Thus, while the Town's emergency alert capabilities have improved over recent years, the Town has decided to carry this forward to institute a locally-controlled Reverse-911 system.</p>
2	Utilize the existing emergency notification system (CT Alert) and email blast emergency notification system to their fullest capabilities	EMS EMD	Capability	This is a capability (see above)
3	Encourage residents to purchase and use NOAA weather radios with alarm features	EMS EMD	Carry Forward	<p>The town provides information and links about hazard preparedness on their website, but has not prioritized encouraging the purchase of NOAA weather radios.</p> <p>We are members of weather ambassadors with NOAA. Will do this. EMD</p>
4	Consider coordinating with local municipalities to obtain a generator for the Housatonic Valley Regional High School. Once acquired, the high school may be operated as a regional shelter.	EMS EMD	Drop	Town staff report that the Torrington Area Regional Health District had considered setting up the HVRHS as an emergency medical center, but they have not pursued. This action is outside of the Town's purview and not necessary, given the two available shelters in Sharon. Action is dropped.
5	Obtain an HMGP grant to acquire portable generators to assist the town, specifically the supermarket and gas station, in providing emergency power when needed.	EMS EMD First selectman	Drop (intent completed)	<p>Town staff report that the gas station and supermarket have been pursuing backup generation on their own. Both businesses have experienced significant loss of business and product during previous outages. The gas station has a partial generator for refrigeration. Town is open to assisting these businesses but does not believe any direct action is necessary.</p> <p>Action is dropped because a grant is no longer needed.</p>

#	Description	Dept.	Status	Notes
6	Develop a plan to review local roads and prioritize improvements in an effort to improve emergency response times.	EMS EMD First selectman	Capability	<i>The Town Road Crew and the Board of Selectmen have developed a prioritized plan for road improvements extending into future years. In general, the Town considers its local roads to be in good shape and well-maintained.</i>
7	Ensure that emergency information is available through several different media, such as newspaper, radio, internet and phone.	EMS EMD	Capability	<i>Local NPR Radio station (WSHU) operates out of Sharon, located next to town hall. This station has been very helpful for broadcasting public information. Town also put out information through the Town website and social media as needed. Information is put out through the local newspaper, but the paper only goes out weekly, so it is not as useful for timely information.</i>
8	Consider adding freeboard requirements to the zoning regulations for new construction and substantial improvements.	P&Z	Carry Forward	<i>Freeboard requirements are now required by the CT Building Code. The Town has not yet updated its floodplain zoning regulations to reflect the State's most recent guidance. It will wait until after FEMA produces new floodplain maps for the region, potentially 2023, at which point it will be required to update its floodplain regulations anyways.</i>
9	Consider updating the Town floodplain ordinances in order to put additional restrictions on floodplain development.	P&Z	Drop	<i>The Town's floodplain ordinances are based on FEMA requirements, and will be updated to meet Connecticut guidance following adoption of new FEMA flood maps (see above). The Town is already very strict about development within the floodplain, and has successfully required property owners to get Elevation Certificates for their properties. New development is minimal. Putting additional restrictions on floodplain development is not considered necessary.</i>
10	Consider requiring new buildings constructed in floodprone areas to be protected to the highest recorded flood level regardless of being within a defined SFHA.	P&Z	Drop	<i>Sharon locally applies the CT Building Code, which includes freeboard requirements.</i>
11	Consider updating the town zoning and subdivision regulations to require detention basin maintenance and drainage swale maintenance.	P&Z	Complete	<i>This is required for all development, parking lots, and multi-use buildings.</i>
12	Require developers to demonstrate whether detention or retention of stormwater is the best option for reducing peak flows downstream of a project and provide a design for the appropriate alternative.	P&Z	Capability	<i>The Town's subdivision regulations require implementation of best stormwater management practices.</i>

#	Description	Dept.	Status	Notes
13	Develop a long term beaver management plan (refer to additional actions under "Structural Projects" below)	PW	Completed	<i>The Town has identified installation of "Beaver Levelers" as the best management practice that they will use to address beaver problems. The Town currently uses Beaver Levelers on many town roads and rights-of-way. This technique is reportedly very effective and low-maintenance.</i>
14	Develop a plan to address runoff from agricultural fields in the north end of town to ensure swales and ditches are properly maintained.	PW	Completed	<i>The Town has determined that the runoff impacting this area is coming from Salisbury upstream, and is not within Sharon's jurisdiction. Additionally, maintenance of swales and ditches has not been a challenge in recent years. The Town reports that it had experienced challenges in the past with excess runoff into swales and ditches because there were extensive lawns in that area, but behaviors have changed and residents have been planting native plants, constructing rain gardens and infiltration systems, and so on, in order to protect the water quality of the river. Additionally, collaboration between the Town and the State on maintenance of roads, culverts, and drainage infrastructure has improved.</i>
15	Provide technical assistance regarding floodproofing measures to interested residents. Pursue funding for home elevations should any residents become interested.	Building Official	Capability	<i>The Building Inspector provides technical assistance as needed. The Town has not assisted private property owners in securing funding for floodproofing projects, and does not believe this action is necessary. There are three local surveyors who have a lot of experience with elevation certificates and floodplain surveying, and are able to help property owners.</i>
16	Encourage property owners to purchase flood insurance under the NFIP.	Building Official	Drop	<i>Town does not believe proactive encouragement about flood insurance is necessary; residents are aware of flood insurance, or are made away by banks when taking out a mortgage.</i>
17	Consider flood mitigation measures along the Housatonic River. Specifically in the vicinity of Kirk Road, River Road and Old Route 7 where property (yard) repeatedly floods.	PW	Capability	<i>Town reports that many flood mitigation projects have been occurring along the Housatonic. Examples?</i>

#	Description	Dept.	Status	Notes
18	Conduct an evaluation at the main business area near the supermarket (Low Road, Murtagh Road, and Route 41 (North Main Street)) to determine appropriate flood mitigation measures.	PW	Carry Forward	<p>Town has not yet conducted a formal evaluation because of limited funding and staff capabilities. Town staff report that flooding occurred in this area in July during a recent year when a short, severe precipitation event dropped approximately 5 inches of rain in 45 minutes.</p> <p>The drainage infrastructure in this area is one long culvert that extends under Murtagh Road, the shopping center, and Route 41. A relatively large swamp upstream of the culvert is reported to serve as flood storage, limiting flooding impacts at the culvert itself.</p>
19	Pursue floodproofing for the Highway Garage, if necessary.	PW		<p>The Town has secured an Elevation Certificate for the Highway Garage to more accurately identify its elevation relative to base flood elevations.</p> <p>Has the structure actually been elevated or floodproofed?</p> <p>Town will provide details</p>
20	Pursue floodproofing for the wastewater treatment facility, if necessary.	PW	Completed	<p>The Wastewater Treatment Facility has been floodproofed, and an Elevation Certificate secured to identify its elevation relative to base flood elevations. Town will provide details on floodproofing.</p>
21	Conduct a drainage analysis in the vicinity of Sharon Hospital to determine potential flood damage reduction methods.	PW	Completed	<p>Town identified that the cause of drainage issues had been improperly maintained drainage swales along the Town Road. The Town has taken back from the Hospital responsibility for maintenance of the swales.</p> <p>Additionally, the Hospital has reconstructed a parking area with improved drainage, and has put in place a comprehensive storm management plan.</p>
22	Compile a checklist that cross-references the bylaws, regulations, and codes related to flood damage prevention that may be applicable to a proposed project and make this list available to potential applicants.	P&Z	Capability	<p>The building inspector completes a full plan review for every development project, ensuring flood damage prevention concerns are addressed.</p>
23	Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	P&Z	Capability	<p>Building inspector, also the Town floodplain manager, is well trained in flood damage prevention methods.</p>
24	Consider replacing culverts frequently impacted by beavers with free span bridges.	PW	Drop	<p>Town has identified an effective method of addressing beaver concerns. This action is not considered necessary.</p>

#	Description	Dept.	Status	Notes
25	Consider the use of beaver deterrent devices such as beaver stops or beaver bafflers.	PW	Completed	Town has identified "Beaver Levelers" as an effective method of addressing beaver concerns.
26	Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.	PW	Carry Forward	When the Town replaces culverts, they often install a new structure that is considerably larger than the previous one. Town Staff will ask Road Foreman where he gets information from.
27	Several undersized culverts are located along State roads. Sharon could encourage the CT DOT to apply for funding to remediate these areas, since State agencies may apply for grants.	PW	Capability	The State manages its culverts as needed, and the Town coordinates as appropriate.
28	When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.	PW	Drop	Redundant with Action 26.
29	Evaluate overtopping at the bridge on Calkinston Road to determine appropriate flood reduction methods.	PW	Completed	The Town determined that overtopping was occurring due to improper maintenance at adjacent properties. The Inland Wetlands & Watercourses Commission instituted a give-year maintenance plan for these properties. Road overtopping has not been an issue since this plan was implemented. Town will check this language to make sure it accurately reflects progress that has been made on this action.
30	Replace and increase the capacity of the culvert on West Woods Road #1 near Sweeney's (just south of Hoopersfield Road).	PW	Completed	A new, increased-capacity culvert has been installed.
31	Install a headwall at the culvert beneath Kings Hill Road along Guinea Brook.	PW	?	Town staff will check with the Road Foreman
32	Continue to seek funding to conduct the necessary repairs on the scour critical bridges within the town.	First Selectman	Capability	Town continually conducts repairs on these bridges. In the last few years the Town has replaced the Keeler and Mitcheltown bridges. Additionally, Town staff have learned improved maintenance practices to cut down on scour at these sites.
33	Conduct routine maintenance of culverts to prevent blockages.	PW	Capability	This is a capability.
34	Ensure adequate barricades are available to block flooded streets in floodprone areas	EMS EMD PW & Fire	Completed	This is completed.

#	Description	Dept.	Status	Notes
35	Develop a site specific evacuation plan for Trinity Glen to ensure safe egress prior to floods.	EMS EMD	Drop	<i>Trinity Glen has a full generator, and is fully self-sustaining. Town staff believe that an evacuation of the site is unlikely to be necessary. Action is dropped.</i>
36	Develop a town wide tree limb inspection and maintenance program to ensure that the potential for downed power lines is diminished.	PW And Utility	Capability	<i>Town has consistently been updating its tree limb inspection budget and capabilities. Town staff report that Eversource has also done a good job of cutting back trees. Town staff note that Ash trees make up about 25% of the tree stock in Litchfield county, and most of those have been killed by the Emerald Ash Borer. The Town admits that it is not able to catch every tree before it comes down during a storm, but it feels its capabilities are sufficient.</i>
37	Develop a plan to address weak or unstable trees throughout Sharon.	PW	Capability	<i>This action is redundant with Action 37, above.</i>
38	Work with CL&P to ensure a more proactive approach is taken in Sharon with regards to tree trimming maintenance.	PW	Capability	<i>The Town works with the local utility provider (currently Eversource). It reports that Eversource has been proactive with tree maintenance.</i>
39	Ensure that the town maximizes its use of the emergency notification system by subscribing to as many residents as possible.	EMS EMD	Capability	<i>The Town's Constant Contact communication system is advertised on the Town website. The Town is currently pursuing a new Reverse-911 system.</i>
40	Continue to review and update the currently enacted EOP, evacuation plans, supply distribution plans, and other emergency planning documents for the Town as appropriate. Post general evacuation and shelter information on the Town website and in municipal buildings.	EMS EMD	Capability	<i>This is a capability. Shelter information is posted on the Town website. Evacuation is not a primary focus of the Town's Emergency Operations Plan, with sheltering in place being the primary response to disasters. The Town has a supply distribution plan in place.</i>
41	Building Department to provide literature regarding appropriate design standards for wind.	Building Official	Drop	<i>Design standards built into the State building code. This action is not considered necessary.</i>
42	Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures to protect new buildings to a standard greater than the minimum building code requirements. Require such improvements for new municipal critical facilities.	Building Official, EMS EMD	Drop	<i>Updated State building code requirements are considered to be sufficient.</i>

#	Description	Dept.	Status	Notes
43	Develop a plan to prioritize snow removal from the roof of critical facilities and other municipal buildings each winter. Ensure adequate funding is available in the Town budget for this purpose.	EMS EMD Public Works	Capability	<i>Town has a large budget for snow removal. Snow on roofs has not been a significant problem in the past, while icing has been more of an issue. The Town Hall's Slate Roof was noted by Town staff as being at risk of snow accumulation and icing. Additionally, the roof of the shopping center is flat, although the Town is not responsible for clearing that roof.</i> <i>Town feels its capabilities in this regard are sufficient.</i>
44	Provide information on the dangers of cold-related hazards to people and property.	EMS EMD	Carry Forward	<i>The Town puts out information about a variety of weather-related dangers as part of its participation in the NOAA Weather Ambassador program. A top concern with regard to cold-weather hazards are those posed by improper maintenance and use of private generators. The Town reaches out to homeowners who have purchased generators to tell them the importance of having a maintenance plan. People with generators that are only 10 years old are getting new ones because they didn't maintain properly.</i> <i>Town will carry this action forward to create a more robust plan for warning residents of the dangers of cold-related hazards, including a reminder about generator safety.</i>
45	Consider posting the snow plowing routes in Town buildings each winter to increase public awareness.	EMS EMD, PW	Drop	<i>Will not increase hazard mitigation capabilities.</i>
46	Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	EMS EMD	Capability	<i>Town constantly keeps track during events of which roads are closed, and identifying alternate routes. This information is relayed to fire and EMS, as well as to other towns because they may be trying to access Sharon Hospital.</i>
47	Building Department to provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat-roofed buildings such as heating coils.	Building Official	Drop	<i>Design standards built into building code.</i>
48	The town should consider utilizing snow fencing in areas prone to snow drift.	PW	Drop	<i>The Town put up snow fencing for years, but the high maintenance requirements and poor performance led them to stop. The Town instead relies on aggressive plowing and upgraded snow clearing equipment.</i> <i>Town will ask Foreman.</i>

#	Description	Dept.	Status	Notes
49	Include dam failure inundation areas in the CT Alert emergency notification system contact database	EMS EMD	Carry Forward with Revisions	<i>The Falls Village dam failure inundation area and the dam failure inundation area for a dam in the town of Salisbury (which has recently undergone rehabilitation) are included in the CTAlert system. The Town is not sure whether the dam failure area for Hatch Pond is included in that system. They will carry this action forward to specifically ensure that the Hatch Pond dam failure area is included in the CTAlert system.</i>
50	The Town should continue to require the installation of fire protection water in new developments, and sprinkler systems where access is limited for fire apparatus.	Fire Dept	Capability	<i>This requirement is built into the Town's Subdivision Regulations and the building code, and is enforced by the Building Inspector and Fire Marshal. The Town has had a number of large residential buildings where the owners have agreed to install in fire protection (including sprinklers). The Town has also been successful at encouraging installation of fire protection water, as doing so lowers the cost of insurance for homeowners.</i>
51	Increase the availability of water sources in the town's areas of high risk, using the historic record (fires exceeding five acres) as a benchmark for locating high risk areas.	Fire Dept	Capability	<i>The Town is consistently installing new dry hydrants. This is a capability.</i>
52	Pursue acquisition of additional municipal open space in SHFAs and set it aside for greenways, parks, etc.	First Selectman	Capability	<i>The Town works with the local Land Trust to acquire and preserve open space. An open space along the Housatonic has been preserved. This is a capability.</i>
53	Consider preventing residential development in areas prone to collapse (see also action #56 below under Landslides)	P&Z	Capability	<i>The Town has updated its zoning regulations to include new slope requirements for subdivisions, residential buildings, and driveways. Additionally, erosion control is required for any new subdivision or development.</i>
54	Ensure that municipal departments have adequate backup facilities in case earthquake damage occurs to municipal buildings.	EMS EMD, PW	Drop	<i>The Town believes its facilities to be sufficient.</i>
55	The town may consider bracing systems and assets inside critical facilities. This could help protect IT systems, important records and files.	EMS EMD, PW	Carry Forward with Revisions	<i>The Town currently backs its systems up to a local server. They will carry forward a new action to back up its IT data to the cloud, to both ensure it is protected from a local hazard event, and to enable continued remote operations in case the local server is not accessible. Town staff with check with selectman about this.</i>

#	Description	Dept.	Status	Notes
56	Consider preventing development in sandy areas with steep slopes.	P&Z	Capability	<i>This is covered in the zoning regulations.</i>
57	Ensure that local utility providers are aware of landslide potential and have responder teams ready to repair damage to their utilities caused by landslides.	EMS EMD	Capability	<i>The Town reports that Eversource, the local utilities provider, has this capability. There are many steep slopes in Town with High Tension wires, and the utility has appropriate equipment to manage these assets.</i>
58	Maintain education and outreach materials at the Building Department regarding how to identify potential landslide areas	Building Official	Capability	<i>The Planning Department and Building Official work with potential developers throughout a process to ensure they are not building in dangerous or otherwise problematic areas. This includes avoiding potential landslide areas, flood areas, and areas where septic systems or a well would not be able to be installed.</i>

MEETING DATE:	September 22, 2020	ATTENDEES:	Elinor Carbone, Mayor
PROJECT:	NHCOG HMP Update		Martin Connor, City Planner
MMI #:	3843-06		Jeremy Leifert, Asst. City Planner
SUBJECT:	City of Torrington		Ray Drew, Director of Public Works
LOCATION	Virtual/Remote Zoom		Paul Kundzins, Deputy Public Works Director/City Engineer
			Peter Towey, Fire Chief
			Brett Zuraitis, Chief Building Official
			Victoria Brudz, MMI

Victoria Brudz met with City of Torrington representatives on September 22, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A PowerPoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Charlotte Hungerford Hospital						
Torrington Transfer Station						
Torrington Police Department	576 Main Street	Police Departments (Except American Indian Or Alaska Native)				
Torrington Volunteer Fire Department	1738 East Main Street	Ambulance And Fire Service Combined				
Burrville Regional Fire School	Burr Mountain Road	Fire Fighter Training Schools				
Torrington Volunteer Fire Department	1738 East Main Street	Ambulance And Fire Service Combined				
Drakeville Volunteer Fire Department	1349 Marshall Lake Road	Fire Departments (E.G., Government, Volunteer (Except Private))				
Torrington Fire Department - Headquarters	111 Water Street	Fire Departments (E.G., Government, Volunteer (Except Private))				

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes / Changes
Torrington Fire Department - North End Station	899 Main Street	Fire Departments (E.G., Government, Volunteer (Except Private))				
Torrington Area Health District	350 Main Street	Community Health Programs Administration				
Burrville Regional Fire School	Burr Mountain Road	Fire Fighter Training Schools				
Milo's Apple House Enterprises Llc	1758 E Main St					
Borla's Service Station Llc	826 New Harwinton Rd					

- Add sewer pumping stations – the City will provide a list.
- Add Torrington Water Co. – 277 Norfolk Road, Torrington 06790
- Middle School is a regional shelter and has a generator.
- East School reportedly needs to be designated a shelter – this may occur in the future.
- Add Torrington Library to the list – 12 Daycoeton Place Torrington 06790
- Add Cumberland Farms – 207 S Main Ste, 1237 E Main St
- Add Sunoco 36 Migeon Ave

Development Trends

- There is currently a 92-unit age 55 and over apartment facility under review, as well as a 60 unit apartment complex on Franklin expected to be completed within the next year.
- The wastewater treatment facility is being completely upgraded to include floodproofing, elevating electric stations and chemical systems above the 500-year flood elevation.

Recent Events

- The impact of Tropical Storm Isaias (August 2020) was significant for the city. Numerous critical facilities were impacted, especially accessibility and backup power capabilities.
- There were over 100 roads blocked in the city, and debris removal was the highest cost item during recovery.
- Due to the COVID-19 pandemic, shelters could not be opened on top of loss of power.

Hazards Discussion

- Summer Street has had flooding problems in the past.
- The City would like to genuinely increase the efforts of putting together an inventory of flood prone roadways and sites throughout Torrington.

- Attendees discussed drought and the concerns regarding future impacts under potential worsening conditions. During past drought events some residents have raised concerns regarding their private wells and water availability issues.
- Attendees noted that there is a certain educational component lacking when discussing drought and wildfire hazards. Residents should be made aware of water conservation efforts, as well as understanding certain landscaping and property maintenance techniques to reduce wildfire risk.
- Icing is often a concern throughout the city. A project is currently underway to install underdrains in certain areas to help reduce icing incidents.
- While some past snow events have adversely taxed the city's resources, the current snow removal capacity is adequate for regular event needs.
- Snow removal is particularly a challenge in the downtown area however, as high pedestrian and car traffic typically impact snow removal efforts.

Capabilities

- The City has several resources for wildfire capacity including tankers and cisterns. However the point was raised that additional exploration could be done to identify other potential sources.
- There is a Winter Operations Plan, which includes plans for snow removal downtown. This has been put to use during past events.
- The city requires gas stations have a generator on site, or at a minimum the capability for a hook up in the event of a power outage.
- With new commercial projects a stormwater maintenance plan is required, and on an annual basis a report is required. This is a condition of approval for these projects.

Goals, Objectives, and New Actions

- **The city would like to improve educational outreach efforts regarding natural hazard information especially in schools and to those with special medical needs.**

Status of Previous Actions

Table V.73: Objective 1 Educate the public regarding natural hazards of concern, mitigation activities, and community preparedness			
Strategies	Who	Status	Notes
1. Visit schools and educate children about natural hazards and how to prepare for them.	Fire Depts. And Emergency Management Director	Carry forward/ revise	Schools are in compliance with educational aspects and requirements, but this specific action is likely not being done. There is a staff capacity issue on the city side when trying to execute. Revise: Coordinate with Torrington Schools to include this into curriculum i.e. science departments.
2. Make literature available on natural hazards and preparedness at Torrington City Hall and the City Library.	Emergency Management Director	Ongoing/revise	The Torrington Library is independent of the city. City staff is always working to incorporate state resources into the website. Revise: incorporate website additions into this action. Action: target outreach to certain populations such as those with special medical needs.
3. Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and Red Cross on community planning, preparedness, response, and training.	Emergency Management Director	Ongoing	There is a bi-annual review and submission. Plans have been put into action on a regular basis considering recent pandemic. City staff is continuously involved in both regional and local plans.
4. Continue to invest in the Emergency Notification System to provide emergency information to residents of the entire City or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.	Emergency Management Director	Carry forward/revise	Revise: continue to investigate and increase capabilities to inform residents. City currently uses LCD Everbridge to notify residents. This is however only the emergency services, not the expanded system.

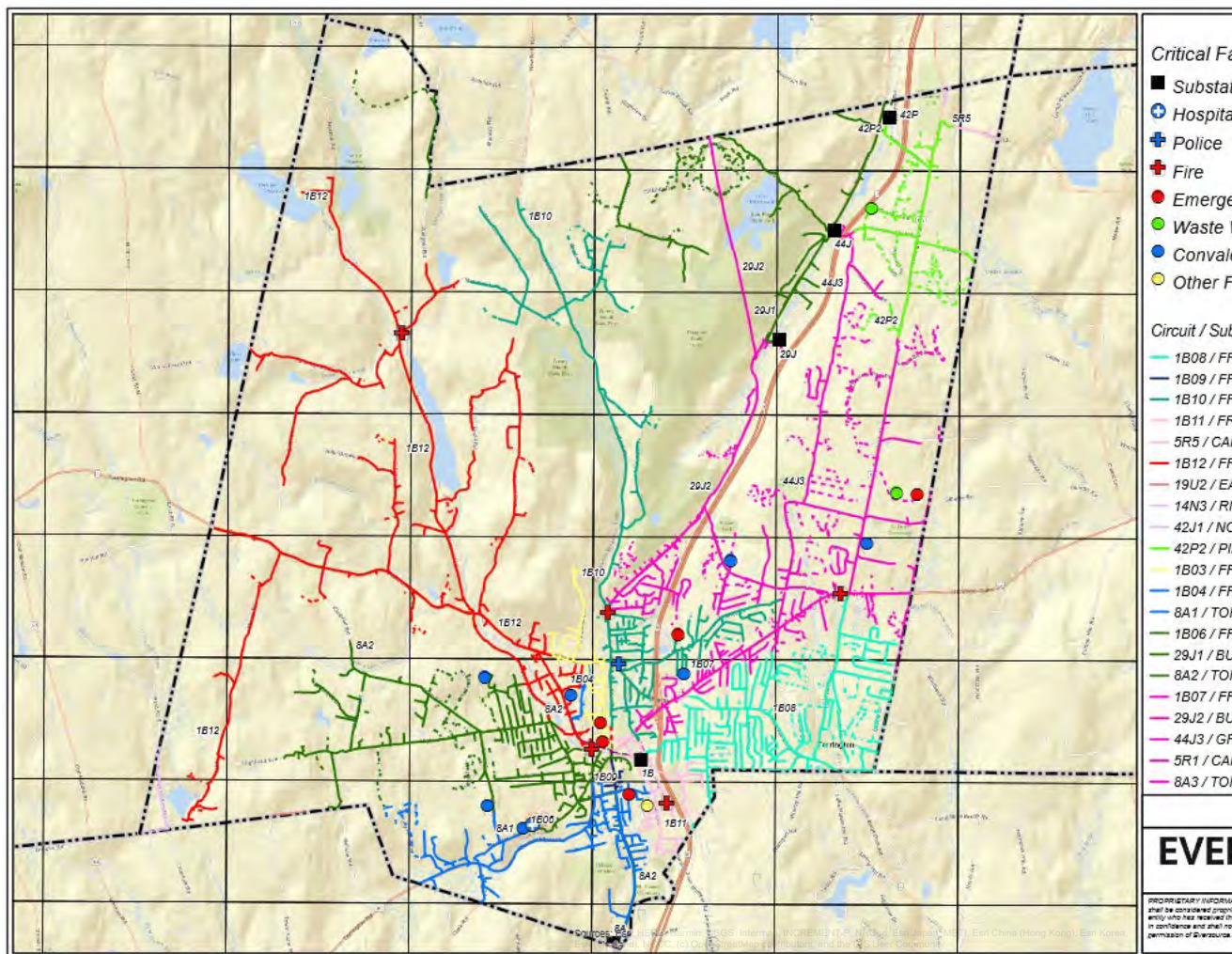
Table V.74: Objective 2 Ensure proper functioning of critical facilities during emergency response			
Strategies	Who	Status	Notes
1. Routinely inspect emergency response equipment, and train for response to natural disasters.	Fire Depts. And Emergency Management	Ongoing	Continuous capability. Training includes using WebEOC and crisis track across all city departments. Training also includes reviewing pre-storm preparation actions, inspecting generators, pumps, and portable systems.

	Director		
<i>2. Acquire additional emergency response equipment including a generator for City Hall and the Armory, and needed communication equipment.</i>	Emergency Management Director, Fire Chief	Ongoing/ carry forward	<p>City Hall does have a generator, wastewater pumps and treatment plant also have backup power. The City has 2 trailer portable generators, and 3 other small generators. The Armory still needs a generator.</p> <p>The city is looking to transition to the state system for communications, which is a robust and costly system. The City is in the planning phase of this transition. An upgrade to this system would allow and promote communication with neighboring towns and cities.</p> <p>New action? Continue communication systems transition planning efforts.</p>
<i>3. Pursue funding for an elevator or ramp at the Armory to move emergency equipment to and from the basement, and to facilitate public access</i>	Emergency Management Director	Carry forward	This action has not been pursued but there is a need in the event the showers in the basement need to be accessed.
<i>4. Promote the use of interoperable communication equipment, and the development of standard operating procedures for emergency response in the regional area.</i>	Emergency Management Director, Fire Chief, Police Chief, and Mayor	Ongoing	Ties into action #2 and new action, acquiring upgraded communications system. This is a high priority to the City.
<i>5. Consider developing a Memorandum of Understanding with schools or school bus company to utilize school buses for mass transportation during an emergency.</i>	Emergency Management Director	Carry forward with revision	Revise: City would like to work to update and formalize this agreement. There is a current informal understanding.
<i>6. Continue GIS capabilities as needed for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.</i>	Emergency Management Director, Fire Chief, Police Chief, and Mayor	Ongoing	<p>The city is continuously updating and improving GIS capabilities. Flooding, public safety infrastructure, and sewer infrastructure are mapped and integrated.</p> <p>Revise: Continue to utilize and improve upon the use of GIS for emergency response and planning</p>

Table V.75: Objective 3 Expand maintenance activities and implement specific projects that address known drainage issues within the town			
Strategies	Who	Status	Notes
<i>1. Implement control measures to mitigate the flooding created by beavers.</i>	Public Works Dept.	Ongoing	PW has an ongoing program to address the concern.
<i>2. Develop clean-out schedules for all catch basins and drainage facilities.</i>	Public Works Dept.	Ongoing/carry forward with revision	The City needs to establish and revise schedules in certain districts. Revise/new action: development of detention basin maintenance program. Several that are becoming overgrown in the city and need to be maintained properly. There are some basins that are not city-owned and also need to be inspected or maintained since property owners are not adequately maintaining. Include information for property owners on necessary maintenance.
<i>3. Identify the location of structures that are susceptible to flooding to facilitate risk assessment and potential control measures.</i>	DEMHS or DEEP	Carry forward with revision	Identify any critical facilities, or pump stations, roads (Summer St.), infrastructure. *Potentially referring to dams since DEEP is the target responsible party – questioned which structures this refers to.
<i>4. Pursue funding to augment the municipal tree trimming program.</i>	Emergency Management Director, Public Works Dept.	Ongoing	There is budget for tree removal in the annual operating budget. The City is in the process of conducting a public tree inventory and incorporating new streetscapes.
<i>5. Pursue funding to prepare a roadside tree inventory to better document the health and condition of trees and to facilitate their removal if hazardous.</i>	City Tree Warden, Public Works Dept.	Ongoing	City would like to pursue additional funding if possible, for assistance with this program. Possibly incorporate tree maintenance efforts into construction projects.

<p><i>6. Establish a 3-5 acre area for the storage of debris resulting from natural hazards such as tornadoes, and for snow from major snow- storms.</i></p>	<p>Emergency Management Director, Public Works Dept</p>	<p>Ongoing/com plete/revise</p>	<p>Three sites have been identified and approved by DEEP. These sites are used for snow, and green debris, and have been incorporated as fixed sites. The City is also working on a debris management plan.</p> <p>Revise: incorporate debris management plan aspects. Incorporate these sites into the debris management plan.</p>
<p><i>7. Install gauges along the Naugatuck River to better monitor river levels during flooding events.</i></p>	<p>Emergency Management Director, Public Works Dept.</p>	<p>Carry forward with revisions.</p>	<p>The funding and capacity of this action may not be feasible for the City to complete on their own. A more feasible option may be for example, the gages painted onto bridge abutments, with high visibility.</p> <p>Revise: investigate the current gages from Army Corps and incorporate these statistics into planning.</p>

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October 30 2019

Massasoit

Critical Facility	Name	Address	Town	State	Circuit	Substation Name / Town Location
Hospital	Charlotte Hungerford Hospital	540 Litchfield St	Torrington	CT	1B06	Franklin Dr / Torrington
Police	Torrington Police Dept	575 Main St	Torrington	CT	1B10	Franklin Dr / Torrington
Fire/PSAP	Torrington Fire Dept/acc	111 Water St	Torrington	CT	1B12	Franklin Dr / Torrington
Fire	Torrington Volunteer Fire Dept	1238 East Main St	Torrington	CT	1B08	Franklin Dr / Torrington
Fire	Drakesville Fire Dept	1308 Marshall Lake Rd	Torrington	CT	1B12	Franklin Dr / Torrington
Fire	Torrington Fire Dept	899 Main St	Torrington	CT	1B10	Franklin Dr / Torrington
Fire	Campion Ambulance	67 Colt Ave	Torrington	CT	1B11	Franklin Dr / Torrington
Emergency Shelter	Torrington Middle School	220 Middle School Dr	Torrington	CT	44J3	Greenwoods Rd / Torrington
Emergency Shelter	Torrington High School/shelter	1 Major Basse Dr	Torrington	CT	1B10	Franklin Dr / Torrington
Emergency Shelter	Sullivan Senior Center/shelter	88 E Albert St	Torrington	CT	8A1	Torrington Terminal / Torrington
Emergency Shelter	Trinity Church/shelter	220 Prospect	Torrington	CT	1B03	Franklin Dr / Torrington
Emergency Shelter	Vogel Wetmore School/shelter	68 Church Street	Torrington	CT	1B03	Franklin Dr / Torrington
Waste Water Treatment	Middle School Pump Station	200 Middle School Drive	Torrington	CT	44J3	Greenwoods Rd / Torrington
Waste Water Treatment	Ella Grasso Pump Station	49 Ella Grasso Avenue	Torrington	CT	42P2	Pinewoods / Torrington
Waste Water Treatment	Wipac	252 Bogue Road	Torrington	CT	8A1	Torrington Terminal / Torrington
Convalescent Home	Torrington Health And Rehab	225 Wyoming Ave	Torrington	CT	8A2	Torrington Terminal / Torrington
Convalescent Home	Torrington Dialysis	780 Litchfield St	Torrington	CT	1B06	Franklin Dr / Torrington
Convalescent Home	Valerie Manor	1360 Torrington St	Torrington	CT	44J3	Greenwoods Rd / Torrington
Convalescent Home	Concentra Health Center	335 Kennedy Dr	Torrington	CT	39J2	Burrville / Torrington
Convalescent Home	Paradigm Health Care	80 Farm Dr	Torrington	CT	1B10	Franklin Dr / Torrington
Convalescent Home	Wolcott House Extended Care	115 Forest St	Torrington	CT	1B12	Franklin Dr / Torrington
Convalescent Home	Litchfield Woods Extended Care	255 Roberts St	Torrington	CT	8A2	Torrington Terminal / Torrington
Other Facilities	Street Dept	104 Arthur St	Torrington	CT	1B12	Franklin Dr / Torrington

2 of 2

List Order	Facility	Address	Notes	Emergency Shelter	SFHA
1	Torrington City Hall	140 Main St	Administration		
2	Torrington Fire Department Headquarters	111 Water St	Fire / PSAP / EOP	✓	
3	Torrington Volunteer Fire Department	1738 East Main St	Fire		
3	Drakeville Fire Department	1349 Marshall Lake Rd	Fire		
3	Torrington Fire Department - North End Station	899 Main St	Fire		
3	Campion Ambulance	67 Colt Ave	Fire		
3	Torrington Police Department	576 Main St	Police		
4	Charlotte Hungerford Hospital	540 Litchfield Street	Hospital	✓	
5	Torrington Middle School	220 Middle School Dr	Emergency Shelter	✓	✓
5	Torrington High School	1 Major Besse Dr	Emergency Shelter	✓	✓
5	Sullivan Senior Center	88 E Albert St	Emergency Shelter	✓	✓
5	Trinity Church	220 Prospect	Emergency Shelter	✓	✓
5	Vogel Wetmore School	68 Church St	Emergency Shelter	✓	✓
6	Torrington Area Health District	350 Main Street	Administration		
6	Street Department	104 Arthur St	Municipal Services		
6	Torrington Transfer Station	118 Old Dump Road	Municipal Services		
7	WW Pump Station #1 Cliffs (Lakeridge#2):	115 Cliffs Drive	Wastewater Treatment	✓	
7	WW Pump Station #3 Ella Grasso (Ind Park #1):	49 Ella T. Grasso Ave	Wastewater Treatment	✓	
7	WW Pump Station #2 Evergreen (Lakeridge #1):	105 Evergreen Drive	Wastewater Treatment	✓	
7	WW Pump Station #4 Torrington Vol Fire (Repeater):	1738 E. Main St	Wastewater Treatment	✓	
7	WW Pump Station #5 Harris Drive	21 Harris Drive	Wastewater Treatment	✓	
7	WW Pump Station #6 Industrial Lane (Ind Park #2):	259 Industrial Lane	Wastewater Treatment	✓	
7	WW Pump Station #7 King Street:	76 King St	Wastewater Treatment	✓	
7	WW Pump Station #8 New Harwinton Rd:	1115 New Harwinton Rd	Wastewater Treatment	✓	
7	WW Pump Station #9 Middle School:	200 Middle School Drive	Wastewater Treatment	✓	
7	WW Pump Station #11 Torrington St:	1788 Torrington St	Wastewater Treatment	✓	
7	WW Pump Station #13 Cinnamon Ridge:	22 Clove Court	Wastewater Treatment	✓	
7	WW Pump Station #15 Willowbrook:	699 S. Main St	Wastewater Treatment	✓	
7	WW Pump Station #16 Torrington Farms:	330 Cedar Lane	Wastewater Treatment	✓	
7	WW Pump Station #17 Burr Mountain Tower (Repeater):	3278 Winsted Rd	Wastewater Treatment	✓	
7	WW Pump Station #18 Winsted Rd:	Winsted Rd	Wastewater Treatment	✓	
7	WW Pump Station #19 Felicity Lane	Felicity Ln	Wastewater Treatment	✓	
7	WPCF	252 Bogue Rd	Wastewater Treatment	✓	
8	Torrington Health and Rehab	225 Wyoming Ave	Convalescent Home		
8	Torrington Dialysis	780 Litchfield St	Convalescent Home		
8	Valerie Manor	1360 Torrington St	Convalescent Home		
8	Concentra Health Center	333 Kennedy Dr	Convalescent Home		
8	Paradigm Health Care	80 Fern Dr	Convalescent Home		
8	Wolcott House Extended Care	215 Forest St	Convalescent Home		
8	Litchfield Woods Extended Care	255 Roberst St	Convalescent Home		
9	Burrville Regional Fire School	Burr Mountain Road	Emergency Response		
10	Milo's Apple House Enterprises LLC	1758 E Main St	Private Service Company		
10	Borla's Service Station LLC	826 New Harwinton Rd	Private Service Company		

CITY of TORRINGTON
 Pump Station Data

Station	Address	Latitude	Longitude	Type	# Wetwells	#Pumps	E-Power
#1 Cliffside (Lakeridge#2):	115 Cliffside Drive	41° 52' 21" N Lat	73° 06' 45" W Lon	Submersible	1	2	Stationary
#3 Ella Grasso (Ind Park #1):	49 Ella T. Grasso Ave	41° 52' 11" N Lat	73° 04' 40" W Lon	Dry Pit	1	2	Stationary
#2 Evergreen (Lakeridge #1):	105 Evergreen Drive	41° 52' 21" N Lat	73° 06' 19" W Lon	Submersible	1	2	Stationary
#4 Torrington Vol Fire (Repeater):	1738 E. Main St			N/A	N/A	N/A	Stationary
#5 Harris Drive	21 Harris Drive	41° 51' 12" N Lat	73° 05' 43" W Lon	Dry Pit	1	3	Stationary
#6 Industrial Lane (Ind Park #2):	259 Industrial Lane	41° 52' 28" N Lat	73° 04' 19" W Lon	Dry Pit	1	2	Stationary
#7 King Street:	76 King St	41° 47' 13" N Lat	73° 06' 58" W Lon	Dry Pit	1	2	Portable
#8 New Harwinton Rd:	1115 New Harwinton Rd	41° 47' 55.47" N Lat	73° 05' 1.21" W Lon	Dry Pit	2	3	Stationary
#9 Middle School:	200 Middle School Drive	41° 50' 1.26" N Lat	73° 04' 12.24" W Lon	Submersible	1	2	Stationary
#11 Torrington St:	1788 Torrington St	41° 50' 8" N Lat	73° 04' 36" W Lon	Submersible	1	2	Portable
#13 Cinnamon Ridge:	22 Clove Court	41 50' 26.85N	73 05' 03" W	Submersible	1	2	Portable
#15 Willowbrook:	699 S. Main St	41° 47' 12" N Lat	73° 06' 55" W Lon	Submersible	1	2	Stationary
#16 Torrington Farms:	330 Cedar Lane	41° 51' 43.12" N Lat	73° 03' 37.16" W Lon	Submersible	1	2	Stationary
#17 Burr Mountain Tower (Repeater):	3278 Winsted Rd			N/A	N/A	N/A	Stationary
#18 Winsted Rd:		41° 52' 30.97" N Lat	73° 04' 44.62" W Lon	Submersible	1	2	Portable
#19 Felicity Lane				Submersible	1	2	Portable



MEETING MINUTES

MEETING DATE:	9/21/2020, 2020	ATTENDEES:	
PROJECT:	NHCOG HMP Update		Craig Nelson – Selectman, Deputy EMD
MMI #:	3843-06		Noah Slovin – MMI
SUBJECT:	Town of Warren		
LOCATION	Virtual – Telephone		

Noah Slovin met with Craig Nelson, Town of Warren Selectman and EMD, on September 21, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held over telephone. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Updates to the list of critical facilities were discussed at the meeting. Information in *italics* represents changes since the previous list, or other updates.

Facility	Address or Location	Comment	Emergency Power	Shelter	SFHA	Notes/Changes
Fire Department Headquarters	11 Sackett Hill Road	Emergency Operations Center	✓	✓		
Town Hall	50 Cemetery Road	Critical Records, Backup Emergency Operations Center	✓			<i>Secondary Shelter</i>
Community Center	7 Sackett Hill Road	Primary Shelter	✓	✓		
Warren Academy	8 Sackett Hill Road	Secondary Shelter	✓	✓		<i>Quarantine shelter (for separating shelter) ONLY Has backup power No backup power</i>
Warren Woods	251 Brick School Road	Tertiary Shelter		✓		<i>Strictly animal shelter – barn can take in large animals (cows, horses)</i>
Warren Town Garage	18 Lake Road	Emergency Response Assistance	✓			
Warren Elementary School	21 Sackett Hill Road	Overflow Shelter (if necessary)				<i>No backup power, can't use for sheltering at all.</i>

New Development Trends

- Town reported no changes in development patterns or trends.

Impacts of Recent Hazard Events

- The most significant recent event in Warren was Tropical Storm Isaias in 2020. This high wind event caused significant damage to trees and utility lines, but no private property damage was reported. The primary challenge the Town faced was the presence of downed, live power lines that Town personnel were unable to address; the Town had to wait for Eversource to come address these wires, and this often took a very long time. The Town also experienced disagreements with Eversource regarding prioritization of power line repairs. An elderly resident who lives on a dead-end road and has had multiple instances in the past in which emergency health services were required was identified as Priority 1 by the Town, but as Priority 2 by Eversource; this resident's road was completely blocked off for four days, presenting a major health risk to the resident. There is still one property that has a downed tree on the line connecting the house to the grid, which has not yet been addressed by Eversource. Town staff report that they are waiting to see what PURA will decide with regards to the Eversource response to this storm, and how that may change the utility's operations in the future.
- Town has worked well with DEMHS during disaster recovery; DEMHS is very responsive and helpful.

Changes to Hazard Concerns or Locations

- One of the Town's top issues is the risk posed by its many dead-end roads, which can be blocked off by debris (or can lose power, as noted above).
- The Town staff reports that their primary culvert-related problems occur with the State-road culverts located near Lake Waramaug.
- Town staff report that Jack Corner Road tends to have more snowdrift problems than Tanner Hill Road.

New Hazard Mitigation Capabilities

- The Town has hired a new EMD
- Litchfield County Dispatch is the new primary emergency dispatch center for the Town, and runs a reverse-911 system that the Town can utilize.
- The Town is working with a telecommunications tower company to install a cellphone tower on Town-owned property, leased to the company. They are still working on finding cellular providers interested in installing their equipment on the towers.
- The Lake Waramaug Task Force (LWTF) is active in assessing and addressing issues, including bank erosion and sediment accumulation, within the Lake Waramaug watershed. The LWTF recently completed a full survey of Sucker Brook (Lake Waramaug Brook) from Lake Waramaug up to the brook's headwaters, and is currently working on Sucker Brook streambank stabilization and collaboration with streamside property owners on limiting erosion into the stream.
- The Town reports that one of the two RLPs in Town has been mitigated; the property was sold, and the new owners tore down the existing structure and constructed a new building at a higher elevation.
- Town has replaced a number of culverts with upgraded structures:
 - The Sanders Hill Brook culvert under Hardscrabble Road
 - The Curtiss Road Culvert
 - The Reed Road Culvert

- Warren Social Services coordinates with the Fire Department and EMS to perform wellness checks on certain residents during severe weather events, including extreme cold days. These checks are primarily completed by phone, but personnel will visit residents in-person as needed. This program was utilized during the power outages following the 2020 Tropical Storm. Social Services provides information on its website, including a sign-up form for special needs that would require help in an emergency or evacuation.

New Goals, Objectives, and Actions

- Town would be interested in installing emergency power at the Warren Elementary School; this is part of a regional school district, complicating the Town's ability to move such a change forward.
- Town is also interested in installing emergency power at Warren Woods, which would allow them to use to kitchen and dining facilities at that site.



MEETING MINUTES

Status of Previous Actions

Actions listed in the previous plan were reviewed, and their current status identified. New information is identified in *italics*.

#	Description	Dept.	Status	Notes
1	Utilize the existing CT Alert emergency notification system to its fullest capabilities with as many residents participating as possible.	EM	Capability	Town utilizes CT Alert as needed. Town participates in the Litchfield County Dispatch center, which runs Reverse-911 alerts. The Town primarily relies on that service. <i>This is a capability.</i>
2	Encourage residents to purchase and use NOAA weather radios with alarm features.	EM	Drop	Town does not believe this action is necessary.
3	Identify opportunities to work with utilities to increase mobile phone coverage in Warren.	PW	Carry Forward / Capability	Town leased some Town-owned property to a tower company, but the tower company has not yet been able to find carriers interested in leasing tower space. The land lease stands, but there is no tower or carrier there yet.
4	Review and update the Town EOP at least once annually.	EM	Capability	<i>This is a capability</i>
5	Provide standby power supply to Warren Woods.	PW	Carry Forward	Town has not yet completed this project due to limited funding.
6	Compile a checklist cross referencing flood-related ordinances and regulations and make this available to development applicants	P&Z	Drop	Town staff report that the floodplain zone is very small, only encompassing about 5 houses, and with no new development. All relevant ordinances are included in the Zoning Regulations, and permits are reviewed by the building department. A cross-reference checklist is not necessary.
7	Consider requiring new buildings constructed in floodprone areas to be protected to the highest recorded flood level regardless of being within a defined SFHA.	P&Z	Drop	Local enforcement of State Building Code requires freeboard. <i>This action is not necessary.</i>

#	Description	Dept.	Status	Notes
8	Require developers to demonstrate whether detention or retention of stormwater is the best option for reducing peak flows downstream of a project and provide a design for the appropriate alternative.	P&Z	Capability	<i>This is required.</i>
9	Consider conducting a Sucker Brook flood mitigation study to identify appropriate methods of reducing flood risks.	PW	Drop	<p><i>Town has considered this action in the timeframe since the initial HMP was developed, and determined it to be unnecessary at this time. The brook has not posed a significant flood risk to the Town, has a limited floodplain area (the Town reports that the only significant floodplain of the brook is located at its mouth, where it enters Lake Waramaug), and has few structures or assets located near it. The Town reports that the last notable flood event from the brook occurred in the 1955 hurricane, when only a handful of homes were flooded.</i></p> <p><i>Other work being done on Sucker Brook by the Lake Waramaug Task Force is addressing erosion issues posed by the brook.</i></p>
10	Conduct an evaluation of Lake Waramaug to determine the cause of siltation within the lake and characterize the impact to flood storage.	PW	Completed	<i>The Lake Waramaug Task Force has completed a full survey of Sucker Brook up to its source, identifying sediment sources. The Task Force has completed some bank stabilization projects and is currently working with landowners to continue to alleviate problems.</i>
11	Obtain funding to remove sediment from Lake Waramaug.	PW	Underway	<i>The LWTF is currently exploring funding options for sediment removal. Carry forward to completion.</i>
12	Reach out to owners of repetitive loss properties and provide technical assistance to reduce flood risks and NFIP claims.	P&Z	Carry Forward with Revisions	<i>One RLP is Town has reportedly been mitigated, and only one RLP remains.</i>
13	Evaluate floodprone properties on Sucker Brook to determine potential flood damage reduction methods for these properties.	P&Z, PW	Drop	<i>There are reportedly few private properties prone to flooding from Sucker Brook (none owned by the Town). Town staff report that flooding from the Brook has not been a problem since 1955. This action is not believed necessary.</i>

#	Description	Dept.	Status	Notes
14	Encourage property owners to purchase flood insurance under the NFIP.	P&Z	Drop	<i>P&Z hasn't done anything. Very few properties in Warren are in flood zones. This is achieved through banks giving mortgages.</i>
15	Provide technical assistance regarding floodproofing measures to interested residents. Pursue funding for home elevations.	P&Z, PW	Capability	<i>This is a capability, found within the Building Department.</i>
16	Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	First Select man	Drop	<i>Town has limited staffing capabilities, and reports that there are very few homes in Town that are at risk of flooding, and those that are located in floodplains tend to be second homes that are frequently rebuilt and are up to code. The Town does not believe this action is a cost-effective way to mitigate hazards.</i>
17	Provide outreach regarding home elevation and relocation, flood barriers, dry floodproofing, wet floodproofing, and other home improvement techniques to private homeowners and businesses with flooding problems.	P&Z	Drop	<i>See previous action.</i>
18	Review culvert conveyances based on existing hydrology and Northeast Regional Climate Center guidance.	PW	Capability	<i>Town maintains an ongoing list of culverts that need replacement, planned out over the coming years. Replacements are primarily upgrades, rather than in-kind replacement.</i>
19	When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.	PW	Drop	<i>This action is redundant with the previous action.</i>
20	Increase the capacity of the culverts at College Farm Road, Curtiss Road and Reed Road.	PW	Complete and Underway	<i>Curtiss Road Culvert has been upgraded. Reed Road Culvert has been upgraded. The Town is currently working on upgrading the College Farm Road. The culvert is expected to be replaced with large box culverts or an open-bottomed structure. The project should be completed by 2022. Carry this action forward.</i>

#	Description	Dept.	Status	Notes
21	Pursue riverbank stabilization along Sucker Brook.	PW	Complete	The LWTF is working with Private Property Owners on this project. A number of stabilization projects have been completed.
22	Ensure adequate barricades are available to block flooded streets in floodprone areas	EM	Capability	The Town has sufficient barricades through the Fire Department, Public Works, and Emergency Management.
23	The Building Department should provide literature regarding appropriate design standards for wind.	Building Official	Capability	The building department has literature displayed in its office at the counter. Additionally, design standards are found in the State Building Code.
24	Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures to protect new buildings to a standard greater than the minimum building code requirements. Require such improvements for new municipal critical facilities.	EMS	Drop	State Building Code requirements are sufficient.
25	Develop townwide tree limb inspection / maintenance program to ensure that the potential for downed power lines is diminished.	PW	Capability	This is a capability. The Town hires an arborist on a day-by-day basis to take care of trees and limbs. The Town increased its budget in 2020 to enable it to deal with the large number of dead Ash trees (due to the Emerald Ash Borer). After the 2020 Tropical Storm there were a number of oak trees with hanging limbs. Overall the Town's tree management capabilities are sufficient.
26	Remove weak or dead ash trees on Curtiss road in an effort to prevent utility damage during heavy wind events.	PW	Completed	This action has been completed.
27	Develop a plan to prioritize snow removal from the roofs of critical facilities and other municipal buildings each winter. Ensure adequate funding is available in the Town budget for this purpose.	PW	Carry Forward	Town has not yet completed this action due to financial and staffing limitations. There are two buildings in Town that the Town has had to clean off: the Salt Shed and the Fire House. Carry Forward.
28	Provide information on the dangers of cold-related hazards to people and property.	PW	Carry Forward	Town has a number of capabilities in this regard but has not specifically instituted a program to provide cold-weather hazard information to the public. This action is carried forward under the purview of Social Services.

#	Description	Dept.	Status	Notes
29	Consider posting the snow plowing routes in Town buildings each winter to increase public awareness.	EM	Drop	Will not increase hazard mitigation capabilities
30	Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	EM	Capability	Capability Town Foreman, Fire Department, and EMS coordinate on this action. They review problem areas after storms.
31	The Building Department should provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat-roofed buildings such as heating coils.	Building Official	Drop	Standards are found within the building code.
32	Develop a plan to address snowdrift concerns in the vicinity of Jack Corner Road and Tanner Hill Road. Snow fencing and certain vegetation buffers may be helpful to reduce drifting.	PW	Completed	Town has determined that snow fencing is not a preferable strategy for addressing snowdrift concerns. Instead, the Town has acquired a large plow truck that is able to clear the road even in high snow drift conditions. Town staff report that Jack Corner Road tends to have more snowdrift problems than Tanner Hill Road.
33	Consider preventing new residential development in areas most prone to collapse or liquefaction.	P&Z	Capability	Remaining developable land in the Town is reportedly dominated by ledge (bedrock) and swamps, and construction is prohibited in swampy areas; thus, this is an incidental capability.
34	Ensure that municipal departments have backup plans and adequate backup facilities such as portable generators in place in case earthquake damage occurs to critical facilities, particularly the water and wastewater treatment facilities.	EM	Capability	Town owns a couple of portable generators that can be used in an emergency. Town does not have any public water or wastewater facilities.
35	Consider bracing systems and assets inside critical facilities. This could help protect IT systems, important records and files, libraries.	EM, PW	Drop	Backup data on the cloud Hard copies stored in vaults that are safe.

Commented [A1]: From Tim Angevine:
Data security is a primary concern these days.
→ NOT under EM or PW.
→ Put under First Selectman, Carry Forward.
→ Software for auto backup is cost prohibitive.
The Town quoted it out earlier this year, it was cost prohibitive. Now they do it on hard drive instead. Once a week. Not the best way to do it.

#	Description	Dept.	Status	Notes
36	Work with DEEP to update the registered dams list to indicate that Robert Scull Pond and Strobel Pond are beaver dams.	PW	Completed	<p>The Town sent an updated list of local dams to DEEP a few years ago, indicating this change. The Town does not know whether DEEP has updated its internal list. This action is complete from the perspective of the Town.</p> <p>In general, the Town has not coordinated with DEEP about local dam management in many years. All of the dams in Warren, except one, are located on private property. The Town owns the one non-private dam. The Town performed an engineering study on the dam in 2018.</p>
37	Ensure that EOPs/EAPs are on file for all high hazard dams located in Warren, including the two owned by the City of Waterbury.	PW	Carry Forward with Revisions	<p>The EAP for the Warren-owned dam is located in Town Hall in the Land Use office.</p> <p>The Town does not know whether the EAPs of the two Waterbury dams are held locally. Reportedly, failure of the Waterbury dams would have affect a few houses in Warren along Valley Road. The flood waters would then move into Washington Depot. Waterbury reportedly does send Warren updates when they work on their dams; Waterbury has performed significant work in the last few years.</p> <p>An action to secure up-to-date EAPs for the Waterbury dams is carried forward.</p>
38	Include dam failure inundation areas in the CT Alert emergency contact database.	EM	Carry Forward with revisions	Town primarily utilizes Litchfield County Dispatch for emergency alerts.
39	Continue to require the installation of fire protection water in new developments, and sprinkler systems where access is limited for fire apparatus.	P&Z	Drop	Warren works with private landowners to install additional dry hydrants as needed; home insurance rates are lowered significantly if a dry hydrant is located on the property.
40	Increase the availability of water sources in the town's areas of high risk, using the historic record (fires exceeding five acres) as a benchmark for locating high risk areas.	EM, FD	Capability	Town uses fire ponds and dry hydrants to provide firefighting water. The Fire Department tests these sources twice a year and supplies fittings to ensure new hydrants are compatible with their equipment. New dry hydrants have installed in recent years; as an example, a dry hydrant was installed in 2019 on North Shore Road at Arrow Point Road.

#	Description	Dept.	Status	Notes
41	Revise and enhance the town's website concerning the local regulatory requirements concerning Open Burning.	EM, FD	Completed	Open Burning information has been loaded onto the Town website. The website also has a link to a state website showing whether it is a good day for open burning; applicants still have to call the Fire Marshal to see if it's ok locally. Individuals must go into town hall in person to get a permit.
42	Pursue acquisition of additional municipal open space in SFHAs and set it aside for greenways, parks, etc.	First Select man	Capability	The Town does not acquire open space itself, instead the very active local land trust pursues acquisitions and conservation easements. The Land Trust works closely with the Eastern Greenway and Housatonic Greenway groups to preserve open space, and tends to focus on preservation of wildlife corridors. The Land Trust is currently looking at two large properties and is waiting on grants to acquire them.
43	Selectively pursue conservation recommendations listed in the Plan of Conservation and Development and other studies and documents	First Select man	Capability	This is a capability No specific locations are listed in the POCD.

Commented [A2]: From Tim Angevine:
 Carry forward. We did acquire some open space recently. Town owns a farm. In the future if they could do it with grants it would be preferable to having the land trusts do it.

One of the properties that the Land Trust is looking at is farm in a floodplain. They are applying through farm preservation and through OSWA.

Get AW501 from Diane, fill out, send in

MEETING DATE:	7/28/2020	ATTENDEES:	
PROJECT:	NHCOG HMP Update		Jim Brinton – First Selectman
MMI #:	3843-06		Rocky Tomlinson – EMD
SUBJECT:	Town of Washington		Shelley White – Land Use Clerk
LOCATION	Virtual/Remote		Victoria Brudz – MMI
	Zoom		

Victoria Brudz met with the Town of Washington representatives on July 28, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. A Powerpoint presentation was used to explain the planning process and guide the meeting. Attendees followed an open discussion format. Discussion topics are grouped below.

Critical Facilities

Facility	Address or Location	Comment	Emergency Power?	Shelter?	In 1% Annual Chance Floodplain?	Notes/Changes
Washington Transfer Station & landfill		Municipal facility				
Town Hall	2 Bryan Plaza	Municipal facility	✓	✓	Yes	Added from meeting
Washington State Trooper	2 Bryan Plaza	Law Enforcement	✓		Yes	
Washington Volunteer Fire Department	109 Bee Brook Road	EMS/Fire	✓	✓	Yes	
Town of Washington Depot Health Department	2 Bryan Plaza	Health Dept.	✓		Yes	
Public Works Garage	110 Blackbill Road	Municipal Facility			No	Added from meeting
Cell Tower	110 Blackbill Road	Communications			No	Added from meeting

New Development Trends

Impacts of Recent Hazard Events

- Town staff reported no notable hazard events have occurred recently.

Changes to Hazard Concerns or Locations

- Several areas mentioned in the previous hazard mitigation plan are still areas of concern in regard to icing, including: Cook Street, June Road, Gunn Hill Road, and Tinker Hill Road. Some has been in these areas, but concerns remain.
- Green Hill Road, route 47, has some trouble spots that need to be structural improved. The town is concerned the state of this road may result in concerns in the future.
-

New Hazard Mitigation Capabilities

- The Highway Department is a relatively new facility with a new fleet.
- The public works department tracks complaints, such as flooding or tree issues, as they are received, and typically is able to respond to the complain within days.

New Goals, Objectives, and Actions

- The town would like to develop a permanent flood mitigation system around the elementary school property.
- The town is in the process of upgrading their radio communication system. The project is currently in phase 1 and will likely need additional funding to complete phases 2 and 3.
- Currently, a consultant is working to evaluate the condition of several bridges and culverts in town. The outcome of this evaluation will likely lead to recommended upgrades and replacements.

MEETING MINUTES

	Strategies and Actions for the Town of Washington	Responsible Department	Status	Notes
	ALL HAZARDS			
1	Obtain emergency generators for the Washington Volunteer Fire Department, the Town Garage and the Senior Center/American Legion.	PW, EMD	Carry forward with revision	Installed at FD and town garage, senior center up for other discussion -
2	Consider making the Senior Center/American Legion a designated shelter once standby power is received	EMD	Incomplete	Remove action – town hall and FD are current shelters; this is no longer up for consideration
3	Utilize the existing Alert Now notification system to its fullest capabilities	EMD	Complete	Remove, Capability, utilizing the system to fullest capacity
4	Encourage residents to purchase and use NOAA weather radios with alarm features	EMD	Ongoing	Remove, capability, this info is being promoted already by other sources and the town feels it is adequately addressed.
5	Review and update the Town EOP at least once annually	EMD	Complete	Remove, ongoing capability
6	Consider developing a Micro Grid in an effort to ensure back-up power is available in the business district during emergency situations.	First Selectman	Carry forward with revision	Past discussions to have “pigtail” connections added to the market and Legion. Edit to include generator hook ups
7	Develop a plan to obtain and store fuel for back-up generators to ensure availability during emergency situations.	EMD	Complete	Remove, Capability, town has adequate backup supply from when upgrades were made
	FLOODING - Prevention			
8	Require developers to demonstrate whether detention or retention of stormwater is the best option for reducing peak flows downstream of a project and provide a design for the appropriate alternative.	LU	Remove	Regulated by IWWR, already certain design guidelines in place, also addressed in zoning regs, town also has stringent guidelines for development for around the lake.
9	Develop a plan to remove debris from rivers and streams in an effort to prevent obstructions of bridges and culverts.	PW		Ongoing, capability, PW is already constantly working to identify and remove debris
	FLOODING - Property Protection			

10	Encourage property owners to purchase flood insurance under the NFIP and to report claims when flooding damage occurs.	LU, Building	Carry forward with revisions	Rework to a general education action – town has minimal impact on personal property insurance.
11	Provide technical assistance regarding floodproofing measures to interested residents. Pursue funding for home elevations should any residents become interested.	LU, Building	Remove	Follow up with building department, may not be relevant to the town. Consider removal Revisit and review
12	Evaluate the possibility of acquiring and/elevating/floodproofing residences or businesses that are prone to flooding.	PW, Building	Carry forward	Ongoing
13	Encourage flood proofing of businesses along Titus Road.	PW, Building	Carry forward with revisions	Also add Bee Brook Road, general educational action. Possibly consider action for larger scale floodproofing within these areas?
14	Evaluate the possibility of relocating the elementary school.	First Selectman	Remove	No longer a feasible action
15	Consider constructing a flood wall or berm around the elementary school.	PW	Carry forward with revisions	Drainage work has been done at the property, has been improved, but need to address additional concerns.
16	If the school district constructs a new elementary school and gives the town the existing building, ensure that the building is re-used in accordance with floodplain development regulations.	LU, Building	Remove	Remove action – not feasible
FLOODING - Public Education				
17	Compile a checklist that cross-references the bylaws, regulations, and codes related to flood damage prevention that may be applicable to a proposed project and make this list available to potential applicants. The information in Section 3.4 provides a starting point for this list.	LU		Follow up on this action - revisit
18	Ensure that the appropriate municipal personnel are trained in flood damage prevention methods.	LU, Building	Combine 18 & 19	
19	Provide outreach regarding home elevation and relocation, flood barriers, dry floodproofing, wet floodproofing, and other home improvement techniques (Section 3.6.2) to private homeowners and businesses with flooding problems.	LU, Building	Combine with 18	Recast 18 and 19 to include resources to FEMA on the town website – the town would work with an engineer for large scale Revisit and review action for additional comments

	FLOODING - Natural Resource Protection			
20	Pursue the acquisition of additional municipal open space inside SFHAs and set it aside as greenways, parks, or other nonresidential, noncommercial, or nonindustrial use.	First Selectman	Carry forward with revisions	Ongoing similar to action 12, combine two actions
21	Selectively pursue conservation recommendations listed in the Plan of Conservation and Development and other studies and documents	First Selectman	Carry forward	Ongoing Any specific actions we might want to include here?
	FLOODING - Structural Projects			
22	Evaluate drainage problems in the town and develop a list of culverts to replace and increase capacities.	PW	Carry forward with revisions	Capability, done on a regular basis, preventative maintenance We might want to gear this toward the work being done by Cardinal – perform necessary upgrades/replacements as identified per their report?
23	When replacing or upgrading culverts, work with CT DOT to incorporate findings of the climate change pilot study and work with HVA to incorporate findings of the stream crossing assessment training.	PW	Ongoing	Currently have 2 projects that are underway. Capability and ongoing
	FLOODING - Emergency Services			
24	Ensure adequate barricades are available to block flooded streets in floodprone areas	PW	Complete	Town acquired barricades
25	Evaluate flooding concerns in the vicinity of the Washington Volunteer Fire House. Potential mitigation actions may include constructing a berm or floodwall, floodproofing the building or relocating facilities on the site.	EMD, PW	Carry forward	Possibly combine with Titus Road Action
26	Work with Rumsey Hall to develop a flood emergency plan that defines actions to be taken to protect students and staff from floods and to prevent facility damage.	EMD	Complete	Ongoing – town has good communication with the school, a plan is in place. Rumsey hall does have a plan that covers this.
	WIND DAMAGE RELATED TO HURRICANES, SUMMER STORMS, AND WINTER STORMS			

27	Consider the hardening of utilities in the vicinity of Rumsey Hall to minimize power outages during storm events	PW	Carry forward	Ongoing conversations with Eversource for here and other sites
28	Develop a town wide tree limb inspection and maintenance program to ensure that the potential for downed power lines is diminished. Continue to encourage property owners to trim branches located over structures and power lines.	PW	Capability ongoing	Eversource has been extremely proactive – town has tree warden, there is a budget, warden works with PW to address issues, and remove after storm.
29	Work with a CL&P liaison to ensure a more proactive approach is taken in Washington with regards to tree trimming maintenance and to ensure appropriate response times following storm events.	PW	Ongoing	Capability - Change to eversource, town has an eversource liaison that works directly with town.
30	Develop a plan to address weak or unstable trees, especially in the vicinity of Baldwin Hill Road.	PW	Remove	Ongoing with Eversource and PW
31	Require the location of utilities underground in new developments or during redevelopment whenever possible. Pursue funding to place them underground in existing developed areas.	LU	Carry forward	Have LID regs, developer encourages underground utilizes Revisit and review
32	Adopt the draft revision to the town zoning regulations which will encourage the burying of utilities for new developments. Consider adding this to the subdivision regulations as well.	LU		Revisit and review
33	Continue to review and update the currently enacted EOP, evacuation plans, supply distribution plans, and other emergency planning documents for the Town as appropriate. Post general evacuation and shelter information on the Town website and in municipal buildings.	EMD		Review is ongoing for all plans – info is not public to ensure it is accurate during an event. Revisit and review
34	The Building Department should provide literature regarding appropriate design standards for wind.	Building Official	Complete	Follow state building code
35	Encourage the use of structural techniques related to mitigation of wind damage in new residential and commercial structures to protect new buildings to a standard greater than the minimum building code requirements. Require such improvements for new municipal critical facilities.	PW, Building		Revisit and review
	WINTER STORMS			

36	Develop a plan to prioritize snow removal from the roof of critical facilities and other municipal buildings each winter. Ensure adequate funding is available in the Town budget for this purpose.	PW	Complete	PW has plans in place, and there is adequate funding
37	Provide information on the dangers of cold-related hazards to people and property.	EMD	Remove	Capability, Town utilizes state resource such as information and 211
38	Consider posting the snow plowing routes in Town buildings each winter to increase public awareness.	PW		Revisit and review
39	Emergency personnel should continue to identify areas that are difficult to access during winter storm events and devise contingency plans to access such areas during emergencies.	EMD, PW	Remove	Ongoing – town reviews this every storm, town holds pre-meetings before a storm and discuss those areas
40	The Building Department should provide literature regarding appropriate design standards for mitigating icing, insulating pipes, and retrofits for flat-roofed buildings such as heating coils.	Building Official	Complete	Utilizes the State code
41	The town should consider utilizing snow fencing in areas prone to snow drift.	PW	Remove	Ongoing Capability, town does this.
42	Conduct drainage studies along Cook Street, June Road, Gunn Hill Road and Tinker Hill Road in order to identify measures that may reduce icing due to poor drainage.	PW		Revisit and review Some have done
	EARTHQUAKES			
43	Consider preventing residential development in areas prone to collapse	LU	Remove	Town already discourages development in high hazard areas
44	Ensure that municipal departments have adequate backup facilities in case earthquake damage occurs to municipal buildings.	PW, EMD	Complete	Town does has capabilities and facilities to move equipment, etc. not just for earthquakes but all types of events
45	Consider bracing vulnerable systems and assets inside critical facilities. This could help protect IT systems, important records and files.	PW, EMD		Revisit and review Fenn hill action, systems in Town Hall
	DAM FAILURE			

46	File EOPs/EAPs with town department and emergency personnel	EMD		Ongoing action, work with town Revisit and review Class C dam owners should file their EAP with the town
47	Develop EAPs for Riverdance Mill Dam and the Lake Waramaug Dam in accordance with new DEEP requirements	EMD		Some work has been done Revisit and review
48	Include dam failure inundation areas in the Alert Now emergency contact database	EMD		Revisit and review
	WILDFIRES			
49	Continue to require the installation of fire protection water in new developments where other sources of water are distant, and installation of sprinkler systems where access is limited for fire apparatus.	Fire Department	Carry forward with revision	Town encourages cisterns, but does not require Add Fire Marshal to department.
50	The Fire Department should coordinate with the Water Department to identify areas where fire-fighting capacity may be limited due to lack of water pressure or storage. Deficiencies should be addressed as they are identified, and funding allows.	Fire Department	Complete	As part of pre-plan process, FD does have list of available water sources, dry hydrants have also been installed throughout town. Have a pretty extensive inventory. Revise?

MEETING DATE:	9/21/2020, 2020	ATTENDEES:	
PROJECT:	NHCOG HMP Update		Pam Colombie – Land Use
MMI #:	3843-06		Jim Rollins – Public Works Director
SUBJECT:	Town of Winchester		Steven Williams – Fire Marshal / EMD
LOCATION	Virtual (Zoom)		

Noah Slovin met with Town of Winchester representatives on September 21, 2020 to begin the local planning process for the hazard mitigation plan update. The meeting was held as a video conference using the Zoom platform. Attendees followed an open discussion format. Discussion topics are grouped below.

Candy Perez, Mayor of Winsted, did not attend the meeting, but provided her own set of notes ahead of the meeting date. Those notes are reflected in this document.

Critical Facilities

Some updates to the list of critical facilities were discussed at the meeting; others were provided in a separate document provided by Steven Williams. Information in *italics* represents changes since the previous list, or other updates.

Facility	Address or Location	Comment	Generator	Shelter	SFHA	Notes/Changes
Winchester Town Hall	338 Main St	EOC	X			
<i>Blanche McCarthy Senior Center</i>	<i>80 Holabird Ave</i>	<i>Senior Center</i>	X	X		<i>Primary Shelter</i>
<i>Winchester Grange Hall</i>	<i>110 Newfield Road</i>	<i>Shelter</i>	X	X		<i>Primary Shelter</i>
Pearson School	2 Wetmore Ave	<i>Secondary Shelter</i>	✗	X		<i>Does not have a generator</i>
Gilbert School	200 Williams Ave	<i>Secondary Shelter</i>		X		<i>Does not have a generator</i>
Municipal Public Works Garage	189 Rowley St	<i>Municipal Services</i>				
Winsted Fire Station #1	27 Elm St	<i>Emergency Response</i>	X			
Winsted Fire Station #2	187 Prospect St	<i>Emergency Response</i>	X			
Winsted Fire Station #3	215 Holabird Ave	<i>Emergency Response</i>	X			
<i>Winchester Center Vol. Fire Dept.</i>	<i>110 Newfield Road</i>	<i>Emergency Response</i>	X			<i>Backup EOC</i>
<i>The Civil Defense Building</i>	<i>72 Waldron Street</i>	<i>Emergency Response</i>	X			
<i>Winsted Medical Associates</i>	<i>80 S Main Street</i>	<i>Medical Services</i>	X			
Winchester Police Station	338 Main St	Dispatch Services				Primary dispatch service has been taken over by Litchfield County Dispatch
<i>Litchfield County Dispatch</i>	<i>111 Water Street, Torrington</i>	<i>Emergency Dispatch Services</i>				<i>Regional Service</i>
Rugg Brook Reservoir	177 Rugg Brook Rd	<i>Water Source</i>				
Crystal Lake Reservoir	Winchester Road	<i>Water Source</i>				
Crystal Lake Water Treatment Plant	Winchester Road	<i>Municipal Services</i>				
Winsted Sewer Treatment Plant	470 N Main St	<i>Municipal Services</i>				

Facility	Address or Location	Comment	Generator	Shelter	SFHA	Notes/Changes
Laurel Healthcare Nursing Home	108 E Lake St	Care Facility				Permanently Closed Remove from list
Carriage Maker Place Apartments	19 Gay Street	Senior Housing				
Chestnut Street Elderly Housing	80 Chestnut Street	Senior Housing				
The Glenn Apartments	130 Willow Street	Senior Housing	X			
Susan M.B. Perry Senior Housing	117 Spencer Street	Senior Housing	X			
Winchester Area Child Center	185 Prospect St	Care Facility				

New Development Trends

Town staff reported that there have not been any significant developments in recent years.

Impacts of Recent Hazard Events

Tropical Storm Isaias caused high winds in the town, taking down trees and powerlines and causing widespread power outages. The Winsted Sewer Treatment Plant (WSTP) lost power and had to run on a generator for about five days. The WSTP generator for the plant is sufficient to maintain basic function and prevent a critical failure for a short period of time, but is not able to sustain a meaningful level of operations for an extended period. The Town had to get creative to prevent an emergency discharge during this outage; such a discharge would have exceeded permitted limits designed to protect the river from pollution. The outage caused significant operational challenges.

Changes to Hazard Concerns or Locations

- Pratt Street had previously been listed as a top concern for the Town; drainage improvements to that street have been completed.
- Complicated drainage issues on Gay Street, Case Avenue, and Center Street continue to result in periodic flooding.
- Flood control gates at the Highland Lake outlet control structure need to be replaced.
- A section of Old Waterbury Turnpike (an unpaved road) near Rugg Brook Reservoir continues to be closed due to a recurring problem with water ponding and road washout. Reopening this road is not a priority for the town.
- Public Works Garage continues to be at risk from flooding from the Still River.

New Hazard Mitigation Capabilities

- The Town has purchased a very large snowblower that can be secured to the front of a loader. This piece of equipment will help the Town clear snow from high drift areas, as well as from roads for which there is not enough space to plow the snow to the roadsides. The Town hasn't had to use the machine yet.
- The Town has completed bridge replacements on West Road, Holabird Avenue, Lanson Drive, and Sucker Brook Road.
- The Town has completed drainage improvements on Woodland Ave and on Hicks Street.
- The Town distributes FEMA informational pamphlets to Town Hall, Schools, The Senior Center, and the Library.

- *Winchester updated its Emergency Operations Plan in 2020*
- *Litchfield County Dispatch now serves as the emergency center the region. LCD runs the Everbridge emergency alerts system. When the Town needs an alert to be sent out, they contact LCD.*
- *Through the Regional Emergency Planning Team, the town obtained a highway sign-board for displaying public alert information on roads, as well as a portable light trailer. These are regional assets stored in Winchester.*
- *The Town is part of a regional group that received a large grant to implement a new emergency radio communications system for the region. The grant pays for new equipment which will be interoperable between communities in the region. This project will be implemented in the fall and winter of 2020-2021.*
- *Winchester has a verbal agreement with the school bus company to utilize school buses for mass transportation during an emergency*
- *Winchester has contracted a third-party company to manage its municipal GIS capabilities. They have not yet utilized the GIS data or platform for hazard mitigation planning.*
- *The region has made the Crisis-Track program available to municipalities, including Winchester. This program allows municipal staff to enter geo-located photos of storm damage into a database through their mobile devices, facilitating damage reporting.*
- *Town is waiting on delivery a new machine that performs street sweeping and basin cleaning together; it is expected that this new piece of equipment will improve the Town's drainage maintenance capabilities.*
- *Town hired an engineer to update the Emergency Action Plans for the two municipally-owned dams: Highland Lake and Crystal Lake. Those EAPs are available at the town EOC and have been approved by CT DEEP.*

New Goals, Objectives, and Actions

- *Pursuing drainage improvements on Case Avenue*
- *Town has begun drainage repairs on Marshall Street, and expects that work to be done by 2021.*
- *The Town is pursuing drainage repairs on Wakefield Boulevard; within the next five years it should have begun development of engineering plans.*
- *Install an emergency generator at the Pearson School, to utilize the site as an emergency shelter. The site is currently used as a distribution center during disasters; supplies from the State are delivered to the school and distributed to residents from there. Emergency power would help facilitate this service.*
- *Upgrade or install a new generator for the WSTP that would be able to maintain a reasonable level of operations during an extended outage.*
- *Winchester's Public Works Department relies on aged radio communications equipment that is losing quality over time, and which is not interoperable with other departments (such as police and fire). The Town is interested in upgrading the equipment to be interoperable with emergency response equipment.*
- *Pursue a written MOU with the school bus company to utilize their buses for mass transportation during an emergency.*
- *Pre-load necessary information into Crisis-Track program, install in local municipal staff devices, and complete trainings to that municipal staff are prepared to utilize the service when a storm hits.*
- *As a relatively short-term mitigation measure for the Winchester Public Works Garage, a new mechanics garage may be built at the current site at a higher elevation, to protect its contents from flooding.*

Status of Previous Actions

Actions listed in the previous plan were reviewed, and their current status identified.

#	Description	Dept.	Status	Notes
1.1	Continue to provide information to schools to help educate children about natural hazards and how to prepare for them.	VFD and EMD	Capability	<i>This is a capability. Town has informational FEMA pamphlets that are provided to schools.</i>
1.2	Continue to make literature available on natural hazards and preparedness at Winchester Town Hall.	EMD	Capability	<i>Town has informational FEMA pamphlets that are available at schools, at town hall, the senior center, and the library.</i>
1.3	Maintain local Emergency Operations Plan and continue to coordinate with the Regional Public Safety Task Force and Red Cross on community planning, preparedness, response, and training.	EMD and Mayer Town Manager	Capability	<i>This is a capability. Updated plan from last year.</i>
1.4	Maintain Emergency Notification System (e.g. Everbridge system) to provide emergency information to residents in the entire town or in a specific geographic area. This notice can provide not only warning of an impending situation but also information regarding how to prepare for a particular event.	EMD and Mayer Town Manager	Capability	<i>Litchfield County Dispatch is now the primary emergency dispatch center for the Town. The LCD runs an Everbridge/reverse 911 system. The Town coordinates with them to send out information and alerts.</i>
2.1	Routinely inspect emergency response equipment, and train for response to natural disasters.	VFD and EMD	Capability	<i>This is a capability.</i>

#	Description	Dept.	Status	Notes
2.2	Acquire additional emergency response equipment such as a generator for the emergency shelter at Pearson School and needed communication equipment.	EMD, Fire Chief	Underway	<p>There is not yet a generator at Pearson School.</p> <p>The Mary P Hinsdale School is scheduled to be renovated beginning in 2021; as part of renovations an emergency generator will be installed. The Town will then establish this facility as an emergency shelter.</p> <p>Through the REPT the Town obtained a highway sign-board that can display alerts, and a "light trailer" to help with emergency response. These equipment are intended to serve all of the towns in the region, and are stored at the Winchester Public Works garage.</p>
2.3	Promote the use of interoperable communication equipment, and the development of standard operating procedures for emergency response in the regional area.	EMD, Fire Chief, Mayor Town Manager	Underway	<p>Fire and Police coordinate through the Litchfield County Dipatch.</p> <p>Additionally, the Town is part of a recently awarded FEMA Grant for Firefighters to develop a new regional, interoperable emergency response radio system, to be implemented 2020-2021.</p> <p>Town staff note that the Public Works radios are different from Police and Fire; they are aged and in poor shape, and posed a challenge during the 2020 tropical storm recovery. Updating the DPW system and making it interoperable with the emergency response radio system will be a new action to carry forward.</p>
2.4	Pursue a verbal agreement with schools or school bus company to utilize school buses for mass transportation during an emergency.	EMD and Mayor Town Manager	Completed	<p>Town has established a verbal agreement.</p> <p>Town is now interested in establishing a written MOU with the school bus company.</p>

#	Description	Dept.	Status	Notes
2.5	Develop basic GIS capabilities as needed for access to aerial photos showing the number and location of properties and structures that could be affected by a natural disaster.	EMD, Fire Chief, and Mayer Town Manager	Completed	<p>Town has hired a contractor to manage its GIS data, increasing its capabilities. The Town has yet to utilize its GIS capabilities to assist with hazard mitigation planning. A new action to do so will be carried forward.</p> <p>Additionally, the Crisis-Track program has been made available regionally for local emergency managers by DEMHS. This program enables municipal staff to take geo-located photos of damage following a disaster. The geographic distribution of damage can be mapped and analyzed with this system. Town will work on pre-loading the necessary information for the program, installing it onto staff devices, and training staff to use it.</p>
3.1	Pursue funding to implement control measures to mitigate the flooding created by beavers.	PWD	Carry Forward with Revisions	<p>Town has reviewed beaver-prone areas, and determined that techniques such as beaver deceivers will not be effective. Currently the Town traps and removes beavers as needed.</p> <p>Old Waterbury Turnpike continues to be partially closed because of downstream beaver activity.</p> <p>While beavers are an ongoing nuisance, the Town does not consider them to be a high priority. A new action should be identified to carry forward.</p>
3.2	Develop and implement clean-out schedules for all catch basins and drainage facilities	PWD	Underway	<p>Catch-basin and drainage maintenance continues to be a challenge. Town has acquired a new piece of equipment that is able to perform both street sweeping and catch-basin cleaning at the same time. The Town is hopeful that this improved capacity will help reduce their maintenance challenges.</p>

#	Description	Dept.	Status	Notes
3.3	Review floodplain regulations and ordinances and update as necessary based on guidance from DEEP.	PZC	Carry Forward	<p>The Town has not yet updated its floodplain regulations due to funding and staffing limitations.</p> <p>Action is carried forward.</p> <p>Town staff noted that FEMA is in the process of updating its Flood Insurance Rate Maps for the Farmington River. FEMA officials met with Winchester staff last year. It appears this project is mostly focused on the lower Farmington River, and it's unclear whether or not updates will be made to the Still River's floodplain.</p>
3.4	Identify the location of structures that are susceptible to flooding to facilitate risk assessment and potential control measures.	DEHMS or CT DEEP	Completed	<p>The Town has identified municipal assets susceptible to flooding. The two most floodprone locations identified by the Town are New Street and Lanson Drive where they cross the Still River.</p> <p>This action will be carried forward within the action to utilize the Town's updated GIS capabilities to assist with Hazard Mitigation.</p>
3.5	Implement drainage improvements at flood-prone areas of Lanson Bridge Rd, Pratt St, Gay St, Case Ave., and Center St. to address localized flooding problems.	PWD	Underway	<p>Lanson Bridge has been redone, but there continue to be problems of backflooding from downstream.</p> <p>Pratt Street drainage has been improved.</p> <p>Gay St., Case Ave., and Center St drainage improvements have not yet been completed. These will be carried forward as individual actions.</p>
3.6	Conduct a feasibility study on relocating the Winchester Public Works Garage to avoid the problems created by the frequent flooding at the current location. Pursue funding for relocation if feasible.	Town Manager, PWD	Carry Forward	<p>Town has not made progress on this action due to funding limitations, but is still interested in this project in the long term.</p> <p>In the short-term, the Town is considering building a mechanics garage at a higher elevation. This will be carried forward as a new action.</p>

Appendix B

Regional Workshops

NHCOG Update of Hazard Mitigation Plan

September 23, 2020



Workshop:
Hazard Identification and Risk Assessment

Victoria Brudz, CFM
David Murphy, PE, CFM
Noah Slovin, CFM



ITEMS FOR DISCUSSION

- Purpose and Need for Hazard Mitigation Planning
- Review of Hazards to be Addressed
- Effects of Climate Change
- Report from Municipal Meetings – What Did We Hear?
- FEMA Map Updates (Diane Ifkovic)
- Characterizing Hazard Loss Estimates
- Mitigation Success Stories
- Next Steps

PURPOSE AND NEED FOR HAZARD MITIGATION PLAN

Authority

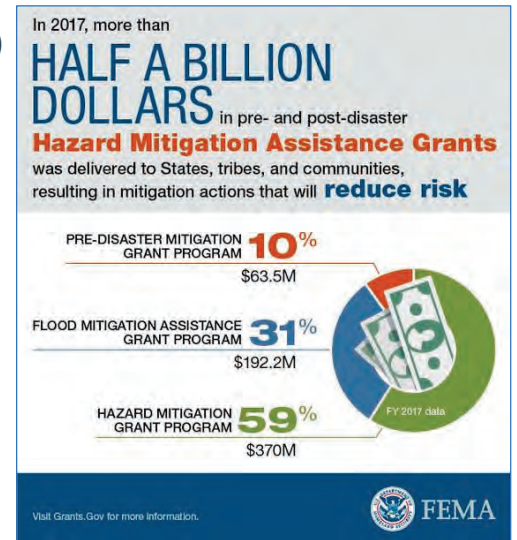
- Disaster Mitigation Act of 2000 (amendments to Stafford Act of 1988)

Goal of Disaster Mitigation Act

- Promote disaster *preparedness*
- Promote hazard mitigation *actions* to reduce losses

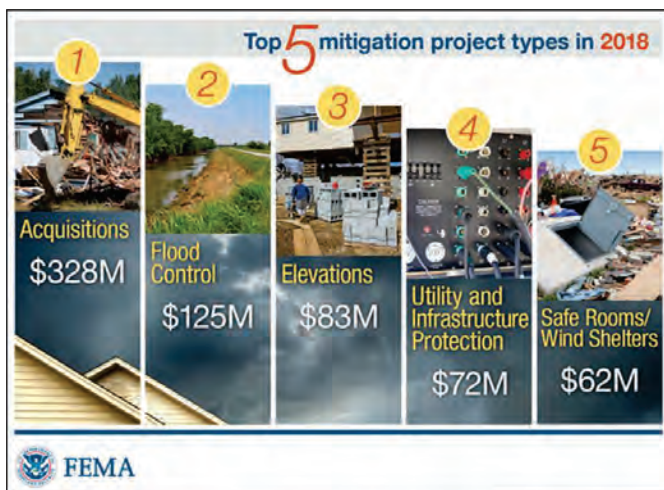
Mitigation Grant Programs

- Flood Mitigation Assistance (FMA)
- Hazard Mitigation Grant Program (HMGP)
- Building Resilient Infrastructure and Communities (BRIC)
 - Replaces Pre-Disaster Mitigation (PDM)
 - Shift from pre-disaster spending to research-supported investment
 - **First round of grant applications open now**



Graphic courtesy of FEMA

PURPOSE AND NEED FOR HAZARD MITIGATION PLAN



PURPOSE AND NEED FOR HAZARD MITIGATION PLAN

Status of Plans in Connecticut

- Most initial plans developed 2005-2011
- Local plans are updated every five years



Status of Former Plans

- The nine individual Northwest CT plans were approved in 12/2014 and 1/2015
- The plan covering Burlington, formerly part of CCRPA, was approved 9/2016
- The remaining eleven plans, part of the Litchfield Hills multi-jurisdiction plan, were approved 8/2016

LOCAL PLAN EXPIRATIONS

- Submit plan to FEMA prior to 2021 expirations
- Submit plan to FEMA prior to availability of mitigation funds in 2021



Municipality	Plan Expiration
Cornwall	12/1/2019
Roxbury	12/17/2019
Warren	12/18/2019
Sharon	1/13/2020
Kent	1/14/2020
Washington	1/22/2020
Canaan	1/29/2020
North Canaan	1/29/2020
Salisbury	1/29/2020
Burlington	9/12/2021
Barkhamsted	8/29/2021
Colebrook	8/29/2021
Goshen	8/29/2021
Hartland	8/29/2021
Harwinton	8/29/2021
Litchfield	8/29/2021
Morris	8/29/2021
New Hartford	8/29/2021
Norfolk	8/29/2021
Torrington	8/29/2021
Winchester	8/29/2021

PURPOSE AND NEED FOR HAZARD MITIGATION PLAN

What is a Natural Hazard?

- An extreme natural event that poses a risk to people, infrastructure, and resources.

What is Hazard Mitigation?

- Actions we take now that reduce or eliminate long-term risk to people, property, and resources from natural hazards and their effects.



New Elevated Construction

Removal of Structures from Floodplain

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
- Summer Storms
- Tornadoes and High Winds
- Severe Winter Storms
- Drought
- Dam Failure
- Wildfire
- Earthquakes



CLIMATE CHANGE

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
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- Tornadoes and High Winds
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- Drought
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- Earthquakes



HAZARDS TO INCLUDE IN THE PLAN

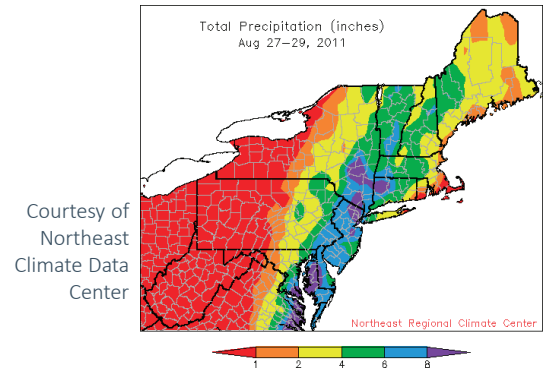
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Photos: Accuweather.com

HAZARDS TO INCLUDE IN THE PLAN

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- **Hurricanes and Tropical Storms**
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HAZARDS TO INCLUDE IN THE PLAN

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HAZARDS TO INCLUDE IN THE PLAN

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Photo Fox61



Photo NewsTimes

HAZARDS TO INCLUDE IN THE PLAN

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- **Severe Winter Storms**
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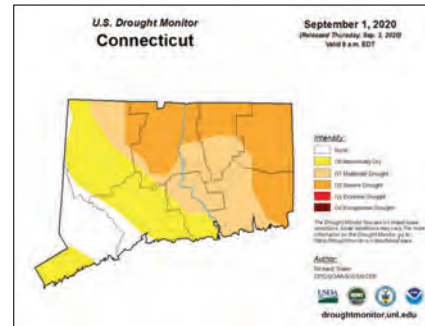
SUDDENLY, IT'S WINTER: A car makes its way cautiously over snow-covered road in Winchester, Conn., after up to eight inches fell in the northern part of the state. Unusual May snowfalls ranged from mid-Vermont

The New York Times
Published Jan. 15, 1997
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HAZARDS TO INCLUDE IN THE PLAN

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- Severe Winter Storms
- **Drought**
- Dam Failure
- Wildfire
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U.S. Drought Monitor



An Aquarion Reservoir impacted by past droughts
Courtesy of Stamford Advocate

HAZARDS TO INCLUDE IN THE PLAN

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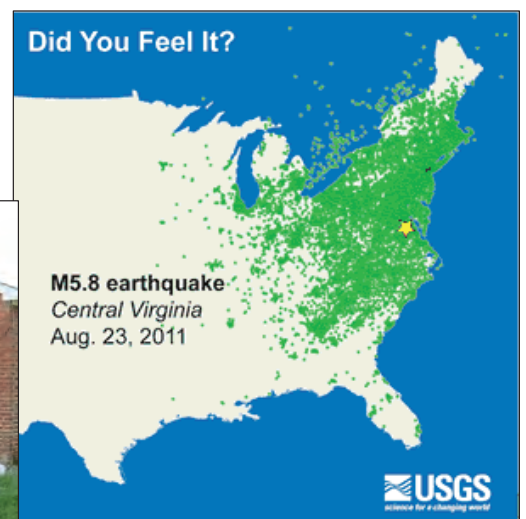
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HAZARDS TO INCLUDE IN THE PLAN

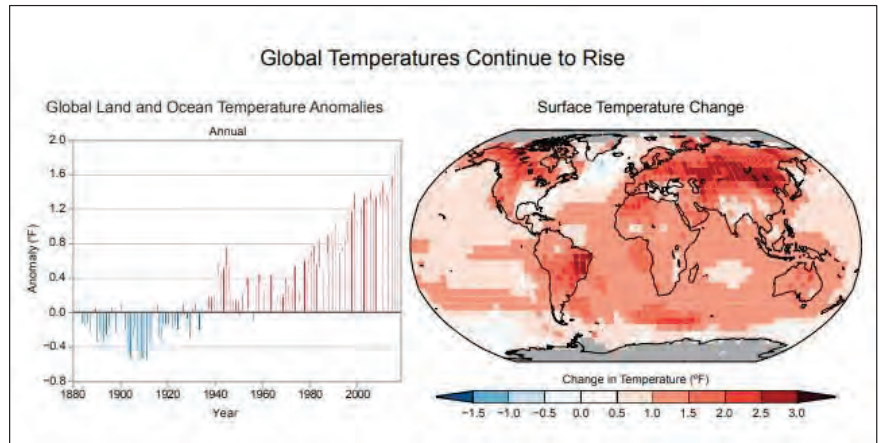
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- Dam Failure
- Wildfire
- **Earthquakes**



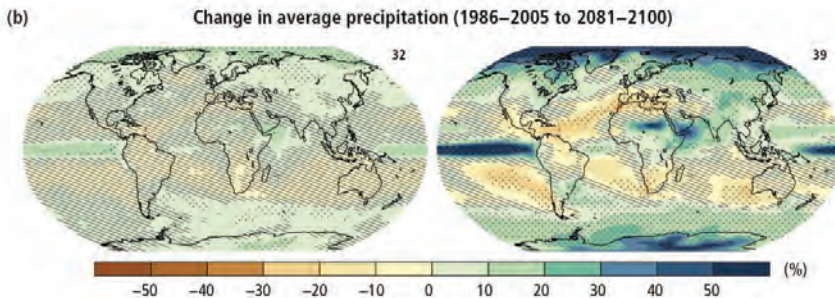
Courtesy of USGS

EFFECTS OF CLIMATE CHANGE

- Increased Temperatures
- Extreme Heat Episodes
- Growing Season Fluctuation
- Frequent Droughts



EFFECTS OF CLIMATE CHANGE



- Increased Precipitation
- More Severe Precipitation
- Increased Winter Precipitation (Less as Snow)

REPORT FROM MUNICIPAL MEETINGS

Topics Discussed

- Critical facilities and standby power
- Changes in capabilities
- Changes in risk
- Events of note in the last 4-5 years
- Repetitive loss properties
- Review of prior mitigation actions
- Potential new mitigation actions
- Designation of the local coordinator



Let's focus on
these

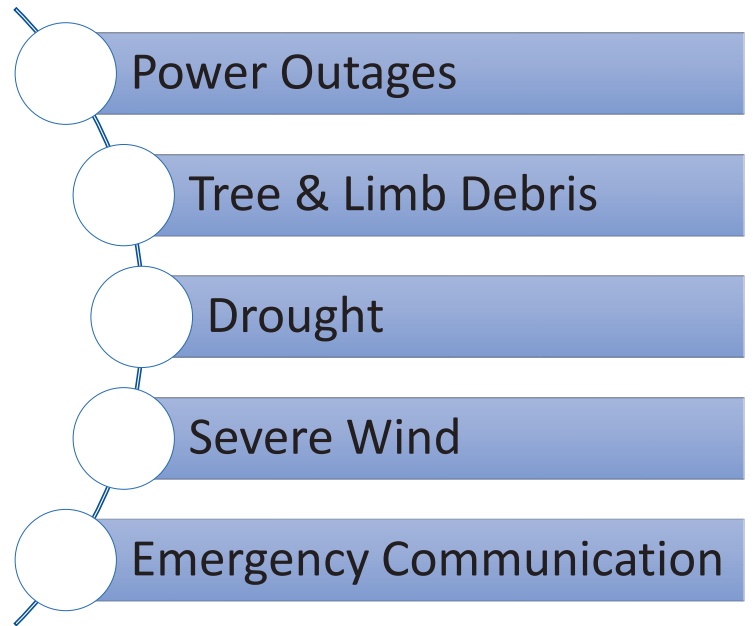
REPORT FROM MUNICIPAL MEETINGS

Changes in Capabilities

- Bridge, Culvert, and Road Repairs
- Streambank Restoration
- Dam Repairs and Restorations
- Upgraded Equipment
- Tree Maintenance Programs and Budgets
- Incorporation of Hazard Mitigation into other Planning (POCD)
- Emergency Alerts and Communication (Everbridge, Blackboard, LCD)
- Critical Facility Generators
- Special Needs Protocols
- Regional Capabilities
 - Bristol-Burlington Health District
 - Litchfield County Dispatch
 - Regional Radio Communications Grant

REPORT FROM MUNICIPAL MEETINGS

- Floods
- Hurricanes and Tropical Storms
- Summer Storms
- Tornadoes and High Winds
- Severe Winter Storms
- Drought
- Dam Failure
- Earthquakes
- Wildfire



Connecticut Department of
Energy and Environmental Protection



Northwest Hills Council of Government (NHCOG)

Hazard Mitigation Plan Update



Diane Ifkovic
State NFIP Coordinator
September 23, 2020



Connecticut Department of Energy and Environmental Protection

CTDEEP Still Working Remotely

Best way to reach staff is by email

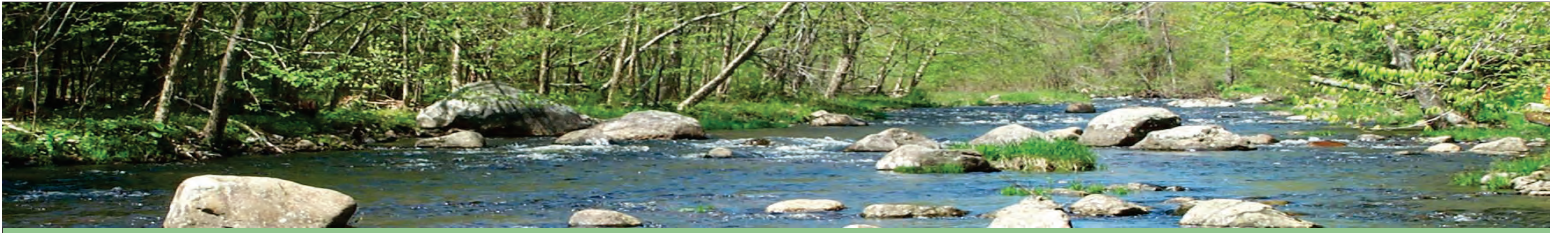
First name.Last name@ct.gov

Go to: www.phone.ct.gov

to find staff by name or agency



Connecticut Department of Energy and Environmental Protection



Flood Map Updates in the NHCOCG Region

1. Farmington River Watershed
2. Housatonic River Watershed



Connecticut Department of Energy and Environmental Protection

Farmington River Watershed (24 communities)

- NHCOCG 9 Communities Included:
Barkhamsted, Burlington, Colebrook,
Hartland, Harwinton, New Hartford, Norfolk,
Torrington, Winchester
- FEMA Mapping Contractor - Compass



Connecticut Department of Energy and Environmental Protection

Farmington River Watershed

- Discovery meetings were held September 25, 2018
- Field surveying was completed in summer 2019
- Discovery Report was issued end of May 2020
- Work Map meetings (webinars) held July 21 & 22, 2020
- One-on-one community meetings held Aug. 3 & 11, 2020
- Comment period for work maps ended August 22, 2020
- Preliminary flood maps and study early summer 2021
- Letter of Final Determination (LFD) December 2022
- Towns update local floodplain regs/ordinance early 2023
- Final effective maps and studies projected June 2023



Connecticut Department of Energy and Environmental Protection

Housatonic River Watershed (54 communities)

- NHCOG 17 Communities Included:
Canaan, Cornwall, Goshen, Harwinton, Kent,
Litchfield, Morris, New Hartford, Norfolk,
North Canaan, Roxbury, Salisbury, Sharon,
Torrington, Warren, Washington, Winchester

(blue text = Community included in both the Farmington and Housatonic River watershed map update projects)



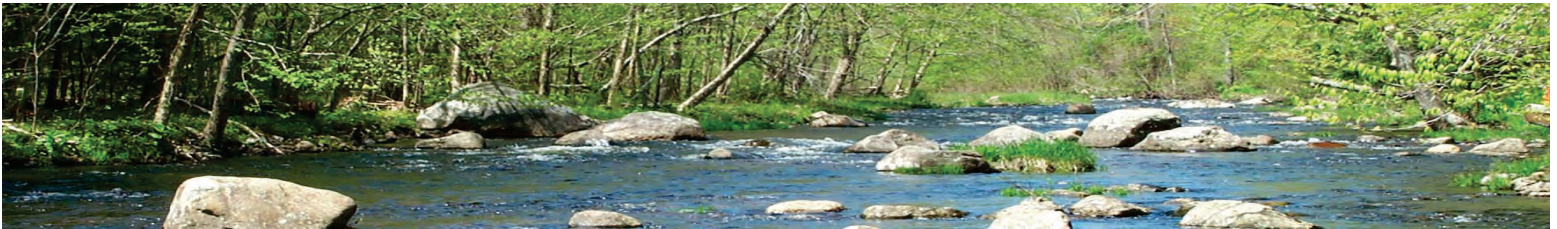
Connecticut Department of Energy and Environmental Protection

Housatonic River Watershed

- FEMA Mapping Contractor - USGS
- Discovery meetings held May 2017
- Field surveying has begun
- Selection of priority stream reaches is complete and includes Torrington levee project
- There will be a 30-day comment period for stakeholders on the model used for this map project but this had been delayed due to the pandemic



Connecticut Department of Energy and Environmental Protection



What should you be aware of with these projects?

1. Pay attention to correspondence from FEMA/mapping contractors and important dates/milestones.
2. Provide feedback when asked, this is your chance to make changes to the map and get FEMA to pay for it.
3. When final maps go effective, town is required to update local floodplain zoning regulations or ordinance or be suspended from the NFIP (hinders home sales)



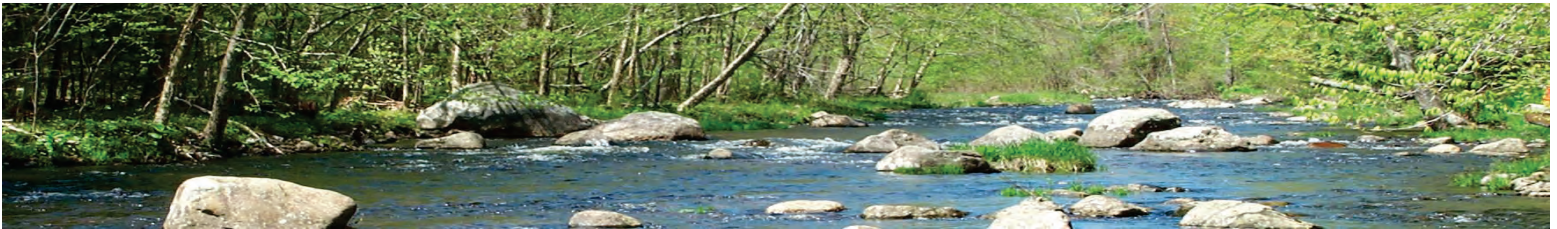
Connecticut Department of Energy and Environmental Protection

Ice Jams and Climate Change

- FEMA flood maps do not contain flood risk information on ice jam flooding or climate change
- Ice jams were a problem in January 2018 on Housatonic River, especially in Kent
- Inland areas seeing effects of climate change with “rain bombs”, extreme precipitation events
- This type of changing rain pattern can have more adverse effects in hilly areas like NHCOCG due to increased flash flooding or new areas experiencing flooding (urban/rural)
- CTDOT using Northeast Regional Climate Center (Cornell) extreme precipitation analyses and data



Connecticut Department of Energy and Environmental Protection



Questions?

Diane Ifkovic

Email: diane.Ifkovic@ct.gov

(860) 424-3537



Connecticut Department of Energy and Environmental Protection

VULNERABILITIES, RISKS, AND LOSS ESTIMATES

Methods of Characterizing Risk

- State Hazard Mitigation Plan
- FEMA maps
- National Climate Data Center, or NCDC (now National Centers for Environmental Information, or NCEI)
- FEMA Public Assistance (PA) reimbursements after disasters
- National Flood Insurance Program (NFIP) claims
- Repetitive Loss property lists
- Meetings with local planning teams!

VULNERABILITIES, RISKS, AND LOSS ESTIMATES

Methods of Quantifying Losses

- NCEI
- FEMA PA reimbursements after disasters
- NFIP claims
- Downscaling from countywide losses in the State Hazard Mitigation Plan
- HAZUS-MH
- Asking local planning teams for typical losses from:
 - Severe Winter Storms
 - Severe Thunderstorm
 - Typical Wildfire

LOSSES FROM NATURAL HAZARDS (NCEI)

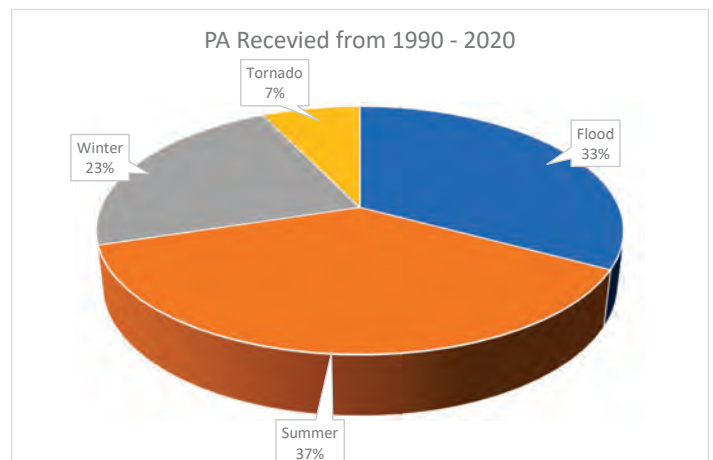
NCEI: Reported data for the Northwest Region since 2014

	Events Since 2014	Costs Since 2014	Average 6-year Cost	Injuries Since 2014	Deaths Since 2014	Episodes
Flood	47	\$10,076	\$1,679	0	0	Flood: 30 Flash Flood: 17
Summer Storms & Thunderstorms	236	\$963,043	\$160,507	2	0	Drought: 3 Extreme Heat: 17 Hail: 28 High/Thunderstorm Winds: 174 Lightning: 14
Winter Storm	187	\$21,876	\$3,646	3	1	Blizzard: 2 Drought: 5 Extreme Cold/Wind Chill/Frost: 38 Heavy Snow: 22 High Winds: 28 Ice Storm: 1 Winter Storm: 22 Winter Weather: 38
Tornado	3	\$0	\$0	0	0	Funnel Cloud: 1 Tornado: 2

LOSSES FROM NATURAL HAZARDS (NCEI)

NCEI: Reported data for the Northwest Region

	Total losses 1990 – 2020	Average Annual Cost
Flood	\$1,833,678	\$61,123
Summer Storms & Thunderstorms	\$2,080,614	\$69,354
Winter Storm	\$1,260,332	\$42,011
Tornado	\$402,883	\$13,429



LOSSES FROM NATURAL HAZARDS (NCEI)

In summary – based on 2014 to 2020:

- Flash floods occur about 3 times a year and other flood events about 5 times a year
- High wind events during summer occur about 29 days a year, with wintertime high wind and storm events occurring about 4 to 5 days a year
- Heavy snow episodes occur about 3 to 4 days a year
- Extreme heat is a concern about 3 days a year, and extreme cold about 6 days a year

FEMA PUBLIC ASSISTANCE (PA) REIMBURSEMENTS

Declared Natural Disasters in Connecticut (2014-2020)

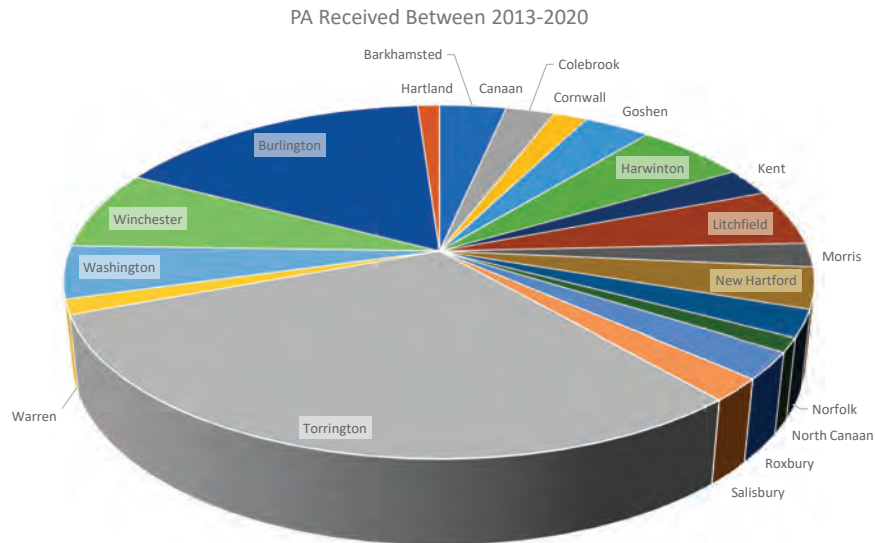
- 2015 Snow Storm
- 2018 Tornadoes
- 2018 Flooding
- 2020 Tropical Storm Isaias (Emergency, not Disaster [yet])

Also...

- 2020 COVID-19

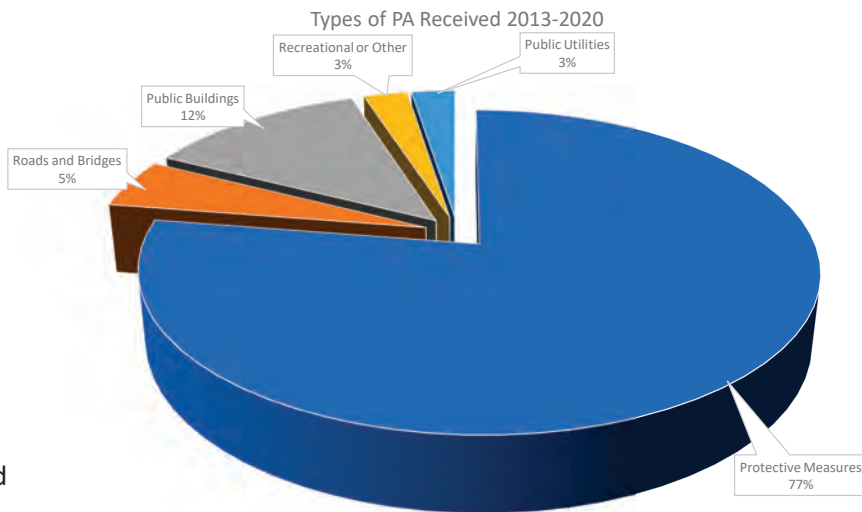


FEMA PUBLIC ASSISTANCE (PA) REIMBURSEMENTS



PA Received attributed to snow and wind events
 Torrington \$189,000
 Hartland \$8,742

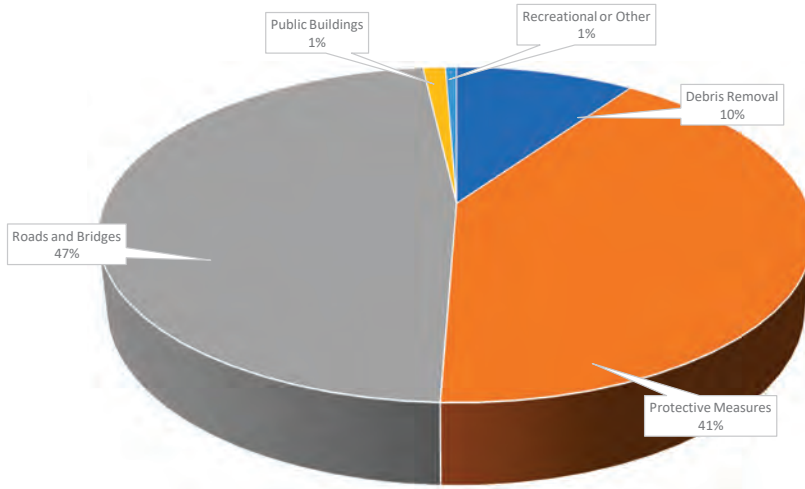
FEMA PUBLIC ASSISTANCE (PA) REIMBURSEMENTS



PA Received attributed to snow and wind events
 Torrington \$189,000
 Hartland \$8,742

FEMA PUBLIC ASSISTANCE (PA) REIMBURSEMENTS

Types of PA Received Since 1998



PA Received attributed to flood, snow, and wind

HAZUS LOSS ESTIMATES FROM STATE HMP

- Used for emergency response planning, shelter planning, and utility company preparedness
- Insurance companies may use these models
- Estimated county-wide losses
- Flooding does not include flash flood
- Estimates are typically synonymous with actual losses

100-year flood loss estimations

County	Actual Replacement Value	Building Loss	Contents Loss	Business Interruption	Total Loss
Litchfield	\$46,324,195	\$576,982	\$792,744	\$47,610	\$1,408,816
Hartford	\$202,087,968	\$635,753	\$781,849	\$39,849	\$1,447,299

HAZUS LOSS ESTIMATES FROM STATE HMP

Estimated total losses for hurricane return periods

County	10-yr	20-yr	50-yr	100-yr	200-yr	500-yr	1,000-yr	Total
Litchfield	\$0	\$862	\$0	\$70,962	\$56,906	\$168,713	\$678,390	\$975,833
Hartford	\$0	\$14,055	\$11,685	\$558,773	\$950,393	\$1,497,097	\$7,287,319	\$10,319,322

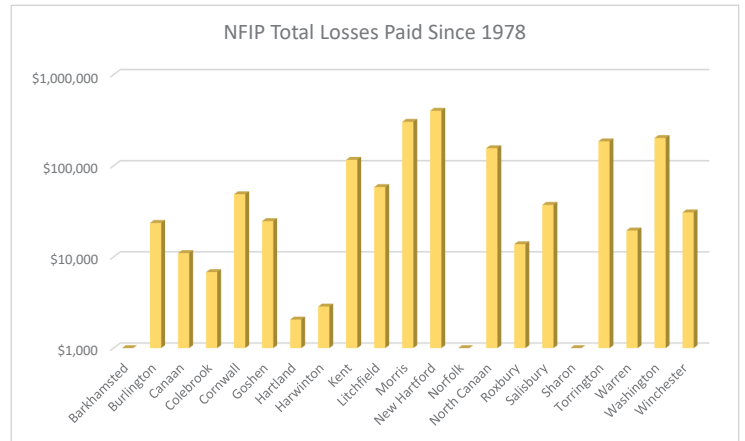
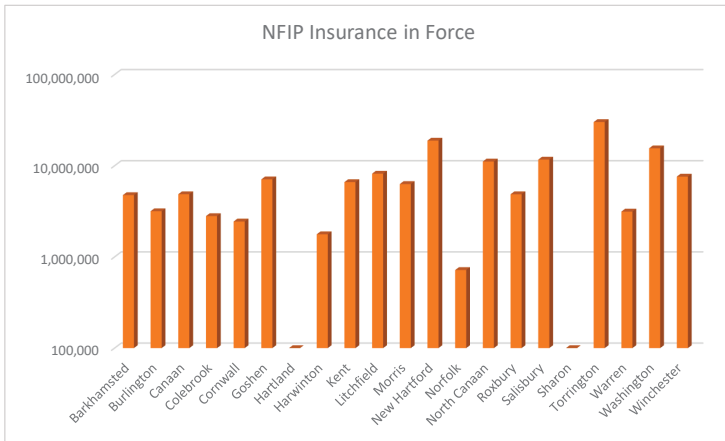
Estimated building damage per storm scenario statewide

Storm Scenario	None	Minor	Moderate	Severe	Destruction
1938 Unnamed	961,438	201,970	48,961	4,502	2,091
1944 Unnamed	1,218,434	507	27	1	0
Carol	1,217,357	1,503	104	4	1
Donna	1,211,128	7,142	668	26	5
Gloria	1,002,924	17,521	800	38	5

NFIP POLICIES

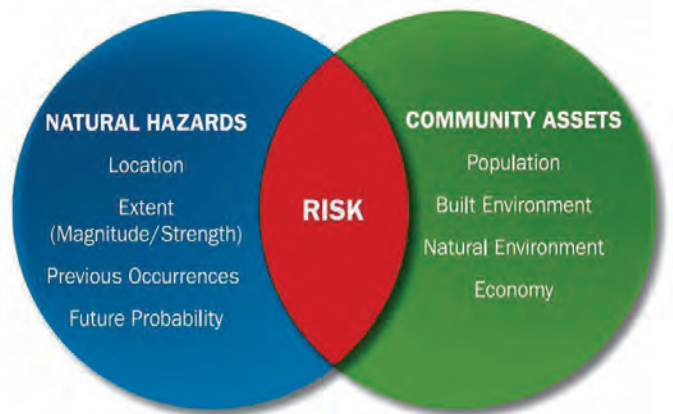
Municipality	Policies In Force	Insurance in Force
Barkhamsted	17	\$ 4,761,000
Burlington	11	\$ 3,168,000
Canaan	19	\$ 4,868,400
Colebrook	12	\$ 2,802,900
Cornwall	10	\$ 2,445,000
Goshen	21	\$ 7,089,000
Hartland		\$ -
Harwinton	7	\$ 1,769,600
Kent	22	\$ 6,609,400
Litchfield	29	\$ 8,176,700
Morris	26	\$ 6,299,100
New Hartford	92	\$ 18,841,500
Norfolk	3	\$ 718,500
North Canaan	63	\$ 11,118,700
Roxbury	15	\$ 4,864,300
Salisbury	43	\$ 11,674,800
Sharon	24	\$ 6,291,400
Torrington	189	\$ 30,138,200
Warren	16	\$ 3,141,900
Washington	52	\$ 15,516,700
Winchester	42	\$ 7,597,900

NFIP POLICIES AND LOSSES PAID



WHAT IS AT RISK?

- Repetitive Loss (RL) properties and properties near them
- Historic and Cultural Resources
- Critical Facilities
- *As well as the built environment and people at large*



Source: FEMA, Local Hazard Mitigation Handbook

Overall – infrastructure, residential and commercial properties, utilities

REPETITIVE LOSS PROPERTIES

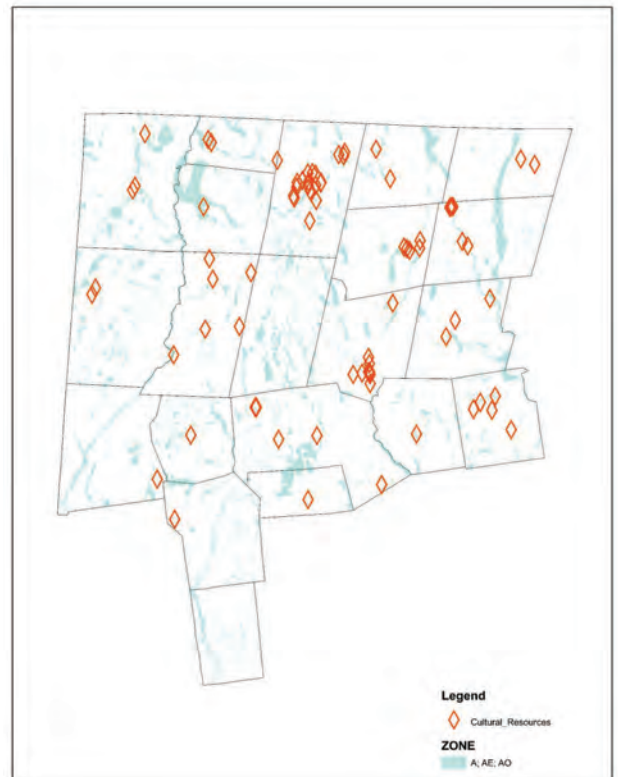
- Only a few RL properties in the regions
- These properties have made multiple claims
- Riverine or lake associated flooding



HISTORIC RESOURCES



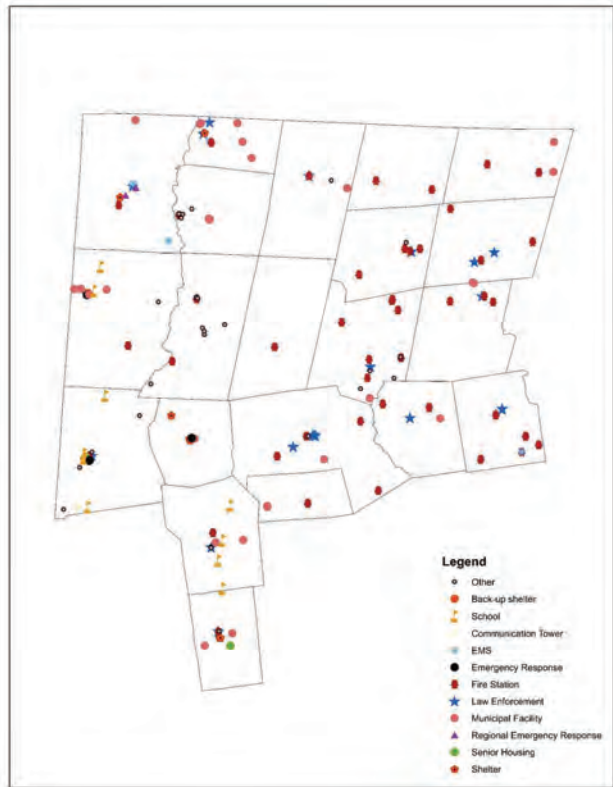
West Cornwall Covered Bridge
Photo Design Darling



CRITICAL FACILITIES

Critical facility updates and changes are made based on feedback during municipal meetings. These include

- EOC
- Police
- Fire
- Shelters
- Municipal buildings
- Care facilities
- Hospitals
- Schools
- Other facilities that are critical to emergency response



NEXT STEPS

- Complete any outstanding municipal planning meeting or coordination
- Review meeting notes as they have been distributed and provide edits to notes, previous actions or critical facilities list
- Outreach and public involvement
 - **Online Survey is OPEN**
 - **Conduct public meetings**
- Workshop to discuss mitigation strategies and actions

Date: September 23, 2020

**Topic: Risk & Vulnerability Assessment Workshop
For Local Coordinators**

Location: Virtual (Zoom)

Attendees:

<p>NHCOG</p> <ul style="list-style-type: none"> • Janell Mullen <p>Consultant Team</p> <ul style="list-style-type: none"> • Noah Slovin • David Murphy • Victoria Brudz <p>Guest Presenter:</p> <ul style="list-style-type: none"> • Diane Ifkovic 	<p>Municipal Participants:</p>	
<ul style="list-style-type: none"> • Barbara Henry • Charlie • Denise Raap • Don Stein • Gibb • Martin Connor • Matt (Riiska?) 	<ul style="list-style-type: none"> • Michael Criss • Thomas Weik • Tom McKeon • Jean Speck • Richard Byrne • “Town of Goshen” • Jim Brinton 	

Notes:

The workshop began with a presentation given by the consultant team. The presentation began with the following topics:

- Purpose and Need for Hazard Mitigation Planning (including federal authority, grant programs, status of municipal plans in the region, and types of hazards covered by the plan)
- Effects of Climate Change (including increased temperatures and extreme heat episodes, more frequent droughts, more severe precipitation, and more intense storms)
- Report from Municipal Meetings – What Did We Hear? (including changes in local capabilities and changes in locally-reported risk concerns).

Diane Ifkovic, the State NFIP coordinator, then presented an update on Flood Map Updates in the NHCOG Region, which are underway for communities in both the Farmington River Watershed and in the Housatonic River Watershed. She encouraged municipal attendees to pay attention to correspondence from FEMA or the mapping contractors and to keep track of important dates and milestones, to provide feedback when asked, and to update local floodplain zoning regulations or ordinances to refer to the new maps when they go effective. Diane also spoke briefly about ice jams and climate change.

The consultant team then continued to present about the following:



















- Characterizing Hazard Loss Estimates (including from federal and state sources, and from municipal reporting)
- Next Steps

The floor was then open to discussion.


















Discussion:

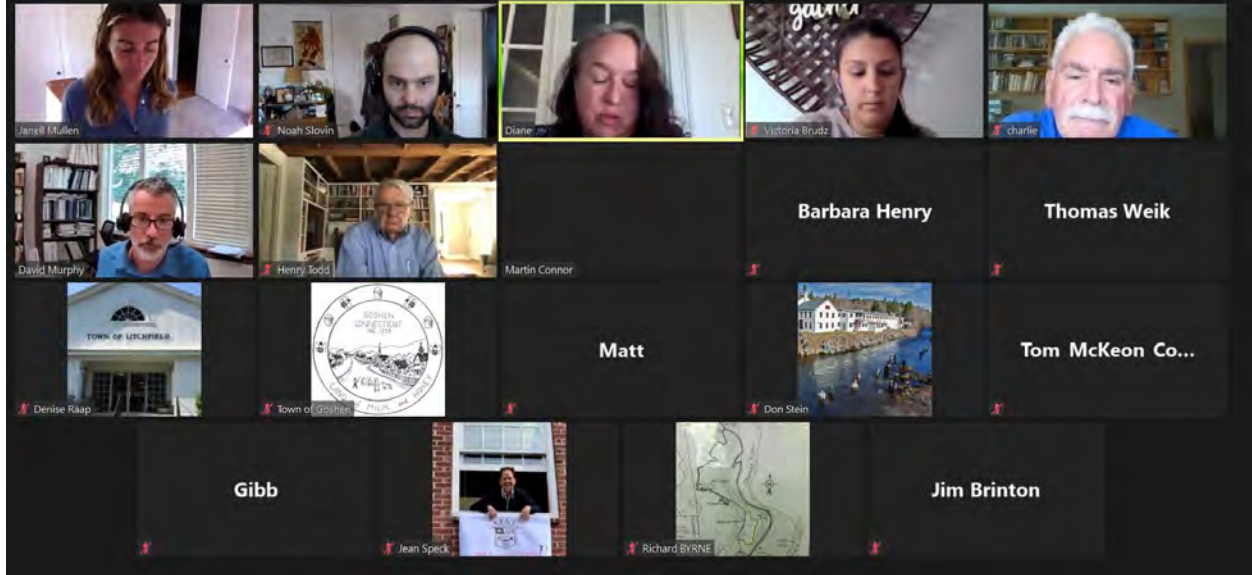
- Janell asked Diane at what scale the new FEMA maps would be issued.
 - Diane: they will be issued by watershed. FEMA is not publishing maps by town or county anymore. Maps will therefore cross multiple communities. Every community will get new maps in the coming years – there is a lot of money put into mapping the whole state. This is good news.
 - Janell: will new maps also be digital. Existing maps are not, they are so old.
 - Diane: yes, they will be digital, and on aerial imagery.
 - Martin Conner: will the public be able to go into the FEMA website and get this updated information?
 - Diane: yes, eventually. In the beginning they give draft maps to town officials to get a first review, and then there will be a point where they do public meetings. Eventually the final drafts will be visible to the public.
 - Diane: I will stay on top of this and tell you if there are any important dates coming up.
- Janell: stay tuned for the next workshop in November.

The meeting was then adjourned.

-  Noah Slovin (Host, me)  
-  Janell Mullen (Co-host)
-  Victoria Brudz (Co-host)
-  David Murphy
-  Diane
-  Barbara Henry
-  charlie
-  Denise Raap
-  Don Stein
-  Gibb
-  Martin Connor
-  Matt
-  Michael Criss
-  Thomas Weik
-  Tom McKeon Colebrook First Selectman
-  Jean Speck

10:21

-  Noah Slovin (Host, me)
-  Janell Mullen (Co-host)
-  Victoria Brudz (Co-host)
-  David Murphy
-  Diane
-  Barbara Henry
-  charlie Ask to Unmut
-  Denise Raap
-  Don Stein
-  Gibb
-  Jean Speck
-  Martin Connor
-  Matt
-  Richard BYRNE
-  Thomas Weik
-  Tom McKeon Colebrook First Selectman
-  Town of Goshen



NHCOG Update of Hazard Mitigation Plan



Workshop: Mitigation Strategies and Actions
November 24, 2020

Victoria Brudz, CFM
David Murphy, PE, CFM
Noah Slovin, CFM



Talking Points



- Risk Assessment Update
- Public Comments Received to Date
- Hazard Mitigation Goals, Objectives, and Strategies
- Guest Presentation
 - *Sustainable CT*
- Regional and Statewide Initiatives
- Wrap Up and Next Steps

Risk Assessment Update

Risk Assessment Update

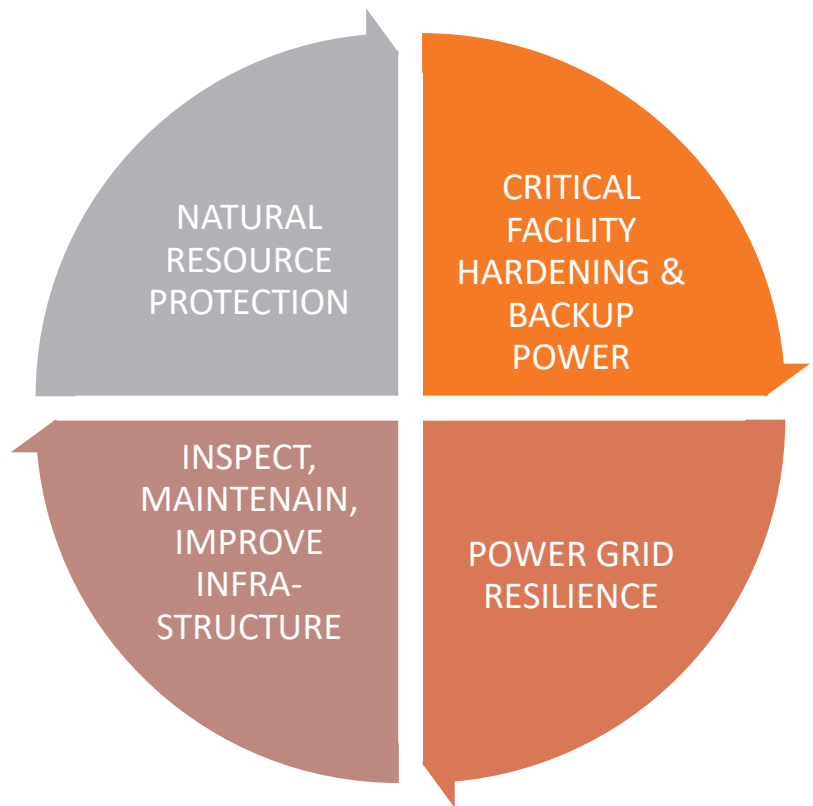
- Hazards were profiled and losses were characterized in our workshop of September 23, 2020
- Public meeting on November 5, 2020 and survey responses did not result in changes to loss estimates or the risk assessment in general
- HAZUS loss estimates have been completed

Public Comments

Public Input Opportunities

- **Public Survey:** 42 Responses
- **Virtual Public Workshops:** 9 Attendees
- **Story Map:** Approximately 25 views; sometimes 2-3 views per day

Priority Actions



Recovery Actions

1

Top Priority

- Address Injuries & Casualties
- Restore Utilities
- Re-Open Roads

2

Medium Priority

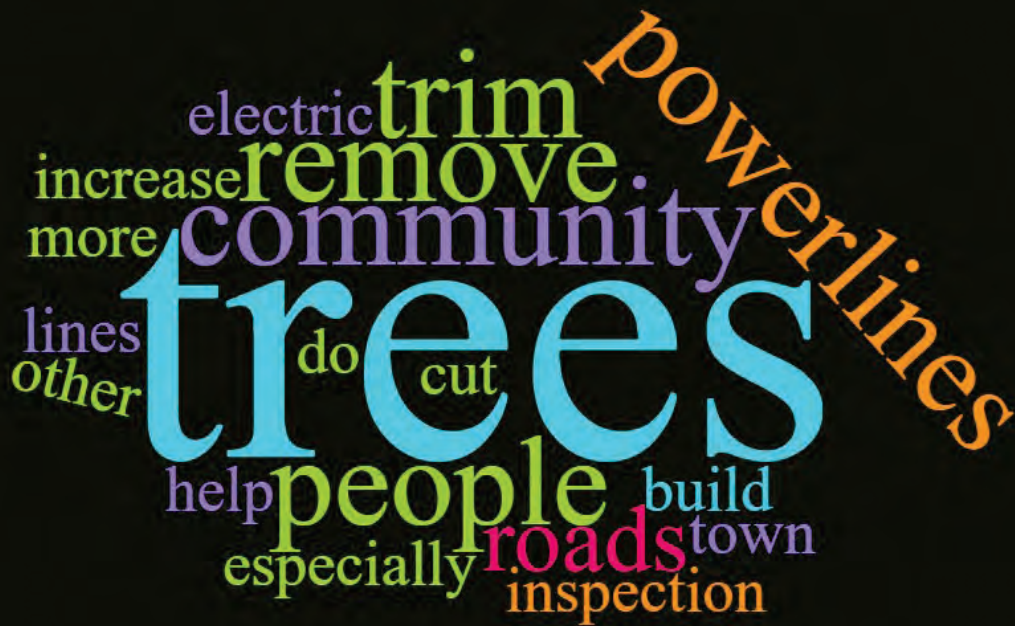
- Resume Business & Economy
- Re-open Schools
- Clean/Repair Homes

3

Low Priority

- Restore Parks & Natural Resources

Actions to Reduce Risks



Public Input Takeaways



Energy Reliability and Resilience is Key



Protect Infrastructure and Utilities



Support Community-Based Mitigation



Public Awareness, Education, & Training

Hazard Mitigation Goals, Objectives, and Strategies

What are We Talking About?



Goal

Broad, intangible, abstract: what do you want to achieve to reduce losses from hazards?



Objective

Specific, tangible, measurable targets that reduce losses from hazards



Strategy/Action

Steps toward achieving the objective to reduce losses from hazards; a Strategy could be a set of similar actions that help reduce losses from hazards

NEW ACTIONS IDENTIFIED TO DATE

PREVENTION

- Pursue funding for tree maintenance
- Upgrade flood regulations to reflect the State Building Code
- Update subdivision or zoning regulations
- Conduct tabletop exercises with schools to prepare for natural hazard events
- Evaluate flood prone areas to determine flood mitigation strategies
- Improve GIS capabilities for planning and response
- Develop drainage system maintenance program

PROPERTY PROTECTION

- Upgrade municipal buildings to withstand snow loads
- Provide assistance to Repetitive Loss (RL) property owners
- Flood mitigation for elementary school

STRUCTURAL PROJECTS

- Mitigate scour potential bridges
- Elevate roads, install culverts, and repair bridges
- Upgrade and replace deteriorating drainage systems
- Dam repairs and upgrades

NEW ACTIONS IDENTIFIED TO DATE

NATURAL RESOURCE PROTECTION

- Restore condition of water sources that serve dry-hydrants

PUBLIC EDUCATION

- Reengage the Teen CERT program
- Incorporate natural hazard education into regular school curriculum
- Improve and upgrade natural hazard materials on municipal website
- Increase communication with seasonal property owners

EMERGENCY SERVICES

- Acquiring new and upgrading existing backup power sources
- Upgrade communication systems and address radio signal deficiencies
- Invest in emergency response trailer and equipment

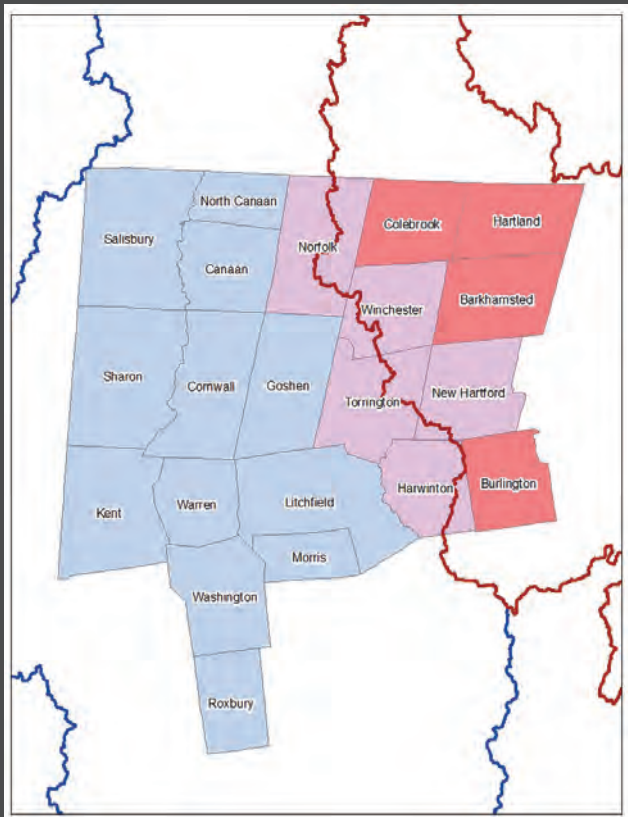
Guest Presentation: Sustainable CT

A program that promotes sustainability and may provide credit for some hazard mitigation actions

Regional and State Mitigation Initiatives

REGIONAL AND STATE INITIATIVES

- FEMA Map Updates
- Historic & Cultural Resources
- Repetitive Loss Properties
- State Building Code & Flood Regulations
- Small Businesses Chemical Management
- “Sustainable CT”
- HVA Road Stream Crossing Inventory
- Low Impact Development (LID) Handbook for Rural Communities



FEMA Flood Map Updates

FEMA Flood Map Updates

FEMA Map Updates Action 1

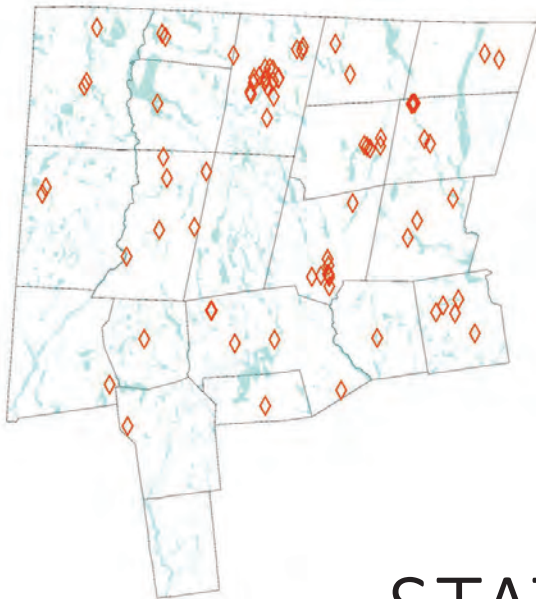
Stay engaged with FEMA, and the entire process, during the Farmington River Watershed flood map updates.

Municipalities within the Farmington River Watershed

FEMA Map Updates Action 2

Stay engaged with FEMA, and the entire process, during the Housatonic River Watershed flood map updates.

Municipalities within the Housatonic River Watershed



STATE INITIATIVE

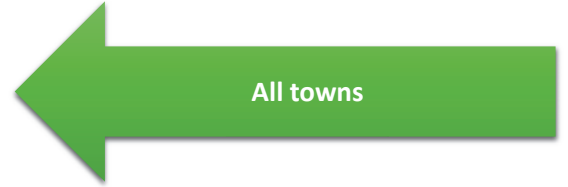
Historic & Cultural Resources

REGIONAL AND STATE INITIATIVES

Historic & Cultural Resources

Historic & Cultural Resources Action 1

Coordinate with CT SHPO to conduct historic resource surveys, focusing on areas within natural hazard risk zones (flood zones, wildfire hazard zones, steep slopes) to support the preparation of resiliency plans across the state.



Historic & Cultural Resources Action 2

Coordinate with CT SHPO to conduct outreach to owners of historic properties to educate them on methods of retrofitting historic properties to be more hazard-resilient while maintaining historic character.

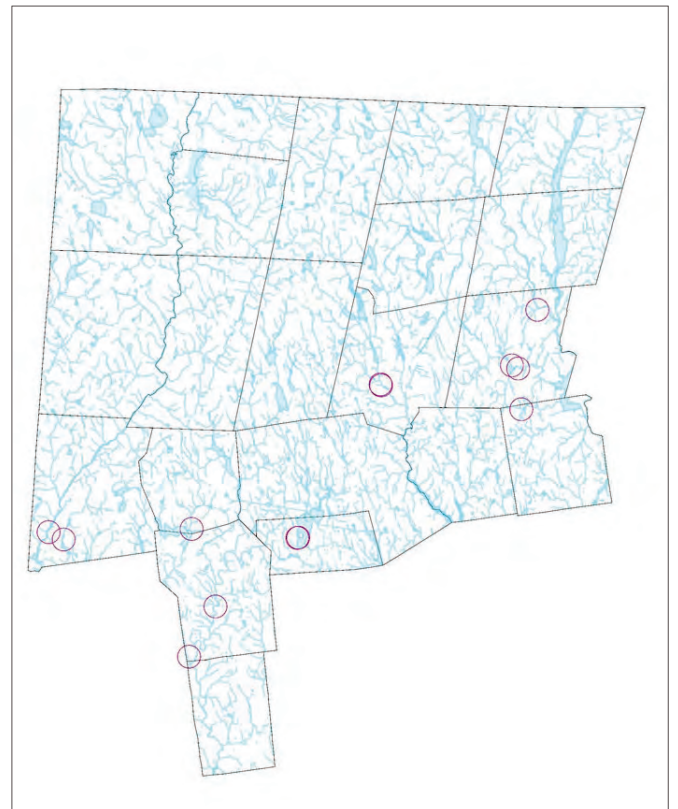


STATE INITIATIVE

Repetitive Loss Properties

Any municipality with 2 or more RLPs

Community	No. of RLPs
Burlington	1
Kent	3
Litchfield	1
Morris	1
New Hartford	3
Torrington	3
Warren	2
Washington	2



REGIONAL AND STATE INITIATIVES

Repetitive Loss Properties

Repetitive Loss Properties Action 1

Work with CT DEEP to complete a formal validation of the Repetitive Loss Property list and update the mitigation status of each listed property.

Any Municipality with at least 1 RL property

Repetitive Loss Properties Action 2

Contact the owners of Repetitive Loss Properties and nearby properties at risk to inquire about mitigation undertaken and suggest options for mitigating flooding in those areas. This should be accomplished with a letter directly mailed to each property owner.

Towns with 2 or more RL properties

STATE INITIATIVE

State Building Code & Flood Regulations

CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION

MODEL FLOODPLAIN MANAGEMENT REGULATIONS NATIONAL FLOOD INSURANCE PROGRAM (NFIP)

Inland/Riverine Community (AE and A Zones only)

Level "D" Community

October 2015

Note: Effective October 1, 2015, the Connecticut Office of the State Building Inspector amended the current state building code to adopt the 2015 International Residential Code. Please see the OSBI website for more information on this change, which can be found at <https://portal.ct.gov/DAS/Office-of-State-Building-Inspector/Building-and-Fire-Code-Process> and the 2015 IRC, Chapter 3, Section R322, Flood-Resistant Construction: <https://codes.iccsafe.org/content/IRC2015/Document/20153/>

Adoption of the 2015 IRC has made significant changes to the elevation and construction requirements for new construction and substantially improved structures in both coastal and inland floodplains. Section R322.2 contains the elevation requirements for A and AE Zones. Section R322.3 contains the elevation requirements for VE Zones and Coastal AE Zones. This is a summary of those new requirements:

- AE and A Zone** – Lowest floor elevated to Base Flood Elevation (BFE) plus 1 foot.
- AO and AH Zones** – Lowest floor elevated to Highest Adjacent Grade (HAG) plus the depth number specified on the flood insurance rate map plus 1 foot or not less than 3 feet if no depth number is specified.
- VE Zone and Coastal AE Zone** – Bottom of the lowest horizontal member supporting the lowest floor elevated to the BFE plus one foot, with structure built on pier, post or pile foundation utilizing breakaway walls. Breakaway walls in Coastal AE zones must also contain hydraulic flood vents.

Adoption of the 2015 IRC will make significant changes to the elevation requirement for new construction and substantially improved structures in coastal floodplains that may be different than the standards currently contained in your local floodplain zoning regulations or ordinance. There are also other changes. **Bold red text** in this model highlights the changes that need to be made to floodplain zoning regulations or ordinances to match the new state building code standards.



REGIONAL AND STATE INITIATIVES

State Building Code & Flood Regulations

Revised State Building Code Action 1

Revise floodplain zoning regulations to reflect the new State Building Code requirements for one foot of freeboard for construction in the 1% annual-chance flood zone.

Revised State Building Code Action 2

Increase Substantial Damage and Substantial Improvement lookback periods to two or more years.

Revised State Building Code Action 3

Compare local floodplain regulations with Revised State Model Flood Regulations to identify any remaining opportunities for improvement

Towns with floodplain regulations that do not require freeboard.

Towns with SD/SI lookback periods of 1 year or less.

All other Towns

STATE INITIATIVE

Small Business
Chemical
Management



REGIONAL AND STATE INITIATIVES

Small Business Chemical Management

Small Business Chemical Management Action 1

Provide information on the Town website about CT DEEP training and information around small business chemical management for hazard resilience.

Small Business Chemical Management Action 2

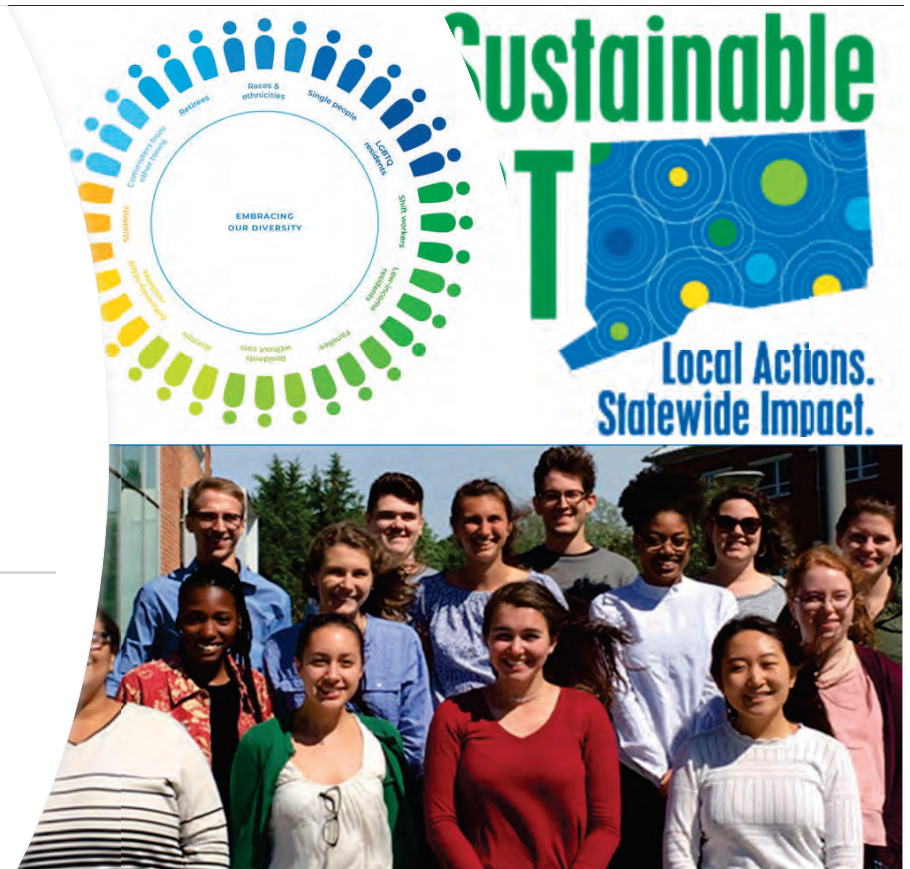
Use the CT Toxics Users and Climate Resilience Map to identify toxic users located in hazard zones within your community. Contact those users to inform them about the CT DEEP small business chemical management initiative.

Small Business Chemical Management Action 3

Host a CT DEEP presentation for municipal staff and local businesses about business chemical management for hazard resilience.

STATE INITIATIVE

Sustainable CT



REGIONAL AND STATE INITIATIVES

Sustainable CT

Sustainable CT Action 1

Register as a Sustainable CT community and make progress with the hazard mitigation goals associated with registration.

Towns not currently in the program

Sustainable CT Action 2

Take one of the following actions that will mitigate natural hazard risks while also meeting Sustainable CT objectives:

1. Disseminate a toolkit for pre-disaster business preparedness.
2. Revise regulations to promote Low Impact Development.
3. Include the goals of this Hazard Mitigation Plan, and at least three other sustainability concepts, in your next POCD update.

Registered and Certified Towns

Regional Initiative

HVA Road-Stream Crossing Inventory

Road: Macedonia Brook Road Stream: Macedonia Brook



Results
Barrier Evaluation: Insignificant barrier
Habitat Restoration Risk: Not Ranked
Condition Maintenance: Not Ranked
Overall Ranking: Bridge, Not Ranked

Location
Subwatershed: Macedonia Brook
Coordinates: 41.77577, -73.49483
Location Description: Bridge south of Hickory campuses
Date Observed: 2014-06-19
Crossing Code: xy4177585573494878
Promoter: UMASS

Stream and Crossing



Crossing Characteristics

Crossing Type: Bridge
Number of structures/poles: 2
Condition: Excellent
Construction: Mild
Alignment: Skewed



Stream Characteristics

Score Pool: None
Bankfull Width (ft): No data
Bankfull Width Confidence: No data

Crossing Comments: None

REGIONAL AND STATE INITIATIVES

HVA Road-Stream Crossing Inventory

Canaan, Colebrook, Cornwall, Kent, Norfolk, Salisbury, Sharon

Road-Stream Crossing Inventory Action 1

Take analysis into consideration when upgrading and replacing infrastructure, including the restoration prioritization results.

Towns with Road-Stream specific resources

Revised State Building Code Action 2

Refer to the road-stream crossing resources for best management practices when upgrading and replacing infrastructure.

Towns outside of the HVA study region

Regional Initiative

Building Municipal Resilience and Climate Adaptation through Low Impact Development



Effective Date: January 1, 2018

MORRIS

Low Impact Sustainable Development and Stormwater Management Design Manual



LOW IMPACT - SUSTAINABLE
LISD
FRINKAUS ENGINEERING

Trinkaus Engineering, LLC
118 Norton Ridge Road
Southbury, Connecticut 06488
(203) 264-4058 (Office/Fax)
Email: info@trinkauseng.com
www.trinkauseng.com

REGIONAL AND STATE INITIATIVES

Building Municipal Resilience and Climate Adaptation through Low Impact Development

LID Action 1
Refer to the manual in your guidance or regulations



LID Action 2
Evaluate whether LID should be incorporated into practices



Wrap Up



Next Steps



- Contact Noah and Victoria if you have any comments about mitigation actions
 - *What do you like? This will work for us...*
 - *What do you dislike? This won't work for us...*
- Individual annexes will be provided for review in January
- Multi-jurisdiction document can be reviewed after your annex
- Post a link for public comments in late January (we will provide the link)

Date: November 24, 2020
Topic: HMP Mitigation Strategies and Actions
 For Local Coordinators
Location: Virtual (Zoom)

Attendees:

NHCOG <ul style="list-style-type: none"> • Janell Mullen Consultant Team <ul style="list-style-type: none"> • Noah Slovin • David Murphy • Victoria Brudz Guest Presenter: <ul style="list-style-type: none"> • Jessica LeClair 	Municipal Participants:	
	<ul style="list-style-type: none"> • Debbie Brydon • Barbara Henry • Brent Colley • Candy Perez • Charlie • Craig Nelson • Curtis Rand • Dan Jerram • E Carbone • Emily Egan • Henry Todd 	<ul style="list-style-type: none"> • Jean Speck • Jim Brinton • Magi Winslow • Matt Riiska • Pamela Colombie • Ron Roberts • Ted Schafer • Timothy Angevine • Tom Bartram • Tom McKeon • Denise Raap

Notes:

The workshop began with a presentation given by the consultant team. The presentation began with the following topics:

- Risk Assessment Update (since the previous regional workshop)
- Public Comments Received to Date (including through a public survey, virtual public workshops, and an online interactive Story Map)
- Hazard Mitigation Goals, Objectives, and Strategies (from previous editions of the HMP, and identified for the current HMP to-date)

Jessica LeClaire then presented information about the Sustainable CT program, and how actions completed as part of a community’s efforts increase its standing in that program often intersect with actions that can mitigate hazard risks.

The consultant team then continued to present about the following:

- Regional and Statewide Initiatives (and the municipal-level HMP actions that are coming out of those initiatives)
- Wrap Up and Next Steps

The floor was then open to discussion.

Discussion:Sustainable CT:

- Ted Shafer – Ted is on the Sustainable CT Board of Directors and is happy to talk about sustainable CT with people who are interested in participating
- Jean Speck – Jean thanked Jessica for the overview. She pitched Sustainable CT participation at the BOS meeting recently, but received a lukewarm reception. She asked for assistance, and may invite Ted/Jessica/Gordon/Barbara to appear during their next BOS meeting to talk about it and try and convince the board to participate.
 - Ted – no problem! Happy to be there!
 - Jessica LeClair – same
- Denise Raap noted that Litchfield loves Sustainable CT. The Town has a strong committee with an enthusiastic Chair.
- Janell can volunteer some time to assist with some of the admin of sustainable CT so as not to give municipal staff more work.

Other Topics:

- Janell: what is timeline for final adoption?
 - David noted that adoptions will likely occur in spring 2021 (April/May/June)
- David asked Jessica to describe Community Resilience Building (CRB) for the northwest towns.
 - Jessica: we've worked with TNC to offer CRB for towns at no cost in person.
 - Due to current conditions, TNC is offering a "truncated" CRB which involves working with 8-10 people who truly have their finger on the pulse of the town.
 - TNC facilitates a half-day virtual session. TNC writes up proceedings and identifies action steps.
 - Now able to do these on Zoom. A CRB is coming up in Litchfield.
 - Jean and Barbara asked for examples of CRB reports.
 - Jessica – on website under task 4.4. J can follow up directly.
- Barbara complimented the overall planning process and noted that this time is much more inclusive and thorough than the previous planning process.
- Jean asked if the towns should meet in the small teams again. What are the next steps?
 - David replied that there is no need to meet again. But if meeting again might be helpful, especially as the plan is being reviewed, anyone can reach out and we can meet virtually. Janell noted that she can help facilitate as well.
- In the chat box, several attendees thanked NHCOG and the consultant team for the presentation.

The meeting was adjourned at 10:55 AM.

Appendix C

Public Outreach

Northwest Hills Council of Government Seeking Input on Natural Hazard Mitigation Plan

From the recent tornadoes and tropical storms to major snow events that occur every winter, nature reminds us that the Northwest Hills region of Connecticut is susceptible to the impacts of natural hazards.

What can be done to minimize risks? A Hazard Mitigation Plan is a tool that helps a community to understand risks and to take specific steps to reduce property damage, injury, and loss of life. The Northwest Hills Council of Governments (NHCOG), along with each of its 21 member municipalities, is in the process of developing its first multi-jurisdictional Hazard Mitigation Plan for all 21 communities. This plan will incorporate existing, separate hazard mitigation plans covering the NHCOG municipalities, with updates based on recent disasters, changes in risk, and public input.

The plan will discuss the risks from floods, winter storms, high winds like tornadoes, hurricanes, wildfires, earthquakes, and dam failure. The plan will identify actions that communities can take to prevent damage from natural hazards. The plan will also identify recent changes in local hazard risks, vulnerable elements of communities, and hazard mitigation capabilities.

NHCOG is asking for public participation in the planning process to make sure it addresses the needs of residents and visitors. There are a few opportunities for participation:

- An interactive online Story Map has been designed to take residents through the hazard mitigation planning process and help visualize risks and adaptation options in the region. The Story Map can be accessed here: <https://arcg.is/0Tr80f>
- An online survey is available for members of the public to give their input. The survey is expected to take about 10 minutes to complete, and survey-takers may skip any questions they don't wish to answer. Please visit www.surveymonkey.com/r/NHCOGHMP to take the survey.
- The region will be holding virtual public workshops where attendees can learn about hazard mitigation planning and speak directly with the consultants working on developing the HMP update. The first is scheduled for November 5, 2020 at 6:00 PM. Check back here for a link to the meeting on November 4: <https://northwesthillscog.org/emergency-planning/>



Seeking Input on Hazard Mitigation Plan

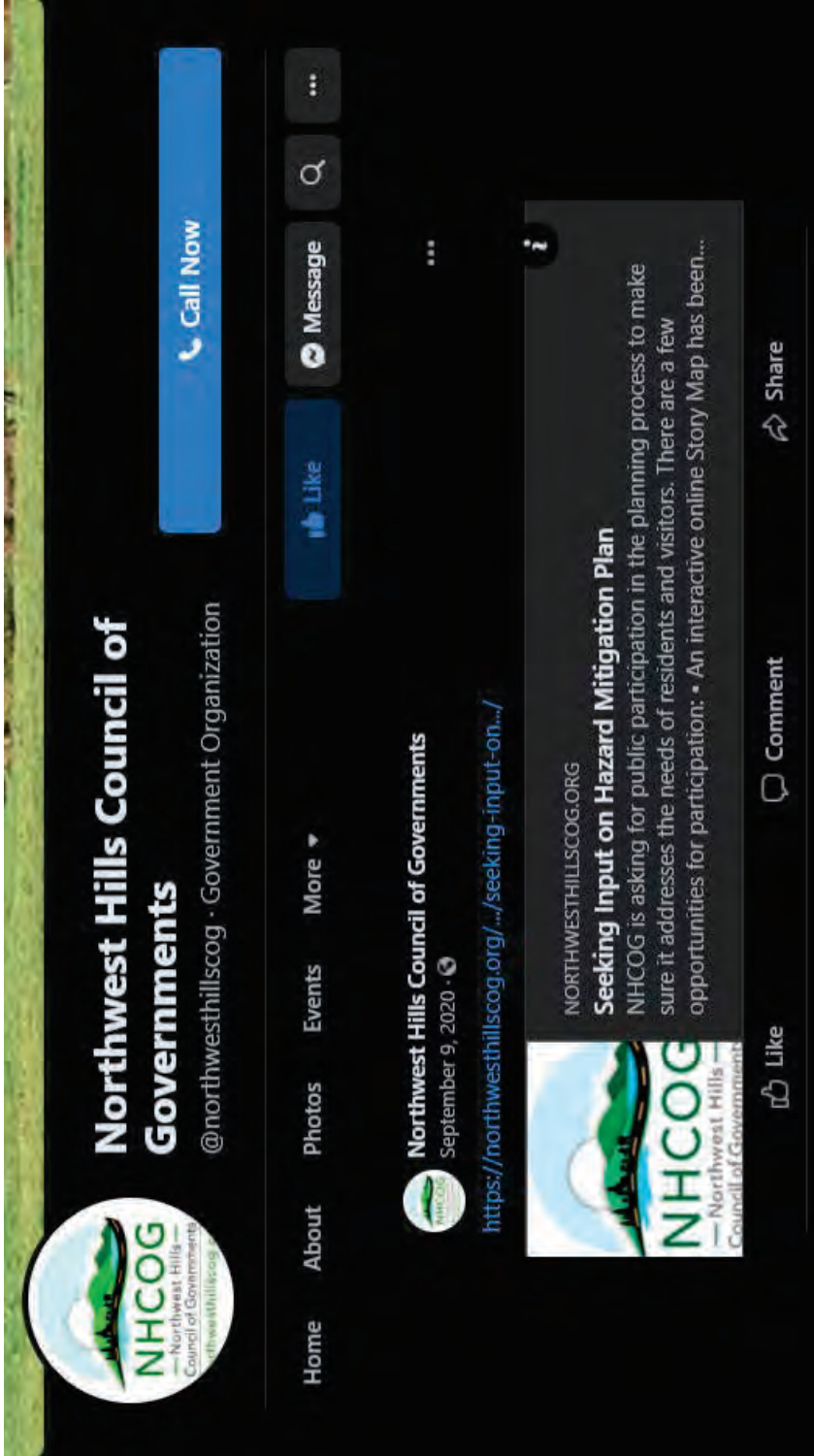
[Home](#) / [Uncategorized](#) / [Seeking Input on Hazard Mitigation Plan](#)


[< Previous](#) [Next >](#)

Seeking Input on Hazard Mitigation Plan

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- The region will be holding virtual public workshops where attendees can learn about hazard mitigation planning and speak directly with the consultants working on developing the HMP update. Stay tuned for dates and times or contact us!







NHCOC
Northwest Hills
Council of Governments
@northwesthillscog

Northwest Hills Council of Governments
@northwesthillscog · Government Organization

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 Northwest Hills Council of Governments
September 9, 2020 · 🌐
<https://northwesthillscog.org/.../seeking-input-on-.../>



NORTHWESTHILLSCOG.ORG
Seeking Input on Hazard Mitigation Plan
NHCOC is asking for public participation in the planning process to make sure it addresses the needs of residents and visitors. There are a few opportunities for participation: • An interactive online Story Map has been...

Like Comment Share

THE REGISTER CITIZEN

<https://www.registercitizen.com/news/article/Northwest-CT-towns-to-join-work-on-natural-hazard-15654416.php>

Northwest CT towns to join work on natural hazard mitigation plan

By **Emily M. Olson** Published 12:00 am EDT, Monday, October 19, 2020

**IMAGE 1 OF 3**

The Northwest Hills Council of Governments is developing a natural Hazard Mitigation Plan for its 21 towns in northwest Connecticut, to help towns deal with the affects of storms and other weather-related ... [more](#)

GOSHEN – Heavy rain and wind, debilitating snowstorms and flooding are three natural events faced by towns in the Northwest Corner. The affect of recent Tropical Storm Isaias, which downed trees and power lines and left many without power, is just one example of how a weather event can affect a community.

The Northwest Hills Council of Governments, comprised of 21 towns in the Northwest Corner, has put its energy into creating hazard mitigation plans and reports over the years. This year, the NHCOCG decided to take that work a step further and create a

multi-jurisdictional Hazard Mitigation Plan that would include individual assessments of each of the 21 towns, since each has its own unique challenges in storm management and recovery. The project is funded by the Federal Emergency Management Agency.



“The plan will incorporate existing, separate hazard mitigation plans covering the NHCOC municipalities, with updates based on recent disasters, changes in risk and public input,” said Executive Director Rick Lynn.

Two Things You Never Realized a Q-Tip Can Do



The plan, he said, will include the risk from floods, winter storms, high winds from tornadoes, hurricanes, wildfires, earthquakes and dam failure, and identify actions communities can take to prevent damage from these natural hazards. It also will identify recent changes in local hazard risk, vulnerable elements in each community and hazard mitigation capabilities, Lynn said.

"We've prepared natural hazard mitigation plans in the past but this version is the first time we're linking all 21 towns of the COG into one plan," he said. "So there's a basic plan, and then individual plans for each town, based on its own challenges. It's a way to better identify risk and vulnerabilities."

The NHCOC's regional planner, Janell Mullen, is working with the engineering firm Milone & MacBroom on the plans. "It's never been done for all 21 towns," she said. "We're doing separate plans for each town, updating recent disaster reports, and getting public input."

The COG's website offers a full review of the plans, Mullen said. "The visual component of this is very helpful, for people to understand the lay of the land and where your town fits in," she said. "It's a great resource."

Ad

For Torrington, flooding makes the city vulnerable, Lynn said. "The Naugatuck River floods, or another smaller stream in the same area floods, and any homes or businesses or facilities that are in the flood plain become vulnerable," he said. "If a major windstorm is coming through, and there's an ice storm, that's often when trees come down. The plan finds ways to quickly respond to wind damage, such as carefully pruning trees near power lines or critical facilities."

Lynn said trees are a problem everywhere in the Northwest Corner. "It's a tough one, because people love trees and want to keep them," he said. "But when power lines come down and hit those trees, it's a big problem."

Mullen said the plan can help provide funding the next time a storm hits a small community and leaves it in the dark, for example. "The goal of this is to identify risks and mitigating measures, to lessen the severity and help towns be a little bit better prepared, and more proactive," she said. "The next time, a town might have purchased generators to have backup power, and once the plan is prepared, there are opportunities for federal funding to support those types of things."

NHCOG is asking for public participation in the planning process to make sure it addresses the needs of residents and visitors. There are a few opportunities for participation.

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The region will hold virtual public workshops where attendees can learn about hazard mitigation planning and speak directly with the consultants working on developing the HMP update. The first is scheduled for 6 p.m. Nov. 5. A link to the meeting will be available Nov. 4 at northwesthillscog.org/emergency-planning.

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H E A R S T



Northwest Connecticut's Regional Planning Organization

[ABOUT US](#)

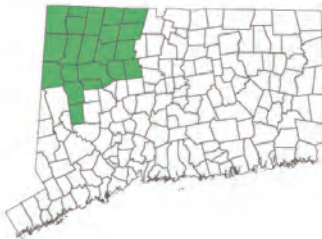
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[MAP RESOURCES](#)

[MEETINGS](#)

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 COLEBROOK
 CORNWALL
 GOSHEN

HARTLAND
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 KENT
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NEW HARTFORD
 NORFOLK
 NORTH CANAAN
 ROXBURY
 SALISBURY

SHARON
 TORRINGTON
 WARREN
 WASHINGTON
 WINCHESTER

Public Meeting on Natural Hazard Mitigation Plans

By Janell Mullen | November 3rd, 2020

On Thursday, November 5th at 6:00 Milone & MacBroom will be hosting a public workshop regarding the regional update to the Natural [...]

[Read More >](#)

POSTPONED: Planning for Economic Recovery

By Jocelyn Ayer | October 27th, 2020

The October 29th "5th Thursdays" Forum on "Planning for Economic Recovery" has been postponed. New date TBD. Our 21-town region was recently [...]

[Read More >](#)

E. Main Street Corridor Study in Torrington

By Janell Mullen | September 22nd, 2020

The NHCOG and the City of Torrington have successfully obtained a grant from the State Department of Transportation in order to conduct [...]

[Read More >](#)

1 2 [Next >](#)



Northwest Hills Council of Governments

The NHCOG is a coordinating body for chief elected officials maintained by twenty-one municipalities in northwest Connecticut. NHCOG's mission is to make Northwest Connecticut a better place to live, do business, and visit by providing a forum for local officials to discuss issues of inter-municipal concern, promote regional cooperation, and direct various regional initiatives to enhance government planning, efficiency and service delivery.

-

[NHCOG Title VI Flyer English | Spanish](#)



59 Torrington Road, Suite A-1
Goshen, CT 06756

Tel: 860.491.9884
Fax: 860.491.3729

Office Hours:
Monday - Friday
8:30am - 5:00pm

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UPDATE OF THE NATURAL HAZARD MITIGATION PLAN FOR THE NORTHWEST HILLS REGION

Public Information Meeting



Presented by:
Milone & MacBroom, Inc.
Victoria Brudz, CFM
David Murphy, PE, CFM
Noah Slovin, CFM

November 5, 2020



1

DISCUSSION TOPICS

- Purpose and Need for Hazard Mitigation Plan
- Long Term Goals of Hazard Mitigation
- How Can the Plan be Used?
- Hazards to Include in the Plan
- Hazards of Concern in the Northwest Hills Region
- Typical Hazard Mitigation Strategies and Actions
- Mitigation Examples from the Region
- How to Participate
- Next Steps



2

Test Poll
(to make sure it is working for you)

3

Poll #1: Tell us a little about you

4

PURPOSE AND NEED FOR HAZARD MITIGATION PLAN

Authority

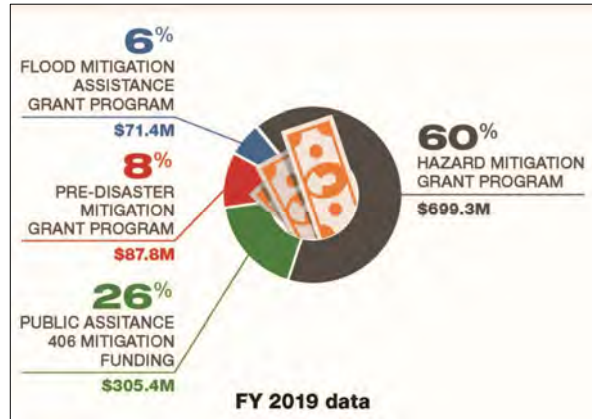
- Disaster Mitigation Act of 2000 (amendments to Stafford Act of 1988)

Goal of Disaster Mitigation Act

- Promote disaster *preparedness*
- Promote hazard mitigation *actions* to reduce losses

Mitigation Grant Programs

- Flood Mitigation Assistance (FMA)
- Hazard Mitigation Grant Program (HMGP)
- Building Resilient Infrastructure and Communities (BRIC)



Graphic courtesy of FEMA

5

PURPOSE AND NEED FOR HAZARD MITIGATION PLAN

What is a Natural Hazard?

- An extreme natural event that poses a risk to people, infrastructure, and resources.



6

PURPOSE AND NEED FOR HAZARD MITIGATION PLAN

What is Hazard Mitigation?

- Actions we take now that reduce or eliminate long-term risk to people, property, and resources from natural hazards and their effects.



New Elevated Construction



Removal of Structures from Floodplain

7

PURPOSE AND NEED FOR HAZARD MITIGATION PLAN

LONG-TERM GOALS OF HAZARD MITIGATION

Reduce

- Loss of life
- Damage to property and infrastructure
- Costs to residents and businesses (taxes, insurance, repair costs, etc.)
- Municipal service costs (long-term, e.g. emergency response, infrastructure maintenance)

Educate

- Residents
- Policy-makers

Connect

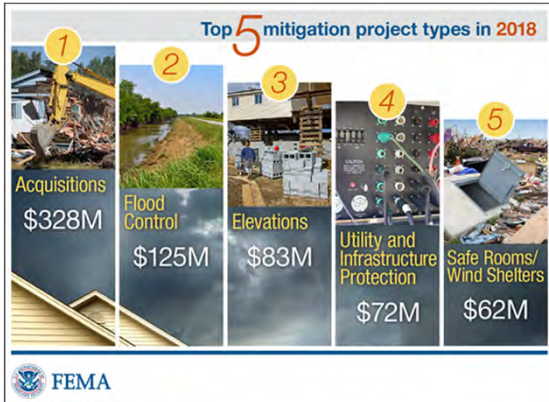
- Hazard mitigation planning to other community planning efforts

Enhance

- And preserve natural resource systems in the community

8

HOW CAN A PLAN BE USED?



9

HOW CAN A PLAN BE USED?

Grants can be used for:

- Building acquisitions or elevations
- Culvert replacements
- Drainage projects
- Bank stabilization
- Landslide stabilization
- Wind retrofits
- Seismic retrofits
- Snow load retrofits
- Standby power supplies for critical facilities



This home in Trumbull was acquired and demolished using a FEMA grant

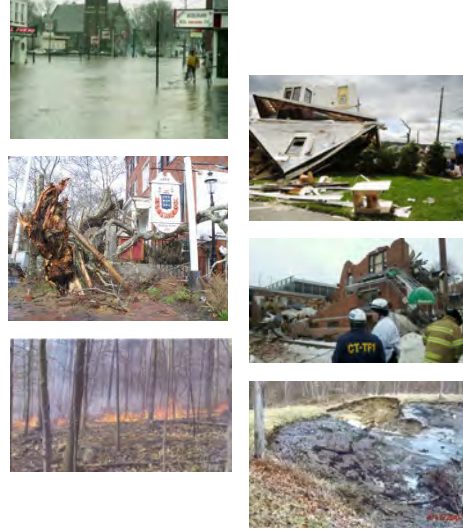


10

HAZARDS TO INCLUDE IN THE PLAN

- Floods
 - Hurricanes and Tropical Storms
 - Summer Storms
 - Tornadoes and High Winds
 - Severe Winter Storms
 - Dam Failure
 - Drought
 - Wildfire
-
- Earthquakes
 - Landslides

↑
CLIMATE CHANGE



13

HAZARDS TO INCLUDE IN THE PLAN

- **Floods**
- Hurricanes and Tropical Storms
- Summer Storms
- Tornadoes and High Winds
- Severe Winter Storms
- Dam Failure
- Drought
- Wildfire
- Earthquakes
- Landslides



Flooding in Torrington
Photo WFSB



Flooding in Litchfield
Photo Register Citizen

14

HAZARDS TO INCLUDE IN THE PLAN

- **Floods**
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- Landslides

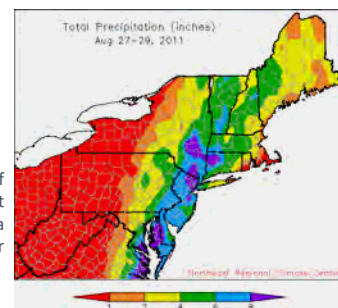


Ice jams along the Housatonic River
Photos newstimes

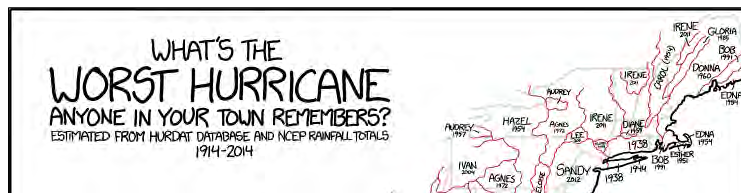
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HAZARDS TO INCLUDE IN THE PLAN

- Floods
- **Hurricanes and Tropical Storms**
- Summer Storms
- Tornadoes and High Winds
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- Drought
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- Earthquakes
- Landslides



Courtesy of
Northeast
Climate Data
Center



16

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
- **Summer Storms**
- Tornadoes and High Winds
- Severe Winter Storms
- Dam Failure
- Drought
- Wildfire
- Earthquakes
- Landslides



Register Citizen



New Canaan (2018) ctpost

17

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
- Summer Storms
- **Tornadoes and High Winds**
- Severe Winter Storms
- Dam Failure
- Drought
- Wildfire
- Earthquakes
- Landslides



Paley's Farm Market

18

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
- Summer Storms
- Tornadoes and High Winds
- **Severe Winter Storms**
- Dam Failure
- Drought
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- Earthquakes
- Landslides



Torrington
The Register
Citizen



NBC
Connecticut

19

HAZARDS TO INCLUDE IN THE PLAN

- Floods
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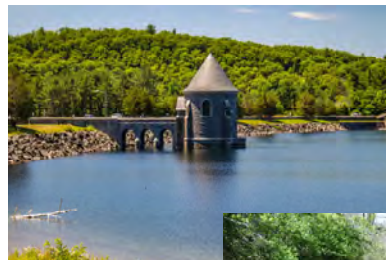
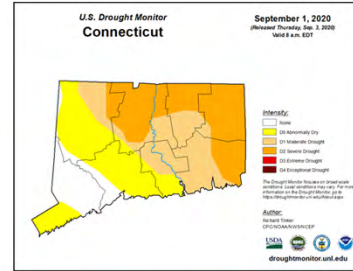


Photo wildlifehelp.org

20

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
- Summer Storms
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- Severe Winter Storms
- Dam Failure
- **Drought**
- Wildfire
- Earthquakes
- Landslides



U.S. Drought Monitor



An Aquarion Reservoir impacted by past droughts
Courtesy of Stamford Advocate

21

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
- Summer Storms
- Tornadoes and High Winds
- Severe Winter Storms
- Dam Failure
- Drought
- **Wildfire**
- Earthquakes
- Landslides



Cornwall (2016)
Photo Hartford Courant



Kent Photo News Times

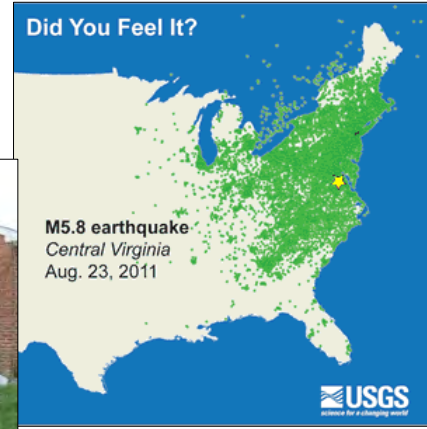


Cornwall Photo Fox 61

22

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
- Summer Storms
- Tornadoes and High Winds
- Severe Winter Storms
- Dam Failure
- Wildfire
- Drought
- **Earthquakes**
- Landslides



Courtesy of USGS

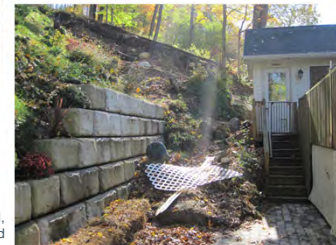
23

HAZARDS TO INCLUDE IN THE PLAN

- Floods
- Hurricanes and Tropical Storms
- Summer Storms
- Tornadoes and High Winds
- Severe Winter Storms
- Dam Failure
- Wildfire
- Drought
- Earthquakes
- **Landslides**



UMASS Geosciences



Photos by MMI, Town of New Milford

24

WHAT ABOUT IMPACTS OF A CHANGING CLIMATE?

- Heat-related hazards will increase in intensity
- More atmospheric heat energy may lead to more intense hurricanes, tornadoes, and other wind events
- Flashy droughts will become more frequent
- Snow may be heavier, although the snow season will be shorter
- Riverine flood risks will increase, even where we have flood control that prevents the largest floods
- Intense precipitation may lead to more flooding

25

Poll #2: Climate Change Concerns

26

HAZARDS OF CONCERN IN THE REGION

- Heavy precipitation
 - Road and culvert washouts
 - Fast rising flood waters & evacuations
 - Flooded roadways
 - Drainage issues
- Tropical storms
 - Extended power outages – 7 days during Isaias
 - Loss of communication capabilities
 - Downed trees and powerlines, blocked roads – even during smaller storms
 - Concern at dead end roads

27

HAZARDS OF CONCERN IN THE REGION

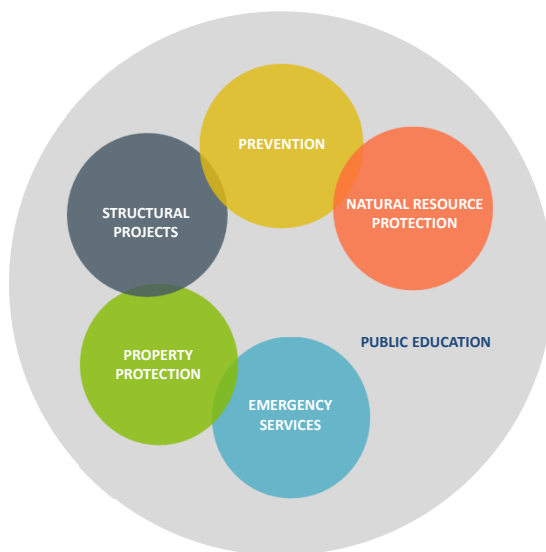
- Snow & high wind events are a concern
 - Drifting and icing is a concern in some towns
- Dams
 - Some smaller, privately owned dams are not maintained properly
 - Beaver dams cause flooding issues
- Wildfires
 - Not a major concern – however there have been past events
- Ice Jams
 - Along the Housatonic, Blackberry River and at the Shepaug Dam
- Drought
 - A concern regarding wildfires and water availability

28

Poll #3: Hazards of Concern

29

HAZARD MITIGATION STRATEGIES AND ACTIONS

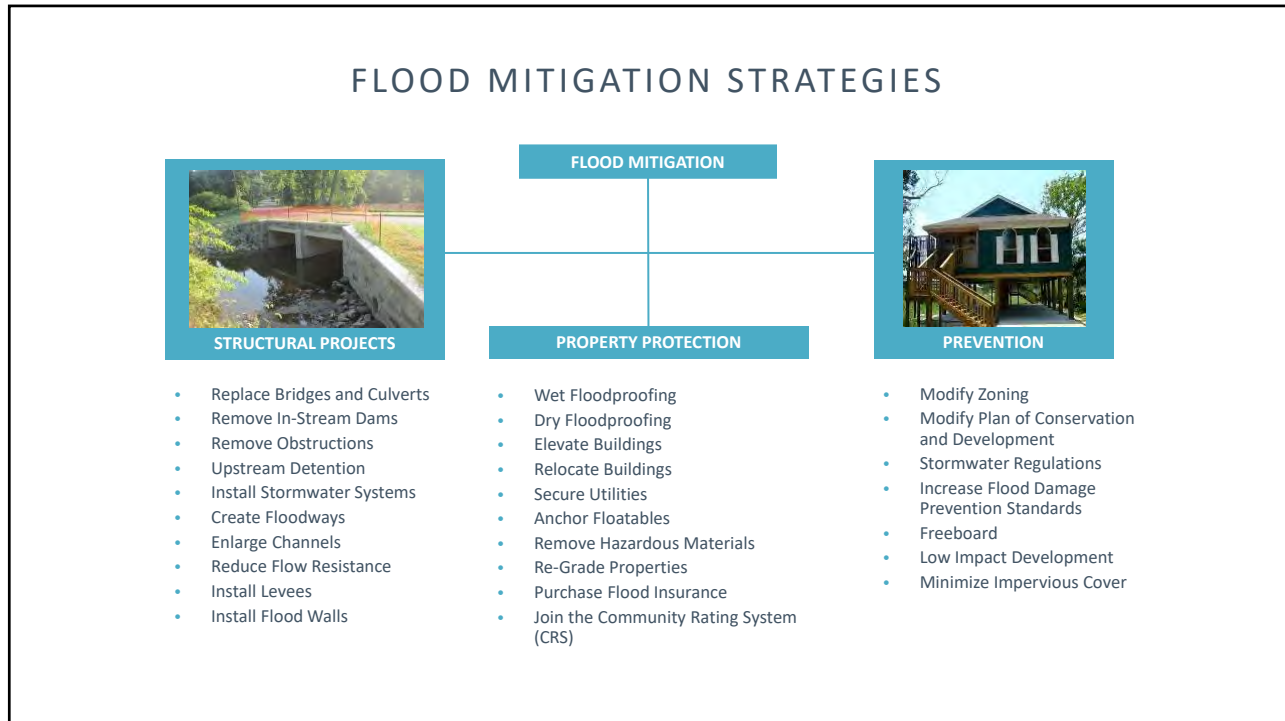


Structural Project

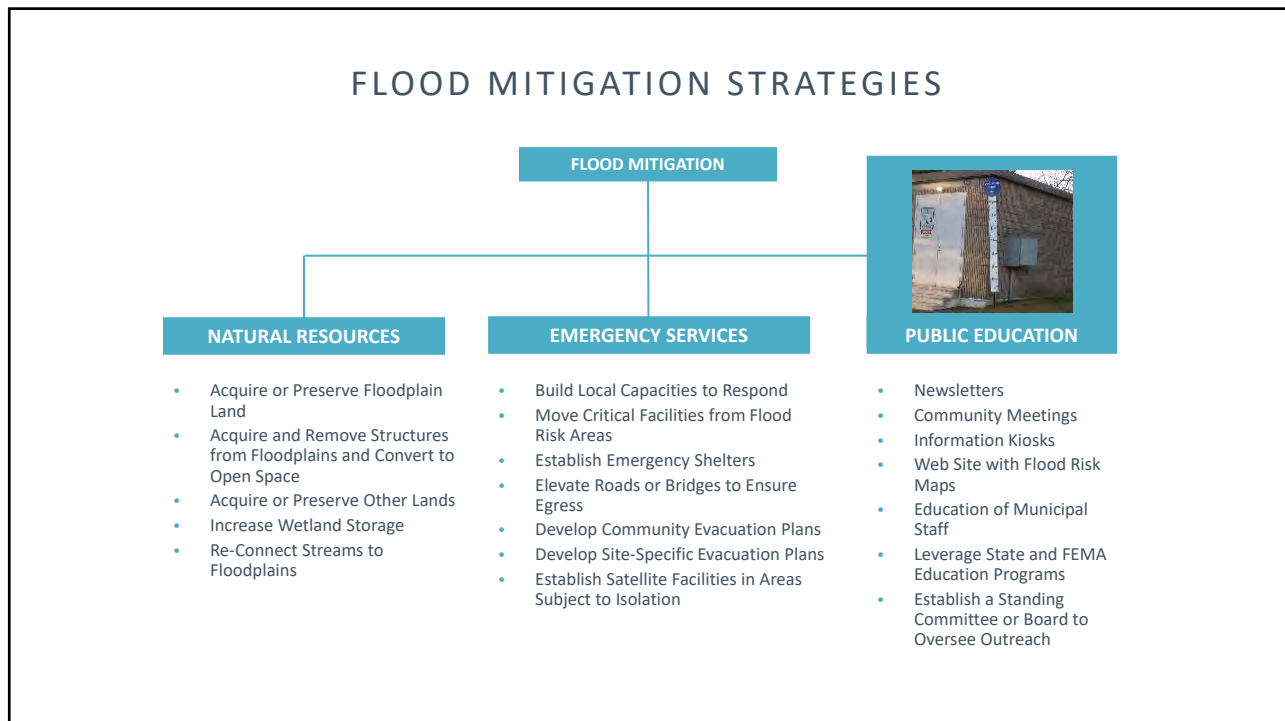


Property Protection

30



31



32

OTHER HAZARD MITIGATION STRATEGIES

- Strengthen or reinforce shelters and critical facilities
- Create backup critical facilities
- Bury utilities
- Harden utilities
- Expand and fund tree maintenance programs
- Snow removal plans and programs
- Shutters, load path, and roof projects
- Enhance fire suppression capabilities with dry hydrants, cisterns, etc.
- Bracing for potential earthquake damage
- Public education programs and resources



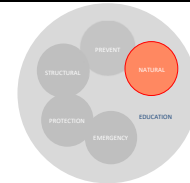
Hurricane Shutters



Dry Hydrants

33

REVIEW MITIGATION SUCCESSES



Conservation of Frost & CL&P Riverfront Properties

- Housatonic Valley Association & Sharon Land Trust acquired 20 acres of undeveloped land along the Housatonic River
- Land will be preserved as open space
- Limits development in a flood risk area
- **Type: Natural Resource Protection**



34

REVIEW MITIGATION SUCCESSES

Building Municipal Resilience and Climate Adaptation through Low Impact Development

- Regional action
- Regulatory review
- Community education events
- Low Impact Sustainable Design Manual
- **Type: Prevention**

35

REVIEW MITIGATION SUCCESSES

Naugatuck River Basin Flood Control Dams

- Thomaston, Hall Meadow Brook, East Branch, Northfield Brook, Black Rock, Hancock Brook, and Hop Brook Dams
- Unlikely to be repeated under current best practices, permitting, and funding environment
- **Type: Structural**

Photos: USACE

36

REVIEW MITIGATION SUCCESSES



CT DOT Federal Highway Climate Resilience Pilot Program

- 2013-2014 federally funded project
- Evaluation of CTDOT bridges and culverts located in the northwest hills area
- Vulnerability & criticality assessment to help with prioritization
- **Type: Prevention and Structural**



37

REVIEW MITIGATION SUCCESSES



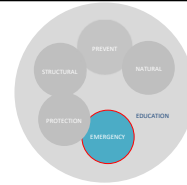
Canaan Bridge Study

- Conducted bridge study to identify structures that need repairs and upgrades
- **Type: Prevention and Structural**



38

REVIEW MITIGATION SUCCESSES



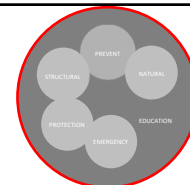
Kent Emergency Response Capacity Improvements

- Emergency capacity increase
- Wrecking ball/crane to break ice
- Emergency shelter and supplies
- Boats, pumps, and sandbags
- **Type: Emergency Services**



39

REVIEW MITIGATION SUCCESSES



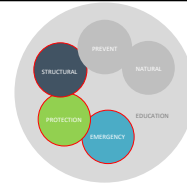
Cornwall Public Information and Education

- Informational flyers placed in Town Hall
- Public event held to particularly target senior citizens on hazard protection at home
- **Type: Education**



40

REVIEW MITIGATION SUCCESSES



Torrington – Harwinton –Burlington Interconnection

- State funding used to extend Torrington Public Water System to Harwinton & Burlington
- Upgrades to water system infrastructure & capacities can help mitigate drought and wildfire hazards.
- **Type: Structural, Emergency Services, and Property Protection**



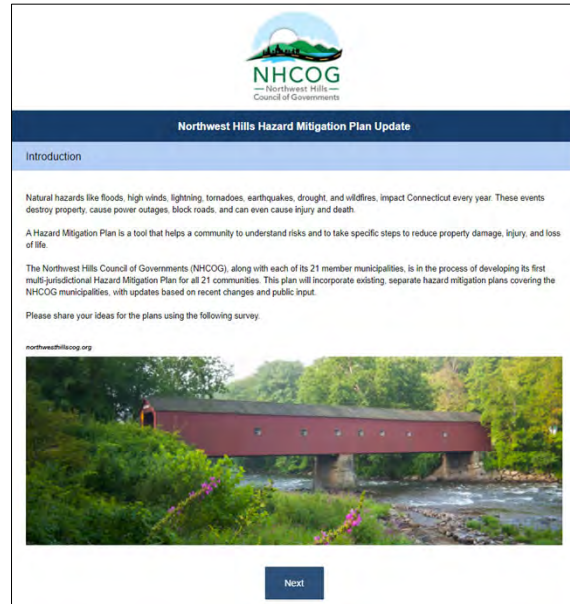
41

Poll #4: Mitigation Actions

42

HOW TO PARTICIPATE

- Visit the NHTCOG HMP Story Map
<https://arcg.is/0Tr80f>
- Survey available at
<https://www.surveymonkey.com/r/NHTCOGHMP>



43

NEXT STEPS

- Incorporate input from residents, business owners, and the public at large
- Develop mitigation strategies and actions
- Prepare draft plan for review by the municipalities and the public
- Adopt and implement the plan
- Seek hazard mitigation funds



44

NHCOG Hazard Mitigation Plan
Public Meeting #1 – Entire Northwest Hills Region
Date: November 5, 2020
Time: 6:00pm – 7:00pm
Location: Zoom

Panelists:

David Murphy, PE, CFM, Milone & MacBroom, Inc. (MMI)
Victoria Brudz, CFM, MMI

Attendees:

- Janell Mullen, NHCOG
- Martin Connor, AICP, Torrington City Planner
- Tom Stansfield, Chair of Town of Goshen Inland Wetlands and Water Courses Commission
- Troy LaMere, Town of Harwinton
- Caller 860-806-1581, Town of Harwinton
- TorringtonZOOM06790, City of Torrington
- Lu-Ann Zbinden, Town of Goshen Planning and Zoning
- Deirdre Daly

David Murphy and Victoria Brudz from MMI conducted the meeting. Approximately six or seven attendees were noted, depending on whether phone numbers and zoom accounts were duplicates. Various topics were presented to the public by MMI including:

- The need for hazard mitigation
- How the plan can be used
- Hazards that will be addressed in the plan
- Specific hazards for the targeted communities
- The next steps of the plan

Throughout the presentation attendees were asked a total of eight polling questions to gain additional insight for plan development. The Questions corresponded with the topic being discussed and were asked after information on the subject was presented to the public. Questions and responses can be found in table 1.

Table 1: November 5, 2020 polling results
1 respondent

Poll #1 Tell us about you											
		Salisbury, North Canaan, or Canaan	Sharon or Cornwall	Kent or Warren	Washington or Roxbury	Norfolk or Goshen	Colebrook or Hartland	Barkhamsted or New Hartford	Litchfield, Morris, or Harwinton	Winchester or Torrington	None of the above
#1	What community do you live in?		1			2				2	
		I want to learn more about Natural Hazards and Mitigation	I want to learn about mitigation options		I have Natural Hazard concerns I want to share		I have ideas for Hazard Mitigation I want to share		I want to know what communities are doing to prepare for hazards		I'm just trying to avoid listening to election news
#2	What brought you here tonight? (Multiple choice)	1							3		1
		I live in the NHCOG Region		I own property in the NHCOG Region			I work in the NHCOG Region			I own a business in the NHCOG Region	
#3	Which of the following is true? (Select all that apply)	5		4			5				
Poll #2 Climate Change											
		I'm not concerned about climate change impacts within my community	More frequent and intense RAIN storms		More frequent and intense WIND storms		More extreme heat events	Mo severe droughts	Increased wildfire risk	Increased risk of insect-borne illnesses	
#1	Which of the following climate change impacts are you most concerned about within your community? (Multiple choice)	1	5		3		3	3	1	1	

Poll #3 Hazards of Concern											
		I am not concerned about natural hazards in my community	River Flooding	Flash Flooding	High Wind Events	Snow/Ice Events	Dam Failure	Earthquakes	Landslides	Wildfire	Extreme Temperatures (hot or cold)
#1	Which 3 Natural Hazard are you MOST concerned about in YOUR community? (Multiple choice)		1	3	3	4					2
		Very Concerned		Somewhat Concerned			A Little Concerned		Not At All Concerned		
#2	How Concerned are you about Climate Change impacts on Natural Hazards?	1	2		2						
		Injury		Property Damage		Displacement (had to move or stay in a shelter)		Lost Work or Income		Minor Delays or Inconvenience	
#3	Have you been impacted by Natural Hazard in the Past?		2				2		5		
Poll #4 Mitigation Actions											
		Public Education & Awareness	Emergency Alerts & Notification	Electric Grid Resilience (tree trimming, burying wires, backup generators, etc.)	Prevention of Damages (zoning regulation, building codes, etc.)	Structural Protection (floodwalls, increased bridge sizes, etc.)	Property Protection (elevation, storm shutters or windows, etc.)	Emergency Services (improvements to shelters, emergency facilities, etc.)	Natural Resource Protection (open space, wetlands, etc.)		
#1	What types of mitigation actions have you seen implements in your community?	3	3	2	3	1		2	3		

		Public Education & Awareness	Emergency Alerts and Notifications	Electric Grid Resilience	Prevention of Damages	Structural Projects	Property Protection	Emergency Services	Natural Resource Protection		
#2	What type of mitigation actions would you most like to see implemented in your community? (Multiple Choice)	3	3	3	3	2	3	3	4		
		Municipal Leadership	Emergency Responders (Police, Fire, EMS)	Public Works (road clearing, maintenance, etc.)	Capital Improvement Projects	Grant Writers	Community Planning Documents	Regulations and Ordinances	Public Outreach and Education	Community Groups and Institutions	Neighbors and Friends
#3	What are the top strengths of your community for mitigating natural hazard impacts? (Multiple Choice)	3	6	4			2	3	1		2

At the conclusion of the presentation participants were asked if there were any questions or comments they would like to share.

An attendee asked where to find resources on protecting your home from some of these hazards

- Victoria explained that sometimes the municipal building department may have information on residential strategies, however, if the local department does not, federal resources may also be helpful, such as FEMA.

There were no other questions or comments from attendees.

One attendee was unable to participate in the polls due to technical device-related issues, and was sent the poll via email at the end of the meeting.

UPDATE OF THE NATURAL HAZARD MITIGATION PLAN FOR THE NORTHWEST HILLS REGION

Public Information Meeting



Presented by:
SLR Consulting
David Murphy, PE, CFM
Noah Slovin, CFM

July 27, 2021




1



2

MEETING TOPICS

- What is a Hazard Mitigation Plan?
- Public Feedback So Far
- Mitigation Actions
- Status of Draft Documents
- Next Steps
- Discussion



3

3

What is a Hazard Mitigation Plan?

Developing Community Capacities to Reduce Risks from Natural Hazards

4

4

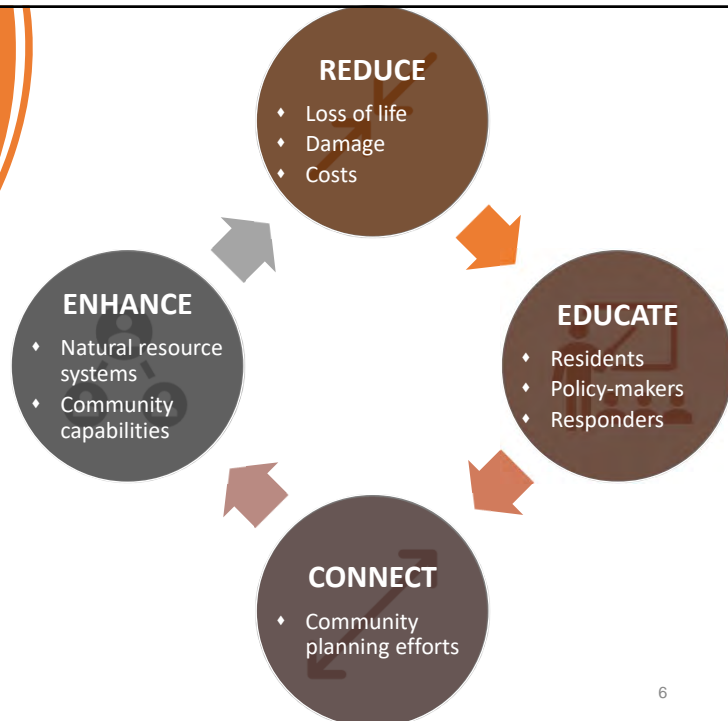
HAZARD MITIGATION PLANNING

- **What is a Natural Hazard?**
 - An extreme natural event that poses a risk to people, infrastructure, and resources.
- **What is Hazard Mitigation?**
 - Actions we take now that reduce or eliminate long-term risk to people, property, and resources from natural hazards and their effects.













5

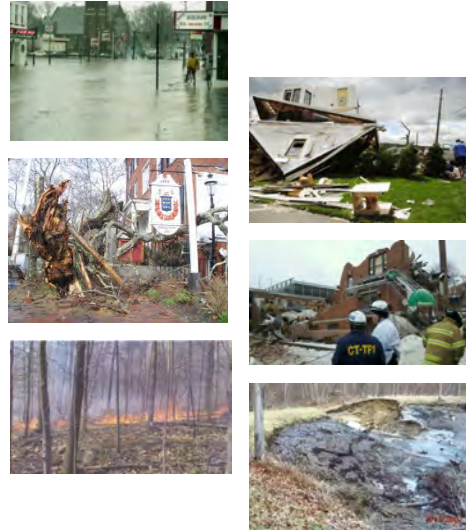
HAZARD MITIGATION PLANNING



6

HAZARD MITIGATION PLANNING











-  Floods
-  Hurricanes and Tropical Storms
-  Summer Storms
-  Tornadoes and High Winds
-  Severe Winter Storms
-  Dam Failure
-  Drought
-  Wildfire
-  Earthquakes
-  Landslides



↑
CLIMATE CHANGE

7










HAZARD MITIGATION PLANNING

-  Heavy rain, washouts, evacuations, roadways, drainage issues
-  Power outages, communication loss
-  Downed trees and powerlines, lost access
- 
-  Snow drifts and ice; ice jams on Housatonic, Blackberry Rivers
-  Maintenance of small private dams; beaver dams
- 
-  Drought a concern for wildfires, water availability
-  Relatively concern; however, notable past events
- 

8

8

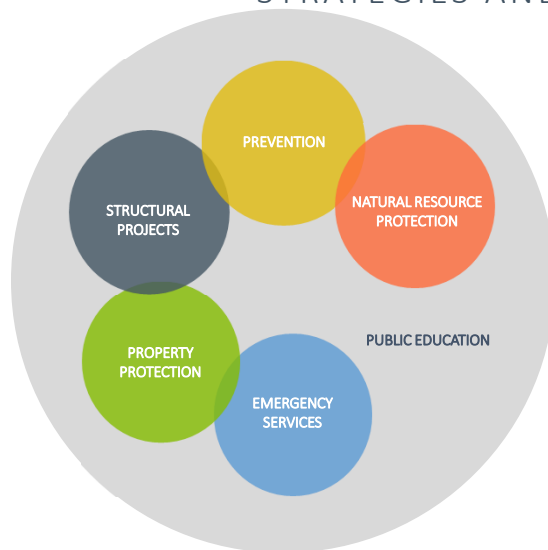
HAZARD MITIGATION PLANNING Climate Change Impacts

-  Riverine flood and erosion risks increase; more intense precipitation
-  More atmospheric heat energy may lead to more intense hurricanes, tornadoes, and other wind events
- 
-  Snow may be heavier, though season will be shorter
- 
-  Flashy droughts will become more frequent
-  Wildfires may become more severe
- 
-  More intense precipitation may cause more landslides

9

9

HAZARD MITIGATION PLANNING STRATEGIES AND ACTIONS



Structural Project



Property Protection

10

10

HAZARD MITIGATION PLANNING PLAN STRUCTURE



Hazard Mitigation Plan Update
Northwest Hills Council of Governments
August 2021



Northwest Hills Council of Governments
2020 Hazard Mitigation Plan Update



NEW INITIATIVES
MITIGATION OF RISKS TO HISTORIC RESOURCES
OUTREACH EFFORTS
PUBLIC ENGAGEMENT SURVEY
REGIONAL CHALLENGES
CLIMATE CHANGE AND HURRICANES
REGIONAL SIGNIFICANCE

Item Description	Project Name	Phase	Start Date	End Date	Estimated Cost	Actual Cost	Project Status
Engaged with FEMA and the state agency during the mitigation plan development process.	FEMA	Phase 1	08/2020	08/2021	\$0	\$0	Completed
Developed a plan to manage the risk of flood damage to the historic building.	Historic Building	Phase 2	09/2020	09/2021	\$10,000	\$10,000	In Progress
Conducted a public survey to gather input from community members.	Public Survey	Phase 3	10/2020	10/2021	\$5,000	\$5,000	Completed
Participated in regional meetings to discuss climate change and hazard mitigation.	Regional Meeting	Phase 4	11/2020	11/2021	\$2,000	\$2,000	In Progress

11

Public Comments

Received During the Planning Process

12

Public Input Opportunities

- **Public Survey:** 42 Responses
- **Virtual Public Workshops:** 9 Attendees
- **Story Map:** Approximately 25 views; sometimes 2-3 views per day

13

13

Priority Actions

NATURAL RESOURCE PROTECTION

CRITICAL FACILITY HARDENING & BACKUP POWER

INSPECT, MAINTENAIN, IMPROVE INFRA-STRUCTURE

POWER GRID RESILIENCE

14

14

Recovery Actions

1

Top Priority

- Address Injuries & Casualties
- Restore Utilities
- Re-Open Roads

2

Medium Priority

- Resume Business & Economy
- Re-open Schools
- Clean/Repair Homes

3

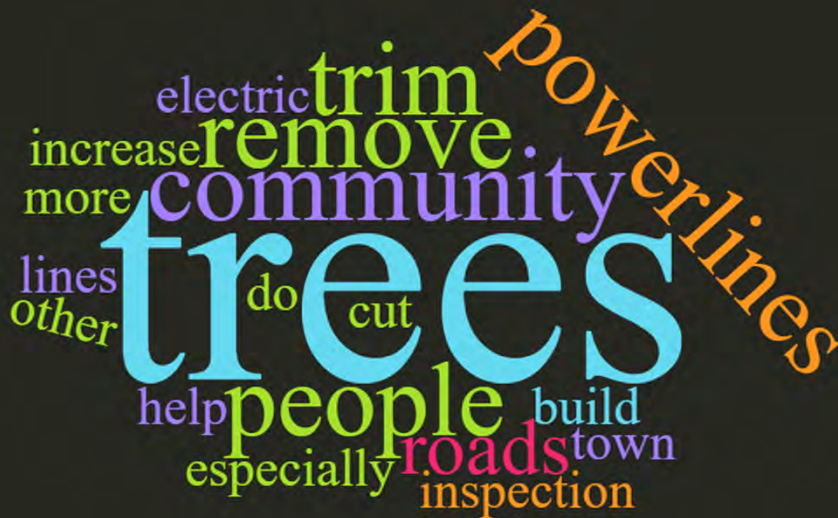
Low Priority

- Restore Parks & Natural Resources

15

15





Actions to Reduce Risks



16

16

Public Input Takeaways

-  Energy Reliability and Resilience is Key
-  Protect Infrastructure and Utilities
-  Support Community-Based Mitigation
-  Public Awareness, Education, & Training

17

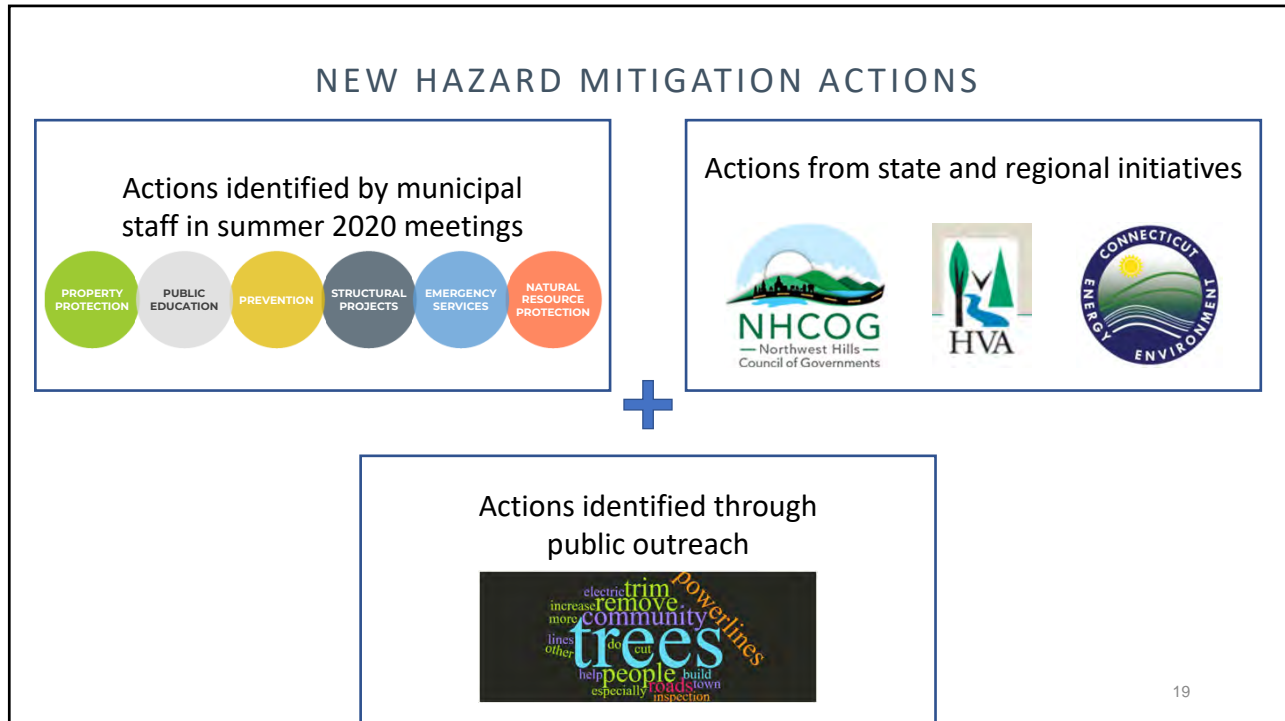
17

Mitigation Actions

Review of Actions in Draft Documents

18

18



19

TOP ACTIONS

- Education & Training
- Critical Facilities & Emergency Response
- Culverts, Bridges, Drainage
- Increasing Rainfall
- Wildfire Risk Reduction

THEME	Number of Actions	Communities Implementing
Public Education	23	15
Critical Facility Backup Power	25	11
Culvert & Bridge Upgrades	21	11
Study	19	11
Emergency Alerts	19	8
NRCC Rainfall Guidance	8	8
Emergency Communication	9	7
Emergency Equipment	7	7
Evacuation Bus	7	6
Other Emergency Response	9	6
Wildfire Risk Reduction	8	6
Municipal Training	5	5
Road Drainage	14	5

20

REGIONAL AND STATE INITIATIVES

- FEMA Map Updates: Farmington River & Housatonic River Basins
- Historic Resources: Outreach and Surveys
- Repetitive Loss Properties: Validate Lists and Make Contact
- State Building Code & Flood Regulations
- Small Businesses Chemical Management: ID Toxic Users in Hazard Zones
- “Sustainable CT”: register and act
- HVA Road Stream Crossing Inventory
- Low Impact Development (LID) Handbook for Rural Communities



21

Next Steps

22

22



- Drafts provided to municipalities May 10, 2021
 - Edits and comments have been addressed
- Draft ready for DEMHS review
- Public review and DEMHS review in parallel
- DEMHS to submit to FEMA shortly thereafter

Next Steps

- Review your community's annex
- Focus on mitigation actions
- Share your thoughts to nslovin@slrconsulting.com

23

23

Discussion



24

24

**NHCOG Hazard Mitigation Plan
Public Meeting #2 – Update on Planning Process
July 27, 2021**

Time: 10:00 am – 11:00 am

Location: Zoom

Panelists:

David Murphy, PE, CFM, SLR (previously MMI)

Noah Slovin, CFM, SLR (previously MMI)

Attendees:

- Magi Winslow - Hartland
- Janell Mullen - NHCOG
- Tom Weik - Morris
- Jim Brinton - Washington
- Barbara Henry - Roxbury
- Charles Perotti - North Canaan

Meeting Summary:

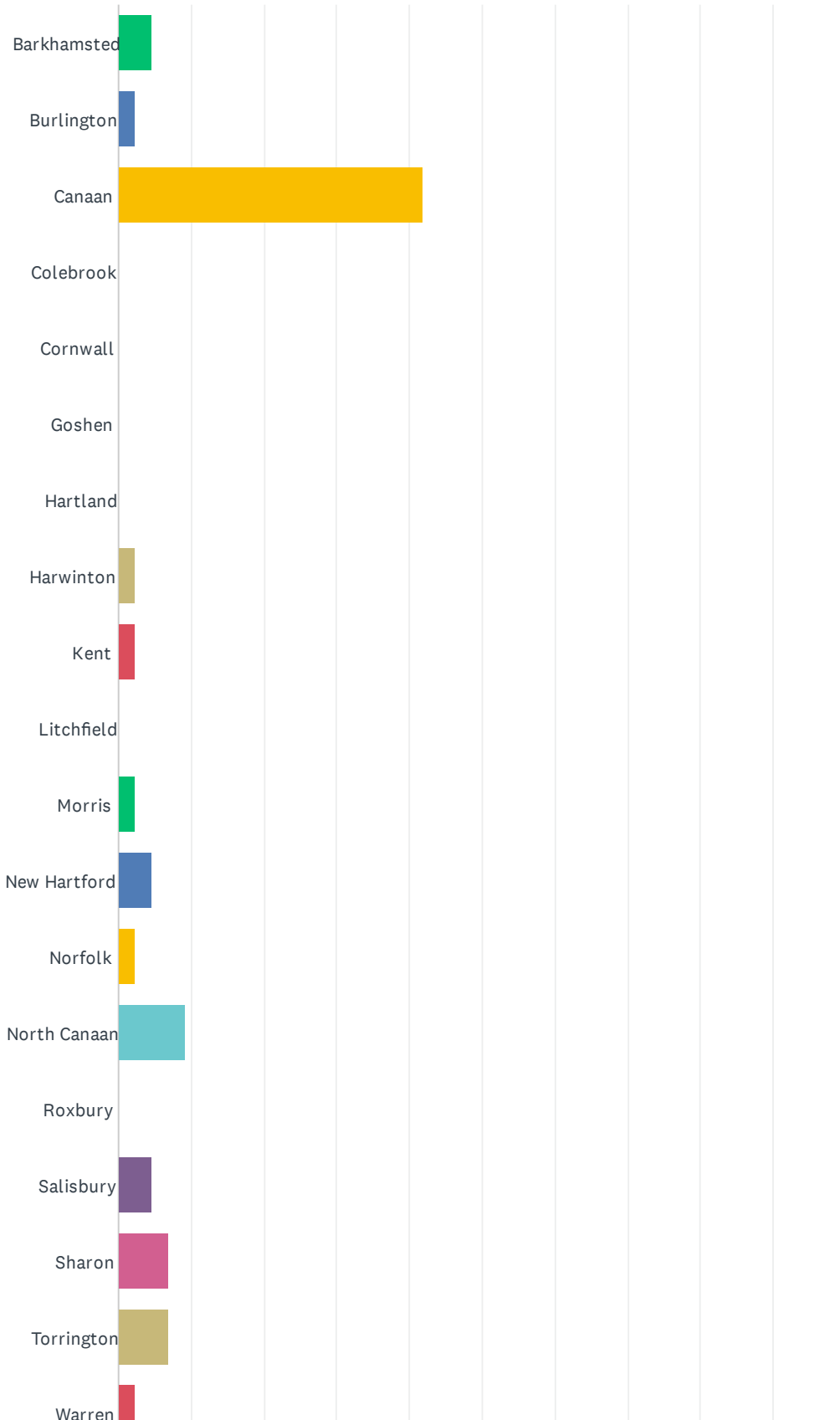
Noah Slovin and David Murphy from SLR Consulting (previously MMI) conducted the meeting. Topics covered included:

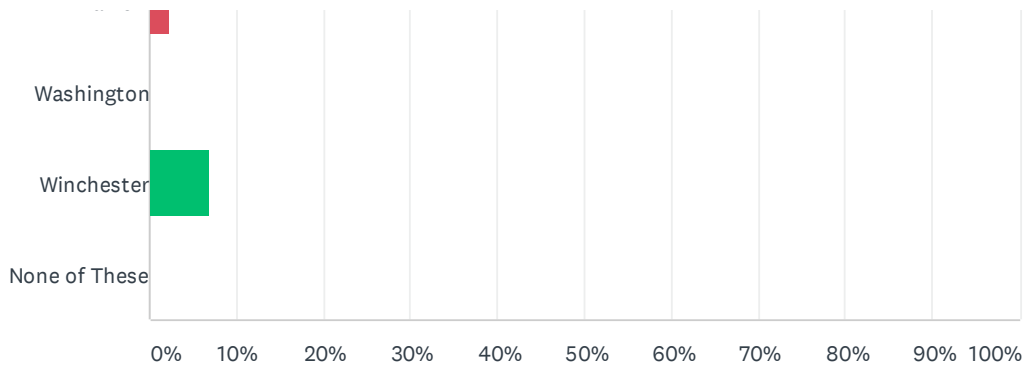
- A review of hazard mitigation planning
- A review of hazards covered in the planning process, including climate change impacts and specific challenges identified through the planning process
- A review of different mitigation approaches and project types
- A summary of the NHCOG Hazard Mitigation Plan Update contents and structure
- A review of comments received through public input
- A summary of municipal hazard mitigation action items included in the HMP
- Steps to adoption of the plan

No public comments were received

Q1 In which community do you live or own property?

Answered: 43 Skipped: 0





ANSWER CHOICES	RESPONSES	
Barkhamsted	4.65%	2
Burlington	2.33%	1
Canaan	41.86%	18
Colebrook	0.00%	0
Cornwall	0.00%	0
Goshen	0.00%	0
Hartland	0.00%	0
Harwinton	2.33%	1
Kent	2.33%	1
Litchfield	0.00%	0
Morris	2.33%	1
New Hartford	4.65%	2
Norfolk	2.33%	1
North Canaan	9.30%	4
Roxbury	0.00%	0
Salisbury	4.65%	2
Sharon	6.98%	3
Torrington	6.98%	3
Warren	2.33%	1
Washington	0.00%	0
Winchester	6.98%	3
None of These	0.00%	0
TOTAL		43

#	NONE OF THESE	DATE
	There are no responses.	

Q2 In which community do you work?

Answered: 43 Skipped: 0



ANSWER CHOICES	RESPONSES	
Barkhamsted	0.00%	0
Burlington	2.33%	1
Canaan	25.58%	11
Colebrook	0.00%	0
Cornwall	0.00%	0
Goshen	4.65%	2
Hartland	0.00%	0
Harwinton	0.00%	0
Kent	2.33%	1
Litchfield	0.00%	0
Morris	2.33%	1
New Hartford	4.65%	2
Norfolk	0.00%	0
North Canaan	6.98%	3
Roxbury	0.00%	0
Salisbury	6.98%	3
Sharon	4.65%	2
Torrington	4.65%	2
Warren	0.00%	0
Washington	0.00%	0
Winchester	6.98%	3
None of These	27.91%	12
TOTAL		43

#	NONE OF THESE	DATE
1	don't work	11/15/2020 8:38 PM
2	Hartford	11/15/2020 8:19 AM
3	Not applicable	11/13/2020 12:03 PM
4	Retired	11/12/2020 6:11 PM
5	Based in NYC, work from Home	11/12/2020 3:17 PM
6	East Hartford, but only 2 out of every 6 working days - remaining 4 I work from home.	10/19/2020 10:28 PM
7	Retired	10/19/2020 5:24 PM
8	Hartford	10/19/2020 11:48 AM
9	retired	10/19/2020 11:40 AM
10	New York City	10/19/2020 9:23 AM
11	retired	10/19/2020 6:32 AM
12	Waterbury	8/28/2020 5:59 PM

Q3 Please enter your street of residence or place of business, or both (optional, can be approximate)

Answered: 35 Skipped: 8

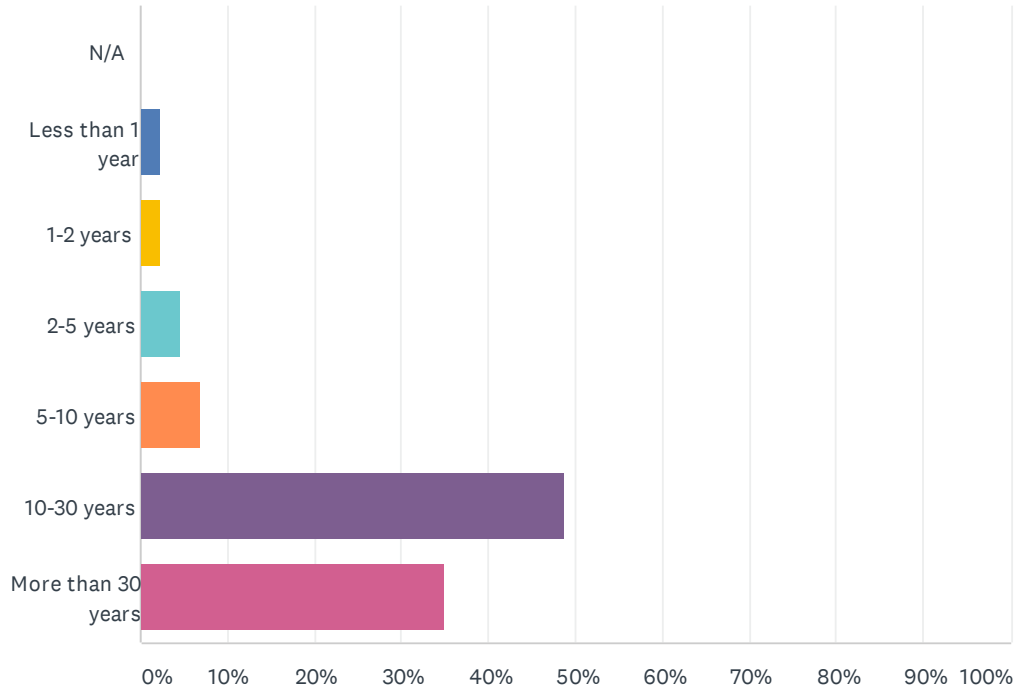
ANSWER CHOICES	RESPONSES	
Residence (Street Name, Town/City)	100.00%	35
Place of Business (Street Name, Town/City)	57.14%	20

#	RESIDENCE (STREET NAME, TOWN/CITY)	DATE
1	Millerton Road	3/16/2021 10:27 PM
2	324 Norfolk Road East Canaan	11/23/2020 4:15 PM
3	Norfolk Road, East Canaan	11/23/2020 11:08 AM
4	beebe hill fv	11/15/2020 8:38 PM
5	78 main	11/14/2020 2:43 PM
6	Buena Vista Ave torrington	11/14/2020 8:38 AM
7	Cedar Road	11/14/2020 8:27 AM
8	Beebe hill	11/13/2020 12:03 PM
9	18 Stein Lane, Falls Village	11/12/2020 7:41 PM
10	main street, Falls Village	11/12/2020 7:05 PM
11	Music mtn rd, Canaan	11/12/2020 6:44 PM
12	Dublin Road Falls Village	11/12/2020 6:42 PM
13	56 Beebe Hill Rd Falls	11/12/2020 6:20 PM
14	Under Mountain Road, Falls Village	11/12/2020 6:11 PM
15	Route 7 South Falls Village	11/12/2020 5:15 PM
16	116 Point of Rocks Road	11/12/2020 5:07 PM
17	Facchin ST	11/12/2020 3:49 PM
18	High st north canaan	11/12/2020 3:35 PM
19	19 Prospect st, Falls Village	11/12/2020 3:17 PM
20	Barnes Road	11/12/2020 3:01 PM
21	4 Brewster Rd , Canaan / Falls Village	11/12/2020 8:49 AM
22	rock road	10/26/2020 3:18 PM
23	East Hartland Rd, Barkhamsted	10/19/2020 10:28 PM
24	New Hartford	10/19/2020 10:17 PM
25	Colebrook Rd, Winchester	10/19/2020 6:40 PM
26	Burr Mountain Road	10/19/2020 5:24 PM
27	511 Town Hill Road	10/19/2020 3:18 PM
28	300 East Hartland Road	10/19/2020 11:48 AM

29	17 Harwinton hts rd Harwinton	10/19/2020 11:40 AM
30	Main Street, Sharon	10/19/2020 9:23 AM
31	E Wakefield Blvd	10/19/2020 9:07 AM
32	Danbury Qtr Rd	10/19/2020 6:32 AM
33	7 w mountain rd	9/25/2020 11:19 AM
34	3 east st	9/23/2020 11:05 AM
35	11 Dewey St, Torrington	8/28/2020 5:59 PM
#	PLACE OF BUSINESS (STREET NAME, TOWN/CITY)	DATE
1	324 Norfolk Road East Canaan	11/23/2020 4:15 PM
2	Norfolk Road, East Canaan	11/23/2020 11:08 AM
3	66 east Albert	11/14/2020 2:43 PM
4	Academy st Salisbury ct	11/14/2020 8:38 AM
5	Academy Street	11/14/2020 8:27 AM
6	34 Railroad St., Falls Village	11/12/2020 7:41 PM
7	67 main street, Sharon	11/12/2020 7:05 PM
8	Sharon turnpike, goshen	11/12/2020 6:44 PM
9	Dublin Road Falls Village	11/12/2020 6:42 PM
10	147 Rt 7 S	11/12/2020 6:20 PM
11	Main Street Falls Village	11/12/2020 5:15 PM
12	Falls Village, CT	11/12/2020 5:07 PM
13	Canaan mountain	11/12/2020 3:35 PM
14	4 Brewster Rd , Canaan / Falls Village	11/12/2020 8:49 AM
15	spielman highway	10/26/2020 3:18 PM
16	n/a	10/19/2020 3:18 PM
17	Hartford,Ct	10/19/2020 11:48 AM
18	Greenwich Village, New York	10/19/2020 9:23 AM
19	Same	10/19/2020 9:07 AM
20	63 mail street	9/25/2020 11:19 AM

Q4 For how many years have you lived or worked in the Region?

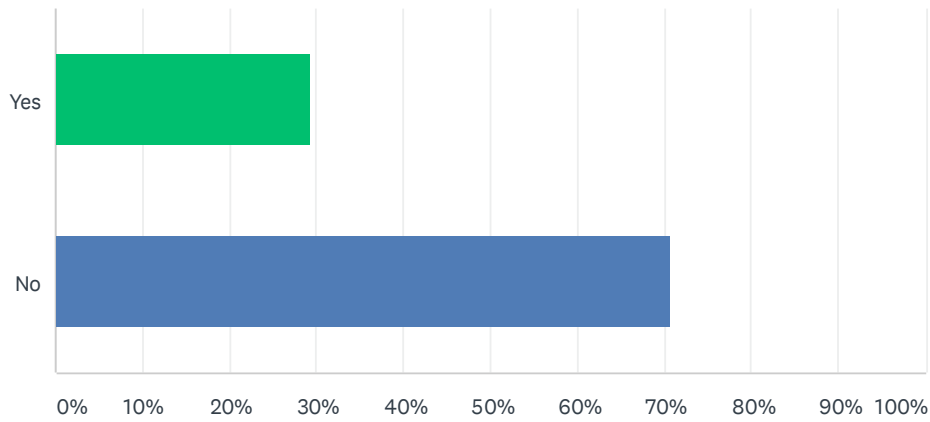
Answered: 43 Skipped: 0



ANSWER CHOICES	RESPONSES	
N/A	0.00%	0
Less than 1 year	2.33%	1
1-2 years	2.33%	1
2-5 years	4.65%	2
5-10 years	6.98%	3
10-30 years	48.84%	21
More than 30 years	34.88%	15
TOTAL		43

Q5 Did you know that the community where you live or work is covered by a Hazard Mitigation Plan?

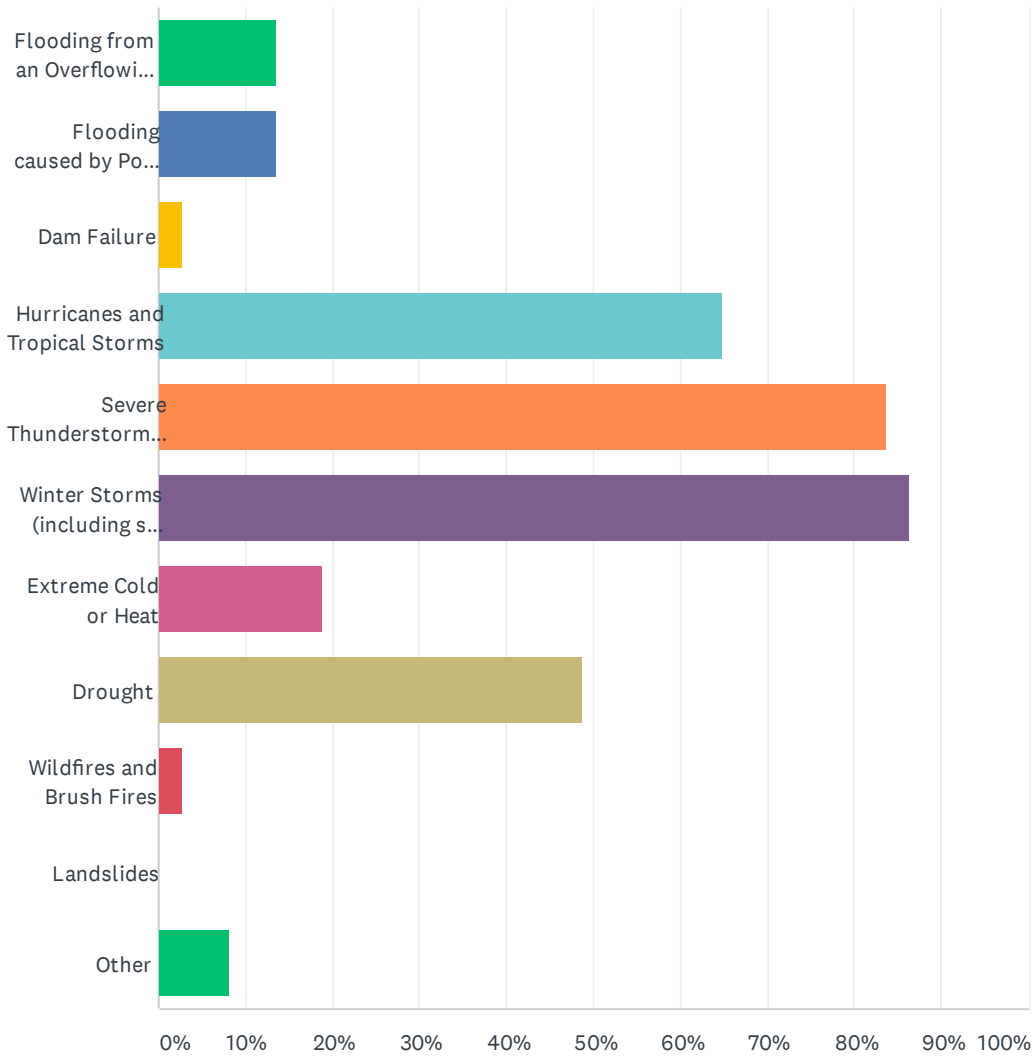
Answered: 41 Skipped: 2



ANSWER CHOICES	RESPONSES	
Yes	29.27%	12
No	70.73%	29
TOTAL		41

Q6 Which of the following natural hazards have impacted you?

Answered: 37 Skipped: 6

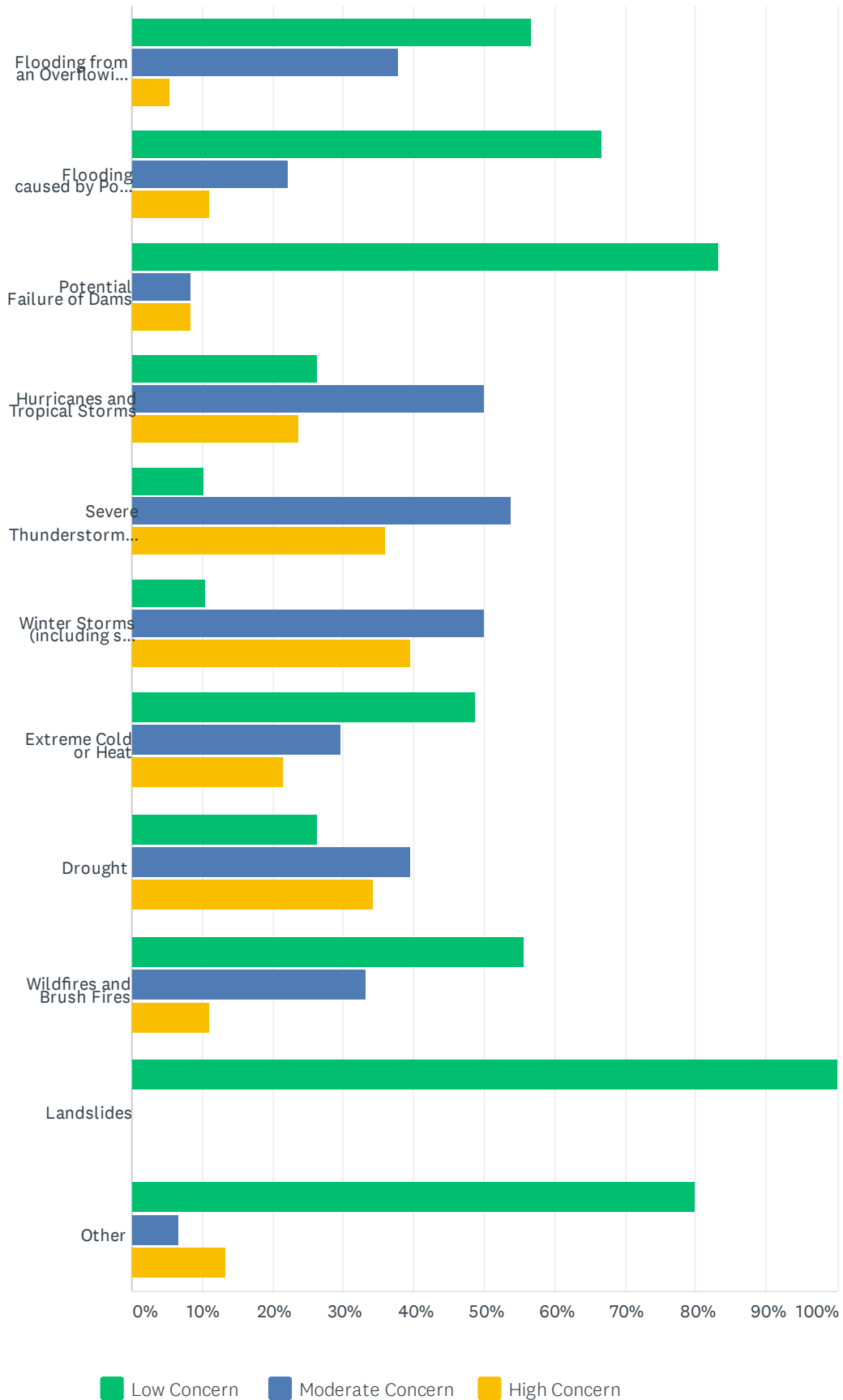


ANSWER CHOICES	RESPONSES	
Flooding from an Overflowing River or Lake	13.51%	5
Flooding caused by Poor Drainage or Ponding on Streets	13.51%	5
Dam Failure	2.70%	1
Hurricanes and Tropical Storms	64.86%	24
Severe Thunderstorms (including wind, hail, and lightning)	83.78%	31
Winter Storms (including snow or ice) and Blizzards	86.49%	32
Extreme Cold or Heat	18.92%	7
Drought	48.65%	18
Wildfires and Brush Fires	2.70%	1
Landslides	0.00%	0
Other	8.11%	3
Total Respondents: 37		

#	PLEASE PROVIDE DETAILS IF YOU WISH:	DATE
1	Close calls - Risk to entire area from human started open bonfire(s), no permits, evening hours	3/16/2021 10:37 PM
2	Runoff from Jasper John's property	11/14/2020 8:29 AM
3	Downed trees	10/19/2020 5:26 PM
4	over the last 27 years we've had tornados impassable roads with blizzards electricity shut off Used to be in 1994 every time the wind was strong the power went out Its gotten better but trees are constantly coming down on my street	10/19/2020 6:35 AM

Q7 How concerned are you about each of those hazards happening in the future?

Answered: 40 Skipped: 3



	LOW CONCERN	MODERATE CONCERN	HIGH CONCERN	TOTAL	WEIGHTED AVERAGE
Flooding from an Overflowing River or Lake	56.76% 21	37.84% 14	5.41% 2	37	1.49
Flooding caused by Poor Drainage or Ponding on Streets	66.67% 24	22.22% 8	11.11% 4	36	1.44
Potential Failure of Dams	83.33% 30	8.33% 3	8.33% 3	36	1.25
Hurricanes and Tropical Storms	26.32% 10	50.00% 19	23.68% 9	38	1.97
Severe Thunderstorms (including wind, hail, and lightning)	10.26% 4	53.85% 21	35.90% 14	39	2.26
Winter Storms (including snow or ice) and Blizzards	10.53% 4	50.00% 19	39.47% 15	38	2.29
Extreme Cold or Heat	48.65% 18	29.73% 11	21.62% 8	37	1.73
Drought	26.32% 10	39.47% 15	34.21% 13	38	2.08
Wildfires and Brush Fires	55.56% 20	33.33% 12	11.11% 4	36	1.56
Landslides	100.00% 36	0.00% 0	0.00% 0	36	1.00
Other	80.00% 12	6.67% 1	13.33% 2	15	1.33

#	PLEASE PROVIDE DETAILS IF YOU WISH:	DATE
1	Human negligence leading to rapid spreading brush/forest/property fires	3/16/2021 10:37 PM
2	Jasper John's new buildings will cause additional flooding on my property	11/14/2020 8:29 AM
3	Very concerned about lack of power restoration. After the summer hurricane we were out of power for 7 days. It's a good thing we had a generator!	11/12/2020 7:55 PM
4	Any high wind event, including tornado	10/19/2020 9:35 AM

Q8 Are any specific areas of your community vulnerable to any of the above hazards? If so, please list them by location. Please use street intersections or landmarks to describe locations, and **INCLUDE THE TOWN/CITY.**

Answered: 10 Skipped: 33

ANSWER CHOICES	RESPONSES	
Location 1	100.00%	10
Location 2	60.00%	6
Location 3	40.00%	4
Location 4	20.00%	2
Additional Locations	0.00%	0

#	LOCATION 1	DATE
1	Both sides Millerton Rd and Rt 112, Lakeville/Salisbury	3/16/2021 10:37 PM
2	River Road, Falls Village	11/12/2020 7:45 PM
3	Village, New Hartford, CT	10/19/2020 3:21 PM
4	Rte 179	10/19/2020 11:50 AM
5	Large dead tree on Harwinton Hts Rd which when it comes down (and it will) will take out power to all of Harwinton Hts Rd and Huntington Drive. Located on the east side of the road, corner of Ricci property. Don't know if it is on private property or town property. Should be taken down now while it is easy rather than waiting it comes down and takes out the power lines and probably the transformer. Much cheaper now	10/19/2020 11:48 AM
6	Rt 341 corridor btwn intersection w/ Rt45 & Kent Hollow Road (WARREN/KENT) prone to severe winter road conditions/insufficient snow & ice mitigation	10/19/2020 9:35 AM
7	All roads with old large trees	10/19/2020 9:10 AM
8	Danbury Qtr Rd Winsted	10/19/2020 6:35 AM
9	Bantam Lake, Morris	9/23/2020 11:06 AM
10	Dewey St/Wolcott Ave, Torrington	8/28/2020 6:00 PM

#	LOCATION 2	DATE
1	Belgo Rd, Lakeville/Salisbury	3/16/2021 10:37 PM
2	Lime Rock Station Rd., Falls Village	11/12/2020 7:45 PM
3	Pine Meadow, New Hartford CT	10/19/2020 3:21 PM
4	Rte 219	10/19/2020 11:50 AM
5	Flooding @ intersection of Main & N Main Streets in Torrington	10/19/2020 9:35 AM
6	Dams around Lake	10/19/2020 9:10 AM

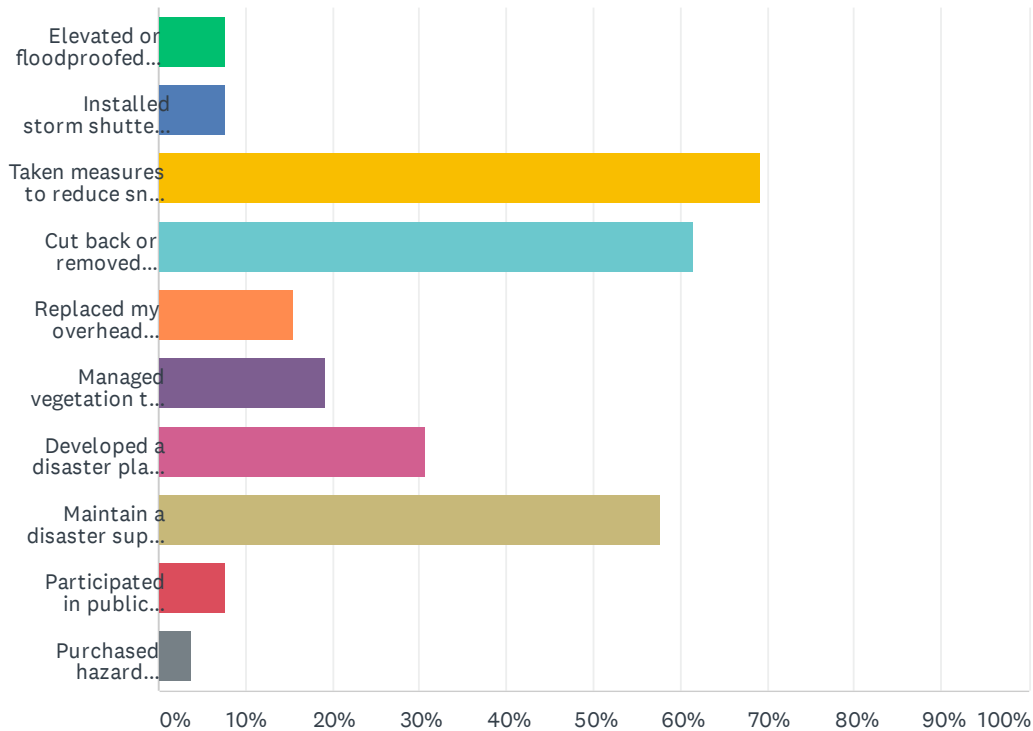
#	LOCATION 3	DATE
1	Indian Mountain Road, Lakeville/Salisbury	3/16/2021 10:37 PM
2	Robbins Swamp area, Falls Village	11/12/2020 7:45 PM
3	entire town of New Hartford, CT	10/19/2020 3:21 PM
4	Overgrown forests	10/19/2020 9:10 AM

#	LOCATION 4	DATE
1	Rte. 63, Falls Village	11/12/2020 7:45 PM
2	Town Hill, New Hartford, CT	10/19/2020 3:21 PM

#	ADDITIONAL LOCATIONS	DATE
	There are no responses.	

Q9 Have you taken any actions to protect your family, home, or business?

Answered: 26 Skipped: 17

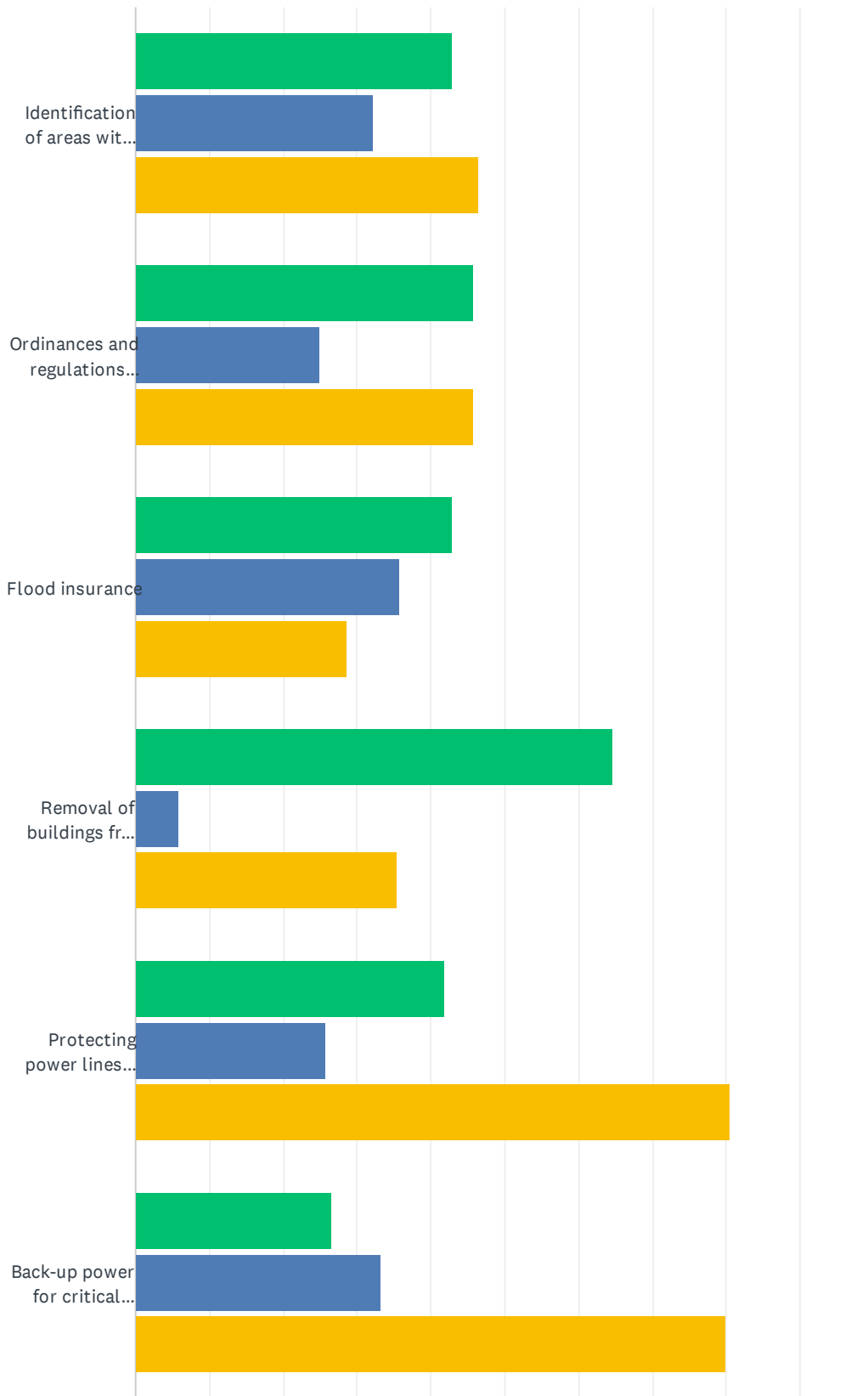


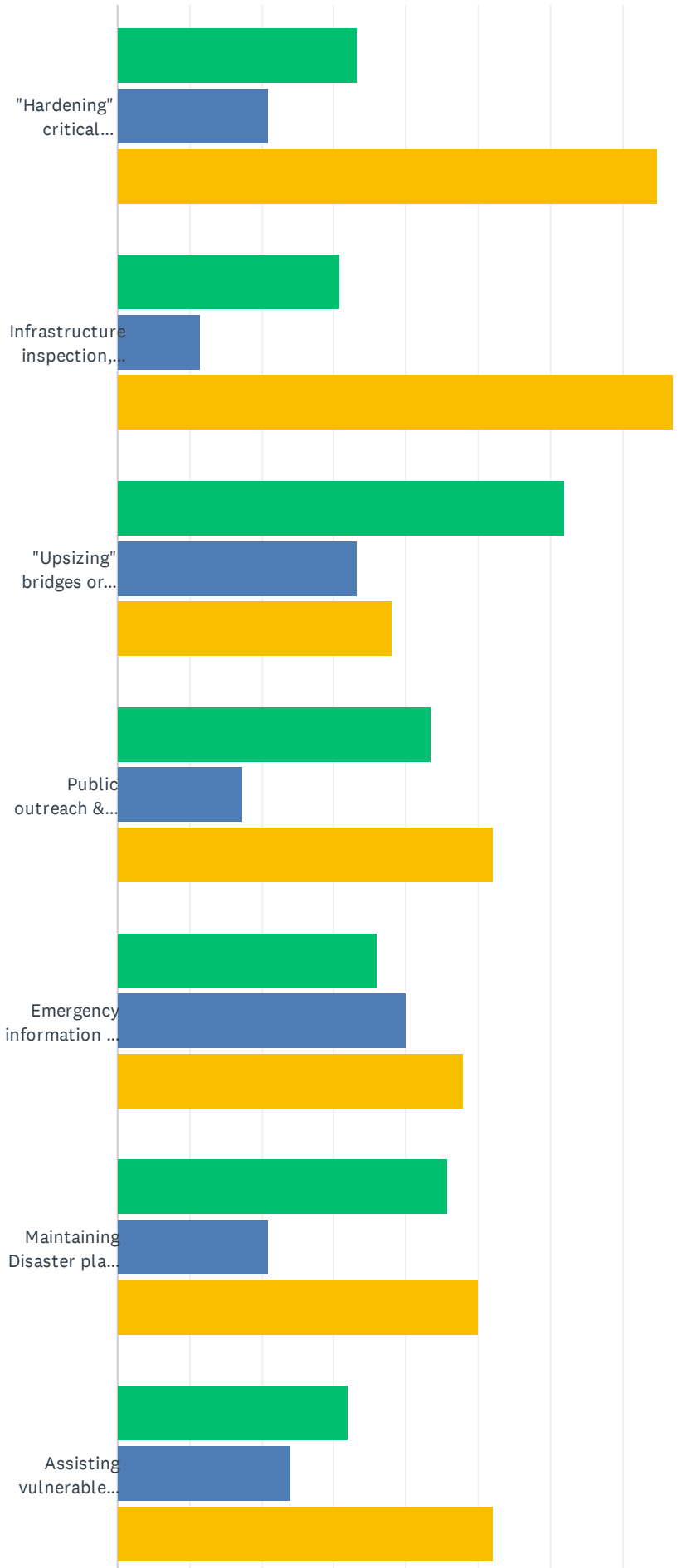
ANSWER CHOICES	RESPONSES
Elevated or floodproofed to reduce flood damage	7.69% 2
Installed storm shutters or structural braces to reduce wind damage	7.69% 2
Taken measures to reduce snow build-up on roofs	69.23% 18
Cut back or removed vegetation from my overhead utility lines or roof	61.54% 16
Replaced my overhead utility lines with underground lines	15.38% 4
Managed vegetation to reduce risk of wildfire reaching my home or business	19.23% 5
Developed a disaster plan for my family, home, or business	30.77% 8
Maintain a disaster supply kit for my family, home, or business	57.69% 15
Participated in public meetings to discuss relevant plans and regulations	7.69% 2
Purchased hazard insurance (like flood insurance)	3.85% 1
Total Respondents: 26	

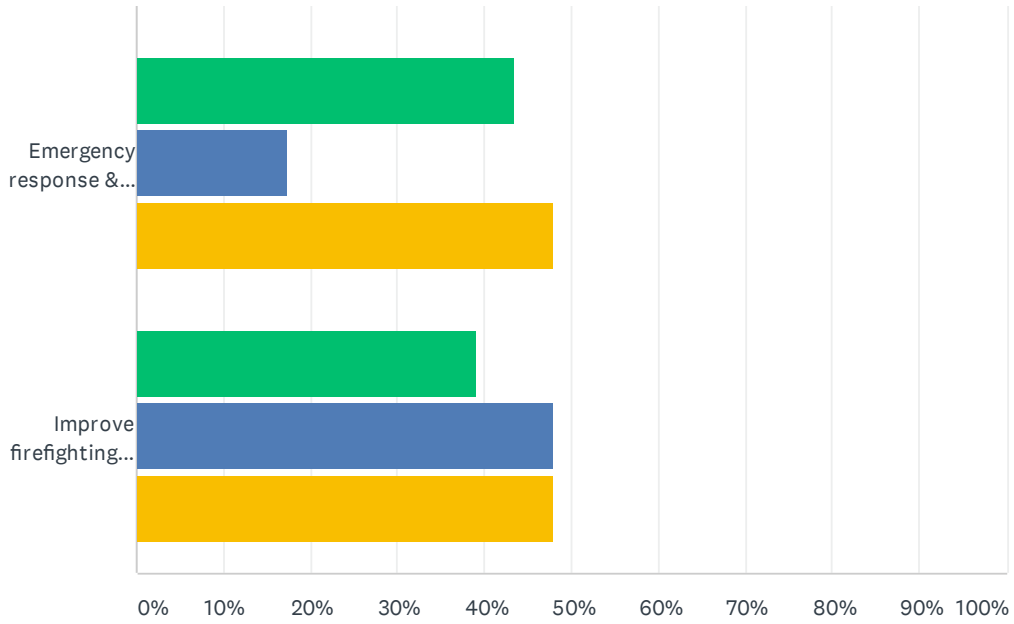
#	OTHER (PLEASE SPECIFY)	DATE
1	Purchased standby generator to deal with long electrical outages	10/19/2020 10:31 PM
2	Have generators, reserve water, reserve fuel	10/19/2020 3:24 PM
3	problem mentioned to town crew	10/19/2020 11:51 AM
4	Own a propane generator	10/19/2020 9:27 AM
5	I'm on social security no money for anything else	10/19/2020 6:39 AM

Q10 For each of the following hazard mitigation tools, check the columns you feel are true for your community.

Answered: 32 Skipped: 11







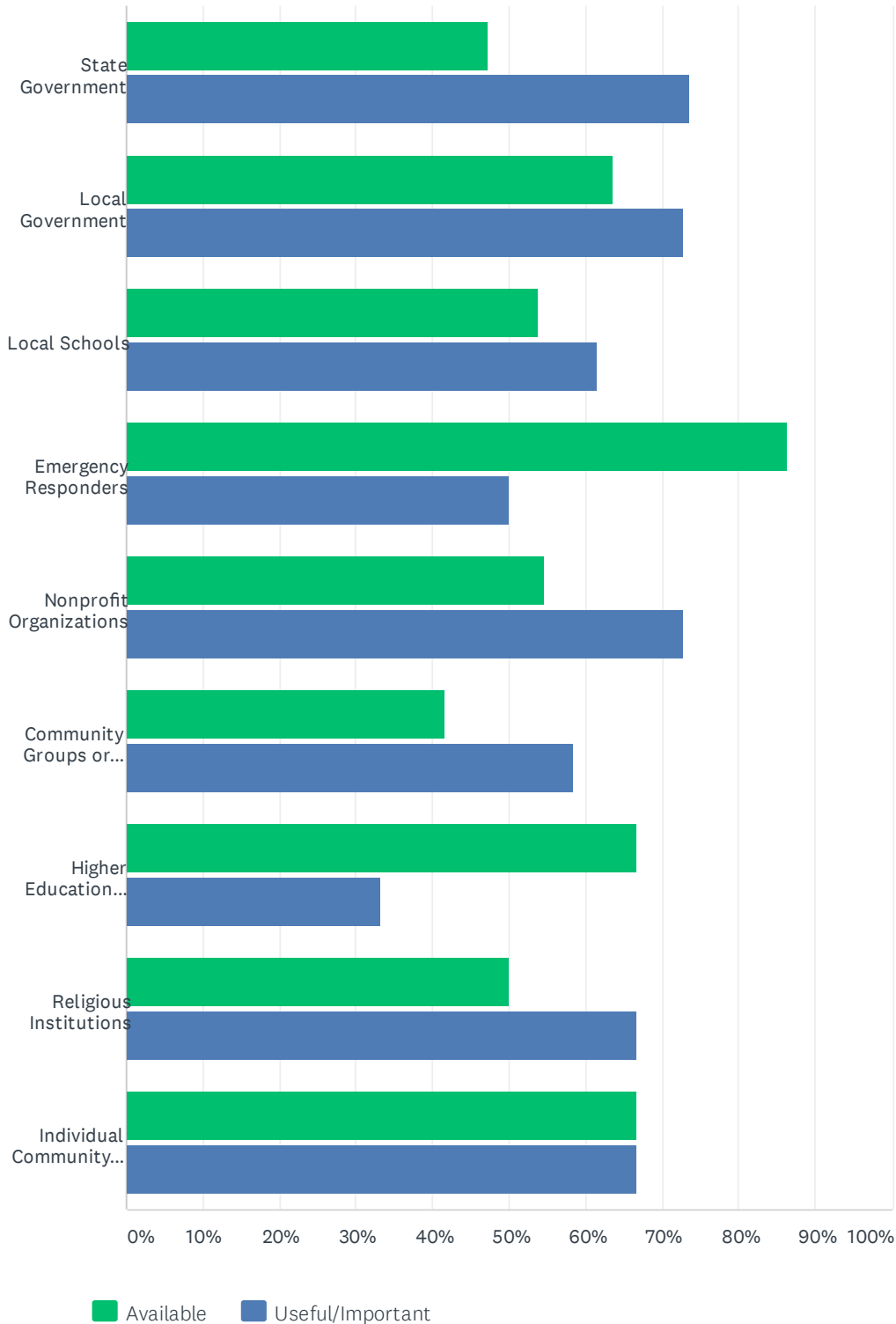
■ Important to mitigate hazards ■ Has been used successfully in the past
■ Should be a priority moving forward

	IMPORTANT TO MITIGATE HAZARDS	HAS BEEN USED SUCCESSFULLY IN THE PAST	SHOULD BE A PRIORITY MOVING FORWARD	TOTAL RESPONDENTS
Identification of areas with risk from hazards	42.86% 12	32.14% 9	46.43% 13	28
Ordinances and regulations that reduce risks from hazards	45.83% 11	25.00% 6	45.83% 11	24
Flood insurance	42.86% 6	35.71% 5	28.57% 4	14
Removal of buildings from areas of risk	64.71% 11	5.88% 1	35.29% 6	17
Protecting power lines from trees and wind	41.94% 13	25.81% 8	80.65% 25	31
Back-up power for critical facilities	26.67% 8	33.33% 10	80.00% 24	30
"Hardening" critical facilities to make them less vulnerable	33.33% 8	20.83% 5	75.00% 18	24
Infrastructure inspection, maintenance, & improvements	30.77% 8	11.54% 3	76.92% 20	26
"Upsizing" bridges or stream culverts	61.90% 13	33.33% 7	38.10% 8	21
Public outreach & education	43.48% 10	17.39% 4	52.17% 12	23
Emergency information and alerts	36.00% 9	40.00% 10	48.00% 12	25
Maintaining Disaster plans & kits	45.83% 11	20.83% 5	50.00% 12	24
Assisting vulnerable populations	32.00% 8	24.00% 6	52.00% 13	25
Emergency response & floodplain management training for municipal staff	43.48% 10	17.39% 4	47.83% 11	23
Improve firefighting capabilities	39.13% 9	47.83% 11	47.83% 11	23

#	OTHER (PLEASE SPECIFY)	DATE
1	we have a considerable deaf community including myself when cable is out that means no way to communicate	10/19/2020 6:39 AM

Q11 What local resources are available to support or assist with hazard preparation, response, or recovery? What resources are or would be useful or important?

Answered: 24 Skipped: 19

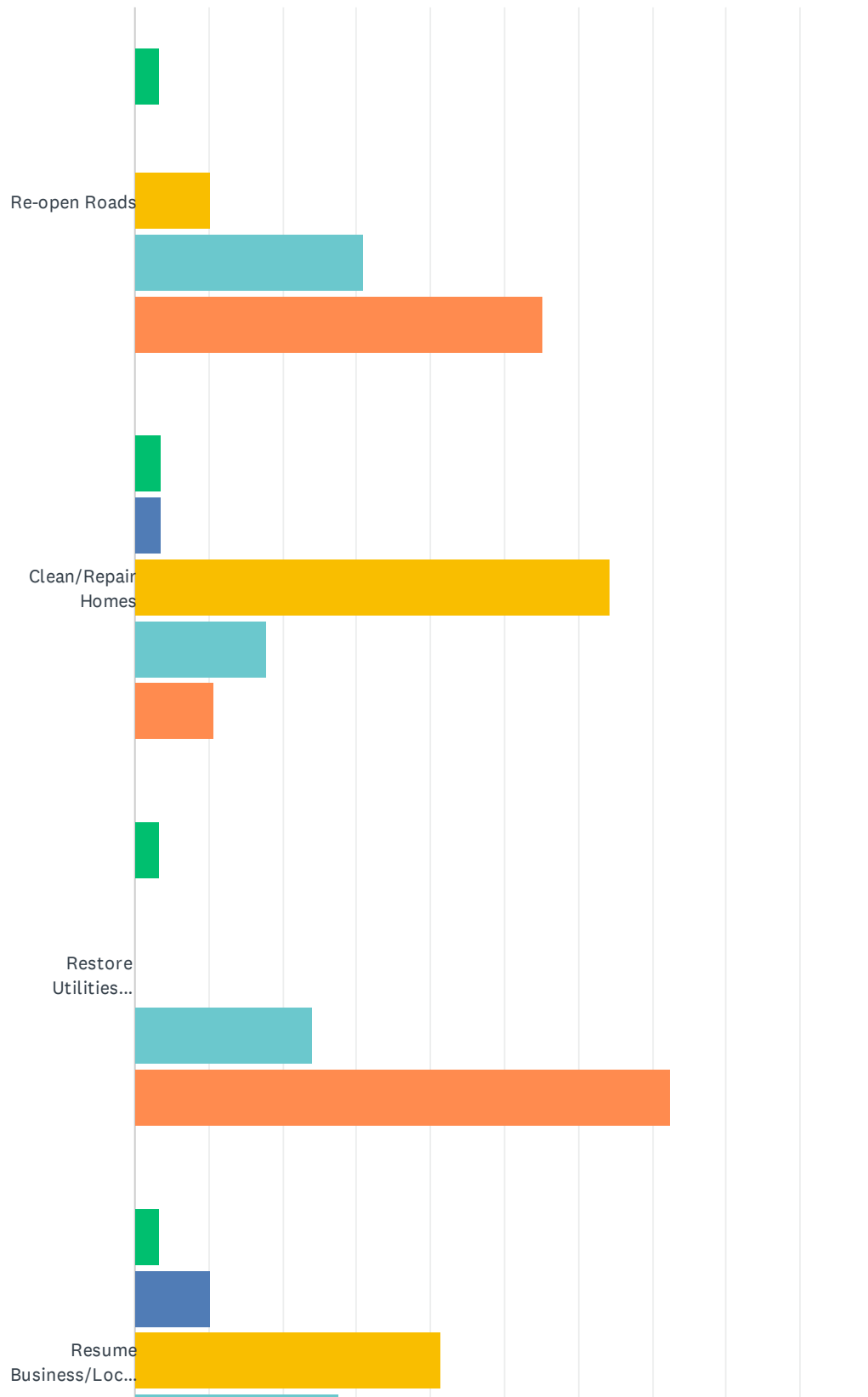


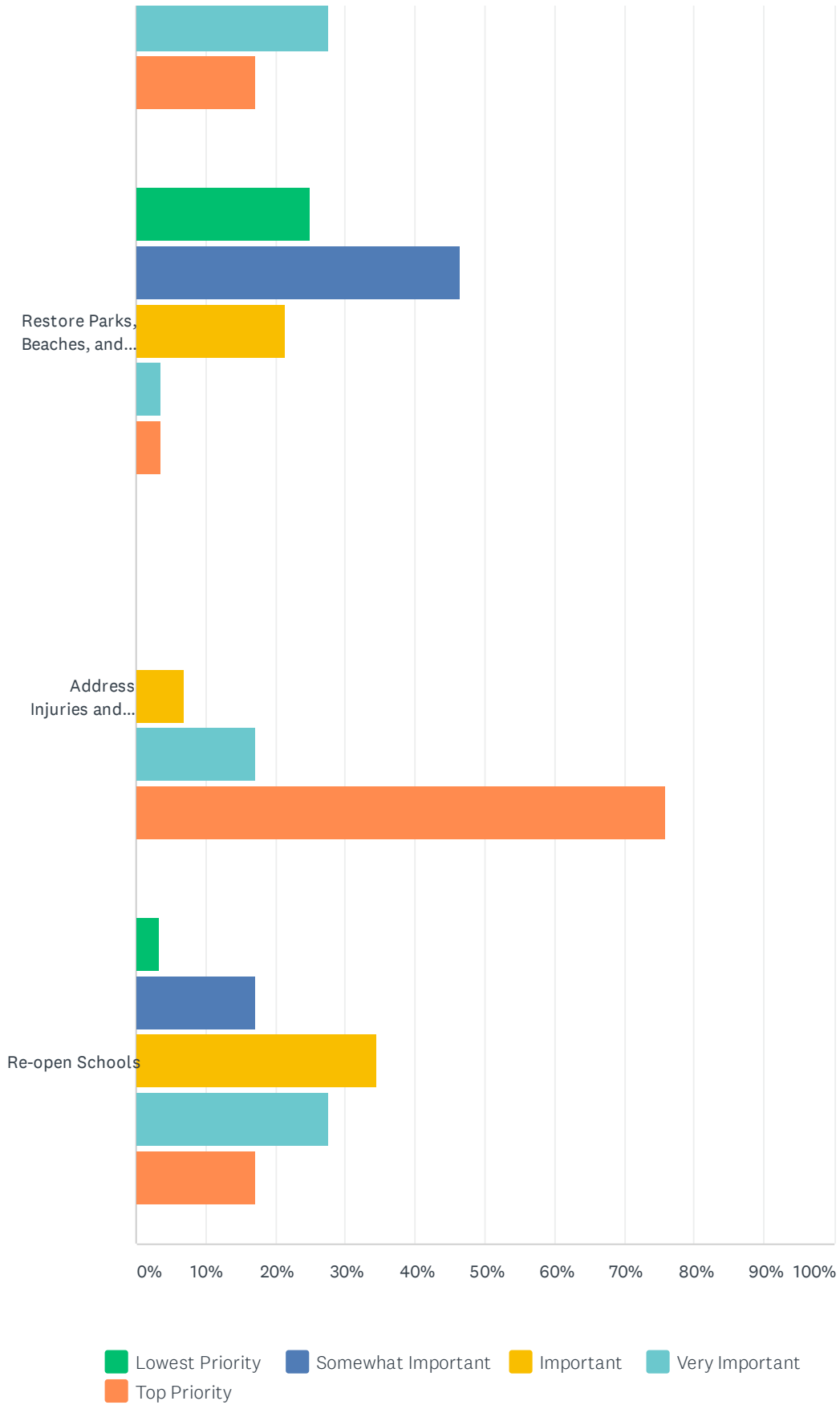
	AVAILABLE	USEFUL/IMPORTANT	TOTAL RESPONDENTS
State Government	47.37% 9	73.68% 14	19
Local Government	63.64% 14	72.73% 16	22
Local Schools	53.85% 7	61.54% 8	13
Emergency Responders	86.36% 19	50.00% 11	22
Nonprofit Organizations	54.55% 6	72.73% 8	11
Community Groups or Neighborhood Associations	41.67% 5	58.33% 7	12
Higher Education Institutions	66.67% 4	33.33% 2	6
Religious Institutions	50.00% 3	66.67% 4	6
Individual Community Members or Neighbors	66.67% 12	66.67% 12	18

#	COMMENTS	DATE
1	I don't know - feel like I'm on my own - limited resources	3/16/2021 10:44 PM
2	town government needs to be more proactive and reach its citizens	10/19/2020 6:41 AM
3	Federal Government	8/28/2020 6:04 PM

Q12 How important is each of the following activities to recovering from a hazard event?

Answered: 29 Skipped: 14

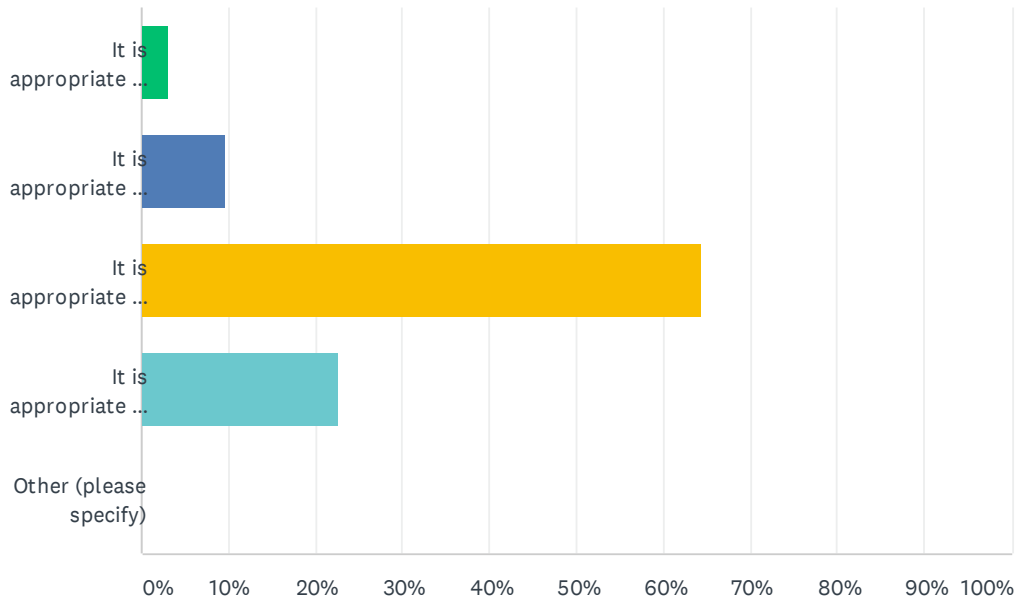




	LOWEST PRIORITY	SOMEWHAT IMPORTANT	IMPORTANT	VERY IMPORTANT	TOP PRIORITY	TOTAL	WEIGHTED AVERAGE
Re-open Roads	3.45% 1	0.00% 0	10.34% 3	31.03% 9	55.17% 16	29	4.34
Clean/Repair Homes	3.57% 1	3.57% 1	64.29% 18	17.86% 5	10.71% 3	28	3.29
Restore Utilities (electric, water, wastewater, communication)	3.45% 1	0.00% 0	0.00% 0	24.14% 7	72.41% 21	29	4.62
Resume Business/Local Economy	3.45% 1	10.34% 3	41.38% 12	27.59% 8	17.24% 5	29	3.45
Restore Parks, Beaches, and other Natural Resources	25.00% 7	46.43% 13	21.43% 6	3.57% 1	3.57% 1	28	2.14
Address Injuries and Casualties	0.00% 0	0.00% 0	6.90% 2	17.24% 5	75.86% 22	29	4.69
Re-open Schools	3.45% 1	17.24% 5	34.48% 10	27.59% 8	17.24% 5	29	3.38

Q13 Scientists expect rain and storm events may increase in this area due to Climate Change. Which of the following statements about planning for future changes in precipitation do you most agree with?

Answered: 31 Skipped: 12



ANSWER CHOICES	RESPONSES	
It is appropriate to plan for storm events to occur more frequently.	3.23%	1
It is appropriate to plan for storm events to become more severe.	9.68%	3
It is appropriate to plan for storm events to become more severe and more frequent.	64.52%	20
It is appropriate to plan for storm events to occur at a similar frequency and severity as in the past.	22.58%	7
Other (please specify)	0.00%	0
TOTAL		31

#	OTHER (PLEASE SPECIFY)	DATE
	There are no responses.	

Q14 If you could choose one action to reduce risks from natural hazards in your community, what would it be?

Answered: 25 Skipped: 18

#	RESPONSES	DATE
1	Increase public awareness, education and responsibility for fire safety and indiv. household prep for weather events	3/16/2021 11:00 PM
2	be prepared	11/23/2020 4:21 PM
3	have back up power, don't build in a flood plain.	11/23/2020 11:15 AM
4	Tree maintenance	11/13/2020 12:10 PM
5	Tree trimming	11/12/2020 7:52 PM
6	Tree trimming increase over power lines	11/12/2020 6:50 PM
7	Emergency plan--especially some type of shelter or gathering place when there is no electricity, especially in winter.	11/12/2020 6:47 PM
8	Dead tree removals & tree management	11/12/2020 6:17 PM
9	Protect elderly/children	11/12/2020 5:21 PM
10	Power lines	11/12/2020 5:12 PM
11	Address problematic trees that need to be trimmed	11/12/2020 3:23 PM
12	Make townspeople aware of the disaster plan (if one even exists). Where do people go? how can people be contacted? Is there any sort of volunteer group for people who are able bodied and willing to help? (There isn't, other than EMS/fire dept, but there could be and that's a severely underutilized resource).	11/12/2020 3:11 PM
13	Community organization and communication	11/12/2020 10:27 AM
14	Remove trees from the vicinity of roads and powerlines. Aggressively.	10/19/2020 10:33 PM
15	Train, educate people	10/19/2020 10:27 PM
16	cut more trees	10/19/2020 6:44 PM
17	Tree trimming and removal	10/19/2020 5:31 PM
18	further clear and harden power lines and communication lines both locally and regionally	10/19/2020 3:27 PM
19	Greatly increase Eversource's in house capacities to deal with outages	10/19/2020 11:55 AM
20	Burying electric & telecom lines	10/19/2020 9:42 AM
21	Build more community so neighbors can help each other.	10/19/2020 9:29 AM
22	Removing large trees along town roads	10/19/2020 9:15 AM
23	cut the trees and brush on the town roads	10/19/2020 6:42 AM
24	Chop down all the trees. ;)	9/25/2020 11:25 AM
25	Better dam inspection program with full disclosure of inspections	8/28/2020 6:06 PM

Q15 Please provide any additional comments or questions to be addressed as this Hazard Mitigation Plan is updated.

Answered: 7 Skipped: 36

#	RESPONSES	DATE
1	Is there a community evacuation plan/route(s) or shelter(s) in the event of uncontrolled fire, flood or storm in Salisbury? Can the siren system alert residents to threats as well as the volunteer firefighters? Since weather for our area comes all the way out of Albany, and weather patterns here vary by microclimates/hills, if there's a tornado or uncontrolled fire, how does the word get out other than Robin Hood Radio or a weather report from dozens of miles away? (I'm asking, having grown up on the coast in a level 1 evacuation zone, where sirens by number of repeats indicated local warnings to all and not just the call to volunteers. If it went off 3 times, it was major).	3/16/2021 11:00 PM
2	I think warnings and updates by text for all phones is an important step	11/12/2020 6:47 PM
3	This could be a great way to bridge the political and social divide in our community to rally around a common cause of safety and resourcefulness. There also must be financial support from the state to ensure that all citizens have the basics needed regardless of income level or time investment. Backup power generation, etc. Getting our towns moving to off-grid community owned power and food production would be the biggest game changer. We all have space for solar fields, wind farms, and community food farms. Local food producers need central outlets and subsidies to provide for their communities and stockpile storage crops.	11/12/2020 10:27 AM
4	Consider burying power lines	10/19/2020 5:31 PM
5	You mention "upsizing" culverts and bridges. In my opinion, not needed in New Hartford	10/19/2020 3:27 PM
6	We need to have our elderly population who live alone checked on and help them	10/19/2020 6:42 AM
7	Our community also needs better communication to the public so they can take action in an emergency. Our community does a VERY poor job of this.	8/28/2020 6:06 PM

Q16 If you wish to be notified of the progress in updating the Hazard Mitigation Plan, please provide your name and email address.

Answered: 14 Skipped: 29

ANSWER CHOICES	RESPONSES	
Name	100.00%	14
Email Address	100.00%	14

#	NAME	DATE
1	Robyn Voshardt	3/16/2021 11:00 PM
2	Amanda Freund	11/23/2020 11:15 AM
3	Daniel Shaw	11/12/2020 6:47 PM
4	Roxann Whitaker	11/12/2020 6:17 PM
5	Barbara Riley	11/12/2020 5:12 PM
6	Jason Losh	11/12/2020 3:23 PM
7	Adam Sher	11/12/2020 10:27 AM
8	Polly H. Pobuda	10/19/2020 10:27 PM
9	John Doyle	10/19/2020 11:55 AM
10	Willard Green	10/19/2020 11:53 AM
11	Jacob Remes	10/19/2020 9:29 AM
12	Mary Ellen Pennell	10/19/2020 6:42 AM
13	brent colley	9/25/2020 11:25 AM
14	Thomas Carr Jr	8/28/2020 6:06 PM

#	EMAIL ADDRESS	DATE
1	robynvoshardt@gmail.com	3/16/2021 11:00 PM
2	amanda@cowpots.com	11/23/2020 11:15 AM
3	dan.shaw@att.net	11/12/2020 6:47 PM
4	rmsteinberg@yahoo.com	11/12/2020 6:17 PM
5	briley058@yahoo.com	11/12/2020 5:12 PM
6	Jasonlosh@hotmail.com	11/12/2020 3:23 PM
7	Adam.sher40@gmail.com	11/12/2020 10:27 AM
8	pbuda55@frontier.com	10/19/2020 10:27 PM
9	thedoylegr@aol.com	10/19/2020 11:55 AM
10	patandbillgreen@sbcglobal.net	10/19/2020 11:53 AM
11	jacob.remes@nyu.edu	10/19/2020 9:29 AM
12	mepennell@yahoo.com	10/19/2020 6:42 AM
13	brent_c@sharon-ct.org	9/25/2020 11:25 AM
14	tjcr42@gmail.com	8/28/2020 6:06 PM



November 30, 2020

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Naugatuck Valley Council of Governments
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Waterbury, CT 06702

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Western Connecticut Council of Governments
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Ms. Lynne Pike DiSanto, AICP
Principal Planner and Policy Analyst
Capitol Region Council of Governments
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Hartford, CT 06106

Mr. William Beale
Dutchess County Department of Emergency Response
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Poughkeepsie, NY 12601

Mr. Thomas Matuszko, Executive Director
Berkshire Regional Planning Commission
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Pittsfield, MA 01201-6229

Ms. Catherine Ratte, Principal Planner
Pioneer Valley Planning Commission
60 Congress Street, Floor 1
Springfield, MA 01104-3419

**RE: Update of the Northwest Hills Multijurisdiction Hazard Mitigation Plan
MMI #3843-06**

Dear Interested Party:

The Northwest Hills Council of Governments (NHCOG) is in the process of updating the Multijurisdiction Hazard Mitigation Plan that includes the 21 member municipalities depicted on the attached map. As an adjacent county government in New York, Council of Governments in Connecticut, or regional planning agency in Massachusetts, we invite you to provide input to the planning process and to distribute this letter to your member municipalities and communities. You may provide comments to Janell Mullen at jmullen@northwesthillscog.org or David Murphy, PE, CFM, at dmurphy@mminc.com by December 31, 2020.

Additionally, please consider viewing the Story Map or participating in the public survey if you are a resident in any one of the 21 member communities. The Story Map and survey can be accessed from <https://arcg.is/0Tr80f> and www.surveymonkey.com/r/NHCOGHMP, respectively. While the survey will remain open through January 2021 to allow members of the public time to participate, we urge you to provide direct comments to us as noted above by the end of the year.

Very truly yours

MILONE & MACBROOM, INC.



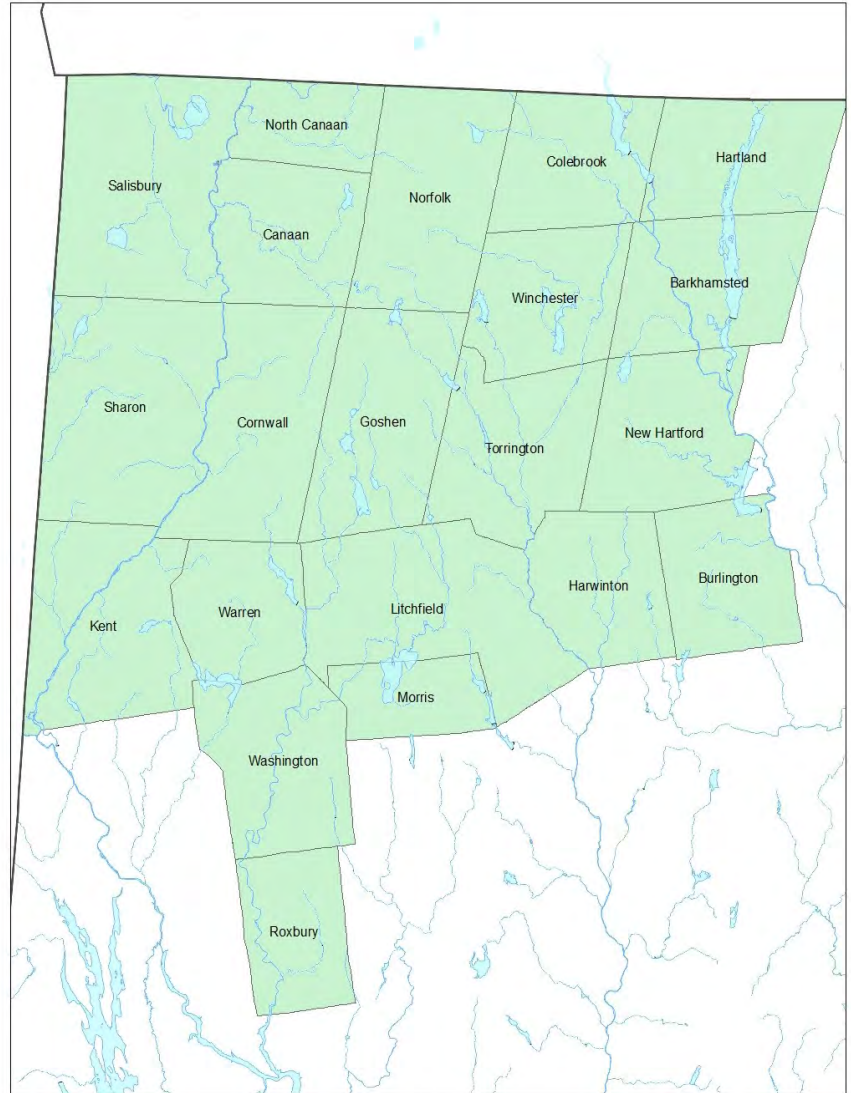
David Murphy, PE, CFM
Manager of Water Resources Planning

Enclosure

3843-06-n3020-ltr.docx

Northwest Hills Council of Governments

Barkhamsted
Burlington
Canaan
Colebrook
Cornwall
Goshen
Hartland
Harwinton
Kent
Litchfield
Morris
New Hartford
Norfolk
North Canaan
Roxbury
Salisbury
Sharon
Torrington
Warren
Washington
Winchester



NHCOG STAFF

Richard Lynn, AICP, Executive Director

Jocelyn Ayer, Community & Economic Development Director

Joanna Wozniak-Brown, PhD, Regional Planner

Darlene Krukar, Office Manager

Appendix D

HAZUS-MH Output

HAZUS OUTPUT: FLOODING

Additional Details are
Available On Request



Hazus: Flood Global Risk Report

Region Name: CT_NHCOG_R1p5

Flood Scenario: PROBABILISTIC

Print Date: Friday, February 12, 2021

Disclaimer:

This version of Hazus utilizes 2010 Census Data.

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Flood. These results can be improved by using enhanced inventory data and flood hazard information.



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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 2 county(ies) from the following state(s):

- Connecticut

Note:

Appendix A contains a complete listing of the counties contained in the region .

The geographical size of the region is approximately 808 square miles and contains 4,873 census blocks. The region contains over 47 thousand households and has a total population of 115,247 people (2010 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B .

There are an estimated 52,494 buildings in the region with a total building replacement value (excluding contents) of 19,981 million dollars. Approximately 89.62% of the buildings (and 77.47% of the building value) are associated with residential housing.



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Building Inventory

General Building Stock

Hazus estimates that there are 52,494 buildings in the region which have an aggregate total replacement value of 19,981 million dollars. Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

**Table 1
Building Exposure by Occupancy Type for the Study Region**

Occupancy	Exposure (\$1000)	Percent of Total
Residential	15,478,418	77.5%
Commercial	2,399,687	12.0%
Industrial	1,204,531	6.0%
Agricultural	98,842	0.5%
Religion	240,900	1.2%
Government	106,024	0.5%
Education	452,129	2.3%
Total	19,980,531	100%

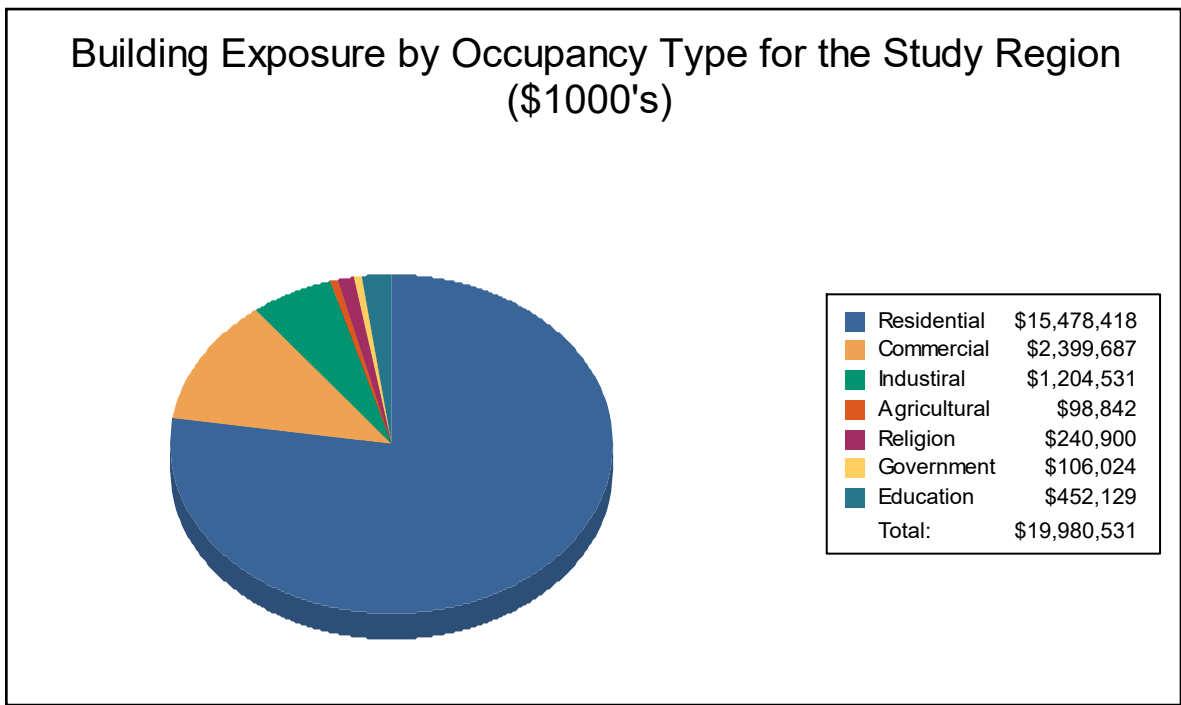
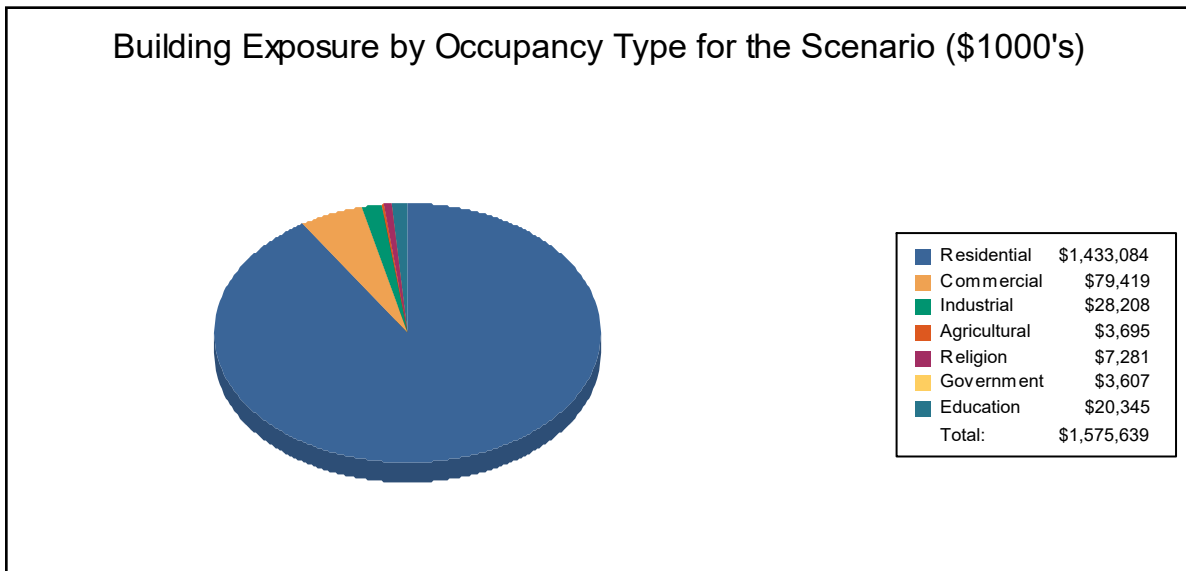




Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure (\$1000)	Percent of Total
Residential	11,731,964	75.8%
Commercial	2,012,351	13.0%
Industrial	1,040,863	6.7%
Agricultural	85,544	0.6%
Religion	191,389	1.2%
Government	83,346	0.5%
Education	329,570	2.1%
Total	15,475,027	100%



Essential Facility Inventory

For essential facilities, there are 3 hospitals in the region with a total bed capacity of 187 beds. There are 81 schools, 44 fire stations, 18 police stations and 21 emergency operation centers.



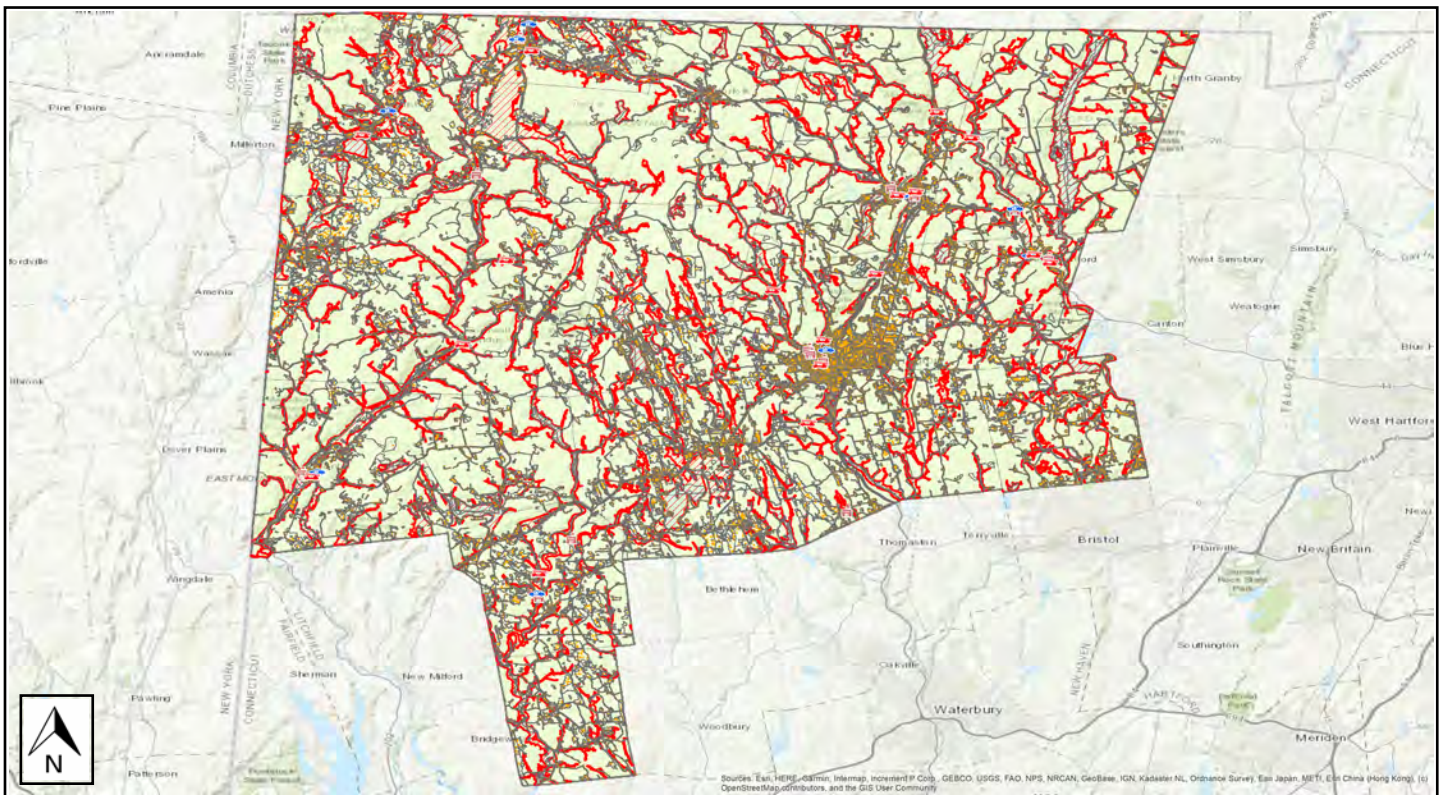
Flood Scenario Parameters

Hazus used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	CT_NHCOG_R1p5
Scenario Name:	PROBABILISTIC
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Study Region Overview Map

Illustrating scenario flood extent, as well as exposed essential facilities and total exposure



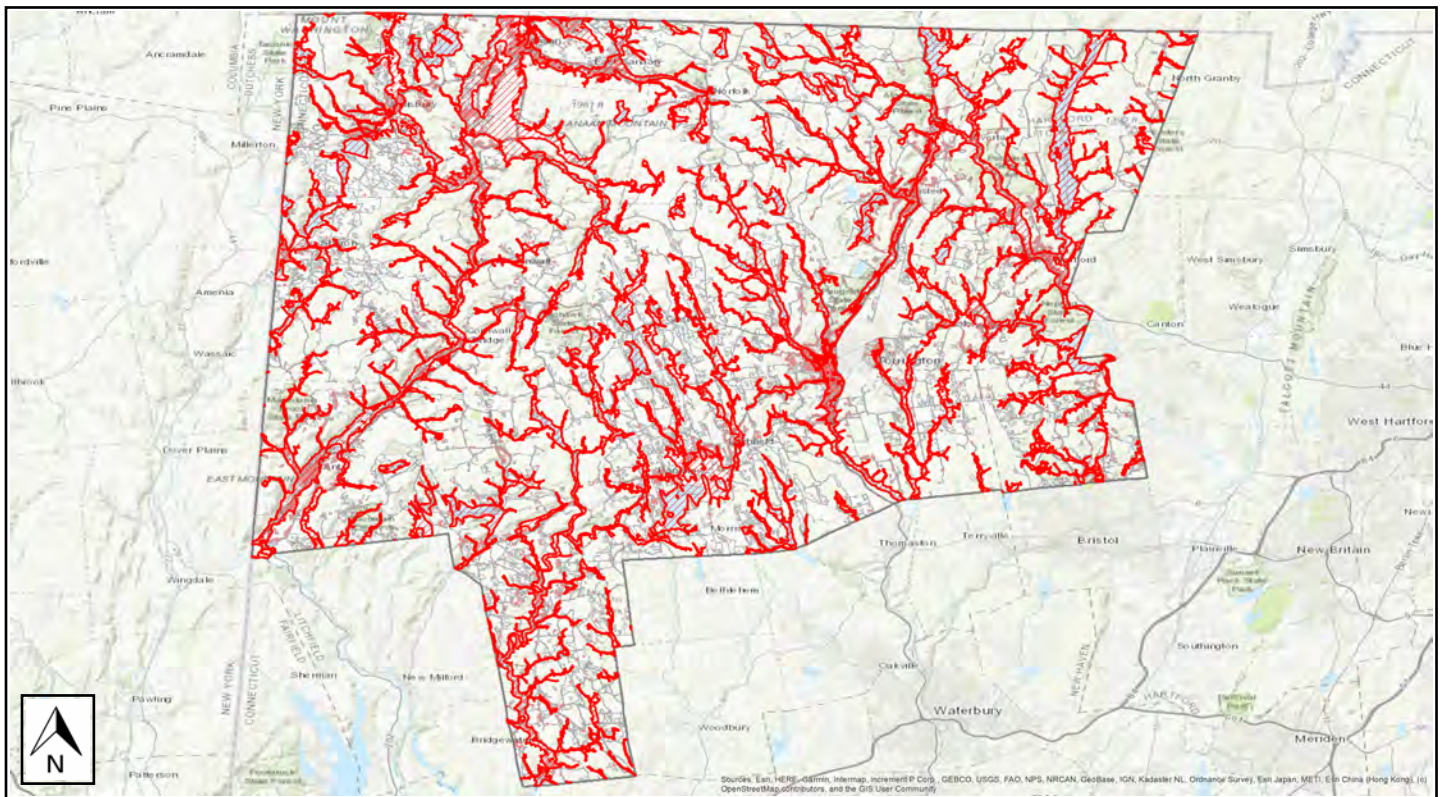


Building Damage

General Building Stock Damage

Hazus estimates that about 2,597 buildings will be at least moderately damaged. This is over 73% of the total number of buildings in the scenario. There are an estimated 372 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Flood Technical Manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Total Economic Loss (1 dot = \$300K) Overview Map



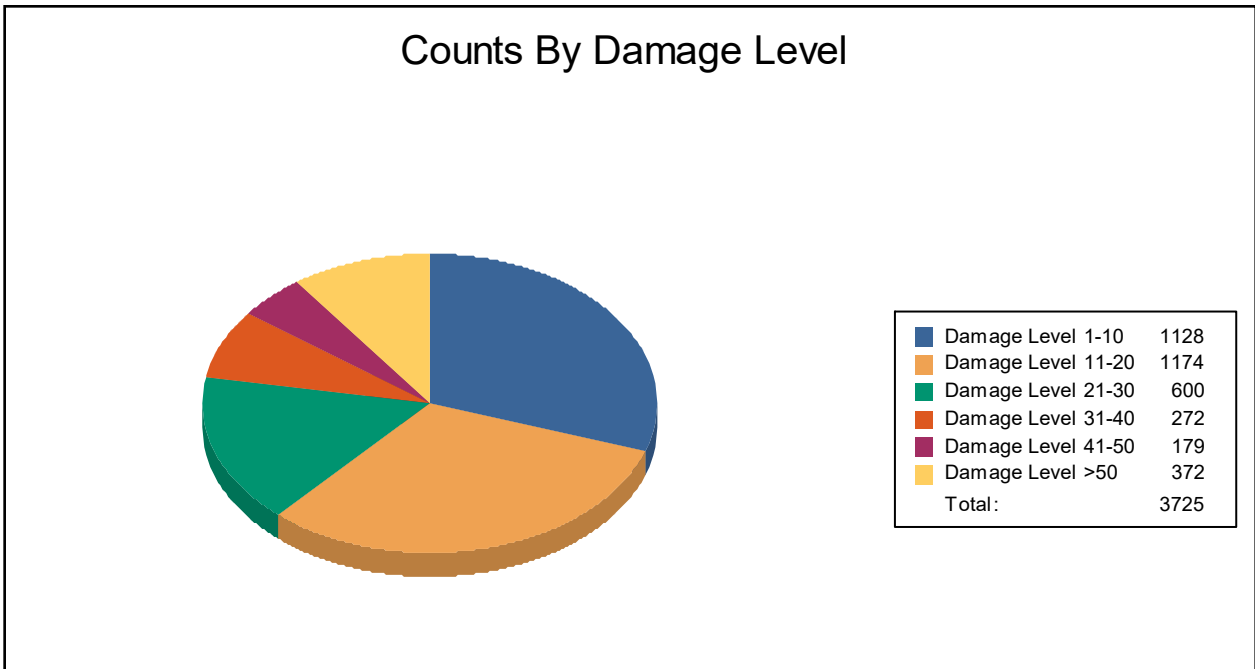
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Table 3: Expected Building Damage by Occupancy

Occupancy	1-10		11-20		21-30		31-40		41-50		>50	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	4	11	27	75	2	6	2	6	1	3	0	0
Education	2	100	0	0	0	0	0	0	0	0	0	0
Government	0	0	1	100	0	0	0	0	0	0	0	0
Industrial	17	50	8	24	2	6	4	12	0	0	3	9
Religion	0	0	3	100	0	0	0	0	0	0	0	0
Residential	1,105	30	1,135	31	596	16	266	7	178	5	369	10
Total	1,128		1,174		600		272		179		372	



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Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		>50	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	2	50	2	50	0	0	0	0	0	0	0	0
ManufHousing	0	0	0	0	0	0	0	0	0	0	7	100
Masonry	42	32	53	41	25	19	3	2	1	1	6	5
Steel	13	28	22	48	4	9	4	9	0	0	3	7
Wood	1,064	30	1,083	31	567	16	266	8	177	5	354	10



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Essential Facility Damage

Before the flood analyzed in this scenario, the region had 187 hospital beds available for use. On the day of the scenario flood event, the model estimates that 187 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

Classification	# Facilities			
	Total	At Least Moderate	At Least Substantial	Loss of Use
Emergency Operation Centers	21	5	0	5
Fire Stations	44	13	0	13
Hospitals	3	0	0	0
Police Stations	18	5	0	5
Schools	81	13	0	12

If this report displays all zeros or is blank, two possibilities can explain this.

- (1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.
- (2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.



Induced Flood Damage

Debris Generation

Hazus estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

Analysis has not been performed for this Scenario.



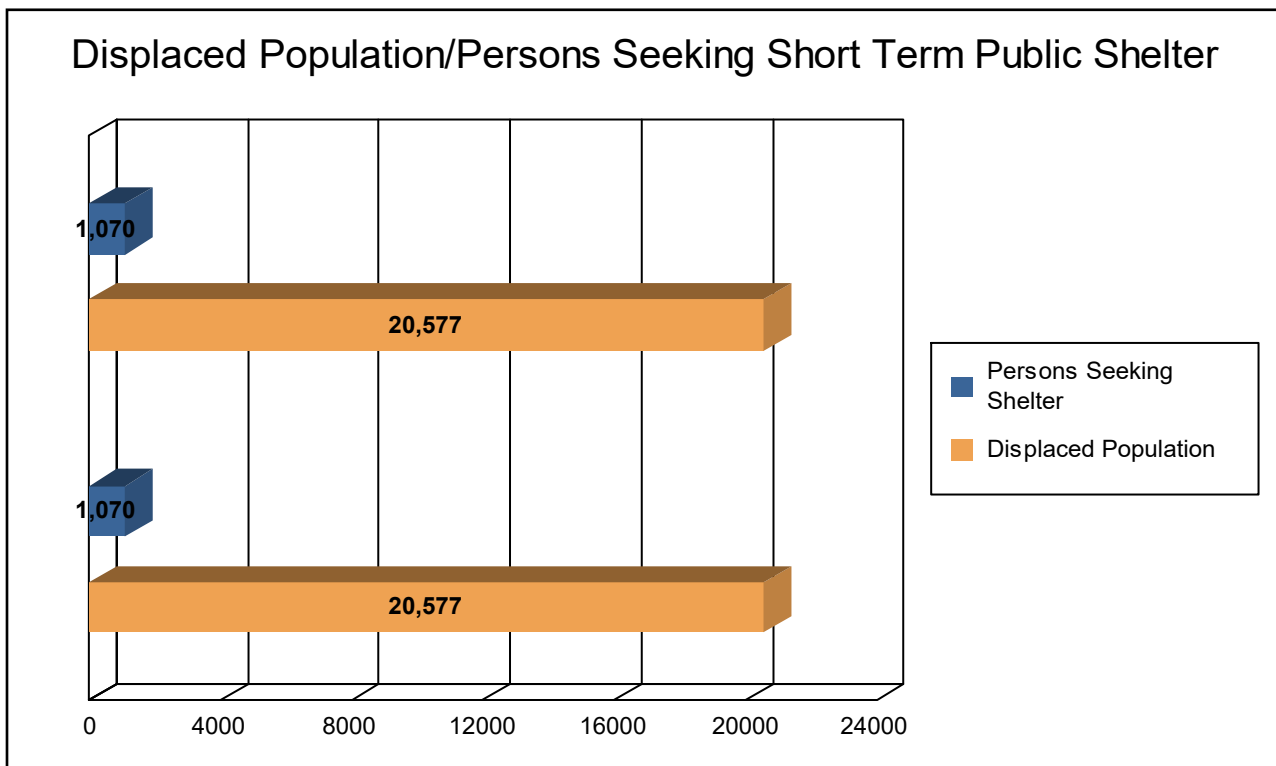
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Social Impact

Shelter Requirements

Hazus estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 6,859 households (or 20,577 of people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 1,070 people (out of a total population of 115,247) will seek temporary shelter in public shelters.





Economic Loss

The total economic loss estimated for the flood is 2,823.20 million dollars, which represents 18.24 % of the total replacement value of the scenario buildings.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 1,632.87 million dollars. 42% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 33.59% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.



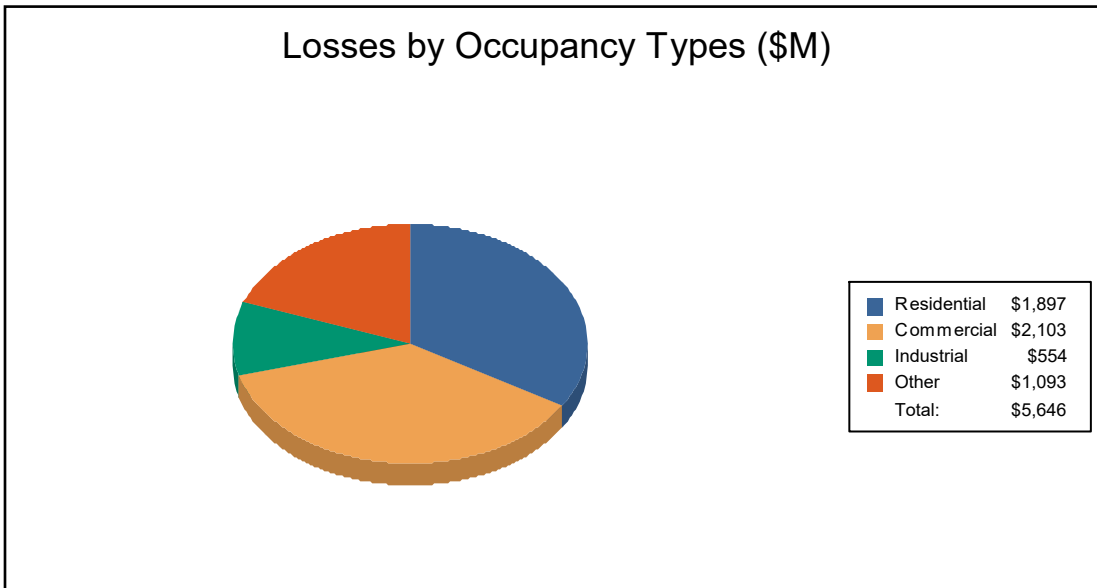
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Table 6: Building-Related Economic Loss Estimates
(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
<u>Building Loss</u>						
	Building	990.53	252.16	148.17	59.12	1,449.98
	Content	498.17	680.04	332.44	248.27	1,758.92
	Inventory	0.00	15.49	39.71	1.65	56.85
	Subtotal	1,488.70	947.69	520.32	309.04	3,265.75
<u>Business Interruption</u>						
	Income	15.73	439.88	7.96	83.08	546.65
	Relocation	233.72	132.95	10.37	43.82	420.86
	Rental Income	121.33	95.95	2.12	4.13	223.53
	Wage	37.17	486.36	13.11	652.98	1,189.61
	Subtotal	407.94	1,155.14	33.56	784.01	2,380.65
ALL	Total	1,896.64	2,102.83	553.88	1,093.05	5,646.40



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Appendix A: County Listing for the Region

Connecticut

- Hartford
- Litchfield



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Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
Connecticut				
Litchfield	103,832	13,770,106	4,327,220	18,097,326
Hartford	11,415	1,708,312	174,893	1,883,205
Total	115,247	15,478,418	4,502,113	19,980,531
Total Study Region	115,247	15,478,418	4,502,113	19,980,531

HAZUS OUTPUT: HURRICANE

Additional Details are
Available On Request

Quick Assessment Report

January 20, 2021

Study Region : HUR_CT_NHCOG

Scenario : Probabilistic

Regional Statistics

Area (Square Miles)	808
Number of Census Tracts	35
Number of People in the Region	115,247
General Building Stock	

<i>Occupancy</i>	<i>Building Count</i>	<i>Dollar Exposure (\$ K)</i>
Residential	47,046	15,478,418
Commercial	3,249	2,399,687
Other	2,199	2,102,426
Total	52,494	19,980,531

Scenario Results

Number of Residential Buildings Damaged

<i>Return Period</i>	<i>Minor</i>	<i>Moderate</i>	<i>Severe</i>	<i>Destruction</i>	<i>Total</i>
10	0	0	0	0	0
20	0	0	0	0	0
50	29	1	0	0	30
100	187	6	0	0	194
200	911	50	1	0	962
500	3,172	285	4	1	3,462
1000	6,227	733	15	10	6,985

Number of Buildings Damaged

<i>Return Period</i>	<i>Minor</i>	<i>Moderate</i>	<i>Severe</i>	<i>Destruction</i>	<i>Total</i>
10	0	0	0	0	0
20	0	0	0	0	0
50	43	1	0	0	44
100	220	7	0	0	227
200	985	54	1	0	1,040
500	3,381	310	9	1	3,701
1000	6,661	807	28	10	7,506

Shelter Requirements

<i>Return Period</i>	<i>Displaced Households (#Households)</i>	<i>Short Term Shelter (#People)</i>
10	0	0
20	0	0
50	0	0
100	0	0
200	0	0
500	34	18
1000	100	54

Economic Loss (x 1000)

ReturnPeriod	<u>Property Damage (Capital Stock) Losses</u>		<u>Business Interruption</u>
	<u>Residential</u>	<u>Total</u>	<u>(Income) Losses</u>
10	0	0	0
20	0	0	0
50	6,777	7,050	3
100	25,898	26,408	89
200	63,071	64,709	1,586
500	140,859	147,592	4,755
1000	235,508	253,034	12,886
Annualized	1,378	1,473	68

Disclaimer:

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using HAZUS loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Hurricane. These results can be improved by using enhanced inventory data.

HAZUS OUTPUT: EARTHQUAKE

Additional Details are
Available On Request

	Haddam – 5.7				
Town	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage
Barkhamsted	1380	93	24	2	0
Burlington	2801	381	124	12	1
Canaan; Norfolk	1459	60	14	1	0
Colebrook	677	31	8	1	0
Cornwall	931	39	9	1	0
Goshen	1543	73	17	1	0
Hartland	791	43	11	1	0
Harwinton	1989	185	52	4	0
Kent	1410	56	13	1	0
Litchfield	3270	212	54	4	0
Morris	1152	76	19	2	0
New Hartford	2412	217	60	5	0
North Canaan	1273	48	11	1	0
Roxbury	1072	61	15	1	0
Salisbury	2338	83	19	1	0
Sharon	1603	60	14	1	0
Torrington	10873	750	193	16	1
Warren	755	34	8	1	0
Washington	1878	93	22	2	0
Winchester	3840	200	49	4	0
NHCOG	43455	2793	733	61	5

	Portland – 5.7				
Town	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage
Barkhamsted	1273	167	53	5	0
Burlington	2356	622	295	40	6
Canaan; Norfolk	1435	78	19	2	0
Colebrook	651	51	13	1	0
Cornwall	915	51	13	1	0
Goshen	1487	115	30	3	0
Hartland	745	76	22	2	0
Harwinton	1776	320	120	13	1
Kent	1398	66	16	1	0
Litchfield	3075	349	107	10	1
Morris	1089	121	36	3	0
New Hartford	2138	392	147	16	2
North Canaan	1262	57	14	1	0
Roxbury	1038	85	23	2	0
Salisbury	2322	95	23	2	0
Sharon	1591	70	17	1	0
Torrington	10088	1293	410	38	4
Warren	738	47	12	1	0
Washington	1814	140	37	3	0
Winchester	3634	349	99	9	1
NHCOG	40836	4558	1489	148	16

	Stamford – 5.7				
Town	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage
Barkhamsted	1440	47	11	1	0
Burlington	3166	122	29	2	0
Canaan; Norfolk	1470	51	12	1	0
Colebrook	689	22	5	0	0
Cornwall	932	38	9	1	0
Goshen	1557	62	15	1	0
Hartland	815	25	6	0	0
Harwinton	2121	86	21	2	0
Kent	1378	81	20	2	0
Litchfield	3350	152	36	3	0
Morris	1173	60	15	1	0
New Hartford	2577	94	22	2	0
North Canaan	1281	43	10	1	0
Roxbury	1001	111	33	3	0
Salisbury	2338	83	19	1	0
Sharon	1596	66	16	1	0
Torrington	11271	447	106	8	1
Warren	749	39	9	1	0
Washington	1828	130	34	3	0
Winchester	3922	136	32	2	0
NHCOG	44641	1905	462	36	2

	East Haddam – 6.4				
Town	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage
Barkhamsted	1153	235	98	12	2
Burlington	2105	711	415	74	15
Canaan; Norfolk	1261	194	71	7	1
Colebrook	578	97	37	4	0
Cornwall	805	124	46	5	1
Goshen	1322	220	83	9	1
Hartland	669	123	48	5	1
Harwinton	1620	396	185	25	4
Kent	1227	181	65	7	1
Litchfield	2770	529	214	25	3
Morris	982	184	74	8	1
New Hartford	1951	482	226	31	5
North Canaan	1112	159	57	6	1
Roxbury	916	162	63	7	1
Salisbury	2057	278	97	10	1
Sharon	1403	198	70	7	1
Torrington	9182	1810	743	87	11
Warren	650	104	39	4	0
Washington	1605	273	104	11	1
Winchester	3260	579	225	25	3
NHCOG	36671	7032	2934	359	50

	Haddam – 5.7				
Town	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage
Barkhamsted	1505	102	26	2	0
Burlington	3008	409	133	13	1
Canaan; Norfolk	1653	68	16	1	0
Colebrook	732	34	8	1	0
Cornwall	1065	45	11	1	0
Goshen	1695	80	19	1	0
Hartland	869	47	12	1	0
Harwinton	2179	202	57	5	0
Kent	1597	64	15	1	0
Litchfield	3774	245	63	5	0
Morris	1273	84	22	2	0
New Hartford	2663	239	66	6	0
North Canaan	1479	56	13	1	0
Roxbury	1206	68	17	1	0
Salisbury	2591	92	22	2	0
Sharon	1814	68	16	1	0
Torrington	12138	837	216	18	1
Warren	836	38	9	1	0
Washington	2161	107	26	2	0
Winchester	4258	221	54	4	0
NHCOG	48487	3116	818	68	5

	Portland – 5.7				
Town	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage
Barkhamsted	1389	182	58	5	1
Burlington	2530	668	317	43	6
Canaan; Norfolk	1626	89	22	2	0
Colebrook	704	55	15	1	0
Cornwall	1047	59	14	1	0
Goshen	1633	126	33	3	0
Hartland	818	84	24	2	0
Harwinton	1947	350	131	14	2
Kent	1583	74	18	1	0
Litchfield	3549	403	123	11	1
Morris	1204	133	40	4	0
New Hartford	2360	432	162	17	2
North Canaan	1465	67	16	1	0
Roxbury	1168	96	26	2	0
Salisbury	2573	106	25	2	0
Sharon	1800	79	19	1	0
Torrington	11262	1443	458	43	4
Warren	816	52	13	1	0
Washington	2088	162	43	4	0
Winchester	4030	388	110	9	1
NHCOG	45564	5085	1661	166	17

	Stamford – 5.7				
Town	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage
Barkhamsted	1570	52	12	1	0
Burlington	3400	131	31	2	0
Canaan; Norfolk	1666	58	13	1	0
Colebrook	745	24	6	0	0
Cornwall	1066	44	10	1	0
Goshen	1710	68	16	1	0
Hartland	895	27	6	0	0
Harwinton	2325	95	22	2	0
Kent	1561	92	23	2	0
Litchfield	3866	175	42	3	0
Morris	1297	67	16	1	0
New Hartford	2844	103	24	2	0
North Canaan	1487	50	12	1	0
Roxbury	1126	125	37	3	0
Salisbury	2591	92	22	2	0
Sharon	1806	75	18	1	0
Torrington	12583	499	118	9	1
Warren	829	43	10	1	0
Washington	2104	150	39	3	0
Winchester	4350	150	35	3	0
NHCOG	49810	2125	516	40	3

	East Haddam – 6.4				
Town	No Damage	Slight Damage	Moderate Damage	Extensive Damage	Complete Damage
Barkhamsted	1258	256	107	13	2
Burlington	2260	763	445	79	16
Canaan; Norfolk	1429	219	80	8	1
Colebrook	625	105	40	4	1
Cornwall	920	142	52	5	1
Goshen	1451	242	91	10	1
Hartland	734	135	53	6	1
Harwinton	1775	434	203	27	4
Kent	1389	205	74	8	1
Litchfield	3197	611	247	29	4
Morris	1086	204	81	9	1
New Hartford	2153	532	250	34	5
North Canaan	1291	185	66	7	1
Roxbury	1030	182	71	8	1
Salisbury	2279	308	107	11	1
Sharon	1588	224	79	8	1
Torrington	10251	2021	830	97	12
Warren	719	116	43	5	1
Washington	1847	315	120	13	2
Winchester	3615	642	250	28	3
NHCOG	40917	7847	3273	401	56

Percent Functional Day 1	Haddam – 5.7					Portland – 5.7				
Facilities/Towns	Medical Facilities	Emergency Operations Center (#)	Fire Stations	Police Stations (#)	Schools (#)	Medical Facilities	Emergency Operations Center (#)	Fire Stations	Police Stations (#)	Schools (#)
Barkhamsted			82		82			74		74
Burlington			75	77	75			65	67	64
Canaan; Norfolk			87	86	87			85	83	85
Colebrook		86	86		86		81	80		81
Cornwall			87		87			85		85
Goshen					86					81
Hartland			84		84			77		77
Harwinton			80		80			71		71
Kent			87		87			86		86
Litchfield			82	83	83			75	77	77
Morris			82		82			76		76
New Hartford			81		80			72		71
North Canaan			88		88			86		86
Roxbury					85					81
Salisbury		88	88		88		87	87		87
Sharon	88				88	87				87
Torrington	82		83	83	82	75		76	75	75
Warren					86					83
Washington			86		85			82		81
Winchester		84	85	84	84		77	78	78	77
NHCOG	85	86	84	83	84	81	82	78	76	78

Percent Functional Day 1	Stamford – 5.7					East Haddam – 6.4				
Facilities/Towns	Medical Facilities	Emergency Operations Center (#)	Fire Stations	Police Stations (#)	Schools (#)	Medical Facilities	Emergency Operations Center (#)	Fire Stations	Police Stations (#)	Schools (#)
Barkhamsted			88		88			67		67
Burlington			87	87	87			60	62	59
Canaan; Norfolk			88	88	88			72	71	72
Colebrook		89	89		89		70	70		70
Cornwall			87		87			72		71
Goshen					87					70
Hartland			89		89			69		68
Harwinton			87		87			65		65
Kent			85		85			72		72
Litchfield			86	86	86			68	69	68
Morris			86		86			68		68
New Hartford			88		88			65		65
North Canaan			88		89			72		73
Roxbury					78					70
Salisbury		88	88		88		73	73		73
Sharon	87				87	73				73
Torrington	87		87	87	87	68		68	68	68
Warren					86					71
Washington			83		82			70		70
Winchester		88	88	88	88		69	69	69	69
NHCOG	87	88	87	87	87	70	71	69	68	69

Facilities/Towns	Medical Facilities	Emergency Operations Center (#)	Fire Stations	Police Stations (#)	Schools (#)	Total
Barkhamsted			1		3	4
Burlington			1	1	4	6
Canaan; Norfolk			2	1	4	7
Colebrook		1	2		1	4
Cornwall			1		1	2
Goshen					1	1
Hartland			2		1	3
Harwinton			2		1	3
Kent			1		4	5
Litchfield			4	2	11	17
Morris			1		1	2
New Hartford			1		3	4
North Canaan			1		1	2
Roxbury					1	1
Salisbury		1	1		4	6
Sharon	1				1	2
Torrington	1		2	1	11	15
Warren					1	1
Washington			1		7	8
Winchester		1	4	1	15	21
NHCOG	2	3	27	6	76	114

Epicenter Location and Magnitude	Haddam – 5.7			Portland – 5.7		
	Brick, Wood & Others	Concrete & Steel	Total	Brick, Wood & Others	Concrete & Steel	Total
Barkhamsted	0.2431637	0.0997216	0.3428853	0.4257866	0.2216724	0.647459
Burlington	0.8962314	0.4055473	1.3017787	1.6481807	1.119745	2.7679258
Canaan; Norfolk	0.2429421	0.0934676	0.3364097	0.3013232	0.1225233	0.4238465
Colebrook	0.0669822	0.0216355	0.0886177	0.1035299	0.0371426	0.1406725
Cornwall	0.1368539	0.0553502	0.1922041	0.1713641	0.0732719	0.244636
Goshen	0.1815747	0.0657831	0.2473578	0.2736466	0.1109697	0.3846163
Hartland	0.098233	0.0349685	0.1332015	0.1665682	0.0717883	0.2383565
Harwinton	0.4524011	0.1969094	0.6493103	0.8075988	0.4761875	1.2837863
Kent	0.2810941	0.1173396	0.3984337	0.3153877	0.1364354	0.4518231
Litchfield	1.1123519	0.5706224	1.6829744	1.7654517	1.1048095	2.8702612
Morris	0.2056612	0.0883076	0.2939689	0.3174356	0.1623876	0.4798232
New Hartford	0.7825463	0.4309536	1.2134999	1.4414556	1.1233658	2.5648212
North Canaan	0.2480096	0.1112683	0.3592779	0.2838215	0.1323795	0.416201
Roxbury	0.1638528	0.0637038	0.2275566	0.2236758	0.0969073	0.3205831
Salisbury	0.2997869	0.1140813	0.4138681	0.3363668	0.1310845	0.4674513
Sharon	0.2113716	0.0827602	0.2941318	0.2377578	0.0954422	0.3332
Torrington	4.3421172	2.1169997	6.4591169	7.2082127	4.4752475	11.6834605
Warren	0.0885979	0.0323088	0.1209067	0.1186876	0.046547	0.1652346
Washington	0.3508787	0.1467904	0.497669	0.5082434	0.2387131	0.7469565
Winchester	1.055582	0.4543248	1.5099068	1.7450096	0.9089477	2.6539572
NHCOG	11.4602323	5.3028437	16.7630758	18.3995039	10.8855678	29.2850718

Epicenter Location and Magnitude	Stamford – 5.7			East Haddam – 6.4		
	Brick, Wood & Others	Concrete & Steel	Total	Brick, Wood & Others	Concrete & Steel	Total
Barkhamsted	0.1341346	0.0475142	0.1816488	0.6681451	0.4708917	1.1390368
Burlington	0.3078262	0.0981441	0.4059703	2.1645307	1.928249	4.0927799
Canaan; Norfolk	0.2059734	0.0760799	0.2820533	0.7757721	0.4919434	1.2677155
Colebrook	0.0491715	0.0149101	0.0640816	0.2173429	0.1104719	0.3278148
Cornwall	0.1303132	0.0518215	0.1821347	0.4381658	0.296138	0.7343038
Goshen	0.1563487	0.0543712	0.2107199	0.5780222	0.3335725	0.9115947
Hartland	0.0616583	0.0201925	0.0818508	0.2970369	0.1754002	0.4724371
Harwinton	0.2260991	0.0791655	0.3052646	1.1270249	0.8523082	1.979333
Kent	0.32808	0.1433327	0.4714126	0.8832288	0.6052934	1.4885223
Litchfield	0.8202586	0.3907498	1.2110085	2.9640582	2.6151775	5.5792355
Morris	0.156325	0.0625554	0.2188803	0.5407146	0.3857147	0.9264293
New Hartford	0.3754834	0.1639562	0.5394396	2.016824	2.0711062	4.0879302
North Canaan	0.2194243	0.0953168	0.3147411	0.7945602	0.5870931	1.3816533
Roxbury	0.2607813	0.1205059	0.3812872	0.4654375	0.2975176	0.7629552
Salisbury	0.2894171	0.1087028	0.3981198	0.977234	0.5808605	1.5580945
Sharon	0.2206884	0.0871547	0.3078431	0.6865616	0.4173625	1.1039242
Torrington	2.7908058	1.1849837	3.9757892	11.1172261	9.3094421	20.4266676
Warren	0.0915412	0.0336289	0.1251701	0.2805524	0.1639176	0.4444699
Washington	0.4266389	0.1882773	0.6149161	1.0664934	0.7465118	1.8130052
Winchester	0.7563443	0.2956836	1.0520278	3.1416134	2.3322289	5.4738424
NHCOG	8.0073133	3.3170468	11.3243594	31.2005448	24.7712008	55.9717452

Epicenter Location and Magnitude	Haddam – 5.7		Portland – 5.7	
	Number of Displaced Households	Short Term Sheltering Need (Number of People)	Number of Displaced Households	Short Term Sheltering Need (Number of People)
Barkhamsted	1	0	1	1
Burlington	1	1	3	1
Canaan; Norfolk	1	0	1	0
Colebrook	0	0	0	0
Cornwall	0	0	0	0
Goshen	0	0	0	0
Hartland	0	0	0	0
Harwinton	1	0	2	1
Kent	1	0	1	0
Litchfield	2	1	4	2
Morris	0	0	1	0
New Hartford	2	1	4	2
North Canaan	1	0	1	0
Roxbury	0	0	0	0
Salisbury	0	0	0	0
Sharon	0	0	0	0
Torrington	20	12	38	22
Warren	0	0	0	0
Washington	0	0	1	0
Winchester	5	2	9	5
NHCOG	35	19	66	36

Epicenter Location and Magnitude	Stamford – 5.7		East Haddam – 6.4	
	Number of Displaced Households	Short Term Sheltering Need (Number of People)	Number of Displaced Households	Short Term Sheltering Need (Number of People)
Barkhamsted	0	0	2	1
Burlington	0	0	4	2
Canaan; Norfolk	0	0	3	1
Colebrook	0	0	0	0
Cornwall	0	0	0	0
Goshen	0	0	1	0
Hartland	0	0	0	0
Harwinton	0	0	3	1
Kent	1	0	2	1
Litchfield	2	1	9	4
Morris	0	0	1	1
New Hartford	1	0	6	3
North Canaan	1	0	3	2
Roxbury	0	0	0	0
Salisbury	0	0	2	1
Sharon	0	0	1	1
Torrington	11	7	69	40
Warren	0	0	0	0
Washington	1	0	2	1
Winchester	3	2	20	10
NHCOG	21	12	129	70

Haddam – 5.7							
Town	Building Loss	Content Loss	Income Loss	Other Losses (Inventory, Relocation, Rental, Wage)	Total Losses	Property Losses	Residential Property Losses
Barkhamsted	1000.2627	237.7933	31.9267	209.7818	1479.7645	1238.056	877.3268
Burlington	5591.7559	1508.2202	156.5533	895.3906	8151.92	7099.9761	5602.9489
Canaan; Norfolk	725.4733	136.6644	62.4778	247.4881	1172.1036	862.1377	516.8259
Colebrook	263.9534	49.8354	7.9049	49.4934	371.1871	313.7888	249.9415
Cornwall	412.6964	80.4734	23.1831	125.4891	641.842	493.1698	276.052
Goshen	640.999	126.8759	31.5827	161.7546	961.2122	767.8749	544.9311
Hartland	398.3971	83.2735	14.8781	74.7689	571.3176	481.6706	367.1521
Harwinton	2107.7252	536.3263	95.6013	452.3257	3191.9785	2644.0515	1869.6326
Kent	744.2677	134.1811	62.0411	261.8576	1202.3475	878.4488	497.8549
Litchfield	3460.6859	881.54	245.664	1047.2281	5635.118	4342.2259	2082.9204
Morris	846.5701	203.0052	46.5616	206.5185	1302.6554	1049.5753	689.4157
New Hartford	2938.3678	820.8113	95.0095	681.0207	4535.2093	3759.1791	2098.732
North Canaan	567.8394	115.7718	44.4172	213.1766	941.205	683.6112	325.858
Roxbury	628.4674	139.5868	24.4314	141.5615	934.0471	768.0542	512.5701
Salisbury	790.4076	133.2407	64.767	268.932	1257.3473	923.6483	553.2287
Sharon	637.4053	111.1094	52.3463	226.6177	1027.4787	748.5147	482.6851
Torrington	12045.7603	3048.5723	834.0148	4023.902	19952.2494	15094.3326	7981.9956
Warren	327.9772	65.0232	9.0745	80.9817	483.0566	393.0004	273.4609
Washington	1090.8485	228.7324	86.0169	339.5274	1745.1252	1319.5809	785.6131
Winchester	2829.6075	677.3831	132.6163	822.0599	4461.6668	3506.9906	1895.7528
NHCOG	38049.4677	9318.4197	2121.0685	10529.8759	60018.8318	47367.8874	28484.8982

Portland – 5.7							
Town	Building Loss	Content Loss	Income Loss	Other Losses (Inventory, Relocation, Rental, Wage)	Total Losses	Property Losses	Residential Property Losses
Barkhamsted	2216.698	624.6554	67.7299	436.899	3345.9823	2006.3133	2841.3534
Burlington	12711.3593	3813.9028	406.655	2121.6842	19053.6013	12754.7062	16525.2621
Canaan; Norfolk	1005.5935	221.2803	80.5247	319.5364	1626.9349	739.2539	1226.8738
Colebrook	492.8203	113.2896	13.1289	83.9996	703.2384	485.1526	606.1099
Cornwall	578.3537	131.9763	30.0337	163.8874	904.2511	400.2901	710.33
Goshen	1151.8205	275.1778	51.3985	264.5383	1742.9351	1018.2201	1426.9983
Hartland	841.424	213.7262	29.1886	148.1932	1232.532	803.8417	1055.1502
Harwinton	4778.4177	1401.4129	220.5698	994.7059	7395.1063	4333.3183	6179.8306
Kent	889.4551	179.3143	71.488	301.9711	1442.2285	602.7457	1068.7694
Litchfield	6808.462	1979.0626	462.7571	1931.0794	11181.3611	4211.1201	8787.5246
Morris	1568.7925	430.5677	81.9485	361.2128	2442.5215	1310.6111	1999.3602
New Hartford	7095.2498	2249.966	228.4963	1578.8724	11152.5845	5140.814	9345.2158
North Canaan	704.5942	160.619	52.106	250.4702	1167.7894	411.1896	865.2132
Roxbury	981.8419	244.258	35.8578	209.5087	1471.4664	820.844	1226.0999
Salisbury	939.1457	172.3324	73.7571	306.7428	1491.978	667.2499	1111.4781
Sharon	767.45	147.6253	59.8328	258.8963	1233.8044	591.0739	915.0753
Torrington	25394.302	7343.6429	1684.5774	7941.1489	42363.6712	17120.0423	32737.9449
Warren	502.434	115.4836	12.6651	114.1744	744.7571	432.3903	617.9176
Washington	1859.6041	447.8395	135.0577	532.9304	2975.4317	1381.9277	2307.4436
Winchester	5877.295	1650.1847	249.9145	1555.0715	9332.4657	4045.619	7527.4797
NHCOG	77165.1133	21916.3173	4047.6874	19875.5229	123004.6409	59276.7238	99081.4306

Stamford – 5.7							
Town	Building Loss	Content Loss	Income Loss	Other Losses (Inventory, Relocation, Rental, Wage)	Total Losses	Property Losses	Residential Property Losses
Barkhamsted	499.9975	82.288	17.1678	110.5887	710.042	433.9889	582.2855
Burlington	1472.0641	245.0617	44.4409	253.1539	2014.7206	1400.1174	1717.1258
Canaan; Norfolk	664.5602	111.561	56.0242	223.2526	1055.398	488.4922	776.1212
Colebrook	206.5115	30.2753	5.9934	37.2847	280.0649	195.0484	236.7868
Cornwall	456.9362	86.0888	23.8989	133.16	700.0839	327.4663	543.025
Goshen	629.9934	108.8028	28.7946	147.629	915.2198	552.6967	738.7962
Hartland	241.5904	34.8942	9.4191	46.2095	332.1132	218.0941	276.4846
Harwinton	946.0466	167.3652	43.7923	208.0562	1365.2603	831.8714	1113.4118
Kent	1259.6898	277.0557	92.8282	395.3699	2024.9436	902.2917	1536.7455
Litchfield	2532.1193	561.357	178.3948	783.1269	4054.998	1545.8554	3093.4763
Morris	705.9429	154.0584	38.0049	167.6219	1065.6281	603.7493	860.0013
New Hartford	1150.9079	217.3769	42.0422	299.6101	1709.9371	816.9256	1368.2848
North Canaan	532.0737	99.0947	41.5748	202.0671	874.8103	321.1734	631.1684
Roxbury	1677.3351	442.4182	52.64	310.2281	2482.6214	1510.4486	2119.7533
Salisbury	880.7323	146.7513	68.0707	284.1072	1379.6615	643.3502	1027.4836
Sharon	821.8559	148.95	59.9458	263.922	1294.6737	666.8859	970.8059
Torrington	6838.408	1329.1532	521.6047	2555.9712	11245.1371	4586.3954	8167.5612
Warren	452.2578	96.8996	10.7213	96.3346	656.2133	403.646	549.1574
Washington	1896.9257	442.4819	130.3385	520.5406	2990.2867	1477.5263	2339.4076
Winchester	1903.2004	346.4422	97.0243	591.4523	2938.1192	1304.8843	2249.6426
NHCOG	25769.1487	5128.3761	1562.7214	7629.6865	40089.9327	19230.9075	30897.5248

East Haddam – 6.4							
Town	Building Loss	Content Loss	Income Loss	Other Losses (Inventory, Relocation, Rental, Wage)	Total Losses	Property Losses	Residential Property Losses
Barkhamsted	3891.9682	1065.4016	136.7894	823.4918	5917.651	4957.3698	3437.2402
Burlington	17500.3033	5043.4966	663.3339	3207.4323	26414.5661	22543.7999	16716.6485
Canaan; Norfolk	3603.1181	871.3778	299.3913	1134.5655	5908.4527	4474.4959	2662.0014
Colebrook	1276.9838	309.367	37.414	225.8748	1849.6396	1586.3508	1259.5381
Cornwall	2030.428	501.4584	107.0682	575.3476	3214.3022	2531.8864	1411.0312
Goshen	3003.2244	742.0221	145.606	706.3848	4597.2373	3745.2465	2647.7898
Hartland	1749.0873	444.2748	68.7562	326.0151	2588.1334	2193.3621	1652.136
Harwinton	7106.7779	1959.7151	376.6481	1607.3292	11050.4703	9066.493	6216.0583
Kent	3628.3568	841.0437	287.5784	1163.9606	5920.9395	4469.4005	2504.7459
Litchfield	13284.3669	3719.4789	986.114	3973.4766	21963.4364	17003.8458	7845.2773
Morris	3083.2494	826.3013	182.3082	761.7331	4853.592	3909.5507	2512.5459
New Hartford	10664.7218	3159.6563	395.1199	2582.1887	16801.6867	13824.3781	7303.8426
North Canaan	2882.9378	754.6826	207.633	957.6717	4802.9251	3637.6204	1704.1427
Roxbury	2559.3035	661.5483	100.6604	563.0228	3884.535	3220.8518	2128.3342
Salisbury	3978.617	894.2893	297.4649	1202.9124	6373.2836	4872.9063	2927.3781
Sharon	3169.4054	733.6223	230.4445	983.1076	5116.5798	3903.0277	2525.534
Torrington	44794.3506	12309.4074	3322.2776	14875.1946	75301.2302	57103.758	29127.1085
Warren	1553.7515	387.1328	40.6328	353.1799	2334.697	1940.8843	1344.4109
Washington	4992.8743	1237.248	394.3533	1472.0885	8096.5641	6230.1223	3665.149
Winchester	12849.517	3537.5585	598.2066	3498.6861	20483.9682	16387.0755	8606.5749
NHCOG	147603.343	39999.0828	8877.8007	40993.6637	237473.8902	187602.4258	108197.4875

Town	Probabilistic						
	Building Loss	Content Loss	Income Loss	Other Losses (Inventory, Relocation, Rental, Wage)	Total Losses	Property Losses	Residential Property Losses
Barkhamsted	5.107	1.5232	0.1832	1.086	7.8994	6.6302	4.4703
Burlington	12.8419	3.8245	0.4182	2.1705	19.2551	16.6664	12.7385
Canaan; Norfolk	6.5724	1.8517	0.5592	2.0746	11.0579	8.4241	4.7938
Colebrook	2.0291	0.561	0.0617	0.3533	3.0051	2.5901	2.0045
Cornwall	3.7825	1.1225	0.204	1.057	6.166	4.905	2.596
Goshen	5.0846	1.4604	0.2542	1.1958	7.995	6.545	4.4763
Hartland	2.5546	0.7147	0.1049	0.4693	3.8435	3.2693	2.3947
Harwinton	7.6684	2.3025	0.3855	1.6787	12.0351	9.9709	6.8107
Kent	7.8351	2.268	0.6074	2.4097	13.1202	10.1031	5.4763
Litchfield	20.3517	6.4379	1.4557	5.9689	34.2142	26.7896	11.7384
Morris	4.8646	1.522	0.2843	1.1675	7.8384	6.3866	3.9727
New Hartford	11.3077	3.5753	0.4047	2.6963	17.984	14.883	7.752
North Canaan	5.8951	1.7865	0.4254	1.927	10.034	7.6816	3.3618
Roxbury	4.7378	1.5312	0.1834	0.9924	7.4448	6.269	4.0304
Salisbury	8.4846	2.3393	0.654	2.5291	14.007	10.8239	6.1998
Sharon	6.6435	1.9122	0.4988	2.0481	11.1026	8.5557	5.2937
Torrington	65.0415	19.4932	4.7153	21.4536	110.7036	84.5347	41.9046
Warren	2.8768	0.8872	0.0765	0.6395	4.48	3.764	2.5205
Washington	9.2651	2.7727	0.717	2.6408	15.3956	12.0378	6.8719
Winchester	20.4014	6.1404	0.9655	5.5951	33.1024	26.5418	13.4226
NHCOG	213.3454	64.0264	13.1589	60.1532	350.6839	277.3718	152.8295

Town	Haddam – 5.7											
	Level1Injury			Level2Injury			Level3Injury			Level4Injury		
	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM
Barkhamsted	0	1	1	0	0	0	0	0	0	0	0	0
Burlington	2	5	3	0	1	0	0	0	0	0	0	0
Canaan; Norfolk	0	0	0	0	0	0	0	0	0	0	0	0
Colebrook	0	0	0	0	0	0	0	0	0	0	0	0
Cornwall	0	0	0	0	0	0	0	0	0	0	0	0
Goshen	0	1	0	0	0	0	0	0	0	0	0	0
Hartland	0	0	0	0	0	0	0	0	0	0	0	0
Harwinton	1	2	1	0	0	0	0	0	0	0	0	0
Kent	0	0	0	0	0	0	0	0	0	0	0	0
Litchfield	1	2	1	0	0	0	0	0	0	0	0	0
Morris	0	1	0	0	0	0	0	0	0	0	0	0
New Hartford	1	2	2	0	0	0	0	0	0	0	0	0
North Canaan	0	0	0	0	0	0	0	0	0	0	0	0
Roxbury	0	0	0	0	0	0	0	0	0	0	0	0
Salisbury	0	1	0	0	0	0	0	0	0	0	0	0
Sharon	0	0	0	0	0	0	0	0	0	0	0	0
Torrington	6	9	7	1	1	1	0	0	0	0	0	0
Warren	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	1	0	0	0	0	0	0	0	0	0	0
Winchester	1	2	2	0	0	0	0	0	0	0	0	0
NHCOG	15	30	21	2	4	3	0	0	0	0	1	0

Town	Portland – 5.7											
	Level1Injury			Level2Injury			Level3Injury			Level4Injury		
	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM
Barkhamsted	1	2	1	0	0	0	0	0	0	0	0	0
Burlington	4	13	8	0	2	1	0	0	0	0	0	0
Canaan; Norfolk	0	1	0	0	0	0	0	0	0	0	0	0
Colebrook	0	0	0	0	0	0	0	0	0	0	0	0
Cornwall	0	0	0	0	0	0	0	0	0	0	0	0
Goshen	0	1	1	0	0	0	0	0	0	0	0	0
Hartland	0	1	1	0	0	0	0	0	0	0	0	0
Harwinton	2	4	3	0	1	0	0	0	0	0	0	0
Kent	0	1	0	0	0	0	0	0	0	0	0	0
Litchfield	2	4	3	0	1	0	0	0	0	0	0	0
Morris	0	1	1	0	0	0	0	0	0	0	0	0
New Hartford	2	5	4	0	1	1	0	0	0	0	0	0
North Canaan	0	1	0	0	0	0	0	0	0	0	0	0
Roxbury	0	1	0	0	0	0	0	0	0	0	0	0
Salisbury	0	1	0	0	0	0	0	0	0	0	0	0
Sharon	0	0	0	0	0	0	0	0	0	0	0	0
Torrington	12	19	13	2	3	2	0	0	0	0	0	0
Warren	0	0	0	0	0	0	0	0	0	0	0	0
Washington	1	1	1	0	0	0	0	0	0	0	0	0
Winchester	3	4	3	0	1	0	0	0	0	0	0	0
NHCOG	28	61	40	4	9	6	0	1	1	1	2	1

Town	Stamford – 5.7											
	Level1Injury			Level2Injury			Level3Injury			Level4Injury		
	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM
Barkhamsted	0	1	0	0	0	0	0	0	0	0	0	0
Burlington	1	2	1	0	0	0	0	0	0	0	0	0
Canaan; Norfolk	0	0	0	0	0	0	0	0	0	0	0	0
Colebrook	0	0	0	0	0	0	0	0	0	0	0	0
Cornwall	0	0	0	0	0	0	0	0	0	0	0	0
Goshen	0	1	0	0	0	0	0	0	0	0	0	0
Hartland	0	0	0	0	0	0	0	0	0	0	0	0
Harwinton	0	1	1	0	0	0	0	0	0	0	0	0
Kent	0	1	0	0	0	0	0	0	0	0	0	0
Litchfield	1	2	1	0	0	0	0	0	0	0	0	0
Morris	0	1	0	0	0	0	0	0	0	0	0	0
New Hartford	0	1	1	0	0	0	0	0	0	0	0	0
North Canaan	0	1	0	0	0	0	0	0	0	0	0	0
Roxbury	0	1	1	0	0	0	0	0	0	0	0	0
Salisbury	0	1	0	0	0	0	0	0	0	0	0	0
Sharon	0	1	0	0	0	0	0	0	0	0	0	0
Torrington	4	6	4	0	1	1	0	0	0	0	0	0
Warren	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	1	1	0	0	0	0	0	0	0	0	0
Winchester	1	2	1	0	0	0	0	0	0	0	0	0
NHCOG	10	21	14	1	3	2	0	0	0	0	0	0

Town	East Haddam – 6.4											
	Level1Injury			Level2Injury			Level3Injury			Level4Injury		
	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM
Barkhamsted	3	4	1	0	1	0	0	0	0	0	0	0
Burlington	13	23	6	2	4	1	0	1	0	1	1	0
Canaan; Norfolk	1	2	1	0	0	0	0	0	0	0	0	0
Colebrook	1	1	0	0	0	0	0	0	0	0	0	0
Cornwall	1	1	0	0	0	0	0	0	0	0	0	0
Goshen	1	2	1	0	0	0	0	0	0	0	0	0
Hartland	1	2	1	0	0	0	0	0	0	0	0	0
Harwinton	5	8	2	1	1	0	0	0	0	0	0	0
Kent	1	2	1	0	0	0	0	0	0	0	0	0
Litchfield	5	8	4	1	1	0	0	0	0	0	0	0
Morris	1	2	1	0	0	0	0	0	0	0	0	0
New Hartford	6	10	3	1	2	0	0	0	0	0	0	0
North Canaan	2	2	1	0	0	0	0	0	0	0	0	0
Roxbury	1	2	1	0	0	0	0	0	0	0	0	0
Salisbury	2	2	1	0	0	0	0	0	0	0	0	0
Sharon	1	2	1	0	0	0	0	0	0	0	0	0
Torrington	25	36	20	4	6	3	0	1	0	1	1	1
Warren	1	1	0	0	0	0	0	0	0	0	0	0
Washington	2	3	1	0	0	0	0	0	0	0	0	0
Winchester	7	10	5	1	2	1	0	0	0	0	0	0
NHCOG	81	124	52	13	21	7	1	2	1	3	4	1

Town	Probabilistic											
	Level1Injury			Level2Injury			Level3Injury			Level4Injury		
	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM	2:00 AM	2:00 PM	5:00 PM
Barkhamsted	0	0	0	0	0	0	0	0	0	0	0	0
Burlington	0	0	0	0	0	0	0	0	0	0	0	0
Canaan; Norfolk	0	0	0	0	0	0	0	0	0	0	0	0
Colebrook	0	0	0	0	0	0	0	0	0	0	0	0
Cornwall	0	0	0	0	0	0	0	0	0	0	0	0
Goshen	0	0	0	0	0	0	0	0	0	0	0	0
Hartland	0	0	0	0	0	0	0	0	0	0	0	0
Harwinton	0	0	0	0	0	0	0	0	0	0	0	0
Kent	0	0	0	0	0	0	0	0	0	0	0	0
Litchfield	0	0	0	0	0	0	0	0	0	0	0	0
Morris	0	0	0	0	0	0	0	0	0	0	0	0
New Hartford	0	0	0	0	0	0	0	0	0	0	0	0
North Canaan	0	0	0	0	0	0	0	0	0	0	0	0
Roxbury	0	0	0	0	0	0	0	0	0	0	0	0
Salisbury	0	0	0	0	0	0	0	0	0	0	0	0
Sharon	0	0	0	0	0	0	0	0	0	0	0	0
Torrington	0	0	0	0	0	0	0	0	0	0	0	0
Warren	0	0	0	0	0	0	0	0	0	0	0	0
Washington	0	0	0	0	0	0	0	0	0	0	0	0
Winchester	0	0	0	0	0	0	0	0	0	0	0	0
NHCOG	0	0	0	0	0	0	0	0	0	0	0	0

Appendix E

Adoption Resolutions

CERTIFICATE OF ADOPTION
BARKHAMSTED BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Barkhamsted has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Barkhamsted Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Barkhamsted and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Barkhamsted; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Barkhamsted, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Barkhamsted eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Barkhamsted;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

**Adopted this ____ day of _____, 2022 by the Board of Selectmen of the Town of Barkhamsted,
Connecticut**

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the the Town of Barkhamsted this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF BURLINGTON BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Burlington has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Burlington Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Burlington and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Burlington; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Burlington, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Burlington eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Burlington;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Burlington, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Burlington this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF CANAAN BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Canaan has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Canaan Board of Selectmen approved the previous version of the Plan in 2014; and

WHEREAS, the Town of Canaan and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Canaan; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Canaan, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Canaan eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Canaan;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Canaan, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Canaan this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF COLEBROOK BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Colebrook has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Colebrook Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Colebrook and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Colebrook; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Colebrook, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Colebrook eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Colebrook;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Colebrook, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Colebrook this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF CORNWALL BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Cornwall has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Cornwall Board of Selectmen approved the previous version of the Plan in 2014; and

WHEREAS, the Town of Cornwall and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Cornwall; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Cornwall, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Cornwall eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Cornwall;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Cornwall, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Cornwall this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF GOSHEN BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Goshen has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Goshen Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Goshen and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Goshen; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Goshen, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Goshen eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Goshen;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Goshen, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Goshen this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF HARTLAND BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Hartland has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Hartland Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Hartland and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Hartland; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Hartland, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Hartland eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Hartland;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Hartland, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Hartland this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF HARWINTON BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Harwinton has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Harwinton Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Harwinton and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Harwinton; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Harwinton, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Harwinton eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Harwinton;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Harwinton, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Harwinton this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF KENT BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Kent has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Kent Board of Selectmen approved the previous version of the Plan in 2014; and

WHEREAS, the Town of Kent and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Kent; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Kent, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Kent eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Kent;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Kent, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Kent this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF LITCHFIELD BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Litchfield has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Litchfield Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Litchfield and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Litchfield; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Litchfield, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Litchfield eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Litchfield;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Litchfield, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Litchfield this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF MORRIS BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Morris has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Morris Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Morris and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Morris; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Morris, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Morris eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Morris;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Morris, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Morris this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF NEW HARTFORD BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of New Hartford has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of New Hartford Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of New Hartford and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of New Hartford; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of New Hartford, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of New Hartford eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of New Hartford;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

**Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of New Hartford,
Connecticut**

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of New Hartford this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF NORFOLK BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Norfolk has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Norfolk Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Norfolk and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Norfolk; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Norfolk, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Norfolk eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Norfolk;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Norfolk, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Norfolk this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF NORTH CANAAN BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of North Canaan has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of North Canaan Board of Selectmen approved the previous version of the Plan in 2014; and

WHEREAS, the Town of North Canaan and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of North Canaan; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of North Canaan, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of North Canaan eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of North Canaan;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of North Canaan, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of North Canaan this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF ROXBURY BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Roxbury has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Roxbury Board of Selectmen approved the previous version of the Plan in 2014; and

WHEREAS, the Town of Roxbury and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Roxbury; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Roxbury, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Roxbury eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Roxbury;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Roxbury, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Roxbury this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF SALISBURY BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Salisbury has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Salisbury Board of Selectmen approved the previous version of the Plan in 2014; and

WHEREAS, the Town of Salisbury and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Salisbury; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Salisbury, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Salisbury eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Salisbury;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Salisbury, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Salisbury this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF SHARON BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Sharon has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Sharon Board of Selectmen approved the previous version of the Plan in 2014; and

WHEREAS, the Town of Sharon and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Sharon; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Sharon, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Sharon eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Sharon;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Sharon, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Sharon this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
CITY OF TORRINGTON CITY COUNCIL

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the City of Torrington has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the City of Torrington City Council approved the previous version of the Plan in ____; and

WHEREAS, the City of Torrington and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the City of Torrington; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the City of Torrington, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the City of Torrington eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the City Council:

1. The Plan is hereby adopted as an official plan of the City of Torrington;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the City Council.

Adopted this ____ day of _____, 2022 by the City Council of City of Torrington, Connecticut

Mayor

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the City of Torrington this ____ day of _____, 2022.

City Clerk

CERTIFICATE OF ADOPTION
TOWN OF WARREN BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Warren has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Warren Board of Selectmen approved the previous version of the Plan in 2014; and

WHEREAS, the Town of Warren and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Warren; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Warren, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Warren eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Warren;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Warren, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Warren this ____ day of _____, 2022.

Town Clerk

CERTIFICATE OF ADOPTION
TOWN OF WINCHESTER BOARD OF SELECTMEN

**A RESOLUTION ADOPTING THE NORTHWEST HILLS COUNCIL OF GOVERNMENTS
HAZARD MITIGATION PLAN UPDATE, 2022-2027**

WHEREAS, the Town of Winchester has historically experienced severe damage from natural hazards and it continues to be vulnerable to the effects of those natural hazards profiled in the plan (e.g. *flooding, high wind, thunderstorms, winter storms, earthquakes, droughts, dam failure, and wildfires*), resulting in loss of property and life, economic hardship, and threats to public health and safety; and

WHEREAS, the Town of Winchester Board of Selectmen approved the previous version of the Plan in 2016; and

WHEREAS, the Town of Winchester and Northwest Hills Council of Governments developed and received conditional approval from the Federal Emergency Management Agency (FEMA) for the Hazard Mitigation Plan Update, 2022-2027 under the requirements of 44 CFR 201.6; and

WHEREAS, public and committee meetings were held and public input was sought in 2020 and 2021 regarding the development and review of the Hazard Mitigation Plan Update, 2022-2027; and

WHEREAS, the Plan specifically addresses hazard mitigation strategies and Plan maintenance procedure for the Town of Winchester; and

WHEREAS, the Plan recommends several hazard mitigation actions/projects that will provide mitigation for specific natural hazards that impact the Town of Winchester, with the effect of protecting people and property from loss associated with those hazards; and

WHEREAS, adoption of this Plan will make the Town of Winchester eligible for funding to alleviate the impacts of future hazards; now therefore be it

RESOLVED by the Board of Selectmen:

1. The Plan is hereby adopted as an official plan of the Town of Winchester;
2. The respective officials identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them;
3. Future revisions and Plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the Board of Selectmen.

Adopted this ____ day of _____, 2022 by the Board of Selectmen of Town of Winchester, Connecticut

First Selectman

IN WITNESS WHEREOF, the undersigned has affixed his/her signature and the corporate seal of the Town of Winchester this ____ day of _____, 2022.

Town Clerk

Appendix F

Mitigation Strategy Worksheet

Mitigation Action Progress Report Form

Progress Report Period	From Date:	To Date:
Action/Project Title		
Responsible Agency		
Contact Name		
Contact Phone/Email		
Project Status	<input type="checkbox"/> Project completed <input type="checkbox"/> Project canceled <input type="checkbox"/> Project on schedule <input type="checkbox"/> Anticipated completion date: _____ <input type="checkbox"/> Project delayed Explain _____	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?

2. What obstacles, problems, or delays did the project encounter?

3. If uncompleted, is the project still relevant? Should the project be changed or revised?

4. Other comments

Worksheet 7.1

Mitigation Action Progress Report Form

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Plan Update Evaluation Worksheet

Plan Section	Considerations	Explanation
Planning Process	Should new jurisdictions and/or districts be invited to participate in future plan updates?	
	Have any internal or external agencies been invaluable to the mitigation strategy?	
	Can any procedures (e.g., meeting announcements, plan updates) be done differently or more efficiently?	
	Has the Planning Team undertaken any public outreach activities?	
	How can public participation be improved?	
	Have there been any changes in public support and/or decision-maker priorities related to hazard mitigation?	
Capability Assessment	Have jurisdictions adopted new policies, plans, regulations, or reports that could be incorporated into this plan?	
	Are there different or additional administrative, human, technical, and financial resources available for mitigation planning?	
	Are there different or new education and outreach programs and resources available for mitigation activities?	
	Has NFIP participation changed in the participating jurisdictions?	
Risk Assessment	Has a natural and/or technical or human-caused disaster occurred?	
	Should the list of hazards addressed in the plan be modified?	
	Are there new data sources and/or additional maps and studies available? If so, what are they and what have they revealed? Should the information be incorporated into future plan updates?	
	Do any new critical facilities or infrastructure need to be added to the asset lists?	
	Have any changes in development trends occurred that could create additional risks?	
	Are there repetitive losses and/or severe repetitive losses to document?	

Worksheet 7.2

Plan Update Evaluation Worksheet

Plan Section	Considerations	Explanation
Mitigation Strategy	Is the mitigation strategy being implemented as anticipated? Were the cost and timeline estimates accurate?	
	Should new mitigation actions be added to the Action Plan? Should existing mitigation actions be revised or eliminated from the plan?	
	Are there new obstacles that were not anticipated in the plan that will need to be considered in the next plan update?	
	Are there new funding sources to consider?	
	Have elements of the plan been incorporated into other planning mechanisms?	
Plan Maintenance Procedures	Was the plan monitored and evaluated as anticipated?	
	What are needed improvements to the procedures?	