From the Critical and Community Facilities Vulnerability Assessment (CCFVA)

HMC Task: Identify 2024 Problem Statements and Mitigation Actions

- 1. List accurate Problem Statements initially identified in Critical & Comm Facilities Excel doc tables.
- 2. Try to solve the Problem (vulnerability to 1 or more natural hazards) long-term by writing reasonable, future fundable, or "wish list" Mitigation Actions.
- 1. List accurate Problem Statements initially identified in Critical & Comm Facilities Excel doc tables.

What is a Problem Statement?

A brief description of a site/building/road's vulnerability to (natural or other) hazard impacts.

A good Problem Statement contains:

the Problem [WHAT]

the Natural Hazards addressed [HAZARD]

the Specific Location / Road / Site/ Building / Facility in Town [WHERE]

the Description of Impact to Location [IMPACT]

2. Try to solve the Problem (vulnerability to 1 or more natural hazards) long-term by writing reasonable, future fundable, or "wish list" Mitigation Actions.

What is a Mitigation Activity versus a Preparedness, Response or Recovery Activity?

Mitigation is long-term risk reduction like an ordinance/regulation, construction, upgrade of existing, or rehabilitation of facilities.

Action Type	Duration	Definition or Characteristics
Mitigation	Long Term	Action / project supports sustained risk prevention or reduces long-term risk
	2024-2029+	to people, property, and infrastructure.
		Sest suited for <i>Town Hazard Mitigation Plan</i> .
Preparedness	Short Term	Action assists or supports planning, protective activities, public education, training
	Ongoing	and exercise. AVOID MOST in HMP
		Sest suited for <i>Town Emergency Operations Plan</i> . Strikethrough
Response,	Short Term	Action supports preventative, response, recovery-related, repeated or deferred
Recovery,	Ongoing	maintenance activities. AVOID MOST in HMP
Other Related		Sest suited for <i>Town Emergency Operations Plan</i> . Strikethrough

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(Natural) Hazards for Problem Statements & Mitigation Actions:

New Natural Hazards 2023	HIRA RANKED TOP Natural Hazards	At Least 1 Mitigation Action? Yes / No
HYDROLOGIC Hazards		
DROUGHT	HIGH	
WILDFIRE Brushfire, Outdoor Fires, Accidental, etc	EXTREME 3	
COLD WEATHER STORMS (Atmospheric Hazards)		
WINTER STORMS BLIZZARD, NOR'EASTER	EXTREME 3	
ICE STORM	EXTREME 3	
EXTREME TEMPERATURES (Atmospheric Hazards)		
COLD WAVE Wind Chill, Freezing	HIGH	
HEAT WAVE Excessive Heat	HIGH	
FLOODING (Hydrologic Hazards)		
DAM FAILURE Water Overtop, Breach, Beaver, etc.	MEDIUM	
INLAND FLOODING Rain, Snow Melt, Flash Floods- Cause Ditch Erosion, Washouts, Pond Overtop, etc	HIGH	
RIVER HAZARDS Flood, Ice Jams, Scouring, Erosion, Channel	EXTREME 3	
GEOLOGIC Hazards		
EARTHQUAKE >4.0MM	LOW	
LANDSLIDE Soil, Rockslide, Excavation Areas, etc	LOW	
PUBLIC HEALTH (Biologic Hazards)	EXTREME 1	
Swimming Water Quality		
Air Quality		
Drinking & Surface Water Quality		
Infectious Diseases		
Arboviral Diseases		
Tickborne Diseases		

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New Natural Hazards 2023	HIRA RANKED TOP Natural Hazards	At Least 1 Mitigation Action? Yes / No
SOLAR STORMS AND SPACE WEATHER		
GEOMAGNETIC STORMS Aurora Borealis	HIGH	
SOLAR RADIATION	HIGH	
RADIO BLACKOUT	HIGH	
WARM WEATHER STORMS (Atmospheric Hazards)		
HIGH WINDS	EXTREME 2	
THUNDERSTORMS	EXTREME 3	
DOWNBURSTS	HIGH	
LIGHTNING	EXTREME 2	
TORNADOES	EXTREME ①	
HAIL	EXTREME	
TROPICAL AND POST-TROPICAL CYCLONES Hurricanes, Tropical Storms, Tree Debris	MEDIUM	

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We need at least 1 Mitigation	Action per Natural Hazard	For Which Hazard?
REVIEW & FINALIZE Critical Facilities Problem	DEVELOP 1 or More	Natural Hazard
Statement for accuracy.	2024 Mitigation Actions?	
Essential Town Facilities Table:		
Wet heavy snow accumulation on flat town	n roofs	
(School) could result in the potential for roo	of	
collapse if snow is not removed regularly.		
Town Office, Police Department, Post Office	e,	
Library, Epsom Central School, Epsom Man	or are	
targets for human threats (active shooter,		
bombing, powders, etc). Safety Committee	has	
reviewed. FD is looking for tactical vests in	30-60	
days. Alert Lockdown Inform Counter Evacu	uate	
ALICE "train the instructor" training sponso	ored by	
the PD for 2 days on April 24-25 at the Epso	om	
Central School, although it has a high cost ((\$600) -	
all staff have basic training & annually, refre	esher	
course. Police does instruct for ALICE for sc	chool.	
Many school staff involved in CPR, certificate	tions.	
Police & Fire doing walk throughs of all 4 to	owns,	
Loudon, Pittsfield, Epsom, Chichester, mult	i-	
jurisdictional effort.		
•		
• NEW		
Utilities Table:		
• If the main transmission towers were destr	oyed by	
any weather event or hazard event, all pub	lic	
safety communications would be jeopardize	ed.	
People panic when internet and power are	out,	
calling emergency facilities. Infrastructure i	is	
protected, but the residents lose service. A	тт	
given broadband contract by governor's off	fice, but	
it does not cover Epsom well. Some of the t	towers	
are vacant, have no service. Poor communi	ications	
on emergency side of operations. Equipme	nt	
taking even longer to get in.		

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We need at least 1 Mitigation Action per Natural Hazard		For Which Hazard?	
REVIEW & FINALIZE Critical Facilities Problem Statement for accuracy.		DEVELOP 1 or More	Natural Hazard
		2024 Mitigation Actions?	
•	Breezeline and internet has often been and		
	Consolidated with telephone. Internet has been		
	down for up to a month with poles fallen during		
	storm events.		
•	Water utilities are old , especially Short Falls Road.		
	Needs to be replaced, have a need for regular		
	services. Lots of holes everywhere. Black Hall road		
	also. INFO: New pipes laid t the circle have been		
	used multiple times and are a huge asset to Fire		
	Dept.		
•	Dry Hydrants are needed, ponds, river access -		
	seasonal. They regularly dry up from drought.		
•			
•			
•	NEW		
Da	ms Table:		
•	With an upstream Northwood Lake dam breach,		
	Epsom's Route 4 at Route 107 intersection would		
	be fully washed out if the Lake drains. A breach		
	would also result in flooding the Cass Pond Dam		
	which may flood Route 4. Northwood Lake dam		
	failure would flood the Suncook River, with		
	detrimental effects experienced along its length.		
	Road damages and diversion of traffic around		
	those areas.		
•	MOSTLY STABILIZED. With the Buck Street Dam		
	out, flash flood but not does not stay around.		
	{previously flood stage 6 feet in 5 hours - 3 feet in		
	1.5 hours evacuation stage]. Swimmers are often		
	floating down the river during floods, FD notifies		
	but they choose to remain. From the		
	Chichester/Epsom town line on Route 28, the		
	Suncook River experiences erosion beside the road		
	to the blacktop. The State of NH replaced and		

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RE	VIEW & FINALIZE Critical Facilities Problem	DEVELOP 1 or More	Natural Hazard
Sta	atement for accuracy.	2024 Mitigation Actions?	
	maintains riprap to stop the area from further		
	erosion. So far, seems to be holding up. State		
	should erect guardrails at Route 28 near Deer		
	Meadow Road (Chichester side).		
•	Town has had problems with propane tank debris		
	floating down the Suncook River from Kingstowne,		
	Lazy River and Suncook Valley Campground and		
	lodging against bridges during flooding events.		
	Could happen again during extreme events. Some		
	homes have been moved. Campgrounds are more		
	responsive to potential flooding. Solved this issue		
	for the most part, although the river has not yet		
	risen high enough.		
•	INFO: 07-10 week flooding- Very fast response and	Promote and enforce tank tie	
	very fast flood. Just short of 11', projections had	down and anchoring.	
	been higher. 10'6" stage at N Chichester Bridge.		
	Lazy River Campground and (11 out) and Epsom		
	Valley Campground (26) FD also stabilized the		
	banks and tanks from floating down.		
Bri	idges Table:		
•	Little Suncook River has the potential to overtop		
	the Route 107 bridge and/or Black Hall Road		
	bridge, Center Hill Bridge. State has taken care of		
	some of the damming concerns. Ice jams would be		
	more problematic. River woody debris above		
	Center Road bridge, which is a newer bridge, had		
	been causing the ice jam, but resolved now.		
•	NEW Woody debris still found on Little Suncook		
	River at Center Hill. One was new fallen tree after		
	erosion, one rotten tree that came from upstream.		
•	Leighton Brook at intersection of Old Town Road.	->> ACTION ITEM FOR PB	
	Now a culvert, should be a box culvert -	DRAINAGE.	
	engineering review permitting. Blackhall Road		
	culvert overtopped downstream in multiple		

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RE	VIEW & FINALIZE Critical Facilities Problem	DEVELOP 1 or More	Natural Hazard
Sta	atement for accuracy.	2024 Mitigation Actions?	
	locations. New development upstream has no		
	drainage on BH Road, increased stress on all		
	seasonal streams and intermitted streams under		
	BH Rd. Devts try to keep the water within their		
	developments. Many repairs from Leighton Brook		
	on the higher side upstream (not downstream DES		
	repaired). PB working on detention ponds		
•	The Town has 3 redlisted/closed bridges for which		
	there is no funding to rehabilitate or remove. No		
	funds to take down the bridges during closed -		
	hazard to kids, people who try to walk across. The		
	Old Turnpike Bridge is historical- may be limited in		
	what can be done later Cass Bridges not in DOT		
	TYP.		
•	NEW		
Sh	elters, Schools and Medical Facilities Table:		
•	Among the biggest potential disasters to the Town		
	are biological hazard events occurring at the		
	Epsom Central School, Epsom Manor, and the		
	Family Medical Center. School tracks symptoms		
	and notifies the State. Town notifies local health		
	officer who then notifies the State. Lyme disease,		
	influenza (POD is in Northwood Coe Brown		
	Academy). Od Sears Building was used for COVID.		
	State Plan 2009 has not been updated. Town held		
	1 drill as a result.		
•	Power failures would severely impact these critical		
	facilities (Epsom Central School, Epsom Nursing		
	Home, or Epsom Family Medical Clinic) that		
	provide medical assistance and sheltering during		
	disasters. Only Epsom Manor has a generator		
	system. Epsom Traffic Circle area is one of the first		
	areas to regain power on a priority basis. Feb 2018		
	Epsom Medical Center one of the generators		

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REVIEW & FINALIZE Critical Facilities Problem	DEVELOP 1 or More	Natural Hazard
Statement for accuracy.	2024 Mitigation Actions?	
failed and pumped smoke into the building.		
Epsom Central School does not have a generator		
and could lose food in its freezers. However, it can		
serve as a temporary Town shelter and people can		
be bussed to a secondary location if needed. Can		
be purchased with grant funding. Who will staff it?		
This is an issue to resolve. Often combine		
resources (people) is the better way -shared		
shelter and transportation during electrical events.		
(Private LRC campground properties - why		
approve & build campgrounds down low at the		
riverside? Always evacuate)		
INFO: Library and Epsom Bible Church can be used		
for either warming or heating shelters.		
INFO: US 4 and NH 28 all priority restoration areas		
through Fort Mountain (primary communications,		
has a generator).		
•		

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REVIEW & FINALIZE Community Facilities Problem	DEVELOP 1 or More	Natural Hazard
Statement for accuracy.	2024 Mitigation Actions?	
Vulnerable Populations Table:		
There exists a probability of future flooding &		
need of evacuation for Lazy River, Kingstowne		
MHP (a few left) and Epsom Valley Campground		
from the Suncook River and along Route 28. These		
are all private communities and they've been		
better with avoiding flooding (home elevation,		
home moving, etc.). Once a Flood Watch comes		
in, they have an alert process in place. More		
aware now than in the past.		
Town receives multiple first responder calls for		
trees down in seasonal campgrounds, on		
manufactured homes and town wide during		
severe wind events and storms. These locations		
are particularly vulnerable with light structures		
and heavy trees. During the drought, more trees		
fall over with dry and exposed roots. Residents are		
becoming proactive with tree removal. Power		
companies come in every 5 years. Town can call		
and request trees removal. HD also removes trees.		
• Dead-end roads- trees down block entire roads for	ACTION - private ROW	
several hours. Emergency services impacted from	easement?	
reaching residents. People cannot get from one		
side to homes or from homes out of development.		
Traffic crashes.		
•		
•		
• NEW		
Economic Assets Table:		
With any accident or casualty at the Epsom Traffic		
Circle (Routes 4/202 & 28), a traffic backup can		
occur, possibly for miles in each direction.		

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REVIEW & FINALIZE Community Facilities Problem	DEVELOP 1 or More	Natural Hazard	
Statement for accuracy.	2024 Mitigation Actions?		
Evacuation of businesses may be needed, and			
traffic rerouting (within 1 mile) would be			
necessary. Epsom Manor would be very difficult			
would be the last option available, as these are			
critical care patients. No specific policy, no			
incident is the same and requires scaling up as			
needed. Staged response. Communications plan in			
place, all Departments follow protocol and contact			
the State when needed.			
After electricity in region goes out, power to the 1			
gas station at the Epsom Circle and State Liquor			
Store is restored quickly because of nearby			
vulnerable populations and Town services. As a			
result, many, many people are drawn to Epsom to			
get fuel, causing traffic backups and hampering			
the local recovery situation. Situation will get			
worse when Bow Merrimack Plant goes offline,			
rolling brownouts will become more severe. PD &			
FD keeps an eye on the situation and would			
provide more coverage if needed. Gas station			
reserves run out quickly. Town has a backup list of			
locations of emergency fuel storage, gas and			
diesel.			
State Sand and gravel excavation has begun to run			
off more sediment during the last flood. Most of			
the agricultural fields impacted by river changes			
and flooding have mostly been abandoned.			
Campgrounds still flood, but that's where they are			
traditionally located. Steve Landry DES considers			
the Suncook River 90% stable, but during major			
events the course will change more.			
Churches & Cemeteries Table:			
There are lots of private cemeteries and individual			
graves . Individual graves and family cemeteries			

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Statement for accuracy.	2024 Mitigation Actions?		
are not considered public cemeteries so they ma	У		
not be tracked or made available or public access	i.		
(see NH Cemetery Association.org)			
• Lightning rod protection for historical buildings -			
may be possible to mitigate for certain Historic			
buildings and church buildings.			
•			
•			
•			
• NEW			
Hazardous Materials Facilities Table:			
• There are a high number of hazardous materials	NONE		
facilities all around Town and along major routes			
Route 4 & 28. If a fire or incident occurs,			
evacuations of nearby vulnerable populations			
must occur. Traffic will need to be rerouted, majo	or		
traffic hazards will result. FD is updating contacts			
at businesses and MSD sheet and are preplanning			
for response, inspections and walk through. Have			
a procedure to follow, bill of lading, Central NH			
Hazmat rules. Federal Highway went to a new			
placarding system to replace the MSDS, with a			
simpler related sheet. Materials Safety Data Shee	et.		
There may be more Tier 2 businesses in town that	t		
do not report. Technically any small businesses			
generating even electronic waste could quality as	5		
a generator.			
•			
•			
•			
Historic Sites and Buildings Table:			
Fire suppression becomes difficult when some of			

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Statement for a	accuracy.	2024 Mitigation Actions?	
the historic	al sites are beyond the water precinct		
zones. Mos	t of them are up on the hills. Placed a		
wet hydran	t to the old Meetinghouse. Hoping to		
extend to 1	.0" pipe. Engineering plans developed		
by Underw	ood. Contaminated water at Getty		
Station (Mt	BE), Exxon Mobil contributed funding		
to the State	e that will benefit Epsom. Town Wells 1		
& 2 are loca	ated on Dover Road (Route 4).		
Expansion (of water service went to the Manor by		
2021. May	have a 3rd well needed in the future.		
Town Fores	st Management Plan needed and in		
progress fo	r Town Forest for logging. Also has an		
old mill, cei	metery and cellar foundations on site at		
Tarleton Ro	oad entrance.		
•			
•			
Epsom has used for recto the use of the	Gathering Sites Table: many remote wooded sections of Town creation. There is a high risk of fire due of and access to remote sites. FD has a seep access to Class VI roads. Upgrading		
forest fire t	ruck in 2021 and a UTV to get access to		
hiker rescu	e and searchers. Town has a forester,		
regular logg	ging. FD kept up to date on logging.		
Slash cleare	ed out, less fire. FD conducts controlled		
burns. Seve	eral areas like Fort Mountain are gated.		
• Emergency	response has difficulty locating and		
evacuating	injured or lost people even in the Town		
	ne person has a cell phone, PD can ping		
the phone	through 911. NH Fish & Game will		
	ill Town Forester. FD do mapping and		
GPS trainin	g every year. PD can access K-9 units		
	al imaging units. The Town does not		

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have Town Forest & other conservation area maps		
readily available to all emergency response or the		
public. Maps are needed and should be available		
to the public and for emergency response.		
• INFO: (map sketch, popular trail system, maybe		
200/week, in walking distance of residents. Scout		
waiver for camping). Cons Comm program working		
to digitally create a map for people to walk.		
AllTrails.com has some trails uploaded from Town		
Forest		
•		
•		
Future Development Table:		
Town services and the School system could not		
accommodate development of the large lot legacy		
properties at current Town service levels.		
Significant upgrades to services, buildings,		
infrastructure, equipment and staff would need to		
occur. Some of the lots could be conserved. Bear		
Paw Regional Greenway recently approached 8		
landowners for conservation land, asked town to		
purchase. Economic development is an important		
theme in the community right now. The 3		
Economic Revitalization Zone (ERZ) ordinance was		
passed, have an Economic Development		
Committee, signs are being printed for installation.		
Purchased 20-22 Bearpaw conservation land		
added to Town Forest. No purchase of additional		
land is proposed, too expensive for budget. Cons		
Comm does not get 100% of the LUTC, a smaller		
%.		
•		
•		

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We need at least 1 Mitigation Action per Natural Hazard		For Which Hazard?
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•		
•		
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•		