

Webster Hazard Risk Assessment 2018

MEETING 1

11/7/2017

PLAN TABLE

Overall Risk Ranking of Hazards in Webster

Overall Risk Ranking of Hazards in Webster				RANK				
		REVIEW & UPDATE POTENTIAL HAZARD LOCATIONS	RANK	Impact to the Town				
Natural, Technological, and Human Hazard Events		Susceptible (Existing) Hazard Locations in the Town	Probability of Occurrence	Human Injury Impact	Critical Services and Infrastructure Impact	Property Damage Impact	Severity of Impact	Overall Risk
		See also the Community and Critical Facility Vulnerability Assessment (CCFVA) for specific sites, addresses, phone numbers and primary hazards.	See scale below 1= Unlikely 2= Possible 3= Likely 4= Highly Likely	See scale below 1= Limited 2= Significant 3= Critical 4= Catastrophic	See scale below 1= Limited 2= Significant 3= Critical 4= Catastrophic	See scale below 1= Limited 2= Significant 3= Critical 4= Catastrophic	Avg. of Human + Services + Property	Relative Threat RANKED 1-16
Flooding	Floods and Flash Floods	<p>Floodplains of Blackwater River and the Flood Control Area. Brooks such as Beaver Dam Brook, Deer Meadow Brook, Schoodac Brook, Pond Brook, Knight Meadow Brook result in expanded flooding. Pillsbury Lake, Lake Winnepocket, Walker Pond, Couch Pond, Knight Meadow Pond/Marsh, Walker Pond and several Farm Ponds can flood. Beaver dams can breach, resulting in localized flooding. Homes within the Flood Control Area are at risk. Runoff from roadways or heavy rain can cause floods over the Entire Town.</p> <p>Bridges, drainage systems and areas of past, repaired, or existing potential for road washout:</p> <ul style="list-style-type: none">• Roads: Battle Street/ Route 127 (State roads & culverts), Roby Road, Corn Hill Road (Pond Brook), Deer Meadow Road (Deer Meadow Brook), Little Hill Road, Long Street (Beaver Dam Brook beaver dam/swamp), Mutton Road, Pillsbury Lake (dam breach – the Lake drained), Roby Road, Whiteplains Road (Schoodac Brook).• Bridges: Whiteplains Road Bridge, Clothespin Bridge, Pillsbury Lake Bridge (beaver dam)• Public/private facilities: Pillsbury Lake Water Precinct• Culverts: Deer Meadow Road, Mutton Road, Battle Street/ Route 127 (State)• Dams: Little Hill Road	1	1	1	1	1	1.0
	Rapid Snow Pack Melt	Snow melt runoff from impervious surfaces and roadways or from tree cover and fields can cause floods over the Entire Town. Particularly susceptible areas: flooding potential of the Blackwater River and Reservoir, Deer Meadow Road, the back side of New Hampshire Drive, and all roads in the floodplain are particularly susceptible. Other areas include the regular road washouts (see Flooding).					#DIV/0!	#DIV/0!
	River Ice Jams	Blackwater River ice jams could endanger the dams and have occurred in the past, especially near Clothespin Bridge Road, Battle Street, Tyler Road and east of Tyler Road.					#DIV/0!	#DIV/0!
	Riverine Scouring, Erosion, Channel Movement	Because of the Blackwater River Flood Control Area, bank erosion, scouring and channel movement are not considered hazards of particular concern. Erosion of Clothespin Bridge Road south of Detour Road is one most likely to be affected by scouring.					#DIV/0!	#DIV/0!
	Tornadoes	Entire Town. Areas of particular concern include high density populations such Blackwater Dam and its reservoir, the bridges in Town, the high population area of Pillsbury Lake, Cozy Pond Camping Resort, the Austin Home and the Elementary School. The entire Town is wooded and forested. Section of Town would be difficult to access with trees and power lines down on the residential roads. Most remote road/area of Town includes Little Hill Road. Dead end roads LIST					#DIV/0!	#DIV/0!

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Wind	Downbursts	Entire Town. Areas of particular concern include high density populations such Blackwater Dam and its reservoir, the bridges in Town, the high population area of Pillsbury Lake, Cozy Pond Camping Resort, the Austin Home and the Elementary School. The entire Town is wooded and forested. Section of Town would be difficult to access with trees and power lines down on the residential roads. Most remote road/area of Town includes Little Hill Road. Dead end roads LIST _____ . Agriculture farms LIST _____					#DIV/0!	#DIV/0!
	Hurricanes and Tropical Storms	Entire Town. Areas of particular concern include high density populations such Blackwater Dam and its reservoir, the bridges in Town, the high population area of Pillsbury Lake, Cozy Pond Camping Resort, the Austin Home and the Elementary School. The entire Town is wooded and forested. Section of Town would be difficult to access with trees and power lines down on the residential roads. Most remote road/area of Town includes Little Hill Road. Dead end roads LIST _____. Roadways (fallen trees), electrical power utilities (Unitil & Eversource), communications network, telecommunications towers, local government operations are susceptible to damage by debris impacted infrastructure. See also previously listed wind and flood vulnerability sites.					#DIV/0!	#DIV/0!
	Severe Winds, Rain Storms and Thunder Storms	Entire Town. Areas of particular concern include high density populations such Blackwater Dam and its reservoir, the bridges in Town, Pillsbury Lake Water Precinct, the high population area of Pillsbury Lake, Cozy Pond Camping Resort, the Austin Home and the Elementary School. Regularly flooded areas need to be monitored. The entire Town is wooded and forested. Section of Town would be difficult to access with trees and power lines down on the residential roads. Most remote road/area of Town includes Little Hill Road. Dead end roads LIST _____. Roadways (fallen trees), electrical power utilities (Unitil & Eversource), communications network, telecommunications towers, local government operations are susceptible to damage by debris impacted infrastructure. See also previously listed Wind and Flooding susceptibility areas.					#DIV/0!	#DIV/0!
	Lightning	Entire Town. Areas of concern are remote areas (see Wind) which could not be easily accessed by emergency vehicles. The two telecommunications towers (US Cellular at Dustin Road tower and AT&T at Pearson Hill tower) receive regularly lightning strikes. Other areas most susceptible include forested areas, conservation areas, open recreation fields, points of higher elevation than surrounding area. Buildings without lightning rods would be more susceptible to damage from a strike. Other susceptible structures include aboveground utilities: transformers, water towers, churches and tall buildings.					#DIV/0!	#DIV/0!
Fire								

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Fire	Wildfire	Entire Town (forested). Areas of concern are Pillsbury Lake, high density residential areas, along a stretch of the Blackwater River spanning from Route 127 to Clothespin Bridge Road, high tension power lines with dense scrub underneath running through the Deer Meadow Road area, dry slash throughout Town, and remote areas (see Wind) which could not be easily accessed by emergency vehicles. Other areas most susceptible include forested areas, conservation areas, open recreation fields, old historic buildings.					#DIV/0!	#DIV/0!
	Severe Winter Weather, Wind Chill and Ice Storms	Entire Town. Areas of particular concern include Elementary School, individual elderly residences, the high population area of Pillsbury Lake, Cozy Pond Camping Resort, the Austin Home. Roadways (fallen trees), electrical power utilities (Unitil & Eversource), powerlines/cable/internet, two telecommunications towers (US Cellular at Dustin Road tower and AT&T at Pearson Hill tower) communications network, local government operations are susceptible to damage. Webster’s dispersed residential population, located in wooded and forested sections of Town are vulnerable to loss of power and debris on roads. Most remote road/area of Town includes Little Hill Road. Other sections of Town would be difficult to access with trees and power lines down on these residential roads. People may be subject to cold temperature, snow isolation, transportation accidents, power failure and communications failure during winter storm events. A voluntary "welfare check" list is available for people to sign up at the Town Office.					#DIV/0!	#DIV/0!
	Drought	Entire Town / Region. Areas susceptible include farms and orchards: 1 dairy farm [NAME], but many households keep farm animals. Also vulnerable are those residences with private dug wells and Town water supplies (Pillsbury Lake Water Precinct). Drought means increased risk of brush fire with dry vegetation (see Wildfire for areas). Gravel roads affected because can't grade them when water is low. All fire ponds will be low or dry during drought times. Higher elevations and ledgy locations tend to run dry first.					#DIV/0!	#DIV/0!
	Excessive Heat	Entire Town. Areas of particular concern include Elementary School, individual elderly residences, the high population area of Pillsbury Lake, Cozy Pond Camping Resort, the Austin Home. Vulnerable areas most susceptible to extreme heat include farms, orchards _____. The EOC can be opened as a cooling centers during extended heat conditions.					#DIV/0!	#DIV/0!
	Earthquake	Entire Town. The Central NH Region is seismically active and earthquakes are regularly felt from area epicenters. Site of greatest concern is the Blackwater Dam. Damage to utility poles and wires, roadways and infrastructure (dams, water lines, bridges) could be significant. Areas with underground utilities, Pillsbury Lake Water Precinct, old buildings, and the Elementary School are particularly susceptible.					#DIV/0!	#DIV/0!

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Earth	Landslide	Development in proximity to areas of steep slopes (greater than 15%) is at risk for these events. Roads with steep ditching or embankments are most vulnerable to landslide include White Plains Road, Detour Road by Pleasant Street, and many others alongside roadways.					#DIV/0!	#DIV/0!
Technological Hazards	Dam Failure	High Hazard (H) dam is the Blackwater Dam (H) and 3 Low Hazard (L) dams are the Pillsbury Lake Dam, Willipocket Lake Dam and Knight Meadow Pond Dam (L), but beaver dams have a high probability of flooding and potential to break.					#DIV/0!	#DIV/0!
Technological Hazards (often secondary hazards)	Power/Utility Failure	Entire Town. Areas of particular concern include Elementary School, individual elderly residences, the high population area of Pillsbury Lake, Cozy Pond Camping Resort, the Austin Home, Pillsbury Lake Water Precinct. Wooded, forested and more remote sections of Town would be difficult to access, with trees and power lines down on these routes or residential roads (see Wind). Webster depends on power from Eversource and Unitil. Power outages may last for several days before service is restored in a large event. Isolated areas of Town are particularly vulnerable to outages and the resulting effects. A voluntary "welfare check" list is available for people to sign up at the Town Office.	not rated	not rated	not rated	not rated	not rated	not rated
Technological Hazards (often secondary hazards)	Communications Systems Failure	Entire Town. Two telecommunications towers (US Cellular at Dustin Road tower and AT&T at Pearson Hill tower), telephone, Verizon Wireless, and electrical lines (Unitil & Eversource). Communications are detailed in the Community Vulnerability Assessment tables. Communications failure would be worse if it occurred at the Fire and Police Depts, Highway Department or Town Offices, especially during a holiday, or inhibited emergency dispatch and EOC operations. Most Town radios are interoperable, and they are used in more than one location. The Town is serviced by the Capital Area Mutual Aid Compact, which does all the emergency medical service and Fire dispatching. They have redundant capabilities. Satellite communication is available for the Army Corps of Engineers at the Blackwater Dam.	not rated	not rated	not rated	not rated	not rated	not rated
Technological Hazards (often secondary hazards)	Debris Impacted Infrastructure	Most dams and bridges could experience debris impacted infrastructure, including the Battle Street bridge over the Blackwater River, Clothespin Bridge Road over the Blackwater River, and the two bridges on Tyler Road over the Blackwater River. If the log boom, which holds back the logs, breaks, debris could clog the Blackwater Dam. Box culverts as replacements for failing culverts have been recently installed in many Webster roads as a result of recurring flooding events. Debris impacted infrastructure includes blocked roadways (trees & powerlines).	not rated	not rated	not rated	not rated	not rated	not rated
Technological Hazards	Transportation Accidents	Main highway through Town is Battle Street/Route 127. Intersections with NH 127 can be dangerous. See Map series for regular accident locations - at certain intersections, curves, straightaways, hills.	not rated	not rated	not rated	not rated	not rated	not rated
Technological Hazards (often secondary)	Hazardous and Radiological Materials Spills	NH 127/Battle Street would be the most realistic routes taken where vehicular traffic transports hazardous waste. The largest or most dangerous stationary sites that store and/or handle haz mat on site (fertilizer, pesticides, fuel, etc) are listed in Appendix A. Occupational haz mat sites where spills could occur include: health care facilities, schools, manufacturing, etc.	not rated	not rated	not rated	not rated	not rated	not rated

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Human	Public Health Epidemic	Congregate populations. Webster Elementary School, Austin Home, populated areas, large employers, senior housing, stores and public assembly venues listed in Appendix A - all of these locations increase the risk of exposure to and transfer of illness. The forests, conservation areas, agriculture, wooded areas, ponds can host ticks (Lyme) and mosquitos (West Nile, EEE, etc).		not rated	not rated	not rated	not rated	not rated	not rated
Human	Fire (Vehicle, Structure, Arson)	Entire Town. Areas most susceptible include: above ground fuel tanks on farms, including Drown, Rose Logging, and Mock; underground storage tanks, Eversource high tension power lines running over auto salvage yards; Mutton Road, Little Hill Road, Deer Meadow Road areas miles away from fire ponds; vacant buildings, foreclosed homes or seasonal buildings; or buildings in densely populated areas. Vehicle fires could occur anywhere, parking lots, driveways, roadways. Above ground LP storage tanks can also pose a potential hazard.		not rated	not rated	not rated	not rated	not rated	not rated
Human	Terrorism	Unlikely, but possible anywhere in Entire Town. Most susceptible sites could include: Town Office, School, churches, Library, Blackwater Dam, Pillsbury Lake Water Precinct, Public Safety Buildings, Eversource high tension power lines, Post Office, all other governmental facilities or state facilities, political offices or rallies, churches, the two telecommunications towers (US Cellular at Dustin Road tower and AT&T at Pearson Hill tower), businesses with large quantities of hazardous materials like Roberts Greenhouse & Cloverdale Feeds, grocery or convenience stores, restaurants.		not rated	not rated	not rated	not rated	not rated	not rated
Human	Sabotage/Vandalism	Town or Governmental Facilities. Sabotage would be most likely to occur at electric utilities, Town Offices (computer systems & website), Town buildings, Blackwater Dams, Pillsbury Lake Water District, other water supplies, cemeteries, vacant buildings, beaver dams, under bridges.		not rated	not rated	not rated	not rated	not rated	not rated
Human	Hostage Situation	Unlikely, isolated events. Locations where hostages could be taken include: Town Offices and other public buildings, School, Post Office, workplaces, grocery and convenience stores, restaurants, high density population areas, public events, and domestic home situations.		not rated	not rated	not rated	not rated	not rated	not rated
Human	Civil Disturbance/ Public Unrest	Unlikely, limited events. Locations where civil disturbance could occur: Town Offices, Pillsbury Lake Community Center, Elementary School, stores, restaurants, establishments serving alcohol, high density population areas. Occasions include: Town Meetings, voting day, local board meetings, during visits from political candidates, large events such as Old Home Day, Veteran's Parade, School sports events, Blackwater Canoeing event.		not rated	not rated	not rated	not rated	not rated	not rated
REVIEW & UPDATE POTENTIAL HAZARD LOCATIONS				RANK		RANK			

NHHSEM's State Multi-Hazard Mitigation Plan 2013 also contains Snow Avalanche and Coastal Flooding. Neither of these are pertinent to the Town. Radon is no longer considered a hazard in NH's Plan and therefore was not included in this local Plan.

16 Ranked Hazards (of 27) in Hazard Risk Analysis 2018
HIGHEST RANKING HAZARDS ◇ RANK x - x

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Probability of Occurrence

1	Unlikely=	0 - 25% chance	in 10 years
2	Possible=	25 - 50% chance	in 10 years
3	Likely=	51 - 75% chance	in 10 years
4	Highly Likely=	76 - 100% chance	in 10 years

Impact to the Town

1	Limited=	Human: Critical Facilities/Services/Infrastructure: Property Damage:	♦ Injuries treatable with first aid. ♦ Minor "quality of life" disturbance, shutdown for 3 days or less. ♦ Less than 10%.
2	Significant=	Human: Critical Facilities/Services/Infrastructure: Property Damage:	♦ Significant injuries or illnesses result in no permanent disability. ♦ Shutdown for up to 2 weeks. ♦ 10% to 25%.
3	Critical=	Human: Critical Facilities/Services/Infrastructure: Property Damage:	♦ Significant injuries or illnesses result in permanent disability. ♦ Complete shutdown for at least 2 weeks. ♦ 25% to 50%.
4	Catastrophic=	Human: Critical Facilities/Services/Infrastructure: Property Damage:	♦ Death or multiple deaths. ♦ Complete shutdown for 30 days or more. ♦ Greater than 50%.