

Identify 2018-2023 Past Hazard Events or Severe Weather and Location
 Epsom HAZARD MITIGATION


HMC Members - add your hazard/severe weather experiences into this file and return to SA
 Submit photos of hazard events or severe weather for the Photo Appendix
 PLEASE HIGHLIGHT YOUR CHANGED CELLS IN GREEN FOR EASY IDENTIFICATION OF REVISIONS

Work Session 1
 6/28/2023
 Email your file to Stephanie at
salexander@cnhrpc.org

HAVE PHOTOS?

The Plan needs your personal, Dept, or agency photos of the past severe weather events in the Town to illustrate their impact. Email Stephanie your JPEGs or share a Dropbox or Google Drive link to the photos. ↩ Note who should receive the photo credit, ensure photo date is noted, and add event location (street, business, waterbody, etc) in file name or in separate

We need YOUR photos!



- **WHERE?** Note location of the event in the Year column.
- **WHAT?** Describe what happened during the event in the Town.
- **WHEN?** Include the Month (or Season) of the event, add Date if known.

Discussed @M1 06-20

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Natural Hazards	ANNUAL or SEASONAL Hazards? WHERE?	2018 (Month) Events	2019 (Month) Events	2020 (Month) Events	2021 (Month) Events	2022 (Month) Events	2023 (Month) Events	NOTES	NOTES
DROUGHT	NEARLY ANNUAL: Water restrictions annually, wells for the last 3 years 2020-2023.	2016-2020 Drought	May through October	10 Jul - Moderate drought conditions 1 Sep - severe drought conditions 27 Oct - Severe to extreme drought conditions 1 Dec - Moderate to severe drought conditions	4 May - Moderate drought conditions	Summer 2022:	2023- Wells may be going dry but are not reported to the Town. Fire suppression is a big issue. Trucks are now tankers going to FD response. Dry hydrants long gone as are the ramp access. CAP area	Fire Dept no longer delivers water to farms for livestock or crops - their products could be contaminated for human consumption. In EOP for private companies.	
EARTHQUAKE	ANNUAL: Regional earthquakes impact the area, with no more than a large "boom" or shaking windows during a nearby earthquake.								
BEGIN HERE AT 06-28 meeting									
LANDSLIDE Soil, Rockslide, Excavation Areas, etc.	NONE								
PUBLIC HEALTH Infectious Diseases, Air & Water Quality, Biological, Addiction, Arboviral, Tick-borne, etc.	ANNUAL: Emerald Ash Borer or cyanobacteria? Lyme disease (tick) or West Nile (mosquito)?	DAILY: Fire & Rescue assist addiction patients daily, exposed to contaminants. More Narcan used than in previous years. Town Report 2022 table has			March 2020 - June 2022- Coronavirus pandemic				
SOLAR STORMS AND SPACE WEATHER Solar Winds, Geomagnetic Storms (Aurora Borealis), Solar Radiation, Radio Blackout, etc.	PERIODIC: Communications equipment has been subject to geomagnetic radiation and solar storms in the past.					Apr 4 - Capital Area Fire & EMS Simulcast dispatch microwave system dropped connection from solar storms. Several towns offline until Lakes Region backup engaged. Multiple antennas			
WILDFIRE Brushfire, Outdoor Fires, Accidental, etc.	ANNUAL: Numerous wildfires at ___ State Forest, between xx-xx acres each event. Regular wildfires to respond to.						2023- Oak tree coverage was frozen in May 2023, and became extra dry with less vegetation. In mid-June 2023, finally rained and downgraded the risk (about 2 months		
EXTREME TEMPERATURES									

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COLD WAVE Wind Chill, Freezing	ANNUAL: Nearly every year, extreme heat event records are broken or the Town encounters very cold temperatures.			13 Feb - Extreme cold temperatures 15-25 degrees below zero		2023--Feb 3-4 Cold Snap: Most communities in Central NH including Epsom experienced negative temperatures (-10 to -19 degrees F) plus windchill, ranging as low as -45 degrees for a 36-hour period.	Feb 2023- Was -30 deg in Epsom. Nursing home had problem with cold, had to evacuate 20 patients for sever cold. Sprinkler system, water pipes were broken. All plumbers were occupied in Feb 2023 with broken pipes and could not respond. Elliott Hospital	2023- Epsom Home Health care on its own water system, may want to monitor water capacity (has 2 tanks). Trying to get municipal water across the street, working with EDC, need grants and revolving loans.	May 2023- Lots of crops damaged with freeze. May 16 frost - Apples, cherries, pears, peaches, oak trees, strawberries. Food crop was devastated locally, impacts economics.
HEAT WAVE Excessive Heat	ANNUAL: Nearly every year, extreme heat event records are broken or the Town encounters very cold temperatures.		19 Jul - High heat and humidity 90-100 deg F		29 Jun - Extreme heat and humidity 90-100 degrees F		Jun 2023- Significant elderly population, high electric demands may cause brownout, a detrimental result for elderly. Holding brownout planning meeting with Unifit & Eversource planning to discuss multiple areas of Epsom to be concerned		
FLOODING									
DAM FAILURE Water Overtop, Breach, Beaver, etc.	ANNUAL- Regular beaver dam failures at: There is a list - not a specific time or season. Beaver dependent. Highway Dept. Relocations are attempted when possible.	Aug 6- Dam Break at Highway Department wetland.						Since the floods of 2005-2009, most of the infrastructure has been rebuilt to last.	Buck Street Dam removal has made a difference in flooding reduction. Northwood Lake's dam at Bixby Pond is the problem now. Homeless encampments are now in the area and may result in loss of life during a flood. Epsom does not have water rescue ability, but must rely on regional resources which only serve certain locations, not necessarily where the damage is.
INLAND FLOODING Rainstorms, Snow Melt, Flash Floods, Ditch Erosion, Washouts, Pond Overtop, etc	SEASONAL: Minor flooding from snow melt and rainstorms impacts roadways, brooks and ponds, and the Suncook River.	Jan 2018 - Snow and melt events 2-8 Mar - Severe storm rain, heavy wind and flooding many power outages 8/8 Rain minor flooding 11/3 minor flooding	19-22 Apr - Heavy rain, warmer weather, and snowmelt caused spring flooding 11-12 Jul - Repeated thunder storms caused flash flooding.		1 Aug - Heavy rain and flooding 30 Jul - torrential rain 18 Jul - Severe rain storm and flooding.	Oct 23 - minor flooding 12/22 4" rain, flooding			
RIVER HAZARDS Ice Jams, Scouring, Erosion, Channel Movement, Debris, etc	ANNUAL: Suncook River can flood or erode banks. Tree debris travels downstream to Allenstown.						Spring- Suncook River downstream tree debris found at NH 28 bridge, where Buck Street dam had been formerly located.	Still concerned with ice jams in the Suncook River. Steve Landry of NHDES maintains watch, concerned with debris movement and ice jams. The state is keeping up with repair work. Much of the localized debris was removed with the US 4 bridge redo, now with freer flowing water. Will study as the result to see how the Suncook River has changed.	
WARM WEATHER STORMS									

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HAIL							June 2023- Bad local hail storm, about a quarter-sized hail. Black Hall Rd and NH 28 windshields broke from hail. Tractor trailers off the road south of the traffic circle with lots of potential dangers. Three trees across wires. Many other hail events going back though to 2018.		
HIGH WINDS Wind Gusts, Storms (Causes Tree Debris, Electric Outage)	ANNUAL: Trees and tree limbs fall on powerlines, all of which can fall onto local and state roads during high wind events. All of Epsom is susceptible. MAIN TREEFALL	4/16/18 - Rain/wind storm. 5/4 T-storm/wind June 2018 - Windstorm 7/17 T-storm/wind 7/28 T-storm/wind 8/3 T-storm/wind 8/8 T-storm/wind 10/27/18 - Windstorm. 12/18/18- Windstorm.	2/25/19- High winds. 7/23 T-storm/wind 10/17/19 - Wind/Rain storm. 2019 large tree blowdown in Webster Park. Later windstorms took out more trees.	25 Dec - Heavy rain 1.5-2.5" and Strong wind 45-55 mph. Extreme.	3/2/21- Windstorm. 3/29/21- Windstorm. 5/26 T-storm/wind 7/21 T-storm/wind 7/23 T-storm/wind	Apr 18 & 19- Heavy rainstorm and winds caused treefall. Nov 29- Heavy winds caused treefall on utility lines. Dec 26- Pembroke Plausawa tower came down in the last wind event, day after Christmas. CAMAFc equipment on the ground, diverted to another tower for simulcast and microwave system. Pembroke has rehabilitation cost on their most recent FEMA claim. 7/12 T-storm/wind	2023- The lack of the Plausawa emergency communications antenna, destroyed after Dec 2022 windstorm and not allowed to place new emergency antennas on tower, has resulted in a lawsuit (overcharged/priced out by tower owners). Need to put a new tower up for the benefit of Epsom. The town cannot receive some emergency calls. Still waiting for parts to fix the antenna, need a tower to place them on. Leaves falling impact the technology.		
DOWNBURSTS									
LIGHTNING	ANNUAL: Lightning regularly strikes buildings in Epsom and rural areas like Mast Yard State Forest.	July 18- Town Library struck by lightning, caught fire. Burned out the computer and alarm systems. Otherwise, the building was mostly damaged from sprinklers and smoke, not the fire. \$700,000 to repair. Still may not have lightning rod now.					May 22- lighting storm.	Multiple strikes to people and property in Epsom over the last few years. Lots of ballfields where spectators and kids can be hit- children are not taught to leave the field during storms. FD gets the kids off the fields. Homes have been destroyed and damaged from lightning.	
THUNDERSTORMS	ANNUAL: Common culvert fail locations:								
TORNADOES	NONE							Three tornados have struck Epsom in Chief's lifetime, about 1 time every 10 years+ for 30 years. Short Falls Road, Lane Road 1970s, small straight line windshear later on. Tornado 2008 - loss of life, million dollar properties destroyed, clean up over five-10 years.	

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TROPICAL AND POST-TROPICAL CYCLONES Hurricanes, Tropical Storms, Tree Debris	PERIODIC: Trees and tree limbs fall on powerlines, all of which can fall onto local and state roads during tropical and post-tropical cyclone events.			Aug 3-6 - Tropical Storm Isaias	Aug 19-27 - Tropical Storm Henri			One egress roads?	Damage can include water, flooding, trees down, drinking water infrastructure.
COLD WEATHER STORMS									
WINTER STORMS, BLIZZARDS (winds >35 mph, visibility <0.25 mile, >3 hours), NOR'EASTERS (tropical pattern, low pressure, follows East Coast)	ANNUAL: Snowstorms impact the entire Town.	Jan 4 " Mar 13 - Severe snowstorm "	20 Jan - snowstorm 4-12" throughout the state 12-13 Feb - Snow and wintery mix storm 6-12" 2 Dec - Snowstorm 1-12" throughout the state 29 Dec - Snowstorm 6-10" throughout the state	17 Dec - Snowstorm 5-25" throughout the state.	1-2 Feb - Severe snowstorm 3-16" of snow throughout the state.	Feb 16- Snow	Jan 22 " ? Dec 23-25- Rain, wind, flood. Downed lines, trees, schools closed. Power outages for days.		
ICE STORM				7-8 Feb - Heavy snow, freezing rain, sleet, and rain causing many power outages.					
NOT APPLICABLE TO TOWN & REGION									
AVALANCHE									
COASTAL FLOODING									
TSUNAMI									
VOLCANIC ACTIVITY									
Technological and Human Hazards, Impacts from Natural Hazards	ANNUAL or SEASONAL Hazards? WHERE?	2018 (Month) Events	2019 (Month) Events	2020 (Month) Events	2021 (Month) Events	2022 (Month) Events	2023 (Month) Events	NOTES	NOTES
AGING INFRASTRUCTURE Bridges, Culverts, Roads, Pipes, Underground Lines, Debris, etc	Public Works Dept check log - # of events/year or note 1 significant event per year								
LONG TERM UTILITY OUTAGE Power, Water, Sewer, Gas, Internet, Communications, Live Wire Danger, etc	Public Works Dept check log - # of events/year or note a significant event per year					3/2/21- Windstorm		Electric Coverage:	Gas: Internet: Phone:
CONFLAGRATION (FIRE)	Fire Dept check log - # of events/year or note a significant event per year, how many acres burned?							How many non-natural fires per year? Any pattern?	
HAZARDOUS MATERIALS Haz Mat Spills, Brownfields, Trucking, Known and Emerging Contaminants, etc	Fire Dept check log - # of events/year or note 1 significant event per year								

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TRANSPORTATION CRASH Vehicle, Airplane, Helicopter, Rail, Interstate, Pedestrian,	ANNUAL: List State Routes, intersections with regular crashes								
MASS CASUALTY INCIDENT As a result of any hazard event	Fire Dept check log - # of events/year or note a significant event per year								
TERRORISM/ VIOLENCE Active Shooter, Hostage, Public Harm, Civil Disturbance/ Unrest, Politically Motivated Attacks, Incendiary	Police Dept check log - # of events/year or note a significant event per year								
CYBER EVENT Municipal Computer Systems Attack, Website Overtake, Cloud Data Breach, Telephone Rerouting, Identity Theft, Phishing, Ransomware, Virus, Phone Scams, etc.	Police Dept check log - # of events/year or note a significant event per year								