

# Hazard Identification and Risk Assessment (HIRA) 2024

HMC Notes Column - white text

Meeting 1
4/29/2024
CNHRPC   Contact Stephanie at salexander@cnhrpc.org   603-226-6021

## HENNIKER HAZARD MITIGATION

Overall Risk Ranking, Highest Magnitude and Change in Intensity of Natural Hazards Over the Next 10 Years

① Determine Probability and Severity of Natural Hazard to HENNIKER Over Next 10 Years  
Assume the Natural Hazard WILL OCCUR when determining Impacts.

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

  

Probability of Occurrence in 10 Years	
1 Unlikely	0 - 25% chance
2 Possible	25 - 50% chance
3 Likely	51 - 75% chance
4 Highly Likely	76 - 100% chance

② Determine Percentage of Hazard Intensity Change Over Next 10 Years.  
Assume the Natural Hazard WILL OCCUR.

Natural Hazard Intensity Change in Next 10 Years									
-100%	-75%	-50%	-25%	0%	25%	50%	75%	100%	
Extreme Decrease	High Decrease	Moderate Decrease	Slight Decrease	No Change	Slight Increase	Moderate Increase	High Increase	Extreme Increase	

Natural Hazards 2024 with Technological Human Hazards (not scored)	① HENNIKER					Overall Risk SCORE	RANKED TOP SCORES Natural Hazards	② Change in Natural Hazard Intensity Over the Next 10 Years (Increase or Decrease by 25% increments) See scale above.	③ Identify the Highest Magnitude or Extent that could occur in HENNIKER in the Next 10 Years using the scientific, measurable Scales in the Primary Measurement. Click on the hyperlinks for more information (see also SECONDARY & TERTIARY Scales).					HENNIKER NATURAL HAZARD CONCERN SUMMARY		
	Probability of Hazard Occurrence in 10 Years See scale below 1 Unlikely 2 Possible 3 Likely 4 Highly Likely	Human Injury Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Essential Services / Infrastructure Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Property Damage or Economic Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Probability x Severity Average Relative Threat SCORE 1 - 16				HENNIKER within Next 10 Years	HENNIKER Next 10 Years	PRIMARY Magnitude/Extent Measurement Scale or Index	PRIMARY Magnitude/Extent Scale or Index Hyperlink	SECONDARY Magnitude/Extent Scale or Index or Explanatory Information (Note Hyperlink if Possible)		TERTIARY Magnitude/Extent Scale or Index or Explanatory Information (Note Hyperlink if Possible)	
<b>Hydrologic Hazards</b>																
<b>DROUGHT</b> Lower Water Supplies, Drier Soil and Vegetation	4	4	4	4	16.0	1	0% No Change		D0 Abnormally Dry to D4 Exceptional Drought	US Drought (D-scale) Monitor Intensity Scale	<a href="https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NH">https://droughtmonitor.unl.edu/CurrentMap/StateDroughtMonitor.aspx?NH</a>				EXTREME	
<b>WILDFIRE</b> Brushfire, Outdoor Fires, Accidental, etc					0.0		0% No Change		Low (Green) to Extreme (Red) Fire Danger	National Fire Danger Rating System	<a href="https://www.nh.gov/nhdf/comunity/daily-fire-danger.htm">https://www.nh.gov/nhdf/comunity/daily-fire-danger.htm</a> <a href="https://www.wfas.net/index.php/fire-danger-rating-fire-potential-danger-32/class-rating-fire-potential-danger-51">https://www.wfas.net/index.php/fire-danger-rating-fire-potential-danger-32/class-rating-fire-potential-danger-51</a>				#N/A	
<b>COLD WEATHER STORMS (Atmospheric Hazards)</b>																
<b>WINTER STORM, BLIZZARD</b> (winds >35 mph, visibility <0.25 mile, >3 hours), NOR'EASTER					0.0		0% No Change		1 Notable to 5 Extreme Snowfall	Northeast Snowfall Impact Scale (NESIS)	<a href="https://www.ncei.noaa.gov/access/monitoring/rsi/nesis">https://www.ncei.noaa.gov/access/monitoring/rsi/nesis</a>				#N/A	
<b>ICE STORM</b>					0.0		0% No Change		No Impacts to Extreme Winter	NWS Winter Storm Severity Index (WSSI)	<a href="https://www.weather.gov/ict/WSSI_Overview">https://www.weather.gov/ict/WSSI_Overview</a>				#N/A	
<b>0 Damage to 5 Ice Damage</b>					0.0		0% No Change		0 Damage to 5 Ice Damage	Sperry-Piltz Ice Accumulation Index	<a href="https://www.spia-index.com/">https://www.spia-index.com/</a>				#N/A	
<b>EXTREME TEMPERATURES (Atmospheric Hazards)</b>																
<b>COLD WAVE</b> Wind Chill, Freezing					0.0		0% No Change		<5 minutes to > 2 hours for Frostbite Times	NOAA Wind Chill Temperature Index	<a href="https://www.noaa.gov/jetstream/global/wind-chill">https://www.noaa.gov/jetstream/global/wind-chill</a>	NWS Frost and Wind Chill Alerts	<a href="https://www.weather.gov/safety/cold-wind-chill-warning">https://www.weather.gov/safety/cold-wind-chill-warning</a>		#N/A	
<b>HEAT WAVE</b> Excessive Heat					0.0		0% No Change		Likelihood of Heat Distorders, Caution (Yellow) - Extreme Danger	NOAA Heat Index	<a href="https://www.noaa.gov/jetstream/global/heat-index">https://www.noaa.gov/jetstream/global/heat-index</a>	NWS Excessive Heat Alerts	<a href="https://www.weather.gov/safety/heat-ww">https://www.weather.gov/safety/heat-ww</a>		#N/A	
<b>FLOODING (Hydrologic Hazards)</b>																
<b>DAM FAILURE</b> Water Overtop, Breach, Beaver, etc.					0.0		0% No Change		Non-Menace to High Hazard Dam Class	NHDES Dam Hazard Classifications	<a href="https://www.des.nh.gov/documents/db-15-classification-dams-new-hampshire">https://www.des.nh.gov/documents/db-15-classification-dams-new-hampshire</a>				#N/A	
<b>INLAND FLOODING</b> Rain, Snow Melt, Flash Floods- Cause Ditch Erosion, Washouts, Pond Overtop, etc					0.0		0% No Change		100 Year to 500 Year Flooding	Special Flood Hazard Areas (SFHAs) on 2010 & Preliminary Digital Flood Rate Insurance Maps (Zones A, AE, X)	<a href="https://msc.fema.gov/portal/home">https://msc.fema.gov/portal/home</a>	NH OPD Current NH Floodplain Mapping Activities	<a href="https://www.nheconomy.com/office-of-planning-and-development/what-we-do/floodplain-management-program/floodplain-maps">https://www.nheconomy.com/office-of-planning-and-development/what-we-do/floodplain-management-program/floodplain-maps</a>	FEMA Flood Zone Designation Descriptions (2010)	<a href="https://efotg.sc.gov.usd.a.gov/references/public/NM/FEMA_FLD_HAZ_guide.pdf">https://efotg.sc.gov.usd.a.gov/references/public/NM/FEMA_FLD_HAZ_guide.pdf</a>	#N/A

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Natural Hazards 2024 with Technological Human Hazards (not scored)	Probability of Hazard Occurrence in 10 Years	HENNIKER				Overall Risk SCORE	RANKED TOP SCORES Natural Hazards	Change in Natural Hazard Intensity Over the Next 10 Years (Increase or Decrease by 25% increments) See scale above.	③ Identify the Highest Magnitude or Extent that could occur in HENNIKER in the Next 10 Years using the scientific, measurable Scales in the Primary Measurement. Click on the hyperlinks for more information (see also SECONDARY & TERTIARY Scales).					HENNIKER NATURAL HAZARD CONCERN SUMMARY
		Human Injury Impact	Essential Services / Infrastructure Impact	Property Damage or Economic Impact	Probability x Average Severity Relative Threat SCORE 1 - 16				HENNIKER within Next 10 Years	HENNIKER Next 10 Years	PRIMARY Magnitude/Extent Measurement Scale or Index	PRIMARY Magnitude/Extent Scale or Index Hyperlink	SECONDARY Magnitude/Extent Scale or Index or Explanatory Information (Note Hyperlink if Possible)	
RIVER HAZARDS Flood, Ice Jams, Scouring, Erosion, Channel Movement, Debris, etc	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	0.0		0% No Change	>5% Marginal (Green) to >70% (Pink) High Rainfall Risk Exceedence of Flash Flood	NOAA Excessive Rainfall Risk Categories	NOAA Excessive Rainfall Outlook <a href="https://www.wpc.ncep.noaa.gov/qpf/excessive_rainfall_outlook_ero.php">https://www.wpc.ncep.noaa.gov/qpf/excessive_rainfall_outlook_ero.php</a>				
Geologic Hazards								Much Below Normal Flow (Red) to Much Above Normal Flow (Green)	National Water Dashboard (USGS Stream Gages, Groundwater Monitors)	<a href="https://dashboard.waterdata.usgs.gov/app/nwd/en/?region=lowe&amp;r48&amp;aol=default">https://dashboard.waterdata.usgs.gov/app/nwd/en/?region=lowe&amp;r48&amp;aol=default</a>				#N/A
EARTHQUAKE >4.0MM					0.0		0% No Change	6' Action Stage to 12' Major Flood Stage Warner	USGS Warner River Flood Stage at Davisville (River Gage #01086000)	<a href="https://water.weather.gov/ahps/2/hydrograph.php?wfo=gvx&amp;gag=e=davn3">https://water.weather.gov/ahps/2/hydrograph.php?wfo=gvx&amp;gag=e=davn3</a>	Flood Categories (in feet) Major Flood Stage: 12 Moderate Flood Stage: 10 Flood Stage: 8 Action Stage: 6			#N/A
LANDSLIDE Roadside Erosion, Soil, Rockslide, Excavation Areas, etc					0.0		0% No Change	10' Action Stage to 20' Major Flood Stage Contoocook	USGS Contoocook River Flood Stage at Henniker West Ave (River Gage #01085000, NOAA #HENN3)	<a href="https://water.weather.gov/ahps/2/hydrograph.php?wfo=gvx&amp;gag=e=henn3">https://water.weather.gov/ahps/2/hydrograph.php?wfo=gvx&amp;gag=e=henn3</a>	Flood Categories (in feet) Major Flood Stage: 20 Moderate Flood Stage: 16 Flood Stage: 12 Action Stage: 10			#N/A
PUBLIC HEALTH (Biologic Hazards)					0.0		0% No Change	I Not Felt to X Extreme Shaking Intensity	USGS Modified Mercalli Intensity Scale	<a href="https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale">https://www.usgs.gov/programs/earthquake-hazards/modified-mercalli-intensity-scale</a>	USGS ShakeMap Instrumental Intensity <a href="https://earthquake.usgs.gov/data/shakemap/">https://earthquake.usgs.gov/data/shakemap/</a>	<a href="https://hazards.fema.gov/nri/map">https://hazards.fema.gov/nri/map</a>		#N/A
Swimming Water Quality (Biological)							0% No Change	<1.5 Magnitude to > Magnitude	KGS Earthquake Moment Magnitude (Size) Scale, formerly Richter Magnitude	<a href="https://geokansas.ku.edu/measuring-earthquake-magnitude-and-intensity">https://geokansas.ku.edu/measuring-earthquake-magnitude-and-intensity</a>	New England Seismic Network at Weston Observatory Boston College <a href="http://aki.bc.edu/index.htm">http://aki.bc.edu/index.htm</a>	USGS Earthquakes 2.5M+ <a href="https://maps.nccs.nasa.gov/arcgis/apps/experiencebuilder/experience/?id=29bd25e78ff45f0a6dbfd0328b4d03e">https://maps.nccs.nasa.gov/arcgis/apps/experiencebuilder/experience/?id=29bd25e78ff45f0a6dbfd0328b4d03e</a>		#N/A
							0% No Change	Very Low Risk (Blue) to Very High Risk (Red)	No widely-used scale measuring the complex magnitude of landslides FEMA National Risk Index Map (Landslides) Link below	USGS Landslide Inventory Mapper <a href="https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=ae120962f459434b8c904b456c82669d">https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=ae120962f459434b8c904b456c82669d</a>	<a href="https://www.usgs.gov/publications/landslide-handbook-a-guide-understanding-landslides">https://www.usgs.gov/publications/landslide-handbook-a-guide-understanding-landslides</a>	NASA Landslide Viewer <a href="https://maps.nccs.nasa.gov/arcgis/apps/experiencebuilder/experience/?id=29bd25e78ff45f0a6dbfd0328b4d03e">https://maps.nccs.nasa.gov/arcgis/apps/experiencebuilder/experience/?id=29bd25e78ff45f0a6dbfd0328b4d03e</a>		#N/A
							0% No Change	Bacteria Advisory to Bacteria Warning	NHDES Cyanobacteria/Public Beach Bacterial Warning Levels	<a href="https://experience.arcgis.com/experience/180c28fa34c4371a9771d999454e8c4/">https://experience.arcgis.com/experience/180c28fa34c4371a9771d999454e8c4/</a>	<a href="https://www.des.nh.gov/water/healthy-swimming">https://www.des.nh.gov/water/healthy-swimming</a>			#N/A

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	Probability of Hazard Occurrence in 10 Years See scale below 1 Unlikely 2 Possible 3 Likely 4 Highly Likely	Human Injury Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Essential Services / Infrastructure Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Property or Economic Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Overall Risk SCORE Probability x Average Severity Relative Threat SCORE 1 - 16			HENNIKER within Next 10 Years	HENNIKER Next 10 Years	PRIMARY Magnitude/Extent Measurement Scale or Index	PRIMARY Magnitude/Extent Scale or Index Hyperlink	SECONDARY Magnitude/Extent Scale or Index or Explanatory Information (Note Hyperlink if Possible)	TERTIARY Magnitude/Extent Scale or Index or Explanatory Information (Note Hyperlink if Possible)	HENNIKER NATURAL HAZARD CONCERN SUMMARY	
Air Quality								Good to Hazardous Air Quality	NHDES Air Quality Index	<a href="https://www4.des.state.nh.us/air/data/">https://www4.des.state.nh.us/air/data/</a>	EPA Air Quality Index (AQI) <a href="https://www.airnow.gov/aqi/aqi-basics/">https://www.airnow.gov/aqi/aqi-basics/</a>				
Drinking or Surface Water Quality								Good Water Quality (Green) to Severe Water Quality (Red)	NHDES Watershed 305(b) Assessment Summary Reports by Watershed 2020-2022	<a href="https://www.arcgis.com/apps/w ebappviewer/index.html?id=d1ba9c5ec85646538e032580e23174fz">https://www.arcgis.com/apps/w ebappviewer/index.html?id=d1ba9c5ec85646538e032580e23174fz</a>	NH DES Drinking Water <a href="https://www.des.nh.gov/water/drinking-water">https://www.des.nh.gov/water/drinking-water</a>				
Infectious Diseases								Minimal (White - Very High (Red)	NHDHHS Acute Respiratory Activity by County (weekly map)	<a href="https://www.dhhs.nh.gov/program-services/disease-prevention/infectious-disease-control/influenza-flu/influenza-activity">https://www.dhhs.nh.gov/program-services/disease-prevention/infectious-disease-control/influenza-flu/influenza-activity</a>	NHDHHS Infectious Disease Control <a href="https://www.dhhs.nh.gov/program-services/disease-prevention/infectious-disease-control/">https://www.dhhs.nh.gov/program-services/disease-prevention/infectious-disease-control/</a>				
Arboviral Diseases								No Risk (Yellow) to Very High Risk (Red)	HENNIKER (annual)	<a href="https://www.dhhs.nh.gov/sites/g/files/ehbemt476/files/document/ts2/arbomap-2022.pdf">https://www.dhhs.nh.gov/sites/g/files/ehbemt476/files/document/ts2/arbomap-2022.pdf</a>	NH DHHS Mosquito Surveillance and Control <a href="https://www.dhhs.nh.gov/program-services/disease-prevention/infectious-disease-control/mosquito-borne-illnesses/mosquito">https://www.dhhs.nh.gov/program-services/disease-prevention/infectious-disease-control/mosquito-borne-illnesses/mosquito</a>				
Tickborne Diseases								Rate Per 100,000 persons or People Per Year by County, 203 cases is baseline in 2021 (example >500/yr)	NH DHHS Reported Cases of Lyme Disease by County 2017-2021	<a href="https://www.dhhs.nh.gov/sites/g/files/ehbemt476/files/document/ts2/lymecounty-2017-2021.pdf">https://www.dhhs.nh.gov/sites/g/files/ehbemt476/files/document/ts2/lymecounty-2017-2021.pdf</a>	NHDHHS Tickborne Diseases <a href="https://www.dhhs.nh.gov/program-services/disease-prevention/infectious-disease-control/tickborne-diseases">https://www.dhhs.nh.gov/program-services/disease-prevention/infectious-disease-control/tickborne-diseases</a>				
Substance Misuse								Several Ways to Rate	NH DHHS Drug Monitoring Initiative (Map) Monthly and YTD, 1-25 EMS Drug Overdose/Abuse Incidents (see Map)	<a href="https://www.dhhs.nh.gov/program-services/health-care/substance-misuse-data-page">https://www.dhhs.nh.gov/program-services/health-care/substance-misuse-data-page</a>	NH DMI Viewer (Map) <a href="https://nhview.maps.arcgis.com/apps/MapSeries/index.html?appid=f664bc08d7724f0d8a47c128832a98a2&amp;folderid=8056bfb06d3a4d7da5a32253ddb47d4">https://nhview.maps.arcgis.com/apps/MapSeries/index.html?appid=f664bc08d7724f0d8a47c128832a98a2&amp;folderid=8056bfb06d3a4d7da5a32253ddb47d4</a>				
SOLAR STORMS AND SPACE WEATHER (Space Hazards)					0.0		0% No Change								
GEOMAGNETIC STORM Aurora Borealis								G1 Minor to G5 Extreme Geomagnetic Storm	NOAA Geomagnetic Storms Scale	<a href="https://www.swpc.noaa.gov/nao-a-scales-explanation">https://www.swpc.noaa.gov/nao-a-scales-explanation</a>				#N/A	
SOLAR RADIATION								S1 Minor to S5 Extreme Solar Radiation	NOAA Solar Radiation Storms Scale	<a href="https://www.swpc.noaa.gov/nao-a-scales-explanation">https://www.swpc.noaa.gov/nao-a-scales-explanation</a>				#N/A	
RADIO BLACKOUT								R1 Minor to R5 Extreme Radio Blackouts	NOAA Radio Blackouts Scale	<a href="https://www.swpc.noaa.gov/nao-a-scales-explanation">https://www.swpc.noaa.gov/nao-a-scales-explanation</a>				#N/A	
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Natural Hazards 2024 with Technological Human Hazards (not scored)	HENNIKER					Overall Risk SCORE	RANKED TOP SCORES Natural Hazards	Change in Natural Hazard Intensity Over the Next 10 Years (Increase or Decrease by 25% increments) See scale above.	③ Identify the Highest Magnitude or Extent that could occur in HENNIKER in the Next 10 Years using the scientific, measurable Scales in the Primary Measurement. Click on the hyperlinks for more information (see also SECONDARY & TERTIARY Scales).					HENNIKER NATURAL HAZARD CONCERN SUMMARY
	Probability of Hazard Occurrence in 10 Years	Human Injury Impact	Essential Services / Infrastructure Impact	Property Damage or Economic Impact	Overall Risk SCORE				HENNIKER within Next 10 Years	HENNIKER Next 10 Years	PRIMARY Magnitude/Extent Measurement Scale or Index	PRIMARY Magnitude/Extent Scale or Index Hyperlink	SECONDARY Magnitude/Extent Scale or Index or Explanatory Information (Note Hyperlink if Possible)	
HIGH WIND					0.0		0% No Change	0 Calm to 12 Hurricane Force Wind	Beaufort Wind Scale (Land)	<a href="https://www.weather.gov/pqr/wind">https://www.weather.gov/pqr/wind</a>			#N/A	
THUNDERSTORM					0.0		0% No Change	1 Marginal to 5 High Thunderstorm Risk	NOAA Severe Thunderstorm Risk Categories	<a href="https://www.spc.noaa.gov/misc/about.html">https://www.spc.noaa.gov/misc/about.html</a>	NOAA Precipitation Frequency and Depth	<a href="https://hdsc.nws.noaa.gov/pfds/pfds_map_cont.html?bkmrk=nh">https://hdsc.nws.noaa.gov/pfds/pfds_map_cont.html?bkmrk=nh</a>	#N/A	
DOWNBURST Microburst, Macroburst, Straight-Line Wind					0.0		0% No Change	<2.5 miles wide Microburst to >2.5 miles wide Macroburst	NOAA Downbursts	<a href="https://www.noaa.gov/jetstream/wind_damage">https://www.noaa.gov/jetstream/wind_damage</a>			#N/A	
LIGHTNING					0.0		0% No Change	LAL 1 No Thunderstorms to LAL 6 Dry Lightning Activity	NWS Lightning Activity Level (LAL)	<a href="https://graphical.weather.gov/definitions/defineLAL.html">https://graphical.weather.gov/definitions/defineLAL.html</a>			#N/A	
TORNADO					0.0		0% No Change	EFO 65-85mph to EF5 >200 mph	NOAA Enhanced Fujita Scale	<a href="https://www.spc.noaa.gov/efscale/">https://www.spc.noaa.gov/efscale/</a>	NOAA Enhanced F Scale for Tornado Damage 2007	<a href="https://www.spc.noaa.gov/fag/tornado/ef-scale.html">https://www.spc.noaa.gov/fag/tornado/ef-scale.html</a>	#N/A	
HAIL					0.0		0% No Change	1/4" Pea Size to 4.5" Grapefruit Size Hail Stones	NOAA Hail Size	<a href="https://www.weather.gov/boi/hailsize">https://www.weather.gov/boi/hailsize</a>	NWS Hail Size Infographic	<a href="https://www.weather.gov/vef/T/hunderstorm_infographics">https://www.weather.gov/vef/T/hunderstorm_infographics</a>	#N/A	
TROPICAL AND POST-TROPICAL CYCLONE Hurricane, Tropical Storm					0.0		0% No Change	Category 1 74-95 mph Minimal to Category 5 >157 mph Catastrophic Winds	NOAA Saffir-Simpson Hurricane Wind Scale	<a href="https://www.nhc.noaa.gov/aboutshws.php">https://www.nhc.noaa.gov/aboutshws.php</a>			#N/A	
HENNIKER & REGION														
COASTAL FLOODING (Hydrologic Hazard)	n/a	n/a	n/a	n/a	#VALUE!		N/A	N/A	Elevated 1-3 feet to Extreme >9 feet	NOAA Storm Surge Threat Scale	<a href="https://www.weather.gov/mhx/HT1StormSurge">https://www.weather.gov/mhx/HT1StormSurge</a>	NOAA National Storm Surge Risk Maps by Hurricane Category	<a href="https://experience.arcgis.com/experience/203772573cb4883b8b50f6cc372e2c">https://experience.arcgis.com/experience/203772573cb4883b8b50f6cc372e2c</a>	#VALUE!
AVALANCHE (Geologic Hazard)	n/a	n/a	n/a	n/a	#VALUE!		N/A	N/A	1 Low Danger to 5 Extreme Danger	North American Public Avalanche Danger Scale	<a href="https://avalanche.org/avalanche-encyclopedia/human/resources/north-american-public-avalanche-danger-scale/">https://avalanche.org/avalanche-encyclopedia/human/resources/north-american-public-avalanche-danger-scale/</a>			#VALUE!
TSUNAMI (Geologic Hazard)	n/a	n/a	n/a	n/a	#VALUE!		N/A	N/A	Watch to Warning	NOAA Tsunami Program Alerts (Pacific)	<a href="https://www.tsunami.noaa.gov/pmel-theme/forecast-warning">https://www.tsunami.noaa.gov/pmel-theme/forecast-warning</a>			#VALUE!

# Hazard Identification and Risk Assessment (HIRA) 2024

HMC Notes Column - white text

Meeting 1
4/29/2024
CNHRPC   Contact Stephanie at salexander@cnhrpc.org   603-226-6021

## HENNIKER HAZARD MITIGATION

Overall Risk Ranking, Highest Magnitude and Change in Intensity of Natural Hazards Over the Next 10 Years

① Determine Probability and Severity of Natural Hazard to HENNIKER Over Next 10 Years  
Assume the Natural Hazard WILL OCCUR when determining Impacts.

Probability of Occurrence in 10 Years	
1 Unlikely	0 - 25% chance
2 Possible	25 - 50% chance
3 Likely	51 - 75% chance
4 Highly Likely	76 - 100% chance

  

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

② Determine Percentage of Hazard Intensity Change Over Next 10 Years.  
Assume the Natural Hazard WILL OCCUR.

Natural Hazard Intensity Change in Next 10 Years									
-100%	-75%	-50%	-25%	0%	25%	50%	75%	100%	
Extreme Decrease	High Decrease	Moderate Decrease	Slight Decrease	No Change	Slight Increase	Moderate Increase	High Increase	Extreme Increase	

③ Identify the Highest Magnitude or Extent that could occur in HENNIKER in the Next 10 Years using the scientific, measurable Scales in the Primary Measurement. Click on the hyperlinks for more information (see also SECONDARY & TERTIARY Scales).

Natural Hazards 2024 with Technological Human Hazards (not scored)	HENNIKER					Overall Risk SCORE	RANKED TOP SCORES Natural Hazards	Change in Natural Hazard Intensity Over the Next 10 Years (Increase or Decrease by 25% increments) See scale above.	③ Identify the Highest Magnitude or Extent that could occur in HENNIKER in the Next 10 Years using the scientific, measurable Scales in the Primary Measurement. Click on the hyperlinks for more information (see also SECONDARY & TERTIARY Scales).					
	Probability of Hazard Occurrence in 10 Years See scale below 1 Unlikely 2 Possible 3 Likely 4 Highly Likely	Human Injury Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Essential Services / Infrastructure Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Property Damage or Economic Impact See scale below 1 Limited 2 Significant 3 Critical 4 Catastrophic	Probability x Severity Relative Threat SCORE 1 - 16				HENNIKER within Next 10 Years	HENNIKER Next 10 Years	PRIMARY Magnitude/Extent Measurement Scale or Index	PRIMARY Magnitude/Extent Scale or Index Hyperlink	SECONDARY Magnitude/Extent Scale or Index or Explanatory Information (Note Hyperlink if Possible)	TERTIARY Magnitude/Extent Scale or Index or Explanatory Information (Note Hyperlink if Possible)
VOLCANIC ACTIVITY (Geologic Hazard)	n/a	n/a	n/a	n/a	#VALUE!		N/A	N/A	0 Magnitude to 8 Magnitude	NPS Volcanic Explosivity Index (VEI) Logarithmic	<a href="https://www.nps.gov/subjects/volcanoes/volcanic-explosivity-index.htm">https://www.nps.gov/subjects/volcanoes/volcanic-explosivity-index.htm</a>			#VALUE!
Technological and Human Hazards, Impacts from Natural Hazards	Not scored in HIRA						not rated	Not scored in HIRA	Miscellaneous Magnitude information					
AGING INFRASTRUCTURE Bridges, Culverts, Roads, Pipes, Underground Lines, Debris, etc	not scored	not scored	not scored	not scored	not scored	not ranked	not rated		Very Low Risk (Blue) to Very High Risk (Red)	FEMA National Risk Index Map (Natural Hazards and Social Vulnerability)	<a href="https://www.fema.gov/national-risk-index">https://www.fema.gov/national-risk-index</a>			
LONG TERM UTILITY OUTAGE Power, Water, Sewer, Gas, Internet, Communications, Live Wire Danger, etc	not scored	not scored	not scored	not scored	not scored	not ranked	not rated		No Scale, datasets often up to 5 years old	NH Health and Human Services WISDOM Data Portal	<a href="https://wisdom.dhhs.nh.gov/wisdom/index.html">https://wisdom.dhhs.nh.gov/wisdom/index.html</a>			
CONFLAGRATION (FIRE)	not scored	not scored	not scored	not scored	not scored	not ranked	not rated		1 Everyday to 5 Death Imminent	CDC Radiation Hazard Scale	<a href="https://www.cdc.gov/hcsh/radiation/emergencies/radiationhazard-scale.htm">https://www.cdc.gov/hcsh/radiation/emergencies/radiationhazard-scale.htm</a>			
HAZARDOUS MATERIALS Haz Mat Spills, Brownfields, Trucking, Known and Emerging Contaminants, etc	not scored	not scored	not scored	not scored	not scored	not ranked	not rated							
RADIOLOGICAL	not scored	not scored	not scored	not scored	not scored	not ranked	not rated							
TRANSPORTATION CRASH Vehicle, Airplane, Helicopter, Rail, Interstate, Pedestrian, Bicycle, etc	not scored	not scored	not scored	not scored	not scored	not ranked	not rated							
MASS CASUALTY INCIDENT As a result of any hazard event	not scored	not scored	not scored	not scored	not scored	not ranked	not rated							
TERRORISM/ VIOLENCE Active Shooter, Hostage, Public Harm, Civil Disturbance/ Unrest, Politically Motivated Attacks, Incendiary Devices, Sabotage, Vandalism, etc	not scored	not scored	not scored	not scored	not scored	not ranked	not rated							
CYBER EVENT Computer Systems Attack, Website Overtake, Cloud Data Breach, Telephone Rerouting, Identity Theft, Phishing, Ransomware, Virus, Phone Scams, etc	not scored	not scored	not scored	not scored	not scored	not ranked	not rated							