

Community Resilience and Select Impacts: Chattanooga TN

Natural Disaster Risk



Based on FEMA's National Risk Index Assessment, Hamilton County has a RELATIVELY MODERATE current risk for natural disasters. The greatest current risks are tornadoes, flooding, winds, landslides, and ice storms. Note: Heatwaves were not calculated.

Social Vulnerability



The Center for Disease Control (CDC) has characterized Hamilton County with a MEDIUM TO HIGH level of social vulnerability (0.54: 0 min - 1 max). Based on census estimates, 14.6% of the individuals living within Hamilton County are disabled, 20.4% are living below 150% of the poverty line, and 17.5% are over 65 years of age.

Community Resilience



Based on FEMA's Resilience Analysis Planning Tool (RAPT) Hamilton County has a MODERATE amount of community resilience compared to the rest of the United States (0.25 standard deviation above average).

Water Security



All of the potable water sources within Hamilton County have been characterized as HIGHLY SUSCEPTIBLE to contamination in the 2003 Tennessee Source Water Assessment.



Feeding America estimates that in 2021, almost 15% of individuals in Hamilton County are food insecure

Climate Projections



The First Street Foundation (FSF) climate evaluations have Chattanooga as a having MAJOR Risks associated with increased temperatures. They estimate that by 2050, over 100 days a year will exceed 90°F compared to 57 days in the 1990s. FSF also estimates that by 2050 over 40 days a year will be dangerous for people to be outside



The First Street Foundation (FSF) climate evaluations have Chattanooga as a having SEVERE risks associated flooding. They estimate that 13,064 (29%) homes are at risk from flooding. They also identified a SEVERE risk to critical infrastructure from flooding, where 72% of infrastructure facilities are at risk from climate-enhanced flooding.



Climate change has already been linked to inflation in supply-chain disruptions from natural disasters and extreme heatwaves, volatility in hydrocarbon markets, and political instability. Additionally, FSF estimates that based on temperature changes alone, buildings in Chattanooga will spend an additional 13.4% on cooling in 2050 from increased needs.



In the 4th National Climate Assessment, the US Government is projecting that food and foraging production and quality will decline in regions experiencing drought, including major agricultural producing areas like California and the Midwest. This has the potential to drive inflation on basic goods while also contributing to increased community hunger.



Migration and displacement are expected to become major challenges with climate change. The United Nations is estimating that by 2050, there will be anywhere from 200 million to 1 billion climate migrants/displaced individuals



In the 2022 Lancet Report, authors reported that climate change is impacting every dimension of global health, with expected increased impacts as climate impacts worsen

CDC Social Vulnerability Index (select indicators): Hamilton County TN (2020)

Social Vulnerability Level	Medium	Persons in Group Quarters	11,625
Housing Units	163,605	Disability	53,545
Persons Below 150% Poverty Line	74,662	Persons Age 17 or Younger	75,901
Unemployed Civilians	8,469	Persons age 65+	64,056
Housing cost burdened (%)	26.1%	Percentage Person (25+) with no High School Diploma	9.7%
Minority (individuals)	106,505	Single Parent Households	8,918
Housing Structures with 10 or more Units	18,690	Percentile Ranking Socioeconomic Themes (100% is most vulnerable)	23.4%
Households with No Available Vehicle	9,165	Percentile Ranking Household Composition	26.6%
Mobile Homes	4,961	Percentile Ranking Minority/Language	89.36%
At Household Level, More People Than Rooms	1,915	Percentile Rankings Housing/Transportation	70.2%
Single-Parent Households	17.98%		

FEMA Community Resilience Indicator Analysis: Hamilton County TN (2022)

Age 65 and Over	17.56%	Income Inequality (GINI Index, 0-1 scale)	0.487
Population with a disability	14.85%	Individuals Without Religious Affiliation	0.40%
Individuals without HS Diploma	9.71%	Number of Health Practitioners/1,000 people	30.1
Unemployed Labor Force	4.56%	Social and Civic Organizations/10,000 people	1.07
Individuals Without Health Insurance	9.17%	Number of Hospitals/10,000 people	0.14
Households with Limited English	1.35%	Unemployed Women in Labor Force	4.70%
Median household income (USD)	\$56,606	Workforce Employed in Predominant Sector	22.76%
Mobile Homes Relative to Housing	3.03%	Inactive Voters	5.76%
Owner-Occupied Housing	58.07%	Individuals Living Below Poverty Level	12.57%
Households Without a Vehicle	6.18%	Households Without a Smartphone	17.38%
Single-Parent Households	27.45%	Aggregate Community Resilience Score (Mean 0, Standard Deviation 1)	0.25

National Risk Index: Hamilton County Tennessee, Select Parameters (2020)

Risk Index (Qualitative)	Relatively Moderate	Landslide	Relatively High
Expected Annual Loss (Qualitative)	Relatively Moderate	Lightning	Relatively High
Annual Expected Loss (USD)	\$51,166,633	Riverine Flooding	Relatively Moderate
Cold Wave	No Rating	Strong Wind	Relatively High
Drought	Very Low	Tornado	Relatively High
Earthquake	Relatively Moderate	Wildfire	Very Low
Hail	Relatively Low	Winter Weather	Relatively High
Heat Wave	No Rating	Ice Storm	Relatively High
Hurricane	Very Low		