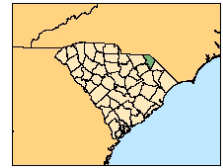


MARLBORO COUNTY, SC

Hazard Profile for 2008

An Excerpt from the State of South Carolina Hazard Assessment for 2008



I. Summary

Marlboro County is vulnerable to both natural (hurricanes/tropical storm) and technological (hazardous material incidents). Severe thunderstorms produce the greatest monetary damage and are among the most frequent of all hazards, especially those that result in substantial dollar losses. Wildfires and hazardous material incidents are some of the prominent hazards that regularly affect the county, based on past occurrences.

II. Social Vulnerability

Social vulnerability examines the socioeconomic and demographic character of places and helps to explain the variation in the population's ability to prepare for and respond to hazards. The Social Vulnerability Index (SoVI) is a statistical measure that compares social vulnerability to environmental hazards among places, and then visually displays these comparisons on a map. SoVI thus illustrates where there is uneven capacity for preparedness and response and where additional planning and response resources might be used most effectively to help residents. The variables used in determining the Social Vulnerability (SoVI) score along with how SoVI is calculated are available on the Hazards and Vulnerability Research Institute SoVI website (<http://www.sovius.org>).

Within Marlboro County, most of the census tracts exhibit moderate to elevated levels of social vulnerability. Census tracts in the southern part of the county have among the highest SoVI scores in the state. Figure 1 provides maps of the Marlboro County depicting (on the left) social vulnerability by census tract and (on the right) cities and major roads.

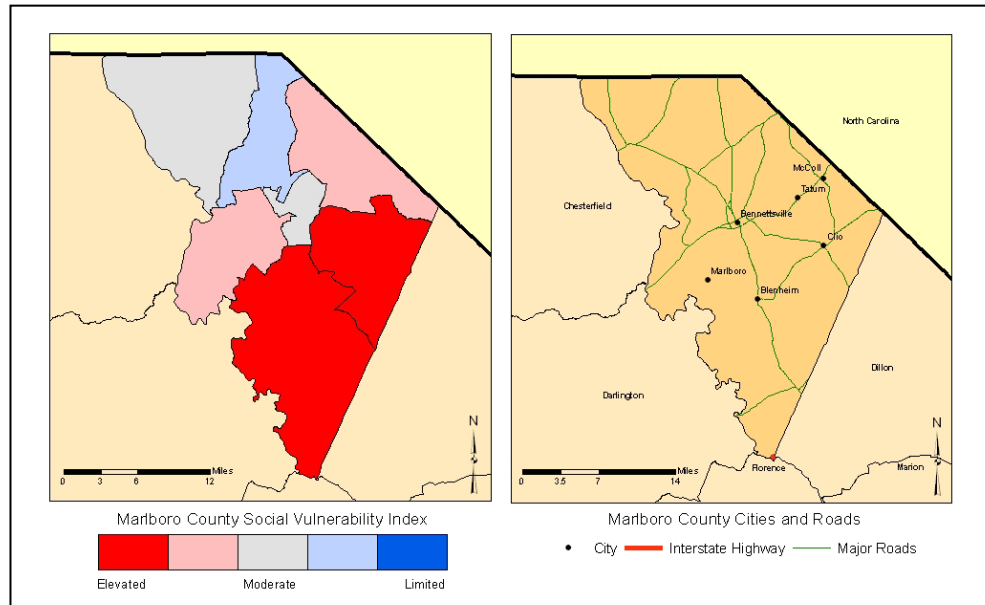


FIGURE 1. The Social Vulnerability for Marlboro County, SC by US Census tracts and a general reference map of Marlboro County.

III. Terms

Disaster – a singular hazard event that results in widespread human losses or has profound impacts on local environments.

Frequency – a calculated number showing the chance of an event occurring each year based on the historic record.

Hazard – the potential threat to humans as well as the impact of an event on society and the environment.

Recurrence – a calculated number that examines the expected time interval between events based on the historic record.

Risk – the likelihood or probability of occurrence of a hazard or adverse event.

Vulnerability – the potential for loss or the capacity to suffer harm from a hazard event.



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MARLBORO COUNTY HAZARD PROFILE 2008

IV. Hazard Identification

The estimated recurrence of a hazard is a useful element (based on event frequency) for distinguishing between infrequent hazards like earthquakes, and frequent hazards such as hazardous materials incidents or traffic accidents. The most common hazard events in Marlboro County are wildfires, thunderstorms and wind, and hazardous material accidents. Earthquakes, ocean and lake surf, and hurricane/tropical storms are hazards with the lowest recurrence intervals. The recurrence and hazard frequency table can be seen in Table 1.

TABLE 1. The Hazard Profile for Marlboro County, SC.

Hazard ^a	Number of Events	Years in Record	Recurrence Interval (Years)	Hazard Frequency (Percent Chance per Year)
Coastal Events				
Hurricane/Tropical Storm	13	158	12.15	8.23
Ocean & Lake Surf ^b	1	16	16.00	6.25
Waterspout	0	16	*	*
Dam Failure	-	-	-	-
Drought	11	59	5.36	18.64
Flood	6	59	9.83	10.17
Fog	0	12	*	*
Geophysical Events				
Avalanche	0	49	*	*
Earthquake	2	310	155.00	0.65
Landslide	0	49	*	*
Human-Induced Events				
Civil Disturbance	-	-	-	-
Hazardous Materials (Hazmat)	28	22	0.79	127.27**
Nuclear Power Plant	0	8	*	*
Terrorism	0	29	*	*
Transportation (Motor Vehicle)	5,596	10	<0.50	55,960.00**
Severe Thunderstorm Events				
Funnel Cloud	0	16	*	*
Hail	46	59	1.28	77.97
Heavy Precipitation	1	15	15.00	6.67
Lightning	5	16	3.20	31.25
Thunderstorm & Wind	95	59	0.620	161.02**
Tornado	14	59	4.210	23.73
Temperature Extremes	0	16	*	*
Wildfire	1,567	21	<0.50	7,461.90**
Winter Weather (Snow & Ice)	15	59	3.93	25.42
^a Data Sources: National Climatic Data Center (www.ncdc.noaa.gov/cgi-win/wcqi.dll?wwEvent-Storm); National Geophysical Data Center (www.ngdc.noaa.gov/hazard/)			* Unable to calculate (cannot divide by zero) ** Percent is greater than 100.00, therefore hazard can be expected to occur more than once per year - Data Unavailable	
^b Includes coastal flooding, coastal erosion, coastal winds				

V. Hazard Loss Information

When compared to South Carolina as a whole, Marlboro County has a higher probability of loss-producing hail, hurricane/tropical storm, and winter weather events. The county has slightly more than the average of tornado loss events. This comparison between the county and state in Figure 2 (page 3) shows hazards that exceeded the state mean in red type. Hail, thunderstorms, tornadoes, and winter weather are above the state mean indicating that these hazards have historically produced more losses for the county when compared to the state as a whole.

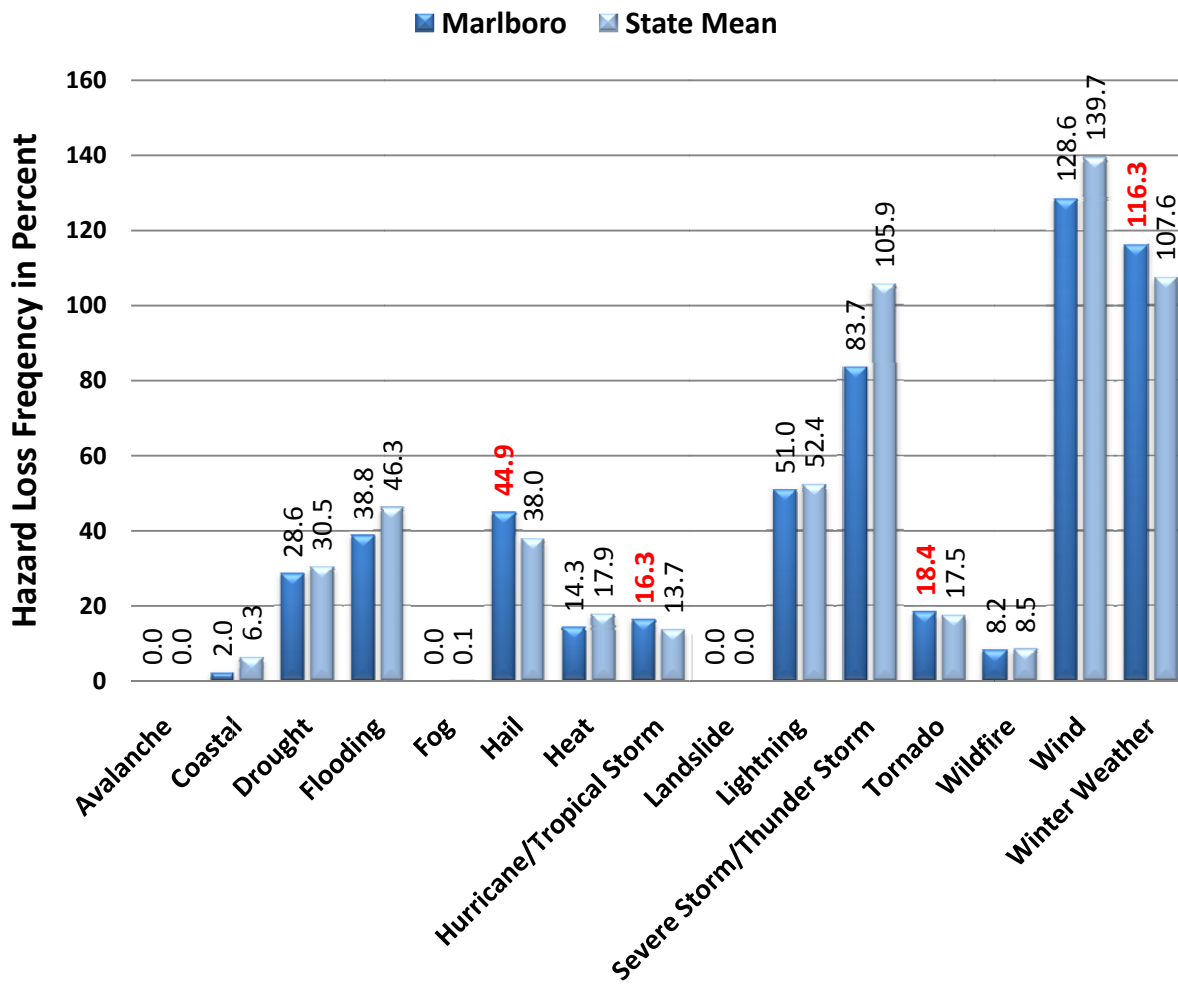


FIGURE 2. The historic loss causing hazard frequency between 1960 and 2008 for Marlboro County compared to South Carolina as reported in SHELUDS. Percentage numbers indicated in red are when the county total exceeds the state mean. Also, a hazard that is identified in the National Climatic Data Center Storm Data reports as a multiple event hazard (flooding, winter weather, coastal storm), and given a statewide or regional location, the impact of the event is equally distributed amongst the counties involved.

Another way of determining how vulnerable a county is to particular hazards is by examining the amount of damage caused by past events. In Figure 3 (page 4), the cumulative amount of damage from 1960 to 2008 based on twelve hazard types is computed from the Hazards and Vulnerability Research Institute's SHELUDS database (available at <http://www.sheldus.org>). The historic losses in Marlboro County exceed \$168 million, and are largely due to severe thunderstorms, tornadoes, and winter weather. While significant for the county, these cumulative losses represent 1.8% of the state's total overall. However, the severe thunderstorm losses represent 52% of county losses and more than 41% of the statewide losses. Tornadoes occurring in Marlboro County account for over 9% of statewide tornado losses.

Hazard	Total Damage (in 2008 dollars)	Percent of State
Coastal	\$6,476	0.01%
Drought	\$14,055,942	2.17%
Flooding	\$559,162	0.36%
Hail	\$1,180,899	1.15%
Heat	\$11,286,643	2.17%
Hurricane/ Tropical Storm	\$10,301,543	0.19%
Lightning	\$418,084	0.80%
Severe Storm/ Thunder Storm	\$87,687,048	41.51%
Tornado	\$21,609,949	9.13%
Wildfire	\$334,042	2.09%
Wind	\$1,315,402	0.90%
Winter Weather	\$19,533,078	2.17%
Marlboro - Total	\$168,288,268	1.76%

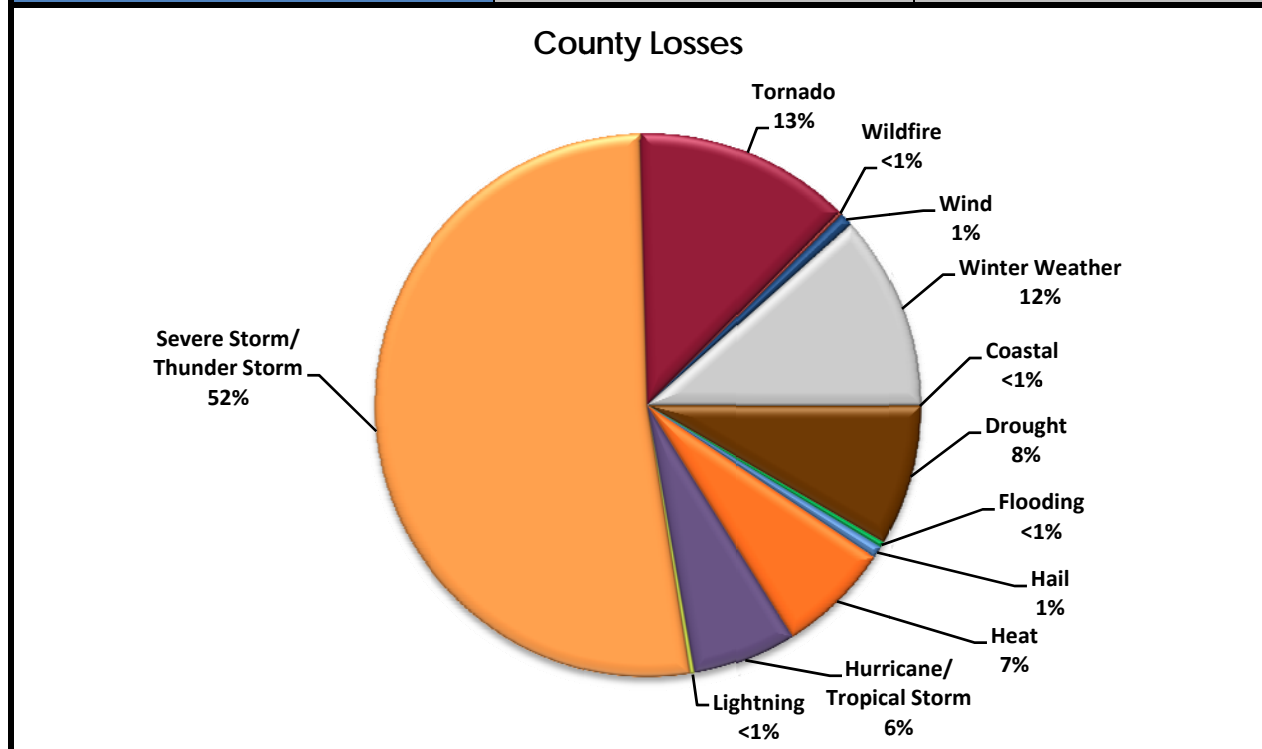


FIGURE 3. Historic Hazard Event Damages (property and crop) between 1960 and 2008 for Marlboro County, SC.