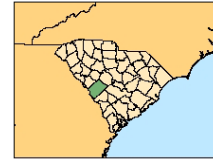


AIKEN COUNTY, SC

Hazard Profile for 2008

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



I. Summary

Aiken County is vulnerable to both natural (hurricanes/tropical storms) and technological (hazardous material incidents) hazards. Drought and winter weather produce the greatest monetary damages; however, the recurrence interval for them is 59 and 15 years, respectively making them relatively rare events. Wildfires, thunderstorms, 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 Aiken County, most of the census tracts exhibit moderate to low levels of social vulnerability. Census tracts in the city of Aiken show elevated SoVI scores. Figure 1 provides maps of the Aiken County depicting (on the left) social vulnerability by census tract and (on the right) cities and major roads.

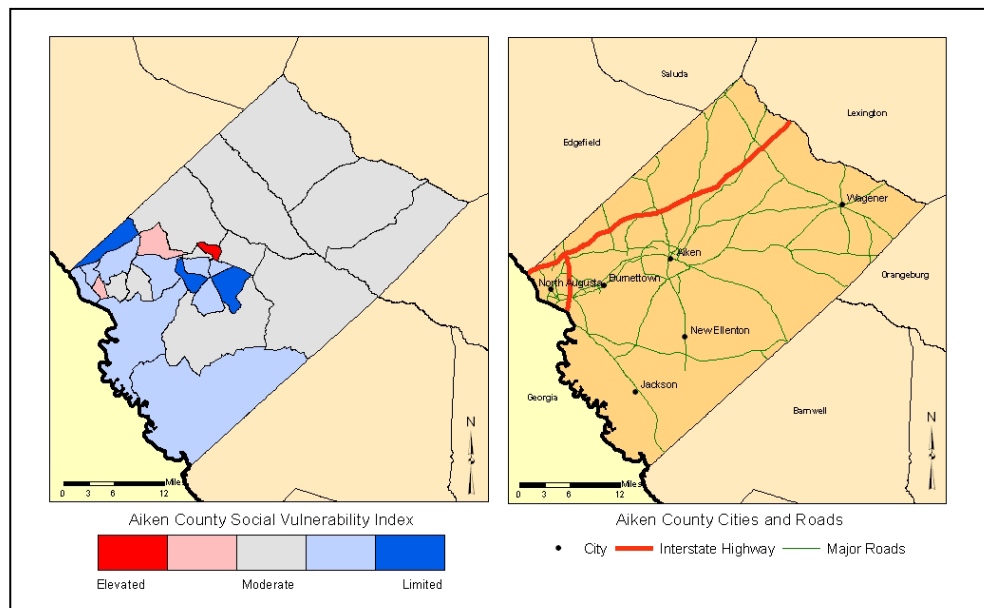


FIGURE 1. The Social Vulnerability for Aiken County, SC by US Census tracts and a general reference map of Aiken County.

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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AIKEN 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 Aiken County are hazardous material accidents, severe thunderstorms and wind, and wildfires. Tropical storms/hurricanes, and earthquakes are hazards with the lowest recurrence intervals and have less than a ten percent chance of occurring in a given year given the historic record (Table 1).

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

Hazard ^a	Number of Events	Years in Record	Recurrence Interval (Years)	Hazard Frequency (Percent Chance per Year)
Coastal Events				
Hurricane/Tropical Storm	5	158	31.60	3.16
Ocean & Lake Surf ^b	1	16	16.00	6.25
Waterspout	0	16	*	*
Dam Failure	-	-	-	-
Drought	1	59	59.00	1.69
Flood	6	59	9.83	10.17
Fog	0	12	*	*
Geophysical Events				
Avalanche	0	49	*	*
Earthquake	6	310	51.67	1.94
Landslide	0	49	*	*
Human-Induced Events				
Civil Disturbance	-	-	-	-
Hazardous Materials (Hazmat)	178	22	<0.50	809.09**
Nuclear Power Plant	0	8	*	*
Terrorism	0	29	*	*
Transportation (Motor Vehicle)	29,249	10	<0.50	292,490.00**
Severe Thunderstorm Events				
Funnel Cloud	1	16	16.00	6.25
Hail	123	59	<0.50	208.47**
Heavy Precipitation	0	15	*	*
Lightning	11	16	1.45	68.75
Thunderstorm & Wind	219	59	0.27	371.19**
Tornado	32	59	1.84	54.24
Temperature Extremes	1	16	16.00	6.25
Wildfire	3,426	21	<0.50	16,314.29**
Winter Weather (Snow & Ice)	4	59	14.75	6.78
^a Data Sources: National Climatic Data Center (www.ncdc.noaa.gov/cqi-win/wvcqi.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, Aiken County has a higher probability of loss causing events from heat and lightning hazards. Figure 2 (page 3) shows those hazards occurring in the county that exceeded the state mean in red type. Winter weather and hurricanes are below the state mean indicating that these hazards historically have had less impact on Aiken County than elsewhere in South Carolina.

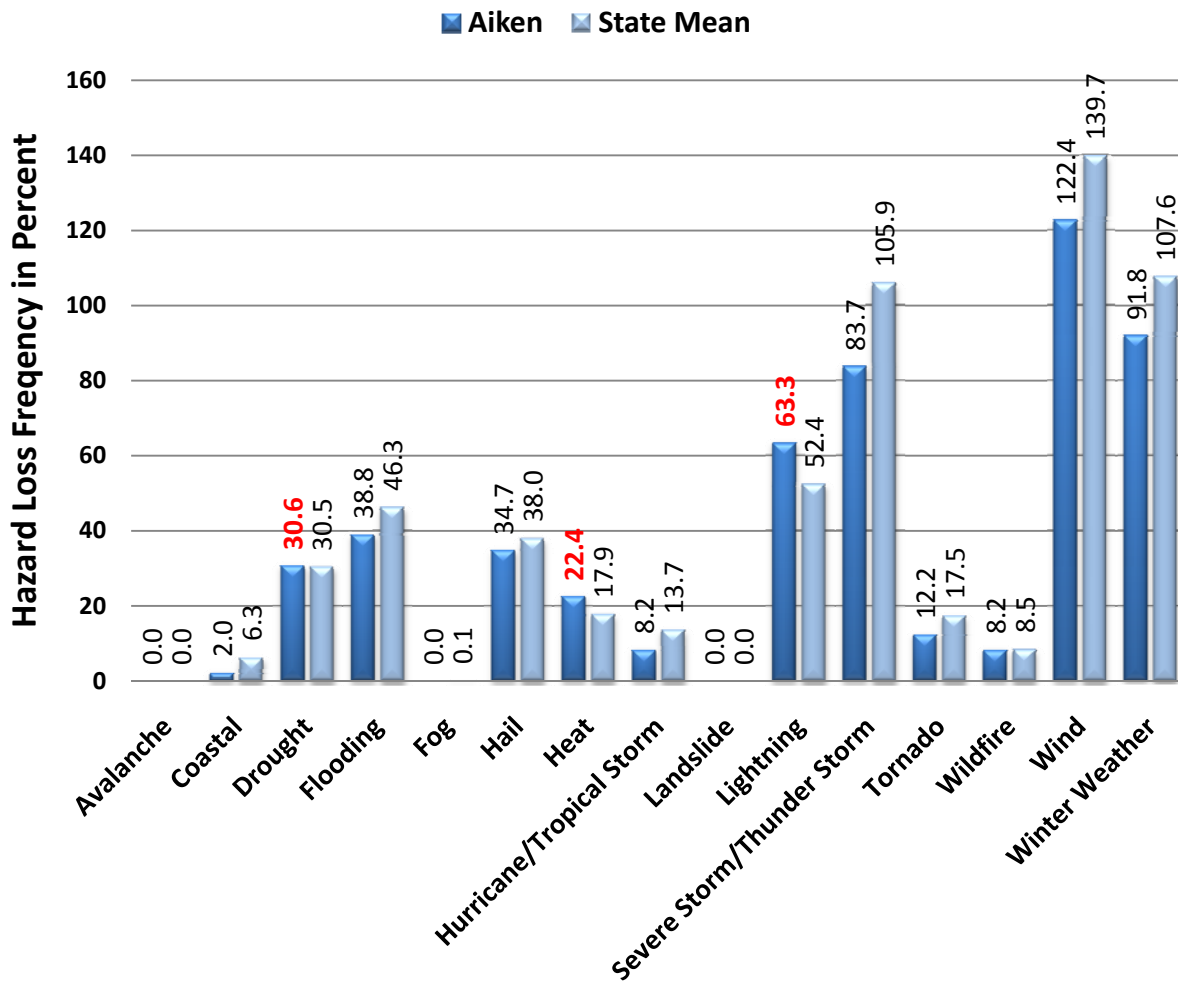


FIGURE 2. The historic loss causing hazard frequency between 1960 and 2008 for Aiken County compared to South Carolina as reported in SHELDUS. Percentage numbers indicated in red are when the county total exceeds the state mean. Also, a hazard that is identified in the National Climatic Data Center Storm 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 total damage is calculated as the cumulative amount of damage from 1960 to 2008 based on twelve hazard types from the Hazards and Vulnerability Research Institute's SHELDUS database – available at (<http://www.sheldus.org>). Winter weather, drought, and heat caused the largest amount of historic losses in Aiken County, representing more than 84% of the total losses, which were around \$47 million. While significant for the county, this loss only accounted for less than one percent of the state's total damages related to natural hazards.

Hazard	Total Damage (in 2008 dollars)	Percent of State
Coastal	\$6,476	0.01%
Drought	\$14,058,478	2.17%
Flooding	\$572,522	0.37%
Hail	\$412,862	0.40%
Heat	\$11,286,643	2.17%
Hurricane/ Tropical Storm	\$335,570	0.01%
Lightning	\$1,764,925	3.36%
Severe Storm/ Thunder Storm	\$1,116,262	0.53%
Tornado	\$2,065,663	0.87%
Wildfire	\$334,042	2.09%
Wind	\$1,046,932	0.72%
Winter Weather	\$14,143,779	1.57%
Aiken - Total	\$47,144,155	0.52%

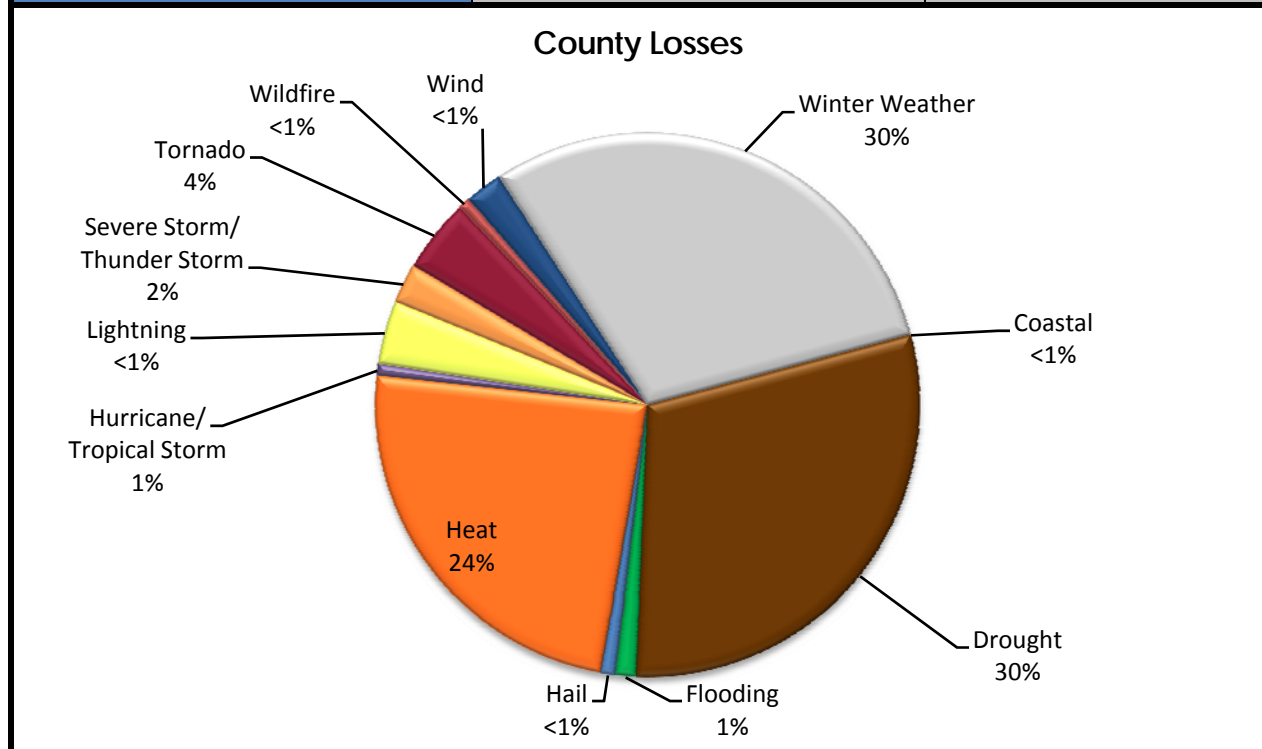


FIGURE 3. Historic Hazard Event Damages (property and crop) between 1960 and 2008 for Aiken County, SC.