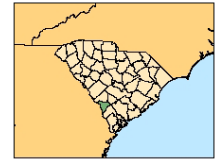


ALLENDALE COUNTY, SC

Hazard Profile for 2008

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



I. Summary

Allendale County is vulnerable to both natural (hurricanes/tropical storms) and technological (hazardous material incidents) hazards. Drought, heat, and winter weather produce the most monetary damages. Winter weather is a relatively rare event (occurring every 19 years or so), but it generates the most losses for the county. Some of the more frequent events that affect the county include temperature extremes, tornadoes, thunderstorms, and hazardous materials incidents.

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 Allendale County, most of the census tracts exhibit moderately high levels of social vulnerability. Figure 1 provides maps of the Allendale County depicting (on the left) social vulnerability by census tract and (on the right) cities and major roads.

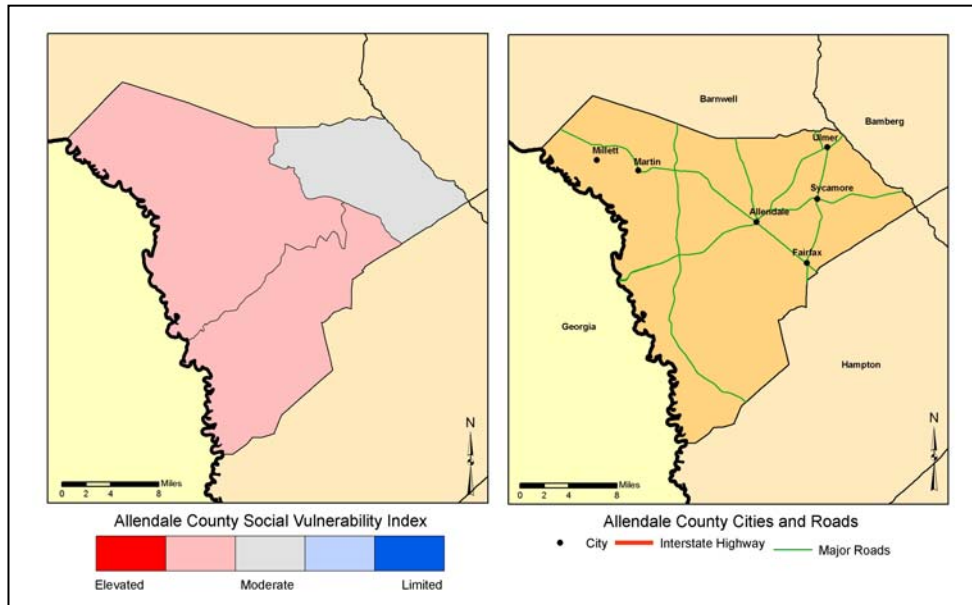


FIGURE 1. The Social Vulnerability for Allendale County, SC by US Census tracts and a general reference map of Allendale County.

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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ALLENDALE 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 Allendale County are transportation-related accidents, severe thunderstorms and wind, and wildfires. Flooding, hurricanes/tropical storms, winter weather, and lightning have less than a 10 percent chance of occurring in any given year given the historic record (Table 1).

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

Hazard ^a	Number of Events	Years in Record	Recurrence Interval (Years)	Hazard Frequency (Percent Chance per Year)
Coastal Events				
Hurricane/Tropical Storm	15	158	10.53	9.49
Ocean & Lake Surf ^b	1	16	16.00	6.25
Waterspout	0	16	*	*
Dam Failure	-	-	-	-
Drought	21	59	2.81	35.59
Flood	3	59	19.67	5.08
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)	35	22	0.63	159.09
Nuclear Power Plant	0	8	*	*
Terrorism	0	29	*	*
Transportation (Motor Vehicle)	2,519	10	<0.50	25,190.00
Severe Thunderstorm Events				
Funnel Cloud	0	16	*	*
Hail	25	59	2.36	42.37
Heavy Precipitation	0	15	*	*
Lightning	1	16	16.00	6.25
Thunderstorm & Wind	77	59	0.77	130.51
Tornado	12	59	4.92	20.34
Temperature Extremes	6	16	2.67	37.50
Wildfire	642	21	<0.50	3,057.14
Winter Weather (Snow & Ice)	3	59	19.67	5.08
^a Data Sources: National Climatic Data Center (www.ncdc.noaa.gov/cgi-win/wwwcgi.dll?wwwEvent-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, Allendale County has a slightly higher probability of loss producing thunderstorm and wind hazards. Figure 2 (page 3) shows those hazards occurring in the county that exceeded the state mean in red type. Heat and drought equal the state average. All other hazards are below the state mean indicating that these hazards historically have had less financial impact on Allendale County than elsewhere in South Carolina.

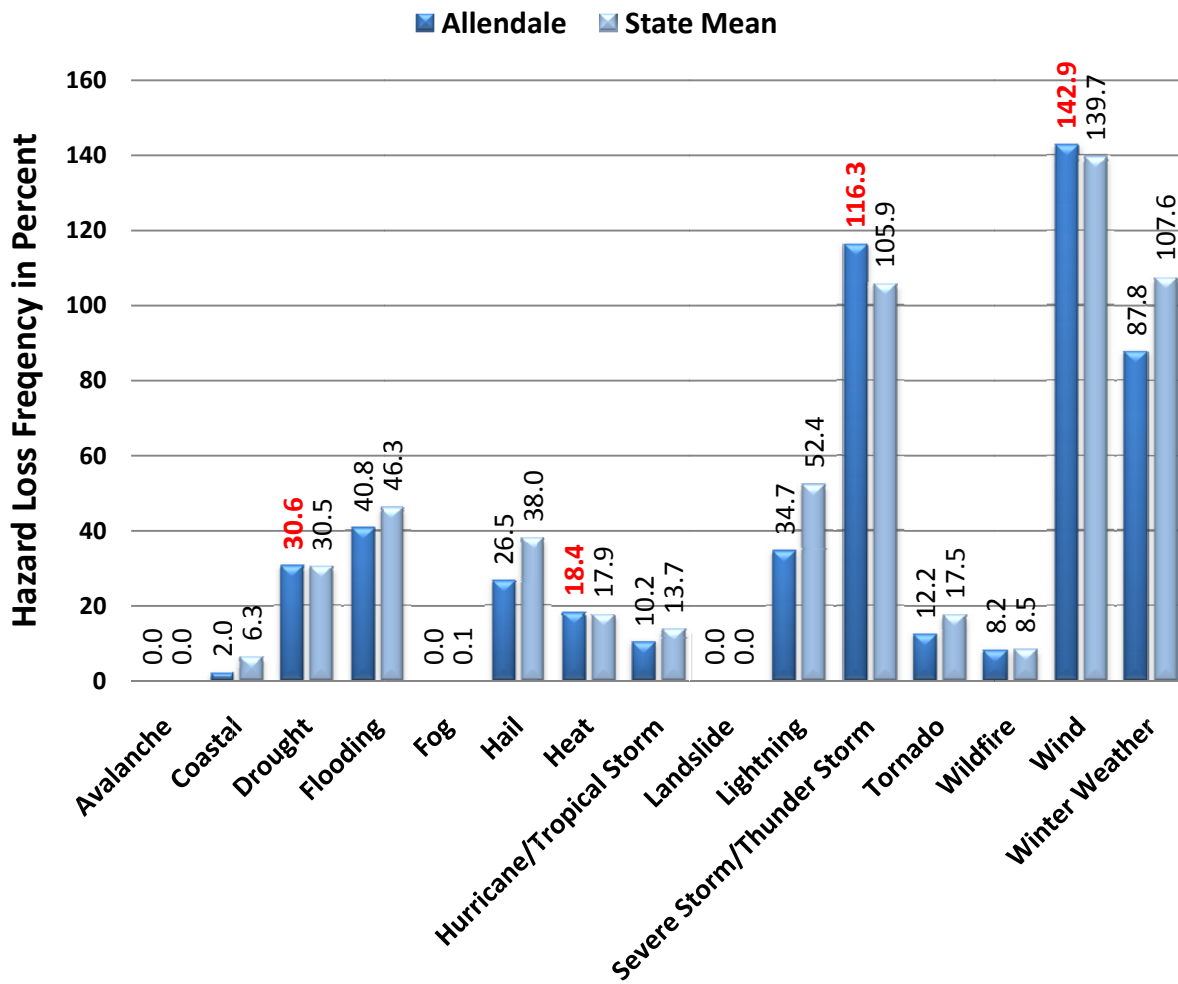


FIGURE 2. The historic loss causing hazard frequency between 1960 and 2008 for Allendale County compared to South Carolina as reported in SHELUDS. Percentage numbers indicated in red are when the county total exceeds the state mean. Also, a hazard that is identified in the National Climatic Data Center 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 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 SHELUDS database – available at (<http://www.sheldus.org>). Winter weather, drought, and heat caused the largest amount of historic losses in Allendale County, losses that exceed \$49 million. While significant for the county, the total losses only accounted for less than one percent of the state’s total damages.

Hazard	Total Damage (in 2008 dollars)	Percent of State
Coastal	\$6,476	0.01%
Drought	\$14,058,478	2.26%
Flooding	\$1,351,778	0.91%
Hail	\$252,405	0.25%
Heat	\$11,286,643	2.26%
Hurricane/ Tropical Storm	\$3,098,070	0.06%
Lightning	\$798,003	1.58%
Severe Storm/ Thunder Storm	\$942,941	0.46%
Tornado	\$3,086,790	1.36%
Wildfire	\$334,042	2.18%
Wind	\$456,684	0.33%
Winter Weather	\$14,145,628	1.63%
Allendale - Total	\$49,817,939	0.54%

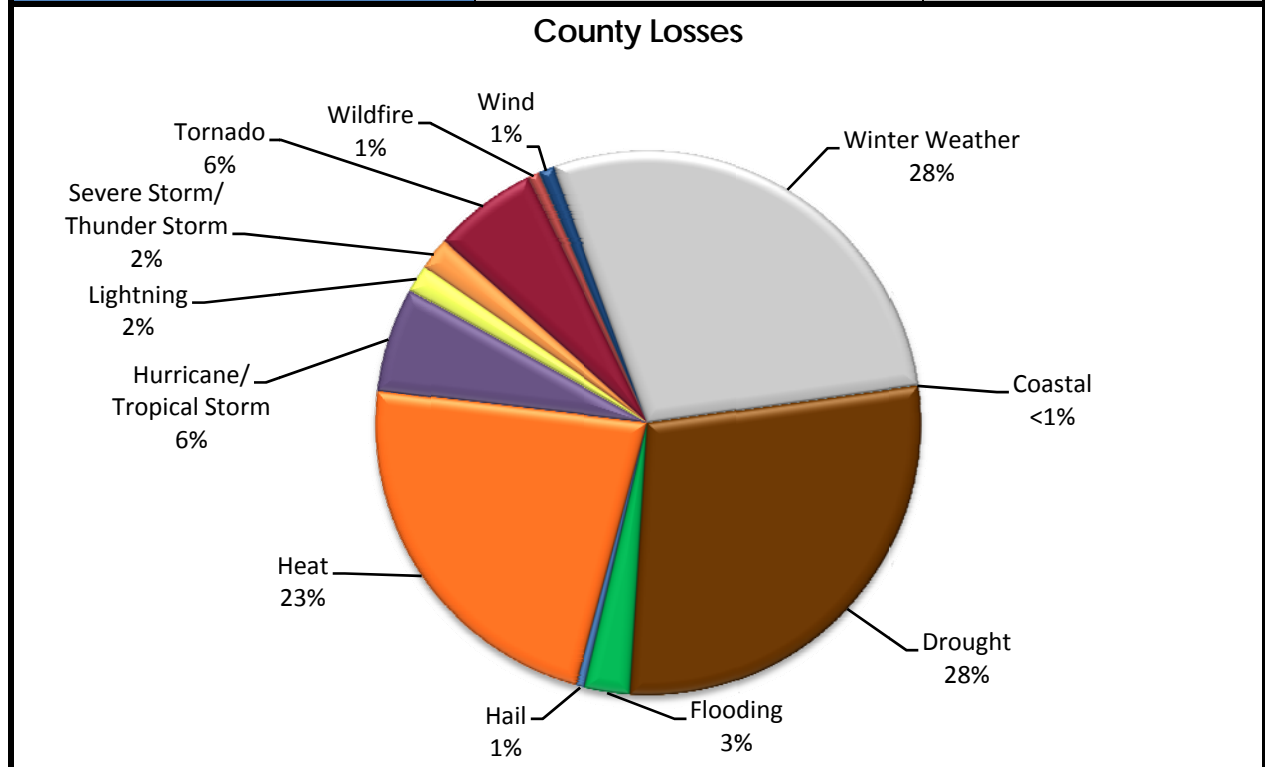


FIGURE 3. Historic Hazard Event Damages (property and crop) between 1960 and 2008 for Allendale County, SC.