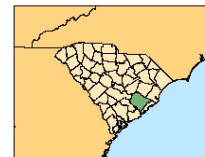


BERKELEY COUNTY, SC

Hazard Profile for 2008

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



I. Summary

Berkeley County is vulnerable to both natural (hurricanes/tropical storms) and technological (hazardous material incidents) hazards. Hurricanes/tropical storms produce the highest monetary damages. The recurrence interval is 6.9 years, making them a somewhat regular event. Chronic hazards such as drought that have a shorter recurrence interval (3 years) should be carefully monitored. Wildfires, thunderstorms, hail and hazardous material incidents are some of the prominent hazards that annually 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 Berkeley County, most of the census tracts exhibit moderate to limited levels of social vulnerability. Census tracts in the north eastern parts of the county have the highest SoVI scores. Figure 1 provides maps of the Berkeley County depicting (on the left) social vulnerability by census tract and (on the right) cities and major roads.

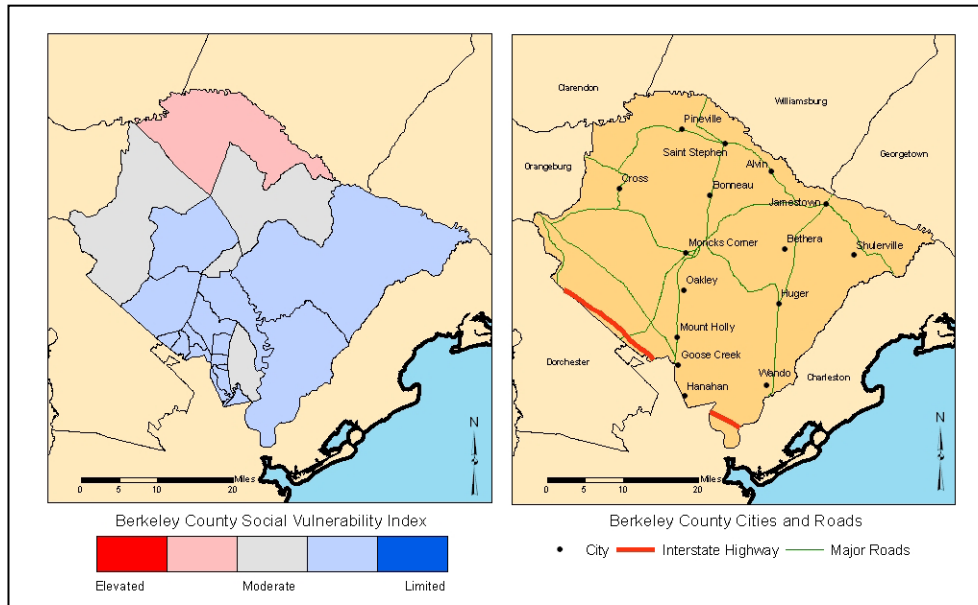


FIGURE 1. The Social Vulnerability for Berkeley County, SC by US Census tracts and a general reference map of Berkeley County.

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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BERKELEY 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 Berkeley County are hazardous material accidents, severe thunderstorms, wildfires, and earthquakes. Winter weather and ocean surf 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 Berkeley County, SC.

Hazard ^a	Number of Events	Years in Record	Recurrence Interval (Years)	Hazard Frequency (Percent Chance per Year)
Coastal Events				
Hurricane/Tropical Storm	23	158	6.87	14.56
Ocean & Lake Surf ^b	1	16	16.00	6.25
Waterspout	0	16	*	*
Dam Failure	-	-	-	-
Drought	21	59	2.81	35.59
Flood	41	59	1.45	69.49
Fog	0	12	*	*
Geophysical Events				
Avalanche	0	49	*	*
Earthquake	540	310	0.57	174.19**
Landslide	0	49	*	*
Human-Induced Events				
Civil Disturbance	-	-	-	-
Hazardous Materials (Hazmat)	440	22	<0.50	2000.00**
Nuclear Power Plant	0	8	*	*
Terrorism	0	29	*	*
Transportation (Motor Vehicle)	27,051	10	<0.50	270,510.00**
Severe Thunderstorm Events				
Funnel Cloud	4	16	4.00	25.00
Hail	189	59	<0.50	320.34**
Heavy Precipitation	1	15	15.00	6.67
Lightning	9	16	1.78	56.25
Thunderstorm & Wind	196	59	<0.50	332.20**
Tornado	29	59	2.03	49.15
Temperature Extremes	8	16	2.00	50.00
Wildfire	6,014	21	<0.50	28,638.10**
Winter Weather (Snow & Ice)	4	59	14.75	6.78

^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/)

^b Includes coastal flooding, coastal erosion, coastal winds

* 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

V. Hazard Loss Information

When compared to South Carolina as a whole, Berkeley County has a higher probability of loss-producing coastal, drought, flood, heat, hurricanes/tropical storms, tornadoes, thunderstorms, and wind events. This comparison between the county and state seen in Figure 2 (page 3) shows hazards that exceeded the state mean in red type. Winter weather and lightning are both below the state mean indicating that these hazards have historically affected the county less frequently when compared to the state as a whole.

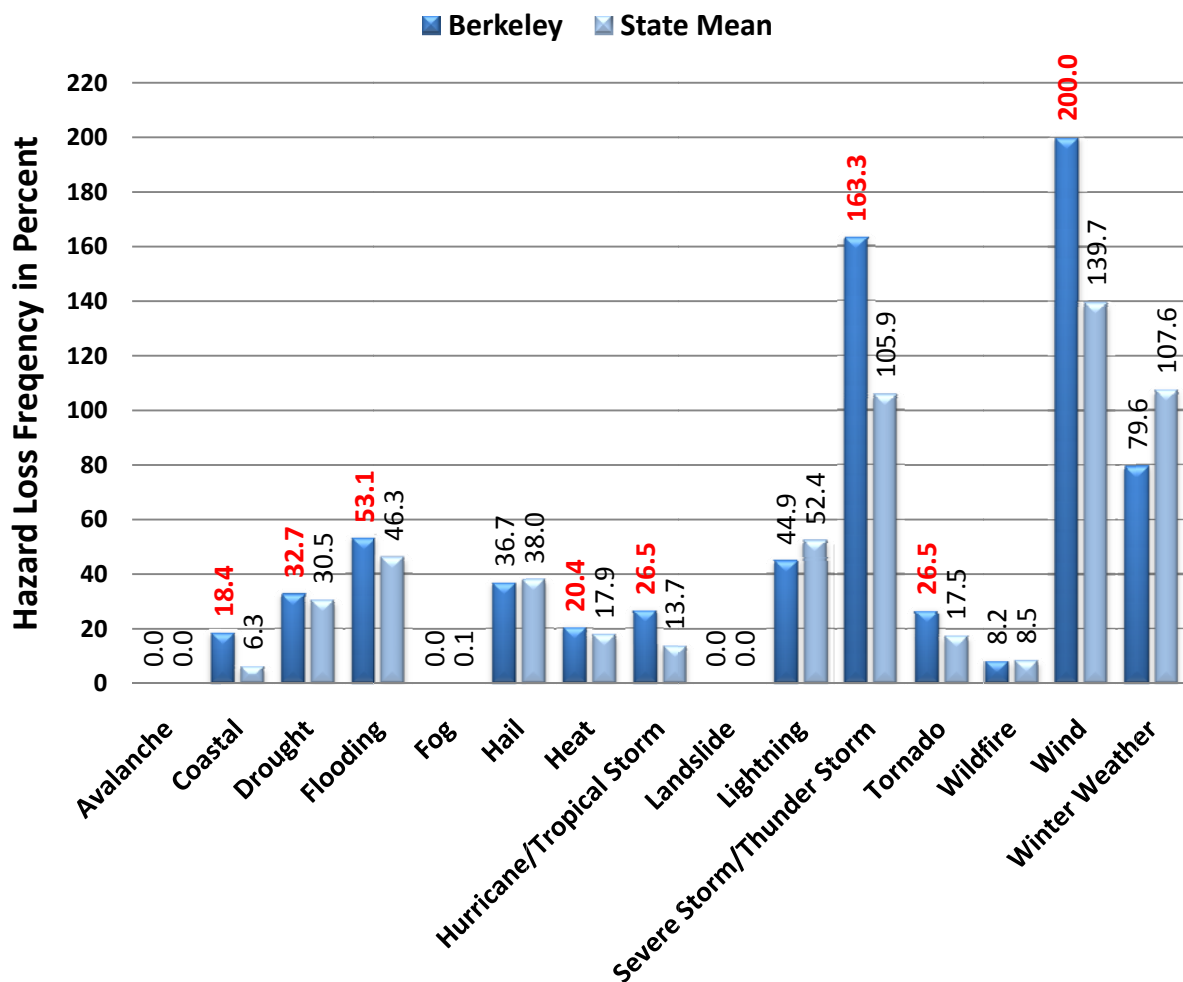


FIGURE 2. The historic loss causing hazard frequency between 1960 and 2008 for Berkeley County compared to South Carolina as reported in SHELUDS. Percentage numbers indicated in red are when the county total exceeds the state mean. Also, a hazard that is identified in the National Climatic Data Center 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>). Hurricane/tropical storms have caused the largest amount of historic losses in Berkeley County (94%), resulting in losses exceeding nearing \$1 billion. While significant for the county, hurricane loss represents 18% of the state's total losses from hurricanes (a significant portion of overall losses) indicating that hurricanes pose a major threat to lives and livelihoods for the state.

Hazard	Total Damage (in 2008 dollars)	Percent of State
Coastal	\$693,847	0.07%
Drought	\$14,201,478	2.28%
Flooding	\$1,313,624	0.88%
Hail	\$341,775	0.34%
Heat	\$11,286,643	2.26%
Hurricane/ Tropical Storm	\$963,920,782	18.20%
Lightning	\$609,401	1.20%
Severe Storm/ Thunder Storm	\$1,395,304	0.69%
Tornado	\$10,761,133	4.72%
Wildfire	\$334,042	2.18%
Wind	\$1,209,549	0.86%
Winter Weather	\$15,342,112	1.77%
Berkeley - Total	\$1,021,409,692	11.10%

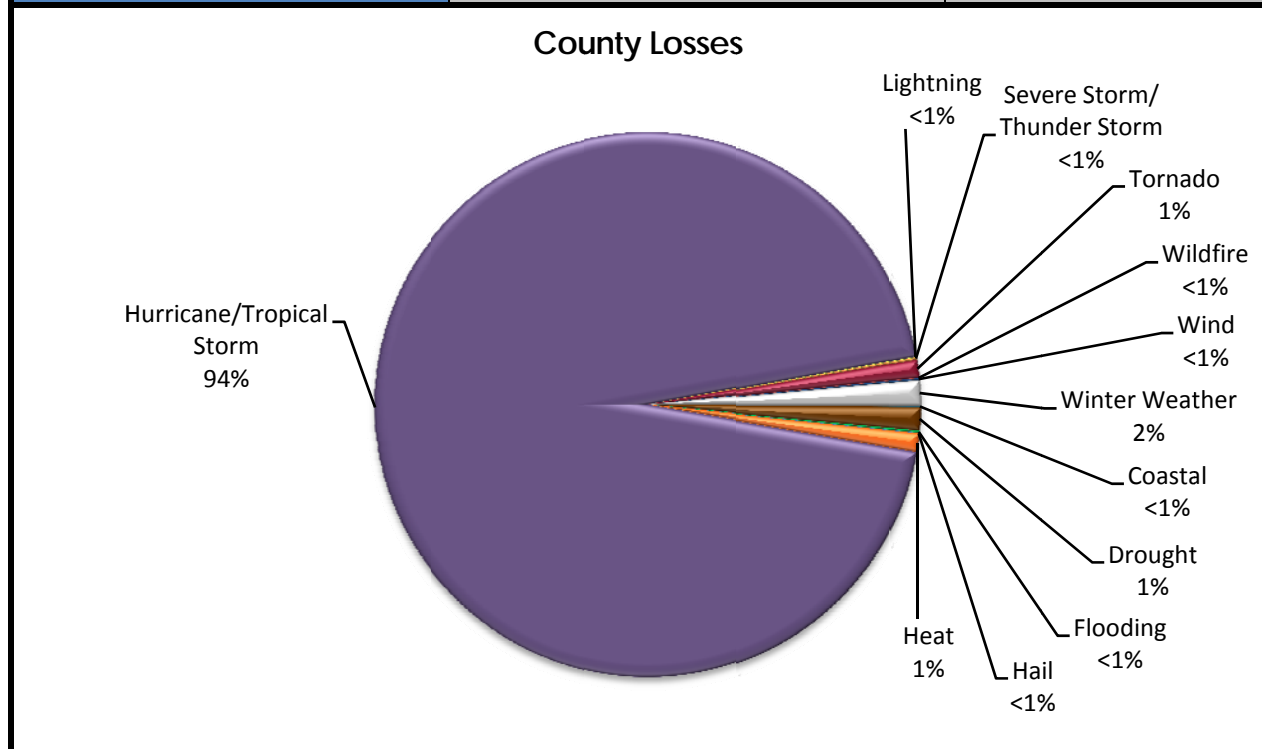


FIGURE 3. Historic Hazard Event Damages (property and crop) between 1960 and 2008 for Berkeley County, SC.