

South Carolina Pedestrian and Bicycle Crash Analysis 2009-2017



Submitted to:

Palmetto Cycling Coalition
and the South Carolina
Livable Communities
Alliance

Submitted by:

Equitable Cities, LLC



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I. Introduction

In summer 2018, Equitable Cities LLC was commissioned by Palmetto Cycling Coalition and the South Carolina Livable Communities Alliance to analyze bicycle and pedestrian crashes over a nine-year period (2009-2017) in the State of South Carolina. South Carolina is home to approximately 4,961,119 residents across 30,062.6 square miles or roughly 165 people per square mile. With a median age of 39.1, the majority of the residents are female and identify as White or Caucasian. There is, however, a sizable minority of Blacks/African-Americans and Hispanics living in the state, with slightly more than one in four residents identifying as Black or African-American. The median household income is less than the US as a whole, and more than one in ten residents live below the poverty line, a rate that is about 10 percent higher than that of the United States. Nearly five percent of residents are foreign-born and, while English is the primary language at home for both adults and children, approximately seven percent of households speak another language at home. The majority of households are owner-occupied with 2.6 persons per household. Lastly, the majority of residents commute to work alone by motor vehicle, with a mean travel time of 24.7 minutes.

In *Smart Growth America's 2016 Dangerous by Design Report*, South Carolina ranked as the seventh worst place for pedestrians. With 1,057 pedestrian deaths between 2005 and 2014, the state's annual rate of pedestrian fatalities per 100,000 people was higher than the national average for pedestrian fatalities. Similarly, the state's metropolitan area of Augusta-Richmond County, GA-SC was also ranked in the report as the 22nd most dangerous place for pedestrians, with 119 pedestrian deaths or 2.07 pedestrian fatalities per 100,000 people during the same time span. The report also highlighted the disparities between the pedestrian deaths of whites and non-white residents in the state. The state had the fourth highest rate for pedestrian fatalities per 100,000 people for non-white residents in the country. The population data was obtained from the U.S. Census Reporter at censusreporter.org, and reflects data included in the 2016 American Community Survey (ACS) 1-year estimates.

In an attempt to better understand the contributing factors surrounding bicycle and pedestrian crashes, injuries, and fatalities in South Carolina, this report includes a comprehensive analysis of bicycle and pedestrian crash data over a nine-year period (2009 to 2017). The data for this report was obtained from the Office of Highway Safety and Justice Programs (OHSJP) at the South Carolina Department of Public Safety. The data received from OHSJP was downloaded into Microsoft Excel and perused for inaccuracies. OHSJP was also contacted to ensure data accuracy and reliability. After discovering data inaccuracies in the initial data file, OHSJP submitted a revised and final dataset to the authors for analysis. The final dataset was analyzed in IBM SPSS Software, an advanced statistical analysis package utilized by social scientists, researchers, etc.

The report is organized into four sections. Section I, this section, is the Introduction. Sections II through IV include analyses of bicycle crashes, pedestrian crashes, and bicycle and pedestrian crashes

combined by a number of factors for years 2009 to 2017. The list of select factors includes year, month, day of the week, time of day, lighting and weather conditions, route category and jurisdiction, race/ethnicity, age, gender, and crash type. The latter, crash type, is broken down into three distinct categories: fatalities, injuries, and property damage. Of the three categories, the variable “injury” includes all crashes that resulted in an injury, serious injury, or possible injury. The three injury categories were combined for ease and consistency in analysis. Lastly, Section V includes a brief summary of key findings observed throughout the report.

"This report was funded by a grant from Voices for Healthy Kids, an initiative of the Robert Wood Johnson Foundation and American Heart Association (AHA). The AHA has not reviewed the data or science in this report."

II. Bicycle Crashes

Crash Years 2009 - 2017

Figure 1 shows the total number of bicycle crashes by year in South Carolina between 2009 and 2017. As shown below, there were a total of 4,570 reported crashes involving bicycles, or an average of 508 reported bicycle crashes per year, on roadways in the state of South Carolina. The majority of reported bicycle crashes occurred in 2012 (550, 12%), followed by years 2016 (534, 11.7%) and 2009 (521, 11.4%). Comparatively, the least number of reported bicycle crashes occurred in 2011 (458, 10%), followed by years 2015 (463, 10.1%) and 2013 (504, 11%). While the number of reported bicycle crashes increased by 15 percent from 2015 to 2016, there was a 3.5 percent decrease (i.e., a positive sign) in the number of reported crashes between 2016 and 2017.

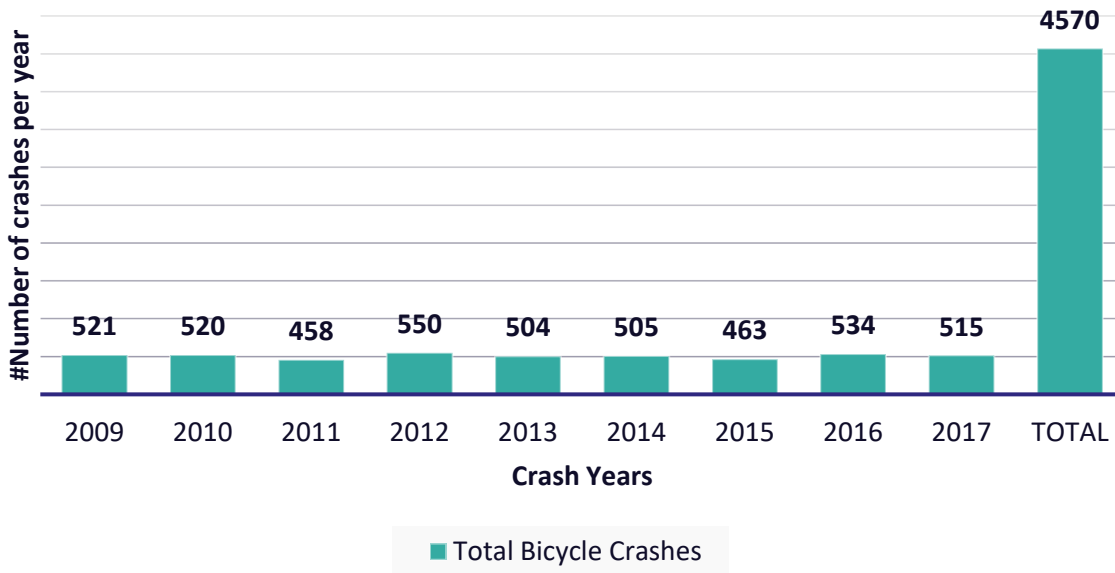


Figure 1: Total Bicycle Crashes by Year, South Carolina, 2009-2017

Table 1 shows the total number of bicycle crashes by year and crash type in South Carolina between 2009 and 2017. Of the total number of reported bicycle crashes that occurred during this timeframe, 3.2 percent or 146 resulted in a fatality, 90.7 percent or 4,147 resulted in an injury, and 6.1 percent or 277 resulted in property damage. With an average of 16 bicycle fatalities and 461 bicycle-related injuries reported each year, 2016 was the deadliest year for bicyclists with 24 reported bicycle fatalities. Similarly, 2012 saw the most bicycle crashes resulting in an injury, with 501 reported injuries. By comparison, 2009 experienced the least number of bicycle fatalities (13), and 2011 experienced the least number of bicycle-related injuries (411).

Table 1: Total Bicycle Crashes by Year and Crash Type, South Carolina, 2009-2017

Year	Crash Types						Total
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	Number
2009	13	2.5%	476	91.4%	32	6.1%	521
2010	14	2.7%	466	89.6%	40	7.7%	520
2011	17	3.7%	411	89.7%	30	6.6%	458
2012	15	2.7%	501	91.1%	34	6.2%	550
2013	15	3.0%	460	91.3%	29	5.8%	504
2014	14	2.8%	459	90.9%	32	6.3%	505
2015	16	3.5%	423	91.4%	24	5.2%	463
2016	24	4.5%	485	90.8%	25	4.7%	534
2017	18	3.5%	466	90.5%	31	6.0%	515
Total	146	3.2%	4147	90.7%	277	6.1%	4570

Source 1: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Race and Ethnicity

Table 2 shows the total number of bicycle crashes by race/ethnicity and crash type in South Carolina between 2009 and 2017. While African-Americans make up only 26.8% of South Carolina’s population¹, they were involved in nearly 40% of the bicycle crashes over the nine-year period. Whites made up the majority of crashes during this time; however, given the percentage of Whites (63.7%) in the state, they were underrepresented in the total number of reported bicycle crashes. Hispanics, Alaskan Natives/American Indians, Asian/Pacific Islanders, and “Others” were also underrepresented in the total number of reported bicycle crashes, given the sizes of their respective populations in the state. For African-Americans, the rate of crashes per 1,000 people was 1.6 times that of Whites and 5.5 times that of Hispanics. African-Americans were also 1.5 times more likely to be a victim of a bicycle crash than Whites and Hispanics.

Table 2: Total Bicycle Crashes by Race/Ethnicity and Crash Types, South Carolina, 2009-2017

Race and Ethnicity	Total Bicycle Crashes	Percentage of Total Bicycle Crashes	Crashes per 1,000 people
African American	1797	39.3%	1.35
Alaskan Native/American Indian	3	0.1%	0.22
Asian/Pacific Islander	49	1.1%	0.63
Caucasian	2546	55.7%	0.81
Hispanic	117	2.6%	0.43
Other	20	0.4%	1.56
Unknown	38	0.8%	n/a
Total	4570	100%	

Source 2: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

¹ <https://censusreporter.org/profiles/04000US45-south-carolina/>

Sex/Gender

Table 3 shows the total number and percentage of bicycle crashes by gender and crash type in South Carolina between 2009 and 2017. While women make up the majority of residents living in the state, the overwhelming majority, or more than eight out of ten (81%) reported bicycle crashes, involved a male bicyclist. Comparatively, fewer than twenty percent (18.5%) of the crashes involved women and less than one percent involved “others” or “unknown.” More than nine out of every ten (92%) bicycle-related fatalities involved a male bicyclist. By comparison, women were more likely than men (95.2% versus 90.1%, respectively) to be injured, rather than killed, when involved in a crash.

Table 3: Total Bicycle Crashes by Gender and Crash Type, South Carolina, 2009-2017

Gender	Crash Types						Total	
	Fatalities		Injuries		Property Damage			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Female	11	1.3%	806	95.2%	30	3.5%	847	18.5%
Male	135	3.7%	3320	90.1%	228	6.2%	3683	80.6%
Unknown	0	0.0%	21	52.5%	19	47.5%	40	0.9%
Total	146	3.2%	4147	90.7%	277	6.1%	4570	100%

Source 3: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Age Group

Table 4 shows the total number of bicycle crashes by age group in South Carolina between 2009 and 2017. As shown, the majority of reported bicycle crashes (21.7%) involved those in the 20-29 age group, followed by those in the 50-59 age group (17.9%). The least number and percentage of reported bicycle crashes occurred among those 80 years or older (0.4%) and those under 10 years old (4.6%).

Table 4: Total Bicycle Crashes by Age Group, South Carolina, 2009-2017

Age Group	Total Bicycle Crashes	Percentage of Total Bicycle Crashes
Under 10	209	4.6%
10-19	799	17.5%
20-29	992	21.7%
30-39	507	11.1%
40-49	683	14.9%
50-59	817	17.9%
60-69	341	7.5%
70-79	112	2.5%
80+	20	0.4%
Unknown	90	2.0%
Total	4570	100%

Source 4: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Table 5 shows the total number and percentage of bicycle crashes by age group and crash type in South Carolina between 2009 and 2017. The largest number of fatalities were among those in the 50-59 age group (45), whereas the least number of fatalities (1) occurred among those 80 years or older

and those under 10 years old (5). Those in the 20-29 age group also experienced the highest number of bicycle-related injuries.

Table 5: Total Bicycle Crashes by Age Group and Gender, South Carolina, 2009-2017

Age Group	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
Under 10	5	2.4%	198	94.7%	6	2.9%	209
10-19	9	1.1%	737	92.2%	53	6.6%	799
20-29	11	1.1%	904	91.1%	77	7.8%	992
30-39	18	3.6%	464	91.5%	25	4.9%	507
40-49	32	4.7%	625	91.5%	26	3.8%	683
50-59	45	5.5%	741	90.7%	31	3.8%	817
60-69	20	5.9%	307	90.0%	14	4.1%	341
70-79	5	4.5%	103	92.0%	4	3.6%	112
80+	1	5.0%	19	95.0%	0	0.0%	20
Unknown	0	0.0%	49	54.4%	41	45.6%	90
Total	146	3.2%	4147	90.7%	277	6.1%	4570

Source 5: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Month of the Year

The majority, or nearly one in three (31.8%) reported bicycle crashes, occurred during the summer months of June (10%), July (10.9%), and August (11%). Comparatively, the least percentage of reported crashes (15.9%) occurred during the winter months of December (5.5%), January (5.4%), and February (5%). With an average of 381 reported bicycle crashes per month over the aforementioned timeframe, August (11%) experienced the highest number of bicycle crashes while February (5%) saw the least number of bicycle crashes. Notably, there was a 45% increase in the number of reported bicycle crashes between spring and summer, and 30% decrease in the number of reported bicycle crashes between fall and winter.

Table 6 shows the total number and percentage of bicycle crashes by month of the year and crash type in South Carolina between 2009 and 2017. While the majority of reported bicycle fatalities (18) occurred in August (i.e., a summer month) and the least number of fatalities (6) occurred in December (i.e., a winter month), the deadliest season for bicyclists over this time period was spring, with 42 total fatalities or 29% of the total number of fatalities. Regarding bicycle-related injuries, the majority occurred in July (448) and August (456), whereas the least number of bicycle-related injuries occurred in February (207) and January (216).

Table 6: Total Bicycle Crashes by Month of the Year and Crash Type, South Carolina, 2009-2017

Month of the Year	Crash Types						Total
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	Number
January	16	6.5%	216	87.8%	14	5.7%	246
February	13	5.7%	207	90.4%	9	3.9%	229
March	10	3.0%	303	91.8%	17	5.2%	330
April	15	3.6%	378	91.3%	21	5.1%	414
May	17	3.8%	402	89.7%	29	6.5%	448
June	7	1.5%	424	93.2%	24	5.3%	455
July	15	3.0%	448	90.1%	34	6.8%	497
August	18	3.6%	456	90.8%	28	5.6%	502
September	13	3.0%	398	91.5%	24	5.5%	435
October	7	1.6%	407	90.6%	35	7.8%	449
November	9	2.9%	282	89.8%	23	7.3%	314
December	6	2.4%	226	90.0%	19	7.6%	251
Total	146	3.2%	4147	90.7%	277	6.1%	4570

Source 6: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Day of the Week

Table 7 shows the total number and percentage of bicycle crashes by day of the week and crash type in South Carolina between 2009 and 2017. The majority of reported bicycle crashes occurred on Friday (769, 16.8%), followed closely by Thursday (701, 15.3%). Comparatively, the least number of reported bicycle crashes occurred on Sunday (490, 10.7%). There was an average of 653 reported crashes per day of the week over the nine-year time frame, with 3.2% resulting in a fatality. Of those that resulted in a fatality, the majority occurred on Thursday (25), followed by Saturday (23) and Tuesday (22). The majority of bicycle crashes resulting in injury occurred on Friday (698) and Thursday (627). More than one in four (44%) fatalities occurred during the weekend. Notably, there was a 33% increase in bicycle crashes from Sunday to Monday, a 17% decrease in crashes from Friday to Saturday, and a 23% decrease in crashes from Saturday to Sunday.

Table 7: Total Bicycle Crashes by Day of Week and Crash Type, South Carolina, 2009-2017

Day of the Week	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
Sunday	21	4.3%	443	90.4%	26	5.3%	490
Monday	17	2.6%	601	91.9%	36	5.5%	654
Tuesday	22	3.3%	611	91.6%	34	5.1%	667
Wednesday	21	3.2%	591	90.8%	39	6.0%	651
Thursday	25	3.6%	627	89.4%	49	7.0%	701
Friday	17	2.2%	698	90.8%	54	7.0%	769
Saturday	23	3.6%	576	90.3%	39	6.1%	638
Total	146	3.2%	4147	90.7%	277	6.1%	4570

Source 7: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Time of the Day

Table 8 shows the total number and percentage of bicycle crashes by time of day and crash type in South Carolina between 2009 and 2017. The majority of reported bicycle crashes (1195) occurred between the hours of 3:01pm and 6:00pm (i.e., PM peak hour), whereas the least number of reported crashes occurred between 3:01am and 6:00am. Notably, less than one in ten (9%) of the reported crashes occurred during AM peak hours, which is from 6:01am and 9:00am. The deadliest hours for bicyclists were between 6:01pm and 9:00pm, with 43 reported fatalities, followed by the hours of 9:01pm and midnight with 26 reported fatalities. Comparatively, the majority of bicycle injuries occurred between 3:01pm and 6:00pm. The number of reported crashes increased by 44% from 3:01pm and 6:00pm to 6:01pm and 9:00pm and decreased by 55% from 6:01pm and 9:00pm to 9:01pm and midnight.

Table 8: Total Bicycle Crashes by Time of Day and Crash Type, South Carolina, 2009-2017

Time of Day	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
12:01am - 3:00am	12	8.7%	118	85.5%	8	5.8%	138
3:01am - 6:00am	9	11.5%	64	82.1%	5	6.4%	78
6:01am - 9:00am	14	3.3%	389	92.4%	18	4.3%	421
9:01am - Noon	7	1.2%	559	92.4%	39	6.4%	605
12:01pm - 3:00pm	14	1.7%	738	91.2%	57	7.0%	809
3:01pm - 6:00pm	21	1.8%	1094	91.5%	80	6.7%	1195
6:01pm - 9:00pm	43	4.7%	820	89.7%	51	5.6%	914
9:01pm - Midnight	26	6.3%	365	89.0%	19	4.6%	410
Total	146	3.2%	4147	90.7%	277	6.1%	4570

Source 8: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Councils of Governments

Table 9 shows the total number and percentage of bicycle crashes and crash rate by Councils of Governments in South Carolina between 2009 and 2017. The overwhelming majority (45.9%) of reported bicycle crashes occurred within the boundaries of two Councils of Government (COG): Berkeley-Charleston-Dorchester and S.C. Appalachian. Nearly thirty percent (29.6%) or 1,351 reported bicycle crashes occurred in Berkeley-Charleston-Dorchester COG and nearly seventeen percent (16.3%) or 744 reported bicycle crashes occurred in S.C. Appalachian COG. The lowest percentage of crashes (3.1%) occurred in Santee-Lynches COG. Comparatively, the Berkeley-Charleston-Dorchester COG had the highest rate (1.7) of bicycle crashes per 1,000 people whereas the Catawba Regional COG had the lowest rate (0.4) of bicycle crashes per 1,000 people.

Table 9: Total Bicycle Crashes and Crash Rate by Council of Governments, South Carolina, 2009-2017

Council of Governments	Total COG Resident Population	Total COG Bicycle Crashes	COG's Percentage of Total Bicycle Crashes	Crashes per 1,000 people by COG
Berkeley-Charleston-Dorchester COG	775,831	1,351	29.6%	1.7
Waccamaw Regional Council of Government	426,008	682	14.9%	1.6
Low Country Council of Government	272,515	328	7.2%	1.2
Pee Dee Regional Council of Government	340,563	306	6.7%	0.9
Central Midlands Council of Government	763,329	526	11.5%	0.7
Upper Savannah Council of Government	253,529	173	3.8%	0.7
Lower Savannah Council of Government	414,238	263	5.8%	0.6
S.C. Appalachian Council of Government	1,247,256	744	16.3%	0.6
Santee-Lynches Council of Government	223,290	142	3.1%	0.6
Catawba Regional Council of Government	418,827	181	4.0%	0.4

Source 9: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

County

Table 10 shows the total number and percentage of bicycle crashes by county in South Carolina between 2009 and 2017. Nearly one out of every four (23.4%) reported bicycle crashes occurred in Charleston County. The county's bicycle crashes per 1,000 people is 1.5 times higher than the next county (i.e., Horry County) with the highest percentage of total bicycle crashes (13%) and 18 times that of the county with the lowest percentage of total bicycle crashes (i.e., Saluda). The ten counties with the highest percentages of total bicycle crashes are Charleston, Horry, Beaufort, Florence, Dorchester, Richland, Greenville, Spartanburg, and Lexington. The ten counties with the highest rates of bicycle crashes per 1,000 people are Charleston, Horry, Beaufort, Florence, Dorchester, Georgetown, Marion, Marlboro, Darlington, and Hampton. Charleston, Beaufort, and Horry were also ranked as the top three counties with the most bicycle fatalities (23, 14, and 11, respectively), whereas Charleston, Horry, and Greenville rounded out the top three for bicycle injuries (971,551, and 336, respectively).

Table 10: Total Bicycle Crashes by County, South Carolina 2009-2017

County	Resident Population	Total Bicycle Crashes	Percent of Total Bicycle Crashes	Bicycle Crashes per 1,000 People
Charleston	401,438	1069	23.4%	2.66
Horry	333,268	592	13.0%	1.78
Beaufort	186,844	261	5.7%	1.40
Georgetown	61,607	76	1.7%	1.23
Florence	138,566	155	3.4%	1.12
Marion	31,293	32	0.7%	1.02
Marlboro	26,825	27	0.6%	1.01
Dorchester	156,456	142	3.1%	0.91
Darlington	67,265	60	1.3%	0.89
Hampton	19,602	17	0.4%	0.87
Sumter	106,847	92	2.0%	0.86
Richland	411,592	339	7.4%	0.82
Colleton	37,611	31	0.7%	0.82
Greenville	506,837	369	8.1%	0.73
McCormick	9,545	7	0.2%	0.73
Newberry	38,488	27	0.6%	0.70
Orangeburg	87,476	61	1.3%	0.70
Jasper	28,458	19	0.4%	0.67
Dillon	30,666	20	0.4%	0.65
Berkeley	217,937	140	3.1%	0.64
Aiken	168,179	107	2.3%	0.64
Clarendon	34,057	21	0.5%	0.62
Greenwood	70,355	43	0.9%	0.61
Barnwell	21,345	12	0.3%	0.56
Cherokee	57,105	32	0.7%	0.56
Spartanburg	306,854	163	3.6%	0.53
Lexington	290,642	153	3.3%	0.53
Anderson	198,759	104	2.3%	0.52
Laurens	66,848	33	0.7%	0.49
Pickens	123,479	60	1.3%	0.49
Union	27,537	13	0.3%	0.47
Lee	17,350	8	0.2%	0.46
York	266,439	122	2.7%	0.46
Williamsburg	31,133	14	0.3%	0.45
Abbeville	24,722	11	0.2%	0.44
Edgefield	26,693	11	0.2%	0.41
Lancaster	92,550	36	0.8%	0.39
Oconee	77,270	27	0.6%	0.35

Bamberg	14,381	5	0.1%	0.35
Allendale	9,002	3	0.1%	0.33
Kershaw	65,036	21	0.5%	0.32
Fairfield	22,607	7	0.2%	0.31
Chester	32,301	10	0.2%	0.31
Chesterfield	45,948	12	0.3%	0.26
Calhoun	14,704	3	0.1%	0.20
Saluda	20,452	3	0.1%	0.15

Source 10: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Route Category/Jurisdiction

Figure 2 shows the percentage of bicycle fatalities by route category/jurisdiction in South Carolina from 2009 to 2017. As shown, the overwhelming majority of bicycle-related fatalities (94%) occurred on roadways (i.e., Interstate, SC Primary, Secondary and US Primary) that are under the jurisdiction of the South Carolina Department of Transportation (SCDOT). By comparison, only 6% of the fatalities occurred on county roadways.

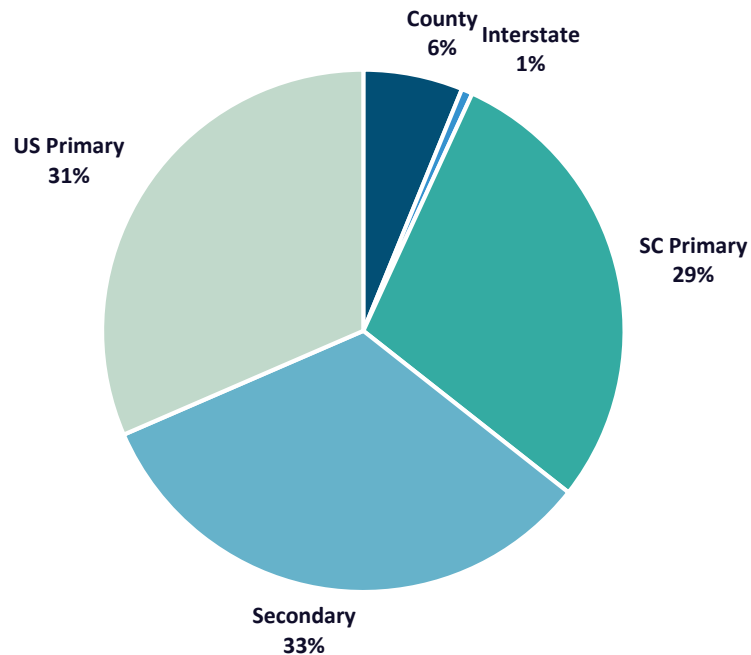


Figure 2: Bicycle Fatalities by Route Category/Jurisdiction, South Carolina, 2009-2017

Table 11 shows the total number and percentage of bicycle crashes by route category and crash type in South Carolina between 2009 and 2017. Of those bicycle crashes, 3.2% resulted in a fatality, whereas 90.7% resulted in an injury and 6.1% in property damage.

Table 11: Total Bicycle Crashes by Roadway Jurisdiction and Crash Types, South Carolina, 2009-2017

Route Category/Jurisdiction	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
County	9	1.3%	653	92.1%	47	6.6%	709
Interstate	1	9.1%	9	81.8%	1	9.1%	11
SC Primary	42	5.9%	638	89.7%	31	4.4%	711
Secondary	48	2.3%	1930	90.7%	151	7.1%	2129
US Primary	46	4.6%	917	90.8%	47	4.7%	1010
Total	146	3.2%	4147	90.7%	277	6.1%	4570

Source 11: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Weather Conditions

Table 12 shows the total number and percentage of bicycle crashes by weather condition and crash type in South Carolina between 2009 and 2017. The overwhelming majority, or nearly nine out of ten (4047, 88.6%) reported bicycle crashes, fatalities (129, 88%), and injuries (3665, 88%) occurred under clear, non-adverse weather conditions. As a result, only a small percentage of bicycle crashes occurred under cloudy (289, 6.3%) or rainy (205, 4.5%) conditions. Similarly, snow and fog/smoke had a minuscule impact on the number of reported bicycle crashes.

Table 12: Total Bicycle Crashes by Weather Condition and Crash Types, South Carolina, 2009-2017

Weather Condition	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
Blowing Sand, Soil, Dirt or Snow	0	0.0%	2	100.0%	0	0.0%	2
Clear, No Adverse Conditions	129	3.2%	3665	90.6%	253	6.3%	4047
Cloudy	10	3.5%	263	91.0%	16	5.5%	289
Fog, Smog, Smoke	0	0.0%	14	100.0%	0	0.0%	14
Rain	6	2.9%	192	93.7%	7	3.4%	205
Severe Cross Winds, High Wind	0	0.0%	1	100.0%	0	0.0%	1
Snow	0	0.0%	2	100.0%	0	0.0%	2
Unknown	1	10.0%	8	80.0%	1	10.0%	10
Total	146	3.2%	4147	90.7%	277	6.1%	4570

Source 12: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Light Condition

Table 13 shows the total number and percentage of bicycle crashes by light condition and crash type in South Carolina between 2009 and 2017. The overwhelming majority, or seven out of ten (3237, 70.8%) reported bicycle crashes, occurred under daylight conditions. However, one in four or 25% of the reported crashes did occur under dark light conditions, with or without street lamps lit or unspecified. The majority of reported bicycle fatalities and injuries occurred under daylight. However,

of all reported bicycle crash types, the total number of fatalities that occurred during the dark exceeds those that occurred under daylight, 81 versus 57, respectively.

Table 13: Total Bicycle Crashes by Light Condition and Crash Types, South Carolina, 2009-2017

Light Condition	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
Dark (Lighting Unspecified)	8	4.3%	170	91.9%	7	3.8%	185
Dark (No Lights)	47	10.8%	368	84.6%	20	4.6%	435
Dark (Street Lamp Lit)	18	3.9%	416	89.5%	31	6.7%	465
Dark (Street Lamp Not Lit)	8	13.1%	52	85.2%	1	1.6%	61
Dawn	4	7.5%	48	90.6%	1	1.9%	53
Daylight	57	1.8%	2971	91.8%	209	6.5%	3237
Dusk	4	3.0%	122	91.0%	8	6.0%	134
Total	146	3.2%	4147	90.7%	277	6.1%	4570

Source 13: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Contributing Factors

Figure 3 shows the top 10 contributing factors in reported bicycle crashes in South Carolina between 2009 and 2017. The number one contributing factor in reported bicycle crashes was “failed to yield right of way,” which was also a contributing factor in more than one in four (26%) reported bicycle crashes. The other factors to round out the top ten included distracted/inattention, driving too fast for conditions, disregarded signs/signals/etc., other improper driver action, unknown driver factor, wrong side/wrong way, improper lane usage/change, and non-motorist wrong side of the road.

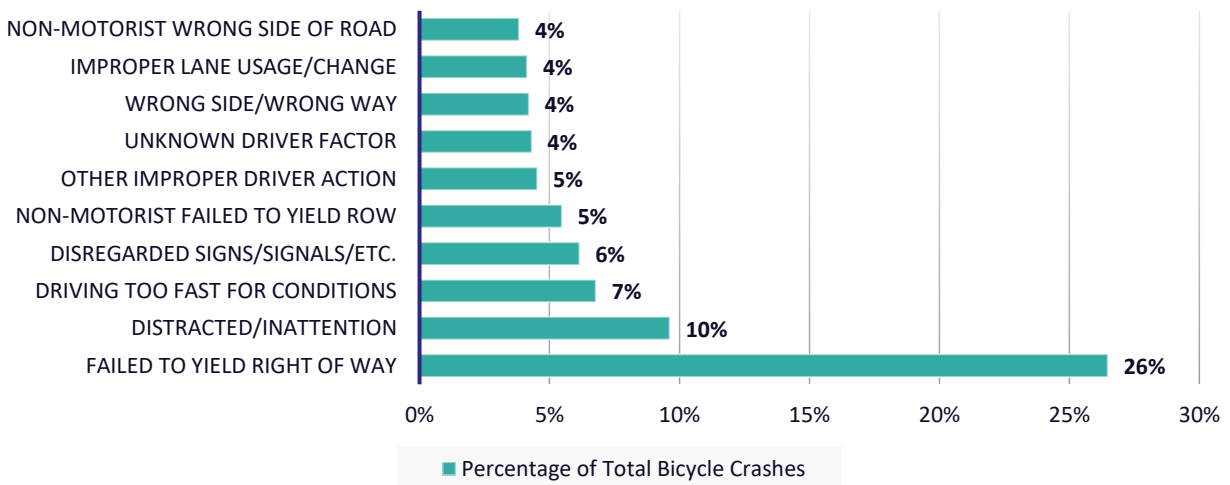


Figure 3: Top 10 Contributing Factor in Bicycle Crashes, South Carolina, 2009-2017

Table 14 shows the top 10 contributing factors that resulted in the highest number of fatalities in South Carolina between 2009 and 2017. The top five contributing factors that resulted in the highest number of fatalities included driving too fast for conditions (18), lying and/or illegally in roadway (18),

failed to yield right of way (14), driver under influence (12), and improper crossing (8). Surprisingly, texting and “on cell phone” contributed to a small percentage of crashes and no fatalities.

Table 14: Top Contributing Factors by Crash Type, South Carolina, 2009-2017

Contributing Factor	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
Driving Too Fast for Conditions	18	5.81%	276	89.03%	16	5.16%	310
Lying &/Or Illegally in Roadway	18	24.32%	53	71.62%	3	4.05%	74
Failed to Yield Right of Way	14	1.16%	1124	92.89%	72	5.95%	1210
Driver Under Influence	12	10.17%	102	86.44%	4	3.39%	118
Not Visible (Dark Clothing)	10	9.52%	88	83.81%	7	6.67%	105
Improper Crossing	8	5.03%	138	86.79%	13	8.18%	159
Non-Motorist Failed to Yield ROW	8	3.20%	222	88.80%	20	8.00%	250
Distracted/Inattention	7	1.59%	407	92.50%	26	5.91%	440
Unknown Driver Factor	7	3.55%	181	91.88%	9	4.57%	197
Improper Lane Usage/Change	6	3.17%	172	91.01%	11	5.82%	189

Source 14: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

III. Pedestrian Crashes

Crash Years 2009 - 2017

Figure 4 shows the total number of pedestrian crashes by year in South Carolina between 2009 and 2017. During this time, there were a total of 9,149 reported crashes involving pedestrians, or an average of 1,016 reported pedestrian crashes per year, on roadways in the state of South Carolina. The majority of reported pedestrian crashes occurred in 2017 (12.9%), followed by 2016 (12.4%) and 2012 (11.8%). Comparatively, the fewest number of reported bicycle crashes (9.5%) occurred in 2011, followed by 2009 (9.8%) and 2014 (10.6%). The number of reported pedestrian crashes has been trending upward since 2014, with an increase of 4% as of 2017.

Figure 4: Total Pedestrian Crashes by Year, South Carolina, 2009-2017

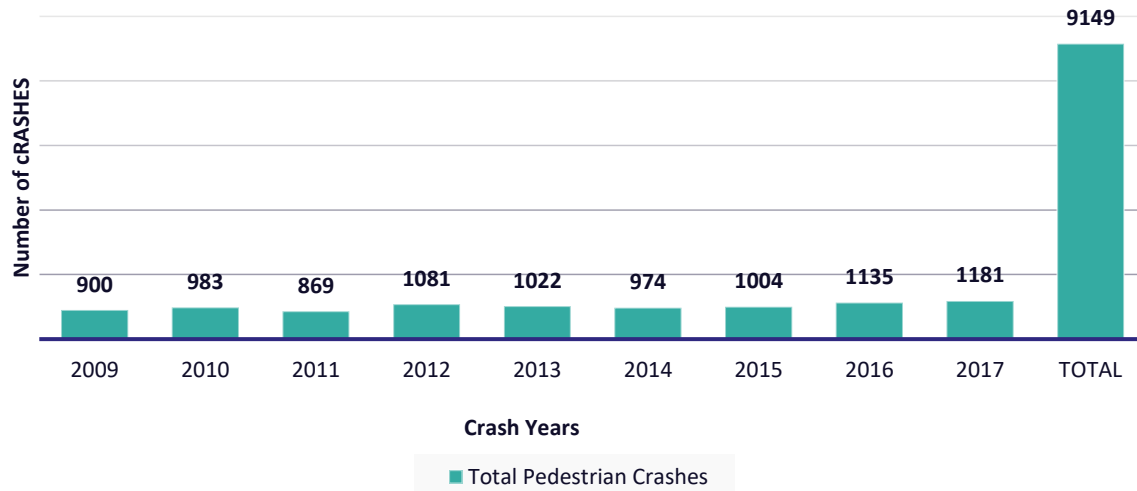


Table 15 shows the total number of pedestrian crashes by year and crash type in South Carolina between 2009 and 2017. Of the total number of reported pedestrian crashes that occurred during this timeframe, 3.5% resulted in a fatality, 90.5% resulted in an injury, and 6% resulted in property damage. With an average of 124 pedestrian fatalities and 866 pedestrian-related injuries reported annually, 2016 and 2017 were the deadliest for pedestrians with 159 reported pedestrian fatalities per year. Similarly, 2017 experienced the most pedestrian crashes resulting in an injury, with 998 reported injuries. By comparison, 2009 experienced the least number of pedestrian fatalities (97), and the year 2011 experienced the least number of bicycle-related injuries (851).

Table 15: Total Pedestrian Crashes by Year and Crash Type, South Carolina, 2009-2017

Year	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
2009	97	10.8%	771	85.7%	32	3.6%	900
2010	102	2.5%	851	91.4%	30	6.1%	983
2011	122	2.7%	721	89.6%	26	7.7%	869
2012	127	3.7%	926	89.7%	28	6.6%	1081
2013	104	2.7%	890	91.1%	28	6.2%	1022
2014	113	3.0%	840	91.3%	21	5.8%	974
2015	129	2.8%	847	90.9%	28	6.3%	1004
2016	159	3.5%	948	91.4%	28	5.2%	1135
2017	159	4.5%	998	90.8%	24	4.7%	1181
Total	1112	3.5%	7792	90.5%	245	6.0%	9149

Source 15: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Race and Ethnicity

Table 16 shows the total number of pedestrian crashes by race/ethnicity and crash rate in South Carolina between 2009 and 2017. While African-Americans make up only 27% of South Carolina’s population, they were involved in nearly 47% of pedestrian crashes over the nine-year period. Whites made up the majority of crashes (48%) during this time; however, given the percentage of Whites (63.7%) in the state, they were underrepresented in the total number of reported pedestrian crashes. The number of crashes per 1,000 people for African-Americans was 2.3 times that of Whites and 2.6 times of Hispanics. African-Americans were also 1.9 times more likely to be a victim of a pedestrian crash than Whites and 1.5 times more likely than Hispanics.

Table 16: Total Pedestrian Crashes by Race and Ethnicity, South Carolina, 2009-2017

Race and Ethnicity	Total Pedestrian Crashes	Percentage of Total Pedestrian Crashes	Crashes per 1,000 people
African-American	4273	46.7%	3.22
Alaskan Native/American Indian	5	0.1%	0.36
Asian/Pacific Islander	46	0.5%	0.59
Caucasian	4383	47.9%	1.39
Hispanic	336	3.7%	1.23
Other	42	0.5%	3.27
Unknown	64	0.7%	
Total	9149	100%	

Source 16: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Sex/Gender

Table 17 shows the total number of pedestrian crashes by gender and crash type in South Carolina between 2009 and 2017. While women make up the majority of residents living in the state, the overwhelming majority, or more than six out of every ten (66%) reported pedestrian crashes, involved a male pedestrian. Comparatively, one out of every three (33%) pedestrian crashes involved women and one percent or less involved “others” or “unknown.” While 73 percent or 821 of the total pedestrian fatalities involved men, a higher percentage of women were killed than men when they were involved in a pedestrian crash, 9.7% versus 1.3%, respectively. By comparison, men were more likely to be injured than killed when involved in a crash, 95.2% versus 88.6%, respectively.

Table 17: Total Pedestrian Crashes by Gender and Crash Type, South Carolina, 2009-2017

Gender	Crash Types						Total	
	Fatalities		Injuries		Property Damage			
	Number	Percent	Number	Percent	Number	Percent	Number	Percentage
Female	291	9.7%	2671	88.6%	52	1.7%	3014	33%
Male	821	1.3%	5085	95.2%	162	3.5%	6068	66%
Unknown	0	3.7%	36	90.1%	31	6.2%	67	1%
Total	1112	12.2%	7792	85.2%	245	2.7%	9149	100%

Source 17: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Age Group

Table 18 shows the total number of pedestrian crashes by age group and crash type in South Carolina between 2009 and 2017. The majority of reported pedestrian crashes (1881, 20.6%) involved those in the 20-29 age group. The least number of reported pedestrian crashes occurred among those 80 years or older (131, 1.4%) and those under 10 years old (506, 5.5%) The largest number of fatalities were among those in the 50-59 age group (233), whereas the least number of fatalities occurred among those under 10 years old (26). Those in the 20-29 age group also experienced the highest number of injuries (1638). A higher percentage (5.9%) of those in the 60-69 age group died as a result of a crash than members of the other age groups. Similarly, a higher percentage of those 80 years or older and under 10 years old were injured as a result of a crash than their counterparts. Those ages 10-59 years old were overrepresented in the number of pedestrian crashes, given their overall percentage of the total population of the state.

Table 18: Total Pedestrian Crashes by Age Group and Crash Type, South Carolina, 2009-2017

Age Group	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
Under 10	26	2.4%	476	94.7%	4	2.9%	506
10-19	77	1.1%	1269	92.2%	14	6.6%	1360
20-29	186	1.1%	1638	91.1%	57	7.8%	1881
30-39	180	3.6%	1171	91.5%	35	4.9%	1386
40-49	195	4.7%	1164	91.5%	33	3.8%	1392
50-59	233	5.5%	1149	90.7%	31	3.8%	1413
60-69	115	5.9%	578	90.0%	11	4.1%	704
70-79	59	4.5%	187	92.0%	5	3.6%	251
80+	40	5.0%	90	95.0%	1	0.0%	131
Unknown	1	0.0%	70	54.4%	54	45.6%	125
Total	1112	3.2%	7792	90.7%	245	6.1%	9149

Source 18: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Month of the Year

Table 19 shows the total number of pedestrian crashes by month of the year and crash type in South Carolina between 2009 and 2017. The majority of the reported pedestrian crashes (29.1%) occurred during the fall months of September (845, 9.2%), October (969, 10.6%), and November (852, 9.3%). Comparatively, the least percentage of reported crashes (23.2%) occurred during the spring months of March (709, 7.7%), April (700, 7.7%), and May (718, 7.7%). With an average of 762 reported pedestrian crashes per month over the aforementioned timeframe, October (969, 10.6%) experienced the highest number of pedestrian crashes and June (667, 7.3%) saw the least number of pedestrian crashes. Notably, there was a 24 percent increase in the number of reported pedestrian crashes between summer and fall, and a 17 percent decrease in the number of reported pedestrian crashes between fall and winter.

The majority of reported pedestrian fatalities (151) occurred in October (i.e., a fall month) and the least number of fatalities (69) occurred in April (i.e., a spring month). Overall, the deadliest season for pedestrians over this time period was fall, with 356 total fatalities or 32% of the total number of fatalities. Spring had the smallest percentage of total pedestrian fatalities (19.5%), with 217 fatalities. Regarding pedestrian-related injuries, the majority occurred in October (800) and September (728), whereas the least number of pedestrian-related injuries occurred in February (524) and March (610).

Table 19: Total Pedestrian Crashes by Month of Year and Crash Type, South Carolina, 2009-2017

Month of the Year	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
January	87	11.2%	665	85.8%	23	3.0%	775
February	81	13.0%	524	83.8%	20	3.2%	625
March	77	10.9%	610	86.0%	22	3.1%	709
April	69	9.9%	613	87.6%	18	2.6%	700
May	71	9.9%	622	86.6%	25	3.5%	718
June	96	14.4%	553	82.9%	18	2.7%	667
July	71	9.8%	637	87.6%	19	2.6%	727
August	93	12.4%	647	85.9%	13	1.7%	753
September	99	11.7%	728	86.2%	18	2.1%	845
October	151	15.6%	800	82.6%	18	1.9%	969
November	106	12.4%	724	85.0%	22	2.6%	852
December	111	13.7%	669	82.7%	29	3.6%	809
Total	1112	12.2%	7792	85.2%	245	2.7%	9149

Source 19: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Day of the Week

Table 20 shows the total number of pedestrian crashes by day of the week and crash type in South Carolina between 2009 and 2017. The majority of reported pedestrian crashes occurred on Saturday (1528, 16.7%), followed closely by Friday (1469, 16.1%). Comparatively, the least number of reported pedestrian crashes occurred on Sunday (1014, 11.1%). There was an average of 1,307 reported crashes per day of the week over the nine-year time frame, with 12.2% resulting in a fatality, 85.2% in an injury, and 2.7% in property damage. Of those that resulted in a fatality, the majority occurred on Saturday (224). By comparison, the majority of pedestrian crashes resulting in injury occurred on Friday (1254) and Saturday (1261). More than one in four (48%) fatalities occurred over the weekend. Notably, there was a 27 percent increase in pedestrian crashes from Sunday to Monday.

Table 20: Total Pedestrian Crashes by Day of the Week and Crash Types, South Carolina, 2009-2017

Day of the Week	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
Sunday	144	14.2%	842	83.0%	28	2.8%	1014
Monday	127	9.8%	1132	87.7%	32	2.5%	1291
Tuesday	132	10.9%	1053	86.6%	31	2.5%	1216
Wednesday	153	11.8%	1120	86.0%	29	2.2%	1302
Thursday	166	12.5%	1130	85.0%	33	2.5%	1329
Friday	166	11.3%	1254	85.4%	49	3.3%	1469
Saturday	224	14.7%	1261	82.5%	43	2.8%	1528
Total	1112	12.2%	7792	85.2%	245	2.7%	9149

Source 20: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Time of the Day

Table 21 shows the total number of pedestrian crashes by time of day and crash type in South Carolina between 2009 and 2017. The majority of reported pedestrian crashes (2288, 25%) occurred between the hours of 6:01pm and 9:00pm, whereas the least number of reported crashes (425, 0.6%) occurred between 3:01am and 6:00am. Notably, less than one in ten (827, 9%) of the reported crashes occurred during AM peak hours, which are from 6:01am and 9:00am. The deadliest hours for pedestrians were between 6:01pm and 9:00pm, with 297 reported fatalities and 1935 injuries, followed by 9:01pm and midnight, with 290 reported fatalities and 1323 injuries. Notably, pedestrian crashes increased by 54 percent between 3:01pm and 6:00pm to 6:01pm and 9:00pm.

Table 21: Total Pedestrian Crashes by Time and Crash Type, South Carolina, 2009-2017

Time of the Day	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
12:01am - 3:00am	163	20.4%	600	75.2%	35	4.4%	798
3:01am - 6:00am	133	31.3%	274	64.5%	18	4.2%	425
6:01am - 9:00am	72	8.7%	742	89.7%	13	1.6%	827
9:01am - Noon	49	6.5%	679	90.4%	23	3.1%	751
12:01pm - 3:00pm	39	4.2%	854	92.2%	33	3.6%	926
3:01pm - 6:00pm	69	4.7%	1385	93.5%	28	1.9%	1482
6:01pm - 9:00pm	297	13.0%	1935	84.6%	56	2.4%	2288
9:01pm - Midnight	290	17.6%	1323	80.1%	39	2.4%	1652
Total	1112	12.2%	7792	85.2%	245	2.7%	9149

Source 21: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Councils of Governments

Table 22 shows the total number of pedestrian crashes by Councils of Governments in South Carolina between 2009 and 2017. The majority, or slightly more than four in every ten (43%) of the reported pedestrian crashes, occurred in the boundaries of two Councils of Government (COG): S.C. Appalachian (2,037, 22.3%) and Berkeley-Charleston-Dorchester (1,905, 20.8%). The least number of crashes occurred in Upper Savannah COG (259, 2.8%). The Berkeley-Charleston-Dorchester COG had the highest rate (2.5) of pedestrian crash per 1,000 people and Upper Savannah COG had the lowest rate (1.2) of pedestrian crashes per 1,000 people.

Table 22: Total Pedestrian Crashes by Council of Governments, South Carolina, 2009-2017

Council of Governments	Total COG Resident Population	Total COG Bicycle and Pedestrian Crashes	COG's Percentage of Total Bike-Ped Crashes	Crashes per 1,000 people by COG
Berkeley-Charleston-Dorchester COG	775,831	1,905	20.8%	2.5
Catawba Regional Council of Government	418,827	480	5.2%	1.1
Central Midlands Council of Government	763,329	1,567	17.1%	2.1
Low Country Council of Government	272,515	385	4.2%	1.4
Lower Savannah Council of Government	315,087	520	5.7%	1.7
Pee Dee Regional Council of Government	340,563	661	7.2%	1.9
S.C. Appalachian Council of Government	1,270,304	2,037	22.3%	1.6
Santee-Lynches Council of Government	223,290	343	3.7%	1.5
Upper Savannah Council of Government	218,615	259	2.8%	1.2
Waccamaw Regional Council of Government	426,008	992	10.8%	2.3

Source 22: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

County

Table 23 shows the total number of pedestrian crashes by county and crash type in South Carolina between 2009 and 2017. The majority of reported pedestrian crashes (15.2%) occurred in Charleston County. Charleston County also had the highest rate of crashes per 1,000 people at 3.47, which is 1.3 times higher than the next county (i.e., Richland County) with the highest percentage of total pedestrian crashes (12%). McCormick County had the lowest rate of crashes per 1,000 people of any county. The ten counties with the highest percentages of total pedestrian crashes were Charleston, Richland, Greenville, Horry, Spartanburg, Lexington, York, Anderson, Florence, and Berkeley. The ten counties with the highest rates of pedestrian crashes per 1,000 people are Charleston, Richland, Dillon, Orangeburg, Horry, Florence, Georgetown, Fairfield, Williamsburg, and Lee. Greenville (120), Horry (100), and Richland (98) were also ranked as the top three counties with the most pedestrian fatalities, whereas Charleston (1271), Richland (975), and Greenville (752) rounded out the top three for pedestrian injuries.

Table 23: Total Pedestrian Crashes by County and Crash Rate, South Carolina, 2009-2017

County	Resident Population	Total Pedestrian Crashes	Percentage of Total Pedestrian Crashes	Crash Rate per 1,000 People
Charleston	401,438	1392	15.2%	3.47
Richland	411,592	1097	12.0%	2.67
Dillon	30,666	80	0.9%	2.61
Orangeburg	87,476	209	2.3%	2.39
Horry	333,268	783	8.6%	2.35
Florence	138,566	316	3.5%	2.28
Georgetown	61,607	140	1.5%	2.27
Fairfield	22,607	51	0.6%	2.26
Williamsburg	31,133	69	0.8%	2.22
Lee	17,350	35	0.4%	2.02
Marion	31,293	61	0.7%	1.95
Hampton	19,602	38	0.4%	1.94
Marlboro	26,825	50	0.5%	1.86
Colleton	37,611	68	0.7%	1.81
Sumter	106,847	192	2.1%	1.80
Greenville	506,837	908	9.9%	1.79
Spartanburg	306,854	524	5.7%	1.71
Darlington	67,265	114	1.2%	1.69
Bamberg	14,381	24	0.3%	1.67
Greenwood	70,355	117	1.3%	1.66
Jasper	28,458	47	0.5%	1.65
Anderson	198,759	317	3.5%	1.59
Barnwell	21,345	32	0.3%	1.50
Chester	32,301	48	0.5%	1.49
Berkeley	217,937	299	3.3%	1.37
Dorchester	156,456	214	2.3%	1.37
Aiken	168,179	229	2.5%	1.36
Clarendon	34,057	46	0.5%	1.35
Cherokee	57,105	77	0.8%	1.35
Lexington	290,642	379	4.1%	1.30
Beaufort	186,844	232	2.5%	1.24
York	266,439	329	3.6%	1.23
Laurens	66,848	80	0.9%	1.20
Calhoun	14,704	17	0.2%	1.16
Pickens	123,479	140	1.5%	1.13
Kershaw	65,036	70	0.8%	1.08
Newberry	38,488	40	0.4%	1.04

Allendale	9,002	9	0.1%	1.00
Oconee	77,270	71	0.8%	0.92
Lancaster	92,550	81	0.9%	0.88
Chesterfield	45,948	40	0.4%	0.87
Abbeville	24,722	21	0.2%	0.85
Edgefield	26,693	22	0.2%	0.82
Union	27,537	22	0.2%	0.80
Saluda	20,452	13	0.1%	0.64
McCormick	9,545	6	0.1%	0.63

Source 23: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Route Category/Jurisdiction

Figure 5 shows the total pedestrian crashes by route category/jurisdiction. As shown below, the overwhelming majority of crashes (86%) occurred on roadways that fall under the jurisdiction of the South Carolina Department of Transportation (SCDOT). Of the crashes, the majority occurred on secondary roadways, with a sizable minority or nearly one in four (24%) having occurred on county roadways.

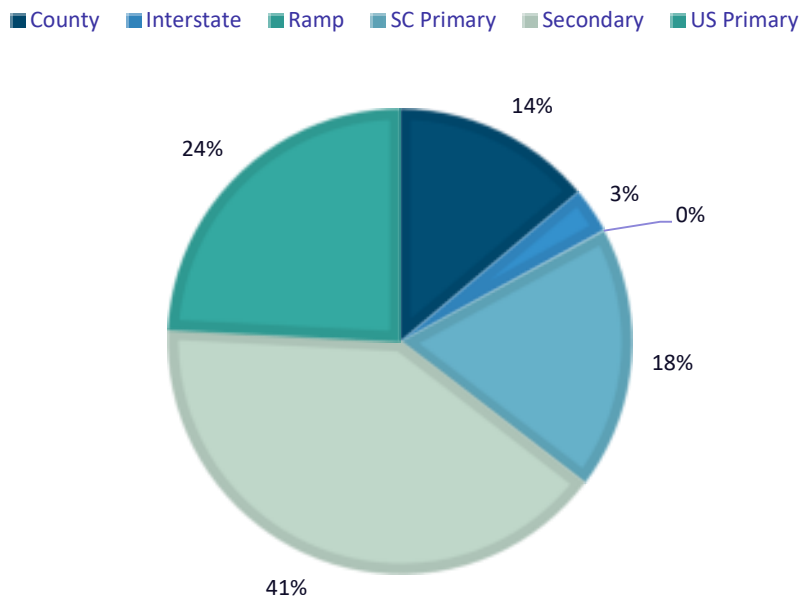


Figure 5: Total Pedestrian Crashes by Route Category/Jurisdiction, South Carolina, 2009-2017

Table 24 shows the total number of pedestrian crashes by roadway jurisdiction and crash type in South Carolina between 2009 and 2017. The majority of fatalities (392) occurred on US primary roadways, whereas the majority of injuries and property damage occurred on secondary roadways, 3,303 and 82, respectively.

Table 24: Total Pedestrian Crashes by Roadway Jurisdiction and Crash Type, South Carolina, 2009-2017

Route Category/Jurisdiction	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
County	47	1.3%	1184	92.1%	40	6.6%	1271
Interstate	98	9.1%	171	81.8%	19	9.1%	288
Ramp	1	5.9%	3	89.7%	0	4.4%	4
SC Primary	257	2.3%	1369	90.7%	46	7.1%	1672
Secondary	317	4.6%	3303	4.7%	82	4.7%	3702
US Primary	392	4.6%	1762	90.8%	58	4.7%	2212
Total	1112	3.2%	7792	90.7%	245	6.1%	9149

Source 24: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Weather Conditions

Table 25 shows the total number of pedestrian crashes by weather condition and crash type in South Carolina between 2009 and 2017. The overwhelming majority, or slightly more than eight out of every ten (7763, 84.9%), of reported pedestrian crashes, fatalities (926, 83%), and injuries (6627, 85%) occurred under clear, non-adverse weather conditions. As a result, only a small percentage of pedestrian crashes occurred under cloudy (6.1%) or rainy (7.7%) conditions. Similarly, snow and fog/smoke had a minuscule impact on the number of reported pedestrian crashes.

Table 25: Total Pedestrian Crashes by Weather Condition and Crash Types, South Carolina, 2009-2017

Weather Condition	Crash Types						Total Number
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	
Blowing Sand, Soil, Dirt or Snow	0	0.0%	1	100.0%	0	0.0%	1
Clear, No Adverse Conditions	926	3.2%	6627	90.6%	210	6.3%	7763
Cloudy	77	3.5%	461	91.0%	19	5.5%	557
Fog, Smog, Smoke	16	0.0%	55	100.0%	1	0.0%	72
Rain	89	2.9%	605	93.7%	13	3.4%	707
Severe Cross Winds, High Wind	0	0.0%	1	100.0%	0	0.0%	1
Sleet or Hail	1	0.0%	8	100.0%	0	0.0%	9
Snow	1	10.0%	19	80.0%	0	10.0%	20
Unknown	2	10.0%	15	80.0%	2	10.0%	19
Total	1112	3.2%	7792	90.7%	245	6.1%	9149

Source 25: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Light Condition

Table 26 shows the total number of pedestrian crashes by light condition and crash type in South Carolina between 2009 and 2017. The majority of the total reported pedestrian crashes (3824,

41.8%) occurred under daylight conditions. However, when combining all of the reported pedestrian crashes that occurred under dark lighting conditions, 53.5% of the total number of crashes and 81% of the fatalities occurred under dark conditions.

Table 26: Total Pedestrian Fatalities by Light Condition, South Carolina, 2009-2017

Light Condition	Crash Types						Total
	Fatalities		Injuries		Property Damage		
	Number	Percent	Number	Percent	Number	Percent	Number
Dark (Lighting Unspecified)	131	4.3%	615	91.9%	16	3.8%	762
Dark (No Lights)	512	10.8%	1554	84.6%	61	4.6%	2127
Dark (Street Lamp Lit)	200	3.9%	1491	89.5%	41	6.7%	1732
Dark (Street Lamp Not Lit)	58	13.1%	205	85.2%	9	1.6%	272
Dawn	18	7.5%	144	90.6%	5	1.9%	167
Daylight	170	1.8%	3551	91.8%	103	6.5%	3824
Dusk	23	3.0%	232	91.0%	10	6.0%	265
Total	1112	3.2%	7792	90.7%	245	6.1%	9149

Source 26: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Contributing Factor

Table 27 shows the total number of pedestrian crashes by primary contributing factors in South Carolina between 2009 and 2017. The number one contributing factor in reported pedestrian crashes was lying and/or illegally in roadway, which was a contributing factor in 20.4% of the total reported pedestrian crashes. The other factors to round out the top ten included improper crossing, failed to yield right of way, distracted/inattention, driving too fast for conditions, unknown driver factor, non-motorist failed to yield right-of-way, other improper driver action, darting, and non-motorist under influence. The top 5 contributing factors that resulted in the highest number of fatalities included lying and/or illegally in roadway, improper crossing, non-motorist failed to yield right-of-way, driver under influence, driving too fast for conditions, not visible (dark clothing), darting, and other improper driver action. Surprisingly, texting and “on cell phone” contributed to a small percentage of crashes and no fatalities.

Table 27: Total Pedestrian Crashes by Primary Contributing Factor, South Carolina, 2009-2017

Contributing Factor	Total Pedestrian Crashes	Percentage of Total Pedestrian Crashes
Lying &/Or Illegally in Roadway	1867	20.41%
Improper Crossing	1127	12.32%
Failed to Yield Right of Way	964	10.54%
Distracted/Inattention	655	7.16%
Driving Too Fast for Conditions	579	6.33%
Unknown Driver Factor	494	5.40%
Non-Motorist Failed to Yield ROW	411	4.49%
Other Improper Driver Action	369	4.03%
Darting	365	3.99%
Non-Motorist Under Influence	279	3.05%
Driver Under Influence	277	3.03%

Source 27: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

IV. Bicycle and Pedestrian Crashes Combined

Table 28 shows the total number of combined bicycle and pedestrian crashes by year in South Carolina between 2009 and 2017. During this time frame, there were a total of 13,719 crashes involving bicycles and pedestrians on roadways in South Carolina, with 87% of the crashes resulting in injury and 9.2% resulting in a fatality. The year 2017 had the highest total and percentage of crashes (1,696 crashes or 12%) recorded since 2009, and the number of crashes has been trending upward each year since 2015.

Table 28: Total Bicycle and Pedestrian Crashes by Year, South Carolina, 2009-2017

Year	Total Bicycle and Pedestrian Crashes	Percentage of Total Bicycle and Pedestrian Crashes
2009	1421	10.4%
2010	1503	11.0%
2011	1327	9.7%
2012	1631	11.9%
2013	1526	11.1%
2014	1479	10.8%
2015	1467	10.7%
2016	1669	12.2%
2017	1696	12.4%
Total	13719	100%

Source 28: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

The least number of crashes to occur during that same time period was in 2011, when only 9.7% or 1,327 crashes occurred. Given the population of males and females in the state, males were overrepresented in the number of crashes. For example, while 48% of the state’s population is male, 71% of the total number of crashes involved males. Comparatively, females make up 52% of the state’s population but were involved in only 28% of crashes. The sex of the victim could not be determined or was unknown in one percent or less, or 107 of the total number of crashes.

Table 29 shows the total number of bicycle and pedestrian crashes by race and ethnicity in South Carolina between 2009 and 2017. The majority of crash victims identified as White or Caucasian. However, a disproportionate number of crash victims were minorities, including African-Americans, Hispanics, and Asians. While all other groups were underrepresented in the total number of crashes—that is, given their percentage of the state’s population—African Americans were overrepresented in the total number of crashes. For instance, African-Americans make up only 27% of the state’s population but were involved in 44% of the total number of crashes. Comparatively, Whites make up 64% of the population but were only involved in 51% of the crashes. Interestingly, the race/ethnicity of the victim could not be determined or was unknown in only one percent or less, or 102 of the total number of crashes. The majority of crashes occurred among those ages 20-29 (21%), followed by those ages 50-59 (16%) and ages 10-19 (16%). The least number of crashes occurred among those under 10 years of age (5%) and those 70 years and above (a combined 3.7%).

Table 29: Total Bicycle and Pedestrian Crashes by Race and Ethnicity, South Carolina, 2009-2017

Race and Ethnicity	Total Bicycle and Pedestrian Crashes	Percentage of Total Bicycle and Pedestrian Crashes
African American	6070	44.2%
Alaskan Native/American Indian	8	0.1%
Asian/Pacific Islander	95	0.7%
Caucasian	6929	50.5%
Hispanic	453	3.3%
Other	62	0.5%
Unknown	102	0.7%
Total	13719	100%

Of the 13,719 crashes to occur on South Carolina roadways, the majority of crashes occurred between the hours of 6:01pm to 9:00pm (23% or 3,202), followed by 3:01pm to 6:00pm (20% or 2,677), and 9:00pm to midnight (15% or 2,062). During these times, crashes drastically increased by 19% between the hours of 3:01pm to 6:00pm and 6:01pm to 9:00pm, and by 54% between noon to 3:00pm and 3:01pm to 6:00pm. Comparatively, the least number of crashes occurred between the hours of 3:01am to 6:00am (3% or 2,062). With the exception of Sunday, crashes were, for the most part, equally distributed throughout the course of the week. The majority of crashes, however, occurred

during the end of the work week and start of the weekend, with Friday and Saturday having witnessed the majority of crashes (16% each, respectively). Similarly, crashes were, for the most part, equally distributed throughout the year. The majority of crashes occurred during the month of October (10%), and the least number of crashes occurred in February (16%). Seasonally, the majority of crashes (28%) occurred during the fall or autumn, closely followed summer (26%) and spring (24%). The least number of crashes (21%) occurred during the winter months, when one expects to see fewer bicycles and pedestrians out on or along roadways.

Table 30 shows the total number of bicycle and pedestrian crashes by roadway jurisdiction in South Carolina between 2009 and 2017. The overwhelming majority (86%) of crashes occurred on roadways under the jurisdiction of the South Carolina Department of Transportation, with the highest percentage of total crashes occurring on secondary roadways followed by US primary roadways, 42.5% and 23.5%, respectively.

Table 30: Total Bicycle and Pedestrian Crashes by Roadway Jurisdiction, South Carolina, 2009-2017

Route Category/Jurisdiction	Total Bicycle and Pedestrian Crashes	Percentage of Total Bicycle and Pedestrian Crashes
County	1980	14.4%
Interstate	299	2.2%
Ramp	4	0.0%
SC Primary	2383	17.4%
Secondary	5831	42.5%
US Primary	3222	23.5%
Total	13719	100.0%

Source 29: Office of Health Safety and Justice Programs, South Carolina Department of Public Safety

Table 31 shows the total number of bicycle and pedestrian crashes by county in South Carolina between 2009 and 2017. Charleston County (17.9%) had the highest percentage and rate (6.3) of crashes than any other county, whereas Allendale (0.1%) had the smallest percentage and Saluda (0.78) had the smallest rate of crashes in the state. The Berkeley-Charleston-Dorchester COG had the highest percentage (23.7%) of the total number of crashes, whereas as the Upper Savannah COG had the smallest percentage (0.2%) of the total number of crashes. Similarly, the Upper Savannah COG had the lowest rate (0.9%) of crashes per 1,000 people, whereas the Berkeley-Charleston-Dorchester COG had the highest rate (4.2) of crashes per 1,000 people. As such, the Berkeley-Charleston-Dorchester COG’s crash rate per 1,000 people was 4 times that of Upper Savannah COG.

Table 31: Total Bicycle and Pedestrian Crashes by County, South Carolina, 2009-2017

County	Resident Population	Total Bicycle and Pedestrian Crashes	Percent of Total Bicycle and Pedestrian Crashes	Crashes per 1,000 People
Charleston	401,438	2461	17.9%	6.13
Horry	333,268	1375	10.0%	4.13
Georgetown	61,607	216	1.6%	3.51
Richland	411,592	1436	10.5%	3.49
Florence	138,566	471	3.4%	3.40
Dillon	30,666	100	0.7%	3.26
Orangeburg	87,476	270	2.0%	3.09
Marion	31,293	93	0.7%	2.97
Marlboro	26,825	77	0.6%	2.87
Hampton	19,602	55	0.4%	2.81
Williamsburg	31,133	83	0.6%	2.67
Sumter	106,847	284	2.1%	2.66
Beaufort	186,844	493	3.6%	2.64
Colleton	37,611	99	0.7%	2.63
Darlington	67,265	174	1.3%	2.59
Fairfield	22,607	58	0.4%	2.57
Greenville	506,837	1277	9.3%	2.52
Lee	17,350	43	0.3%	2.48
Jasper	28,458	66	0.5%	2.32
Dorchester	156,456	356	2.6%	2.28
Greenwood	70,355	160	1.2%	2.27
Spartanburg	306,854	687	5.0%	2.24
Anderson	198,759	421	3.1%	2.12
Barnwell	21,345	44	0.3%	2.06
Bamberg	14,381	29	0.2%	2.02
Berkeley	217,937	439	3.2%	2.01
Aiken	168,179	336	2.4%	2.00
Clarendon	34,057	67	0.5%	1.97
Cherokee	57,105	109	0.8%	1.91
Lexington	290,642	532	3.9%	1.83
Chester	32,301	58	0.4%	1.80
Newberry	38,488	67	0.5%	1.74
York	266,439	451	3.3%	1.69
Laurens	66,848	113	0.8%	1.69
Pickens	123,479	200	1.5%	1.62
Kershaw	65,036	91	0.7%	1.40

McCormick	9,545	13	0.1%	1.36
Calhoun	14,704	20	0.1%	1.36
Allendale	9,002	12	0.1%	1.33
Abbeville	24,722	32	0.2%	1.29
Union	27,537	35	0.3%	1.27
Oconee	77,270	98	0.7%	1.27
Lancaster	92,550	117	0.9%	1.26
Edgefield	26,693	33	0.2%	1.24
Chesterfield	45,948	52	0.4%	1.13
Saluda	20,452	16	0.1%	0.78
		13719	100.0%	

Source 30: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

Table 32 shows the total number of bicycle and pedestrian crashes by primary contributing factors in South Carolina between 2009 and 2017. The primary contributing factor in the majority of crashes was failed to yield right-of-way (15.85%), followed by lying and/or illegally in roadway, improper crossing, distracted/inattention, driving too fast for conditions, unknown driver factor, non-motorist failed to yield right-of-way, other improper driver factor, and disregarded signs/signals/etc.

Table 32: Total Bicycle and Pedestrian Crashes by Primary Contributing Factor, South Carolina, 2009-2017

Contributing Factor	Total Bicycle and Pedestrian Crashes	Percent of Total Bicycle and Pedestrian Crashes
Failed to Yield Right of Way	2174	15.85%
Lying &/Or Illegally in Roadway	1941	14.15%
Improper Crossing	1286	9.37%
Distracted/Inattention	1095	7.98%
Driving Too Fast for Conditions	889	6.48%
Unknown Driver Factor	691	5.04%
Non-Motorist Failed to Yield ROW	661	4.82%
Other Improper Driver Action	576	4.20%
Disregarded Signs/Signals/Etc.	433	3.16%
Darting	414	3.02%
Driver Under Influence	395	2.88%

Source 31: Office of Highway Safety and Justice Programs, South Carolina Department of Public Safety

V. Summary

Below is a list of key highlights from two distinct sections in the report: bicycle crashes and pedestrian crashes. The highlights paint a clearer picture of the story behind the bicycle and pedestrian crashes, injuries, and fatalities in the state.

- **Bicycle Crashes**
 - Race & Ethnicity, Sex/Gender, & Age:
 - African-Americans make up only 27% of South Carolina’s population, but were involved in nearly 40% of the bicycle crashes over the nine-year period.

- The rate of crashes per 1,000 people for African-Americans was 1.6 times that of Whites and 5.5 times of Hispanics. African-Americans were also 1.5 times more likely to be a victim of a bicycle crash than Whites and Hispanics.
 - More than eight out of ten (81%) reported bicycle crashes involved a male bicyclist.
 - More than nine out of every ten (92%) bicycle-related fatalities involved a male bicyclist.
 - The majority of reported bicycle crashes (21.7%) involved those in the 20-29 age group, followed by those in the 50-59 age group (17.9%).
 - The largest number of fatalities were among those in the 50-59 age group (45).
- Time:
 - The majority (31.8%) of reported bicycle crashes occurred during the summer months of June (10%), July (10.9%), and August (11%).
 - The deadliest season for bicyclists was spring, with 42 total fatalities or 29% of the total number of fatalities.
 - The majority of reported bicycle crashes occurred on Friday (16.8%), followed closely by Thursday (15.3%).
 - Notably, there was a 33% increase in bicycle crashes from Sunday to Monday, a 17% decrease in crashes from Friday to Saturday, and a 23% decrease in crashes from Saturday to Sunday.
 - The deadliest hours for bicyclists were between 6:01pm and 9:00pm, with 43 reported fatalities.
 - The majority of reported bicycle crashes occurred between the hours of 3:01pm and 6:00pm.
 - The overwhelming majority (60.1%) of reported bicycle crashes occurred within the boundaries of two Councils of Governments (COG): Low Country Council of Governments and Lower Savannah Council of Governments.
- Location & Other Factors:
 - Nearly one out of every four (23.4%) reported bicycle crashes occurred in Charleston County. The county's bicycle crashes per 1,000 people is 1.5 times higher than the next county (i.e., Horry County) with the highest percentage of total bicycle crashes (13%) and 18 times that of the county with the lowest percentage of total bicycle crashes (i.e., Saluda).
 - The overwhelming majority (84%) of reported bicycle crashes, fatalities (94%), and injuries (84%) occurred on roadways that fall under the jurisdiction of the South Carolina Department of Transportation (SCDOT).
 - The overwhelming majority (88.6%) of reported bicycle crashes, fatalities (88%), and injuries (88%) occurred under clear, non-adverse weather conditions.
 - The overwhelming majority (70.8%) of reported bicycle crashes occurred under daylight conditions.
 - The number one contributing factor in reported bicycle crashes was failed to yield right-of-way, which was a contributing factor in more than one in four (26%) reported bicycle crashes.

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- The top 5 contributing factors that resulted in the highest number of fatalities included driving too fast for conditions (18), lying and/or illegally in roadway (18), failed to yield right-of-way (14), driver under influence (12), and improper crossing (8).
 - Surprisingly, texting and “on cell phone” contributed to a small percentage of crashes and no fatalities.
- **Pedestrian Crashes**
 - Race & Ethnicity, Sex/Gender, & Age:
 - African-Americans make up only 27% of South Carolina’s population, but were involved in nearly 47% of the bicycle crashes over the nine-year period.
 - The number of crashes per 1,000 people for African-Americans was 2.3 times that of Whites and 2.6 times that of Hispanics. African-Americans were also 1.9 times more likely to be a victim of a pedestrian crash than Whites and 1.5 times more likely than Hispanics.
 - The overwhelming majority, or more than six out of every ten (66%) reported pedestrian crashes, involved a male pedestrian.
 - While 73% or 821 of the total pedestrian fatalities involved men, a higher percentage of women were killed than men when they were involved in a pedestrian crash, 9.7% versus 1.3%, respectively.
 - The majority of reported pedestrian crashes (20.6%) involved those in the 20-29 age group.
 - Time:
 - The majority of the reported pedestrian crashes (29.1%) occurred during the fall months of September (9.2%), October (10.6%), and November (9.3%).
 - The deadliest season for pedestrians over this time period was fall, with 356 total fatalities or 32% of the total number of fatalities.
 - The majority of reported pedestrian crashes occurred on Saturday (16.7%).
 - The majority of reported pedestrian crashes (25%) occurred between the hours of 6:01pm and 9:00pm.
 - Pedestrian crashes increased by 54% between 3:01pm and 6:00pm to 6:01pm – and 9:00pm.
 - Location & Other Factors:
 - The majority (43%) of the reported pedestrian crashes occurred in the boundaries of two Councils of Governments (COG): S.C. Appalachian (2,037) and Berkeley-Charleston-Dorchester (1,905).
 - The majority of reported pedestrian crashes (15.2%) occurred in Charleston County. Charleston County also had the highest rate of crashes per 1,000 people at 3.47, which is 1.3 times higher than the next county (i.e., Richland County) with the highest percentage of total pedestrian crashes (12%).
 - The overwhelming majority (86%) of the reported pedestrian crashes, fatalities (96%), and injuries (85%) occurred on roadways that fall under the jurisdiction of the South Carolina Department of Transportation (SCDOT).
 - The overwhelming majority (84.9%) of reported pedestrian crashes, fatalities (83%), and injuries (85%) occurred under clear, non-adverse weather conditions.

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- The majority of the total reported pedestrian crashes (41.8%) occurred under daylight conditions.
 - The number one contributing factor in reported pedestrian crashes was lying and/or illegally in roadway, which was a contributing factor in 20.4% of the total reported pedestrian crashes.
 - **Pedestrian and Bicycle Crashes Combined**
 - Race & Ethnicity, Sex/Gender, & Age:
 - A disproportionate number of crash victims were minorities, including African-Americans, Hispanics, and Asians.
 - African-Americans make up only 27% of the state's population but were involved in 44% of the total number of crashes.
 - The majority of crashes occurred among those ages 20-29 (21%), whereas the least number of crashes occurred among those under 10 years of age (5%) and those 70 years and above (a combined 3.7%).
 - While 48% of the state's population is male, 71% of the total number of crashes involved males.
 - Time:
 - The majority of crashes occurred between the hours of 6:01pm to 9:00pm (23% or 3,202).
 - Crashes drastically increase by 19% between the hours of 3:01pm to 6:00pm and 6:01pm to 9:00pm, and by 54% between noon to 3:00pm and 3:01pm to 6:00pm.
 - Location & Other Factors:
 - The overwhelming majority (86%) of the crashes occurred on roadways under the jurisdiction of the South Carolina Department of Transportation, with the highest percentage of total crashes occurring on secondary roadways followed by US primary roadways, 42.5% and 23.5%, respectively.
 - Charleston County (17.9%) had the highest percentage and rate (6.3) of crashes than any other county.
 - The Berkeley-Charleston-Dorchester Council of Governments had the highest percentage (23.7%) of the total number of crashes.
 - The Berkeley-Charleston-Dorchester Council of Governments had the highest rate (4.2) of crashes per 1,000 people.
 - The Berkeley-Charleston-Dorchester Council of Governments' crash rate per 1,000 people was four times that of Upper Savannah COG.
 - The primary contributing factor in the majority of crashes was failed to yield right-of-way (15.85%).

