BICYCLE CRASH FACTS SUMMARY REPORT, 2003-2007

Trends

Each year during 2003-2007, nearly 1000 bicycle-motor vehicle crashes were reported to the North Carolina Division of Motor Vehicles. On average 23 bicyclists were killed each year with more than 800 being injured or possibly injured (see Figure 1).

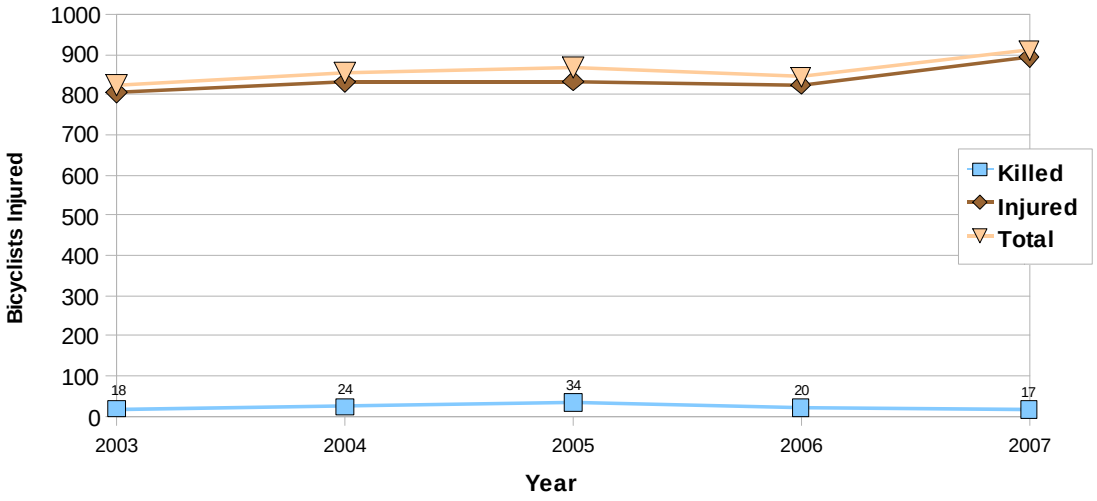

Figure 1. Five year trend of NC bicyclist fatalities and injuries due to reported collisions with motor vehicles, 2003 - 2007. (Counts are of bicyclists. The totals reflected in this figure do not include bicyclists reported being involved in collisions for whom unknown or no injuries were indicated.)

After falling below 1000 from 1998-99 levels, the number of bicycle crashes has been trending upwards since 2003. Bicycle crashes increased to above 1000 again in 2007, with 1046 reported (see **Figure 2**). This is the largest number of bicycle collisions reported since 1999. For most of these years, the increase in crashes has been mostly in urban areas, although there was a 25% increase in crashes occurring in areas designated as rural (not within municipal boundaries) between 2006 and 2007.

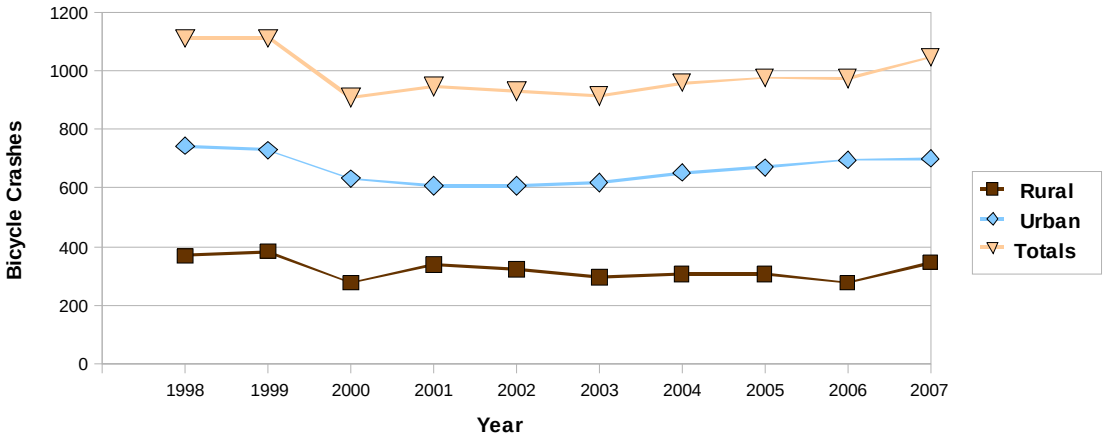

Figure 2. Bicycle crash trends, 1998 – 2007. After reductions in the first few years, urban crashes have accounted for most of the recent increasing trend in bicycle crashes; 2007 was an exception with a greater increase in rural crashes. (Counts are of crashes.)

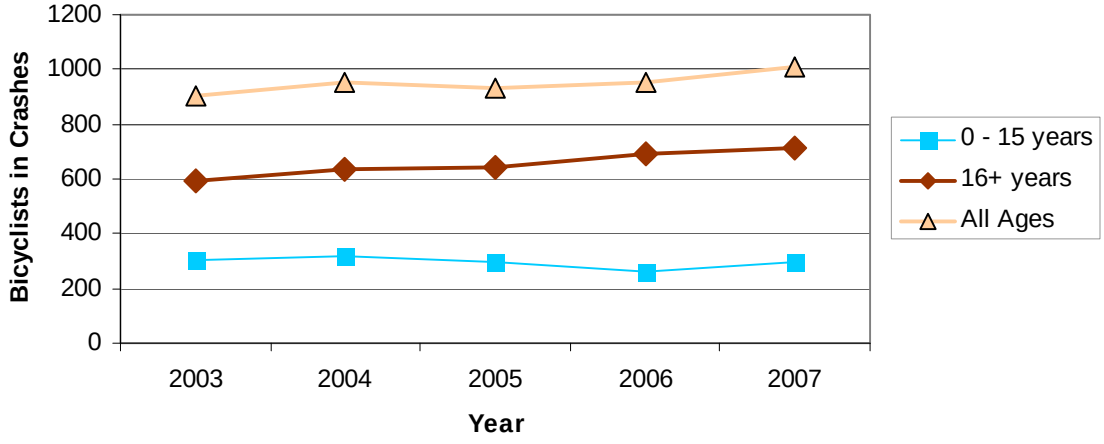

Figure 3. Crash involvement by age group of bicyclist. Counts are of bicyclists, 2003-2007.

This report summarizes roadway, environmental, and person characteristics for 4,868 bicycle-motor vehicle crashes that were reported Statewide for 2003-2007. As with all crash data, the reported numbers in the crash characteristics that follow undoubtedly reflect some error, including errors in officers' coding of crashes, as well as errors made during data entry and coding.

Where do most NC Bicycle Crashes Occur

More than two-thirds of bicycle collisions in NC occurred in urban areas, with about 31% in rural (unincorporated) areas of the State. Using 2007 population data as a rate denominator, the average yearly urban crash rate Statewide was
These data are coded based on whether the crash was indicated as occurring within municipal boundaries (urban), or not (rural), and may not reflect area land use. Using 2007 population data as a rate denominator, the yearly bicycle crash rate averages 1.3 per 10,000 population across all urban areas, and 0.74 per 10,000 population in un-incorporated (more rural) areas of the State for the five-year time period. (Municipal population Statewide was estimated at 4,962,027 and the population of unincorporated areas, 4,107,317 in 2007. Population estimates are from the Office of State Budget and Management, Municipal and Non-Municipal Population by County, retrieved from **http://www.osbm.state.nc.us/ncosbm/facts_and_figures/socioeconomic_data/population_estimates/demog/ctotm07.htm**). The difference in rural and urban crash rates likely reflect greater exposure in urban areas where sidewalks, transit use, compact development and other opportunities for walking are typically greater than in rural areas of the state.

Table 1. Number and percentage of rural and urban bicycle crashes Statewide

Area type	YEAR					Total
	2003	2004	2005	2006	2007	
Rural	296	307	306	277	346	1509
	32.4	32.0	31.4	28.5	33.1	31.5
Urban	618	652	670	696	700	3243
	67.6	68.0	68.7	71.5	66.9	68.5
Total	914	959	976	973	1046	4868
	18.8	19.7	20.05	19.99	21.5	100

The ten counties with the highest numbers of bicyclist-motor vehicle crashes for the recent five-year period are shown in Table 2. The ten highest crash counties account for nearly 51% of NC's reported bicycle-motor vehicle crashes. Most of the counties below are highly urbanized (most more than 80% urban populations), with the exceptions of Buncombe and Robeson. Thus, the high crash counties are to a large extent, reflections of where people live in the state. However, the crash rates based on population do vary from a low of 0.7 per 10,000 population (Forsyth Co.) to a high of 2.5 per 10,000 (New Hanover), with most falling between 1.1 and 1.4. These differences may reflect differences in amounts of cycling in the different counties in addition to other exposure and risk factors.

Table 2. The Ten NC Counties with the Highest Numbers of Bicycle Crashes from 2003-2007

Bicycle Crashes by Top 10 Counties				
County	**Count**	**Percent of NC Total (4868)**	**2007 County Population est.**	**Average yearly Crash Rate/10,000 population**
Mecklenburg	571	11.7	863,147	1.3
Wake	515	10.6	832590	1.2.
Guilford	280	5.8	460,780	1.2
New Hanover	240	4.9	189,922	2.5
Cumberland	206	4.2	313,616	1.3
Durham	178	3.7	254,740	1.4
Forsyth	126	2.6	338,679	0.7
Gaston	125	2.6	200,972	1.2
Buncombe	120	2.5	225,609	1.1
Robeson	120	2.5	129,425	1.9
Total - 10 counties	2481	51.0	3,809,480	1.3

Reflecting the high crash counties, a majority of the ten highest crash cities are the most populous cities in those counties (Table 3). The crash rates based on population tend range from about 1.4 to 1.9 per 10,000 population) with a few notable exceptions. Three communities have much higher than average crash rates and one is moderately higher, while one is notably lower. Two of the cities with higher than average crash rates for example, Asheville and Wilmington, although on opposite sides of the State have some factors in common that may result in more bicycling. Both have universities with sizable student populations, and both are tourist destinations. Additionally, flatter terrain, lower auto ownership or other factors may foster more widespread use of bicycles in some communities than others. However, there is no data to directly compare crash rates based on miles of bicycling, numbers of cycling trips, or other better measures of exposure.

Table 3. The ten NC cities with the highest numbers of bicycle collisions, 2003-2007

Bicycle Crashes by Top 10 Cities				
Munincipality	**Count**	**Percent of NC Total (4868)**	**2007 City Population est.**	**Average yearly Crash Rate/10,000 population**
Charlotte	515	10.6	674,658	1.5
Raleigh	342	7.0	367,098	1.9
Wilmington	183	3.8	100,746	3.6
Greensboro	176	3.6	248,111	1.4
Durham	163	3.4	222,472	1.5
Fayetteville	141	2.9	181,453	1.5
Rocky Mount	125	2.6	56,288	4.4
Asheville	88	1.8	76,764	2.3
Winston-Salem	83	1.7	224,889	0.7
Wilson	79	1.6	49,947	3.2
Total - 10 cities	1895	37.3	2,202,426	1.7

The crash fact descriptions that follow are also undoubtedly related to exposure, or when and where people choose to ride, and who is riding (age, skill and physical condition). Crash numbers can also change over time simply due to chance, due to changes in crash reporting procedures, due to weather or other factors such as economics that affect the amounts of cycling and driving, and as a result of safety-related factors including engineering, educational, and enforcement initiatives.

Bicyclist Characteristics

Bicyclist Age

There is some year-to-year variability in the crash involvement by age groups of bicyclists across the five years of data (Table 4- Note that age group intervals vary to show more detail for the younger age groups.) Overall, however, the largest proportion of crashes was in the 11-15 year old group (nearly 19%), although the involvement of this group seems to be declining somewhat. Young people in general remain a large part of the crash-involved population. Children less than 16 years old, for whom a bicycle helmet is now mandatory in NC, account for 31% of all crashes. Teens 16 – 19, and young adults ages 20 - 24 are also highly represented, accounting for another 11% and 10%, respectively. Those aged 40 – 49 and 30 – 39 represent 16% and 13% respectively. NC seems to be following national trends, with adult ages showing higher crash involvement over recent years, perhaps reflecting more riding by these age groups. Both the 30 – 39 and 50 – 59 year age groups also showed increases in both frequency and percentage of collisions in 2007 compared to the averages for all five years.

Table 4. Bicyclist age group of those involved in crashes

Age	Year					Total
	2003	2004	2005	2006	2007	
<6	11 1.2 [1]	28 3.0	19 2.0	12 1.3	15 1.5	85 1.8
6 -10	104 11.5	118 12.4	96 10.3	88 9.2	109 10.8	515 10.9
11 -15	192 21.3	171 18.0	178 19.1	158 16.6	170 16.9	869 18.3
16 -19	111 12.3	96 10.1	102 10.9	113 11.9	114 11.3	536 11.3
20 - 24	86 9.5	88 9.3	87 9.3	100 10.5	100 9.9	461 9.7
25 - 29	62 6.9	57 6.0	52 5.6	66 6.9	52 5.2	289 6.1
30 - 39	96 10.7	128 13.5	125 13.4	121 12.7	142 14.1	612 12.9
40 - 49	144 16.0	159 16.7	154 16.5	160 16.8	156 15.5	773 16.3
50 - 59	62 6.9	71 7.5	81 8.7	96 10.1	112 11.1	422 8.9
60 - 69	24 2.7	22 2.3	28 3.0	22 2.3	30 3.0	126 2.7
70+	9 1.0	12 1.3	11 1.2	17 1.8	9 0.9	58 1.2
Total	901 19.0 [2]	950 20.0	933 19.7	953 20.1	1009 21.3	4746 [3]

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total bicyclists identified (4866) due to missing data or unknown values.

Bicyclist Gender

Once again, there is some variability by year, but on average, male bicyclists account for about 85% of the crash-involved bicyclists in NC (Table 5).

Table 5. Bicyclist gender of those involved in crashes

Gender	Year					Total
	2003	2004	2005	2006	2007	
Female	163	131	141	144	148	723
	18.1 [1]	13.7	15.0	15.1	14.6	15.2
Male	740	825	797	811	865	4034
	82.0	86.3	85.0	85.0	85.4	84.8
Total	903	956	938	955	1013	4765 [3]
	18.95 [2]	20.06	19.69	20.04	21.26	

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total bicyclists identified due to missing data or unknown values

Bicyclist Race

Black and white bicyclists each account for 45-48% of the crashes with motor vehicles and Native Americans, 1.5% (Table 6). Bicyclists identified as Hispanic account for about 5% of the 2003-2007 crashes and identified Asians account for about 1% or less in each of those years. "Other" ethnic groups combined account for less than 1% of the crashes in 2003-2007.

Table 6. Bicyclist race/ethnicity

Race/Ethnicity	Year					Total
	2003	2004	2005	2006	2007	
Asian	10 1.1 [1]	3 0.3	6 0.7	9 1.0	10 1.0	38 0.8
Black	410 45.8	440 46.4	411 44.2	402 42.5	404 40.1	2067 43.7
Hispanic	36 4.0	40 4.2	48 5.2	49 5.2	56 5.6	229 4.8
Native American	10 1.1	15 1.6	14 1.5	16 1.7	14 1.4	69 1.5
White	421 47.0	450 47.4	447 48.1	3 0.3	7 0.7	22 0.5
Other	8 0.9	1 0.1	3 0.3	468 49.4	517 51.3	2303 48.7
Total	895 18.9 [2]	949 20.1	929 19.7	947 20.0	1008 21.3	4728 [3]

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total bicyclists identified due to missing data or unknown values.

Bicyclist Injury Severity

About 2.4% of bicyclists were fatally injured in crashes with motor vehicles over this time period, but the number of fatalities showed decreases in 2006 and 2007 when compared with 2005 (Table 7). Another 7% suffered A type (disabling) injuries. About 45% receive B type (evident) injuries and 38% type C (possible) injuries with another 8% reporting no injuries received.

Table 7. Bicyclist injury severity

Injury	Year					Total
	2003	2004	2005	2006	2007	
K Killed	18	24	34	20	17	113
	2.0 [1]	2.6	3.7	2.2	1.7	2.4
A Type Injury –Disabling	63	59	62	56	70	310
	7.1	6.3	6.7	6.0	7	6.6
B Type Injury – Evident	389	414	447	401	447	2098
	43.7	43.9	48.1	43.5	44.7	44.8
C Type Injury – Possible	353	357	324	367	376	1777
	39.6	37.9	34.9	39.8	37.6	37.9
O No Injury	68	89	62	78	90	387
	7.6	9.4	6.7	8.5	9.0	8.3
Total	891	943	929	931	1000	4694 [3]
	19.0 [2]	20.1	19.8	19.8	21.3	

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total bicyclists identified due to missing data or unknown values.

Bicyclist Alcohol Use

According to the information available on police crash reports, alcohol use by bicyclists was detected or suspected in about 8% of all bicyclists involved in crashes from 2003-2007 (Table 5). The percentage value was lower for the most recent year, 2007. This means that the investigating police officer merely detected the presence of alcohol; it does not imply intoxication. Prior to 2004, there were many missing values after a crash reporting form change in 2000, so 2003 data are not comparable to 2004 to 2007. The data appear to be complete for 2004 through 2007.

Table 8. Bicyclist use of alcohol

Alcohol use suspected/ detected	YEAR					
	2003	2004	2005	2006	2007	Total
No	235	884	863	883	952	3817
	88.7 [1]	91.5	91.2	91.6	93.2	91.7
Yes	30	82	83	81	70	346
	11.3	8.5	8.8	8.4	6.9	8.3
Total	265	966	946	964	1022	4163 [3]
	6.4 [2]	23.2	22.7	23.2	24.6	

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total bicyclists identified due to missing data or unknown values.

Driver Characteristics

Driver Age

There is little variability in the age distributions of crash-involved drivers striking bicyclists across the five years of data (Table 9– Note that age intervals vary again). Young drivers 24 (including teen drivers) account for 21% of all collisions with bicyclists. Among 10-year age groups, the largest proportion of crashes involved the 30-39 year old group of drivers (19.7%). The second largest group was the 40-49 year old group (18.3%).

Table 9. Ages of drivers involved in crashes with bicyclists

Driver age group	Year					Total
	2003	2004	2005	2006	2007	
<20 years	62	79	75	85	83	384
	7.9 [1]	9.4	8.2	9.7	8.9	8.8
20-24	110	112	127	106	120	575
	13.9	13.3	13.9	12.1	12.9	13.2
25-29	93	94	99	101	92	479
	11.8	11.1	10.8	11.5	9.9	11
30-39	161	179	177	155	164	836
	20.4	21.2	19.4	17.7	17.6	19.2
40-49	137	154	172	167	159	789
	17.3	18.2	18.8	19.1	17.1	18.1
50-59	108	104	136	119	149	616
	13.7	12.3	14.9	13.6	16.0	14.2
60-69	57	63	64	87	94	365
	7.2	7.5	7.0	9.9	10.1	8.4
70+	62	60	63	55	69	309
	7.9	7.1	6.9	6.3	7.4	7.1
Total	790	845	913	875	930	4353 [3]
	18.2 [2]	19.4	21.0	20.1	21.4	

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total bicyclists identified due to missing data or unknown values.

Driver Gender

Male drivers account for 55% of the bicycle-motor vehicle crashes and female drivers 45% (Table 7). There was a slight increasing trend in the proportion of female drivers and an accompanying decrease in the proportion of male drivers from 2003 to 2006, although this trend reversed in 2007.

Table 10. Gender of drivers involved in crashes with bicyclists

Gender	Year					Total
	2003	2004	2005	2006	2007	
Female	351	400	421	403	412	1987
	44.4 [1]	47.5	46.1	46.2	44.3	45.7
Male	439	443	493	470	518	2363
	55.6	52.6	53.9	53.8	55.7	54.3
Total	790	843	914	873	930	4350 [3]
	18.2 [2]	19.4	21.0	20.1	21.4	

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total drivers identified due to missing data or unknown values.

Driver Race

White drivers were involved in 60% and Black drivers 32% of the crashes with bicyclists on average (Table 11). Identified Hispanics accounted for about 4% of the 2003-2007 crash-involved drivers and identified Asians account for 1% or less in each of those years on average. "Other" ethnic groups also accounted for 1% or less of the crashes in 2003-2007.

Table 11. Race/ethnicity of drivers involved in crashes with bicyclists

Ethnicity	YEAR					Total
	2003	2004	2005	2006	2007	
Asian	6 0.8 [1]	3 0.4	9 1.0	6 0.7	14 1.5	38 0.9
Black	266 33.8	295 35.0	287 31.5	277 31.9	282 30.6	1407 32.5
Hispanic	41 5.2	36 4.3	40 4.4	37 4.3	31 3.4	185 4.3
Native American	9 1.1	9 1.1	16 1.8	18 2.1	14 1.5	66 1.5
Other	7 0.9	3 0.4	10 1.1	8 0.9	6 0.7	34 0.8
White	458 58.2	496 58.9	549 60.3	523 60.2	576 62.4	2602 60.1
Total	787 18.2 [2]	842 19.4	911 21.0	869 20.1	923 21.3	4332 [3]

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total drivers identified due to missing data or unknown values.

Driver Injury Severity

As would be expected, drivers are rarely injured in crashes with bicycles (Table 12). Approximately 96% received no injuries, and about 4% B (evident) or C type (possible) injuries. There are very few instances of A type injury and only one driver fatality in a bicycle-related collision over this time period.

Table 12. Injury severity of drivers involved in crashes with bicyclists

	YEAR					
Injury Severity	**2003**	**2004**	**2005**	**2006**	**2007**	**Total**
K Killed	0	1	0	0	0	1
	0.0 [1]	0.1	0.0	0.0	0.0	0.0
A Type Injury (disabling)	2	1	3	0	2	8
	0.3	0.1	0.3	0.0	0.2	0.2
B Type Injury (evident)	13	10	12	21	16	72
	1.7	1.2	1.3	2.5	1.7	1.7
C Type Injury (possible)	8	24	36	26	10	104
	1.0	2.9	4.0	3.0	1.1	2.4
O No Injury	758	802	854	808	889	4111
	97.1	95.7	94.4	94.5	97.0	95.7
Total	781	838	905	855	917	4296 [3]
	18.2 [2]	19.5	21.1	19.9	21.4	

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total drivers identified due to missing data or unknown values.

Driver Alcohol Use

Alcohol use by drivers in crashes with bicyclists is detected in 2% of crashes (Table 13). This means that the investigating police officer detected or suspected the presence of alcohol; it does not confirm intoxication or that alcohol was a factor in the crash.

Table 13. Alcohol use suspected for drivers involved in crashes with bicyclists

Alcohol use suspected/ detected	YEAR					
	2003	2004	2005	2006	2007	Total
No	787 98.3 [1]	844 98.4	911 98.2	870 98.4	927 98.0	4339 98.2
Yes	14 1.8	14 1.6	17 1.8	14 1.6	19 2.0	78 1.8
Total	801 18.1 [2]	858 19.4	928 21.0	884 20.0	946 21.4	4417 [3]

[1] Row percent of column total
[2] Column percent of row total
[3] Total does not equal total drivers identified due to missing data or unknown values.

Temporal and Environmental Factors

Month of Year

There is substantial difference in the proportions of bicycle-motor vehicle crashes as related to month of year with more collisions occurring during the warmer months which are also those months with longer daylight hours (Table 14). There is also year-to-year variability within months that is likely related at least somewhat to the varying periods of warm and cold weather or rain and clear/cloudy conditions in any given year.

Table 14. Bicycle crashes by month

Month	YEAR					Total
	2003	2004	2005	2006	2007	
January	45 4.9 [1]	40 4.2	65 6.7	49 5.0	53 5.1	252 5.2
February	32 3.5	38 4.0	44 4.5	57 5.9	39 3.7	210 4.3
March	62 6.8	69 7.2	56 5.7	61 6.3	72 6.9	320 6.6
April	96 10.5	94 9.8	73 7.5	77 7.9	89 8.5	429 8.8
May	81 8.9	97 10.1	92 9.4	108 11.1	96 9.2	474 9.7
June	102 11.2	98 10.2	106 10.9	97 10.0	100 9.6	503 10.3
July	104 11.4	119 12.4	107 11.0	122 12.5	122 11.7	574 11.8
August	111 12.1	110 11.5	112 11.5	111 11.4	123 11.8	567 11.7
September	118 12.9	88 9.2	115 11.8	110 11.3	126 12.1	557 11.4
October	88 9.6	92 9.6	98 10.0	76 7.8	108 10.3	462 9.5
November	53 5.8	64 6.7	64 6.6	59 6.1	62 5.9	302 6.2
December	22 2.4	50 5.2	44 4.5	46 4.7	56 5.4	218 4.5
Total	914 18.8 [2]	959 19.7	976 20.1	973 20.0	1046 21.5	4868

[1] Row percent of column total
[2] Column percent of row total

Day of Week

Bicycle-motor vehicle crashes are fairly equally spread across weekdays with weekend days of Saturday and particularly, Sunday having fewer crashes (Table 15).

Table 15. Bicycle crashes by day of the week

Day of Week	YEAR					Total
	2003	2004	2005	2006	2007	
Sunday	104 11.4 [1]	109 11.4	107 11.0	93 9.6	105 10.0	518 10.6
Monday	144 15.8	132 13.8	125 12.8	144 14.8	156 14.9	701 14.4
Tuesday	135 14.8	122 12.7	161 16.5	154 15.8	167 16.0	739 15.2
Wednesday	133 14.6	144 15.0	140 14.3	151 15.5	165 15.8	733 15.1
Thursday	145 15.9	146 15.2	157 16.1	156 16.0	148 14.2	752 15.4
Friday	130 14.2	149 15.5	153 15.7	151 15.5	164 15.7	747 15.3
Saturday	123 13.5	157 16.4	133 13.6	124 12.7	141 13.5	678 13.9
Total	914 18.8 [2]	959 19.7	976 20.1	973 20.0	1046 21.5	4868

[1] Row percent of column total
[2] Column percent of row total

Time of Day

Most crashes occur during mid-afternoon to evening hours (Table 16). About 31% of all crashes occurred between 3 and 6 p.m., peak travel times, and a time when younger children might be riding. Another 21% occurred between 6 and 9 p.m.

Table 16. Time of day of bicycle crashes

Time of Day	YEAR					Total
	2003	2004	2005	2006	2007	
midnight to 3 am	18 2.0 [1]	19 2.0	24 2.5	15 1.5	34 3.3	110 2.3
3 am to 6 am	9 1.0	10 1.0	9 0.9	9 0.9	15 1.4	52 1.1
6 am to 9 am	65 7.1	62 6.5	81 8.3	69 7.1	75 7.2	352 7.2
9 am to noon	82 9.0	94 9.8	91 9.3	99 10.2	109 10.4	475 9.8
noon to 3 pm	166 18.2	171 17.8	172 17.6	196 20.1	187 17.9	892 18.3
3 pm to 6 pm	296 32.4	310 32.3	312 32.0	294 30.2	309 29.5	1521 31.2
6 pm to 9 pm	203 22.2	206 21.5	199 20.4	207 21.3	226 21.6	1041 21.4
9 pm to midnight	75 8.2	87 9.1	88 9.0	84 8.6	91 8.7	425 8.7
Total	914 18.8 [2]	959 19.7	976 20.1	973 20.0	1046 21.5	4868

[1] Row percent of column total
[2] Column percent of row total

Light Condition

About three-fourths (74%) of crashes happen in conditions of daylight (Table 17). Another 21% occur during conditions of darkness, and in about half of these the roadway was lighted. Dawn and dusk conditions combined account for about 5% of crashes. There is some variability across years in these percentages, but the trends are similar.

Table 17. Bicycle crashes by light condition

Light Condition	YEAR					Total
	2003	2004	2005	2006	2007	
Dark - Lighted Roadway	107 11.8 [1]	109 11.4	98 10.1	87 9.0	112 10.7	513 10.6
Dark - Roadway Not Lighted	79 8.7	113 11.8	107 11.0	102 10.5	110 10.5	511 10.5
Dark - Unknown Lighting	2 0.2	4 0.4	1 0.1	3 0.3	6 0.6	16 0.3
Dawn	7 0.8	7 0.7	11 1.1	9 0.9	10 1.0	44 0.9
Daylight	689 75.6	686 71.8	720 74.0	730 75.3	768 73.6	3593 74.0
Dusk	27 3.0	37 3.9	36 3.7	39 4.0	38 3.6	177 3.7
Total	911 18.8 [2]	956 19.7	973 20.1	970 20.0	1044 21.5	4854

[1] Row percent of column total
[2] Column percent of row total

Weather

The vast majority of crashes occur in clear (81%) and cloudy (15%) weather (Table 18). About 3.5% of crashes take place in rainy conditions. The variability from year-to-year may reflect the prevalence of different conditions, and to some extent choice of when to ride. Note the 2007 increase is almost entirely reflected in an increase in crashes under clear skies, for example, when the State was undergoing extensive drought conditions.

Table 18. Bicycle crashes by weather conditions

Weather Conditions	YEAR					Total
	2003	2004	2005	2006	2007	
Clear	692 75.7 [1]	763 79.6	770 78.9	796 81.8	915 87.5	3936 80.9
Cloudy	176 19.3	168 17.5	159 16.3	145 14.9	99 9.5	747 15.4
Fog - Smog - Smoke	0 0.0	4 0.4	3 0.3	3 0.3	1 0.1	11 0.2
Other	1 0.1	1 0.1	0 0.0	3 0.3	2 0.2	7 0.1
Rain	44 4.8	23 2.4	43 4.4	25 2.6	29 2.8	164 3.4
Snow - Sleet - Hail - Freezing Rain/drizzle	1 0.1	0 0.0	1 0.1	1 0.1	0 0.0	3 0.1
Total	914 18.8 [2]	959 19.7	976 20.1	973 20.0	1046 21.5	4868

[1] Row percent of column total
[2] Column percent of row total

Roadway Characteristics

Roadway Type

About 61% of bicycle-motor vehicle crashes took place on local streets (Table 19). Another 17% occurred on secondary roadways, the majority of which were rural paved roadways. About 7% happened in public vehicular areas (typically parking lots). About 7% each also occurred on US and NC routes. Only a minor number took place on Interstate roadways (where bicycles are not allowed to ride by law).

Table 19. Bicycle crashes by roadway classification

Road Classification	YEAR					Total
	2003	2004	2005	2006	2007	
Interstate Route	1 0.1 [1]	2 0.2	3 0.3	1 0.1	2 0.2	9 0.2
Local City Street	566 61.9	580 60.5	605 62.0	610 62.7	627 59.9	2988 61.4
North Carolina Route	48 5.3	68 7.1	65 6.7	67 6.9	81 7.7	329 6.8
Private Property	2 0.2	4 0.4	3 0.3	9 0.9	3 0.3	21 0.4
Public Vehicular Area (ex. Parking lot)	61 6.7	82 8.6	61 6.3	67 6.9	78 7.5	349 7.2
State Secondary Route	170 18.6	173 18.0	169 17.3	151 15.5	180 17.2	843 17.3
United States Route	66 7.2	50 5.2	70 7.2	68 7.0	75 7.2	329 6.8
Total	914 18.8 [2]	959 19.7	976 20.1	973 20.0	1046 21.5	4868

[1] Row percent of column total
[2] Column percent of row total

Number of Through Lanes

A majority, 63%, of bicycle-motor vehicle crashes occur on roads with two through lanes of traffic (Table 18). The majority of the rest are on roads with four or five lanes.

Table 20. Bicyclist crashes by number of through travel lanes

Number of Lanes	YEAR					Total
	2003	2004	2005	2006	2007	
1	20 2.4 [1]	18 2.0	18 2.0	20 2.2	25 2.5	101 2.2
2	541 64.1	587 64.9	557 60.6	543 59.9	619 61.9	2847 62.2
3	47 5.6	54 6.0	80 8.7	70 7.7	76 7.6	327 7.2
4	127 15.1	130 14.4	141 15.3	150 16.5	164 16.4	712 15.6
5	74 8.8	73 8.1	81 8.8	91 10.0	81 8.1	400 8.8
More than 5 Lanes	35 4.15	42 4.65	42 4.57	33 3.64	35 3.5	187 4.09
Total	844 18.5 [2]	904 19.8	919 20.1	907 19.8	1000 21.9	4574 [3]

[1] Row percent of column total
[2] Column percent of row total
[3] Total excludes crashes in off-roadway areas

Speed Limit

About 61% of crashes take place on roadways with speed limits of 35 mph or less coinciding with the two-thirds of crashes that occur in predominantly urban locations (Table 21). The 45 mph roadways account for about 19% of crashes, and those of 55 mph and above limits for about 18 - 19%.

Table 21. Bicycle crashes by speed limit

	YEAR					
Speed Limit	**2003**	**2004**	**2005**	**2006**	**2007**	**Total**
35 mph or less	554 60.6 [1]	590 61.5	585 59.9	585 60.0	638 61.0	2951 60.6
40 mph	7 0.8	10 1.0	15 1.5	7 0.7	8 0.8	47 1.0
45 mph	172 18.8	170 17.7	175 17.9	190 19.5	204 19.5	910 18.7
50 mph	13 1.42	9 0.94	17 1.74	11 1.13	18 1.72	68 1.4
55+ mph	168 18.4	180 18.8	184 18.9	180 18.5	178 17.0	890 18.3
Total	914 18.8 [2]	959 19.7	976 20.1	973 20.0	1046 21.5	4868

[1] Row percent of column total
[2] Column percent of row total

Roadway Feature

Slightly more than half (53%) of bicycle crashes with motor vehicles typically occur at roadway locations with no special features (i.e., in between intersections, driveways, or other distinguishing features; Table 22). About 34% occur at or related to all types of intersections (four-way, five-point, T, alley, etc.), and locations near public and private driveways account for another 12%.

Table 22. Bicycle crashes by road feature

Road feature	YEAR					Total
	2003	2004	2005	2006	2007	
Alley Intersection	4 0.4 [1]	3 0.3	6 0.6	1 0.1	2 0.2	16 0.3
Bridge	6 0.7	6 0.6	6 0.6	3 0.3	7 0.7	28 0.6
Bridge Approach	2 0.2	1 0.1	1 0.1	3 0.3	1 0.1	8 0.2
Driveway - Private	51 5.6	44 4.6	46 4.7	31 3.2	43 4.1	215 4.4
Driveway - Public	63 6.9	68 7.1	62 6.4	79 8.1	78 7.5	350 7.2
Five-Point Or More	1 0.1	1 0.1	2 0.2	1 0.1	1 0.1	6 0.1
Four-Way Intersection	144 15.8	169 17.6	161 16.5	168 17.3	194 18.6	836 17.2
No Special Feature	472 51.6	517 53.9	501 51.3	518 53.2	553 52.9	2561 52.6
Non-intersection Median Crossing	0 0.0	0 0.0	3 0.3	0 0.0	0 0.0	3 0.1
On or Off Ramp	4 0.4	3 0.3	6 0.6	5 0.5	13 1.2	31 0.6
Other	6 0.7	3 0.3	6 0.6	3 0.3	5 0.5	23 0.5
Railroad Crossing	0 0.0	0 0.0	0 0.0	0 0.0	1 0.1	1 0.0
Related To Intersection	11 1.2	18 1.9	11 1.1	11 1.1	10 1.0	61 1.3
Shared-Use Paths Or Trails	0 0.0	0 0.0	1 0.1	1 0.1	1 0.1	3 0.1
T-Intersection	146 16.0	122 12.7	158 16.2	141 14.5	129 12.3	696 14.3
Traffic Circle/Roundabout	2 0.2	0 0.0	0 0.0	1 0.1	3 0.3	6 0.1
Underpass	1 0.1	1 0.1	2 0.2	2 0.2	0 0.0	6 0.1
Y-Intersection	1 0.1	3 0.3	4 0.4	5 0.5	5 0.5	18 0.4
Total	914 18.8 [2]	959 19.7	976 20.1	973 20.0	1046 21.5	4868

[1] Row percent of column total
[2] Column percent of row total

For additional information on the types of bicycle-motor vehicle crashes occurring in the State over the same time period, see the Bicycle Crash Types summary report, available at http://www.pedbikeinfo.org/pbcat/pdf/summary_bike_types5yrs.pdf