

Suggestions for Using *Crash Facts*

Crash Facts is designed to meet the needs of different audiences. If you are unfamiliar with this report, here are some suggestions that may make it easier for you to find the information you are seeking.

Legislators:

Section II through IX focus on particular traffic safety sub-areas (alcohol, seat belts, crashes involving motorcycles, pedestrians, and so on). Each section begins with a narrative that provides background, mentions highlights for the years, and discusses some legislative history (where appropriate). The first table in each section gives a ten-year history outlining key parameters of the problem.

Students studying traffic safety issues:

Of all age groups, teenagers and young adults pay the heaviest price in traffic safety (in terms of deaths and injuries). Each section contains tables focusing on age of drivers and victims in crashes.

Law enforcement community:

There are over 500 city, county, and state law enforcement agencies in Minnesota. Each agency has access to its own reports on traffic crashes, but the data are brought together here. Table 1.24 shows statistical information arranged by county. Table 1.25 reports on the traffic crash experience of almost 200 cities with populations over 2,500.

Public health:

Traffic crashes cause deaths and injuries; they are the leading cause of death to people from age 1 to 34 (people generally thought of as “too young to die”). *Crash Facts* contains many tables that show age and gender of drivers and victims, and many tables focus on the contributing factors in crashes. Section II contains tables relevant to chemical dependency issues, in particular, alcohol use and crash involvement.

City and county government agencies:

Information about your county will be found in Tables 1.24; your city’s statistics may be listed in Table 1.25. The Office of Traffic Safety can provide additional information on traffic crashes in your county or city; just contact us at the address shown below.

Data availability:

This report presents a wide spectrum of information in more than 100 tables and figures, but it may not answer every question. You may request additional data. Each response usually requires from one day to two weeks, depending on the complexity of the request.

Such requests should be directed to:

Department of Public Safety
Office of Traffic Safety
445 Minnesota Street, Suite 150
St. Paul, MN 55101-5150
(651) 201-7081

MINNESOTA MOTOR VEHICLE CRASH FACTS 2015

A summary of crashes occurring on Minnesota roadways based on crash reports submitted to the Minnesota Department of Public Safety by investigating police officers and drivers.

Produced by:
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Note:

The Minnesota Department of Public Safety is working to create an accessible electronic version of this document that meets the State of Minnesota Accessibility Standard and Minnesota State Statutes Section 16E.03. The most up-to-date version of this document is posted on the Minnesota Department of Public Safety Website:

<https://dps.mn.gov/divisions/ots/>

Click on the “Reports and Statistics” tab.

This site also includes yearly archived Crash Facts reports back to 2004.



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June 2016

A father and daughter killed by a distracted driver. Two teens killed by a suspected drunk driver. Numerous motorists who died all because they weren't wearing a seat belt. These are just some of the stories behind *Minnesota Motor Vehicle Crash Facts 2015*.

Minnesota Motor Vehicle Crash Facts contains statistics and information that will be used by our traffic safety partners, legislators, media and the motoring public. It is derived from law enforcement reports and describes how and why crashes happened, where they occurred in our state and who was involved.

Last year proved to be a challenging year on Minnesota roads, including for the families of 61 motorcyclists who lost their lives — the highest number of deaths since 2008. The 411 traffic fatalities also marks the most people killed on Minnesota roads since 2010.

The title "Crash" Facts is chosen instead of the word "accident" because the majority of traffic incidents are preventable. There are behaviors that drivers can control to prevent tragedies such as: slowing down, paying attention, never driving drunk and always buckling up.

The top four contributing factors in Minnesota road fatalities were:

- Speed – 78 deaths were attributed to illegal/unsafe speed.
- Distractions – 74 fatalities were linked to inattention.
- Impaired driving – 95 traffic deaths were attributed to drunk driving.
- Failing to buckle up - 91 motor vehicle occupants who were killed weren't belted.

The Minnesota Department of Public Safety (DPS) will use this information to determine future traffic safety initiatives that will lead to safer roads, more efficient safety programs and changed driver behavior.

It's difficult to imagine what could have been for those who should still be with us, and for the families who will experience a lifetime of heartache knowing these tragedies could have been prevented.

All of us can do our part in keeping our roads safe by speaking up when we see a dangerous driver or driving habit. Together, we can save lives and move toward the goal of zero deaths on Minnesota roads.

Sincerely,

Ramona L. Dohman

EQUAL OPPORTUNITY EMPLOYER

Mona Dohman
Commissioner, Department of Public Safety

Minnesota Traffic Crashes in 2015

OVERVIEW

This edition of *Minnesota Motor Vehicle Crash Facts* summarizes the crashes, deaths and injuries that occurred on Minnesota roadways during 2015. The information provided in this book will assist you in traveling our roadways safely.

In 2015:

- 74,772 traffic crashes were reported to the Minnesota Department of Public Safety (DPS)
- 138,057 motor vehicles and 181,663 people were involved in these crashes
- 411 people died and 29,981 people were injured
- Estimated economic cost to Minnesota: \$1,773,219,300

On an average day in 2015:

- 205 crashes
- 1 death and 82 injuries
- Average daily cost to Minnesota: \$4,858,135

2015 known alcohol-related statistics:

- 3,634 crashes
- 137 deaths and 2,203 injuries
- Estimated economic cost to Minnesota: \$285,118,600

Highlights from the 2015 *Crash Facts* edition

- **Traffic fatalities increase**
In 2015, Minnesota experienced a total of 411 traffic fatalities, a 13.9 percent increase from the previous year. This percentage increase is discouraging in light of the fact that traffic fatalities in Minnesota rose to their highest levels since 2010 after decreasing sharply over the last decade. It indicates that traffic fatalities in Minnesota remain at epidemic levels - serving as a call-to-action for all motorists to buckle up, drive at safe speeds, pay attention and never drive impaired.
- **Safety belt use in Minnesota is 94 percent**
An observational study in June, 2015 showed that belt use by front seat drivers and passengers was 94%. Seat belts save lives. All motor vehicle occupants are urged to buckle up—every seat and every ride.
- **The fatality rate in Minnesota per 100 million vehicle miles traveled (VMT) remains low**
The VMT-based fatality rate for 2015 is 0.70, one of the lowest in the nation. The VMT fatality rate has shown dramatic improvement in the last two decades (it was 1.48 in 1994), however, in 2015 it rose to its highest level since 2010.

CRASH FACTS ORGANIZATION

Crash Facts has a wealth of statistical information about traffic crashes in Minnesota. Follow this basic user's guide to navigate the book.

Introduction

Beginning on page 1, you will find introductory information including the history, societal costs and general cause of crashes. You can use this information to find:

- How crash costs are estimated
- Contributing factors in crashes
- Historical analysis of traffic deaths over the last 35 to 40 years
- Licensed drivers by age (Table 2)
- Registered motor vehicles by category (Table 3)

Section I: All Crashes

Beginning on page 7, you will find the aggregate of all traffic crashes that occurred in Minnesota in 2015. Information provided includes:

- Historical information dating back to 1965 (Table 1.01)
- Factors contributing to crashes (Tables 1.09, 1.10 and 1.17)
- Holiday crashes, deaths and injuries (Table 1.28)

Section II: Alcohol-Related Crashes

Beginning on page 38, you will find data about impaired driving and traffic crashes. This section focuses on crashes involving alcohol and spells out answers to commonly-raised questions, including:

- Historical overview since 1990 (Table 2.02)
- DWI arrest statistics (Tables 2.03, 2.04 and 2.05)
- Persons killed and injured in alcohol-related crashes by age (Table 2.06)

Section III: Safety Equipment Use by Vehicle Occupants in Crashes

Beginning on page 55, you will find information on belt use by people in cars and trucks.

- This section includes a table showing observational seat belt use rates since 1986 (Table 3.01)

Section IV: Motorcycle Crashes

Beginning on page 64, you will find information on crashes involving motorcycles.

- Crashes involving all-terrain vehicles or mopeds are not included in this section

Section V: Truck Crashes

Beginning on page 73, you will find information on crashes that involved a heavy commercial vehicle.

- Crashes involving pickup trucks are not included in this section

Section VI: Pedestrian Crashes

Beginning on page 81, you will find information on motor-vehicle/pedestrian crashes.

- Crashes involving a pedestrian/train or pedestrian/bicycle are not included in this section

Section VII: Bicycle Crashes

Beginning on page 91, you will find information on motor-vehicle/bicycle crashes.

- Bicycle crashes not on public highways and roadways are not included in this section
- Bicycle crashes not involving a motor vehicle are not included in this section

Section VIII: School Bus Crashes

Beginning on page 96, you will find information pertaining to school bus crashes.

- This section focuses on crashes that involved a school bus as a "contact vehicle"
- Crashes where a school bus was indirectly involved are not included in this section
(Note: this data collection began in 2003; please see narrative for discussion)

Section IX: Motor Vehicle/Train Crashes

Beginning on page 101, you will find information pertaining to train crashes.

- Crashes that do not involve a motor vehicle are not included in this section

Section X: Motor Vehicle Teen Crashes

Beginning on page 105, you will find information pertaining to teen-involved traffic crashes.

- This section focuses on drivers aged 15 through 19

Section XI: Motor Vehicle Senior Crashes

Beginning on page 110, you will find information pertaining to senior-involved traffic crashes.

- This section focuses on drivers aged 65 and older

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Introduction

At the end of the 2015 calendar year, 4,118,102 people held Minnesota driver licenses and 5,242,267 motor vehicles were registered in the state. Vehicles traveled over 59 billion miles on public roadways. There were 74,772 traffic crashes; 411 people died and 29,981 people were injured in those crashes. This report provides a statistical summary of those crashes.

The purpose of *Crash Facts* is to provide summary statistical information about the crashes reported to the state each year. The term “crash” is used in preference to “accident.” The latter term suggests there is a random, unavoidable quality about the events in question. In fact, the experience of the last three decades strongly demonstrates that advances in engineering and technology, coupled with changes in public policy and individual human behavior, can dramatically reduce the number and severity of traffic crashes.

Cost of traffic crashes

The use of motor vehicles for getting from one place to another results in significant costs to society. The National Safety Council reports that crashes (from all causes) are the leading cause of death among persons aged 1 to 34, the leading cause of unintentional injury-related death for all ages combined and the fifth leading cause of death among all persons (*Injury Facts, 2014 Edition*, p. 12-13,16).

It is possible to estimate economic costs of traffic crashes, although the results can vary depending on definitions and estimating procedures. Many states use cost figures released by the National Safety Council, the most recent of which use 2014 data. Based upon those, the total economic loss from 2015 traffic crashes in Minnesota was \$1,773,953,802, a figure that is calculated as follows:

Cost of Motor Vehicle Crashes in 2015:

411	deaths	@	\$1,512,000	=	\$621,432,000
1,127	severe injuries	@	\$88,500	=	\$99,739,500
7,251	moderate injuries	@	\$25,600	=	\$185,625,600
21,603	minor injuries	@	\$21,000	=	\$454,397,502
98,276	PDO crashes ¹	@	\$4,200	=	\$412,759,200
Total:					\$1,773,219,300

Factors affecting traffic crashes

A single crash may have many contributing factors. Cell phone use or playing with the radio may lead to driver distraction, which together with wet, slippery pavement and high traffic congestion at an intersection causes a traffic crash.

In general, a handful of factors affect the majority of traffic crashes. These can be organized into logical groups, such as human behavior factors or vehicle safety factors. The following paragraphs outline some of the factors most frequently thought to affect crash incidence and severity.

Vehicle Safety Factors: Engineering and design standards for vehicle performance can help prevent crashes from occurring. When there is a crash, vehicles designed for safety can increase survivability. For example, the design of windshield glass and the location and durability of gas tanks can increase safety. The “passenger packaging” inside a vehicle can reduce injury severity through means such as padded dashboards and collapsible steering wheel columns. Passenger protection systems in vehicles (airbags, safety belts, etc.), if used, can eliminate injuries or reduce their severity.

¹ Beginning in 2015, PDO crashes were calculated by the National Safety Council on cost per vehicle. Before 2015, PDO crashes were calculated on cost per crash and included non-disabling injuries.

Behavior factors: For all crashes and fatal crashes, the driver behaviors police cite most often as contributing factors are, in order of frequency: driver inattention or distraction, failure to yield right of way and illegal or unsafe speed. Reducing these behaviors would reduce crashes. Further, when there is a crash, using seat belts will likely reduce a crash's severity.

Roadway characteristics: Limited access highways carry about a fifth of the traffic volume in Minnesota, yet account for only about a twelfth of fatal accidents. They are built to high roadway engineering standards and are very safe, relatively speaking. In general, roadway characteristics conducive to safety include wide lanes, clearly visible striping, flared guardrails, wide shoulders of good quality, shoulders and roadsides free of obstacles, well-located crash attenuation devices, well-planned use of traffic signals and effective communication to roadway users through clear and visible signage.

Environmental factors: Weather conditions affect crash incidence and severity. Clear, dry roads are conducive to high speeds; consequently, fatal crashes have a pronounced seasonal variation, peaking in the warm summer months and falling in the winter months. The total number of crashes is driven by the incidence of the less serious property damage crashes, which tend to have the opposite seasonal variation, peaking in the winter months.

Volume of traffic, or vehicle miles traveled (VMT), is a predictor of crash incidence. All other things being equal, as VMT increases, so will traffic crashes. The relationship may not be simple, however; after a point, increasing congestion leads to reduced speeds, changing the proportion of crashes that occur at different severity levels.

The quality and availability of emergency medical services might be classified as an environmental factor. The first hour after a traumatic episode, such as a traffic crash, has been called the "golden hour." Victims who receive emergency services within that time have markedly improved chances of survival.

The age structure of the population has a strong effect on crash incidence, although it is not generally thought about since demographic changes are so gradual. In Minnesota, about one in ten teenage drivers are involved in crashes each

year. The involvement rate drops off for successive age groups. For example, it is about 1 in 14 for drivers in their 40s. The aging of the 'baby boom' has reduced crash incidence, however, their children who are now driving may cause an increase.

Historical perspective

In 1966, there were 53,041 traffic fatalities in the country, or 5.7 for every hundred million miles of travel. In Minnesota in 1968, there were 1,060 traffic fatalities, or 5.3 per hundred million miles of travel. Those were the worst years. Since then, both the rate and the number of fatalities have declined in a fairly steady pattern. In 2015, there were about 32,675 traffic fatalities throughout the country (*based on the most recent available data from 2014*) and 411 in Minnesota. The respective fatality rates per hundred million miles of travel were 1.07 and 0.70. A dramatic benefit has been achieved.

The benefit is in large part the result of conscious decision-making on traffic safety issues. The National Highway Traffic Safety Administration (originally called the National Highway Safety Bureau) was established in the US Department of Transportation in 1967. Since then it has promoted and Congress has passed, legislation mandating the manufacture of safer cars. At the same time, the federal interstate highway system has expanded, contributing to a safer roadway environment.

Simultaneously there has been an effort to change human behavior factors. Minnesota was a leader among the states in the development of innovative drunk driving countermeasures. The Legislature made significant amendments to the DWI law in 1971, 1976, 1978 and in almost every year of the 1980s. It also passed the child passenger protection law in 1981 and the secondary seat belt law in 1986. In 2009 the law was updated to 'Primary.' It subsequently amended those laws, closing loopholes, broadening their scope and strengthening penalties. The benefits of action in these areas are clear. The graph shown in Figure 1 is one illustration. It shows a steady increase in the number of drivers and vehicles, but a steady decrease in the fatality rate per hundred million miles of travel.

Legislative requirement

Minnesota Motor Vehicle Crash Facts is produced annually by the Minnesota Department of Public

Safety Office of Traffic Safety, in accordance with state law. Minnesota Statutes, Section 169.10, requires that traffic crashes be reported to the Department. Section 169.10 then requires the Department to "...tabulate all crash reports and publish annually statistical information based thereon as to the number and circumstances of traffic crashes..."

Section 169.09 specifies that a driver involved in a crash that results in injury to or death of any person or total property damage of \$1,000 or more must submit a report within ten days of the crash. The law enforcement officer who investigates the crash must also submit a report within ten days. The minimum dollar amount for crashes involving only property damage has changed over the years. The first minimum was set at \$50 in 1939. It was raised to \$100 in 1965, to \$300 on August 1, 1977 and then to \$500 on August 1, 1981. The current minimum of \$1,000 took effect August 1, 1994.

Crash Facts is divided into eleven sections. The first section presents information on the aggregate of all crashes reported to the state during the preceding calendar year. The remaining ten sections focus on specific areas of interest to policy makers and the public. Section II deals with alcohol-related crashes. Section III is about the use of safety equipment by occupants of vehicles required to be equipped with passenger protection systems, including child safety seats and safety belts. The following six sections focus on crashes that involved motorcycles (section IV), trucks (section V), pedestrians (section VI), bicycles (section VII), school buses (section VIII) and trains (section IX). Sections X and XI summarize info on crashes involving teen and senior drivers.

FIGURE 1
VEHICLES, DRIVERS AND FATALITY RATE, 1970 - 2015

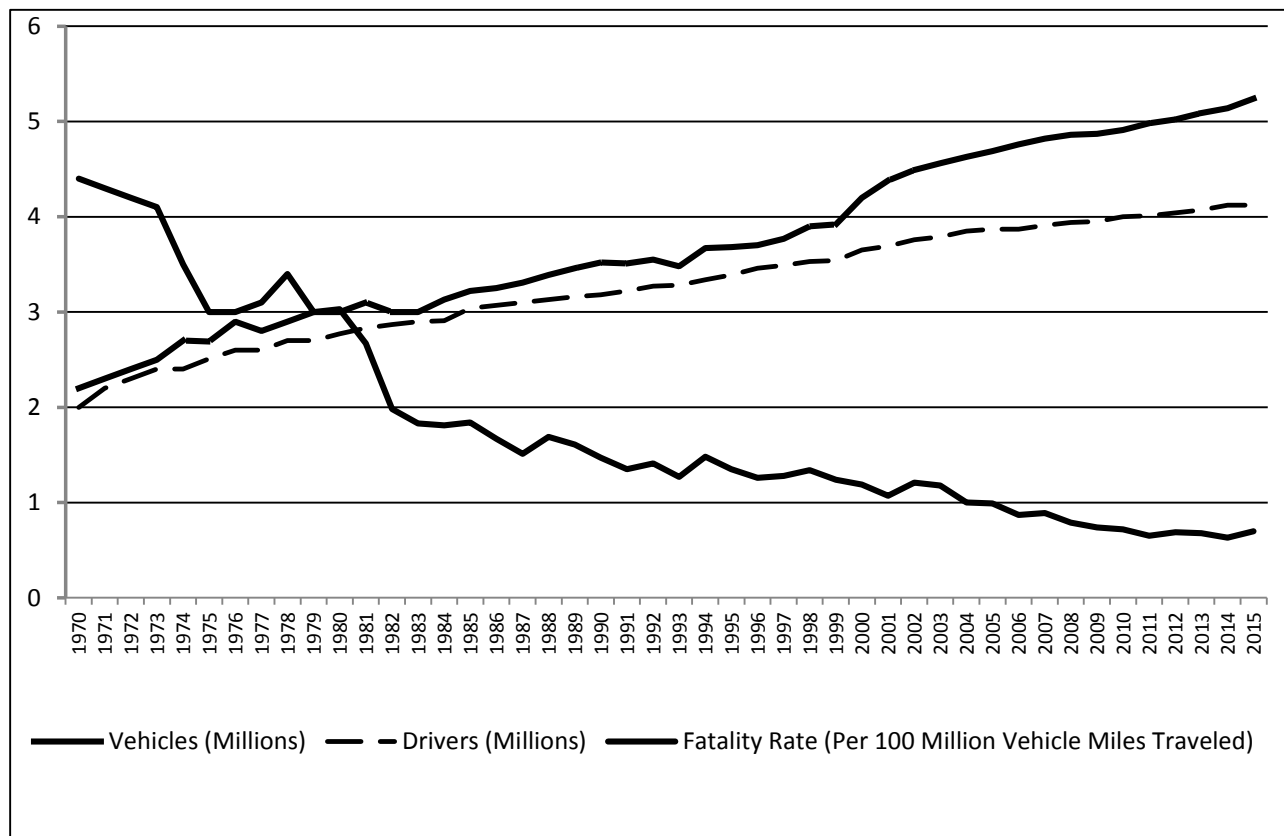


TABLE 1

MINNESOTA TRAFFIC FATALITIES, 1910 - 2015

Since 1961: Vehicle Miles Traveled (Billions) and Fatality Rates (Per 100 Million VMT)

YEAR (1)	Fatal- ities (2)	YEAR (3)	Fatal- ities (4)	YEAR (5)	Fatal- ities (6)	YEAR (7)	Fatal- ities (8)	Vehicle Miles (9)	Fatal Rate (10)	YEAR (11)	Fatal- ities (12)	Vehicle Miles (13)	Fatal Rate (14)	YEAR (15)	Fatal- ities (16)	Vehicle Miles (17)	Fatal Rate (18)
1910	23	1929	505	1948	552	1961	724	14.5	4.99	1980	863	28.5	3.03	1999	626	50.7	1.24
1911	26	1930	561	1949	540	1962	692	15.1	4.58	1981	763	28.6	2.67	2000	625	52.4	1.19
1912	39	1931	622	1950	532	1963	798	15.3	5.22	1982	581	29.2	1.98	2001	568	53.2	1.07
1913	46	1932	486	1951	610	1964	841	16.2	5.19	1983	558	30.5	1.83	2002	657	54.4	1.21
1914	88	1933	525	1952	534	1965	875	16.8	5.21	1984	584	32.2	1.81	2003	655	55.4	1.18
1915	85	1934	641	1953	637	1966	977	17.7	5.52	1985	610	33.1	1.84	2004	567	56.5	1.00
1916	143	1935	596	1954	639	1967	965	18.7	5.16	1986	572	34.2	1.67	2005	559	56.5	0.99
1917	161	1936	649	1955	577	1968	1,060	19.9	5.33	1987	530	35.1	1.51	2006	494	56.6	0.87
1918	183	1937	630	1956	637	1969	988	20.8	4.75	1988	615	36.4	1.69	2007	510	57.4	0.89
1919	171	1938	609	1957	684	1970	987	22.4	4.41	1989	605	37.6	1.61	2008	455	57.3	0.79
1920	178	1939	576	1958	708	1971	1,024	23.4	4.38	1990	568	38.8	1.47	2009	421	56.9	0.74
1921	216	1940	577	1959	662	1972	1,031	24.9	4.14	1991	531	39.3	1.35	2010	411	56.8	0.72
1922	260	1941	626	1960	724	1973	1,024	25.2	4.06	1992	581	41.3	1.41	2011	368	56.7	0.65
1923	328	1942	439			1974	852	24.6	3.46	1993	538	42.3	1.27	2012	395	57.0	0.69
1924	366	1943	274			1975	777	25.6	3.04	1994	644	43.4	1.48	2013	387	57.0	0.68
1925	361	1944	356			1976	809	27.0	3.00	1995	597	44.1	1.35	2014	361	57.0	0.63
1926	326	1945	449			1977	856	28.1	3.05	1996	576	45.9	1.26	2015	411	59.1	0.70
1927	369	1946	536			1978	980	28.8	3.40	1997	600	46.9	1.28				
1928	435	1947	572			1979	881	29.0	3.04	1998	650	48.5	1.34				

NOTE: VMT data provided by the Minnesota Department of Transportation

FIGURE 2

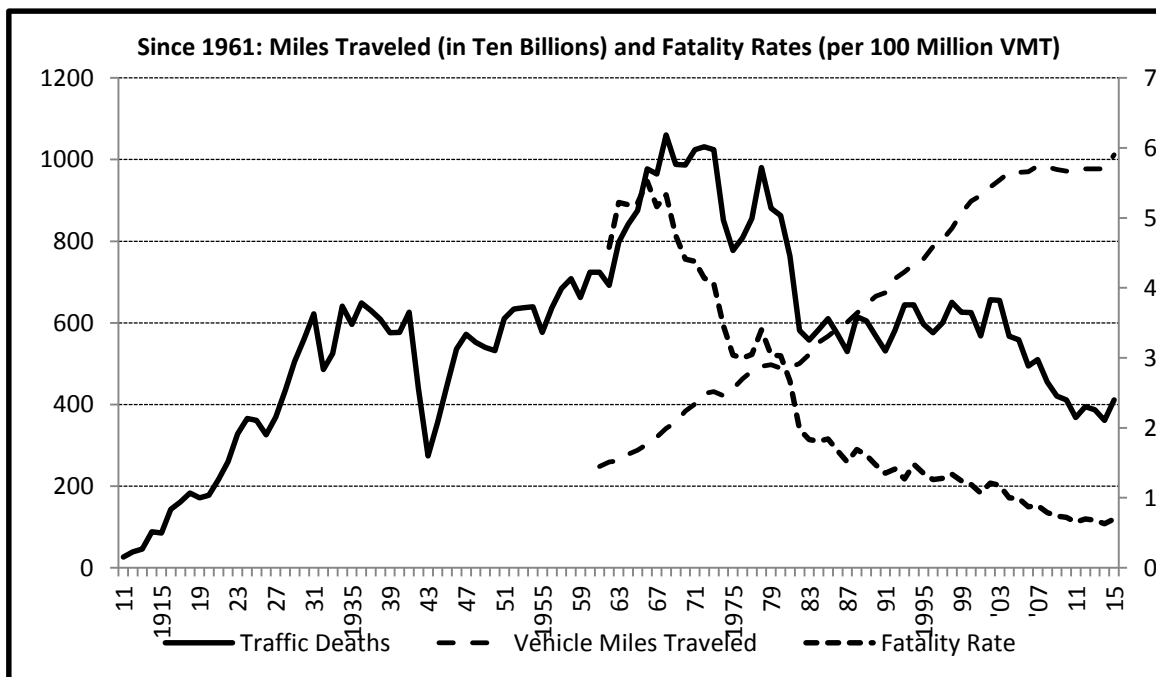
MINNESOTA TRAFFIC FATALITIES, 1910 - 2015

TABLE 2

DRIVER LICENSE* SUMMARY BY AGE, 2010 - 2015

Age	2010	2011	2012	2013	2014	2015
15	28,020	25,422	25,946	25,324	26,393	30,120
16	49,634	48,260	47,801	48,013	48,263	49,306
17	55,885	54,781	54,489	53,744	54,190	54,818
18	61,526	59,722	59,220	58,706	58,202	58,766
19	66,272	63,997	63,212	62,642	62,349	61,692
20	69,495	67,176	65,539	64,972	64,503	63,314
Under 21	330,832	319,358	316,207	313,401	313,900	318,016
15 – 19	261,337	252,182	250,668	248,429	249,397	254,702
20 – 24	348,937	343,942	341,891	340,074	338,753	329,936
25 – 29	366,813	358,738	356,653	358,005	362,329	355,329
30 – 34	342,756	351,489	359,718	365,101	370,093	367,609
35 – 39	311,858	306,985	312,377	320,919	331,734	339,167
40 – 44	340,906	336,514	330,720	331,868	315,800	305,492
45 – 49	380,685	365,193	351,004	340,791	335,127	333,063
50 – 54	389,685	392,410	392,344	390,177	383,567	370,824
55 – 59	343,840	350,359	358,458	365,577	373,526	377,221
60 – 64	282,820	293,833	301,734	311,683	321,611	328,227
65 – 69	198,777	213,587	226,107	237,444	252,369	264,586
70 – 74	149,002	155,347	164,699	172,320	178,905	181,902
75 – 79	114,320	116,871	119,643	123,927	127,476	131,549
80 – 84	88,821	90,620	90,268	90,333	91,175	91,681
85 & Older	74,678	79,683	82,434	82,608	84,666	86,814
Total	3,995,235	4,007,753	4,038,718	4,069,256	4,116,528	4,118,102

* This information is provided by the Department of Public Safety, Driver and Vehicle Services Division (DVS). Counts of licensed drivers include drivers who only hold learner's permits.

TABLE 3

MOTOR VEHICLE REGISTRATIONS, 2010 - 2015

Type of Vehicle*	2010	2011	2012	2013	2014	2015
Passenger Vehicles	3,527,503	3,579,033	3,621,291	3,630,245	3,595,037	3,589,800
Pickup Trucks	828,305	832,463	829,965	882,136	966,978	1,062,344
Commercial Trucks	214,680	216,532	220,623	225,201	229,580	235,475
Recreational Vehicles	34,797	33,070	32,511	31,349	30,763	30,993
Motorcycles	229,912	232,274	237,278	235,909	236,040	238,243
Motorized Bicycles	15,682	16,016	16,378	16,035	15,956	15,932
School Buses	6,940	6,951	7,120	7,220	7,463	7,709
Other Buses	5,067	5,161	5,105	5,188	5,281	5,341
Van Pool	174	226	210	159	159	162
Tax Exempt Vehicles	52,061	53,420	53,175	54,682	54,508	56,268
Motor Vehicle Subtotal	4,915,121	4,975,146	5,023,656	5,088,124	5,141,765	5,242,267
Other Registrations*						
Trailers	1,665,491	1,715,404	1,773,595	1,830,458	1,888,825	1,956,022
Classic Motor Vehicles	179,771	186,586	192,649	198,716	182,581	212,218
Classic Motorcycles	9,487	10,489	11,070	11,993	12,807	13,500
Other Subtotal	1,854,749	1,912,479	1,977,314	2,041,167	2,084,213	2,181,740
Total Registrations	6,769,870	6,887,625	7,000,970	7,129,291	7,225,978	7,424,007

* Information provided by Department of Public Safety, Driver and Vehicle Services Division.

Minnesota license plates on a vehicle signify that it has been registered with the state and that the owner has paid the registration fee. The vehicle classification used for registration purposes is similar, but not identical, to the vehicle classification (shown in Tables 1.11 and 1.12) police use in reporting accidents. Following are some notes on the registration categories shown above:

- Passenger Vehicles include cars, SUV's and Vans (except for a "Van Pool," which is a Van used exclusively for car pooling purposes).
- Pickup Trucks are rated three-fourths ton or less.
- Motorcycles have engines exceeding 50 cc; otherwise the vehicle is classified as a Motorized Bicycle (Moped).
- Tax exempt Vehicles are vehicles owned by city, county, or state offices. They have license plates but no registration fees are paid on them. (Police and fire department vehicles are tax exempt but are not included since they do not have state license plates and are not registered.)
- Trailers (such as utility trailers pulled by cars, or semi or twin trailers pulled by trucks) are pulled by motorized vehicles and do not themselves have motors.
- Classic Motor Vehicles and Classic Motorcycles must be at least 20 years old and cannot be used for normal transportation purposes. They can only be driven, for example, to car shows.

I. ALL CRASHES

Overview of Traffic Crashes in Minnesota

If a traffic crash in Minnesota meets certain criteria, the law states that data concerning that crash must be reported to the Department of Public Safety. In the recent past, over 70,000 traffic crashes each year have been reported. Reducing the number of traffic crashes remains a challenge each year for public safety officials. By the end of calendar year 2015:

- The population of Minnesota increased to 5.45 million
- Over 5 million motor vehicles were registered
- There were 4 million licensed drivers
- Over 59 billion miles were driven in Minnesota

As these numbers steadily increase, the citizens of Minnesota face an extreme challenge in reducing the number and severity of traffic crashes.

Crashes decrease, fatalities increase in 2015

There were 74,772 traffic crashes reported to Public Safety in 2015, a decrease of 4.6% from 2014. There were 411 deaths on Minnesota roads, a 13.9% increase from the previous year. However, our roads are relatively safe. Traffic deaths in Minnesota have decreased dramatically overall in the past decade. There are many factors for the continued improvement in traffic safety, but much can be credited to strengthened traffic safety laws, enhanced enforcement, education and outreach, engineering and emergency trauma care. These elements are all part of the state's *Toward Zero Deaths (TZD)* initiative — a multidisciplinary program addressing traffic issues at the local level.

Traffic Crashes in 2015

The following facts give an overall picture of 2015 traffic crashes. In addition to the 411 killed:

- 29,981 people were injured
- 1,127 of these were severe injuries
- 7,251 of these were moderate injuries
- 21,603 of these were minor injuries
- 181,663 people were involved in crashes
- 138,057 motor vehicles were involved in crashes
- 898 crashes involved at least 1 bicyclist
- 911 crashes involved at least 1 pedestrian
- One-third of all crashes involved just one vehicle
- One in five fatalities were less than 25 years of age
- 3 of 4 fatalities occurred in rural areas (< 5,000 population)
- 7,425 crashes were classified as “hit-and-run”
- The economic loss to Minnesota was over \$1.7 billion

WHO was involved

Among drivers, young people and males are over-represented in traffic crashes in Minnesota. There are 4,118,102 licensed drivers in the state. People aged 15- 24 make up 14.2% of the licensed drivers, yet they accounted for 23.4% of the crash-involved drivers. Drivers aged 20-24 are the worst, from this perspective. In 2015, they represented just 8.0% of the licensed drivers, but 13.4% of all crash-involved drivers. By contrast drivers over 65 made up 18.3% of the driving population, but accounted for just 9.0% of the crash-involved drivers. Crash-involved drivers are also more likely to be males: 73.8% of drivers in fatal crashes were male; 54.4% of drivers in all crashes were male. However, although fatal crash-involved drivers are largely male, the number of female drivers involved in fatal crashes increased at a higher rate than males in 2015. One hundred forty-seven female drivers were involved in fatal crashes last year, which represents a 15% increase from the previous year. This compares with an 11% increase in male driver involvement (437 males were involved in fatal crashes).

Traffic crashes are a leading cause of death in young people. In the state last year, 113 people under age 30 died in crashes, representing 27% of all traffic deaths. As noted, the National Safety Council reports that crashes (from all causes) are the leading cause of death among persons aged 1 to 34.

Among people injured, young people especially pay the price. There were 11,989 people under age 30 who were injured, representing 40% of the total number of people injured.

WHY they happened

An officer at the scene will list zero, one or two contributing factors for each ‘vehicle’ involved in a crash. The ‘cause’ of a crash is sometimes not entirely clear as vehicular factors in a crash may be listed alongside human factors. However, vehicular factors are not cited as often as human factors.

About one-third of all crashes involve only one vehicle and about two-thirds involve two or more vehicles. Single-vehicle and multiple-vehicle crashes have different characteristics. In single-vehicle crashes, illegal or unsafe speed is the contributing factor cited most often for all drivers. For drivers 15-19 years old, driver inexperience and overcorrecting were also among the most frequently cited factors. In multiple-vehicle crashes, for drivers through age 64, driver inattention or distraction is cited most often and failure to yield right of way is cited second most often. After age 65, the pattern reverses: failing to yield is most common and inattention or distraction is second most common.

“Hit-and-run” crashes accounted for 7,425 (10%) of all crashes. Fatal hit and run crashes are few. Only 12 occurred in 2015; however, 10 (83%) of those involved pedestrians.

WHAT the conditions were

Victims of traffic crashes are mostly car, pickup, sport utility vehicle (SUV) or van occupants. Of the 411 traffic fatalities, 281 (65%) were from these 4 vehicle types. There were also 41 pedestrians, 61 motorcyclists and 10 bicyclists who died in traffic crashes. There were 10 deaths to ATV riders, 4 deaths involving commercial motor vehicles and 2 deaths among farm equipment.

A collision with another vehicle is the leading crash type. About 48% of the fatal crashes and 67% of all crashes involve one vehicle colliding with another vehicle. In fatal and injury crashes, collisions with fixed objects and overturns are also common. For property damage crashes, the other leading crash types are collision with fixed object and collision with a parked motor vehicle.

Most crashes occur in good driving conditions. Over half of fatal crashes and over two-thirds of nonfatal crashes occurred during daylight hours. A majority of crashes occur in good weather conditions. Nearly two-thirds of all crashes occur during “clear” weather. Road surface conditions where crashes occurred were usually good. For fatal crashes, 81% were on dry roads, 10% were on wet roads and 7% were on snowy or icy roads.

WHERE they happened

Fatal crashes tend to occur on roads in rural areas that permit high speeds and do not have interstate-type safety designs. Last year, 262 (70%) fatal crashes occurred in rural areas, which are defined as having a population of less than 5,000 people. Additionally, 125 (33%) of all fatal crashes occurred on county state aid highways and 93 of those were in rural areas. Injury and property damage crashes are more common in urban areas. Over three-fourths happened inside cities of 5,000 or more population. The seven county metro area, with over half the state's population, accounted for only 25% of the fatal crashes, but 63% of all crashes.

WHEN they occurred

A fatal traffic crash is most likely to occur during the morning and afternoon rush-hour time periods (6:00-9:00 a.m. and 3:00-6:00 p.m.). This has changed since the early 1990s when most fatal crashes occurred at night during the time period of 10:00 p.m.-2:00 a.m. This phenomenon may be explained by the smarter deployment of law enforcement, increased seat belt usage and the public's awareness of the dangers of drinking and driving. As for total crashes, the six hour time period of 12:00-6:00 p.m. had the most. In that time frame, 45% of all crashes occurred. This has not changed over the years. Indeed, Figure 1.03 shows that the afternoon time period is truly a dangerous time to be driving.

Fridays, Saturdays and Sundays accounted for 168 of the 375 fatal crashes (45%). Total crashes are more evenly distributed across days of the week, although Tuesdays had the most (16%) and Sundays had the least (10%).

As a general rule, harsh winter weather results in more traffic crashes. In other words, there are more ‘fender-benders’ during icy and snowy conditions. January of 2015 followed this axiom. Because of severe weather, January had the most crashes reported of any month (7,625). As a general rule, warmer weather produces more fatalities. June had the most with 46 fatalities. As mentioned earlier, though, factors other than the weather are also involved. These include speeding, drinking and driving, not wearing a seat belt and not paying attention while driving.

Can traffic crashes be prevented?

On average over the past decade, about 420 people have been killed and 30,000 injured every year on our roadways. Minnesota is still experiencing a number of traffic crashes that is cause for concern. In a public health sense, epidemics that kill and injure fewer people are usually attacked vigorously until they are no longer a threat to public safety.

The Department of Public Safety (DPS) uses the term “crash” instead of “accident.” This is because a traffic crash can be prevented. Coupled with enforcement, education, engineering and emergency trauma solutions, changes in the behavior of all drivers will surely help attack the public threat of tragic roadway fatalities and injuries.

DPS implores the reader to spread the word: Driving is a privilege; aggressive driving is not. Buckle up. Drive at safe speeds. Pay attention. Never drive impaired.

TABLE 1.01

TRAFFIC SAFETY STATISTICS SUMMARY, 1965 - 2015

									Crash			Fatality	
				Licensed	Motor	State	Vehicle	Crash	Crash	Crash	Fatality	Fatality	
				Drivers	Vehicles	Popu-	Miles	Rates	Rates	Rates	Rates	Rates	
				(million)	(MV)	lation	Traveled	Per	Per 100	Per 100	Per	Per 100,000	
Year	Total	Persons	Persons		(million)	(million)	(VMT)	100,000	Popu-	Mil	100,000	Popu-	
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	MV	lation	VTMT	MV	lation	
								(i)	(j)	(k)	(l)	(m)	
												(n)	
1965	83,329	875	50,847	1.85	1.86	3.57	16.8	4,480	2,334	496	47.0	24.5	5.20
1970	99,404	987	38,538	2.05	2.24	3.80	22.4	4,438	2,616	444	44.1	26.0	4.40
1975	123,206	777	41,931	2.51	2.69	3.92	25.6	4,580	3,143	481	28.9	19.8	3.00
1980	103,612	863	45,227	2.77	3.01	4.08	28.5	3,446	2,546	364	28.7	21.2	3.03
1981	97,879	763	43,739	2.83	3.09	4.10	28.6	3,163	2,387	342	24.7	18.6	2.67
1982	89,443	581	38,692	2.87	3.01	4.13	29.2	2,972	2,181	304	19.3	14.2	1.98
1983	97,371	558	41,086	2.90	3.03	4.15	30.5	3,214	2,356	319	18.4	13.5	1.83
1984	93,741	584	41,808	2.91	3.13	4.16	32.2	2,995	2,262	291	18.7	14.1	1.81
1985	99,168	610	44,316	3.04	3.22	4.19	33.1	3,080	2,380	300	18.9	14.7	1.84
1986	95,460	572	42,130	3.07	3.25	4.21	34.2	2,937	2,266	279	17.6	13.6	1.67
1987	94,095	530	42,091	3.10	3.31	4.25	35.1	2,840	2,233	268	16.0	12.6	1.51
1988	102,094	615	44,415	3.13	3.39	4.31	36.4	3,012	2,371	280	18.1	14.3	1.69
1989	105,996	605	45,404	3.16	3.46	4.35	37.6	3,060	2,435	282	17.5	13.9	1.61
1990	99,236	568	44,634	3.18	3.52	4.38	38.8	2,817	2,268	256	16.1	13.0	1.47
1991	101,419	531	42,748	3.22	3.51	4.43	39.3	2,890	2,288	258	15.1	12.0	1.35
1992	96,808	581	43,249	3.27	3.55	4.48	41.3	2,730	2,161	235	16.4	13.0	1.41
1993	100,907	538	44,987	3.28	3.48	4.52	42.3	2,899	2,234	239	15.5	11.9	1.27
1994	99,701	644	46,403	3.34	3.67	4.57	43.4	2,720	2,183	230	17.6	14.1	1.48
1995	96,022	597	47,161	3.39	3.68	4.61	44.1	2,606	2,083	218	16.2	13.0	1.35
1996	105,332	576	48,963	3.46	3.70	4.66	45.9	2,845	2,261	230	15.6	12.4	1.26
1997	98,625	600	46,064	3.49	3.77	4.69	46.9	2,065	2,105	210	12.6	12.8	1.28
1998	92,926	650	45,115	3.53	3.90	4.74	48.5	2,380	1,962	192	16.6	13.7	1.34
1999	96,813	626	44,538	3.54	3.92	4.78	50.7	2,470	2,027	191	16.0	13.1	1.24
2000	103,591	625	44,740	3.65	4.20	4.92	52.4	2,469	2,106	198	14.9	12.7	1.19
2001	98,984	568	42,223	3.69	4.38	4.97	53.2	2,262	1,991	186	13.0	11.4	1.07
2002	94,969	657	40,677	3.76	4.49	5.02	54.4	2,115	1,892	175	14.6	13.1	1.21
2003	N/A	655	N/A	3.79	4.56	5.09	55.4	N/A	N/A	N/A	14.4	12.9	1.18
2004	91,274	567	40,073	3.85	4.63	5.14	56.5	1,971	1,774	162	12.2	11.0	1.00
2005	87,813	559	37,686	3.87	4.69	5.21	56.5	1,873	1,687	155	11.9	10.7	0.99
2006	78,745	494	35,025	3.87	4.76	5.23	56.6	1,654	1,505	139	10.4	9.4	0.87
2007	81,505	510	35,318	3.91	4.82	5.26	57.4	1,691	1,548	142	10.6	9.7	0.89
2008	79,095	455	33,379	3.94	4.86	5.29	57.3	1,628	1,494	138	9.4	8.6	0.79
2009	73,498	421	31,074	3.95	4.87	5.30	57.0	1,510	1,387	129	8.7	7.9	0.74
2010	74,073	411	31,176	4.00	4.92	5.30	56.8	1,507	1,397	130	8.4	7.5	0.72
2011	72,117	368	30,295	4.01	4.98	5.33	56.7	1,450	1,352	127	7.4	6.9	0.65
2012	69,236	395	29,314	4.04	5.02	5.37	57.0	1,378	1,290	122	7.9	7.4	0.69
2013	77,707	387	30,653	4.07	5.09	5.40	57.0	1,527	1,439	136	7.6	7.2	0.68
2014	78,396	361	29,439	4.12	5.14	5.42	57.0	1,525	1,446	138	7.0	6.7	0.63
2015	74,772	411	29,981	4.12	5.24	5.45	59.1	1,426	1,371	126	7.8	7.5	0.70

Note:

- (1) By State statute, information on traffic crashes must be reported to the Department of Public Safety if the crashes involve motor vehicles in transport on Minnesota roadways and have at least \$1,000 in property damage, or a motor vehicle occupant, pedestrian, or bicyclist is injured or killed.
- (2) The numbers shown for licensed drivers includes those who have only permits.
- (3) Vehicle miles traveled are provided by Minnesota Department of Transportation and estimated using a 3% growth rate calculated from continuous count location data.
- (4) Numbers of licensed drivers and registered motor vehicles are provided by the Driver and Vehicle Services Division, Minnesota Department of Public Safety.

TABLE 1.02

**TRAFFIC CRASH TRENDS
2010 - 2015**

	2010	2011	2012	2013	2014	2015	Record High	
Fatal Crashes	364	334	349	357	324	375	878	(1973)
Injury Crashes	22,013	21,662	20,972	21,960	21,257	21,516	33,686	(1978)
Severe	974	954	1,044	981	862	932	5,109	(1984) ¹
Moderate	5,792	5,581	5,423	5,563	5,302	5,721	12,326	(1985) ¹
Minor	15,247	15,127	14,505	15,416	15,093	14,863	18,578	(1996) ¹
PDO Crashes	51,696	50,121	47,915	55,390	56,815	52,881	94,810	(1975)
Total Crashes	74,073	72,117	69,236	77,707	78,396	74,772	123,106	(1975)
Total Injuries	31,176	30,295	29,314	30,653	29,439	29,981	50,332	(1978)
Severe	1,191	1,159	1,268	1,216	1,044	1,127	6,573	(1984) ¹
Moderate	7,445	7,110	6,902	7,109	6,712	7,251	17,670	(1985) ¹
Minor	22,540	22,026	21,144	22,328	21,683	21,603	28,631	(1996) ¹
Total Fatalities	411	368	395	387	361	411	1,060	(1968)
Motor Vehicle Occupant	305	271	276	269	278	285	544	(2002) ¹
Motorcycle	45	42	55	60	46	61	121	(1980)
Pedestrian	36	40	40	35	17	41	157	(1971)
Bicycle	9	5	7	6	5	10	24	(1977)
All Terrain Vehicle	8	8	9	7	7	10	10	(2008)
Commercial Bus	3	0	1	2	4	1	9	(1984)
Farm Equipment	2	2	2	5	1	2	N/A	N/A
Other Vehicle Type	3	0	5	3	3	1	N/A	N/A
Minnesota Fatality Rate²	0.72	0.65	0.69	0.68	0.63	0.70	23.6	(1934)
U.S. Fatality Rate²	1.11	1.10	1.14	1.11	1.10	1.07	18.0	(1925)
Minnesota Economic Loss (millions)	\$1,477	\$1,481	\$1,514	\$1,588	\$1,604	\$1,773	\$1,773	(2015) ³

¹ The available records on which these categories "record highs" are based only go back to 1984.

² Rate is based on 100 million vehicle miles of travel.

³ Economic cost estimates are based upon wage and productivity losses, medical expenses, administrative expenses, motor vehicle damage and employers' uninsured costs, among other factors.

TABLE 1.03

2015 FATALITIES BY TRAFFIC ROLE, GENDER AND AGE

Type of Vehicle	Position in Vehicle	Gender	Age 70 and Older								Total
			Age 0-9	Age 10-19	Age 20-29	Age 30-39	Age 40-49	Age 50-59	Age 60-69		
Car	Driver	Male	0	5	24	15	5	11	11	14	85
		Female	0	6	6	3	7	9	7	11	49
	Passenger	Male	1	5	1	0	2	1	1	1	12
		Female	0	2	5	1	0	1	1	5	15
Pickup	Driver	Male	0	4	9	8	5	11	7	8	52
		Female	0	0	0	1	0	1	0	0	2
	Passenger	Male	0	3	1	2	0	2	0	0	8
		Female	1	1	1	0	0	1	1	0	5
SUV	Driver	Male	0	0	3	2	3	2	2	7	19
		Female	0	1	3	1	2	0	1	0	8
	Passenger	Male	0	1	0	0	0	0	1	2	4
		Female	0	2	0	0	1	0	0	5	8
Van	Driver	Male	0	0	1	0	1	3	0	2	7
		Female	0	0	1	0	1	0	0	0	2
	Passenger	Male	0	0	0	0	1	0	0	1	2
		Female	0	1	0	0	0	0	0	2	3
Truck	Driver	Male	0	0	0	1	1	0	0	2	4
		Female	0	0	0	0	0	0	0	0	0
	Passenger	Male	0	0	0	0	0	0	0	0	0
		Female	0	0	0	0	0	0	0	0	0
Motorcycle	Driver	Male	0	0	9	8	8	16	9	2	52
		Female	0	0	0	0	0	0	0	0	0
	Passenger	Male	0	0	0	0	1	0	0	0	1
		Female	0	0	0	2	3	2	1	0	8
Other Motor Vehicle	Driver	Male	0	0	1	2	0	2	2	2	9
		Female	0	0	0	0	0	0	0	0	0
	Passenger	Male	0	1	1	0	0	1	1	0	4
		Female	0	1	0	0	0	0	0	0	1
Bicyclist		Male	0	0	2	0	2	2	1	1	8
		Female	0	0	0	0	1	1	0	0	2
Pedestrian		Male	2	1	4	4	4	5	2	6	28
		Female	1	0	2	2	1	1	5	1	13
Total Fatalities		Male	3	20	56	42	33	56	37	48	295
		Female	2	14	18	10	16	16	16	24	116
		Total	5	34	74	52	49	72	53	72	411

Note: The vehicle types for the 14 fatalities in the 'Other Motor Vehicle' category consisted of: ten ATVs, two farm equipment, one commercial bus and one other vehicle type.

TABLE 1.04

AGE AND GENDER OF PERSONS KILLED OR INJURED IN 2015 CRASHES

Age Group	Males Killed	Females Killed	Total Killed	Males Injured	Females Injured	Unknown Injured	Total Injured
00 - 03	0	1	1	186	162	4	352
04 - 10	3	2	5	435	434	9	878
11 - 14	3	4	7	287	332	8	627
Total < 15:	6	7	13	908	928	21	1,857
15	2	0	2	131	162	1	294
16	1	4	5	308	401	2	711
17	3	0	3	332	382	2	716
18	6	1	7	387	396	4	787
19	5	4	9	381	348	1	730
20	9	1	10	373	403	0	776
Total 15-20:	26	10	36	1,912	2,092	10	4,014
Total < 21:	32	17	49	2,820	3,020	31	5,871
00 - 04	0	1	1	240	206	5	451
05 - 09	3	1	4	328	324	8	660
10 - 14	3	5	8	340	398	8	746
15 - 19	17	9	26	1,539	1,689	10	3,238
20 - 24	35	10	45	1,824	1,871	7	3,702
25 - 29	21	8	29	1,567	1,619	6	3,192
30 - 34	25	4	29	1,313	1,442	5	2,760
35 - 39	17	6	23	1,025	1,208	1	2,234
40 - 44	13	10	23	973	970	3	1,946
45 - 49	20	6	26	945	1,030	1	1,976
50 - 54	32	10	42	993	1,087	0	2,080
55 - 59	24	6	30	969	951	5	1,925
60 - 64	20	6	26	723	735	4	1,462
65 - 69	17	10	27	513	592	0	1,105
70 - 74	11	6	17	326	372	0	698
75 - 79	15	6	21	210	263	1	474
80 - 84	11	4	15	160	176	1	337
85 +	11	8	19	132	135	2	269
Unknown	0	0	0	190	201	335	726
Total:	295	116	411	14,310	15,269	402	29,981

See Figure 1.01 on page 15 for a graphical depiction of how many persons were killed and injured by age and gender groups.

TABLE 1.05

AGE AND GENDER OF DRIVERS IN 2015 CRASHES

Age Group	Male Drivers in Fatal Crashes	Female Drivers in Fatal Crashes	Driver Gender Not Stated in Fatal Crashes	Total in Fatal Crashes	Male Drivers in All Crashes	Female Drivers in All Crashes	Driver Gender is Not Stated in All Crashes	Total in All Crashes
<15	0	0	0	0	35	19	0	54
15	0	1	0	1	113	108	5	226
16	3	5	0	8	1,369	1,425	0	2,794
17	5	5	0	10	1,693	1,590	0	3,283
18	8	4	0	12	1,939	1,587	4	3,530
19	8	5	0	13	1,865	1,474	7	3,346
20	14	2	0	16	1,968	1,627	10	3,605
All <21	38	22	0	60	8,982	7,830	26	16,838
00 - 04	0	0	0	0	1	1	0	2
05 - 09	0	0	0	0	3	3	0	6
10 - 14	0	0	0	0	31	15	0	46
15 - 19	24	20	0	44	6,979	6,184	16	13,179
20 - 24	48	13	0	61	9,607	7,997	62	17,666
25 - 29	42	16	0	58	8,530	6,842	69	15,441
30 - 34	46	11	1	58	7,368	5,793	48	13,209
35 - 39	28	10	0	38	6,291	4,756	35	11,082
40 - 44	27	12	0	39	5,528	4,078	22	9,628
45 - 49	29	12	0	41	5,365	3,929	22	9,316
50 - 54	45	15	0	60	5,583	3,856	27	9,466
55 - 59	47	8	0	55	5,139	3,459	15	8,613
60 - 64	24	6	0	30	4,007	2,645	16	6,668
65 - 69	25	7	0	32	2,754	1,863	13	4,630
70 - 74	14	4	0	18	1,688	1,240	7	2,935
75 - 79	18	3	0	21	1,084	844	4	1,932
80 - 84	11	4	0	15	747	565	2	1,314
85+	9	6	0	15	583	450	2	1,035
Unk	0	0	6	6	490	239	5,095	5,824
Total	437	147	7	591	71,778	54,759	5,455	131,992

Most crashes involve more than one driver, causing the total number of drivers to exceed the total number of crashes. (Pedestrians and bicyclists are not counted in this table.)

TABLE 1.06

LICENSED VERSUS CRASH-INVOLVED DRIVERS BY AGE, 2015

Age Group	Percentage of All Licensed Drivers	Percentage of Drivers in Fatal Crashes	Percentage of Drivers in Injury Crashes	Percentage of Drivers in Property Damage Crashes	Percentage of Drivers in All Crashes
14 & Younger	0.0%	0.0%	0.1%	0.0%	0.0%
15	0.7%	0.2%	0.2%	0.2%	0.2%
16	1.2%	1.4%	2.0%	2.2%	2.1%
17	1.3%	1.7%	2.3%	2.6%	2.5%
18	1.4%	2.0%	2.6%	2.7%	2.7%
19	1.5%	2.2%	2.5%	2.6%	2.5%
20	1.5%	2.7%	2.6%	2.8%	2.7%
Total < 21	7.7%	10.2%	12.4%	12.9%	12.8%
15 - 19	6.2%	7.4%	9.7%	10.1%	10.0%
20 - 24	8.0%	10.3%	13.1%	13.5%	13.4%
25 - 29	8.6%	9.8%	11.7%	11.7%	11.7%
30 - 34	8.9%	9.8%	10.1%	10.0%	10.0%
35 - 39	8.2%	6.4%	8.7%	8.3%	8.4%
40 - 44	7.4%	6.6%	7.5%	7.2%	7.3%
45 - 49	8.1%	6.9%	7.3%	6.9%	7.1%
50 - 54	9.0%	10.2%	7.6%	7.0%	7.2%
55 - 59	9.2%	9.3%	6.8%	6.4%	6.5%
60 - 64	8.0%	5.1%	5.4%	4.9%	5.1%
65 - 69	6.4%	5.4%	3.9%	3.4%	3.5%
70 - 74	4.4%	3.1%	2.4%	2.2%	2.2%
75 - 79	3.2%	3.6%	1.6%	1.4%	1.5%
80 - 84	2.2%	2.5%	1.1%	1.0%	1.0%
85 & Older	2.1%	2.5%	0.8%	0.8%	0.8%
Age Not Stated	0.0%	1.0%	2.4%	5.3%	4.4%
Total Percent	100%	100%	100%	100%	100%
Total Number	4,118,102				

See Figure 1.02 on page 15 for a graphical depiction of crash-involved drivers compared to licensed drivers by age group.

FIGURE 1.01
AGE AND GENDER OF PERSONS KILLED OR INJURED, 2015

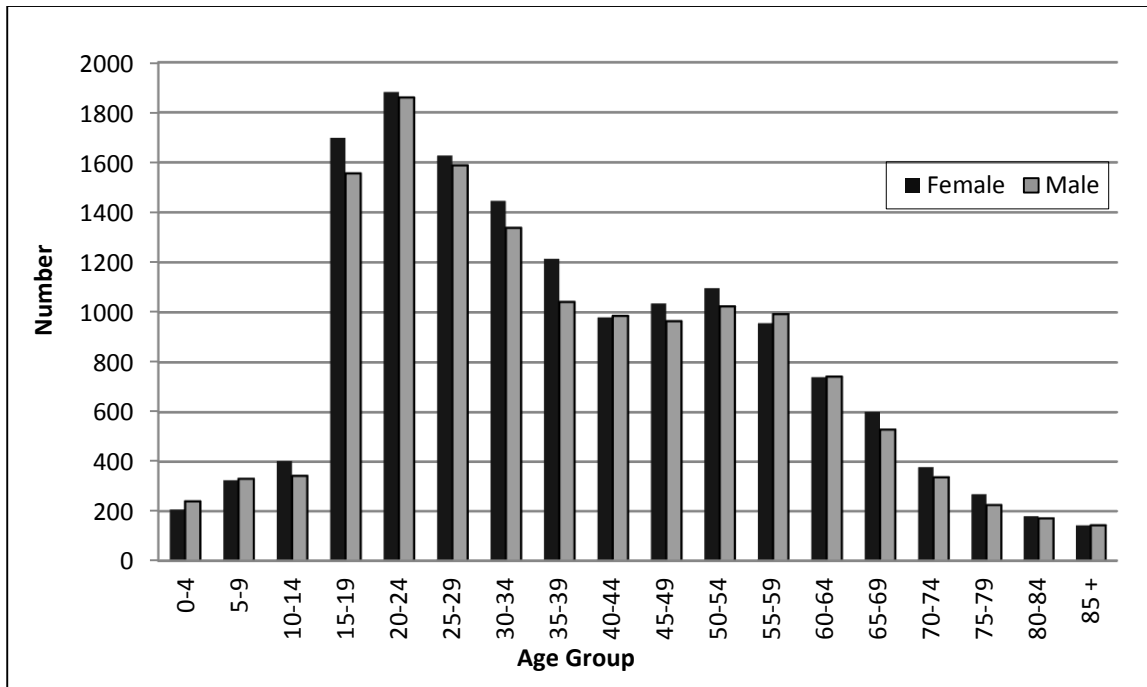


FIGURE 1.02
LICENSED VERSUS CRASH-INVOLVED DRIVERS BY AGE, 2015

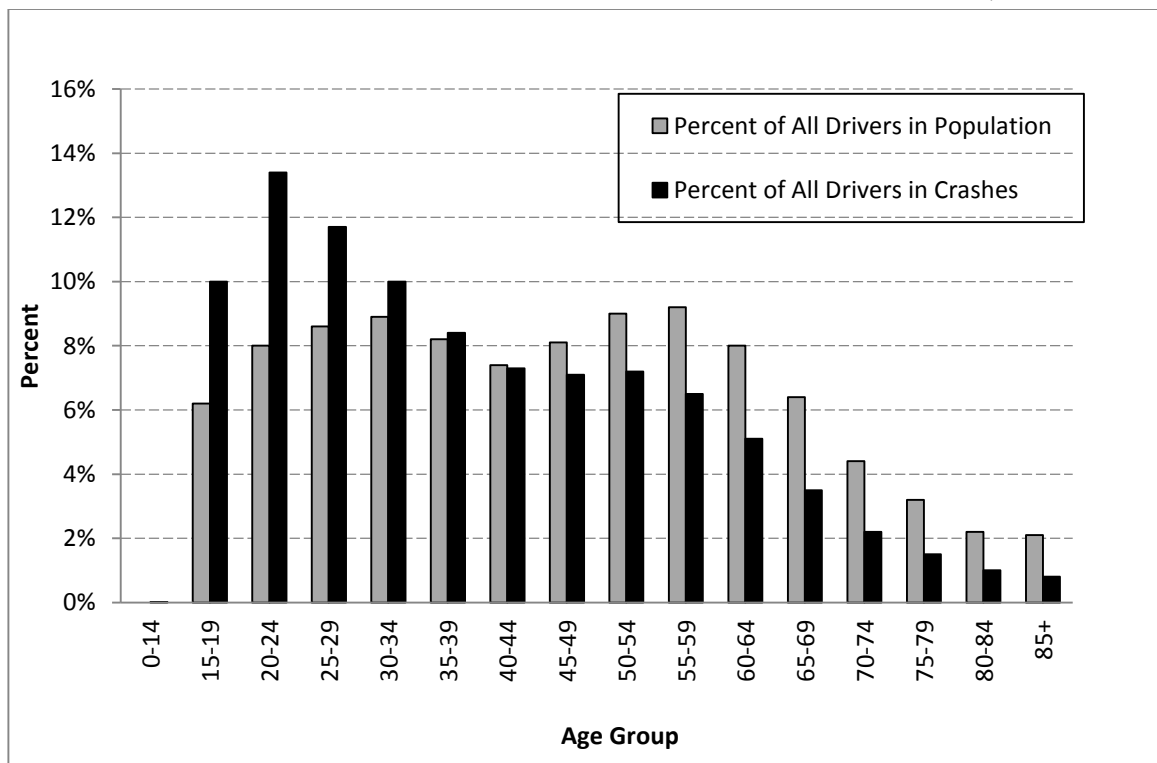


TABLE 1.07
PERCENTAGE OF DRIVERS IN 2015 CRASHES
BY AGE AND FIRST HARMFUL EVENT*

First Harmful Event	Age Group 15-19	Age Group 20-24	Age Group 25-29	Age Group 30-34	Age Group 35-64	Age Group 65-79	Age Group 80 +	All Ages
Collision With:								
Other Motor Vehicle	76.5%	78.4%	80.8%	82.5%	83.9%	83.6%	81.8%	80.5%
Parked Motor Vehicle	3.8%	3.4%	3.3%	2.9%	2.8%	3.3%	4.8%	4.3%
Bicycle	0.3%	0.5%	0.6%	0.6%	0.7%	0.8%	1.3%	0.7%
Pedestrian	0.4%	0.5%	0.7%	0.6%	0.6%	0.9%	1.4%	0.7%
Deer	0.8%	1.2%	1.2%	1.5%	2.2%	2.4%	0.9%	1.6%
Other Animal	0.1%	0.1%	0.1%	0.2%	0.2%	0.1%	0.0%	0.1%
Railroad Train	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%
Fixed Object	12.9%	11.8%	10.0%	8.8%	6.7%	6.1%	7.6%	8.7%
Other Object	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.3%
Non-Collision:								
Overturn	3.8%	2.7%	1.9%	1.6%	1.5%	1.3%	0.7%	1.9%
Other Non-Collision	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.1%	0.3%
Other or Unknown	0.8%	0.8%	0.8%	0.7%	0.8%	0.9%	0.9%	0.8%
Total Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Drivers	13,179	17,666	15,441	13,209	54,773	9,497	2,352	131,992

*Percentages are based on the number of crash-involved drivers in each age group (some driver ages are not available). Bicyclists and pedestrians are not counted as drivers in this table.

TABLE 1.08
DRIVERS IN 2015 CRASHES BY PHYSICAL CONDITION*

Physical Condition	Drivers in Fatal Crashes	Drivers in Injury Crashes	Drivers in Property Damage Crashes	Drivers in All Crashes
Normal	339	32,743	76,448	109,530
Under the Influence	36	1,107	1,505	2,648
Had Been Drinking	29	416	424	869
Commercial Driver .04+	0	0	1	1
Had Been Using Drugs	5	99	91	195
Aggressive	1	11	36	48
Fatigued/Asleep	1	198	283	482
Physical Disability	0	37	37	74
Ill	1	68	43	112
Other	8	165	143	316
Unknown	171	3,608	13,938	17,717
Total	591	38,452	92,949	131,992

* As noted by police officer on accident report. Note that in the absence of alcohol or drug test results (not usually available at the time the crash report is completed), officers are conservative in reporting impairment. Compare these figures with those from Section II. Pedestrians and bicyclists are excluded from this table.

TABLE 1.09

**SINGLE-VEHICLE CRASHES:
CONTRIBUTING FACTORS, BY PERCENT, WITHIN DRIVER AGE GROUPS, 2015**

Contributing Factor	Age Group 15-19	Age Group 20-24	Age Group 25-29	Age Group 30-34	Age Group 35-64	Age Group 65-79	Age Group 80+	All Ages
Human Factors								
Illegal/Unsafe Speed	22.1%	24.6%	24.2%	22.7%	19.8%	13.3%	7.6%	21.8%
Driver Inattention or Distraction	13.9%	14.2%	14.5%	12.4%	13.3%	18.7%	23.6%	14.0%
Chemical Impairment	3.4%	11.3%	11.8%	11.6%	9.4%	2.7%	0.0%	8.7%
Overcorrecting	11.7%	9.5%	8.0%	8.1%	7.3%	6.6%	4.9%	8.6%
Driver Inexperience	15.5%	3.7%	2.5%	1.8%	1.4%	0.5%	0.4%	4.6%
Improper/Unsafe Lane Use	1.8%	2.3%	3.4%	3.3%	3.0%	4.6%	2.7%	3.0%
Improper Turn	0.7%	1.0%	0.5%	0.9%	1.5%	2.3%	2.2%	1.2%
Disregard for Traffic Control Device	0.6%	0.7%	0.3%	0.7%	0.8%	0.9%	1.8%	0.7%
Following Too Closely	0.3%	0.7%	0.5%	0.6%	0.7%	0.6%	0.0%	0.6%
Driving Left of Center (not passing)	0.4%	0.6%	0.5%	0.5%	0.7%	0.7%	2.7%	0.6%
Vision Obscured	0.5%	0.3%	0.2%	0.8%	0.7%	1.1%	2.2%	0.5%
Unsafe Backing	0.3%	0.2%	0.2%	0.3%	0.3%	0.5%	0.9%	0.3%
Failure to Yield Right of Way	0.3%	0.2%	0.2%	0.3%	0.4%	0.5%	0.9%	0.3%
Improper Passing/Overtaking	0.4%	0.4%	0.4%	0.3%	0.2%	0.0%	0.9%	0.3%
Driver on Phone/CB/Radio	0.1%	0.3%	0.2%	0.1%	0.2%	0.0%	0.4%	0.2%
Improper Park/Stop/Start	0.2%	0.0%	0.0%	0.1%	0.3%	0.0%	0.9%	0.2%
Impeding Traffic	0.1%	0.0%	0.2%	0.0%	0.1%	0.0%	0.0%	0.1%
Failure to Use Lights	0.0%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%
Improper/No Signal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other Human Factor	4.0%	5.4%	6.1%	5.5%	7.1%	14.9%	22.2%	6.4%
Vehicular Factors								
Skidding	7.3%	6.2%	7.0%	7.4%	7.5%	7.7%	4.4%	7.1%
Defective Breaks	1.2%	1.7%	1.4%	2.1%	2.1%	1.5%	1.3%	1.7%
Other Vehicle Factor	0.8%	0.9%	1.3%	0.9%	1.5%	1.8%	1.3%	1.1%
Miscellaneous Factors								
Weather	10.3%	10.3%	11.5%	13.0%	13.2%	13.0%	8.0%	11.6%
Other	4.3%	5.5%	5.3%	6.8%	8.6%	8.3%	10.7%	6.8%
Total Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Contributing Factors Cited	3,197	3,491	2,453	1,769	5,734	854	225	18,048
Drivers for Whom There Was "No Clear Contributing Factor"	210	310	265	241	1,182	174	27	2,449
Total Number of Drivers	2,375	2,870	2,091	1,635	5,948	969	221	16,849

Percentages are based on all contributing factors cited within each age group (some driver ages are not available). Zero, one, or two contributing factors may be associated with each driver. The percentages may not sum to 100% due to rounding. Contributing factors for bicyclists and pedestrians are excluded.

For contributing factors in multiple-vehicle crashes, see Table 1.10. For contributing factors in crashes at different levels of severity, see Table 1.17.

TABLE 1.10

**MULTIPLE-VEHICLE CRASHES:
CONTRIBUTING FACTORS, BY PERCENT, WITHIN DRIVER AGE GROUPS, 2015**

Contributing Factor	Age Group 15-19	Age Group 20-24	Age Group 25-29	Age Group 30-34	Age Group 35-64	Age Group 65-79	Age Group 80 +	All Ages
Human Factors								
Driver Inattention or Distraction	25.0%	25.4%	23.6%	23.7%	21.8%	19.5%	17.1%	22.7%
Failure to Yield Right of Way	19.6%	17.5%	17.3%	16.5%	19.5%	30.1%	37.0%	19.8%
Following Too Closely	14.9%	16.6%	16.0%	15.8%	14.0%	8.6%	5.7%	14.2%
Improper/Unsafe Lane Use	3.7%	5.1%	5.4%	6.0%	6.6%	6.6%	7.0%	6.1%
Illegal/Unsafe Speed	6.2%	7.5%	7.1%	6.6%	5.3%	3.2%	1.7%	6.0%
Disregard for Traffic Control Device	4.2%	4.7%	5.3%	5.0%	5.0%	6.1%	7.0%	5.1%
Improper Turn	2.0%	2.0%	1.9%	1.7%	2.5%	3.4%	3.7%	2.3%
Chemical Impairment	0.6%	2.0%	3.1%	2.5%	2.2%	1.0%	0.1%	1.9%
Improper Passing or Overtaking	1.0%	1.2%	1.3%	1.5%	1.8%	1.9%	0.8%	1.6%
Vision Obscured	1.8%	1.3%	1.1%	1.3%	1.8%	2.4%	2.9%	1.6%
Driver Inexperience	7.0%	1.5%	0.9%	0.8%	0.4%	0.1%	0.2%	1.6%
Unsafe Backing	1.1%	0.8%	0.8%	1.4%	1.8%	1.8%	2.0%	1.5%
Improper Parking, Starting, Stopping	0.1%	1.0%	1.4%	1.1%	1.4%	1.4%	2.2%	1.3%
Driving Left of Center (Not Passing)	0.4%	0.6%	0.7%	1.0%	0.6%	0.8%	0.8%	0.7%
Overcorrecting	0.8%	0.8%	0.6%	0.6%	0.6%	0.5%	0.4%	0.6%
Impeding Traffic	0.3%	0.3%	0.3%	0.4%	0.3%	0.3%	0.2%	0.3%
Improper/No Signal	0.2%	0.1%	0.1%	0.1%	0.2%	0.2%	0.4%	0.2%
Driver on Phone/CB/Radio	0.3%	0.2%	0.2%	0.1%	0.1%	0.0%	0.1%	0.2%
Failure to Use Lights	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%
Other Human Factor	1.6%	2.0%	1.8%	2.5%	2.4%	3.2%	5.0%	2.3%
Vehicular Factors								
Skidding	2.2%	1.9%	2.1%	2.3%	2.1%	1.3%	0.4%	2.0%
Defective Equipment	1.0%	1.0%	0.9%	0.7%	0.8%	0.6%	0.3%	0.8%
Other Vehicular Factor	0.4%	0.6%	0.7%	0.5%	0.7%	0.5%	0.2%	0.6%
Miscellaneous Factors								
Weather	3.3%	3.3%	3.7%	3.9%	3.8%	2.7%	1.1%	3.4%
Other	1.8%	2.8%	3.8%	3.8%	4.0%	3.9%	3.7%	3.4%
Total Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Contributing Factors Cited	9,599	10,903	8,343	6,356	24,301	4,832	1,683	68,463
Drivers for Whom There Was "No Clear Contributing Factor"	3,185	5,490	5,998	5,822	26,345	3,991	622	51,962
Total Number of Drivers	10,804	14,792	13,342	11,570	48,803	8,526	2,129	115,304

Percentages are based on all contributing factors cited within each age group (some driver ages are not available). Zero, one, or two contributing factors may be associated with each driver. The percentages may not sum to 100% due to rounding. Contributing factors for bicyclists and pedestrians are excluded.

For contributing factors in single-vehicle crashes, see Table 1.09. For contributing factors in crashes at different levels of severity, see Table 1.17.

TABLE 1.11

**PERSONS INVOLVED IN CRASHES BY TYPE OF
VEHICLE OCCUPIED AND INJURY SEVERITY, 2015**

Vehicle Type	Killed	Severely Injured	Moderately Injured	Minor Injured	Total Injured	Not Injured	Total Persons
Automobile	161	422	3,524	11,697	15,643	76,841	92,645
Pickup Truck	67	117	603	1,604	2,324	15,382	17,773
Sport Utility Vehicle	39	131	1,198	4,338	5,667	31,467	37,173
Van	14	60	446	1,743	2,249	11,980	14,243
Motor Home/Camper	0	0	2	5	7	86	93
Limousine	0	0	3	7	10	75	85
Taxi Cab	0	1	21	128	150	742	892
Police Vehicle	0	1	28	70	99	474	573
Fire Department Vehicle	0	0	2	1	3	69	72
School Bus	0	0	9	87	96	3,324	3,420
Other Bus	1	1	13	103	117	932	1,050
Ambulance	0	0	5	10	15	102	117
Military Vehicle	0	0	1	0	1	19	20
Snowmobile	0	2	0	0	2	2	4
All-Terrain Vehicle	10	9	25	12	46	25	81
Farm Tractor or Equipment	2	1	5	17	23	110	135
Motorcycle	61	203	593	388	1,184	241	1,486
Motor Scooter/Motorbike*	0	2	25	20	47	11	58
Motorized Bicycle (Moped)	0	6	21	19	46	8	54
Hit and Run Vehicle	0	3	24	89	116	3,013	3,129
Road Maintenance Vehicle	0	0	10	28	38	527	565
Other Public Owned Vehicle	0	1	3	20	24	209	233
Single Truck (2-axle, 6 tire)	1	3	16	31	50	799	850
Single Truck (3 or more axles)	1	2	18	17	37	348	386
Single Truck with Trailer	0	0	4	11	15	334	349
Truck Tractor with No Trailer	0	0	2	4	6	75	81
Truck Tractor with Semi Trailer	2	4	52	91	147	2,085	2,234
Truck Tractor with Double Trailers	0	0	0	0	0	30	30
Other or Unknown Truck Type	0	0	3	8	11	272	283
Other Vehicle Type	1	0	5	18	23	227	251
Unknown Vehicle Type	0	0	1	7	8	1,401	1,409
Bicycle	10	45	277	551	873	31	914
Pedestrian	41	113	312	479	904	30	975
Total	411	1,127	7,251	21,603	29,981	151,271	181,663

* On the accident report form, police may show that a vehicle is a "motorcycle," a "motor scooter/motorbike," or a "moped or motorized bicycle." Since 1986, however, the law recognizes just two categories. If the vehicle has an engine capacity of more than 50 cc, it is classified as a motorcycle; if it has 50 cc or smaller engine capacity, it is classified as a motorized bicycle. The term moped is short for motorized pedal cycle, which is the same as motorized bicycle. (Section 4 of this book now combines "motorcycle" and "motor scooter/motorbike").

TABLE 1.12
TYPES OF MOTOR VEHICLES IN 2015 CRASHES

Motor Vehicle Type*	Vehicles in Fatal Crashes	Vehicles in Injury Crashes	Vehicles in Property Damage Crashes	Vehicles in All Crashes
Automobile	235	20,958	52,632	73,825
Pickup Truck	114	3,855	10,390	14,359
Sport Utility Vehicle	73	7,874	19,168	27,115
Van	29	2,839	6,344	9,212
Motor Home/Camper	1	22	45	68
Limousine	0	17	38	55
Taxi Cab	0	215	440	655
Police Vehicle	0	131	407	538
Fire Department Vehicle	0	6	35	41
School Bus	1	145	554	700
Other Bus	4	136	385	525
Ambulance	0	14	41	55
Military Vehicle	0	4	12	16
Snowmobile*	0	2	2	4
All-Terrain Vehicle*	9	35	17	61
Farm Tractor or Equipment	3	48	81	132
Motorcycle	61	1,088	186	1,335
Motor Scooter/Motorbike**	0	48	7	55
Motorized Bicycle (Moped)	0	45	6	51
Hit and Run Vehicle	4	477	2,471	2,952
Road Maintenance Vehicle	2	114	417	533
Other Public Owned Vehicle	0	44	150	194
Single Truck (2-axle, 6-tire)	10	179	553	742
Single Truck (3 or more axles)	10	105	262	377
Single Truck with Trailer	4	67	234	305
Truck Tractor with No Trailer	1	15	62	78
Truck Tractor with Semi Trailer	33	518	1,600	2,151
Truck Tractor with Double Trailers	0	3	26	29
Other or Unknown Truck Type	1	61	202	264
Other Vehicle Type	2	54	174	230
Unknown Vehicle Type	1	114	1,285	1,400
Total***	598	39,233	98,226	138,057

* Snowmobiles and ATVs in crashes are not counted in this table unless the crash occurred on a public roadway.

** On the accident report form, police may show that a vehicle is a "motorcycle," a "motor scooter/motorbike," or a "moped or motorized bicycle." Since 1986, however, the law recognizes just two categories. If the vehicle has an engine capacity of more than 50 cc, it is classified as a motorcycle; if it has 50 cc or smaller engine capacity, it is classified as a motorized bicycle. The term moped is short for motorized pedal cycle, which is the same as motorized bicycle. (Section 4 of this book now combines "motorcycle" and "motor scooter/motorbike").

*** Most crashes involve more than one vehicle, causing total vehicles to exceed total crashes. Bicyclists and pedestrians are excluded from this table.

TABLE 1.13
2015 CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured	Fatality Rate Per 1,000 Crashes
Collision With:							
Another Motor Vehicle	179	14,012	36,180	50,371	206	21,038	4.1
Parked Motor Vehicle	0	556	4,515	5,071	0	727	0.0
Bicycle	10	861	22	893	10	887	11.2
Pedestrian	41	849	17	907	41	908	45.2
Deer	6	289	1,846	2,141	6	345	2.8
Other Animal	1	54	117	172	1	61	5.8
Railroad Train	2	15	31	48	3	19	62.5
Fixed Object	69	2,988	8,244	11,301	73	3,547	6.5
Non-Fixed Object	0	53	223	276	0	69	0.0
Other Collision Type	6	168	242	416	6	220	14.4
Unk Collision Type	0	7	14	21	0	11	0.0
Non-Collision:							
Overturn	55	1,379	1,036	2,470	58	1,805	23.5
Submersion	0	18	33	51	0	20	0.0
Fire/Explosion	0	2	27	29	0	2	0.0
Other Non-Collision	3	116	143	262	3	142	11.5
Unknown Crash Type:	3	149	191	343	4	180	11.7
Total	375	21,516	52,881	74,772	411	29,981	5.5

TABLE 1.14
2015 "HIT-AND-RUN" CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Collision With:						
Other Motor Vehicle	2	777	3,024	3,803	2	1,126
Parked Motor Vehicle	0	76	2,083	2,159	0	101
Bicycle	0	106	6	112	0	113
Pedestrian	10	160	3	173	10	165
Deer	0	2	2	4	0	2
Other Animal	0	0	0	0	0	0
Railroad Train	0	0	3	3	0	0
Fixed Object	0	131	898	1,029	0	158
Non-Fixed Object	0	1	26	27	0	1
Other Collision Type	0	14	30	44	0	21
Unk Collision Type	0	0	2	2	0	0
Non-Collision:						
Overturn	0	13	18	31	0	16
Submersion	0	0	1	1	0	0
Other Non-Collision	0	0	3	3	0	0
Unknown Crash Type	0	15	19	34	0	19
Total	12	1,295	6,118	7,425	12	1,722

TABLE 1.15

2015 CRASHES BY TRAFFIC CONTROL DEVICE

Traffic Control Device	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Traffic Signal	26	5,879	12,602	18,507	29	8,294
Overhead Flashers	0	13	39	52	0	15
Stop Sign-All Approaches	4	482	1,128	1,614	4	687
Other Stop Sign	63	3,160	6,200	9,423	71	4,689
Yield Sign	4	331	903	1,238	5	481
Flagman, Officer, School Patrol	1	13	40	54	1	20
School Bus Stop Arm	0	8	17	25	0	12
School Zone Sign	0	4	6	10	0	6
No Passing Zone	4	97	116	217	5	143
RR Crossing Gate	1	10	29	40	1	11
RR Flashing Lights	1	7	11	19	2	13
RR Crossing Stop Sign	0	6	8	14	0	13
RR Overhead Flashing Lights	0	1	2	3	0	2
RR Overhead Lights and Gate	0	9	19	28	0	10
RR Crossbuck	0	3	10	13	0	3
Other Device	3	239	634	876	3	319
Not Applicable	264	11,136	30,679	42,078	286	15,104
Unknown	4	118	439	561	4	159
Total	375	21,516	52,881	74,772	411	29,981

TABLE 1.16

2015 CRASHES BY WEATHER CONDITION

Weather Condition	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Clear	256	14,196	32,612	47,064	279	19,943
Cloudy	80	4,458	11,159	15,697	86	6,184
Rain	15	1,316	3,393	4,724	17	1,819
Snow	10	1,008	3,880	4,898	13	1,329
Sleet/Hail/Freezing Rain	0	197	519	716	0	260
Fog/Smog/Smoke	2	43	98	143	2	57
Blowing Sand/Dust/Snow	2	105	375	482	2	139
Severe Crosswinds	0	22	51	73	0	32
Other	1	40	94	135	1	56
Not Stated/Unknown	9	131	700	840	11	162
Total	375	21,516	52,881	74,772	411	29,981

TABLE 1.17
CONTRIBUTING FACTORS IN 2015 CRASHES

Contributing Factors	Percent of Factors Cited in Crashes by Severity of Crash			Number of Crashes in which the Factor was Cited			Number of People Affected	
	Fatal Crashes	Injury Crashes	Property Damage Crashes	Fatal Crashes	Injury Crashes	Property Damage Crashes	Killed	Injured
Human Factors								
Driver Inattention/Distraction	14.3%	20.4%	20.7%	71	5,387	11,934	74	7,666
Failure to Yield Right of Way	13.7%	17.9%	14.7%	67	4,629	8,279	76	6,963
Following Too Closely	1.0%	9.4%	12.2%	5	2,373	6,760	5	3,343
Illegal/Unsafe Speed	14.7%	9.1%	9.2%	72	2,428	5,363	78	3,495
Disregard Traffic Cntl Device	6.4%	6.1%	3.4%	32	1,602	1,946	37	2,595
Chemical Impairment	6.8%	4.6%	2.7%	33	1,212	1,547	38	1,632
Improper/Unsafe Lane Use	6.0%	3.4%	6.4%	29	918	3,642	34	1,329
Overcorrecting	4.8%	2.7%	2.0%	23	743	1,173	25	996
Driver Inexperience	2.2%	2.2%	2.2%	11	598	1,288	11	875
Improper Turn	0.8%	1.5%	2.3%	4	403	1,349	5	580
Vision Obscured	0.4%	1.4%	1.4%	2	367	759	2	462
Improper Passing/Overtaking	1.4%	0.9%	1.6%	7	230	901	7	332
Driving Left of Ctr (Not Passing)	8.4%	0.9%	0.5%	39	240	279	46	464
Improper Park/Start/Stop	0.2%	0.8%	1.3%	1	207	720	1	280
Non-Motorist Error	1.8%	0.7%	0.1%	9	176	59	9	193
Impeding Traffic	0.0%	0.3%	0.2%	0	82	141	0	122
Unsafe Backing	0.6%	0.2%	1.7%	3	52	950	3	59
Driver on Phone/CB/Radio	0.4%	0.2%	0.1%	2	61	71	2	94
Improper/No Signal	0.2%	0.1%	0.2%	1	27	91	1	39
Failure to Use Lights	0.0%	0.1%	0.1%	0	30	39	0	39
Other Human Factor	5.0%	4.1%	2.8%	22	1,042	1,573	25	1,341
Vehicular Factors								
Skidding	1.8%	2.6%	3.1%	9	686	1,791	9	905
Defective Equipment	0.4%	0.9%	0.9%	2	229	531	2	317
Other Vehicular Factor	0.4%	0.7%	0.9%	2	165	483	3	234
Miscellaneous Factors								
Weather	1.6%	4.1%	5.6%	8	947	2,955	11	1,228
Other	6.6%	4.9%	4.0%	31	1,140	2,050	33	1,520
Total Percent	100.0%	100.0%	100.0%					
Total Contributing Factors	498	27,507	59,930					
Vehicles Where There Was "No Clear Contributing Factor"	251	17,885	40,713					
Total Number of Vehicles	649	41,013	98,276					

Zero, one, or two contributing factors may be associated with a vehicle, causing the number of factors cited to vary from the number of crashes, vehicles and persons affected by the factors. Note that in the absence of alcohol or drug test results (not usually available at the time the crash report is completed); officers are conservative in reporting impairment. Compare these figures with those from Section II. Bicyclists and pedestrians are considered as vehicles in this table and factors associated with them are included. For contributing factors by age of drivers, see tables 1.09 and 1.10.

TABLE 1.18
2015 CRASHES BY LIGHT CONDITION

Light Condition	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Daylight	215	15,317	36,655	52,187	236	21,482
Dawn (Morning)	13	451	1,323	1,787	14	578
Dusk (Evening)	16	599	1,347	1,962	17	847
Dark/Street Lights On	50	3,414	9,143	12,607	54	4,693
Dark/No Street Lights	74	1,637	3,770	5,481	82	2,260
Other/Unknown	7	98	643	748	8	121
Total	375	21,516	52,881	74,772	411	29,981

TABLE 1.19
2015 CRASHES BY ROAD SURFACE CONDITION

Road Surface Condition	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Dry	302	16,106	36,574	52,982	332	22,663
Wet	37	2,719	6,995	9,751	40	3,792
Snow/Slush	9	1,011	3,935	4,955	12	1,324
Ice or Packed Snow	18	1,426	4,617	6,061	18	1,883
Other	4	174	329	507	4	226
Not Stated/Unknown	5	80	431	516	5	93
Total	375	21,516	52,881	74,772	411	29,981

TABLE 1.20
2015 CRASHES BY ROAD DESIGN

Road Design	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Freeway (Including Ramps)	31	3,574	11,110	14,715	34	4,826
Other Divided Highway	44	3,112	6,371	9,527	51	4,583
One-Way Street	1	524	1,260	1,785	1	751
4-6 Lanes Undivided	25	4,258	9,934	14,217	26	5,953
3 Lanes Undivided	6	266	584	856	6	398
2 Lane – 1 Each Way	255	8,030	17,535	25,820	280	11,221
Alley	2	57	203	262	2	64
Other Road Design	8	875	1,943	2,826	8	1,162
Not Stated/Unknown	3	820	3,941	4,764	3	1,023
Total	375	21,516	52,881	74,772	411	29,981

TABLE 1.21

2015 CRASHES BY DIAGRAM

Diagram	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Rear End	23	6,652	17,296	23,971	23	9,444
Sideswipe Passing	1	997	7,926	8,923	1	1,246
Left Turn – Oncoming Traffic	8	1,199	2,526	3,733	8	1,754
Ran Off Road – Left	48	1,560	3,405	5,013	51	1,922
Right Angle	78	4,472	7,521	12,071	93	6,802
Right Turn – Cross Street Traffic	2	261	698	961	2	317
Ran Off Road – Right	61	2,046	3,839	5,946	63	2,499
Head On	82	1,300	2,439	3,821	94	1,976
Sideswipe Opposing	8	423	1,110	1,541	8	620
Other Diagram	45	2,030	4,186	6,261	48	2,678
Not Applicable	7	443	1,102	1,552	7	548
Unknown / Incomplete	12	133	834	979	13	175
Total	375	21,516	52,881	74,772	411	29,981

Note: It is known that there is significant error in the “diagram” field on the Police Accident Report. Two specific types of error are most common: First, the field is often left blank. Second, a large proportion (estimated by some traffic engineers to be as high as one-half) of crashes coded as “right-angle” are not right angle crashes, but are some other type of crash—most frequently “left turn into oncoming traffic.”

TABLE 1.22

2015 CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
250,000 & Over	22	4,636	13,609	18,267	23	6,384
100,000-249,999	4	460	1,130	1,594	4	664
50,000 - 99,999	25	4,069	10,272	14,366	25	5,470
25,000 - 49,999	12	2,452	6,251	8,715	13	3,334
10,000 - 24,999	31	3,195	7,860	11,086	35	4,456
5,000 - 9,999	19	1,186	2,897	4,102	20	1,671
2,500 - 4,999	15	626	1,591	2,232	16	890
1,000 - 2,499	4	339	859	1,202	4	468
Under 1,000	243	4,553	8,412	13,208	271	6,644
Total	375	21,516	52,881	74,772	411	29,981

TABLE 1.23

2015 CRASHES BY TYPE OF ROADWAY

Type of Roadway	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Urban						
Interstate	13	2,307	7,066	9,386	13	3,080
US Trunk Hwy	16	1,153	3,333	4,502	17	1,612
MN Trunk Hwy	22	2,128	5,376	7,526	25	3,067
County State Aid Hwy	32	4,187	9,329	13,548	34	5,861
County Road	2	93	205	300	2	137
Township Road	0	0	1	1	0	0
Municipal State Aid Hwy	15	3,859	9,413	13,287	16	5,220
Municipal Street	13	2,229	6,980	9,222	13	2,951
Other Road	0	42	316	358	0	51
Urban Total	113	15,998	42,019	58,130	120	21,979
Rural						
Interstate	12	468	1,625	2,105	14	657
US Trunk Hwy	39	1,005	1,962	3,006	43	1,479
MN Trunk Hwy	81	1,249	2,383	3,713	96	1,910
County State Aid Hwy	93	1,662	2,763	4,518	99	2,347
County Road	14	293	381	688	15	437
Township Road	18	550	749	1,317	19	783
Municipal State Aid Hwy	0	2	4	6	0	2
Municipal Street	1	268	898	1,167	1	357
Other Road	4	21	97	122	4	30
Rural Total	262	5,518	10,862	16,642	291	8,002
All Roadways						
Interstate	25	2,775	8,691	11,491	27	3,737
US Trunk Hwy	55	2,158	5,295	7,508	60	3,091
MN Trunk Hwy	103	3,377	7,759	11,239	121	4,977
County State Aid Hwy	125	5,849	12,092	18,066	133	8,208
County Road	16	386	586	988	17	574
Township Road	18	550	750	1,318	19	783
Municipal State Aid Hwy	15	3,861	9,417	13,293	16	5,222
Municipal Street	14	2,497	7,878	10,389	14	3,308
Other Road	4	63	413	480	4	81
Total	375	21,516	52,881	74,772	411	29,981

("Urban" refers to an area having a population of 5,000 or more; "rural" refers to an area of less than 5,000.)

TABLE 1.24

2015 COUNTY CRASH REPORT

County	2015								
	2015 Fatal Crashes	2015 Injury Crashes	Property Damage Crashes	2015 Total Crashes	2014 Total Crashes	2015 Number Killed	2014 Number Killed	2015 Number Injured	2014 Number Injured
Aitkin	3	44	127	174	170	6	4	80	86
Anoka	10	1,114	2,005	3,129	3,413	11	16	1,556	1,666
Becker	1	113	189	303	289	1	3	167	154
Beltrami	6	121	249	376	370	6	6	172	159
Benton	6	156	387	549	615	7	1	224	223
Big Stone	1	16	15	32	41	1	0	22	29
Blue Earth	10	303	861	1,174	1,169	12	3	415	394
Brown	2	71	158	231	260	2	7	107	96
Carlton	7	108	236	351	319	9	1	163	130
Carver	4	292	766	1,062	1,038	5	10	413	364
Cass	4	106	165	275	222	4	6	164	152
Chippewa	3	29	70	102	113	4	5	63	55
Chisago	4	188	388	580	627	4	8	256	284
Clay	2	214	437	653	707	3	4	291	282
Clearwater	2	10	29	41	41	2	1	21	11
Cook	0	28	51	79	55	0	1	37	17
Cottonwood	5	30	53	88	97	6	1	56	44
Crow Wing	5	285	532	822	806	5	10	428	393
Dakota	10	1,516	3,777	5,303	5,499	11	10	2,085	1,946
Dodge	2	63	127	192	209	2	3	82	53
Douglas	2	167	332	501	472	2	6	236	179
Faribault	4	49	79	132	127	4	2	63	75
Fillmore	2	53	121	176	199	2	2	84	67
Freeborn	2	116	330	448	512	2	3	158	193
Goodhue	7	204	491	702	850	8	10	293	265
Grant	0	28	45	73	73	0	3	32	31
Hennepin	31	6,640	16,125	22,796	23,075	33	34	9,063	8,675
Houston	4	35	121	160	172	5	0	47	46
Hubbard	3	70	79	152	157	3	4	86	83
Isanti	12	113	227	352	352	15	8	192	150
Itasca	5	167	285	457	529	6	2	227	190
Jackson	5	31	66	102	125	6	1	45	47
Kanabec	2	44	44	90	126	2	1	68	77
Kandiyohi	7	163	419	589	665	8	12	240	248

TABLE 1.24 CONTINUED

2015 COUNTY CRASH REPORT

County	2015			2015 Total Crashes	2014 Total Crashes	2015 Number Killed	2014 Number Killed	2015 Number Injured	2014 Number Injured
	Fatal Crashes	2015 Injury Crashes	Property Damage Crashes						
Kittson	0	5	5	10	13	0	0	7	7
Koochiching	1	35	54	90	80	1	0	46	41
Lac qui Parle	2	15	14	31	44	2	1	18	27
Lake	2	35	67	104	108	3	0	55	49
Lake of the Woods	0	7	6	13	11	0	1	9	7
Le Sueur	5	113	200	318	335	6	1	157	168
Lincoln	0	9	36	45	70	0	1	14	21
Lyon	3	67	148	218	285	3	5	107	125
McLeod	4	119	252	375	479	4	2	170	224
Mahnomen	1	11	17	29	30	1	1	19	16
Marshall	1	13	19	33	28	1	1	19	20
Martin	1	57	153	211	234	1	0	76	97
Meeker	3	58	109	170	216	4	2	85	101
Mille Lacs	3	92	136	231	216	4	8	150	138
Morrison	7	101	140	248	269	9	8	145	138
Mower	2	116	260	378	470	2	1	161	172
Murray	1	19	34	54	64	1	2	20	39
Nicollet	2	101	324	427	405	2	6	151	143
Nobles	2	84	190	276	325	3	2	128	136
Norman	2	17	26	45	47	3	0	23	21
Olmsted	14	635	1,483	2,132	2,189	14	8	905	929
Otter Tail	8	200	409	617	642	9	3	274	267
Pennington	3	57	57	117	91	3	1	86	63
Pine	9	114	223	346	359	9	4	164	160
Pipestone	2	22	16	40	53	2	0	36	39
Polk	4	91	192	287	359	4	3	132	123
Pope	0	28	56	84	110	0	0	34	39
Ramsey	18	2,334	8,597	10,949	11,355	18	12	3,114	3,108
Red Lake	0	7	4	11	19	0	0	13	18
Redwood	2	41	65	108	127	2	1	65	64
Renville	2	54	78	134	157	2	4	92	77
Rice	4	212	356	572	588	5	6	285	253
Rock	0	32	70	102	151	0	5	40	57

TABLE 1.24 CONTINUED

2015 COUNTY CRASH REPORT

County	2015				2014 Total Crashes	2014 Total Crashes	2015 Number Killed	2014 Number Killed	2015 Number Injured	2014 Number Injured
	2015 Fatal Crashes	2015 Injury Crashes	Property Damage Crashes	2015 Total Crashes						
Roseau	0	23	25	48	80	0	6	43	38	
St. Louis	16	657	2,184	2,857	3,277	16	8	888	928	
Scott	7	423	883	1,313	1,255	7	5	643	584	
Sherburne	10	262	690	962	1,074	11	2	402	388	
Sibley	6	36	89	131	154	6	2	50	84	
Stearns	12	688	1,668	2,368	2,640	12	9	969	985	
Steele	4	130	363	497	561	4	6	174	173	
Stevens	1	33	64	98	78	1	0	45	32	
Swift	3	23	36	62	69	3	2	26	26	
Todd	2	88	122	212	212	2	3	124	126	
Traverse	0	9	26	35	19	0	0	10	7	
Wabasha	3	63	114	180	227	3	4	82	106	
Wadena	4	43	71	118	110	4	3	58	74	
Waseca	1	46	110	157	197	1	2	73	68	
Washington	12	744	1,874	2,630	2,777	12	8	1,034	1,153	
Watonwan	1	36	66	103	100	1	1	47	38	
Wilkin	0	29	82	111	115	0	0	32	36	
Winona	1	179	328	508	553	1	6	225	221	
Wright	8	395	860	1,263	1,389	8	16	587	589	
Yellow Medicine	3	21	44	68	86	4	1	33	32	
Minnesota Totals	375	21,516	52,881	74,772	78,396	411	361	29,981	29,439	

TABLE 1.25

2015 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

City	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Persons Killed	Persons Injured
Afton	0	11	29	40	0	17
Albany	0	5	17	22	0	5
Albert Lea	1	56	174	231	1	75
Albertville	1	25	61	87	1	41
Alexandria	0	82	109	191	0	118
Andover	1	43	53	97	2	62
Annandale	0	2	3	5	0	4
Anoka	0	102	324	426	0	137
Apple Valley	2	163	371	536	2	204
Arden Hills	2	96	409	507	2	124
Austin	0	62	189	251	0	85
Barnesville	0	1	6	7	0	1
Baxter	0	59	142	201	0	92
Bayport	0	4	15	19	0	5
Becker	1	15	28	44	1	21
Belle Plaine	1	4	25	30	1	7
Bemidji	0	59	102	161	0	81
Benson	0	2	9	11	0	2
Big Lake	0	16	28	44	0	24
Blaine	0	199	286	485	0	271
Bloomington	2	466	1,082	1,550	2	590
Blue Earth	0	9	26	35	0	10
Brainerd	1	67	187	255	1	94
Breckenridge	0	5	14	19	0	5
Brooklyn Center	1	251	449	701	1	369
Brooklyn Park	2	271	419	692	2	383
Buffalo	1	41	99	141	1	61
Burnsville	1	317	725	1,043	1	447
Byron	0	7	21	28	0	8
Caledonia	1	4	15	20	1	7
Cambridge	0	33	79	112	0	51
Cannon Falls	0	11	36	47	0	14
Carver	0	9	11	20	0	12
Centerville	0	2	9	11	0	2
Champlin	1	32	75	108	1	47
Chanhassen	1	64	230	295	1	87
Chaska	0	65	134	199	0	89
Chatfield	0	2	11	13	0	5
Chisago City	0	23	45	68	0	28
Chisholm	0	6	32	38	0	11
Circle Pines	0	7	15	22	0	10
Cloquet	3	51	68	122	5	80
Cohasset	0	10	11	21	0	16
Cokato	0	2	5	7	0	2
Cold Spring	0	9	21	30	0	12
Columbia Heights	0	67	95	162	0	97
Columbus	0	20	49	69	0	29
Coon Rapids	2	296	536	834	2	402
Corcoran	2	27	47	76	2	36
Cottage Grove	1	63	254	318	1	82

TABLE 1.25 CONTINUED

2015 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

City	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Persons Killed	Persons Injured
Crookston	0	17	60	77	0	25
Crystal	0	71	160	231	0	94
Dayton	0	20	46	66	0	25
Deephaven	0	2	12	14	0	2
Delano	0	13	30	43	0	20
Detroit Lakes	0	41	74	115	0	60
Dilworth	0	6	21	27	0	7
Dodge Center	0	2	4	6	0	4
Duluth	3	315	1,420	1,738	3	411
Eagan	2	217	612	831	2	308
Eagle Lake	0	2	6	8	0	2
East Bethel	0	29	19	48	0	44
East Grand Forks	0	21	62	83	0	27
Eden Prairie	3	184	559	746	3	249
Edina	0	172	475	647	0	227
Elko/New Market	0	6	5	11	0	12
Elk River	2	77	252	331	2	121
Ely	0	4	17	21	0	6
Eveleth	0	7	24	31	0	7
Fairmont	0	21	100	121	0	32
Falcon Heights	1	15	42	58	1	23
Faribault	1	84	135	220	1	105
Farmington	0	33	88	121	0	42
Fergus Falls	2	45	132	179	2	56
Foley	0	3	6	9	0	3
Forest Lake	1	90	180	271	1	130
Fridley	3	126	218	347	3	196
Glencoe	0	14	22	36	0	20
Glenwood	0	4	12	16	0	6
Golden Valley	1	167	421	589	1	221
Goodview	1	4	6	11	1	9
Grand Rapids	1	55	133	189	1	70
Granite Falls	0	4	16	20	0	13
Grant	1	13	20	34	1	18
Greenfield	0	14	23	37	0	22
Ham Lake	0	28	21	49	0	43
Hanover	0	2	12	14	0	3
Hastings	0	62	148	210	0	82
Hermantown	2	33	67	102	2	48
Hibbing	0	59	143	202	0	81
Hopkins	1	78	175	254	1	101
Hugo	2	26	43	71	2	40
Hutchinson	0	42	98	140	0	59
Independence	2	14	45	61	2	20
International Falls	0	19	23	42	0	23
Inver Grove Heights	1	98	299	398	1	125
Isanti	0	14	36	50	0	26
Jackson	1	0	14	15	2	1
Jordan	1	21	56	78	1	40
Kasson	0	12	37	49	0	15

TABLE 1.25 CONTINUED

2015 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

City	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Persons Killed	Persons Injured
La Crescent	0	3	24	27	0	6
Lake City	0	11	30	41	0	17
Lake Crystal	0	2	17	19	0	3
Lake Elmo	1	49	90	140	1	66
Lakeville	0	180	509	689	0	246
Le Center	0	0	5	5	0	0
Le Sueur	0	8	29	37	0	11
Lindstrom	0	7	30	37	0	10
Lino Lakes	0	61	195	256	0	79
Litchfield	0	18	39	57	0	22
Little Canada	0	65	169	234	0	90
Little Falls	0	24	42	66	0	35
Long Prairie	0	5	15	20	0	7
Lonsdale	0	3	4	7	0	3
Luverne	0	5	23	28	0	5
Mahtomedi	0	7	22	29	0	7
Mankato	1	226	710	937	1	304
Maple Grove	0	240	658	898	0	313
Maplewood	1	201	543	745	1	282
Marshall	2	37	78	117	2	61
Medina	1	24	75	100	1	37
Melrose	0	5	34	39	0	7
Mendota Heights	0	69	188	257	0	79
Milaca	0	5	19	24	0	6
Minneapolis	11	3,360	8,150	11,521	12	4,693
Minnetonka	0	151	367	518	0	193
Minnetrista	0	17	47	64	0	27
Montevideo	0	12	34	46	0	17
Montgomery	0	4	7	11	0	4
Monticello	0	48	131	179	0	65
Montrose	0	8	11	19	0	10
Moorhead	0	140	240	380	0	188
Moose Lake	0	3	9	12	0	3
Mora	0	14	12	26	0	24
Morris	0	15	36	51	0	19
Mound	0	11	33	44	0	17
Mounds View	0	25	93	118	0	35
Mountain Iron	1	18	43	62	1	33
New Brighton	0	84	213	297	0	105
New Hope	0	32	90	122	0	43
Newport	0	23	77	100	0	33
New Prague	0	13	13	26	0	14
New Ulm	0	39	92	131	0	61
North Branch	0	34	67	101	0	49
Northfield	0	30	49	79	0	44
North Mankato	0	33	88	121	0	50
North Oaks	0	3	9	12	0	3
North St. Paul	1	42	78	121	1	62
Norwood	0	4	17	21	0	4
Nowthen	0	14	12	26	0	18

TABLE 1.25 CONTINUED

2015 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

City	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Persons Killed	Persons Injured
Oakdale	0	95	268	363	0	124
Oak Grove	1	17	19	37	1	22
Oak Park Heights	1	34	91	126	1	52
Orono	1	42	55	98	2	53
Osseo	0	14	15	29	0	19
Otsego	0	40	71	111	0	69
Owatonna	1	68	221	290	1	85
Park Rapids	0	11	10	21	0	15
Perham	0	3	12	15	0	4
Pine City	0	12	17	29	0	21
Pine Island	0	5	17	22	0	8
Pipestone	0	6	4	10	0	8
Plainview	0	3	7	10	0	3
Plymouth	1	217	728	946	1	276
Princeton	1	9	22	32	1	10
Prior Lake	0	50	42	92	0	78
Proctor	0	4	9	13	0	5
Ramsey	0	46	87	133	0	57
Red Wing	0	63	213	276	0	95
Redwood Falls	0	19	25	44	0	29
Richfield	0	230	457	687	0	305
Robbinsdale	0	44	136	180	0	61
Rochester	4	460	1,130	1,594	4	664
Rockford	0	6	13	19	0	9
Rockville	0	11	30	41	0	16
Rogers	0	49	177	226	0	70
Roseau	0	5	8	13	0	11
Rosemount	2	63	155	220	2	95
Roseville	0	210	752	962	0	286
Rush City	1	5	10	16	1	5
St. Anthony	0	24	46	70	0	28
St. Augusta	0	11	20	31	0	14
St. Charles	0	2	8	10	0	2
St. Cloud	7	409	905	1,321	7	573
St. Francis	1	10	9	20	1	13
St. James	0	9	29	38	0	10
St. Joseph	1	10	27	38	1	12
St. Louis Park	0	257	609	866	0	327
St. Michael	1	48	111	160	1	71
St. Paul	11	1,276	5,459	6,746	11	1,691
St. Paul Park	0	8	18	26	0	9
St. Peter	0	33	92	125	0	47
Sandstone	0	3	11	14	0	7
Sartell	0	18	74	92	0	29
Sauk Center	0	11	42	53	0	13
Sauk Rapids	1	31	72	104	2	45
Savage	0	71	215	286	0	98
Scandia	0	11	21	32	0	16
Shakopee	2	132	348	482	2	182
Shoreview	0	47	162	209	0	59

TABLE 1.25 CONTINUED

2015 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

City	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Persons Killed	Persons Injured
Shorewood	1	28	59	88	1	35
Sleepy Eye	0	6	16	22	0	7
South St. Paul	0	83	192	275	0	113
Spring Lake Park	0	31	47	78	0	48
Staples	0	9	14	23	0	16
Stewartville	0	11	29	40	0	13
Stillwater	2	23	92	117	2	32
Thief River Falls	0	30	37	67	0	49
Two Harbors	0	7	21	28	0	12
Vadnais Heights	1	58	201	260	1	74
Victoria	0	24	54	78	0	29
Virginia	0	19	110	129	0	24
Wabasha	1	5	7	13	1	6
Waconia	0	25	76	101	0	45
Wadena	3	21	22	46	3	26
Waite Park	1	53	158	212	1	70
Waseca	0	23	32	55	0	36
Watertown	0	7	24	31	0	8
Wayzata	0	32	108	140	0	41
West St. Paul	0	94	201	295	0	128
White Bear Lake	1	167	369	537	1	225
Willmar	0	79	285	364	0	103
Windom	0	12	19	31	0	23
Winona	0	67	130	197	0	86
Woodbury	0	217	488	705	0	311
Worthington	1	43	113	157	2	64
Wyoming	0	28	63	91	0	44
Zimmerman	1	20	39	60	1	33
Zumbrota	0	4	18	22	0	5

TABLE 1.26

2015 CRASHES BY TIME AND DAY

Hour	All Days Total	All Days Fatal	Sun. Total	Sun. Fatal	Mon. Total	Mon. Fatal	Tues. Total	Tues. Fatal	Wed. Total	Wed. Fatal	Thurs. Total	Thurs. Fatal	Fri. Total	Fri. Fatal	Sat. Total	Sat. Fatal
Beginning																
Midnight	1,047	9	247	1	113	0	120	0	108	2	114	3	133	0	212	3
1 am	926	7	217	2	84	1	112	0	98	1	108	1	99	1	208	1
2 am	934	4	235	0	79	0	95	0	92	2	90	0	110	0	233	2
3 am	607	11	157	4	55	0	53	1	52	1	57	0	77	3	156	2
4 am	588	5	110	0	65	0	59	1	75	1	94	2	90	0	95	1
5 am	1,036	13	117	2	181	4	188	5	160	1	125	0	140	0	125	1
6 am	2,253	14	127	2	449	2	427	2	396	4	355	1	335	2	164	1
7 am	4,603	13	153	2	810	5	966	2	905	1	802	1	721	2	246	0
8 am	4,135	14	229	1	657	0	894	2	776	4	716	0	537	2	326	5
9 am	3,301	18	282	4	492	2	622	3	547	2	536	3	434	0	388	4
10 am	3,293	11	348	1	434	2	555	2	466	2	478	0	511	3	501	1
11 am	3,611	13	408	2	448	4	568	1	512	2	525	1	560	1	590	2
Noon	4,169	15	520	1	509	5	609	1	539	1	688	2	703	3	601	2
1 pm	4,269	15	481	2	560	2	628	1	576	0	675	4	692	1	657	5
2 pm	4,951	26	535	5	634	3	705	4	726	3	788	3	945	6	618	2
3 pm	6,178	35	547	5	854	4	1,030	6	943	8	1,065	5	1,161	2	578	5
4 pm	6,686	20	507	5	985	2	1,147	0	1,198	2	1,160	5	1,148	3	541	3
5 pm	7,078	20	523	2	1,089	5	1,270	1	1,177	2	1,240	4	1,199	2	580	4
6 pm	4,341	25	437	7	652	5	690	4	684	3	724	4	693	1	461	1
7 pm	2,946	22	411	2	398	3	438	1	414	4	408	5	493	4	384	3
8 pm	2,363	15	334	3	281	3	351	2	330	3	349	2	348	1	370	1
9 pm	2,231	21	275	3	312	1	310	2	304	3	308	2	359	5	363	5
10 pm	1,718	16	193	1	201	1	231	1	214	1	241	3	315	4	323	5
11 pm	1,291	13	131	0	174	1	149	4	162	0	183	2	232	2	260	4
Unk	217	0	29	0	27	0	35	0	29	0	23	0	40	0	34	0
Total	74,772	375	7,553	57	10,543	55	12,252	46	11,483	53	11,852	53	12,075	48	9,014	63

FIGURE 1.03

TOTAL CRASHES VS FATAL CRASHES, BY TIME, 2015

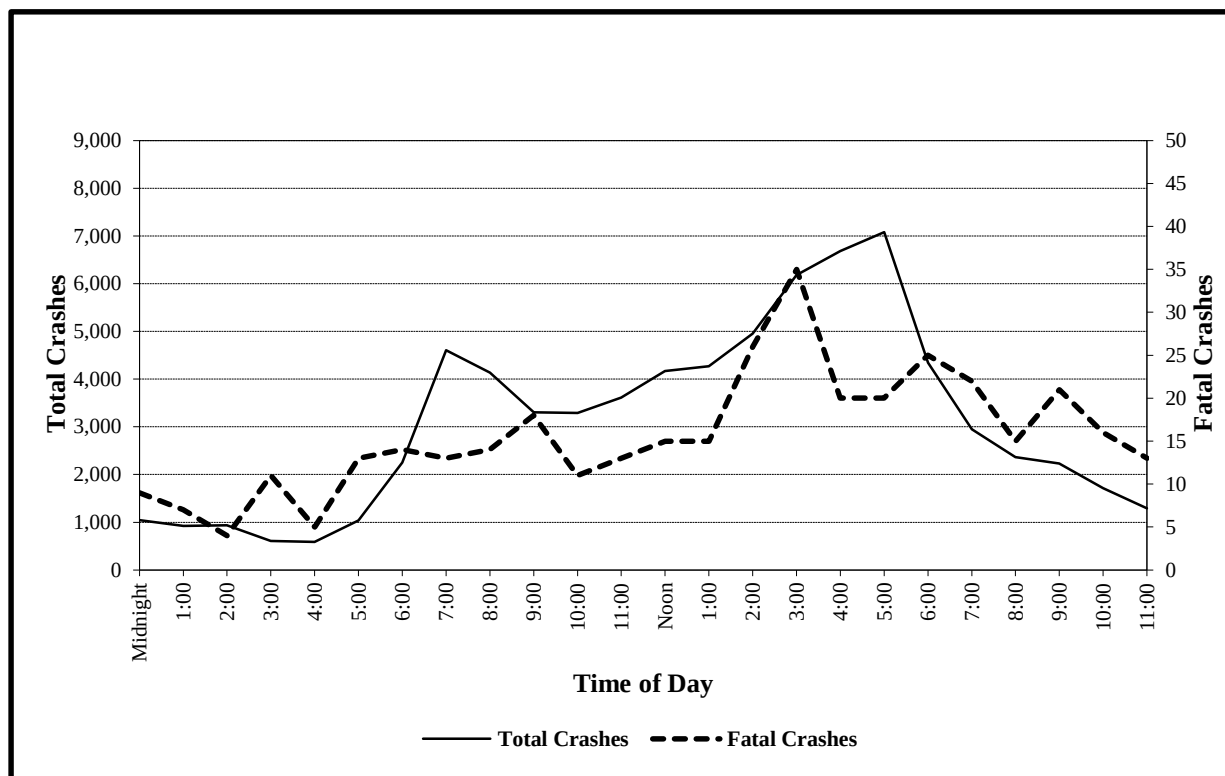


TABLE 1.27

2015 CRASHES, FATALITIES AND INJURIES BY MONTH

Month	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
January	14	1,843	5,768	7,625	14	2,532
February	16	1,602	4,806	6,424	19	2,134
March	28	1,433	3,681	5,142	31	1,981
April	34	1,472	3,300	4,806	36	2,022
May	38	1,882	4,059	5,979	40	2,735
June	43	1,954	4,248	6,245	46	2,708
July	30	1,976	4,023	6,029	37	2,802
August	34	1,921	4,063	6,018	38	2,688
September	37	1,874	4,087	5,998	41	2,681
October	39	1,942	4,561	6,542	41	2,703
November	30	1,866	5,060	6,956	32	2,580
December	32	1,751	5,225	7,008	36	2,415
Total	375	21,516	52,881	74,772	411	29,981

TABLE 1.28
HOLIDAY CRASH SUMMARY, 2010 - 2015

Holiday Period	Year	Hours*	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Memorial Day	2010	78	8	167	244	419	9	245
(In 2015, the holiday	2011	78	0	130	258	388	0	189
period was 6 pm Fri,	2012	78	3	170	278	451	4	239
May 22- midnight	2013	78	5	111	250	366	5	154
Monday, May 25)	2014	78	4	158	263	425	4	233
	2015	78	4	148	334	486	4	216
July 4th	2010	78	4	165	268	437	5	246
(In 2015, the holiday	2011	78	4	170	268	442	6	255
period was 6pm	2012	30	0	79	80	159	0	119
Thursday,	2013	102	6	222	334	562	7	332
July 2-midnight	2014	78	6	154	281	441	7	211
Sunday, July 5)	2015	78	1	179	274	454	1	258
Labor Day	2010	78	5	143	265	413	5	228
(In 2015, the holiday	2011	78	6	138	209	353	6	207
period was 6 pm Fri,	2012	78	5	145	241	391	6	221
Sept 4-midnight	2013	78	4	159	248	411	4	231
Monday, Sept 7)	2014	78	3	142	253	398	3	193
	2015	78	5	163	283	451	6	286
Thanksgiving	2010	102	4	201	589	794	4	281
(In 2015, the holiday	2011	102	2	161	334	497	2	232
period was 6pm Wed	2012	102	1	191	599	791	1	269
Nov 25- midnight	2013	102	3	195	366	564	3	297
Sunday, Nov 29)	2014	102	3	198	658	859	3	293
	2015	102	5	195	466	666	5	278
Christmas	2010	78	0	135	555	690	0	197
(In 2015, the holiday	2011	78	3	125	206	334	3	186
period was	2012	102	1	115	436	552	1	180
6 pm Thurs,	2013	30	0	70	309	379	0	102
Dec 24-midnight	2014	102	7	221	754	982	9	325
Sun, Dec 27)	2015	78	1	137	454	592	4	208
New Year's	2010/11	78	1	221	671	893	1	308
(In 2015, the	2011/12	78	3	153	478	634	4	212
holiday period was	2012/13	102	5	165	489	549	7	240
6 pm Thurs, Dec 31	2013/14	30	0	61	179	240	0	76
-Midnight Sun,	2014/15	102	3	165	573	741	3	242
January 3, 2016)	2015/16	78	2	82	337	421	2	118

*Holiday period hours vary depending on the day of the week on which the holiday falls.

II: ALCOHOL-RELATED CRASHES

BACKGROUND AND DEFINITIONS

Impaired driving incidents

As used here, an “impaired driving incident” is one where there was an arrest for driving while under the influence of alcohol or drugs and a violation from that incident was subsequently entered on the person’s driving record. In prior years, tables in this section reported “DWI Arrests.” “DWI” is an older term that usually connotes intoxication by alcohol. “Impaired driving” is a broader and thus more descriptive term and it conforms better to current Minnesota law. Law enforcement agencies and courts report violations to Driver Licensing, making driver license records the most complete centralized source of data for statistics on impaired driving. Additionally, since it is almost impossible for a person, once arrested, to evade all of the criminal charges and administrative actions the law calls for, the number of impaired driving incidents on record is almost the same as the number of arrests.

Alcohol-related crashes

While the term “impaired driving” covers many possible types of impairment, the term “alcohol-related” is restrictive: *only* alcohol-related crashes are counted. For example, if a driver tests positive for cocaine, but negative for alcohol, the crash will not be counted in this section. A crash is classified as “alcohol-related” if any driver, pedestrian, or bicyclist is shown by a chemical test to be positive for alcohol. Thus, alcohol at the .01-or-higher level makes the crash alcohol-related. In the absence of test data, if the officer reports that he or she believes the person had been drinking, or was under the influence, the crash is also classified as alcohol-related. Though rare, an officer sometimes reports he or she believed a person had been drinking or was under the influence, but the alcohol test is negative. In these cases, the test result takes priority over the officer’s perception and the crash is not classified as alcohol-related. Once a crash is so classified, no matter whether it was a driver, pedestrian, or bicyclist that was drinking, then every fatality and injury in the crash is classified as alcohol-related.

Drunk driving-related crashes

The term “drunk driving-related” is a more restrictive term than “alcohol-related.” A crash is classified as “drunk driving-related” if a motor vehicle driver in a fatal crash tested positive for alcohol at the .08% level or above. Pedestrians, bicyclists and officer perception are not included. Once a crash is so classified, every fatality in the crash is classified as drunk-driving related.

Officers’ reported perceptions are conservative

Officers are conservative in reporting drinking and driving. Officer cautiousness is less a factor in fatal crashes because every effort is made to obtain alcohol test results. For less severe crashes, though, the officer’s judgment is all that is available. Therefore, alcohol-related non-fatal crashes are almost certain to be considerably underestimated.

Important caveats to the definition

Not all alcohol-related traffic fatalities are due to driving while intoxicated. If a drinking pedestrian or bicyclist is in a crash and then he or she (or anyone in the crash) dies, the death is an alcohol-related traffic death. For example, in 2015, ten drinking pedestrians in separate incidents died after colliding with a vehicle driven by a non-drinking driver. Additionally, the definition given above makes an assumption that the person drinking caused, or contributed significantly to the crash. Experts who study fatal traffic crashes in detail confirm that this is almost always true, but it is important to recognize that the assumption is not invariably true. There will be exceptions to the rule. Sometimes a crash is alcohol-related, but is not classified as such due to inadequate data. For example, a drunk driver may die in a fiery crash and the body may be incinerated. In this case, there may be no evidence remaining that the crash involved alcohol. Or a driver may die and lose all his or her blood from wounds received in the crash, which likewise prevents alcohol tests from being performed.

“Known” versus “estimated” alcohol-related deaths.

Testing drivers for alcohol is the key to accurately classifying crashes. Minnesota is much better at testing than most states. Because many drivers are still not tested, the National Highway Traffic Safety Administration (NHTSA) developed a sophisticated statistical procedure that estimates how many fatalities really were alcohol-related. The idea that a computerized statistical procedure can accurately make such estimates initially invites skepticism. However, NHTSA developed the procedure with the greatest care over many years. Tests of the procedure, performed by having it make estimates for datasets from which critical data was removed and then comparing the estimates against the true parameters (putting back in the data that has been removed), show that the procedure is accurate to within about plus or minus one percentage point. Tables 2.02 and 2.08 show alcohol-related fatalities for Minnesota using the two procedures (NHTSA’s estimating procedure and the state’s procedure based on known data). NHTSA’s estimate of the true percentage of alcohol-related fatalities is always higher than, but very close to, the state’s numbers. The reason the two numbers are so close is that Minnesota does a good job

of collecting test results on drivers, pedestrians and bicyclists in fatal crashes.

Alcohol-related crashes in Minnesota 2015

Drinking and driving remains a serious problem in Minnesota and across the nation. For 2015, the National Safety Council has made a conservative estimate of \$285 million as the cost of alcohol-related crashes in Minnesota. Predictably, there is a strong positive relationship between alcohol use and crash severity. That is, as crash severity increases, alcohol is more likely to have been a factor in the crash. In 2015, 6% of minor injuries, 11% of moderate injuries, 19% of severe injuries and 33% of deaths were alcohol-related, including 23% of deaths that were drunk driving-related. In all, 137 known people died, which represents a 23% increase from 2014 when 111 known people died. 2,203 known people were injured in crashes classified as alcohol-related which is an 8% increase from 2014. (NHTSA estimates will be higher).

Impaired driving incidents (DWIs) decrease

In 2015, there were 25,027 impaired driving incidents in Minnesota. This number represents a 1% decrease from the previous year. Anecdotal evidence suggests many enforcement agencies have had problems filling vacancies due to retirements. This could explain the decrease in arrests.

Males and young people

When gender was stated, males made up 72% of the DWI offenders last year, however, females are making up a growing percentage of arrests. In 2015, they accounted for 28% of the offenders. (10 years ago, they were 24% of the offenders.) Impaired driving is especially a problem among young adults. A person can legally buy alcohol at age 21 (raised from 19 in 1986) and drinking and driving too often follows that. Last year, 21-to-34 year-olds committed 51% of the DWI incidents on record. Drivers under age 21 accounted for 5%.

Drinking drivers themselves pay the price

Young people may have better reflexes than their elders, but as drivers they take more risks and have less experience than older people. They pay a clear price for this. Drivers aged 15-34 accounted for 31% of all traffic deaths and for fully 39% of the alcohol-related deaths. It is also the drinkers themselves who are more likely to pay the price for their dangerous behavior. Last year, 113 (82%) of the 137 people who died in alcohol-related crashes were themselves the people whose drinking behavior was a main factor which led to the crash to be classified as alcohol-related. In short, drinking drivers, pedestrians and bicyclists mostly kill and injure

themselves. The remaining 24 people who died in the alcohol crashes were non-drinking drivers, pedestrians, or bicyclists, or were drinking or non-drinking vehicle passengers.

When the crashes occur: weekends, late night

Most alcohol-related crashes occur on Fridays, Saturdays and Sundays. Combined, these three days accounted for 38% of all traffic crashes, but 58% of the alcohol-related crashes. The late night hours 9 p.m.-3 a.m. accounted for 11% of all crashes, but 44% of the alcohol-related crashes. In addition, 43 (31%) of all fatal alcohol-related crashes occurred on county state aid highways.

Fatal alcohol crashes usually involve just one vehicle

Of the 125 alcohol-related fatal crashes in 2015, 85 (68%) involved just one motor vehicle in transport. Of the 125 alcohol-related fatal crashes: 31 involved a single vehicle colliding with a fixed object and 31 involved a single vehicle losing control and overturning.

Test results for killed drivers

Minnesota is consistently at or near the top among the states in the proportion of drivers in fatal crashes who are tested for alcohol. Also, NHTSA developed a procedure (explained on page 38) that compensates for missing data. In 2015, there were 289 motor vehicle drivers who were killed. (Note that this total does not include pedestrians or bicyclists). Of the 289 killed drivers, the Department of Public Safety was able to obtain alcohol test results for 239 (83%). Of the 239 tested, 139 (58%) tested negative, 22 (9%) tested between .01 and .07, 6 (3%) tested between .08 and .09 and 72 (30%) tested .10 or greater.

Majority of alcohol-related fatalities test above the legal limit

The 137 alcohol-related fatalities in 2015 consisted of 80 car or truck drivers, 11 car or truck passengers, 23 motorcycle drivers, 3 motorcycle passengers, 5 ATV drivers, 11 pedestrians, 3 bicyclists and 1 other vehicle. Of the 137, the Department of Public Safety was able to obtain alcohol test results for 128. Of these, 93 (73%) had a result above the legal limit of .08.

Success story in Minnesota

In reality, the percentage of alcohol-related traffic fatalities in Minnesota has steadily decreased in the past half-century. In the 1960's, around 60% of all traffic deaths per year were alcohol-related. Today, this percentage hovers around 33%. This is a great success story for Minnesota and the nation as a whole. It is also proof that as drivers change their behavior less tragedy occurs on our roadways.

TABLE 2.01

OVERVIEW OF TRAFFIC SAFETY AND ALCOHOL STATISTICS, 1966 - 2015

<u>Year</u> (1)	<u>Total Deaths</u> (2)	<u>DWI Arrests</u> (3)	<u>Deaths 'Any' Alcohol</u> (4)	<u>% of Col (2)</u> (5)	<u>Deaths .08% + Alcohol</u> (6)	<u>% of Col (2)</u> (7)	<u>Deaths Drunk Driving (.08%+ Alcohol)</u> (8)	<u>% of Col (2)</u> (9)
1996	576	30,927	205	36%	169	29%	157	27%
1997	600	31,384	178	30%	151	25%	142	24%
1998	650	32,429	273	42%	222	34%	206	32%
1999	626	34,569	195	31%	156	25%	147	24%
2000	625	35,018	245	39%	212	34%	203	33%
2001	568	33,546	211	37%	167	29%	157	28%
2002	657	33,160	239	36%	185	28%	174	27%
2003	655	32,355	255	39%	205	31%	196	30%
2004	567	34,359	177	31%	155	27%	143	25%
2005	559	37,078	197	35%	164	29%	150	27%
2006	494	42,007	166	34%	141	29%	134	27%
2007	510	38,765	190	37%	170	33%	164	32%
2008	455	35,869	163	36%	137	30%	129	28%
2009	421	32,995	141	34%	112	27%	101	24%
2010	411	30,099	131	32%	121	29%	112	27%
2011	368	29,504	136	37%	111	30%	103	28%
2012	395	28,658	131	33%	104	26%	95	24%
2013	387	26,032	117	30%	95	25%	81	21%
2014	361	25,386	111	31%	91	25%	88	24%
2015	411	25,027	137	33%	107	26%	95	23%

Note: Column (4) lists the number of alcohol-related deaths resulting from fatal crashes where at least one driver, pedestrian or bicyclist was suspected to be drinking or tested positive for alcohol at the .01% level or above. Column (6) lists the number of impaired-related deaths resulting from fatal crashes where at least one driver, pedestrian or bicyclist tested positive for alcohol at the .08% level or above. Column (8) lists the number of drunk driving-related deaths resulting from fatal crashes where at least one driver tested positive for alcohol at the .08% level or above.

TABLE 2.02
ALCOHOL-RELATED FATAL CRASH SUMMARY, 1990 - 2015

Year	Alcohol Test Results on Killed Drivers											All Traffic Fatalities				
	Drivers Killed			Results on Drivers Tested								Alcohol-Related Fatalities				
	Tested for Alcohol		% of Total	Negative for Alcohol		.01 to .07 Alcohol		.08 to .09 Alcohol		.10 or Higher Alcohol		Known*			Estimated**	
	Total	N		N	% of Tested	N	% of Tested	N	% of Tested	N	% of Tested	Total	N	% of Total	N	% of Total
1990	334	260	78	129	50	19	7	4	2	108	41	568	235	41	258	46
1991	327	242	74	135	56	20	8	2	1	85	35	531	212	40	233	44
1992	344	237	69	135	57	9	3	6	2	89	38	581	229	39	240	41
1993	355	283	80	174	61	14	5	5	2	90	32	538	196	36	216	40
1994	377	303	80	183	60	16	5	7	3	97	32	644	226	35	250	39
1995	383	343	90	198	58	22	7	8	2	115	34	597	246	41	269	45
1996	359	314	87	209	67	16	5	6	2	83	26	576	205	36	222	38
1997	384	345	90	226	66	15	5	4	1	100	29	600	178	30	197	33
1998	406	369	91	218	59	23	6	6	2	122	33	650	273	42	285	44
1999	426	370	87	254	69	9	2	7	2	100	27	626	195	31	206	33
2000	403	375	93	226	60	16	4	6	2	127	34	625	245	39	258	41
2001	361	322	89	198	62	17	5	6	2	101	31	568	211	37	226	40
2002	430	365	85	223	61	21	6	3	1	118	32	657	239	36	255	39
2003	435	376	86	219	58	18	5	5	1	134	36	655	255	39	267	41
2004	389	337	87	219	65	11	3	4	1	103	31	567	177	31	184	32
2005	379	348	92	213	61	17	5	5	1	113	33	559	197	35	201	36
2006	346	321	93	207	64	15	5	5	2	94	29	494	166	34	183	37
2007	381	336	88	207	62	15	4	7	2	107	32	510	190	37	198	39
2008	316	286	90	176	62	15	5	6	2	89	31	455	163	36	168	38
2009	266	236	89	160	68	13	5	4	2	59	25	421	141	34	152	36
2010	270	237	88	156	66	6	3	2	1	73	31	411	131	32	146	36
2011	243	220	91	137	62	11	5	6	3	66	30	368	136	37	146	40
2012	262	206	79	130	63	5	2	2	1	69	34	395	131	33	148	37

Year	Alcohol Test Results on Killed Drivers											All Traffic Fatalities				
	Drivers Killed			Results on Drivers Tested								Impaired-Related Fatalities**				
	Tested for Alcohol		% of Total	Negative for Alcohol		.01 to .07 Alcohol		.08 to .09 Alcohol		.10 or Higher Alcohol		Known*			Estimated**	
	Total	N		N	% of Tested	N	% of Tested	N	% of Tested	N	% of Tested	Total	N	% of Total	N	% of Total
2013	259	219	85	151	69	10	5	3	1	55	25	387	81	21	114	29
2014	248	200	81	129	65	8	4	3	2	60	30	361	88	24	121	33%
2015	289	239	83	139	58	22	9	6	3	72	30	411	95	23	n/a	n/a

* For explanation of the difference between “known” and “estimated” alcohol-related fatalities, see page 38.

** NHTSA recently improved its method of estimating the true percentage of alcohol-related fatalities for each year.

The above table reflects these changes back to the year 1982. Starting in 2013, NHTSA began estimating the true percentage of based on impaired-related fatalities and excluding pedestrians and bicyclists.

TABLE 2.03
IMPAIRED DRIVING INCIDENTS (“DWIs”) BY GENDER
AND BY AREA OF STATE WHERE ARREST WAS MADE, 1996 - 2015

Year	Total	Male		Female		Not Stated		Area: Metro		Area: Non-Metro	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1996	30,927	23,982	77.5%	5,466	17.7%	1,479	4.8%	15,947	51.6%	14,980	48.4%
1997	31,384	24,116	76.8%	5,833	18.6%	1,435	4.6%	16,148	51.5%	15,236	48.6%
1998	32,429	24,649	76.0%	6,152	19.0%	1,628	5.0%	16,718	51.6%	15,711	48.5%
1999	34,569	26,116	75.6%	6,551	19.0%	1,902	5.5%	17,136	49.6%	17,433	50.4%
2000	35,018	26,077	74.5%	6,846	19.6%	2,095	6.0%	16,816	48.0%	18,202	52.0%
2001	33,546	24,849	74.1%	6,597	19.7%	2,100	6.3%	16,351	48.7%	17,195	51.3%
2002	33,160	24,285	73.2%	6,655	20.1%	2,220	6.7%	16,211	48.9%	16,949	51.1%
2003	32,355	23,468	72.5%	6,630	20.5%	2,257	7.0%	16,041	49.6%	16,314	50.4%
2004	34,359	24,683	71.8%	7,312	21.3%	2,364	6.9%	16,776	48.8%	17,583	51.2%
2005	37,078	26,354	71.1%	8,165	22.0%	2,559	6.9%	17,875	48.2%	19,203	51.8%
2006	42,007	29,380	69.9%	9,475	22.6%	3,152	7.5%	20,534	48.9%	21,473	51.1%
2007	38,765	26,889	69.4%	8,984	23.2%	2,892	7.5%	18,797	48.5%	19,968	51.5%
2008	35,869	24,633	68.7%	8,594	24.0%	2,642	7.4%	17,825	49.7%	18,044	50.3%
2009	32,995	22,611	68.5%	8,070	24.5%	2,314	7.0%	16,348	49.6%	16,647	50.5%
2010	30,009	20,402	67.8%	7,555	25.1%	2,142	7.1%	15,213	50.5%	14,886	49.5%
2011	29,504	20,300	68.8%	7,427	25.2%	1,777	6.0%	14,966	50.7%	14,538	49.3%
2012	28,658	19,399	67.7%	7,287	25.4%	1,972	6.9%	14,764	51.5%	13,894	48.5%
2013	26,032	17,519	67.3%	6,631	25.5%	1,882	7.2%	13,431	51.6%	12,601	48.4%
2014	25,386	17,092	67.3%	6,267	24.7%	2,027	8.0%	13,281	52.3%	12,105	47.7%
2015	25,027	16,422	65.6%	6,368	25.4%	2,237	8.9%	12,959	51.8%	12,068	48.2%

* Note: The table above creates the impression that the proportion of violators with gender “not stated” is increasing over time. This is *not* so. If a person arrested for impaired driving does not have a Minnesota driver’s license, then a record is created, but the new record does *not* show the person’s gender. As years pass, many of these violators do eventually get a Minnesota driver’s license, which does record gender. Thus, as time passes, the gender of more and more past violators becomes known. The table above merely uses current information that was not available at the time of the original violation.

TABLE 2.04
IMPAIRED DRIVING INCIDENTS (“DWIs”) FOR SELECTED AGE GROUPS, 1996 - 2015

Year	Total	Age 0-14	Age 15	Age 16	Age 17	Age 18	Age 19	Age 20	Total < 21	Age 21-34	Age 35-49	Age 50+
1996	30,927	2	13	138	306	615	798	838	2,708	16,021	9,902	2,294
1997	31,384	4	18	106	278	639	768	895	2,704	15,732	10,441	2,503
1998	32,429	2	18	105	301	679	892	930	2,925	15,839	11,116	2,547
1999	34,569	4	18	116	289	744	1,003	1,047	3,217	17,114	11,480	2,754
2000	35,018	4	10	127	327	711	991	1,119	3,285	17,329	11,547	2,853
2001	33,546	1	16	123	277	645	925	1,046	3,032	16,888	10,825	2,800
2002	33,160	7	12	124	308	661	861	1,097	3,063	16,706	10,433	2,951
2003	32,355	3	21	118	281	697	920	1,078	3,115	16,602	9,765	2,870
2004	34,359	3	13	108	302	685	903	1,018	3,029	17,905	10,225	3,196
2005	37,078	5	16	122	344	710	1,037	1,238	3,467	19,621	10,607	3,378
2006	42,007	4	24	138	391	870	1,291	1,351	4,065	22,557	11,524	3,856
2007	38,765	4	11	126	327	720	1,066	1,218	3,468	20,588	10,770	3,935
2008	35,869	4	15	105	269	638	885	1,049	2,961	19,014	9,890	4,000
2009	32,995	4	7	75	197	536	805	911	2,531	17,297	9,251	3,911
2010	30,099	4	9	57	142	434	676	816	2,134	15,812	8,188	3,961
2011	29,504	2	6	56	160	379	591	757	1,949	15,604	7,900	4,049
2012	28,658	4	10	44	114	341	629	674	1,812	15,240	7,577	4,025
2013	26,032	1	10	42	103	289	443	618	1,505	13,810	6,871	3,845
2014	25,386	0	5	22	105	266	399	541	1,338	13,067	6,885	4,096
2015	25,027	0	3	27	84	271	402	487	1,274	12,855	6,779	4,117

FIGURE 2.01

PERCENT OF IMPAIRED DRIVING INCIDENTS (“DWIs”) COMMITTED BY OFFENDERS IN FOUR AGE GROUPS, 1996 - 2015

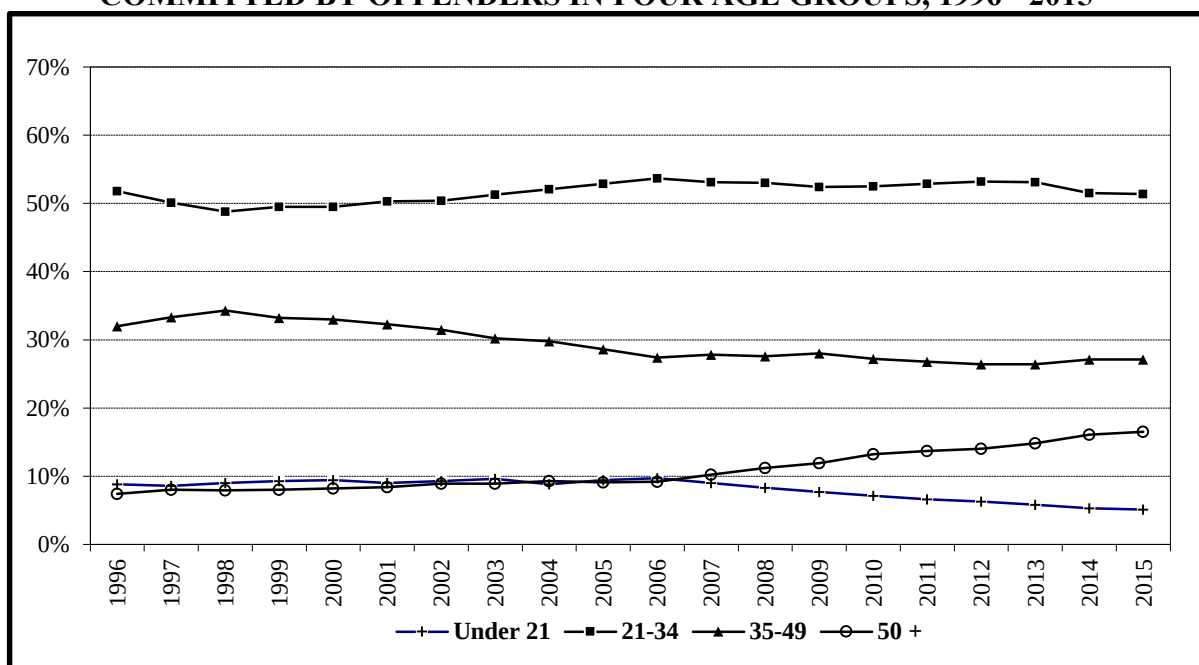


TABLE 2.05

IMPAIRED DRIVING INCIDENTS (“DWIs”) BY AGE-GROUP, 1996 - 2015

Year of Incident	Age 0-14	Age 15-19	Age 20-24	Age 25-29	Age 30-34	Age 35-39	Age 40-44	Age 45-49	Age 50-54	Age 55-59	Age 60-64	Age 65-69	Age 70-74	Age 75-79	Age 80-84	Age 85+	Total
1996	2	1,870	5,809	5,588	5,462	4,792	3,181	1,929	1,009	595	318	215	97	43	16	1	30,927
1997	4	1,809	5,824	5,720	5,083	4,969	3,361	2,111	1,172	621	341	206	97	50	14	2	31,384
1998	2	1,995	6,261	5,596	4,912	5,223	3,631	2,262	1,155	677	340	195	103	57	18	2	32,429
1999	4	2,170	7,398	5,850	4,913	5,255	3,853	2,372	1,331	672	403	192	96	45	12	3	34,569
2000	4	2,166	7,780	5,843	4,825	5,122	3,943	2,482	1,400	696	372	194	119	54	18	0	35,018
2001	1	1,986	7,918	5,451	4,565	4,450	3,910	2,465	1,457	651	339	192	100	43	14	4	33,546
2002	7	1,966	8,148	5,283	4,372	4,060	3,876	2,497	1,456	752	358	197	105	60	18	5	33,160
2003	3	2,037	8,248	5,420	4,012	3,643	3,653	2,469	1,382	753	384	188	96	47	19	1	32,355
2004	3	2,011	8,739	5,923	4,261	3,667	3,846	2,712	1,654	791	425	166	92	38	27	3	34,359
2005	5	2,229	9,633	6,845	4,381	3,802	3,867	2,938	1,676	923	411	215	92	46	10	5	37,078
2006	4	2,714	11,057	8,073	4,778	4,161	4,027	3,336	1,984	1,029	449	226	109	37	18	4	42,007
2007	4	2,250	9,907	7,407	4,492	3,960	3,637	3,173	1,919	1,101	492	263	94	51	13	2	38,765
2008	4	1,912	8,624	6,908	4,531	3,600	3,282	3,008	1,947	1,104	555	229	101	46	12	6	35,869
2009	4	1,620	7,637	6,442	4,129	3,385	2,971	2,895	1,899	1,063	539	233	120	37	13	7	32,995
2010	4	1,318	6,857	5,802	3,969	2,932	2,678	2,578	1,928	1,090	546	237	99	41	18	2	30,099
2011	2	1,192	6,553	5,874	3,934	2,807	2,686	2,407	1,921	1,084	618	232	121	46	22	5	29,504
2012	4	1,138	6,452	5,478	3,984	2,657	2,688	2,232	1,843	1,096	612	276	137	39	16	6	28,658
2013	1	887	5,531	5,077	3,820	2,627	2,271	1,973	1,794	1,059	565	249	109	42	23	4	26,032
2014	0	797	5,138	4,853	3,617	2,727	2,283	1,875	1,800	1,178	614	318	115	53	15	3	25,386
2015	0	787	4,908	4,881	3,553	2,789	2,117	1,873	1,797	1,226	609	290	121	51	19	4	25,027

TABLE 2.06

**AGE OF PERSONS KILLED AND INJURED IN ALL CRASHES
AND IN ALCOHOL-RELATED CRASHES, 2015**

Age Group	Killed	Alcohol Related¹	Severe Injuries	Alcohol Related²	Moderate Injuries	Alcohol Related²	Minor Injuries	Alcohol Related²	Total Injured	Alcohol Related²
00 - 04	1	0	14	1	50	4	387	14	451	19
05 - 09	4	0	15	1	131	12	514	17	660	30
10 - 14	8	0	21	1	137	9	588	19	746	29
15	2	0	16	2	72	2	206	5	294	9
16	5	1	30	1	156	15	525	11	711	27
17	3	1	23	4	159	10	534	22	716	36
18	7	0	26	4	214	20	547	27	787	51
19	9	2	23	3	188	23	519	36	730	62
20	10	3	24	5	224	26	528	30	776	61
< 21:	49	7	192	22	1,331	121	4,348	181	5,871	324
00 - 14	13	0	50	3	318	25	1,489	50	1,857	78
15 - 19	26	4	118	14	789	70	2,331	101	3,238	185
20 - 24	45	21	136	38	988	135	2,578	231	3,702	404
25 - 29	29	17	119	39	782	134	2,291	197	3,192	370
30 - 34	29	12	111	26	640	97	2,009	124	2,760	247
35 - 39	23	14	73	20	551	65	1,610	98	2,234	183
40 - 44	23	12	80	17	471	54	1,395	78	1,946	149
45 - 49	26	14	80	21	481	58	1,415	69	1,976	148
50 - 54	42	18	80	11	506	43	1,494	75	2,080	129
55 - 59	30	7	91	10	491	49	1,343	58	1,925	117
60 - 64	26	7	64	5	368	34	1,030	42	1,462	81
65 - 69	27	2	38	5	278	18	789	19	1,105	42
70 - 74	17	4	25	3	207	9	466	16	698	28
75 - 79	21	1	18	0	136	3	320	4	474	7
80 - 84	15	3	22	0	76	1	239	5	337	6
85 +	19	1	9	0	77	3	183	1	269	4
Unk	0	0	13	0	92	5	621	20	726	25
Total	411	137	1,127	212	7,251	803	21,603	1,188	29,981	2,203

¹ Based on alcohol test results plus officer's perception of possible alcohol involvement as noted on crash report.

² Based only on officer's perception of possible alcohol involvement as noted on crash report.

Note As shown, there were 137 alcohol-related traffic fatalities in the year 2015. Eleven of those deaths were to pedestrians and ten of them were drinking. None of the motor vehicle drivers involved was drinking. Three bicyclists were also among the alcohol related fatalities in 2015. All three bicyclists had been drinking and one of the motor vehicle drivers involved was drinking.

TABLE 2.07
2015 ALCOHOL-RELATED FATALITIES'
LEVEL OF ALCOHOL CONCENTRATION BY TRAFFIC ROLE

Traffic Role	Killed	Tested	.00	.01 - .07	.08 - .09	.10 +
Car or Truck Driver	80	79	7	11	6	55
Car or Truck Passenger	11	3	1	2	0	0
Motorcycle Driver	23	23	1	9	0	13
Motorcycle Passenger	3	3	0	1	1	1
ATV Driver	5	5	0	1	0	4
Pedestrian	11	11	1	0	0	10
Bicyclist	3	3	0	0	0	3
Other Vehicle	1	1	0	1	0	0
Total	137	128	10	25	7	86

TABLE 2.08
PERCENT OF DEATHS, INJURIES and PROPERTY DAMAGE CRASHES
DETERMINED TO BE ALCOHOL-RELATED, 2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Deaths* (Known)	34%	37%	36%	34%	32%	37%	33%	30%	31%	33%
(Estimated)**	37%	39%	38%	36%	36%	40%	37%	24%	33%	n/a
Injuries***	10%	9%	9%	8%	8%	8%	9%	8%	7%	7%
PDO Crashes****	4%	4%	4%	4%	4%	4%	4%	4%	3%	4%

* Based on alcohol test results plus officer's perception of possible alcohol involvement as noted on crash report.

**Beginning in 2013, estimations are based on impaired-related fatalities and excluding pedestrians and bicyclists.

*** Based on alcohol test results plus officer's perception of possible alcohol involvement as noted on crash report.

**** Based only on police officer's perception of possible alcohol involvement. (PDO = Property Damage Only).

TABLE 2.09
FIRST HARMFUL EVENT IN ALCOHOL-RELATED
FATAL CRASHES AND ALL FATAL CRASHES, 2015

First Harmful Event	Number of All Fatal Crashes	% of Fatal Crashes	Number of Alcohol-Related Fatal Crashes	% of Alcohol-Related Fatal Crashes
Collision with:				
Another Motor Vehicle	179	47.7%	40	32.0%
Fixed Object	69	18.4%	31	24.8%
Pedestrian	41	10.9%	11	8.8%
Train	2	0.5%	1	0.8%
Bicyclist	10	2.7%	3	2.4%
Deer/Other Animal	7	1.9%	3	2.4%
Other Collision Type	6	1.6%	3	2.4%
Non-Collision:				
Overturn	55	14.7%	31	24.8%
Other Type Non-Collision	3	0.8%	1	0.8%
Unknown	3	0.8%	1	0.8%
Total	375	100.0%	125	100.0%

TABLE 2.10
TEST RESULTS OF DRIVERS KILLED, 2006 - 2015

Year	Killed	Tested	.00	.01 - .07	.08 - .09	.10 +
2006	346	321	207 (64%)	15 (5%)	5 (2%)	94 (29%)
2007	381	336	207 (62%)	15 (4%)	7 (2%)	107 (32%)
2008	316	286	176 (62%)	15 (5%)	6 (2%)	89 (31%)
2009	266	236	160 (68%)	13 (5%)	4 (2%)	59 (25%)
2010	270	237	156 (66%)	6 (3%)	2 (1%)	73 (31%)
2011	243	220	137 (62%)	11 (5%)	6 (3%)	66 (30%)
2012	262	206	130 (63%)	5 (2%)	2 (1%)	69 (34%)
2013	259	219	151 (69%)	10 (5%)	3 (1%)	55 (25%)
2014	248	200	129 (65%)	8 (4%)	3 (2%)	60 (30%)
2015	289	239	139 (58%)	22 (9%)	6 (3%)	72 (30%)

Percents based on drivers tested.

TABLE 2.11
DRIVERS KILLED WHO TESTED .01 OR HIGHER, 2006 - 2015
("Any Alcohol")

Year	Total	Male	Female	Occurred Between Midnight - 3 AM	Under Legal Age
2006	114	95 (83%)	19 (17%)	34 (30%)	14 (12%)
2007	129	110 (85%)	19 (15%)	28 (22%)	11 (9%)
2008	110	91 (83%)	19 (17%)	31 (28%)	9 (8%)
2009	76	63 (83%)	13 (17%)	12 (16%)	7 (9%)
2010	81	63 (78%)	18 (22%)	12 (15%)	7 (9%)
2011	83	70 (84%)	13 (16%)	24 (29%)	9 (11%)
2012	76	66 (87%)	10 (13%)	13 (17%)	6 (8%)
2013	68	59 (87%)	9 (13%)	20 (29%)	3 (4%)
2014	71	63 (89%)	8 (11%)	15 (21%)	3 (4%)
2015	100	88 (88%)	12 (12%)	15 (15%)	4 (4%)

TABLE 2.12
DRIVERS KILLED WHO TESTED OVER THE LEGAL LIMIT, 2006 - 2015
(The legal limit in Minnesota was lowered to .08 in mid-2005)

Year	Total	Male	Female	Occurred Between Midnight - 3 AM	Under Legal Age
2006	99	84 (85%)	15 (15%)	32 (32%)	13 (13%)
2007	114	98 (86%)	16 (14%)	27 (24%)	10 (9%)
2008	95	81 (85%)	14 (15%)	31 (33%)	8 (8%)
2009	63	53 (84%)	10 (16%)	11 (17%)	6 (10%)
2010	75	58 (77%)	17 (23%)	12 (16%)	6 (8%)
2011	72	62 (86%)	10 (14%)	21 (29%)	8 (11%)
2012	71	62 (87%)	9 (13%)	12 (29%)	8 (11%)
2013	58	49 (85%)	9 (16%)	18 (31%)	2 (4%)
2014	63	56 (89%)	7 (11%)	14 (22%)	2 (3%)
2015	78	71 (91%)	7 (9%)	15 (19%)	3 (4%)

FIGURE 2.02

KILLED DRIVERS TESTED FOR ALCOHOL: 1980 - 2015
Percent Over .01 Alcohol Level and Percent Over Legal Limit
 (The legal limit in Minnesota was lowered to .08 in 2005)

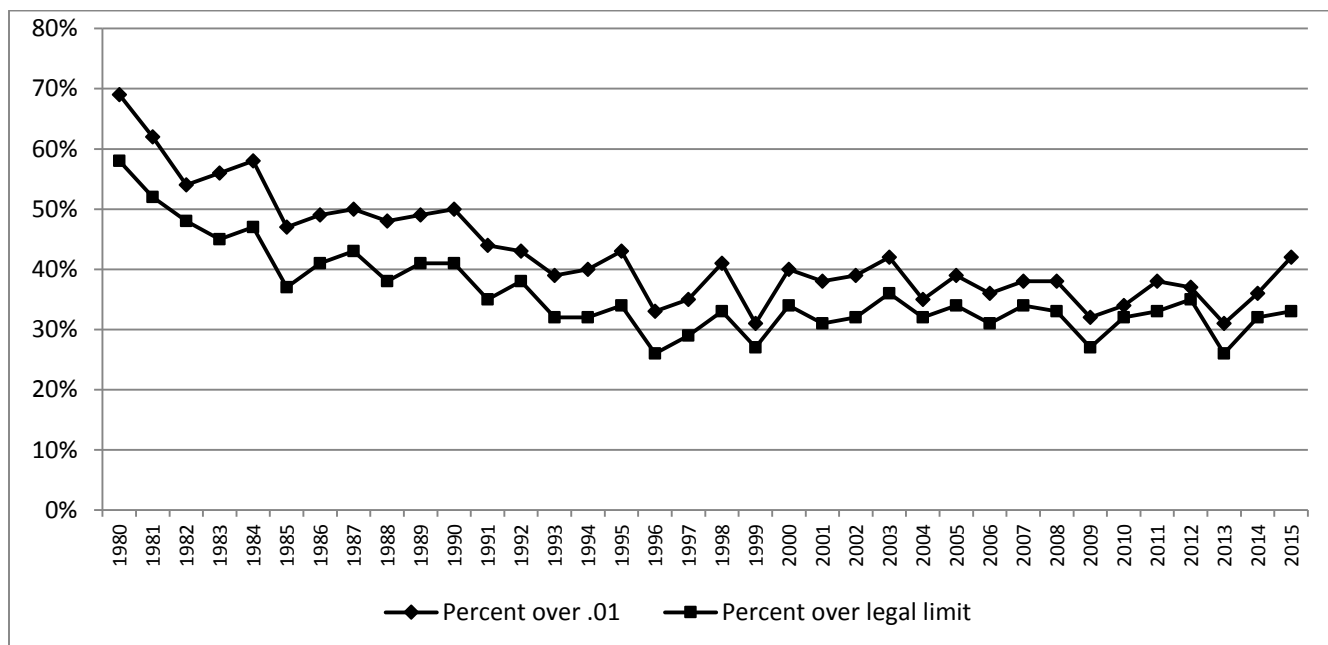


FIGURE 2.03

PERCENT OF DRIVERS KILLED WHO HAD BEEN DRINKING, BY AGE, 2015

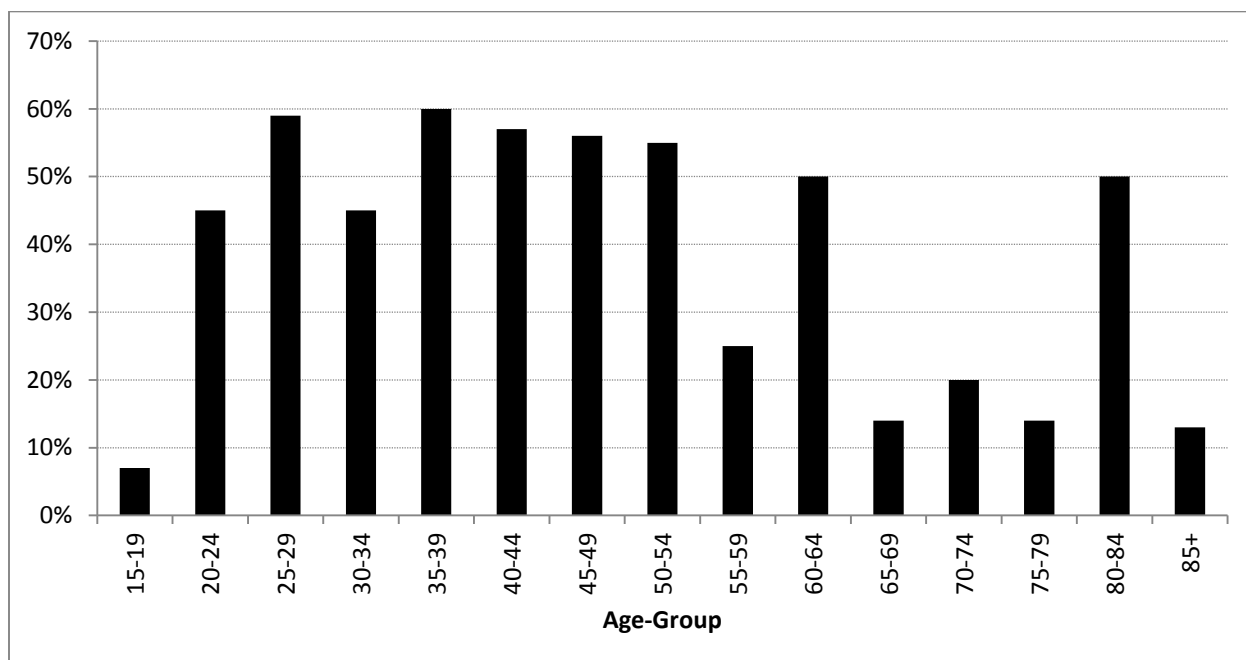


TABLE 2.13

2015 DRIVER FATALITIES' LEVEL OF ALCOHOL CONCENTRATION BY AGE

Age	Killed	Tested	Alcohol Concentration								Alcohol Concentration						
			.00		.01 - .07		.08 - .09		.10+								
			num- ber	per- cent	num- ber	per- cent	num- ber	per- cent	num- ber	per- cent	.00	.01- .04	.05- .09	.10- .14	.15- .19	.20- .24	.25+
00 - 14	0	0	0		0		0		0		0	0	0	0	0	0	0
15	0	0	0		0		0		0		0	0	0	0	0	0	0
16	4	4	4		0		0		0		4	0	0	0	0	0	0
17	2	2	2		0		0		0		2	0	0	0	0	0	0
18	4	4	4		0		0		0		4	0	0	0	0	0	0
19	6	5	4		0		0		1		4	0	0	0	0	0	1
20	10	10	7		1		1		1		7	1	1	1	0	0	0
< 21	26	25	21		1		1		2		21	1	1	1	0	0	1
00 - 14	0	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0	0	0	0	0
15 - 19	16	15	14	93.3%	0	0.0%	0	0.0%	1	6.7%	14	0	0	0	0	0	1
20 - 24	35	31	17	54.8%	2	6.5%	1	3.2%	11	35.5%	17	2	1	3	2	3	3
25 - 29	22	22	9	40.9%	2	9.1%	0	0.0%	11	50.0%	9	1	1	1	3	3	4
30 - 34	26	20	11	55.0%	0	0.0%	0	0.0%	9	45.0%	11	0	0	0	3	4	2
35 - 39	15	15	6	40.0%	1	6.7%	0	0.0%	8	53.3%	6	1	0	1	5	1	1
40 - 44	16	14	6	42.9%	1	7.1%	1	7.1%	6	42.9%	6	1	1	0	1	2	3
45 - 49	17	16	7	43.8%	2	12.5%	0	0.0%	7	43.8%	7	1	1	2	3	1	1
50 - 54	33	31	14	45.2%	3	9.7%	3	9.7%	11	35.5%	14	2	4	1	4	2	4
55 - 59	22	16	12	75.0%	1	6.3%	0	0.0%	3	18.8%	12	1	0	1	0	0	2
60 - 64	18	14	7	50.0%	5	35.7%	0	0.0%	2	14.3%	7	3	2	1	0	0	1
65 - 69	21	14	12	85.7%	1	7.1%	0	0.0%	1	7.1%	12	1	0	1	0	0	0
70 - 74	13	10	8	80.0%	1	10.0%	0	0.0%	1	10.0%	8	1	0	0	0	1	0
75 - 79	12	7	6	85.7%	1	14.3%	0	0.0%	0	0.0%	6	0	1	0	0	0	0
80 - 84	11	6	3	50.0%	2	33.3%	0	0.0%	1	16.7%	3	1	1	0	0	1	0
85+	12	8	7	87.5%	0	0.0%	1	12.5%	0	0.0%	7	0	1	0	0	0	0
Total	289	239	139	58.2%	22	9.2%	6	2.5%	72	30.1%	139	15	13	11	21	18	22

NOTE: Percentages, based on drivers tested, may not add to 100.0% due to rounding.

TABLE 2.14

2015 ALCOHOL-RELATED CRASHES BY MONTH

Month	Fatal Crashes	Injury Crashes	Property Damage	Total Crashes	Killed	Injured
January	3	104	188	295	3	147
February	8	110	169	287	9	171
March	14	113	147	274	16	157
April	12	125	122	259	12	159
May	11	152	170	333	12	213
June	21	124	158	303	21	170
July	9	155	161	325	12	216
August	12	168	156	336	14	236
September	11	149	154	314	12	208
October	9	144	189	342	10	189
November	8	138	157	303	9	192
December	7	105	151	263	7	145
Total	125	1,587	1,922	3,634	137	2,203

TABLE 2.15

2015 ALCOHOL-RELATED CRASHES BY ROADWAY TYPE

Roadway Type	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Urban Interstate	6	131	249	386	6	167
Rural Interstate	3	36	53	92	3	46
Urban US Trunk Hwy	5	82	105	192	5	118
Rural US Trunk Hwy	9	79	60	148	10	115
Urban MN Trunk Hwy	10	106	174	290	12	173
Rural MN Trunk Hwy	23	111	98	232	29	160
County State Aid Hwy	40	473	395	908	43	640
County Road	6	60	35	101	6	87
Township Road	11	86	56	153	11	120
Mun State Aid Hwy	4	207	297	508	4	284
Municipal Street	6	209	384	599	6	282
Other	2	7	16	25	2	11
Total	125	1,587	1,922	3,634	137	2,203

FIGURE 2.04

2015 ALCOHOL-RELATED CRASHES BY TIME OF DAY

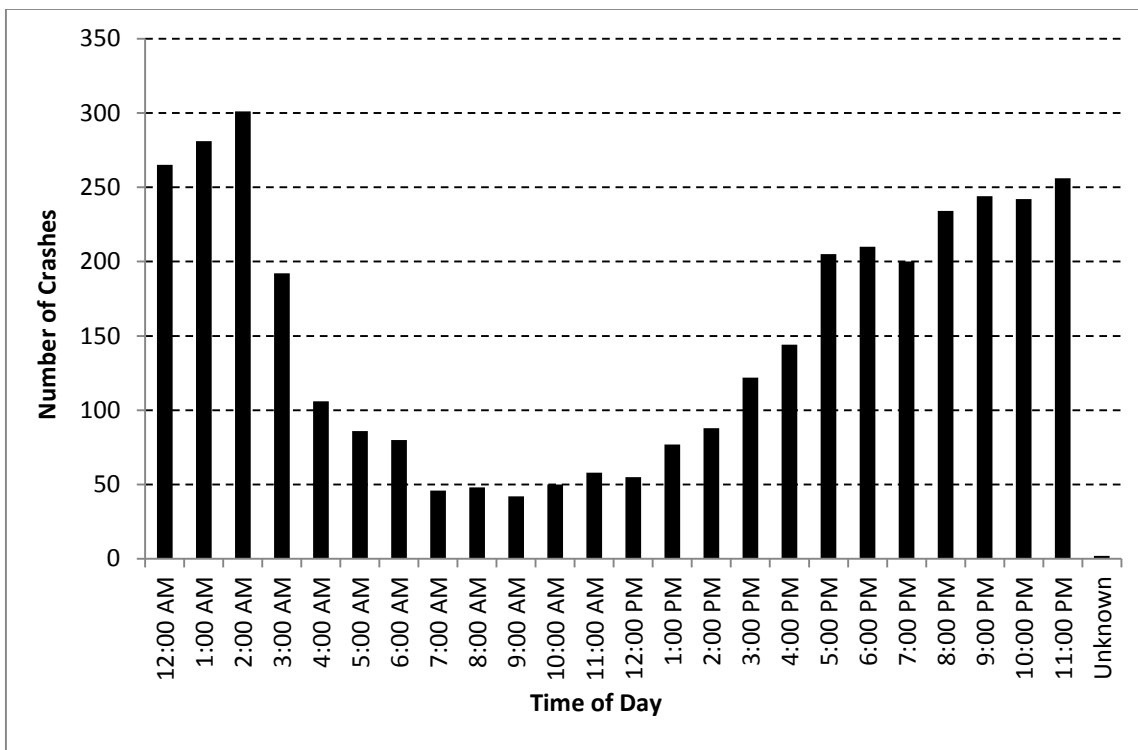


FIGURE 2.05

2015 ALCOHOL-RELATED CRASHES BY DAY OF WEEK

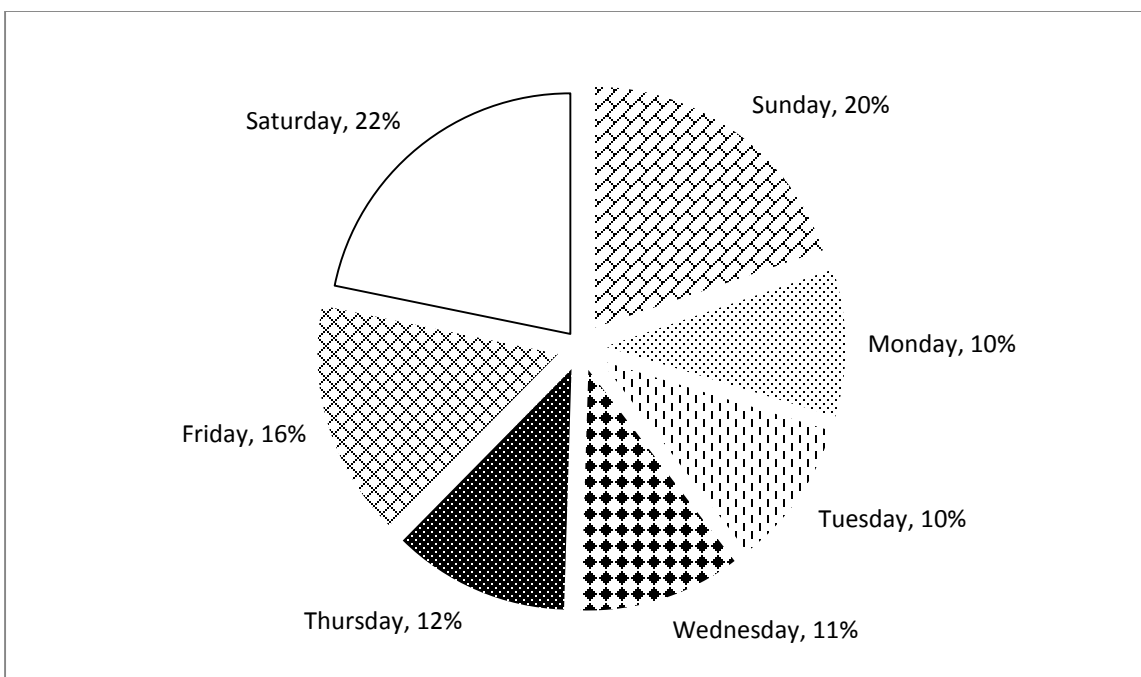


TABLE 2.16

2015 ALCOHOL-RELATED CRASHES BY TIME OF DAY AND DAY OF WEEK

Hour Beginning	Sunday	Monday	Tuesday	Wednes- day	Thurs- day	Friday	Saturday	Total Crashes	Total Killed	Total Injured
Midnight	70	14	23	28	24	42	64	265	9	139
1:00 AM	86	24	24	21	34	30	62	281	6	151
2:00 AM	86	22	22	21	30	42	78	301	4	169
3:00 AM	60	13	9	6	21	24	59	192	10	111
4:00 AM	33	3	7	8	13	13	29	106	4	58
5:00 AM	21	8	4	8	11	11	23	86	5	57
6:00 AM	21	7	9	4	9	10	20	80	6	71
7:00 AM	14	6	1	4	3	7	11	46	2	26
8:00 AM	8	4	5	6	6	3	16	48	2	23
9:00 AM	7	5	8	4	5	4	9	42	1	20
10:00 AM	9	6	6	5	6	9	9	50	1	28
11:00 AM	11	5	8	7	7	10	10	58	1	45
Noon	10	6	5	6	10	7	11	55	2	30
1:00 PM	16	9	7	6	12	11	16	77	3	71
2:00 PM	14	8	13	10	10	14	19	88	3	69
3:00 PM	21	12	13	13	22	18	23	122	8	68
4:00 PM	19	22	21	18	11	25	28	144	4	80
5:00 PM	26	17	27	28	25	44	38	205	6	112
6:00 PM	34	29	19	28	22	38	40	210	9	168
7:00 PM	29	14	23	32	21	45	36	200	6	140
8:00 PM	40	26	26	30	26	35	51	234	8	148
9:00 PM	29	32	29	33	30	43	48	244	12	134
10:00 PM	27	21	36	27	36	48	47	242	11	156
11:00 PM	22	32	30	29	30	50	63	256	14	129
Unknown	1	0	0	0	0	0	1	2	0	0
Total	714	345	375	382	424	583	811	3,634	137	2,203

TABLE 2.17

2015 DRUNK DRIVING-RELATED CRASHES BY MONTH

Month	Fatal Crashes	Killed
January	1	1
February	6	7
March	11	13
April	10	10
May	6	6
June	14	14
July	7	10
August	7	8
September	7	8
October	7	8
November	5	5
December	5	5
Total	86	95

TABLE 2.18

2015 DRUNK DRIVING-RELATED FATAL CRASHES BY ROADWAY TYPE

Roadway Type	Fatal Crashes	Killed
Urban Interstate	3	3
Rural Interstate	2	2
Urban US Trunk Hwy	3	3
Rural US Trunk Hwy	5	6
Urban MN Trunk Hwy	4	6
Rural MN Trunk Hwy	20	24
County State Aid Hwy	26	28
County Road	6	6
Township Road	8	8
Mun State Aid Hwy	3	3
Municipal Street	4	4
Other	2	2
Total	86	95

FIGURE 2.06

2015 DRUNK DRIVING-RELATED FATAL CRASHES BY TIME OF DAY

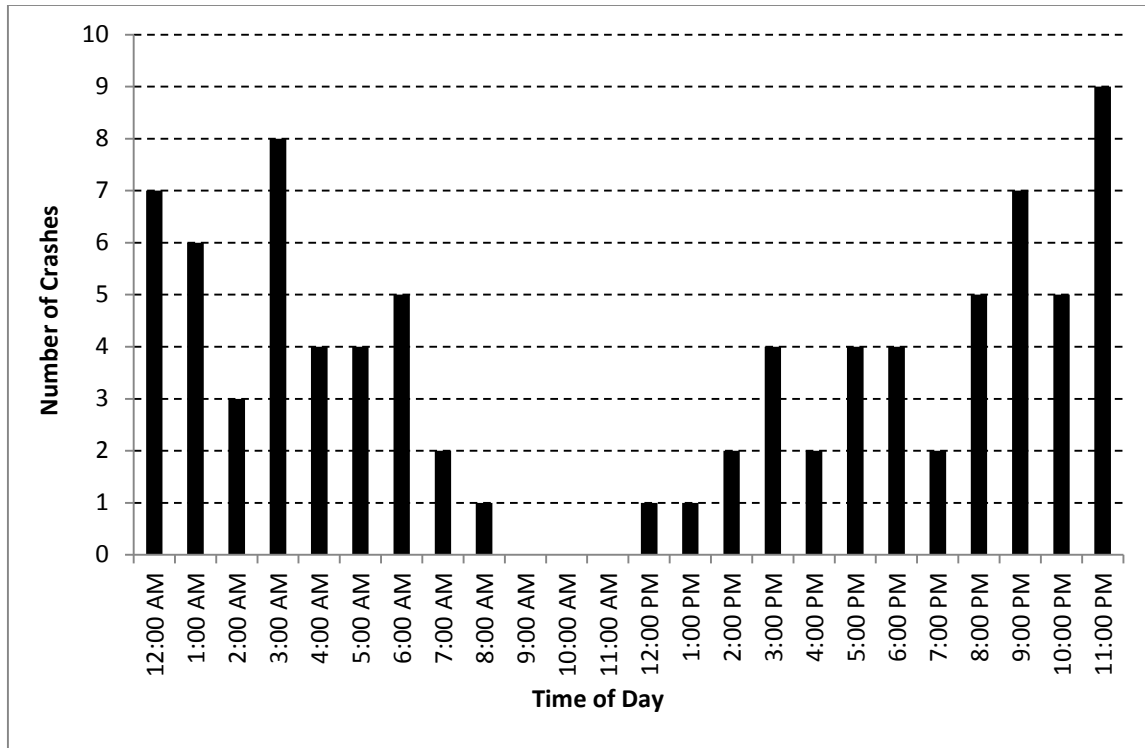


FIGURE 2.07

2015 DRUNK DRIVING-RELATED FATAL CRASHES BY DAY OF WEEK

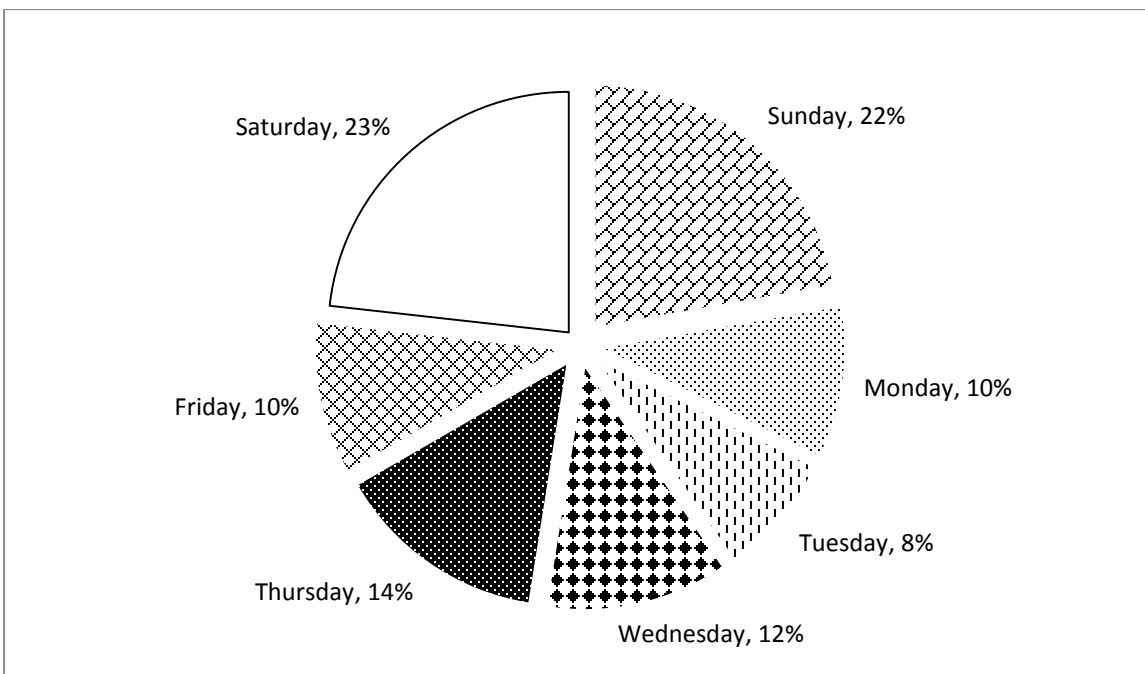


TABLE 2.19

**DRUNK DRIVING-RELATED FATALITIES AND ALCOHOL-RELATED INJURIES
BY SEX AND PERSON TYPE, 2015**

	Females Killed	Males Killed	Total Killed	Females Severely Injured	Males Severely Injured	Females Moderately Injured	Males Moderately Injured	Females- Minor Injuries	Males- Minor Injuries	Total Injuries
Driver	10	74	84	26	123	167	404	277	570	1,568
Passenger	4	6	10	22	23	98	86	124	153	517
Non-Motorist Occupant	0	0	0	0	0	0	0	2	3	5
Bicyclist	0	1	1	0	3	2	12	2	12	31
Pedestrian	0	0	0	3	10	9	21	11	19	74
Unknown	0	0	0	0	1	0	1	2	4	8
Total	14	81	95	51	160	276	524	418	761	2,203

Note: Gender was not reported for 12 persons injured, causing the "Total" to be 12 greater than the sum of the "severe," "moderate," and "minor" injury columns.

III: SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS IN 2015 CRASHES

A brief history of restraint legislation

Studies estimate that using safety restraint devices reduces the risk of death and serious injury by 40% to 60%. In view of this, the Minnesota Legislature enacted laws mandating safety equipment use. The Child Passenger Protection Act took effect in 1982 and was amended in 1983 and 1987. It requires children under the age of four to be properly restrained in a federally approved child car seat. The state's safety belt law went into effect in 1986 and was amended in 1988 and 1991. The law requires all front seat occupants (and children ages four through ten, regardless of seating position) to be restrained. The 1986 belt law was 'Secondary' in nature. Thus, an officer could not issue a citation for non-belt use unless there was another moving violation. In 2009 the law was updated to 'Primary'. In addition, children aged four through seven must now be properly restrained in a 'booster seat'.

Tables in this section focus on restraint use by people in crashes who were occupants of motor vehicles normally equipped with seat belts. The data pose one problem in that restraint use was reported as "unknown" for 14.4% of the persons killed and 11.6% of the persons injured in 2015.

Restraint use responds to legislation

Observational surveys of safety belt use conducted annually at random sites around Minnesota show that legislation affects safety belt wearing behavior, thus, saving lives and preventing injuries. In June 1986, before the first safety belt law took effect, 20% of front seat vehicle occupants used belts. The usage rate jumped to 33% after the 1986 law took effect; to 47% after a \$10 fine was added in 1988; and to 55% after the fine was increased to \$25 in 1991. In 1993 the fine for a child safety seat violation was raised to \$50 which also helped increase the overall seat belt usage rate. Minnesota's 'Primary' seat belt law took effect on June 9th, 2009. In June 2015, the observational seat belt study revealed a 94.0% usage rate.

Occupant fatalities and injuries in 2015

In 2015, 285 motor vehicle occupants were killed in traffic crashes, a 3% increase from the previous year. Only 6% of Minnesotans do not use a seat belt, yet those who were known to be unbelted represent 32% (91) of the motor vehicle occupants killed in 2015. This over-representation of unbelted occupants among those killed clearly demonstrates the increased risk of death when seat belts are not used. The number of vehicle occupants injured (26,583) increased 1% from 2014. These figures actually reveal a beneficial trend that started in the mid-1980s. Specifically, fatalities and severe injuries have been "trading off" with moderate and minor injuries. They are steadily declining due to the seat belt legislation of the mid-1980s. In 1987, 4,176 motor vehicle occupants suffered severe injuries. In 2015, that number decreased to 745. This is encouraging news. By definition, minor (or "possible") and moderate (or "non-incapacitating") injuries do not produce long-term and severe suffering, while severe injuries often cause such suffering, including consequences such as permanent brain damage and dismemberment.

Regional differences/Township roads

Among the motor vehicle occupants that were killed or injured in the Northwest region of Minnesota, only 73% were known to be using a restraint. This is the lowest rate of use of any region. The Southwest region was the second lowest: 77%. Concerning types of roadway, 'Township Roads' had the lowest percentage of seat belt use (70%).

Ejection update: always wear your seat belt

Of the 285 occupants killed in 2015, nearly one in four were ejected or partially ejected from the vehicles they were riding in. And, 77% of these ejected fatalities were not wearing a seat belt.

Airbag deployment update

In 2015, airbag deployment was reported 18,152 times when the occupant was also wearing a seat belt. Fifty-six percent of these incidents resulted in no apparent injury. Airbags deployed 808 times when occupants were not wearing seat belts. Only 34% of these cases resulted in no apparent injury. The message is clear, always wear your seat belt.

TABLE 3.01

**PERCENT OF FRONT SEAT OCCUPANTS WEARING SAFETY BELTS,
BY DATE OF OBSERVATION STUDY**

Date of Survey	Area of State			Class of Roadway	
	Overall	Metro	Non-Metro	Major Roads	Local Roads
August 1986	33%	43%	26%	35%	31%
August 1987	32%	40%	28%	35%	29%
August 1988	47%	51%	45%	48%	46%
August 1989	44%	52%	40%	44%	45%
August 1990	47%	54%	42%	49%	46%
August 1991	53%	62%	47%	53%	52%
August 1992	51%	62%	46%	55%	48%
August 1993	55%	59%	52%	57%	53%
August 1994*	57%	58%	54%	65%	54%
August 1995	65%	68%	56%	68%	64%
August 1996	64%	67%	58%	68%	62%
August 1997	65%	67%	59%	69%	63%
August 1998	64%	67%	56%	68%	63%
August 1999	72%	73%	68%	72%	68%
August 2000	73%	74%	69%	75%	71%
August 2001	74%	75%	72%	75%	69%
August 2002	80%	83%	72%	81%	76%

Date of Survey	Vehicle Type					Gender	
	Overall	Car	SUV	Van	Pickup	Male	Female
August 2003	79.4%	82%	79%	83%	69%	76%	83%
August 2004	82.1%	83%	87%	87%	71%	78%	88%
August 2005	83.9%	86%	87%	83%	75%	80%	89%
August 2006	83.3%	83%	87%	88%	76%	79%	88%
August 2007**	87.8%	89%	90%	90%	81%	84%	92%
August 2008	86.7%	88%	92%	88%	76%	83%	92%
August 2009	90.2%	91%	91%	95%	84%	89%	92%
August 2010	92.3%	94%	94%	95%	83%	89%	96%
August 2011	92.7%	94%	92%	96%	88%	90%	95%
August 2012	93.6%	94%	96%	93%	87%	92%	96%
August 2013	94.8%	96%	97%	97%	87%	93%	98%
August 2014	94.7%	97%	97%	97%	85%	93%	97%
August 2015	94.0%	94%	98%	94%	90%	92%	97%

* A new survey design was initiated in August 1994. In 2003 the survey was completely redesigned and collected more information on vehicle occupants.

** The 2007 observational study was conducted after the 35W bridge collapse.

TABLE 3.02

**MOTOR VEHICLE OCCUPANTS KILLED OR INJURED
BY EJECTION STATUS AND INJURY SEVERITY, 2015**

Ejection Status	Killed		Severe Injury		Moderate Injury		Minor Injury		Total Killed or Injured	
	Number	Row %	Number	Row %	Number	Row %	Number	Row %	Number	Total %
Not Ejected	215	0.9%	641	2.5%	5,688	22.4%	18,885	74.3%	25,429	100%
Partly Ejected	13	34.2%	6	15.8%	14	36.8%	5	13.2%	38	100%
Ejected	52	18.8%	65	23.5%	87	31.4%	73	26.4%	277	100%
Not Stated	5	0.4%	33	2.9%	166	14.8%	920	81.9%	1,124	100%
Total	285	1.1%	745	2.8%	5,955	22.2%	19,883	74.0%	26,868	100%

TABLE 3.03

**MOTOR VEHICLE OCCUPANTS KILLED OR INJURED,
BY AGE AND INJURY SEVERITY, 2015**

Age Group	Killed	Severe Injury	Moderate Injury	Minor Injury	Total Injuries
00 - 04	0	10	42	362	414
05 - 09	2	9	87	446	542
10 - 14	7	11	81	460	552
15 - 19	24	93	708	2,149	2,950
20 - 24	36	104	836	2,393	3,333
25 - 29	19	91	647	2,114	2,852
30 - 34	22	77	535	1,846	2,458
35 - 39	12	54	458	1,517	2,029
40 - 44	14	45	385	1,285	1,715
45 - 49	15	42	374	1,304	1,720
50 - 54	25	39	377	1,357	1,773
55 - 59	17	45	383	1,221	1,649
60 - 64	14	33	292	961	1,286
65 - 69	18	26	230	748	1,004
70 - 74	13	19	178	444	641
75 - 79	16	15	121	310	446
80 - 84	13	17	71	231	319
85 & Older	18	6	73	181	260
Not Stated	0	9	77	554	640
Total	285	745	5,955	19,883	26,583

FIGURE 3.01

**SAFETY EQUIPMENT USE AMONG MOTOR VEHICLE
OCCUPANTS KILLED OR INJURED, BY AGE, 2015**

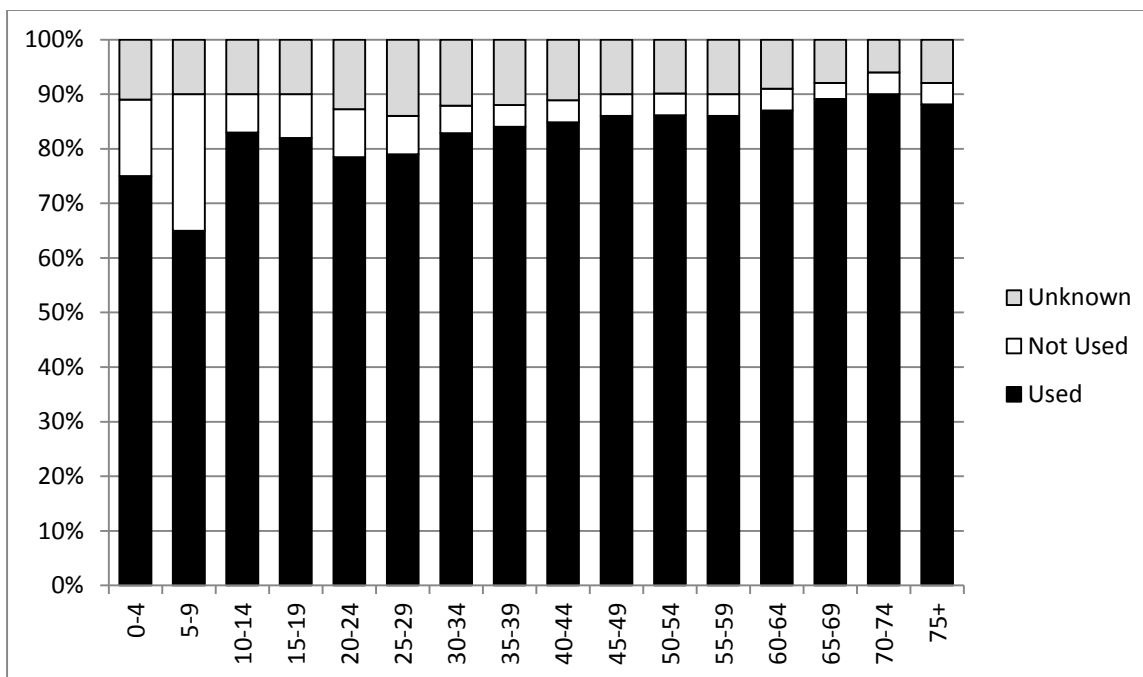


TABLE 3.04

**SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS,
BY GENDER AND INJURY SEVERITY, 2015**

	Females Killed	Males Killed	Total Killed	Females Severely Injured	Males Severely Injured	Females Moderately Injured	Males Moderately Injured	Females- Minor Injuries	Males- Minor Injuries	Total Injuries
Used	57	96	153	222	203	2,581	2,126	9,547	7,173	22,024
Not Used	24	67	91	56	118	184	316	360	417	1,470
Unknown	11	30	41	36	104	295	407	986	1,088	3,089
Total	92	193	285	314	425	3,060	2,849	10,893	8,678	26,583

Note: Gender was not reported for 364 persons injured (mostly those with minor injuries), causing the “Total” to be 364 greater than the sum of the “severe,” “moderate,” and “minor” injury columns.

TABLE 3.05

SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS KILLED OR INJURED, BY AGE AND INJURY SEVERITY, 2015

Age Group	Restraint Use	Killed		Severe Injuries		Moderate Injuries		Minor Injuries		Total Injured	
		N	%	N	%	N	%	N	%	N	%
00 - 03 Years	Used	0	0.0%	5	62.5%	19	59.4%	229	79.8%	253	77.4%
	Not Used	0	0.0%	2	25.0%	6	18.8%	30	10.5%	38	11.6%
	Unknown	0	0.0%	1	12.5%	7	21.9%	28	9.8%	36	11.0%
	Subtotal	0	100.0%	8	100.0%	32	100.0%	287	100.0%	327	100.0%
04 - 07 Years	Used	0	0.0%	5	62.5%	29	45.3%	195	56.9%	229	55.2%
	Not Used	0	0.0%	2	25.0%	26	40.6%	111	32.4%	139	33.5%
	Unknown	1	100%	1	12.5%	9	14.1%	37	10.8%	47	11.3%
	Subtotal	1	100.0%	8	100.0%	64	100.0%	343	100.0%	415	100.0%
Total 00 - 07 Years	Used	0	0.0%	10	62.5%	48	50.0%	424	67.3%	482	65.0%
	Not Used	0	0.0%	4	25.0%	32	33.3%	141	22.4%	177	23.9%
	Unknown	1	100.0%	2	12.5%	16	16.7%	65	10.3%	83	11.2%
	Subtotal	1	100.0%	16	100.0%	96	100.0%	630	100.0%	742	100.0%
00 - 04 Years	Used	0	0.0%	6	60.0%	25	59.5%	280	77.4%	311	75.1%
	Not Used	0	0.0%	2	20.0%	8	19.1%	47	13.0%	57	13.8%
	Unknown	0	0.0%	2	20.0%	9	21.4%	35	9.7%	46	11.1%
	Subtotal	0	100.0%	10	100.0%	42	100.0%	362	100.0%	414	100.0%
05 - 09 Years	Used	1	50.0%	5	55.6%	51	58.6%	294	65.9%	350	64.6%
	Not Used	0	0.0%	4	44.4%	28	32.2%	106	23.8%	138	25.5%
	Unknown	1	50.0%	0	0.0%	8	9.2%	46	10.3%	54	10.0%
	Subtotal	2	100.0%	9	100.0%	87	100.0%	446	100.0%	542	100.0%
10 - 14 Years	Used	5	71.4%	5	45.5%	66	81.5%	387	84.1%	458	83.0%
	Not Used	2	28.6%	3	27.3%	10	12.4%	24	5.2%	37	6.7%
	Unknown	0	0.0%	3	27.3%	5	6.2%	49	10.7%	57	10.3%
	Subtotal	7	100.0%	11	100.0%	81	100.0%	460	100.0%	552	100.0%
15 - 19 Years	Used	11	45.8%	52	55.9%	548	77.4%	1,823	84.8%	2,423	82.1%
	Not Used	8	33.3%	30	32.3%	85	12.0%	120	5.6%	235	8.0%
	Unknown	5	20.8%	11	11.8%	75	10.6%	206	9.6%	292	9.9%
	Subtotal	24	100.0%	93	100.0%	708	100.0%	2,149	100.0%	2,950	100.0%
20 - 24 Years	Used	19	52.8%	55	52.9%	635	76.0%	1,982	82.8%	2,672	80.2%
	Not Used	15	41.7%	21	20.2%	87	10.4%	109	4.6%	217	6.5%
	Unknown	2	5.6%	28	26.9%	114	13.6%	302	12.6%	444	13.3%
	Subtotal	36	100.0%	104	100.0%	836	100.0%	2,393	100.0%	3,333	100.0%
25 - 29 Years	Used	4	21.1%	43	47.3%	479	74.0%	1,742	82.4%	2,264	79.4%
	Not Used	10	52.6%	28	30.8%	67	10.4%	85	4.0%	180	6.3%
	Unknown	5	26.3%	20	22.0%	101	15.6%	287	13.6%	408	14.3%
	Subtotal	19	100.0%	91	100.0%	647	100.0%	2,114	100.0%	2,852	100.0%
30 - 34 Years	Used	6	27.3%	38	49.4%	420	78.5%	1,577	85.4%	2,035	82.8%
	Not Used	13	59.1%	20	26.0%	41	7.7%	60	3.3%	121	4.9%
	Unknown	3	13.6%	19	24.7%	74	13.8%	209	11.3%	302	12.3%
	Subtotal	22	100.0%	77	100.0%	535	100.0%	1,846	100.0%	2,458	100.0%
35 - 39 Years	Used	4	33.3%	31	57.4%	365	79.7%	1,310	86.4%	1,706	84.1%
	Not Used	5	41.7%	13	24.1%	27	5.9%	45	3.0%	85	4.2%
	Unknown	3	25.0%	10	18.5%	66	14.4%	162	10.7%	238	11.7%
	Subtotal	12	100.0%	54	100.0%	458	100.0%	1,517	100.0%	2,029	100.0%

TABLE 3.05 CONTINUED

SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS KILLED OR INJURED, BY AGE AND INJURY SEVERITY, 2015

Age Group	Restraint Use	Killed		Severe Injuries		Moderate Injuries		Minor Injuries		Total Injured	
		N	%	N	%	N	%	N	%	N	%
40 - 44 Years	Used	3	21.4%	27	60.0%	313	81.3%	1,117	86.9%	1,457	85.0%
	Not Used	9	64.3%	7	15.6%	25	6.5%	32	2.5%	64	3.7%
	Unknown	2	14.3%	11	24.4%	47	12.2%	136	10.6%	194	11.3%
	Subtotal	14	100.0%	45	100.0%	385	100.0%	1,285	100.0%	1,715	100.0%
45 - 49 Years	Used	11	73.3%	27	64.3%	310	82.9%	1,145	87.8%	1,482	86.2%
	Not Used	4	26.7%	10	23.8%	24	6.4%	25	1.9%	59	3.4%
	Unknown	0	0.0%	5	11.9%	40	10.7%	134	10.3%	179	10.4%
	Subtotal	15	100.0%	42	100.0%	374	100.0%	1,304	100.0%	1,720	100.0%
50 - 54 Years	Used	10	40.0%	28	71.8%	311	82.5%	1,209	89.1%	1,548	87.3%
	Not Used	10	40.0%	5	12.8%	25	6.6%	26	1.9%	56	3.2%
	Unknown	5	20.0%	6	15.4%	41	10.9%	122	9.0%	169	9.5%
	Subtotal	25	100.0%	39	100.0%	377	100.0%	1,357	100.0%	1,773	100.0%
55 - 59 Years	Used	10	58.8%	29	64.4%	318	83.0%	1,077	88.2%	1,424	86.4%
	Not Used	4	23.5%	8	17.8%	30	7.8%	29	2.4%	67	4.1%
	Unknown	3	17.7%	8	17.8%	35	9.1%	115	9.4%	158	9.6%
	Subtotal	17	100.0%	45	100.0%	383	100.0%	1,221	100.0%	1,649	100.0%
60 - 64 Years	Used	12	85.7%	20	60.6%	244	83.6%	860	89.5%	1,124	87.4%
	Not Used	1	7.1%	10	30.3%	17	5.8%	19	2.0%	46	3.6%
	Unknown	1	7.1%	3	9.1%	31	10.6%	82	8.5%	116	9.0%
	Subtotal	14	100.0%	33	100.0%	292	100.0%	961	100.0%	1,286	100.0%
65 - 69 Years	Used	13	72.2%	22	84.6%	200	87.0%	682	91.2%	904	90.0%
	Not Used	2	11.1%	3	11.5%	7	3.0%	13	1.7%	23	2.3%
	Unknown	3	16.7%	1	3.9%	23	10.0%	53	7.1%	77	7.7%
	Subtotal	18	100.0%	26	100.0%	230	100.0%	748	100.0%	1,004	100.0%
70 - 74 Years	Used	10	76.9%	11	57.9%	160	89.9%	407	91.7%	578	90.2%
	Not Used	2	15.4%	4	21.1%	6	3.4%	14	3.2%	24	3.7%
	Unknown	1	7.7%	4	21.1%	12	6.7%	23	5.2%	39	6.1%
	Subtotal	13	100.0%	19	100.0%	178	100.0%	444	100.0%	641	100.0%
75 & Older	Used	34	72.3%	27	71.1%	236	89.1%	653	90.4%	916	89.4%
	Not Used	6	12.8%	4	10.5%	13	4.9%	13	1.8%	30	2.9%
	Unknown	7	14.9%	7	18.4%	16	6.0%	56	7.8%	79	7.7%
	Subtotal	47	100.0%	38	100.0%	265	100.0%	722	100.0%	1,025	100.0%
Age Not Stated	Used	0	0.0%	1	11.1%	52	67.5%	319	57.6%	372	58.1%
	Not Used	0	0.0%	4	44.4%	3	3.9%	24	4.3%	31	4.8%
	Unknown	0	0.0%	4	44.4%	22	28.6%	211	38.1%	237	37.0%
	Subtotal	0	100.0%	9	100.0%	77	100.0%	554	100.0%	640	100.0%
All Ages	Used	153	53.7%	427	57.3%	4,733	79.5%	16,864	84.8%	22,024	82.9%
	Not Used	91	31.9%	176	23.6%	503	8.5%	791	4.0%	1,470	5.5%
	Unknown	41	14.4%	142	19.1%	719	12.1%	2,228	11.2%	3,089	11.6%
	Total	285	100.0%	745	100.0%	5,955	100.0%	19,883	100.0%	26,583	100.0%

Percentages may not sum to 100.0% due to rounding. Persons aged 0 through 3 and 4 through 7 years old are categorized separately because Minnesota law makes special provisions for these age groups.

TABLE 3.06

PERCENT OF KILLED OR INJURED MOTOR VEHICLE OCCUPANTS WHO USED SAFETY EQUIPMENT, BY INJURY SEVERITY AND YEAR, 2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Killed										
Used	40.0%	41.4%	45.2%	42.4%	48.5%	46.5%	46.7%	53.9%	54.7%	53.7%
Not Used	52.0%	48.9%	46.2%	43.7%	41.0%	44.3%	42.0%	34.9%	38.1%	31.9%
Unknown	8.0%	9.8%	8.6%	13.9%	10.5%	9.2%	11.2%	11.2%	7.2%	14.4%
Injured										
Severe Injuries										
Used	49.9%	52.2%	51.4%	55.2%	58.3%	59.2%	57.8%	57.2%	60.8%	57.3%
Not Used	32.8%	31.6%	29.8%	27.9%	27.2%	29.0%	25.8%	28.0%	21.6%	23.6%
Unknown	17.3%	16.2%	18.8%	16.9%	14.5%	11.8%	16.3%	14.8%	17.7%	19.1%
Moderate Injuries										
Used	69.0%	71.6%	72.4%	74.6%	79.1%	79.1%	79.4%	81.0%	81.7%	79.5%
Not Used	16.8%	15.4%	14.8%	12.8%	10.8%	10.4%	10.1%	9.7%	8.3%	8.5%
Unknown	14.2%	13.0%	12.8%	12.6%	10.1%	10.5%	10.6%	9.3%	10.0%	12.1%
Minor Injuries										
Used	80.2%	81.6%	81.8%	83.0%	84.7%	85.4%	85.1%	85.8%	86.0%	84.8%
Not Used	8.6%	7.6%	7.4%	6.5%	5.5%	5.1%	5.1%	4.1%	4.0%	4.0%
Unknown	11.3%	10.8%	10.8%	10.4%	9.8%	9.5%	9.9%	10.1%	10.0%	11.2%
Total Injured										
Used	76.1%	78.0%	78.5%	80.1%	82.7%	83.3%	82.9%	83.9%	84.3%	82.9%
Not Used	11.6%	10.4%	10.0%	8.7%	7.3%	7.0%	6.8%	6.1%	5.4%	5.5%
Unknown	12.3%	11.6%	11.6%	11.2%	10.0%	9.7%	10.2%	10.0%	10.3%	11.6%

TABLE 3.07

**SAFETY EQUIPMENT USE BY MOTOR VEHICLE OCCUPANTS
KILLED OR INJURED, BY ROADWAY TYPE, 2015**

Roadway Type	Used		Not Used		Unknown		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Interstate	3,264	90.6%	144	4.0%	195	5.4%	3,603	100.0%
US Trunk Hwy	2,584	87.6%	184	6.2%	183	6.2%	2,951	100.0%
MN Trunk Hwy	4,026	86.3%	261	5.6%	377	8.1%	4,664	100.0%
CSAH	5,885	80.2%	439	6.0%	1,014	13.8%	7,338	100.0%
County Road	400	76.2%	50	9.5%	75	14.3%	525	100.0%
Township Road	503	69.7%	110	15.2%	109	15.1%	722	100.0%
MSAH	3,459	80.1%	198	4.6%	661	15.3%	4,318	100.0%
Municipal Street	2,025	75.4%	160	6.0%	500	18.6%	2,685	100.0%
Other Road	31	50.0%	15	24.2%	16	25.8%	62	100.0%
Total	22,177	82.5%	1,561	5.8%	3,130	11.7%	26,868	100.0%

CSAH = County State Aid Highway. MSAH = Municipal State Aid Highway

TABLE 3.08

**SAFETY EQUIPMENT USE BY MOTOR VEHICLE OCCUPANTS
KILLED OR INJURED, BY REGION OF THE STATE, 2015**

EMS Region	Percent Used	Percent Not Used	Percent Unknown	Number of People
Metropolitan	82.8%	4.0%	13.2%	15,765
Central	84.9%	6.8%	8.4%	3,654
Northeast	80.8%	8.0%	11.3%	1,366
Northwest	72.8%	12.2%	15.1%	584
South Central	81.7%	8.5%	9.9%	1,042
Southeast	84.6%	7.1%	8.3%	2,266
Southwest	77.4%	13.4%	9.2%	1,179
West Central	80.3%	9.6%	10.1%	1,012
Statewide	82.5%	5.8%	11.7%	26,868

*The regions of the state are shown in the map below.



TABLE 3.09
AIRBAG DEPLOYMENTS, 2008 - 2015

Year	Injury Severity	Airbag Deployed Belt Used	Airbag Deployed Belt Not Used	Deployment Not Indicated Belt Used	Deployment Not Indicated Belt Not Used	Belt Use Unknown	Total
2008	Killed	81	46	66	104	28	325
	Severe Injury	278	113	290	216	207	1,104
	Moderate Injury	1,851	297	3,128	718	879	6,873
	Minor Injury	4,233	341	13,504	1,267	2,345	21,690
	No Apparent Injury	7,594	323	102,417	3,345	36,239	149,918
	Total	14,037	1,120	119,405	5,650	39,698	179,910
2009	Killed	73	57	55	75	42	302
	Severe Injury	251	96	255	160	155	917
	Moderate Injury	1,767	271	3,023	553	809	6,423
	Minor Injury	4,076	272	12,702	1,045	2,111	20,206
	No Apparent Injury	7,318	270	98,055	3,308	31,781	140,732
	Total	13,485	966	114,090	5,141	34,898	168,580
2010	Killed	95	46	53	79	32	305
	Severe Injury	248	76	240	152	121	837
	Moderate Injury	1,807	176	3,096	492	624	6,195
	Minor Injury	4,241	226	13,347	917	2,027	20,758
	No Apparent Injury	7,620	210	101,735	3,055	30,979	143,599
	Total	14,011	734	118,471	4,695	33,783	171,694
2011	Killed	83	51	43	69	25	271
	Severe Injury	268	100	203	131	94	796
	Moderate Injury	1,763	190	2,855	416	613	5,837
	Minor Injury	4,332	234	12,978	799	1,915	20,258
	No Apparent Injury	7,860	243	99,608	2,716	28,078	138,505
	Total	14,306	818	115,687	4,131	30,725	165,667
2012	Killed	80	50	49	66	31	276
	Severe Injury	297	91	202	132	141	863
	Moderate Injury	1,869	201	2,581	364	592	5,607
	Minor Injury	4,637	256	11,761	721	1,904	19,279
	No Apparent Injury	8,093	229	94,519	2,390	27,092	132,323
	Total	14,976	827	109,112	3,673	29,760	158,348
2013	Killed	92	39	53	55	30	269
	Severe Injury	287	100	213	145	129	874
	Moderate Injury	2,003	189	2,774	382	548	5,896
	Minor Injury	4,988	228	12,680	624	2,072	20,592
	No Apparent Injury	9,075	226	106,392	2,586	30,084	148,363
	Total	16,445	782	122,112	3,792	32,863	175,994
2014	Killed	109	48	43	58	20	278
	Severe Injury	261	77	190	83	131	742
	Moderate Injury	1,958	161	2,575	298	558	5,550
	Minor Injury	4,935	219	12,279	579	2,013	20,025
	No Apparent Injury	9,351	263	108,546	2,507	30,738	151,405
	Total	16,614	768	123,633	3,525	33,460	178,000
2015	Killed	106	47	47	44	41	285
	Severe Injury	274	77	153	99	142	745
	Moderate Injury	2,296	189	2,437	314	719	5,955
	Minor Injury	5,298	218	11,566	573	2,228	19,883
	No Apparent Injury	10,178	277	101,132	2,299	30,236	144,122
	Total	18,152	808	115,335	3,329	33,366	170,990

Note: "Belt use" is used as a shorthand term for safety restraint use. Safety restraint devices are normally lap and shoulder belts, but they can also be child safety seats or booster seats.

IV: MOTORCYCLE CRASHES

2015 motorcycle crash summary

In the past decade many older people have returned to motorcycling. By the end of the calendar year 2015, the number of licensed motorcycle operators in Minnesota had reached the highest level in history. As a result, motorcyclist crash involvement remains very worrisome to traffic safety officials. In 2015, there were 1,352 crashes that involved at least one motorcycle. This represents a 13% increase from the previous year.

Motorcyclist fatalities in 2015 increased 33% from 2014 (from 46 to 61). Of the 61 killed, 52 were drivers and 9 were passengers. Injuries to motorcyclists increased 10% as well (from 1,117 to 1,232). Sixty-nine percent of all motorcyclists killed or injured in 2015 were people aged 40 and over.

Alcohol use among drivers remains high

State law requires that drivers who die in traffic crashes be tested for blood alcohol level. In 2015, 52 motorcycle drivers were killed and 47 of them were tested. Twenty-two (47%) of the 47 drivers tested positive for alcohol and 13 of the 47 (28%) tested at .08% or greater.

Greater crash severity

When a motorcycle is involved in a traffic crash, the chances for a fatality are greatly increased. In fact, 4.3 out of every 100 motorcycle crashes in 2015 was a fatal crash. For all crashes in Minnesota, only 0.5 out of every 100 crashes is a fatal crash.

Helmet use

Currently, Minnesota does not have a mandatory helmet use law for motorcyclists 18 or older. Laws may be debated, but the benefits helmets offer are clear; they protect the head in the event of a crash. In 2015, only seventeen (28%) of the 61 motorcycle riders killed were known to be wearing a helmet. Of the 1,232 motorcyclists injured, only 480 (39%) were known to be wearing a helmet.

Operator training is essential

In addition to the newly endorsed younger drivers each year, a large number of middle-aged people are returning to motorcycling. Motorcycle and motorized bicycle registrations have increased four percent since 2010. The crash data indicates the importance proper operator training. In 2015, one out of seven motorcycle operators that were involved in a fatal crash did not have a valid endorsement to drive a motorcycle. These facts surely indicate that further training is needed for a large segment of the motorcycle driver population.

Males are most often victims

The motorcycle crash experience in Minnesota remains largely a male one. In 2015, 53 of the 61 motorcyclists killed and 1,014 of the 1,232 injured were male. Males account for 83% of all motorcyclists killed or injured.

Contributing factors for motorcyclists

In 2015, two in five (39%) motorcycle crashes were single-vehicle crashes. In these crashes, the factors that reporting officers list most often are illegal or unsafe speed (19%), chemical impairment (11%) and driver inexperience (11%). In crashes that involve another motor vehicle, the reporting officers list driver inattention or distraction (22%) and following too closely (21%) most often for the motorcyclists.

Contributing factors for the other drivers

In motorcycle crashes that involve another vehicle, the reporting officers more often associate contributing factors with the other driver than with the motorcyclist. For the other drivers, failure to yield right of way (42%) and driver inattention or distraction (17%) are listed most frequently. This demonstrates the need for programming to help motor vehicle drivers and motorcyclists share the road safely.

TABLE 4.01

MOTORCYCLE CRASH SUMMARY, 1981 - 2015

Year	Motorcycle Crashes				Killed		Injured		Licensed Operators	Registered Motorcycles	Mcy Deaths per 10,000 Reg. Mcy	Fatal Crash Rate Per 100 Crashes	
	Fatal	Injury	PDO*	Total	Mcy	Other	Mcy	Other				For Mcy	For All Crashes
1981	92	2,516	455	3,063	96	0	2,874	196	238,926	166,151	5.8	3.0	0.7
1982	72	2,115	331	2,518	70	6	2,381	189	264,134	159,345	4.4	2.9	0.6
1983	70	2,377	364	2,811	73	0	2,678	191	252,808	155,502	4.7	2.5	0.5
1984	59	2,302	407	2,768	62	1	2,590	207	256,836	153,851	4.0	2.2	0.5
1985	75	2,238	435	2,748	77	1	2,500	204	272,317	151,449	5.1	2.7	0.5
1986	63	1,891	364	2,318	66	0	2,152	142	282,087	141,261	4.7	2.7	0.5
1987	51	1,692	378	2,121	51	3	1,853	145	288,424	134,590	3.8	2.4	0.5
1988	57	1,628	284	1,969	58	4	1,817	126	293,347	128,956	4.5	2.9	0.5
1989	37	1,463	248	1,748	37	0	1,617	104	290,000	123,308	3.0	2.1	0.5
1990	46	1,446	243	1,735	50	2	1,605	126	292,074	120,081	4.2	2.7	0.5
1991	38	1,198	225	1,461	40	0	1,357	104	296,624	117,492	3.4	2.6	0.5
1992	29	1,133	199	1,361	28	3	1,288	60	290,722	116,124	2.4	2.1	0.5
1993	33	1,022	190	1,245	34	3	1,151	104	291,756	114,548	3.0	2.7	0.5
1994	41	1,151	189	1,381	43	0	1,324	66	293,164	113,337	3.8	3.0	0.6
1995	32	941	153	1,126	35	2	1,063	76	295,849	113,981	3.1	2.8	0.5
1996	39	934	158	1,131	42	0	1,046	71	297,102	112,551	3.7	3.4	0.5
1997	23	821	127	971	24	1	916	65	298,863	113,443	2.1	2.4	0.5
1998	41	883	141	1,065	40	1	987	69	301,992	118,275	3.4	3.8	0.6
1999	30	867	127	1,024	29	2	991	64	307,009	122,676	2.4	2.9	0.6
2000	34	935	166	1,135	35	1	1,039	45	311,825	132,352	2.6	3.0	0.5
2001	41	997	175	1,213	42	1	1,094	54	317,421	142,882	2.9	3.4	0.5
2002	47	943	178	1,168	47	0	1,071	46	327,604	149,360	3.1	4.0	0.6
2003	58	NA	NA	NA	62	1	NA	NA	335,862	161,793	3.8	NA	NA
2004	50	1,112	182	1,344	50	1	1,251	67	346,169	174,195	2.9	3.7	0.6
2005	61	1,201	169	1,431	59	4	1,319	72	353,460	185,087	3.2	4.3	0.6
2006	70	1,279	147	1,496	70	0	1,413	79	360,143	197,735	3.5	4.7	0.6
2007	60	1,368	195	1,623	61	0	1,498	67	369,623	209,591	2.9	3.7	0.6
2008	71	1,350	212	1,633	72	0	1,505	62	380,232	224,625	3.2	4.3	0.5
2009	47	1,089	193	1,329	53	0	1,200	53	387,159	226,675	2.3	3.5	0.5
2010	44	1,168	165	1,377	45	2	1,296	58	394,083	229,912	2.0	3.2	0.5
2011	43	1,130	136	1,309	42	2	1,248	45	398,092	232,274	1.8	3.3	0.5
2012	51	1,320	192	1,563	55	0	1,454	68	404,967	237,278	2.3	3.3	0.5
2013	59	1,047	160	1,266	60	2	1,143	52	409,943	235,909	2.5	4.7	0.5
2014	44	1,005	152	1,201	46	1	1,117	44	414,346	236,040	1.9	3.7	0.4
2015	58	1,103	191	1,352	61	1	1,232	81	414,782	238,243	2.6	4.3	0.5
Record High*	112	2,728	537	3,308	121	9	3,359	207	414,782	238,243	7.7	4.7	0.8
(year)	(1980)	(1980)	(1976)	(1980)	(1980)	(1975)	(1980)	(1984)	(2015)	(2015)	(1980)	(2013)	(1970)

* Notes: The abbreviation PDO stands for “property damage only” — a crash in which no one is killed or injured. The abbreviation Mcy stands for “motorcyclists” or for “motorcycle.” The record high shown is for the period of time back to year 1970. For registered classic motorcycles, see Table 3 on page 6.

TABLE 4.02

2015 MOTORCYCLE CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Motor-cyclists Killed	Motor-cyclists Injured
Collision With:						
Other Motor Vehicle	25	500	121	646	28	556
Parked Vehicle	0	14	28	42	0	12
Pedestrian	0	3	0	3	0	2
Bicyclist	1	1	0	2	0	0
Deer	6	65	9	80	6	78
Other Animal	0	15	0	15	0	18
Fixed Object	14	160	10	184	15	170
Non-Collision:						
Overturn/Rollover	8	148	4	160	8	170
Fire/Explosion	0	1	0	1	0	1
Other / Unknown	4	196	19	219	4	225
Total	58	1,103	191	1,352	61	1,232

TABLE 4.03

2015 MOTORCYCLE CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Motor-cyclists Killed	Motor-cyclists Injured
250,000 and Over	3	166	52	221	2	170
100,000 - 249,999	1	12	2	15	1	13
50,000 - 99,999	4	206	31	241	4	226
25,000 - 49,999	2	87	22	111	2	92
10,000 - 24,999	5	150	26	181	5	166
5,000 - 9,999	4	58	13	75	4	58
2,500 - 4,999	4	52	7	63	5	65
1,000 - 2,499	1	18	6	25	1	21
Under 1,000	34	354	32	420	37	421
Total	58	1,103	191	1,352	61	1,232

TABLE 4.04

2015 MOTORCYCLE CRASHES BY MONTH

Month	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Motor- cyclists Killed	Motor- cyclists Injured
January	0	1	2	3	0	1
February	0	0	2	2	0	0
March	1	26	5	32	1	28
April	5	92	18	115	6	100
May	11	131	27	169	12	138
June	15	187	30	232	15	215
July	6	209	31	246	7	235
August	6	168	37	211	6	187
September	6	175	20	201	6	203
October	7	88	13	108	7	97
November	1	25	4	30	1	27
December	0	1	2	3	0	1
Total	58	1,103	191	1,352	61	1,232

FIGURE 4.01

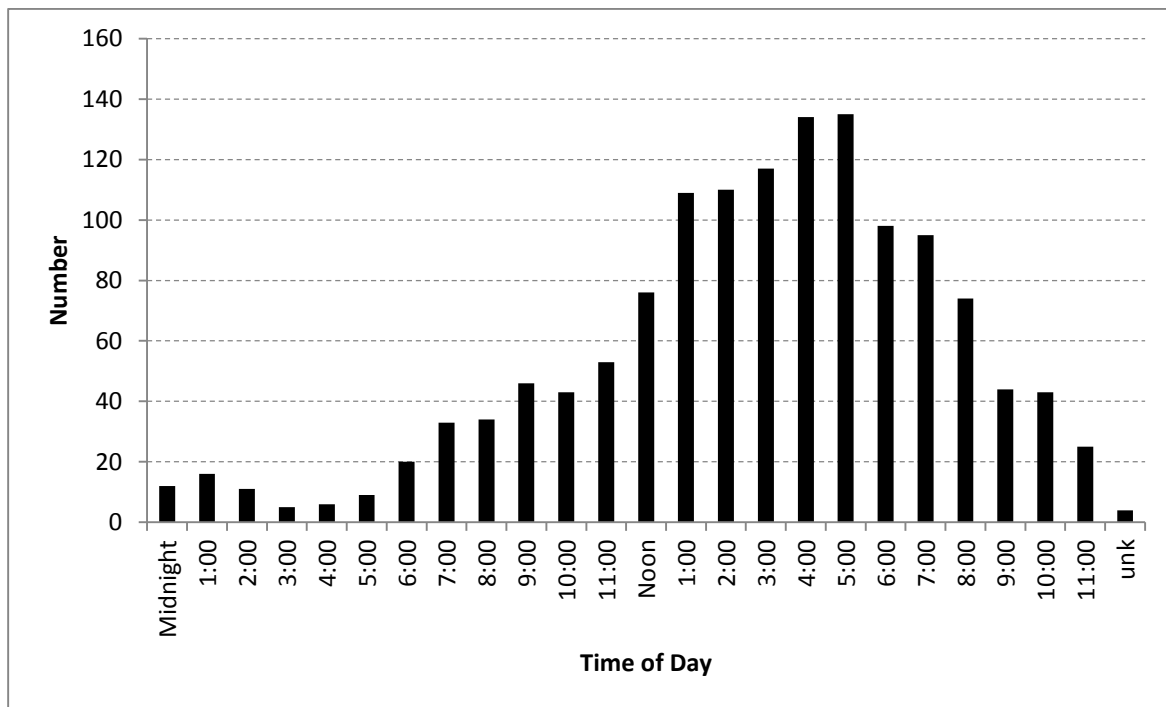
2015 MOTORCYCLE CRASHES BY TIME OF DAY

TABLE 4.05

2015 MOTORCYCLE CRASHES BY TIME AND DAY

Hour Beginning	Crashes		Sunday		Monday		Tuesday		Wednesday		Thursday		Friday		Saturday	
	Total	Fatal	All	Fatal	All	Fatal	All	Fatal	All	Fatal	All	Fatal	All	Fatal	All	Fatal
12 am	12	2	1	0	1	0	0	0	1	0	3	1	2	0	4	1
1:00	16	2	2	0	2	0	0	0	2	0	4	1	3	0	3	1
2:00	11	0	4	0	1	0	0	0	0	0	0	0	3	0	3	0
3:00	5	0	1	0	0	0	0	0	1	0	0	0	1	0	2	0
4:00	6	0	1	0	0	0	1	0	1	0	0	0	2	0	1	0
5:00	9	1	0	0	3	0	1	0	1	0	3	0	0	0	1	1
6:00	20	0	1	0	3	7	8	0	2	0	4	0	1	0	1	0
7:00	33	0	1	0	1	0	7	0	6	0	10	0	5	0	3	0
8:00	34	0	3	0	6	0	7	0	2	0	4	0	6	0	6	0
9:00	46	2	5	1	7	0	3	0	6	0	4	0	10	0	11	1
10:00	43	1	9	1	4	0	5	0	1	0	10	0	8	0	6	0
11:00	53	1	7	1	6	0	5	0	6	0	8	0	7	0	14	0
Noon	76	6	13	1	11	2	5	0	10	1	6	1	13	1	18	0
1:00	109	4	16	0	12	0	15	0	13	0	12	2	11	0	30	2
2:00	110	4	31	2	10	0	9	0	8	0	7	0	14	0	31	2
3:00	117	5	28	2	11	0	9	0	9	0	14	0	15	0	31	3
4:00	134	6	18	3	17	1	18	0	14	0	20	1	15	0	32	1
5:00	135	0	21	0	20	0	16	0	10	0	19	0	19	0	30	0
6:00	98	9	17	3	16	2	16	2	14	0	10	1	12	0	13	1
7:00	95	5	13	1	10	1	12	0	12	1	7	0	20	1	21	1
8:00	74	2	9	0	8	0	7	0	14	1	4	0	11	0	21	1
9:00	44	3	3	1	4	0	3	0	7	0	9	1	9	0	9	1
10:00	43	4	4	0	1	0	2	0	7	1	7	1	6	1	16	1
11:00	25	1	2	0	0	0	3	1	1	0	5	0	8	0	6	0
Unk	4	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0
Total	1,352	58	211	16	154	6	152	3	149	4	170	9	202	3	314	17

TABLE 4.06

MOTORCYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2015

Age Group	Killed			Injured									Total Injured		
				Severe			Moderate			Minor					
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
00 - 04	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05 - 09	0	0	0	0	0	0	0	0	0	0	1	1	0	1	1
10 - 14	0	0	0	0	0	0	4	0	4	0	0	0	4	0	4
15 - 19	0	0	0	3	1	4	21	2	23	15	0	15	39	3	42
20 - 24	5	0	5	15	1	16	64	9	73	43	3	46	122	13	135
25 - 29	4	0	4	11	3	14	61	13	74	47	8	55	119	24	143
30 - 34	4	1	5	21	1	22	37	12	49	44	8	52	102	21	123
35 - 39	4	1	5	8	1	9	41	11	52	16	3	19	65	15	80
40 - 44	4	1	5	14	7	21	35	16	51	29	7	36	78	30	108
45 - 49	5	2	7	17	6	23	43	16	59	34	4	38	94	26	120
50 - 54	9	0	9	19	8	27	56	14	70	39	12	51	114	34	148
55 - 59	7	2	9	30	5	35	57	10	67	29	14	43	116	29	145
60 - 64	5	0	5	21	3	24	43	8	51	21	1	22	85	12	97
65 - 69	4	1	5	7	0	7	23	4	27	14	1	15	44	5	49
70 & Older	2	0	2	2	0	2	15	3	18	9	1	10	26	4	30
Not Stated	0	0	0	0	1	1	1	0	1	5	0	5	6	1	7
Total	53	8	61	168	37	205	501	118	619	345	63	408	1,014	218	1,232

FIGURE 4.02

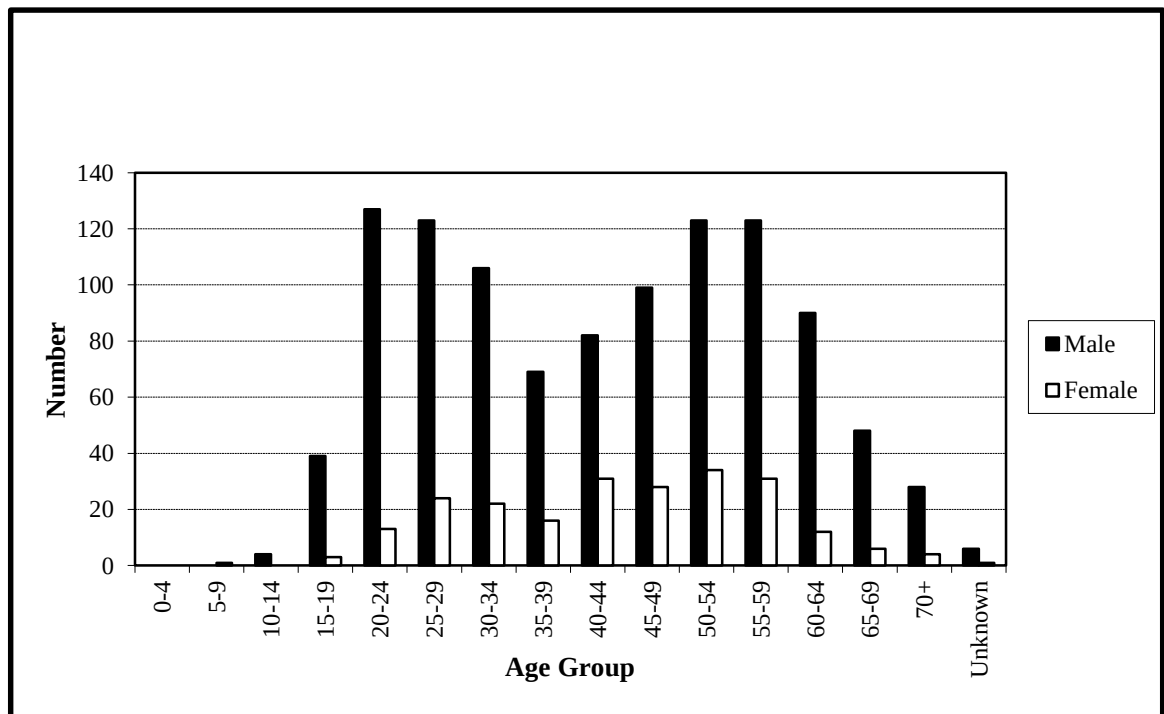
MOTORCYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2015

TABLE 4.07
HELMET USE BY MOTORCYCLISTS KILLED OR INJURED, 2006 - 2015

	Year	Helmet Used		Helmet Not Used		Unknown Helmet Use		Total	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Killed	2006	15	21.4%	53	75.7%	2	2.9%	70	100.0%
	2007	11	18.0%	45	73.8%	5	8.2%	61	100.0%
	2008	12	16.7%	53	73.6%	7	9.7%	72	100.0%
	2009	11	20.8%	37	69.8%	5	9.4%	53	100.0%
	2010	12	26.7%	26	57.8%	7	15.6%	45	100.0%
	2011	13	31.0%	23	54.8%	6	14.3%	42	100.0%
	2012	11	20.0%	38	69.1%	6	10.9%	55	100.0%
	2013	14	23.3%	34	56.7%	12	20.0%	60	100.0%
	2014	9	19.6%	28	60.9%	9	19.6%	46	100.0%
	2015	17	27.9%	37	60.7%	7	11.5%	61	100.0%
	Year	Helmet Used		Helmet Not Used		Unknown Helmet Use		Total	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Injured	2006	481	34.0%	544	38.5%	388	27.5%	1,413	100.0%
	2007	554	37.0%	520	34.7%	424	28.3%	1,498	100.0%
	2008	539	35.8%	569	37.8%	397	26.4%	1,505	100.0%
	2009	452	37.7%	432	36.0%	316	26.3%	1,200	100.0%
	2010	483	37.3%	468	36.1%	345	26.6%	1,296	100.0%
	2011	488	39.1%	447	35.8%	313	25.1%	1,248	100.0%
	2012	523	36.0%	549	37.8%	382	26.3%	1,454	100.0%
	2013	389	34.0%	424	37.1%	330	28.9%	1,143	100.0%
	2014	423	37.9%	369	33.0%	325	29.1%	1,117	100.0%
	2015	480	39.0%	417	33.9%	335	27.2%	1,232	100.0%

TABLE 4.08
ENDORSEMENT STATUS OF MOTORCYCLE OPERATORS
INVOLVED IN FATAL CRASHES, 2006 - 2015

Year	Valid Endorsement		Permit Only		Canceled, Suspended, Revoked		No Endorsement*		Total** for Year	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
2006	59	83.1%	1	1.4%	3	4.2%	4	5.6%	71	100.0%
2007	49	81.7%	0	0.0%	4	6.7%	5	8.3%	60	100.0%
2008	57	79.2%	0	0.0%	5	6.9%	8	11.1%	72	100.0%
2009	39	29.6%	0	0.0%	1	2.0%	8	16.3%	49	100.0%
2010	38	77.6%	0	0.0%	5	10.2%	5	10.2%	49	100.0%
2011	38	84.4%	0	0.0%	3	6.7%	4	8.9%	45	100.0%
2012	41	78.8%	0	0.0%	0	0.0%	10	19.2%	52	100.0%
2013	41	69.5%	0	0.0%	0	0.0%	10	16.9%	59	100.0%
2014	37	77.1%	2	4.2%	1	2.1%	5	10.4%	45	100.0%
2015	47	75.8%	5	8.1%	3	4.8%	6	14.5%	62	100.0%

* A valid endorsement means that the driver's license has been "endorsed" to permit operation of a motorcycle.

** Rows may not add to total due to the unknown status of some motorcycle operators. In addition, totals can include non-motorcyclists killed in motorcycle-related crashes.

TABLE 4.09

ALCOHOL USE BY KILLED MOTORCYCLE DRIVERS, 2006 - 2015

Year	Killed	Tested	Alcohol Concentration							
			(.00)	(.01 - .07)	(.08 - .09)	(.10 or more)				
2006	66	61	42 (69%)	1 (2%)	1 (2%)	17 (28%)				
2007	58	52	34 (65%)	3 (6%)	1 (2%)	14 (27%)				
2008	65	59	31 (53%)	3 (5%)	2 (3%)	23 (39%)				
2009	45	42	25 (60%)	6 (14%)	2 (5%)	9 (21%)				
2010	42	40	25 (63%)	1 (2%)	1 (2%)	13 (32%)				
2011	34	29	21 (72%)	2 (7%)	1 (3%)	5 (17%)				
2012	47	38	26 (68%)	2 (5%)	1 (3%)	9 (24%)				
2013	53	43	27 (63%)	2 (5%)	2 (5%)	12 (28%)				
2014	41	35	25 (71%)	3 (9%)	0 (0%)	7 (20%)				
2015	61	47	25 (53%)	9 (19%)	0 (0%)	13 (28%)				

Percentages are based on those motorcycle drivers tested.

TABLE 4.10

**2015 MOTORCYCLE DRIVER FATALITIES'
LEVEL OF ALCOHOL CONCENTRATION BY AGE**

Age	Killed	Tested	Alcohol Concentration									
			.01-.07	.08-.09	.10+	.00	.01-.04	.05-.09	.10-.14	.15-.19	.20-.24	.25 and Over
14 & Younger	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0
20	1	1	0	0	0	1	0	0	0	0	0	0
Under 21	1	1	0	0	0	1	0	0	0	0	0	0
14 & Younger	0	0	0	0	0	0	0	0	0	0	0	0
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	5	5	0	0	2	3	0	0	0	0	1	1
25 - 29	4	4	1	0	1	2	1	0	0	0	1	0
30 - 34	4	3	0	0	0	3	0	0	0	0	0	0
35 - 39	4	4	0	0	3	1	0	0	1	2	0	0
40 - 44	3	3	1	0	1	1	1	0	0	1	0	0
45 - 49	5	4	1	0	3	0	1	0	1	1	1	0
50 - 54	9	8	2	0	3	3	2	0	1	1	1	0
55 - 59	7	7	1	0	0	6	1	0	0	0	0	0
60 & Older	11	9	3	0	0	6	2	1	0	0	0	0
Total	52	47	9	0	13	25	8	1	3	5	4	1

TABLE 4.11
CONTRIBUTING FACTORS IN 2015 MOTORCYCLE CRASHES

Contributing Factors	Single Vehicle Crashes		Multi-Vehicle Crashes			
	Attributed to Motorcycle Drivers		Attributed to Motorcycle Drivers		Attributed to Other Drivers	
	Number	Percent	Number	Percent	Number	Percent
Human Factors:						
Illegal/Unsafe Speed	121	19.1%	37	10.0%	8	1.6%
Chemical Impairment	70	11.0%	6	1.6%	8	1.6%
Driver Inexperience	69	10.9%	9	2.4%	3	0.6%
Driver Inattention or Distraction	48	7.6%	82	22.2%	86	17.3%
Overcorrecting	43	6.8%	0	0.0%	2	0.4%
Improper/Unsafe Lane Use	19	3.0%	19	5.1%	27	5.4%
Following Too Closely	15	2.4%	76	20.5%	38	7.6%
Improper Turn	8	1.3%	5	1.4%	22	4.4%
Improper Passing/Overtaking	7	1.1%	21	5.7%	4	0.8%
Improper Park/Stop/Start	4	0.6%	1	0.3%	10	2.0%
Failure to Yield Right of Way	3	0.5%	39	10.5%	209	42.1%
Driving Left of Center (no passing)	3	0.5%	4	1.1%	6	1.2%
Disregard for Traffic Control Device	2	0.3%	14	3.8%	15	3.0%
Non-Motorist Error	2	0.3%	0	0.0%	0	0.0%
Vision Obscured-Sunlight	2	0.3%	0	0.0%	10	2.0%
Impeding Traffic	1	0.2%	2	0.5%	3	0.6%
Driver on Phone/CB/Radio	1	0.2%	0	0.0%	3	0.6%
Other Vision Related Factor	1	0.2%	3	0.8%	9	1.8%
Unsafe Backing	0	0.0%	0	0.0%	6	1.2%
Improper/No Signal	0	0.0%	0	0.0%	4	0.8%
Vision Obscured-Windshield	0	0.0%	1	0.3%	1	0.2%
Other Human Factor	30	4.7%	12	3.2%	8	1.6%
Vehicular Factors:						
Skidding	56	8.8%	11	3.0%	1	0.2%
Defective/Failed Tire	7	1.1%	1	0.3%	0	0.0%
Defective Brakes	5	0.8%	1	0.3%	0	0.0%
Defective Lights	0	0.0%	1	0.3%	0	0.0%
Other Vehicular Factor	16	2.5%	2	0.5%	0	0.0%
Miscellaneous Factors:						
Weather	13	2.0%	2	0.5%	0	0.0%
Other Factor	89	14.0%	21	5.7%	14	2.8%
Total	635	100.0%	370	100.0%	497	100.0%
Vehicles for Which There Was “No Clear Cont. Factor”	202		362		254	
Total Number of Drivers	713		679		649	

Zero, one, or two contributing factors may be attributed to a single driver. This may cause the sum of the factors cited to differ from the number of drivers. Percentages are based on all contributing factors cited. They may not sum to 100 due to rounding.

V. TRUCK CRASHES

This section summarizes data on crashes involving trucks, also known as commercial motor vehicles (CMVs). On the crash report form, commercial motor vehicles are identified as any of the following eight types of trucks: (1) two-axle, six-tire single unit truck or stepvan, (2) three-or-more-axle single unit truck, (3) single-unit truck with trailer, (4) truck tractor with no trailer, (5) truck tractor with semi-trailer, (6) truck tractor with double trailers, (7) truck tractor with triple trailers, (8) heavy truck of other or unknown type. A crash involving any of these vehicles is classified as a truck crash. Pickup trucks and vans are not counted as trucks in this section.

Truck crashes decrease

In 2015, there were 4,226 truck-involved traffic crashes reported to the Department of Public Safety. This represents a 16% decrease from the previous year. There were 57 fatal truck crashes, killing a total of 62 people. In addition, there were 1,316 people injured in truck-related crashes.

Fatalities and injuries are mostly in other vehicles

In two-vehicle collisions, heavier vehicles have the clear safety advantage. Only 4 of the 62 people killed in truck-involved crashes were in trucks. The other 58 deaths included two pedestrians, one motorcyclist, one bicyclist and 54 persons in cars, SUVs, pickups, or vans. Of the 1,316 people injured, only 266 (20%) were truck occupants.

Contributing factors in truck crashes

Table 5.03 in this Section reveals that contributing factors listed by officers are very similar for truck and non-truck drivers. For example, driver inattention or distraction was most frequently cited for truck

drivers (18% of the time) as well as for non-truck drivers (17% of the time). However, non-truck drivers drive too fast and fail to yield more often than truck drivers. Illegal or unsafe speed was reported for 10% of the other vehicles but only 8% of the trucks. And, failure to yield was reported for 15% of the other vehicles but only 10% of the trucks. For the other motorists and even more so for the truck drivers, it is quite rare that officers report the presence of any type of chemical impairment such as the use of alcohol or drugs. Less than one quarter of a percent of the truckers and 1.6% of the drivers of other vehicles were reported as having some such impairment.

Truck crashes are workday occurrences

Truck crashes are strongly tied to the workday. In 2015, only 364 (9%) of truck crashes occurred on either a Saturday or Sunday. And, Figure 5.01 in this Section reveals that a vast majority of truck crashes occur during daytime work hours.

Driving conditions

Driving conditions can vary from day to day in Minnesota, but most truck crashes occurred on dry roads in clear weather. However, 21% of the fatal crashes and 27% of the injury crashes occurred on road surfaces reported to be wet, or to be covered with snow or slush, or with ice or packed snow.

Crash severity increases in rural areas

For this report, “rural” is defined as an area that has a population of less than 5,000. Probably because high speeds are more often possible in the rural open countryside, crashes there are more severe. Ninety percent of fatal and 44% of truck-related injury crashes occurred in the rural areas of Minnesota.

TABLE 5.01
TRUCK CRASH SUMMARY, 2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Crashes	4,558	4,631	4,344	3,653	4,181	4,025	3,789	4,741	5,023	4,226
Fatal Crashes	62	71	64	47	77	48	50	62	57	57
Persons Killed	65	90	74	58	93	51	56	67	63	62
Injury Crashes	1,156	1,144	1,056	889	1,005	916	870	1,042	1,047	982
Severe	89	83	72	68	71	59	70	55	61	58
Moderate	323	334	295	288	270	265	273	315	321	307
Minor	744	727	689	533	664	592	527	672	665	617
Persons Injured	1,544	1,745	1,425	1,162	1,385	1,219	1,178	1,425	1,387	1,316
Severe	104	130	89	88	90	70	86	80	76	75
Moderate	415	508	388	359	358	323	355	419	409	379
Minor	1,025	1,107	948	715	937	826	737	926	902	862
PDO Crashes	3,340	3,416	3,224	2,717	3,099	3,061	2,869	3,637	3,919	3,187

TABLE 5.02
PERSONS KILLED OR INJURED IN 2015 TRUCK CRASHES
BY VEHICLE OCCUPIED

Vehicle Type	Killed	Severely Injured	Moderately Injured	Minor Injuries	Total Injured
Automobile	35	23	153	376	552
Pickup Truck	13	9	41	65	115
SUV	4	14	56	141	211
Van	2	12	18	65	95
Pedestrian	2	3	1	3	7
Bicycle	1	1	4	2	7
Motorcycle	1	2	1	4	7
Motorscooter/Motorbike	0	0	1	1	2
Snowmobile	0	1	0	0	1
Ambulance	0	0	1	8	9
Police/Fire Vehicle	0	0	1	1	2
Roadway Maintenance Vehicle	0	0	4	13	17
Other Public Owned Vehicle	0	1	1	5	7
Farm Equipment	0	0	1	0	1
Taxicab	0	0	0	4	4
School Bus	0	0	0	7	7
Bus-Non School	0	0	0	2	2
Hit and Run	0	0	0	2	2
Two-Axle, Six-Tire, Single Unit Truck	1	3	16	31	50
Three or More Axle Single Unit Truck	1	2	18	17	37
Single Unit Truck with Trailer	0	0	4	11	15
Truck Tractor with No Trailer	0	0	2	4	6
Truck Tractor with Semi Trailer	2	4	52	91	147
Heavy Truck—Other or Unknown Type	0	0	3	8	11
Other or Unknown Vehicle Type	0	0	1	1	2
Total	62	75	379	862	1,316

TABLE 5.03

CONTRIBUTING FACTORS IN 2015 TRUCK CRASHES

Contributing Factors	Attributed to Truck Vehicles		Attributed to Non-Truck Vehicles	
	Number	Percent	Number	Percent
Human Factors				
Driver Inattention or Distraction	517	17.7%	442	17.1%
Improper/Unsafe Lane Use	339	11.6%	297	11.5%
Failure to Yield Right of Way	301	10.3%	396	15.3%
Following Too Closely	236	8.1%	202	7.8%
Illegal/Unsafe Speed	235	8.0%	258	10.0%
Improper Turn	177	6.0%	43	1.7%
Unsafe Backing	137	4.7%	19	0.7%
Disregarding Traffic Control Device	62	2.1%	70	2.7%
Overcorrecting	52	1.8%	35	1.4%
Improper Passing or Overtaking	49	1.7%	123	4.7%
Vision Obscured-Windshield	43	1.5%	38	1.5%
Driver Inexperience	37	1.3%	49	1.9%
Improper Parking, Starting, or Stopping	29	1.0%	21	0.8%
Driving Left of Center (no passing)	22	0.8%	49	1.9%
Improper/No Signal	11	0.4%	7	0.3%
Impeding Traffic	9	0.3%	16	0.6%
Chemical Impairment	6	0.2%	42	1.6%
Driver on Phone/CB/Radio	3	0.1%	1	0.0%
Failure to Use Lights	1	0.0%	1	0.0%
Non-Motorist Error	0	0.0%	5	0.2%
Other Human Factors	107	3.7%	75	2.9%
Vehicular Factors				
Skidding	66	2.3%	91	3.5%
Defective Brakes	54	1.8%	18	0.7%
Oversize/Overweight Vehicle	45	1.5%	1	0.0%
Other Vehicular Factor	66	2.3%	15	0.6%
Miscellaneous Factors				
Weather	152	5.2%	168	6.5%
Other	171	5.8%	110	4.2%
Total Contributing Factors Cited	2,927	100.0%	2,592	100.0%
Vehicles for Which There Was "No Clear Contributing Factor"	1,924		1,766	
Total Number of Vehicles	4,421		3,836	

Zero, one, or two contributing factors may be associated with each vehicle. This may result in the sum of the factors cited to differ from the number of vehicles. Percentages are based on all contributing factors cited. They may not sum to 100 due to rounding. Bicyclists and pedestrians are included in the "non-truck vehicles" columns in this table.

TABLE 5.04

AGE OF TRUCK DRIVERS IN 2015 CRASHES

Driver Age	Truck or Tractor	Truck with Semi- Trailer	Truck with Twin Trailer	Truck with Other Trailer	Total
14 & younger	0	0	0	0	0
15 - 19	18	5	0	6	29
20 - 24	128	97	0	20	245
25 - 29	188	167	2	29	386
30 - 34	197	181	3	38	419
35 - 39	186	209	1	37	433
40 - 44	185	234	3	33	455
45 - 49	179	237	5	36	457
50 - 54	220	333	5	41	599
55 - 59	216	308	2	33	559
60 - 64	114	195	6	27	342
65 & Older	77	143	1	19	240
Not Stated	48	81	0	12	141
Total*	1,756	2,190	28	331	4,305

* There were 4,421 trucks involved in 2015 crashes. Table 5.04 tabulates the ages of drivers for the 4,305 trucks where it was possible to identify a driver.

TABLE 5.05

DRIVERS IN 2015 TRUCK CRASHES BY PHYSICAL CONDITION*

Physical Condition	Truck Drivers		Other Drivers	
	Number	Percent	Number	Percent
Normal	4,014	93.2%	3,338	92.3%
Under the Influence	5	0.1%	37	1.0%
Had Been Drinking	3	0.1%	11	0.3%
Had Been Using Drugs	3	0.1%	6	0.2%
Aggressive	0	0.0%	1	0.0%
Fatigued/Asleep	8	0.2%	16	0.4%
Physical Disability	3	0.1%	2	0.1%
Ill	5	0.1%	3	0.1%
Other	6	0.1%	15	0.4%
Unknown	258	6.0%	189	5.0%
Total **	4,305	100.0%	3,618	100.0%

* As noted by police officer on accident report.

** There were 4,421 trucks involved in 2015 crashes. This table tabulates the apparent physical condition of drivers for the 4,305 trucks where it was possible to identify a driver. Similarly, there were 3,836 non-truck motor vehicles involved in 2015 truck crashes. The condition of the identifiable 3,618 non-truck drivers is presented here.

TABLE 5.06

2015 TRUCK CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Collision With:						
Other Motor Vehicle	48	776	2,355	3,179	52	1,088
Parked Motor Vehicle	0	29	227	256	0	44
Train	0	3	7	10	0	3
Bicycle	1	7	0	8	1	7
Pedestrian	2	7	0	9	2	8
Deer	0	0	8	8	0	0
Other Animal	0	3	8	11	0	3
Fixed Object	2	58	373	433	2	60
Non-Collision:						
Overturn	2	78	89	169	2	80
Fire or Explosion	0	0	2	2	0	0
Jackknife	0	2	45	47	0	2
Other Non-Collision	0	6	15	21	0	6
Other/Unknown	2	13	58	73	3	15
Total	57	982	3,187	4,226	62	1,316

TABLE 5.07

2015 TRUCK CRASHES BY MONTH

Month	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
January	4	94	308	406	4	132
February	3	72	262	337	4	85
March	7	63	212	282	9	97
April	6	54	183	243	6	71
May	4	64	215	283	4	86
June	4	107	296	407	4	144
July	4	90	271	365	4	130
August	3	102	289	394	3	132
September	5	84	274	363	6	112
October	7	94	318	419	8	123
November	5	67	277	349	5	86
December	5	91	282	378	5	118
Total	57	982	3,187	4,226	62	1,316

TABLE 5.08

2015 TRUCK CRASHES BY TIME AND DAY

Time of Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Midnight - 2:59 AM	5	4	25	15	14	12	10	85
3:00 - 5:59 AM	4	20	19	20	26	24	15	128
6:00 - 8:59 AM	10	151	182	137	119	129	42	770
9:00 - 11:59 AM	22	179	206	181	152	145	68	953
Noon - 2:59 PM	17	197	187	171	195	171	47	985
3:00 - 5:59 PM	35	155	182	158	156	141	29	856
6:00 - 8:59 PM	25	49	61	47	48	57	15	302
9:00 - 11:59 PM	8	20	26	28	29	19	12	142
Unknown	0	1	1	2	0	1	0	5
Total	126	776	889	759	739	699	238	4,226

FIGURE 5.01

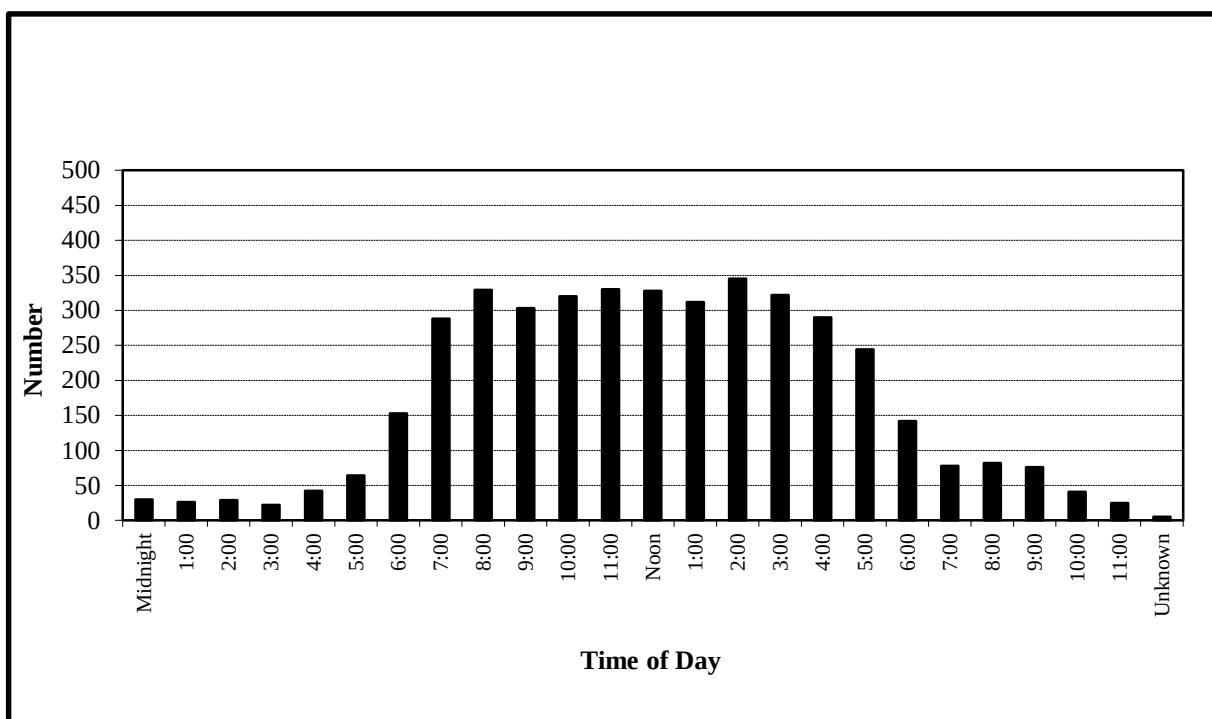
2015 TRUCK CRASHES BY TIME OF DAY

TABLE 5.09

2015 TRUCK CRASHES BY ROAD SURFACE CONDITION

Road Surface Condition	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Dry	45	710	2,241	2,996	50	954
Wet	5	117	391	513	5	161
Snow	1	54	224	279	1	73
Slush	1	10	29	40	1	15
Ice or Packed Snow	5	84	278	367	5	106
Muddy	0	5	1	6	0	5
Debris	0	0	1	1	0	0
Other	0	2	11	13	0	2
Unknown	0	0	11	11	0	0
Total	57	982	3,187	4,226	62	1,316

TABLE 5.10

2015 TRUCK CRASHES BY WEATHER CONDITION

Weather Condition	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Clear	32	595	1,880	2,507	36	801
Cloudy	19	217	729	965	20	283
Rain	2	56	195	253	2	74
Snow	3	77	265	345	3	109
Sleet/Hail/Freezing Rain	0	15	38	53	0	16
Fog/Smog/Smoke	0	3	8	11	0	4
Blowing Sand/Dust/Snow	0	10	46	56	0	16
Severe Cross Winds	0	6	6	12	0	8
Other	1	2	7	10	1	4
Unknown	0	1	13	14	0	1
Total	57	982	3,187	4,226	62	1,316

TABLE 5.11

2015 TRUCK CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
250,000 & Over	1	132	652	785	1	173
100,000 - 249,999	0	19	43	62	0	23
50,000 - 99,999	0	143	546	689	0	188
25,000 - 49,999	1	83	328	412	1	112
10,000 - 24,999	2	124	453	579	2	159
5,000 - 9,999	2	47	185	234	2	73
2,500 - 4,999	2	26	132	160	2	34
1,000 - 2,499	1	29	63	93	1	32
Under 1,000	48	379	785	1,212	53	522
Total	57	982	3,187	4,226	62	1,316

TABLE 5.12

2015 TRUCK CRASHES BY TYPE OF ROADWAY

Roadway Type	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Interstate Highway	4	240	882	1,126	4	311
US Trunk Highway	14	183	430	627	15	246
State Trunk Highway	24	192	504	720	27	276
County State-Aid Highway	14	200	563	777	15	264
County Road	0	16	29	45	0	19
Township Road	1	33	43	77	1	42
Local Street	0	118	708	826	0	158
Other Road	0	0	28	28	0	0
Total	57	982	3,187	4,226	62	1,316

VI: PEDESTRIAN CRASHES

This section deals with motor vehicle crashes that injure or kill pedestrians. Prior to 1984, a crash was defined as a pedestrian crash only if the pedestrian was the first "object" struck by a motor vehicle. Since 1984, a pedestrian crash is defined as any crash where a pedestrian is struck and injured or killed.

Overall, pedestrian crashes increase

In 2015, there were 911 crashes in which at least one pedestrian was injured or killed by a motor vehicle. This represents an 11 percent increase from the previous year. Pedestrian crashes were at their highest level since 2008.

Deaths and injuries increase

In 2015, 41 pedestrians were killed, 24 more than in 2014. In addition, 904 pedestrians were injured, an 8 percent increase from the previous year. Nearly five percent of all pedestrian crashes resulted in a death, compared to one-half of 1% of all traffic crashes resulting in a death.

Males at greater risk

In 2015, persons less than 25 years of age accounted for 15% of the pedestrians killed and 35% of pedestrians injured. Male pedestrians were more likely than females to be killed or injured: males accounted for 68% of all pedestrian fatalities and 53% of all pedestrian injuries.

Urban/rural areas and time of day

In 2015, 92% of pedestrian crashes occurred in urban areas (defined as areas with populations over 5,000). About one-third (33%) of pedestrian crashes occurred during the weekday rush hour driving time periods - the rush hour driving time period is defined as Monday through Friday 6:00-9:00 a.m. and 3:00-6:00 p.m. One out of every four (24%) pedestrian fatal crashes occurred during the late night hours 9:00 p.m.-3:00 a.m.

Prior actions of vehicles

Nearly half (48%) of all motor vehicles involved in pedestrian injury crashes and four in five (79%) involved in fatal pedestrian crashes in 2015 were going straight ahead on the roadway prior to the crash. One-third (31%) of all motor vehicles involved in pedestrian crashes were making a right or left turn.

Prior actions of pedestrians

Thirty-two percent of pedestrians killed and 26% of pedestrians injured were trying to cross a road at an area with no crosswalk and no signal. However, only 13% of pedestrians injured were crossing the road at a signaled intersection and were crossing with the signal.

Contributing factors

For 38% of all motor vehicle drivers and 16% of pedestrians in all pedestrian crashes, the reporting officer indicated that driver failure to yield right of way was a contributing factor. The second most cited contributing factor for motor vehicle drivers was driver inattention or distraction (21%). Obscured vision was a factor for motor vehicle drivers in 9% of all pedestrian crashes.

Drinking pedestrian fatalities

Of the 41 pedestrians killed, 30 were tested for the presence of alcohol in their blood system. Of those tested, one third (10) tested positive for alcohol. All ten of these killed pedestrians had BACs of .10 or higher.

TABLE 6.01

PEDESTRIAN CRASH SUMMARY, 2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Pedestrian Crashes	915	957	860	883	808	857	878	868	818	911
Pedestrians Killed	38	33	25	41	36	40	40	35	17	41
Pedestrians Injured	906	975	867	880	824	859	874	867	837	904

TABLE 6.02

PEDESTRIAN CRASHES BY ROUTE SYSTEM, 2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Interstate	14	7	7	12	8	19	10	10	12	18
US Trunk	47	51	52	35	35	36	42	41	34	31
Washington Trunk	99	92	92	101	82	75	82	87	79	86
CSAH	273	294	259	272	253	278	280	267	260	231
County Road	5	11	4	4	8	5	4	6	2	4
Township Road	8	8	5	1	1	4	4	3	6	2
Local Road	456	470	437	441	413	423	447	443	411	531
Other	9	22	4	13	4	15	6	11	12	7
Unknown	4	2	0	4	4	2	3	0	2	1
Total	915	957	860	883	808	857	878	868	818	911

TABLE 6.03

PEDESTRIANS KILLED OR INJURED BY AGE AND GENDER, 2015

Age Group	Killed			Severe Injuries			Moderate Injuries			Minor Injuries			Total Injuries		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total*
00 - 04	0	1	1	2	2	4	2	3	5	4	10	14	8	15	23
05 - 09	2	0	2	6	0	6	13	7	20	15	10	25	34	17	51
10 - 14	0	0	0	2	4	6	10	10	20	19	14	33	31	28	59
15 - 19	1	0	1	7	7	14	16	7	23	30	25	55	53	39	92
20 - 24	1	1	2	10	1	11	17	13	30	25	25	50	52	39	91
25 - 29	3	1	4	6	3	9	12	11	23	19	19	38	37	33	70
30 - 34	1	0	1	2	3	5	9	18	27	21	26	47	32	47	79
35 - 39	3	2	5	2	0	2	9	8	17	20	17	37	31	25	56
40 - 44	2	0	2	5	3	8	7	7	14	11	13	24	23	23	46
45 - 49	2	1	3	6	3	9	13	9	22	11	16	27	30	28	58
50 - 54	1	1	2	6	4	10	15	15	30	18	9	27	39	28	67
55 - 59	4	0	4	1	3	4	14	9	23	21	10	31	36	22	58
60 - 64	2	2	4	2	4	6	5	6	11	11	10	21	18	20	38
65 - 69	0	3	3	1	3	4	5	9	14	11	5	16	17	17	34
70 - 74	1	1	2	1	2	3	6	3	9	4	3	7	11	8	19
75 - 79	4	0	4	2	1	3	6	2	8	2	3	5	10	6	16
80 - 84	0	0	0	2	3	5	1	2	3	2	4	6	5	9	14
85 & Older	1	0	1	1	1	2	2	1	3	0	0	0	3	2	5
Not Stated	0	0	0	1	1	2	3	3	10	2	5	16	6	9	28
Total	28	13	41	65	48	113	165	143	312	246	224	479	476	415	904

* Within column categories, where rows do not add across, gender was not stated on crash report.

FIGURE 6.01
PEDESTRIAN FATALITIES BY AGE GROUP, 2006 - 2015 COMBINED

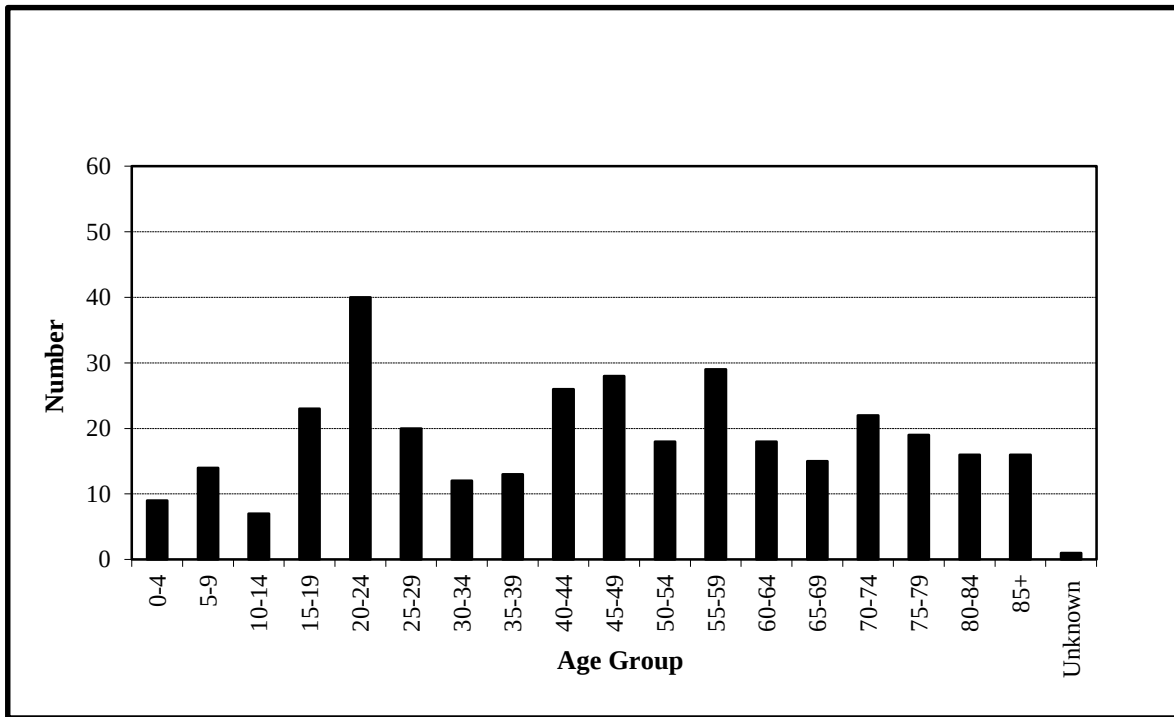


FIGURE 6.02
PEDESTRIANS KILLED OR INJURED BY AGE AND GENDER, 2015

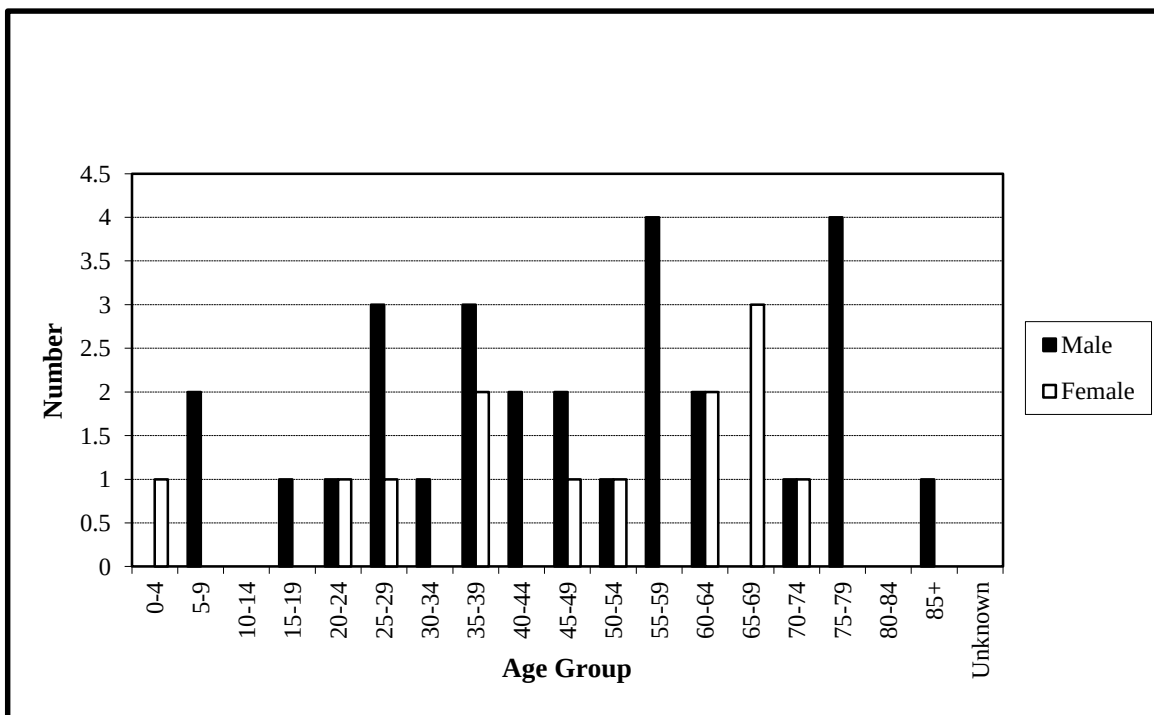


TABLE 6.04

2015 PEDESTRIAN CRASHES BY MONTH

Month	Fatal Crashes	Injury Crashes	Total Crashes	Killed	Injured
January	4	68	72	4	72
February	1	52	53	1	55
March	3	73	76	3	75
April	2	66	68	2	68
May	1	63	64	1	70
June	3	55	58	3	54
July	3	67	70	3	71
August	1	59	60	1	61
September	6	82	88	6	84
October	7	108	115	7	113
November	5	88	93	5	90
December	5	89	94	5	91
Total	41	870	911	41	904

TABLE 6.05

2015 PEDESTRIAN CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Injury Crashes	Total Crashes	Pedestrians Killed	Pedestrians Injured
250,000 and Over	12	457	469	12	480
100,000 - 249,999	1	20	21	1	22
50,000 - 99,999	10	93	103	10	92
25,000 - 49,999	1	87	88	1	90
10,000 - 24,999	4	122	126	4	126
5,000 - 9,999	2	31	33	2	31
2,500 - 4,999	1	29	30	1	31
1,000 - 2,499	0	11	11	0	11
Under 1,000	10	20	30	10	21
Total	41	870	911	41	904

TABLE 6.06

2015 PEDESTRIAN CRASHES BY TIME AND DAY

Time of Day	Fatal Crashes	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Mid - 2:59 AM	1	13	1	1	1	3	3	18	40
3:00 - 5:59 AM	3	6	2	1	3	3	3	1	19
6:00 - 8:59 AM	3	1	31	18	20	27	13	5	115
9:00 - 11:59 AM	2	12	23	15	11	17	13	14	105
Noon - 2:59 PM	3	4	14	17	21	19	24	12	111
3:00 - 5:59 PM	6	13	38	42	39	41	30	23	226
6:00 - 8:59 PM	14	19	29	27	36	37	33	21	202
9:00 - 11:59 PM	9	12	15	8	17	15	15	11	93
Total	41	80	153	129	148	162	134	105	911

FIGURE 6.03

2015 PEDESTRIAN CRASHES BY TIME OF DAY

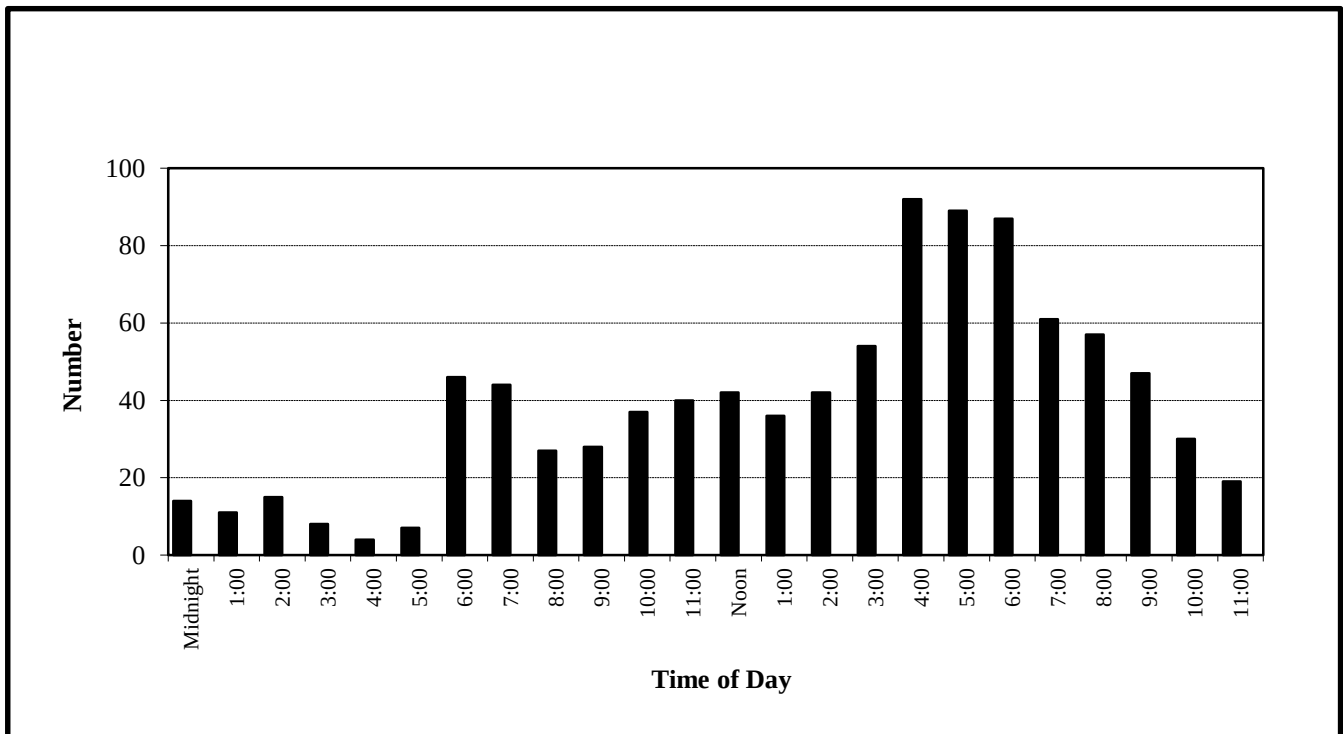


TABLE 6.07

PRIOR ACTION OF VEHICLES IN 2015 PEDESTRIAN CRASHES

Action	Vehicles in Fatal Crashes	Vehicles in Injury Crashes	Vehicles in All Crashes
Going Straight	37	433	470
Wrong Way Opposing Traffic	0	1	1
Turning Right on Red	1	22	23
Turning Left on Red	0	2	2
Turning Right	1	70	71
Turning Left	1	222	223
Making U Turn	0	2	2
Starting From Parked	0	7	7
Starting in Traffic	0	11	11
Slowing in Traffic	0	2	2
Parking	0	4	4
Avoiding Object in Road	1	7	8
Changing Lanes	1	1	2
Passing	0	1	1
Backing	0	22	22
All Others	4	71	75
Unknown	1	21	22
Total*	47	899	946

* The number of vehicles in total crashes exceeds the number of crashes because some crashes involved more than one vehicle.

TABLE 6.08

PRIOR ACTION OF PEDESTRIANS KILLED OR INJURED IN 2015

Action	Number Pedestrians Killed	Percent Pedestrians Killed	Number Pedestrians Injured	Percent Pedestrians Injured
Crossing Road (No Crosswalk and No Signal)	13	31.7%	233	25.8%
Crossing Against Signal	1	2.4%	43	4.8%
Crossing With Signal	1	2.4%	118	13.1%
Crossing In Crosswalk (No Signal)	4	9.8%	178	19.7%
Walking In Road With Traffic	8	19.5%	57	6.3%
Walking In Road Against Traffic	1	2.4%	18	2.0%
Standing In Road	0	0.0%	28	3.1%
Emerging Front/Behind Parked Vehicle	0	0.0%	0	0.0%
Child Getting On/Off School Bus	0	0.0%	0	0.0%
Pushing/Working on Vehicle	0	0.0%	0	0.0%
Working In Road	0	0.0%	2	0.2%
Getting On/Off Vehicle	0	0.0%	7	0.8%
Playing In Road	0	0.0%	6	0.7%
Not In Road	1	2.4%	24	2.7%
Other Pedestrian Action	2	4.9%	51	5.6%
Unknown	10	24.4%	139	15.4%
Total*	41	100.0%	904	100.0%

* Percent totals may not sum to 100% due to rounding.

TABLE 6.09

CONTRIBUTING FACTORS IN 2015 PEDESTRIAN CRASHES

Contributing Factors	Number Attributed to Pedestrians	Percent Attributed to Pedestrians	Number Attributed to Motor Vehicle Drivers	Percent Attributed to Motor Vehicle Drivers
Human Factors				
Non-Motorist Error	106	25.9%	0	0.0%
Failure to Yield Right of Way	67	16.4%	253	38.0%
Disregard for Traffic Control Device	29	7.1%	14	2.1%
Chemical Impairment	22	5.4%	19	2.9%
Impeding Traffic	10	2.4%	3	0.5%
Improper/Unsafe Lane Use	5	1.2%	12	1.8%
Vision Obscured	5	1.2%	59	8.9%
Driver Inattention or Distraction	4	1.0%	136	20.5%
Improper Parking/Starting/Stopping	1	0.2%	2	0.3%
Driver Inexperience	1	0.2%	6	0.9%
Illegal/Unsafe Speed	0	0.0%	25	3.8%
Following Too Closely	0	0.0%	5	0.8%
Driving Left of Center (not passing)	0	0.0%	1	0.2%
Improper Passing/Overtaking	0	0.0%	2	0.3%
Improper Turn	0	0.0%	8	1.2%
Unsafe Backing	0	0.0%	15	2.3%
Overcorrecting	0	0.0%	1	0.2%
Driver on Phone/CB/Radio	0	0.0%	2	0.3%
Failure to Use Lights	56	13.7%	34	5.1%
Other Human Factors	106	25.9%	0	0.0%
Vehicular Factors				
Skidding	0	0.0%	2	0.3%
Other Vehicular Factors	2	0.5%	1	0.2%
Miscellaneous Factors				
Weather Conditions	5	1.2%	19	2.9%
Other/Unknown	96	23.5%	46	6.9%
Total Contributing Factors Cited	409	100.0%	665	100.0%
Vehicles for Which There Was "No Clear Contributing Factor"	501		348	
Total Number of Drivers	974		972	

Zero, one, or two contributing factors may be attributed to a single driver. This may cause the sum of the factors cited to differ from the number of drivers. Percentages are based on all contributing factors cited. They may not sum to 100 due to rounding.

TABLE 6.10

**PEDESTRIAN FATALITIES'
LEVEL OF ALCOHOL CONCENTRATION, 2005 - 2015**

Year	Killed	Tested	Alcohol Concentration*							
			(.00)		(.01 - .07)		(.08 - .09)		(.10 or more)	
2005	44	34	18	(53%)	1	(3%)	2	(6%)	13	(38%)
2006	38	31	22	(71%)	1	(3%)	0	(0%)	8	(26%)
2007	33	18	9	(50%)	1	(6%)	0	(0%)	8	(44%)
2008	25	20	11	(55%)	0	(0%)	0	(0%)	9	(45%)
2009	41	33	22	(67%)	0	(0%)	1	(3%)	10	(30%)
2010	36	29	19	(66%)	0	(0%)	0	(0%)	10	(34%)
2011	40	33	21	(64%)	3	(9%)	0	(0%)	9	(27%)
2012	40	22	16	(73%)	0	(0%)	0	(0%)	6	(27%)
2013	35	31	15	(48%)	3	(10%)	0	(0%)	13	(42%)
2014	17	10	6	(60%)	0	(0%)	0	(0%)	4	(40%)
2015	41	30	20	(67%)	0	(0%)	0	(0%)	10	(33%)

* The percentage figures shown are based on the number of fatally injured pedestrians who were tested for alcohol concentration. (The law requires testing of all drivers and pedestrians, 16 years of age or older, who die within four hours as a result of a motor vehicle crash.)

TABLE 6.11

**2015 PEDESTRIAN FATALITIES'
LEVEL OF ALCOHOL CONCENTRATION BY AGE**

Age Group	Killed	Tested	Alcohol Concentration			
			(.00)	(.01 - .07)	(.08 - .09)	(.10 or more)
< 15	3	1	1	0	0	0
15 - 19	1	1	1	0	0	0
20 - 24	2	2	1	0	0	1
25 - 29	4	4	2	0	0	2
30 - 34	1	1	0	0	0	1
35 - 39	5	4	2	0	0	2
40 - 44	2	2	1	0	0	1
45 - 49	3	2	2	0	0	0
50 - 54	2	1	1	0	0	0
55 - 59	4	4	1	0	0	3
60 - 64	4	2	2	0	0	0
65 - 69	3	1	1	0	0	0
70 - 74	2	2	2	0	0	0
75 - 79	4	2	2	0	0	0
80 - 84	0	0	0	0	0	0
85 & Older	1	1	1	0	0	0
Total	41	30	20	0	0	10

TABLE 6.12

**2015 PEDESTRIAN FATALITIES' LEVEL OF ALCOHOL
CONCENTRATION BY TIME OF DAY**

Time of Day	Killed	Tested	Alcohol Concentration			
			(.00)	(.01 - .07)	(.08 - .09)	(.10 or more)
Mid - 2:59 AM	1	1	0	0	0	1
3:00 - 5:59 AM	3	3	1	0	0	2
6:00 - 8:59 AM	3	2	2	0	0	0
9:00 - 11:59 AM	2	0	0	0	0	0
Noon - 2:59 PM	3	1	1	0	0	0
3:00 - 5:59 PM	6	4	4	0	0	0
6:00 - 8:59 PM	14	12	8	0	0	4
9:00 - 11:59 PM	9	7	4	0	0	3
Total	41	30	20	0	0	10

VII: BICYCLE CRASHES

Bicycles are subject to the same traffic laws as motor vehicles, but bicycle crashes are reported to the Minnesota Department of Public Safety only if they involve collision with a motor vehicle. Therefore, this section represents only a portion of the total number of bicycle crashes.

Bicycle crashes increase

In 2015, there was a 16% increase in bicycle crashes from the previous year - there were 898 bicycle crashes in 2015, compared to 776 bicycle crashes in 2014.

Fatalities and injuries increase

In 2015, 873 bicyclists were injured compared to 755 injured bicyclists in 2014, a 16% increase. Bicyclist fatalities doubled from 5 in 2014 to 10 in 2015.

Warm weather

Bicycle crashes are mostly a warm weather occurrence. In 2015, all ten fatalities and 757 of the 873 injuries (87%) occurred during the six-month period April-October.

Time of day

One-third (32%) of all weekday bicycle crashes occurred during the afternoon rush hours 3:00-6:00pm. About one out of four (26%) weekend bicycle crashes occurred during the same period.

Big cities

Generally, traffic crashes involving a bicycle and a motor vehicle tend to occur in areas with larger populations. Over nine out of ten (95%) bicycle crashes and 60% of fatal bicycle crashes occurred in cities where the population was over 5,000 people.

Males injured most often

Males were nearly three times more likely than females to be injured in a bicycle crash. In 2015, 674 male bicyclists (76%) were injured compared with 202 female bicyclists (23%).

Age

Of the 873 bicyclists injured in 2015, over two in five (44%) were less than 25 years of age.

Prior action of bicyclists

Nearly half (49%) of bicyclists in all crashes were riding with traffic. Only 4% of all crash involved bicyclists were riding against traffic.

Contributing factors

Failure to yield the right of way was listed most often by officers for both the bicyclists and other motor vehicle drivers. Failure to yield right of way was attributed to (28%) of the bicyclists and (44%) of the other drivers. For bicyclists, disregard for traffic control device and non-motorist error (a violation committed by the bicyclist separate from those listed) were listed the next most often. Driver inattention or distraction was the second contributing factor cited most often for other drivers.

TABLE 7.01
BICYCLE CRASH SUMMARY, 2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bicycle Crashes	944	1,020	981	957	898	963	920	862	776	898
Bicyclists Killed	8	4	13	10	9	5	7	6	5	10
Bicyclists Injured	908	979	942	963	882	937	875	822	755	873

TABLE 7.02
2015 BICYCLE CRASHES BY MONTH

Month	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
January	0	10	0	10	0	10
February	0	8	0	8	0	8
March	0	34	0	34	0	35
April	1	64	2	67	1	63
May	0	99	1	100	0	104
June	1	136	2	139	1	137
July	2	129	6	137	2	129
August	1	126	3	130	1	127
September	4	114	3	121	4	113
October	1	82	4	87	1	84
November	0	54	2	56	0	54
December	0	9	0	9	0	9
Total	10	865	23	898	10	873

FIGURE 7.01
2015 BICYCLE CRASHES BY TIME OF DAY

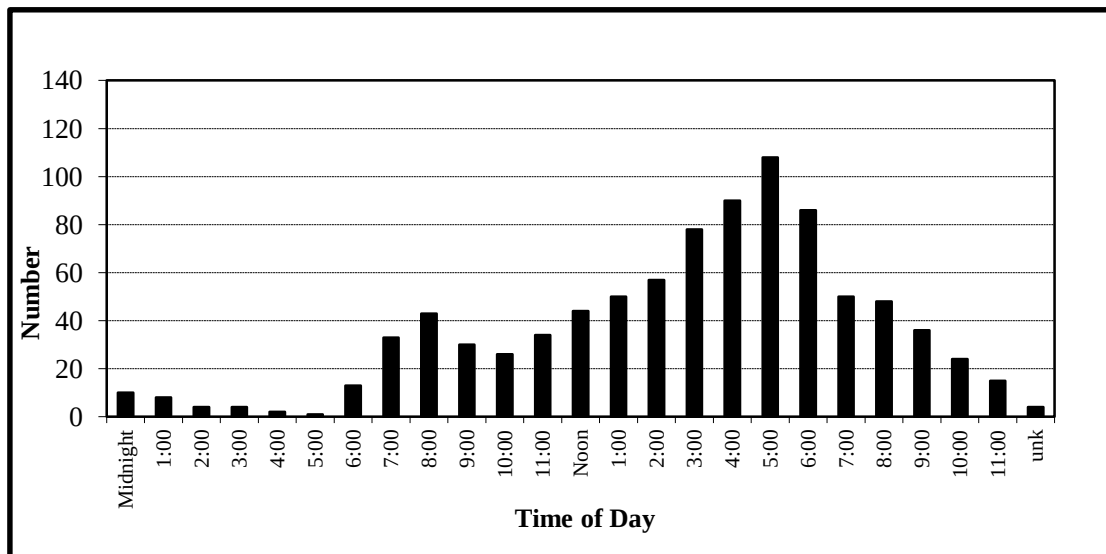


TABLE 7.03
2015 BICYCLE CRASHES BY TIME AND DAY

Time of Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Mid - 2:59 AM	6	2	1	4	0	1	8	22
3:00 - 5:59 AM	1	0	2	2	1	1	0	7
6:00 - 8:59 AM	2	22	18	14	17	14	2	89
9:00 - 11:59 AM	15	9	11	19	17	5	14	90
Noon - 2:59 PM	20	12	27	27	18	30	17	151
3:00 - 5:59 PM	27	31	54	53	41	44	26	276
6:00 - 8:59 PM	21	29	28	35	24	24	23	184
9:00 - 11:59 PM	8	10	10	13	6	15	13	75
Unknown	2	1	1	0	0	0	0	4
Total	102	116	152	167	124	134	103	898

TABLE 7.04
2015 BICYCLE CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Bicyclists Killed	Bicyclists Injured
250,000 and Over	2	381	14	397	2	387
100,000 - 249,999	0	25	1	26	0	25
50,000 - 99,999	0	157	4	161	0	160
25,000 - 49,999	2	109	0	111	2	109
10,000 - 24,999	1	119	3	123	1	119
5,000 - 9,999	1	35	1	37	1	34
2,500 - 4,999	0	15	0	15	0	15
1,000 - 2,499	1	10	0	11	1	10
Under 1,000	3	14	0	17	3	14
Total	10	865	23	898	10	873

FIGURE 7.02
BICYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2015

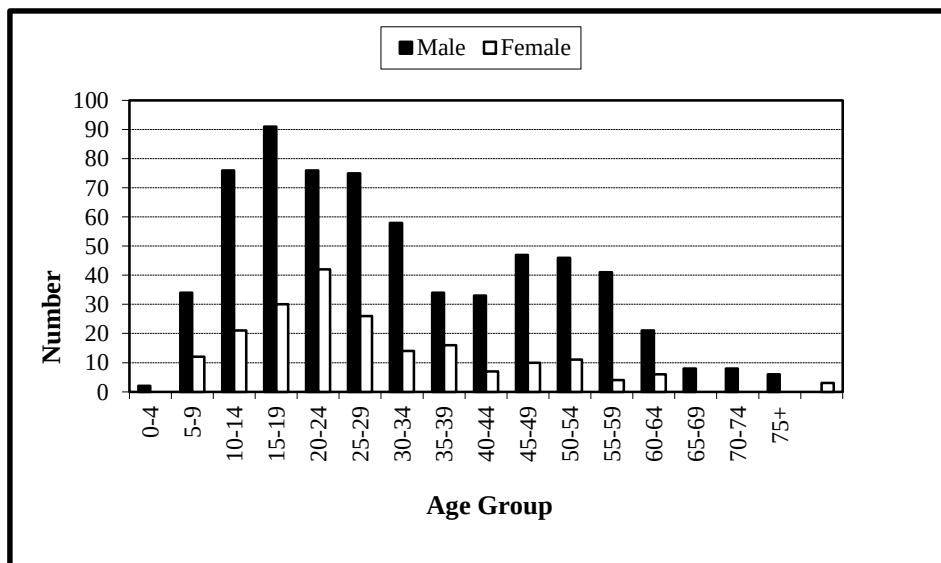


TABLE 7.05

BICYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2015

Age Group	Killed			Severe Injuries			Moderate Injuries			Minor Injuries			Total Injuries		
	M	F	Total*	M	F	Total*	M	F	Total*	M	F	Total*	M	F	Total*
00 - 04	0	0	0	0	0	0	2	0	2	0	0	0	2	0	2
05 - 09	0	0	0	0	0	0	11	5	16	23	7	30	34	12	46
10 - 14	0	0	0	2	1	3	19	7	26	55	13	68	76	21	97
15 - 19	0	0	0	4	2	6	18	7	25	69	21	90	91	30	121
20 - 24	1	0	1	2	1	3	26	14	40	47	27	74	75	42	117
25 - 29	1	0	1	3	1	4	22	11	33	49	14	64	74	26	101
30 - 34	0	0	0	4	0	4	16	5	21	38	9	47	58	14	72
35 - 39	0	0	0	6	0	6	13	7	20	15	9	24	34	16	50
40 - 44	1	1	2	2	1	3	13	1	14	17	4	21	32	6	38
45 - 49	1	0	1	2	2	4	17	4	21	27	4	31	46	10	56
50 - 54	2	1	3	1	1	2	18	5	23	25	4	29	44	10	54
55 - 59	0	0	0	6	1	7	12	2	14	23	1	24	41	4	45
60 - 64	1	0	1	1	0	1	7	2	9	12	4	16	20	6	26
65 - 69	0	0	0	0	0	0	4	0	4	4	0	4	8	0	8
70 - 74	0	0	0	1	0	1	4	0	4	3	0	3	8	0	8
75 & Older	1	0	1	0	0	0	2	0	2	3	0	3	5	0	5
Not Stated	0	0	0	1	0	1	2	1	3	15	2	23	18	3	27
Total	8	2	10	35	10	45	206	71	277	425	119	551	666	200	873

* Within columns, where numbers do not add across to total, gender was not stated on the accident report.

TABLE 7.06

PRIOR ACTION OF BICYCLISTS INVOLVED IN 2015 CRASHES

Prior Action	Bicyclists in Fatal Crashes	Bicyclists in Injury Crashes	Bicyclists in Property Damage Crashes	Bicyclists in All Crashes*
Riding With Traffic	6	421	16	443
Riding Against Traffic	1	31	2	34
Making Right Turn	0	11	0	11
Making Left Turn	0	21	0	21
Making U Turn	0	2	0	2
Riding Across Road	1	38	3	42
Slowing/Stopping/Starting	0	5	0	5
Other/Unknown	2	344	10	356
Total	10	873	31	914

* The total number of bicyclist actions may exceed the number of bicycle crashes because some crashes involved more than one bicycle.

TABLE 7.07

CONTRIBUTING FACTORS IN 2015 BICYCLE CRASHES

Contributing Factors	Number Attributed to Bicyclists	Percent Attributed to Bicyclists	Number Attributed to Motor Vehicle Drivers	Percent Attributed to Motor Vehicle Drivers
Human Factors				
Failure to Yield Right of Way	123	28.3%	241	43.8%
Disregard for Traffic Control Device	73	16.8%	24	4.4%
Non-Motorist Error	65	14.9%	0	0.0%
Driver Inattention or Distraction	24	5.5%	109	19.8%
Failure to Use Lights	19	4.4%	0	0.0%
Improper/Unsafe Lane Use	15	3.4%	12	2.2%
Vision Obscured	9	2.1%	45	8.2%
Illegal/Unsafe Speed	4	0.9%	7	1.3%
Driver Inexperience	4	0.9%	1	0.2%
Chemical Impairment	4	0.9%	4	0.7%
Improper Passing/Overtaking	3	0.7%	8	1.5%
Improper Turn	3	0.7%	6	1.1%
Following Too Closely	2	0.5%	1	0.2%
Improper Park/Start/Stop	2	0.5%	4	0.7%
Impeding Traffic	2	0.5%	0	0.0%
Driver on Phone/CB/Radio	1	0.2%	1	0.2%
Driving Left of Center (not passing)	1	0.2%	2	0.4%
Unsafe Backing	0	0.0%	4	0.7%
Improper/No Signal	0	0.0%	2	0.4%
Other Human Factors	20	4.6%	22	4.0%
Vehicular Factors				
Defective Brakes	4	0.9%	0	0.0%
Skidding	0	0.0%	0	0.0%
Other Vehicular Factor	2	0.5%	2	0.4%
Miscellaneous Factors				
Weather Conditions	9	2.1%	11	2.0%
Other	46	10.6%	44	8.0%
Total	435	100.0%	550	100.0%
Vehicles for Which There Was "No Clear Contributing Factor"	416		362	
Total Number of Bicyclists/Drivers	907		907	

Zero, one, or two contributing factors may be attributed to a single driver or bicyclist. This may cause the sum of the factors cited to differ from the number of drivers or bicyclists. Percentages are based on all contributing factors cited. They may not sum to 100 due to rounding.

VIII: SCHOOL BUS CRASHES

As a general rule, school bus travel is very safe. The school bus is a large and heavy vehicle that provides good protection for its occupants. However, since buses can carry many passengers, serious crashes could potentially cause many injuries.

Crashes included in this section are those in which at least one school bus was physically involved. Note that in some cases, a crash could be seen as involving a school bus (albeit indirectly), yet not be counted as a school bus crash. For example, one such case would be a crash in which a person gets off the bus, crosses a street and is struck by another vehicle. Such a case could be called an indirect school bus crash.

Indirect bus crashes

Changes in the crash reporting system in 2003 now make it possible to identify crashes in which a school bus was indirectly involved. In 2015, there were 151 crashes resulting in 70 injuries in which a school bus was indirectly involved.

Number of crashes increase

In 2015, school bus crashes increased by 14%. There were 690 traffic crashes directly involving at least one school bus, compared to 806 crashes in 2014.

One death in 2015

In 2015, there was one fatal school bus crash resulting in one death. This fatality was a driver from the other motor vehicle.

Morning and afternoon rush hours

Seven in ten (70%) school bus crashes and three in four school bus crash injuries (75%) in 2015 occurred during the time periods of 6-9 a.m. and 3-6 p.m. Over nine out of ten (92%) of school bus crashes occurred during school year months September through May.

School bus stop arm

Less than 1% of all school bus crashes occurred when the school bus stop arm was deployed. Only two injuries occurred in school bus crashes where the school bus stop arm was in use, down from 17 in 2014.

Contributing factors

In 2015, there were 690 traffic crashes where at least one school bus was involved. In all there were 704 school buses directly involved in these crashes. For half (51%) of the school bus drivers, officer reports showed there was “no clear contributing factor.” The two contributing factors cited most often were driver inattention or distraction (19%) and failure to yield right of way (15%). The third most frequently cited contributing factor was following too closely (9%). The most commonly cited contributing factors attributed to drivers of other vehicles in school bus crashes were driver inattention or distraction (21%), failure to yield right of way (15%) and following too closely (11%).

TABLE 8.01

SCHOOL BUS CRASH SUMMARY, 2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Crashes	625	680	663	670	611	615	553	732	806	690
Fatal Crashes	1	7	1	4	4	1	4	3	1	1
Persons Killed	1	8	4	4	4	1	7	3	1	1
Injury Crashes	137	126	107	144	116	112	113	132	117	142
Persons Injured	241	243	188	233	215	214	211	237	238	234
Property Damage Crashes	487	547	555	522	491	502	436	597	688	547
School Buses Directly Involved	631	690	670	675	615	621	554	736	820	700

TABLE 8.02

2015 SCHOOL BUS CRASHES BY TIME OF DAY

Time of Day	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Midnight - 2:59 AM	0	1	0	1	0	1
3:00 - 5:59 AM	0	0	0	0	0	0
6:00 - 8:59 AM	1	58	212	271	1	105
9:00 - 11:59 AM	0	12	65	77	0	24
Noon - 2:59 PM	0	21	83	104	0	29
3:00 - 5:59 PM	0	47	167	214	0	70
6:00 - 8:59 PM	0	3	16	19	0	5
9:00 - 11:59 PM	0	0	2	2	0	0
Unknown	0	0	2	2	0	0
Total	1	142	547	690	1	234

TABLE 8.03

2015 SCHOOL BUS CRASHES BY MONTH

Month	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
January	0	15	78	93	0	21
February	0	19	86	105	0	30
March	0	9	35	44	0	18
April	0	13	36	49	0	23
May	0	18	54	72	0	23
June	0	6	21	27	0	6
July	0	6	12	18	0	23
August	0	0	8	8	0	0
September	0	17	45	62	0	24
October	0	13	54	67	0	18
November	0	16	63	79	0	27
December	1	10	55	66	1	21
Total	1	142	547	690	1	234

TABLE 8.04

**AGE AND GENDER OF PERSONS INJURED
IN 2015 SCHOOL BUS CRASHES**

Age Group	In Bus	Pedestrian	In Other Vehicle	Male	Female	Total*
00 - 04	11	0	3	8	6	14
05 - 09	14	0	5	11	7	19
10 - 14	22	1	4	21	6	27
15 - 19	8	1	21	16	14	30
20 - 24	1	0	15	7	9	16
25 - 29	3	0	18	12	9	21
30 - 34	4	2	11	7	10	17
35 - 39	3	0	7	4	6	10
40 - 44	3	0	10	8	5	13
45 - 49	2	0	9	6	5	11
50 - 54	4	0	4	2	6	8
55 - 59	5	0	7	8	4	12
60 - 64	2	0	4	5	1	6
65 & Older	4	1	12	11	6	17
Unknown	10	1	2	7	5	13
Total	96	6	132	133	99	234

*There were two cases where the gender of the person was not recorded on the crash form.

TABLE 8.05

**PERSONS KILLED OR INJURED
IN 2015 SCHOOL BUS CRASHES BY POPULATION OF AREA**

Population of City or Township	Killed	Severely Injured	Moderately Injured	Minor Injuries	Total
250,000 and Over	0	1	10	49	60
100,000 - 249,999	0	1	1	5	7
50,000 - 99,999	0	0	4	35	39
25,000 - 49,999	0	0	3	7	10
10,000 - 24,999	0	0	9	29	38
5,000 - 9,999	0	0	1	21	22
2,500 - 4,999	0	0	3	4	7
1,000 - 2,499	0	0	4	2	6
Under 1,000	1	1	5	39	45
Total	1	3	40	191	234

TABLE 8.06

2015 SCHOOL BUS CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Collision With:						
Other Motor Vehicle	1	121	426	548	1	200
Parked Motor Vehicle	0	7	107	114	0	12
Bicycle	0	3	0	3	0	3
Pedestrian	0	6	0	6	0	6
Deer	0	0	1	1	0	0
Fixed Object	0	3	10	13	0	10
Other/Unknown	0	2	3	5	0	3
Total	1	142	547	690	1	234

TABLE 8.07

2015 SCHOOL BUS CRASHES BY TRAFFIC CONTROL DEVICE

Traffic Control Device	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Traffic Signal	0	39	141	180	0	55
Overhead Flashers	0	0	1	1	0	0
Stop Sign—All Approaches	0	2	29	31	0	3
Stop Sign—Not All Approaches	0	35	128	163	0	50
Yield Sign	0	4	5	9	0	5
School Bus Stop Arm	0	2	4	6	0	2
No Passing Zone	0	0	1	1	0	0
Railroad Crossing Stop Sign	0	1	11	12	0	2
Other	0	4	17	21	0	5
Not Applicable	1	55	206	262	1	112
Unknown	0	0	4	4	0	0
Total	1	142	547	690	1	234

TABLE 8.08

CONTRIBUTING FACTORS IN 2015 SCHOOL BUS CRASHES

Contributing Factors	Number Attributed to School Bus Drivers	Percent Attributed to School Bus Drivers	Number Attributed to Drivers of Other Vehicles	Percent Attributed to Drivers of Other Vehicles
Human Factors				
Driver Inattention or Distraction	56	18.6%	100	20.7%
Failure to Yield Right of Way	46	15.3%	71	14.7%
Following Too Closely	26	8.6%	51	10.5%
Improper Turn	25	8.3%	7	1.4%
Improper/Unsafe Lane Use	20	6.6%	27	5.6%
Unsafe Backing	20	6.6%	8	1.7%
Improper Passing/Overtaking	12	4.0%	9	1.9%
Improper Park/Start/Stop	12	4.0%	14	2.9%
Driver Inexperience	7	2.3%	12	2.5%
Disregard for Traffic Control Device	6	2.0%	25	5.2%
Vision Obscured	6	2.0%	10	2.1%
Illegal/Unsafe Speed	4	1.3%	34	7.0%
Driving Left of Center (not passing)	1	0.3%	3	0.6%
Overcorrecting	1	0.3%	1	0.2%
Impeding Traffic	1	0.3%	2	0.4%
Non-Motorist Error	1	0.3%	1	0.2%
Improper/No Signal	0	0.0%	2	0.4%
Chemical Impairment	0	0.0%	3	0.6%
Driver on Phone/CB/Radio	0	0.0%	1	0.2%
Failure to Use Lights	0	0.0%	0	0.0%
Other Human Factors	8	2.7%	13	2.7%
Vehicular Factors				
Skidding	7	2.3%	29	6.0%
Defective Brakes	1	0.3%	4	0.8%
Other Vehicular Factors	1	0.3%	4	0.8%
Miscellaneous Factors				
Weather Conditions	20	6.6%	43	8.9%
Other	20	6.6%	10	2.1%
Total	301	100.0%	484	100.0%
Vehicles for Which There Was "No Clear Contributing Factor"	360		261	
Total Number of Drivers	704		722	

Zero, one, or two contributing factors may be attributed to a single driver. This may cause the sum of the factors cited to differ from the number of drivers. Percentages are based on all contributing factors cited. They may not sum to 100 due to rounding. Bicyclists and pedestrians are included as other drivers in this table.

IX: MOTOR VEHICLE/TRAIN CRASHES

Each crash reported in this section involves a motor vehicle and a train. Train collisions with pedestrians or bicyclists are not counted as traffic crashes in this publication.

Statewide, one-half of one percent of all motor vehicle crashes result in a fatality. Generally, motor-vehicle/train crashes are few in number, but they are more likely to be serious. In 2015, there were two motor vehicle/train crashes that resulted in a fatality, representing 6% of all motor-vehicle/train crashes in Minnesota.

Number of train crashes decreased in 2015

In the past decade, the number of motor-vehicle/train crashes in Minnesota has been declining. In 2015, there were 48 vehicle/train crashes, 15 fewer crashes than were reported in the previous year.

Fatalities and injuries decrease

Both fatalities and injuries in motor vehicle/train crashes decreased. Three people were killed in 2015 compared with eight in 2014. Nineteen people were injured in 2015 compared with 25 in 2014.

Railroad crossings with flashing lights or gates

Railroad crossings without some type of flashing lights or gates are very dangerous. No fatalities occurred at a railroad crossing without flashing lights or gates. Only three crashes occurred where there was a railroad crossing gate present.

Most crashes occurred in rural areas

Motor vehicle crashes involving a train are a predominantly rural phenomenon, defined as an area with a population of less than 5,000. In 2015, 19 of the 48 total crashes and one of the three fatalities occurred in rural areas.

Contributing factors

For motor vehicle drivers involved in train crashes, failure to yield right of way (34%), disregard of traffic control device (25%) and improper turn were the three contributing factors listed most often by officers.

TABLE 9.01

MOTOR VEHICLE / TRAIN CRASH SUMMARY, 2006 - 2015

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Total Crashes	51	56	40	37	33	48	25	51	63	48
Fatal Crashes	8	2	3	4	1	4	3	5	6	2
Persons Killed	9	2	4	5	1	4	3	5	8	3
Injury Crashes	10	16	17	11	17	16	12	17	25	15
Persons Injured	15	20	20	15	21	18	15	20	33	19
Property Damage Crashes	33	38	20	22	15	28	10	29	32	31

TABLE 9.02

2015 MOTOR VEHICLE / TRAIN CRASHES BY MONTH

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total	Killed	Injured
January	0	0	2	2	0	0
February	0	1	6	7	0	1
March	0	1	1	2	0	2
April	0	0	5	5	0	0
May	1	4	1	6	1	5
June	0	1	2	3	0	2
July	0	1	1	2	0	1
August	0	2	3	5	0	2
September	0	0	3	3	0	0
October	0	1	4	5	0	1
November	1	4	1	6	2	5
December	0	0	2	2	0	0
Total	2	15	31	48	3	19

TABLE 9.03

2015 MOTOR VEHICLE / TRAIN CRASHES BY TIME AND DAY

Time of Day	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
Midnight - 2:59 AM	0	0	0	2	0	0	0	2
3:00 - 5:59 AM	0	0	0	0	0	0	0	0
6:00 - 8:59 AM	0	2	1	1	3	0	1	8
9:00 - 11:59 AM	0	3	0	2	1	1	1	8
Noon - 2:59 PM	1	2	1	1	1	1	1	8
3:00 - 5:59 PM	3	2	1	3	0	2	1	12
6:00 - 8:59 PM	1	2	1	2	1	0	1	8
9:00 - 11:59 PM	0	0	1	0	1	0	0	2
Total	5	11	5	11	7	4	5	48

TABLE 9.04

**2015 MOTOR VEHICLE / TRAIN CRASHES
BY TRAFFIC CONTROL DEVICE**

Traffic Control Device	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Stop Sign All Approaches	0	2	3	5	0	3
RR Crossing Gate	1	0	0	1	1	0
RR Crossing Flashing Lights	1	1	1	3	2	2
RR Crossing Stop Sign	0	3	6	9	0	3
RR Overhead Lights/Gate	0	2	0	2	0	3
RR Crossbuck	0	1	0	1	0	1
Other Device	0	6	18	24	0	7
Not Applicable	0	0	3	3	0	0
Total	2	15	31	48	3	19

TABLE 9.05

**2015 MOTOR VEHICLE / TRAIN CRASHES
AGE OF PERSONS KILLED OR INJURED**

Age Group	Killed	Severe Injuries	Moderate Injuries	Minor Injuries	Total Injuries
00 - 04	0	0	0	0	0
05 - 09	0	0	0	0	0
10 - 14	0	0	0	0	0
15 - 19	0	0	0	0	0
20 - 24	1	1	0	0	1
25 - 29	0	0	1	1	2
30 - 34	0	0	1	0	1
35 - 39	0	0	1	1	2
40 - 44	0	0	0	1	1
45 - 49	0	0	0	2	2
50 - 54	0	0	0	3	3
55 - 59	1	0	0	2	2
60 - 64	0	0	0	2	2
65 - 69	0	0	0	0	0
70 - 74	0	0	0	0	0
75 - 79	0	0	0	1	1
80 & Older	1	0	2	0	2
Total	3	1	5	13	19

TABLE 9.06

2015 MOTOR VEHICLE / TRAIN CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
250,000 and Over	0	6	17	23	0	7
100,000 - 249,999	0	0	0	0	0	0
50,000 - 99,999	0	0	0	0	0	0
25,000 - 49,999	0	1	1	2	0	1
10,000 - 24,999	1	0	1	2	2	1
5,000 - 9,999	0	1	1	2	0	2
2,500 - 4,999	0	0	0	0	0	0
1,000 - 2,499	0	2	0	2	0	2
Under 1,000	1	5	11	17	1	6
Total	2	15	31	48	3	19

TABLE 9.07

**2015 MOTOR VEHICLE / TRAIN CRASHES
MOTOR VEHICLE DRIVER CONTRIBUTING FACTORS**

Contributing Factor	Number	Percent
Human Factors		
Failure to Yield Right of Way	25	34.2%
Disregard for Traffic Control	18	24.7%
Driver Inattention or Distraction	8	11.0%
Improper Turn	7	9.6%
Illegal/Unsafe Speed	2	2.7%
Improper/Unsafe Lane Use	2	2.7%
Improper Passing/Overtaking	1	1.4%
Chemical Impairment	1	1.4%
Vision Obscured	1	1.4%
Other Human Factor	2	2.7%
Vehicular Factors		
Skidding	2	2.7%
Other		
Weather	2	2.7%
Other Contributing Factor	2	2.7%
Total	73	100.0%
Vehicles for Which There Was "No Clear Contributing Factor"	4	
Number of Drivers	51	

Zero, one, or two contributing factors may be attributed to a single driver. This may cause the sum of the factors cited to differ from the number of drivers. Percentages are based on all contributing factors cited. They may not sum to 100 due to rounding. No contributing factors are cited for train operators.

X: CRASHES INVOLVING TEEN DRIVERS

Minnesota teen drivers continue to be overrepresented in traffic crashes due to driver inexperience, distractions, speeding/risk-taking and seat belt non-use. The greatest crash risk occurs during the first months of independent driving. The good news is that progress has been made. Laws such as no cell phone use, no texting, primary seat belt and nighttime and passenger limitations have helped reduce teen traffic deaths and injuries.

Parents play a vital role in developing safe teen drivers. Teens need to gain experience in a variety of road types and environments — day, night, city, rural, rain, snow — while supervised by an experienced licensed driver. Even after a teen is licensed, they continue to need training and monitoring. Programming is available through driver educators to assist parents in learning more about graduated driver licensing, as well as tips for helping their teens become safer drivers.

Teen involvement in traffic crashes

This Section provides a short summary regarding teen drivers (ages 15-19) who were involved in crashes. However, more information concerning teens can be found in other Sections of this Crash Facts report:

- Table 1.04: Age/Gender of teens killed or injured
- Table 1.05: Age/Gender of teen drivers involved
- Table 1.06: Licensed vs. Crash involved drivers
- Table 1.07: Teen driver crash type
- Table 1.09: Single-vehicle crash contributing factors
- Table 1.10: Multi-vehicle crash contributing factors
- Table 2.03: DWI's issued to underage drivers
- Table 2.05: Alcohol related teens killed or injured
- Table 2.12: Teen driver alcohol concentration
- Table 3.03: Teen vehicle occupants killed or injured
- Table 3.05: Teen occupant seat belt use
- Table 4.06: Teen motorcyclists killed or injured
- Table 6.03: Teen pedestrians killed or injured
- Table 7.05: Teen bicyclists killed or injured
- Table 8.04: Teen school bus riders killed or injured

Teen crash involvement is decreasing

Table 10.01 indicates that the numbers of teen-involved traffic crashes have been decreasing. The definition of a teen-involved crash used here is any crash with at least one teen driver (ages 15-19) of any

motor vehicle involved (no teen pedestrians or bicyclists used). In 2009, 19.2% of all traffic crashes in Minnesota were teen-related. In 2015, that percentage dropped to 16.4%.

Teen (ages 13-19) fatalities and injuries have also decreased. In 2009, 10% of all traffic fatalities in Minnesota were teens. In 2015, that percentage has dropped to 8%. In 2006, 15% of all traffic injuries in Minnesota were teens. In 2015, that percentage dropped to 12%.

Rate per licensed teen driver decreasing

Table 10.02 indicates that the number of teen motor vehicle occupant (MVO) drivers (ages 15-19) who were involved in crashes is also decreasing. That is, only teens that were driving vehicles normally equipped with seat belts are counted in this table. In 2009, 57.4 teen MVO drivers were involved in crashes for every 1,000 licensed teen drivers. In 2015, that rate has dropped to 51.4.

Colder weather

Teen involved crashes are rather evenly distributed throughout the year; however, there is an uptick during the colder months. In 2015, one out of every five (19%) teen-involved crashes occurred during the months of January and December.

Afternoons are dangerous

As can be seen from Table 10.05 and Figure 10.01, a large number of teen-involved crashes happen during the afternoon period of 2:00 - 6:00 p.m. During that four-hour time period in 2015, 38% of all teen-involved crashes occurred. On the other hand, less than 4% of all teen involved crashes occurred during the five-hour nighttime period of 12:00 a.m. - 5:00 a.m.

Contributing factors

For teen drivers of any vehicle who were involved in crashes, driver distraction was listed most often (22%) by officers at the scene. Next was failure to yield the right of way (15%) and then following too closely (11%). For the 'other' motor vehicle drivers involved, failure to yield the right of way was listed most often (24%), next was driver distraction (18%) and following too closely (15%). Only 6% of the 'other' drivers were listed as illegal or unsafe speed.

TABLE 10.01

TEEN CRASH SUMMARY, 2009 - 2015

Category	2009	2010	2011	2012	2013	2014	2015
Crashes with at least one Teen (15-19) Driver*	14,142	13,611	12,139	11,804	12,384	12,247	12,268
All Traffic Crashes in Minnesota	73,498	74,073	72,117	69,236	77,707	78,396	74,772
-Teen (15-19) Driver* Crash %	19.2%	18.4%	16.8%	17.0%	15.9%	15.6%	16.4%
Teen (13-19) Traffic Fatalities	40	47	39	40	33	21	31
All Traffic Fatalities in Minnesota	421	411	368	395	387	361	411
-Teen (13-19) Fatality %	9.5%	11.4%	10.6%	10.1%	8.5%	5.8%	7.5%
Teen (13-19) Traffic Injuries	4,648	4,391	3,921	3,844	3,662	3,417	3,600
All Traffic Injuries in Minnesota	31,074	31,176	30,295	29,314	30,653	29,439	29,981
-Teen (13-19) Injury %	15.0%	14.1%	12.9%	13.1%	11.9%	11.6%	12.0%

*Driver of any motor vehicle.

TABLE 10.02

TEEN 'MOTOR VEHICLE OCCUPANT' DRIVER CRASH INVOLVEMENT, 2009 - 2015

Age of Teen MVO* Driver	2009	2010	2011	2012	2013	2014	2015
Age 15 MVO* Drivers involved in Crashes	159	187	181	156	152	172	218
Age 15 Licensed Drivers**	28,126	28,020	25,422	25,946	25,324	26,393	30,120
-Rate per 1,000 Licensed Drivers:	5.7	6.7	7.1	6.0	6.0	6.5	7.2
Age 16 MVO* Drivers involved in Crashes	3,160	2,897	2,567	2,645	2,772	2,669	2,780
Age 16 Licensed Drivers**	49,884	49,634	48,260	47,801	48,013	48,263	49,306
-Rate per 1,000 Licensed Drivers:	63.3	58.4	53.2	55.3	57.7	55.3	56.4
Age 17 MVO* Drivers involved in Crashes	3,888	3,580	3,251	3,205	3,268	3,327	3,273
Age 17 Licensed Drivers**	56,554	55,885	54,781	54,489	53,744	54,190	54,818
-Rate per 1,000 Licensed Drivers:	68.7	64.1	59.3	58.8	60.8	61.4	59.7
Age 18 MVO* Drivers involved in Crashes	4,024	4,014	3,504	3,364	3,430	3,389	3,506
Age 18 Licensed Drivers**	62,707	61,526	59,722	59,220	58,706	58,202	58,766
-Rate per 1,000 Licensed Drivers:	64.2	65.2	58.7	56.8	58.4	58.2	59.7
Age 19 MVO* Drivers involved in Crashes	3,971	3,900	3,450	3,261	3,532	3,424	3,312
Age 19 Licensed Drivers**	67,701	66,272	63,997	63,212	62,642	62,349	61,692
-Rate per 1,000 Licensed Drivers:	58.7	58.8	53.9	51.6	56.4	54.9	53.7
All 15-19 MVO* Drivers involved in Crashes	15,202	14,578	12,953	12,631	13,154	12,981	13,089
All 15-19 Licensed Drivers**	264,972	261,337	252,182	250,668	248,429	249,397	254,702
-Rate per 1,000 Licensed Drivers:	57.4	55.8	51.4	50.4	52.9	52.0	51.4

*MVO = Motor Vehicle Occupant. Only teen drivers in vehicles equipped with Seat-Belts are included in Table 10.02.

**Licensed Driver totals include Permits.

TABLE 10.03

2015 TEEN-INVOLVED CRASHES* BY MONTH
 (*Crashes involving at least one Teen Driver (15-19) of any vehicle)

Month	Fatal Crashes	A-Injury Crashes	B-Injury Crashes	C-Injury Crashes	PDO Crashes	Total Crashes
January	4	7	66	217	904	1,198
February	4	8	70	190	766	1,038
March	1	5	46	170	551	773
April	5	14	78	160	542	799
May	3	9	80	232	686	1,010
June	5	14	64	225	776	1,084
July	5	8	86	207	669	975
August	4	14	86	242	713	1,059
September	4	12	60	219	690	985
October	3	8	69	221	752	1,053
November	1	7	90	229	819	1,146
December	4	10	71	196	867	1,148
Total	43	116	866	2,508	8,735	12,268

TABLE 10.04

2015 TEEN-INVOLVED CRASHES* BY DAY OF WEEK
 (*Crashes involving at least one Teen Driver (15-19) of any vehicle)

Day	Fatal Crashes	A-Injury Crashes	B-Injury Crashes	C-Injury Crashes	PDO Crashes	Total Crashes
Sunday	3	9	120	278	904	1,314
Monday	6	15	127	326	1,166	1,640
Tuesday	6	16	104	392	1,408	1,926
Wednesday	7	14	118	371	1,405	1,915
Thursday	7	19	127	373	1,388	1,914
Friday	8	20	140	435	1,422	2,025
Saturday	6	23	130	333	1,042	1,534
Total	43	116	866	2,508	8,735	12,268

TABLE 10.05
2015 TEEN-INVOLVED CRASHES* BY TIME OF DAY
 (*Crashes involving at least one Teen Driver (15-19) of any vehicle)

Hour	Fatal Crashes	A-Injury Crashes	B-Injury Crashes	C-Injury Crashes	PDO Crashes	Total Crashes
Midnight	0	3	13	25	85	126
1:00	2	2	11	27	79	121
2:00	0	3	7	18	56	84
3:00	1	3	8	31	39	82
4:00	0	2	8	5	23	38
5:00	2	5	8	12	41	68
6:00	1	3	12	39	125	180
7:00	2	4	41	173	623	843
8:00	1	4	28	99	454	586
9:00	2	1	25	79	297	404
10:00	0	4	25	89	286	404
11:00	2	5	25	107	362	501
Noon	4	5	49	147	463	668
1:00	1	0	44	131	419	595
2:00	4	11	62	161	613	851
3:00	2	8	88	261	955	1,314
4:00	3	10	92	257	886	1,248
5:00	3	5	78	253	910	1,249
6:00	3	6	58	164	581	812
7:00	2	10	45	116	399	572
8:00	2	3	28	103	315	451
9:00	1	6	47	100	325	479
10:00	3	12	36	66	239	356
11:00	2	1	28	43	142	216
Unknown	0	0	0	2	18	20
Total	43	116	866	2,508	8,735	12,268

FIGURE 10.01
TOTAL TEEN-INVOLVED CRASHES, BY TIME, 2015

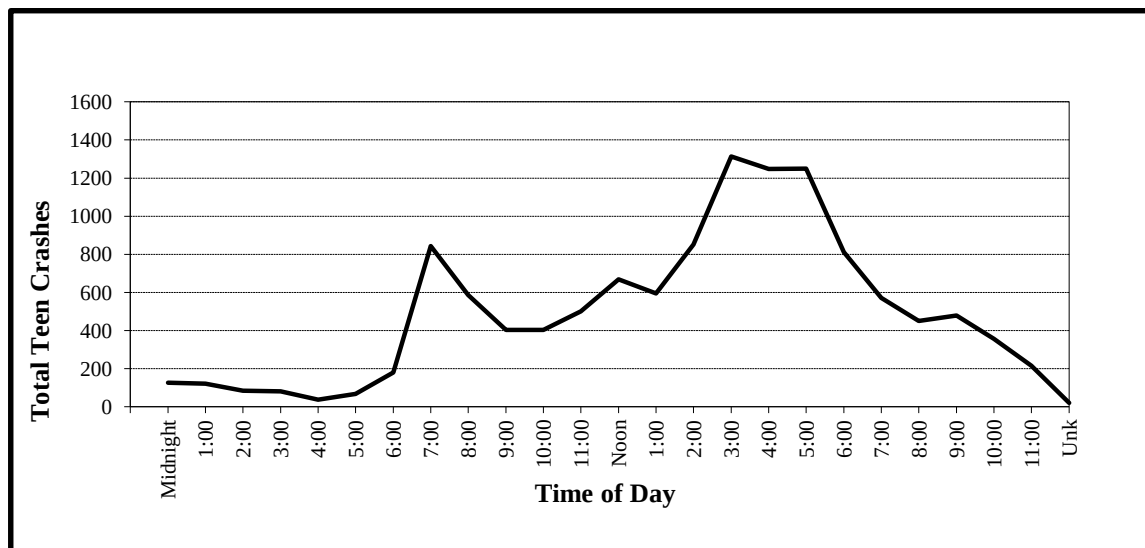


TABLE 10.06
CONTRIBUTING FACTORS IN 2015 TEEN-INVOLVED CRASHES

Contributing Factors	Number Attributed to Teen Drivers*	Percent Attributed to Teen Drivers*	Number Attributed to Other Vehicle Drivers*	Percent Attributed to Other Vehicle Drivers*
Human Factors				
Driver Inattention or Distraction	2,840	22.2%	649	18.1%
Failure to Yield Right of Way	1,886	14.7%	862	24.1%
Following Too Closely	1,438	11.2%	536	15.0%
Illegal/Unsafe Speed	1,299	10.2%	197	5.5%
Driver Inexperience	1,169	9.1%	18	0.5%
Overcorrecting	449	3.5%	22	0.6%
Disregard for Traffic Control Device	422	3.3%	183	5.1%
Improper/Unsafe Lane Use	412	3.2%	179	5.0%
Improper Turn	209	1.6%	77	2.2%
Vision Obscured	183	1.4%	62	1.7%
Chemical Impairment	163	1.3%	52	1.5%
Unsafe Backing	114	0.9%	38	1.1%
Improper Passing/Overtaking	111	0.9%	56	1.6%
Improper Park/Start/Stop	90	0.7%	42	1.2%
Driving Left of Center (not passing)	53	0.4%	26	0.7%
Impeding Traffic	33	0.3%	17	0.5%
Driver On Phone/CB/Radio	28	0.2%	4	0.1%
Improper/No Signal	17	0.1%	15	0.4%
Failure to Use Lights	6	0.0%	3	0.1%
Non-Motorist Error	0	0.0%	19	0.5%
Other Human Factor	280	2.2%	83	2.3%
Vehicular Factors				
Skidding	439	3.4%	67	1.9%
Defective Brakes	130	1.0%	18	0.5%
Oversize/Overweight Vehicle	2	0.0%	1	0.0%
Other Vehicular Factor	63	0.5%	39	1.1%
Miscellaneous Factors				
Weather Conditions	647	5.1%	151	4.2%
Other	313	2.4%	161	4.5%
Total Contributing Factors	12,796	100.0%	3,577	100.0%
Vehicles for Which There Was “No Clear Contributing Factor”	3,395		6,659	
Total Number of Drivers	13,179		10,089	

*The term ‘Drivers’ refers to a driver of any motor vehicle. Contributing factor data for the ‘Other Vehicle Drivers’ includes pedestrians and bicyclists. Pedestrians and bicyclists are not included in the ‘Teen Driver’ data.

Zero, one, or two contributing factors may be attributed to each vehicle, pedestrian, or bicyclist involved in a crash. This may cause the sum of the factors cited to differ from the number of drivers, pedestrians, or bicyclists. Percentages are based on all contributing factors listed. They may not sum to 100 due to rounding.

XI: CRASHES INVOLVING SENIOR DRIVERS

Between 2000 and 2030, the population of Minnesotans aged 65 and older will increase to over 24 percent of the total population. Age alone does not determine a person's ability to drive safely; each of us ages differently. There are safe and unsafe drivers at every age. National research suggests that crash rates for older drivers are actually decreasing due to better health, vehicles with helpful technologies, more driving experience and safer roadways. As people get older, their driving schedules change due to retirement, different activities and fewer required trips. Older drivers generally drive fewer miles than younger ones. In addition, many older drivers self-regulate by avoiding driving at night or on particularly challenging roadways. While the average driver is older than in the past, this has not caused the large increase in crashes and deaths on our roadways that was initially predicted.

Senior involvement in traffic crashes

This Section provides a short summary regarding senior drivers (ages 65 and above) who were involved in crashes. However, more information concerning seniors can be found in other Sections of this Crash Facts report:

- Table 1.04: Age/Gender of seniors killed or injured
- Table 1.05: Age/Gender of senior drivers involved
- Table 1.06: Licensed vs. Crash involved drivers
- Table 1.07: Senior driver crash type
- Table 1.09: Single-vehicle crash contributing factors
- Table 1.10: Multi-vehicle crash contributing factors
- Table 2.05: Alcohol related seniors killed or injured
- Table 2.12: Senior driver alcohol concentration
- Table 3.03: Senior vehicle occupants killed or injured
- Table 3.05: Senior occupant seat belt use
- Table 4.06: Senior motorcyclists killed or injured
- Table 6.03: Senior pedestrians killed or injured
- Table 7.05: Senior bicyclists killed or injured

Senior crash involvement remains steady

Table 11.01 indicates that the number of senior-involved traffic crashes is increasing. The definition of a senior-involved crash used here is any crash with at least one senior driver (ages 65 and above) of any motor vehicle (no senior pedestrians or bicyclists used). In 2009, 13% of all traffic crashes in Minnesota were senior-related. In 2015, that percentage was 15%. As the senior population in Minnesota increases,

senior traffic fatalities are expected to increase. In 2009, 20% of all traffic fatalities in Minnesota were seniors. In 2015, that percentage has risen to 24%.

Senior (ages 65 and older) injuries have also increased. In 2009, 8% of all traffic injuries in Minnesota were seniors. In 2015, that percentage rose to 10%.

MVO rate per licensed senior driver also steady

Table 11.02 indicates that the number of senior motor vehicle occupant (MVO) drivers who were involved in crashes decreased slightly. That is, only seniors that were driving vehicles normally equipped with seat belts are counted in this table. In 2009, 15.9 senior MVO drivers were involved in crashes for every 1,000 licensed senior drivers. In 2015, that rate dropped to 15.2.

Cold Weather

Senior-involved crashes are rather evenly distributed throughout the year; however, there is an uptick during the colder months. In 2015, one out of every four (26%) senior involved crashes occurred during the months of November, December, and January.

Afternoons are dangerous

As can be seen from Table 11.05 and Figure 11.01, a large number of senior involved crashes happen during the afternoon period of noon - 5:00 p.m. During that five-hour time-period in 2015, 46% of all senior involved crashes occurred. On the other hand, less than 1% of all senior involved crashes occurred during the five-hour nighttime period of 12:00 a.m. - 5:00 a.m.

Contributing factors

For senior drivers of any vehicle who were involved in crashes, failure to yield right of way was listed most often (27%) by officers at the scene. Next was driver inattention/distraction (19%). For the other motor vehicle drivers involved, driver inattention/distraction was listed most often (23%), next was failure to yield right of way (20%) and following too closely (15%).

TABLE 11.01

SENIOR CRASH SUMMARY, 2009 - 2015

Category	2009	2010	2011	2012	2013	2014	2015
Crashes with at least one Senior (65+) Driver*	9,453	9,657	9,511	9,687	10,630	11,162	11,184
All Traffic Crashes in Minnesota	73,498	74,073	72,117	69,236	77,707	78,396	74,772
-Senior (65+) Driver* Crash %	12.9%	13.0%	13.2%	14.0%	13.7%	14.2%	15.0%
Senior (65+) Traffic Fatalities	84	72	76	81	86	82	99
All Traffic Fatalities in Minnesota	421	411	368	395	387	361	411
-Senior (65+) Fatality %	20.0%	17.5%	20.7%	20.5%	22.2%	22.7%	24.1%
Senior (65+) Traffic Injuries	2,477	2,523	2,496	2,654	2,712	2,698	2,883
All Traffic Injuries in Minnesota	31,074	31,176	30,295	29,314	30,653	29,439	29,981
-Senior (65+) Injury %	8.0%	8.1%	8.2%	9.1%	8.8%	9.1%	9.6%

*Driver of any motor vehicle.

TABLE 11.02

SENIOR 'MOTOR VEHICLE OCCUPANT' DRIVER CRASH INVOLVEMENT, 2009 - 2015

Age of Senior MVO* Driver	2009	2010	2011	2012	2013	2014	2015
Age 65-69 MVO* Drivers involved in Crashes	3,345	3,511	3,451	3,630	3,980	4,447	4,439
Age 65-69 Licensed Drivers	193,513	198,777	213,587	226,107	237,444	252,369	264,586
-Rate per 1,000 Licensed Drivers:	17.3	17.7	16.2	16.1	16.8	17.6	16.8
Age 70-74 MVO* Drivers involved in Crashes	2,210	2,326	2,332	2,311	2,616	2,777	2,821
Age 70-74 Licensed Drivers	143,738	149,002	155,347	164,699	172,320	178,905	181,902
-Rate per 1,000 Licensed Drivers:	15.4	15.6	15.0	14.0	15.2	15.5	15.5
Age 75-79 MVO* Drivers involved in Crashes	1,828	1,791	1,743	1,744	1,912	1,972	1,885
Age 75-79 Licensed Drivers	113,517	114,320	116,871	119,643	123,927	127,476	131,549
-Rate per 1,000 Licensed Drivers:	16.1	15.7	14.9	14.6	15.4	15.5	14.3
Age 80-84 MVO* Drivers involved in Crashes	1,389	1,382	1,327	1,392	1,382	1,320	1,294
Age 80-84 Licensed Drivers	87,672	88,821	90,620	90,268	90,333	91,175	91,681
-Rate per 1,000 Licensed Drivers:	15.8	15.6	14.6	15.4	15.3	14.5	14.1
Age 85+ MVO* Drivers involved in Crashes	931	967	955	955	1,069	997	1,027
Age 85+ Licensed Drivers	71,997	74,678	79,683	82,434	82,608	84,666	86,814
-Rate per 1,000 Licensed Drivers:	12.9	12.9	12.0	11.6	12.9	11.8	11.8
All 65+ MVO* Drivers involved in Crashes	9,703	9,977	9,808	10,032	10,959	11,513	11,466
All 65+ Licensed Drivers	610,437	625,598	656,108	683,151	706,632	734,591	756,532
-Rate per 1,000 Licensed Drivers:	15.9	15.9	14.9	14.7	15.5	15.7	15.2

*MVO = Motor Vehicle Occupant.

Only senior drivers in vehicles equipped with seatbelts are included in Table 11.02.

TABLE 11.03

2015 SENIOR-INVOLVED CRASHES* BY MONTH(*Crashes involving at least one Senior Driver (65+) of any vehicle)

Month	Fatal Crashes	A-Injury Crashes	B-Injury Crashes	C-Injury Crashes	PDO Crashes	Total Crashes
January	3	6	51	222	672	954
February	5	5	44	183	569	806
March	6	7	64	160	493	730
April	3	7	67	147	507	731
May	11	14	112	188	633	958
June	10	11	91	231	714	1,057
July	10	23	102	226	609	970
August	9	16	89	200	637	951
September	11	15	91	219	608	944
October	8	13	78	253	734	1,086
November	10	11	73	208	705	1,007
December	8	6	76	192	708	990
Total	94	134	938	2,429	7,589	11,184

TABLE 11.04

2015 SENIOR-INVOLVED CRASHES* BY DAY OF WEEK(*Crashes involving at least one Senior Driver (65+) of any vehicle)

Day	Fatal Crashes	A-Injury Crashes	B-Injury Crashes	C-Injury Crashes	PDO Crashes	Total Crashes
Sunday	17	10	98	222	644	991
Monday	15	21	133	353	1,067	1,589
Tuesday	12	19	136	360	1,265	1,792
Wednesday	14	24	143	389	1,284	1,854
Thursday	14	28	151	385	1,265	1,843
Friday	11	14	145	442	1,265	1,877
Saturday	11	18	132	278	799	1,238
Total	94	134	938	2,429	7,589	11,184

TABLE 11.05
2015 SENIOR-INVOLVED CRASHES* BY TIME OF DAY
 (*Crashes involving at least one Senior Driver (65+) of any vehicle)

Hour	Fatal Crashes	A-Injury Crashes	B-Injury Crashes	C-Injury Crashes	PDO Crashes	Total Crashes
Midnight	1	0	1	7	21	30
1:00	0	0	4	4	15	23
2:00	0	0	0	1	7	8
3:00	0	1	2	1	13	17
4:00	0	0	3	6	14	23
5:00	2	2	9	8	36	57
6:00	4	1	15	29	95	144
7:00	4	3	38	85	252	382
8:00	6	3	48	115	388	560
9:00	7	6	56	125	439	633
10:00	4	11	75	174	550	814
11:00	5	10	65	183	604	867
Noon	6	7	66	205	641	925
1:00	3	16	75	206	682	982
2:00	10	19	68	235	718	1,050
3:00	8	12	85	271	778	1,154
4:00	8	11	98	239	676	1,032
5:00	8	14	92	218	630	962
6:00	4	5	57	116	362	544
7:00	2	1	31	76	217	327
8:00	4	5	20	45	184	258
9:00	6	3	12	41	111	173
10:00	0	2	9	25	84	120
11:00	2	2	8	10	35	57
Unknown	0	0	1	4	37	42
Total	94	134	938	2,429	7,589	11,184

FIGURE 11.01
TOTAL SENIOR-INVOLVED CRASHES, BY TIME, 2015

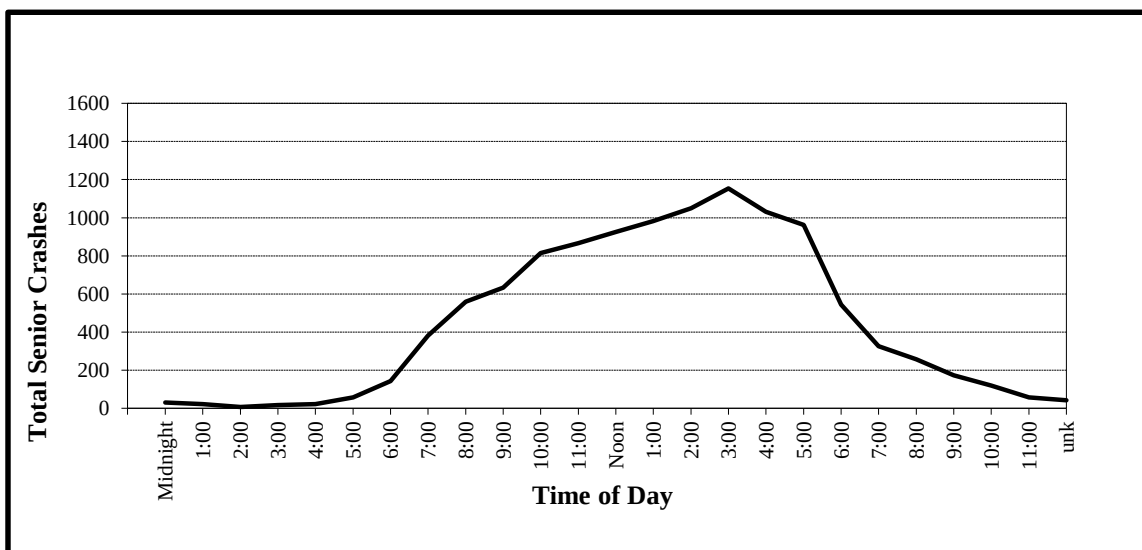


TABLE 11.06
CONTRIBUTING FACTORS IN 2015 SENIOR-INVOLVED CRASHES

Contributing Factors	Number Attributed to Senior Drivers*	Percent Attributed to Senior Drivers*	Number Attributed to Other Vehicle Drivers*	Percent Attributed to Other Vehicle Drivers*
Human Factors				
Failure to Yield Right of Way	2,083	27.4%	1,132	20.1%
Driver Inattention or Distraction	1,442	19.0%	1,310	23.2%
Following Too Closely	514	6.8%	823	14.6%
Improper/Unsafe Lane Use	482	6.3%	278	4.9%
Disregard for Traffic Control Device	424	5.6%	367	6.5%
Illegal/Unsafe Speed	314	4.1%	343	6.1%
Improper Turn	252	3.3%	100	1.8%
Vision Obscured	180	2.4%	92	1.6%
Unsafe Backing	124	1.6%	52	0.9%
Improper Passing/Overtaking	107	1.4%	92	1.6%
Improper Park/Start/Stop	106	1.4%	54	1.0%
Overcorrecting	100	1.3%	22	0.4%
Chemical Impairment	74	1.0%	79	1.4%
Driving Left of Center (no passing)	61	0.8%	39	0.7%
Improper/No Signal	17	0.2%	12	0.2%
Impeding Traffic	15	0.2%	18	0.3%
Driver Inexperience	12	0.2%	99	1.8%
Driver On Phone/CB/Radio	3	0.0%	8	0.1%
Failure to Use Lights	1	0.0%	10	0.2%
Non-Motorist Error	0	0.0%	29	0.5%
Other Human Factor	415	5.5%	130	2.3%
Vehicular Factors				
Skidding	146	1.9%	114	2.0%
Defective Brakes	46	0.6%	41	0.7%
Oversize/Overweight Vehicle	4	0.1%	2	0.0%
Other Vehicular Factor	48	0.6%	33	0.6%
Miscellaneous Factors				
Weather Conditions	280	3.7%	173	3.1%
Other	345	4.5%	192	3.4%
Total Contributing Factors	7,595	100.0%	5,644	100.0%
Vehicles for Which There Was “No Clear Contributing Factor”	4,816		5,088	
Total Number of Drivers	11,848		10,298	

*The term ‘Drivers’ refers to a driver of any motor vehicle.

Contributing factor data for the ‘Other Vehicle Drivers’ includes pedestrians and bicyclists. Pedestrians and bicyclists are not included in the ‘Senior Driver’ data.

Zero, one, or two contributing factors may be attributed to each vehicle, pedestrian, or bicyclist involved in a crash. This may cause the sum of the factors cited to differ from the number of drivers, pedestrians, or bicyclists. Percentages are based on all contributing factors listed. They may not sum to 100 due to rounding.

DEFINITIONS

Accident — See motor vehicle crash.

Alcohol Concentration — The level of alcohol in a person's body as measured by blood, breath or urine.

Alcohol-Related Fatal Crash — A crash that results in one or more deaths and in which the investigating officer suspected alcohol involvement or in which the results of an alcohol concentration test were positive for any driver, pedestrian or bicyclist involved in the crash.

Alcohol-Related Fatality — A death resulting from an alcohol-related crash.

Alcohol-Related Injury Crash — A non-fatal crash in which one or more persons are injured and in which the investigating officer suspected alcohol involvement for any driver, pedestrian or bicyclist involved in the crash. (Since only the officer's perception is used in this definition, alcohol-related injury crashes and injuries are probably underestimated.)

Alcohol-Related Injury — A non-fatal injury resulting from an alcohol-related crash.

Alcohol-Related Property Damage Crash — A crash in which no one is killed or injured and the investigating officer suspected alcohol involvement for any driver, pedestrian, or bicyclist involved in the crash.

Bicycle Crash — A motor vehicle crash involving one or more bicycles.

Child Safety Seats — Safety devices designed to fit in motor vehicles that keep children securely in place. The seats are required by law for children less than four years of age.

Crash — See motor vehicle crash.

Driver — The occupant of a motor vehicle who is in actual physical control of the vehicle in transit or, for an out-of-control vehicle, the occupant who was in control before control was lost.

Economic Loss — An approximation of the costs associated with crashes, based upon current National Safety Council estimates of the loss to society for each fatality, injury and property damage crash.

Fatal Crash — A motor vehicle crash on a public traffic-way in which at least one person dies unintentionally as a result of the crash. The death must occur within 30 days of the crash.

First Harmful Event — The first event during a crash that caused injury or property damage.

Injury Severity

Fatal Injury — An injury that results in an unintentional death within 30 days of the crash.

Severe or Incapacitating Injury — An injury (other than fatal) that prevents the injured person from walking, driving or normally continuing the activities he or she was capable of performing before the injury occurred. Includes severe lacerations, broken or distorted limbs, skull fracture, crushed chest, internal injuries, unconsciousness, etc. Hospitalization is usually required.

Moderate/Non-Incapacitating injury — An injury (other than fatal or severe) that is evident to the officer at the scene of the crash. Includes abrasions, minor lacerations, bleeding, etc. May require medical treatment, but hospitalization is usually not required.

Minor or Possible Injury — An injury (other than fatal, severe or moderate) that is reported by a person involved in the crash. Includes complaint of physical pain when no cause is evident, momentary unconsciousness, limping, nausea, hysteria, etc.

Motorcycle — A two-wheeled or three-wheeled motor vehicle having one or more riding saddles and having an engine of more than 50 cc. If it has a 50 cc or smaller engine, it is classified as a motorized bicycle or motor scooter/motorbike.

Motorcycle Crash — A motor vehicle crash involving one or more motorcycles.

Motor Vehicle — A self-propelled vehicle, including attached trailers and semi trailers designed for use with such vehicles.

Motor Vehicle Crash — A crash that involves a motor vehicle in transport on a public traffic-way in Minnesota and results in injury, death or at least \$1,000.00 in property damage.

Occupant — Any person who is in or on a vehicle, including the driver, passenger and persons riding on the outside of the vehicle.

Occupant Restraints — Protective devices used in motor vehicles to keep the driver and passengers in their seats and prevent them from being ejected from the motor vehicle in a crash. Restraint devices include lap belts, lap/shoulder harness combinations, air bags and child safety seats.

Passenger — Any occupant of a motor vehicle other than the driver.

Pedestrian — Any person not in or on a motor vehicle or other vehicle (e.g., a bicycle).

Pedestrian Crash — A motor vehicle crash involving one or more pedestrians.

Restraint Usage — An occupant's use of available vehicle restraints including lap belt, lap/shoulder combination harness, or child safety seats.

Rural — Having a population of fewer than 5,000.

School Bus Crash — A crash involving one or more school buses. The school bus must collide with another vehicle, or pedestrian or object, for the crash to be classified as a school bus crash.

Trafficway — Any land way open to the public as a matter of right or custom for moving persons or property from one place to another.

Train/Motor Vehicle Crash — A motor vehicle crash involving a motor vehicle in transport and a railway train. Presently, the only crashes classified as train crashes are those in which the first harmful event is collision with a train.

Truck Crash — A motor vehicle crash involving one or more vehicles of the following types: (1) 2-axle, 6-tire single unit truck or step van, (2) 3-or-more-axle single unit truck, (3) single-unit truck with trailer, (4) truck tractor with no trailer, (5) truck tractor with semi-trailer, (6) truck tractor with double trailers, (7) truck tractor with triple trailers, (8) heavy truck of other or unknown type. Pickup trucks and vans are not counted as trucks.

Urban — Having a population of 5,000 or more.