

## 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 2013

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.

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Many thanks to the Crash Records Section of the Driver and Vehicle Services Division at the Department of Public Safety for their excellent data quality control work. Thanks also to the State Patrol, the Bureau of Criminal Apprehension, Sheriffs, Police Chiefs, and Medical Examiners for their assistance regarding alcohol-related crashes. And many thanks to all law enforcement officers who were on the scene of these traffic crashes. Their hard work and data reporting skills make this book a valuable document to traffic safety researchers, legislators, the media, and the public.

## **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.*



## Office of the Commissioner

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June 2014

This edition of *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.

These numbers represent people.

In 2013, there were 387 traffic fatalities, compared to 395 in 2012. While we recognize the decline last year and the downward trend during the last decade, we can't overlook the fact that far too many of our friends, neighbors and loved ones were involved in crashes that resulted in death or life-altering injuries last year.

As we've seen in past years, the four top contributing factors were:

- Speed – 76 deaths were attributed to illegal/unsafe speed.
- Distractions – 68 fatalities were caused by inattention.
- Impaired driving – 95 traffic deaths were attributed to drunk driving.
- Not buckling up – 94 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.

We are making progress, but we have work to do. It starts with our own behavior – slow down, pay attention, don't drink and drive and always buckle up. Then it drives us to work steadily, strategically and steadfastly to keep every person on our roads safe.

Sincerely,

A handwritten signature in cursive script that reads "Ramona L. Dohman".

Mona Dohman  
Commissioner, Department of Public Safety

Alcohol  
and Gambling  
Enforcement

Bureau of Criminal  
Apprehension

Driver  
and Vehicle  
Services

Emergency  
Communication  
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Homeland  
Security and  
Emergency  
Management

Minnesota  
State Patrol

Office of  
Communications

Office of  
Justice Programs

Office of  
Traffic Safety

State Fire Marshal

## Minnesota Traffic Crashes in 2013

### OVERVIEW

This edition of *Minnesota Motor Vehicle Crash Facts* summarizes the crashes, deaths, and injuries that occurred on Minnesota roadways during 2013. The information provided in this book will assist you in traveling our roadways safely.

#### In 2013:

- 77,707 traffic crashes were reported to the Minnesota Department of Public Safety (DPS)
- 140,769 motor vehicles and 186,854 people were involved in these crashes
- 387 people died and 30,653 people were injured
- Estimated economic cost to Minnesota: \$1,588,124,400

#### On an average day in 2013:

- 213 crashes
- 1 death and 84 injuries
- Average daily cost: \$4,351,026

#### 2013 known alcohol-related statistics:

- 3,669 crashes
- 117 deaths and 2,300 injuries
- Estimated economic cost: \$235,411,700

#### Highlights from the 2013 *Crash Facts* edition

- **Traffic fatalities decrease**  
In 2013, Minnesota experienced a total of 387 traffic fatalities, a two percent decrease from the previous year. This low percentage decrease is disappointing considering the fact that traffic fatalities in Minnesota have decreased sharply during the past 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 95 percent**  
An observational study in June, 2013 showed that belt use by front seat drivers and passengers was 95%. 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 2013 is 0.68, one of the lowest in the nation. The VMT fatality rate has shown dramatic improvement in the last five decades (it was 5.52 in 1966).

### 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 2013. Information provided includes:

- Historical information dating back to 1965 (Table 1.01)
- Contributing factors 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 1980 (Table 2.01)
- DWI arrest statistics (Tables 2.02, 2.03, and 2.04)
- Persons killed and injured in alcohol-related crashes by age (Table 2.05)

#### **Section III: Safety Equipment Use by Vehicle Occupants in Crashes**

Beginning on page 51, 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 60, 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 69, 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 77, 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 86, 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 91, 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 96, 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 100, 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 105, 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 2013 calendar year, 4,079,256 people held Minnesota driver licenses and 5,088,124 motor vehicles were registered in the state. Vehicles traveled over 57 billion miles on public roadways. There were 77,707 traffic crashes; 387 people died and 30,653 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 necessity of getting from one place to another and the efficiency of motor vehicles for this purpose result 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 and the fifth leading cause of death among all persons (*Injury Facts, 2005-2006 Edition*, p. 10-11).

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 2011 data. Based upon those, the total economic loss from 2013 traffic crashes in Minnesota was \$1,588,124,400, a figure that is calculated as follows:

### Cost of Motor Vehicle Crashes in 2013:

|        |                   |                    |                  |
|--------|-------------------|--------------------|------------------|
| 387    | deaths            | @ \$1,410,000 = \$ | 545,670,000      |
| 1,216  | severe injuries   | @ \$72,700 = \$    | 88,403,200       |
| 7,109  | moderate injuries | @ \$23,400 = \$    | 166,350,600      |
| 22,328 | minor injuries    | @ \$13,200 = \$    | 294,729,600      |
| 55,390 | PDO crashes       | @ \$8,900 = \$     | 492,971,000      |
| Total: |                   |                    | \$ 1,588,124,400 |

### Factors affecting traffic crashes

Many factors may contribute to even a single crash. 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.

There are a more limited number of factors that significantly affect the aggregate 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.

*Behavior factors:* For all 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. In fatal crashes, illegal or unsafe speed is cited most often, followed by driver inattention or distraction. Reducing these behaviors would reduce crashes. Further, when there is a crash, using safety equipment will reduce 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 18 teenage drivers are involved in crashes each year. The involvement rate drops off for successive age groups. For example, it is about 1 in 36 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 2013, there were about 33,500 traffic fatalities throughout the country and 387 in Minnesota. The respective fatality rates per hundred million miles of travel were 1.11 and 0.68. 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. 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, 1970-2013**

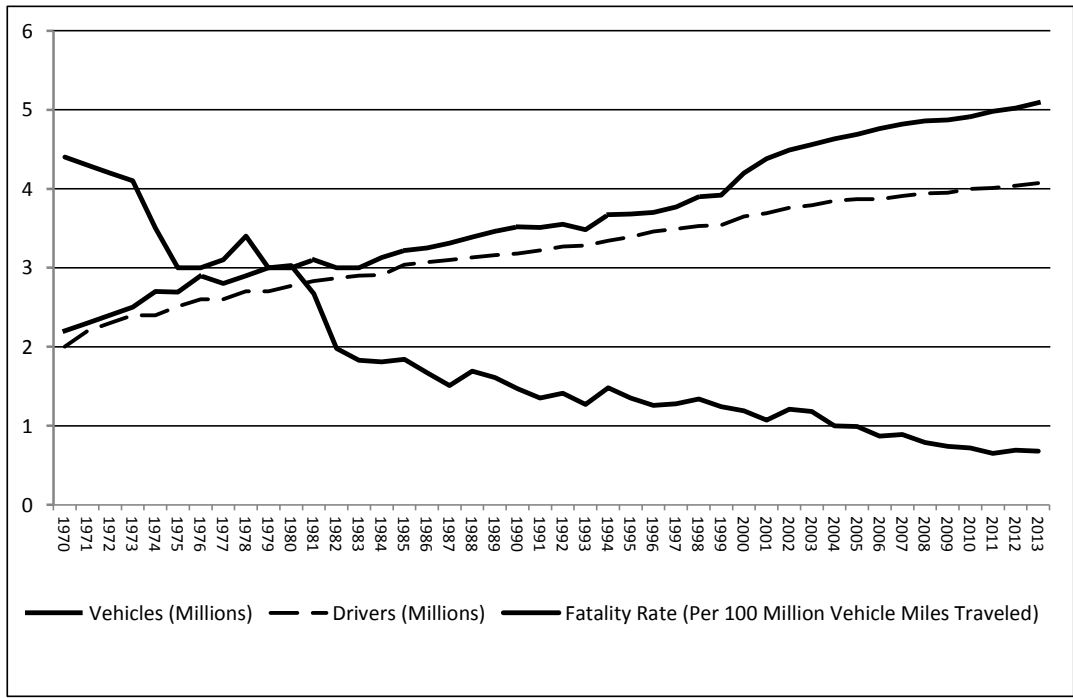


TABLE 1

**MINNESOTA TRAFFIC FATALITIES, 1910 – 2013**  
 Since 1961: Vehicle Miles Traveled (Billions) and Fatality Rates (Per 100 Million VMT)

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

FIGURE 2

**MINNESOTA TRAFFIC FATALITIES, 1910-2013**

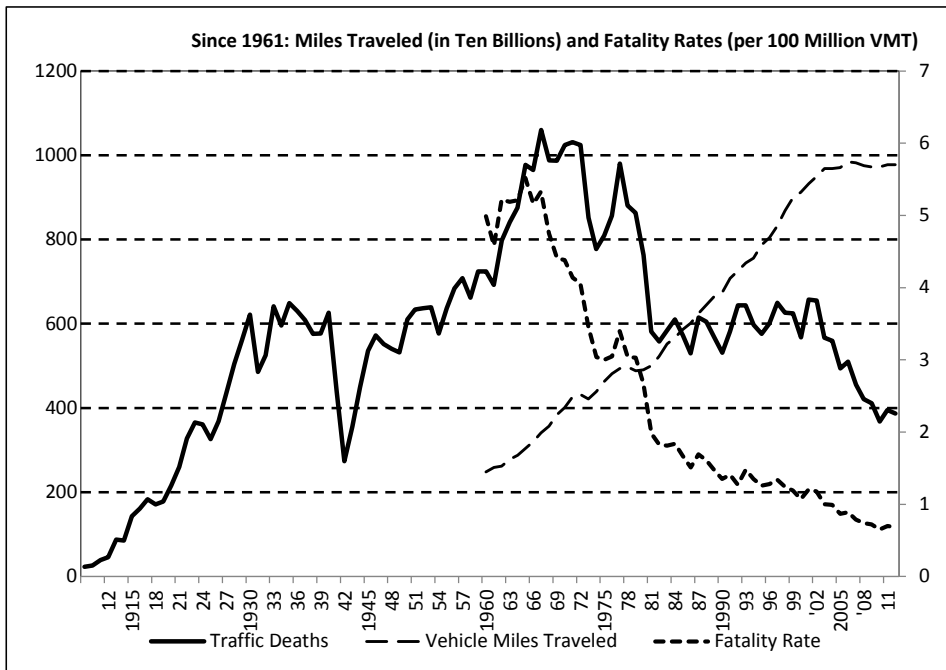




TABLE 2

**DRIVER LICENSE\* SUMMARY BY AGE, 2008 - 2013**

| Age        | 2008      | 2009      | 2010      | 2011      | 2012      | 2013      |
|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| 15         | 26,141    | 28,126    | 28,020    | 25,422    | 25,946    | 25,324    |
| 16         | 49,801    | 49,884    | 49,634    | 48,260    | 47,801    | 48,013    |
| 17         | 57,875    | 56,554    | 55,885    | 54,781    | 54,489    | 53,744    |
| 18         | 64,337    | 62,707    | 61,526    | 59,722    | 59,220    | 58,706    |
| 19         | 68,050    | 67,701    | 66,272    | 63,997    | 63,212    | 62,642    |
| 20         | 68,920    | 69,074    | 69,495    | 67,176    | 65,539    | 64,972    |
| Under 21   | 335,124   | 334,046   | 330,832   | 319,358   | 316,207   | 313,401   |
| 15 - 19    | 266,204   | 264,972   | 261,337   | 252,182   | 250,668   | 248,429   |
| 20 - 24    | 350,535   | 347,193   | 348,937   | 343,942   | 341,891   | 340,074   |
| 25 - 29    | 365,501   | 364,228   | 366,813   | 358,738   | 356,653   | 358,005   |
| 30 - 34    | 324,694   | 330,073   | 342,756   | 351,489   | 359,718   | 365,101   |
| 35 - 39    | 327,911   | 319,456   | 311,858   | 306,985   | 312,377   | 320,919   |
| 40 - 44    | 347,387   | 339,999   | 340,906   | 336,514   | 330,720   | 331,868   |
| 45 - 49    | 399,215   | 391,392   | 380,685   | 365,193   | 351,004   | 340,791   |
| 50 - 54    | 376,096   | 382,435   | 389,685   | 392,410   | 392,344   | 390,177   |
| 55 - 59    | 324,589   | 332,705   | 343,840   | 350,359   | 358,458   | 365,577   |
| 60 - 64    | 251,756   | 265,450   | 282,820   | 293,833   | 301,734   | 311,683   |
| 65 - 69    | 187,347   | 193,513   | 198,777   | 213,587   | 226,107   | 237,444   |
| 70 - 74    | 140,879   | 143,738   | 149,002   | 155,347   | 164,699   | 172,320   |
| 75 - 79    | 113,740   | 113,517   | 114,320   | 116,871   | 119,643   | 123,927   |
| 80 - 84    | 89,045    | 87,672    | 88,821    | 90,620    | 90,268    | 90,333    |
| 85 & Older | 73,502    | 71,997    | 74,678    | 79,683    | 82,434    | 82,608    |
| Total      | 3,938,401 | 3,948,340 | 3,995,235 | 4,007,753 | 4,038,718 | 4,069,256 |

\* 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, 2008 - 2013

| Type of Vehicle*            | 2008             | 2009             | 2010             | 2011             | 2012             | 2013             |
|-----------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Passenger Vehicles          | 3,455,451        | 3,478,218        | 3,527,503        | 3,579,033        | 3,621,291        | 3,630,245        |
| Pickup Trucks               | 849,627          | 833,329          | 828,305          | 832,463          | 829,965          | 882,136          |
| Commercial Trucks           | 215,107          | 213,489          | 214,680          | 216,532          | 220,623          | 225,201          |
| Recreational Vehicles       | 34,998           | 35,042           | 34,797           | 33,070           | 32,511           | 31,349           |
| Motorcycles                 | 224,625          | 226,675          | 229,912          | 232,274          | 237,278          | 235,909          |
| Motorized Bicycles          | 15,601           | 15,559           | 15,682           | 16,016           | 16,378           | 16,035           |
| School Buses                | 6,766            | 6,810            | 6,940            | 6,951            | 7,120            | 7,220            |
| Other Buses                 | 5,076            | 4,996            | 5,067            | 5,161            | 5,105            | 5,188            |
| Van Pool                    | 205              | 165              | 174              | 226              | 210              | 159              |
| Tax Exempt Vehicles         | 51,045           | 52,480           | 52,061           | 53,420           | 53,175           | 54,682           |
| Motor Vehicle Subtotal      | 4,858,501        | 4,866,763        | 4,915,121        | 4,975,146        | 5,023,656        | 5,088,124        |
| <b>Other Registrations*</b> |                  |                  |                  |                  |                  |                  |
| Trailers                    | 1,564,054        | 1,610,989        | 1,665,491        | 1,715,404        | 1,773,595        | 1,830,458        |
| Classic Motor Vehicles      | 166,472          | 172,858          | 179,771          | 186,586          | 192,649          | 198,716          |
| Classic Motorcycles         | 8,124            | 8,778            | 9,487            | 10,489           | 11,070           | 11,993           |
| Other Subtotal              | 1,738,650        | 1,792,625        | 1,854,749        | 1,912,479        | 1,977,314        | 2,041,167        |
| <b>Total Registrations</b>  | <b>6,597,151</b> | <b>6,659,388</b> | <b>6,769,870</b> | <b>6,887,625</b> | <b>7,000,970</b> | <b>7,129,291</b> |

\* 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, about 70,000 traffic crashes each year have been reported. Preventing the number of traffic crashes remains a challenge each year for public safety officials. By the end of calendar year 2013:

- The population of Minnesota increased to 5.40 million
- Over 5 million motor vehicles were registered
- There were 4 million licensed drivers
- Over 57 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 increase, fatalities decrease in 2013

There were 77,707 traffic crashes reported to Public Safety in 2013, an increase of 10.9% from 2012. However, there were 387 deaths on Minnesota roads, a 2.0% decrease from the previous year. In reality, traffic deaths in Minnesota have decreased dramatically 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 2013

The following facts give an overall picture of 2013 traffic crashes. In addition to the 387 killed:

- 30,653 were injured
- 1,216 of these were severe injuries
- 7,109 of these were moderate injuries
- 22,328 of these were minor injuries
  
- 186,854 people were involved in crashes
- 140,769 motor vehicles were involved in crashes
- There were 862 crashes that involved at least 1 bicyclist
- There were 868 crashes that involved at least 1 pedestrian
  
- One-third of all crashes involved just one vehicle
- One-fourth of all fatalities were less than 25 years of age
- 2 of 3 fatalities occurred in rural areas (< 5,000 population)
- 2,263 crashes were classified as “hit-and-run”
- The economic loss to Minnesota was almost \$1.6 billion

### WHO was involved

Among drivers, young people and males are over-represented in traffic crashes in Minnesota. There are 4,079,256 licensed drivers in the state. People aged 15- 24 make up 14.4% 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 2013, they represented just 8.3% of the licensed drivers, but 13.6% of all crash-involved drivers. By contrast drivers over 65 made up 17.2% of the driving population, but accounted for just 8.4% of the crash-involved drivers. Crash-involved drivers are also more likely to be males: 73.2% of drivers in fatal crashes were male; 54.6% of drivers in all crashes were male.

Traffic crashes are the leading cause of death to young people. In the state last year, 124 people under age 30 died in crashes, representing 32% of all traffic deaths. As mentioned previously, people over 65 are safe drivers as a general rule, but are more likely to be killed if they are involved in a traffic crash. Senior citizen drivers were involved in only 8.4% of all traffic crashes in 2013 but accounted for 15% of the traffic fatalities.

Among people injured, young people especially pay the price. There were 12,262 people under age 30 who were injured, representing 40% of the total number of people injured. People aged 65 and over accounted for just 9% of all traffic injuries.

### WHY they happened

An officer at the scene will list 0, 1, or 2 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 less than 65 years old. For them, driver inattention or distraction is the most cited factor. 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.

#### **WHAT the conditions were**

Victims of traffic crashes are mostly car, pickup, sport utility vehicle (SUV) or van occupants. Of the 387 traffic fatalities, 259 (67%) were from these 4 vehicle types. There were also 35 pedestrians, 60 motorcyclists, and 6 bicyclists who died in traffic crashes. There were 7 deaths to ATV riders, 5 deaths among farm equipment and 2 fatalities among snowmobiles. Other vehicle types (e.g., larger trucks and road maintenance vehicles) accounted for 13 fatalities.

A collision with another vehicle is the leading crash type. About 47% of the fatal crashes and 65% 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 two-thirds of nonfatal crashes occurred during daylight hours. A majority of crashes occur also in good weather conditions. Over half of all crashes occur during "clear" weather. Road surface conditions where crashes occurred were usually good. For fatal crashes, 76% were on dry roads, 10% were on wet roads, and 12% 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, 239 (67%) of all fatal crashes occurred in rural areas, which are defined as having a population of less than 5,000 people. Additionally, 131 (37%) of all fatal crashes occurred on county state aid highways, and 85 of those were in rural areas. Injury and property damage crashes are more common in urban areas. Over two-thirds happened inside cities of 5,000 or more population. The seven county metro area, with over half the state's population, accounted for only 26% of the fatal crashes, but 61% 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, 43% of all crashes occurred. This has not changed over the years. Indeed, Figure 1.03 on page 36 shows that the afternoon time period is truly a dangerous time to be driving.

Fridays, Saturdays, and Sundays accounted for 167 of the 357 fatal crashes (47%). Total crashes are more evenly distributed across days of the week, although Fridays 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. December of 2013 followed this axiom. Because of severe weather, December had the most crashes reported of any month (11,548). As a general rule, warmer weather produces more fatalities. July and September had the most with 49 and 46 respectively. 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 500 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 - 2013

| Year<br>(a) | Total<br>Crashes<br>(b) | Persons<br>Killed<br>(c) | Persons<br>Injured<br>(d) | Licensed<br>Drivers<br>(million)<br>(e) | Motor<br>Vehicles<br>(million)<br>(f) | State<br>Popu-<br>lation<br>(million)<br>(g) | Vehicle<br>Miles<br>Traveled<br>(VMT)<br>(billion)<br>(h) | Crash                                |  |   | Fatality  |   |   |
|-------------|-------------------------|--------------------------|---------------------------|---|---------------------------------------|--|---|--------------------------------------|--|---|---|---|---|
|             |                         |                          |                           |   |                                       |  |   | Rates<br>Per<br>100,000<br>MV<br>(i) | Rates<br>Per<br>100<br>Mil<br>VMT<br>(k) | Rates<br>Per<br>100,000<br>Popu-<br>lation<br>(j) | Rates<br>Per<br>100,000<br>Popu-<br>lation<br>(l) | Rates<br>Per<br>100,000<br>Popu-<br>lation<br>(m) | Rates<br>Per<br>100,000<br>Popu-<br>lation<br>(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  |

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.
- (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  
2008 - 2013**

|  | 2008          | 2009          | 2010          | 2011          | 2012          | 2013          | Record High    |                     |
|--|---------------|---------------|---------------|---------------|---------------|---------------|----------------|---------------------|
| <b>Fatal Crashes</b>                       | <b>420</b>    | <b>371</b>    | <b>364</b>    | <b>334</b>    | <b>349</b>    | <b>357</b>    | <b>878</b>     | <b>(1973)</b>       |
| <b>Injury Crashes</b>                      | <b>23,914</b> | <b>22,159</b> | <b>22,013</b> | <b>21,662</b> | <b>20,972</b> | <b>21,960</b> | <b>33,686</b>  | <b>(1978)</b>       |
| Severe                                     | 1,248         | 1,036         | 974           | 954           | 1,044         | 981           | 5,109          | (1984) <sup>1</sup> |
| Moderate                                   | 6,493         | 5,942         | 5,792         | 5,581         | 5,423         | 5,563         | 12,326         | (1985) <sup>1</sup> |
| Minor                                      | 16,173        | 15,181        | 15,247        | 15,127        | 14,505        | 15,416        | 18,578         | (1996) <sup>1</sup> |
| <b>PDO Crashes</b>                         | <b>54,761</b> | <b>50,968</b> | <b>51,696</b> | <b>50,121</b> | <b>47,915</b> | <b>55,390</b> | <b>94,810</b>  | <b>(1975)</b>       |
| <b>Total Crashes</b>                       | <b>79,095</b> | <b>73,498</b> | <b>74,073</b> | <b>72,117</b> | <b>69,236</b> | <b>77,707</b> | <b>123,106</b> | <b>(1975)</b>       |
| <b>Total Injuries</b>                      | <b>33,379</b> | <b>31,074</b> | <b>31,176</b> | <b>30,295</b> | <b>29,314</b> | <b>30,653</b> | <b>50,332</b>  | <b>(1978)</b>       |
| Severe                                     | 1,553         | 1,271         | 1,191         | 1,159         | 1,268         | 1,216         | 6,573          | (1984) <sup>1</sup> |
| Moderate                                   | 8,334         | 7,714         | 7,445         | 7,110         | 6,902         | 7,109         | 17,670         | (1985) <sup>1</sup> |
| Minor                                      | 23,492        | 22,089        | 22,540        | 22,026        | 21,144        | 22,328        | 28,631         | (1996) <sup>1</sup> |
| <b>Total Fatalities</b>                    | <b>455</b>    | <b>421</b>    | <b>411</b>    | <b>368</b>    | <b>395</b>    | <b>387</b>    | <b>1,060</b>   | <b>(1968)</b>       |
| Motor Vehicle Occupant                     | 325           | 302           | 305           | 271           | 276           | 269           | 544            | (2002) <sup>1</sup> |
| Motorcycle                                 | 72            | 53            | 45            | 42            | 55            | 60            | 121            | (1980)              |
| Pedestrian                                 | 25            | 41            | 36            | 40            | 40            | 35            | 157            | (1971)              |
| Bicycle                                    | 13            | 10            | 9             | 5             | 7             | 6             | 24             | (1977)              |
| All Terrain Vehicle                        | 10            | 9             | 8             | 8             | 9             | 7             | 10             | (2008)              |
| Snowmobile                                 | 1             | 0             | 3             | 0             | 1             | 2             | 9              | (1984)              |
| Farm Equipment                             | 0             | 3             | 2             | 2             | 2             | 5             | N/A            | N/A                 |
| Other Vehicle Type                         | 9             | 3             | 3             | 0             | 5             | 3             | N/A            | N/A                 |
| <b>Minnesota Fatality Rate<sup>3</sup></b> | 0.79          | 0.74          | 0.72          | 0.65          | 0.69          | 0.68          | 23.6           | (1934)              |
| <b>U.S. Fatality Rate<sup>3</sup></b>      | 1.26          | 1.15          | 1.11          | 1.10          | 1.14          | 1.11          | 18.0           | (1925)              |
| <b>Minnesota Economic Loss (millions)</b>  | \$1,480       | \$1,496       | \$1,477       | \$1,481       | \$1,514       | \$1,588       | \$1,769        | (2004) <sup>4</sup> |

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

<sup>2</sup> Fatalities occurring in motor vehicle/train crashes are included in other categories as well.

<sup>3</sup> Rate is based on 100 million vehicle miles of travel.

<sup>4</sup> 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

2013 FATALITIES BY TRAFFIC ROLE, GENDER, AND AGE

| Type of Vehicle         | Position in Vehicle | Gender | Age 0-9 | Age 10-19 | Age 20-29 | Age 30-39 | Age 40-49 | Age 50-59 | Age 60-69 | Age 70 and Older | Total |
|-------------------------|---------------------|--------|---------|-----------|-----------|-----------|-----------|-----------|-----------|------------------|-------|
| Car                     | Driver              | Male   | 0       | 4         | 19        | 14        | 6         | 7         | 8         | 12               | 70    |
|                         |                     | Female | 0       | 7         | 6         | 2         | 4         | 5         | 9         | 6                | 39    |
|                         | Passenger           | Male   | 2       | 3         | 7         | 0         | 2         | 1         | 0         | 1                | 16    |
|                         |                     | Female | 1       | 4         | 3         | 3         | 3         | 1         | 1         | 1                | 13    |
| Pickup                  | Driver              | Male   | 0       | 0         | 5         | 4         | 7         | 6         | 2         | 3                | 27    |
|                         |                     | Female | 0       | 1         | 1         | 0         | 0         | 0         | 0         | 0                | 2     |
|                         | Passenger           | Male   | 1       | 2         | 1         | 0         | 0         | 1         | 0         | 0                | 5     |
|                         |                     | Female | 2       | 1         | 1         | 0         | 0         | 2         | 0         | 0                | 6     |
| SUV                     | Driver              | Male   | 0       | 2         | 5         | 5         | 1         | 3         | 4         | 4                | 24    |
|                         |                     | Female | 0       | 0         | 3         | 3         | 0         | 2         | 1         | 1                | 10    |
|                         | Passenger           | Male   | 1       | 0         | 2         | 1         | 1         | 0         | 0         | 1                | 6     |
|                         |                     | Female | 0       | 3         | 0         | 0         | 0         | 0         | 0         | 0                | 3     |
| Van                     | Driver              | Male   | 0       | 0         | 0         | 1         | 0         | 1         | 2         | 2                | 6     |
|                         |                     | Female | 0       | 0         | 0         | 0         | 0         | 0         | 1         | 3                | 4     |
|                         | Passenger           | Male   | 0       | 1         | 0         | 1         | 0         | 0         | 2         | 0                | 4     |
|                         |                     | Female | 1       | 1         | 1         | 0         | 1         | 0         | 1         | 3                | 8     |
| Truck                   | Driver              | Male   | 0       | 0         | 1         | 0         | 1         | 3         | 2         | 2                | 9     |
|                         |                     | 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       | 1         | 10        | 8         | 5         | 15        | 6         | 5                | 50    |
|                         |                     | Female | 0       | 0         | 0         | 0         | 1         | 1         | 1         | 0                | 3     |
|                         | Passenger           | Male   | 0       | 0         | 0         | 0         | 0         | 0         | 0         | 0                | 0     |
|                         |                     | Female | 0       | 0         | 0         | 0         | 2         | 3         | 2         | 0                | 7     |
| Other Motor Vehicle     | Driver              | Male   | 0       | 0         | 3         | 0         | 1         | 5         | 3         | 1                | 13    |
|                         | Female              | 0      | 1       | 0         | 1         | 0         | 0         | 0         | 0         | 0                | 2     |
| Passenger               | Male                | 1      | 0       | 0         | 0         | 0         | 0         | 0         | 0         | 0                | 1     |
|                         | Female              | 0      | 0       | 1         | 0         | 0         | 0         | 1         | 0         | 0                | 2     |
| Bicyclist               | Male                | 1      | 1       | 0         | 0         | 0         | 0         | 1         | 0         | 1                | 4     |
|                         | Female              | 0      | 0       | 2         | 0         | 0         | 0         | 0         | 0         | 0                | 2     |
| Pedestrian              | Male                | 3      | 2       | 6         | 3         | 4         | 2         | 3         | 2         | 2                | 25    |
|                         | Female              | 0      | 0       | 0         | 0         | 2         | 3         | 2         | 3         | 3                | 10    |
| <b>Total Fatalities</b> | Male                | 9      | 16      | 59        | 37        | 28        | 45        | 32        | 34        | 260              |       |
|                         | Female              | 4      | 18      | 18        | 9         | 13        | 18        | 18        | 29        | 127              |       |
|                         | Total               | 13     | 34      | 77        | 46        | 41        | 63        | 50        | 63        | 387              |       |

Note: The vehicle types for the 18 fatalities in the 'Other Motor Vehicle' category consisted of: Seven ATVs, 5 farm equipment, 2 snowmobiles, 1 moped, 1 motorhome, 1 roadway maintenance vehicle, and 1 unknown vehicle type.

TABLE 1.04

AGE AND GENDER OF PERSONS KILLED OR INJURED IN 2013 CRASHES

| Age Group             | Males Killed | Females Killed | Total Killed | Males Injured | Females Injured | Unknown Injured | Total Injured |
|-----------------------|--------------|----------------|--------------|---------------|-----------------|-----------------|---------------|
| 00 - 03               | 2            | 2              | 4            | 183           | 135             | 4               | 322           |
| 04 - 10               | 7            | 2              | 9            | 424           | 423             | 5               | 852           |
| 11 - 14               | 2            | 3              | 5            | 319           | 354             | 6               | 679           |
| <b>Total &lt; 15:</b> | 11           | 7              | 18           | 926           | 912             | 15              | 1,853         |
| 15                    | 2            | 1              | 3            | 109           | 148             | 4               | 261           |
| 16                    | 4            | 4              | 8            | 261           | 391             | 3               | 655           |
| 17                    | 1            | 1              | 2            | 352           | 389             | 3               | 744           |
| 18                    | 1            | 6              | 7            | 405           | 395             | 2               | 802           |
| 19                    | 6            | 3              | 9            | 390           | 428             | 2               | 820           |
| 20                    | 5            | 0              | 5            | 399           | 396             | 3               | 798           |
| <b>Total 15-20:</b>   | 19           | 15             | 34           | 1,916         | 2,147           | 17              | 4,080         |
| <b>Total &lt; 21:</b> | 26           | 26             | 52           | 2,842         | 3,059           | 32              | 5,933         |
| 00 - 04               | 2            | 2              | 4            | 244           | 171             | 4               | 419           |
| 05 - 09               | 7            | 2              | 9            | 308           | 320             | 5               | 633           |
| 10 - 14               | 2            | 3              | 5            | 374           | 421             | 6               | 801           |
| 15 - 19               | 14           | 15             | 29           | 1,517         | 1,751           | 14              | 3,282         |
| 20 - 24               | 33           | 9              | 42           | 1,865         | 2,008           | 9               | 3,882         |
| 25 - 29               | 26           | 9              | 35           | 1,519         | 1,724           | 2               | 3,245         |
| 30 - 34               | 20           | 3              | 23           | 1,346         | 1,474           | 6               | 2,826         |
| 35 - 39               | 17           | 6              | 23           | 1,059         | 1,147           | 2               | 2,208         |
| 40 - 44               | 14           | 3              | 17           | 1,010         | 1,134           | 3               | 2,147         |
| 45 - 49               | 14           | 10             | 24           | 1,007         | 1,130           | 4               | 2,141         |
| 50 - 54               | 23           | 9              | 32           | 1,075         | 1,219           | 3               | 2,297         |
| 55 - 59               | 22           | 9              | 31           | 934           | 998             | 2               | 1,934         |
| 60 - 64               | 18           | 9              | 27           | 735           | 753             | 3               | 1,491         |
| 65 - 69               | 14           | 9              | 23           | 408           | 505             | 2               | 915           |
| 70 - 74               | 9            | 5              | 14           | 284           | 388             | 1               | 673           |
| 75 - 79               | 9            | 8              | 17           | 231           | 268             | 1               | 500           |
| 80 - 84               | 8            | 10             | 18           | 148           | 189             | 1               | 338           |
| 85 & Older            | 8            | 5              | 13           | 141           | 143             | 0               | 284           |
| Not Stated            | 0            | 1              | 1            | 151           | 212             | 274             | 637           |
| <b>Total:</b>         | 260          | 127            | 387          | 14,356        | 15,955          | 342             | 30,653        |

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 2013 CRASHES

| Age Group         | Male Drivers in Fatal Crashes | Female Drivers in Fatal Crashes | Drivers Gender Not Stated in Fatal Crashes | Total in Fatal Crashes | Male Drivers in All Crashes | Female Drivers in All Crashes | All Crashes Where Drivers Gender is Not Stated | Total in All Crashes |
|-------------------|-------------------------------|---------------------------------|--|------------------------|-----------------------------|-------------------------------|--|----------------------|
| <15               | 0                             | 0                               | 0  | 0                      | 36                          | 13                            | 2  | 51                   |
| 15                | 0                             | 1                               | 0  | 1                      | 81                          | 77                            | 2  | 160                  |
| 16                | 6                             | 7                               | 0  | 13                     | 1,432                       | 1,350                         | 3  | 2,785                |
| 17                | 2                             | 1                               | 0  | 3                      | 1,711                       | 1,563                         | 3  | 3,277                |
| 18                | 9                             | 5                               | 0  | 14                     | 1,870                       | 1,580                         | 10   | 3,460                |
| 19                | 4                             | 3                               | 0  | 7                      | 1,964                       | 1,602                         | 10   | 3,576                |
| 20                | 10                            | 1                               | 0  | 11                     | 1,998                       | 1,715                         | 8  | 3,721                |
| <b>All &lt;21</b> | <b>31</b>                     | <b>18</b>                       | <b>0</b>                                   | <b>49</b>              | <b>9,092</b>                | <b>7,900</b>                  | <b>38</b>                                      | <b>17,030</b>        |
| 00 – 04           | 0                             | 0                               | 0  | 0                      | 1                           | 0                             | 0  | 1                    |
| 05 – 09           | 0                             | 0                               | 0  | 0                      | 7                           | 0                             | 0  | 7                    |
| 10 – 14           | 0                             | 0                               | 0  | 0                      | 28                          | 13                            | 2  | 43                   |
| 15 – 19           | 21                            | 17                              | 0  | 38                     | 7,058                       | 6,172                         | 28   | 13,258               |
| 20 – 24           | 45                            | 16                              | 0  | 61                     | 9,724                       | 8,526                         | 69   | 18,319               |
| 25 – 29           | 36                            | 14                              | 0  | 50                     | 8,323                       | 7,048                         | 82   | 15,453               |
| 30 – 34           | 36                            | 8                               | 0  | 44                     | 7,688                       | 5,892                         | 60   | 13,640               |
| 35 – 39           | 33                            | 8                               | 0  | 41                     | 6,227                       | 4,715                         | 56   | 10,998               |
| 40 – 44           | 27                            | 10                              | 0  | 37                     | 6,080                       | 4,357                         | 31   | 10,468               |
| 45 – 49           | 34                            | 11                              | 0  | 45                     | 5,865                       | 4,273                         | 37   | 10,175               |
| 50 – 54           | 43                            | 11                              | 0  | 54                     | 6,152                       | 4,185                         | 36   | 10,373               |
| 55 – 59           | 47                            | 11                              | 0  | 58                     | 5,291                       | 3,486                         | 21   | 8,798                |
| 60 – 64           | 32                            | 10                              | 0  | 42                     | 3,996                       | 2,632                         | 23   | 6,651                |
| 65 – 69           | 21                            | 12                              | 0  | 33                     | 2,452                       | 1,700                         | 10   | 4,162                |
| 70 – 74           | 12                            | 4                               | 0  | 16                     | 1,600                       | 1,099                         | 8  | 2,707                |
| 75 – 79           | 11                            | 4                               | 0  | 15                     | 1,090                       | 859                           | 7  | 1,956                |
| 80 – 84           | 9                             | 4                               | 0  | 13                     | 812                         | 579                           | 4  | 1,395                |
| 85+               | 8                             | 3                               | 0  | 11                     | 624                         | 446                           | 1  | 1,071                |
| Unk               | 1                             | 0                               | 9  | 10                     | 535                         | 252                           | 4,432  | 5,219                |
| <b>Total</b>      | <b>416</b>                    | <b>143</b>                      | <b>9</b>                                   | <b>568</b>             | <b>73,553</b>               | <b>56,234</b>                 | <b>4,907</b>                                   | <b>134,694</b>       |

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.)

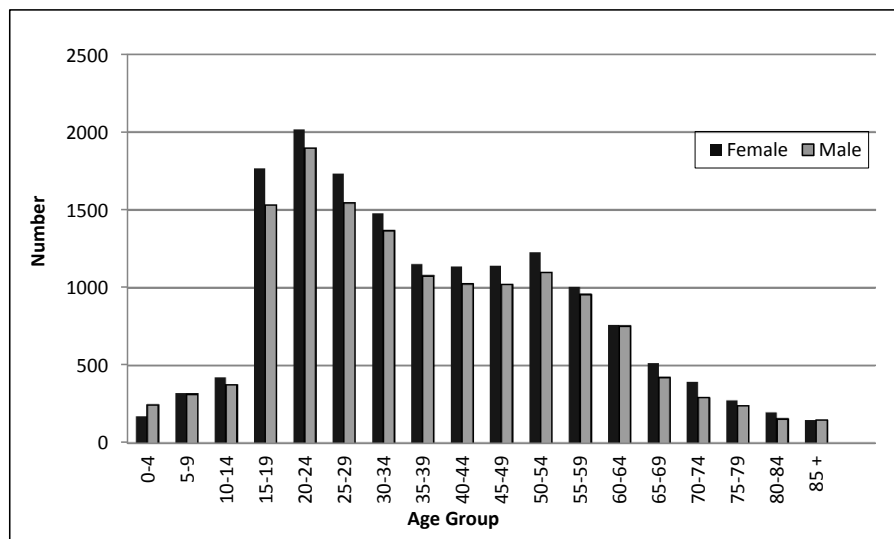
TABLE 1.06

LICENSED VS. CRASH-INVOLVED DRIVERS BY AGE, 2013

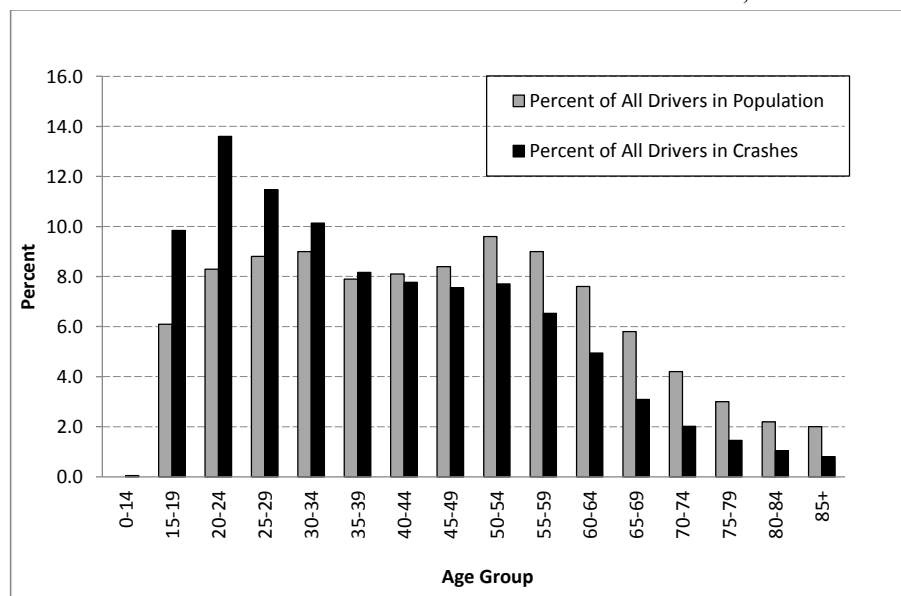
| Age Group            | Percentage of All Licensed Drivers | Percentage of Drivers in Fatal Crashes | Percentage of Drivers in Injury Crashes | Percentage of Drivers in Property Damage Crashes | Percentage of Drivers in All Crashes |
|----------------------|------------------------------------|--|---|--|--------------------------------------|
| 14 & Younger         | 0.0%                               | 0.0%                                   | 0.1%                                    | 0.0%   | 0.0%                                 |
| 15                   | 0.6                                | 0.2                                    | 0.1                                     | 0.1  | 0.1                                  |
| 16                   | 1.2                                | 2.3                                    | 2.0                                     | 2.1  | 2.1                                  |
| 17                   | 1.3                                | 0.5                                    | 2.4                                     | 2.5  | 2.4                                  |
| 18                   | 1.4                                | 2.5                                    | 2.5                                     | 2.6  | 2.6                                  |
| 19                   | 1.5                                | 1.2                                    | 2.7                                     | 2.7  | 2.7                                  |
| 20                   | 1.6                                | 1.9                                    | 2.8                                     | 2.8  | 2.8                                  |
| <b>Total &lt; 21</b> | 7.7%                               | 8.6%                                   | 12.5%                                   | 12.7%  | 12.7%                                |
| 15 - 19              | 6.1%                               | 6.7%                                   | 9.6%                                    | 10.0%  | 9.9%                                 |
| 20 - 24              | 8.3                                | 10.7                                   | 13.3                                    | 13.8   | 13.6                                 |
| 25 - 29              | 8.8                                | 8.8                                    | 11.4                                    | 11.6   | 11.5                                 |
| 30 - 34              | 9.0                                | 7.7                                    | 10.4                                    | 10.1   | 10.2                                 |
| 35 - 39              | 7.9                                | 7.2                                    | 8.5                                     | 8.1  | 8.2                                  |
| 40 - 44              | 8.1                                | 6.5                                    | 7.9                                     | 7.8  | 7.8                                  |
| 45 - 49              | 8.4                                | 7.9                                    | 7.9                                     | 7.5  | 7.6                                  |
| 50 - 54              | 9.6                                | 9.5                                    | 8.0                                     | 7.6  | 7.7                                  |
| 55 - 59              | 9.0                                | 10.2                                   | 6.8                                     | 6.4  | 6.6                                  |
| 60 - 64              | 7.6                                | 7.4                                    | 5.4                                     | 4.8  | 5.0                                  |
| 65 - 69              | 5.8                                | 5.8                                    | 3.2                                     | 3.0  | 3.1                                  |
| 70 - 74              | 4.2                                | 2.8                                    | 2.2                                     | 2.0  | 2.0                                  |
| 75 - 79              | 3.0                                | 2.6                                    | 1.6                                     | 1.4  | 1.5                                  |
| 80 - 84              | 2.2                                | 2.3                                    | 1.1                                     | 1.0  | 1.0                                  |
| 85 & Older           | 2.0                                | 1.9                                    | 0.9                                     | 0.8  | 0.8                                  |
| Age Not Stated       | 0.0                                | 1.8                                    | 1.9                                     | 4.7  | 3.9                                  |
| <b>Total Percent</b> | 100.0%                             | 100.0%                                 | 100.0%                                  | 100.0%   | 100.0%                               |
| <b>Total Number</b>  | 4,079,256                          |  |   |  |                                      |

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, 2013**



**FIGURE 1.02**  
**LICENSED VS CRASH-INVOLVED DRIVERS BY AGE, 2013**



*TABLE 1.07*  
**PERCENTAGE OF DRIVERS IN 2013 CRASHES  
 BY AGE AND FIRST HARMFUL EVENT**

| <b>First Harmful Event</b> | <b>Age Group 15-19</b> | <b>Age Group 20-24</b> | <b>Age Group 25-29</b> | <b>Age Group 30-34</b> | <b>Age Group 35-64</b> | <b>Age Group 65-79</b> | <b>Age Group 80 +</b> | <b>All Ages</b> |
|----------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|-----------------------|-----------------|
| <b>Collision With:</b>     |                        |                        |                        |                        |                        |                        |                       |                 |
| Other Motor Vehicle        | 73.6%                  | 76.0%                  | 79.1%                  | 80.3%                  | 81.8%                  | 82.5%                  | 83.7%                 | 79.7%           |
| Parked Motor Vehicle       | 3.7                    | 3.4                    | 3.3                    | 3.3                    | 2.8                    | 3.2                    | 3.8                   | 4.3             |
| Bicycle                    | 0.3                    | 0.4                    | 0.5                    | 0.6                    | 0.6                    | 0.9                    | 1.5                   | 0.6             |
| Pedestrian                 | 0.3                    | 0.6                    | 0.5                    | 0.6                    | 0.6                    | 0.8                    | 0.9                   | 0.6             |
| Deer                       | 0.7                    | 1.0                    | 1.2                    | 1.5                    | 2.2                    | 2.0                    | 0.7                   | 1.6             |
| Other Animal               | 0.1                    | 0.1                    | 0.1                    | 0.1                    | 0.2                    | 0.1                    | 0.1                   | 0.2             |
| Railroad Train             | 0.0                    | 0.0                    | 0.0                    | 0.0                    | 0.0                    | 0.1                    | 0.0                   | 0.0             |
| Fixed Object               | 14.4                   | 13.1                   | 10.7                   | 9.5                    | 7.8                    | 7.3                    | 6.4                   | 9.7             |
| Other Object               | 0.3                    | 0.3                    | 0.2                    | 0.3                    | 0.3                    | 0.2                    | 0.2                   | 0.3             |
| <b>Non-Collision:</b>      |                        |                        |                        |                        |                        |                        |                       |                 |
| Overturn                   | 5.4                    | 3.8                    | 3.3                    | 2.8                    | 2.4                    | 2.1                    | 1.7                   | 2.9             |
| Other Non-Collision        | 0.2                    | 0.4                    | 0.4                    | 0.4                    | 0.5                    | 0.3                    | 0.2                   | 0.4             |
| <b>Other or Unknown</b>    | 0.9                    | 0.8                    | 0.7                    | 0.6                    | 0.8                    | 0.8                    | 0.8                   | 0.8             |
| <b>Total Percent</b>       | 100.0%                 | 100.0%                 | 100.0%                 | 100.0%                 | 100.0%                 | 100.0%                 | 100.0%                | 100.0%          |
| <b>Total Drivers</b>       | 13,258                 | 18,319                 | 15,453                 | 13,640                 | 57,463                 | 8,825                  | 2,472                 | 134,694         |

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 2013 CRASHES BY PHYSICAL CONDITION\***

| <b>Physical Condition</b> | <b>Drivers in Fatal Crashes</b> | <b>Drivers in Injury Crashes</b> | <b>Drivers in Property Damage Crashes</b> | <b>Drivers in All Crashes</b> |
|---------------------------|---------------------------------|----------------------------------|---|-------------------------------|
| Normal                    | 362                             | 33,543                           | 78,957                                    | 112,862                       |
| Under the Influence       | 30                              | 1,086                            | 1,511                                     | 2,627                         |
| Had Been Drinking         | 29                              | 451                              | 433                                       | 913                           |
| Commercial Driver .04+    | 0                               | 2                                | 7   | 9                             |
| Had Been Using Drugs      | 3                               | 75                               | 58  | 136                           |
| Aggressive                | 1                               | 22                               | 20  | 43                            |
| Fatigued/Asleep           | 5                               | 166                              | 224                                       | 395                           |
| Physical Disability       | 0                               | 38                               | 38  | 76                            |
| Ill                       | 2                               | 81                               | 59  | 142                           |
| Other                     | 9                               | 199                              | 135                                       | 343                           |
| Unknown                   | 127                             | 3,405                            | 13,616                                    | 17,148                        |
| <b>Total</b>              | 568                             | 39,068                           | 95,058                                    | 134,694                       |

\* 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, 2013**

| <b>Contributing Factor</b>   | <b>Age Group<br/>15-19</b> | <b>Age Group<br/>20-24</b> | <b>Age Group<br/>25-29</b> | <b>Age Group<br/>30-34</b> | <b>Age Group<br/>35-64</b> | <b>Age Group<br/>65-79</b> | <b>Age Group<br/>80+</b> | <b>All Ages</b> |
|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|--------------------------|-----------------|
| <b>Human Factors</b>   |                            |                            |                            |                            |                            |                            |                          |                 |
| Illegal/Unsafe Speed   | 24.8%                      | 30.4%                      | 28.9%                      | 27.5%                      | 24.4%                      | 20.0%                      | 15.7%                    | 26.3%           |
| Driver Inattention/Distraction                                       | 12.1                       | 11.3                       | 10.7                       | 10.8                       | 11.1                       | 17.0                       | 21.6                     | 11.6            |
| Overcorrecting   | 9.3                        | 7.6                        | 7.7                        | 6.1                        | 5.8                        | 5.4                        | 4.7                      | 6.9             |
| Chemical Impairment  | 2.8                        | 9.0                        | 9.2                        | 8.9                        | 6.7                        | 2.1                        | 1.3                      | 6.7             |
| Driver Inexperience  | 13.5                       | 3.8                        | 1.9                        | 1.7                        | 1.4                        | 0.4                        | 0.0                      | 4.0             |
| Improper/Unsafe Lane Use   | 1.7                        | 2.1                        | 2.6                        | 2.5                        | 2.6                        | 2.3                        | 5.1                      | 2.5             |
| Improper Turn  | 0.8                        | 0.4                        | 0.5                        | 0.5                        | 1.3                        | 0.9                        | 1.7                      | 0.9             |
| Disregard for Traffic Control Device                                 | 0.4                        | 0.4                        | 0.6                        | 0.5                        | 0.6                        | 0.9                        | 1.7                      | 0.6             |
| Following Too Closely  | 0.4                        | 0.3                        | 0.6                        | 0.5                        | 0.7                        | 0.9                        | 0.0                      | 0.5             |
| Vision Obscured  | 0.4                        | 0.4                        | 0.4                        | 0.3                        | 0.6                        | 0.8                        | 1.3                      | 0.5             |
| Driving Left of Center-Not Passing                                   | 0.4                        | 0.3                        | 0.3                        | 0.4                        | 0.3                        | 1.0                        | 1.7                      | 0.4             |
| Unsafe Backing   | 0.2                        | 0.3                        | 0.1                        | 0.3                        | 0.3                        | 0.5                        | 0.9                      | 0.3             |
| Improper Passing/Overtaking  | 0.2                        | 0.2                        | 0.2                        | 0.4                        | 0.2                        | 0.4                        | 0.0                      | 0.2             |
| Failure to Yield Right of Way  | 0.1                        | 0.2                        | 0.1                        | 0.2                        | 0.3                        | 0.9                        | 0.0                      | 0.2             |
| Driver on Cell Phone or CB Radio                                     | 0.3                        | 0.1                        | 0.2                        | 0.1                        | 0.1                        | 0.2                        | 0.0                      | 0.2             |
| Improper Parking, Starting, Stopping                                 | 0.1                        | 0.1                        | 0.1                        | 0.1                        | 0.1                        | 0.3                        | 0.4                      | 0.1             |
| Impeding Traffic   | 0.0                        | 0.1                        | 0.0                        | 0.0                        | 0.0                        | 0.0                        | 0.0                      | 0.0             |
| Other Human Factor   | 3.8                        | 3.1                        | 3.4                        | 3.2                        | 4.8                        | 9.7                        | 15.7                     | 4.3             |
| <b>Vehicular Factors</b>   |                            |                            |                            |                            |                            |                            |                          |                 |
| Skidding   | 8.7                        | 8.1                        | 8.9                        | 9.8                        | 10.0                       | 10.0                       | 8.1                      | 9.2             |
| Defective Equipment  | 0.9                        | 0.9                        | 1.3                        | 1.2                        | 1.8                        | 1.2                        | 0.0                      | 1.3             |
| Other Vehicular Factor   | 0.6                        | 0.9                        | 0.8                        | 0.7                        | 1.0                        | 0.8                        | 1.7                      | 0.8             |
| <b>Miscellaneous Factors</b>   |                            |                            |                            |                            |                            |                            |                          |                 |
| Weather  | 15.7                       | 15.9                       | 16.8                       | 19.2                       | 19.3                       | 18.6                       | 14.1                     | 17.4            |
| Other  | 2.7                        | 4.0                        | 4.7                        | 5.3                        | 6.7                        | 6.0                        | 4.2                      | 5.0             |
| <b>Total Percent</b>   | 100.0%                     | 100.0%                     | 100.0%                     | 100.0%                     | 100.0%                     | 100.0%                     | 100.0%                   | 100.0%          |
| <b>Total Contributing Factors Cited</b>                              | 3,870                      | 4,360                      | 2,937                      | 2,287                      | 7,831                      | 1,056                      | 236                      | 22,875          |
| <b>Drivers for Whom There Was<br/>"No Clear Contributing Factor"</b> |                            |                            |                            |                            |                            |                            |                          |                 |
|  | 195                        | 306                        | 280                        | 245                        | 1,282                      | 135                        | 24                       | 2,501           |
| <b>Total Number of Drivers</b>                                       | 2,788                      | 3,375                      | 2,415                      | 1,939                      | 7,432                      | 1,027                      | 223                      | 20,045          |

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, 2013**

| <b>Contributing Factor</b>                                       | <b>Age Group<br/>15-19</b> | <b>Age Group<br/>20-24</b> | <b>Age Group<br/>25-29</b> | <b>Age Group<br/>30-34</b> | <b>Age Group<br/>35-64</b> | <b>Age Group<br/>65-79</b> | <b>Age Group<br/>80 +</b> | <b>All Ages</b> |
|--|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|-----------------|
| <b>Human Factors</b>   |                            |                            |                            |                            |                            |                            |                           |                 |
| Driver Inattention or Distraction                                | 23.8%                      | 24.2%                      | 22.5%                      | 22.2%                      | 21.0%                      | 20.6%                      | 16.6%                     | 21.8%           |
| Failure to Yield Right of Way                                    | 18.1                       | 16.0                       | 15.4                       | 15.5                       | 18.1                       | 28.4                       | 38.1                      | 18.4            |
| Improper or Unsafe Lane Use                                      | 3.3                        | 4.4                        | 5.0                        | 5.1                        | 5.7                        | 6.4                        | 5.4                       | 5.4             |
| Following Too Closely  | 12.7                       | 14.8                       | 14.5                       | 14.5                       | 12.5                       | 6.5                        | 5.7                       | 12.7            |
| Illegal or Unsafe Speed  | 8.1                        | 9.5                        | 8.9                        | 8.3                        | 6.8                        | 3.9                        | 2.9                       | 7.6             |
| Improper Passing or Overtaking                                   | 0.9                        | 1.2                        | 1.3                        | 1.4                        | 1.5                        | 1.3                        | 1.9                       | 1.5             |
| Disregard for Traffic Control Device                             | 4.0                        | 4.2                        | 4.7                        | 4.6                        | 4.5                        | 6.3                        | 6.6                       | 4.7             |
| Improper Turn  | 2.0                        | 1.7                        | 1.9                        | 1.6                        | 2.4                        | 3.2                        | 3.9                       | 2.2             |
| Vision Obscured  | 1.9                        | 1.5                        | 1.7                        | 1.8                        | 1.9                        | 2.7                        | 2.2                       | 1.8             |
| Chemical Impairment  | 0.6                        | 1.9                        | 2.8                        | 2.6                        | 1.9                        | 0.5                        | 0.1                       | 1.7             |
| Unsafe Backing   | 1.1                        | 0.9                        | 1.0                        | 1.6                        | 2.0                        | 2.5                        | 2.3                       | 1.7             |
| Driver Inexperience  | 7.0                        | 1.6                        | 1.0                        | 0.8                        | 0.5                        | 0.2                        | 0.1                       | 1.6             |
| Improper Parking, Starting, Stopping                             | 1.0                        | 0.8                        | 1.0                        | 1.2                        | 1.2                        | 1.3                        | 1.3                       | 1.1             |
| Overcorrecting   | 0.8                        | 1.0                        | 0.9                        | 0.6                        | 0.7                        | 0.5                        | 0.3                       | 0.7             |
| Driving Left of Center-Not Passing                               | 0.5                        | 0.6                        | 0.5                        | 0.5                        | 0.8                        | 0.8                        | 0.6                       | 0.6             |
| Impeding Traffic   | 0.1                        | 0.2                        | 0.2                        | 0.2                        | 0.3                        | 0.3                        | 0.4                       | 0.2             |
| Improper or No Signal  | 0.1                        | 0.1                        | 0.1                        | 0.1                        | 0.2                        | 0.3                        | 0.3                       | 0.2             |
| Driver on Cell Phone or CB Radio                                 | 0.2                        | 0.2                        | 0.1                        | 0.2                        | 0.1                        | 0.0                        | 0.9                       | 0.1             |
| Failure to Use Lights  | 0.0                        | 0.1                        | 0.1                        | 0.0                        | 0.1                        | 0.0                        | 0.1                       | 0.1             |
| Other Human Factor   | 1.3                        | 1.8                        | 1.8                        | 2.0                        | 2.4                        | 2.7                        | 3.9                       | 2.1             |
| <b>Vehicular Factors</b>   |                            |                            |                            |                            |                            |                            |                           |                 |
| Skidding   | 3.7                        | 3.7                        | 3.6                        | 3.9                        | 3.8                        | 2.5                        | 1.4                       | 3.5             |
| Defective Equipment  | 0.7                        | 0.8                        | 0.7                        | 0.8                        | 0.6                        | 0.3                        | 0.2                       | 0.6             |
| Other Vehicular Factor   | 0.4                        | 0.4                        | 0.4                        | 0.6                        | 0.7                        | 0.6                        | 0.6                       | 0.5             |
| <b>Miscellaneous Factors</b>                                     |                            |                            |                            |                            |                            |                            |                           |                 |
| Weather  | 5.7                        | 6.2                        | 6.7                        | 6.4                        | 6.8                        | 4.7                        | 2.5                       | 6.1             |
| Other  | 2.0                        | 2.4                        | 3.2                        | 3.4                        | 2.8                        | 3.5                        | 2.6                       | 3.2             |
| <b>Total Percent</b>   | 100.0%                     | 100.0%                     | 100.0%                     | 100.0%                     | 100.0%                     | 100.0%                     | 100.0%                    | 100.0%          |
| <b>Total Contributing Factors Cited</b>                          | 9,617                      | 11,608                     | 8,506                      | 6,783                      | 26,196                     | 4,737                      | 1,807                     | 71,669          |
| <b>Drivers for Whom There Was "No Clear Contributing Factor"</b> |                            |                            |                            |                            |                            |                            |                           |                 |
| <b>Total Number of Drivers</b>                                   | 10,469                     | 14,942                     | 13,033                     | 11,689                     | 49,998                     | 7,796                      | 2,249                     | 114,967         |

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, 2013**

| Vehicle Type                       | Killed     | Severely Injured | Moderately Injured | Minor Injuries | Total Injured | Not Injured    | Total Persons  |
|------------------------------------|------------|------------------|--------------------|----------------|---------------|----------------|----------------|
| Automobile                         | 154        | 491              | 3,333              | 12,003         | 15,827        | 78,837         | 94,818         |
| Pickup Truck                       | 39         | 113              | 674                | 1,786          | 2,573         | 16,197         | 18,809         |
| Sport Utility Vehicle              | 43         | 170              | 1,163              | 4,349          | 5,682         | 31,287         | 37,012         |
| Van                                | 22         | 83               | 543                | 1,946          | 2,572         | 13,721         | 16,315         |
| Motor Home/Camper                  | 1          | 0                | 1                  | 9              | 10            | 115            | 126            |
| Limousine                          | 0          | 0                | 0                  | 7              | 7             | 74             | 81             |
| Taxi Cab                           | 0          | 0                | 26                 | 154            | 180           | 704            | 884            |
| Police Vehicle                     | 0          | 1                | 27                 | 76             | 104           | 381            | 485            |
| Fire Department Vehicle            | 0          | 0                | 0                  | 1              | 1             | 57             | 58             |
| School Bus                         | 0          | 2                | 9                  | 95             | 106           | 3,826          | 3,932          |
| Other Bus                          | 0          | 0                | 13                 | 139            | 152           | 1,162          | 1,314          |
| Ambulance                          | 0          | 0                | 0                  | 12             | 12            | 107            | 119            |
| Military Vehicle                   | 0          | 0                | 1                  | 1              | 2             | 11             | 13             |
| Snowmobile                         | 2          | 4                | 7                  | 8              | 19            | 11             | 32             |
| All-Terrain Vehicle                | 7          | 8                | 17                 | 16             | 41            | 14             | 62             |
| Farm Tractor of Equipment          | 5          | 2                | 6                  | 12             | 20            | 115            | 140            |
| Motorcycle                         | 58         | 166              | 533                | 398            | 1,097         | 198            | 1,353          |
| Motor Scooter/Motorbike*           | 2          | 6                | 19                 | 20             | 45            | 5              | 52             |
| Motorized Bicycle (Moped)          | 1          | 5                | 32                 | 21             | 58            | 3              | 62             |
| Hit and Run Vehicle                | 0          | 2                | 12                 | 45             | 59            | 2,293          | 2,352          |
| Road Maintenance Vehicle           | 2          | 1                | 11                 | 30             | 42            | 752            | 796            |
| Other Public Owned Vehicle         | 0          | 0                | 2                  | 21             | 23            | 200            | 223            |
| Single Truck (2-axle, 6 tire)      | 2          | 1                | 13                 | 41             | 55            | 774            | 831            |
| Single Truck (3 or more axles)     | 0          | 2                | 17                 | 19             | 38            | 376            | 414            |
| Single Truck with Trailer          | 1          | 2                | 10                 | 18             | 30            | 368            | 399            |
| Truck Tractor with No Trailer      | 0          | 0                | 1                  | 2              | 3             | 77             | 80             |
| Truck Tractor with Semi Trailer    | 6          | 8                | 61                 | 88             | 157           | 2,393          | 2,556          |
| Truck Tractor with Double Trailers | 0          | 0                | 1                  | 4              | 5             | 48             | 53             |
| Truck Tractor with Triple Trailers | 0          | 0                | 0                  | 0              | 0             | 1              | 1              |
| Other or Unknown Truck Type        | 0          | 0                | 3                  | 4              | 7             | 282            | 289            |
| Other Vehicle Type                 | 0          | 2                | 7                  | 12             | 21            | 213            | 234            |
| Unknown Vehicle Type               | 1          | 1                | 7                  | 9              | 17            | 1,146          | 1,164          |
| Bicycle                            | 6          | 50               | 256                | 515            | 821           | 42             | 869            |
| Pedestrian                         | 35         | 96               | 304                | 467            | 867           | 24             | 926            |
| <b>Total</b>                       | <b>387</b> | <b>1,216</b>     | <b>7,109</b>       | <b>22,328</b>  | <b>30,653</b> | <b>155,814</b> | <b>186,854</b> |

\* 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 2013 CRASHES**

| <b>Motor Vehicle Type*</b>         | <b>Vehicles in Fatal Crashes</b> | <b>Vehicles in Injury Crashes</b> | <b>Vehicles in Property Damage Crashes</b> | <b>Vehicles in All Crashes</b> |
|------------------------------------|----------------------------------|-----------------------------------|--|--------------------------------|
| Automobile                         | 204                              | 21,145                            | 53,744                                     | 75,093                         |
| Pickup Truck                       | 82                               | 4,091                             | 10,986                                     | 15,159                         |
| Sport Utility Vehicle              | 95                               | 7,767                             | 19,104                                     | 26,966                         |
| Van                                | 43                               | 3,177                             | 7,195                                      | 10,415                         |
| Motor Home/Camper                  | 1                                | 17                                | 45   | 63                             |
| Limousine                          | 0                                | 10                                | 54   | 64                             |
| Taxi Cab                           | 0                                | 233                               | 423  | 656                            |
| Police Vehicle                     | 1                                | 125                               | 333  | 459                            |
| Fire Department Vehicle            | 0                                | 3                                 | 28   | 31                             |
| School Bus                         | 3                                | 132                               | 601  | 736                            |
| Other Bus                          | 3                                | 131                               | 442  | 576                            |
| Ambulance                          | 0                                | 12                                | 40   | 52                             |
| Military Vehicle                   | 0                                | 4                                 | 5  | 9                              |
| Snowmobile                         | 2                                | 18                                | 8  | 28                             |
| All-Terrain Vehicle*               | 7                                | 36                                | 10   | 53                             |
| Farm Tractor or Equipment          | 6                                | 58                                | 76   | 140                            |
| Motorcycle                         | 57                               | 1,025                             | 158  | 1,240                          |
| Motor scooter/Motorbike**          | 2                                | 44                                | 8  | 54                             |
| Motorized Bicycle (Moped)          | 1                                | 57                                | 4  | 62                             |
| Hit and Run Vehicle                | 3                                | 334                               | 1,926                                      | 2,263                          |
| Road Maintenance Vehicle           | 6                                | 130                               | 624  | 760                            |
| Other Public Owned Vehicle         | 0                                | 39                                | 139  | 178                            |
| Single Truck (2-axle, 6-tire)      | 5                                | 180                               | 562  | 747                            |
| Single Truck (3 or more axles)     | 8                                | 106                               | 286  | 400                            |
| Single Truck with Trailer          | 5                                | 80                                | 257  | 342                            |
| Truck Tractor with No Trailer      | 1                                | 15                                | 64   | 80                             |
| Truck Tractor with Semi Trailer    | 43                               | 549                               | 1,854                                      | 2,446                          |
| Truck Tractor with Double Trailers | 0                                | 10                                | 39   | 49                             |
| Truck Tractor with Triple Trailers | 0                                | 0                                 | 1  | 1                              |
| Other or Unknown Truck Type        | 0                                | 53                                | 210  | 263                            |
| Other Vehicle Type                 | 1                                | 49                                | 166  | 216                            |
| Unknown Vehicle Type               | 2                                | 96                                | 1,070                                      | 1,168                          |
| <b>Total***</b>                    | <b>581</b>                       | <b>39,726</b>                     | <b>100,462</b>                             | <b>140,769</b>                 |

\* Snowmobiles and ATV's 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*  
**2013 CRASHES BY FIRST HARMFUL EVENT**

| <b>First Harmful Event</b> | <b>Fatal Crashes</b> | <b>Personal Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> | <b>Fatality Rate Per 1,000 Crashes</b> |
|----------------------------|----------------------|--------------------------------|--------------------------------|----------------------|---------------|----------------|--|
| <b>Collision With:</b>     |                      |                                |                                |                      |               |                |  |
| Another Motor Vehicle      | 168                  | 14,099                         | 35,974                         | 50,241               | 189           | 21,207         | 3.8                                    |
| Parked Motor Vehicle       | 7                    | 502                            | 4,669                          | 5,178                | 9             | 670            | 1.7                                    |
| Bicycle                    | 7                    | 813                            | 32                             | 852                  | 7             | 829            | 8.2                                    |
| Pedestrian                 | 34                   | 806                            | 8                              | 848                  | 35            | 861            | 41.3                                   |
| Deer                       | 8                    | 250                            | 1,838                          | 2,096                | 8             | 302            | 3.8                                    |
| Other Animal               | 0                    | 45                             | 155                            | 200                  | 0             | 58             | 0.0                                    |
| Railroad Train             | 5                    | 17                             | 29                             | 51                   | 5             | 20             | 98.0                                   |
| Fixed Object               | 55                   | 2,988                          | 9,766                          | 12,809               | 58            | 3,587          | 4.5                                    |
| Non-Fixed Object           | 0                    | 59                             | 232                            | 291                  | 0             | 68             | 0.0                                    |
| Other Collision Type       | 2                    | 153                            | 232                            | 387                  | 2             | 186            | 5.2                                    |
| Unk Collision Type         | 0                    | 6                              | 7                              | 13                   | 0             | 10             | 0.0                                    |
| Runaway Car                | 0                    | 2                              | 13                             | 15                   | 0             | 2              | 0.0                                    |
| <b>Non-Collision:</b>      |                      |                                |                                |                      |               |                |  |
| Overturn                   | 59                   | 1,909                          | 1,946                          | 3,914                | 60            | 2,491          | 15.3                                   |
| Submersion                 | 6                    | 11                             | 37                             | 54                   | 7             | 17             | 129.6                                  |
| Fire/Explosion             | 0                    | 0                              | 30                             | 30                   | 0             | 0              | 0.0                                    |
| Other Non-Collision        | 4                    | 140                            | 233                            | 377                  | 5             | 154            | 13.3                                   |
| <b>Unknown Crash Type:</b> | 2                    | 160                            | 189                            | 351                  | 2             | 191            | 5.7                                    |
| <b>Total</b>               | 357                  | 21,960                         | 55,390                         | 77,707               | 387           | 30,653         | 5.0                                    |

*TABLE 1.14*  
**2013 "HIT-AND-RUN" CRASHES BY FIRST HARMFUL EVENT**

| <b>First Harmful Event</b> | <b>Fatal Crashes</b> | <b>Personal Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|----------------------------|----------------------|--------------------------------|--------------------------------|----------------------|---------------|----------------|
| <b>Collision With:</b>     |                      |                                |                                |                      |               |                |
| Other Motor Vehicle        | 2                    | 649                            | 2,719                          | 3,370                | 2             | 882            |
| Parked Motor Vehicle       | 0                    | 57                             | 1,999                          | 2,056                | 0             | 69             |
| Bicycle                    | 3                    | 100                            | 3                              | 106                  | 3             | 102            |
| Pedestrian                 | 6                    | 164                            | 3                              | 173                  | 6             | 172            |
| Deer                       | 0                    | 0                              | 3                              | 3                    | 0             | 0              |
| Other Animal               | 0                    | 0                              | 0                              | 0                    | 0             | 0              |
| Railroad Train             | 0                    | 0                              | 2                              | 2                    | 0             | 0              |
| Fixed Object               | 0                    | 129                            | 851                            | 980                  | 0             | 154            |
| Non-Fixed Object           | 0                    | 3                              | 15                             | 18                   | 0             | 7              |
| Other Collision Type       | 0                    | 12                             | 29                             | 41                   | 0             | 16             |
| Unk Collision Type         | 0                    | 1                              | 1                              | 2                    | 0             | 2              |
| <b>Non-Collision:</b>      |                      |                                |                                |                      |               |                |
| Overturn                   | 1                    | 14                             | 13                             | 28                   | 1             | 28             |
| Submersion                 | 0                    | 1                              | 2                              | 3                    | 0             | 1              |
| Other Non-Collision        | 0                    | 3                              | 3                              | 6                    | 0             | 5              |
| <b>Unknown Crash Type</b>  | 0                    | 11                             | 18                             | 29                   | 0             | 15             |
| <b>Total</b>               | 12                   | 1,144                          | 5,661                          | 6,817                | 12            | 1,453          |

TABLE 1.15

2013 CRASHES BY TRAFFIC CONTROL DEVICE

| Traffic Control Device          | Fatal Crashes | Personal Injury Crashes | Property Damage Crashes | Total Crashes | Killed     | Injured       |
|---------------------------------|---------------|-------------------------|-------------------------|---------------|------------|---------------|
| Traffic Signal                  | 32            | 5,763                   | 12,136                  | 17,931        | 35         | 8,264         |
| Overhead Flashers               | 0             | 15                      | 39                      | 54            | 0          | 20            |
| Stop Sign-All Approaches        | 5             | 420                     | 1,174                   | 1,599         | 6          | 558           |
| Other Stop Sign                 | 58            | 3,112                   | 6,614                   | 9,784         | 62         | 4,676         |
| Yield Sign                      | 5             | 332                     | 836                     | 1,173         | 5          | 496           |
| Flagman, Officer, School Patrol | 0             | 24                      | 44                      | 68            | 0          | 40            |
| School Bus Stop Arm             | 0             | 14                      | 23                      | 37            | 0          | 20            |
| School Zone Sign                | 0             | 6                       | 15                      | 21            | 0          | 14            |
| No Passing Zone                 | 8             | 98                      | 169                     | 275           | 11         | 149           |
| RR Crossing Gate                | 0             | 8                       | 33                      | 41            | 0          | 12            |
| RR Flashing Lights              | 0             | 6                       | 14                      | 20            | 0          | 10            |
| RR Crossing Stop Sign           | 2             | 6                       | 5                       | 13            | 2          | 6             |
| RR Overhead Flashing Lights     | 0             | 2                       | 1                       | 3             | 0          | 4             |
| RR Overhead Lights and Gate     | 2             | 8                       | 26                      | 36            | 2          | 8             |
| RR Crossbuck                    | 0             | 1                       | 14                      | 15            | 0          | 1             |
| Other Device                    | 1             | 181                     | 579                     | 761           | 1          | 254           |
| Not Applicable                  | 241           | 11,876                  | 33,330                  | 45,447        | 260        | 16,004        |
| Unknown                         | 3             | 88                      | 338                     | 429           | 3          | 117           |
| <b>Total</b>                    | <b>357</b>    | <b>21,960</b>           | <b>55,390</b>           | <b>77,707</b> | <b>387</b> | <b>30,653</b> |

TABLE 1.16

2013 CRASHES BY WEATHER CONDITION

| Weather Condition        | Fatal Crashes | Personal Injury Crashes | Property Damage Crashes | Total Crashes | Killed     | Injured       |
|--------------------------|---------------|-------------------------|-------------------------|---------------|------------|---------------|
| Clear                    | 215           | 12,948                  | 29,894                  | 43,057        | 235        | 18,139        |
| Cloudy                   | 95            | 5,177                   | 12,931                  | 18,203        | 99         | 7,226         |
| Rain                     | 11            | 1,028                   | 2,320                   | 3,359         | 14         | 1,477         |
| Snow                     | 16            | 1,879                   | 7,155                   | 9,050         | 18         | 2,588         |
| Sleet/Hail/Freezing Rain | 1             | 415                     | 1,257                   | 1,673         | 1          | 552           |
| Fog/Smog/Smoke           | 2             | 79                      | 155                     | 236           | 2          | 112           |
| Blowing Sand/Dust/Snow   | 7             | 253                     | 750                     | 1,010         | 8          | 337           |
| Severe Crosswinds        | 1             | 17                      | 81                      | 99            | 1          | 21            |
| Other                    | 1             | 36                      | 113                     | 150           | 1          | 43            |
| Not Stated/Unknown       | 8             | 128                     | 734                     | 870           | 8          | 158           |
| <b>Total</b>             | <b>357</b>    | <b>21,960</b>           | <b>55,390</b>           | <b>77,707</b> | <b>387</b> | <b>30,653</b> |

TABLE 1.17  
CONTRIBUTING FACTORS IN 2013 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 |
| <b>Human Factors</b>   |  |                |                         |   |                |                         |                           |         |
| Driver Inattention/Distraction                                 | 13.2   | 20.0           | 18.8                    | 63  | 5,618          | 11,900                  | 68                        | 8,034   |
| Failure to Yield Right of Way                                  | 14.9   | 15.8           | 13.2                    | 70  | 4,379          | 8,204                   | 75                        | 6,640   |
| Illegal/Unsafe Speed   | 15.3   | 11.4           | 12.3                    | 71  | 3,227          | 7,892                   | 76                        | 4,549   |
| Following Too Closely  | 1.0  | 8.6            | 10.1                    | 4   | 2,264          | 6,159                   | 5                         | 3,127   |
| Improper/Unsafe Lane Use                                       | 3.1  | 3.2            | 5.4                     | 15  | 919            | 3,411                   | 19                        | 1,305   |
| Disregard Traffic Cntl Device                                  | 5.4  | 5.4            | 3.0                     | 26  | 1,514          | 1,889                   | 27                        | 2,446   |
| Chemical Impairment  | 7.2  | 4.0            | 2.4                     | 35  | 1,148          | 1,513                   | 36                        | 1,658   |
| Improper Turn  | 1.4  | 1.3            | 2.2                     | 7   | 379            | 1,376                   | 7                         | 550     |
| Driver Inexperience  | 3.5  | 2.1            | 2.2                     | 17  | 612            | 1,412                   | 20                        | 908     |
| Overcorrecting   | 6.0  | 2.7            | 2.0                     | 29  | 775            | 1,286                   | 30                        | 1,025   |
| Unsafe Backing   | 0.2  | 0.3            | 1.8                     | 1   | 84             | 1,075                   | 1                         | 109     |
| Vision Obscured  | 0.2  | 1.7            | 1.4                     | 1   | 451            | 857                     | 1                         | 605     |
| Improper Passing/Overtaking                                    | 0.6  | 0.7            | 1.3                     | 3   | 212            | 854                     | 3                         | 314     |
| Improper Park/Start/Stop                                       | 0.2  | 0.9            | 1.0                     | 1   | 243            | 631                     | 1                         | 327     |
| Driving Left of Ctr(Not Passing)                               | 6.4  | 0.8            | 0.4                     | 30  | 229            | 284                     | 38                        | 415     |
| Impeding Traffic   | 0.6  | 0.2            | 0.2                     | 3   | 53             | 121                     | 3                         | 74      |
| Improper/No Signal   | 0.0  | 0.1            | 0.1                     | 0   | 31             | 85                      | 0                         | 45      |
| Driver on Phone/CB Radio                                       | 0.4  | 0.2            | 0.1                     | 2   | 48             | 64                      | 2                         | 56      |
| Failure to Use Lights  | 0.0  | 0.1            | 0.1                     | 0   | 39             | 28                      | 0                         | 44      |
| Non-Motorist Error   | 1.4  | 0.7            | 0.0                     | 7   | 200            | 7                       | 7                         | 207     |
| Other Human Factor   | 5.0  | 3.3            | 2.4                     | 24  | 911            | 1,443                   | 25                        | 1,238   |
| <b>Vehicular Factors</b>                                       |  |                |                         |   |                |                         |                           |         |
| Skidding   | 1.9  | 3.9            | 5.3                     | 9   | 1,082          | 3,273                   | 12                        | 1,435   |
| Defective Equipment  | 0.6  | 0.7            | 0.7                     | 3   | 202            | 444                     | 4                         | 287     |
| Other Vehicular Factor   | 0.6  | 0.6            | 0.8                     | 3   | 165            | 480                     | 4                         | 218     |
| <b>Miscellaneous Factors</b>                                   |  |                |                         |   |                |                         |                           |         |
| Weather  | 4.7  | 7.2            | 9.5                     | 19  | 1,788          | 5,493                   | 19                        | 2,403   |
| Other  | 6.2  | 4.0            | 3.7                     | 26  | 1,008          | 2,064                   | 28                        | 1,384   |
| <b>Total Percent</b>   | 100.0%   | 100.0%         | 100.0%                  |   |                |                         |                           |         |
| <b>Total Contributing Factors</b>                              | 485  | 29,299         | 66,213                  |   |                |                         |                           |         |
| <b>Vehicles Where There Was "No Clear Contributing Factor"</b> | 255  | 17,552         | 39,891                  |   |                |                         |                           |         |
| <b>Total Number of Vehicles</b>                                | 623  | 41,426         | 100,511                 |   |                |                         |                           |         |

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*  
**2013 CRASHES BY LIGHT CONDITION**

| <b>Light Condition</b> | <b>Fatal Crashes</b> | <b>Personal Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|------------------------|----------------------|--------------------------------|--------------------------------|----------------------|---------------|----------------|
| Daylight               | 214                  | 15,524                         | 38,105                         | 53,843               | 232           | 21,757         |
| Dawn (Morning)         | 11                   | 487                            | 1,465                          | 1,963                | 11            | 647            |
| Dusk (Evening)         | 13                   | 577                            | 1,388                          | 1,978                | 13            | 823            |
| Dark/Street Lights On  | 37                   | 3,545                          | 9,710                          | 13,292               | 41            | 4,896          |
| Dark/No Street Lights  | 76                   | 1,742                          | 4,092                          | 5,910                | 84            | 2,421          |
| Other/Unknown          | 6                    | 85                             | 630                            | 721                  | 6             | 109            |
| <b>Total</b>           | <b>357</b>           | <b>21,960</b>                  | <b>55,390</b>                  | <b>77,707</b>        | <b>387</b>    | <b>30,653</b>  |

*TABLE 1.19*  
**2013 CRASHES BY ROAD SURFACE CONDITION**

| <b>Road Surface Condition</b> | <b>Fatal Crashes</b> | <b>Personal Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|-------------------------------|----------------------|--------------------------------|--------------------------------|----------------------|---------------|----------------|
| Dry                           | 272                  | 14,370                         | 31,189                         | 45,831               | 294           | 20,328         |
| Wet                           | 34                   | 2,801                          | 6,732                          | 9,567                | 36            | 3,923          |
| Snow/Slush                    | 14                   | 1,854                          | 7,335                          | 9,203                | 16            | 2,502          |
| Ice or Packed Snow            | 29                   | 2,703                          | 9,449                          | 12,181               | 33            | 3,601          |
| Other                         | 3                    | 168                            | 307                            | 478                  | 3             | 226            |
| Not Stated/Unknown            | 5                    | 64                             | 378                            | 447                  | 5             | 73             |
| <b>Total</b>                  | <b>357</b>           | <b>21,960</b>                  | <b>55,390</b>                  | <b>77,707</b>        | <b>387</b>    | <b>30,653</b>  |

*TABLE 1.20*  
**2013 CRASHES BY ROAD DESIGN**

| <b>Road Design</b>        | <b>Fatal Crashes</b> | <b>Personal Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|---------------------------|----------------------|--------------------------------|--------------------------------|----------------------|---------------|----------------|
| Freeway (Including Ramps) | 31                   | 3,906                          | 11,797                         | 15,734               | 37            | 5,312          |
| Other Divided Highway     | 46                   | 3,244                          | 6,700                          | 9,990                | 48            | 4,720          |
| One-Way Street            | 3                    | 486                            | 1,373                          | 1,862                | 3             | 663            |
| 4-6 Lanes Undivided       | 26                   | 4,155                          | 9,425                          | 13,606               | 27            | 5,883          |
| 3 Lanes Undivided         | 3                    | 270                            | 489                            | 762                  | 3             | 397            |
| 2 Lane—1 Each Way         | 234                  | 8,155                          | 19,368                         | 27,757               | 255           | 11,391         |
| Alley                     | 0                    | 61                             | 283                            | 344                  | 0             | 69             |
| Other Road Design         | 9                    | 773                            | 1,772                          | 2,554                | 9             | 1,039          |
| Not Stated/Unknown        | 5                    | 910                            | 4,183                          | 5,098                | 5             | 1,179          |
| <b>Total</b>              | <b>357</b>           | <b>21,960</b>                  | <b>55,390</b>                  | <b>77,707</b>        | <b>387</b>    | <b>30,653</b>  |

TABLE 1.21

2013 CRASHES BY DIAGRAM

| Diagram                           | Fatal Crashes | Personal Injury Crashes | Property Damage Crashes | Total Crashes | Killed     | Injured       |
|-----------------------------------|---------------|-------------------------|-------------------------|---------------|------------|---------------|
| Rear End                          | 24            | 6,660                   | 16,209                  | 22,893        | 27         | 9,397         |
| Sideswipe Passing                 | 7             | 944                     | 7,740                   | 8,691         | 7          | 1,237         |
| Left Turn – Oncoming Traffic      | 11            | 1,116                   | 2,396                   | 3,523         | 11         | 1,627         |
| Ran Off Road – Left               | 47            | 1,797                   | 4,427                   | 6,271         | 51         | 2,270         |
| Right Angle                       | 80            | 4,545                   | 8,479                   | 13,104        | 85         | 6,924         |
| Right Turn – Cross Street Traffic | 1             | 236                     | 679                     | 916           | 1          | 308           |
| Ran Off Road – Right              | 59            | 2,285                   | 5,104                   | 7,448         | 60         | 2,783         |
| Head On                           | 68            | 1,386                   | 2,466                   | 3,920         | 79         | 2,194         |
| Sideswipe Opposing                | 8             | 395                     | 1,262                   | 1,665         | 9          | 571           |
| Other Diagram                     | 34            | 2,001                   | 4,479                   | 6,514         | 38         | 2,625         |
| Not Applicable                    | 5             | 459                     | 1,371                   | 1,835         | 5          | 541           |
| Unknown / Incomplete              | 13            | 136                     | 778                     | 927           | 14         | 176           |
| <b>Total</b>                      | <b>357</b>    | <b>21,960</b>           | <b>55,390</b>           | <b>77,707</b> | <b>387</b> | <b>30,653</b> |

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

2013 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                 | 21            | 4,331                   | 12,900                  | 17,252        | 25         | 5,957         |
| 100,000-249,999                | 3             | 436                     | 973                     | 1,412         | 3          | 606           |
| 50,000 - 99,999                | 22            | 3,922                   | 10,032                  | 13,976        | 23         | 5,297         |
| 25,000 - 49,999                | 23            | 2,820                   | 7,119                   | 9,962         | 25         | 3,879         |
| 10,000 - 24,999                | 31            | 3,261                   | 8,712                   | 12,004        | 32         | 4,561         |
| 5,000 - 9,999                  | 18            | 1,193                   | 3,185                   | 4,396         | 18         | 1,644         |
| 2,500 - 4,999                  | 8             | 711                     | 1,923                   | 2,642         | 8          | 997           |
| 1,000 - 2,499                  | 8             | 395                     | 1,025                   | 1,428         | 9          | 577           |
| Under 1,000                    | 223           | 4,891                   | 9,521                   | 14,635        | 244        | 7,135         |
| <b>Total</b>                   | <b>357</b>    | <b>21,960</b>           | <b>55,390</b>           | <b>77,707</b> | <b>387</b> | <b>30,653</b> |

TABLE 1.23

2013 CRASHES BY TYPE OF ROADWAY

| Type of Roadway         | Fatal Crashes | Personal Injury Crashes | Property Damage Crashes | Total Crashes | Killed     | Injured       |
|-------------------------|---------------|-------------------------|-------------------------|---------------|------------|---------------|
| <b>Urban</b>            |               |                         |                         |               |            |               |
| Interstate              | 8             | 2,494                   | 7,324                   | 9,826         | 10         | 3,367         |
| US Trunk Hwy            | 13            | 1,383                   | 3,652                   | 5,048         | 13         | 1,966         |
| MN Trunk Hwy            | 26            | 2,383                   | 5,775                   | 8,184         | 28         | 3,327         |
| County State Aid Hwy    | 46            | 4,560                   | 9,926                   | 14,532        | 50         | 6,493         |
| County Road             | 0             | 89                      | 226                     | 315           | 0          | 132           |
| Township Road           | 0             | 1                       | 4                       | 5             | 0          | 1             |
| Municipal State Aid Hwy | 14            | 3,602                   | 9,638                   | 13,254        | 14         | 4,823         |
| Municipal Street        | 10            | 1,407                   | 6,067                   | 7,484         | 10         | 1,781         |
| Other Road              | 1             | 44                      | 309                     | 354           | 1          | 54            |
| <b>Urban Total</b>      | <b>118</b>    | <b>15,963</b>           | <b>42,921</b>           | <b>59,002</b> | <b>126</b> | <b>21,944</b> |
| <b>Rural</b>            |               |                         |                         |               |            |               |
| Interstate              | 12            | 552                     | 1,919                   | 2,483         | 15         | 791           |
| US Trunk Hwy            | 43            | 1,174                   | 2,546                   | 3,763         | 47         | 1,785         |
| MN Trunk Hwy            | 72            | 1,478                   | 2,676                   | 4,226         | 80         | 2,264         |
| County State Aid Hwy    | 85            | 1,867                   | 3,224                   | 5,176         | 91         | 2,586         |
| County Road             | 10            | 249                     | 423                     | 682           | 10         | 339           |
| Township Road           | 17            | 407                     | 576                     | 1,000         | 18         | 582           |
| Municipal State Aid Hwy | 0             | 1                       | 6                       | 7             | 0          | 1             |
| Municipal Street        | 0             | 250                     | 980                     | 1,230         | 0          | 338           |
| Other Road              | 0             | 19                      | 119                     | 138           | 0          | 23            |
| <b>Rural Total</b>      | <b>239</b>    | <b>5,997</b>            | <b>12,469</b>           | <b>18,705</b> | <b>261</b> | <b>8,709</b>  |
| <b>All Roadways</b>     |               |                         |                         |               |            |               |
| Interstate              | 20            | 3,046                   | 9,243                   | 12,309        | 25         | 4,158         |
| US Trunk Hwy            | 56            | 2,557                   | 6,198                   | 8,811         | 60         | 3,751         |
| MN Trunk Hwy            | 98            | 3,861                   | 8,451                   | 12,410        | 108        | 5,591         |
| County State Aid Hwy    | 131           | 6,427                   | 13,150                  | 19,708        | 141        | 9,079         |
| County Road             | 10            | 338                     | 649                     | 997           | 10         | 471           |
| Township Road           | 17            | 408                     | 580                     | 1,005         | 18         | 583           |
| Municipal State Aid Hwy | 14            | 3,603                   | 9,644                   | 13,261        | 14         | 4,824         |
| Municipal Street        | 10            | 1,657                   | 7,047                   | 8,714         | 10         | 2,119         |
| Other Road              | 1             | 63                      | 428                     | 492           | 1          | 77            |
| <b>Total</b>            | <b>357</b>    | <b>21,960</b>           | <b>55,390</b>           | <b>77,707</b> | <b>387</b> | <b>30,653</b> |

("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

2013 COUNTY CRASH REPORT

| County     | 2013             |                   | 2013<br>Crashes<br>Property<br>Damage | 2013<br>Crashes<br>Total | Total<br>Crashes<br>2012 | Number<br>Killed<br>2013 | Number<br>Killed<br>2012 | Number<br>Injured<br>2013 | Number<br>Injured<br>2012 |
|------------|------------------|-------------------|---------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
|            | Crashes<br>Fatal | Crashes<br>Injury |                                       |                          |                          |                          |                          |                           |                           |
| Aitkin     | 2                | 69                | 97                                    | 168                      | 189                      | 2                        | 3                        | 96                        | 90                        |
| Anoka      | 11               | 1,143             | 2,101                                 | 3,255                    | 2,874                    | 12                       | 25                       | 1,634                     | 1,536                     |
| Becker     | 3                | 119               | 165                                   | 287                      | 283                      | 3                        | 4                        | 174                       | 166                       |
| Beltrami   | 6                | 128               | 331                                   | 465                      | 443                      | 6                        | 7                        | 189                       | 199                       |
| Benton     | 8                | 144               | 415                                   | 567                      | 523                      | 8                        | 8                        | 207                       | 207                       |
| Big Stone  | 2                | 10                | 41                                    | 53                       | 64                       | 2                        | 1                        | 11                        | 32                        |
| Blue Earth | 4                | 285               | 787                                   | 1,076                    | 1,014                    | 4                        | 5                        | 395                       | 408                       |
| Brown      | 2                | 92                | 202                                   | 296                      | 244                      | 2                        | 1                        | 117                       | 106                       |
| Carlton    | 3                | 120               | 279                                   | 402                      | 304                      | 3                        | 4                        | 185                       | 170                       |
| Carver     | 6                | 289               | 789                                   | 1,084                    | 933                      | 6                        | 1                        | 424                       | 352                       |
| Cass       | 3                | 104               | 188                                   | 295                      | 256                      | 5                        | 6                        | 140                       | 166                       |
| Chippewa   | 4                | 55                | 88                                    | 147                      | 114                      | 4                        | 4                        | 94                        | 72                        |
| Chisago    | 6                | 228               | 372                                   | 606                      | 484                      | 6                        | 6                        | 357                       | 308                       |
| Clay       | 5                | 187               | 648                                   | 840                      | 642                      | 6                        | 4                        | 247                       | 282                       |
| Clearwater | 1                | 24                | 35                                    | 60                       | 69                       | 1                        | 0                        | 33                        | 47                        |
| Cook       | 1                | 20                | 38                                    | 59                       | 60                       | 1                        | 0                        | 38                        | 42                        |
| Cottonwood | 4                | 21                | 60                                    | 85                       | 93                       | 4                        | 2                        | 34                        | 72                        |
| Crow Wing  | 8                | 274               | 522                                   | 804                      | 748                      | 9                        | 10                       | 401                       | 427                       |
| Dakota     | 18               | 1,465             | 3,891                                 | 5,374                    | 4,491                    | 19                       | 19                       | 2,044                     | 1,877                     |
| Dodge      | 0                | 58                | 141                                   | 199                      | 188                      | 0                        | 5                        | 72                        | 102                       |
| Douglas    | 1                | 162               | 359                                   | 522                      | 525                      | 1                        | 8                        | 201                       | 262                       |
| Faribault  | 3                | 35                | 98                                    | 136                      | 128                      | 3                        | 4                        | 45                        | 55                        |
| Fillmore   | 1                | 57                | 137                                   | 195                      | 168                      | 1                        | 2                        | 89                        | 90                        |
| Freeborn   | 2                | 119               | 362                                   | 483                      | 406                      | 2                        | 3                        | 182                       | 190                       |
| Goodhue    | 6                | 191               | 530                                   | 727                      | 649                      | 7                        | 7                        | 271                       | 278                       |
| Grant      | 0                | 27                | 50                                    | 77                       | 64                       | 0                        | 1                        | 30                        | 28                        |
| Hennepin   | 37               | 6,394             | 15,903                                | 22,334                   | 19,816                   | 42                       | 33                       | 8,735                     | 8,205                     |
| Houston    | 2                | 48                | 170                                   | 220                      | 228                      | 2                        | 1                        | 62                        | 69                        |
| Hubbard    | 4                | 72                | 132                                   | 208                      | 140                      | 4                        | 1                        | 104                       | 112                       |
| Isanti     | 5                | 106               | 231                                   | 342                      | 306                      | 5                        | 2                        | 147                       | 162                       |
| Itasca     | 6                | 177               | 390                                   | 573                      | 536                      | 6                        | 8                        | 271                       | 255                       |
| Jackson    | 4                | 39                | 86                                    | 129                      | 124                      | 5                        | 3                        | 58                        | 60                        |
| Kanabec    | 0                | 38                | 53                                    | 91                       | 115                      | 0                        | 0                        | 62                        | 58                        |
| Kandiyohi  | 2                | 188               | 436                                   | 626                      | 546                      | 2                        | 11                       | 259                       | 285                       |

TABLE 1.24 CONTINUED

2013 COUNTY CRASH REPORT

| County            | 2013             |                   | 2013                          |                  |                  | Total<br>Crashes<br>2012 | Number<br>Killed<br>2013 | Number<br>Killed<br>2012 | Number<br>Injured<br>2013 | Number<br>Injured<br>2012 |
|-------------------|------------------|-------------------|-------------------------------|------------------|------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
|                   | Crashes<br>Fatal | Crashes<br>Injury | Crashes<br>Property<br>Damage | Crashes<br>Total | Crashes<br>Total |                          |                          |                          |                           |                           |
| Kittson           | 1                | 7                 | 11                            | 19               | 10               | 2                        | 1                        | 12                       | 5                         |                           |
| Koochiching       | 1                | 35                | 48                            | 84               | 84               | 1                        | 2                        | 59                       | 38                        |                           |
| Lac Qui Parle     | 0                | 23                | 32                            | 55               | 37               | 0                        | 0                        | 27                       | 24                        |                           |
| Lake              | 4                | 37                | 89                            | 130              | 92               | 4                        | 1                        | 52                       | 61                        |                           |
| Lake of the Woods | 0                | 1                 | 9                             | 10               | 21               | 0                        | 0                        | 1                        | 9                         |                           |
| Le Sueur          | 3                | 102               | 232                           | 337              | 317              | 6                        | 2                        | 146                      | 139                       |                           |
| Lincoln           | 2                | 11                | 43                            | 56               | 81               | 2                        | 2                        | 13                       | 25                        |                           |
| Lyon              | 2                | 78                | 183                           | 263              | 284              | 2                        | 4                        | 110                      | 108                       |                           |
| McLeod            | 4                | 120               | 294                           | 418              | 431              | 4                        | 6                        | 194                      | 167                       |                           |
| Mahnomen          | 1                | 16                | 30                            | 47               | 45               | 1                        | 2                        | 27                       | 29                        |                           |
| Marshall          | 1                | 14                | 14                            | 29               | 59               | 1                        | 2                        | 20                       | 50                        |                           |
| Martin            | 3                | 75                | 176                           | 254              | 204              | 3                        | 1                        | 106                      | 97                        |                           |
| Meeker            | 5                | 80                | 166                           | 251              | 209              | 5                        | 2                        | 117                      | 104                       |                           |
| Mille Lacs        | 4                | 97                | 145                           | 246              | 231              | 4                        | 3                        | 151                      | 183                       |                           |
| Morrison          | 5                | 97                | 187                           | 289              | 284              | 5                        | 5                        | 135                      | 162                       |                           |
| Mower             | 3                | 132               | 312                           | 447              | 353              | 3                        | 6                        | 189                      | 121                       |                           |
| Murray            | 0                | 23                | 40                            | 63               | 76               | 0                        | 2                        | 27                       | 60                        |                           |
| Nicollet          | 2                | 116               | 299                           | 417              | 358              | 2                        | 3                        | 162                      | 132                       |                           |
| Nobles            | 4                | 82                | 224                           | 310              | 343              | 5                        | 7                        | 144                      | 114                       |                           |
| Norman            | 2                | 19                | 32                            | 53               | 51               | 3                        | 0                        | 28                       | 28                        |                           |
| Olmsted           | 11               | 620               | 1,299                         | 1,930            | 1,764            | 12                       | 2                        | 882                      | 757                       |                           |
| Otter Tail        | 7                | 191               | 491                           | 689              | 639              | 8                        | 10                       | 272                      | 294                       |                           |
| Pennington        | 0                | 51                | 62                            | 113              | 114              | 0                        | 2                        | 66                       | 81                        |                           |
| Pine              | 6                | 143               | 229                           | 378              | 361              | 7                        | 14                       | 197                      | 189                       |                           |
| Pipestone         | 1                | 30                | 41                            | 72               | 87               | 1                        | 2                        | 52                       | 48                        |                           |
| Polk              | 5                | 92                | 279                           | 376              | 324              | 5                        | 7                        | 117                      | 131                       |                           |
| Pope              | 2                | 31                | 82                            | 115              | 96               | 2                        | 3                        | 58                       | 73                        |                           |
| Ramsey            | 11               | 2,465             | 8,734                         | 11,210           | 10,419           | 12                       | 19                       | 3,310                    | 3,363                     |                           |
| Red Lake          | 0                | 4                 | 14                            | 18               | 22               | 0                        | 1                        | 4                        | 9                         |                           |
| Redwood           | 3                | 42                | 76                            | 121              | 134              | 3                        | 6                        | 73                       | 71                        |                           |
| Renville          | 3                | 51                | 92                            | 146              | 139              | 4                        | 1                        | 74                       | 63                        |                           |
| Rice              | 5                | 185               | 452                           | 642              | 627              | 5                        | 4                        | 281                      | 302                       |                           |
| Rock              | 1                | 39                | 86                            | 126              | 110              | 1                        | 4                        | 52                       | 43                        |                           |



TABLE 1.24 CONTINUED

2013 COUNTY CRASH REPORT

| County                  | 2013                     |                           |                               |                          |                          | Number Killed<br>2013 | Number Killed<br>2012 | Number Injured<br>2013 | Number Injured<br>2012 |
|-------------------------|--------------------------|---------------------------|-------------------------------|--------------------------|--------------------------|-----------------------|-----------------------|------------------------|------------------------|
|                         | 2013<br>Crashes<br>Fatal | 2013<br>Crashes<br>Injury | Crashes<br>Property<br>Damage | 2013<br>Crashes<br>Total | Total<br>Crashes<br>2012 |                       |                       |                        |                        |
| Roseau                  | 1                        | 32                        | 45                            | 78                       | 81                       | 1                     | 2                     | 49                     | 44                     |
| St. Louis               | 17                       | 819                       | 2,649                         | 3,485                    | 2,898                    | 19                    | 11                    | 1,091                  | 979                    |
| Scott                   | 11                       | 434                       | 831                           | 1,276                    | 1,079                    | 11                    | 4                     | 624                    | 554                    |
| Sherburne               | 4                        | 330                       | 848                           | 1,182                    | 1,011                    | 4                     | 8                     | 482                    | 371                    |
| Sibley                  | 2                        | 48                        | 84                            | 134                      | 124                      | 2                     | 2                     | 72                     | 52                     |
| Stearns                 | 6                        | 782                       | 1,782                         | 2,570                    | 2,242                    | 6                     | 7                     | 1,104                  | 922                    |
| Steele                  | 1                        | 134                       | 330                           | 465                      | 413                      | 1                     | 2                     | 185                    | 178                    |
| Stevens                 | 1                        | 39                        | 100                           | 140                      | 80                       | 1                     | 1                     | 49                     | 32                     |
| Swift                   | 1                        | 22                        | 61                            | 84                       | 78                       | 1                     | 0                     | 32                     | 35                     |
| Todd                    | 5                        | 84                        | 149                           | 238                      | 203                      | 6                     | 1                     | 147                    | 112                    |
| Traverse                | 1                        | 10                        | 15                            | 26                       | 15                       | 1                     | 0                     | 10                     | 13                     |
| Wabasha                 | 4                        | 61                        | 146                           | 211                      | 184                      | 4                     | 2                     | 80                     | 90                     |
| Wadena                  | 1                        | 45                        | 67                            | 113                      | 100                      | 1                     | 1                     | 66                     | 53                     |
| Waseca                  | 2                        | 45                        | 128                           | 175                      | 185                      | 2                     | 3                     | 59                     | 85                     |
| Washington              | 10                       | 844                       | 1,916                         | 2,770                    | 2,368                    | 10                    | 8                     | 1,145                  | 1,062                  |
| Watonwan                | 1                        | 38                        | 54                            | 93                       | 85                       | 1                     | 0                     | 61                     | 35                     |
| Wilkin                  | 0                        | 33                        | 111                           | 144                      | 99                       | 0                     | 0                     | 40                     | 38                     |
| Winona                  | 2                        | 189                       | 441                           | 632                      | 581                      | 2                     | 5                     | 245                    | 257                    |
| Wright                  | 13                       | 347                       | 952                           | 1,312                    | 1,148                    | 16                    | 12                    | 503                    | 513                    |
| Yellow Medicine         | 2                        | 27                        | 51                            | 80                       | 86                       | 2                     | 1                     | 43                     | 39                     |
| Unknown                 | 0                        | 0                         | 0                             | 0                        | 3                        | 0                     | 0                     | 0                      | 0                      |
| <b>Minnesota Totals</b> | <b>357</b>               | <b>21,960</b>             | <b>55,390</b>                 | <b>77,707</b>            | <b>69,236</b>            | <b>387</b>            | <b>395</b>            | <b>30,653</b>          | <b>29,314</b>          |

TABLE 1.25

2013 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

| City             | Fatal Crashes | Injury Crashes | PDO Crashes | Total Crashes | Persons Killed | Persons Injured |
|------------------|---------------|----------------|-------------|---------------|----------------|-----------------|
| Afton            | 0             | 14             | 35          | 49            | 0              | 16              |
| Albany           | 0             | 9              | 31          | 40            | 0              | 16              |
| Albert Lea       | 1             | 58             | 200         | 259           | 1              | 82              |
| Albertville      | 0             | 21             | 88          | 109           | 0              | 25              |
| Alexandria       | 0             | 76             | 171         | 247           | 0              | 93              |
| Andover          | 1             | 66             | 64          | 131           | 1              | 105             |
| Annandale        | 0             | 4              | 5           | 9             | 0              | 4               |
| Anoka            | 0             | 109            | 300         | 409           | 0              | 157             |
| Apple Valley     | 1             | 158            | 366         | 525           | 1              | 233             |
| Arden Hills      | 0             | 106            | 402         | 508           | 0              | 129             |
| Austin           | 0             | 80             | 235         | 315           | 0              | 112             |
| Barnesville      | 0             | 1              | 12          | 13            | 0              | 1               |
| Baxter           | 0             | 41             | 133         | 174           | 0              | 53              |
| Bayport          | 0             | 3              | 23          | 26            | 0              | 4               |
| Becker           | 0             | 12             | 34          | 46            | 0              | 15              |
| Belle Plaine     | 0             | 11             | 29          | 40            | 0              | 13              |
| Bemidji          | 2             | 44             | 140         | 186           | 2              | 65              |
| Benson           | 0             | 3              | 25          | 28            | 0              | 3               |
| Big Lake         | 0             | 14             | 49          | 63            | 0              | 18              |
| Blaine           | 2             | 186            | 277         | 465           | 2              | 275             |
| Bloomington      | 0             | 548            | 1,273       | 1,821         | 0              | 728             |
| Blue Earth       | 0             | 3              | 33          | 36            | 0              | 3               |
| Brainerd         | 1             | 74             | 203         | 278           | 1              | 96              |
| Breckenridge     | 0             | 8              | 38          | 46            | 0              | 10              |
| Brooklyn Center  | 2             | 293            | 545         | 840           | 2              | 420             |
| Brooklyn Park    | 2             | 295            | 524         | 821           | 2              | 415             |
| Buffalo          | 0             | 52             | 101         | 153           | 0              | 81              |
| Burnsville       | 0             | 315            | 827         | 1,142         | 0              | 439             |
| Byron            | 0             | 8              | 17          | 25            | 0              | 13              |
| Caledonia        | 1             | 3              | 22          | 26            | 1              | 3               |
| Cambridge        | 1             | 26             | 84          | 111           | 1              | 36              |
| Cannon Falls     | 1             | 12             | 52          | 65            | 1              | 20              |
| Carver           | 0             | 3              | 8           | 11            | 0              | 5               |
| Centerville      | 0             | 1              | 9           | 10            | 0              | 2               |
| Champlin         | 0             | 31             | 65          | 96            | 0              | 50              |
| Chanhassen       | 1             | 95             | 241         | 337           | 1              | 153             |
| Chaska           | 1             | 55             | 157         | 213           | 1              | 73              |
| Chatfield        | 0             | 4              | 16          | 20            | 0              | 6               |
| Chisago City     | 1             | 23             | 28          | 52            | 1              | 50              |
| Chisholm         | 0             | 12             | 33          | 45            | 0              | 18              |
| Circle Pines     | 1             | 10             | 12          | 23            | 1              | 15              |
| Cloquet          | 0             | 39             | 84          | 123           | 0              | 65              |
| Cohasset         | 0             | 7              | 7           | 14            | 0              | 11              |
| Cokato           | 0             | 3              | 8           | 11            | 0              | 3               |
| Cold Spring      | 0             | 10             | 29          | 39            | 0              | 12              |
| Columbia Heights | 0             | 75             | 105         | 180           | 0              | 102             |
| Columbus         | 0             | 27             | 52          | 79            | 0              | 41              |
| Coon Rapids      | 2             | 284            | 609         | 895           | 2              | 378             |
| Corcoran         | 1             | 19             | 49          | 69            | 1              | 23              |
| Cottage Grove    | 2             | 89             | 268         | 359           | 2              | 114             |

TABLE 1.25 CONTINUED

2013 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

| City                | Fatal Crashes | Injury Crashes | PDO Crashes | Total Crashes | Persons Killed | Persons Injured |
|---------------------|---------------|----------------|-------------|---------------|----------------|-----------------|
| Crookston           | 1             | 19             | 86          | 106           | 1              | 25              |
| Crystal             | 0             | 77             | 17          | 249           | 0              | 102             |
| Dayton              | 1             | 24             | 48          | 73            | 1              | 35              |
| Deephaven           | 0             | 3              | 16          | 19            | 0              | 7               |
| Delano              | 0             | 5              | 16          | 21            | 0              | 7               |
| Detroit Lakes       | 0             | 40             | 52          | 92            | 0              | 63              |
| Dilworth            | 0             | 8              | 26          | 34            | 0              | 10              |
| Dodge Center        | 0             | 3              | 12          | 15            | 0              | 4               |
| Duluth              | 1             | 407            | 1,704       | 2,112         | 2              | 522             |
| Eagan               | 4             | 243            | 680         | 927           | 4              | 322             |
| Eagle Lake          | 0             | 2              | 6           | 8             | 0              | 2               |
| East Bethel         | 0             | 33             | 26          | 59            | 0              | 47              |
| East Grand Forks    | 1             | 20             | 96          | 117           | 1              | 22              |
| Eden Prairie        | 2             | 171            | 531         | 704           | 2              | 239             |
| Edina               | 1             | 167            | 483         | 651           | 1              | 211             |
| Elko/New Market     | 0             | 3              | 3           | 6             | 0              | 3               |
| Elk River           | 2             | 121            | 305         | 428           | 2              | 181             |
| Ely                 | 0             | 5              | 14          | 19            | 0              | 6               |
| Eveleth             | 0             | 7              | 47          | 54            | 0              | 8               |
| Fairmont            | 0             | 30             | 103         | 133           | 0              | 38              |
| Falcon Heights      | 0             | 12             | 57          | 69            | 0              | 16              |
| Faribault           | 0             | 60             | 152         | 212           | 0              | 84              |
| Farmington          | 0             | 24             | 70          | 94            | 0              | 35              |
| Fergus Falls        | 0             | 48             | 155         | 203           | 0              | 65              |
| Foley               | 0             | 4              | 13          | 17            | 0              | 7               |
| Forest Lake         | 0             | 85             | 183         | 268           | 0              | 120             |
| Fridley             | 0             | 132            | 218         | 350           | 0              | 183             |
| Glencoe             | 1             | 8              | 36          | 45            | 1              | 16              |
| Glenwood            | 0             | 1              | 23          | 24            | 0              | 1               |
| Golden Valley       | 2             | 156            | 410         | 568           | 2              | 219             |
| Goodview            | 0             | 3              | 20          | 23            | 0              | 4               |
| Grand Rapids        | 0             | 47             | 176         | 223           | 0              | 77              |
| Granite Falls       | 0             | 8              | 17          | 25            | 0              | 12              |
| Grant               | 0             | 13             | 29          | 42            | 0              | 19              |
| Greenfield          | 0             | 10             | 23          | 33            | 0              | 10              |
| Ham Lake            | 2             | 38             | 37          | 77            | 3              | 64              |
| Hanover             | 0             | 4              | 9           | 13            | 0              | 4               |
| Hastings            | 0             | 53             | 185         | 238           | 0              | 68              |
| Hermantown          | 0             | 46             | 77          | 123           | 0              | 66              |
| Hibbing             | 1             | 71             | 211         | 283           | 1              | 93              |
| Hopkins             | 0             | 75             | 163         | 238           | 0              | 93              |
| Hugo                | 0             | 19             | 55          | 74            | 0              | 25              |
| Hutchinson          | 1             | 46             | 126         | 173           | 1              | 71              |
| Independence        | 0             | 23             | 37          | 60            | 0              | 35              |
| International Falls | 0             | 19             | 24          | 43            | 0              | 29              |
| Inver Grove Heights | 1             | 115            | 280         | 396           | 1              | 162             |
| Isanti              | 0             | 16             | 26          | 42            | 0              | 20              |
| Jackson             | 0             | 8              | 19          | 27            | 0              | 11              |
| Jordan              | 1             | 10             | 38          | 49            | 1              | 13              |
| Kasson              | 0             | 4              | 34          | 38            | 0              | 4               |

TABLE 1.25 CONTINUED

2013 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             | 11             | 31          | 42            | 0              | 14              |
| Lake City       | 0             | 5              | 43          | 48            | 0              | 5               |
| Lake Crystal    | 0             | 6              | 10          | 16            | 0              | 7               |
| Lake Elmo       | 2             | 48             | 66          | 116           | 2              | 68              |
| Lakeville       | 3             | 168            | 419         | 590           | 3              | 245             |
| Le Center       | 0             | 3              | 6           | 9             | 0              | 3               |
| Le Sueur        | 1             | 7              | 31          | 39            | 1              | 8               |
| Lindstrom       | 0             | 7              | 30          | 37            | 0              | 13              |
| Lino Lakes      | 1             | 43             | 171         | 215           | 1              | 63              |
| Litchfield      | 0             | 21             | 43          | 64            | 0              | 28              |
| Little Canada   | 0             | 91             | 200         | 291           | 0              | 114             |
| Little Falls    | 0             | 12             | 41          | 53            | 0              | 16              |
| Long Prairie    | 0             | 3              | 15          | 18            | 0              | 3               |
| Lonsdale        | 0             | 3              | 2           | 5             | 0              | 4               |
| Luverne         | 0             | 9              | 23          | 32            | 0              | 9               |
| Mahtomedi       | 0             | 8              | 28          | 36            | 0              | 14              |
| Mankato         | 1             | 214            | 565         | 780           | 1              | 294             |
| Maple Grove     | 2             | 226            | 583         | 811           | 2              | 292             |
| Maplewood       | 3             | 250            | 570         | 823           | 3              | 355             |
| Marshall        | 0             | 32             | 98          | 130           | 0              | 42              |
| Medina          | 1             | 17             | 80          | 98            | 1              | 28              |
| Melrose         | 0             | 5              | 22          | 27            | 0              | 7               |
| Mendota Heights | 2             | 47             | 171         | 220           | 2              | 59              |
| Milaca          | 0             | 8              | 18          | 26            | 0              | 11              |
| Minneapolis     | 16            | 3,021          | 7,489       | 10,526        | 19             | 4,208           |
| Minnetonka      | 1             | 175            | 383         | 559           | 1              | 230             |
| Minnetrissa     | 0             | 9              | 39          | 48            | 0              | 12              |
| Montevideo      | 0             | 13             | 35          | 48            | 0              | 24              |
| Montgomery      | 0             | 5              | 12          | 17            | 0              | 5               |
| Monticello      | 1             | 33             | 146         | 180           | 1              | 50              |
| Montrose        | 0             | 2              | 8           | 10            | 0              | 3               |
| Moorhead        | 0             | 99             | 380         | 479           | 0              | 128             |
| Moose Lake      | 0             | 2              | 7           | 9             | 0              | 5               |
| Mora            | 0             | 9              | 19          | 28            | 0              | 12              |
| Morris          | 1             | 15             | 62          | 78            | 1              | 19              |
| Mound           | 0             | 13             | 36          | 49            | 0              | 19              |
| Mounds View     | 0             | 40             | 119         | 159           | 0              | 56              |
| Mountain Iron   | 0             | 15             | 15          | 30            | 0              | 24              |
| New Brighton    | 0             | 77             | 260         | 337           | 0              | 107             |
| New Hope        | 0             | 41             | 85          | 126           | 0              | 58              |
| Newport         | 0             | 34             | 108         | 142           | 0              | 42              |
| New Prague      | 0             | 15             | 24          | 39            | 0              | 20              |
| New Ulm         | 0             | 50             | 120         | 170           | 0              | 62              |
| North Branch    | 4             | 46             | 95          | 145           | 4              | 66              |
| Northfield      | 1             | 32             | 55          | 88            | 1              | 50              |
| North Mankato   | 0             | 24             | 98          | 122           | 0              | 33              |
| North Oaks      | 0             | 7              | 16          | 23            | 0              | 11              |
| North St. Paul  | 1             | 36             | 74          | 111           | 1              | 41              |
| Norwood         | 0             | 6              | 24          | 30            | 0              | 6               |
| Nowthen         | 1             | 12             | 9           | 22            | 1              | 16              |

TABLE 1.25 CONTINUED

2013 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

| City             | Fatal Crashes | Injury Crashes | PDO Crashes | Total Crashes | Persons Killed | Persons Injured |
|------------------|---------------|----------------|-------------|---------------|----------------|-----------------|
| Oakdale          | 1             | 103            | 205         | 309           | 1              | 126             |
| Oak Grove        | 1             | 24             | 25          | 50            | 1              | 39              |
| Oak Park Heights | 0             | 34             | 77          | 111           | 0              | 46              |
| Orono            | 0             | 37             | 65          | 102           | 0              | 46              |
| Otsego           | 3             | 26             | 66          | 95            | 3              | 38              |
| Owatonna         | 1             | 70             | 192         | 263           | 1              | 101             |
| Park Rapids      | 0             | 14             | 25          | 39            | 0              | 15              |
| Perham           | 0             | 6              | 19          | 25            | 0              | 10              |
| Pine City        | 0             | 14             | 18          | 32            | 0              | 23              |
| Pine Island      | 0             | 3              | 15          | 18            | 0              | 4               |
| Pipestone        | 0             | 8              | 11          | 19            | 0              | 11              |
| Plainview        | 0             | 3              | 13          | 16            | 0              | 3               |
| Plymouth         | 1             | 199            | 546         | 746           | 1              | 242             |
| Princeton        | 0             | 13             | 33          | 46            | 0              | 18              |
| Prior Lake       | 1             | 48             | 24          | 73            | 1              | 65              |
| Proctor          | 0             | 8              | 22          | 30            | 0              | 12              |
| Ramsey           | 0             | 55             | 113         | 168           | 0              | 76              |
| Red Wing         | 1             | 63             | 215         | 279           | 1              | 85              |
| Redwood Falls    | 0             | 14             | 33          | 47            | 0              | 32              |
| Richfield        | 2             | 233            | 600         | 835           | 3              | 316             |
| Robbinsdale      | 0             | 42             | 132         | 174           | 0              | 55              |
| Rochester        | 3             | 436            | 973         | 1,412         | 3              | 606             |
| Rockford         | 0             | 7              | 14          | 21            | 0              | 21              |
| Rogers           | 1             | 61             | 207         | 269           | 1              | 79              |
| Roseau           | 0             | 4              | 16          | 20            | 0              | 5               |
| Rosemount        | 0             | 50             | 148         | 198           | 0              | 67              |
| Roseville        | 1             | 194            | 736         | 931           | 1              | 265             |
| Rush City        | 0             | 4              | 12          | 16            | 0              | 7               |
| St. Anthony      | 1             | 20             | 58          | 79            | 1              | 25              |
| St. Augusta      | 0             | 12             | 19          | 31            | 0              | 13              |
| St. Charles      | 0             | 4              | 11          | 15            | 0              | 5               |
| St. Cloud        | 1             | 429            | 964         | 1,394         | 1              | 587             |
| St. Francis      | 0             | 5              | 9           | 14            | 0              | 5               |
| St. James        | 0             | 6              | 18          | 24            | 0              | 8               |
| St. Joseph       | 0             | 12             | 35          | 47            | 0              | 16              |
| St. Louis Park   | 1             | 252            | 634         | 887           | 2              | 328             |
| St. Michael      | 0             | 20             | 117         | 137           | 0              | 27              |
| St. Paul         | 5             | 1,310          | 5,411       | 6,726         | 6              | 1,749           |
| St. Paul Park    | 0             | 10             | 25          | 35            | 0              | 12              |
| St. Peter        | 0             | 31             | 63          | 94            | 0              | 41              |
| Sandstone        | 0             | 3              | 6           | 9             | 0              | 5               |
| Sartell          | 0             | 37             | 86          | 123           | 0              | 56              |
| Sauk Center      | 1             | 11             | 56          | 68            | 1              | 19              |
| Sauk Rapids      | 0             | 22             | 80          | 102           | 0              | 25              |
| Savage           | 1             | 71             | 202         | 274           | 1              | 100             |

TABLE 1.25 CONTINUED

2013 CRASHES IN CITIES OF 2,500 OR MORE POPULATION

| City              | Fatal Crashes | Injury Crashes | PDO Crashes | Total Crashes | Persons Killed | Persons Injured |
|-------------------|---------------|----------------|-------------|---------------|----------------|-----------------|
| Scandia           | 1             | 16             | 14          | 31            | 1              | 25              |
| Shakopee          | 3             | 154            | 391         | 548           | 3              | 223             |
| Shoreview         | 1             | 78             | 244         | 323           | 1              | 105             |
| Shorewood         | 0             | 11             | 54          | 65            | 0              | 13              |
| Sleepy Eye        | 0             | 8              | 24          | 32            | 0              | 8               |
| South St. Paul    | 0             | 65             | 211         | 276           | 0              | 94              |
| Spring Lake Park  | 0             | 35             | 53          | 88            | 0              | 58              |
| Staples           | 0             | 7              | 15          | 22            | 0              | 10              |
| Stewartville      | 0             | 8              | 16          | 24            | 0              | 9               |
| Stillwater        | 1             | 46             | 112         | 159           | 1              | 61              |
| Thief River Falls | 0             | 36             | 49          | 85            | 0              | 49              |
| Two Harbors       | 0             | 12             | 35          | 47            | 0              | 17              |
| Vadnais Heights   | 0             | 71             | 189         | 260           | 0              | 95              |
| Victoria          | 0             | 16             | 58          | 74            | 0              | 22              |
| Virginia          | 1             | 42             | 130         | 173           | 1              | 52              |
| Wabasha           | 0             | 8              | 17          | 25            | 0              | 9               |
| Waconia           | 0             | 32             | 74          | 106           | 0              | 43              |
| Wadena            | 0             | 22             | 30          | 52            | 0              | 34              |
| Waite Park        | 2             | 65             | 152         | 219           | 2              | 99              |
| Waseca            | 0             | 20             | 34          | 54            | 0              | 26              |
| Watertown         | 0             | 3              | 13          | 16            | 0              | 4               |
| Wayzata           | 0             | 35             | 117         | 152           | 0              | 42              |
| West St. Paul     | 1             | 78             | 210         | 289           | 1              | 99              |
| White Bear Lake   | 0             | 159            | 351         | 510           | 0              | 215             |
| Willmar           | 0             | 88             | 286         | 374           | 0              | 120             |
| Windom            | 0             | 9              | 24          | 33            | 0              | 13              |
| Winona            | 0             | 82             | 176         | 258           | 0              | 110             |
| Woodbury          | 1             | 221            | 483         | 705           | 1              | 307             |
| Worthington       | 0             | 42             | 163         | 205           | 0              | 83              |
| Wyoming           | 1             | 46             | 64          | 111           | 1              | 69              |
| Zimmerman         | 0             | 11             | 32          | 43            | 0              | 20              |
| Zumbrota          | 0             | 4              | 14          | 18            | 0              | 4               |

TABLE 1.26

2013 CRASHES BY TIME AND DAY

| Hour         | All           |             | Sun.         |           | Mon.          |           | Tues.         |           | Wed.          |           | Thurs.        |           | Fri.          |           | Sat.         |           |
|--------------|---------------|-------------|--------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|---------------|-----------|--------------|-----------|
|              | Beginning     | Total Fatal | Total        | Fatal     | Total         | Fatal     | Total         | Fatal     | Total         | Fatal     | Total         | Fatal     | Total         | Fatal     | Total        | Fatal     |
| Midnight     | 1,179         | 8           | 236          | 4         | 113           | 1         | 159           | 0         | 118           | 0         | 122           | 0         | 161           | 1         | 270          | 2         |
| 1 am         | 1,012         | 10          | 251          | 6         | 99            | 1         | 104           | 0         | 90            | 0         | 105           | 1         | 120           | 1         | 243          | 1         |
| 2 am         | 931           | 16          | 220          | 2         | 87            | 2         | 95            | 1         | 72            | 1         | 90            | 1         | 126           | 1         | 241          | 8         |
| 3 am         | 607           | 6           | 133          | 1         | 54            | 0         | 74            | 1         | 58            | 1         | 55            | 1         | 63            | 0         | 170          | 2         |
| 4 am         | 608           | 6           | 97           | 3         | 78            | 2         | 74            | 0         | 94            | 0         | 66            | 0         | 96            | 0         | 103          | 1         |
| 5 am         | 1,104         | 12          | 84           | 2         | 172           | 0         | 202           | 1         | 176           | 3         | 163           | 3         | 163           | 2         | 144          | 1         |
| 6 am         | 2,435         | 12          | 120          | 0         | 429           | 1         | 460           | 3         | 450           | 1         | 425           | 2         | 364           | 2         | 187          | 3         |
| 7 am         | 5,030         | 23          | 143          | 1         | 877           | 5         | 1,049         | 5         | 995           | 0         | 840           | 3         | 826           | 5         | 300          | 4         |
| 8 am         | 4,576         | 16          | 179          | 2         | 757           | 2         | 935           | 3         | 843           | 2         | 738           | 3         | 755           | 1         | 369          | 3         |
| 9 am         | 3,726         | 9           | 277          | 1         | 671           | 1         | 658           | 1         | 569           | 1         | 529           | 2         | 588           | 0         | 434          | 3         |
| 10 am        | 3,556         | 15          | 439          | 1         | 573           | 0         | 514           | 2         | 536           | 4         | 506           | 2         | 506           | 4         | 482          | 2         |
| 11 am        | 4,030         | 17          | 495          | 0         | 663           | 2         | 554           | 2         | 583           | 4         | 570           | 2         | 569           | 5         | 596          | 2         |
| Noon         | 4,614         | 16          | 553          | 1         | 708           | 3         | 646           | 3         | 689           | 2         | 682           | 2         | 691           | 1         | 645          | 4         |
| 1 pm         | 4,401         | 13          | 549          | 1         | 688           | 1         | 570           | 3         | 635           | 2         | 609           | 1         | 735           | 3         | 615          | 2         |
| 2 pm         | 5,201         | 32          | 593          | 5         | 839           | 4         | 713           | 4         | 803           | 7         | 712           | 4         | 895           | 5         | 646          | 3         |
| 3 pm         | 6,179         | 22          | 536          | 3         | 1,023         | 4         | 926           | 2         | 961           | 2         | 1,057         | 5         | 1,051         | 5         | 625          | 1         |
| 4 pm         | 6,417         | 14          | 547          | 1         | 1,080         | 5         | 1,016         | 0         | 1,017         | 1         | 1,081         | 5         | 1,073         | 2         | 603          | 0         |
| 5 pm         | 6,581         | 26          | 459          | 0         | 1,109         | 3         | 1,062         | 4         | 1,169         | 4         | 1,126         | 5         | 1,089         | 5         | 567          | 5         |
| 6 pm         | 4,351         | 26          | 451          | 6         | 633           | 0         | 721           | 3         | 654           | 2         | 711           | 6         | 707           | 6         | 474          | 3         |
| 7 pm         | 2,933         | 16          | 368          | 2         | 428           | 3         | 388           | 1         | 440           | 1         | 411           | 4         | 520           | 2         | 378          | 3         |
| 8 pm         | 2,414         | 12          | 289          | 2         | 347           | 0         | 336           | 2         | 342           | 0         | 350           | 2         | 412           | 4         | 338          | 2         |
| 9 pm         | 2,295         | 11          | 271          | 1         | 315           | 2         | 292           | 1         | 261           | 0         | 338           | 2         | 460           | 4         | 358          | 1         |
| 10 pm        | 1,904         | 10          | 220          | 1         | 246           | 4         | 222           | 1         | 200           | 1         | 262           | 1         | 435           | 2         | 319          | 0         |
| 11 pm        | 1,442         | 9           | 156          | 0         | 179           | 0         | 154           | 0         | 143           | 1         | 207           | 4         | 351           | 2         | 252          | 2         |
| Unk          | 181           | 0           | 26           | 0         | 22            | 0         | 32            | 0         | 21            | 0         | 36            | 0         | 29            | 0         | 15           | 0         |
| <b>Total</b> | <b>77,707</b> | <b>357</b>  | <b>7,692</b> | <b>46</b> | <b>12,190</b> | <b>46</b> | <b>11,956</b> | <b>43</b> | <b>11,919</b> | <b>40</b> | <b>11,791</b> | <b>61</b> | <b>12,785</b> | <b>63</b> | <b>9,374</b> | <b>58</b> |

FIGURE 1.03

TOTAL CRASHES VS FATAL CRASHES, BY TIME, 2013

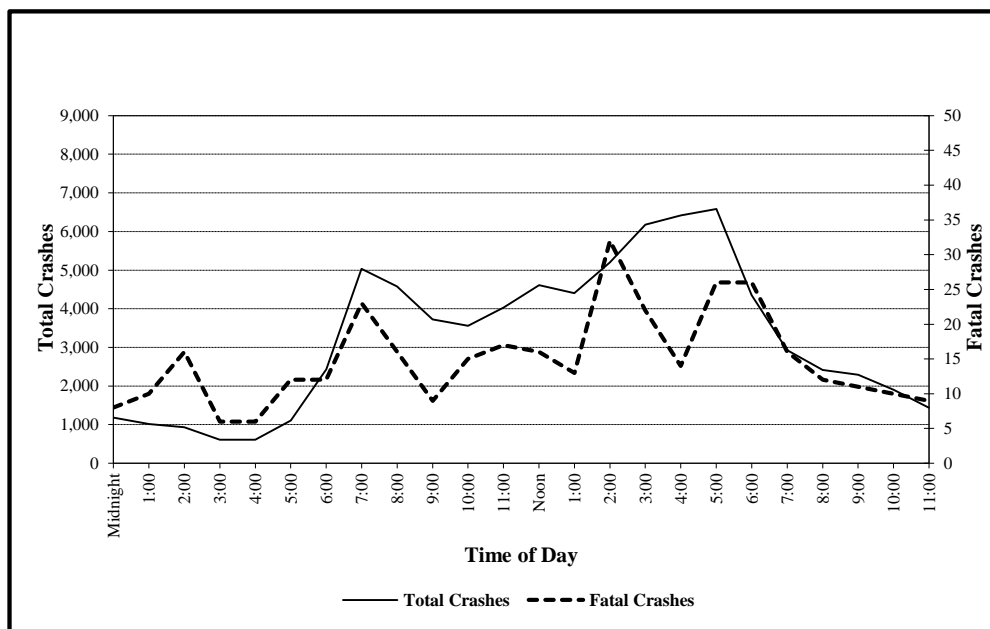


TABLE 1.27

2013 CRASHES, FATALITIES, AND INJURIES BY MONTH

| Month        | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed     | Injured       |
|--------------|---------------|----------------|-------------------------|---------------|------------|---------------|
| January      | 14            | 1,700          | 4,922                   | 6,636         | 16         | 2,336         |
| February     | 24            | 1,686          | 5,278                   | 6,988         | 27         | 2,341         |
| March        | 21            | 1,687          | 5,096                   | 6,804         | 22         | 2,336         |
| April        | 23            | 1,621          | 4,126                   | 5,770         | 27         | 2,303         |
| May          | 31            | 1,615          | 3,521                   | 5,167         | 31         | 2,251         |
| June         | 29            | 1,869          | 3,734                   | 5,632         | 33         | 2,675         |
| July         | 49            | 1,918          | 3,554                   | 5,521         | 54         | 2,694         |
| August       | 33            | 1,984          | 3,657                   | 5,674         | 34         | 2,735         |
| September    | 46            | 1,835          | 3,806                   | 5,687         | 52         | 2,581         |
| October      | 27            | 1,803          | 4,276                   | 6,106         | 27         | 2,563         |
| November     | 37            | 1,773          | 4,364                   | 6,174         | 40         | 2,488         |
| December     | 23            | 2,469          | 9,056                   | 11,548        | 24         | 3,350         |
| <b>Total</b> | <b>357</b>    | <b>21,960</b>  | <b>55,390</b>           | <b>77,707</b> | <b>387</b> | <b>30,653</b> |



TABLE 1.28  
HOLIDAY CRASH SUMMARY, 2008 - 2013

| Holiday Period  | Year    | Hours* | Fatal Crashes | Injury Crashes | PDO Crashes | Total Crashes | Killed | Injured |
|---|---------|--------|---------------|----------------|-------------|---------------|--------|---------|
| <b>Memorial Day</b><br>(In 2013, the holiday period was 6 pm Fri, May 24- midnight Monday, May 27)            | 2008    | 78     | 2             | 168            | 275         | 445           | 2      | 243     |
|   | 2009    | 78     | 9             | 168            | 259         | 436           | 13     | 254     |
|   | 2010    | 78     | 8             | 167            | 244         | 419           | 9      | 245     |
|   | 2011    | 78     | 0             | 130            | 258         | 388           | 0      | 189     |
|   | 2012    | 78     | 3             | 170            | 278         | 451           | 4      | 239     |
|   | 2013    | 78     | 5             | 111            | 250         | 366           | 5      | 154     |
| <b>July 4<sup>th</sup></b><br>(In 2013, the holiday period was 6pm Wednesday, July 3-midnight Sunday, July 7) | 2008    | 78     | 8             | 188            | 247         | 443           | 8      | 290     |
|   | 2009    | 78     | 7             | 191            | 263         | 461           | 10     | 303     |
|   | 2010    | 78     | 4             | 165            | 268         | 437           | 5      | 246     |
|   | 2011    | 78     | 4             | 170            | 268         | 442           | 6      | 255     |
|   | 2012    | 30     | 0             | 79             | 80          | 159           | 0      | 119     |
|   | 2013    | 102    | 6             | 222            | 334         | 562           | 7      | 332     |
| <b>Labor Day</b><br>(In 2013, the holiday period was 6 pm Fri, Aug 30-midnight Monday, Sept 2)                | 2008    | 78     | 4             | 197            | 252         | 453           | 4      | 286     |
|   | 2009    | 78     | 2             | 150            | 218         | 370           | 3      | 197     |
|   | 2010    | 78     | 5             | 143            | 265         | 413           | 5      | 228     |
|   | 2011    | 78     | 6             | 138            | 209         | 353           | 6      | 207     |
|   | 2012    | 78     | 5             | 145            | 241         | 391           | 6      | 221     |
|   | 2013    | 78     | 4             | 159            | 248         | 411           | 4      | 231     |
| <b>Thanksgiving</b><br>(In 2013, the holiday period was 6pm Wed Nov 27- midnight Sunday, Dec 1)               | 2008    | 102    | 7             | 251            | 700         | 958           | 7      | 400     |
|   | 2009    | 102    | 5             | 168            | 397         | 570           | 5      | 263     |
|   | 2010    | 102    | 4             | 201            | 589         | 794           | 4      | 281     |
|   | 2011    | 102    | 2             | 161            | 334         | 497           | 2      | 232     |
|   | 2012    | 102    | 1             | 191            | 599         | 791           | 1      | 269     |
|   | 2013    | 102    | 3             | 195            | 366         | 564           | 3      | 297     |
| <b>Christmas</b><br>(In 2013, the holiday period was 6 pm Tue, Dec 24-midnight Wed, Dec 25)                   | 2008    | 102    | 3             | 197            | 485         | 685           | 3      | 279     |
|   | 2009    | 78     | 1             | 168            | 669         | 838           | 1      | 261     |
|   | 2010    | 78     | 0             | 135            | 555         | 690           | 0      | 197     |
|   | 2011    | 78     | 3             | 125            | 206         | 334           | 3      | 186     |
|   | 2012    | 102    | 1             | 115            | 436         | 552           | 1      | 180     |
|   | 2013    | 30     | 0             | 70             | 309         | 379           | 0      | 102     |
| <b>New Year's</b><br>(In 2013, the holiday period was 6 pm Tue, Dec 31 -- Midnight Wed, January 1, 2014)      | 2008/09 | 102    | 3             | 305            | 989         | 1,297         | 3      | 467     |
|   | 2009/10 | 78     | 3             | 133            | 495         | 631           | 4      | 197     |
|   | 2010/11 | 78     | 1             | 221            | 671         | 893           | 1      | 308     |
|   | 2011/12 | 78     | 3             | 153            | 478         | 634           | 4      | 212     |
|   | 2012/13 | 102    | 5             | 165            | 489         | 659           | 7      | 240     |
|   | 2013/14 | 30     | 0             | 61             | 179         | 240           | 0      | 76      |

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

## II: ALCOHOL-RELATED CRASHES

### BACKGROUND AND DEFINITIONS

#### 1. 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.

#### (2) 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 or higher 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.

#### Alcohol-related fatalities and injuries

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.

#### Officers’ reported perceptions are conservative

Officers are conservative in reporting drinking and driving. However, officers’ 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 2013, 15 drinking pedestrians 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. (This procedure was once again improved in 2002). 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 2.01 and 2.07 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 2013**

Drinking and driving remains a serious problem in Minnesota and across the nation. For 2013, the National Safety Council has made a conservative estimate of \$235 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. Last year, 6% of minor injuries, 11% of moderate injuries, 20% of severe injuries, and 30% of deaths were alcohol-related. In all, 117 known people died and 2,300 known people were injured in crashes classified as alcohol-related. (NHTSA estimates will be higher).

### **Impaired driving incidents (DWIs) decrease**

In 2013, there were 25,719 impaired driving incidents in Minnesota. This number represents a 9% 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 is stated, males made up 67% of the DWI offenders last year, however, females are making up a growing percentage of arrests. In 2013, they accounted for 25% of the offenders. (10 years ago, they were 20% 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 fully 53% of the incidents on record. Drivers under age 21 accounted for 6%.

### **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. Motorists aged 15-34 accounted for 33% of all traffic deaths, and for fully 51% 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, 97 (83%) of the 117 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 20 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 59% of the alcohol-related crashes. The late night hours 9 p.m.-3 a.m. accounted for 11% of all crashes, but 47% of the alcohol-related crashes.

### **Fatal alcohol crashes usually involve just one vehicle**

Of the 107 alcohol-related fatal crashes in 2013, 81 (76%) involved just one motor vehicle in transport. Of the 81 single vehicle alcohol-related fatal crashes, 29 involved a single vehicle colliding with a fixed object, and 26 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 2013, there were 259 motor vehicle drivers who were killed. (Note that this total does not include pedestrians or bicyclists). Of the 259 killed drivers, the Department of Public Safety was able to get alcohol test results for 219 (85%). Of the 219 tested, 151 (69%) tested negative, 10 (5%) tested between .01 and .07, 3 (1%) tested between .08 and .09, and 55 (25%) tested .10 or greater.

### **Majority of alcohol-related fatalities test above the legal limit**

The 117 alcohol-related fatalities in 2013 consisted of 53 car or truck drivers, 20 car or truck passengers, 17 motorcycle drivers, two motorcycle passengers, two snowmobile drivers, three ATV drivers, 16 pedestrians, and two bicyclists. Of the 117, the Department of Public Safety was able to get alcohol test results for 103. Of these, 79 (77%) 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% per year. 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

ALCOHOL-RELATED FATAL CRASH SUMMARY, 1980 - 1989

| Year | Alcohol Test Results on Killed Drivers |     |            |                           |             |                    |             |                       |             | All Traffic Fatalities     |     |              |     |            |
|------|--|-----|------------|---------------------------|-------------|--------------------|-------------|-----------------------|-------------|----------------------------|-----|--------------|-----|------------|
|      | Drivers Killed                         |     |            | Results on Drivers Tested |             |                    |             |                       |             | Alcohol-Related Fatalities |     |              |     |            |
|      | Tested for Alcohol                     |     |            | Negative for Alcohol      |             | .01 to .09 Alcohol |             | .10 or Higher Alcohol |             | Known *                    |     | Estimated ** |     |            |
|      | Total                                  | N   | % of Total | N                         | % of Tested | N                  | % of Tested | N                     | % of Tested | Total                      | N   | % of Total   | N   | % of Total |
| 1980 | 519                                    | 337 | 65         | 103                       | 31          | 37                 | 11          | 197                   | 58          | 863                        |     |              |     |            |
| 1981 | 437                                    | 288 | 66         | 110                       | 38          | 28                 | 10          | 150                   | 52          | 763                        |     |              |     |            |
| 1982 | 321                                    | 232 | 72         | 106                       | 46          | 14                 | 6           | 112                   | 48          | 581                        |     |              | 322 | 56         |
| 1983 | 345                                    | 258 | 75         | 113                       | 44          | 28                 | 11          | 117                   | 45          | 558                        |     |              | 314 | 56         |
| 1984 | 383                                    | 318 | 83         | 133                       | 42          | 36                 | 11          | 149                   | 47          | 584                        | 305 | 52           | 332 | 57         |
| 1985 | 372                                    | 295 | 79         | 156                       | 53          | 31                 | 10          | 108                   | 37          | 610                        | 261 | 43           | 287 | 47         |
| 1986 | 347                                    | 281 | 81         | 143                       | 51          | 24                 | 8           | 114                   | 41          | 572                        | 264 | 46           | 284 | 50         |
| 1987 | 297                                    | 265 | 89         | 132                       | 50          | 18                 | 7           | 115                   | 43          | 530                        | 224 | 42           | 248 | 47         |
| 1988 | 361                                    | 313 | 87         | 163                       | 52          | 32                 | 10          | 118                   | 38          | 615                        | 277 | 45           | 294 | 48         |
| 1989 | 368                                    | 313 | 85         | 158                       | 51          | 26                 | 8           | 129                   | 41          | 605                        | 275 | 45           | 289 | 48         |

ALCOHOL-RELATED FATAL CRASH SUMMARY, 1990 – 2013

| Year | Alcohol Test Results on Killed Drivers |     |            |                           |             |                    |             |                    |             | All Traffic Fatalities     |             |         |     |              |     |            |
|------|--|-----|------------|---------------------------|-------------|--------------------|-------------|--------------------|-------------|----------------------------|-------------|---------|-----|--------------|-----|------------|
|      | Drivers Killed                         |     |            | Results on Drivers Tested |             |                    |             |                    |             | Alcohol-Related Fatalities |             |         |     |              |     |            |
|      | Tested for Alcohol                     |     |            | Negative for Alcohol      |             | .01 to .07 Alcohol |             | .08 to .09 Alcohol |             | .10 or Higher Alcohol      |             | Known * |     | Estimated ** |     |            |
|      | Total                                  | N   | % of Total | 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         |
| 2013 | 259                                    | 219 | 85         | 151                       | 69          | 10                 | 5           | 3                  | 1           | 55                         | 25          | 387     | 117 | 30           | 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.

**TABLE 2.02  
IMPAIRED DRIVING INCIDENTS (“DWIs”) BY GENDER  
AND BY AREA OF STATE WHERE ARREST WAS MADE, 1996 - 2013**

| Year | Total  | Male   |      | Female |      | Not Stated |     | Area: Metro |      | Area: Non-Metro |      |
|------|--------|--------|------|--------|------|------------|-----|-------------|------|-----------------|------|
|      |        | Male   | %    | Female | %    | Not Stated | %   | Area: Metro | %    | Area: Non-Metro | %    |
| 1996 | 30,515 | 23,588 | 77.3 | 5,371  | 17.6 | 1,556      | 5.1 | 15,774      | 51.7 | 14,741          | 48.3 |
| 1997 | 30,905 | 23,636 | 76.5 | 5,733  | 18.6 | 1,536      | 5.0 | 15,954      | 51.6 | 14,951          | 48.4 |
| 1998 | 32,001 | 24,193 | 75.6 | 6,048  | 18.9 | 1,760      | 5.5 | 16,537      | 51.7 | 15,464          | 48.3 |
| 1999 | 34,529 | 25,938 | 75.1 | 6,505  | 18.8 | 2,086      | 6.0 | 17,126      | 49.6 | 17,403          | 50.4 |
| 2000 | 34,803 | 27,741 | 74.0 | 6,755  | 19.4 | 2,307      | 6.6 | 16,739      | 48.1 | 18,064          | 51.9 |
| 2001 | 33,305 | 24,479 | 73.5 | 6,494  | 19.5 | 2,331      | 7.0 | 16,284      | 48.9 | 17,021          | 51.1 |
| 2002 | 32,948 | 23,887 | 72.5 | 6,557  | 19.9 | 2,504      | 7.6 | 16,147      | 49.0 | 16,801          | 51.0 |
| 2003 | 32,193 | 23,082 | 71.7 | 6,535  | 20.3 | 2,575      | 8.0 | 15,972      | 49.6 | 16,221          | 50.4 |
| 2004 | 34,199 | 24,199 | 70.8 | 7,165  | 21.0 | 2,835      | 8.3 | 16,762      | 49.0 | 17,437          | 51.0 |
| 2005 | 36,870 | 25,712 | 69.7 | 7,989  | 21.7 | 3,169      | 8.6 | 17,837      | 48.4 | 19,033          | 51.6 |
| 2006 | 41,842 | 28,665 | 68.6 | 9,293  | 22.2 | 3,884      | 9.3 | 20,496      | 49.0 | 21,346          | 51.0 |
| 2007 | 38,635 | 26,365 | 68.2 | 8,809  | 22.8 | 3,461      | 9.0 | 18,764      | 48.6 | 19,871          | 51.4 |
| 2008 | 35,736 | 24,142 | 67.6 | 8,444  | 23.6 | 3,150      | 8.8 | 17,781      | 49.8 | 17,995          | 50.2 |
| 2009 | 32,756 | 22,078 | 67.4 | 7,906  | 24.1 | 2,772      | 8.5 | 16,253      | 49.6 | 16,503          | 50.4 |
| 2010 | 29,918 | 19,982 | 66.8 | 7,410  | 24.8 | 2,526      | 8.4 | 15,146      | 50.6 | 14,772          | 49.4 |
| 2011 | 29,257 | 19,851 | 67.8 | 7,280  | 24.9 | 2,126      | 7.3 | 14,888      | 50.9 | 14,369          | 49.1 |
| 2012 | 28,418 | 19,035 | 67.0 | 7,156  | 25.2 | 2,227      | 7.8 | 14,660      | 51.6 | 13,758          | 48.4 |
| 2013 | 25,719 | 17,130 | 66.6 | 6,497  | 25.3 | 2,092      | 8.1 | 13,341      | 51.9 | 12,378          | 48.1 |

\* 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 2.03  
IMPAIRED DRIVING INCIDENTS (“DWIs”) FOR SELECTED AGE GROUPS, 1996 - 2013**

| Year | Total  | Age  | Age | Age | Age | Age | Age   | Age   | Total < 21 | Age    | Age    | Age   |
|------|--------|------|-----|-----|-----|-----|-------|-------|------------|--------|--------|-------|
|      |        | 0-14 | 15  | 16  | 17  | 18  | 19    | 20    |            | 21-34  | 35-49  | 50+   |
| 1996 | 30,515 | 2    | 10  | 135 | 300 | 608 | 791   | 826   | 2,672      | 15,815 | 9,762  | 2,266 |
| 1997 | 30,905 | 5    | 17  | 102 | 273 | 627 | 751   | 886   | 2,661      | 15,495 | 10,283 | 2,466 |
| 1998 | 32,001 | 2    | 17  | 102 | 297 | 675 | 888   | 911   | 2,892      | 15,624 | 10,973 | 2,512 |
| 1999 | 34,529 | 4    | 18  | 114 | 285 | 740 | 1,004 | 1,032 | 3,197      | 17,100 | 11,479 | 2,753 |
| 2000 | 34,803 | 5    | 10  | 124 | 330 | 691 | 984   | 1,104 | 3,248      | 17,245 | 11,472 | 2,838 |
| 2001 | 33,305 | 2    | 14  | 118 | 277 | 636 | 911   | 1,030 | 2,988      | 16,791 | 10,740 | 2,786 |
| 2002 | 32,948 | 6    | 13  | 122 | 298 | 655 | 849   | 1,086 | 3,029      | 16,594 | 10,379 | 2,946 |
| 2003 | 32,193 | 3    | 21  | 117 | 279 | 689 | 904   | 1,064 | 3,077      | 16,518 | 9,732  | 2,866 |
| 2004 | 34,199 | 3    | 13  | 105 | 300 | 679 | 889   | 1,012 | 3,001      | 17,382 | 10,185 | 3,181 |
| 2005 | 36,870 | 5    | 16  | 118 | 335 | 705 | 1,028 | 1,236 | 3,443      | 19,505 | 10,557 | 3,365 |
| 2006 | 41,842 | 6    | 24  | 135 | 394 | 854 | 1,274 | 1,346 | 4,035      | 22,465 | 11,487 | 3,855 |
| 2007 | 38,635 | 4    | 11  | 126 | 325 | 712 | 1,064 | 1,209 | 3,451      | 20,518 | 10,743 | 3,922 |
| 2008 | 35,736 | 6    | 14  | 102 | 266 | 630 | 887   | 1,046 | 2,951      | 18,933 | 9,851  | 4,001 |
| 2009 | 32,756 | 6    | 6   | 75  | 197 | 524 | 801   | 896   | 2,505      | 17,165 | 9,196  | 3,889 |
| 2010 | 29,918 | 4    | 9   | 54  | 139 | 425 | 667   | 804   | 2,102      | 15,727 | 8,154  | 3,935 |
| 2011 | 29,257 | 1    | 5   | 55  | 154 | 362 | 578   | 748   | 1,903      | 15,489 | 7,842  | 4,020 |
| 2012 | 28,418 | 4    | 10  | 42  | 112 | 332 | 621   | 662   | 1,783      | 15,122 | 7,504  | 4,009 |
| 2013 | 25,719 | 1    | 9   | 43  | 99  | 285 | 432   | 609   | 1,478      | 13,658 | 6,782  | 3,801 |

FIGURE 2.01

**PERCENT OF IMPAIRED DRIVING INCIDENTS (“DWIs”) COMMITTED BY OFFENDERS IN FOUR AGE GROUPS, 1990-2013**

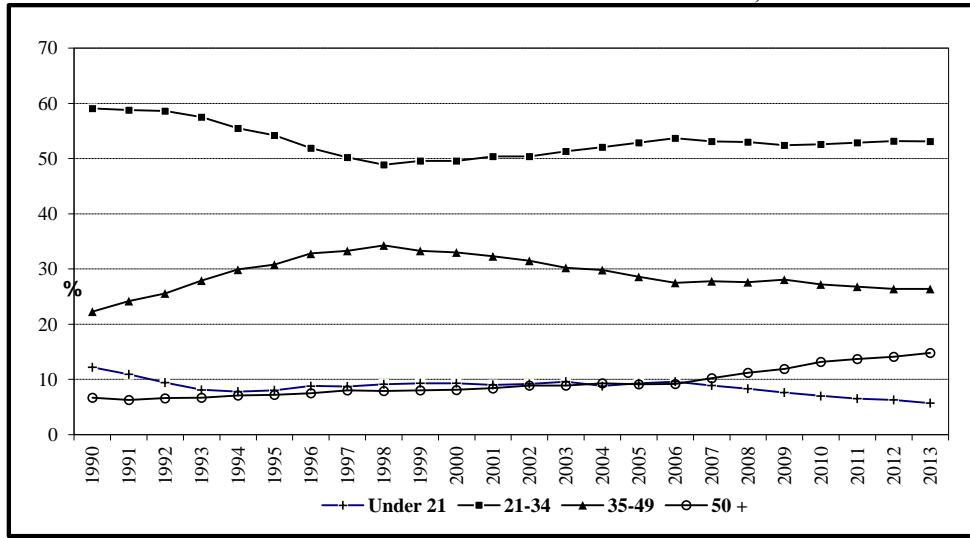


TABLE 2.04

**IMPAIRED DRIVING INCIDENTS (“DWIs”) BY AGE-GROUP, 1996 - 2013**

| 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   | Age   | Age   | Age   | Age   | Total |         |
|------------------|----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-------|-------|-------|-------|-------|-------|---------|
|                  |          |           |           |           |           |           |           |           |           |           | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 |       | Age 85+ |
| 1996             | 2        | 1,844     | 5,731     | 5,507     | 5,403     | 4,719     | 3,144     | 1,899     | 991       | 589       | 317   | 213   | 96    | 43    | 16    | 1     | 30,515  |
| 1997             | 5        | 1,770     | 5,733     | 5,651     | 4,997     | 4,888     | 3,295     | 2,100     | 1,154     | 615       | 335   | 204   | 96    | 46    | 14    | 2     | 30,905  |
| 1998             | 2        | 1,979     | 6,176     | 5,513     | 4,846     | 5,160     | 3,591     | 2,222     | 1,137     | 671       | 333   | 192   | 102   | 57    | 18    | 2     | 32,001  |
| 1999             | 4        | 2,161     | 7,389     | 5,843     | 4,900     | 5,267     | 3,844     | 2,368     | 1,330     | 670       | 405   | 190   | 98    | 45    | 12    | 3     | 34,529  |
| 2000             | 5        | 2,139     | 7,725     | 5,819     | 4,805     | 5,071     | 3,922     | 2,479     | 1,396     | 692       | 368   | 191   | 118   | 55    | 18    | 0     | 34,803  |
| 2001             | 2        | 1,956     | 7,839     | 5,437     | 4,545     | 4,408     | 3,887     | 2,445     | 1,450     | 649       | 333   | 194   | 99    | 43    | 14    | 4     | 33,305  |
| 2002             | 6        | 1,937     | 8,080     | 5,255     | 4,345     | 4,030     | 3,849     | 2,500     | 1,451     | 754       | 355   | 198   | 105   | 60    | 18    | 5     | 32,948  |
| 2003             | 3        | 2,010     | 8,195     | 5,394     | 3,993     | 3,621     | 3,646     | 2,465     | 1,380     | 753       | 381   | 188   | 97    | 47    | 19    | 1     | 32,193  |
| 2004             | 3        | 1,986     | 8,689     | 5,895     | 4,260     | 3,660     | 3,817     | 2,708     | 1,641     | 789       | 425   | 166   | 93    | 38    | 26    | 3     | 34,199  |
| 2005             | 5        | 2,202     | 9,594     | 6,790     | 4,360     | 3,778     | 3,850     | 2,929     | 1,664     | 920       | 410   | 213   | 92    | 48    | 10    | 5     | 36,870  |
| 2006             | 6        | 2,681     | 11,021    | 8,043     | 4,749     | 4,134     | 4,011     | 3,342     | 1,985     | 1,030     | 447   | 225   | 107   | 39    | 18    | 4     | 41,842  |
| 2007             | 4        | 2,238     | 9,856     | 7,398     | 4,473     | 3,948     | 3,624     | 3,171     | 1,911     | 1,100     | 491   | 262   | 93    | 50    | 13    | 2     | 38,635  |
| 2008             | 6        | 1,899     | 8,609     | 6,868     | 4,502     | 3,579     | 3,278     | 2,994     | 1,937     | 1,114     | 554   | 229   | 101   | 47    | 13    | 6     | 35,736  |
| 2009             | 6        | 1,603     | 7,570     | 6,394     | 4,097     | 3,386     | 2,937     | 2,873     | 1,893     | 1,055     | 541   | 225   | 119   | 37    | 12    | 7     | 32,756  |
| 2010             | 4        | 1,294     | 6,821     | 5,776     | 3,934     | 2,918     | 2,671     | 2,565     | 1,914     | 1,086     | 543   | 234   | 98    | 41    | 17    | 2     | 29,918  |
| 2011             | 1        | 1,154     | 6,505     | 5,837     | 3,895     | 2,778     | 2,671     | 2,393     | 1,904     | 1,084     | 608   | 231   | 120   | 46    | 22    | 5     | 29,257  |
| 2012             | 4        | 1,117     | 6,413     | 5,421     | 3,950     | 2,627     | 2,665     | 2,212     | 1,839     | 1,090     | 613   | 271   | 135   | 39    | 16    | 6     | 28,418  |
| 2013             | 1        | 868       | 5,478     | 5,023     | 3,766     | 2,596     | 2,236     | 1,950     | 1,779     | 1,041     | 557   | 245   | 110   | 42    | 23    | 4     | 25,719  |

TABLE 2.05

**AGE OF PERSONS KILLED AND INJURED IN ALL CRASHES  
AND IN ALCOHOL-RELATED CRASHES, 2013**

| Age Group       | Killed     | Alcohol Related <sup>1</sup> | Severe Injuries | Alcohol Related <sup>2</sup> | Moderate Injuries | Alcohol Related <sup>2</sup> | Minor Injuries | Alcohol Related <sup>2</sup> | Total Injured | Alcohol Related <sup>2</sup> |
|-----------------|------------|------------------------------|-----------------|------------------------------|-------------------|------------------------------|----------------|------------------------------|---------------|------------------------------|
| 00 - 04         | 4          | 0                            | 12              | 4                            | 65                | 5                            | 342            | 11                           | 419           | 20                           |
| 05 - 09         | 9          | 2                            | 18              | 4                            | 115               | 9                            | 500            | 16                           | 633           | 29                           |
| 10 - 14         | 5          | 2                            | 40              | 3                            | 170               | 11                           | 591            | 29                           | 801           | 43                           |
| 15              | 3          | 0                            | 19              | 3                            | 66                | 3                            | 176            | 5                            | 261           | 11                           |
| 16              | 8          | 1                            | 18              | 2                            | 147               | 7                            | 490            | 16                           | 655           | 25                           |
| 17              | 2          | 0                            | 24              | 5                            | 184               | 15                           | 536            | 26                           | 744           | 46                           |
| 18              | 7          | 3                            | 40              | 8                            | 194               | 21                           | 568            | 18                           | 802           | 47                           |
| 19              | 9          | 2                            | 37              | 6                            | 189               | 23                           | 594            | 47                           | 820           | 76                           |
| 20              | 5          | 3                            | 32              | 11                           | 180               | 19                           | 586            | 37                           | 798           | 67                           |
| <b>&lt; 21:</b> | <b>52</b>  | <b>13</b>                    | <b>240</b>      | <b>46</b>                    | <b>1,310</b>      | <b>113</b>                   | <b>4,383</b>   | <b>205</b>                   | <b>5,933</b>  | <b>364</b>                   |
| 00 - 14         | 18         | 4                            | 70              | 11                           | 350               | 25                           | 1,433          | 56                           | 1,853         | 92                           |
| 15 - 19         | 29         | 6                            | 138             | 24                           | 780               | 69                           | 2,364          | 112                          | 3,282         | 205                          |
| 20 - 24         | 42         | 25                           | 153             | 49                           | 898               | 147                          | 2,831          | 255                          | 3,882         | 451                          |
| 25 - 29         | 35         | 16                           | 135             | 42                           | 752               | 124                          | 2,358          | 182                          | 3,245         | 348                          |
| 30 - 34         | 23         | 13                           | 98              | 24                           | 633               | 89                           | 2,095          | 155                          | 2,826         | 268                          |
| 35 - 39         | 23         | 10                           | 84              | 22                           | 521               | 68                           | 1,603          | 106                          | 2,208         | 196                          |
| 40 - 44         | 17         | 7                            | 88              | 17                           | 504               | 50                           | 1,555          | 70                           | 2,147         | 137                          |
| 45 - 49         | 24         | 5                            | 70              | 12                           | 506               | 64                           | 1,565          | 93                           | 2,141         | 169                          |
| 50 - 54         | 32         | 14                           | 89              | 16                           | 566               | 58                           | 1,642          | 80                           | 2,297         | 154                          |
| 55 - 59         | 31         | 6                            | 93              | 14                           | 461               | 36                           | 1,380          | 55                           | 1,934         | 105                          |
| 60 - 64         | 27         | 7                            | 73              | 11                           | 341               | 36                           | 1,077          | 29                           | 1,491         | 76                           |
| 65 - 69         | 23         | 2                            | 35              | 0                            | 239               | 17                           | 641            | 24                           | 915           | 41                           |
| 70 - 74         | 14         | 1                            | 27              | 1                            | 182               | 6                            | 464            | 6                            | 673           | 13                           |
| 75 - 79         | 17         | 0                            | 24              | 2                            | 135               | 2                            | 341            | 7                            | 500           | 11                           |
| 80 - 84         | 18         | 0                            | 11              | 1                            | 96                | 1                            | 231            | 3                            | 338           | 5                            |
| 85 +            | 13         | 1                            | 22              | 0                            | 84                | 0                            | 178            | 3                            | 284           | 3                            |
| Unk             | 1          | 0                            | 6               | 1                            | 61                | 4                            | 570            | 21                           | 637           | 26                           |
| <b>Total</b>    | <b>387</b> | <b>117</b>                   | <b>1,216</b>    | <b>247</b>                   | <b>7,109</b>      | <b>796</b>                   | <b>22,328</b>  | <b>1,257</b>                 | <b>30,653</b> | <b>2,300</b>                 |

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

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

\* As shown, there were 117 alcohol-related traffic fatalities in the year 2013. Sixteen of those deaths were to pedestrians, and all of them were drinking. In the 15 fatal crashes involving the 16 drinking pedestrians who were killed, only one of the motor vehicle drivers involved was drinking. Two bicyclists were also among the alcohol related fatalities in 2013. One of the two bicyclists was drinking.

TABLE 2.06  
**2013 ALCOHOL-RELATED FATALITIES'  
 LEVEL OF ALCOHOL CONCENTRATION BY TRAFFIC ROLE**

| Traffic Role           | Killed     | Tested     | .00      | .01 - .07 | .08 - .09 | .10 +     |
|------------------------|------------|------------|----------|-----------|-----------|-----------|
| Car or Truck Driver    | 53         | 52         | 5        | 6         | 1         | 40        |
| Car or Truck Passenger | 20         | 10         | 1        | 2         | 0         | 7         |
| Motorcycle Driver      | 17         | 16         | 0        | 2         | 2         | 12        |
| Motorcycle Passenger   | 2          | 2          | 2        | 0         | 0         | 0         |
| ATV Driver             | 3          | 3          | 0        | 0         | 0         | 3         |
| Snowmobile Driver      | 2          | 1          | 0        | 1         | 0         | 0         |
| Pedestrian             | 16         | 16         | 0        | 3         | 0         | 13        |
| Bicyclist              | 2          | 2          | 1        | 0         | 0         | 1         |
| Other Vehicle          | 2          | 1          | 0        | 1         | 0         | 0         |
| <b>Total</b>           | <b>117</b> | <b>103</b> | <b>9</b> | <b>15</b> | <b>3</b>  | <b>76</b> |

TABLE 2.07  
**PERCENT OF DEATHS, INJURIES, AND PROPERTY DAMAGE CRASHES  
 DETERMINED TO BE ALCOHOL-RELATED, 2004 - 2013**

|                        | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|------------------------|------|------|------|------|------|------|------|------|------|------|
| <b>Deaths*</b> (Known) | 31%  | 35%  | 34%  | 37%  | 36%  | 34%  | 32%  | 37%  | 33%  | 30%  |
| (Estimated)            | 32%  | 36%  | 37%  | 39%  | 38%  | 36%  | 36%  | 40%  | 37%  | n/a  |
| <b>Injuries**</b>      | 9%   | 9%   | 10%  | 9%   | 9%   | 8%   | 8%   | 8%   | 9%   | 8%   |
| <b>PDO Crashes**</b>   | 3%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   | 4%   |

\* 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 2.08  
**FIRST HARMFUL EVENT IN ALCOHOL-RELATED  
 FATAL CRASHES AND ALL FATAL CRASHES, 2013**

| First Harmful Event      | All Fatal<br>Crashes | % of Fatal<br>Crashes | % of   |  |
|--------------------------|----------------------|-----------------------|--|--|
|                          |                      |                       | Number of<br>Alcohol<br>Related Fatal<br>Crashes | Alcohol<br>Related<br>Fatal<br>Crashes |
| <b>Collision with:</b>   |                      |                       |  |  |
| Another Motor Vehicle    | 168                  | 47.1%                 | 26   | 24.3%                                  |
| Parked Motor Vehicle     | 7                    | 2.0                   | 3  | 2.8                                    |
| Train                    | 5                    | 1.4                   | 0  | 0.0                                    |
| Bicyclist                | 7                    | 2.0                   | 2  | 1.9                                    |
| Pedestrian               | 34                   | 9.5                   | 15   | 14.0                                   |
| Deer/Other Animal        | 8                    | 2.2                   | 1  | 0.9                                    |
| Fixed Object             | 55                   | 15.4                  | 29   | 27.1                                   |
| Other Collision Type     | 2                    | 0.6                   | 0  | 0.0                                    |
| <b>Non-Collision:</b>    |                      |                       |  |  |
| Overturn                 | 59                   | 16.5                  | 26   | 24.3                                   |
| Submersion               | 6                    | 1.7                   | 4  | 3.7                                    |
| Other Type Non-Collision | 4                    | 1.1                   | 1  | 0.9                                    |
| <b>Unknown</b>           | <b>2</b>             | <b>0.6</b>            | <b>0</b>   | <b>0.0</b>                             |
| <b>Total</b>             | <b>357</b>           | <b>100.0%</b>         | <b>107</b>                                       | <b>100.0%</b>                          |

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



**TABLE 2.09  
TEST RESULTS OF DRIVERS KILLED, 2004 - 2013**

| <b>Year</b> | <b>Killed</b> | <b>Tested</b> | <b>.00</b> | <b>.01 - .07</b> | <b>.08 - .09</b> | <b>.10 +</b> |
|-------------|---------------|---------------|------------|------------------|------------------|--------------|
| 2004        | 389           | 337           | 219 (65%)  | 11 (3%)          | 4 (1%)           | 103 (31%)    |
| 2005        | 379           | 348           | 213 (61%)  | 17 (5%)          | 5 (1%)           | 113 (33%)    |
| 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%)     |

\* Percents based on drivers tested.

**TABLE 2.10  
DRIVERS KILLED WHO TESTED .01 OR HIGHER, 2004 - 2013  
("Any Alcohol")**

| <b>Year</b> | <b>Total</b> | <b>Male</b> | <b>Female</b> | <b>Occurred Between<br/>Midnight - 3 AM</b> | <b>Under<br/>Legal Age</b> |
|-------------|--------------|-------------|---------------|---|----------------------------|
| 2004        | 118          | 101 (86%)   | 17 (14%)      | 35 (30%)                                    | 19 (16%)                   |
| 2005        | 135          | 120 (89%)   | 15 (11%)      | 34 (25%)                                    | 11 (8%)                    |
| 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%)                     |

**TABLE 2.11  
DRIVERS KILLED WHO TESTED OVER THE LEGAL LIMIT, 2004 - 2013  
(The legal limit in Minnesota was lowered to .08 in mid-2005)**

| <b>Year</b> | <b>Total</b> | <b>Male</b> | <b>Female</b> | <b>Occurred Between<br/>Midnight - 3 AM</b> | <b>Under<br/>Legal Age</b> |
|-------------|--------------|-------------|---------------|---|----------------------------|
| 2004        | 103          | 90 (87%)    | 13 (13%)      | 34 (33%)                                    | 16 (16%)                   |
| 2005        | 118          | 105 (89%)   | 13 (11%)      | 33 (28%)                                    | 9 (8%)                     |
| 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%)                     |

FIGURE 2.02

**KILLED DRIVERS TESTED FOR ALCOHOL: 1980-2013**  
**Percent Over .01 Alcohol Level and Percent Over Legal Limit**  
 (The legal limit in Minnesota was lowered to .08 in 2005)

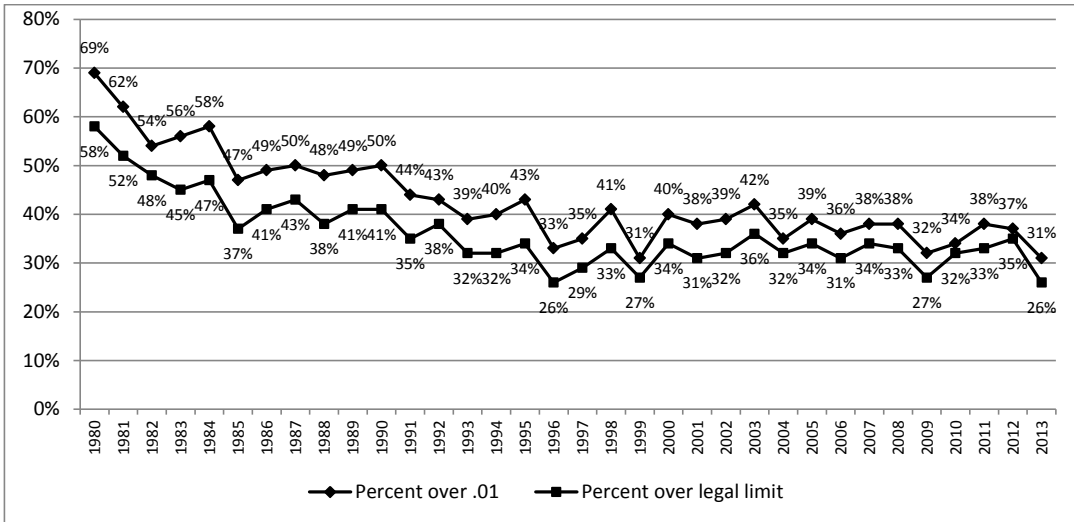


FIGURE 2.03

**PERCENT OF DRIVERS KILLED WHO HAD BEEN DRINKING, BY AGE, 2013**

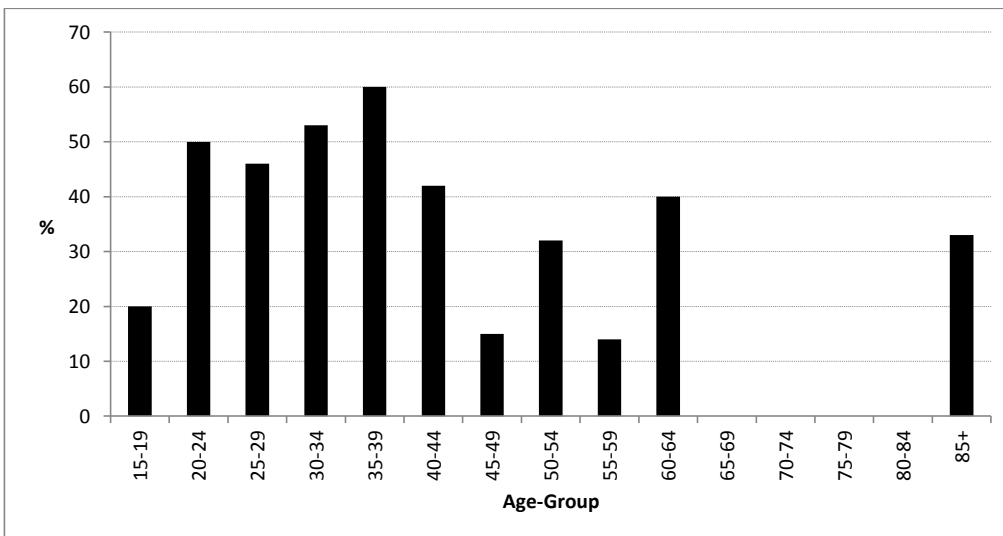


TABLE 2.12

2013 DRIVER FATALITIES' LEVEL OF ALCOHOL CONCENTRATION BY AGE

| Age            | Killed     | Tested     | Alcohol Concentration |             |           |            |           |            |           |             | Alcohol Concentration |          |           |          |            |           |
|----------------|------------|------------|-----------------------|-------------|-----------|------------|-----------|------------|-----------|-------------|-----------------------|----------|-----------|----------|------------|-----------|
|                |            |            | .00                   |             | .01 - .07 |            | .08 - .09 |            | .10 +     |             | .01- .05-             |          | .10- .15- |          | .20- .25 + |           |
|                |            |            | num-ber               | per-cent    | num-ber   | per-cent   | num-ber   | per-cent   | num-ber   | per-cent    | num-ber               | per-cent | num-ber   | per-cent | num-ber    | per-cent  |
| 00 - 14        | 0          | 0          | 0                     | 0           | 0         | 0          | 0         | 0          | 0         | 0           | 0                     | 0        | 0         | 0        | 0          | 0         |
| 15             | 1          | 0          | 0                     | 0           | 0         | 0          | 0         | 0          | 0         | 0           | 0                     | 0        | 0         | 0        | 0          | 0         |
| 16             | 7          | 7          | 6                     | 1           | 1         | 0          | 0         | 0          | 0         | 6           | 1                     | 0        | 0         | 0        | 0          | 0         |
| 17             | 1          | 1          | 1                     | 0           | 0         | 0          | 0         | 0          | 0         | 1           | 0                     | 0        | 0         | 0        | 0          | 0         |
| 18             | 2          | 2          | 0                     | 0           | 0         | 0          | 0         | 2          | 0         | 0           | 0                     | 0        | 0         | 2        | 0          | 0         |
| 19             | 5          | 5          | 5                     | 0           | 0         | 0          | 0         | 0          | 0         | 5           | 0                     | 0        | 0         | 0        | 0          | 0         |
| 20             | 4          | 2          | 2                     | 0           | 0         | 0          | 0         | 0          | 0         | 2           | 0                     | 0        | 0         | 0        | 0          | 0         |
| <b>&lt; 21</b> | <b>20</b>  | <b>17</b>  | <b>14</b>             | <b>1</b>    | <b>0</b>  | <b>2</b>   | <b>14</b> | <b>1</b>   | <b>0</b>  | <b>0</b>    | <b>2</b>              | <b>0</b> | <b>0</b>  | <b>0</b> | <b>0</b>   | <b>0</b>  |
| 00 - 14        | 0          | 0          | 0                     | 0.0         | 0         | 0.0        | 0         | 0.0        | 0         | 0.0         | 0                     | 0        | 0         | 0        | 0          | 0         |
| 15 - 19        | 16         | 15         | 12                    | 80.0        | 1         | 6.7        | 0         | 0.0        | 2         | 13.3        | 12                    | 1        | 0         | 0        | 2          | 0         |
| 20 - 24        | 29         | 24         | 12                    | 50.0        | 2         | 8.3        | 1         | 4.2        | 9         | 37.5        | 12                    | 1        | 2         | 1        | 2          | 4         |
| 25 - 29        | 24         | 22         | 12                    | 54.6        | 1         | 4.5        | 0         | 0.0        | 9         | 40.9        | 12                    | 1        | 0         | 1        | 4          | 2         |
| 30 - 34        | 20         | 19         | 9                     | 47.4        | 1         | 5.3        | 1         | 5.3        | 8         | 42.1        | 9                     | 1        | 1         | 0        | 3          | 1         |
| 35 - 39        | 18         | 15         | 6                     | 40.0        | 2         | 13.3       | 0         | 0.0        | 7         | 46.7        | 6                     | 1        | 1         | 1        | 2          | 1         |
| 40 - 44        | 12         | 12         | 7                     | 58.3        | 1         | 8.3        | 0         | 0.0        | 4         | 33.3        | 7                     | 1        | 0         | 0        | 2          | 2         |
| 45 - 49        | 14         | 13         | 11                    | 84.6        | 0         | 0.0        | 0         | 0.0        | 2         | 15.4        | 11                    | 0        | 0         | 0        | 2          | 0         |
| 50 - 54        | 24         | 22         | 15                    | 68.2        | 2         | 9.1        | 0         | 0.0        | 5         | 22.7        | 15                    | 2        | 0         | 0        | 1          | 2         |
| 55 - 59        | 24         | 21         | 18                    | 85.7        | 0         | 0.0        | 1         | 4.8        | 2         | 9.5         | 18                    | 0        | 1         | 0        | 0          | 1         |
| 60 - 64        | 22         | 15         | 9                     | 60.0        | 0         | 0.0        | 0         | 0.0        | 6         | 40.0        | 9                     | 0        | 0         | 2        | 0          | 3         |
| 65 - 69        | 17         | 16         | 16                    | 100.0       | 0         | 0.0        | 0         | 0.0        | 0         | 0.0         | 16                    | 0        | 0         | 0        | 0          | 0         |
| 70 - 74        | 10         | 8          | 8                     | 100.0       | 0         | 0.0        | 0         | 0.0        | 0         | 0.0         | 8                     | 0        | 0         | 0        | 0          | 0         |
| 75 - 79        | 11         | 7          | 7                     | 100.0       | 0         | 0.0        | 0         | 0.0        | 0         | 0.0         | 7                     | 0        | 0         | 0        | 0          | 0         |
| 80 - 84        | 11         | 7          | 7                     | 100.0       | 0         | 0.0        | 0         | 0.0        | 0         | 0.0         | 7                     | 0        | 0         | 0        | 0          | 0         |
| 85+            | 7          | 3          | 2                     | 66.7        | 0         | 0.0        | 0         | 0.0        | 1         | 33.3        | 2                     | 0        | 0         | 1        | 0          | 0         |
| Unk Age        | 0          | 0          | 0                     | 0.0         | 0         | 0.0        | 0         | 0.0        | 0         | 0.0         | 0                     | 0        | 0         | 0        | 0          | 0         |
| <b>Total</b>   | <b>259</b> | <b>219</b> | <b>151</b>            | <b>68.9</b> | <b>10</b> | <b>4.6</b> | <b>3</b>  | <b>1.4</b> | <b>55</b> | <b>25.0</b> | <b>151</b>            | <b>8</b> | <b>5</b>  | <b>6</b> | <b>18</b>  | <b>16</b> |

\* Percents, based on drivers tested, may not add to 100.0% due to rounding.

TABLE 2.13

2013 ALCOHOL-RELATED CRASHES BY MONTH

| Month        | Fatal Crashes | Injury Crashes | Property Damage | Total Crashes | Killed | Injured |
|--------------|---------------|----------------|-----------------|---------------|--------|---------|
| January      | 2             | 107            | 182             | 291           | 2      | 153     |
| February     | 9             | 115            | 192             | 316           | 10     | 163     |
| March        | 10            | 113            | 172             | 295           | 11     | 168     |
| April        | 1             | 123            | 142             | 266           | 1      | 162     |
| May          | 8             | 125            | 149             | 282           | 8      | 164     |
| June         | 10            | 139            | 135             | 284           | 11     | 227     |
| July         | 11            | 152            | 128             | 291           | 12     | 203     |
| August       | 15            | 170            | 147             | 332           | 16     | 225     |
| September    | 14            | 161            | 151             | 326           | 17     | 245     |
| October      | 7             | 147            | 175             | 329           | 7      | 204     |
| November     | 17            | 149            | 164             | 330           | 19     | 215     |
| December     | 3             | 121            | 203             | 327           | 3      | 171     |
| <b>Total</b> | 107           | 1,622          | 1,940           | 3,669         | 117    | 2,300   |

TABLE 2.14

2013 ALCOHOL-RELATED CRASHES BY ROADWAY TYPE

| Roadway Type         | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed | Injured |
|----------------------|---------------|----------------|-------------------------|---------------|--------|---------|
| Urban Interstate     | 1             | 139            | 271                     | 411           | 1      | 205     |
| Rural Interstate     | 2             | 23             | 36                      | 61            | 2      | 31      |
| Urban US Trunk Hwy   | 3             | 88             | 118                     | 209           | 3      | 132     |
| Rural US Trunk Hwy   | 10            | 79             | 86                      | 175           | 10     | 112     |
| Urban MN Trunk Hwy   | 7             | 130            | 181                     | 318           | 8      | 193     |
| Rural MN Trunk Hwy   | 16            | 140            | 127                     | 283           | 19     | 221     |
| County State Aid Hwy | 47            | 511            | 415                     | 973           | 52     | 724     |
| County Road          | 6             | 43             | 24                      | 73            | 6      | 59      |
| Township Road        | 4             | 74             | 31                      | 109           | 5      | 112     |
| Mun State Aid Hwy    | 5             | 210            | 315                     | 530           | 5      | 273     |
| Municipal Street     | 6             | 178            | 323                     | 507           | 6      | 230     |
| Other                | 0             | 7              | 13                      | 20            | 0      | 8       |
| <b>Total</b>         | 107           | 1,622          | 1,940                   | 3,669         | 117    | 2,300   |

FIGURE 2.04

2013 ALCOHOL-RELATED CRASHES BY TIME OF DAY

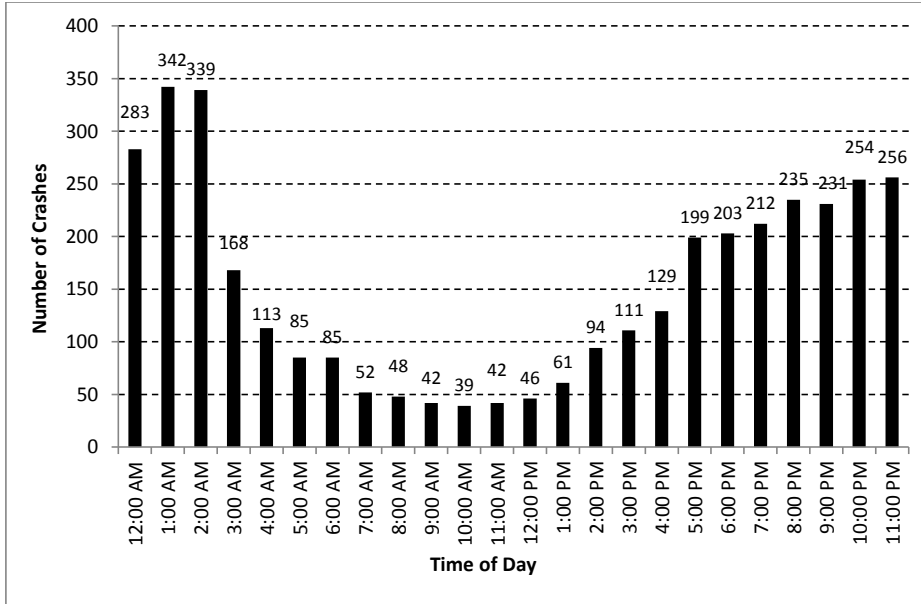


FIGURE 2.05

2013 ALCOHOL-RELATED CRASHES BY DAY OF WEEK

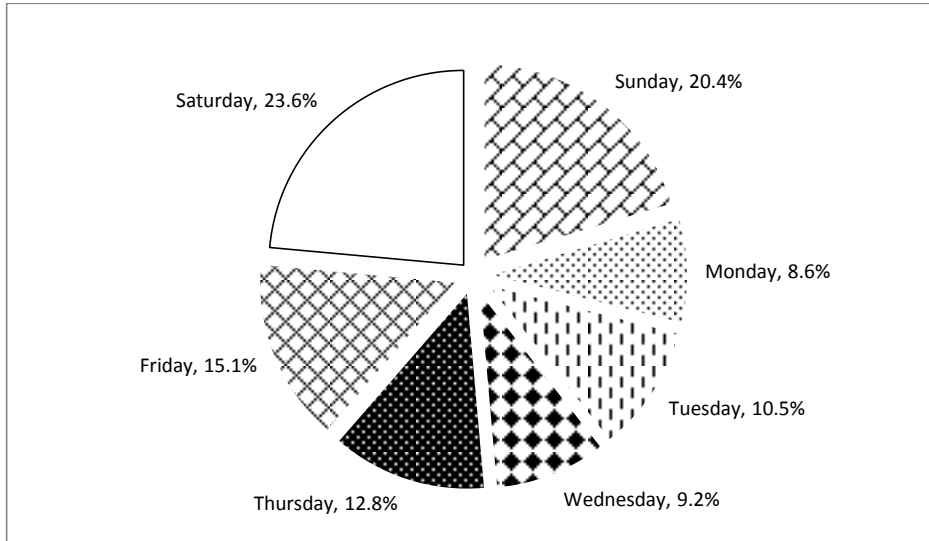


TABLE 2.15

2013 ALCOHOL-RELATED CRASHES BY TIME OF DAY AND DAY OF WEEK

| Hour Beginning  | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Total Crashes | Total Killed | Total Injured |
|-----------------|--------|--------|---------|-----------|----------|--------|----------|---------------|--------------|---------------|
| <b>Midnight</b> | 74     | 18     | 30      | 17        | 30       | 44     | 70       | 283           | 6            | 162           |
| 1:00 AM         | 106    | 23     | 26      | 23        | 35       | 36     | 93       | 342           | 11           | 191           |
| 2:00 AM         | 95     | 23     | 26      | 16        | 37       | 43     | 99       | 339           | 14           | 210           |
| 3:00 AM         | 56     | 11     | 12      | 7         | 13       | 11     | 58       | 168           | 4            | 93            |
| 4:00 AM         | 33     | 4      | 8       | 10        | 7        | 14     | 37       | 113           | 3            | 58            |
| 5:00 AM         | 25     | 8      | 5       | 6         | 11       | 6      | 24       | 85            | 6            | 56            |
| 6:00 AM         | 31     | 8      | 12      | 4         | 11       | 6      | 13       | 85            | 0            | 49            |
| 7:00 AM         | 12     | 6      | 7       | 2         | 2        | 4      | 19       | 52            | 4            | 24            |
| 8:00 AM         | 11     | 2      | 9       | 4         | 2        | 7      | 13       | 48            | 3            | 23            |
| 9:00 AM         | 11     | 4      | 1       | 6         | 4        | 5      | 11       | 42            | 2            | 26            |
| 10:00 AM        | 7      | 5      | 6       | 3         | 6        | 3      | 9        | 39            | 1            | 30            |
| 11:00 AM        | 11     | 5      | 6       | 7         | 4        | 4      | 5        | 42            | 0            | 32            |
| <b>Noon</b>     | 8      | 4      | 5       | 6         | 9        | 6      | 8        | 46            | 0            | 38            |
| 1:00 PM         | 6      | 7      | 6       | 6         | 7        | 13     | 16       | 61            | 0            | 37            |
| 2:00 PM         | 13     | 8      | 11      | 12        | 16       | 14     | 20       | 94            | 7            | 76            |
| 3:00 PM         | 19     | 10     | 16      | 15        | 13       | 15     | 23       | 111           | 3            | 81            |
| 4:00 PM         | 16     | 12     | 21      | 14        | 17       | 24     | 25       | 129           | 2            | 99            |
| 5:00 PM         | 26     | 23     | 19      | 24        | 29       | 26     | 52       | 199           | 9            | 142           |
| 6:00 PM         | 33     | 16     | 30      | 23        | 33       | 33     | 35       | 203           | 9            | 115           |
| 7:00 PM         | 36     | 30     | 22      | 24        | 27       | 36     | 37       | 212           | 11           | 158           |
| 8:00 PM         | 35     | 19     | 28      | 32        | 34       | 48     | 39       | 235           | 2            | 166           |
| 9:00 PM         | 25     | 17     | 29      | 22        | 38       | 50     | 50       | 231           | 6            | 153           |
| 10:00 PM        | 33     | 31     | 22      | 31        | 36       | 47     | 54       | 254           | 8            | 133           |
| 11:00 PM        | 25     | 20     | 27      | 22        | 48       | 58     | 56       | 256           | 6            | 148           |
| Unknown         | 0      | 0      | 0       | 0         | 0        | 0      | 0        | 0             | 0            | 0             |
| <b>Total</b>    | 747    | 314    | 384     | 336       | 469      | 553    | 866      | 3,669         | 117          | 2,300         |

### III: SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS IN 2013 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 4 through 7 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 11.2% of the persons killed and 10.1% of the persons injured in 2013.

#### **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 9<sup>th</sup>, 2009. In June, 2013, the observational seat belt study revealed a 94.8% usage rate.

#### **Occupant fatalities in 2013**

In 2013, 269 motor vehicle occupants were killed in traffic crashes which represents a 3% decrease from the previous year. However, the number of vehicle occupants injured (27,362) increased slightly (6%) from 2012. 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 2013, that number decreased to 874. 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.

#### **Northwest region/Township roads**

Among the motor vehicle occupants that were killed or injured in the Northwest region of Minnesota, only 76% were known to be using a restraint. This is the lowest rate of use of any region, however, it is an increase from 67% in 2012. The Southwest and West Central regions were second lowest: 80%. Concerning types of roadway, 'Township Roads' had the lowest percentage of seat belt use (67%).

#### **Ejection update: always wear your seat belt**

Of the 269 occupants killed in 2013, almost one-third were ejected or partially ejected from the vehicles they were riding in. And, 90% of these ejected fatalities were not wearing a seat belt.

#### **Airbag deployment update**

In 2013, airbag deployment was reported 16,445 times when the occupant was also wearing a seat belt. Fifty-five percent of these incidents resulted in no apparent injury. Airbags deployed 782 times when occupants were not wearing seat belts. Only 29% 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 | Overall | Vehicle Type |     |     |        | Gender |        |
|----------------|---------|--------------|-----|-----|--------|--------|--------|
|                |         | 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     |

\* 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 crash



TABLE 3.02

**MOTOR VEHICLE OCCUPANTS KILLED OR INJURED  
BY EJECTION STATUS AND INJURY SEVERITY, 2013**

| Ejection Status | Killed     | Row %       | Severe Injury | Row %       | Moderate Injury | Row %        | Minor Injury  | Row %        | Total Killed or Injured | Total %     |
|-----------------|------------|-------------|---------------|-------------|-----------------|--------------|---------------|--------------|-------------------------|-------------|
| Not Ejected     | 203        | 0.8         | 730           | 2.8         | 5,661           | 21.6         | 19,657        | 74.9         | 26,251                  | 100%        |
| Partly Ejected  | 7          | 14.9        | 17            | 36.2        | 12              | 25.5         | 11            | 23.4         | 47                      | 100%        |
| Ejected         | 51         | 16.5        | 92            | 29.8        | 75              | 24.3         | 91            | 29.5         | 309                     | 100%        |
| Not Stated      | 8          | 0.8         | 35            | 3.4         | 148             | 14.5         | 833           | 81.4         | 1,024                   | 100%        |
| <b>Total</b>    | <b>269</b> | <b>1.0%</b> | <b>874</b>    | <b>3.2%</b> | <b>5,896</b>    | <b>21.3%</b> | <b>20,592</b> | <b>74.5%</b> | <b>27,631</b>           | <b>100%</b> |

TABLE 3.03

**MOTOR VEHICLE OCCUPANTS KILLED OR INJURED,  
BY AGE AND INJURY SEVERITY, 2013**

| Age Group    | Killed     | Severe Injury | Moderate Injury | Minor Injury  | Total Injuries |
|--------------|------------|---------------|-----------------|---------------|----------------|
| 00 - 04      | 3          | 10            | 54              | 325           | 389            |
| 05 - 09      | 5          | 12            | 86              | 425           | 523            |
| 10 - 14      | 4          | 24            | 119             | 475           | 618            |
| 15 - 19      | 25         | 114           | 677             | 2,194         | 2,985          |
| 20 - 24      | 27         | 119           | 760             | 2,597         | 3,476          |
| 25 - 29      | 29         | 103           | 617             | 2,160         | 2,880          |
| 30 - 34      | 16         | 77            | 532             | 1,973         | 2,582          |
| 35 - 39      | 18         | 56            | 438             | 1,495         | 1,989          |
| 40 - 44      | 11         | 56            | 408             | 1,450         | 1,914          |
| 45 - 49      | 15         | 48            | 417             | 1,450         | 1,915          |
| 50 - 54      | 17         | 55            | 443             | 1,507         | 2,005          |
| 55 - 59      | 15         | 52            | 365             | 1,273         | 1,690          |
| 60 - 64      | 16         | 50            | 282             | 1,002         | 1,334          |
| 65 - 69      | 17         | 27            | 202             | 605           | 834            |
| 70 - 74      | 12         | 19            | 156             | 438           | 613            |
| 75 - 79      | 12         | 22            | 117             | 330           | 469            |
| 80 - 84      | 16         | 9             | 92              | 227           | 328            |
| 85 & Older   | 11         | 17            | 78              | 172           | 267            |
| Not Stated   | 0          | 4             | 53              | 494           | 551            |
| <b>Total</b> | <b>269</b> | <b>874</b>    | <b>5,896</b>    | <b>20,592</b> | <b>27,362</b>  |

FIGURE 3.01

**SAFETY EQUIPMENT USE AMONG MOTOR VEHICLE OCCUPANTS KILLED OR INJURED, BY AGE, 2013**

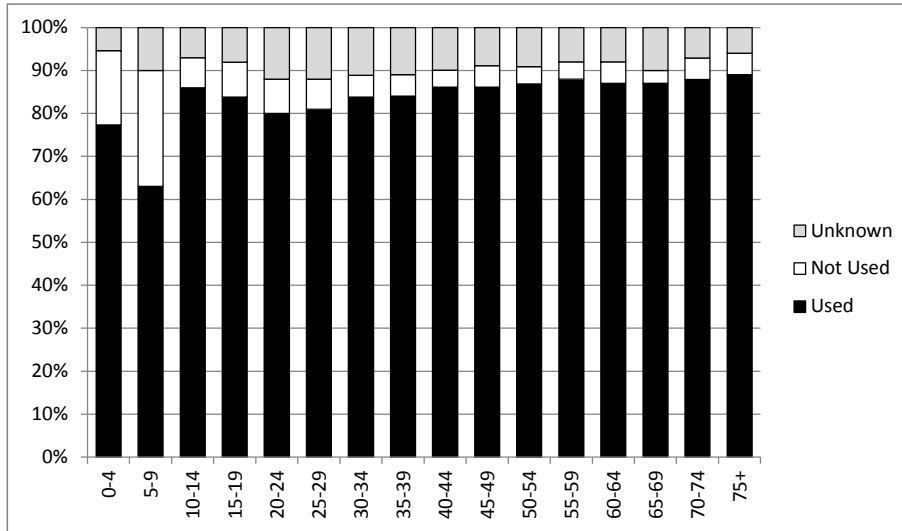


TABLE 3.04

**SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS, BY GENDER AND INJURY SEVERITY, 2013**

|              | 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         | 68             | 77           | 145          | 233                      | 266                    | 2,629                      | 2,131                    | 10,183                 | 7,335                | 22,945         |
| Not Used     | 29             | 65           | 94           | 85                       | 160                    | 212                        | 357                      | 384                    | 454                  | 1,668          |
| Unknown      | 5              | 25           | 30           | 53                       | 75                     | 220                        | 316                      | 977                    | 1,005                | 2,749          |
| <b>Total</b> | <b>102</b>     | <b>167</b>   | <b>269</b>   | <b>371</b>               | <b>501</b>             | <b>3,061</b>               | <b>2,804</b>             | <b>11,544</b>          | <b>8,794</b>         | <b>27,362</b>  |

Note: Gender was not reported for 287 persons injured (mostly those with minor injuries), causing the "Total" to be 287 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, 2013**

| Age Group        | Restraint Use | Killed   |             | Severe Injuries |             | Moderate Injuries |             | Minor Injuries |             | Total Injured |             |
|------------------|---------------|----------|-------------|-----------------|-------------|-------------------|-------------|----------------|-------------|---------------|-------------|
|                  |               | Killed   | %           | Injuries        | %           | Injuries          | %           | Injuries       | %           | Injured       | %           |
| 00 - 03<br>Years | Used          | 3        | 100.0       | 4               | 66.7        | 28                | 77.8        | 211            | 81.5        | 243           | 80.7        |
|                  | Not Used      | 0        | 0.0         | 1               | 16.7        | 6                 | 16.7        | 37             | 14.3        | 44            | 14.6        |
|                  | Unknown       | <u>0</u> | <u>0.0</u>  | <u>1</u>        | <u>16.7</u> | <u>2</u>          | <u>5.6</u>  | <u>11</u>      | <u>4.3</u>  | <u>14</u>     | <u>4.7</u>  |
|                  | Subtotal      | 3        | 100.0       | 6               | 100.0       | 36                | 100.0       | 259            | 100.0       | 301           | 100.0       |
| 04 - 07<br>Years | Used          | 1        | 25.0        | 0               | 0.0         | 33                | 50.0        | 172            | 54.4        | 205           | 52.4        |
|                  | Not Used      | 2        | 50.0        | 6               | 66.7        | 30                | 45.5        | 109            | 34.5        | 145           | 37.1        |
|                  | Unknown       | <u>1</u> | <u>25.0</u> | <u>3</u>        | <u>33.3</u> | <u>3</u>          | <u>4.6</u>  | <u>35</u>      | <u>11.1</u> | <u>41</u>     | <u>10.5</u> |
|                  | Subtotal      | 4        | 100.0       | 9               | 100.0       | 66                | 100.0       | 316            | 100.0       | 391           | 100.0       |
| Total            | Used          | 4        | 57.1        | 4               | 26.7        | 61                | 59.8        | 383            | 66.6        | 448           | 64.7        |
| 00 - 07<br>Years | Not Used      | 2        | 28.6        | 7               | 46.7        | 36                | 35.3        | 146            | 25.4        | 189           | 27.3        |
|                  | Unknown       | <u>1</u> | <u>14.3</u> | <u>4</u>        | <u>26.7</u> | <u>5</u>          | <u>4.9</u>  | <u>46</u>      | <u>8.0</u>  | <u>55</u>     | <u>8.0</u>  |
|                  | Subtotal      | 7        | 100.0       | 15              | 100.0       | 102               | 100.0       | 575            | 100.0       | 692           | 100.0       |
| 00 - 04<br>Years | Used          | 3        | 100.0       | 4               | 40.0        | 38                | 70.4        | 258            | 79.4        | 300           | 77.1        |
|                  | Not Used      | 0        | 0.0         | 5               | 50.0        | 13                | 24.1        | 50             | 15.4        | 68            | 17.5        |
|                  | Unknown       | <u>0</u> | <u>0.0</u>  | <u>1</u>        | <u>10.0</u> | <u>3</u>          | <u>5.6</u>  | <u>17</u>      | <u>5.2</u>  | <u>21</u>     | <u>5.4</u>  |
|                  | Subtotal      | 3        | 100.0       | 10              | 100.0       | 54                | 100.0       | 325            | 100.0       | 389           | 100.0       |
| 05 - 09<br>Years | Used          | 2        | 40.0        | 5               | 41.7        | 52                | 60.5        | 272            | 64.0        | 329           | 62.9        |
|                  | Not Used      | 2        | 40.0        | 4               | 33.3        | 27                | 31.4        | 110            | 25.9        | 141           | 27.0        |
|                  | Unknown       | <u>1</u> | <u>20.0</u> | <u>3</u>        | <u>25.0</u> | <u>7</u>          | <u>8.1</u>  | <u>43</u>      | <u>10.1</u> | <u>53</u>     | <u>10.1</u> |
|                  | Subtotal      | 5        | 100.0       | 12              | 100.0       | 86                | 100.0       | 425            | 100.0       | 523           | 100.0       |
| 10 - 14<br>Years | Used          | 1        | 25.0        | 18              | 75.0        | 94                | 79.0        | 423            | 89.1        | 535           | 86.6        |
|                  | Not Used      | 2        | 50.0        | 6               | 25.0        | 15                | 12.6        | 18             | 3.8         | 39            | 6.3         |
|                  | Unknown       | <u>1</u> | <u>25.0</u> | <u>0</u>        | <u>0.0</u>  | <u>10</u>         | <u>8.4</u>  | <u>34</u>      | <u>7.2</u>  | <u>44</u>     | <u>7.1</u>  |
|                  | Subtotal      | 4        | 100.0       | 24              | 100.0       | 119               | 100.0       | 475            | 100.0       | 618           | 100.0       |
| 15 - 19<br>Years | Used          | 13       | 52.0        | 64              | 56.1        | 522               | 77.1        | 1,908          | 87.0        | 2,494         | 83.6        |
|                  | Not Used      | 11       | 44.0        | 35              | 30.7        | 92                | 13.6        | 111            | 5.1         | 238           | 8.0         |
|                  | Unknown       | <u>1</u> | <u>4.0</u>  | <u>15</u>       | <u>13.2</u> | <u>63</u>         | <u>9.3</u>  | <u>175</u>     | <u>8.0</u>  | <u>253</u>    | <u>8.5</u>  |
|                  | Subtotal      | 25       | 100.0       | 114             | 100.0       | 677               | 100.0       | 2,194          | 100.0       | 2,985         | 100.0       |
| 20 - 24<br>Years | Used          | 13       | 48.2        | 54              | 45.4        | 576               | 75.8        | 2,166          | 83.4        | 2,796         | 80.4        |
|                  | Not Used      | 11       | 40.7        | 47              | 39.5        | 87                | 11.5        | 122            | 4.7         | 256           | 7.4         |
|                  | Unknown       | <u>3</u> | <u>11.1</u> | <u>18</u>       | <u>15.1</u> | <u>97</u>         | <u>12.8</u> | <u>309</u>     | <u>11.9</u> | <u>424</u>    | <u>12.2</u> |
|                  | Subtotal      | 27       | 100.0       | 119             | 100.0       | 760               | 100.0       | 2,597          | 100.0       | 3,476         | 100.0       |
| 25 - 29<br>Years | Used          | 11       | 37.9        | 49              | 47.6        | 484               | 78.4        | 1,806          | 83.6        | 2,339         | 81.2        |
|                  | Not Used      | 13       | 44.8        | 33              | 32.0        | 73                | 11.8        | 83             | 3.8         | 189           | 6.6         |
|                  | Unknown       | <u>5</u> | <u>17.2</u> | <u>21</u>       | <u>20.4</u> | <u>60</u>         | <u>9.7</u>  | <u>271</u>     | <u>12.6</u> | <u>352</u>    | <u>12.2</u> |
|                  | Subtotal      | 29       | 100.0       | 103             | 100.0       | 617               | 100.0       | 2,160          | 100.0       | 2,880         | 100.0       |
| 30 - 34<br>Years | Used          | 9        | 56.3        | 43              | 55.8        | 419               | 78.8        | 1,693          | 85.8        | 2,155         | 83.5        |
|                  | Not Used      | 5        | 31.3        | 19              | 24.7        | 60                | 11.3        | 60             | 3.0         | 139           | 5.4         |
|                  | Unknown       | <u>2</u> | <u>12.5</u> | <u>15</u>       | <u>19.5</u> | <u>53</u>         | <u>10.0</u> | <u>220</u>     | <u>11.2</u> | <u>288</u>    | <u>11.2</u> |
|                  | Subtotal      | 16       | 100.0       | 77              | 100.0       | 532               | 100.0       | 1,973          | 100.0       | 2,582         | 100.0       |
| 35 - 39<br>Years | Used          | 8        | 44.4        | 29              | 51.8        | 364               | 83.1        | 1,286          | 86.0        | 1,679         | 84.4        |
|                  | Not Used      | 7        | 38.9        | 19              | 33.9        | 33                | 7.5         | 47             | 3.1         | 99            | 5.0         |
|                  | Unknown       | <u>3</u> | <u>16.7</u> | <u>8</u>        | <u>14.3</u> | <u>41</u>         | <u>9.4</u>  | <u>162</u>     | <u>10.8</u> | <u>211</u>    | <u>10.6</u> |
|                  | Subtotal      | 18       | 100.0       | 56              | 100.0       | 438               | 100.0       | 1,495          | 100.0       | 1,989         | 100.0       |

TABLE 3.05 CONTINUED

SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS KILLED  
OR INJURED, BY AGE AND INJURY SEVERITY, 2013

| Age Group            | Restraint Use   | Killed    |             | Severe Injuries |             | Moderate Injuries |             | Minor Injuries |             | Total Injured |             |
|----------------------|-----------------|-----------|-------------|-----------------|-------------|-------------------|-------------|----------------|-------------|---------------|-------------|
|                      |                 |           | %           |                 | %           |                   | %           |                | %           |               | %           |
| 40 - 44<br>Years     | Used            | 6         | 54.6        | 37              | 66.1        | 347               | 85.1        | 1,279          | 88.2        | 1,663         | 86.9        |
|                      | Not Used        | 3         | 27.3        | 11              | 19.6        | 27                | 6.6         | 33             | 2.3         | 71            | 3.7         |
|                      | Unknown         | <u>2</u>  | <u>18.2</u> | <u>8</u>        | <u>14.3</u> | <u>34</u>         | <u>8.3</u>  | <u>138</u>     | <u>9.5</u>  | <u>180</u>    | <u>9.4</u>  |
|                      | Subtotal        | 11        | 100.0       | 56              | 100.0       | 408               | 100.0       | 1,450          | 100.0       | 1,914         | 100.0       |
| 45 - 49<br>Years     | Used            | 11        | 73.3        | 29              | 60.4        | 351               | 84.2        | 1,282          | 88.4        | 1,662         | 86.8        |
|                      | Not Used        | 3         | 20.0        | 13              | 27.1        | 37                | 8.9         | 39             | 2.7         | 89            | 4.7         |
|                      | Unknown         | <u>1</u>  | <u>6.7</u>  | <u>6</u>        | <u>12.5</u> | <u>29</u>         | <u>7.0</u>  | <u>129</u>     | <u>8.9</u>  | <u>164</u>    | <u>8.6</u>  |
|                      | Subtotal        | 15        | 100.0       | 48              | 100.0       | 417               | 100.0       | 1,450          | 100.0       | 1,915         | 100.0       |
| 50 - 54<br>Years     | Used            | 9         | 52.9        | 31              | 56.4        | 381               | 86.0        | 1,327          | 88.1        | 1,739         | 86.7        |
|                      | Not Used        | 6         | 35.3        | 19              | 34.6        | 18                | 4.1         | 47             | 3.1         | 84            | 4.2         |
|                      | Unknown         | <u>2</u>  | <u>11.8</u> | <u>5</u>        | <u>9.1</u>  | <u>44</u>         | <u>9.9</u>  | <u>133</u>     | <u>8.8</u>  | <u>182</u>    | <u>9.1</u>  |
|                      | Subtotal        | 17        | 100.0       | 55              | 100.0       | 443               | 100.0       | 1,507          | 100.0       | 2,005         | 100.0       |
| 55 - 59<br>Years     | Used            | 9         | 60.0        | 35              | 67.3        | 315               | 86.3        | 1,142          | 89.7        | 1,492         | 88.3        |
|                      | Not Used        | 5         | 33.3        | 8               | 15.4        | 23                | 6.3         | 33             | 2.6         | 64            | 3.8         |
|                      | Unknown         | <u>1</u>  | <u>6.7</u>  | <u>9</u>        | <u>17.3</u> | <u>27</u>         | <u>7.4</u>  | <u>98</u>      | <u>7.7</u>  | <u>134</u>    | <u>7.9</u>  |
|                      | Subtotal        | 15        | 100.0       | 52              | 100.0       | 365               | 100.0       | 1,273          | 100.0       | 1,690         | 100.0       |
| 60 - 64<br>Years     | Used            | 7         | 43.8        | 35              | 70.0        | 238               | 84.4        | 898            | 89.6        | 1,171         | 87.8        |
|                      | Not Used        | 7         | 43.8        | 9               | 18.0        | 23                | 8.2         | 31             | 3.1         | 63            | 4.7         |
|                      | Unknown         | <u>2</u>  | <u>12.5</u> | <u>6</u>        | <u>12.0</u> | <u>21</u>         | <u>7.5</u>  | <u>73</u>      | <u>7.3</u>  | <u>100</u>    | <u>7.5</u>  |
|                      | Subtotal        | 16        | 100.0       | 50              | 100.0       | 282               | 100.0       | 1,002          | 100.0       | 1,334         | 100.0       |
| 65 - 69<br>Years     | Used            | 12        | 70.6        | 20              | 74.1        | 176               | 87.1        | 534            | 88.3        | 730           | 87.5        |
|                      | Not Used        | 3         | 17.7        | 4               | 14.8        | 6                 | 3.0         | 12             | 2.0         | 22            | 2.6         |
|                      | Unknown         | <u>2</u>  | <u>11.8</u> | <u>3</u>        | <u>11.1</u> | <u>20</u>         | <u>9.9</u>  | <u>59</u>      | <u>9.8</u>  | <u>82</u>     | <u>9.8</u>  |
|                      | Subtotal        | 17        | 100.0       | 27              | 100.0       | 202               | 100.0       | 605            | 100.0       | 834           | 100.0       |
| 70 - 74<br>Years     | Used            | 4         | 33.3        | 12              | 63.2        | 136               | 87.2        | 393            | 89.7        | 541           | 88.3        |
|                      | Not Used        | 7         | 58.3        | 5               | 26.3        | 14                | 9.0         | 8              | 1.8         | 27            | 4.4         |
|                      | Unknown         | <u>1</u>  | <u>8.3</u>  | <u>2</u>        | <u>10.5</u> | <u>6</u>          | <u>3.9</u>  | <u>37</u>      | <u>8.5</u>  | <u>45</u>     | <u>7.3</u>  |
|                      | Subtotal        | 12        | 100.0       | 19              | 100.0       | 156               | 100.0       | 438            | 100.0       | 613           | 100.0       |
| 75 &<br>Older        | Used            | 27        | 69.2        | 33              | 68.8        | 250               | 87.1        | 669            | 91.6        | 952           | 89.4        |
|                      | Not Used        | 9         | 23.1        | 8               | 16.7        | 19                | 6.6         | 20             | 2.7         | 47            | 4.4         |
|                      | Unknown         | <u>3</u>  | <u>7.7</u>  | <u>7</u>        | <u>14.6</u> | <u>18</u>         | <u>6.3</u>  | <u>41</u>      | <u>5.6</u>  | <u>66</u>     | <u>6.2</u>  |
|                      | Subtotal        | 39        | 100.0       | 48              | 100.0       | 287               | 100.0       | 730            | 100.0       | 1,065         | 100.0       |
| Age<br>Not<br>Stated | Used            | 0         | 0.0         | 2               | 50.0        | 34                | 64.2        | 332            | 67.3        | 368           | 66.9        |
|                      | Not Used        | 0         | 0.0         | 0               | 0.0         | 4                 | 7.8         | 28             | 5.7         | 32            | 5.8         |
|                      | Unknown         | <u>0</u>  | <u>0.0</u>  | <u>2</u>        | <u>50.0</u> | <u>15</u>         | <u>28.3</u> | <u>133</u>     | <u>27.0</u> | <u>150</u>    | <u>27.3</u> |
|                      | Subtotal        | 0         | 0.0         | 4               | 100.0       | 53                | 100.0       | 493            | 100.0       | 550           | 100.0       |
| <b>All<br/>Ages</b>  | <b>Used</b>     | 145       | 53.9        | 500             | 57.2        | 4,777             | 81.0        | 17,668         | 85.8        | 22,945        | 83.9        |
|                      | <b>Not Used</b> | 94        | 34.9        | 245             | 28.0        | 571               | 9.7         | 852            | 4.1         | 1,668         | 6.1         |
|                      | <b>Unknown</b>  | <u>30</u> | <u>11.2</u> | <u>129</u>      | <u>14.8</u> | <u>548</u>        | <u>9.3</u>  | <u>2,072</u>   | <u>10.1</u> | <u>2,749</u>  | <u>10.1</u> |
|                      | <b>Subtotal</b> | 269       | 100.0       | 874             | 100.0       | 5,896             | 100.0       | 20,592         | 100.0       | 27,362        | 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, 2004 - 2013**

|                          | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--------------------------|------|------|------|------|------|------|------|------|------|------|
| <b>Killed</b>            |      |      |      |      |      |      |      |      |      |      |
| Used                     | 39.5 | 40.2 | 40.0 | 41.4 | 45.2 | 42.4 | 48.5 | 46.5 | 46.7 | 53.9 |
| Not Used                 | 51.8 | 51.2 | 52.0 | 48.9 | 46.2 | 43.7 | 41.0 | 44.3 | 42.0 | 34.9 |
| Unknown                  | 8.7  | 8.6  | 8.0  | 9.8  | 8.6  | 13.9 | 10.5 | 9.2  | 11.2 | 11.2 |
| <b>Injured</b>           |      |      |      |      |      |      |      |      |      |      |
| <b>Severe Injuries</b>   |      |      |      |      |      |      |      |      |      |      |
| Used                     | 49.3 | 49.6 | 49.9 | 52.2 | 51.4 | 55.2 | 58.3 | 59.2 | 57.8 | 57.2 |
| Not Used                 | 32.8 | 30.8 | 32.8 | 31.6 | 29.8 | 27.9 | 27.2 | 29.0 | 25.8 | 28.0 |
| Unknown                  | 17.9 | 19.6 | 17.3 | 16.2 | 18.8 | 16.9 | 14.5 | 11.8 | 16.3 | 14.8 |
| <b>Moderate Injuries</b> |      |      |      |      |      |      |      |      |      |      |
| Used                     | 70.3 | 70.9 | 69.0 | 71.6 | 72.4 | 74.6 | 79.1 | 79.1 | 79.4 | 81.0 |
| Not Used                 | 17.4 | 15.9 | 16.8 | 15.4 | 14.8 | 12.8 | 10.8 | 10.4 | 10.1 | 9.7  |
| Unknown                  | 12.4 | 13.2 | 14.2 | 13.0 | 12.8 | 12.6 | 10.1 | 10.5 | 10.6 | 9.3  |
| <b>Minor Injuries</b>    |      |      |      |      |      |      |      |      |      |      |
| Used                     | 78.8 | 80.6 | 80.2 | 81.6 | 81.8 | 83.0 | 84.7 | 85.4 | 85.1 | 85.8 |
| Not Used                 | 9.7  | 8.8  | 8.6  | 7.6  | 7.4  | 6.5  | 5.5  | 5.1  | 5.1  | 4.1  |
| Unknown                  | 11.4 | 10.6 | 11.3 | 10.8 | 10.8 | 10.4 | 9.8  | 9.5  | 9.9  | 10.1 |
| <b>Total Injured</b>     |      |      |      |      |      |      |      |      |      |      |
| Used                     | 74.8 | 76.6 | 76.1 | 78.0 | 78.5 | 80.1 | 82.7 | 83.3 | 82.9 | 83.9 |
| Not Used                 | 13.2 | 11.7 | 11.6 | 10.4 | 10.0 | 8.7  | 7.3  | 7.0  | 6.8  | 6.1  |
| Unknown                  | 12.0 | 11.7 | 12.3 | 11.6 | 11.6 | 11.2 | 10.0 | 9.7  | 10.2 | 10.0 |

TABLE 3.07

**SAFETY EQUIPMENT USE BY MOTOR VEHICLE OCCUPANTS  
KILLED OR INJURED, BY ROADWAY TYPE, 2013**

| Roadway Type     | Used          | %           | Not Used     | %          | Unknown      | %           | Total         | %             |
|------------------|---------------|-------------|--------------|------------|--------------|-------------|---------------|---------------|
| Interstate       | 3,674         | 90.9        | 194          | 4.8        | 174          | 4.3         | 4,042         | 100.0%        |
| US Trunk Hwy     | 3,193         | 89.4        | 196          | 5.5        | 183          | 5.1         | 3,572         | 100.0%        |
| MN Trunk Hwy     | 4,519         | 86.4        | 338          | 6.5        | 375          | 7.2         | 5,232         | 100.0%        |
| CSAH             | 6,557         | 81.3        | 556          | 6.9        | 952          | 11.8        | 8,065         | 100.0%        |
| County Road      | 314           | 73.5        | 54           | 12.7       | 59           | 13.8        | 427           | 100.0%        |
| Township Road    | 372           | 67.0        | 106          | 19.1       | 77           | 13.9        | 555           | 100.0%        |
| MSAH             | 3,228         | 80.5        | 181          | 4.5        | 599          | 15.0        | 4,008         | 100.0%        |
| Municipal Street | 1,193         | 71.2        | 129          | 7.7        | 353          | 21.1        | 1,675         | 100.0%        |
| Other Road       | 40            | 72.3        | 8            | 14.6       | 7            | 12.7        | 55            | 100.0%        |
| <b>Total</b>     | <b>23,090</b> | <b>83.6</b> | <b>1,762</b> | <b>6.4</b> | <b>2,779</b> | <b>10.1</b> | <b>27,631</b> | <b>100.0%</b> |

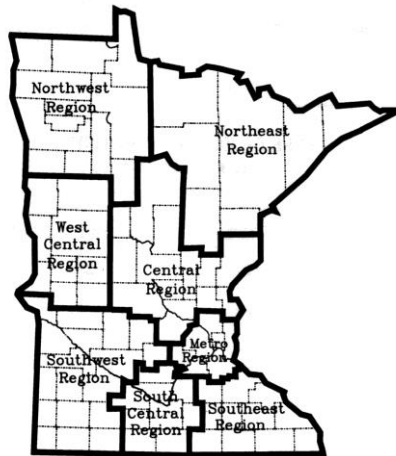
CSAH = County State Aid Highway. MSAH = Municipal State Aid Highway

TABLE 3.08

**SAFETY EQUIPMENT USE BY MOTOR VEHICLE OCCUPANTS  
KILLED OR INJURED, BY REGION OF THE STATE, 2013**

| <b>EMS Region</b> | <b>Percent Used</b> | <b>Percent Not Used</b> | <b>Percent Unknown</b> | <b>Number of People</b> |
|-------------------|---------------------|-------------------------|------------------------|-------------------------|
| Metropolitan      | 84.0                | 4.4                     | 11.6                   | 15,832                  |
| Central           | 85.0                | 8.0                     | 7.0                    | 3,815                   |
| Northeast         | 82.5                | 8.2                     | 9.3                    | 1,646                   |
| Northwest         | 75.9                | 11.2                    | 12.9                   | 606                     |
| South Central     | 81.7                | 9.7                     | 8.6                    | 1,058                   |
| Southeast         | 85.7                | 7.4                     | 7.0                    | 2,315                   |
| Southwest         | 79.6                | 12.6                    | 7.9                    | 1,347                   |
| West Central      | 79.6                | 11.9                    | 8.5                    | 1,012                   |
| <b>Statewide</b>  | <b>83.6</b>         | <b>6.4</b>              | <b>10.1</b>            | <b>27,631</b>           |

\*The regions of the state are shown in the map at right.



**TABLE 3.09**  
**AIRBAG DEPLOYMENTS, 2006 - 2013**

| 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          |
|-------------|--------------------|---------------------------|-------------------------------|------------------------------------|--|------------------|----------------|
| <b>2006</b> | Killed             | 80                        | 63                            | 69                                 | 131                                    | 30               | 373            |
|             | Severe Injury      | 265                       | 142                           | 398                                | 293                                    | 230              | 1,328          |
|             | Moderate Injury    | 1,917                     | 323                           | 3,491                              | 993                                    | 1,114            | 7,838          |
|             | Minor Injury       | 4,067                     | 351                           | 13,747                             | 1,552                                  | 2,504            | 22,221         |
|             | No Apparent Injury | <u>7,130</u>              | <u>375</u>                    | <u>96,018</u>                      | <u>3,779</u>                           | <u>44,881</u>    | <u>152,183</u> |
|             | Total              | 13,459                    | 1,254                         | 113,723                            | 6,748                                  | 48,759           | 183,943        |
| <b>2007</b> | Killed             | 89                        | 76                            | 76                                 | 119                                    | 39               | 399            |
|             | Severe Injury      | 294                       | 152                           | 350                                | 237                                    | 200              | 1,233          |
|             | Moderate Injury    | 2,044                     | 338                           | 3,489                              | 850                                    | 1,009            | 7,730          |
|             | Minor Injury       | 4,336                     | 365                           | 13,941                             | 1,334                                  | 2,417            | 22,393         |
|             | No Apparent Injury | <u>7,535</u>              | <u>361</u>                    | <u>104,297</u>                     | <u>3,783</u>                           | <u>43,270</u>    | <u>159,246</u> |
|             | Total              | 14,298                    | 1,292                         | 122,153                            | 6,323                                  | 46,935           | 191,001        |
| <b>2008</b> | 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 | <u>7,594</u>              | <u>323</u>                    | <u>102,417</u>                     | <u>3,345</u>                           | <u>36,239</u>    | <u>149,918</u> |
|             | Total              | 14,037                    | 1,120                         | 119,405                            | 5,650                                  | 39,698           | 179,910        |
| <b>2009</b> | 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 | <u>7,318</u>              | <u>270</u>                    | <u>98,055</u>                      | <u>3,308</u>                           | <u>31,781</u>    | <u>140,732</u> |
|             | Total              | 13,485                    | 966                           | 114,090                            | 5,141                                  | 34,898           | 168,580        |
| <b>2010</b> | 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 | <u>7,620</u>              | <u>210</u>                    | <u>101,735</u>                     | <u>3,055</u>                           | <u>30,979</u>    | <u>143,599</u> |
|             | Total              | 14,011                    | 734                           | 118,471                            | 4,695                                  | 33,783           | 171,694        |
| <b>2011</b> | 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 | <u>7,860</u>              | <u>243</u>                    | <u>99,608</u>                      | <u>2,716</u>                           | <u>28,078</u>    | <u>138,505</u> |
|             | Total              | 14,306                    | 818                           | 115,687                            | 4,131                                  | 30,725           | 165,667        |
| <b>2012</b> | 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 | <u>8,093</u>              | <u>229</u>                    | <u>94,519</u>                      | <u>2,390</u>                           | <u>27,092</u>    | <u>132,323</u> |
|             | Total              | 14,976                    | 827                           | 109,112                            | 3,673                                  | 29,760           | 158,348        |
| <b>2013</b> | 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 | <u>9,075</u>              | <u>226</u>                    | <u>106,392</u>                     | <u>2,586</u>                           | <u>30,084</u>    | <u>148,363</u> |
|             | Total              | 16,445                    | 782                           | 122,112                            | 3,792                                  | 32,863           | 175,994        |

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

### **2013 motorcycle crash summary**

In the past decade many older people have returned to motorcycling. By the end of the calendar year 2013, 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. However, in 2013 there were 1,266 crashes that involved at least one motorcycle. This represents a 19% decrease from the previous year.

On the other hand, motorcyclist fatalities in 2013 increased 9% from 2012 (from 55 to 60). Of the 60 killed, 53 were drivers and 7 were passengers. Injuries to motorcyclists decreased 21% though (from 1,454 to 1,143). Sixty-eight percent of all motorcyclists killed or injured in 2013 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 2013, 53 motorcycle drivers were killed and 43 of them were tested. Sixteen (37%) of the 43 drivers tested positive for alcohol, and 14 of the 43 (33%) 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, 4.7 out of every 100 motorcycle crashes in 2013 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 2013, only 14 (23%) of the 60 motorcycle riders killed were known to be wearing a helmet. Of the 1,143 motorcyclists injured, only 389 (34%) 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. The crash data indicates that proper operator training is a must. In 2013, 55% of all motorcycle crashes were single vehicle crashes. A majority of these single vehicle crashes were collisions with fixed objects or simply the motorcycle overturning. In addition, 2013 data indicate that one out of every five 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 2013, 50 of the 60 motorcyclists killed, and 948 of the 1,143 injured, were male. Males account for 83% of all motorcyclists killed or injured.

### **Contributing factors for motorcyclists**

As noted, over half of motorcycle crashes are single-vehicle crashes. In these crashes, the factors that reporting officers list most often are illegal or unsafe speed (17%), driver inexperience (12%), and driver inattention or distraction (10%). In crashes that involve another motor vehicle, the reporting officers list following too closely (19%) and driver inattention or distraction most often for the motorcyclists (17%).

### **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 (39%), and driver inattention or distraction (21%) 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 – 2013

| 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             |
| Record High* (year) | 112 (1980)         | 2,728 (1980) | 537 (1976) | 3,308 (1980) | 121 (1980) | 9 (1975) | 3,359 (1980) | 207 (1984) | 409,943 (2013)     | 237,278 (2012)         | 7.7 (1980)                     | 4.7 (2013)                       | 0.8 (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

2013 MOTORCYCLE CRASHES BY FIRST HARMFUL EVENT

| First Harmful Event    | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Motorcyclists Killed | Motorcyclists Injured |
|------------------------|---------------|----------------|-------------------------|---------------|----------------------|-----------------------|
| <b>Collision With:</b> |               |                |                         |               |                      |                       |
| Other Motor Vehicle    | 26            | 445            | 100                     | 571           | 28                   | 489                   |
| Parked Vehicle         | 0             | 11             | 24                      | 35            | 0                    | 11                    |
| Bicyclist              | 2             | 4              | 0                       | 6             | 1                    | 2                     |
| Pedestrian             | 1             | 2              | 0                       | 3             | 0                    | 3                     |
| Deer                   | 7             | 72             | 5                       | 84            | 7                    | 88                    |
| Other Animal           | 0             | 6              | 2                       | 8             | 0                    | 8                     |
| Fixed Object           | 15            | 131            | 9                       | 155           | 15                   | 145                   |
| <b>Non-Collision:</b>  |               |                |                         |               |                      |                       |
| Overturn/Rollover      | 6             | 152            | 8                       | 166           | 6                    | 160                   |
| <b>Other / Unknown</b> | 2             | 224            | 12                      | 238           | 3                    | 237                   |
| <b>Total</b>           | 59            | 1,047          | 160                     | 1,266         | 60                   | 1,143                 |

TABLE 4.03

2013 MOTORCYCLE CRASHES BY POPULATION OF AREA

| Population of City or Township | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Motorcyclists Killed | Motorcyclists Injured |
|--------------------------------|---------------|----------------|-------------------------|---------------|----------------------|-----------------------|
| 250,000 and Over               | 4             | 122            | 45                      | 171           | 4                    | 130                   |
| 100,000 - 249,999              | 3             | 18             | 1                       | 22            | 3                    | 19                    |
| 50,000 - 99,999                | 6             | 172            | 23                      | 201           | 6                    | 188                   |
| 25,000 - 49,999                | 3             | 127            | 18                      | 148           | 3                    | 135                   |
| 10,000 - 24,999                | 4             | 162            | 28                      | 194           | 4                    | 173                   |
| 5,000 - 9,999                  | 4             | 64             | 4                       | 72            | 3                    | 69                    |
| 2,500 - 4,999                  | 2             | 40             | 15                      | 57            | 2                    | 43                    |
| 1,000 - 2,499                  | 2             | 25             | 1                       | 28            | 2                    | 26                    |
| Under 1,000                    | 31            | 317            | 25                      | 373           | 33                   | 360                   |
| <b>Total</b>                   | 59            | 1,047          | 160                     | 1,266         | 60                   | 1,143                 |

TABLE 4.04

2013 MOTORCYCLE CRASHES BY MONTH

| Month        | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Motorcyclists Killed | Motorcyclists Injured |
|--------------|---------------|----------------|-------------------------|---------------|----------------------|-----------------------|
| January      | 0             | 0              | 0                       | 0             | 0                    | 0                     |
| February     | 0             | 0              | 0                       | 0             | 0                    | 0                     |
| March        | 0             | 9              | 1                       | 10            | 0                    | 9                     |
| April        | 3             | 51             | 2                       | 56            | 3                    | 55                    |
| May          | 8             | 100            | 14                      | 122           | 8                    | 109                   |
| June         | 10            | 182            | 23                      | 215           | 11                   | 193                   |
| July         | 17            | 200            | 28                      | 245           | 19                   | 233                   |
| August       | 10            | 248            | 42                      | 300           | 9                    | 266                   |
| September    | 11            | 174            | 33                      | 218           | 10                   | 191                   |
| October      | 0             | 71             | 16                      | 87            | 0                    | 74                    |
| November     | 0             | 11             | 1                       | 12            | 0                    | 12                    |
| December     | 0             | 1              | 0                       | 1             | 0                    | 1                     |
| <b>Total</b> | <b>59</b>     | <b>1,047</b>   | <b>160</b>              | <b>1,266</b>  | <b>60</b>            | <b>1,143</b>          |

FIGURE 4.01

2013 MOTORCYCLE CRASHES BY TIME OF DAY

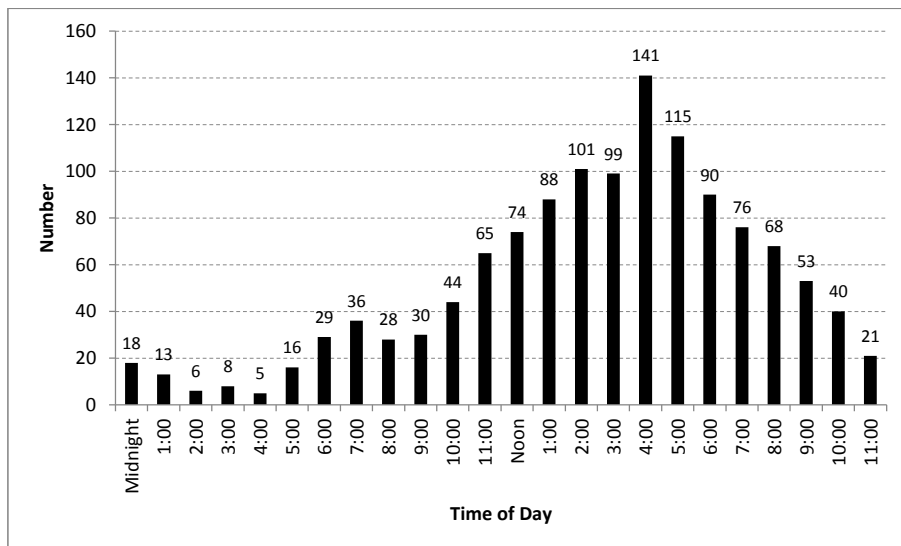


TABLE 4.05

2013 MOTORCYCLE CRASHES BY TIME AND DAY

| Hour<br>Begin-<br>ing | Total<br>Crashes | Fatal<br>Crashes | Sun.<br>All | Sun.<br>Fatal | Mon.<br>All | Mon.<br>Fatal | Tues.<br>All | Tues.<br>Fatal | Wed.<br>All | Wed.<br>Fatal | Thur.<br>All | Thur.<br>Fatal | Fri.<br>All | Fri.<br>Fatal | Sat.<br>All | Sat.<br>Fatal |
|-----------------------|------------------|------------------|-------------|---------------|-------------|---------------|--------------|----------------|-------------|---------------|--------------|----------------|-------------|---------------|-------------|---------------|
| <b>12 am</b>          | 18               | 2                | 5           | 1             | 2           | 0             | 1            | 0              | 0           | 0             | 3            | 0              | 3           | 0             | 4           | 1             |
| 1:00                  | 13               | 1                | 6           | 0             | 2           | 0             | 1            | 0              | 0           | 0             | 2            | 1              | 0           | 0             | 2           | 0             |
| 2:00                  | 6                | 0                | 2           | 0             | 0           | 0             | 2            | 0              | 0           | 0             | 0            | 0              | 0           | 0             | 2           | 0             |
| 3:00                  | 8                | 2                | 3           | 1             | 0           | 0             | 1            | 1              | 1           | 0             | 1            | 0              | 1           | 0             | 1           | 0             |
| 4:00                  | 5                | 0                | 0           | 0             | 0           | 0             | 1            | 0              | 2           | 0             | 1            | 0              | 1           | 0             | 0           | 0             |
| 5:00                  | 16               | 2                | 0           | 0             | 2           | 0             | 4            | 0              | 3           | 1             | 3            | 0              | 4           | 1             | 0           | 0             |
| 6:00                  | 29               | 0                | 0           | 0             | 2           | 0             | 3            | 0              | 9           | 0             | 8            | 0              | 4           | 0             | 3           | 0             |
| 7:00                  | 36               | 3                | 0           | 0             | 2           | 1             | 6            | 0              | 5           | 0             | 6            | 0              | 11          | 1             | 6           | 1             |
| 8:00                  | 28               | 2                | 1           | 0             | 3           | 0             | 10           | 0              | 5           | 0             | 5            | 2              | 4           | 0             | 0           | 0             |
| 9:00                  | 30               | 1                | 7           | 1             | 2           | 0             | 3            | 0              | 2           | 0             | 5            | 0              | 4           | 0             | 7           | 0             |
| 10:00                 | 44               | 3                | 9           | 1             | 1           | 0             | 4            | 0              | 7           | 2             | 5            | 0              | 8           | 0             | 10          | 0             |
| 11:00                 | 65               | 4                | 9           | 0             | 6           | 1             | 10           | 1              | 8           | 0             | 10           | 1              | 10          | 0             | 12          | 1             |
| <b>Noon</b>           | 74               | 3                | 12          | 1             | 7           | 0             | 8            | 0              | 7           | 0             | 14           | 1              | 11          | 0             | 15          | 1             |
| 1:00                  | 88               | 1                | 18          | 0             | 16          | 0             | 7            | 0              | 11          | 1             | 8            | 0              | 14          | 0             | 14          | 0             |
| 2:00                  | 101              | 7                | 20          | 2             | 11          | 2             | 8            | 1              | 14          | 2             | 9            | 0              | 19          | 0             | 20          | 0             |
| 3:00                  | 99               | 2                | 15          | 0             | 14          | 1             | 16           | 0              | 12          | 0             | 17           | 0              | 9           | 1             | 16          | 0             |
| 4:00                  | 141              | 3                | 24          | 0             | 13          | 0             | 20           | 0              | 20          | 0             | 25           | 2              | 23          | 1             | 16          | 0             |
| 5:00                  | 115              | 5                | 15          | 0             | 17          | 0             | 17           | 1              | 19          | 3             | 16           | 0              | 19          | 1             | 12          | 0             |
| 6:00                  | 90               | 6                | 14          | 3             | 8           | 0             | 13           | 0              | 11          | 0             | 19           | 1              | 10          | 0             | 15          | 2             |
| 7:00                  | 76               | 3                | 11          | 0             | 4           | 0             | 14           | 0              | 6           | 0             | 16           | 1              | 14          | 0             | 11          | 2             |
| 8:00                  | 68               | 2                | 13          | 1             | 5           | 0             | 6            | 1              | 17          | 0             | 10           | 0              | 7           | 0             | 10          | 0             |
| 9:00                  | 53               | 3                | 4           | 0             | 13          | 1             | 6            | 1              | 6           | 0             | 7            | 0              | 9           | 0             | 8           | 1             |
| 10:00                 | 40               | 2                | 11          | 0             | 6           | 1             | 6            | 1              | 1           | 0             | 3            | 0              | 4           | 0             | 9           | 0             |
| 11:00                 | 21               | 2                | 1           | 0             | 4           | 0             | 2            | 0              | 1           | 0             | 8            | 2              | 3           | 0             | 2           | 0             |
| Unk                   | 2                | 0                | 0           | 0             | 0           | 0             | 0            | 0              | 0           | 0             | 0            | 0              | 2           | 0             | 0           | 0             |
| <b>Total</b>          | 1,266            | 59               | 200         | 11            | 140         | 7             | 169          | 7              | 167         | 9             | 201          | 11             | 194         | 5             | 195         | 9             |

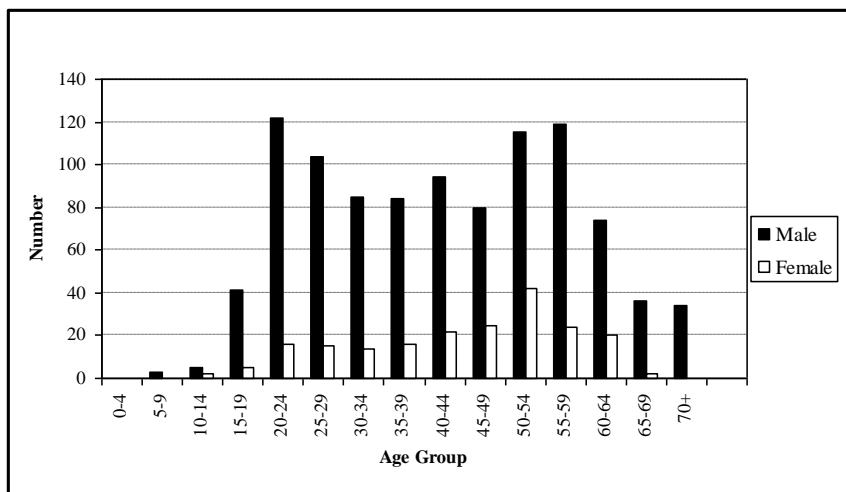
TABLE 4.06

**MOTORCYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2013**

| Age Group    | Killed    |           |           | Injured    |           |            |            |           |            |            |           |            | Total Injured |            |              |   |
|--------------|-----------|-----------|-----------|------------|-----------|------------|------------|-----------|------------|------------|-----------|------------|---------------|------------|--------------|---|
|              | M         | F         | Total     | Severe     |           |            | Moderate   |           |            | Minor      |           |            | 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            | 0 |
| 05-09        | 0         | 0         | 0         | 0          | 0         | 0          | 1          | 0         | 1          | 2          | 0         | 2          | 3             | 0          | 3            |   |
| 10-14        | 0         | 0         | 0         | 0          | 0         | 0          | 1          | 1         | 2          | 4          | 1         | 5          | 5             | 2          | 7            |   |
| 15-19        | 1         | 0         | 1         | 3          | 2         | 5          | 26         | 0         | 26         | 11         | 3         | 14         | 40            | 5          | 45           |   |
| 20-24        | 7         | 0         | 7         | 14         | 5         | 19         | 50         | 7         | 57         | 51         | 4         | 55         | 115           | 16         | 131          |   |
| 25-29        | 3         | 0         | 3         | 13         | 1         | 14         | 43         | 8         | 51         | 45         | 6         | 51         | 101           | 15         | 116          |   |
| 30-34        | 6         | 0         | 6         | 9          | 0         | 9          | 39         | 10        | 49         | 31         | 4         | 35         | 79            | 14         | 93           |   |
| 35-39        | 2         | 0         | 2         | 17         | 2         | 19         | 40         | 6         | 46         | 25         | 8         | 33         | 82            | 16         | 98           |   |
| 40-44        | 2         | 1         | 3         | 16         | 4         | 20         | 48         | 11        | 59         | 28         | 6         | 34         | 92            | 21         | 113          |   |
| 45-49        | 3         | 2         | 5         | 7          | 1         | 8          | 40         | 17        | 57         | 30         | 5         | 35         | 77            | 23         | 100          |   |
| 50-54        | 6         | 4         | 10        | 18         | 7         | 25         | 58         | 21        | 79         | 33         | 10        | 43         | 109           | 38         | 147          |   |
| 55-59        | 9         | 0         | 9         | 25         | 7         | 32         | 46         | 7         | 53         | 39         | 10        | 49         | 110           | 24         | 134          |   |
| 60-64        | 4         | 3         | 7         | 11         | 2         | 13         | 29         | 7         | 36         | 30         | 8         | 38         | 70            | 17         | 87           |   |
| 65-69        | 2         | 0         | 2         | 5          | 0         | 5          | 18         | 2         | 20         | 11         | 0         | 11         | 34            | 2          | 36           |   |
| 70 & Older   | 5         | 0         | 5         | 2          | 0         | 2          | 15         | 0         | 15         | 12         | 0         | 12         | 29            | 0          | 29           |   |
| Not Stated   | 0         | 0         | 0         | 1          | 0         | 1          | 1          | 0         | 1          | 0          | 2         | 2          | 2             | 2          | 4            |   |
| <b>Total</b> | <b>50</b> | <b>10</b> | <b>60</b> | <b>141</b> | <b>31</b> | <b>172</b> | <b>455</b> | <b>97</b> | <b>552</b> | <b>352</b> | <b>67</b> | <b>419</b> | <b>948</b>    | <b>195</b> | <b>1,143</b> |   |

FIGURE 4.02

**MOTORCYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2013**



**TABLE 4.07  
HELMET USE BY MOTORCYCLISTS KILLED OR INJURED, 2004 - 2013**

|               | Year | Helmet Used |      | Helmet Not Used |      | Unknown Helmet Use |      | Total |       |
|---------------|------|-------------|------|-----------------|------|--------------------|------|-------|-------|
|               |      | Used        | %    | Used            | %    | Use                | %    | Total | %     |
| <b>Killed</b> | 2004 | 14          | 28.0 | 29              | 58.0 | 7                  | 14.0 | 50    | 100.0 |
|               | 2005 | 18          | 30.5 | 34              | 57.6 | 7                  | 11.9 | 59    | 100.0 |
|               | 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 |

|                | Year | Helmet Used |      | Helmet Not Used |      | Unknown Helmet Use |      | Total |       |
|----------------|------|-------------|------|-----------------|------|--------------------|------|-------|-------|
|                |      | Used        | %    | Used            | %    | Use                | %    | Total | %     |
| <b>Injured</b> | 2004 | 418         | 33.4 | 477             | 38.1 | 356                | 28.5 | 1,251 | 100.0 |
|                | 2005 | 412         | 31.2 | 530             | 40.2 | 377                | 28.6 | 1,319 | 100.0 |
|                | 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 |

**TABLE 4.08  
ENDORSEMENT STATUS OF MOTORCYCLE OPERATORS  
INVOLVED IN FATAL CRASHES, 2004 - 2013**

| Year | Valid Endorsement |      | Permit Only |     | Canceled,<br>Suspended, Revoked |      | No Endorsement |      | Total** for Year |       |
|------|-------------------|------|-------------|-----|---------------------------------|------|----------------|------|------------------|-------|
|      | N                 | %    | N           | %   | N                               | %    | N              | %    | N                | %     |
| 2004 | 45                | 83.3 | 1           | 1.9 | 0                               | 0.0  | 8              | 14.8 | 54               | 100.0 |
| 2005 | 51                | 81.0 | 2           | 3.2 | 5                               | 7.9  | 4              | 6.3  | 63               | 100.0 |
| 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                | 79.6 | 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 |

\* 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.

TABLE 4.09

ALCOHOL USE BY KILLED MOTORCYCLE DRIVERS, 2004 – 2013

| Year | Killed | Tested | Alcohol Concentration (.00) | Alcohol Concentration (.01 - .07) | Alcohol Concentration (.08 – .09) | Alcohol Concentration (.10 or more) |
|------|--------|--------|-----------------------------|-----------------------------------|-----------------------------------|-------------------------------------|
| 2004 | 46     | 37     | 27 (73%)                    | 3 (8%)                            | 0 (0%)                            | 7 (19%)                             |
| 2005 | 55     | 51     | 28 (55%)                    | 8 (16%)                           | 1 (2%)                            | 14 (27%)                            |
| 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%)                            |

Percentages are based on those motorcycle drivers tested.

TABLE 4.10

2013 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            | 0        |
| 15              | 0         | 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            | 0        |
| 17              | 0         | 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            | 0        |
| 19              | 1         | 1         | 0                     | 0        | 0         | 0         | 0        | 0        | 0        | 0        | 0        | 0            | 0        |
| 20              | 2         | 0         | 0                     | 0        | 0         | 0         | 0        | 0        | 0        | 0        | 0        | 0            | 0        |
| <b>Under 21</b> | <b>3</b>  | <b>1</b>  | <b>0</b>              | <b>0</b> | <b>0</b>  | <b>0</b>  | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b> | <b>0</b>     | <b>0</b> |
| 14 & Younger    | 0         | 0         | 0                     | 0        | 0         | 0         | 0        | 0        | 0        | 0        | 0        | 0            | 0        |
| 15 – 19         | 1         | 1         | 0                     | 0        | 0         | 1         | 0        | 0        | 0        | 0        | 0        | 0            | 0        |
| 20 – 24         | 7         | 5         | 0                     | 1        | 1         | 3         | 0        | 1        | 0        | 0        | 1        | 0            | 0        |
| 25 – 29         | 3         | 3         | 1                     | 0        | 1         | 1         | 1        | 0        | 0        | 1        | 0        | 0            | 0        |
| 30 – 34         | 6         | 6         | 0                     | 0        | 3         | 3         | 0        | 0        | 0        | 2        | 0        | 1            | 0        |
| 35 – 39         | 2         | 1         | 0                     | 0        | 1         | 0         | 0        | 0        | 0        | 1        | 0        | 0            | 0        |
| 40 – 44         | 2         | 2         | 0                     | 0        | 1         | 1         | 0        | 0        | 0        | 1        | 0        | 0            | 0        |
| 45 – 49         | 4         | 4         | 0                     | 0        | 2         | 2         | 0        | 0        | 0        | 2        | 0        | 0            | 0        |
| 50 – 54         | 7         | 7         | 1                     | 0        | 2         | 4         | 1        | 0        | 0        | 1        | 0        | 1            | 0        |
| 55 – 59         | 9         | 7         | 0                     | 1        | 0         | 6         | 0        | 1        | 0        | 0        | 0        | 0            | 0        |
| 60 & Older      | 12        | 7         | 0                     | 0        | 1         | 6         | 0        | 0        | 1        | 0        | 0        | 0            | 0        |
| Unk Age         | 0         | 0         | 0                     | 0        | 0         | 0         | 0        | 0        | 0        | 0        | 0        | 0            | 0        |
| <b>Total</b>    | <b>53</b> | <b>43</b> | <b>2</b>              | <b>2</b> | <b>12</b> | <b>27</b> | <b>2</b> | <b>2</b> | <b>1</b> | <b>8</b> | <b>1</b> | <b>2</b>     | <b>0</b> |

**TABLE 4.11**  
**CONTRIBUTING FACTORS IN 2013 MOTORCYCLE CRASHES**

| Contributing Factors  | Single Vehicle Crashes<br>Attributed to<br>Motorcycle Drivers |               | Multi-Vehicle Crashes               |               |                                |               |
|---|---|---------------|-------------------------------------|---------------|--------------------------------|---------------|
|   | N   | %             | Attributed to<br>Motorcycle Drivers |               | Attributed to<br>Other Drivers |               |
|   | N   | %             | N                                   | %             | N                              | %             |
| <b>Human Factors:</b>   |   |               |                                     |               |                                |               |
| Illegal/Unsafe Speed  | 101   | 16.9%         | 37                                  | 12.7%         | 7                              | 1.5%          |
| Driver Inexperience   | 73  | 12.2          | 16                                  | 5.5           | 7                              | 1.5           |
| Driver Inattention/Distracted                                   | 62  | 10.4          | 50                                  | 17.1          | 97                             | 20.9          |
| Chemical Impairment   | 60  | 10.1          | 9                                   | 3.1           | 8                              | 1.7           |
| Overcorrecting  | 33  | 5.5           | 2                                   | 0.7           | 0                              | 0.0           |
| Following Too Closely   | 24  | 4.0           | 55                                  | 18.8          | 27                             | 5.8           |
| Improper/Unsafe Lane Use  | 23  | 3.9           | 8                                   | 2.7           | 32                             | 6.9           |
| Improper Park/Start/Stop  | 9   | 1.5           | 2                                   | 0.7           | 6                              | 1.3           |
| Failure To Yield Right of Way                                   | 5   | 0.8           | 38                                  | 13.0          | 180                            | 38.7          |
| Disregard Traf Control Device                                   | 5   | 0.8           | 6                                   | 2.1           | 23                             | 4.9           |
| Improper Passing/Overtaking                                     | 4   | 0.7           | 13                                  | 4.5           | 8                              | 1.7           |
| Other Vision Related Factor                                     | 4   | 0.7           | 2                                   | 0.7           | 7                              | 1.5           |
| Driving Left of Center  | 3   | 0.5           | 6                                   | 2.1           | 3                              | 0.6           |
| Improper Turn   | 2   | 0.3           | 2                                   | 0.7           | 29                             | 6.2           |
| Vision Obscured—Sunlight  | 2   | 0.3           | 3                                   | 1.0           | 3                              | 0.6           |
| Impeding Traffic  | 1   | 0.2           | 1                                   | 0.3           | 0                              | 0.0           |
| Unsafe Backing  | 0   | 0.0           | 1                                   | 0.3           | 7                              | 1.5           |
| Improper/No Signal  | 0   | 0.0           | 0                                   | 0.0           | 1                              | 0.2           |
| Failure To Use Lights   | 0   | 0.0           | 0                                   | 0.0           | 1                              | 0.2           |
| Driver on Phone/CB/Radio  | 0   | 0.0           | 0                                   | 0.0           | 1                              | 0.2           |
| Other Human Factor  | 25  | 4.2           | 13                                  | 4.5           | 9                              | 1.9           |
| <b>Vehicular Factors:</b>                                       |   |               |                                     |               |                                |               |
| Skidding  | 59  | 9.9           | 6                                   | 2.1           | 0                              | 0.0           |
| Defective Tires   | 4   | 0.7           | 0                                   | 0.0           | 0                              | 0.0           |
| Defective Brakes  | 0   | 0.0           | 0                                   | 0.0           | 1                              | 0.2           |
| Other Vehicular Factors   | 7   | 1.2           | 5                                   | 1.7           | 1                              | 0.2           |
| <b>Miscellaneous Factors:</b>                                   |   |               |                                     |               |                                |               |
| Weather Conditions  | 17  | 2.8           | 5                                   | 1.7           | 3                              | 0.6           |
| Other   | 74  | 12.4          | 12                                  | 4.1           | 4                              | 0.9           |
| <b>Total</b>  | <b>597</b>  | <b>100.0%</b> | <b>292</b>                          | <b>100.0%</b> | <b>465</b>                     | <b>100.0%</b> |
| <b>Vehicles for Which There Was<br/>“No Clear Cont. Factor”</b> | <b>216</b>  |               | <b>335</b>                          |               | <b>206</b>                     |               |
| <b>Total Number of Drivers</b>                                  | <b>707</b>  |               | <b>589</b>                          |               | <b>577</b>                     |               |

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 increase**

In 2013, there were 4,741 truck-involved traffic crashes reported to the Department of Public Safety. This represents a 25% increase from the previous year. There were 62 fatal truck crashes, killing a total of 67 people. In addition, there were 1,425 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 nine of the 67 people killed in truck-involved crashes were in trucks. The other 58 deaths included three motorcyclists, one bicyclist, one person riding an ATV, one roadway maintenance vehicle and 52 persons in cars, SUVs, pickups, or vans. Of the 1,425 people injured, only 295 (21%) 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 14% of the other vehicles but only 10% of the trucks. And, failure to yield was reported for 14% of the other vehicles but only 9% 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 1% of the truckers and 2% 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 2013, only 440 (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, 31% of the fatal crashes and 35% 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 less than 5,000 population. Probably because high speeds are more often possible in the rural open countryside, crashes there are more severe. 84% of fatal and 43% of truck-related injury crashes occurred in the rural areas of Minnesota.

TABLE 5.01

## TRUCK CRASH SUMMARY, 2004 - 2013

|                      | 2004         | 2005         | 2006         | 2007         | 2008         | 2009         | 2010         | 2011         | 2012         | 2013         |
|----------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Total Crashes</b> | <b>5,521</b> | <b>5,313</b> | <b>4,558</b> | <b>4,631</b> | <b>4,344</b> | <b>3,653</b> | <b>4,181</b> | <b>4,025</b> | <b>3,789</b> | <b>4,741</b> |
| Fatal Crashes        | 70           | 66           | 62           | 71           | 64           | 47           | 77           | 48           | 50           | 62           |
| Persons Killed       | 79           | 78           | 65           | 90           | 74           | 58           | 93           | 51           | 56           | 67           |
| Injury Crashes       | 1,401        | 1,315        | 1,156        | 1,144        | 1,056        | 889          | 1,005        | 916          | 870          | 1,042        |
| Severe               | 107          | 96           | 89           | 83           | 72           | 68           | 71           | 59           | 70           | 55           |
| Moderate             | 443          | 377          | 323          | 334          | 295          | 288          | 270          | 265          | 273          | 315          |
| Minor                | 851          | 842          | 744          | 727          | 689          | 533          | 664          | 592          | 527          | 672          |
| Persons Injured      | 1,935        | 1,753        | 1,544        | 1,745        | 1,425        | 1,162        | 1,385        | 1,219        | 1,178        | 1,425        |
| Severe               | 131          | 116          | 104          | 130          | 89           | 88           | 90           | 70           | 86           | 80           |
| Moderate             | 585          | 481          | 415          | 508          | 388          | 359          | 358          | 323          | 355          | 419          |
| Minor                | 1,219        | 1,156        | 1,025        | 1,107        | 948          | 715          | 937          | 826          | 737          | 926          |
| PDO Crashes          | 4,050        | 3,932        | 3,340        | 3,416        | 3,224        | 2,717        | 3,099        | 3,061        | 2,869        | 3,637        |

TABLE 5.02

PERSONS KILLED OR INJURED IN 2013 TRUCK CRASHES  
BY VEHICLE OCCUPIED

| Vehicle Type                          | Killed    | Severely Injured | Moderately Injured | Minor Injuries | Total Injured |
|---------------------------------------|-----------|------------------|--------------------|----------------|---------------|
| Automobile                            | 27        | 23               | 180                | 436            | 639           |
| Pickup Truck                          | 9         | 11               | 29                 | 81             | 121           |
| SUV                                   | 12        | 12               | 49                 | 116            | 177           |
| Van                                   | 4         | 12               | 25                 | 61             | 98            |
| Pedestrian                            | 0         | 2                | 7                  | 6              | 15            |
| Bicycle                               | 1         | 3                | 3                  | 5              | 11            |
| Motorcycle                            | 3         | 2                | 4                  | 1              | 7             |
| Motorscooter/Motorbike                | 0         | 0                | 0                  | 1              | 1             |
| Snowmobile                            | 0         | 0                | 0                  | 1              | 1             |
| ATV                                   | 1         | 1                | 0                  | 1              | 2             |
| Ambulance                             | 0         | 0                | 0                  | 7              | 7             |
| Police/Fire Vehicle                   | 0         | 0                | 1                  | 0              | 1             |
| Roadway Maintenance Vehicle           | 1         | 1                | 6                  | 11             | 18            |
| Other Public Owned Vehicle            | 0         | 0                | 0                  | 1              | 1             |
| Farm Equipment                        | 0         | 0                | 2                  | 0              | 2             |
| Motorhome/Camper                      | 0         | 0                | 0                  | 1              | 1             |
| Taxicab                               | 0         | 0                | 4                  | 5              | 9             |
| School Bus                            | 0         | 0                | 1                  | 2              | 3             |
| Bus-Non School                        | 0         | 0                | 1                  | 13             | 14            |
| Hit and Run                           | 0         | 0                | 1                  | 0              | 1             |
| Two-Axle, Six-Tire, Single Unit Truck | 2         | 1                | 13                 | 41             | 55            |
| Three or More Axle Single Unit Truck  | 0         | 2                | 17                 | 19             | 38            |
| Single Unit Truck with Trailer        | 1         | 2                | 10                 | 18             | 30            |
| Truck Tractor with No Trailer         | 0         | 0                | 1                  | 2              | 3             |
| Truck Tractor with Semi Trailer       | 6         | 8                | 61                 | 88             | 157           |
| Truck Tractor with Twin Trailers      | 0         | 0                | 1                  | 4              | 5             |
| Heavy Truck—Other or Unknown Type     | 0         | 0                | 3                  | 4              | 7             |
| Other or Unknown Vehicle Type         | 0         | 0                | 0                  | 1              | 1             |
| <b>Total</b>                          | <b>67</b> | <b>80</b>        | <b>419</b>         | <b>926</b>     | <b>1,425</b>  |

TABLE 5.03

CONTRIBUTING FACTORS IN 2013 TRUCK CRASHES

| Contributing Factors   | Number<br>Attributed to<br>Truck Vehicles | Percent<br>Attributed<br>to Truck<br>Vehicles | Number<br>Attributed<br>to Non-<br>Truck<br>Vehicles | Percent<br>Attributed<br>to Non-<br>Truck<br>Vehicles |
|--|---|---|--|---|
| <b>Human Factors</b>   |   |   |  |   |
| Driver Inattention/Distracted                                  | 584                                       | 17.8%   | 516  | 17.2%   |
| Illegal/Unsafe Speed   | 313                                       | 9.5   | 430  | 14.3  |
| Failure to Yield Right of Way                                  | 307                                       | 9.3   | 432  | 14.4  |
| Improper or Unsafe Lane Use                                    | 295                                       | 9.0   | 284  | 9.5   |
| Following Too Closely  | 255                                       | 7.8   | 192  | 6.4   |
| Improper Turn  | 192                                       | 5.8   | 52   | 1.7   |
| Unsafe Backing   | 146                                       | 4.4   | 25   | 0.8   |
| Vision Obscured-Windshield                                     | 67  | 2.0   | 58   | 1.9   |
| Improper Passing or Overtaking                                 | 61  | 1.9   | 112  | 3.7   |
| Disregarding Traffic Control Device                            | 54  | 1.6   | 88   | 2.9   |
| Driver Inexperience  | 40  | 1.2   | 50   | 1.7   |
| Overcorrecting   | 38  | 1.2   | 45   | 1.5   |
| Improper Parking, Starting, or Stopping                        | 29  | 0.9   | 31   | 1.0   |
| Driving Left of Center   | 22  | 0.7   | 40   | 1.3   |
| Chemical Impairment  | 10  | 0.3   | 52   | 1.7   |
| Improper/No Signal   | 9   | 0.3   | 4  | 0.1   |
| Impeding Traffic   | 7   | 0.2   | 12   | 0.4   |
| Driver on Phone/CB/2-Way Radio                                 | 2   | 0.1   | 2  | 0.1   |
| Failure to Use Lights  | 1   | 0.0   | 7  | 0.2   |
| Non-Motorist Error   | 0   | 0.0   | 2  | 0.1   |
| Other Human Factors  | 89  | 2.7   | 61   | 2.0   |
| <b>Vehicular Factors</b>                                       |   |   |  |   |
| Skidding   | 124                                       | 3.8   | 116  | 3.9   |
| Defective Brakes   | 54  | 1.6   | 18   | 0.6   |
| Oversize/Overweight Vehicle                                    | 52  | 1.6   | 1  | 0.0   |
| Other Vehicular Factor   | 57  | 1.7   | 19   | 0.6   |
| <b>Miscellaneous Factors</b>                                   |   |   |  |   |
| Weather  | 304                                       | 9.3   | 239  | 8.0   |
| Other  | 174                                       | 5.3   | 117  | 3.9   |
| Total Contributing Factors Cited                               | 3,286                                     | 100.0%  | 3,005  | 100.0%  |
| Vehicles for Which There Was<br>"No Clear Contributing Factor" | 2,193                                     |   | 1,818  |   |
| Total Number of Vehicles                                       | 4,956                                     |   | 4,232  |   |

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. Human factors with a frequency of less than one-tenth of one percent are merged into the category "other human factors."

TABLE 5.04

AGE OF TRUCK DRIVERS IN 2013 CRASHES

| Driver Age | Truck or Tractor | Truck with Semi-Trailer | Truck with Twin Trailer | Truck with Other Trailer | Total |
|------------|------------------|-------------------------|-------------------------|--------------------------|-------|
| 05 - 09    | 2                | 0                       | 0                       | 0                        | 2     |
| 10 - 14    | 0                | 0                       | 0                       | 0                        | 0     |
| 15 - 19    | 24               | 8                       | 0                       | 10                       | 42    |
| 20 - 24    | 120              | 89                      | 1                       | 14                       | 224   |
| 25 - 29    | 185              | 166                     | 2                       | 37                       | 390   |
| 30 - 34    | 219              | 220                     | 3                       | 28                       | 470   |
| 35 - 39    | 197              | 238                     | 5                       | 43                       | 483   |
| 40 - 44    | 222              | 268                     | 7                       | 46                       | 543   |
| 45 - 49    | 252              | 323                     | 7                       | 35                       | 617   |
| 50 - 54    | 245              | 346                     | 9                       | 49                       | 649   |
| 55 - 59    | 221              | 345                     | 6                       | 40                       | 612   |
| 60 - 64    | 111              | 224                     | 6                       | 32                       | 373   |
| 65 & Older | 53               | 163                     | 1                       | 14                       | 231   |
| Not Stated | 59               | 101                     | 2                       | 5                        | 167   |
| Total*     | 1,910            | 2,491                   | 49                      | 353                      | 4,803 |

\* There were 4,956 trucks involved in 2013 crashes. Table 5.04 tabulates the ages of drivers for the remaining 4,803 trucks where it was possible to identify a driver.

TABLE 5.05

DRIVERS IN 2013 TRUCK CRASHES BY PHYSICAL CONDITION\*

| Physical Condition          | Truck Drivers | Percent of Truck Drivers | Number of Other Drivers | Percent of Other Drivers |
|-----------------------------|---------------|--------------------------|-------------------------|--------------------------|
| Normal                      | 4,434         | 92.3%                    | 3,592                   | 91.2%                    |
| Under the Influence         | 7             | 0.2                      | 42                      | 1.1                      |
| Had Been Drinking           | 1             | 0.0                      | 16                      | 0.4                      |
| Commercial Driver > .04 BAC | 3             | 0.1                      | 0                       | 0.0                      |
| Had Been Using Drugs        | 3             | 0.1                      | 7                       | 0.2                      |
| Fatigued/Asleep             | 9             | 0.2                      | 13                      | 0.3                      |
| Physical Disability         | 0             | 0                        | 2                       | 0.1                      |
| Ill                         | 3             | 0.1                      | 1                       | 0.0                      |
| Other                       | 4             | 0.1                      | 14                      | 0.4                      |
| Unknown                     | 339           | 7.1                      | 253                     | 6.4                      |
| Total **                    | 4,803         | 100.0%                   | 3,940                   | 100.0%                   |

\* As noted by police officer on accident report.

\*\* There were 4,956 trucks involved in 2013 crashes. This table tabulates the apparent physical condition of drivers for the remaining 4,803 trucks where it was possible to identify a driver. Similarly, there were 4,204 non-truck motor vehicles involved in 2013 truck crashes. The condition of the identifiable 3,940 non-truck drivers is presented here.

TABLE 5.06

## 2013 TRUCK CRASHES BY FIRST HARMFUL EVENT

| First Harmful Event<br>Collision With: | Fatal<br>Crashes | Injury<br>Crashes | Property<br>Damage<br>Crashes | Total<br>Crashes | Killed    | Injured      |
|--|------------------|-------------------|-------------------------------|------------------|-----------|--------------|
| Other Motor Vehicle                    | 54               | 828               | 2,596                         | 3,478            | 59        | 1,177        |
| Parked Motor Vehicle                   | 1                | 32                | 302                           | 335              | 1         | 44           |
| Train                                  | 3                | 5                 | 7                             | 15               | 3         | 5            |
| Bicycle                                | 1                | 11                | 0                             | 12               | 1         | 11           |
| Pedestrian                             | 0                | 7                 | 0                             | 7                | 0         | 10           |
| Deer                                   | 0                | 0                 | 13                            | 13               | 0         | 0            |
| Other Animal                           | 0                | 1                 | 12                            | 13               | 0         | 1            |
| Runaway Car                            | 0                | 0                 | 5                             | 5                | 0         | 0            |
| Fixed Object                           | 0                | 39                | 398                           | 437              | 0         | 42           |
| <b>Non-Collision:</b>                  |                  |                   |                               |                  |           |              |
| Overturn                               | 3                | 89                | 114                           | 206              | 3         | 99           |
| Fire or Explosion                      | 0                | 0                 | 5                             | 5                | 0         | 0            |
| Jackknife                              | 0                | 8                 | 105                           | 113              | 0         | 9            |
| Other Non-Collision                    | 0                | 10                | 15                            | 25               | 0         | 13           |
| <b>Other/Unknown</b>                   | 0                | 12                | 65                            | 77               | 0         | 14           |
| <b>Total</b>                           | <b>62</b>        | <b>1,042</b>      | <b>3,637</b>                  | <b>4,741</b>     | <b>67</b> | <b>1,425</b> |

TABLE 5.07

## 2013 TRUCK CRASHES BY MONTH

| Month        | Fatal<br>Crashes | Injury<br>Crashes | Property<br>Damage<br>Crashes | Total<br>Crashes | Killed    | Injured      |
|--------------|------------------|-------------------|-------------------------------|------------------|-----------|--------------|
| January      | 2                | 78                | 269                           | 349              | 2         | 108          |
| February     | 4                | 76                | 334                           | 414              | 5         | 104          |
| March        | 3                | 79                | 356                           | 438              | 3         | 102          |
| April        | 4                | 90                | 290                           | 384              | 5         | 123          |
| May          | 9                | 69                | 240                           | 318              | 9         | 96           |
| June         | 3                | 76                | 274                           | 353              | 4         | 108          |
| July         | 10               | 103               | 274                           | 387              | 11        | 143          |
| August       | 1                | 92                | 264                           | 357              | 1         | 121          |
| September    | 7                | 83                | 261                           | 351              | 8         | 116          |
| October      | 5                | 98                | 310                           | 413              | 5         | 134          |
| November     | 8                | 77                | 224                           | 309              | 8         | 107          |
| December     | 6                | 121               | 541                           | 668              | 6         | 163          |
| <b>Total</b> | <b>62</b>        | <b>1,042</b>      | <b>3,637</b>                  | <b>4,741</b>     | <b>67</b> | <b>1,425</b> |

TABLE 5.08

2013 TRUCK CRASHES BY TIME AND DAY

| Time of Day        | Sunday     | Monday     | Tuesday    | Wednesday  | Thursday   | Friday     | Saturday   | Total        |
|--------------------|------------|------------|------------|------------|------------|------------|------------|--------------|
| Midnight - 2:59 AM | 9          | 10         | 23         | 15         | 16         | 19         | 14         | 106          |
| 3:00 - 5:59 AM     | 8          | 29         | 41         | 28         | 23         | 34         | 15         | 178          |
| 6:00 - 8:59 AM     | 14         | 178        | 167        | 142        | 182        | 162        | 37         | 882          |
| 9:00 - 11:59 AM    | 52         | 223        | 213        | 192        | 217        | 187        | 49         | 1,133        |
| Noon - 2:59 PM     | 35         | 229        | 197        | 191        | 181        | 167        | 50         | 1,050        |
| 3:00 - 5:59 PM     | 35         | 173        | 147        | 156        | 138        | 148        | 49         | 846          |
| 6:00 - 8:59 PM     | 24         | 72         | 52         | 56         | 63         | 55         | 12         | 334          |
| 9:00 - 11:59 PM    | 17         | 40         | 32         | 31         | 40         | 31         | 20         | 211          |
| Unknown            | 0          | 0          | 0          | 0          | 1          | 0          | 0          | 1            |
| <b>Total</b>       | <b>194</b> | <b>954</b> | <b>872</b> | <b>811</b> | <b>861</b> | <b>803</b> | <b>246</b> | <b>4,741</b> |

FIGURE 5.01

2013 TRUCK CRASHES BY TIME OF DAY

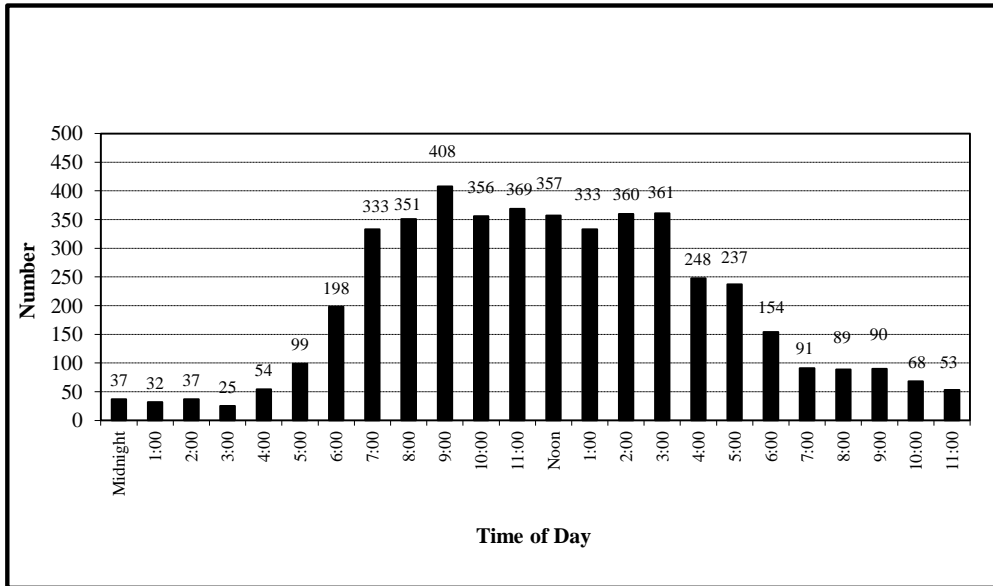


TABLE 5.09

## 2013 TRUCK CRASHES BY ROAD SURFACE CONDITION

| Road Surface Condition | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed | Injured |
|------------------------|---------------|----------------|-------------------------|---------------|--------|---------|
| Dry                    | 43            | 674            | 2,124                   | 2,841         | 46     | 931     |
| Wet                    | 3             | 107            | 388                     | 498           | 3      | 144     |
| Snow                   | 5             | 68             | 394                     | 467           | 6      | 92      |
| Slush                  | 2             | 28             | 107                     | 137           | 3      | 36      |
| Ice or Packed Snow     | 9             | 157            | 596                     | 762           | 9      | 212     |
| Muddy                  | 0             | 2              | 4                       | 6             | 0      | 2       |
| Debris                 | 0             | 0              | 1                       | 1             | 0      | 0       |
| Other                  | 0             | 3              | 14                      | 17            | 0      | 5       |
| Unknown                | 0             | 3              | 9                       | 12            | 0      | 3       |
| Total                  | 62            | 1,042          | 3,637                   | 4,741         | 67     | 1,425   |

TABLE 5.10

## 2013 TRUCK CRASHES BY WEATHER CONDITION

| Weather Condition        | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed | Injured |
|--------------------------|---------------|----------------|-------------------------|---------------|--------|---------|
| Clear                    | 35            | 573            | 1,927                   | 2,535         | 37     | 788     |
| Cloudy                   | 15            | 255            | 875                     | 1,145         | 16     | 347     |
| Rain                     | 0             | 39             | 138                     | 177           | 0      | 52      |
| Snow                     | 9             | 117            | 462                     | 588           | 11     | 163     |
| Sleet/Hail/Freezing Rain | 1             | 25             | 102                     | 128           | 1      | 31      |
| Fog/Smog/Smoke           | 0             | 6              | 18                      | 24            | 0      | 8       |
| Blowing Sand/Dust/Snow   | 2             | 22             | 87                      | 111           | 2      | 30      |
| Severe Cross Winds       | 0             | 1              | 11                      | 12            | 0      | 1       |
| Other                    | 0             | 1              | 4                       | 5             | 0      | 1       |
| Unknown                  | 0             | 3              | 13                      | 16            | 0      | 4       |
| Total                    | 62            | 1,042          | 3,637                   | 4,741         | 67     | 1,425   |

TABLE 5.11

2013 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                 | 0             | 132            | 741                     | 873           | 0      | 168     |
| 100,000 – 249,999              | 0             | 11             | 42                      | 53            | 0      | 12      |
| 50,000 - 99,999                | 2             | 165            | 593                     | 760           | 3      | 218     |
| 25,000 - 49,999                | 4             | 119            | 382                     | 505           | 4      | 157     |
| 10,000 - 24,999                | 2             | 114            | 480                     | 596           | 2      | 160     |
| 5,000 - 9,999                  | 2             | 53             | 208                     | 263           | 2      | 75      |
| 2,500 - 4,999                  | 1             | 41             | 164                     | 206           | 1      | 60      |
| 1,000 - 2,499                  | 1             | 22             | 92                      | 115           | 1      | 30      |
| Under 1,000                    | 50            | 385            | 935                     | 1,370         | 54     | 545     |
| Total                          | 62            | 1,042          | 3,637                   | 4,741         | 67     | 1,425   |

TABLE 5.12

2013 TRUCK CRASHES BY TYPE OF ROADWAY

| Roadway Type             | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed | Injured |
|--------------------------|---------------|----------------|-------------------------|---------------|--------|---------|
| Interstate Highway       | 6             | 274            | 1,046                   | 1,326         | 7      | 382     |
| US Trunk Highway         | 12            | 171            | 498                     | 681           | 12     | 239     |
| State Trunk Highway      | 24            | 212            | 565                     | 801           | 25     | 315     |
| County State-Aid Highway | 15            | 240            | 662                     | 917           | 18     | 308     |
| County Road              | 1             | 13             | 27                      | 41            | 1      | 18      |
| Township Road            | 4             | 23             | 34                      | 61            | 4      | 27      |
| Local Street             | 0             | 109            | 790                     | 899           | 0      | 136     |
| Other Road               | 0             | 0              | 15                      | 15            | 0      | 0       |
| Total                    | 62            | 1,042          | 3,637                   | 4,741         | 67     | 1,425   |



## 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 decrease**

In 2013, there were 868 crashes in which at least one pedestrian was injured or killed by a motor vehicle. This represents a 1.1 percent decrease from the previous year.

### **Deaths and injuries decrease**

In 2013, 35 pedestrians were killed, five fewer than in 2012. In addition, 867 pedestrians were injured, a 0.8 percent decrease from the previous year. Four 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 2013, persons less than 25 years of age accounted for 29% of the pedestrians killed and 40% of pedestrians injured. Male pedestrians were more likely than females to be killed or injured: males accounted for 71% of all pedestrian fatalities and 52% of all pedestrian injuries.

### **Urban/rural areas and time of day**

In 2013, 93% of pedestrian crashes occurred in urban areas (defined as areas with populations over 5,000). One-third (32%) 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. More than one out of every four (27%) pedestrian fatal crashes occurred during the evening hours 9:00 p.m.-3:00 a.m.

### **Prior actions of vehicles**

Nearly half (48%) of all motor vehicles involved in pedestrian crashes and over four out of five (82%) involved in fatal pedestrian crashes in 2013 were going straight ahead on the roadway prior to the crash. One-third (32%) of all motor vehicles involved in pedestrian crashes were making a right or left turn.

### **Prior actions of pedestrians**

Twenty-three percent of pedestrians killed and 24% of pedestrians injured were trying to cross a road at an area with no crosswalk and no signal. However, 15% of pedestrians injured were crossing the road at a signaled intersection and were crossing with the signal.

### **Contributing factors**

For 35% of all motor vehicle drivers 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 was driver inattention or distraction (21%). Obscured vision was a factor in 9% of all pedestrian crashes.

### **Drinking pedestrian fatalities**

Of the 35 pedestrians killed, 31 were tested for the presence of alcohol in their blood system. Of those tested, over half (52%) tested positive for alcohol. Sixty-nine percent of killed pedestrians with BACs .10 or higher were 30 years old or above. Eight (62%) out of the 13 pedestrians killed with BACs of .10 or higher were killed from 9:00pm-6:00am.

TABLE 6.01

PEDESTRIAN CRASH SUMMARY, 2004 - 2013

|                     | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|---------------------|------|------|------|------|------|------|------|------|------|------|
| Pedestrian Crashes  | 963  | 938  | 915  | 957  | 860  | 883  | 808  | 857  | 878  | 868  |
| Pedestrians Killed  | 37   | 44   | 38   | 33   | 25   | 41   | 36   | 40   | 40   | 35   |
| Pedestrians Injured | 976  | 936  | 906  | 975  | 867  | 880  | 824  | 859  | 874  | 867  |

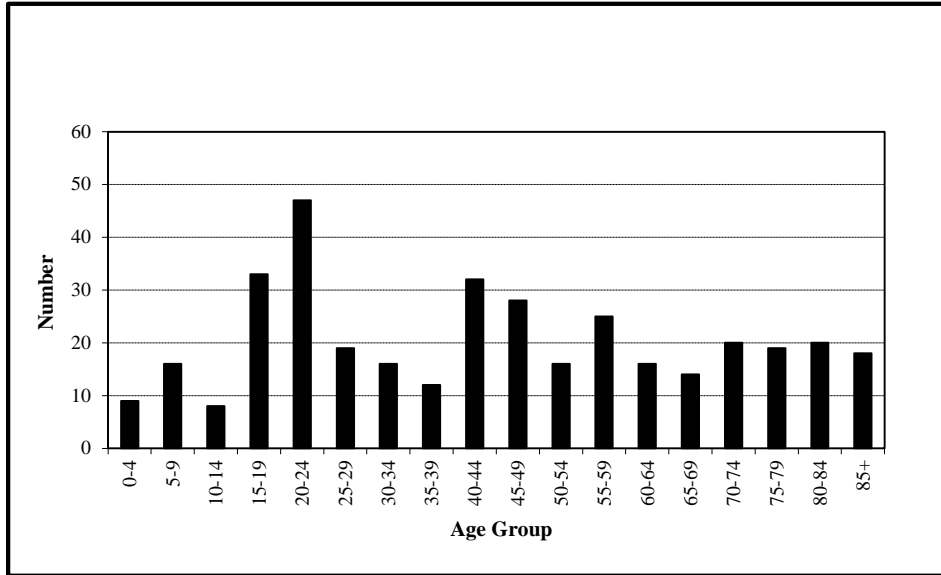
TABLE 6.02

PEDESTRIANS KILLED OR INJURED BY AGE AND GENDER, 2013

| 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    | 1      | 0  | 1     | 1               | 0  | 1     | 5                 | 3   | 8     | 8              | 2   | 10    | 14             | 5   | 19     |
| 05 - 09    | 2      | 0  | 2     | 1               | 3  | 4     | 5                 | 12  | 17    | 24             | 16  | 40    | 30             | 31  | 61     |
| 10 - 14    | 0      | 0  | 0     | 5               | 5  | 10    | 12                | 9   | 21    | 16             | 15  | 31    | 33             | 29  | 62     |
| 15 - 19    | 2      | 0  | 2     | 7               | 1  | 8     | 20                | 17  | 37    | 29             | 21  | 50    | 56             | 39  | 95     |
| 20 - 24    | 5      | 0  | 5     | 3               | 3  | 6     | 21                | 19  | 40    | 28             | 35  | 63    | 52             | 57  | 109    |
| 25 - 29    | 1      | 0  | 1     | 4               | 2  | 6     | 14                | 21  | 35    | 19             | 21  | 40    | 37             | 44  | 81     |
| 30 - 34    | 1      | 0  | 1     | 4               | 4  | 8     | 11                | 11  | 22    | 15             | 17  | 32    | 30             | 32  | 62     |
| 35 - 39    | 2      | 0  | 2     | 3               | 1  | 4     | 8                 | 6   | 14    | 20             | 17  | 37    | 31             | 24  | 55     |
| 40 - 44    | 2      | 0  | 2     | 4               | 2  | 6     | 9                 | 5   | 14    | 16             | 11  | 27    | 29             | 18  | 47     |
| 45 - 49    | 2      | 2  | 4     | 3               | 7  | 10    | 6                 | 6   | 12    | 16             | 14  | 30    | 25             | 27  | 52     |
| 50 - 54    | 1      | 1  | 2     | 2               | 2  | 4     | 12                | 7   | 19    | 24             | 10  | 34    | 38             | 19  | 57     |
| 55 - 59    | 1      | 2  | 3     | 2               | 3  | 5     | 11                | 11  | 22    | 12             | 7   | 19    | 25             | 21  | 46     |
| 60 - 64    | 2      | 0  | 2     | 6               | 2  | 8     | 5                 | 5   | 10    | 6              | 6   | 12    | 17             | 13  | 30     |
| 65 - 69    | 1      | 2  | 3     | 3               | 0  | 3     | 3                 | 6   | 9     | 4              | 8   | 12    | 10             | 14  | 24     |
| 70 - 74    | 1      | 0  | 1     | 0               | 5  | 5     | 4                 | 8   | 12    | 4              | 7   | 11    | 8              | 20  | 28     |
| 75 - 79    | 0      | 1  | 1     | 2               | 0  | 2     | 3                 | 4   | 7     | 2              | 1   | 3     | 7              | 5   | 12     |
| 80 - 84    | 0      | 1  | 1     | 1               | 1  | 2     | 0                 | 2   | 2     | 1              | 0   | 1     | 2              | 3   | 5      |
| 85 & Older | 1      | 0  | 1     | 1               | 3  | 4     | 1                 | 2   | 3     | 1              | 2   | 3     | 3              | 7   | 10     |
| Not Stated | 0      | 1  | 1     | 0               | 0  | 0     | 0                 | 0   | 0     | 6              | 2   | 12    | 6              | 2   | 12     |
| Total      | 25     | 10 | 35    | 52              | 44 | 96    | 150               | 154 | 304   | 251            | 212 | 467   | 453            | 410 | 867    |

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

*FIGURE 6.01*  
**PEDESTRIAN FATALITIES BY AGE GROUP, 2004-2013 COMBINED**



*FIGURE 6.02*  
**PEDESTRIANS KILLED OR INJURED BY AGE AND GENDER 2013**

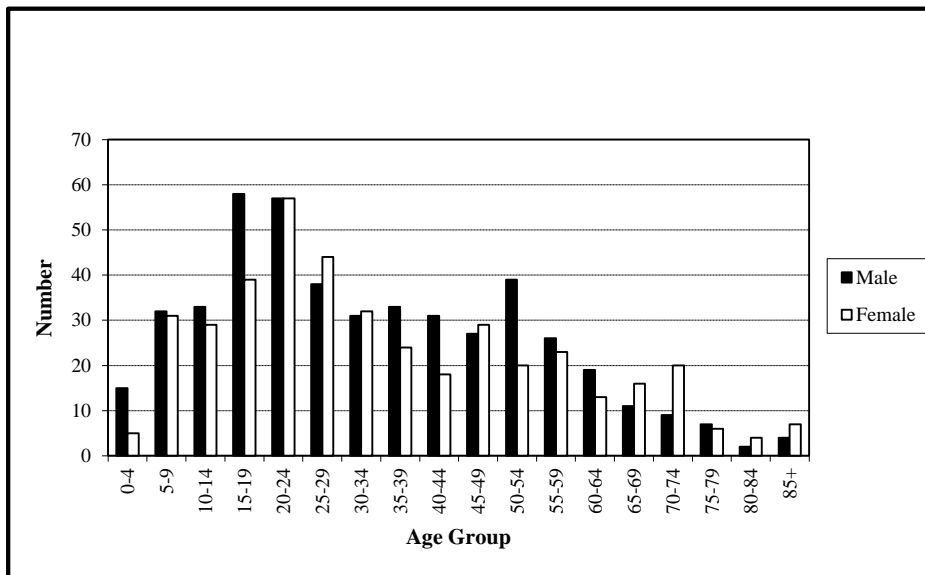


TABLE 6.03

2013 PEDESTRIAN CRASHES BY MONTH

| Month     | Fatal Crashes | Injury Crashes | Total Crashes | Killed | Injured |
|-----------|---------------|----------------|---------------|--------|---------|
| January   | 0             | 83             | 83            | 0      | 86      |
| February  | 0             | 48             | 48            | 0      | 51      |
| March     | 3             | 48             | 51            | 3      | 50      |
| April     | 1             | 52             | 53            | 1      | 51      |
| May       | 2             | 64             | 66            | 2      | 64      |
| June      | 1             | 69             | 70            | 1      | 72      |
| July      | 3             | 59             | 62            | 3      | 62      |
| August    | 4             | 67             | 71            | 4      | 70      |
| September | 7             | 84             | 91            | 7      | 86      |
| October   | 4             | 101            | 105           | 4      | 108     |
| November  | 7             | 89             | 96            | 8      | 97      |
| December  | 2             | 70             | 72            | 2      | 70      |
| Total     | 34            | 834            | 868           | 35     | 867     |

TABLE 6.04

2013 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               | 7             | 451            | 458           | 7                  | 466                 |
| 100,000 - 249,999              | 0             | 13             | 13            | 0                  | 13                  |
| 50,000 - 99,999                | 2             | 105            | 107           | 2                  | 111                 |
| 25,000 - 49,999                | 5             | 81             | 86            | 6                  | 85                  |
| 10,000 - 24,999                | 5             | 99             | 104           | 5                  | 105                 |
| 5,000 - 9,999                  | 2             | 34             | 36            | 2                  | 36                  |
| 2,500 - 4,999                  | 1             | 20             | 21            | 1                  | 20                  |
| 1,000 - 2,499                  | 0             | 11             | 11            | 0                  | 11                  |
| Under 1,000                    | 12            | 20             | 32            | 12                 | 20                  |
| Total                          | 34            | 834            | 868           | 35                 | 867                 |

TABLE 6.05

2013 PEDESTRIAN CRASHES BY TIME AND DAY

| Time of Day     | Fatal Crashes | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Total |
|-----------------|---------------|--------|--------|---------|-----------|----------|--------|----------|-------|
| Mid - 2:59 AM   | 2             | 13     | 1      | 4       | 1         | 2        | 4      | 17       | 42    |
| 3:00 - 5:59 AM  | 5             | 4      | 1      | 6       | 3         | 3        | 1      | 4        | 22    |
| 6:00 - 8:59 AM  | 1             | 1      | 17     | 21      | 23        | 22       | 18     | 6        | 108   |
| 9:00 - 11:59 AM | 2             | 7      | 19     | 15      | 13        | 10       | 13     | 14       | 91    |
| Noon - 2:59 PM  | 3             | 17     | 16     | 33      | 16        | 16       | 22     | 17       | 137   |
| 3:00 - 5:59 PM  | 4             | 5      | 32     | 38      | 25        | 40       | 39     | 18       | 197   |
| 6:00 - 8:59 PM  | 10            | 12     | 22     | 29      | 24        | 27       | 25     | 22       | 161   |
| 9:00 - 11:59 PM | 7             | 11     | 7      | 15      | 15        | 18       | 33     | 11       | 110   |
| Total           | 34            | 70     | 115    | 161     | 120       | 138      | 155    | 109      | 868   |

FIGURE 6.03

2013 PEDESTRIAN CRASHES BY TIME OF DAY

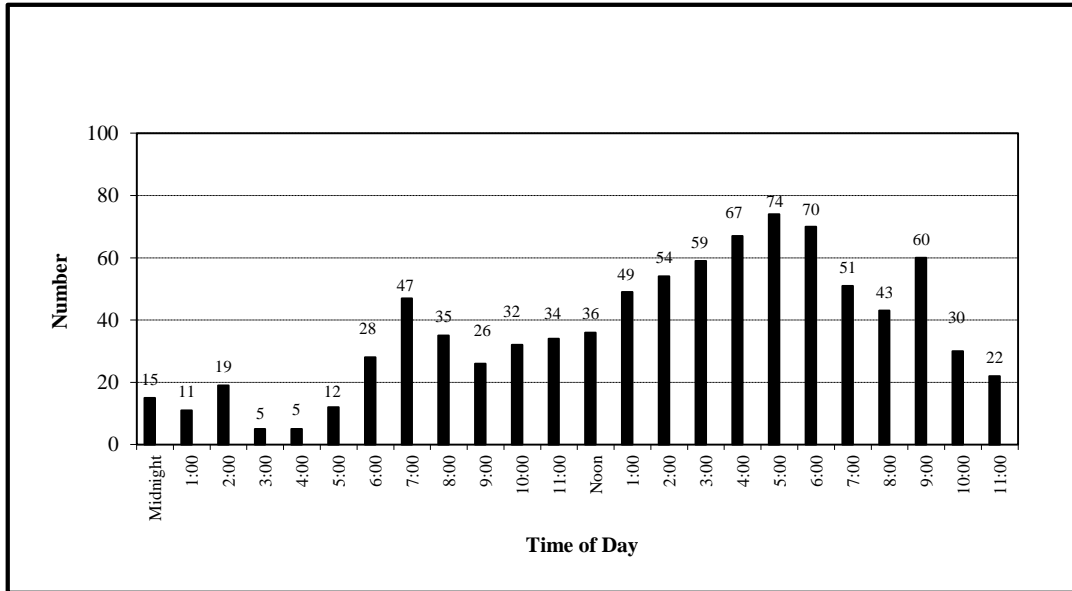


TABLE 6.06

**PRIOR ACTION OF VEHICLES IN 2013 PEDESTRIAN CRASHES**

| <b>Action</b>           | <b>Vehicles in Fatal Crashes</b> | <b>Vehicles in Injury Crashes</b> | <b>Vehicles in All Crashes</b> |
|-------------------------|----------------------------------|-----------------------------------|--------------------------------|
| Going Straight          | 32                               | 407                               | 439                            |
| Turning Right on Red    | 0                                | 24                                | 24                             |
| Turning Right           | 0                                | 67                                | 67                             |
| Turning Left            | 2                                | 226                               | 228                            |
| Making U Turn           | 0                                | 1                                 | 1                              |
| Starting From Parked    | 0                                | 13                                | 13                             |
| Starting in Traffic     | 0                                | 9                                 | 9                              |
| Slowing in Traffic      | 0                                | 4                                 | 4                              |
| Parking                 | 0                                | 2                                 | 2                              |
| Avoiding Object in Road | 1                                | 9                                 | 10                             |
| Passing                 | 0                                | 1                                 | 1                              |
| Backing                 | 2                                | 23                                | 25                             |
| All Others              | 1                                | 65                                | 66                             |
| Unknown                 | 1                                | 25                                | 26                             |
| <b>Total</b>            | <b>39</b>                        | <b>876</b>                        | <b>915</b>                     |

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

TABLE 6.07

**PRIOR ACTION OF PEDESTRIANS KILLED OR INJURED IN 2013**

| <b>Action</b>                              | <b>Number Pedestrians Killed</b> | <b>Percent Pedestrians Killed</b> | <b>Number Pedestrians Injured</b> | <b>Percent Pedestrians Injured</b> |
|--|----------------------------------|-----------------------------------|-----------------------------------|------------------------------------|
| Crossing Road (No Crosswalk and No Signal) | 8                                | 22.9%                             | 204                               | 23.5%                              |
| Crossing Against Signal                    | 2                                | 5.7                               | 39                                | 4.5                                |
| Crossing With Signal                       | 1                                | 2.9                               | 128                               | 14.8                               |
| Crossing In Crosswalk (No Signal)          | 2                                | 5.7                               | 139                               | 16.0                               |
| Walking In Road With Traffic               | 4                                | 11.4                              | 48                                | 5.5                                |
| Walking In Road Against Traffic            | 2                                | 5.7                               | 12                                | 1.4                                |
| Standing In Road                           | 5                                | 14.3                              | 41                                | 4.7                                |
| Emerging Front/Behind Parked Vehicle       | 0                                | 0.0                               | 8                                 | 0.9                                |
| Pushing/Working on Vehicle                 | 0                                | 0.0                               | 6                                 | 0.7                                |
| Working In Road                            | 0                                | 0.0                               | 7                                 | 0.8                                |
| Getting On/Off Vehicle                     | 0                                | 0.0                               | 4                                 | 0.5                                |
| Playing In Road                            | 1                                | 2.9                               | 1                                 | 0.1                                |
| Not In Road                                | 0                                | 0.0                               | 23                                | 2.7                                |
| Other Pedestrian Action                    | 3                                | 8.6                               | 44                                | 5.1                                |
| Unknown                                    | 7                                | 20.0                              | 163                               | 18.8                               |
| <b>Total*</b>                              | <b>35</b>                        | <b>100.0%</b>                     | <b>867</b>                        | <b>100.0%</b>                      |

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

TABLE 6.08

**CONTRIBUTING FACTORS IN 2013 PEDESTRIAN CRASHES**

| <b>Contributing Factors</b>  | <b>Number Attributed to Motor Vehicle Drivers</b> | <b>Percent Attributed to Motor Vehicle Drivers</b> |
|--|---|--|
| <b>Human Factors</b>   |   |  |
| Failure to Yield Right of Way                                      | 232   | 35.3%  |
| Driver Inattention / Distraction                                   | 137   | 20.8   |
| Vision Obscured  | 58  | 8.8  |
| Illegal or Unsafe Speed  | 20  | 3.0  |
| Improper / Unsafe Lane Use   | 20  | 3.0  |
| Disregard of Traffic Control                                       | 19  | 2.9  |
| Chemical Impairment  | 19  | 2.9  |
| Unsafe Backing   | 13  | 2.0  |
| Improper Turn  | 11  | 1.7  |
| Driver Inexperience  | 7   | 1.1  |
| Improper Parking/Starting/Stopping                                 | 4   | 0.6  |
| Improper Passing / Overtaking                                      | 3   | 0.5  |
| Driver on Phone/CB/Radio   | 3   | 0.5  |
| Following Too Closely  | 2   | 0.3  |
| Impeding Traffic   | 2   | 0.3  |
| Driving Left of Center   | 1   | 0.2  |
| Failure to Use Lights  | 1   | 0.2  |
| Other Human Factors  | 24  | 3.6  |
| <b>Vehicular Factors</b>   |   |  |
| Skidding   | 9   | 1.4  |
| Defective Brakes   | 1   | 0.2  |
| Other Vehicular Factors  | 3   | 0.5  |
| <b>Miscellaneous Factors</b>                                       |   |  |
| Weather Conditions   | 39  | 5.9  |
| Other  | 30  | 4.6  |
| <b>Total Contributing Factors Cited</b>                            | <b>658</b>  | <b>100.0%</b>                                      |
| <b>Vehicles for Which There Was "No Clear Contributing Factor"</b> | <b>44</b>   |  |
| <b>Total Number of Drivers</b>                                     | <b>915</b>  |  |

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 6.09

**PEDESTRIAN FATALITIES'  
LEVEL OF ALCOHOL CONCENTRATION, 2003 - 2013**

| Year | Killed | Tested | Alcohol<br>Concentration*<br>(.00) | Alcohol<br>Concentration*<br>(.01 - .07) | Alcohol<br>Concentration*<br>(.08 - .09) | Alcohol<br>Concentration*<br>(.10 or more) |
|------|--------|--------|------------------------------------|--|--|--|
| 2003 | 52     | 36     | 23 (64%)                           | 0 (0%)                                   | 0 (0%)                                   | 10 (28%)                                   |
| 2004 | 37     | 35     | 23 (66%)                           | 0 (0%)                                   | 2 (6%)                                   | 10 (28%)                                   |
| 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%)                                   |

\* 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 6.10

**2013 PEDESTRIAN FATALITIES'  
LEVEL OF ALCOHOL CONCENTRATION BY AGE**

| Age Group  | Killed | Tested | Alcohol<br>Concentration*<br>(.00) | Alcohol<br>Concentration*<br>(.01 - .07) | Alcohol<br>Concentration*<br>(.08 - .09) | Alcohol<br>Concentration*<br>(.10 or more) |
|------------|--------|--------|------------------------------------|--|--|--|
| < 15       | 3      | 3      | 3                                  | 0  | 0  | 0  |
| 15 - 19    | 2      | 2      | 2                                  | 0  | 0  | 0  |
| 20 - 24    | 5      | 3      | 0                                  | 0  | 0  | 3  |
| 25 - 29    | 1      | 1      | 0                                  | 0  | 0  | 1  |
| 30 - 34    | 1      | 1      | 0                                  | 0  | 0  | 1  |
| 35 - 39    | 2      | 2      | 1                                  | 0  | 0  | 1  |
| 40 - 44    | 2      | 2      | 1                                  | 0  | 0  | 1  |
| 45 - 49    | 4      | 4      | 1                                  | 0  | 0  | 3  |
| 50 - 54    | 2      | 2      | 0                                  | 1  | 0  | 1  |
| 55 - 59    | 3      | 3      | 2                                  | 0  | 0  | 1  |
| 60 - 64    | 2      | 2      | 1                                  | 1  | 0  | 0  |
| 65 - 69    | 3      | 3      | 2                                  | 0  | 0  | 1  |
| 70 - 74    | 1      | 1      | 0                                  | 1  | 0  | 0  |
| 75 - 79    | 1      | 0      | 0                                  | 0  | 0  | 0  |
| 80 - 84    | 1      | 1      | 1                                  | 0  | 0  | 0  |
| 85 & Older | 2      | 1      | 1                                  | 0  | 0  | 0  |
| Total      | 35     | 31     | 15                                 | 3  | 0  | 13   |



TABLE 6.11

**2013 PEDESTRIAN FATALITIES' LEVEL OF ALCOHOL  
CONCENTRATION BY TIME OF DAY**

| <b>Time of Day</b> | <b>Killed</b> | <b>Tested</b> | <b>Alcohol<br/>Concentration<br/>* (.00)</b> | <b>Alcohol<br/>Concentration*<br/>(.01 - .07)</b> | <b>Alcohol<br/>Concentration*<br/>(.08 - .09)</b> | <b>Alcohol<br/>Concentration*<br/>(.10 or more)</b> |
|--------------------|---------------|---------------|--|---|---|---|
| Mid-2:59 AM        | 2             | 2             | 1  | 0   | 0   | 1   |
| 3:00-5:59 AM       | 5             | 5             | 1  | 0   | 0   | 4   |
| 6:00-8:59 AM       | 1             | 0             | 0  | 0   | 0   | 0   |
| 9:00-11:59 AM      | 2             | 2             | 2  | 0   | 0   | 0   |
| Noon-2:59 PM       | 3             | 2             | 2  | 0   | 0   | 0   |
| 3:00-5:59 PM       | 4             | 4             | 2  | 0   | 0   | 2   |
| 6:00-8:59 PM       | 11            | 10            | 4  | 3   | 0   | 3   |
| 9:00-11:59 PM      | 7             | 6             | 3  | 0   | 0   | 3   |
| <b>Total</b>       | <b>35</b>     | <b>31</b>     | <b>15</b>                                    | <b>3</b>  | <b>0</b>  | <b>13</b>   |

## 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 decrease**

In 2013, there was a 6.3% decrease in bicycle crashes from the previous year - there were 862 bicycle crashes in 2013, compared to 920 bicycle crashes in 2012.

### **Fatalities and Injuries decrease**

In 2013, 822 bicyclists were injured compared to 875 injured bicyclists in 2012, a 6.1% decrease. There were six bicyclist fatalities in 2013 compared to seven fatalities in 2012, a 14.3% decrease.

### **Warm weather**

Bicycle crashes are mostly a warm weather occurrence. In 2013, two of the six fatalities (33.3%), and 670 of the 822 injuries (81.5%) occurred during the six-month period April-September.

### **Time of day**

One-third (32.1%) of all weekday bicycle crashes occurred during the afternoon rush hours 3:00-6:00pm. Almost one out of three (31.1%) of 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 (93.7%) bicycle crashes and over half (57.1%) of fatal bicycle crashes occurred in cities where the population was over 5,000 people.

### **Males killed and injured most often**

In 2013, four of the six killed bicyclists were male. And, males were nearly three times more likely than females to be injured in a bicycle crash. In 2013, 596 male bicyclists (72.0%) were injured compared to 223 female bicyclists (27.0%).

### **Age**

Of the 822 bicyclists injured in 2013, nearly half (45.9%) were less than 25 years of age.

### **Prior action of bicyclists**

Almost half (46.6%) of all bicyclists in all crashes were riding with traffic. Only 6.7% 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 (27.8%) of the bicyclists and (42.7%) of the other drivers. For bicyclists, non-motorist error (a violation committed by the bicyclist separate from those listed), and disregard for traffic control device and were listed the next most often. Driver inattention or distraction was the second contributing factor cited most often for other drivers.

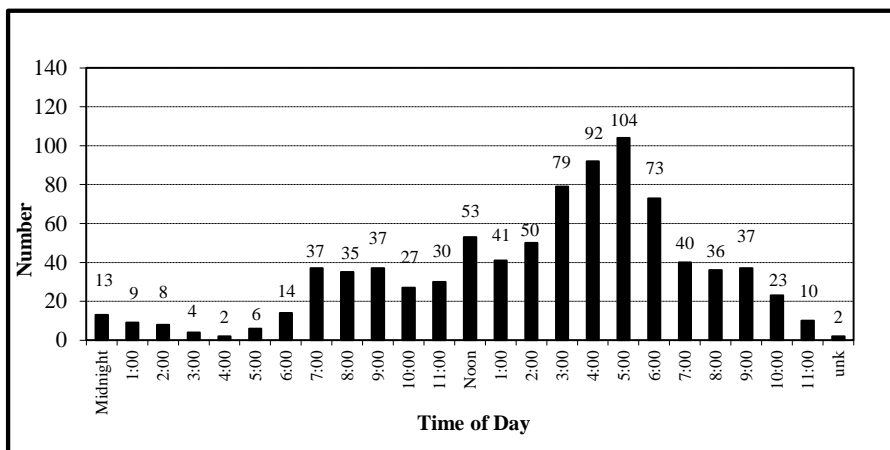
**TABLE 7.01  
BICYCLE CRASH SUMMARY, 2004 - 2013**

|                    | 2004 | 2005 | 2006 | 2007  | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--------------------|------|------|------|-------|------|------|------|------|------|------|
| Bicycle Crashes    | 985  | 965  | 944  | 1,020 | 981  | 957  | 898  | 963  | 920  | 862  |
| Bicyclists Killed  | 10   | 7    | 8    | 4     | 13   | 10   | 9    | 5    | 7    | 6    |
| Bicyclists Injured | 937  | 952  | 908  | 979   | 942  | 963  | 882  | 937  | 875  | 822  |

**TABLE 7.02  
2013 BICYCLE CRASHES BY MONTH**

| Month     | Property      |                |                | Total Crashes | Killed | Injured |
|-----------|---------------|----------------|----------------|---------------|--------|---------|
|           | Fatal Crashes | Injury Crashes | Damage Crashes |               |        |         |
| January   | 0             | 14             | 1              | 15            | 0      | 14      |
| February  | 0             | 6              | 0              | 6             | 0      | 5       |
| March     | 1             | 15             | 0              | 16            | 1      | 15      |
| April     | 0             | 23             | 1              | 24            | 0      | 23      |
| May       | 1             | 76             | 1              | 78            | 0      | 78      |
| June      | 0             | 124            | 7              | 131           | 0      | 123     |
| July      | 1             | 156            | 7              | 164           | 1      | 156     |
| August    | 0             | 151            | 6              | 157           | 0      | 152     |
| September | 1             | 138            | 5              | 144           | 1      | 138     |
| October   | 2             | 85             | 3              | 90            | 2      | 85      |
| November  | 1             | 29             | 2              | 32            | 1      | 28      |
| December  | 0             | 5              | 0              | 5             | 0      | 5       |
| Total     | 7             | 822            | 33             | 862           | 6      | 822     |

**FIGURE 7.01  
2013 BICYCLE CRASHES BY TIME OF DAY**



**TABLE 7.03  
2013 BICYCLE CRASHES BY TIME AND DAY**

| Time of Day     | Sunday    | Monday     | Tuesday    | Wednesday  | Thursday*  | Friday     | Saturday** | Total      |
|-----------------|-----------|------------|------------|------------|------------|------------|------------|------------|
| Mid - 2:59 AM   | 6         | 1          | 3          | 2          | 5          | 5          | 8          | 30         |
| 3:00 - 5:59 AM  | 0         | 2          | 3          | 1          | 1          | 1          | 4          | 12         |
| 6:00 - 8:59 AM  | 1         | 19         | 14         | 18         | 15         | 17         | 2          | 86         |
| 9:00 - 11:59 AM | 9         | 19         | 17         | 20         | 10         | 11         | 8          | 94         |
| Noon - 2:59 PM  | 6         | 23         | 23         | 26         | 28         | 18         | 20         | 144        |
| 3:00 - 5:59 PM  | 24        | 36         | 44         | 50         | 56         | 39         | 26         | 275        |
| 6:00 - 8:59 PM  | 15        | 20         | 39         | 14         | 25         | 21         | 15         | 149        |
| 9:00 - 11:59 PM | 4         | 11         | 11         | 10         | 10         | 12         | 12         | 70         |
| Unknown         | 0         | 0          | 0          | 0          | 1          | 0          | 1          | 2          |
| <b>Total</b>    | <b>65</b> | <b>131</b> | <b>154</b> | <b>141</b> | <b>151</b> | <b>124</b> | <b>96</b>  | <b>862</b> |

**TABLE 7.04  
2013 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             | 375            | 23                      | 400           | 2                 | 373                |
| 100,000 - 249,999              | 0             | 16             | 0                       | 16            | 0                 | 17                 |
| 50,000 - 99,999                | 0             | 120            | 4                       | 124           | 0                 | 119                |
| 25,000 - 49,999                | 0             | 103            | 3                       | 106           | 0                 | 103                |
| 10,000 - 24,999                | 0             | 130            | 2                       | 132           | 0                 | 130                |
| 5,000 - 9,999                  | 2             | 27             | 1                       | 30            | 2                 | 27                 |
| 2,500 - 4,999                  | 0             | 19             | 0                       | 19            | 0                 | 19                 |
| 1,000 - 2,499                  | 0             | 9              | 0                       | 9             | 0                 | 10                 |
| Under 1,000                    | 3             | 23             | 0                       | 26            | 2                 | 24                 |
| <b>Total</b>                   | <b>7</b>      | <b>822</b>     | <b>33</b>               | <b>862</b>    | <b>6</b>          | <b>822</b>         |

**FIGURE 7.02  
BICYCLISTS KILLED OR INJURED BY AGE AND GENDER 2013**

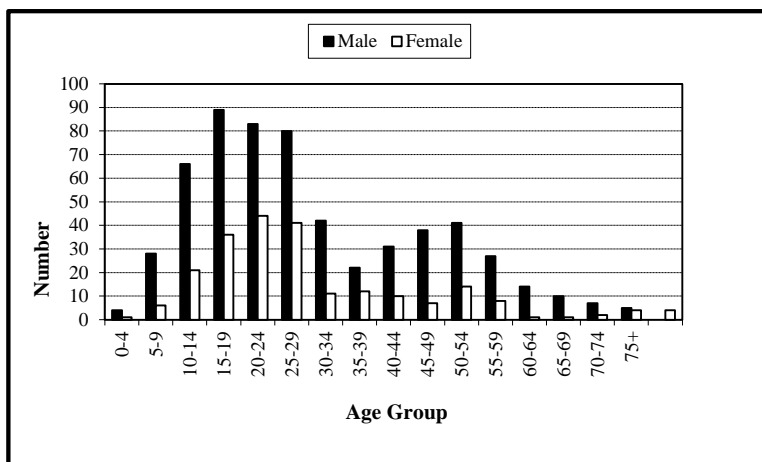


TABLE 7.05

**BICYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2013**

| 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      | 0                 | 1  | 1      | 4              | 0   | 4      | 4              | 1   | 5      |
| 05-09      | 1      | 0 | 1     | 2               | 0  | 2      | 9                 | 0  | 9      | 16             | 6   | 22     | 28             | 6   | 34     |
| 10-14      | 1      | 0 | 1     | 5               | 0  | 5      | 19                | 7  | 26     | 41             | 14  | 55     | 66             | 21  | 87     |
| 15-19      | 0      | 0 | 0     | 5               | 3  | 9      | 24                | 7  | 31     | 60             | 26  | 86     | 89             | 36  | 126    |
| 20-24      | 0      | 1 | 1     | 3               | 2  | 5      | 25                | 9  | 34     | 55             | 32  | 87     | 83             | 44  | 127    |
| 25-29      | 0      | 1 | 1     | 7               | 3  | 10     | 28                | 11 | 39     | 45             | 26  | 71     | 80             | 41  | 121    |
| 30-34      | 0      | 0 | 0     | 2               | 0  | 2      | 15                | 5  | 20     | 25             | 6   | 32     | 42             | 11  | 54     |
| 35-39      | 0      | 0 | 0     | 1               | 1  | 2      | 8                 | 4  | 12     | 13             | 7   | 20     | 22             | 12  | 34     |
| 40-44      | 0      | 0 | 0     | 2               | 0  | 2      | 14                | 4  | 18     | 15             | 6   | 21     | 31             | 10  | 41     |
| 45-49      | 0      | 0 | 0     | 4               | 0  | 4      | 12                | 3  | 15     | 22             | 4   | 26     | 38             | 7   | 45     |
| 50-54      | 0      | 0 | 0     | 3               | 0  | 3      | 12                | 3  | 15     | 26             | 11  | 37     | 41             | 14  | 55     |
| 55-59      | 1      | 0 | 1     | 1               | 0  | 1      | 13                | 3  | 16     | 12             | 5   | 17     | 27             | 8   | 35     |
| 60-64      | 0      | 0 | 0     | 2               | 0  | 2      | 5                 | 0  | 5      | 7              | 1   | 8      | 14             | 1   | 15     |
| 65-69      | 0      | 0 | 0     | 0               | 0  | 0      | 3                 | 0  | 3      | 7              | 1   | 8      | 10             | 1   | 11     |
| 70-74      | 0      | 0 | 0     | 1               | 1  | 2      | 3                 | 0  | 3      | 3              | 1   | 4      | 7              | 2   | 9      |
| 75 & Older | 1      | 0 | 1     | 0               | 0  | 0      | 2                 | 2  | 4      | 2              | 2   | 4      | 5              | 4   | 9      |
| Not Stated | 0      | 0 | 0     | 0               | 1  | 1      | 2                 | 2  | 5      | 7              | 1   | 14     | 9              | 4   | 20     |
| Total      | 4      | 2 | 6     | 38              | 11 | 50     | 194               | 61 | 256    | 360            | 149 | 516    | 596            | 223 | 828    |

\* 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 2013 CRASHES**

| Prior Action              | Bicyclists in Fatal Crashes | Bicyclists in Injury Crashes | Bicyclists in Property Damage Crashes | Bicyclists in All Crashes |
|---------------------------|-----------------------------|------------------------------|---------------------------------------|---------------------------|
| Riding With Traffic       | 4                           | 382                          | 19                                    | 405                       |
| Riding Against Traffic    | 0                           | 53                           | 5                                     | 58                        |
| Making Right Turn         | 0                           | 5                            | 0                                     | 5                         |
| Making Left Turn          | 1                           | 19                           | 1                                     | 21                        |
| Making U Turn             | 0                           | 1                            | 0                                     | 1                         |
| Riding Across Road        | 1                           | 57                           | 1                                     | 59                        |
| Slowing/Stopping/Starting | 0                           | 7                            | 1                                     | 8                         |
| Other/Unknown             | 0                           | 298                          | 15                                    | 313                       |
| Total                     | 6                           | 822                          | 42                                    | 870                       |

\* 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 2013 BICYCLE CRASHES

| Contributing Factors   | Number<br>Attributed to<br>Bicyclists | Percent<br>Attributed to<br>Bicyclists | Number Attributed<br>to Motor Vehicle<br>Drivers | Percent Attributed<br>to Motor Vehicle<br>Drivers |
|--|---------------------------------------|--|--|---|
| <b>Human Factors</b>   |                                       |  |  |   |
| Failure to Yield Right of Way                                  | 141                                   | 27.8                                   | 214  | 42.7  |
| Non-Motorist Error   | 86                                    | 16.9                                   | 0  | 0.0   |
| Disregard Traffic Control Device                               | 84                                    | 16.5                                   | 12   | 2.4   |
| Improper/Unsafe Lane Use                                       | 35                                    | 6.9                                    | 14   | 2.8   |
| Driver Inattention/Distracted                                  | 33                                    | 6.5                                    | 110  | 22.0  |
| Failure to Use Lights  | 18                                    | 3.5                                    | 0  | 0.0   |
| Driver Inexperience  | 10                                    | 2.0                                    | 6  | 1.2   |
| Illegal/Unsafe Speed   | 9                                     | 1.8                                    | 4  | 0.8   |
| Chemical Impairment  | 7                                     | 1.4                                    | 12   | 2.4   |
| Vision Obscured  | 6                                     | 1.2                                    | 45   | 9.0   |
| Improper Park/Start/Stop                                       | 3                                     | 0.6                                    | 11   | 2.2   |
| Improper Passing/Overtaking                                    | 2                                     | 0.4                                    | 3  | 0.6   |
| Improper Turn  | 2                                     | 0.4                                    | 9  | 1.8   |
| Improper/No Signal   | 2                                     | 0.4                                    | 0  | 0.0   |
| Driving Left of Center   | 1                                     | 0.2                                    | 2  | 0.4   |
| Impeding Traffic   | 1                                     | 0.2                                    | 1  | 0.2   |
| Following Too Closely  | 0                                     | 0.0                                    | 3  | 0.6   |
| Unsafe Backing   | 0                                     | 0.0                                    | 2  | 0.4   |
| Driver On Phone/CB   | 0                                     | 0.0                                    | 1  | 0.2   |
| Oversized/Overweight Vehicle                                   | 0                                     | 0.0                                    | 1  | 0.2   |
| Other Human Factors  | 14                                    | 2.8                                    | 19   | 3.8   |
| <b>Vehicular Factors</b>                                       |                                       |  |  |   |
| Defective Brakes   | 9                                     | 1.8                                    | 0  | 0.0   |
| Skidding   | 3                                     | 0.6                                    | 0  | 0.0   |
| Other Vehicular Factor   | 1                                     | 0.2                                    | 1  | 0.2   |
| <b>Miscellaneous Factors</b>                                   |                                       |  |  |   |
| Weather Conditions   | 4                                     | 0.8                                    | 4  | 0.8   |
| Other  | 37                                    | 7.3                                    | 27   | 5.4   |
| Total  | 508                                   | 100.0%                                 | 501  | 100.0%  |
| Vehicles for Which There Was<br>"No Clear Contributing Factor" | 380                                   |  | 367  |   |
| Total Number of Bicyclists/Drivers                             | 867                                   |  | 863  |   |

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 2013, there were 158 crashes resulting in 75 injuries in which a school bus was indirectly involved.

### **Number of crashes increase**

In 2013, school bus crashes increased by 32%. There were 732 traffic crashes directly involving at least one school bus, compared to 553 crashes in 2012.

### **Three deaths in 2013**

In 2013, there were three fatal school bus crashes resulting in three deaths. None of the fatalities were people riding in the school buses. Two drivers and one passenger from the other motor vehicles were killed.

### **Morning and afternoon rush hours**

Two out of three (68%) school bus crashes and seven out of ten school bus crash injuries (67%) in 2013 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 2% 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.

### **Contributing factors**

In 2013, there were 732 traffic crashes where at least one school bus was involved. In all there were 736 school buses directly involved in these crashes. For 50% 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 (16%) or failure to yield right of way (13%). The third most frequently cited contributing factor was improper turn (11%). The most commonly cited contributing factors attributed to drivers of other vehicles in school bus crashes were driver inattention or distraction (17%), failure to yield right of way (15%), and following too closely (10%).

TABLE 8.01

**SCHOOL BUS CRASH SUMMARY, 2004 - 2013**

|                                | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|
| Total Crashes                  | 702  | 717  | 625  | 680  | 663  | 670  | 611  | 615  | 553  | 732  |
| Fatal Crashes                  | 3    | 7    | 1    | 7    | 1    | 4    | 4    | 1    | 4    | 3    |
| Persons Killed                 | 3    | 7    | 1    | 8    | 4    | 4    | 4    | 1    | 7    | 3    |
| Injury Crashes                 | 150  | 140  | 137  | 126  | 107  | 144  | 116  | 112  | 113  | 132  |
| Persons Injured                | 266  | 250  | 241  | 243  | 188  | 233  | 215  | 214  | 211  | 237  |
| Property Damage Crashes        | 549  | 570  | 487  | 547  | 555  | 522  | 491  | 502  | 436  | 597  |
| School Buses Directly Involved | 708  | 724  | 631  | 690  | 670  | 675  | 615  | 621  | 554  | 736  |

TABLE 8.02

**2013 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             | 0              | 2                       | 2             | 0      | 0       |
| 3:00 - 5:59 AM   | 0             | 0              | 1                       | 1             | 0      | 0       |
| 6:00 - 8:59 AM   | 0             | 45             | 209                     | 254           | 0      | 98      |
| 9:00 - 11:59 AM  | 1             | 13             | 77                      | 91            | 1      | 19      |
| Noon - 2:59 PM   | 0             | 27             | 95                      | 122           | 0      | 50      |
| 3:00 - 5:59 PM   | 2             | 44             | 198                     | 244           | 2      | 67      |
| 6:00 - 8:59 PM   | 0             | 1              | 12                      | 13            | 0      | 1       |
| 9:00 - 11:59 PM  | 0             | 2              | 0                       | 2             | 0      | 2       |
| Unknown          | 0             | 0              | 3                       | 3             | 0      | 0       |
| Total            | 3             | 132            | 597                     | 732           | 3      | 237     |

TABLE 8.03

**2013 SCHOOL BUS CRASHES BY MONTH**

| Month     | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed | Injured |
|-----------|---------------|----------------|-------------------------|---------------|--------|---------|
| January   | 0             | 15             | 70                      | 85            | 0      | 22      |
| February  | 1             | 14             | 74                      | 89            | 1      | 20      |
| March     | 0             | 13             | 63                      | 76            | 0      | 15      |
| April     | 1             | 15             | 57                      | 73            | 1      | 25      |
| May       | 0             | 14             | 42                      | 56            | 0      | 21      |
| June      | 0             | 2              | 23                      | 25            | 0      | 2       |
| July      | 0             | 5              | 14                      | 19            | 0      | 6       |
| August    | 0             | 3              | 8                       | 11            | 0      | 4       |
| September | 0             | 16             | 37                      | 53            | 0      | 45      |
| October   | 1             | 9              | 44                      | 54            | 1      | 33      |
| November  | 0             | 11             | 35                      | 46            | 0      | 20      |
| December  | 0             | 15             | 130                     | 145           | 0      | 24      |
| Total     | 3             | 132            | 597                     | 732           | 3      | 237     |



TABLE 8.04

**AGE AND GENDER OF PERSONS INJURED  
IN 2013 SCHOOL BUS CRASHES**

| Age Group  | In Bus | Pedestrian | In Other |  | Male | Female | Total* |
|------------|--------|------------|----------|--|------|--------|--------|
|            |        |            | Vehicle  |  |      |        |        |
| 00 - 04    | 1      | 0          | 5        |  | 3    | 3      | 6      |
| 05 - 09    | 9      | 0          | 1        |  | 5    | 4      | 10     |
| 10 - 14    | 21     | 1          | 1        |  | 11   | 12     | 23     |
| 15 - 19    | 6      | 2          | 18       |  | 12   | 13     | 26     |
| 20 - 24    | 2      | 2          | 12       |  | 5    | 11     | 16     |
| 25 - 29    | 2      | 0          | 9        |  | 2    | 9      | 11     |
| 30 - 34    | 1      | 2          | 14       |  | 10   | 7      | 17     |
| 35 - 39    | 3      | 0          | 8        |  | 6    | 5      | 11     |
| 40 - 44    | 2      | 0          | 14       |  | 10   | 5      | 16     |
| 45 - 49    | 7      | 1          | 13       |  | 8    | 13     | 21     |
| 50 - 54    | 3      | 0          | 6        |  | 3    | 6      | 9      |
| 55 - 59    | 5      | 0          | 6        |  | 1    | 10     | 11     |
| 60 - 64    | 5      | 0          | 6        |  | 7    | 4      | 11     |
| 65 & Older | 8      | 0          | 9        |  | 10   | 7      | 17     |
| Unknown    | 31     | 0          | 1        |  | 0    | 3      | 32     |
| Total      | 106    | 8          | 123      |  | 93   | 112    | 237    |

\*There were 32 cases where the gender of the person was not recorded on the crash form.

TABLE 8.05

**PERSONS KILLED OR INJURED  
IN 2013 SCHOOL BUS CRASHES BY POPULATION OF AREA**

| Population of City<br>or Township | Killed | Severely<br>Injured | Moderately<br>Injured | Minor<br>Injuries | Total |
|-----------------------------------|--------|---------------------|-----------------------|-------------------|-------|
| 250,000 and Over                  | 0      | 0                   | 10                    | 42                | 52    |
| 100,000 - 249,999                 | 0      | 0                   | 3                     | 3                 | 6     |
| 50,000 - 99,999                   | 0      | 2                   | 7                     | 26                | 35    |
| 25,000 - 49,999                   | 0      | 0                   | 5                     | 57                | 62    |
| 10,000 - 24,999                   | 1      | 2                   | 7                     | 15                | 24    |
| 5,000 - 9,999                     | 0      | 0                   | 0                     | 6                 | 6     |
| 2,500 - 4,999                     | 0      | 0                   | 2                     | 14                | 16    |
| 1,000 - 2,499                     | 0      | 0                   | 2                     | 0                 | 2     |
| Under 1,000                       | 2      | 5                   | 10                    | 19                | 34    |
| Total                             | 3      | 9                   | 46                    | 182               | 237   |

TABLE 8.06

2013 SCHOOL BUS CRASHES BY FIRST HARMFUL EVENT

| First Harmful Event    | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed   | Injured    |
|------------------------|---------------|----------------|-------------------------|---------------|----------|------------|
| <b>Collision With:</b> |               |                |                         |               |          |            |
| Other Motor Vehicle    | 3             | 114            | 445                     | 562           | 3        | 216        |
| Parked Motor Vehicle   | 0             | 1              | 127                     | 128           | 0        | 1          |
| Bicycle                | 0             | 5              | 0                       | 5             | 0        | 5          |
| Pedestrian             | 0             | 7              | 0                       | 7             | 0        | 8          |
| Deer                   | 0             | 0              | 1                       | 1             | 0        | 0          |
| Other Animal           | 0             | 0              | 1                       | 1             | 0        | 0          |
| Fixed Object           | 0             | 4              | 19                      | 23            | 0        | 6          |
| Overturn               | 0             | 1              | 0                       | 1             | 0        | 1          |
| <b>Other/Unknown</b>   | 0             | 0              | 4                       | 4             | 0        | 0          |
| <b>Total</b>           | <b>3</b>      | <b>132</b>     | <b>597</b>              | <b>732</b>    | <b>3</b> | <b>237</b> |

TABLE 8.07

2013 SCHOOL BUS CRASHES BY TRAFFIC CONTROL DEVICE

| Traffic Control Device       | Fatal Crashes | Injury Crashes | Property Damage Crashes* | Total Crashes | Killed   | Injured    |
|------------------------------|---------------|----------------|--------------------------|---------------|----------|------------|
| Traffic Signal               | 0             | 40             | 135                      | 175           | 0        | 57         |
| Overhead Flashers            | 0             | 0              | 1                        | 1             | 0        | 0          |
| Stop Sign—All Approaches     | 0             | 5              | 25                       | 30            | 0        | 6          |
| Stop Sign—Not All Approaches | 0             | 26             | 126                      | 152           | 0        | 69         |
| Yield Sign                   | 0             | 0              | 7                        | 7             | 0        | 0          |
| School Bus Stop Arm          | 0             | 2              | 9                        | 11            | 0        | 2          |
| School Zone Sign             | 0             | 1              | 1                        | 2             | 0        | 4          |
| Railroad Crossing Stop Sign  | 0             | 1              | 14                       | 15            | 0        | 1          |
| Other                        | 0             | 3              | 8                        | 11            | 0        | 6          |
| Not Applicable               | 3             | 54             | 266                      | 323           | 3        | 92         |
| Unknown                      | 0             | 0              | 3                        | 3             | 0        | 0          |
| <b>Total</b>                 | <b>3</b>      | <b>132</b>     | <b>597</b>               | <b>732</b>    | <b>3</b> | <b>237</b> |

\*This field left blank on crash report for two school bus crashes

TABLE 8.08

**CONTRIBUTING FACTORS IN 2013 SCHOOL BUS CRASHES**

| <b>Contributing Factors</b>                                    | <b>Number<br/>Attributed to<br/>School Bus<br/>Drivers</b> | <b>Percent<br/>Attributed to<br/>School Bus<br/>Drivers</b> | <b>Number<br/>Attributed to<br/>Drivers of<br/>Other Vehicles</b> | <b>Percent<br/>Attributed to<br/>Drivers of Other<br/>Vehicles</b> |
|--|--|---|---|--|
| <b>Human Factors</b>   |  |   |   |  |
| Driver Inattention/Distracted                                  | 57   | 15.7%   | 91  | 17.3%  |
| Failure to Yield Right of Way                                  | 47   | 12.9  | 76  | 14.5   |
| Improper Turn  | 39   | 10.7  | 14  | 2.7  |
| Improper/Unsafe Lane Use                                       | 23   | 6.3   | 18  | 3.4  |
| Following Too Closely  | 19   | 5.2   | 51  | 9.7  |
| Unsafe Backing   | 13   | 3.6   | 6   | 1.1  |
| Illegal/Unsafe Speed   | 8  | 2.2   | 41  | 7.8  |
| Improper Passing/Overtaking                                    | 8  | 2.2   | 6   | 1.1  |
| Driver Inexperience  | 8  | 2.2   | 13  | 2.5  |
| Disregard of Traffic Control Device                            | 7  | 1.9   | 21  | 4.0  |
| Improper Park/Start/Stop                                       | 6  | 1.7   | 10  | 1.9  |
| Vision Obscured  | 5  | 1.4   | 13  | 2.5  |
| Driving Left of Center   | 1  | 0.3   | 4   | 0.8  |
| Improper/No Signal   | 1  | 0.3   | 2   | 0.4  |
| Overcorrecting   | 0  | 0.0   | 3   | 0.6  |
| Impeding Traffic   | 0  | 0.0   | 3   | 0.6  |
| Chemical Impairment  | 0  | 0.0   | 3   | 0.6  |
| Driver on Phone/CB Radio                                       | 0  | 0.0   | 1   | 0.2  |
| Other Human Factors  | 7  | 1.9   | 7   | 1.3  |
| <b>Vehicular Factors</b>                                       |  |   |   |  |
| Skidding   | 29   | 8.0   | 56  | 10.7   |
| Defective Brakes   | 1  | 0.3   | 3   | 0.6  |
| Other Vehicular Factors  | 0  | 0.0   | 1   | 0.2  |
| <b>Miscellaneous Factors</b>                                   |  |   |   |  |
| Weather Conditions   | 56   | 15.4  | 68  | 13.0   |
| Other  | 28   | 7.7   | 14  | 2.7  |
| <b>Total</b>   | <b>363</b>   | <b>100.0%</b>   | <b>525</b>  | <b>100.0%</b>  |
| Vehicles for Which There Was<br>"No Clear Contributing Factor" | 367  |   | 283   |  |
| Total Number of Drivers  | 740  |   | 752   |  |

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, slightly more than 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 2013, there were five motor vehicle/train crashes that resulted in a fatality, representing 10% of all motor-vehicle/train crashes in Minnesota.

### **Number of train crashes jump in 2013**

In the past decade, the number of motor-vehicle/train crashes in Minnesota has been declining. However, in 2013 there were 51 vehicle/train crashes, 26 more crashes than were reported in the previous year.

### **Fatalities and Injuries increase**

Both fatalities and injuries in motor vehicle/train crashes increased. Five people were killed in 2013 compared to three in 2012. Twenty people were injured in 2013 compared to 15 in 2012.

### **Railroad crossings with flashing lights or gates**

Railroad crossings without some type of flashing lights or gates are very dangerous. Four fatalities occurred at a railroad crossing without flashing lights or gates. Only seven 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 less than 5,000 population. In 2013, 32 of the 51 total crashes and four of the fatalities occurred in rural areas.

### **Contributing factors**

For motor vehicle drivers involved in train crashes, failure to yield right of way, driver inattention or distraction and disregard of traffic control device were the three contributing factors listed most often by officers.

TABLE 9.01

**MOTOR VEHICLE / TRAIN CRASH SUMMARY, 2004 – 2013**

|                         | 2004 | 2005 | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Total Crashes           | 72   | 52   | 51   | 56   | 40   | 37   | 33   | 48   | 25   | 51   |
| Fatal Crashes           | 12   | 5    | 8    | 2    | 3    | 4    | 1    | 4    | 3    | 5    |
| Persons Killed          | 13   | 6    | 9    | 2    | 4    | 5    | 1    | 4    | 3    | 5    |
| Injury Crashes          | 21   | 22   | 10   | 16   | 17   | 11   | 17   | 16   | 12   | 17   |
| Persons Injured         | 27   | 29   | 15   | 20   | 20   | 15   | 21   | 18   | 15   | 20   |
| Property Damage Crashes | 39   | 25   | 33   | 38   | 20   | 22   | 15   | 28   | 10   | 29   |

TABLE 9.02

**2013 MOTOR VEHICLE / TRAIN CRASHES BY MONTH**

| Month     | Fatal Crashes | Injury Crashes | PDO Crashes | Total | Killed | Injured |
|-----------|---------------|----------------|-------------|-------|--------|---------|
| January   | 0             | 2              | 1           | 3     | 0      | 2       |
| February  | 1             | 3              | 3           | 7     | 1      | 3       |
| March     | 0             | 1              | 3           | 4     | 0      | 1       |
| April     | 0             | 2              | 5           | 7     | 0      | 2       |
| May       | 1             | 0              | 2           | 3     | 1      | 0       |
| June      | 0             | 0              | 2           | 2     | 0      | 0       |
| July      | 1             | 1              | 2           | 4     | 1      | 1       |
| August    | 0             | 0              | 2           | 2     | 0      | 0       |
| September | 0             | 0              | 1           | 1     | 0      | 0       |
| October   | 0             | 3              | 3           | 6     | 0      | 5       |
| November  | 0             | 2              | 0           | 2     | 0      | 3       |
| December  | 2             | 3              | 5           | 10    | 2      | 3       |
| Total     | 5             | 17             | 29          | 51    | 5      | 20      |

TABLE 9.03

**2013 MOTOR VEHICLE / TRAIN CRASHES BY TIME AND DAY**

| Time of Day      | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Total |
|------------------|--------|--------|---------|-----------|----------|--------|----------|-------|
| Midnight-2:59 AM | 1      | 0      | 0       | 0         | 0        | 1      | 0        | 2     |
| 3:00 - 5:59 AM   | 0      | 0      | 0       | 0         | 0        | 1      | 0        | 1     |
| 6:00 - 8:59 AM   | 0      | 1      | 2       | 2         | 0        | 5      | 1        | 11    |
| 9:00 - 11:59 AM  | 0      | 2      | 3       | 1         | 1        | 1      | 1        | 9     |
| Noon - 2:59 PM   | 0      | 3      | 1       | 2         | 2        | 2      | 0        | 10    |
| 3:00 - 5:59 PM   | 0      | 3      | 1       | 2         | 0        | 1      | 3        | 10    |
| 6:00 - 8:59 PM   | 0      | 1      | 1       | 0         | 2        | 2      | 0        | 6     |
| 9:00 - 11:59 PM  | 0      | 0      | 1       | 0         | 0        | 0      | 1        | 2     |
| Total            | 1      | 10     | 9       | 7         | 5        | 13     | 6        | 51    |

TABLE 9.04

**2013 MOTOR VEHICLE / TRAIN CRASHES  
BY TRAFFIC CONTROL DEVICE**

| Traffic Control Device      | Fatal<br>Crashes | Injury<br>Crashes | Property          | Total<br>Crashes | Killed | Injured |
|-----------------------------|------------------|-------------------|-------------------|------------------|--------|---------|
|                             |                  |                   | Damage<br>Crashes |                  |        |         |
| Stop Sign All Approaches    | 2                | 4                 | 2                 | 8                | 2      | 5       |
| RR Crossing Gate            | 0                | 0                 | 4                 | 4                | 0      | 0       |
| RR Crossing Flashing Lights | 0                | 2                 | 3                 | 5                | 0      | 2       |
| RR Crossing Stop Sign       | 2                | 6                 | 4                 | 12               | 2      | 6       |
| RR Overhead Flashing Lights | 0                | 1                 | 0                 | 1                | 0      | 3       |
| RR Overhead Lights/Gate     | 1                | 0                 | 2                 | 3                | 1      | 0       |
| RR Crossbuck                | 0                | 1                 | 4                 | 5                | 0      | 1       |
| Other Device                | 0                | 1                 | 7                 | 8                | 0      | 1       |
| Unknown                     | 0                | 2                 | 3                 | 5                | 0      | 2       |
| Total                       | 5                | 17                | 29                | 51               | 5      | 20      |

TABLE 9.05

**2013 MOTOR VEHICLE / TRAIN CRASHES  
AGE OF PERSONS KILLED OR INJURED**

| Age Group  | Killed | Severe   | Moderate | Minor    | Total Injuries |
|------------|--------|----------|----------|----------|----------------|
|            |        | Injuries | Injuries | Injuries |                |
| 00 - 04    | 0      | 0        | 0        | 2        | 2              |
| 05 - 09    | 0      | 0        | 0        | 0        | 0              |
| 10 - 14    | 0      | 0        | 0        | 0        | 0              |
| 15 - 19    | 0      | 0        | 0        | 2        | 2              |
| 20 - 24    | 0      | 1        | 2        | 2        | 5              |
| 25 - 29    | 1      | 0        | 0        | 2        | 2              |
| 30 - 34    | 0      | 0        | 0        | 1        | 1              |
| 35 - 39    | 0      | 0        | 0        | 2        | 2              |
| 40 - 44    | 0      | 1        | 1        | 0        | 2              |
| 45 - 49    | 1      | 0        | 0        | 1        | 1              |
| 50 - 54    | 1      | 0        | 0        | 1        | 1              |
| 55 - 59    | 1      | 0        | 1        | 0        | 1              |
| 60 - 64    | 0      | 0        | 0        | 0        | 0              |
| 65 - 69    | 0      | 0        | 0        | 0        | 0              |
| 70 - 74    | 1      | 0        | 0        | 1        | 1              |
| 75 - 79    | 0      | 0        | 0        | 0        | 0              |
| 80 & Older | 0      | 0        | 0        | 0        | 0              |
| Not Stated | 0      | 0        | 0        | 0        | 0              |
| Total      | 5      | 2        | 4        | 14       | 20             |

TABLE 9.06

2013 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             | 1              | 6                       | 7             | 0      | 1       |
| 100,000 - 249,999              | 0             | 0              | 0                       | 0             | 0      | 0       |
| 50,000 - 99,999                | 0             | 1              | 6                       | 7             | 0      | 1       |
| 25,000 - 49,999                | 0             | 1              | 1                       | 2             | 0      | 1       |
| 10,000 - 24,999                | 0             | 0              | 1                       | 1             | 0      | 0       |
| 5,000 - 9,999                  | 1             | 1              | 0                       | 2             | 1      | 1       |
| 2,500 - 4,999                  | 0             | 2              | 5                       | 7             | 0      | 2       |
| 1,000 - 2,499                  | 0             | 1              | 0                       | 1             | 0      | 1       |
| Under 1,000                    | 4             | 10             | 10                      | 24            | 4      | 13      |
| Total                          | 5             | 17             | 29                      | 51            | 5      | 20      |

TABLE 9.07

2013 MOTOR VEHICLE / TRAIN CRASHES  
MOTOR VEHICLE DRIVER CONTRIBUTING FACTORS

| Contributing Factor                | Number | Percent |
|------------------------------------|--------|---------|
| <b>Human Factors</b>               |        |         |
| Failure to Yield Right of Way      | 21     | 29.6%   |
| Driver Inattention/Distracted      | 13     | 18.3    |
| Disregard of Traffic Control       | 10     | 14.1    |
| Illegal/Unsafe Speed               | 7      | 9.9     |
| Improper Turn                      | 3      | 4.2     |
| Chemical Impairment                | 3      | 4.2     |
| Improper Parking/Starting/Stopping | 2      | 2.8     |
| Driver Inexperience                | 2      | 2.8     |
| Improper/Unsafe Lane Use           | 1      | 1.4     |
| <b>Vehicular Factors</b>           |        |         |
| Skidding                           | 5      | 7.0     |
| Defective Brakes                   | 2      | 2.8     |
| <b>Other</b>                       |        |         |
| Weather                            | 1      | 1.4     |
| Other Contributing Factor          | 1      | 1.4     |

Total 71 100.0%

Vehicles for Which There Was "No Clear Contributing Factor" 5

Number of Drivers 55

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 6.02: Teen pedestrians killed or injured
- Table 7.05: Teen bicyclists killed or injured
- Table 8.04: Teen school bus riders killed or injured

### Improvement seen in the past decade

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 2004, 22.7% of all traffic crashes

in Minnesota were teen-related. In 2013, that percentage has dropped to 15.9%.

Teen (ages 13-19) fatalities have also decreased. In 2004, 15.5% of all traffic fatalities in Minnesota were teens. In 2013, that percentage has dropped to 8.5%.

Teen (ages 13-19) injuries have also decreased. In 2004, 17.6% of all traffic injuries in Minnesota were teens. In 2013, that percentage has dropped to 11.9%.

### Rate per licensed teen driver decreasing

Table 10.02 indicates that the number of teen MVO drivers (ages 15-19) who were involved in crashes has also been decreasing. MVO stands for 'motor vehicle occupant'. That is, only teens that were driving vehicles normally equipped with seat belts are counted in this table. In 2004, 79 teen MVO drivers were involved in crashes for every 1,000 licensed teen drivers. In 2013, that rate has dropped to 53.

### Colder weather

Teen involved crashes are rather evenly distributed throughout the year; however, there is an uptick during the colder months. In 2013, one out of every four (23%) 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 2013, 43% of all teen-involved crashes occurred. On the other hand, only 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 (21%) by officers at the scene. Next was failure to yield the right of way (13%), and then illegal or unsafe speed (13%). For the 'other' motor vehicle drivers involved, failure to yield the right of way was listed most often (21%), next was driver distraction (19%). Only 5% of the 'other' drivers were listed as illegal or unsafe speed.



TABLE 10.01

## TEEN CRASH SUMMARY, 2007 - 2013

| Category                                       | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   |
|--|--------|--------|--------|--------|--------|--------|--------|
| Crashes with at least one Teen (15-19) Driver* | 17,011 | 15,475 | 14,142 | 13,611 | 12,139 | 11,804 | 12,384 |
| All Traffic Crashes in Minnesota               | 81,505 | 79,095 | 73,498 | 74,073 | 72,117 | 69,236 | 77,707 |
| -Teen (15-19) Driver* Crash %                  | 20.9%  | 19.6%  | 19.2%  | 18.4%  | 16.8%  | 17.0%  | 15.9%  |
| Teen (13-19) Traffic Fatalities                | 53     | 37     | 40     | 47     | 39     | 40     | 33     |
| All Traffic Fatalities in Minnesota            | 510    | 455    | 421    | 411    | 368    | 395    | 387    |
| -Teen (13-19) Fatality %                       | 10.4%  | 8.1%   | 9.5%   | 11.4%  | 10.6%  | 10.1%  | 8.5%   |
| Teen (13-19) Traffic Injuries                  | 5,723  | 5,079  | 4,648  | 4,391  | 3,921  | 3,844  | 3,662  |
| All Traffic Injuries in Minnesota              | 35,318 | 33,379 | 31,074 | 31,176 | 30,295 | 29,314 | 30,653 |
| -Teen (13-19) Injury %                         | 16.2%  | 15.2%  | 15.0%  | 14.1%  | 12.9%  | 13.1%  | 11.9%  |

\*Driver of any motor vehicle.

TABLE 10.02

## TEEN 'MOTOR VEHICLE OCCUPANT' DRIVER CRASH INVOLVEMENT, 2007 - 2013

| Age of Teen MVO* Driver                    | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    |
|--|---------|---------|---------|---------|---------|---------|---------|
| Age 15 MVO* Drivers involved in Crashes    | 236     | 195     | 159     | 187     | 181     | 156     | 152     |
| Age 15 Licensed Drivers**                  | 26,029  | 26,141  | 28,126  | 28,020  | 25,422  | 25,946  | 25,324  |
| -Rate per 1,000 Licensed Drivers:          | 9.1     | 7.5     | 5.7     | 6.7     | 7.1     | 6.0     | 6.0     |
| Age 16 MVO* Drivers involved in Crashes    | 3,889   | 3,496   | 3,160   | 2,897   | 2,567   | 2,645   | 2,772   |
| Age 16 Licensed Drivers**                  | 51,499  | 49,801  | 49,884  | 49,634  | 48,260  | 47,801  | 48,013  |
| -Rate per 1,000 Licensed Drivers:          | 75.5    | 70.2    | 63.3    | 58.4    | 53.2    | 55.3    | 57.7    |
| Age 17 MVO* Drivers involved in Crashes    | 4,793   | 4,227   | 3,888   | 3,580   | 3,251   | 3,205   | 3,268   |
| Age 17 Licensed Drivers**                  | 59,766  | 57,875  | 56,554  | 55,885  | 54,781  | 54,489  | 53,744  |
| -Rate per 1,000 Licensed Drivers:          | 80.2    | 73.0    | 68.7    | 64.1    | 59.3    | 58.8    | 60.8    |
| Age 18 MVO* Drivers involved in Crashes    | 4,780   | 4,527   | 4,024   | 4,014   | 3,504   | 3,364   | 3,430   |
| Age 18 Licensed Drivers**                  | 64,910  | 64,337  | 62,707  | 61,526  | 59,722  | 59,220  | 58,706  |
| -Rate per 1,000 Licensed Drivers:          | 73.6    | 70.4    | 64.2    | 65.2    | 58.7    | 56.8    | 58.4    |
| Age 19 MVO* Drivers involved in Crashes    | 4,581   | 4,153   | 3,971   | 3,900   | 3,450   | 3,261   | 3,532   |
| Age 19 Licensed Drivers**                  | 67,664  | 68,050  | 67,701  | 66,272  | 63,997  | 63,212  | 62,642  |
| -Rate per 1,000 Licensed Drivers:          | 67.7    | 61.0    | 58.7    | 58.8    | 53.9    | 51.6    | 56.4    |
| All 15-19 MVO* Drivers involved in Crashes | 18,279  | 16,598  | 15,202  | 14,578  | 12,953  | 12,631  | 13,154  |
| All 15-19 Licensed Drivers**               | 269,868 | 266,204 | 264,972 | 261,337 | 252,182 | 250,668 | 248,429 |
| -Rate per 1,000 Licensed Drivers:          | 67.7    | 62.4    | 57.4    | 55.8    | 51.4    | 50.4    | 52.9    |

\*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

**2013 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      | 2             | 10               | 57               | 234              | 815          | 1,118         |
| February     | 4             | 13               | 71               | 198              | 823          | 1,109         |
| March        | 2             | 9                | 53               | 201              | 753          | 1,018         |
| April        | 3             | 6                | 50               | 170              | 644          | 873           |
| May          | 5             | 7                | 56               | 192              | 592          | 852           |
| June         | 2             | 11               | 85               | 223              | 638          | 959           |
| July         | 5             | 18               | 77               | 228              | 615          | 943           |
| August       | 5             | 19               | 87               | 215              | 620          | 946           |
| September    | 1             | 12               | 82               | 214              | 596          | 905           |
| October      | 4             | 10               | 66               | 235              | 637          | 952           |
| November     | 3             | 10               | 77               | 224              | 689          | 1,003         |
| December     | 2             | 8                | 68               | 266              | 1,362        | 1,706         |
| <b>Total</b> | <b>38</b>     | <b>133</b>       | <b>829</b>       | <b>2,600</b>     | <b>8,784</b> | <b>12,384</b> |

TABLE 10.04

**2013 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       | 4             | 23               | 111              | 264              | 867          | 1,269         |
| Monday       | 5             | 18               | 112              | 394              | 1,374        | 1,903         |
| Tuesday      | 5             | 23               | 116              | 380              | 1,319        | 1,843         |
| Wednesday    | 8             | 9                | 107              | 410              | 1,363        | 1,897         |
| Thursday     | 7             | 20               | 113              | 390              | 1,342        | 1,872         |
| Friday       | 5             | 24               | 144              | 433              | 1,512        | 2,118         |
| Saturday     | 4             | 16               | 126              | 329              | 1,007        | 1,482         |
| <b>Total</b> | <b>38</b>     | <b>133</b>       | <b>829</b>       | <b>2,600</b>     | <b>8,784</b> | <b>12,384</b> |

**TABLE 10.05**  
**2013 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     | 1             | 0                | 6                | 23               | 115          | 145           |
| 1:00         | 0             | 2                | 11               | 21               | 69           | 103           |
| 2:00         | 3             | 3                | 9                | 20               | 51           | 86            |
| 3:00         | 0             | 3                | 11               | 14               | 37           | 65            |
| 4:00         | 0             | 2                | 7                | 14               | 30           | 53            |
| 5:00         | 1             | 1                | 7                | 13               | 42           | 64            |
| 6:00         | 1             | 4                | 12               | 37               | 134          | 188           |
| 7:00         | 3             | 3                | 46               | 178              | 678          | 908           |
| 8:00         | 0             | 5                | 39               | 122              | 456          | 622           |
| 9:00         | 1             | 4                | 23               | 85               | 321          | 434           |
| 10:00        | 2             | 4                | 26               | 77               | 300          | 409           |
| 11:00        | 3             | 4                | 38               | 104              | 370          | 519           |
| Noon         | 1             | 10               | 40               | 144              | 433          | 628           |
| 1:00         | 1             | 4                | 62               | 146              | 415          | 628           |
| 2:00         | 2             | 11               | 69               | 179              | 654          | 915           |
| 3:00         | 4             | 16               | 73               | 267              | 916          | 1,276         |
| 4:00         | 3             | 9                | 77               | 254              | 847          | 1,190         |
| 5:00         | 2             | 15               | 69               | 247              | 845          | 1,178         |
| 6:00         | 0             | 9                | 51               | 194              | 559          | 813           |
| 7:00         | 2             | 3                | 45               | 120              | 405          | 575           |
| 8:00         | 2             | 7                | 35               | 107              | 320          | 471           |
| 9:00         | 3             | 5                | 32               | 91               | 311          | 442           |
| 10:00        | 2             | 6                | 20               | 86               | 281          | 395           |
| 11:00        | 1             | 2                | 21               | 56               | 184          | 264           |
| Unknown      | 0             | 1                | 0                | 1                | 11           | 13            |
| <b>Total</b> | <b>38</b>     | <b>133</b>       | <b>829</b>       | <b>2,600</b>     | <b>8,784</b> | <b>12,384</b> |

**FIGURE 10.01**  
**TOTAL TEEN-INVOLVED CRASHES, BY TIME, 2013**

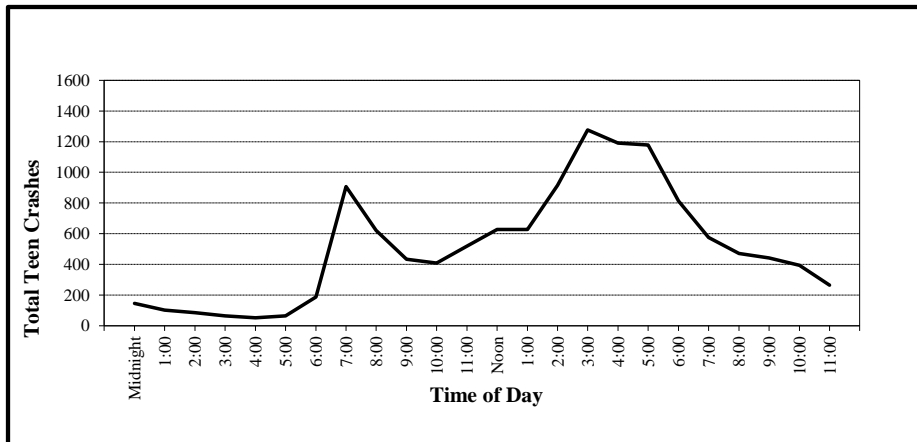


TABLE 10.06  
CONTRIBUTING FACTORS IN 2013 TEEN-INVOLVED CRASHES

| Contributing Factors   | Number<br>Attributed to<br>Teen Drivers* | Percent<br>Attributed to<br>Teen Drivers* | Number<br>Attributed to<br>Other Vehicle<br>Drivers* | Percent<br>Attributed to<br>Other Vehicle<br>Drivers* |
|--|--|---|--|---|
| <b>Human Factors</b>   |  |   |  |   |
| Driver Inattention/Distracted  | 2,760                                    | 20.5%                                     | 714  | 19.3%   |
| Failure to Yield Right of Way  | 1,742                                    | 12.9                                      | 791  | 21.4  |
| Illegal/Unsafe Speed   | 1,737                                    | 12.9                                      | 199  | 5.4   |
| Following Too Closely  | 1,237                                    | 9.2                                       | 520  | 14.1  |
| Driver Inexperience  | 1,196                                    | 8.9                                       | 24   | 0.7   |
| Overcorrecting   | 442                                      | 3.3                                       | 14   | 0.4   |
| Disregard Traffic Control Device                                       | 404                                      | 3.0                                       | 180  | 4.9   |
| Improper/Unsafe Lane Use   | 380                                      | 2.8                                       | 161  | 4.4   |
| Other Human Factor   | 274                                      | 2.0                                       | 88   | 2.4   |
| Improper Turn  | 220                                      | 1.6                                       | 78   | 2.1   |
| Vision Obscured  | 204                                      | 1.5                                       | 67   | 1.8   |
| Chemical Impairment  | 160                                      | 1.2                                       | 50   | 1.4   |
| Unsafe Backing   | 115                                      | 0.9                                       | 46   | 1.2   |
| Improper Park/Start/Stop   | 103                                      | 0.8                                       | 35   | 0.9   |
| Improper Passing/Overtaking  | 93                                       | 0.7                                       | 43   | 1.2   |
| Driving Left of Center   | 62                                       | 0.5                                       | 20   | 0.5   |
| Driver On Phone/CB   | 24                                       | 0.2                                       | 1  | 0.0   |
| Improper/No Signal   | 10                                       | 0.1                                       | 12   | 0.3   |
| Impeding Traffic   | 10                                       | 0.1                                       | 15   | 0.4   |
| Failure to Use Lights  | 5  | 0.0                                       | 3  | 0.1   |
| Non-Motorist Error   | 0  | 0.0                                       | 12   | 0.3   |
| <b>Vehicular Factors</b>   |  |   |  |   |
| Skidding   | 692                                      | 5.1                                       | 136  | 3.7   |
| Defective Brakes   | 98                                       | 0.7                                       | 19   | 0.5   |
| Oversize/Overweight Vehicle  | 1  | 0.0                                       | 1  | 0.0   |
| Other Vehicular Factor   | 62                                       | 0.5                                       | 32   | 0.9   |
| <b>Miscellaneous Factors</b>   |  |   |  |   |
| Weather Conditions   | 1,157                                    | 8.6                                       | 289  | 7.8   |
| Other  | 299                                      | 2.2                                       | 142  | 3.8   |
| <b>Total Contributing Factors</b>                                      | <b>13,487</b>                            | <b>100.0%</b>                             | <b>3,692</b>   | <b>100.0%</b>   |
| <b>Vehicles for Which There Was<br/>“No Clear Contributing Factor”</b> | <b>3,202</b>                             |   | <b>6,313</b>   |   |
| <b>Total Number of Drivers</b>   | <b>13,258</b>                            |   | <b>9,789</b>   |   |

\*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 2013 and 2020, the population of Minnesotans aged 65 and older will increase over 28 percent. 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 6.02: 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 has increased only slightly in the past few years. 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 2007, 11.8% of all traffic crashes in Minnesota were senior-related. In 2013, that percentage has risen to 13.7%.

As the senior population in Minnesota increases, senior traffic fatalities are expected to increase. In 2007, 20.0% of all traffic fatalities in Minnesota were seniors. In 2013, that percentage has risen to 22.2%.

Senior (ages 65 and older) injuries have also increased. In 2007, 7.7% of all traffic injuries in Minnesota were seniors. In 2013, that percentage has risen to 8.8%.

### MVO rate per licensed senior driver also steady

Table 11.02 indicates that the number of senior MVO drivers who were involved in crashes has decreased slightly. MVO stands for 'motor vehicle occupant'. That is, only seniors that were driving vehicles normally equipped with seat belts are counted in this table. In 2007, 16.7 senior MVO drivers were involved in crashes for every 1,000 licensed senior drivers. In 2013, that rate has dropped to 15.5.

### Colder weather

Senior-involved crashes are rather evenly distributed throughout the year; however, there is an uptick during the colder months. In 2013, one out of every five (21%) senior involved crashes occurred during the months of January and December.

### 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 2013, 47% of all senior involved crashes occurred. On the other hand, only 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 (26%) by officers at the scene. Next was driver inattention/distraction (19%), and then illegal or unsafe speed (6%). For the other motor vehicle drivers involved, driver inattention/distraction was listed most often (23%), next was failure to yield right of way (19%) and following too closely (14%). Only 7% of the other drivers were listed as illegal or unsafe speed.

TABLE 11.01

## SENIOR CRASH SUMMARY, 2007 - 2013

| Category                                       | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   |
|--|--------|--------|--------|--------|--------|--------|--------|
| Crashes with at least one Senior (65+) Driver* | 9,639  | 9,646  | 9,453  | 9,657  | 9,511  | 9,687  | 10,630 |
| All Traffic Crashes in Minnesota               | 81,505 | 79,095 | 73,498 | 74,073 | 72,117 | 69,236 | 77,707 |
| -Senior (65+) Driver* Crash %                  | 11.8%  | 12.2%  | 12.9%  | 13.0%  | 13.2%  | 14.0%  | 13.7%  |
| Senior (65+) Traffic Fatalities                | 102    | 87     | 84     | 72     | 76     | 81     | 86     |
| All Traffic Fatalities in Minnesota            | 510    | 455    | 421    | 411    | 368    | 395    | 387    |
| -Senior (65+) Fatality %                       | 20.0%  | 19.1%  | 20.0%  | 17.5%  | 20.7%  | 20.5%  | 22.2%  |
| Senior (65+) Traffic Injuries                  | 2,724  | 2,503  | 2,477  | 2,523  | 2,496  | 2,654  | 2,712  |
| All Traffic Injuries in Minnesota              | 35,318 | 33,379 | 31,074 | 31,176 | 30,295 | 29,314 | 30,653 |
| -Senior (65+) Injury %                         | 7.7%   | 7.5%   | 8.0%   | 8.1%   | 8.2%   | 9.1%   | 8.8%   |

\*Driver of any motor vehicle.

TABLE 11.02

## SENIOR 'MOTOR VEHICLE OCCUPANT' DRIVER CRASH INVOLVEMENT, 2007 - 2013

| Age of Senior MVO* Driver                  | 2007    | 2008    | 2009    | 2010    | 2011    | 2012    | 2013    |
|--|---------|---------|---------|---------|---------|---------|---------|
| Age 65-69 MVO* Drivers involved in Crashes | 3,085   | 3,388   | 3,345   | 3,511   | 3,451   | 3,630   | 3,980   |
| Age 65-69 Licensed Drivers                 | 178,918 | 187,347 | 193,513 | 198,777 | 213,587 | 226,107 | 237,444 |
| -Rate per 1,000 Licensed Drivers:          | 17.2    | 18.1    | 17.3    | 17.7    | 16.2    | 16.1    | 16.8    |
| Age 70-74 MVO* Drivers involved in Crashes | 2,307   | 2,215   | 2,210   | 2,326   | 2,332   | 2,311   | 2,616   |
| Age 70-74 Licensed Drivers                 | 136,026 | 140,879 | 143,738 | 149,002 | 155,347 | 164,699 | 172,320 |
| -Rate per 1,000 Licensed Drivers:          | 17.0    | 15.7    | 15.4    | 15.6    | 15.0    | 14.0    | 15.2    |
| Age 75-79 MVO* Drivers involved in Crashes | 2,017   | 1,929   | 1,828   | 1,791   | 1,743   | 1,744   | 1,912   |
| Age 75-79 Licensed Drivers                 | 114,678 | 113,740 | 113,517 | 114,320 | 116,871 | 119,643 | 123,927 |
| -Rate per 1,000 Licensed Drivers:          | 17.6    | 17.0    | 16.1    | 15.7    | 14.9    | 14.6    | 15.4    |
| Age 80-84 MVO* Drivers involved in Crashes | 1,493   | 1,475   | 1,389   | 1,382   | 1,327   | 1,392   | 1,382   |
| Age 80-84 Licensed Drivers                 | 88,606  | 89,045  | 87,672  | 88,821  | 90,620  | 90,268  | 90,333  |
| -Rate per 1,000 Licensed Drivers:          | 16.8    | 16.6    | 15.8    | 15.6    | 14.6    | 15.4    | 15.3    |
| Age 85+ MVO* Drivers involved in Crashes   | 941     | 889     | 931     | 967     | 955     | 955     | 1,069   |
| Age 85+ Licensed Drivers                   | 71,373  | 73,502  | 71,997  | 74,678  | 79,683  | 82,434  | 82,608  |
| -Rate per 1,000 Licensed Drivers:          | 13.2    | 12.1    | 12.9    | 12.9    | 12.0    | 11.6    | 12.9    |
| All 65+ MVO* Drivers involved in Crashes   | 9,843   | 9,896   | 9,703   | 9,977   | 9,808   | 10,032  | 10,959  |
| All 65+ Licensed Drivers                   | 589,601 | 604,513 | 610,437 | 625,598 | 656,108 | 683,151 | 706,632 |
| -Rate per 1,000 Licensed Drivers:          | 16.7    | 16.4    | 15.9    | 15.9    | 14.9    | 14.7    | 15.5    |

\*MVO = Motor Vehicle Occupant.  
Only senior drivers in vehicles equipped with  
Seat-Belts are included in Table 11.02.

TABLE 11.03

**2013 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      | 2             | 8                | 69               | 145              | 577          | 801           |
| February     | 3             | 9                | 50               | 138              | 594          | 794           |
| March        | 5             | 8                | 50               | 152              | 564          | 779           |
| April        | 4             | 6                | 62               | 185              | 441          | 698           |
| May          | 10            | 10               | 75               | 189              | 534          | 818           |
| June         | 10            | 14               | 85               | 190              | 560          | 859           |
| July         | 12            | 17               | 99               | 191              | 575          | 894           |
| August       | 4             | 16               | 90               | 206              | 574          | 890           |
| September    | 11            | 20               | 70               | 189              | 566          | 856           |
| October      | 7             | 12               | 91               | 201              | 604          | 915           |
| November     | 8             | 10               | 59               | 208              | 597          | 882           |
| December     | 5             | 9                | 74               | 254              | 1,102        | 1,444         |
| <b>Total</b> | <b>81</b>     | <b>139</b>       | <b>874</b>       | <b>2,248</b>     | <b>7,288</b> | <b>10,630</b> |

TABLE 11.04

**2013 SENIOR-INVOLVED CRASHES BY DAY OF WEEK**

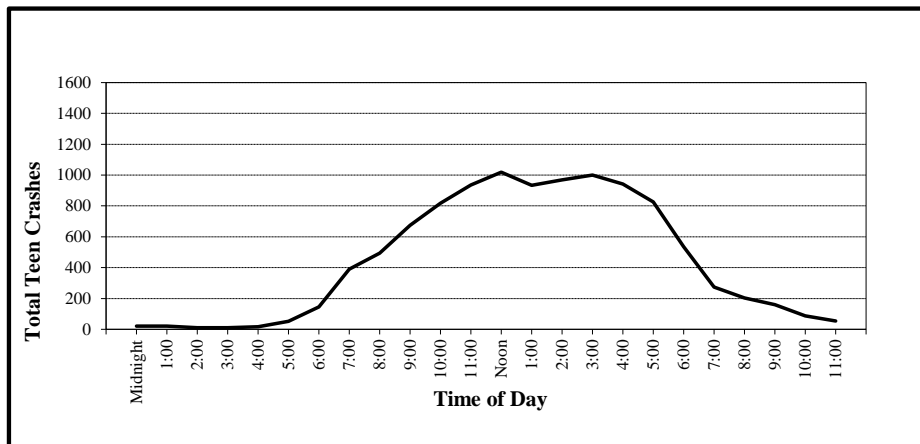
(\*Crashes involving at least one Senior (65+) of any vehicle)

| Day          | Fatal Crashes | A-Injury Crashes | B-Injury Crashes | C-Injury Crashes | PDO Crashes  | Total Crashes |
|--------------|---------------|------------------|------------------|------------------|--------------|---------------|
| Sunday       | 5             | 17               | 77               | 188              | 554          | 841           |
| Monday       | 13            | 14               | 115              | 364              | 1,140        | 1,646         |
| Tuesday      | 11            | 23               | 136              | 357              | 1,203        | 1,730         |
| Wednesday    | 10            | 25               | 141              | 348              | 1,150        | 1,674         |
| Thursday     | 13            | 14               | 136              | 354              | 1,230        | 1,747         |
| Friday       | 17            | 25               | 155              | 372              | 1,246        | 1,815         |
| Saturday     | 12            | 21               | 114              | 265              | 765          | 1,177         |
| <b>Total</b> | <b>81</b>     | <b>139</b>       | <b>874</b>       | <b>2,248</b>     | <b>7,288</b> | <b>10,630</b> |

**TABLE 11.05**  
**2013 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     | 0             | 0                | 2                | 1                | 18           | 21            |
| 1:00         | 0             | 0                | 1                | 2                | 18           | 21            |
| 2:00         | 0             | 0                | 1                | 0                | 10           | 11            |
| 3:00         | 0             | 0                | 1                | 3                | 7            | 11            |
| 4:00         | 0             | 0                | 3                | 4                | 9            | 16            |
| 5:00         | 1             | 0                | 6                | 10               | 36           | 53            |
| 6:00         | 2             | 2                | 14               | 33               | 95           | 146           |
| 7:00         | 6             | 3                | 28               | 85               | 269          | 391           |
| 8:00         | 6             | 12               | 36               | 102              | 338          | 494           |
| 9:00         | 5             | 5                | 53               | 129              | 483          | 675           |
| 10:00        | 9             | 9                | 64               | 162              | 574          | 818           |
| 11:00        | 6             | 12               | 83               | 192              | 642          | 935           |
| Noon         | 9             | 19               | 80               | 219              | 692          | 1,019         |
| 1:00         | 4             | 12               | 80               | 186              | 652          | 934           |
| 2:00         | 11            | 9                | 76               | 207              | 665          | 968           |
| 3:00         | 5             | 10               | 82               | 212              | 691          | 1,000         |
| 4:00         | 2             | 11               | 74               | 218              | 636          | 941           |
| 5:00         | 4             | 6                | 62               | 194              | 559          | 825           |
| 6:00         | 5             | 6                | 47               | 124              | 353          | 535           |
| 7:00         | 1             | 7                | 26               | 51               | 190          | 275           |
| 8:00         | 2             | 10               | 21               | 46               | 125          | 204           |
| 9:00         | 2             | 3                | 25               | 31               | 100          | 161           |
| 10:00        | 0             | 2                | 6                | 19               | 61           | 88            |
| 11:00        | 1             | 1                | 2                | 13               | 38           | 55            |
| Unknown      | 0             | 0                | 1                | 5                | 27           | 33            |
| <b>Total</b> | <b>81</b>     | <b>139</b>       | <b>874</b>       | <b>2,248</b>     | <b>7,288</b> | <b>10,630</b> |

**FIGURE 11.01**  
**TOTAL SENIOR-INVOLVED CRASHES, BY TIME, 2013**





*TABLE 11.06*  
**CONTRIBUTING FACTORS IN 2013 SENIOR-INVOLVED CRASHES**

| Contributing Factors   | Number<br>Attributed to<br>Senior<br>Drivers* | Percent<br>Attributed to<br>Senior<br>Drivers* | Number<br>Attributed to<br>Other Vehicle<br>Drivers* | Percent<br>Attributed to<br>Other Vehicle<br>Drivers* |
|--|---|--|--|---|
| <b>Human Factors</b>   |   |  |  |   |
| Failure to Yield Right of Way  | 2,044   | 26.1%  | 1,002  | 18.7%   |
| Driver Inattention/Distracted  | 1,504   | 19.2   | 1,219  | 22.7  |
| Illegal/Unsafe Speed   | 486   | 6.2  | 361  | 6.7   |
| Improper/Unsafe Lane Use   | 436   | 5.6  | 239  | 4.5   |
| Disregard Traffic Control Device                                       | 429   | 5.5  | 324  | 6.0   |
| Following Too Closely  | 419   | 5.3  | 724  | 13.5  |
| Other Human Factor   | 338   | 4.3  | 100  | 1.9   |
| Improper Turn  | 234   | 3.0  | 93   | 1.7   |
| Vision Obscured  | 177   | 2.3  | 96   | 1.8   |
| Unsafe Backing   | 164   | 2.1  | 76   | 1.4   |
| Improper Passing/Overtaking  | 101   | 1.3  | 78   | 1.5   |
| Overcorrecting   | 98  | 1.3  | 29   | 0.5   |
| Improper Park/Start/Stop   | 92  | 1.2  | 50   | 0.9   |
| Driving Left of Center   | 64  | 0.8  | 37   | 0.7   |
| Chemical Impairment  | 52  | 0.7  | 50   | 0.9   |
| Impeding Traffic   | 22  | 0.3  | 14   | 0.3   |
| Improper/No Signal   | 18  | 0.2  | 9  | 0.2   |
| Driver Inexperience  | 17  | 0.2  | 80   | 1.5   |
| Failure to Use Lights  | 4   | 0.1  | 10   | 0.2   |
| Driver On Phone/CB   | 2   | 0.0  | 9  | 0.2   |
| Non-Motorist Error   | 0   | 0.0  | 36   | 0.7   |
| <b>Vehicular Factors</b>   |   |  |  |   |
| Skidding   | 271   | 3.5  | 171  | 3.2   |
| Defective Brakes   | 24  | 0.3  | 44   | 0.8   |
| Oversize/Overweight Vehicle  | 4   | 0.1  | 6  | 0.1   |
| Other Vehicular Factor   | 53  | 0.7  | 39   | 0.7   |
| <b>Miscellaneous Factors</b>   |   |  |  |   |
| Weather Conditions   | 499   | 6.4  | 291  | 5.4   |
| Other  | 286   | 3.6  | 177  | 3.3   |
| <b>Total Contributing Factors</b>                                      | 7,838   | 100.0%   | 5,364  | 100.0%  |
| <b>Vehicles for Which There Was<br/>"No Clear Contributing Factor"</b> | 4,312   |  | 4,730  |   |
| <b>Total Number of Drivers</b>   | 11,297  |  | 9,668  |   |

\*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.