

## **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  
444 Cedar Street, Suite 150  
St. Paul, MN 55101-5150  
(651) 201-7076

# **MINNESOTA**

## **MOTOR VEHICLE**

### **CRASH FACTS**

#### **2006**

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

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Many thanks go to our Crash Records Section in the Driver and Vehicle Services Division of the Department of Public Safety for their excellent data quality control work. Thanks also to the State Patrol, the Bureau of Criminal Apprehension, Sheriff's, Police Chiefs, and Medical Examiner's for their assistance regarding alcohol-related crashes. And, of course, many thanks go out to all of the troopers and officers around Minnesota who were at the scene of 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.



Alcohol  
and Gambling  
Enforcement

ARMER/911  
Program

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Criminal  
Apprehension

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and Vehicle  
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July 2007

Nearly 500 people were killed in traffic crashes last year in Minnesota. With an annual death toll of hundreds as well as thousands injured, many with life-long injuries, the reality is unacceptable to the Department of Public Safety — and should be to all Minnesotans.

To reverse the epidemic, the Department of Public Safety works with state agencies, organizations and stakeholders to find local solutions based in education, enforcement, engineering and emergency care — and drive Minnesota *Toward Zero Deaths*. There is real progress, and continued challenges, from last year to report.

- The 494 deaths in 2006 were the lowest number of traffic fatalities on our roads since 1945, and represents 65 fewer deaths than the 559 killed in 2005 (a reduction of nearly 12 percent).
- Traffic fatalities have been reduced consecutively the last three years, from 655 in 2003 to 494 last year — a nearly 25 percent reduction.
- The fatality rate per 100 million vehicle miles traveled (VMT) has decreased to less than one person (0.87) — among the lowest in the nation — down from a rate of 5.52 in 1966. This is significant as the number of drivers, vehicles and VMT have increased with population.
- There were 166 alcohol-related traffic deaths — the lowest number since 1984. However, impairment is a factor in fully one-third of all our road deaths.
- Motorcycles represented 4 percent of registered vehicles in the state, but the 70 rider deaths comprised 14 percent of the state's traffic fatalities — continuing a disturbing 10-year rise. Older and returning riders figure prominently among those killed.

While the Department of Public Safety and many road safety partners continue existing programs and to explore new approaches in reducing traffic crashes, every motorist also has a role. All drivers and passengers are responsible for their behavior and can demonstrate that understanding through the following:

- Always wear a seat belt.
- Drive at safe speeds.
- Drive sober.
- Pay attention.

All Minnesotans can mitigate the likelihood of a crash and death to themselves, family and friends with these four simple actions. United in purpose, commitment and action, we can drive Minnesota *Toward Zero Deaths*.

A handwritten signature in black ink that reads "Michael Campion".

Michael Campion, Commissioner

## Minnesota Traffic Crashes in 2006 OVERVIEW

Driving may be the most dangerous thing you do. This edition of *Minnesota Motor Vehicle Crash Facts* summarizes the crashes, deaths, and injuries that occurred in Minnesota during 2006. We hope that the information contained within this book will help you and others use our roadways more safely.

### **In 2006,**

- 78,745 traffic crashes were reported to the Department of Public Safety
- 144,522 motor vehicles were involved
- 198,027 people were involved
- 494 people died
- 35,025 people were injured
- \$1,529,411,600 estimated economic cost to Minnesota

### **On an average day in 2006,**

- 216 crashes
- 1.4 deaths
- 96 people injured
- \$4,190,169 average daily cost

### **2006 crashes that involved alcohol**

- 4,688 crashes
- 166 deaths
- 3,501 people injured
- \$277,672,100 estimated economic cost

### **Highlights from the 2006 *Crash Facts* edition**

- **Traffic fatalities decrease for third year in a row.**  
In 2006, Minnesota experienced a decrease in traffic fatalities of 11.6% from the previous year. Despite this decrease, traffic fatalities in Minnesota remain at epidemic levels. We urge all drivers to pay attention while driving, to drive at legal speeds, and to always be sober when driving.
- **Safety belt use in Minnesota is 83%.**  
It is a known fact that seat belts save lives. Observational studies in 2006 show that belt use by front seat drivers and passengers was 83%. Minnesota can do better. Because there is no 'primary' seat belt law in Minnesota, we urge all motor vehicle occupants to buckle up!
- **The fatality rate in Minnesota per 100 million vehicle miles traveled (VMT) decreased.**  
Because of the decrease in traffic deaths, the VMT-based fatality rate for 2006 is 0.87. This is a decrease from 2005 when the fatality rate was 0.99. The VMT fatality rate has shown dramatic improvement in the last three decades. For example, 1990 had a rate of 1.47, 1980 had a rate of 3.03, and 1970 had a rate of 4.41. This means that, as more drivers travel more miles each year, the number of people killed in proportion to the number of miles driven has decreased as a general rule.

## **CRASH FACTS ORGANIZATION**

*Crash Facts* has a wealth of statistical information about traffic crashes in Minnesota. To help you find your way around the book, we've prepared this basic user's guide.

### **Introduction**

Starting on page 1, the introduction discusses the history, societal costs, and general cause of crashes. Use it to find the following information:

- 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**

This section starts on page 7, and it describes the aggregate of all traffic crashes in the state last year. 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**

Starting on page 38, you'll 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 since 1990 (Tables 2.02, 2.03, and 2.04)
- Persons killed and injured in alcohol-related crashes by age (2.05)

### **Section III: Safety Equipment Use by Vehicle Occupants in 2006 Crashes**

Seat belt and related information can be found starting on page 51. This section focuses on safety belt use by people in cars and trucks, and includes a table showing seat belt use rates since 1986.

### **Section IV: Motorcycle Crashes**

The motorcycle section starts on page 60; it focuses on crashes involving a motorcycle.

- This section does not include all-terrain vehicles or mopeds.

### **Section V: Truck Crashes**

This section, which starts on page 69, focuses on crashes that involved a truck, normally a "heavy commercial vehicle."

- Crashes involving pickup trucks are not included in this section.

### **Section VI: Pedestrian Crashes**

Pedestrian crash information starts on page 77. The section does not include crashes unless a motor vehicle was involved (so there are no data from pedestrian/train crashes or pedestrian/bicycle crashes).

### **Section VII: Bicycle Crashes**

This section focuses on motor-vehicle/bicycle crashes, and it starts on page 86.

- Does not include bicycle crashes not on public highways and roadways.
- Does not include bicycle crashes unless a motor vehicle was involved.

### **Section VIII: School Bus Crashes**

- School bus crash information starts on page 91. This section focuses on crashes that involved a school bus as a "contact vehicle."
- Does not include crashes where a school bus was indirectly involved.  
(This data collected beginning 2003)

### **Section IX: Motor Vehicle/Train Crashes**

Information about train crashes starts on page 96. Crashes that do not involve a motor vehicle (that is, a crash between a pedestrian or a bicyclist and a train) are not included in this section.

### **Definitions:**

The definitions section at the end of the book attempts to succinctly define key terms.

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# INTRODUCTION

At the end of the 2006 calendar year, 3,871,160 people held Minnesota driver licenses and 4,760,872 motor vehicles were registered in the state. Vehicles traveled almost fifty-seven billion miles on public roadways in the state. There were 78,745 traffic crashes; 494 people died and 35,025 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 the National Safety Council's economic cost figures, the most recent of which are based on 2005 data. Based on those, the total economic loss from 2006 traffic crashes in Minnesota was \$1,529,411,600, a figure that is calculated as follows:

## Cost of Motor Vehicle Crashes in 2006

|        |                   |   |             |   |                 |
|--------|-------------------|---|-------------|---|-----------------|
| 494    | deaths            | @ | \$1,150,000 | = | \$568,100,000   |
| 1,844  | severe injuries   | @ | \$60,500    | = | \$111,562,000   |
| 9,323  | moderate injuries | @ | \$19,600    | = | \$182,730,800   |
| 23,858 | minor injuries    | @ | \$11,100    | = | \$264,823,800   |
| 53,626 | property damage   |   |             |   |                 |
|        | crashes           | @ | \$7,500     | = | \$402,195,000   |
|        | Total             | = |             |   | \$1,529,411,600 |

## 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. Public policy cannot address the infinite number of individual causes imaginable.

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. Motorcyclists and bicyclists should wear helmets. Vehicle occupants should use safety belts. Infants and toddlers should always be placed in child safety seats, and booster seats should be used for older children.

*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 signing.

*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 a reverse 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 eight teenage drivers are involved in crashes each year. The involvement rate drops off for successive age groups. For example, it is about 1 in 25 for drivers in their forties. The aging of the 'baby boom' has reduced crash incidence, however, their children who are now reaching driving age 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 2006, there were 43,300 traffic fatalities throughout the country and 494 in Minnesota. The respective rates per hundred million miles of travel were 1.44 and 0.87. 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 mandatory 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.

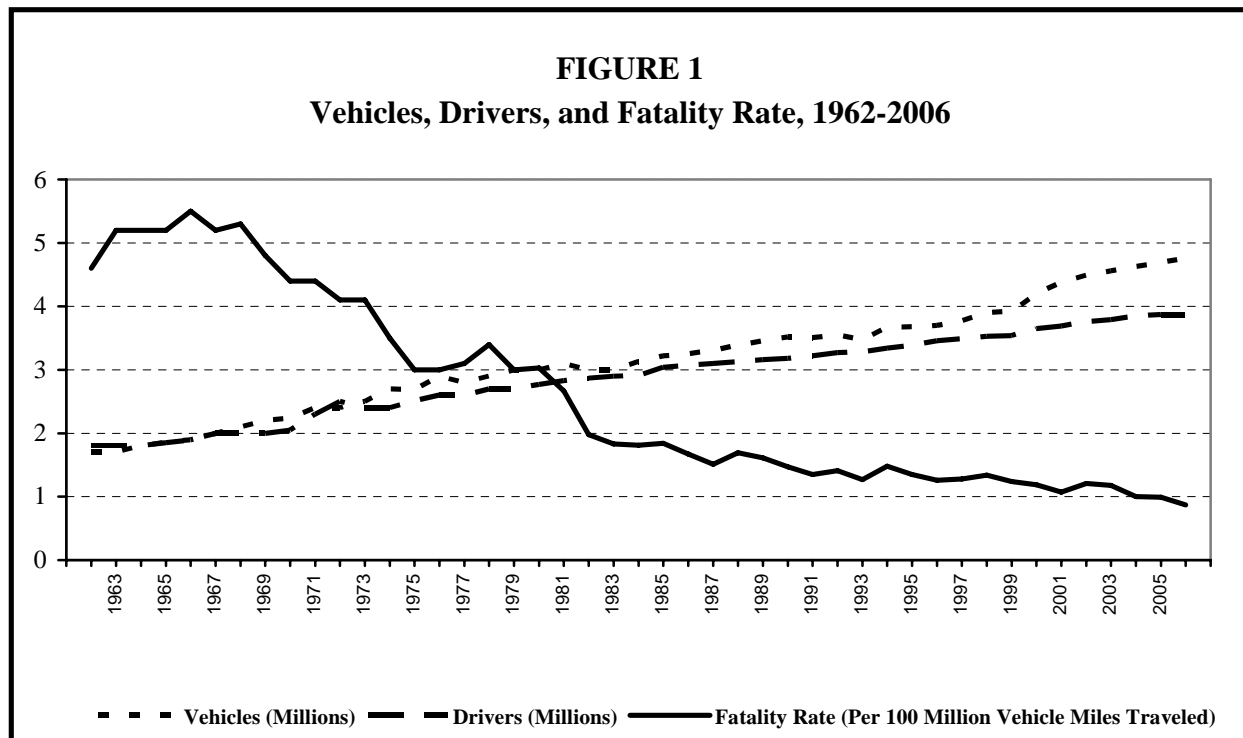
#### Legislative requirement

*Minnesota Motor Vehicle Crash Facts* is produced annually by the Office of Traffic Safety, Minnesota Department of Public 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.

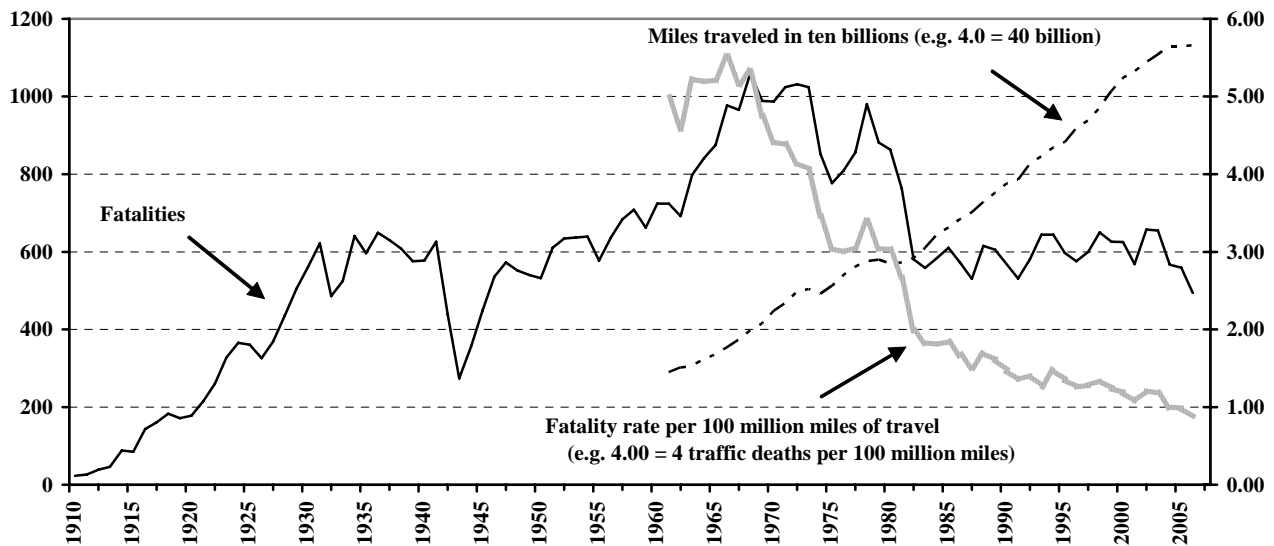
*Crash Facts* is divided into nine sections. The first present's information on the aggregate of all crashes reported to the state during the preceding calendar year. The remaining eight sections focus on specific areas of interest to policy makers and the public. Section II deals with alcohol-related 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 five sections focus on crashes that involved motorcycles (section IV), trucks (section V), pedestrians (section VI), bicycles (section VII), and school buses (section VIII). The final section (IX) summarizes information on collisions between motor vehicles and trains.



**TABLE 1**  
**Minnesota Traffic Fatalities, 1910 – 2006**  
 Since 1961: Vehicle Miles Traveled (Billions) and Fatality Rates (Per 100 Million VMT)

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

**FIGURE 2**  
**Minnesota Traffic Fatalities, 1910 - 2006**  
 Since 1961: Miles Traveled (in Ten Billions) and Fatality Rates (per 100 Million VMT)



**TABLE 2**  
**DRIVER LICENSE\* SUMMARY BY AGE, 2001 - 2006**

| <b>Age</b> | <b>2001</b> | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> |
|------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 15         | 27,878      | 28,880      | 29,800      | 31,638      | 31,161      | 26,360      |
| 16         | 56,361      | 55,286      | 55,614      | 55,812      | 55,398      | 53,520      |
| 17         | 62,068      | 63,011      | 61,329      | 61,286      | 61,431      | 60,695      |
| 18         | 64,963      | 66,876      | 67,491      | 66,397      | 65,440      | 64,617      |
| 19         | 69,232      | 68,609      | 69,792      | 71,026      | 68,842      | 67,917      |
| 20         | 70,351      | 70,985      | 69,385      | 71,513      | 71,780      | 68,826      |
| Under 21   | 350,853     | 353,647     | 353,411     | 357,672     | 354,052     | 341,935     |
| 15 – 19    | 280,502     | 282,662     | 284,026     | 286,159     | 282,272     | 273,109     |
| 20 – 24    | 339,486     | 352,022     | 352,818     | 361,589     | 361,839     | 353,949     |
| 25 – 29    | 309,079     | 320,420     | 326,355     | 339,712     | 348,538     | 353,241     |
| 30 – 34    | 344,952     | 343,933     | 333,363     | 330,480     | 319,537     | 311,685     |
| 35 – 39    | 377,905     | 366,661     | 354,509     | 350,988     | 349,515     | 342,520     |
| 40 – 44    | 408,621     | 411,413     | 408,428     | 403,774     | 390,439     | 372,638     |
| 45 – 49    | 368,930     | 379,702     | 386,086     | 395,178     | 400,876     | 401,715     |
| 50 – 54    | 316,321     | 325,664     | 335,331     | 345,855     | 355,524     | 361,197     |
| 55 – 59    | 238,022     | 252,631     | 264,204     | 280,193     | 296,390     | 306,185     |
| 60 – 64    | 180,723     | 192,074     | 200,322     | 208,133     | 212,324     | 226,262     |
| 65 – 69    | 146,107     | 149,272     | 154,103     | 158,035     | 163,125     | 168,693     |
| 70 – 74    | 133,205     | 132,368     | 131,255     | 131,277     | 131,383     | 132,725     |
| 75 – 79    | 111,876     | 113,370     | 114,350     | 114,333     | 114,220     | 114,750     |
| 80 – 84    | 78,351      | 80,361      | 82,681      | 84,761      | 85,056      | 86,274      |
| 85 & Older | 51,419      | 54,940      | 60,348      | 61,389      | 61,055      | 66,217      |
| Total      | 3,685,499   | 3,757,493   | 3,788,179   | 3,851,856   | 3,872,093   | 3,871,160   |

\* 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, 2001 - 2006**

| <b>Type of Vehicle*</b>       | <b>2001</b>      | <b>2002</b>      | <b>2003</b>      | <b>2004</b>      | <b>2005</b>      | <b>2006</b>      |
|-------------------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| Passenger Cars                | 3,072,081        | 3,156,906        | 3,196,960        | 3,239,418        | 3,288,446        | 3,353,858        |
| Pickups                       | 866,434          | 890,648          | 895,409          | 902,941          | 894,230          | 883,623          |
| Trucks                        | 190,314          | 194,695          | 197,952          | 206,419          | 211,577          | 215,542          |
| Recreational Vehicles         | 39,649           | 39,584           | 39,828           | 39,853           | 39,032           | 37,978           |
| Motorcycles                   | 142,822          | 149,360          | 161,793          | 174,195          | 185,087          | 197,735          |
| Motorized Bicycles            | 6,277            | 6,500            | 7,493            | 8,670            | 9,432            | 10,726           |
| School Buses                  | 5,926            | 5,938            | 5,979            | 5,989            | 6,093            | 6,257            |
| Buses                         | 5,037            | 5,001            | 5,058            | 5,059            | 5,018            | 5,235            |
| Van Pool                      | 267              | 246              | 219              | 201              | 193              | 197              |
| Tax Exempt Vehicles           | 48,008           | 41,271           | 44,316           | 47,919           | 49,845           | 49,721           |
| <b>Motor Vehicle Subtotal</b> | <b>4,376,815</b> | <b>4,490,149</b> | <b>4,555,007</b> | <b>4,630,664</b> | <b>4,688,953</b> | <b>4,760,872</b> |
| Trailers                      | 1,052,751        | 875,677          | 1,357,019        | 1,388,642        | 1,448,877        | 1,445,556        |
| Classic Motor Vehicles        | 127,239          | 132,964          | 139,784          | 146,541          | 153,383          | 153,594          |
| Classic Motorcycles           | 4,077            | 4,599            | 5,110            | 5,703            | 6,266            | 6,855            |
| <b>Total Registrations</b>    | <b>5,560,882</b> | <b>5,503,389</b> | <b>6,056,920</b> | <b>6,171,550</b> | <b>6,297,479</b> | <b>6,366,877</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 cars include vans, except for "van pools." A van pool 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.
- 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 past two decades, approximately 90,000 traffic crashes each year have been reported to the Minnesota Department of Public Safety. This is a very large number that is commensurate with the critical dependence we have placed upon motor vehicles for all sorts of transportation needs. Preventing the number of traffic crashes remains a challenge each year for public safety officials because:

By the end of the calendar year 2006:

- The population of Minnesota approached 5.3 million.
- Over 4.7 million motor vehicles were registered.
- There were almost 3.9 million licensed drivers.
- Almost 57 billion miles were driven.

These numbers increase steadily. And, as more and more roads are constructed, the reader can see that the citizens of Minnesota face an extreme challenge in reducing this dependence on the motor vehicle, and with it, the high number and severity of traffic crashes.

### Traffic Crashes in 2006

There were 78,745 traffic crashes in 2006. This amount is actually the lowest number of crashes reported in Minnesota since the early 1960's.

There were 494 deaths on Minnesota roads in 2006, a decrease for the third year in a row. In actuality, the number of traffic deaths has been very high in the recent past. In the last 10 years, Minnesota has averaged 600 traffic deaths per year. The warmer weather in winters may be a cause for this, but many other factors contribute to the crash death epidemic. Among them; speed, failure to wear seat belts, drinking and driving, driver inattention, and inexperienced younger drivers.

The following facts will help to give an overall picture of 2006 traffic crashes; In addition to the 494 killed...

- 35,025 were injured.
- 1,844 of these were severe injuries.
- 9,323 of these were moderate injuries.
- 23,858 of these were minor injuries.
- In all crashes, 198,027 people were involved.
- In all crashes, 144,522 motor vehicles were involved.
- There were 944 crashes that involved at least 1 bicyclist.
- There were 915 crashes that involved at least 1 pedestrian.
- One-third of all crashes involved just one vehicle.
- One-third of all fatalities were less than 25 years of age.
- 2 of 3 fatalities occurred in rural areas (< 5,000 pop.).
- In all, 7,590 crashes were "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 3,871,160 licensed drivers in the state. Fifteen to 24 year olds make up 16% of the licensed drivers, yet they accounted for 28% of the crash-involved drivers. Teenage drivers are the worst, from this perspective. In 2006, they represented 7% of the licensed drivers, but 14% of the crash-involved drivers. By contrast drivers over 65 made up 15% of the driving population, but accounted for just 7% of the crash-involved drivers in 2006. Crash-involved drivers are also more likely to be males: 72% of drivers in fatal crashes were male; 55% of drivers in all crashes were male.

Traffic crashes are the leading cause of death to young people. In the state last year, 196 people under age 30 died in crashes. That represents 40% 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 7% of all traffic crashes in 2006 but accounted for 17% of the traffic fatalities.

Among people injured, young people especially pay the price. There were 16,289 people under age 30 who were injured; that represents 47% of the total number of people injured. People aged 65 and over accounted for just 7% of all traffic injuries.

### WHY they happened

Because defective equipment (such as a flat tire) may be a contributing factor in a particular traffic crash, an officer at the scene will list 0, 1, or 2 contributing factors for each 'vehicle' involved. Thus, the 'cause' of a crash is sometimes not entirely clear as multiple vehicular factors in a crash may be listed along side multiple human factors. However, vehicular factors are not cited as often as human factors. Human behavior factors usually give us a clear indication of why a traffic crash occurs.

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 younger drivers. For older drivers, "driver inattention or distraction" is cited most often. "Chemical impairment" (typically meaning alcohol impairment) is the second most cited factor for drivers aged 20-29. 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. For the under-65 drivers, two additional



contributing factors are also frequently cited. These are "following too closely" and "illegal or unsafe speed."

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

Victims of traffic crashes are mostly car, pickup, sport utility vehicle (SUV) or van occupants. Of the 494 traffic fatalities, 357 (72%) were from these 4 vehicle types. There were also 38 pedestrians, 70 motorcyclists, and 8 bicyclists who died in traffic crashes. There were no deaths among school bus occupants, and only 11 fatalities among commercial truck occupants. There is a similar pattern among people who were injured: of the 35,025 injured, 87% were car, van, SUV, or pickup occupants, and the remainder were from several categories, mainly motorcycle riders, pedestrians, and bicyclists.

A collision with another vehicle is the leading crash type. Almost half (42%) of the fatal crashes and two-thirds (64%) 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 (13% of the total), collision with a parked motor vehicle (7% of the total), and collision with deer (5% of the total).

Most crashes occur in good driving conditions. Over half (53%) of fatal crashes, and 65% of nonfatal crashes occurred during daylight hours. A majority of crashes occur also in good weather conditions. Over half (61%) of fatal crashes, and 58% of nonfatal crashes occurred during "clear" weather. Road surface conditions where crashes occurred were usually good. For fatal crashes, 76% were on dry roads, 11% were on wet roads, and 9% were on snowy or icy roads. For nonfatal crashes, 72% were on dry roads, 13% on wet roads, and 12% 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. In the year 2006, 308 (68%) of all fatal crashes occurred in rural areas, which are defined as having a population of less than 5,000 people. And, 145 (32%) of all fatal crashes occurred on county state aid highways, and 107 of those were in rural areas. Injury and property damage crashes are more common in urban areas. Over two-thirds of them happened inside cities of 5,000 or more population. The seven county metro area, with over half the state's population, accounted for only 29% of the fatal crashes, but 58% of all crashes.

#### **WHEN they occurred**

In the year 2006, fatal crashes occurred most often in the 5:00-6:00pm time period (35) and the 7:00-8:00am time period (28). In fact, a fatal traffic crash is most likely to occur during morning and afternoon rush-hour time periods. This observable fact has changed since the early 1990's when most fatal crashes occurred during the time period of 10:00pm-2:00am at night. This phenomenon may be explained by the smarter deployment of law enforcement, and the public's awareness of the dangers of drinking and driving. Similarly, total crashes were also concentrated in the late afternoon: Almost 30% occurred in the four hours from 3:00 to 7:00 PM. This event has not changed over the years, as most crashes have always occurred during the afternoon rush hour period. Fridays and Saturdays had the most fatal crashes (together accounting for 30%). Total crashes are more evenly distributed across days of the week, though Fridays had the most (17%) and Sundays had the least (11%).

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. The year 2006 followed this axiom in the sense that there was *not* a lot of harsh winter weather, thus, helping to reduce the number of crashes reported about 10% from the previous year. As mentioned earlier, though, other factors are involved than strictly the weather. These include speeding, drinking and driving, not wearing a safety restraint, and not paying attention while driving.

#### **Can traffic crashes be prevented?**

In the past two decades, approximately 600 people have been killed and 45,000 people have been injured on our roadways each and every year. We must acknowledge the fact that Minnesota is still experiencing an "epidemic" concerning traffic crashes. 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 uses the term "crash" instead of "accident." This is because a traffic crash can be prevented. Coupled with engineering solutions, changes in the behavior of all drivers will surely help attack the public threat of tragic roadway fatalities and injuries.

The Office of Traffic Safety implores the reader to spread the word: Driving is a privilege; aggressive driving is not. Do not drink and drive! Wear your seat belt! Slow down! Pay attention!

TABLE 1.01

## TRAFFIC SAFETY STATISTICS SUMMARY, 1965 - 2006

| Year | Total<br>Crashes | Persons |              | Licensed<br>Drivers<br>(million) | Motor<br>Vehicles<br>(MV)<br>(million) | State<br>Popu-<br>lation<br>(million) | Vehicle<br>Miles<br>Traveled<br>(VMT)<br>(billion) | Crash Rates          |                                   |                       | Fatality Rates       |                                   |                       |
|------|------------------|---------|--------------|----------------------------------|----------------------------------------|---------------------------------------|----------------------------------------------------|----------------------|-----------------------------------|-----------------------|----------------------|-----------------------------------|-----------------------|
|      |                  | Killed  | In-<br>jured |                                  |                                        |                                       |                                                    | Per<br>100,000<br>MV | Per<br>100,000<br>Popu-<br>lation | Per<br>100 Mil<br>VMT | Per<br>100,000<br>MV | Per<br>100,000<br>Popu-<br>lation | Per<br>100 Mil<br>VMT |
|      |                  |         |              |                                  |                                        |                                       |                                                    |                      |                                   |                       |                      |                                   |                       |
| (a)  | (b)              | (c)     | (d)          | (e)                              | (f)                                    | (g)                                   | (h)                                                | (i)                  | (j)                               | (k)                   | (l)                  | (m)                               | (n)                   |
| 1965 | 83,329           | 875     | 50,847       | 1.85                             | 1.86                                   | 3.57                                  | 16.8                                               | 4,480                | 2,334                             | 496                   | 47.0                 | 24.5                              | 5.2                   |
| 1970 | 99,404           | 987     | 38,538       | 2.05                             | 2.24                                   | 3.80                                  | 22.4                                               | 4,438                | 2,616                             | 444                   | 44.1                 | 26.0                              | 4.4                   |
| 1975 | 123,206          | 777     | 41,931       | 2.51                             | 2.69                                   | 3.92                                  | 25.6                                               | 4,580                | 3,143                             | 481                   | 28.9                 | 19.8                              | 3.0                   |
| 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                                   | 5.26                                  | 56.6                                               | 1,654                | 1,496                             | 139                   | 10.4                 | 9.4                               | 0.87                  |

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) Estimates for 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**  
**2001 - 2006**

|                                            | 2001          | 2002          | 2003       | 2004          | 2005          | 2006          | Record High    |                     |
|--------------------------------------------|---------------|---------------|------------|---------------|---------------|---------------|----------------|---------------------|
| <b>Fatal Crashes</b>                       | <b>508</b>    | <b>590</b>    | <b>583</b> | <b>520</b>    | <b>500</b>    | <b>456</b>    | <b>878</b>     | <b>(1973)</b>       |
| <b>Injury Crashes</b>                      | <b>29,273</b> | <b>28,140</b> | <b>N/A</b> | <b>28,066</b> | <b>26,618</b> | <b>24,663</b> | <b>33,686</b>  | <b>(1978)</b>       |
| Severe                                     | 2,274         | 2,226         | N/A        | 1,937         | 1,660         | 1,528         | 5,109          | (1984) <sup>1</sup> |
| Moderate                                   | 10,851        | 10,460        | N/A        | 9,257         | 7,958         | 7,111         | 12,326         | (1985) <sup>1</sup> |
| Minor                                      | 16,148        | 15,454        | N/A        | 16,872        | 17,000        | 16,024        | 18,578         | (1996) <sup>1</sup> |
| <b>PDO Crashes</b>                         | <b>69,203</b> | <b>66,239</b> | <b>N/A</b> | <b>62,688</b> | <b>60,695</b> | <b>53,626</b> | <b>94,810</b>  | <b>(1975)</b>       |
| <b>Total Crashes</b>                       | <b>98,984</b> | <b>94,969</b> | <b>N/A</b> | <b>91,274</b> | <b>87,813</b> | <b>78,745</b> | <b>123,106</b> | <b>(1975)</b>       |
| <b>Total Injuries</b>                      | <b>42,223</b> | <b>40,677</b> | <b>N/A</b> | <b>40,073</b> | <b>37,686</b> | <b>35,025</b> | <b>50,332</b>  | <b>(1978)</b>       |
| Severe                                     | 2,949         | 2,807         | N/A        | 2,424         | 2,019         | 1,844         | 6,573          | (1984) <sup>1</sup> |
| Moderate                                   | 14,861        | 14,485        | N/A        | 12,416        | 10,453        | 9,323         | 17,670         | (1985) <sup>1</sup> |
| Minor                                      | 24,413        | 23,385        | N/A        | 25,233        | 25,214        | 23,858        | 28,631         | (1996) <sup>1</sup> |
| <b>Total Fatalities</b>                    | <b>568</b>    | <b>657</b>    | <b>655</b> | <b>567</b>    | <b>559</b>    | <b>494</b>    | <b>1,060</b>   | <b>(1968)</b>       |
| Motor Vehicle Occupants                    | 460           | 544           | 526        | 461           | 440           | 373           | 544            | (2002) <sup>1</sup> |
| Motorcycle                                 | 42            | 47            | 62         | 50            | 59            | 70            | 121            | (1980)              |
| Pedestrian                                 | 46            | 50            | 52         | 37            | 44            | 38            | 157            | (1971)              |
| Bicycle                                    | 7             | 7             | 6          | 10            | 7             | 8             | 24             | (1977)              |
| All Terrain Vehicle                        | 4             | 1             | 4          | 4             | 7             | 2             | 9              | (1986)              |
| Snowmobile                                 | 3             | 2             | 2          | 1             | 2             | 3             | 9              | (1984)              |
| <b>Minnesota Fatality Rate<sup>3</sup></b> | 1.07          | 1.21          | 1.18       | 1.00          | 0.99          | 0.87          | 23.6           | (1934)              |
| <b>U.S. Fatality Rate<sup>3</sup></b>      | 1.51          | 1.51          | 1.48       | 1.44          | 1.45          | 1.44          | 18.0           | (1925)              |
| <b>Minnesota Economic Loss (millions)</b>  | \$1,619       | \$1,712       | N/A        | \$1,769       | \$1,666       | \$1,529       | \$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

**2006 FATALITIES BY TRAFFIC ROLE, GENDER, AND AGE**

| Type of Vehicle     | Position in Vehicle | Gender | Age |       |       |       |       |       |       |            | Total |
|---------------------|---------------------|--------|-----|-------|-------|-------|-------|-------|-------|------------|-------|
|                     |                     |        | 0-9 | 10-19 | 20-29 | 30-39 | 40-49 | 50-59 | 60-69 | 70 & Older |       |
| Car                 | Driver              | Male   | 0   | 15    | 25    | 11    | 15    | 7     | 7     | 17         | 97    |
|                     |                     | Female | 0   | 12    | 7     | 7     | 11    | 10    | 7     | 10         | 64    |
|                     | Passenger           | Male   | 0   | 14    | 15    | 4     | 1     | 3     | 0     | 5          | 42    |
|                     |                     | Female | 0   | 8     | 7     | 2     | 1     | 3     | 0     | 7          | 28    |
| Pickup              | Driver              | Male   | 0   | 3     | 14    | 7     | 7     | 8     | 4     | 1          | 44    |
|                     |                     | Female | 0   | 2     | 1     | 0     | 0     | 2     | 0     | 1          | 6     |
|                     | Passenger           | Male   | 1   | 1     | 0     | 0     | 1     | 1     | 0     | 1          | 5     |
|                     |                     | Female | 1   | 2     | 2     | 0     | 1     | 1     | 0     | 0          | 7     |
| SUV                 | Driver              | Male   | 0   | 1     | 5     | 3     | 5     | 1     | 2     | 3          | 20    |
|                     |                     | Female | 0   | 0     | 2     | 4     | 2     | 5     | 2     | 1          | 16    |
|                     | Passenger           | Male   | 0   | 1     | 0     | 0     | 0     | 0     | 1     | 1          | 3     |
|                     |                     | Female | 1   | 1     | 1     | 0     | 1     | 0     | 0     | 0          | 4     |
| Van                 | Driver              | Male   | 0   | 1     | 1     | 0     | 2     | 3     | 0     | 3          | 10    |
|                     |                     | Female | 0   | 1     | 0     | 2     | 0     | 1     | 0     | 1          | 5     |
|                     | Passenger           | Male   | 0   | 1     | 1     | 0     | 0     | 0     | 0     | 0          | 2     |
|                     |                     | Female | 0   | 0     | 0     | 1     | 0     | 0     | 0     | 3          | 4     |
| Truck               | Driver              | Male   | 0   | 0     | 1     | 3     | 2     | 2     | 1     | 0          | 9     |
|                     |                     | Female | 0   | 0     | 0     | 0     | 2     | 0     | 0     | 0          | 2     |
| Motorcycle          | Driver              | Male   | 0   | 1     | 19    | 8     | 19    | 12    | 2     | 1          | 62    |
|                     |                     | Female | 0   | 0     | 0     | 1     | 2     | 0     | 0     | 1          | 4     |
|                     | Passenger           | Male   | 0   | 0     | 0     | 0     | 0     | 0     | 0     | 0          | 0     |
|                     |                     | Female | 0   | 0     | 1     | 1     | 0     | 2     | 0     | 0          | 4     |
| Other Motor Vehicle | Driver              | Male   | 0   | 3     | 1     | 0     | 0     | 0     | 2     | 1          | 7     |
|                     |                     | Female | 0   | 0     | 0     | 0     | 0     | 0     | 0     | 0          | 0     |
|                     | Passenger           | Male   | 0   | 0     | 0     | 0     | 0     | 0     | 0     | 0          | 0     |
|                     |                     | Female | 0   | 1     | 1     | 0     | 0     | 0     | 0     | 1          | 3     |
| Bicyclist           |                     | Male   | 1   | 3     | 1     | 0     | 0     | 0     | 0     | 1          | 6     |
|                     |                     | Female | 1   | 0     | 1     | 0     | 0     | 0     | 0     | 0          | 2     |
| Pedestrian          |                     | Male   | 0   | 5     | 3     | 2     | 4     | 3     | 0     | 3          | 20    |
|                     |                     | Female | 0   | 3     | 3     | 1     | 4     | 2     | 1     | 4          | 18    |
| Total               |                     |        |     |       |       |       |       |       |       |            |       |
| Fatalities          |                     | Male   | 2   | 49    | 86    | 38    | 56    | 40    | 19    | 37         | 327   |
|                     |                     | Female | 3   | 30    | 26    | 19    | 24    | 26    | 10    | 29         | 167   |
| Total               |                     |        | 5   | 79    | 112   | 57    | 80    | 66    | 29    | 66         | 494   |

Note: The vehicle types for the 10 fatalities in the 'Other Motor Vehicle' category consisted of: three snowmobiles, two ATV's, two hit-and-run vehicles, one motorhome, one taxicab, and one roadway maintenance vehicle.

TABLE 1.04

**AGE AND GENDER OF PERSONS KILLED OR INJURED IN 2006 CRASHES**

| Age Group      | Persons Killed |        |       | Persons Injured |        |         |        |
|----------------|----------------|--------|-------|-----------------|--------|---------|--------|
|                | Male           | Female | Total | Male            | Female | Unknown | Total  |
| 00 - 03        | 1              | 2      | 3     | 201             | 199    | 2       | 402    |
| 04 - 10        | 3              | 1      | 4     | 516             | 546    | 6       | 1,068  |
| 11 - 14        | 3              | 4      | 7     | 455             | 420    | 4       | 879    |
| Total Under 15 | 7              | 7      | 14    | 1,172           | 1,165  | 12      | 2,349  |
| 15             | 4              | 1      | 5     | 209             | 252    | 2       | 463    |
| 16             | 8              | 11     | 19    | 532             | 718    | 4       | 1,254  |
| 17             | 8              | 4      | 12    | 566             | 758    | 3       | 1,327  |
| 18             | 12             | 6      | 18    | 647             | 634    | 3       | 1,284  |
| 19             | 12             | 4      | 16    | 600             | 605    | 3       | 1,208  |
| 20             | 8              | 6      | 14    | 529             | 550    | 12      | 1,091  |
| Total 15 - 20  | 52             | 32     | 84    | 3,083           | 3,517  | 27      | 6,627  |
| Total Under 21 | 59             | 39     | 98    | 4,255           | 4,682  | 39      | 8,976  |
| 00 - 04        | 1              | 2      | 3     | 258             | 265    | 5       | 528    |
| 05 - 09        | 1              | 1      | 2     | 391             | 397    | 3       | 791    |
| 10 - 14        | 5              | 4      | 9     | 523             | 503    | 4       | 1,030  |
| 15 - 19        | 44             | 26     | 70    | 2,554           | 2,967  | 15      | 5,536  |
| 20 - 24        | 49             | 17     | 66    | 2,521           | 2,375  | 24      | 4,920  |
| 25 - 29        | 37             | 9      | 46    | 1,708           | 1,770  | 6       | 3,484  |
| 30 - 34        | 23             | 13     | 36    | 1,225           | 1,317  | 5       | 2,547  |
| 35 - 39        | 15             | 6      | 21    | 1,154           | 1,361  | 2       | 2,517  |
| 40 - 44        | 27             | 13     | 40    | 1,257           | 1,367  | 6       | 2,630  |
| 45 - 49        | 29             | 11     | 40    | 1,249           | 1,329  | 1       | 2,579  |
| 50 - 54        | 18             | 15     | 33    | 997             | 1,169  | 1       | 2,167  |
| 55 - 59        | 22             | 11     | 33    | 803             | 874    | 3       | 1,680  |
| 60 - 64        | 6              | 4      | 10    | 515             | 579    | 1       | 1,095  |
| 65 - 69        | 13             | 6      | 19    | 337             | 413    | 2       | 752    |
| 70 - 74        | 9              | 6      | 15    | 284             | 306    | 2       | 592    |
| 75 - 79        | 12             | 4      | 16    | 214             | 289    | 0       | 503    |
| 80 - 84        | 9              | 10     | 19    | 165             | 214    | 0       | 379    |
| 85 & Older     | 7              | 9      | 16    | 121             | 132    | 0       | 253    |
| Not Stated     | 0              | 0      | 0     | 264             | 412    | 366     | 1,042  |
| Total          | 327            | 167    | 494   | 16,540          | 18,039 | 446     | 35,025 |

See Figure 1.01 on page 12 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 2006 CRASHES**

| Age Group      | Drivers in Fatal Crashes |        |            |       | Drivers in All Crashes |        |            |         |
|----------------|--------------------------|--------|------------|-------|------------------------|--------|------------|---------|
|                | Male                     | Female | Not Stated | Total | Male                   | Female | Not Stated | Total   |
| 14 & Younger   | 1                        | 0      | 0          | 1     | 77                     | 25     | 6          | 108     |
| 15             | 2                        | 2      | 0          | 4     | 159                    | 107    | 1          | 267     |
| 16             | 8                        | 9      | 0          | 17    | 2,193                  | 2,198  | 1          | 4,392   |
| 17             | 14                       | 13     | 0          | 27    | 2,532                  | 2,321  | 2          | 4,855   |
| 18             | 17                       | 8      | 0          | 25    | 2,665                  | 2,055  | 7          | 4,727   |
| 19             | 13                       | 4      | 0          | 17    | 2,471                  | 1,861  | 7          | 4,339   |
| 20             | 14                       | 3      | 0          | 17    | 2,357                  | 1,884  | 18         | 4,259   |
| Total Under 21 | 69                       | 39     | 0          | 108   | 12,454                 | 10,451 | 42         | 22,947  |
| 00 - 04        | 0                        | 0      | 0          | 0     | 14                     | 3      | 6          | 23      |
| 05 - 09        | 0                        | 0      | 0          | 0     | 7                      | 3      | 0          | 10      |
| 10 - 14        | 1                        | 0      | 0          | 1     | 56                     | 19     | 0          | 75      |
| 15 - 19        | 54                       | 36     | 0          | 90    | 10,020                 | 8,542  | 18         | 18,580  |
| 20 - 24        | 68                       | 13     | 0          | 81    | 10,918                 | 8,611  | 58         | 19,587  |
| 25 - 29        | 56                       | 17     | 0          | 73    | 8,355                  | 6,146  | 25         | 14,526  |
| 30 - 34        | 38                       | 13     | 0          | 51    | 6,627                  | 4,796  | 18         | 11,441  |
| 35 - 39        | 34                       | 13     | 0          | 47    | 6,492                  | 4,852  | 6          | 11,350  |
| 40 - 44        | 43                       | 19     | 0          | 62    | 6,606                  | 4,962  | 7          | 11,575  |
| 45 - 49        | 54                       | 16     | 0          | 70    | 6,411                  | 4,600  | 9          | 11,020  |
| 50 - 54        | 25                       | 15     | 0          | 40    | 5,313                  | 3,766  | 1          | 9,080   |
| 55 - 59        | 43                       | 10     | 0          | 53    | 4,276                  | 2,966  | 6          | 7,248   |
| 60 - 64        | 20                       | 11     | 0          | 31    | 2,797                  | 1,785  | 1          | 4,583   |
| 65 - 69        | 17                       | 8      | 0          | 25    | 1,851                  | 1,236  | 0          | 3,087   |
| 70 - 74        | 10                       | 5      | 0          | 15    | 1,376                  | 944    | 1          | 2,321   |
| 75 - 79        | 14                       | 3      | 0          | 17    | 1,085                  | 884    | 0          | 1,969   |
| 80 - 84        | 11                       | 7      | 0          | 18    | 837                    | 640    | 0          | 1,477   |
| 85 & Older     | 5                        | 4      | 0          | 9     | 494                    | 396    | 0          | 890     |
| Not Stated     | 0                        | 0      | 9          | 9     | 549                    | 267    | 6,178      | 6,994   |
| Total          | 493                      | 190    | 9          | 692   | 74,084                 | 55,418 | 6,334      | 135,836 |

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 shown in this table.)

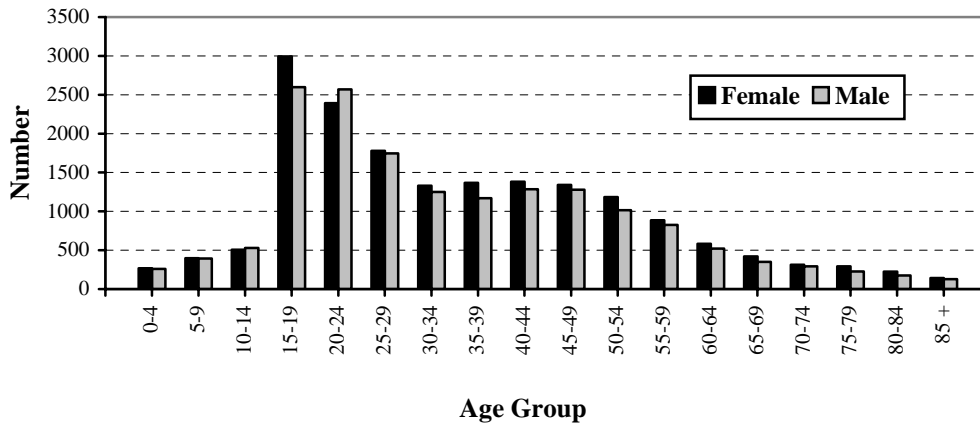
TABLE 1.06

**LICENSED VS. CRASH-INVOLVED DRIVERS BY AGE, 2006**

| <b>Age Group</b> | <b>Percentage of All<br/>Licensed Drivers</b> | <b>Percentage of Drivers in</b> |                           |                                    |                        |
|------------------|-----------------------------------------------|---------------------------------|---------------------------|------------------------------------|------------------------|
|                  |                                               | <b>Fatal<br/>Crashes</b>        | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage Crashes</b> | <b>All<br/>Crashes</b> |
| 14 & Younger     | 0.0%                                          | 0.1%                            | 0.1%                      | 0.1%                               | 0.1%                   |
| 15               | 0.7                                           | 0.6                             | 0.2                       | 0.2                                | 0.2                    |
| 16               | 1.4                                           | 2.5                             | 3.3                       | 3.2                                | 3.2                    |
| 17               | 1.6                                           | 3.9                             | 3.6                       | 3.6                                | 3.6                    |
| 18               | 1.7                                           | 3.6                             | 3.6                       | 3.4                                | 3.5                    |
| 19               | 1.8                                           | 2.5                             | 3.4                       | 3.1                                | 3.2                    |
| 20               | 1.8                                           | 2.5                             | 3.1                       | 3.2                                | 3.1                    |
| Total Under 21   | 8.8%                                          | 15.6%                           | 17.3%                     | 16.7%                              | 16.9%                  |
| 15 - 19          | 7.1%                                          | 13.0%                           | 14.1%                     | 13.5%                              | 13.7%                  |
| 20 - 24          | 9.1                                           | 11.7                            | 14.5                      | 14.4                               | 14.4                   |
| 25 - 29          | 9.1                                           | 10.6                            | 11.0                      | 10.6                               | 10.7                   |
| 30 - 34          | 8.1                                           | 7.4                             | 8.5                       | 8.4                                | 8.4                    |
| 35 - 39          | 8.8                                           | 6.8                             | 8.7                       | 8.2                                | 8.4                    |
| 40 - 44          | 9.6                                           | 9.0                             | 8.9                       | 8.3                                | 8.5                    |
| 45 - 49          | 10.4                                          | 10.1                            | 8.6                       | 7.9                                | 8.1                    |
| 50 - 54          | 9.3                                           | 5.8                             | 6.8                       | 6.6                                | 6.7                    |
| 55 - 59          | 7.9                                           | 7.7                             | 5.2                       | 5.4                                | 5.3                    |
| 60 - 64          | 5.8                                           | 4.5                             | 3.4                       | 3.3                                | 3.4                    |
| 65 - 69          | 4.4                                           | 3.6                             | 2.4                       | 2.2                                | 2.3                    |
| 70 - 74          | 3.4                                           | 2.2                             | 1.7                       | 1.7                                | 1.7                    |
| 75 - 79          | 3.0                                           | 2.5                             | 1.5                       | 1.4                                | 1.4                    |
| 80 - 84          | 2.2                                           | 2.6                             | 1.1                       | 1.1                                | 1.1                    |
| 85 & Older       | 1.7                                           | 1.3                             | 0.7                       | 0.6                                | 0.7                    |
| Age Not Stated   | 0.0                                           | 1.3                             | 2.8                       | 6.3                                | 5.2                    |
| Total Percent    | 100.0%                                        | 100.0%                          | 100.0%                    | 100.0%                             | 100.0%                 |
| Total Number     | 3,871,160                                     |                                 |                           |                                    |                        |

See Figure 1.02 on page 12 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, 2006**



**FIGURE 1.02**  
**Licensed vs Crash-Involved Drivers by Age, 2006**

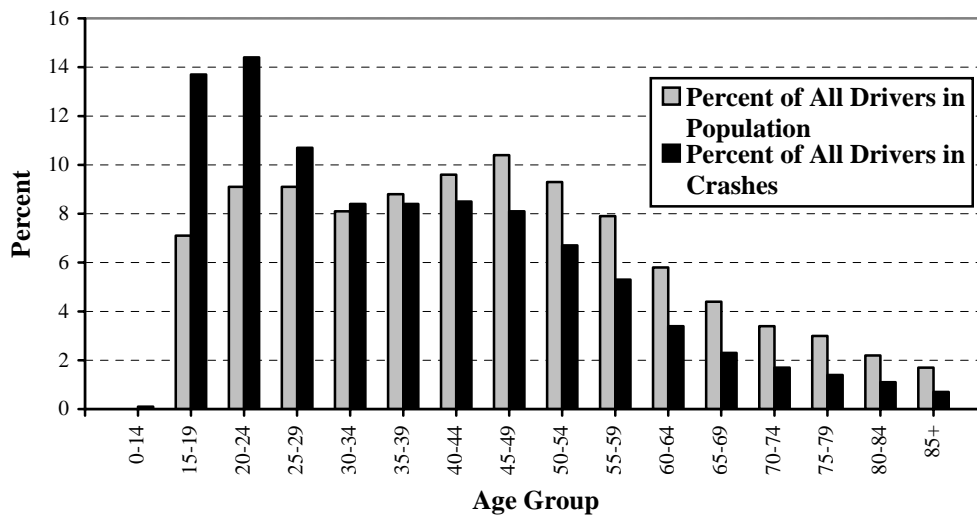




TABLE 1.07

**PERCENTAGE OF DRIVERS IN 2006 CRASHES  
BY AGE AND FIRST HARMFUL EVENT**

| First Harmful Event     | Age Group |        |        |        |        |        |        | All<br>Ages |
|-------------------------|-----------|--------|--------|--------|--------|--------|--------|-------------|
|                         | 15-19     | 20-24  | 25-29  | 30-34  | 35-64  | 65-79  | 80 +   |             |
| <b>Collision With:</b>  |           |        |        |        |        |        |        |             |
| Other Motor Vehicle     | 74.8%     | 76.7%  | 79.7%  | 79.8%  | 80.8%  | 82.1%  | 83.0%  | 78.0%       |
| Parked Motor Vehicle    | 3.5       | 3.2    | 3.2    | 3.0    | 2.6    | 3.4    | 5.1    | 4.2         |
| Bicycle                 | 0.4       | 0.6    | 0.7    | 0.6    | 0.7    | 0.6    | 1.0    | 0.7         |
| Pedestrian              | 0.5       | 0.6    | 0.6    | 0.6    | 0.6    | 0.6    | 1.0    | 0.6         |
| Deer                    | 1.5       | 2.3    | 2.8    | 3.1    | 4.3    | 3.4    | 1.2    | 3.1         |
| Other Animal            | 0.2       | 0.2    | 0.2    | 0.4    | 0.3    | 0.2    | 0.1    | 0.2         |
| Railroad Train          | 0.0       | 0.0    | 0.0    | 0.1    | 0.1    | 0.1    | 0.0    | 0.1         |
| Fixed Object            | 11.4      | 9.9    | 8.2    | 7.3    | 5.7    | 5.8    | 6.2    | 7.7         |
| Other Object            | 0.3       | 0.4    | 0.3    | 0.5    | 0.5    | 0.6    | 0.3    | 0.4         |
| <b>Non-Collision:</b>   |           |        |        |        |        |        |        |             |
| Overturn                | 5.9       | 4.3    | 3.7    | 3.1    | 2.8    | 1.9    | 0.7    | 3.4         |
| Other Non-Collision     | 0.4       | 0.5    | 0.4    | 0.6    | 0.6    | 0.3    | 0.2    | 0.5         |
| <b>Other or Unknown</b> | 1.2       | 1.1    | 1.0    | 1.1    | 1.1    | 1.1    | 1.1    | 1.2         |
| Total Percent           | 100.0%    | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0%      |
| Total Drivers           | 18,580    | 19,587 | 14,526 | 11,441 | 54,856 | 7,377  | 2,372  | 135,836     |

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 2006 CRASHES BY PHYSICAL CONDITION\***

| Physical Condition      | Drivers<br>in Fatal<br>Crashes | Drivers<br>in Injury<br>Crashes | Drivers<br>in Property<br>Damage Crashes | Drivers<br>in All<br>Crashes |
|-------------------------|--------------------------------|---------------------------------|------------------------------------------|------------------------------|
| Normal                  | 382                            | 34,116                          | 69,249                                   | 103,747                      |
| Under the Influence     | 47                             | 1,675                           | 1,562                                    | 3,284                        |
| Had Been Drinking       | 45                             | 737                             | 520                                      | 1,302                        |
| Commercial Driver > .04 | 0                              | 3                               | 7                                        | 10                           |
| Had Been Using Drugs    | 1                              | 70                              | 46                                       | 117                          |
| Aggressive              | 0                              | 21                              | 47                                       | 68                           |
| Fatigued/Asleep         | 1                              | 297                             | 251                                      | 549                          |
| Ill                     | 0                              | 82                              | 49                                       | 131                          |
| Physical Disability     | 1                              | 47                              | 41                                       | 89                           |
| Other                   | 6                              | 177                             | 124                                      | 307                          |
| Unknown                 | 209                            | 5,789                           | 20,233                                   | 26,231                       |
| Total                   | 692                            | 43,014                          | 92,129                                   | 135,835                      |

\* 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, 2006**

| Contributing Factor                  | Age Group |        |        |        |        |        |        | All<br>Ages |
|--------------------------------------|-----------|--------|--------|--------|--------|--------|--------|-------------|
|                                      | 15-19     | 20-24  | 25-29  | 30-34  | 35-64  | 65-79  | 80+    |             |
| Human Factors                        |           |        |        |        |        |        |        |             |
| Illegal/Unsafe Speed                 | 24.7%     | 26.7%  | 25.8%  | 22.1%  | 20.6%  | 13.2%  | 8.0%   | 23.5%       |
| Driver Inattention/Distraction       | 13.9      | 12.5   | 12.9   | 13.1   | 13.4   | 19.0   | 20.1   | 13.5        |
| Chemical Impairment                  | 5.3       | 14.4   | 14.0   | 11.4   | 9.4    | 3.2    | 1.0    | 9.7         |
| Overcorrecting                       | 9.8       | 6.7    | 6.7    | 7.6    | 6.1    | 6.5    | 3.5    | 7.2         |
| Driver Inexperience                  | 14.8      | 3.0    | 3.1    | 2.2    | 1.7    | 0.9    | 0.0    | 5.3         |
| Improper/Unsafe Lane Use             | 1.8       | 3.3    | 2.2    | 2.9    | 3.2    | 2.8    | 3.5    | 2.9         |
| Improper Turn                        | 1.0       | 1.2    | 0.9    | 1.2    | 1.1    | 1.3    | 1.0    | 1.2         |
| Driving Left of Center--Not Passing  | 0.6       | 0.6    | 0.7    | 0.6    | 0.7    | 1.5    | 1.0    | 0.7         |
| Disregard for Traffic Control Device | 0.6       | 0.8    | 0.6    | 0.8    | 0.6    | 0.7    | 1.0    | 0.7         |
| Vision Obscured                      | 0.3       | 0.4    | 0.3    | 0.4    | 0.6    | 1.2    | 4.5    | 0.5         |
| Following Too Closely                | 0.3       | 0.6    | 0.3    | 0.3    | 0.4    | 0.4    | 0.0    | 0.4         |
| Unsafe Backing                       | 0.2       | 0.3    | 0.2    | 0.4    | 0.5    | 0.9    | 1.5    | 0.4         |
| Improper Passing/Overtaking          | 0.3       | 0.3    | 0.3    | 0.4    | 0.3    | 0.0    | 0.0    | 0.3         |
| Failure to Yield Right of Way        | 0.2       | 0.2    | 0.2    | 0.1    | 0.2    | 0.4    | 0.5    | 0.2         |
| Improper Parking/Starting/Stopping   | 0.1       | 0.2    | 0.1    | 0.2    | 0.1    | 0.2    | 3.0    | 0.2         |
| Driver on Cell Phone or CB Radio     | 0.2       | 0.2    | 0.4    | 0.1    | 0.1    | 0.2    | 0.0    | 0.2         |
| Other Human Factors                  | 3.9       | 4.1    | 3.6    | 4.4    | 5.7    | 16.3   | 21.6   | 5.0         |
| Vehicular Factors                    |           |        |        |        |        |        |        |             |
| Skidding                             | 7.3       | 7.2    | 8.1    | 9.1    | 9.9    | 7.1    | 7.5    | 8.2         |
| Defective Equipment                  | 1.2       | 1.4    | 1.6    | 1.6    | 1.6    | 1.9    | 0.5    | 1.4         |
| Other Vehicular Factor               | 1.1       | 1.0    | 1.1    | 1.2    | 1.2    | 1.2    | 1.0    | 1.1         |
| Miscellaneous Factors                |           |        |        |        |        |        |        |             |
| Weather                              | 8.5       | 10.5   | 11.6   | 13.9   | 15.4   | 13.4   | 9.0    | 11.8        |
| Other                                | 3.8       | 4.4    | 5.1    | 6.1    | 7.0    | 7.8    | 11.6   | 5.5         |
|                                      |           |        |        |        |        |        |        |             |
| Total Percent                        | 100.0%    | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0%      |
| Total Contributing Factors Cited     | 4,878     | 4,115  | 2,406  | 1,700  | 6,306  | 680    | 199    | 20,742      |
|                                      |           |        |        |        |        |        |        |             |
| Drivers for Whom There Was           |           |        |        |        |        |        |        |             |
| "No Clear Contributing Factor"       | 383       | 497    | 427    | 369    | 2,038  | 204    | 28     | 3,975       |
| Total Number of Drivers              | 3,667     | 3,412  | 2,221  | 1,647  | 7,405  | 849    | 205    | 20,236      |

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, 2006**

| Contributing Factor                     | Age Group |        |        |        |        |        |        | All<br>Ages |
|-----------------------------------------|-----------|--------|--------|--------|--------|--------|--------|-------------|
|                                         | 15-19     | 20-24  | 25-29  | 30-34  | 35-64  | 65-79  | 80 +   |             |
| Human Factors                           |           |        |        |        |        |        |        |             |
| Driver Inattention or Distraction       | 27.1%     | 26.4%  | 25.5%  | 25.1%  | 25.6%  | 24.7%  | 20.4%  | 25.3%       |
| Failure to Yield Right of Way           | 19.2      | 16.4   | 16.3   | 16.5   | 18.5   | 27.7   | 36.2   | 18.8        |
| Following Too Closely                   | 11.3      | 14.0   | 14.0   | 13.3   | 12.1   | 7.5    | 4.1    | 11.9        |
| Illegal or Unsafe Speed                 | 7.6       | 9.0    | 8.4    | 7.7    | 5.9    | 3.0    | 1.8    | 7.1         |
| Improper or Unsafe Lane Use             | 3.6       | 4.6    | 5.8    | 5.7    | 5.7    | 6.0    | 5.6    | 5.5         |
| Disregard of Traffic Control Device     | 3.8       | 4.9    | 4.6    | 4.8    | 4.8    | 6.0    | 7.7    | 4.9         |
| Improper Turn                           | 2.4       | 2.2    | 2.2    | 2.0    | 2.5    | 3.7    | 4.4    | 2.5         |
| Chemical Impairment                     | 1.0       | 3.2    | 3.3    | 3.4    | 2.5    | 0.8    | 0.2    | 2.3         |
| Vision Obscured                         | 2.0       | 2.0    | 2.0    | 2.0    | 2.5    | 2.9    | 3.6    | 2.2         |
| Driver Inexperience                     | 7.8       | 1.8    | 1.2    | 0.9    | 0.4    | 0.3    | 0.3    | 2.2         |
| Improper Passing or Overtaking          | 1.2       | 1.5    | 1.5    | 1.4    | 1.8    | 1.4    | 1.3    | 1.7         |
| Unsafe Backing                          | 1.1       | 1.3    | 1.2    | 1.2    | 2.0    | 2.3    | 2.2    | 1.7         |
| Improper Parking, Starting, or Stopping | 0.9       | 0.9    | 1.2    | 1.0    | 1.2    | 1.5    | 2.4    | 1.2         |
| Driving Left of Center (Not Passing)    | 0.7       | 0.8    | 0.8    | 0.7    | 0.8    | 1.0    | 0.9    | 0.8         |
| Overcorrecting                          | 0.6       | 0.6    | 0.7    | 0.8    | 0.5    | 0.4    | 0.3    | 0.6         |
| Improper or No Signal                   | 0.3       | 0.2    | 0.2    | 0.1    | 0.4    | 0.5    | 0.6    | 0.3         |
| Impeding Traffic                        | 0.2       | 0.1    | 0.2    | 0.2    | 0.3    | 0.4    | 0.2    | 0.2         |
| Driver on Cell Phone or CB Radio        | 0.3       | 0.3    | 0.2    | 0.3    | 0.2    | 0.0    | 0.0    | 0.2         |
| Failure To Use Lights                   | 0.1       | 0.1    | 0.2    | 0.1    | 0.1    | 0.0    | 0.0    | 0.1         |
| Other Human Factors                     | 1.1       | 1.5    | 1.6    | 2.0    | 1.9    | 2.8    | 4.0    | 1.8         |
| Vehicular Factors                       |           |        |        |        |        |        |        |             |
| Skidding                                | 2.2       | 1.8    | 1.9    | 2.2    | 1.8    | 1.0    | 0.5    | 1.8         |
| Defective Equipment                     | 0.7       | 0.7    | 0.6    | 0.7    | 0.7    | 0.3    | 0.2    | 0.6         |
| Other Vehicular Factor                  | 0.3       | 0.4    | 0.6    | 0.8    | 0.7    | 0.3    | 0.2    | 0.5         |
| Miscellaneous Factors                   |           |        |        |        |        |        |        |             |
| Weather                                 | 2.9       | 2.9    | 3.1    | 3.8    | 3.5    | 2.2    | 1.0    | 3.0         |
| Other                                   | 1.6       | 2.3    | 3.0    | 3.2    | 3.5    | 3.2    | 2.1    | 2.8         |
|                                         |           |        |        |        |        |        |        |             |
| Total Percent                           | 100.0%    | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0%      |
| Total Contributing Factors Cited        | 13,527    | 11,948 | 7,951  | 5,607  | 24,799 | 4,074  | 1,847  | 72,983      |
|                                         |           |        |        |        |        |        |        |             |
| Drivers for Whom There Was              |           |        |        |        |        |        |        |             |
| "No Clear Contributing Factor"          | 4,250     | 6,006  | 5,111  | 4,509  | 23,035 | 2,567  | 555    | 46,381      |
| Total Number of Drivers                 | 14,909    | 16,173 | 12,300 | 9,791  | 47,437 | 6,526  | 2,167  | 115,759     |

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, 2006**

| Vehicle Type                       | Killed | Injured |               |        |        | Not Injured | Total Persons |
|------------------------------------|--------|---------|---------------|--------|--------|-------------|---------------|
|                                    |        | Severe  | Moder-<br>ate | Minor  | Total  |             |               |
| Automobile                         | 231    | 780     | 4,750         | 13,832 | 19,362 | 83,121      | 102,714       |
| Pickup Truck                       | 62     | 200     | 1,014         | 2,256  | 3,470  | 19,250      | 22,782        |
| Sport Utility Vehicle              | 43     | 207     | 1,146         | 3,383  | 4,736  | 24,476      | 29,255        |
| Van                                | 21     | 118     | 728           | 2,219  | 3,065  | 16,129      | 19,215        |
| Motorhome/Camper                   | 1      | 0       | 9             | 11     | 20     | 136         | 157           |
| Taxi Cab                           | 1      | 3       | 18            | 94     | 115    | 507         | 623           |
| Police Vehicle                     | 0      | 1       | 23            | 69     | 93     | 468         | 561           |
| Fire Department Vehicle            | 0      | 0       | 2             | 4      | 6      | 59          | 65            |
| School Bus                         | 0      | 5       | 11            | 89     | 105    | 4,273       | 4,378         |
| Other Bus                          | 0      | 1       | 11            | 61     | 73     | 1,409       | 1,482         |
| Ambulance                          | 0      | 0       | 0             | 6      | 6      | 92          | 98            |
| Military Vehicle                   | 0      | 0       | 0             | 1      | 1      | 14          | 15            |
| Snowmobile                         | 3      | 2       | 11            | 10     | 23     | 11          | 37            |
| All Terrain Vehicle                | 2      | 16      | 19            | 16     | 51     | 12          | 65            |
| Farm Tractor or Equipment          | 0      | 5       | 5             | 9      | 19     | 114         | 133           |
| Motorcycle*                        | 67     | 257     | 651           | 442    | 1,350  | 213         | 1,630         |
| Motor scooter/Motorbike*           | 3      | 10      | 26            | 22     | 58     | 10          | 71            |
| Motorized Bicycle (Moped)*         | 0      | 6       | 9             | 10     | 25     | 10          | 35            |
| Hit and Run Vehicle                | 2      | 7       | 41            | 89     | 137    | 4,080       | 4,219         |
| Road Maintenance Vehicle           | 1      | 2       | 12            | 24     | 38     | 507         | 546           |
| Other Public Owned Vehicle         | 0      | 1       | 6             | 15     | 22     | 195         | 217           |
| Single Truck (2-axle, 6-tire)      | 1      | 2       | 19            | 50     | 71     | 933         | 1,005         |
| Single Truck (3 or more axles)     | 2      | 1       | 10            | 23     | 34     | 384         | 420           |
| Single Truck with Trailer          | 0      | 0       | 7             | 13     | 20     | 295         | 315           |
| Truck Tractor with No Trailer      | 0      | 0       | 0             | 3      | 3      | 76          | 79            |
| Truck Tractor with Semi Trailer    | 7      | 5       | 48            | 118    | 171    | 2,213       | 2,391         |
| Truck Tractor with Double Trailers | 0      | 0       | 2             | 2      | 4      | 36          | 40            |
| Other or Unknown Truck Type        | 1      | 1       | 8             | 12     | 21     | 358         | 380           |
| Other Vehicle Type                 | 0      | 4       | 16            | 9      | 29     | 319         | 348           |
| Unknown Vehicle Type               | 0      | 4       | 29            | 51     | 84     | 2,675       | 2,759         |
| Bicycle                            | 8      | 60      | 370           | 477    | 907    | 59          | 974           |
| Pedestrian                         | 38     | 146     | 322           | 438    | 906    | 74          | 1,018         |
| Total                              | 494    | 1,844   | 9,323         | 23,858 | 35,025 | 162,508     | 198,027       |

\* 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 2006 CRASHES

| Motor Vehicle Type*                | Vehicles in      |                   |                               |                |
|------------------------------------|------------------|-------------------|-------------------------------|----------------|
|                                    | Fatal<br>Crashes | Injury<br>Crashes | Property<br>Damage<br>Crashes | All<br>Crashes |
| Automobile                         | 310              | 24,201            | 52,702                        | 77,213         |
| Pickup Truck                       | 108              | 5,345             | 12,510                        | 17,963         |
| Sport Utility Vehicle              | 86               | 6,319             | 14,013                        | 20,418         |
| Van                                | 47               | 3,722             | 8,009                         | 11,778         |
| Motorhome/Camper                   | 3                | 25                | 59                            | 87             |
| Taxicab                            | 1                | 151               | 278                           | 430            |
| Police Vehicle                     | 1                | 162               | 391                           | 554            |
| Fire Department Vehicle            | 0                | 10                | 25                            | 35             |
| School Bus                         | 1                | 139               | 491                           | 631            |
| Other Bus                          | 3                | 73                | 220                           | 296            |
| Ambulance                          | 0                | 10                | 34                            | 44             |
| Military Vehicle                   | 0                | 2                 | 10                            | 12             |
| Snowmobile*                        | 3                | 19                | 9                             | 31             |
| All Terrain Vehicle*               | 2                | 45                | 6                             | 53             |
| Farm Tractor or Equipment          | 1                | 45                | 82                            | 128            |
| Motorcycle**                       | 68               | 1,256             | 143                           | 1,467          |
| Motor scooter/Motorbike**          | 3                | 57                | 5                             | 65             |
| Motorized Bicycle (Moped)**        | 1                | 24                | 8                             | 33             |
| Hit and Run Vehicle                | 4                | 520               | 3,013                         | 3,537          |
| Road Maintenance Vehicle           | 3                | 120               | 388                           | 511            |
| Other Public Owned Vehicle         | 0                | 50                | 141                           | 191            |
| Single Truck (2-axle, 6-tire)      | 9                | 239               | 641                           | 889            |
| Single Truck (3 or more axles)     | 11               | 111               | 283                           | 405            |
| Single Truck with Trailer          | 4                | 48                | 208                           | 260            |
| Truck Tractor with No Trailer      | 0                | 22                | 60                            | 82             |
| Truck Tractor with Semi Trailer    | 35               | 624               | 1,616                         | 2,275          |
| Truck Tractor with Double Trailers | 2                | 9                 | 25                            | 36             |
| Other or Unknown Truck Type        | 1                | 71                | 279                           | 351            |
| Other Vehicle Type                 | 1                | 62                | 246                           | 309            |
| Unknown Vehicle Type               | 0                | 460               | 2,006                         | 2,466          |
| Total***                           | 708              | 43,941            | 97,901                        | 142,550        |

\* 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

## 2006 CRASHES BY FIRST HARMFUL EVENT

| First Harmful Event       | Fatal Crashes | Personal Injury Crashes | Property Damage Crashes | Total Crashes | Killed | Injured | Fatality Rate Per 1,000 Crashes |
|---------------------------|---------------|-------------------------|-------------------------|---------------|--------|---------|---------------------------------|
| <b>Collision With:</b>    |               |                         |                         |               |        |         |                                 |
| Another Motor Vehicle     | 193           | 15,272                  | 34,947                  | 50,412        | 220    | 23,398  | 4.4                             |
| Parked Motor Vehicle      | 10            | 613                     | 4,634                   | 5,257         | 10     | 781     | 1.9                             |
| Bicycle                   | 8             | 867                     | 40                      | 915           | 8      | 901     | 8.7                             |
| Pedestrian                | 35            | 811                     | 1                       | 847           | 35     | 875     | 41.3                            |
| Deer                      | 3             | 420                     | 3,715                   | 4,138         | 3      | 486     | 0.7                             |
| Other Animal              | 1             | 64                      | 244                     | 309           | 1      | 73      | 3.2                             |
| Railroad Train            | 8             | 10                      | 33                      | 51            | 9      | 15      | 176.5                           |
| Fixed Object              | 91            | 3,374                   | 6,728                   | 10,193        | 96     | 4,163   | 9.4                             |
| Non-Fixed Object          | 2             | 106                     | 311                     | 419           | 2      | 128     | 4.8                             |
| Other Collision Type      | 1             | 216                     | 321                     | 538           | 1      | 281     | 1.9                             |
| Unkn Collision Type       | 0             | 14                      | 31                      | 45            | 0      | 19      | 0.0                             |
| <b>Non-Collision:</b>     |               |                         |                         |               |        |         |                                 |
| Overturn                  | 96            | 2,495                   | 1,912                   | 4,503         | 101    | 3,438   | 22.4                            |
| Fire/Explosion            | 1             | 6                       | 102                     | 109           | 1      | 6       | 9.2                             |
| Submersion                | 2             | 11                      | 42                      | 55            | 2      | 16      | 36.4                            |
| Other Non-Collision       | 0             | 157                     | 243                     | 400           | 0      | 186     | 0.0                             |
| <b>Unknown Crash Type</b> | 5             | 227                     | 322                     | 554           | 5      | 259     | 9.0                             |
| Total                     | 456           | 24,663                  | 53,626                  | 78,745        | 494    | 35,025  | 6.3                             |

TABLE 1.14

## 2006 "HIT-AND-RUN" CRASHES BY FIRST HARMFUL EVENT

| First Harmful Event       | Fatal Crashes | Personal Injury Crashes | Property Damage Crashes | Total Crashes | Killed | Injured |
|---------------------------|---------------|-------------------------|-------------------------|---------------|--------|---------|
| <b>Collision With:</b>    |               |                         |                         |               |        |         |
| Other Motor Vehicle       | 5             | 825                     | 2,712                   | 3,542         | 5      | 1,183   |
| Parked Motor Vehicle      | 1             | 119                     | 2,181                   | 2,301         | 1      | 141     |
| Bicycle                   | 0             | 116                     | 7                       | 123           | 0      | 120     |
| Pedestrian                | 5             | 146                     | 0                       | 151           | 5      | 158     |
| Deer                      | 0             | 1                       | 2                       | 3             | 0      | 2       |
| Other Animal              | 0             | 0                       | 1                       | 1             | 0      | 0       |
| Railroad Train            | 0             | 1                       | 5                       | 6             | 0      | 2       |
| Fixed Object              | 1             | 213                     | 1,008                   | 1,222         | 1      | 248     |
| Non-Fixed Object          | 0             | 9                       | 28                      | 37            | 0      | 10      |
| Other Collision Type      | 0             | 7                       | 40                      | 47            | 0      | 9       |
| Unkn Collision Type       | 0             | 0                       | 14                      | 14            | 0      | 0       |
| <b>Non-Collision:</b>     |               |                         |                         |               |        |         |
| Overturn                  | 1             | 42                      | 43                      | 86            | 1      | 57      |
| Other Non-Collision       | 0             | 2                       | 7                       | 9             | 0      | 2       |
| <b>Unknown Crash Type</b> | 0             | 13                      | 35                      | 48            | 0      | 14      |
| Total                     | 13            | 1,494                   | 6,083                   | 7,590         | 13     | 1,946   |

TABLE 1.15

## 2006 CRASHES BY TRAFFIC CONTROL DEVICE

| <b>Traffic Control Device</b>      | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|------------------------------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Not Applicable                     | 321                      | 13,188                                 | 31,314                                 | 44,823                   | 346           | 18,270         |
| Traffic Signal                     | 25                       | 5,999                                  | 11,225                                 | 17,249                   | 28            | 8,641          |
| Overhead Flashers                  | 0                        | 24                                     | 53                                     | 77                       | 0             | 45             |
| Stop Sign-All Approaches           | 4                        | 419                                    | 1,152                                  | 1,575                    | 5             | 557            |
| Other Stop Sign                    | 71                       | 3,702                                  | 6,438                                  | 10,211                   | 79            | 5,639          |
| Yield Sign                         | 8                        | 435                                    | 854                                    | 1,297                    | 8             | 646            |
| Flagman, Officer, or School Patrol | 1                        | 24                                     | 59                                     | 84                       | 1             | 37             |
| School Bus Stop Arm                | 0                        | 19                                     | 28                                     | 47                       | 0             | 31             |
| School Zone Sign                   | 0                        | 13                                     | 19                                     | 32                       | 0             | 15             |
| No Passing Zone                    | 14                       | 165                                    | 236                                    | 415                      | 15            | 227            |
| RR Crossing Gate                   | 1                        | 9                                      | 34                                     | 44                       | 1             | 11             |
| RR Flashing Lights                 | 0                        | 13                                     | 19                                     | 32                       | 0             | 17             |
| RR Crossing Stop Sign              | 4                        | 7                                      | 9                                      | 20                       | 4             | 10             |
| RR Overhead Flashing Lights        | 0                        | 0                                      | 4                                      | 4                        | 0             | 0              |
| RR Overhead Lights and Gate        | 0                        | 9                                      | 24                                     | 33                       | 0             | 12             |
| RR Crossbuck                       | 1                        | 4                                      | 25                                     | 30                       | 1             | 5              |
| Other Device                       | 5                        | 294                                    | 764                                    | 1,063                    | 5             | 439            |
| Unknown                            | 1                        | 339                                    | 1,369                                  | 1,709                    | 1             | 423            |
| <b>Total</b>                       | <b>456</b>               | <b>24,663</b>                          | <b>53,626</b>                          | <b>78,745</b>            | <b>494</b>    | <b>35,025</b>  |

TABLE 1.16

## 2006 CRASHES BY WEATHER CONDITION

| <b>Weather Condition</b> | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|--------------------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Clear                    | 277                      | 14,864                                 | 30,750                                 | 45,891                   | 303           | 20,965         |
| Cloudy                   | 122                      | 6,375                                  | 13,789                                 | 20,286                   | 132           | 9,193          |
| Rain                     | 25                       | 1,533                                  | 3,400                                  | 4,958                    | 27            | 2,250          |
| Snow                     | 14                       | 1,001                                  | 2,950                                  | 3,965                    | 14            | 1,429          |
| Sleet/Hail/Freezing Rain | 4                        | 294                                    | 763                                    | 1,061                    | 4             | 382            |
| Fog/Smog/Smoke           | 6                        | 106                                    | 231                                    | 343                      | 6             | 141            |
| Blowing Sand/Dust/Snow   | 1                        | 164                                    | 375                                    | 540                      | 1             | 240            |
| Severe Crosswinds        | 0                        | 30                                     | 44                                     | 74                       | 0             | 41             |
| Other                    | 1                        | 51                                     | 145                                    | 197                      | 1             | 74             |
| Not Stated/Unknown       | 6                        | 245                                    | 1,179                                  | 1,430                    | 6             | 310            |
| <b>Total</b>             | <b>456</b>               | <b>24,663</b>                          | <b>53,626</b>                          | <b>78,745</b>            | <b>494</b>    | <b>35,025</b>  |

TABLE 1.17

**CONTRIBUTING FACTORS IN 2006 CRASHES**

| <b>Contributing Factors</b>             | <b>Percent of Factors Cited in<br/>Crashes by Severity of Crash</b> |                           |                                        | <b>Number of Crashes in<br/>which the Factor was Cited</b> |                           |                                        | <b>Number of<br/>People Affected</b> |                |
|-----------------------------------------|---------------------------------------------------------------------|---------------------------|----------------------------------------|------------------------------------------------------------|---------------------------|----------------------------------------|--------------------------------------|----------------|
|                                         | <b>Fatal<br/>Crashes</b>                                            | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Fatal<br/>Crashes</b>                                   | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Killed</b>                        | <b>Injured</b> |
| <b>Human Factors</b>                    |                                                                     |                           |                                        |                                                            |                           |                                        |                                      |                |
| Driver Inattention/Distraction          | 10.8%                                                               | 22.0%                     | 22.8%                                  | 74                                                         | 7,058                     | 13,179                                 | 75                                   | 10,216         |
| Failure to Yield Right of Way           | 11.5                                                                | 16.0                      | 14.0                                   | 81                                                         | 5,126                     | 8,111                                  | 91                                   | 7,986          |
| Illegal/Unsafe Speed                    | 19.9                                                                | 11.3                      | 10.1                                   | 140                                                        | 3,667                     | 5,905                                  | 151                                  | 5,490          |
| Following Too Closely                   | 0.0                                                                 | 7.6                       | 10.2                                   | 0                                                          | 2,282                     | 5,710                                  | 0                                    | 3,266          |
| Improper/Unsafe Lane Use                | 5.6                                                                 | 3.4                       | 5.8                                    | 37                                                         | 1,114                     | 3,356                                  | 43                                   | 1,616          |
| Disregard Traf Contr Device             | 3.4                                                                 | 5.1                       | 3.5                                    | 23                                                         | 1,668                     | 2,056                                  | 26                                   | 2,711          |
| Driver Inexperience                     | 2.4                                                                 | 3.0                       | 2.7                                    | 17                                                         | 998                       | 1,618                                  | 19                                   | 1,503          |
| Chemical Impairment                     | 8.4                                                                 | 5.6                       | 2.9                                    | 58                                                         | 1,820                     | 1,713                                  | 62                                   | 2,540          |
| Improper Turn                           | 1.3                                                                 | 1.5                       | 2.6                                    | 9                                                          | 512                       | 1,538                                  | 12                                   | 768            |
| Vision Obscured                         | 2.0                                                                 | 1.7                       | 1.9                                    | 11                                                         | 526                       | 1,047                                  | 11                                   | 758            |
| Unsafe Backing                          | 0.0                                                                 | 0.3                       | 2.0                                    | 0                                                          | 112                       | 1,164                                  | 0                                    | 140            |
| Improper Passing/Overtaking             | 1.1                                                                 | 0.8                       | 1.7                                    | 8                                                          | 260                       | 1,007                                  | 8                                    | 362            |
| Overcorrecting                          | 6.0                                                                 | 2.6                       | 1.6                                    | 43                                                         | 872                       | 961                                    | 45                                   | 1,213          |
| Improper Park/Start/Stop                | 0.8                                                                 | 0.8                       | 1.2                                    | 5                                                          | 281                       | 674                                    | 5                                    | 433            |
| Driving Left of Center<br>(Not Passing) | 5.0                                                                 | 1.0                       | 0.6                                    | 35                                                         | 334                       | 386                                    | 41                                   | 585            |
| Improper or No Signal                   | 0.1                                                                 | 0.1                       | 0.3                                    | 1                                                          | 46                        | 163                                    | 3                                    | 67             |
| Impeding Traffic                        | 0.3                                                                 | 0.2                       | 0.2                                    | 2                                                          | 68                        | 110                                    | 2                                    | 95             |
| Driver on Phone or CB Radio             | 0.0                                                                 | 0.2                       | 0.2                                    | 0                                                          | 80                        | 112                                    | 0                                    | 108            |
| Failure to Use Lights                   | 0.3                                                                 | 0.1                       | 0.1                                    | 2                                                          | 30                        | 41                                     | 2                                    | 43             |
| Non-Motorist Error                      | 2.5                                                                 | 0.8                       | 0.1                                    | 15                                                         | 228                       | 35                                     | 15                                   | 249            |
| Other Human Factor                      | 4.9                                                                 | 3.3                       | 2.1                                    | 33                                                         | 1,049                     | 1,221                                  | 36                                   | 1,381          |
| <b>Vehicular Factors</b>                |                                                                     |                           |                                        |                                                            |                           |                                        |                                      |                |
| Skidding                                | 5.8                                                                 | 3.1                       | 3.2                                    | 41                                                         | 997                       | 1,868                                  | 47                                   | 1,392          |
| Defective Equipment                     | 0.4                                                                 | 0.8                       | 0.7                                    | 3                                                          | 250                       | 419                                    | 4                                    | 372            |
| Other Vehicular Factor                  | 0.3                                                                 | 0.6                       | 0.8                                    | 2                                                          | 198                       | 444                                    | 2                                    | 268            |
| <b>Miscellaneous Factors</b>            |                                                                     |                           |                                        |                                                            |                           |                                        |                                      |                |
| Weather                                 | 3.2                                                                 | 4.2                       | 5.3                                    | 18                                                         | 1,257                     | 2,845                                  | 19                                   | 1,765          |
| Other                                   | 3.9                                                                 | 3.7                       | 3.5                                    | 25                                                         | 1,081                     | 1,724                                  | 26                                   | 1,467          |
| Total Percent                           | 100.0%                                                              | 100.0%                    | 100.0%                                 |                                                            |                           |                                        |                                      |                |
| Total Contributing Factors              | 713                                                                 | 33,686                    | 60,859                                 |                                                            |                           |                                        |                                      |                |
| Vehicles Where There Was "No            |                                                                     |                           |                                        |                                                            |                           |                                        |                                      |                |
| Clear Contributing Factor"              | 265                                                                 | 17,612                    | 35,206                                 |                                                            |                           |                                        |                                      |                |
| Total Number of Vehicles                | 760                                                                 | 45,763                    | 97,999                                 |                                                            |                           |                                        |                                      |                |

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

**2006 CRASHES BY LIGHT CONDITION**

| <b>Light Condition</b> | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|------------------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Daylight               | 240                      | 16,593                                 | 34,932                                 | 51,765                   | 260           | 23,615         |
| Dawn (Morning)         | 11                       | 498                                    | 1,284                                  | 1,793                    | 11            | 681            |
| Dusk (Evening)         | 9                        | 624                                    | 1,492                                  | 2,125                    | 10            | 879            |
| Dark/Street Lights On  | 58                       | 4,040                                  | 9,022                                  | 13,120                   | 62            | 5,760          |
| Dark/No Street Lights  | 134                      | 2,723                                  | 5,798                                  | 8,655                    | 147           | 3,851          |
| Other/Unknown          | 4                        | 185                                    | 1,098                                  | 1,287                    | 4             | 239            |
| Total                  | 456                      | 24,663                                 | 53,626                                 | 78,745                   | 494           | 35,025         |

TABLE 1.19

**2006 CRASHES BY ROAD SURFACE CONDITION**

| <b>Road<br/>Surface Condition</b> | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|-----------------------------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Dry                               | 345                      | 18,457                                 | 38,270                                 | 57,072                   | 373           | 26,250         |
| Wet                               | 51                       | 3,207                                  | 7,309                                  | 10,567                   | 56            | 4,641          |
| Snow/Slush                        | 9                        | 893                                    | 2,890                                  | 3,792                    | 9             | 1,238          |
| Ice or Packed Snow                | 32                       | 1,594                                  | 3,890                                  | 5,516                    | 37            | 2,198          |
| Other                             | 13                       | 374                                    | 563                                    | 950                      | 13            | 518            |
| Not Stated/Unknown                | 6                        | 138                                    | 704                                    | 848                      | 6             | 180            |
| Total                             | 456                      | 24,663                                 | 53,626                                 | 78,745                   | 494           | 35,025         |

TABLE 1.20

**2006 CRASHES BY ROAD DESIGN**

| <b>Road Design</b>        | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|---------------------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Freeway (Including Ramps) | 49                       | 3,086                                  | 8,231                                  | 11,366                   | 52            | 4,309          |
| Other Divided Highway     | 60                       | 3,641                                  | 6,433                                  | 10,134                   | 67            | 5,420          |
| One-Way Street            | 1                        | 568                                    | 1,090                                  | 1,659                    | 1             | 802            |
| 4-6 Lanes Undivided       | 25                       | 4,083                                  | 7,768                                  | 11,876                   | 25            | 5,837          |
| 3 Lanes Undivided         | 4                        | 274                                    | 573                                    | 851                      | 4             | 401            |
| 2-Lane--2-Way             | 300                      | 10,041                                 | 19,280                                 | 29,621                   | 326           | 14,332         |
| Alley/Driveway            | 0                        | 98                                     | 368                                    | 466                      | 0             | 110            |
| Other Road Design         | 16                       | 757                                    | 1,570                                  | 2,343                    | 18            | 1,068          |
| Not Stated/Unknown        | 1                        | 2,115                                  | 8,313                                  | 10,429                   | 1             | 2,746          |
| Total                     | 456                      | 24,663                                 | 53,626                                 | 78,745                   | 494           | 35,025         |

TABLE 1.21

**2006 CRASHES BY DIAGRAM**

| <b>Diagram</b>                     | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|------------------------------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Rear End                           | 23                       | 6,943                                  | 15,462                                 | 22,428                   | 24            | 10,027         |
| Sideswipe Passing                  | 8                        | 863                                    | 6,390                                  | 7,261                    | 8             | 1,159          |
| Left Turn -- Oncoming Traffic      | 11                       | 1,324                                  | 2,787                                  | 4,122                    | 11            | 1,960          |
| Ran Off Road - Left                | 63                       | 2,105                                  | 2,830                                  | 4,998                    | 67            | 2,756          |
| Right Angle                        | 106                      | 5,415                                  | 9,184                                  | 14,705                   | 116           | 8,301          |
| Right Turn -- Cross Street Traffic | 1                        | 258                                    | 702                                    | 961                      | 1             | 324            |
| Ran Off Road - Right               | 96                       | 2,823                                  | 4,097                                  | 7,016                    | 101           | 3,671          |
| Head On                            | 76                       | 1,344                                  | 2,506                                  | 3,926                    | 92            | 2,108          |
| Sideswipe Opposing                 | 13                       | 432                                    | 1,340                                  | 1,785                    | 14            | 622            |
| Not Applicable                     | 10                       | 796                                    | 2,052                                  | 2,858                    | 10            | 984            |
| Other / Unknown / Incomplete       | 49                       | 2,360                                  | 6,276                                  | 8,685                    | 50            | 3,113          |
| <b>Total</b>                       | <b>456</b>               | <b>24,663</b>                          | <b>53,626</b>                          | <b>78,745</b>            | <b>494</b>    | <b>35,025</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

**2006 CRASHES BY POPULATION OF AREA**

| <b>Population of<br/>City or Township</b> | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|-------------------------------------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| 100,000 & Over                            | 25                       | 4,351                                  | 11,803                                 | 16,179                   | 26            | 6,031          |
| 50,000 - 99,999                           | 37                       | 3,759                                  | 8,068                                  | 11,864                   | 40            | 5,208          |
| 25,000 - 49,999                           | 31                       | 3,132                                  | 6,836                                  | 9,999                    | 34            | 4,384          |
| 10,000 - 24,999                           | 41                       | 3,857                                  | 8,519                                  | 12,417                   | 46            | 5,403          |
| 5,000 - 9,999                             | 14                       | 1,580                                  | 3,707                                  | 5,301                    | 15            | 2,287          |
| 2,500 - 4,999                             | 11                       | 933                                    | 2,351                                  | 3,295                    | 12            | 1,337          |
| 1,000 - 2,499                             | 8                        | 451                                    | 1,178                                  | 1,637                    | 9             | 610            |
| Under 1,000                               | 289                      | 6,600                                  | 11,164                                 | 18,053                   | 312           | 9,765          |
| <b>Total</b>                              | <b>456</b>               | <b>24,663</b>                          | <b>53,626</b>                          | <b>78,745</b>            | <b>494</b>    | <b>35,025</b>  |

TABLE 1.23

**2006 CRASHES BY TYPE OF ROADWAY**

| <b>Type of Roadway</b>   | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|--------------------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| <b>Urban</b>             |                          |                                        |                                        |                          |               |                |
| Interstate               | 29                       | 1,943                                  | 5,483                                  | 7,455                    | 32            | 2,697          |
| US Trunk Highway         | 15                       | 1,520                                  | 3,354                                  | 4,889                    | 16            | 2,194          |
| MN Trunk Highway         | 33                       | 2,615                                  | 5,391                                  | 8,039                    | 41            | 3,774          |
| County State Aid Highway | 38                       | 4,934                                  | 9,756                                  | 14,728                   | 38            | 7,015          |
| County Road              | 2                        | 121                                    | 219                                    | 342                      | 2             | 175            |
| Township Road            | 0                        | 2                                      | 8                                      | 10                       | 0             | 2              |
| Local Street             | 30                       | 5,462                                  | 14,380                                 | 19,872                   | 31            | 7,356          |
| Other Road               | 1                        | 82                                     | 342                                    | 425                      | 1             | 100            |
| Urban Total              | 148                      | 16,679                                 | 38,933                                 | 55,760                   | 161           | 23,313         |
| <b>Rural</b>             |                          |                                        |                                        |                          |               |                |
| Interstate               | 11                       | 608                                    | 1,615                                  | 2,234                    | 11            | 890            |
| US Trunk Highway         | 48                       | 1,366                                  | 2,564                                  | 3,978                    | 52            | 2,088          |
| MN Trunk Highway         | 82                       | 1,970                                  | 3,625                                  | 5,677                    | 87            | 2,949          |
| County State Aid Highway | 107                      | 2,594                                  | 4,037                                  | 6,738                    | 119           | 3,714          |
| County Road              | 24                       | 399                                    | 537                                    | 960                      | 26            | 555            |
| Township Road            | 28                       | 642                                    | 951                                    | 1,621                    | 29            | 975            |
| Local Street             | 7                        | 344                                    | 1,200                                  | 1,551                    | 8             | 458            |
| Other Road               | 1                        | 61                                     | 164                                    | 226                      | 1             | 83             |
| Rural Total              | 308                      | 7,984                                  | 14,693                                 | 22,985                   | 333           | 11,712         |
| <b>All Roadways</b>      |                          |                                        |                                        |                          |               |                |
| Interstate               | 40                       | 2,551                                  | 7,098                                  | 9,689                    | 43            | 3,587          |
| US Trunk Highway         | 63                       | 2,886                                  | 5,918                                  | 8,867                    | 68            | 4,282          |
| MN Trunk Highway         | 115                      | 4,585                                  | 9,016                                  | 13,716                   | 128           | 6,723          |
| County State Aid Highway | 145                      | 7,528                                  | 13,793                                 | 21,466                   | 157           | 10,729         |
| County Road              | 26                       | 520                                    | 756                                    | 1,302                    | 28            | 730            |
| Township Road            | 28                       | 644                                    | 959                                    | 1,631                    | 29            | 977            |
| Local Street             | 37                       | 5,806                                  | 15,580                                 | 21,423                   | 39            | 7,814          |
| Other Road               | 2                        | 143                                    | 506                                    | 651                      | 2             | 183            |
| Total                    | 456                      | 24,663                                 | 53,626                                 | 78,745                   | 494           | 35,025         |

("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

## 2006 COUNTY CRASH REPORT

| County     | 2006 Crashes |        |                    |        | Total<br>Crashes<br>2005 | Number<br>Killed<br>2006 | Number<br>Killed<br>2005 | Number<br>Injured<br>2006 | Number<br>Injured<br>2005 |
|------------|--------------|--------|--------------------|--------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
|            | Fatal        | Injury | Property<br>Damage | Total  |                          |                          |                          |                           |                           |
| Aitkin     | 2            | 76     | 133                | 211    | 242                      | 2                        | 5                        | 116                       | 92                        |
| Anoka      | 26           | 1,386  | 2,519              | 3,931  | 4,167                    | 29                       | 22                       | 2,031                     | 2,057                     |
| Becker     | 3            | 161    | 195                | 359    | 336                      | 4                        | 6                        | 243                       | 215                       |
| Beltrami   | 8            | 173    | 434                | 615    | 621                      | 8                        | 4                        | 252                       | 331                       |
| Benton     | 4            | 190    | 369                | 563    | 595                      | 4                        | 10                       | 288                       | 274                       |
| Big Stone  | 1            | 14     | 40                 | 55     | 64                       | 1                        | 0                        | 19                        | 17                        |
| Blue Earth | 5            | 364    | 956                | 1,325  | 1,433                    | 5                        | 10                       | 478                       | 483                       |
| Brown      | 3            | 117    | 200                | 320    | 342                      | 3                        | 1                        | 159                       | 163                       |
| Carlton    | 8            | 153    | 179                | 340    | 397                      | 9                        | 4                        | 223                       | 209                       |
| Carver     | 7            | 367    | 793                | 1,167  | 1,246                    | 8                        | 8                        | 516                       | 516                       |
| Cass       | 4            | 127    | 214                | 345    | 351                      | 4                        | 5                        | 199                       | 211                       |
| Chippewa   | 4            | 55     | 117                | 176    | 174                      | 5                        | 4                        | 78                        | 102                       |
| Chisago    | 12           | 264    | 427                | 703    | 791                      | 13                       | 6                        | 420                       | 377                       |
| Clay       | 6            | 223    | 593                | 822    | 970                      | 8                        | 5                        | 309                       | 357                       |
| Clearwater | 3            | 22     | 54                 | 79     | 91                       | 3                        | 5                        | 29                        | 40                        |
| Cook       | 2            | 35     | 92                 | 129    | 132                      | 2                        | 1                        | 48                        | 46                        |
| Cottonwood | 1            | 44     | 79                 | 124    | 117                      | 1                        | 1                        | 65                        | 79                        |
| Crow Wing  | 7            | 331    | 635                | 973    | 1,032                    | 8                        | 16                       | 485                       | 543                       |
| Dakota     | 20           | 1,532  | 2,996              | 4,548  | 5,206                    | 20                       | 28                       | 2,150                     | 2,478                     |
| Dodge      | 2            | 73     | 114                | 189    | 228                      | 2                        | 7                        | 117                       | 111                       |
| Douglas    | 7            | 186    | 496                | 689    | 757                      | 8                        | 6                        | 263                       | 297                       |
| Faribault  | 2            | 62     | 130                | 194    | 180                      | 3                        | 2                        | 97                        | 75                        |
| Fillmore   | 6            | 89     | 164                | 259    | 315                      | 6                        | 2                        | 121                       | 119                       |
| Freeborn   | 2            | 144    | 404                | 550    | 635                      | 2                        | 4                        | 215                       | 241                       |
| Goodhue    | 7            | 266    | 583                | 856    | 916                      | 7                        | 8                        | 401                       | 350                       |
| Grant      | 1            | 38     | 60                 | 99     | 86                       | 1                        | 0                        | 48                        | 28                        |
| Hennepin   | 38           | 6,554  | 14,305             | 20,897 | 24,322                   | 40                       | 50                       | 9,078                     | 10,024                    |
| Houston    | 0            | 85     | 227                | 312    | 305                      | 0                        | 2                        | 119                       | 79                        |
| Hubbard    | 3            | 93     | 129                | 225    | 277                      | 5                        | 5                        | 140                       | 157                       |
| Isanti     | 9            | 158    | 327                | 494    | 533                      | 9                        | 7                        | 230                       | 217                       |
| Itasca     | 5            | 212    | 364                | 581    | 667                      | 5                        | 4                        | 334                       | 419                       |
| Jackson    | 1            | 61     | 112                | 174    | 140                      | 1                        | 6                        | 81                        | 70                        |
| Kanabec    | 0            | 75     | 96                 | 171    | 225                      | 0                        | 9                        | 105                       | 127                       |
| Kandiyohi  | 6            | 210    | 428                | 644    | 728                      | 8                        | 8                        | 309                       | 343                       |

TABLE 1.24 CONTINUED

## 2006 COUNTY CRASH REPORT

| County            | 2006 Crashes |        |                    |        | Total<br>Crashes<br>2005 | Number<br>Killed<br>2006 | Number<br>Killed<br>2005 | Number<br>Injured<br>2006 | Number<br>Injured<br>2005 |
|-------------------|--------------|--------|--------------------|--------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
|                   | Fatal        | Injury | Property<br>Damage | Total  |                          |                          |                          |                           |                           |
| Kittson           | 0            | 13     | 25                 | 38     | 44                       | 0                        | 2                        | 24                        | 14                        |
| Koochiching       | 1            | 50     | 92                 | 143    | 137                      | 1                        | 1                        | 73                        | 72                        |
| Lac Qui Parle     | 2            | 20     | 35                 | 57     | 46                       | 2                        | 1                        | 29                        | 36                        |
| Lake              | 3            | 61     | 115                | 179    | 172                      | 3                        | 5                        | 83                        | 78                        |
| Lake of the Woods | 1            | 11     | 13                 | 25     | 41                       | 1                        | 2                        | 17                        | 22                        |
| Le Sueur          | 2            | 131    | 287                | 420    | 446                      | 3                        | 7                        | 183                       | 220                       |
| Lincoln           | 0            | 23     | 52                 | 75     | 108                      | 0                        | 3                        | 40                        | 29                        |
| Lyon              | 5            | 95     | 215                | 315    | 396                      | 6                        | 2                        | 150                       | 192                       |
| McLeod            | 7            | 160    | 415                | 582    | 644                      | 7                        | 5                        | 235                       | 270                       |
| Mahnomen          | 2            | 26     | 35                 | 63     | 60                       | 2                        | 0                        | 39                        | 43                        |
| Marshall          | 2            | 37     | 37                 | 76     | 75                       | 2                        | 1                        | 44                        | 35                        |
| Martin            | 2            | 91     | 215                | 308    | 297                      | 2                        | 3                        | 133                       | 87                        |
| Meeker            | 3            | 92     | 149                | 244    | 247                      | 3                        | 5                        | 142                       | 149                       |
| Mille Lacs        | 9            | 136    | 184                | 329    | 380                      | 10                       | 8                        | 218                       | 182                       |
| Morrison          | 4            | 135    | 215                | 354    | 465                      | 5                        | 7                        | 193                       | 199                       |
| Mower             | 5            | 162    | 394                | 561    | 624                      | 5                        | 1                        | 217                       | 206                       |
| Murray            | 1            | 39     | 69                 | 109    | 87                       | 1                        | 2                        | 66                        | 50                        |
| Nicollet          | 4            | 122    | 302                | 428    | 468                      | 6                        | 1                        | 170                       | 157                       |
| Nobles            | 2            | 103    | 252                | 357    | 345                      | 2                        | 3                        | 154                       | 135                       |
| Norman            | 0            | 23     | 51                 | 74     | 71                       | 0                        | 0                        | 34                        | 41                        |
| Olmsted           | 13           | 636    | 1,277              | 1,926  | 2,363                    | 15                       | 10                       | 888                       | 1,047                     |
| Otter Tail        | 4            | 277    | 524                | 805    | 817                      | 4                        | 10                       | 389                       | 438                       |
| Pennington        | 0            | 71     | 85                 | 156    | 168                      | 0                        | 3                        | 101                       | 116                       |
| Pine              | 4            | 125    | 222                | 351    | 388                      | 4                        | 13                       | 194                       | 262                       |
| Pipestone         | 2            | 35     | 73                 | 110    | 107                      | 2                        | 2                        | 51                        | 57                        |
| Polk              | 4            | 84     | 271                | 359    | 397                      | 6                        | 4                        | 109                       | 155                       |
| Pope              | 4            | 51     | 65                 | 120    | 140                      | 4                        | 2                        | 71                        | 54                        |
| Ramsey            | 18           | 2,647  | 8,157              | 10,822 | 12,712                   | 20                       | 26                       | 3,649                     | 4,006                     |
| Red Lake          | 2            | 16     | 11                 | 29     | 37                       | 2                        | 1                        | 27                        | 18                        |
| Redwood           | 3            | 78     | 111                | 192    | 181                      | 3                        | 3                        | 115                       | 99                        |
| Renville          | 4            | 74     | 81                 | 159    | 181                      | 4                        | 7                        | 118                       | 128                       |
| Rice              | 11           | 308    | 524                | 843    | 924                      | 13                       | 14                       | 420                       | 461                       |
| Rock              | 1            | 46     | 126                | 173    | 151                      | 1                        | 1                        | 65                        | 72                        |

TABLE 1.24 CONTINUED

2006 COUNTY CRASH REPORT

| County           | 2006 Crashes |        |                    |        | Total<br>Crashes<br>2005 | Number<br>Killed<br>2006 | Number<br>Killed<br>2005 | Number<br>Injured<br>2006 | Number<br>Injured<br>2005 |
|------------------|--------------|--------|--------------------|--------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------------|
|                  | Fatal        | Injury | Property<br>Damage | Total  |                          |                          |                          |                           |                           |
| Roseau           | 0            | 29     | 81                 | 110    | 145                      | 0                        | 6                        | 44                        | 74                        |
| St. Louis        | 21           | 897    | 1,938              | 2,856  | 2,364                    | 21                       | 19                       | 1,279                     | 1,203                     |
| Scott            | 8            | 464    | 777                | 1,249  | 1,365                    | 8                        | 11                       | 709                       | 746                       |
| Sherburne        | 9            | 356    | 807                | 1,172  | 1,240                    | 9                        | 18                       | 508                       | 561                       |
| Sibley           | 2            | 43     | 99                 | 144    | 184                      | 2                        | 0                        | 63                        | 96                        |
| Stearns          | 14           | 758    | 1,547              | 2,319  | 2,222                    | 15                       | 18                       | 1,129                     | 1,145                     |
| Steele           | 5            | 154    | 355                | 514    | 759                      | 5                        | 7                        | 219                       | 235                       |
| Stevens          | 2            | 29     | 101                | 132    | 103                      | 2                        | 3                        | 49                        | 45                        |
| Swift            | 0            | 39     | 47                 | 86     | 90                       | 0                        | 0                        | 62                        | 40                        |
| Todd             | 3            | 97     | 157                | 257    | 235                      | 3                        | 5                        | 131                       | 118                       |
| Traverse         | 1            | 7      | 19                 | 27     | 17                       | 1                        | 0                        | 10                        | 9                         |
| Wabasha          | 7            | 95     | 176                | 278    | 283                      | 7                        | 6                        | 145                       | 139                       |
| Wadena           | 2            | 51     | 91                 | 144    | 167                      | 3                        | 2                        | 71                        | 84                        |
| Waseca           | 3            | 84     | 151                | 238    | 267                      | 3                        | 3                        | 111                       | 120                       |
| Washington       | 15           | 840    | 1,902              | 2,757  | 3,167                    | 16                       | 19                       | 1,175                     | 1,411                     |
| Watonwan         | 2            | 33     | 104                | 139    | 154                      | 4                        | 3                        | 50                        | 61                        |
| Wilkin           | 1            | 42     | 83                 | 126    | 134                      | 1                        | 0                        | 51                        | 51                        |
| Winona           | 7            | 235    | 592                | 834    | 942                      | 7                        | 2                        | 300                       | 338                       |
| Wright           | 11           | 451    | 872                | 1,334  | 1,495                    | 11                       | 16                       | 658                       | 754                       |
| Yellow Medicine  | 3            | 41     | 84                 | 128    | 139                      | 3                        | 5                        | 54                        | 77                        |
| Unknown          | 0            | 0      | 0                  | 0      | 1                        | 0                        | 0                        | 0                         | 2                         |
| Minnesota Totals | 456          | 24,663 | 53,626             | 78,745 | 87,813                   | 494                      | 559                      | 35,025                    | 37,686                    |

TABLE 1.25

**2006 CRASHES IN CITIES OF 2,500 OR MORE POPULATION**

| City             | Crashes |                 |                 |       | Persons |         |
|------------------|---------|-----------------|-----------------|-------|---------|---------|
|                  | Fatal   | Personal Injury | Property Damage | Total | Killed  | Injured |
| Afton            | 0       | 11              | 17              | 28    | 0       | 14      |
| Albert Lea       | 1       | 55              | 221             | 277   | 1       | 88      |
| Albertville      | 0       | 38              | 73              | 111   | 0       | 53      |
| Alexandria       | 0       | 79              | 231             | 310   | 0       | 105     |
| Andover          | 2       | 73              | 103             | 178   | 2       | 113     |
| Annandale        | 0       | 8               | 12              | 20    | 0       | 11      |
| Anoka            | 0       | 96              | 317             | 413   | 0       | 123     |
| Apple Valley     | 0       | 203             | 279             | 482   | 0       | 286     |
| Arden Hills      | 1       | 105             | 311             | 417   | 1       | 154     |
| Aurora           | 0       | 4               | 5               | 9     | 0       | 5       |
| Austin           | 1       | 85              | 260             | 346   | 1       | 114     |
| Baxter           | 0       | 60              | 122             | 182   | 0       | 95      |
| Bayport          | 0       | 7               | 21              | 28    | 0       | 10      |
| Baytown Township | 0       | 7               | 21              | 28    | 0       | 10      |
| Becker           | 0       | 13              | 35              | 48    | 0       | 22      |
| Belle Plaine     | 0       | 15              | 43              | 58    | 0       | 23      |
| Bemidji          | 1       | 72              | 234             | 307   | 1       | 96      |
| Benson           | 0       | 6               | 21              | 27    | 0       | 13      |
| Big Lake         | 0       | 26              | 49              | 75    | 0       | 33      |
| Blaine           | 5       | 257             | 334             | 596   | 6       | 372     |
| Bloomington      | 3       | 574             | 1,111           | 1,688 | 3       | 783     |
| Blue Earth       | 1       | 11              | 32              | 44    | 2       | 14      |
| Brainerd         | 0       | 106             | 240             | 346   | 0       | 145     |
| Breckenridge     | 0       | 11              | 33              | 44    | 0       | 13      |
| Brooklyn Center  | 2       | 247             | 395             | 644   | 2       | 358     |
| Brooklyn Park    | 6       | 299             | 251             | 556   | 7       | 431     |
| Buffalo          | 0       | 52              | 94              | 146   | 0       | 81      |
| Burnsville       | 2       | 280             | 504             | 786   | 2       | 386     |
| Byron            | 0       | 12              | 21              | 33    | 0       | 21      |
| Caledonia        | 0       | 6               | 25              | 31    | 0       | 6       |
| Cambridge        | 0       | 39              | 104             | 143   | 0       | 50      |
| Cannon Falls     | 1       | 11              | 34              | 46    | 1       | 25      |
| Centerville      | 0       | 3               | 11              | 14    | 0       | 3       |
| Champlin         | 0       | 80              | 92              | 172   | 0       | 120     |
| Chanhassen       | 2       | 99              | 289             | 390   | 3       | 130     |
| Chaska           | 0       | 67              | 163             | 230   | 0       | 106     |
| Chisago City     | 0       | 11              | 16              | 27    | 0       | 20      |
| Chisholm         | 1       | 11              | 61              | 73    | 1       | 14      |
| Circle Pines     | 0       | 10              | 28              | 38    | 0       | 10      |
| Cloquet          | 2       | 47              | 34              | 83    | 2       | 77      |
| Cokato           | 0       | 3               | 10              | 13    | 0       | 5       |
| Cold Spring      | 0       | 8               | 31              | 39    | 0       | 17      |
| Columbia Heights | 1       | 82              | 132             | 215   | 1       | 110     |
| Coon Rapids      | 3       | 328             | 669             | 1,000 | 3       | 468     |
| Corcoran         | 0       | 21              | 41              | 62    | 0       | 32      |
| Cottage Grove    | 0       | 62              | 223             | 285   | 0       | 99      |
| Crookston        | 0       | 8               | 57              | 65    | 0       | 9       |

TABLE 1.25

**2006 CRASHES IN CITIES OF 2,500 OR MORE POPULATION**

| City                | Crashes |                 |                 |       | Persons |         |
|---------------------|---------|-----------------|-----------------|-------|---------|---------|
|                     | Fatal   | Personal Injury | Property Damage | Total | Killed  | Injured |
| Crystal             | 0       | 89              | 100             | 189   | 0       | 131     |
| Dayton              | 0       | 29              | 54              | 83    | 0       | 42      |
| Deephaven           | 0       | 6               | 18              | 24    | 0       | 9       |
| Delano              | 1       | 8               | 33              | 42    | 1       | 11      |
| Denmark Township    | 1       | 13              | 20              | 34    | 1       | 16      |
| Detroit Lakes       | 0       | 55              | 87              | 142   | 0       | 82      |
| Dilworth            | 0       | 7               | 24              | 31    | 0       | 16      |
| Duluth              | 4       | 342             | 876             | 1,222 | 4       | 485     |
| Eagan               | 3       | 255             | 652             | 910   | 3       | 342     |
| East Bethel         | 1       | 39              | 42              | 82    | 2       | 65      |
| East Grand Forks    | 0       | 21              | 92              | 113   | 0       | 25      |
| Eden Prairie        | 1       | 194             | 549             | 744   | 2       | 266     |
| Edina               | 0       | 147             | 416             | 563   | 0       | 192     |
| Elk River           | 1       | 111             | 211             | 323   | 1       | 157     |
| Ely                 | 0       | 4               | 16              | 20    | 0       | 4       |
| Eveleth             | 0       | 7               | 40              | 47    | 0       | 10      |
| Fairmont            | 0       | 42              | 100             | 142   | 0       | 59      |
| Falcon Heights      | 0       | 21              | 43              | 64    | 0       | 30      |
| Faribault           | 2       | 105             | 115             | 222   | 3       | 153     |
| Farmington          | 1       | 32              | 80              | 113   | 1       | 46      |
| Fergus Falls        | 1       | 58              | 157             | 216   | 1       | 69      |
| Forest Lake         | 0       | 101             | 214             | 315   | 0       | 137     |
| Fridley             | 3       | 139             | 210             | 352   | 3       | 203     |
| Gilbert             | 0       | 6               | 17              | 23    | 0       | 10      |
| Glencoe             | 0       | 12              | 34              | 46    | 0       | 18      |
| Glenwood            | 0       | 8               | 22              | 30    | 0       | 13      |
| Golden Valley       | 1       | 142             | 314             | 457   | 1       | 185     |
| Goodview            | 0       | 6               | 22              | 28    | 0       | 6       |
| Grand Rapids        | 0       | 60              | 140             | 200   | 0       | 112     |
| Granite Falls       | 1       | 4               | 27              | 32    | 1       | 9       |
| Grant               | 2       | 11              | 32              | 45    | 2       | 17      |
| Greenfield          | 0       | 13              | 18              | 31    | 0       | 14      |
| Ham Lake            | 2       | 53              | 70              | 125   | 2       | 108     |
| Hastings            | 0       | 68              | 192             | 260   | 0       | 185     |
| Hermantown          | 0       | 50              | 61              | 111   | 0       | 81      |
| Hibbing             | 1       | 86              | 256             | 343   | 1       | 119     |
| Hopkins             | 1       | 68              | 164             | 233   | 1       | 86      |
| Hugo                | 1       | 33              | 53              | 87    | 1       | 53      |
| Hutchinson          | 2       | 61              | 161             | 224   | 2       | 84      |
| Independence        | 0       | 19              | 25              | 44    | 0       | 28      |
| International Falls | 0       | 25              | 53              | 78    | 0       | 37      |
| Inver Grove Heights | 2       | 110             | 245             | 357   | 2       | 164     |
| Jackson             | 0       | 9               | 33              | 42    | 0       | 14      |
| Jordan              | 1       | 24              | 35              | 60    | 1       | 39      |



TABLE 1.25

**2006 CRASHES IN CITIES OF 2,500 OR MORE POPULATION**

| City             | Crashes |                 |                 |        | Persons |         |
|------------------|---------|-----------------|-----------------|--------|---------|---------|
|                  | Fatal   | Personal Injury | Property Damage | Total  | Killed  | Injured |
| Kasson           | 0       | 9               | 26              | 35     | 0       | 12      |
| La Crescent      | 0       | 13              | 46              | 59     | 0       | 18      |
| Lake City        | 0       | 17              | 46              | 63     | 0       | 33      |
| Lake Elmo        | 2       | 54              | 118             | 174    | 2       | 75      |
| Lakeville        | 2       | 111             | 144             | 257    | 2       | 166     |
| Le Sueur         | 0       | 15              | 31              | 46     | 0       | 19      |
| Lindstrom        | 0       | 16              | 32              | 48     | 0       | 21      |
| Lino Lakes       | 2       | 61              | 189             | 252    | 3       | 94      |
| Litchfield       | 0       | 13              | 47              | 60     | 0       | 18      |
| Little Canada    | 0       | 132             | 303             | 435    | 0       | 187     |
| Little Falls     | 0       | 35              | 76              | 111    | 0       | 48      |
| Long Prairie     | 0       | 9               | 19              | 28     | 0       | 14      |
| Luverne          | 0       | 10              | 38              | 48     | 0       | 12      |
| Mahtomedi        | 1       | 12              | 26              | 39     | 1       | 19      |
| Mankato          | 2       | 255             | 693             | 950    | 2       | 338     |
| Maple Grove      | 1       | 214             | 567             | 782    | 1       | 310     |
| Maplewood        | 3       | 254             | 677             | 934    | 3       | 356     |
| Marshall         | 1       | 50              | 113             | 164    | 2       | 79      |
| May Township     | 0       | 7               | 14              | 21     | 0       | 9       |
| Medina           | 0       | 34              | 91              | 125    | 0       | 47      |
| Melrose          | 1       | 10              | 25              | 36     | 1       | 16      |
| Mendota Heights  | 0       | 57              | 121             | 178    | 0       | 71      |
| Minneapolis      | 15      | 3,052           | 6,998           | 10,065 | 15      | 4,263   |
| Minnetonka       | 2       | 230             | 416             | 648    | 2       | 305     |
| Minnetrista      | 0       | 12              | 55              | 67     | 0       | 17      |
| Montevideo       | 0       | 14              | 56              | 70     | 0       | 19      |
| Monticello       | 0       | 40              | 98              | 138    | 0       | 59      |
| Moorhead         | 1       | 130             | 370             | 501    | 2       | 174     |
| Mora             | 0       | 17              | 27              | 44     | 0       | 23      |
| Morris           | 0       | 11              | 56              | 67     | 0       | 21      |
| Mound            | 0       | 20              | 35              | 55     | 0       | 26      |
| Mounds View      | 0       | 49              | 71              | 120    | 0       | 70      |
| Mountain Iron    | 0       | 17              | 32              | 49     | 0       | 28      |
| New Brighton     | 2       | 70              | 185             | 257    | 2       | 96      |
| New Hope         | 0       | 40              | 96              | 136    | 0       | 54      |
| Newport          | 0       | 37              | 118             | 155    | 0       | 45      |
| New Prague       | 1       | 10              | 26              | 37     | 2       | 19      |
| New Scandia Twsp | 1       | 22              | 26              | 49     | 1       | 30      |
| New Ulm          | 1       | 75              | 130             | 206    | 1       | 98      |
| North Branch     | 1       | 45              | 80              | 126    | 1       | 74      |
| Northfield       | 0       | 49              | 98              | 147    | 0       | 70      |
| North Mankato    | 0       | 20              | 69              | 89     | 0       | 28      |
| North Oaks       | 0       | 7               | 13              | 20     | 0       | 12      |
| North St. Paul   | 0       | 58              | 127             | 185    | 0       | 82      |
| Oakdale          | 3       | 101             | 183             | 287    | 3       | 141     |

TABLE 1.25

**2006 CRASHES IN CITIES OF 2,500 OR MORE POPULATION**

| City               | Crashes |                 |                 |       | Persons |         |
|--------------------|---------|-----------------|-----------------|-------|---------|---------|
|                    | Fatal   | Personal Injury | Property Damage | Total | Killed  | Injured |
| Oak Park Heights   | 0       | 32              | 52              | 84    | 0       | 41      |
| Olivia             | 0       | 5               | 6               | 11    | 0       | 9       |
| Orono              | 0       | 29              | 86              | 115   | 0       | 35      |
| Otsego             | 1       | 46              | 72              | 119   | 1       | 57      |
| Owatonna           | 1       | 80              | 161             | 242   | 1       | 115     |
| Park Rapids        | 0       | 12              | 18              | 30    | 0       | 21      |
| Pine City          | 0       | 7               | 26              | 33    | 0       | 8       |
| Pipestone          | 0       | 12              | 18              | 30    | 0       | 16      |
| Plainview          | 0       | 12              | 10              | 22    | 0       | 20      |
| Plymouth           | 4       | 209             | 564             | 777   | 4       | 284     |
| Princeton          | 0       | 26              | 37              | 63    | 0       | 37      |
| Prior Lake         | 2       | 46              | 38              | 86    | 2       | 73      |
| Proctor            | 0       | 7               | 28              | 35    | 0       | 9       |
| Ramsey             | 4       | 91              | 158             | 253   | 4       | 132     |
| Red Wing           | 0       | 99              | 244             | 343   | 0       | 136     |
| Redwood Falls      | 0       | 23              | 42              | 65    | 0       | 27      |
| Richfield          | 0       | 219             | 474             | 693   | 0       | 306     |
| Robbinsdale        | 0       | 47              | 89              | 136   | 0       | 61      |
| Rochester          | 4       | 425             | 951             | 1,380 | 5       | 588     |
| Rockford           | 0       | 8               | 16              | 24    | 0       | 14      |
| Rogers             | 0       | 75              | 149             | 224   | 0       | 104     |
| Roseau             | 0       | 6               | 16              | 22    | 0       | 10      |
| Rosemount          | 0       | 65              | 169             | 234   | 0       | 98      |
| Roseville          | 1       | 215             | 617             | 833   | 1       | 301     |
| St. Anthony        | 0       | 26              | 54              | 80    | 0       | 40      |
| St. Augusta Twnshp | 0       | 10              | 28              | 38    | 0       | 12      |
| St. Charles        | 0       | 7               | 36              | 43    | 0       | 7       |
| St. Cloud          | 4       | 409             | 958             | 1,371 | 4       | 560     |
| St. Francis        | 1       | 20              | 31              | 52    | 1       | 35      |
| St. James          | 0       | 12              | 32              | 44    | 0       | 14      |
| St. Joseph         | 0       | 12              | 23              | 35    | 0       | 20      |
| St. Louis Park     | 2       | 205             | 553             | 760   | 2       | 263     |
| St. Michael        | 1       | 30              | 54              | 85    | 1       | 45      |
| St. Paul           | 10      | 1,299           | 4,805           | 6,114 | 11      | 1,768   |
| St. Paul Park      | 0       | 12              | 32              | 44    | 0       | 14      |
| St. Peter          | 0       | 23              | 80              | 103   | 0       | 32      |
| Sartell            | 0       | 22              | 38              | 60    | 0       | 33      |
| Sauk Centre        | 0       | 19              | 25              | 44    | 0       | 33      |
| Sauk Rapids        | 1       | 40              | 56              | 97    | 1       | 56      |
| Savage             | 1       | 114             | 177             | 292   | 1       | 158     |
| Shakopee           | 2       | 116             | 290             | 408   | 2       | 164     |
| Shoreview          | 0       | 102             | 241             | 343   | 0       | 140     |
| Shorewood          | 0       | 30              | 83              | 113   | 0       | 34      |
| Sleepy Eye         | 0       | 11              | 14              | 25    | 0       | 18      |

TABLE 1.25

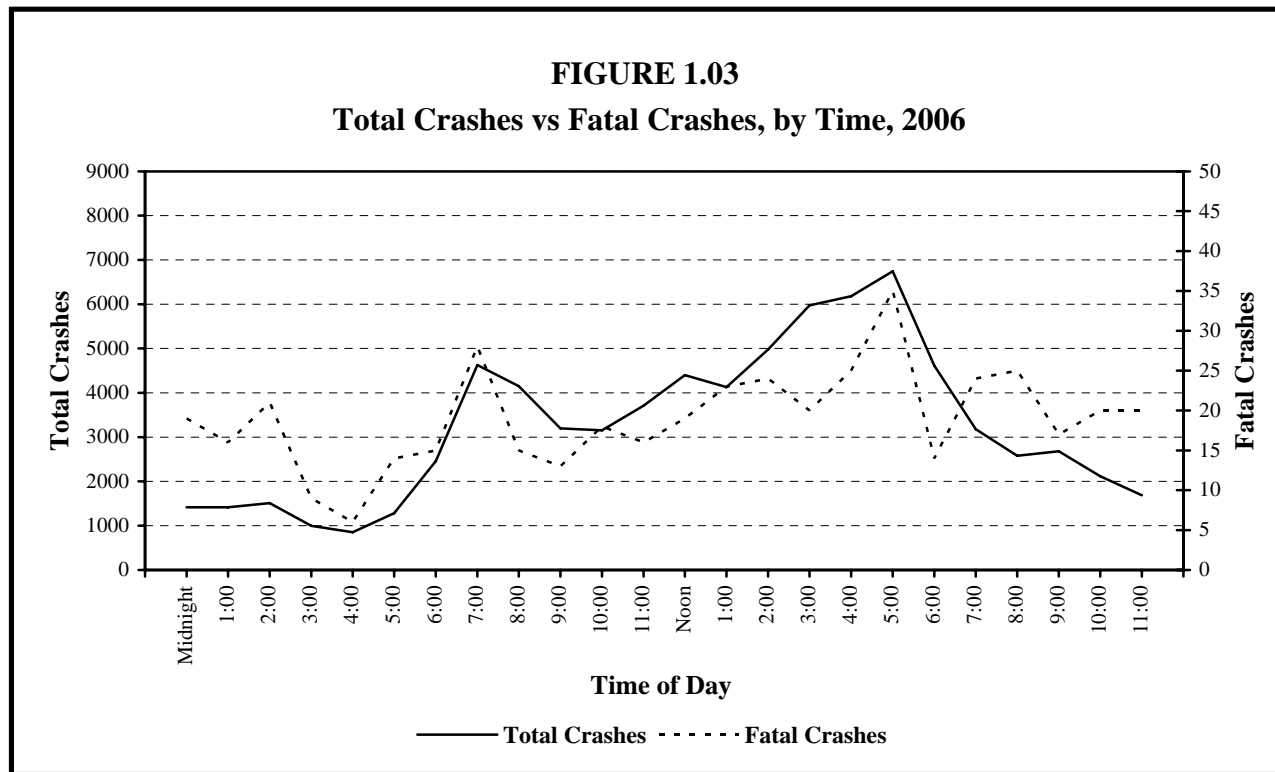
**2006 CRASHES IN CITIES OF 2,500 OR MORE POPULATION**

| City                | Crashes |                 |                 |       | Persons |         |
|---------------------|---------|-----------------|-----------------|-------|---------|---------|
|                     | Fatal   | Personal Injury | Property Damage | Total | Killed  | Injured |
| South St. Paul      | 1       | 90              | 240             | 331   | 1       | 113     |
| Spring Lake Park    | 0       | 34              | 66              | 100   | 0       | 48      |
| Spring Valley       | 0       | 12              | 25              | 37    | 0       | 16      |
| Staples             | 0       | 5               | 23              | 28    | 0       | 8       |
| Stewartville        | 0       | 8               | 15              | 23    | 0       | 10      |
| Stillwater          | 1       | 57              | 166             | 224   | 1       | 68      |
| Stillwater Township | 0       | 27              | 36              | 63    | 0       | 44      |
| Thief River Falls   | 0       | 41              | 61              | 102   | 0       | 53      |
| Two Harbors         | 0       | 15              | 33              | 48    | 0       | 20      |
| Vadnais Heights     | 0       | 108             | 272             | 380   | 0       | 153     |
| Victoria            | 0       | 17              | 36              | 53    | 0       | 22      |
| Virginia            | 2       | 44              | 146             | 192   | 2       | 56      |
| Waconia             | 0       | 19              | 43              | 62    | 0       | 26      |
| Wadena              | 0       | 16              | 38              | 54    | 0       | 23      |
| Waite Park          | 1       | 52              | 127             | 180   | 1       | 81      |
| Waseca              | 1       | 30              | 64              | 95    | 1       | 44      |
| Watertown           | 0       | 7               | 17              | 24    | 0       | 11      |
| Wayzata             | 0       | 32              | 116             | 148   | 0       | 38      |
| W. Lakeland Twnsp   | 0       | 6               | 24              | 30    | 0       | 8       |
| West St. Paul       | 0       | 94              | 125             | 219   | 0       | 128     |
| White Bear Lake     | 0       | 174             | 371             | 545   | 0       | 227     |
| White Bear Twnsp    | 1       | 19              | 37              | 57    | 2       | 27      |
| Willmar             | 0       | 107             | 281             | 388   | 0       | 157     |
| Windom              | 0       | 10              | 37              | 47    | 0       | 13      |
| Winona              | 0       | 119             | 275             | 394   | 0       | 145     |
| Woodbury            | 3       | 183             | 404             | 590   | 4       | 267     |
| Worthington         | 0       | 52              | 139             | 191   | 0       | 70      |
| Wyoming             | 1       | 17              | 42              | 60    | 1       | 27      |
| Zimmerman           | 0       | 13              | 58              | 71    | 0       | 17      |

TABLE 1.26

## 2006 CRASHES BY TIME AND DAY

| Hour<br>Begin-<br>Ning | All Days |       | Sunday |       | Monday |       | Tuesday |       | Wednesday |       | Thursday |       | Friday |       | Saturday |       |
|------------------------|----------|-------|--------|-------|--------|-------|---------|-------|-----------|-------|----------|-------|--------|-------|----------|-------|
|                        | Total    | Fatal | Total  | Fatal | Total  | Fatal | Total   | Fatal | Total     | Fatal | Total    | Fatal | Total  | Fatal | Total    | Fatal |
| Midnight               | 1,413    | 19    | 323    | 2     | 138    | 2     | 132     | 3     | 146       | 1     | 146      | 2     | 195    | 3     | 333      | 6     |
| 1:00                   | 1,413    | 16    | 332    | 6     | 135    | 3     | 140     | 1     | 147       | 0     | 152      | 1     | 183    | 1     | 324      | 4     |
| 2:00                   | 1,507    | 21    | 399    | 6     | 126    | 1     | 106     | 1     | 112       | 1     | 189      | 2     | 219    | 1     | 356      | 9     |
| 3:00                   | 995      | 9     | 246    | 2     | 103    | 0     | 90      | 0     | 94        | 1     | 115      | 1     | 135    | 0     | 212      | 5     |
| 4:00                   | 853      | 6     | 156    | 2     | 127    | 1     | 89      | 0     | 93        | 2     | 88       | 0     | 138    | 0     | 162      | 1     |
| 5:00                   | 1,281    | 14    | 171    | 1     | 207    | 2     | 157     | 2     | 185       | 4     | 214      | 4     | 210    | 0     | 137      | 1     |
| 6:00                   | 2,458    | 15    | 203    | 2     | 424    | 4     | 405     | 2     | 402       | 0     | 448      | 4     | 386    | 0     | 190      | 3     |
| 7:00                   | 4,626    | 28    | 216    | 2     | 852    | 12    | 921     | 5     | 836       | 3     | 849      | 3     | 690    | 2     | 262      | 1     |
| 8:00                   | 4,151    | 15    | 259    | 3     | 749    | 2     | 793     | 3     | 700       | 3     | 734      | 2     | 636    | 1     | 280      | 1     |
| 9:00                   | 3,196    | 13    | 289    | 1     | 545    | 1     | 569     | 1     | 446       | 1     | 463      | 4     | 512    | 4     | 372      | 1     |
| 10:00                  | 3,154    | 18    | 422    | 6     | 433    | 2     | 441     | 2     | 369       | 1     | 469      | 1     | 532    | 1     | 488      | 5     |
| 11:00                  | 3,709    | 16    | 458    | 3     | 511    | 5     | 522     | 2     | 455       | 1     | 515      | 3     | 656    | 1     | 592      | 1     |
| Noon                   | 4,400    | 19    | 582    | 9     | 600    | 3     | 640     | 1     | 577       | 0     | 629      | 3     | 760    | 2     | 612      | 1     |
| 1:00                   | 4,129    | 23    | 492    | 2     | 545    | 3     | 564     | 3     | 545       | 1     | 661      | 5     | 731    | 6     | 591      | 3     |
| 2:00                   | 4,978    | 24    | 514    | 2     | 732    | 4     | 704     | 3     | 684       | 7     | 782      | 4     | 962    | 4     | 600      | 0     |
| 3:00                   | 5,975    | 20    | 559    | 4     | 937    | 5     | 843     | 2     | 891       | 5     | 1,039    | 1     | 1,130  | 2     | 576      | 1     |
| 4:00                   | 6,183    | 25    | 552    | 4     | 938    | 5     | 935     | 3     | 969       | 3     | 1,019    | 4     | 1,173  | 3     | 597      | 3     |
| 5:00                   | 6,744    | 35    | 522    | 1     | 1,043  | 8     | 1,086   | 9     | 1,194     | 3     | 1,158    | 5     | 1,193  | 8     | 548      | 1     |
| 6:00                   | 4,613    | 14    | 510    | 1     | 642    | 0     | 688     | 2     | 695       | 3     | 766      | 2     | 760    | 3     | 552      | 3     |
| 7:00                   | 3,180    | 24    | 473    | 4     | 440    | 1     | 429     | 3     | 439       | 3     | 455      | 3     | 521    | 4     | 423      | 6     |
| 8:00                   | 2,581    | 25    | 380    | 5     | 362    | 2     | 355     | 1     | 360       | 6     | 393      | 2     | 357    | 2     | 374      | 7     |
| 9:00                   | 2,681    | 17    | 375    | 3     | 329    | 1     | 370     | 3     | 336       | 0     | 391      | 2     | 493    | 6     | 387      | 2     |
| 10:00                  | 2,115    | 20    | 282    | 2     | 258    | 1     | 263     | 1     | 244       | 0     | 315      | 3     | 422    | 7     | 331      | 6     |
| 11:00                  | 1,687    | 20    | 194    | 4     | 161    | 1     | 196     | 3     | 178       | 4     | 202      | 1     | 390    | 5     | 366      | 2     |
| Unknown                | 723      | 0     | 77     | 0     | 96     | 0     | 105     | 0     | 116       | 0     | 101      | 0     | 130    | 0     | 98       | 0     |
| Total                  | 78,745   | 456   | 8,986  | 77    | 11,433 | 69    | 11,543  | 56    | 11,213    | 53    | 12,293   | 62    | 13,514 | 66    | 9,763    | 73    |



*TABLE 1.27*  
**2006 CRASHES, FATALITIES, AND INJURIES BY MONTH**

| Month     | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed | Injured |
|-----------|---------------|----------------|-------------------------|---------------|--------|---------|
| January   | 43            | 1,952          | 5,051                   | 7,046         | 50     | 2,755   |
| February  | 27            | 1,702          | 4,496                   | 6,225         | 27     | 2,371   |
| March     | 28            | 1,725          | 4,569                   | 6,322         | 31     | 2,489   |
| April     | 34            | 1,783          | 3,491                   | 5,308         | 35     | 2,563   |
| May       | 39            | 2,072          | 4,168                   | 6,279         | 44     | 2,945   |
| June      | 40            | 2,211          | 4,266                   | 6,517         | 42     | 3,185   |
| July      | 56            | 2,184          | 3,639                   | 5,879         | 59     | 3,116   |
| August    | 42            | 2,192          | 3,939                   | 6,173         | 48     | 3,106   |
| September | 30            | 2,249          | 4,492                   | 6,771         | 30     | 3,189   |
| October   | 39            | 2,226          | 4,991                   | 7,256         | 41     | 3,103   |
| November  | 36            | 1,963          | 4,853                   | 6,852         | 41     | 2,775   |
| December  | 42            | 2,404          | 5,671                   | 8,117         | 46     | 3,428   |
| Total     | 456           | 24,663         | 53,626                  | 78,745        | 494    | 35,025  |

TABLE 1.28

**HOLIDAY CRASH SUMMARY, 2001 - 2006**

| <b>Holiday Period</b>      | <b>Year</b> | <b>Hours*</b> | <b>Fatal<br/>Crashes</b> | <b>Personal<br/>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|----------------------------|-------------|---------------|--------------------------|----------------------------------------|----------------------------------------|--------------------------|---------------|----------------|
| <b>Memorial Day</b>        | 2001        | 78            | 7                        | 169                                    | 388                                    | 564                      | 7             | 260            |
| (For 2006, the holiday     | 2002        | 78            | 6                        | 208                                    | 387                                    | 601                      | 7             | 297            |
| period was 6 PM Fri.,      | 2003        | 78            | 6                        | NA                                     | NA                                     | NA                       | 6             | NA             |
| May 26 -- midnight         | 2004        | 78            | 6                        | 194                                    | 362                                    | 562                      | 9             | 283            |
| Monday, May 29.)           | 2005        | 78            | 8                        | 177                                    | 342                                    | 527                      | 9             | 295            |
|                            | 2006        | 78            | 3                        | 188                                    | 344                                    | 535                      | 4             | 287            |
| <b>July 4<sup>th</sup></b> | 2001        | 30            | 2                        | 122                                    | 161                                    | 285                      | 3             | 189            |
| (For 2006, the holiday     | 2002        | 102           | 6                        | 342                                    | 606                                    | 954                      | 6             | 541            |
| period was 6 PM Fri.,      | 2003        | 78            | 3                        | NA                                     | NA                                     | NA                       | 3             | NA             |
| June 30 -- midnight        | 2004        | 78            | 9                        | 235                                    | 420                                    | 664                      | 9             | 379            |
| Tuesday, July 4.)          | 2005        | 78            | 7                        | 207                                    | 336                                    | 550                      | 9             | 332            |
|                            | 2006        | 102           | 5                        | 266                                    | 389                                    | 660                      | 5             | 377            |
| <b>Labor Day</b>           | 2001        | 78            | 4                        | 220                                    | 394                                    | 618                      | 4             | 326            |
| (For 2006, the holiday     | 2002        | 78            | 7                        | 233                                    | 389                                    | 629                      | 7             | 377            |
| period was 6 PM Fri.,      | 2003        | 78            | 7                        | NA                                     | NA                                     | NA                       | 9             | NA             |
| Sept 1 -- midnight         | 2004        | 78            | 4                        | 213                                    | 357                                    | 574                      | 4             | 358            |
| Monday, Sept 4.)           | 2005        | 78            | 8                        | 187                                    | 315                                    | 510                      | 8             | 289            |
|                            | 2006        | 78            | 1                        | 182                                    | 325                                    | 508                      | 1             | 272            |
| <b>Thanksgiving</b>        | 2001        | 102           | 9                        | 309                                    | 698                                    | 1,016                    | 10            | 473            |
| (For 2006, the holiday     | 2002        | 102           | 8                        | 232                                    | 593                                    | 833                      | 8             | 357            |
| period was 6 PM Wed.,      | 2003        | 102           | 5                        | NA                                     | NA                                     | NA                       | 6             | NA             |
| Nov 22 -- midnight         | 2004        | 102           | 10                       | 419                                    | 981                                    | 1,410                    | 13            | 646            |
| Sunday, Nov 26.)           | 2005        | 102           | 8                        | 390                                    | 1,066                                  | 1,464                    | 11            | 592            |
|                            | 2006        | 102           | 8                        | 200                                    | 469                                    | 677                      | 8             | 299            |
| <b>Christmas</b>           | 2001        | 102           | 9                        | 491                                    | 1,552                                  | 2,052                    | 10            | 719            |
| (For 2006, the holiday     | 2002        | 30            | 1                        | 37                                     | 84                                     | 122                      | 1             | 56             |
| period was 6 PM Fri.,      | 2003        | 102           | 4                        | NA                                     | NA                                     | NA                       | 4             | NA             |
| Dec 22 -- midnight         | 2004        | 78            | 9                        | 178                                    | 511                                    | 698                      | 9             | 284            |
| Monday, Dec 25.)           | 2005        | 78            | 1                        | 153                                    | 325                                    | 479                      | 1             | 227            |
|                            | 2006        | 78            | 0                        | 150                                    | 333                                    | 483                      | 0             | 214            |
| <b>New Year's</b>          | 2001/02     | 102           | 8                        | 213                                    | 760                                    | 981                      | 11            | 342            |
| (For 2006, the             | 2002/03     | 30            | 5                        | 56                                     | 112                                    | 173                      | 5             | 84             |
| holiday period was         | 2003/04     | 102           | 7                        | NA                                     | NA                                     | NA                       | 10            | NA             |
| 6 PM Fri, Dec. 29 --       | 2004/05     | 78            | 3                        | 219                                    | 598                                    | 820                      | 3             | 333            |
| Midnight Monday,           | 2005/06     | 78            | 6                        | 134                                    | 422                                    | 562                      | 8             | 211            |
| Jan 1, 2007.)              | 2006/07     | 78            | 8                        | 286                                    | 735                                    | 1,029                    | 9             | 451            |

\* 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 cautious, or conservative, in reporting that a driver, pedestrian, or bicyclist had been drinking or was under the influence. 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. In 2006, six drinking pedestrians and one drinking bicyclist died after colliding with a vehicle driven by a non-drinking driver. (Three more drinking pedestrians died after colliding with drinking drivers).

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 2006**

Drinking and driving remains a serious problem in Minnesota and across the nation. For 2006, the National Safety Council has made a conservative estimate of \$278 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, 8% of minor injuries, 13% of moderate injuries, 24% of severe injuries, and 34% of deaths were alcohol-related. In all, 166 known people died and 3,501 known people were injured in crashes classified as alcohol-related. (NHTSA estimates will be higher).

### **Impaired driving incidents (DWI's) increase**

There were 41,842 impaired driving incidents last year in Minnesota. This number represents a 13% increase from the previous year. There would surely be more impaired driving arrests each year if staffing levels of State Troopers and police officers in Minnesota had not remained static over the past 20 years. These low staffing levels are inconsistent with the fact that the population and the number of roads continue to rise, and the fact that the number of licensed drivers in Minnesota is now quickly approaching 4 million people.

### **Males and young people especially incur the incidents**

Males made up 69% of the DWI offenders last year. Females are getting arrested more and more often though. In 2006, they accounted for 22% of the incidents. (Ten years ago, they were 18% 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 10%.

### **Young people and the 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. Fifteen-to-thirty-four year-olds accounted for 44% of all traffic deaths, and for fully 59% 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, 124 (75%) of the 166 people who died in alcohol-related crashes were themselves the people whose drinking behavior caused the crash to be classified as alcohol-related. In short, drinking drivers, pedestrians, and bicyclists mostly kill and injure themselves. The remaining 42 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 41% of all traffic crashes, but 61% of the alcohol-related crashes. The late night hours from 9:00 PM to 3:00 AM accounted for 14% of all crashes, but 52% of the alcohol crashes.

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

Of the 156 alcohol-related fatal crashes in 2006, 125 (80%) involved just one motor vehicle in transport. Of the 125 single vehicle alcohol-related fatal crashes, 49 involved a single vehicle colliding with a fixed object, and 50 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 2006, there were 346 motor vehicle drivers who were killed. (Note that this total does not include pedestrians or bicyclists). Of the 346 killed drivers, the Department of Public Safety was able to get alcohol test results for 321 (93%). Of the 321 tested, 207 (64%) tested negative, 15 (5%) tested between .01 and .07, 5 (2%) tested between .08 and .09, and 94 (29%) tested .10 or greater.

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

The 166 alcohol-related fatalities in 2006 consisted of 102 car or truck drivers, 31 car or truck passengers, 19 motorcycle drivers, 1 motorcycle passenger, 12 pedestrians, and 1 bicyclist. Of the 166, the Department of Public Safety was able to get alcohol test results for 153. Of the 153 tested, 117 (76%) 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. The implementation of the .08 legal limit law in mid-2005 will also help this downward trend continue.

Many factors can contribute to a traffic death. Speeding, driver inattention, and not wearing a seat belt are but a few of these. Drinking and driving should not be one of them!



*TABLE 2.01*  
**ALCOHOL-RELATED FATAL CRASH SUMMARY, 1980 - 2006**

| Year | Alcohol Concentration Test Results<br>on Fatally Injured Drivers Only |                    |               |                           |                |                    |                |                       |                | All Traffic Fatalities |                            |               |              |               |     |    |
|------|-----------------------------------------------------------------------|--------------------|---------------|---------------------------|----------------|--------------------|----------------|-----------------------|----------------|------------------------|----------------------------|---------------|--------------|---------------|-----|----|
|      | Drivers Killed                                                        |                    |               | Results on Drivers Tested |                |                    |                |                       |                | Total                  | Alcohol-Related Fatalities |               |              |               |     |    |
|      | Total                                                                 | Tested for Alcohol |               | Negative for Alcohol      |                | .01 to .09 Alcohol |                | .10 or Higher Alcohol |                |                        | Known *                    |               | Estimated ** |               |     |    |
|      |                                                                       | num-<br>ber        | % of<br>total | num-<br>ber               | % of<br>tested | num-<br>ber        | % of<br>tested | num-<br>ber           | % of<br>tested |                        | num-<br>ber                | % of<br>total | num-<br>ber  | % of<br>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            |     |    |
| 1990 | 334                                                                   | 260                | 78            | 129                       | 50             | .01 to .07         |                | .08 to .09            |                | 108                    | 41                         | 568           | 235          | 41            | 258 | 46 |
| 1991 | 327                                                                   | 242                | 74            | 135                       | 56             | 19                 | 7              | 4                     | 2              | 85                     | 35                         | 531           | 212          | 40            | 233 | 44 |
| 1992 | 344                                                                   | 237                | 69            | 135                       | 57             | 20                 | 8              | 2                     | 1              | 89                     | 38                         | 581           | 229          | 39            | 240 | 41 |
| 1993 | 355                                                                   | 283                | 80            | 174                       | 61             | 9                  | 3              | 6                     | 2              | 90                     | 32                         | 538           | 196          | 36            | 216 | 40 |
| 1994 | 377                                                                   | 303                | 80            | 183                       | 60             | 14                 | 5              | 5                     | 2              | 97                     | 32                         | 644           | 226          | 35            | 250 | 39 |
| 1995 | 383                                                                   | 343                | 90            | 198                       | 58             | 16                 | 5              | 7                     | 3              | 115                    | 34                         | 597           | 246          | 41            | 269 | 45 |
| 1996 | 359                                                                   | 314                | 87            | 209                       | 67             | 22                 | 7              | 8                     | 2              | 83                     | 26                         | 576           | 205          | 36            | 222 | 38 |
| 1997 | 384                                                                   | 345                | 90            | 226                       | 66             | 16                 | 5              | 6                     | 2              | 100                    | 29                         | 600           | 178          | 30            | 197 | 33 |
| 1998 | 406                                                                   | 369                | 91            | 218                       | 59             | 15                 | 5              | 4                     | 1              | 122                    | 33                         | 650           | 273          | 42            | 285 | 44 |
| 1999 | 426                                                                   | 370                | 87            | 254                       | 69             | 23                 | 6              | 6                     | 2              | 100                    | 27                         | 626           | 195          | 31            | 206 | 33 |
| 2000 | 403                                                                   | 375                | 93            | 226                       | 60             | 9                  | 2              | 7                     | 2              | 127                    | 34                         | 625           | 245          | 39            | 258 | 41 |
| 2001 | 361                                                                   | 322                | 89            | 198                       | 62             | 16                 | 4              | 6                     | 2              | 101                    | 31                         | 568           | 211          | 37            | 226 | 40 |
| 2002 | 430                                                                   | 365                | 85            | 223                       | 61             | 17                 | 5              | 6                     | 2              | 118                    | 32                         | 657           | 239          | 36            | 255 | 39 |
| 2003 | 435                                                                   | 376                | 86            | 219                       | 58             | 21                 | 6              | 3                     | 1              | 134                    | 36                         | 655           | 255          | 39            | 267 | 41 |
| 2004 | 389                                                                   | 337                | 87            | 219                       | 65             | 18                 | 5              | 5                     | 1              | 103                    | 31                         | 567           | 177          | 31            | 184 | 32 |
| 2005 | 379                                                                   | 348                | 92            | 213                       | 61             | 11                 | 3              | 4                     | 1              | 113                    | 33                         | 559           | 197          | 35            | 201 | 36 |
| 2006 | 346                                                                   | 321                | 93            | 207                       | 64             | 15                 | 5              | 5                     | 2              | 94                     | 29                         | 494           | 166          | 34            | NA  | NA |

\* 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, 1990 - 2006**

| Year | Total  | Gender      |              |             |              |             |              | Area of State |              |             |              |
|------|--------|-------------|--------------|-------------|--------------|-------------|--------------|---------------|--------------|-------------|--------------|
|      |        | Male        |              | Female      |              | Not Stated  |              | Metro         |              | Non-Metro   |              |
|      |        | Num-<br>ber | Per-<br>cent | Num-<br>ber | Per-<br>cent | Num-<br>ber | Per-<br>cent | Num-<br>ber   | Per-<br>cent | Num-<br>ber | Per-<br>cent |
| 1990 | 36,884 | 29,397      | 79.7         | 6,160       | 16.7         | 1,327       | 3.6          | 20,692        | 56.1         | 16,192      | 43.9         |
| 1991 | 32,466 | 25,830      | 79.6         | 5,438       | 16.8         | 1,198       | 3.7          | 17,597        | 54.2         | 14,869      | 45.8         |
| 1992 | 30,834 | 24,760      | 80.3         | 5,581       | 18.1         | 493         | 1.6          | 16,311        | 52.9         | 14,523      | 47.1         |
| 1993 | 30,111 | 24,149      | 80.2         | 5,480       | 18.2         | 482         | 1.6          | 15,597        | 51.8         | 14,514      | 48.2         |
| 1994 | 29,739 | 23,182      | 77.9         | 5,296       | 17.8         | 1,261       | 4.2          | 15,477        | 52.0         | 14,262      | 48.0         |
| 1995 | 30,255 | 23,217      | 76.7         | 5,425       | 17.9         | 1,613       | 5.3          | 15,678        | 51.8         | 14,577      | 48.2         |
| 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         |

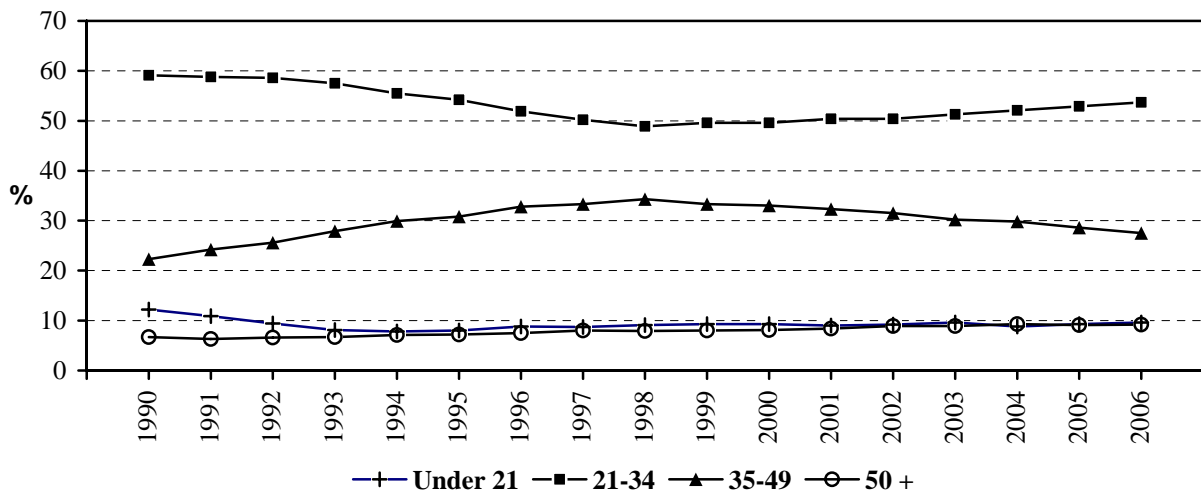
\* Note: The table above creates the impression that the proportion of violators with gender “not stated” is increasing over time. This is *not* so. If a person arrested for impaired driving does not have a Minnesota driver’s license, then a record is created, but the new record does *not* show the person’s 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, 1990 - 2006**

| Year | Total  | Age  |    |     |     |     |       |       |       | Total<br>Under 21 | 21-34  | 35-49  | 50 &<br>Older |
|------|--------|------|----|-----|-----|-----|-------|-------|-------|-------------------|--------|--------|---------------|
|      |        | 0-14 | 15 | 16  | 17  | 18  | 19    | 20    |       |                   |        |        |               |
| 1990 | 36,884 | 3    | 19 | 184 | 454 | 989 | 1,346 | 1,477 | 4,472 |                   | 21,778 | 8,191  | 2,443         |
| 1991 | 32,466 | 9    | 13 | 143 | 328 | 747 | 1,033 | 1,252 | 3,525 |                   | 19,062 | 7,854  | 2,025         |
| 1992 | 30,834 | 3    | 12 | 111 | 290 | 594 | 830   | 1,036 | 2,876 |                   | 18,055 | 7,887  | 2,016         |
| 1993 | 30,111 | 2    | 8  | 89  | 254 | 500 | 744   | 837   | 2,434 |                   | 17,299 | 8,379  | 1,999         |
| 1994 | 29,739 | 5    | 7  | 108 | 233 | 545 | 644   | 761   | 2,303 |                   | 16,481 | 8,871  | 2,084         |
| 1995 | 30,255 | 1    | 20 | 111 | 243 | 519 | 723   | 799   | 2,416 |                   | 16,368 | 9,302  | 2,169         |
| 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         |

**FIGURE 2.01**  
**PERCENT OF IMPAIRED DRIVING INCIDENTS ("DWIs")**  
**COMMITTED BY OFFENDERS IN FOUR AGE GROUPS, 1990 - 2006**



*TABLE 2.04*  
**IMPAIRED DRIVING INCIDENTS ("DWIs") BY AGE, 1990 - 2006**

| Year | Age Group |       |        |       |       |       |       |       |       |       |       |       |       |       |       |     | Total  |
|------|-----------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|--------|
|      | 0-14      | 15-19 | 20-24  | 25-29 | 30-34 | 35-39 | 40-44 | 45-49 | 50-54 | 55-59 | 60-64 | 65-69 | 70-74 | 75-79 | 80-84 | 85+ |        |
| 1990 | 3         | 2,992 | 8,287  | 8,548 | 6,420 | 4,073 | 2,629 | 1,489 | 997   | 591   | 420   | 238   | 127   | 52    | 15    | 3   | 36,884 |
| 1991 | 9         | 2,264 | 7,167  | 7,051 | 6,096 | 3,985 | 2,580 | 1,289 | 815   | 482   | 355   | 216   | 92    | 49    | 13    | 3   | 32,466 |
| 1992 | 3         | 1,837 | 6,940  | 6,284 | 5,867 | 3,916 | 2,498 | 1,473 | 828   | 510   | 357   | 173   | 100   | 35    | 9     | 4   | 30,834 |
| 1993 | 2         | 1,595 | 6,377  | 5,944 | 5,815 | 4,295 | 2,577 | 1,507 | 870   | 512   | 296   | 184   | 94    | 35    | 5     | 3   | 30,111 |
| 1994 | 5         | 1,537 | 5,819  | 5,608 | 5,815 | 4,224 | 2,891 | 1,756 | 849   | 567   | 339   | 188   | 81    | 44    | 12    | 4   | 29,739 |
| 1995 | 1         | 1,616 | 5,850  | 5,517 | 5,800 | 4,536 | 3,034 | 1,732 | 957   | 550   | 324   | 185   | 93    | 43    | 17    | 0   | 30,255 |
| 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 |

**TABLE 2.05**  
**AGE OF PERSONS KILLED AND INJURED IN ALL CRASHES**  
**AND IN ALCOHOL - RELATED CRASHES, 2006**

| Age Group       | Persons Killed |                              | Persons Injured by Severity |                              |          |                              |        |                              | Total Persons Injured |                              |
|-----------------|----------------|------------------------------|-----------------------------|------------------------------|----------|------------------------------|--------|------------------------------|-----------------------|------------------------------|
|                 |                |                              | Severe                      |                              | Moderate |                              | Minor  |                              |                       |                              |
|                 | All            | Alcohol-Related <sup>1</sup> | All                         | Alcohol-Related <sup>2</sup> | All      | Alcohol-Related <sup>2</sup> | All    | Alcohol-Related <sup>2</sup> | All                   | Alcohol-Related <sup>2</sup> |
| 00 - 04         | 3              | 0                            | 22                          | 2                            | 87       | 7                            | 419    | 23                           | 528                   | 32                           |
| 05 - 09         | 2              | 0                            | 36                          | 3                            | 192      | 6                            | 563    | 21                           | 791                   | 30                           |
| 10 - 14         | 9              | 1                            | 56                          | 2                            | 291      | 15                           | 683    | 26                           | 1,030                 | 43                           |
| 15              | 5              | 0                            | 22                          | 3                            | 121      | 12                           | 320    | 18                           | 463                   | 33                           |
| 16              | 19             | 4                            | 46                          | 11                           | 367      | 28                           | 841    | 29                           | 1,254                 | 68                           |
| 17              | 12             | 2                            | 73                          | 15                           | 370      | 36                           | 884    | 54                           | 1,327                 | 105                          |
| 18              | 18             | 6                            | 71                          | 16                           | 368      | 46                           | 845    | 61                           | 1,284                 | 123                          |
| 19              | 16             | 8                            | 63                          | 21                           | 331      | 62                           | 814    | 88                           | 1,208                 | 171                          |
| 20              | 14             | 3                            | 58                          | 19                           | 338      | 61                           | 695    | 69                           | 1,091                 | 149                          |
| Total Under 21: | 98             | 24                           | 447                         | 92                           | 2,465    | 273                          | 6,064  | 389                          | 8,976                 | 754                          |
| 00 - 14         | 14             | 1                            | 114                         | 7                            | 570      | 28                           | 1,665  | 70                           | 2,349                 | 105                          |
| 15 - 19         | 70             | 20                           | 275                         | 66                           | 1,557    | 184                          | 3,704  | 250                          | 5,536                 | 500                          |
| 20 - 24         | 66             | 31                           | 282                         | 117                          | 1,435    | 320                          | 3,203  | 425                          | 4,920                 | 862                          |
| 25 - 29         | 46             | 27                           | 197                         | 72                           | 894      | 186                          | 2,393  | 300                          | 3,484                 | 558                          |
| 30 - 34         | 36             | 21                           | 146                         | 40                           | 632      | 116                          | 1,769  | 169                          | 2,547                 | 325                          |
| 35 - 39         | 21             | 10                           | 125                         | 29                           | 670      | 90                           | 1,722  | 150                          | 2,517                 | 269                          |
| 40 - 44         | 40             | 20                           | 134                         | 33                           | 670      | 99                           | 1,826  | 112                          | 2,630                 | 244                          |
| 45 - 49         | 40             | 10                           | 152                         | 38                           | 693      | 82                           | 1,734  | 115                          | 2,579                 | 235                          |
| 50 - 54         | 33             | 9                            | 110                         | 19                           | 550      | 48                           | 1,507  | 75                           | 2,167                 | 142                          |
| 55 - 59         | 33             | 8                            | 102                         | 7                            | 435      | 29                           | 1,143  | 50                           | 1,680                 | 86                           |
| 60 - 64         | 10             | 2                            | 53                          | 2                            | 304      | 26                           | 738    | 36                           | 1,095                 | 64                           |
| 65 - 69         | 19             | 4                            | 44                          | 4                            | 198      | 8                            | 510    | 14                           | 752                   | 26                           |
| 70 - 74         | 15             | 1                            | 37                          | 3                            | 164      | 8                            | 391    | 8                            | 592                   | 19                           |
| 75 - 79         | 16             | 0                            | 25                          | 0                            | 154      | 7                            | 324    | 7                            | 503                   | 14                           |
| 80 - 84         | 19             | 1                            | 14                          | 1                            | 118      | 3                            | 247    | 2                            | 379                   | 6                            |
| 85 & Older      | 16             | 1                            | 18                          | 0                            | 76       | 1                            | 159    | 1                            | 253                   | 2                            |
| Not Stated      | 0              | 0                            | 16                          | 2                            | 203      | 10                           | 823    | 32                           | 1,042                 | 44                           |
| Total           | 494            | 166                          | 1,844                       | 440                          | 9,323    | 1,245                        | 23,858 | 1,816                        | 35,025                | 3,501                        |

<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 166 alcohol-related traffic deaths in the year 2006. Twelve of those deaths were to pedestrians, and 9 of those 12 pedestrians were drinking. In 3 of the 12 crashes involving drinking pedestrians, the motor vehicle driver had also been drinking. Additionally, 1 bicyclist was among the 166 alcohol-related deaths. In that crash, the bicyclist was drinking and the motor vehicle driver was not.

**TABLE 2.06**  
**2006 ALCOHOL - RELATED FATALITIES'**  
**LEVEL OF ALCOHOL CONCENTRATION BY TRAFFIC ROLE**

| <b>Traffic Role</b>    | <b>Killed</b> | <b>Tested</b> | <b>.00</b> | <b>.01 - .07</b> | <b>.08 - .09</b> | <b>.10 +</b> |
|------------------------|---------------|---------------|------------|------------------|------------------|--------------|
| Car or Truck Driver    | 102           | 102           | 7          | 14               | 4                | 77           |
| Car or Truck Passenger | 31            | 19            | 4          | 6                | 1                | 8            |
| Motorcycle Driver      | 19            | 19            | 0          | 1                | 1                | 17           |
| Motorcycle Passenger   | 1             | 1             | 0          | 0                | 0                | 1            |
| Snowmobile Driver      | 0             | 0             | 0          | 0                | 0                | 0            |
| ATV Driver             | 0             | 0             | 0          | 0                | 0                | 0            |
| Pedestrian             | 12            | 11            | 2          | 1                | 0                | 8            |
| Bicyclist              | 1             | 1             | 0          | 1                | 0                | 0            |
| <b>Total</b>           | <b>166</b>    | <b>153</b>    | <b>13</b>  | <b>23</b>        | <b>6</b>         | <b>111</b>   |

**TABLE 2.07**

**PERCENT OF DEATHS, INJURIES, AND PROPERTY DAMAGE CRASHES  
DETERMINED TO BE ALCOHOL - RELATED, 1997 - 2006**

|                 | <b>1997</b> | <b>1998</b> | <b>1999</b> | <b>2000</b> | <b>2001</b> | <b>2002</b> | <b>2003</b> | <b>2004</b> | <b>2005</b> | <b>2006</b> |
|-----------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Deaths* (Known) | 30%         | 42%         | 31%         | 39%         | 37%         | 36%         | 39%         | 31%         | 35%         | 34%         |
| (Estimated)     | 33%         | 44%         | 33%         | 41%         | 40%         | 39%         | 41%         | 32%         | 36%         | NA          |
| Injuries**      | 11%         | 11%         | 10%         | 10%         | 10%         | 10%         | NA          | 9%          | 9%          | 10%         |
| PDO Crashes**   | 4%          | 4%          | 4%          | 4%          | 4%          | 4%          | NA          | 3%          | 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, 2006**

| <b>First Harmful Event</b> | <b>All Fatal Crashes</b> |                | <b>Alcohol-Related<br/>Fatal Crashes *</b> |                |
|----------------------------|--------------------------|----------------|--------------------------------------------|----------------|
|                            | <b>Number</b>            | <b>Percent</b> | <b>Number</b>                              | <b>Percent</b> |
| <b>Collision with:</b>     |                          |                |                                            |                |
| Another Motor Vehicle      | 193                      | 42.3%          | 31                                         | 19.9%          |
| Parked Motor Vehicle       | 10                       | 2.2            | 5                                          | 3.2            |
| Railroad Train             | 8                        | 1.8            | 2                                          | 1.3            |
| Bicycle                    | 8                        | 1.8            | 1                                          | 0.6            |
| Pedestrian                 | 35                       | 7.7            | 12                                         | 7.7            |
| Deer                       | 3                        | 0.7            | 0                                          | 0.0            |
| Fixed Object               | 91                       | 20.0           | 49                                         | 31.4           |
| Other Collision Type       | 4                        | 0.9            | 2                                          | 1.3            |
| <b>Non-Collision:</b>      |                          |                |                                            |                |
| Overturn                   | 96                       | 21.0           | 50                                         | 32.0           |
| Submersion                 | 2                        | 0.4            | 1                                          | 0.6            |
| Other Type Non-Collision   | 1                        | 0.2            | 1                                          | 0.6            |
| <b>Other/Unknown</b>       | <b>5</b>                 | <b>1.1</b>     | <b>2</b>                                   | <b>1.3</b>     |
| <b>Total</b>               | <b>456</b>               | <b>100.0%</b>  | <b>156</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, 1997 - 2006**

| <b>Year</b> | <b>Killed</b> | <b>Tested</b> | <b>.00</b> | <b>.01 - .07</b> | <b>.08 - .09</b> | <b>.10 +</b> |
|-------------|---------------|---------------|------------|------------------|------------------|--------------|
| 1997        | 384           | 345           | 226 (66%)  | 15 (5%)          | 4 (1%)           | 100 (29%)    |
| 1998        | 406           | 369           | 218 (59%)  | 23 (6%)          | 6 (2%)           | 122 (33%)    |
| 1999        | 426           | 370           | 254 (69%)  | 9 (2%)           | 7 (2%)           | 100 (27%)    |
| 2000        | 403           | 375           | 226 (60%)  | 16 (4%)          | 6 (2%)           | 127 (34%)    |
| 2001        | 361           | 322           | 198 (61%)  | 17 (5%)          | 6 (2%)           | 101 (31%)    |
| 2002        | 430           | 365           | 223 (61%)  | 21 (6%)          | 3 (1%)           | 118 (32%)    |
| 2003        | 435           | 376           | 219 (58%)  | 18 (5%)          | 5 (1%)           | 134 (36%)    |
| 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%)     |

\* Percents based on drivers tested.

*TABLE 2.10*  
**DRIVERS KILLED WHO TESTED .01 OR HIGHER, 1997 - 2006**  
**("Any Alcohol")**

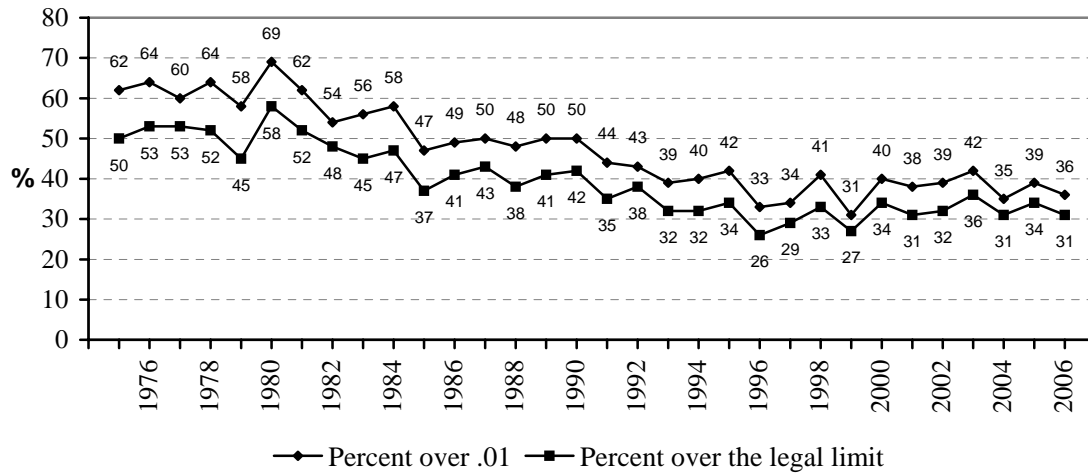
| <b>Year</b> | <b>Total</b> | <b>Male</b> |       | <b>Female</b> |       | <b>Occurred Between<br/>Midnight - 3 AM</b> |       | <b>Under<br/>Legal Age</b> |       |
|-------------|--------------|-------------|-------|---------------|-------|---------------------------------------------|-------|----------------------------|-------|
| 1997        | 119          | 102         | (86%) | 17            | (14%) | 32                                          | (27%) | 13                         | (11%) |
| 1998        | 151          | 126         | (83%) | 25            | (17%) | 41                                          | (27%) | 26                         | (17%) |
| 1999        | 116          | 98          | (84%) | 16            | (16%) | 30                                          | (26%) | 16                         | (14%) |
| 2000        | 149          | 125         | (84%) | 24            | (16%) | 47                                          | (32%) | 15                         | (10%) |
| 2001        | 124          | 104         | (84%) | 20            | (16%) | 37                                          | (30%) | 17                         | (14%) |
| 2002        | 142          | 124         | (87%) | 18            | (13%) | 41                                          | (29%) | 23                         | (16%) |
| 2003        | 157          | 135         | (86%) | 22            | (14%) | 42                                          | (27%) | 14                         | (9%)  |
| 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%) |

*TABLE 2.11*  
**DRIVERS KILLED WHO TESTED OVER THE LEGAL LIMIT, 1997 - 2006**  
**(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> |       |
|-------------|--------------|-------------|-------|---------------|-------|---------------------------------------------|-------|----------------------------|-------|
| 1997        | 100          | 89          | (89%) | 11            | (11%) | 32                                          | (32%) | 13                         | (13%) |
| 1998        | 122          | 104         | (85%) | 18            | (15%) | 36                                          | (30%) | 19                         | (16%) |
| 1999        | 100          | 87          | (87%) | 13            | (13%) | 26                                          | (26%) | 14                         | (14%) |
| 2000        | 127          | 105         | (83%) | 22            | (17%) | 43                                          | (34%) | 14                         | (11%) |
| 2001        | 101          | 86          | (85%) | 15            | (15%) | 31                                          | (31%) | 15                         | (15%) |
| 2002        | 118          | 102         | (86%) | 16            | (14%) | 34                                          | (29%) | 16                         | (14%) |
| 2003        | 134          | 115         | (86%) | 19            | (14%) | 39                                          | (29%) | 9                          | (7%)  |
| 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%) |

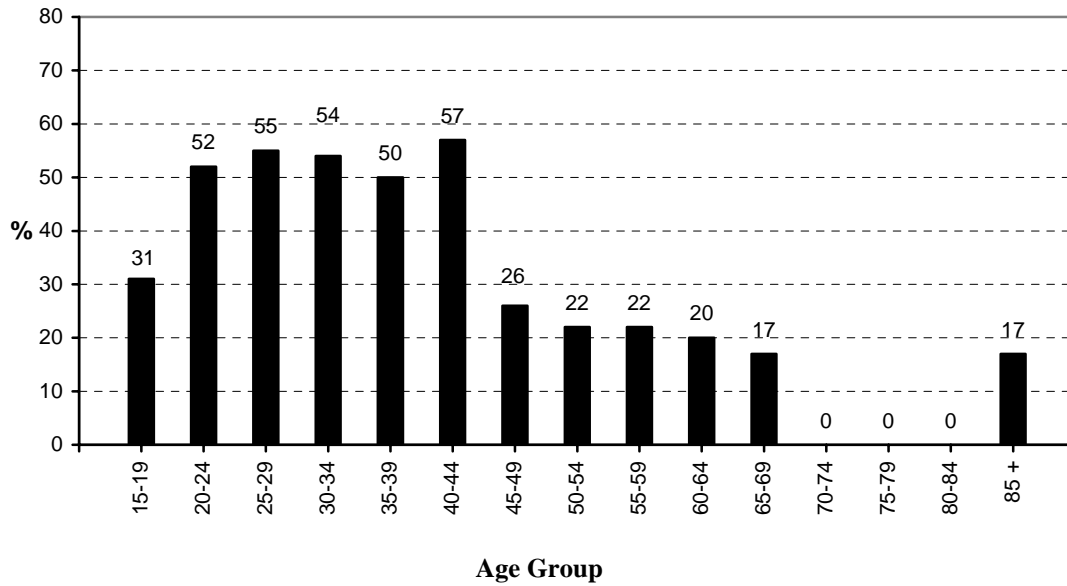
**FIGURE 2.02**

**Killed Drivers Tested for Alcohol: 1975 - 2006**  
**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, 2006**



*TABLE 2.12*  
**2006 DRIVER FATALITIES' LEVEL OF ALCOHOL CONCENTRATION BY AGE**

| Age Killed Tested |     |     | Alcohol Concentration |              |             |              |             |              |             |              | Alcohol Concentration |             |             |             |             |             |          |
|-------------------|-----|-----|-----------------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-----------------------|-------------|-------------|-------------|-------------|-------------|----------|
|                   |     |     | .00                   |              | .01 - .07   |              | .08 - .09   |              | .10 +       |              |                       |             |             |             |             |             |          |
|                   |     |     | num-<br>ber           | per-<br>cent | num-<br>ber | per-<br>cent | num-<br>ber | per-<br>cent | num-<br>ber | per-<br>cent | .00                   | .01-<br>.04 | .05-<br>.09 | .10-<br>.14 | .15-<br>.19 | .20-<br>.24 | .25<br>+ |
| 14 & Younger      | 1   | 0   | 0                     |              | 0           |              | 0           |              | 0           |              | 0                     | 0           | 0           | 0           | 0           | 0           |          |
| 15                | 2   | 1   | 1                     |              | 0           |              | 0           |              | 0           |              | 1                     | 0           | 0           | 0           | 0           | 0           |          |
| 16                | 12  | 12  | 10                    |              | 0           |              | 0           |              | 2           |              | 10                    | 0           | 0           | 1           | 1           | 0           |          |
| 17                | 6   | 6   | 5                     |              | 0           |              | 0           |              | 1           |              | 5                     | 0           | 0           | 0           | 0           | 1           |          |
| 18                | 9   | 8   | 5                     |              | 1           |              | 0           |              | 2           |              | 5                     | 1           | 0           | 1           | 0           | 1           |          |
| 19                | 9   | 9   | 4                     |              | 0           |              | 1           |              | 4           |              | 4                     | 0           | 1           | 4           | 0           | 0           |          |
| 20                | 8   | 8   | 5                     |              | 0           |              | 0           |              | 3           |              | 5                     | 0           | 0           | 0           | 0           | 3           |          |
| Under 21          | 47  | 44  | 30                    |              | 1           |              | 1           |              | 12          |              | 30                    | 1           | 1           | 6           | 1           | 4           |          |
| 14 & Younger      | 1   | 0   | 0                     | 0.0          | 0           | 0.0          | 0           | 0.0          | 0           | 0.0          | 0                     | 0           | 0           | 0           | 0           | 0           |          |
| 15 - 19           | 38  | 36  | 25                    | 69.4         | 1           | 2.8          | 1           | 2.8          | 9           | 25.0         | 25                    | 1           | 1           | 6           | 1           | 1           |          |
| 20 - 24           | 43  | 40  | 19                    | 47.5         | 2           | 5.0          | 0           | 0.0          | 19          | 47.5         | 19                    | 1           | 1           | 2           | 6           | 8           |          |
| 25 - 29           | 33  | 33  | 15                    | 45.4         | 1           | 3.0          | 0           | 0.0          | 17          | 51.5         | 15                    | 0           | 1           | 1           | 8           | 4           |          |
| 30 - 34           | 27  | 26  | 12                    | 46.2         | 3           | 11.5         | 0           | 0.0          | 11          | 42.3         | 12                    | 2           | 1           | 2           | 3           | 2           |          |
| 35 - 39           | 19  | 18  | 9                     | 50.0         | 1           | 5.6          | 0           | 0.0          | 8           | 44.4         | 9                     | 0           | 1           | 3           | 1           | 3           |          |
| 40 - 44           | 33  | 30  | 13                    | 43.3         | 4           | 13.3         | 1           | 3.3          | 12          | 40.0         | 13                    | 4           | 1           | 0           | 4           | 4           |          |
| 45 - 49           | 34  | 31  | 23                    | 74.2         | 0           | 0.0          | 1           | 3.2          | 7           | 22.6         | 23                    | 0           | 1           | 0           | 0           | 3           |          |
| 50 - 54           | 24  | 23  | 18                    | 78.3         | 0           | 0.0          | 1           | 4.4          | 4           | 17.4         | 18                    | 0           | 1           | 2           | 0           | 1           |          |
| 55 - 59           | 27  | 27  | 21                    | 77.8         | 0           | 0.0          | 1           | 3.7          | 5           | 18.5         | 21                    | 0           | 1           | 0           | 2           | 2           |          |
| 60 - 64           | 10  | 10  | 8                     | 80.0         | 1           | 10.0         | 0           | 0.0          | 1           | 10.0         | 8                     | 1           | 0           | 1           | 0           | 0           |          |
| 65 - 69           | 17  | 12  | 10                    | 83.3         | 1           | 8.3          | 0           | 0.0          | 1           | 8.3          | 10                    | 1           | 0           | 0           | 0           | 1           |          |
| 70 - 74           | 7   | 7   | 7                     | 100.0        | 0           | 0.0          | 0           | 0.0          | 0           | 0.0          | 7                     | 0           | 0           | 0           | 0           | 0           |          |
| 75 - 79           | 12  | 10  | 10                    | 100.0        | 0           | 0.0          | 0           | 0.0          | 0           | 0.0          | 10                    | 0           | 0           | 0           | 0           | 0           |          |
| 80 - 84           | 13  | 12  | 12                    | 100.0        | 0           | 0.0          | 0           | 0.0          | 0           | 0.0          | 12                    | 0           | 0           | 0           | 0           | 0           |          |
| 85 +              | 8   | 6   | 5                     | 83.3         | 1           | 16.7         | 0           | 0.0          | 0           | 0.0          | 5                     | 1           | 0           | 0           | 0           | 0           |          |
| Total             | 346 | 321 | 207                   | 64.5         | 15          | 4.7          | 5           | 1.6          | 94          | 29.3         | 207                   | 11          | 9           | 17          | 25          | 28          |          |

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



TABLE 2.13

**2006 ALCOHOL - RELATED CRASHES BY MONTH**

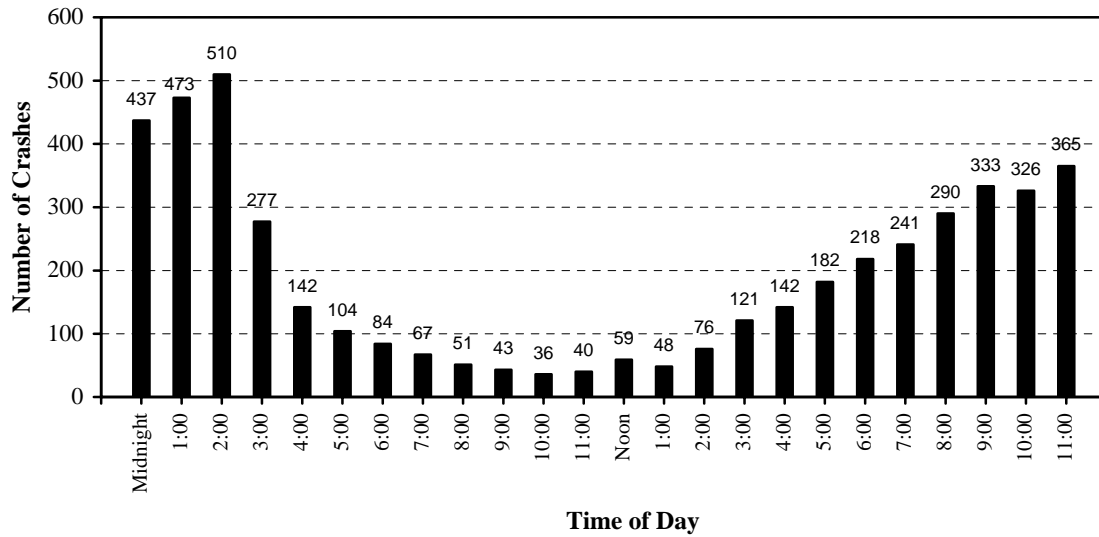
| <b>Month</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|--------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------|----------------|
| January      | 13                       | 186                       | 200                                    | 399                      | 14            | 265            |
| February     | 9                        | 173                       | 191                                    | 373                      | 9             | 226            |
| March        | 6                        | 175                       | 195                                    | 376                      | 7             | 244            |
| April        | 17                       | 198                       | 153                                    | 368                      | 17            | 287            |
| May          | 18                       | 208                       | 187                                    | 413                      | 19            | 300            |
| June         | 9                        | 209                       | 139                                    | 357                      | 9             | 297            |
| July         | 22                       | 240                       | 148                                    | 410                      | 23            | 348            |
| August       | 16                       | 200                       | 162                                    | 378                      | 18            | 273            |
| September    | 11                       | 225                       | 162                                    | 398                      | 11            | 333            |
| October      | 8                        | 212                       | 185                                    | 405                      | 9             | 300            |
| November     | 12                       | 190                       | 158                                    | 360                      | 12            | 274            |
| December     | 15                       | 237                       | 199                                    | 451                      | 18            | 354            |
| Total        | 156                      | 2,453                     | 2,079                                  | 4,688                    | 166           | 3,501          |

TABLE 2.14

**2006 ALCOHOL - RELATED CRASHES BY ROADWAY TYPE**

| <b>Roadway Type</b>  | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|----------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Urban Interstate     | 13                       | 192                       | 196                                    | 401                      | 13            | 273            |
| Rural Interstate     | 0                        | 34                        | 36                                     | 70                       | 0             | 45             |
| Urban US Trunk Hwy   | 3                        | 106                       | 115                                    | 224                      | 3             | 156            |
| Rural US Trunk Hwy   | 12                       | 133                       | 89                                     | 234                      | 13            | 188            |
| Urban MN Trunk Hwy   | 12                       | 178                       | 149                                    | 339                      | 15            | 263            |
| Rural MN Trunk Hwy   | 20                       | 249                       | 107                                    | 376                      | 20            | 369            |
| County State Aid Hwy | 54                       | 783                       | 534                                    | 1,371                    | 57            | 1,120          |
| County Road          | 16                       | 99                        | 50                                     | 165                      | 17            | 139            |
| Township Road        | 13                       | 132                       | 80                                     | 225                      | 13            | 210            |
| Local Street         | 13                       | 529                       | 699                                    | 1,241                    | 15            | 718            |
| Other                | 0                        | 18                        | 24                                     | 42                       | 0             | 20             |
| Total                | 156                      | 2,453                     | 2,079                                  | 4,688                    | 166           | 3,501          |

**FIGURE 2.04**  
**2006 Alcohol-Related Crashes by Time of Day**



**FIGURE 2.05**  
**2006 Alcohol-Related Crashes by Day of Week**

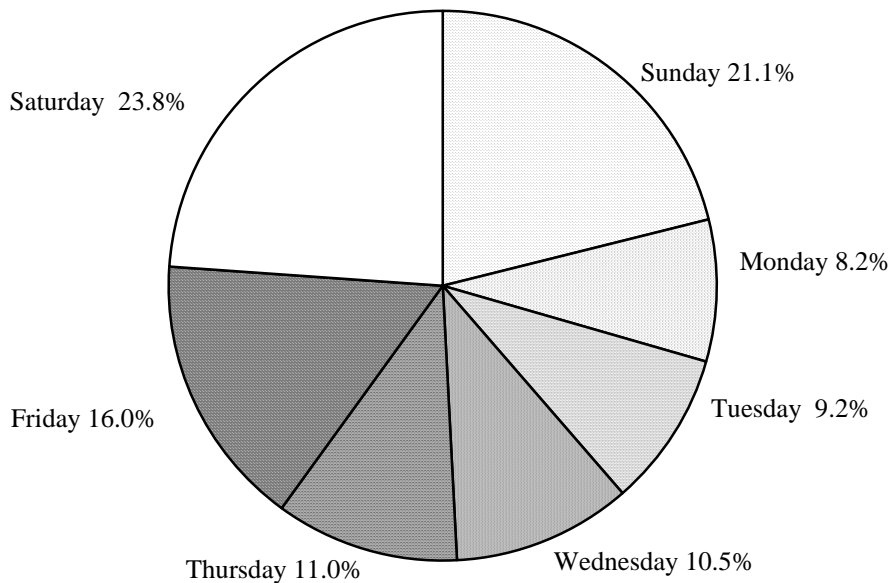


TABLE 2.15

**2006 ALCOHOL-RELATED CRASHES BY TIME OF DAY AND DAY OF WEEK**

| <b>Hour<br/>Beginning</b> | <b>Sun-<br/>day</b> | <b>Mon-<br/>day</b> | <b>Tues-<br/>day</b> | <b>Wednes-<br/>day</b> | <b>Thurs-<br/>day</b> | <b>Fri-<br/>day</b> | <b>Satur-<br/>day</b> | <b>Total<br/>Crashes</b> | <b>Total<br/>Killed</b> | <b>Total<br/>Injured</b> |
|---------------------------|---------------------|---------------------|----------------------|------------------------|-----------------------|---------------------|-----------------------|--------------------------|-------------------------|--------------------------|
| Midnight                  | 99                  | 29                  | 34                   | 44                     | 46                    | 64                  | 121                   | 437                      | 16                      | 307                      |
| 1:00 AM                   | 127                 | 34                  | 34                   | 43                     | 44                    | 61                  | 130                   | 473                      | 13                      | 342                      |
| 2:00 AM                   | 150                 | 28                  | 28                   | 19                     | 55                    | 72                  | 158                   | 510                      | 19                      | 380                      |
| 3:00 AM                   | 89                  | 11                  | 20                   | 17                     | 28                    | 24                  | 88                    | 277                      | 10                      | 189                      |
| 4:00 AM                   | 46                  | 5                   | 8                    | 12                     | 14                    | 15                  | 42                    | 142                      | 3                       | 105                      |
| 5:00 AM                   | 34                  | 10                  | 5                    | 10                     | 8                     | 8                   | 29                    | 104                      | 3                       | 65                       |
| 6:00 AM                   | 26                  | 5                   | 3                    | 10                     | 7                     | 8                   | 25                    | 84                       | 5                       | 59                       |
| 7:00 AM                   | 14                  | 3                   | 3                    | 13                     | 6                     | 7                   | 21                    | 67                       | 4                       | 58                       |
| 8:00 AM                   | 15                  | 3                   | 2                    | 9                      | 5                     | 10                  | 7                     | 51                       | 2                       | 31                       |
| 9:00 AM                   | 9                   | 7                   | 4                    | 3                      | 4                     | 8                   | 8                     | 43                       | 2                       | 26                       |
| 10:00 AM                  | 16                  | 1                   | 2                    | 2                      | 3                     | 4                   | 8                     | 36                       | 1                       | 27                       |
| 11:00 AM                  | 4                   | 6                   | 4                    | 9                      | 2                     | 7                   | 8                     | 40                       | 4                       | 37                       |
| Noon                      | 11                  | 6                   | 9                    | 7                      | 7                     | 5                   | 14                    | 59                       | 0                       | 40                       |
| 1:00 PM                   | 11                  | 7                   | 6                    | 6                      | 8                     | 6                   | 4                     | 48                       | 2                       | 26                       |
| 2:00 PM                   | 15                  | 10                  | 10                   | 10                     | 5                     | 13                  | 13                    | 76                       | 3                       | 73                       |
| 3:00 PM                   | 20                  | 19                  | 16                   | 12                     | 14                    | 15                  | 25                    | 121                      | 3                       | 93                       |
| 4:00 PM                   | 29                  | 10                  | 17                   | 17                     | 18                    | 30                  | 21                    | 142                      | 5                       | 115                      |
| 5:00 PM                   | 33                  | 20                  | 26                   | 23                     | 19                    | 32                  | 29                    | 182                      | 10                      | 133                      |
| 6:00 PM                   | 31                  | 19                  | 23                   | 29                     | 26                    | 36                  | 54                    | 218                      | 3                       | 180                      |
| 7:00 PM                   | 38                  | 23                  | 35                   | 34                     | 20                    | 43                  | 48                    | 241                      | 10                      | 193                      |
| 8:00 PM                   | 56                  | 23                  | 33                   | 33                     | 39                    | 42                  | 64                    | 290                      | 10                      | 232                      |
| 9:00 PM                   | 44                  | 35                  | 41                   | 52                     | 42                    | 63                  | 56                    | 333                      | 11                      | 290                      |
| 10:00 PM                  | 27                  | 38                  | 33                   | 39                     | 54                    | 76                  | 59                    | 326                      | 14                      | 207                      |
| 11:00 PM                  | 41                  | 33                  | 37                   | 38                     | 42                    | 95                  | 79                    | 365                      | 13                      | 277                      |
| Unknown                   | 5                   | 1                   | 0                    | 3                      | 2                     | 5                   | 7                     | 23                       | 0                       | 16                       |
| Total                     | 990                 | 386                 | 433                  | 494                    | 518                   | 749                 | 1,118                 | 4,688                    | 166                     | 3,501                    |

### III: SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS IN 2006 CRASHES

#### **Safety benefits and 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. In 1993, the Legislature increased the fine for not using a child car seat from \$25 to \$50. The state's safety belt law went into effect in 1986 and was amended in 1988 and 1991. It requires all front seat occupants (and children ages four through ten, regardless of seating position) to wear safety belts.

Tables in this section focus on the use of safety equipment by people in crashes who were occupants of vehicles normally equipped with safety equipment (e.g., passenger cars and trucks rather than motorcycles). The data pose a problem in that safety equipment use was reported as "unknown" for 8.0% of the persons killed and 12.3% of the persons injured in 2006. However, these percentages of 'unknowns' have been decreasing over the past few years as data collection keeps improving at the Department of Public Safety.

#### **Safety belt 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 vehicle occupants used belts. The use rate jumped to 33% after the 1986 law took effect, to 47% after a \$10 fine was added in 1988, and to 53% after the fine was increased to \$25 in 1991. Educational and special traffic enforcement strategies also have benefits. After the introduction of *Safe & Sober* (an intensive traffic safety enforcement and public information campaign), the use rate jumped from about 57% in 1994 to 65% in 1995. Other states--especially those with primary seat belt laws--have still higher rates.

#### **Occupant fatalities decrease in 2006**

In 2006, 373 motor vehicle occupants died in crashes --a 15% decrease from the previous year of 2005. Also, vehicle occupants injured (31,387) decreased 8% from 2005. However, these figures conceal an even more dramatically beneficial trend that started in the mid-1980s. Specifically, 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 2006, that number decreased to 1,328. 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 severe and permanent brain damage, paralysis, and dismemberment.

#### **Seat belt use in Minnesota holds steady**

According to the August 2006 observational survey, belt use among front-seat occupants averaged 83% across all of Minnesota. Traffic safety officials agree that 90% is an obtainable goal in the near future.

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

Among the motor vehicle occupants that were killed or injured in the northwest region of Minnesota, 26% were not using a restraint. This is the highest rate of non-use of any region. The southwest region was second highest: 22%. The 7-county metro area had the lowest rate of non-use: just 8%. Concerning types of roadway, 'Township Roads' had the highest percentage of non-seat belt use (30%). The second highest rate of non-use was on 'County Roads' (21%).

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

In 2006, airbag deployment was reported 13,459 times when the occupant was also wearing a seat belt. Fifty-three percent of these incidents resulted in no apparent injury. Airbags deployed 1,254 times when occupants were not wearing seat belts. Only 30% of these cases resulted in no apparent injury. The message is clear: always buckle up!

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 |
| <b>June 1986</b>    | 20%           | 30%   | 15%       | 23%              | 17%         |
| <b>August 1986</b>  | 33            | 43    | 26        | 35               | 31          |
| <b>August 1987</b>  | 32            | 40    | 28        | 35               | 29          |
| <b>August 1988</b>  | 47            | 51    | 45        | 48               | 46          |
| <b>August 1989</b>  | 44            | 52    | 40        | 44               | 45          |
| <b>August 1990</b>  | 47            | 54    | 42        | 49               | 46          |
| <b>August 1991</b>  | 53            | 62    | 47        | 53               | 52          |
| <b>August 1992</b>  | 51            | 62    | 46        | 55               | 48          |
| <b>August 1993</b>  | 55            | 59    | 52        | 57               | 53          |
| <b>August 1994*</b> | 57            | 58    | 54        | 65               | 54          |
| <b>August 1995</b>  | 65            | 68    | 56        | 68               | 64          |
| <b>August 1996</b>  | 64            | 67    | 58        | 68               | 62          |
| <b>August 1997</b>  | 65            | 67    | 59        | 69               | 63          |
| <b>August 1998</b>  | 64            | 67    | 56        | 68               | 63          |
| <b>August 1999</b>  | 72            | 73    | 68        | 72               | 68          |
| <b>August 2000</b>  | 73            | 74    | 69        | 75               | 71          |
| <b>August 2001</b>  | 74            | 75    | 72        | 75               | 69          |
| <b>August 2002</b>  | 80            | 83    | 72        | 81               | 76          |

| Date of Survey     | Overall | Vehicle Type |     |     |        | Gender |        |
|--------------------|---------|--------------|-----|-----|--------|--------|--------|
|                    |         | Car          | SUV | Van | Pickup | Male   | Female |
| <b>August 2003</b> | 79%     | 82%          | 79% | 83% | 69%    | 76%    | 83%    |
| <b>August 2004</b> | 82      | 83           | 87  | 87  | 71     | 78     | 88     |
| <b>August 2005</b> | 84      | 86           | 87  | 83  | 75     | 80     | 89     |
| <b>August 2006</b> | 83      | 83           | 87  | 88  | 76     | 79     | 88     |

The usage rate is not a simple ratio of the number of persons observed belted to the total number of people observed. It is, instead, the ratio of estimated time on the road that front seat occupants are using safety belts to the total estimated time on the road for these occupants.

\* A new survey design was initiated in August 1994. In 2003 the survey was completely redesigned and collected more information on vehicle occupants. The current version of the survey began in August, 2003 and has been conducted at least once annually since. It is *not* strictly comparable to prior designs.

TABLE 3.02

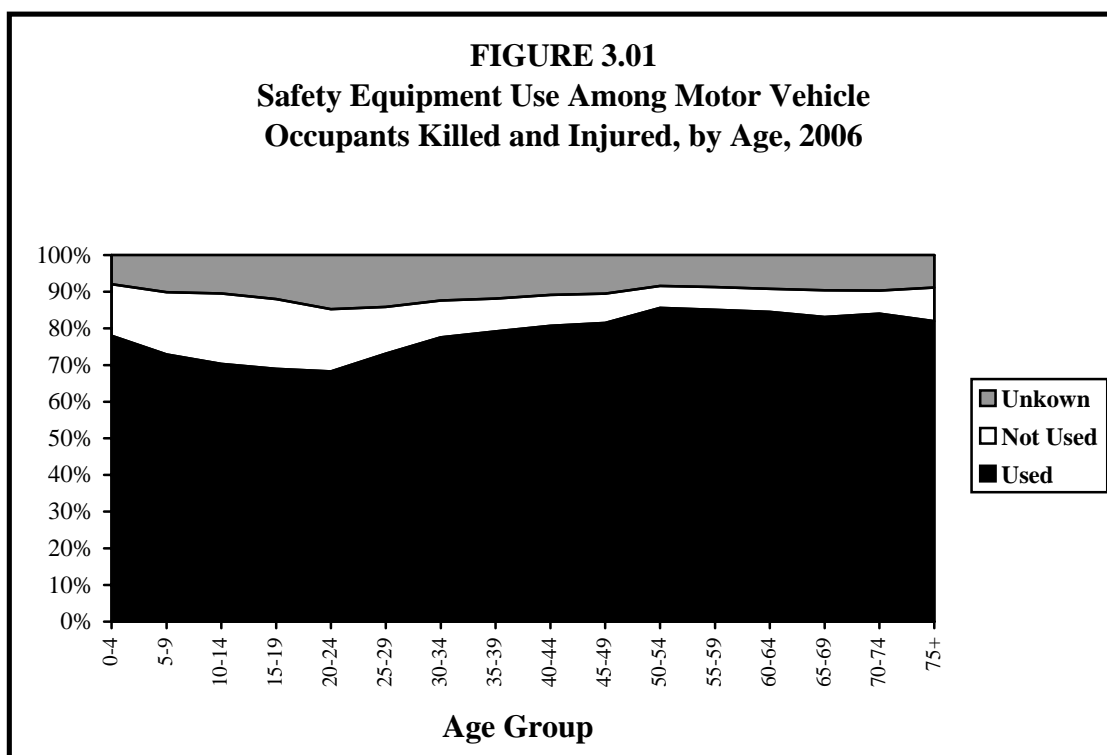
**MOTOR VEHICLE OCCUPANTS KILLED OR INJURED  
BY EJECTION STATUS AND INJURY SEVERITY, 2006**

| Ejection Status | Killed     |            | Severe Injury |            | Moderate Injury |             | Minor Injury  |             | Total Persons Killed or Injured |               |
|-----------------|------------|------------|---------------|------------|-----------------|-------------|---------------|-------------|---------------------------------|---------------|
|                 | Num-ber    | Per-cent   | Num-ber       | Per-cent   | Num-ber         | Per-cent    | Num-ber       | Per-cent    | Num-ber                         | Per-cent      |
| Not Ejected     | 260        | 0.9        | 1,046         | 3.6        | 7,155           | 24.6        | 20,673        | 71.0        | 29,134                          | 100.0%        |
| Partly Ejected  | 18         | 18.6       | 24            | 24.7       | 30              | 30.9        | 25            | 25.8        | 97                              | 100.0         |
| Ejected         | 86         | 13.9       | 169           | 27.4       | 187             | 30.3        | 175           | 28.4        | 617                             | 100.0         |
| Not Stated      | 9          | 0.5        | 89            | 4.6        | 466             | 24.4        | 1,348         | 70.5        | 1,912                           | 100.0         |
| <b>Total</b>    | <b>373</b> | <b>1.2</b> | <b>1,328</b>  | <b>4.2</b> | <b>7,838</b>    | <b>24.7</b> | <b>22,221</b> | <b>70.0</b> | <b>31,760</b>                   | <b>100.0%</b> |

TABLE 3.03

**MOTOR VEHICLE OCCUPANTS KILLED OR INJURED,  
BY AGE AND INJURY SEVERITY, 2006**

| Age Group    | Killed     | Injured      |              |               | Total         |
|--------------|------------|--------------|--------------|---------------|---------------|
|              |            | Severe       | Moderate     | Minor         |               |
| 00 - 04      | 3          | 18           | 78           | 406           | 502           |
| 05 - 09      | 0          | 16           | 149          | 466           | 631           |
| 10 - 14      | 5          | 27           | 169          | 524           | 720           |
| 15 - 19      | 58         | 234          | 1,413        | 3,504         | 5,151         |
| 20 - 24      | 49         | 222          | 1,235        | 3,020         | 4,477         |
| 25 - 29      | 35         | 148          | 772          | 2,264         | 3,184         |
| 30 - 34      | 29         | 103          | 530          | 1,691         | 2,324         |
| 35 - 39      | 15         | 98           | 558          | 1,607         | 2,263         |
| 40 - 44      | 22         | 79           | 548          | 1,695         | 2,322         |
| 45 - 49      | 29         | 88           | 543          | 1,613         | 2,244         |
| 50 - 54      | 25         | 70           | 426          | 1,394         | 1,890         |
| 55 - 59      | 22         | 66           | 354          | 1,068         | 1,488         |
| 60 - 64      | 9          | 36           | 250          | 693           | 979           |
| 65 - 69      | 16         | 34           | 172          | 488           | 694           |
| 70 - 74      | 12         | 29           | 149          | 368           | 546           |
| 75 - 79      | 15         | 24           | 145          | 310           | 479           |
| 80 - 84      | 14         | 10           | 110          | 240           | 360           |
| 85 & Older   | 15         | 16           | 71           | 157           | 244           |
| Not Stated   | 0          | 10           | 166          | 713           | 889           |
| <b>Total</b> | <b>373</b> | <b>1,328</b> | <b>7,838</b> | <b>22,221</b> | <b>31,387</b> |



*TABLE 3.04*

**SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS,  
 BY GENDER AND INJURY SEVERITY, 2006**

|              | <b>Killed</b> |             |              | <b>Injured</b> |             |                 |              |               |              |               |
|--------------|---------------|-------------|--------------|----------------|-------------|-----------------|--------------|---------------|--------------|---------------|
|              | <b>Female</b> | <b>Male</b> | <b>Total</b> | <b>Severe</b>  |             | <b>Moderate</b> |              | <b>Minor</b>  |              | <b>Total</b>  |
|              |               |             |              | <b>Female</b>  | <b>Male</b> | <b>Female</b>   | <b>Male</b>  | <b>Female</b> | <b>Male</b>  |               |
| Used         | 65            | 84          | 149          | 368            | 294         | 3,069           | 2,304        | 10,342        | 7,372        | 23,885        |
| Not Used     | 62            | 132         | 194          | 155            | 277         | 556             | 753          | 823           | 1,065        | 3,654         |
| Unknown      | 11            | 19          | 30           | 85             | 144         | 456             | 633          | 1,117         | 1,213        | 3,848         |
| <b>Total</b> | <b>138</b>    | <b>235</b>  | <b>373</b>   | <b>608</b>     | <b>715</b>  | <b>4,081</b>    | <b>3,690</b> | <b>12,282</b> | <b>9,650</b> | <b>31,387</b> |

Note: Gender was not reported for 361 persons injured (mostly those with minor injuries), causing the "Total" to be 361 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, 2006**

| Age<br>Group     | Restraint<br>Use | Injured       |              |               |             |                 |             |              |             |              |             |
|------------------|------------------|---------------|--------------|---------------|-------------|-----------------|-------------|--------------|-------------|--------------|-------------|
|                  |                  | <u>Killed</u> |              | <u>Severe</u> |             | <u>Moderate</u> |             | <u>Minor</u> |             | <u>Total</u> |             |
|                  |                  | #             | %            | #             | %           | #               | %           | #            | %           | #            | %           |
| 00 - 03<br>Years | Used             | 0             | 0.0          | 5             | 45.4        | 37              | 72.6        | 259          | 80.7        | 301          | 78.6        |
|                  | Not Used         | 2             | 66.7         | 5             | 45.4        | 6               | 11.8        | 41           | 12.8        | 52           | 13.6        |
|                  | Unknown          | <u>1</u>      | <u>33.3</u>  | <u>1</u>      | <u>9.1</u>  | <u>8</u>        | <u>15.7</u> | <u>21</u>    | <u>6.5</u>  | <u>30</u>    | <u>7.8</u>  |
|                  | Subtotal         | 3             | 100.0        | 11            | 100.0       | 51              | 100.0       | 321          | 100.0       | 383          | 100.0       |
| 04 - 10<br>Years | Used             | 0             | 0.0          | 10            | 37.0        | 127             | 65.1        | 496          | 77.5        | 633          | 73.4        |
|                  | Not Used         | 0             | 0.0          | 11            | 40.7        | 38              | 19.5        | 92           | 14.4        | 141          | 16.4        |
|                  | Unknown          | <u>1</u>      | <u>100.0</u> | <u>6</u>      | <u>22.2</u> | <u>30</u>       | <u>15.4</u> | <u>52</u>    | <u>8.1</u>  | <u>88</u>    | <u>10.2</u> |
|                  | Subtotal         | 1             | 100.0        | 27            | 100.0       | 195             | 100.0       | 640          | 100.0       | 862          | 100.0       |
| Total            | Used             | 0             | 0.0          | 15            | 39.5        | 164             | 66.7        | 755          | 78.6        | 934          | 75.0        |
| 00 - 10<br>Years | Not Used         | 2             | 50.0         | 16            | 42.1        | 44              | 17.9        | 133          | 13.8        | 193          | 15.5        |
|                  | Unknown          | <u>2</u>      | <u>50.0</u>  | <u>7</u>      | <u>18.4</u> | <u>38</u>       | <u>15.4</u> | <u>73</u>    | <u>7.6</u>  | <u>118</u>   | <u>9.5</u>  |
|                  | Subtotal         | 4             | 100.0        | 38            | 100.0       | 246             | 100.0       | 961          | 100.0       | 1,245        | 100.0       |
| 00 - 04<br>Years | Used             | 0             | 0.0          | 9             | 50.0        | 54              | 69.2        | 331          | 81.5        | 394          | 78.5        |
|                  | Not Used         | 2             | 66.7         | 7             | 38.9        | 12              | 15.4        | 50           | 12.3        | 69           | 13.8        |
|                  | Unknown          | <u>1</u>      | <u>33.3</u>  | <u>2</u>      | <u>11.1</u> | <u>12</u>       | <u>15.4</u> | <u>25</u>    | <u>6.2</u>  | <u>39</u>    | <u>7.8</u>  |
|                  | Subtotal         | 3             | 100.0        | 18            | 100.0       | 78              | 100.0       | 406          | 100.0       | 502          | 100.0       |
| 05 - 09<br>Years | Used             | 0             | 0.0          | 6             | 37.5        | 97              | 65.1        | 357          | 76.6        | 460          | 72.9        |
|                  | Not Used         | 0             | 0.0          | 7             | 43.8        | 29              | 19.5        | 71           | 15.2        | 107          | 17.0        |
|                  | Unknown          | <u>0</u>      | <u>0.0</u>   | <u>3</u>      | <u>18.8</u> | <u>23</u>       | <u>15.4</u> | <u>38</u>    | <u>8.2</u>  | <u>64</u>    | <u>10.1</u> |
|                  | Subtotal         | 0             | 0.0          | 16            | 100.0       | 149             | 100.0       | 466          | 100.0       | 631          | 100.0       |
| 10 - 14<br>Years | Used             | 2             | 40.0         | 6             | 22.2        | 110             | 65.1        | 392          | 74.8        | 508          | 70.6        |
|                  | Not Used         | 1             | 20.0         | 16            | 59.3        | 39              | 23.1        | 83           | 15.8        | 138          | 19.2        |
|                  | Unknown          | <u>2</u>      | <u>40.0</u>  | <u>5</u>      | <u>18.5</u> | <u>20</u>       | <u>11.8</u> | <u>49</u>    | <u>9.4</u>  | <u>74</u>    | <u>10.3</u> |
|                  | Subtotal         | 5             | 100.0        | 27            | 100.0       | 169             | 100.0       | 524          | 100.0       | 720          | 100.0       |
| 15 - 19<br>Years | Used             | 20            | 34.5         | 92            | 39.3        | 885             | 62.6        | 2,597        | 74.1        | 3,574        | 69.4        |
|                  | Not Used         | 31            | 53.4         | 99            | 42.3        | 355             | 25.1        | 506          | 14.4        | 960          | 18.6        |
|                  | Unknown          | <u>7</u>      | <u>12.1</u>  | <u>43</u>     | <u>18.4</u> | <u>173</u>      | <u>12.2</u> | <u>401</u>   | <u>11.4</u> | <u>617</u>   | <u>12.0</u> |
|                  | Subtotal         | 58            | 100.0        | 234           | 100.0       | 1,413           | 100.0       | 3,504        | 100.0       | 5,151        | 100.0       |
| 20 - 24<br>Years | Used             | 9             | 18.4         | 83            | 37.4        | 724             | 58.6        | 2,275        | 75.3        | 3,082        | 68.8        |
|                  | Not Used         | 37            | 75.5         | 91            | 41.0        | 287             | 23.2        | 353          | 11.7        | 731          | 16.3        |
|                  | Unknown          | <u>3</u>      | <u>6.1</u>   | <u>48</u>     | <u>21.6</u> | <u>224</u>      | <u>18.1</u> | <u>392</u>   | <u>13.0</u> | <u>664</u>   | <u>14.8</u> |
|                  | Subtotal         | 49            | 100.0        | 222           | 100.0       | 1,235           | 100.0       | 3,020        | 100.0       | 4,477        | 100.0       |
| 25 - 29<br>Years | Used             | 12            | 34.3         | 67            | 45.3        | 489             | 63.3        | 1,786        | 78.9        | 2,342        | 73.6        |
|                  | Not Used         | 20            | 57.1         | 51            | 34.5        | 148             | 19.2        | 191          | 8.4         | 390          | 12.2        |
|                  | Unknown          | <u>3</u>      | <u>8.6</u>   | <u>30</u>     | <u>20.3</u> | <u>135</u>      | <u>17.5</u> | <u>287</u>   | <u>12.7</u> | <u>452</u>   | <u>14.2</u> |
|                  | Subtotal         | 35            | 100.0        | 148           | 100.0       | 772             | 100.0       | 2,264        | 100.0       | 3,184        | 100.0       |
| 30 - 34<br>Years | Used             | 6             | 20.7         | 52            | 50.5        | 371             | 70.0        | 1,396        | 82.6        | 1,819        | 78.3        |
|                  | Not Used         | 21            | 72.4         | 31            | 30.1        | 82              | 15.5        | 103          | 6.1         | 216          | 9.3         |
|                  | Unknown          | <u>2</u>      | <u>6.9</u>   | <u>20</u>     | <u>19.4</u> | <u>77</u>       | <u>14.5</u> | <u>192</u>   | <u>11.4</u> | <u>289</u>   | <u>12.4</u> |
|                  | Subtotal         | 29            | 100.0        | 103           | 100.0       | 530             | 100.0       | 1,691        | 100.0       | 2,324        | 100.0       |
| 35 - 39<br>Years | Used             | 3             | 20.0         | 50            | 51.0        | 417             | 74.7        | 1,334        | 83.0        | 1,801        | 79.6        |
|                  | Not Used         | 9             | 60.0         | 31            | 31.6        | 71              | 12.7        | 93           | 5.8         | 195          | 8.6         |
|                  | Unknown          | <u>3</u>      | <u>20.0</u>  | <u>17</u>     | <u>17.4</u> | <u>70</u>       | <u>12.5</u> | <u>180</u>   | <u>11.2</u> | <u>267</u>   | <u>11.8</u> |
|                  | Subtotal         | 15            | 100.0        | 98            | 100.0       | 558             | 100.0       | 1,607        | 100.0       | 2,263        | 100.0       |



TABLE 3.05 CONTINUED

**SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS KILLED  
OR INJURED, BY AGE AND INJURY SEVERITY, 2006**

| Age Group      | Restraint Use | <u>Killed</u> |             | <u>Severe</u> |             | <u>Moderate</u> |             | <u>Minor</u> |             | <u>Total</u> |             |
|----------------|---------------|---------------|-------------|---------------|-------------|-----------------|-------------|--------------|-------------|--------------|-------------|
|                |               | #             | %           | #             | %           | #               | %           | #            | %           | #            | %           |
| 40 - 44 Years  | Used          | 8             | 36.4        | 47            | 59.5        | 409             | 74.6        | 1,428        | 84.2        | 1,884        | 81.1        |
|                | Not Used      | 13            | 59.1        | 19            | 24.0        | 65              | 11.9        | 100          | 5.9         | 184          | 7.9         |
|                | Unknown       | <u>1</u>      | <u>4.6</u>  | <u>13</u>     | <u>16.5</u> | <u>74</u>       | <u>13.5</u> | <u>167</u>   | <u>9.8</u>  | <u>254</u>   | <u>10.9</u> |
|                | Subtotal      | 22            | 100.0       | 79            | 100.0       | 548             | 100.0       | 1,695        | 100.0       | 2,322        | 100.0       |
| 45 - 49 Years  | Used          | 15            | 51.7        | 46            | 52.3        | 413             | 76.1        | 1,379        | 85.5        | 1,838        | 81.9        |
|                | Not Used      | 13            | 44.8        | 27            | 30.7        | 59              | 10.9        | 82           | 5.1         | 168          | 7.5         |
|                | Unknown       | <u>1</u>      | <u>3.4</u>  | <u>15</u>     | <u>17.0</u> | <u>71</u>       | <u>13.1</u> | <u>152</u>   | <u>9.4</u>  | <u>238</u>   | <u>10.6</u> |
|                | Subtotal      | 29            | 100.0       | 88            | 100.0       | 543             | 100.0       | 1,613        | 100.0       | 2,244        | 100.0       |
| 50 - 54 Years  | Used          | 16            | 64.0        | 41            | 58.6        | 347             | 81.5        | 1,235        | 88.6        | 1,623        | 85.9        |
|                | Not Used      | 8             | 32.0        | 18            | 25.7        | 41              | 9.6         | 48           | 3.4         | 107          | 5.7         |
|                | Unknown       | <u>1</u>      | <u>4.0</u>  | <u>11</u>     | <u>15.7</u> | <u>38</u>       | <u>8.9</u>  | <u>111</u>   | <u>8.0</u>  | <u>160</u>   | <u>8.5</u>  |
|                | Subtotal      | 25            | 100.0       | 70            | 100.0       | 426             | 100.0       | 1,394        | 100.0       | 1,890        | 100.0       |
| 55 - 59 Years  | Used          | 11            | 50.0        | 42            | 63.6        | 291             | 82.2        | 941          | 88.1        | 1,274        | 85.6        |
|                | Not Used      | 10            | 45.4        | 16            | 24.2        | 29              | 8.2         | 38           | 3.6         | 83           | 5.6         |
|                | Unknown       | <u>1</u>      | <u>4.6</u>  | <u>8</u>      | <u>12.1</u> | <u>34</u>       | <u>9.6</u>  | <u>89</u>    | <u>8.3</u>  | <u>131</u>   | <u>8.8</u>  |
|                | Subtotal      | 22            | 100.0       | 66            | 100.0       | 354             | 100.0       | 1,068        | 100.0       | 1,488        | 100.0       |
| 60 - 64 Years  | Used          | 5             | 55.6        | 25            | 69.4        | 206             | 82.4        | 599          | 86.4        | 830          | 84.8        |
|                | Not Used      | 4             | 44.4        | 6             | 16.7        | 18              | 7.2         | 34           | 4.9         | 58           | 5.9         |
|                | Unknown       | <u>0</u>      | <u>0.0</u>  | <u>5</u>      | <u>13.9</u> | <u>26</u>       | <u>10.4</u> | <u>60</u>    | <u>8.7</u>  | <u>91</u>    | <u>9.3</u>  |
|                | Subtotal      | 9             | 100.0       | 36            | 100.0       | 250             | 100.0       | 693          | 100.0       | 979          | 100.0       |
| 65 - 69 Years  | Used          | 10            | 62.5        | 27            | 79.4        | 136             | 79.1        | 417          | 85.4        | 580          | 83.6        |
|                | Not Used      | 6             | 37.5        | 4             | 11.8        | 15              | 8.7         | 27           | 5.5         | 46           | 6.6         |
|                | Unknown       | <u>0</u>      | <u>0.0</u>  | <u>3</u>      | <u>8.8</u>  | <u>21</u>       | <u>12.2</u> | <u>44</u>    | <u>9.0</u>  | <u>68</u>    | <u>9.8</u>  |
|                | Subtotal      | 16            | 100.0       | 34            | 100.0       | 172             | 100.0       | 488          | 100.0       | 694          | 100.0       |
| 70 - 74 Years  | Used          | 7             | 58.3        | 23            | 79.3        | 111             | 74.5        | 328          | 89.1        | 462          | 84.6        |
|                | Not Used      | 3             | 25.0        | 4             | 13.8        | 12              | 8.0         | 16           | 4.4         | 32           | 5.9         |
|                | Unknown       | <u>2</u>      | <u>16.7</u> | <u>2</u>      | <u>6.9</u>  | <u>26</u>       | <u>17.4</u> | <u>24</u>    | <u>6.5</u>  | <u>52</u>    | <u>9.5</u>  |
|                | Subtotal      | 12            | 100.0       | 29            | 100.0       | 149             | 100.0       | 368          | 100.0       | 546          | 100.0       |
| 75 & Older     | Used          | 25            | 56.8        | 43            | 86.0        | 251             | 76.5        | 607          | 85.6        | 901          | 82.9        |
|                | Not Used      | 16            | 36.4        | 4             | 8.0         | 39              | 11.9        | 45           | 6.4         | 88           | 8.1         |
|                | Unknown       | <u>3</u>      | <u>6.8</u>  | <u>3</u>      | <u>6.0</u>  | <u>38</u>       | <u>11.6</u> | <u>57</u>    | <u>8.0</u>  | <u>98</u>    | <u>9.0</u>  |
|                | Subtotal      | 44            | 100.0       | 50            | 100.0       | 328             | 100.0       | 709          | 100.0       | 1,087        | 100.0       |
| Age Not Stated | Used          | 0             | 0.0         | 4             | 40.0        | 97              | 59.2        | 412          | 58.0        | 513          | 58.0        |
|                | Not Used      | 0             | 0.0         | 4             | 40.0        | 15              | 9.2         | 63           | 8.9         | 82           | 9.3         |
|                | Unknown       | <u>0</u>      | <u>0.0</u>  | <u>2</u>      | <u>20.0</u> | <u>52</u>       | <u>31.7</u> | <u>236</u>   | <u>33.2</u> | <u>290</u>   | <u>32.8</u> |
|                | Subtotal      | 0             | 0.0         | 10            | 100.0       | 164             | 100.0       | 711          | 100.0       | 885          | 100.0       |
| All Ages       | Used          | 149           | 40.0        | 663           | 49.9        | 5,408           | 69.0        | 17,814       | 80.2        | 23,885       | 76.1        |
|                | Not Used      | 194           | 52.0        | 435           | 32.8        | 1,316           | 16.8        | 1,903        | 8.6         | 3,654        | 11.6        |
|                | Unknown       | <u>30</u>     | <u>8.0</u>  | <u>230</u>    | <u>17.3</u> | <u>1,114</u>    | <u>14.2</u> | <u>2,504</u> | <u>11.3</u> | <u>3,848</u> | <u>12.3</u> |
|                | Subtotal      | 373           | 100.0       | 1,328         | 100.0       | 7,838           | 100.0       | 22,221       | 100.0       | 31,387       | 100.0       |

(Persons aged 0 through 3 and 4 through 10 years old are categorized in separate groups because Minnesota law makes special provisions for these age groups. Percentages may not sum to 100.0% due to rounding.)

TABLE 3.06

**PERCENT OF INJURED OR KILLED MOTOR VEHICLE OCCUPANTS WHO  
USED SAFETY EQUIPMENT, BY INJURY SEVERITY AND YEAR, 1997 - 2006**

|                          | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------------|------|------|------|------|------|------|------|------|------|------|
| <b>Killed</b>            |      |      |      |      |      |      |      |      |      |      |
| Used                     | 37.5 | 30.3 | 31.6 | 29.4 | 31.1 | 37.9 | 39.4 | 39.5 | 40.2 | 40.0 |
| Not Used                 | 45.9 | 48.7 | 50.0 | 54.4 | 54.8 | 55.0 | 48.9 | 51.8 | 51.2 | 52.0 |
| Unknown                  | 16.6 | 21.0 | 18.4 | 16.2 | 14.1 | 7.2  | 11.8 | 8.7  | 8.6  | 8.0  |
| <b>Injured</b>           |      |      |      |      |      |      |      |      |      |      |
| <b>Severe Injuries</b>   |      |      |      |      |      |      |      |      |      |      |
| Used                     | 45.4 | 43.8 | 44.9 | 45.7 | 47.1 | 46.0 | NA   | 49.3 | 49.6 | 49.9 |
| Not Used                 | 35.2 | 36.0 | 34.2 | 33.5 | 34.4 | 34.5 | NA   | 32.8 | 30.8 | 32.8 |
| Unknown                  | 19.4 | 20.1 | 20.9 | 20.8 | 18.5 | 19.5 | NA   | 17.9 | 19.6 | 17.3 |
| <b>Moderate Injuries</b> |      |      |      |      |      |      |      |      |      |      |
| Used                     | 59.0 | 59.3 | 61.0 | 63.1 | 65.3 | 65.1 | NA   | 70.3 | 70.9 | 69.0 |
| Not Used                 | 25.7 | 26.0 | 24.6 | 22.9 | 21.1 | 21.1 | NA   | 17.4 | 15.9 | 16.8 |
| Unknown                  | 15.3 | 14.7 | 14.4 | 14.0 | 13.5 | 13.8 | NA   | 12.4 | 13.2 | 14.2 |
| <b>Minor Injuries</b>    |      |      |      |      |      |      |      |      |      |      |
| Used                     | 69.5 | 69.9 | 71.1 | 72.6 | 73.6 | 73.7 | NA   | 78.8 | 80.6 | 80.2 |
| Not Used                 | 13.1 | 13.4 | 12.7 | 11.9 | 11.2 | 10.6 | NA   | 9.7  | 8.8  | 8.6  |
| Unknown                  | 17.4 | 16.7 | 16.2 | 15.5 | 15.2 | 15.7 | NA   | 11.4 | 10.6 | 11.3 |
| <b>Total Injured</b>     |      |      |      |      |      |      |      |      |      |      |
| Used                     | 64.2 | 64.4 | 65.7 | 67.6 | 69.2 | 69.0 | NA   | 74.8 | 76.6 | 76.1 |
| Not Used                 | 18.9 | 19.4 | 18.4 | 17.1 | 16.0 | 15.7 | NA   | 13.2 | 11.7 | 11.6 |
| Unknown                  | 16.8 | 16.2 | 15.9 | 15.3 | 14.8 | 15.3 | NA   | 12.0 | 11.7 | 12.3 |

TABLE 3.07

**SAFETY EQUIPMENT USE BY MOTOR VEHICLE OCCUPANTS  
KILLED AND INJURED, BY ROADWAY TYPE, 2006**

| <b>Roadway Type</b> | <b>Used</b>   |                | <b>Not Used</b> |                | <b>Unknown</b> |                | <b>Total</b>  |                |
|---------------------|---------------|----------------|-----------------|----------------|----------------|----------------|---------------|----------------|
|                     | <b>Number</b> | <b>Percent</b> | <b>Number</b>   | <b>Percent</b> | <b>Number</b>  | <b>Percent</b> | <b>Number</b> | <b>Percent</b> |
| Interstate          | 2,921         | 84.6           | 291             | 8.4            | 242            | 7.0            | 3,454         | 100.0%         |
| US Trunk Hwy        | 3,321         | 81.3           | 474             | 11.6           | 289            | 7.1            | 4,084         | 100.0%         |
| MN Trunk Hwy        | 4,998         | 79.7           | 712             | 11.4           | 559            | 8.9            | 6,269         | 100.0%         |
| CSAH                | 7,123         | 73.5           | 1,219           | 12.6           | 1,346          | 13.9           | 9,688         | 100.0%         |
| County Road         | 443           | 64.8           | 141             | 20.6           | 100            | 14.6           | 684           | 100.0%         |
| Township Road       | 507           | 55.2           | 278             | 30.2           | 134            | 14.6           | 919           | 100.0%         |
| Local Street        | 4,631         | 71.1           | 706             | 10.8           | 1,177          | 18.1           | 6,514         | 100.0%         |
| Other Road          | 90            | 60.8           | 27              | 18.2           | 31             | 21.0           | 148           | 100.0%         |
| <b>Total</b>        | <b>24,034</b> | <b>75.7</b>    | <b>3,848</b>    | <b>12.1</b>    | <b>3,878</b>   | <b>12.2</b>    | <b>31,760</b> | <b>100.0%</b>  |

CSAH = County State Aid Highway

TABLE 3.08

**SAFETY EQUIPMENT USE BY MOTOR VEHICLE OCCUPANTS  
KILLED AND INJURED, BY REGION OF THE STATE, 2006**

| <b>EMS Region</b> | <b>Percent<br/>Used</b> | <b>Percent<br/>Not Used</b> | <b>Percent<br/>Unknown</b> | <b>Number<br/>of People</b> |
|-------------------|-------------------------|-----------------------------|----------------------------|-----------------------------|
| Metropolitan      | 78.2                    | 8.0                         | 13.9                       | 17,203                      |
| Central           | 75.2                    | 14.7                        | 10.2                       | 4,462                       |
| Northeast         | 74.6                    | 15.7                        | 9.7                        | 2,012                       |
| Northwest         | 60.5                    | 26.3                        | 13.2                       | 811                         |
| South Central     | 73.0                    | 16.5                        | 10.5                       | 1,300                       |
| Southeast         | 74.2                    | 15.0                        | 10.8                       | 2,927                       |
| Southwest         | 68.6                    | 22.5                        | 8.8                        | 1,717                       |
| West Central      | 70.9                    | 19.4                        | 9.6                        | 1,328                       |
| Statewide         | 75.7                    | 12.1                        | 12.2                       | 31,760                      |

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



TABLE 3.09

**AIRBAG DEPLOYMENTS, 1999 - 2006**

| Year | Injury Severity    | Airbag Deployed |               | Deployment Not Indicated |               | Belt Use Unknown | Total          |
|------|--------------------|-----------------|---------------|--------------------------|---------------|------------------|----------------|
|      |                    | Belt Used       | Belt Not Used | Belt Used                | Belt Not Used |                  |                |
| 1999 | Killed             | 20              | 13            | 143                      | 245           | 95               | 516            |
|      | Severe Injury      | 117             | 47            | 1,143                    | 914           | 588              | 2,809          |
|      | Moderate Injury    | 746             | 124           | 7,883                    | 3,353         | 2,032            | 14,138         |
|      | Minor Injury       | 833             | 73            | 15,722                   | 2,882         | 3,766            | 23,276         |
|      | No Apparent Injury | <u>1,777</u>    | <u>87</u>     | <u>101,556</u>           | <u>6,597</u>  | <u>84,477</u>    | <u>194,494</u> |
|      | Total              | 3,493           | 344           | 126,447                  | 13,991        | 90,958           | 235,233        |
| 2000 | Killed             | 28              | 27            | 125                      | 256           | 84               | 520            |
|      | Severe Injury      | 132             | 38            | 1,022                    | 809           | 524              | 2,525          |
|      | Moderate Injury    | 850             | 147           | 7,995                    | 3,067         | 1,957            | 14,016         |
|      | Minor Injury       | 936             | 84            | 16,320                   | 2,732         | 3,681            | 23,753         |
|      | No Apparent Injury | <u>2,106</u>    | <u>107</u>    | <u>111,072</u>           | <u>6,275</u>  | <u>87,803</u>    | <u>207,363</u> |
|      | Total              | 4,052           | 403           | 136,534                  | 13,139        | 94,049           | 248,177        |
| 2001 | Killed             | 22              | 23            | 121                      | 229           | 65               | 460            |
|      | Severe Injury      | 149             | 51            | 960                      | 760           | 436              | 2,356          |
|      | Moderate Injury    | 915             | 119           | 7,563                    | 2,624         | 1,756            | 12,977         |
|      | Minor Injury       | 976             | 102           | 15,664                   | 2,421         | 3,433            | 22,596         |
|      | No Apparent Injury | <u>2,141</u>    | <u>105</u>    | <u>105,404</u>           | <u>5,519</u>  | <u>82,566</u>    | <u>195,735</u> |
|      | Total              | 4,203           | 400           | 129,712                  | 11,553        | 88,256           | 234,124        |
| 2002 | Killed             | 41              | 28            | 165                      | 271           | 39               | 544            |
|      | Severe Injury      | 140             | 57            | 882                      | 710           | 433              | 2,222          |
|      | Moderate Injury    | 955             | 180           | 7,332                    | 2,508         | 1,757            | 12,732         |
|      | Minor Injury       | 1,198           | 114           | 14,707                   | 2,173         | 3,389            | 21,581         |
|      | No Apparent Injury | <u>2,441</u>    | <u>130</u>    | <u>101,861</u>           | <u>5,022</u>  | <u>79,687</u>    | <u>189,141</u> |
|      | Total              | 4,775           | 509           | 124,947                  | 10,684        | 85,305           | 226,220        |
| 2003 | Killed             | 86              | 67            | 121                      | 190           | 62               | 526            |
|      | Severe Injury      | NA              | NA            | NA                       | NA            | NA               | NA             |
|      | Moderate Injury    | NA              | NA            | NA                       | NA            | NA               | NA             |
|      | Minor Injury       | NA              | NA            | NA                       | NA            | NA               | NA             |
|      | No Apparent Injury | NA              | NA            | NA                       | NA            | NA               | NA             |
|      | Total              | NA              | NA            | NA                       | NA            | NA               | NA             |
| 2004 | Killed             | 85              | 66            | 97                       | 173           | 40               | 461            |
|      | Severe Injury      | 381             | 181           | 560                      | 444           | 342              | 1,908          |
|      | Moderate Injury    | 2,526           | 428           | 5,073                    | 1,448         | 1,337            | 10,812         |
|      | Minor Injury       | 3,801           | 407           | 14,878                   | 1,897         | 2,705            | 23,688         |
|      | No Apparent Injury | <u>7,480</u>    | <u>419</u>    | <u>110,451</u>           | <u>5,523</u>  | <u>57,101</u>    | <u>180,974</u> |
|      | Total              | 14,273          | 1,501         | 131,059                  | 9,485         | 61,525           | 217,843        |
| 2005 | Killed             | 74              | 75            | 103                      | 150           | 38               | 440            |
|      | Severe Injury      | 308             | 147           | 457                      | 328           | 302              | 1,542          |
|      | Moderate Injury    | 2,172           | 367           | 4,117                    | 1,045         | 1,174            | 8,875          |
|      | Minor Injury       | 4,195           | 375           | 14,846                   | 1,706         | 2,504            | 23,626         |
|      | No Apparent Injury | <u>7,529</u>    | <u>390</u>    | <u>109,215</u>           | <u>4,714</u>  | <u>50,655</u>    | <u>172,503</u> |
|      | Total              | 14,278          | 1,354         | 128,738                  | 7,943         | 54,673           | 206,986        |
| 2006 | 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        |

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**

### **Motorcycle crashes skyrocket**

In 2006, there were 1,496 crashes that involved at least one motorcycle. This is the highest number of motorcycle crashes observed in Minnesota in the past sixteen years. In 1990, there were 1,735 motorcycle crashes, but then the number of crashes decreased throughout the decade.

In 2006, 1,413 motorcyclists were injured. This is also the highest number of motorcyclist injuries since 1990 when 1,605 motorcyclists were injured.

### **Fatalities increase**

Motorcyclist fatalities increased again in 2006. There were 70 killed motorcyclists recorded. This number is a 19% increase from the previous year. And, it is the highest recorded number since 1985 when 77 motorcyclists died on Minnesota roadways. Of the 70 killed motorcyclists in 2006, 66 were drivers and 4 were passengers.

There is some evidence for the increase in motorcycle crashes, fatalities, and injuries; the number of registered motorcycles has almost doubled since 1996 with older people returning to motorcycling. In fact, 56% of the killed motorcyclists in 2006 were 40 years or older.

### **Alcohol use among fatalities increase**

State law requires that drivers who die in traffic crashes be tested for blood alcohol level. In 2006, 66 motorcycle drivers were killed and 61 of them were tested. Nineteen (32%) of the 61 drivers tested positive for alcohol, and almost one-third (28%) tested at .08 or greater.

### **Greater crash severity**

When a motorcycle is involved in a traffic crash, the chances of severe injury are greatly increased. In fact, 4.7 of every 100 motorcycle crashes in 2006 were fatal and nearly one out of every five motorcyclists injured was injured severely.

### **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 collision. In 2006, only 15 (21%) of the 70 motorcycle riders killed were known to be wearing a helmet. Of the 1,413 motorcyclists injured, only 481 (34%) were recorded as wearing a helmet.

### **Operator training is essential**

As mentioned previously, a large number of middle-aged people are returning to motorcycling, and evidently, they are returning without proper operator training. In 2006, 58% 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. This surely indicates 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 2006, 62 of the 70 motorcyclists killed, and 1,147 of the 1,413 injured, were male. Males account for 82% of all motorcyclists killed or injured.

### **Contributing factors:**

#### **Speeding motorcyclists**

#### **Failing to yield by other vehicles**

As noted, over half of motorcycle crashes are single-vehicle crashes. In these crashes, the factors that reporting officers cite most often are illegal or unsafe speed (22%), driver inexperience (15%), and chemical impairment (10%). In crashes that do involve another motor vehicle, the reporting officers more often associate contributing factors with the other driver than with the motorcyclist. For other drivers, failure to yield right of way (39%) and driver inattention or distraction (26%) are cited most frequently.

TABLE 4.01

**MOTORCYCLE CRASH SUMMARY, 1980 - 2006**

| Year   | Motorcycle Crashes |        |        |        | Killed |        | Injured |        | Licensed<br>Oper-<br>ators | Regis-<br>tered<br>Motor-<br>Cycles | Mcy<br>deaths<br>per<br>10,000<br>Reg.<br>Mcy | Fatal Crash<br>Rate Per 100<br>Crashes |                    |
|--------|--------------------|--------|--------|--------|--------|--------|---------|--------|----------------------------|-------------------------------------|-----------------------------------------------|----------------------------------------|--------------------|
|        | Fatal              | Injury | PDO*   | Total  | Mcy    | Other  | Mcy     | Other  |                            |                                     |                                               | For<br>Mcy                             | For all<br>crashes |
| 1980   | 112                | 2,728  | 468    | 3,308  | 121    | 1      | 3,359   | 34     | 222,330                    | 157,815                             | 7.7                                           | 3.4                                    | 0.7                |
| 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                |
| Record |                    |        |        |        |        |        |         |        |                            |                                     |                                               |                                        |                    |
| High*  | 112                | 2,728  | 537    | 3,308  | 121    | 9      | 3,359   | 207    | 360,143                    | 197,735                             | 7.7                                           | 4.7                                    | 0.8                |
| (year) | (1980)             | (1980) | (1976) | (1980) | (1980) | (1975) | (1980)  | (1984) | (2006)                     | (2006)                              | (1980)                                        | (2006)                                 | (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

**2006 MOTORCYCLE CRASHES BY FIRST HARMFUL EVENT**

| <b>First Harmful Event</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Motorcyclists<br/>Killed</b> | <b>Motorcyclists<br/>Injured</b> |
|----------------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------------------------|----------------------------------|
| <b>Collision With:</b>     |                          |                           |                                        |                          |                                 |                                  |
| Other Motor Vehicle        | 30                       | 515                       | 80                                     | 625                      | 30                              | 565                              |
| Parked Motor Vehicle       | 1                        | 22                        | 17                                     | 40                       | 1                               | 22                               |
| Bicycle                    | 0                        | 8                         | 1                                      | 9                        | 0                               | 6                                |
| Pedestrian                 | 0                        | 4                         | 0                                      | 4                        | 0                               | 3                                |
| Deer                       | 3                        | 91                        | 13                                     | 107                      | 3                               | 109                              |
| Other Animal               | 0                        | 8                         | 2                                      | 10                       | 0                               | 9                                |
| Train                      | 0                        | 0                         | 0                                      | 0                        | 0                               | 0                                |
| Fixed Object               | 20                       | 185                       | 6                                      | 211                      | 20                              | 200                              |
| <b>Non-Collision:</b>      |                          |                           |                                        |                          |                                 |                                  |
| Overturn/Rollover          | 12                       | 192                       | 7                                      | 211                      | 12                              | 222                              |
| Fire/Explosion             | 0                        | 0                         | 1                                      | 1                        | 0                               | 0                                |
| Submersion                 | 0                        | 0                         | 0                                      | 0                        | 0                               | 0                                |
| <b>Other / Unknown</b>     | 4                        | 254                       | 20                                     | 278                      | 4                               | 277                              |
| <b>Total</b>               | <b>70</b>                | <b>1,279</b>              | <b>147</b>                             | <b>1,496</b>             | <b>70</b>                       | <b>1,413</b>                     |

TABLE 4.03

**2006 MOTORCYCLE CRASHES BY POPULATION OF AREA**

| <b>Population of<br/>City or Township</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Motorcyclists<br/>Killed</b> | <b>Motorcyclists<br/>Injured</b> |
|-------------------------------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------------------------|----------------------------------|
| 100,000 and Over                          | 5                        | 138                       | 32                                     | 175                      | 5                               | 145                              |
| 50,000 - 99,999                           | 6                        | 162                       | 14                                     | 182                      | 6                               | 167                              |
| 25,000 - 49,999                           | 6                        | 157                       | 12                                     | 175                      | 6                               | 172                              |
| 10,000 - 24,999                           | 6                        | 192                       | 21                                     | 219                      | 6                               | 207                              |
| 5,000 - 9,999                             | 3                        | 87                        | 16                                     | 106                      | 3                               | 95                               |
| 2,500 - 4,999                             | 2                        | 62                        | 10                                     | 74                       | 2                               | 67                               |
| 1,000 - 2,499                             | 3                        | 24                        | 7                                      | 34                       | 3                               | 24                               |
| Under 1,000                               | 39                       | 457                       | 35                                     | 531                      | 39                              | 536                              |
| <b>Total</b>                              | <b>70</b>                | <b>1,279</b>              | <b>147</b>                             | <b>1,496</b>             | <b>70</b>                       | <b>1,413</b>                     |

TABLE 4.04

2006 MOTORCYCLE CRASHES BY MONTH

| Month     | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Motorcyclists Killed | Motorcyclists Injured |
|-----------|---------------|----------------|-------------------------|---------------|----------------------|-----------------------|
| January   | 0             | 1              | 2                       | 3             | 0                    | 1                     |
| February  | 0             | 0              | 0                       | 0             | 0                    | 0                     |
| March     | 0             | 18             | 2                       | 20            | 0                    | 18                    |
| April     | 5             | 99             | 7                       | 111           | 5                    | 107                   |
| May       | 9             | 145            | 18                      | 172           | 9                    | 163                   |
| June      | 9             | 228            | 30                      | 267           | 9                    | 252                   |
| July      | 19            | 274            | 26                      | 319           | 19                   | 321                   |
| August    | 13            | 244            | 23                      | 280           | 13                   | 262                   |
| September | 5             | 152            | 23                      | 180           | 5                    | 155                   |
| October   | 7             | 81             | 10                      | 98            | 7                    | 96                    |
| November  | 3             | 33             | 6                       | 42            | 3                    | 34                    |
| December  | 0             | 4              | 0                       | 4             | 0                    | 4                     |
| Total     | 70            | 1,279          | 147                     | 1,496         | 70                   | 1,413                 |

FIGURE 4.01  
2006 Motorcycle Crashes by Time of Day

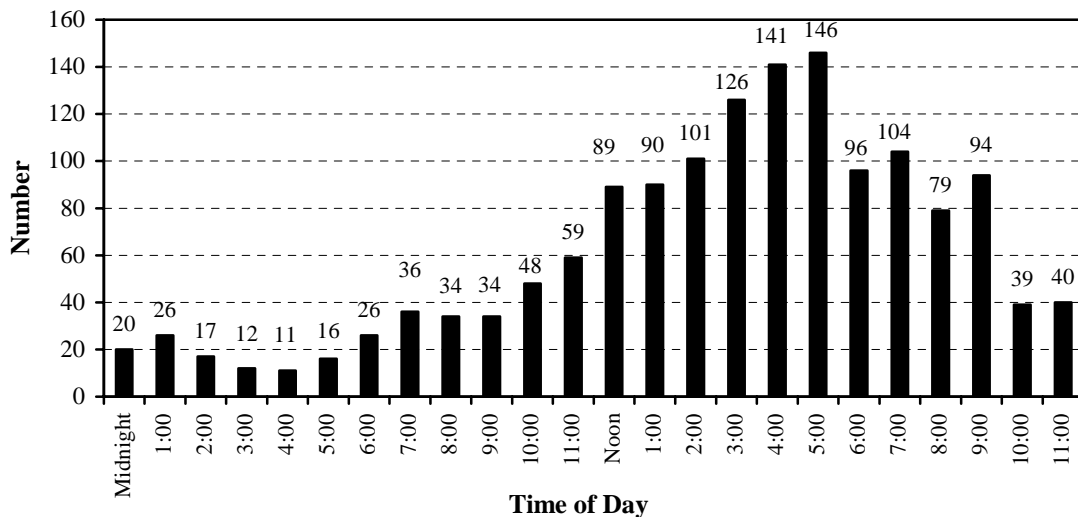




TABLE 4.05

**2006 MOTORCYCLE CRASHES BY TIME AND DAY**

| Hour<br>Begin-<br>ning | Total<br>Crashes | Fatal<br>Crashes | Sunday |       | Monday |       | Tuesday |       | Wednesday |       | Thursday |       | Friday |       | Saturday |       |
|------------------------|------------------|------------------|--------|-------|--------|-------|---------|-------|-----------|-------|----------|-------|--------|-------|----------|-------|
|                        |                  |                  | All    | Fatal | All    | Fatal | All     | Fatal | All       | Fatal | All      | Fatal | All    | Fatal | All      | Fatal |
| Midnight               | 20               | 1                | 1      | 0     | 0      | 0     | 3       | 1     | 4         | 0     | 4        | 0     | 6      | 0     | 2        | 0     |
| 1:00                   | 26               | 1                | 6      | 1     | 0      | 0     | 5       | 0     | 3         | 0     | 3        | 0     | 6      | 0     | 3        | 0     |
| 2:00                   | 17               | 1                | 4      | 0     | 1      | 0     | 0       | 0     | 0         | 0     | 1        | 0     | 2      | 0     | 9        | 1     |
| 3:00                   | 12               | 1                | 3      | 0     | 1      | 0     | 0       | 0     | 0         | 0     | 2        | 0     | 1      | 0     | 5        | 1     |
| 4:00                   | 11               | 2                | 3      | 1     | 1      | 0     | 2       | 0     | 0         | 0     | 0        | 0     | 2      | 0     | 3        | 1     |
| 5:00                   | 16               | 2                | 0      | 0     | 5      | 0     | 4       | 1     | 3         | 1     | 0        | 0     | 4      | 0     | 0        | 0     |
| 6:00                   | 26               | 2                | 1      | 1     | 7      | 0     | 9       | 1     | 4         | 0     | 3        | 0     | 0      | 0     | 2        | 0     |
| 7:00                   | 36               | 1                | 1      | 0     | 4      | 0     | 4       | 1     | 4         | 0     | 10       | 0     | 9      | 0     | 4        | 0     |
| 8:00                   | 34               | 2                | 4      | 1     | 8      | 0     | 3       | 0     | 3         | 0     | 6        | 0     | 4      | 0     | 6        | 1     |
| 9:00                   | 34               | 1                | 7      | 0     | 3      | 0     | 3       | 0     | 2         | 0     | 7        | 1     | 4      | 0     | 8        | 0     |
| 10:00                  | 48               | 3                | 7      | 1     | 5      | 0     | 6       | 0     | 6         | 0     | 2        | 0     | 8      | 0     | 14       | 2     |
| 11:00                  | 59               | 3                | 12     | 1     | 9      | 1     | 8       | 0     | 9         | 0     | 4        | 1     | 5      | 0     | 12       | 0     |
| Noon                   | 89               | 6                | 23     | 3     | 9      | 0     | 14      | 1     | 9         | 0     | 7        | 1     | 10     | 0     | 17       | 1     |
| 1:00                   | 90               | 4                | 15     | 0     | 13     | 0     | 10      | 1     | 9         | 0     | 9        | 0     | 11     | 1     | 23       | 2     |
| 2:00                   | 101              | 3                | 23     | 0     | 13     | 1     | 12      | 0     | 12        | 1     | 7        | 1     | 7      | 0     | 27       | 0     |
| 3:00                   | 126              | 3                | 24     | 1     | 14     | 1     | 10      | 1     | 20        | 0     | 19       | 0     | 15     | 0     | 24       | 0     |
| 4:00                   | 141              | 4                | 30     | 2     | 22     | 1     | 13      | 0     | 15        | 0     | 16       | 1     | 21     | 0     | 24       | 0     |
| 5:00                   | 146              | 8                | 25     | 0     | 15     | 2     | 25      | 1     | 17        | 1     | 23       | 1     | 23     | 2     | 18       | 1     |
| 6:00                   | 96               | 4                | 12     | 0     | 13     | 0     | 18      | 2     | 9         | 0     | 14       | 0     | 8      | 1     | 22       | 1     |
| 7:00                   | 104              | 5                | 20     | 0     | 15     | 1     | 11      | 0     | 13        | 1     | 12       | 0     | 15     | 1     | 18       | 2     |
| 8:00                   | 79               | 4                | 10     | 1     | 12     | 1     | 8       | 0     | 11        | 2     | 13       | 0     | 9      | 0     | 16       | 0     |
| 9:00                   | 94               | 4                | 23     | 1     | 10     | 0     | 8       | 0     | 9         | 0     | 12       | 0     | 13     | 2     | 19       | 1     |
| 10:00                  | 39               | 3                | 2      | 0     | 5      | 1     | 4       | 0     | 4         | 0     | 8        | 0     | 9      | 1     | 7        | 1     |
| 11:00                  | 40               | 2                | 5      | 1     | 3      | 0     | 5       | 0     | 3         | 0     | 3        | 0     | 10     | 1     | 11       | 0     |
| Unknown                | 12               | 0                | 0      | 0     | 1      | 0     | 0       | 0     | 1         | 0     | 1        | 0     | 3      | 0     | 6        | 0     |
| Total                  | 1,496            | 70               | 261    | 15    | 189    | 9     | 185     | 10    | 170       | 6     | 186      | 6     | 205    | 9     | 300      | 15    |

TABLE 4.06

**MOTORCYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2006**

| Age Group  | <u>Killed</u> |   |       | <u>Injured</u> |    |       |                 |     |       |              |    |       | <u>Total</u> |     |        |
|------------|---------------|---|-------|----------------|----|-------|-----------------|-----|-------|--------------|----|-------|--------------|-----|--------|
|            |               |   |       | <u>Severe</u>  |    |       | <u>Moderate</u> |     |       | <u>Minor</u> |    |       |              |     |        |
|            | M             | F | Total | M              | F  | Total | M               | F   | Total | M            | F  | Total | M            | F   | Total* |
| 00 - 04    | 0             | 0 | 0     | 0              | 0  | 0     | 0               | 0   | 0     | 0            | 0  | 0     | 0            | 0   | 0      |
| 05 - 09    | 0             | 0 | 0     | 0              | 0  | 0     | 1               | 0   | 1     | 2            | 0  | 2     | 3            | 0   | 3      |
| 10 - 14    | 0             | 0 | 0     | 3              | 1  | 4     | 5               | 1   | 6     | 2            | 1  | 3     | 10           | 3   | 13     |
| 15 - 19    | 1             | 0 | 1     | 11             | 3  | 14    | 26              | 4   | 30    | 29           | 6  | 35    | 66           | 13  | 79     |
| 20 - 24    | 10            | 1 | 11    | 33             | 3  | 36    | 81              | 14  | 95    | 56           | 11 | 67    | 170          | 28  | 198    |
| 25 - 29    | 9             | 0 | 9     | 23             | 4  | 27    | 54              | 11  | 65    | 48           | 2  | 50    | 125          | 17  | 142    |
| 30 - 34    | 3             | 2 | 5     | 22             | 6  | 28    | 40              | 12  | 52    | 27           | 7  | 34    | 89           | 25  | 114    |
| 35 - 39    | 5             | 0 | 5     | 10             | 4  | 14    | 53              | 17  | 70    | 36           | 7  | 43    | 99           | 28  | 127    |
| 40 - 44    | 11            | 1 | 12    | 27             | 11 | 38    | 57              | 15  | 74    | 49           | 15 | 64    | 133          | 41  | 176    |
| 45 - 49    | 8             | 1 | 9     | 36             | 8  | 44    | 78              | 18  | 96    | 44           | 8  | 52    | 158          | 34  | 192    |
| 50 - 54    | 4             | 1 | 5     | 23             | 3  | 26    | 66              | 13  | 79    | 39           | 11 | 50    | 128          | 27  | 155    |
| 55 - 59    | 8             | 1 | 9     | 16             | 5  | 21    | 37              | 8   | 45    | 27           | 3  | 30    | 80           | 16  | 96     |
| 60 - 64    | 1             | 0 | 1     | 7              | 2  | 9     | 28              | 7   | 36    | 15           | 4  | 19    | 50           | 13  | 64     |
| 65 - 69    | 1             | 0 | 1     | 2              | 1  | 3     | 10              | 2   | 12    | 5            | 0  | 5     | 17           | 3   | 20     |
| 70 & Older | 1             | 1 | 2     | 1              | 0  | 1     | 7               | 1   | 8     | 8            | 0  | 8     | 16           | 1   | 17     |
| Not Stated | 0             | 0 | 0     | 0              | 1  | 2     | 2               | 5   | 11    | 1            | 1  | 4     | 3            | 7   | 17     |
| Total      | 62            | 8 | 70    | 214            | 52 | 267   | 545             | 128 | 680   | 388          | 76 | 466   | 1,147        | 256 | 1,413  |

\* Within injury severity, where rows do not add across to total, gender was not reported on the accident report form.

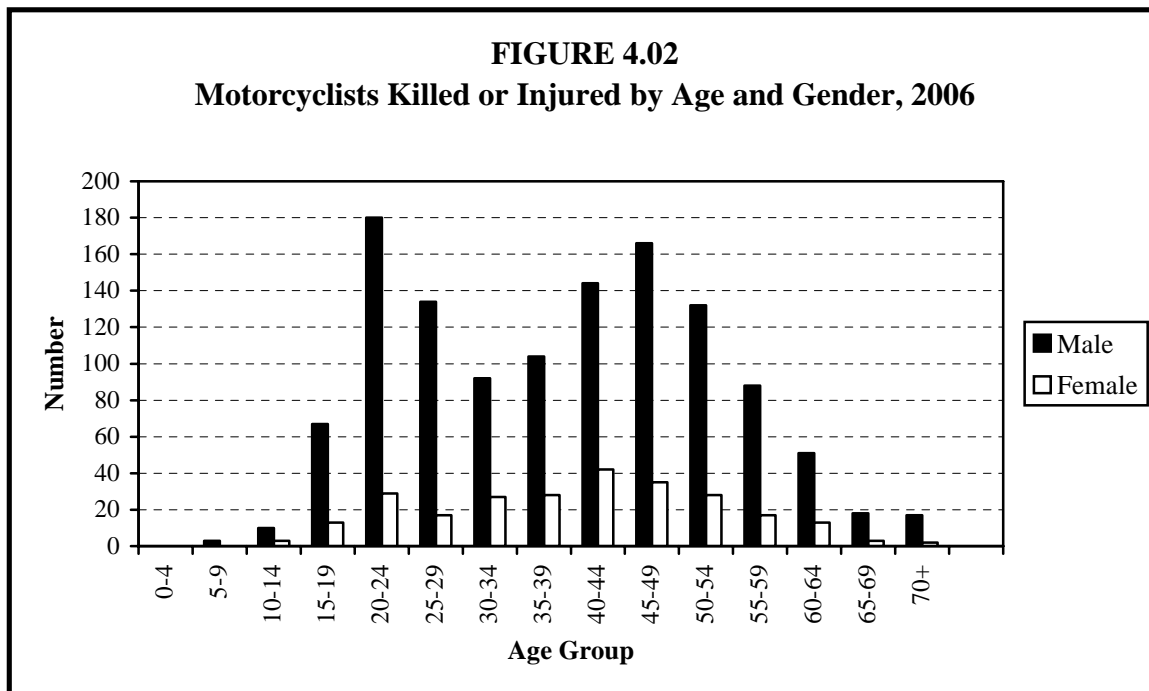


TABLE 4.07

**HELMET USE BY MOTORCYCLISTS KILLED OR INJURED, 1997 - 2006**

|                | <u>Helmet Used</u> |         | <u>Helmet Not Used</u> |         | <u>Helmet Use Unknown</u> |         | <u>Total</u> |         |
|----------------|--------------------|---------|------------------------|---------|---------------------------|---------|--------------|---------|
|                | Number             | Percent | Number                 | Percent | Number                    | Percent | Number       | Percent |
| <b>Killed</b>  |                    |         |                        |         |                           |         |              |         |
| 1997           | 3                  | 12.5    | 17                     | 70.8    | 4                         | 16.7    | 24           | 100.0   |
| 1998           | 3                  | 7.5     | 27                     | 67.5    | 10                        | 25.0    | 40           | 100.0   |
| 1999           | 8                  | 27.6    | 18                     | 62.1    | 3                         | 10.3    | 29           | 100.0   |
| 2000           | 6                  | 17.1    | 27                     | 77.1    | 2                         | 5.7     | 35           | 100.0   |
| 2001           | 9                  | 21.4    | 30                     | 71.4    | 3                         | 7.1     | 42           | 100.0   |
| 2002           | 6                  | 12.8    | 30                     | 63.8    | 11                        | 23.4    | 47           | 100.0   |
| 2003           | 18                 | 29.0    | 36                     | 58.1    | 8                         | 12.9    | 62           | 100.0   |
| 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   |
| <b>Injured</b> |                    |         |                        |         |                           |         |              |         |
| 1997           | 225                | 24.5    | 470                    | 51.3    | 221                       | 24.1    | 916          | 100.0   |
| 1998           | 310                | 31.4    | 483                    | 48.9    | 194                       | 19.7    | 987          | 100.0   |
| 1999           | 282                | 28.4    | 533                    | 53.8    | 176                       | 17.8    | 991          | 100.0   |
| 2000           | 317                | 30.5    | 519                    | 50.0    | 203                       | 19.5    | 1,039        | 100.0   |
| 2001           | 379                | 34.6    | 541                    | 49.4    | 174                       | 15.9    | 1,094        | 100.0   |
| 2002           | 350                | 32.7    | 534                    | 49.9    | 187                       | 17.5    | 1,071        | 100.0   |
| 2003           | NA                 | NA      | NA                     | NA      | NA                        | NA      | NA           | NA      |
| 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   |

TABLE 4.08

**ENDORSEMENT STATUS OF MOTORCYCLE OPERATORS INVOLVED IN FATAL CRASHES, 1997 - 2006**

| <b>Year</b> | <u>Valid Endorsement*</u> |         | <u>Permit Only</u> |         | <u>Canceled, Suspended, Revoked</u> |         | <u>No Endorsement</u> |         | <u>Total** For Year</u> |         |
|-------------|---------------------------|---------|--------------------|---------|-------------------------------------|---------|-----------------------|---------|-------------------------|---------|
|             | Number                    | Percent | Number             | Percent | Number                              | Percent | Number                | Percent | Number                  | Percent |
| 1997        | 21                        | 91.3    | 0                  | 0.0     | 0                                   | 0.0     | 2                     | 8.7     | 23                      | 100.0   |
| 1998        | 34                        | 75.6    | 1                  | 2.2     | 4                                   | 8.9     | 6                     | 13.3    | 45                      | 100.0   |
| 1999        | 28                        | 90.3    | 0                  | 0.0     | 0                                   | 0.0     | 3                     | 9.7     | 31                      | 100.0   |
| 2000        | 30                        | 83.3    | 0                  | 0.0     | 2                                   | 5.6     | 4                     | 11.1    | 36                      | 100.0   |
| 2001        | 32                        | 78.0    | 0                  | 0.0     | 4                                   | 9.8     | 5                     | 12.2    | 41                      | 100.0   |
| 2002        | 38                        | 79.2    | 0                  | 0.0     | 5                                   | 10.4    | 5                     | 10.4    | 48                      | 100.0   |
| 2003        | 45                        | 73.8    | 2                  | 3.3     | 5                                   | 8.2     | 9                     | 14.8    | 61                      | 100.0   |
| 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   |

\* 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 MOTORCYCLE DRIVERS, 1997 – 2006**

| Year | Killed | Tested | Alcohol Concentration* |             |           |               |
|------|--------|--------|------------------------|-------------|-----------|---------------|
|      |        |        | (.00)                  | (.01 - .07) | (.08-.09) | (.10 or more) |
| 1997 | 22     | 19     | 7 (37%)                | 3 (16%)     | 0 (0%)    | 9 (47%)       |
| 1998 | 36     | 35     | 15 (43%)               | 1 (3%)      | 1 (3%)    | 18 (51%)      |
| 1999 | 28     | 22     | 12 (55%)               | 0 (0%)      | 2 (9%)    | 8 (36%)       |
| 2000 | 32     | 32     | 22 (69%)               | 1 (3%)      | 0 (0%)    | 9 (28%)       |
| 2001 | 36     | 31     | 17 (55%)               | 5 (16%)     | 1 (3%)    | 8 (26%)       |
| 2002 | 41     | 40     | 24 (60%)               | 2 (5%)      | 1 (3%)    | 13 (32%)      |
| 2003 | 53     | 46     | 27 (59%)               | 4 (9%)      | 2 (4%)    | 13 (28%)      |
| 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%)      |

\*Percentages are based on those motorcycle drivers tested.

TABLE 4.10

**2006 MOTORCYCLE DRIVER FATALITIES'  
LEVEL OF ALCOHOL CONCENTRATION BY AGE**

| Age          | Killed | Tested | Alcohol Concentration* |           |         |  | Alcohol Concentration |         |         |         |         |         |            |
|--------------|--------|--------|------------------------|-----------|---------|--|-----------------------|---------|---------|---------|---------|---------|------------|
|              |        |        | (.01 - .07)            | (.08-.09) | (.10 +) |  | .00                   | .01-.04 | .05-.09 | .10-.14 | .15-.19 | .20-.24 | .25 & Over |
| 14 & Younger | 0      | 0      | 0                      | 0         | 0       |  | 0                     | 0       | 0       | 0       | 0       | 0       | 0          |
| 15           | 0      | 0      | 0                      | 0         | 0       |  | 0                     | 0       | 0       | 0       | 0       | 0       | 0          |
| 16           | 0      | 0      | 0                      | 0         | 0       |  | 0                     | 0       | 0       | 0       | 0       | 0       | 0          |
| 17           | 0      | 0      | 0                      | 0         | 0       |  | 0                     | 0       | 0       | 0       | 0       | 0       | 0          |
| 18           | 0      | 0      | 0                      | 0         | 0       |  | 0                     | 0       | 0       | 0       | 0       | 0       | 0          |
| 19           | 1      | 1      | 0                      | 0         | 1       |  | 0                     | 0       | 0       | 1       | 0       | 0       | 0          |
| 20           | 2      | 2      | 0                      | 0         | 1       |  | 1                     | 0       | 0       | 0       | 0       | 1       | 0          |
| Under 21     | 3      | 3      | 0                      | 0         | 2       |  | 1                     | 0       | 0       | 1       | 0       | 1       | 0          |
| 14 & Younger | 0      | 0      | 0                      | 0         | 0       |  | 0                     | 0       | 0       | 0       | 0       | 0       | 0          |
| 15 – 19      | 1      | 1      | 0                      | 0         | 1       |  | 0                     | 0       | 0       | 1       | 0       | 0       | 0          |
| 20 – 24      | 10     | 9      | 0                      | 0         | 2       |  | 7                     | 0       | 0       | 1       | 0       | 1       | 0          |
| 25 – 29      | 9      | 9      | 0                      | 0         | 4       |  | 5                     | 0       | 0       | 0       | 3       | 0       | 1          |
| 30 – 34      | 4      | 4      | 1                      | 0         | 3       |  | 0                     | 0       | 1       | 1       | 1       | 0       | 1          |
| 35 – 39      | 5      | 5      | 0                      | 0         | 3       |  | 2                     | 0       | 0       | 2       | 0       | 1       | 0          |
| 40 – 44      | 12     | 10     | 0                      | 1         | 2       |  | 7                     | 0       | 1       | 0       | 1       | 1       | 0          |
| 45 – 49      | 9      | 7      | 0                      | 0         | 0       |  | 7                     | 0       | 0       | 0       | 0       | 0       | 0          |
| 50 – 54      | 4      | 4      | 0                      | 0         | 1       |  | 3                     | 0       | 0       | 1       | 0       | 0       | 0          |
| 55 – 59      | 8      | 8      | 0                      | 0         | 1       |  | 7                     | 0       | 0       | 0       | 1       | 0       | 0          |
| 60 & Older   | 4      | 4      | 0                      | 0         | 0       |  | 4                     | 0       | 0       | 0       | 0       | 0       | 0          |
| Total        | 66     | 61     | 1                      | 1         | 17      |  | 42                    | 0       | 2       | 6       | 6       | 3       | 2          |

\* Percentages are based on those motorcycle drivers tested.

TABLE 4.11

## CONTRIBUTING FACTORS IN 2006 MOTORCYCLE CRASHES

| Contributing Factors             | <i>Single Vehicle Crashes</i> |         | <i>Multi-Vehicle Crashes</i> |         |                      |         |
|----------------------------------|-------------------------------|---------|------------------------------|---------|----------------------|---------|
|                                  | Attributed to                 |         | Attributed to                |         | Attributed to        |         |
|                                  | <u>Motorcycle Drivers</u>     |         | <u>Motorcycle Drivers</u>    |         | <u>Other Drivers</u> |         |
|                                  | Number                        | Percent | Number                       | Percent | Number               | Percent |
| <b>Human Factors:</b>            |                               |         |                              |         |                      |         |
| Illegal/Unsafe Speed             | 187                           | 22.4%   | 60                           | 15.9%   | 7                    | 1.3%    |
| Driver Inexperience              | 124                           | 14.9    | 25                           | 6.6     | 11                   | 2.1     |
| Chemical Impairment              | 85                            | 10.2    | 16                           | 4.2     | 9                    | 1.7     |
| Driver Inattention/Distracted    | 76                            | 9.1     | 84                           | 22.2    | 139                  | 26.1    |
| Overcorrecting                   | 35                            | 4.2     | 5                            | 1.3     | 2                    | 0.4     |
| Improper/Unsafe Lane Use         | 26                            | 3.1     | 16                           | 4.2     | 35                   | 6.6     |
| Following Too Closely            | 14                            | 1.7     | 48                           | 12.7    | 28                   | 5.3     |
| Improper Turn                    | 12                            | 1.4     | 7                            | 1.9     | 20                   | 3.8     |
| Improper Passing/Overtaking      | 9                             | 1.1     | 14                           | 3.7     | 2                    | 0.4     |
| Improper Park/Start/Stop         | 6                             | 0.7     | 2                            | 0.5     | 5                    | 0.9     |
| Vision Obscured                  | 6                             | 0.7     | 1                            | 0.3     | 12                   | 2.3     |
| Disregard Traffic Control Device | 4                             | 0.5     | 17                           | 4.5     | 18                   | 3.4     |
| Driving Left of Center           | 3                             | 0.4     | 5                            | 1.3     | 4                    | 0.8     |
| Failure To Yield Right of Way    | 2                             | 0.2     | 21                           | 5.6     | 210                  | 39.4    |
| Failure To Use Lights            | 1                             | 0.1     | 1                            | 0.3     | 0                    | 0.0     |
| Improper/No Signal               | 1                             | 0.1     | 1                            | 0.3     | 7                    | 1.3     |
| Driver on Phone/CB               | 1                             | 0.1     | 0                            | 0.0     | 0                    | 0.0     |
| Impeding Traffic                 | 0                             | 0.0     | 0                            | 0.0     | 3                    | 0.6     |
| Unsafe Backing                   | 0                             | 0.0     | 0                            | 0.0     | 3                    | 0.6     |
| Other Human Factor               | 32                            | 3.8     | 10                           | 2.6     | 4                    | 0.8     |
| <b>Vehicular Factors:</b>        |                               |         |                              |         |                      |         |
| Skidding                         | 72                            | 8.6     | 17                           | 4.5     | 0                    | 0.0     |
| Defective Brakes                 | 13                            | 1.6     | 4                            | 1.1     | 3                    | 0.6     |
| Other Vehicular Factors          | 23                            | 2.8     | 2                            | 0.5     | 2                    | 0.4     |
| <b>Miscellaneous Factors:</b>    |                               |         |                              |         |                      |         |
| Weather Conditions               | 11                            | 1.3     | 2                            | 0.5     | 2                    | 0.4     |
| Other                            | 91                            | 10.9    | 20                           | 5.3     | 7                    | 1.3     |
| Total                            | 834                           | 100.0%  | 378                          | 100.0%  | 533                  | 100.0%  |
| Vehicles for Which There Was     |                               |         |                              |         |                      |         |
| “No Clear Contributing Factor”   | 229                           |         | 346                          |         | 222                  |         |
| Total Number Drivers             | 885                           |         | 657                          |         | 631                  |         |

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

### **Truck crashes decrease**

There were 4,558 truck-involved traffic crashes in 2006—a 14% decrease from the total number of crashes in the previous year.

### **Fatalities and injuries decrease**

In 2006, there were 62 fatal truck crashes, killing 65 people. The number of fatalities was a 17% decrease from the previous year. There were 1,544 persons injured in 2006. This was a 12% decrease from the previous year.

### **Persons killed or injured are usually in other vehicles**

In two-vehicle collisions, heavier vehicles have the clear safety advantage. Only 11 of the 65 people killed in truck-involved crashes were in trucks. The other 54 included 1 bicyclist, 3 pedestrians, 1 motorcyclist, and 46 people who were in cars, SUVs, pickups, or vans. Of the 1,544 people injured, only 324 (21%) were truck occupants.

### **Contributing factors for truck drivers compared to others.**

Reporting officers indicated there was no clear contributing factor for 42% of the truck drivers and for 43% of the drivers of other vehicles. Moreover, most contributing factors cited by officers are more similar for truck and non-truck drivers than they are different. For example, driver inattention or distraction was most frequently cited for truck drivers

(22% of the time) as well as for non-truck drivers (21% of the time). Illegal or unsafe speed was reported for 8% of the trucks and for 10% of the other vehicles.

Truck drivers do differ some from other drivers; truck drivers are less likely to be reported for “failure to yield right of way” (8% versus 14%), but they are more likely to be reported for “following too closely” (9% compared to 7%) and for unsafe backing (5% compared to 1%).

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 other vehicle drivers were reported as having some such impairment.

### **Truck crashes are workday occurrences**

Truck crashes are strongly tied to the workday. In 2006, only 10% (441) of the crashes occurred on either a Saturday or a Sunday.

### **Driving conditions**

Driving conditions can vary from day to day in Minnesota, but most truck crashes occurred on dry roads in clear weather. However, 19% of the fatal crashes and 25% 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. Seventy-nine percent of fatal and 36% of the injury truck crashes occurred in the rural areas of Minnesota.

TABLE 5.01

**TRUCK CRASH SUMMARY, 1997 - 2006**

|                            | 1997         | 1998         | 1999         | 2000         | 2001         | 2002         | 2003      | 2004         | 2005         | 2006         |
|----------------------------|--------------|--------------|--------------|--------------|--------------|--------------|-----------|--------------|--------------|--------------|
| <b>Total Crashes</b>       | <b>4,991</b> | <b>4,761</b> | <b>5,156</b> | <b>5,306</b> | <b>4,976</b> | <b>4,409</b> | <b>NA</b> | <b>5,521</b> | <b>5,313</b> | <b>4,558</b> |
| Fatal Crashes              | 90           | 85           | 84           | 73           | 61           | 76           | 71        | 70           | 66           | 62           |
| Persons Killed             | 105          | 97           | 94           | 90           | 67           | 87           | 78        | 79           | 78           | 65           |
| Injury Crashes             | 1,389        | 1,408        | 1,400        | 1,371        | 1,287        | 1,179        | NA        | 1,401        | 1,315        | 1,156        |
| Severe                     | 163          | 180          | 150          | 134          | 127          | 82           | NA        | 107          | 96           | 89           |
| Moderate                   | 505          | 492          | 567          | 490          | 479          | 449          | NA        | 443          | 377          | 323          |
| Minor                      | 721          | 736          | 683          | 747          | 681          | 648          | NA        | 851          | 842          | 744          |
| Persons Injured            | 2,042        | 2,031        | 2,026        | 1,903        | 1,785        | 1,674        | NA        | 1,935        | 1,753        | 1,544        |
| Severe                     | 215          | 219          | 212          | 173          | 157          | 115          | NA        | 131          | 116          | 104          |
| Moderate                   | 721          | 700          | 782          | 659          | 632          | 597          | NA        | 585          | 481          | 415          |
| Minor                      | 1,106        | 1,112        | 1,032        | 1,071        | 996          | 962          | NA        | 1,219        | 1,156        | 1,025        |
| Property Damage<br>Crashes | 3,512        | 3,268        | 3,672        | 3,862        | 3,628        | 3,154        | NA        | 4,050        | 3,932        | 3,340        |

TABLE 5.02

**PERSONS KILLED OR INJURED IN 2006 TRUCK CRASHES  
BY VEHICLE OCCUPIED**

| Vehicle Type                                        | Killed | Injured |          |       | Total |
|-----------------------------------------------------|--------|---------|----------|-------|-------|
|                                                     |        | Severe  | Moderate | Minor |       |
| Automobile                                          | 26     | 44      | 177      | 491   | 712   |
| Pickup Truck                                        | 8      | 13      | 41       | 84    | 138   |
| SUV                                                 | 9      | 9       | 41       | 126   | 176   |
| Pedestrian                                          | 3      | 8       | 1        | 3     | 12    |
| Bicycle                                             | 1      | 5       | 6        | 3     | 14    |
| Van                                                 | 3      | 7       | 31       | 62    | 100   |
| Ambulance                                           | 0      | 0       | 0        | 3     | 3     |
| Police/Fire Vehicle                                 | 0      | 0       | 3        | 4     | 7     |
| Motor Home/Camper                                   | 1      | 0       | 2        | 0     | 2     |
| Motorcycle                                          | 1      | 5       | 8        | 5     | 18    |
| Snowmobile                                          | 1      | 0       | 0        | 0     | 0     |
| Roadway Maintenance Vehicle                         | 1      | 1       | 7        | 14    | 22    |
| Two-Axle, Six-Tire, Single<br>Unit Truck or Stepvan | 1      | 2       | 19       | 50    | 71    |
| Three or More Axle Single Unit Truck                | 2      | 1       | 10       | 23    | 34    |
| Single Unit Truck with Trailer                      | 0      | 0       | 7        | 13    | 20    |
| Truck Tractor with No Trailer                       | 0      | 0       | 0        | 3     | 3     |
| Truck Tractor with Semi Trailer                     | 7      | 5       | 48       | 118   | 171   |
| Truck Tractor with Twin Trailers                    | 0      | 0       | 2        | 2     | 4     |
| Heavy Truck--Other or Unknown Type                  | 1      | 1       | 8        | 12    | 21    |
| Other or Unknown Vehicle Type                       | 0      | 3       | 4        | 9     | 16    |
| Total                                               | 65     | 104     | 415      | 1,025 | 1,544 |

TABLE 5.03

**CONTRIBUTING FACTORS IN 2006 TRUCK CRASHES**

| <b>Contributing Factors</b>             | <b>Attributed to<br/>Truck Vehicles</b> |                | <b>Attributed to<br/>Non-Truck Vehicles</b> |                |
|-----------------------------------------|-----------------------------------------|----------------|---------------------------------------------|----------------|
|                                         | <b>Number</b>                           | <b>Percent</b> | <b>Number</b>                               | <b>Percent</b> |
| <b>Human Factors</b>                    |                                         |                |                                             |                |
| Driver Inattention/Distracted           | 710                                     | 21.6%          | 613                                         | 20.8%          |
| Improper or Unsafe Lane Use             | 310                                     | 9.4            | 325                                         | 11.0           |
| Following Too Closely                   | 284                                     | 8.6            | 201                                         | 6.8            |
| Illegal/Unsafe Speed                    | 269                                     | 8.2            | 290                                         | 9.8            |
| Failure to Yield Right of Way           | 266                                     | 8.1            | 417                                         | 14.1           |
| Unsafe Backing                          | 175                                     | 5.3            | 27                                          | 0.9            |
| Improper Turn                           | 152                                     | 4.6            | 68                                          | 2.3            |
| Vision Obscured-Windshield              | 102                                     | 3.1            | 64                                          | 2.2            |
| Disregard for Traffic Control Device    | 73                                      | 2.2            | 112                                         | 3.8            |
| Improper Passing or Overtaking          | 59                                      | 1.8            | 111                                         | 3.8            |
| Driver Inexperience                     | 48                                      | 1.5            | 68                                          | 2.3            |
| Improper Parking, Starting, or Stopping | 37                                      | 1.1            | 33                                          | 1.1            |
| Overcorrecting                          | 36                                      | 1.1            | 35                                          | 1.2            |
| Driving Left of Center (Not Passing)    | 23                                      | 0.7            | 53                                          | 1.8            |
| Improper/No Signal                      | 14                                      | 0.4            | 8                                           | 0.3            |
| Impeding Traffic                        | 6                                       | 0.2            | 10                                          | 0.3            |
| Chemical Impairment                     | 6                                       | 0.2            | 70                                          | 2.4            |
| Driver on Phone/CB/2-Way Radio          | 5                                       | 0.2            | 9                                           | 0.3            |
| Failure to Use Lights                   | 2                                       | 0.1            | 1                                           | 0.0            |
| Non-Motorist Error                      | 0                                       | 0.0            | 9                                           | 0.3            |
| Other Human Factors                     | 90                                      | 2.7            | 66                                          | 2.2            |
| <b>Vehicular Factors</b>                |                                         |                |                                             |                |
| Skidding                                | 75                                      | 2.3            | 74                                          | 2.5            |
| Defective Brakes                        | 74                                      | 2.3            | 20                                          | 0.7            |
| Oversize/Overweight Vehicle             | 49                                      | 1.5            | 3                                           | 0.1            |
| Other Vehicular Factor                  | 72                                      | 2.2            | 15                                          | 0.5            |
| <b>Miscellaneous Factors</b>            |                                         |                |                                             |                |
| Weather                                 | 188                                     | 5.7            | 153                                         | 5.2            |
| Other                                   | 162                                     | 4.9            | 94                                          | 3.2            |
| Total Contributing Factors Cited        | 3,287                                   | 100.0%         | 2,949                                       | 100.0%         |
| Vehicles for Which There Was            |                                         |                |                                             |                |
| "No Clear Contributing Factor"          | 1,972                                   |                | 1,792                                       |                |
| Total Number of Vehicles                | 4,732                                   |                | 4,201                                       |                |

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 2006 CRASHES**

| <b>Driver Age</b> | <b>Truck or<br/>Tractor</b> | <b>Truck with<br/>Semi-Trailer</b> | <b>Truck with<br/>Twin Trailer</b> | <b>Truck with<br/>Other Trailer</b> | <b>Total</b> |
|-------------------|-----------------------------|------------------------------------|------------------------------------|-------------------------------------|--------------|
| 10 - 14           | 0                           | 0                                  | 0                                  | 0                                   | 0            |
| 15 - 19           | 30                          | 11                                 | 0                                  | 1                                   | 42           |
| 20 - 24           | 164                         | 108                                | 1                                  | 20                                  | 293          |
| 25 - 29           | 268                         | 176                                | 3                                  | 35                                  | 482          |
| 30 - 34           | 208                         | 235                                | 5                                  | 26                                  | 474          |
| 35 - 39           | 225                         | 276                                | 6                                  | 36                                  | 543          |
| 40 - 44           | 261                         | 300                                | 5                                  | 35                                  | 601          |
| 45 - 49           | 258                         | 326                                | 5                                  | 35                                  | 624          |
| 50 - 54           | 217                         | 315                                | 3                                  | 21                                  | 556          |
| 55 - 59           | 144                         | 225                                | 6                                  | 19                                  | 394          |
| 60 - 64           | 68                          | 136                                | 3                                  | 14                                  | 221          |
| 65 & Older        | 72                          | 115                                | 0                                  | 12                                  | 199          |
| Not Stated        | 52                          | 78                                 | 0                                  | 14                                  | 144          |
| Total*            | 1,967                       | 2,301                              | 37                                 | 268                                 | 4,573        |

\* There were 4,732 trucks in crashes in 2006. However, 159 of these trucks were parked vehicles. This table tabulates the ages of drivers for the remaining 4,573 trucks where it was possible to identify a driver.

TABLE 5.05

**DRIVERS IN 2006 TRUCK CRASHES  
BY PHYSICAL CONDITION\***

| <b>Physical Condition</b> | <b>Truck Driver</b> |                | <b>Other Driver</b> |                |
|---------------------------|---------------------|----------------|---------------------|----------------|
|                           | <b>Number</b>       | <b>Percent</b> | <b>Number</b>       | <b>Percent</b> |
| Normal                    | 4,116               | 90.0%          | 3,446               | 87.4%          |
| Under the Influence       | 3                   | 0.1            | 60                  | 1.5            |
| Had Been Drinking         | 4                   | 0.1            | 27                  | 0.7            |
| Driver >.04 BAC           | 1                   | 0.0            | 1                   | 0.0            |
| Had Been Using Drugs      | 1                   | 0.0            | 2                   | 0.1            |
| Aggressive                | 1                   | 0.0            | 3                   | 0.1            |
| Fatigued/Asleep           | 30                  | 0.7            | 22                  | 0.6            |
| Physical Disability       | 0                   | 0.0            | 1                   | 0.0            |
| Ill                       | 1                   | 0.0            | 7                   | 0.2            |
| Other                     | 9                   | 0.2            | 14                  | 0.4            |
| Unknown                   | 407                 | 8.9            | 358                 | 9.1            |
| Total **                  | 4,573               | 100.0%         | 3,941               | 100.0%         |

\* As noted by police officer on accident report.

\*\* There were 4,732 trucks in crashes in 2006. However, 159 were parked. This table tabulates the apparent physical condition of drivers for the remaining 5,634 trucks where it was possible to identify a driver. Also, there were 4,169 non-truck motor vehicles in 2006 truck crashes. However, 228 of them were parked, leaving 3,941 for which an apparent physical condition was recorded.

TABLE 5.06

## 2006 TRUCK 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    | 44            | 886            | 2,392                   | 3,322         | 47        | 1,233        |
| Parked Motor Vehicle   | 4             | 35             | 274                     | 313           | 4         | 49           |
| Bicycle                | 1             | 13             | 0                       | 14            | 1         | 14           |
| Pedestrian             | 3             | 11             | 0                       | 14            | 3         | 12           |
| Deer                   | 0             | 2              | 39                      | 41            | 0         | 2            |
| Other Animal           | 0             | 3              | 13                      | 16            | 0         | 3            |
| Fixed Object           | 2             | 57             | 308                     | 367           | 2         | 67           |
| Train                  | 1             | 2              | 9                       | 12            | 1         | 2            |
| <b>Non-Collision:</b>  |               |                |                         |               |           |              |
| Overturn               | 6             | 109            | 105                     | 220           | 6         | 115          |
| Jackknife              | 0             | 11             | 66                      | 77            | 0         | 14           |
| Fire or Explosion      | 0             | 0              | 9                       | 9             | 0         | 0            |
| <b>Other</b>           | 1             | 27             | 125                     | 153           | 1         | 33           |
| <b>Total</b>           | <b>62</b>     | <b>1,156</b>   | <b>3,340</b>            | <b>4,558</b>  | <b>65</b> | <b>1,544</b> |

TABLE 5.07

## 2006 TRUCK CRASHES BY MONTH

| Month        | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Killed    | Injured      |
|--------------|---------------|----------------|-------------------------|---------------|-----------|--------------|
| January      | 9             | 86             | 258                     | 353           | 9         | 111          |
| February     | 6             | 88             | 302                     | 396           | 6         | 118          |
| March        | 4             | 104            | 326                     | 434           | 5         | 145          |
| April        | 1             | 75             | 199                     | 275           | 1         | 103          |
| May          | 4             | 98             | 306                     | 408           | 5         | 145          |
| June         | 7             | 113            | 254                     | 374           | 7         | 151          |
| July         | 4             | 100            | 269                     | 373           | 4         | 118          |
| August       | 5             | 87             | 309                     | 401           | 6         | 112          |
| September    | 7             | 96             | 282                     | 385           | 7         | 129          |
| October      | 6             | 127            | 318                     | 451           | 6         | 175          |
| November     | 4             | 97             | 249                     | 350           | 4         | 117          |
| December     | 5             | 85             | 268                     | 358           | 5         | 120          |
| <b>Total</b> | <b>62</b>     | <b>1,156</b>   | <b>3,340</b>            | <b>4,558</b>  | <b>65</b> | <b>1,544</b> |

TABLE 5.08

2006 TRUCK CRASHES BY TIME AND DAY

| Time of Day        | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Total |
|--------------------|--------|--------|---------|-----------|----------|--------|----------|-------|
| Midnight - 2:59 AM | 15     | 11     | 16      | 19        | 27       | 19     | 22       | 129   |
| 3:00 - 5:59 AM     | 14     | 28     | 16      | 25        | 40       | 26     | 12       | 161   |
| 6:00 - 8:59 AM     | 19     | 155    | 188     | 145       | 144      | 139    | 28       | 818   |
| 9:00 - 11:59 AM    | 30     | 214    | 184     | 150       | 193      | 203    | 48       | 1,022 |
| Noon - 2:59 PM     | 46     | 200    | 203     | 155       | 172      | 191    | 49       | 1,016 |
| 3:00 - 5:59 PM     | 37     | 171    | 152     | 155       | 166      | 154    | 32       | 867   |
| 6:00 - 8:59 PM     | 34     | 55     | 67      | 55        | 74       | 49     | 16       | 350   |
| 9:00 - 11:59 PM    | 21     | 34     | 20      | 19        | 30       | 24     | 14       | 162   |
| Unknown            | 3      | 6      | 5       | 6         | 3        | 9      | 1        | 33    |
| Total              | 219    | 874    | 851     | 729       | 849      | 814    | 222      | 4,558 |

FIGURE 5.01  
2006 Truck Crashes by Time of Day

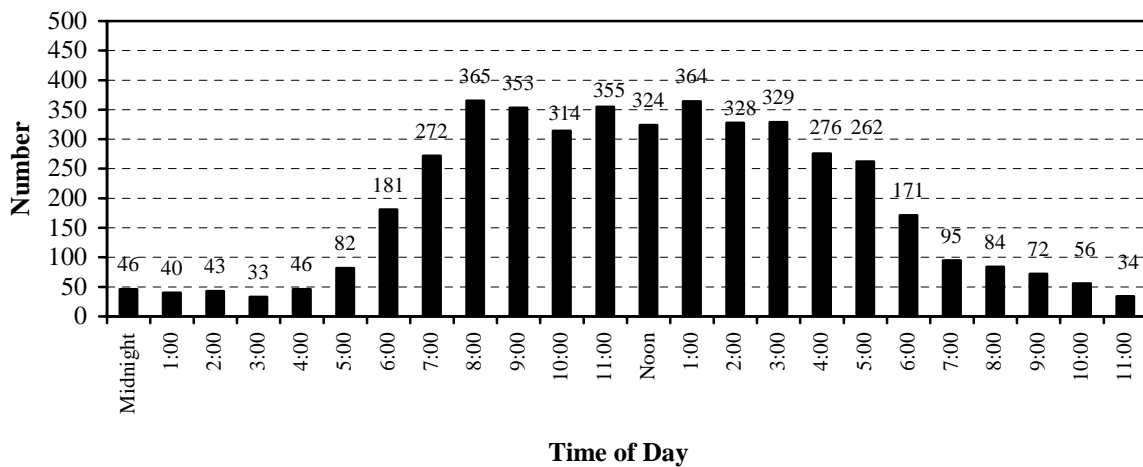


TABLE 5.09

**2006 TRUCK CRASHES BY ROAD SURFACE CONDITION**

| <b>Road Surface Condition</b> | <b>Fatal Crashes</b> | <b>Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|-------------------------------|----------------------|-----------------------|--------------------------------|----------------------|---------------|----------------|
| Dry                           | 48                   | 856                   | 2,451                          | 3,355                | 51            | 1,144          |
| Wet                           | 8                    | 145                   | 385                            | 538                  | 8             | 190            |
| Snow or Slush                 | 1                    | 52                    | 208                            | 261                  | 1             | 65             |
| Ice or Packed Snow            | 3                    | 84                    | 245                            | 332                  | 3             | 120            |
| Water Standing/Moving         | 0                    | 0                     | 1                              | 1                    | 0             | 0              |
| Muddy                         | 0                    | 0                     | 8                              | 8                    | 0             | 0              |
| Debris                        | 0                    | 3                     | 1                              | 4                    | 0             | 5              |
| Other                         | 2                    | 11                    | 21                             | 34                   | 2             | 15             |
| Unknown                       | 0                    | 5                     | 20                             | 25                   | 0             | 5              |
| <b>Total</b>                  | <b>62</b>            | <b>1,156</b>          | <b>3,340</b>                   | <b>4,558</b>         | <b>65</b>     | <b>1,544</b>   |

TABLE 5.10

**2006 TRUCK CRASHES BY WEATHER CONDITION**

| <b>Weather Condition</b> | <b>Fatal Crashes</b> | <b>Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|--------------------------|----------------------|-----------------------|--------------------------------|----------------------|---------------|----------------|
| Clear                    | 40                   | 657                   | 1,893                          | 2,590                | 43            | 867            |
| Cloudy                   | 15                   | 323                   | 914                            | 1,252                | 15            | 442            |
| Rain                     | 4                    | 63                    | 170                            | 237                  | 4             | 86             |
| Snow                     | 1                    | 67                    | 224                            | 292                  | 1             | 92             |
| Sleet/Hail/Freezing Rain | 1                    | 17                    | 46                             | 64                   | 1             | 19             |
| Fog/Smog/Smoke           | 1                    | 11                    | 12                             | 24                   | 1             | 15             |
| Blowing Sand/Dust/Snow   | 0                    | 8                     | 42                             | 50                   | 0             | 12             |
| Severe Cross Winds       | 0                    | 5                     | 12                             | 17                   | 0             | 5              |
| Other                    | 0                    | 1                     | 5                              | 6                    | 0             | 2              |
| Unknown                  | 0                    | 4                     | 22                             | 26                   | 0             | 4              |
| <b>Total</b>             | <b>62</b>            | <b>1,156</b>          | <b>3,340</b>                   | <b>4,558</b>         | <b>65</b>     | <b>1,544</b>   |

TABLE 5.11

**2006 TRUCK CRASHES BY POPULATION OF AREA**

| <b>Population of<br/>City or Township</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|-------------------------------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------|----------------|
| 100,000 & Over                            | 1                        | 152                       | 618                                    | 771                      | 1             | 213            |
| 50,000 - 99,999                           | 4                        | 174                       | 500                                    | 678                      | 4             | 237            |
| 25,000 - 49,999                           | 1                        | 138                       | 383                                    | 522                      | 1             | 179            |
| 10,000 - 24,999                           | 5                        | 130                       | 483                                    | 618                      | 6             | 167            |
| 5,000 - 9,999                             | 2                        | 71                        | 249                                    | 322                      | 2             | 88             |
| 2,500 - 4,999                             | 2                        | 42                        | 183                                    | 227                      | 2             | 58             |
| 1,000 - 2,499                             | 1                        | 28                        | 107                                    | 136                      | 1             | 30             |
| Under 1,000                               | 46                       | 421                       | 817                                    | 1,284                    | 48            | 572            |
| Total                                     | 62                       | 1,156                     | 3,340                                  | 4,558                    | 65            | 1,544          |

TABLE 5.12

**2006 TRUCK CRASHES BY TYPE OF ROADWAY**

| <b>Roadway Type</b>      | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|--------------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Interstate Highway       | 8                        | 282                       | 876                                    | 1,166                    | 9             | 394            |
| US Trunk Highway         | 13                       | 201                       | 498                                    | 712                      | 13            | 261            |
| State Trunk Highway      | 23                       | 263                       | 590                                    | 876                      | 24            | 346            |
| County State-Aid Highway | 15                       | 226                       | 627                                    | 868                      | 16            | 300            |
| County Road              | 0                        | 12                        | 30                                     | 42                       | 0             | 19             |
| Township Road            | 1                        | 26                        | 32                                     | 59                       | 1             | 31             |
| Local Street             | 2                        | 141                       | 656                                    | 799                      | 2             | 184            |
| Other Road               | 0                        | 5                         | 31                                     | 36                       | 0             | 9              |
| Total                    | 62                       | 1,156                     | 3,340                                  | 4,558                    | 65            | 1,544          |

## **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.

### **Pedestrian crashes decline**

In 2006, there were 915 crashes in which a pedestrian was injured or killed by a motor vehicle. This is the lowest number of pedestrian crashes over the last ten years.

### **Deaths and injuries**

In 2006, 38 pedestrians were killed and 906 pedestrians were injured. Nearly 4% of pedestrian crashes resulted in a death, compared to about one-half of one percent for all traffic crashes.

### **Young people and males at greater risk**

Persons less than 25 years of age accounted for nearly one-third (32%) of the persons killed and nearly two out of five (38%) of those injured. Males were more likely than females to be killed: Males accounted for 53% of all pedestrian fatalities.

### **Urban areas and rush-hours**

In 2006, 47% of pedestrian crashes occurred in areas with populations over 100,000. However, 14 of the 38 (37%) fatalities occurred in rural areas (defined as less than 5,000 population.) In 2006, 37% of pedestrian crashes occurred during the weekday rush hour driving time periods. The rush hour driving time period is defined as 6:00-9:00 a.m. and 3:00-6:00 p.m.

### **Prior actions of vehicles and pedestrians**

Regarding motor vehicles that were involved in pedestrian crashes in 2006, nearly half (47%) of them were simply going straight ahead on the roadway prior to the crash. Nearly one-third (32%) of the motor vehicles involved in pedestrian crashes were making a right or left turn. As might be expected, more than one out of four (29%) of pedestrians killed were trying to cross a road with no crosswalk and no signal.

### **Contributing factors**

For 29% of the motor vehicle drivers in pedestrian crashes, the reporting officer indicated that failure to yield right of way was a contributing factor. The second most cited contributing factor was driver inattention or distraction (24%).

### **Drinking pedestrian fatalities decreases**

Of the 38 pedestrians killed, 31 were tested for alcohol. Of those tested, 26% had concentrations over .08, a thirty eight percent decrease from the previous year.

TABLE 6.01

**PEDESTRIAN CRASH SUMMARY, 1997 - 2006**

|                     | 1997  | 1998  | 1999  | 2000  | 2001  | 2002  | 2003 | 2004 | 2005 | 2006 |
|---------------------|-------|-------|-------|-------|-------|-------|------|------|------|------|
| Pedestrian Crashes  | 1,419 | 1,400 | 1,329 | 1,253 | 1,175 | 1,151 | NA   | 963  | 938  | 915  |
| Pedestrians Killed  | 58    | 56    | 51    | 41    | 46    | 50    | 52   | 37   | 44   | 38   |
| Pedestrians Injured | 1,434 | 1,410 | 1,330 | 1,269 | 1,184 | 1,149 | NA   | 976  | 936  | 906  |

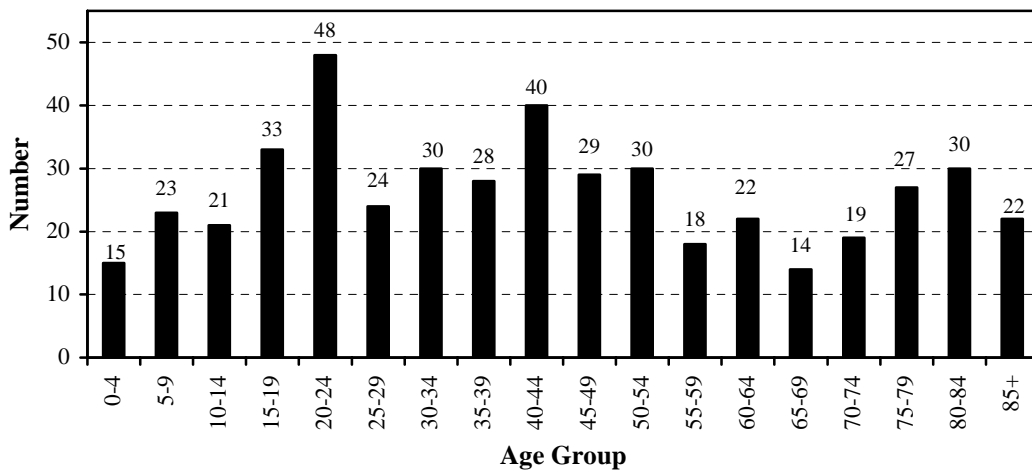
TABLE 6.02

**PEDESTRIANS KILLED OR INJURED BY AGE AND GENDER, 2006**

| Age Group  | <u>Killed</u> |    |       | <u>Injured</u> |    |     |                 |     |     |              |     |     | <u>Total</u> |     |        |
|------------|---------------|----|-------|----------------|----|-----|-----------------|-----|-----|--------------|-----|-----|--------------|-----|--------|
|            | M             | F  | Total | <u>Severe</u>  |    |     | <u>Moderate</u> |     |     | <u>Minor</u> |     |     | M            | F   | Total* |
| 00 - 14    | 0             | 0  | 0     | 2              | 1  | 3   | 4               | 1   | 5   | 4            | 5   | 10  | 10           | 7   | 18     |
| 05 - 09    | 0             | 0  | 0     | 7              | 5  | 12  | 6               | 8   | 14  | 22           | 10  | 32  | 35           | 23  | 58     |
| 10 - 14    | 1             | 1  | 2     | 6              | 3  | 9   | 18              | 10  | 28  | 14           | 17  | 32  | 38           | 30  | 69     |
| 15 - 19    | 4             | 2  | 6     | 7              | 7  | 15  | 23              | 16  | 39  | 21           | 26  | 48  | 51           | 49  | 102    |
| 20 - 24    | 3             | 1  | 4     | 6              | 6  | 12  | 23              | 23  | 46  | 21           | 19  | 40  | 50           | 48  | 98     |
| 25 - 29    | 0             | 2  | 2     | 8              | 2  | 10  | 5               | 16  | 22  | 22           | 17  | 40  | 35           | 35  | 72     |
| 30 - 34    | 1             | 1  | 2     | 4              | 5  | 9   | 12              | 10  | 23  | 11           | 12  | 23  | 27           | 27  | 55     |
| 35 - 39    | 1             | 0  | 1     | 6              | 4  | 10  | 6               | 13  | 20  | 11           | 13  | 24  | 23           | 30  | 54     |
| 40 - 44    | 3             | 3  | 6     | 6              | 6  | 12  | 11              | 9   | 20  | 17           | 12  | 30  | 34           | 27  | 62     |
| 45 - 49    | 1             | 1  | 2     | 6              | 2  | 8   | 10              | 10  | 20  | 13           | 17  | 30  | 29           | 29  | 58     |
| 50 - 54    | 2             | 1  | 3     | 3              | 6  | 9   | 11              | 14  | 25  | 13           | 13  | 26  | 27           | 33  | 60     |
| 55 - 59    | 1             | 1  | 2     | 8              | 3  | 11  | 9               | 10  | 19  | 11           | 14  | 25  | 28           | 27  | 55     |
| 60 - 64    | 0             | 0  | 0     | 4              | 2  | 6   | 2               | 6   | 8   | 7            | 5   | 12  | 13           | 13  | 26     |
| 65 - 69    | 0             | 1  | 0     | 3              | 1  | 4   | 6               | 1   | 7   | 5            | 4   | 9   | 14           | 6   | 20     |
| 70 - 74    | 2             | 0  | 2     | 5              | 1  | 6   | 2               | 3   | 5   | 4            | 5   | 9   | 11           | 9   | 20     |
| 75 - 79    | 0             | 1  | 1     | 0              | 1  | 1   | 2               | 2   | 4   | 1            | 6   | 7   | 3            | 9   | 12     |
| 80 - 84    | 1             | 3  | 4     | 3              | 1  | 4   | 1               | 3   | 4   | 3            | 3   | 6   | 7            | 7   | 14     |
| 85 & Older | 0             | 0  | 0     | 0              | 2  | 2   | 4               | 0   | 4   | 0            | 0   | 0   | 4            | 2   | 6      |
| Not Stated | 0             | 0  | 0     | 2              | 0  | 3   | 0               | 3   | 9   | 5            | 10  | 35  | 7            | 13  | 47     |
| Total      | 20            | 18 | 38    | 86             | 58 | 146 | 155             | 158 | 322 | 205          | 208 | 438 | 446          | 424 | 906    |

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

**FIGURE 6.01**  
**Pedestrian Fatalities by Age Group, 1997-2006 Combined**



**FIGURE 6.02**  
**Pedestrians Killed or Injured by Age and Gender, 2006**

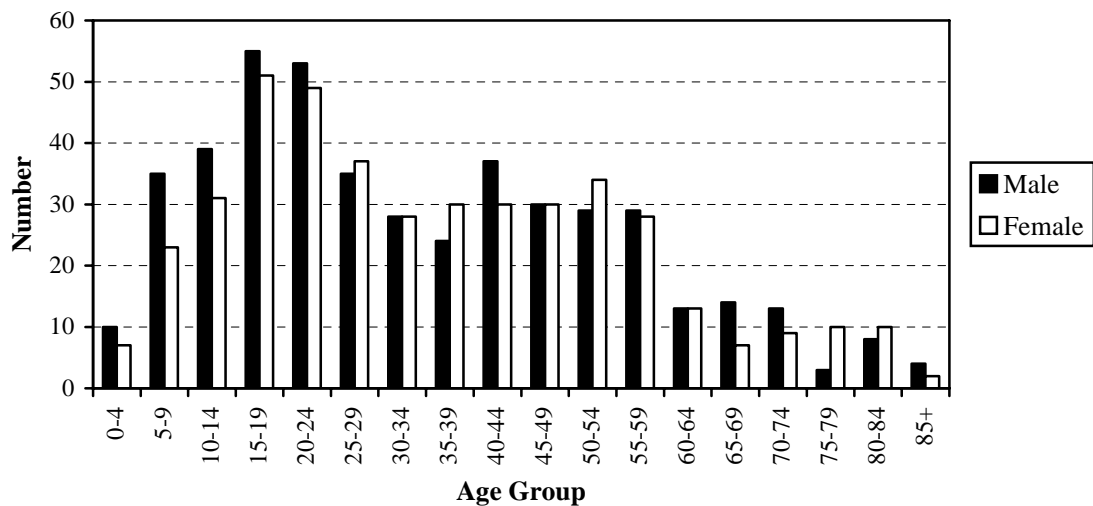




TABLE 6.03

**2006 PEDESTRIAN CRASHES BY MONTH**

| <b>Month</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Pedestrians<br/>Killed</b> | <b>Pedestrians<br/>Injured</b> |
|--------------|--------------------------|---------------------------|--------------------------|-------------------------------|--------------------------------|
| January      | 4                        | 86                        | 90                       | 4                             | 88                             |
| February     | 3                        | 64                        | 67                       | 3                             | 65                             |
| March        | 3                        | 55                        | 58                       | 3                             | 59                             |
| April        | 4                        | 62                        | 66                       | 4                             | 64                             |
| May          | 1                        | 59                        | 60                       | 1                             | 60                             |
| June         | 7                        | 72                        | 79                       | 7                             | 74                             |
| July         | 1                        | 66                        | 67                       | 1                             | 69                             |
| August       | 1                        | 60                        | 61                       | 1                             | 59                             |
| September    | 3                        | 90                        | 93                       | 3                             | 100                            |
| October      | 2                        | 88                        | 90                       | 2                             | 92                             |
| November     | 5                        | 90                        | 95                       | 5                             | 91                             |
| December     | 4                        | 85                        | 89                       | 4                             | 85                             |
| Total        | 38                       | 877                       | 915                      | 38                            | 906                            |

TABLE 6.04

**2006 PEDESTRIAN CRASHES BY POPULATION OF AREA**

| <b>Population of<br/>City or Township</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Pedestrians<br/>Killed</b> | <b>Pedestrians<br/>Injured</b> |
|-------------------------------------------|--------------------------|---------------------------|--------------------------|-------------------------------|--------------------------------|
| 100,000 and Over                          | 4                        | 414                       | 418                      | 4                             | 429                            |
| 50,000 - 99,999                           | 4                        | 119                       | 123                      | 4                             | 123                            |
| 25,000 - 49,999                           | 8                        | 83                        | 91                       | 8                             | 87                             |
| 10,000 - 24,999                           | 7                        | 122                       | 129                      | 7                             | 128                            |
| 5,000 - 9,999                             | 1                        | 46                        | 47                       | 1                             | 48                             |
| 2,500 - 4,999                             | 0                        | 37                        | 37                       | 0                             | 35                             |
| 1,000 - 2,499                             | 0                        | 20                        | 20                       | 0                             | 20                             |
| Under 1,000                               | 14                       | 36                        | 50                       | 14                            | 36                             |
| Total                                     | 38                       | 877                       | 915                      | 38                            | 906                            |

TABLE 6.05

2006 PEDESTRIAN CRASHES BY TIME AND DAY

| Time of Day        | Fatal Crashes | Total Crashes | Sun | Mon | Tues | Wed | Thur | Fri | Sat |
|--------------------|---------------|---------------|-----|-----|------|-----|------|-----|-----|
| Midnight - 2:59 AM | 5             | 55            | 19  | 3   | 3    | 2   | 3    | 7   | 18  |
| 3:00 - 5:59 AM     | 6             | 27            | 5   | 3   | 4    | 4   | 5    | 1   | 5   |
| 6:00 - 8:59 AM     | 5             | 124           | 4   | 20  | 26   | 27  | 21   | 21  | 5   |
| 9:00 - 11:59 AM    | 1             | 84            | 5   | 10  | 11   | 16  | 17   | 15  | 10  |
| Noon - 2:59 PM     | 1             | 144           | 11  | 16  | 16   | 26  | 24   | 30  | 21  |
| 3:00 - 5:59 PM     | 9             | 215           | 15  | 31  | 40   | 52  | 23   | 34  | 20  |
| 6:00 - 8:59 PM     | 6             | 169           | 19  | 15  | 27   | 21  | 27   | 29  | 31  |
| 9:00 - 11:59 PM    | 5             | 92            | 11  | 14  | 11   | 9   | 14   | 14  | 19  |
| Unknown            | 0             | 5             | 0   | 2   | 0    | 0   | 2    | 0   | 1   |
| Total              | 38            | 915           | 89  | 114 | 138  | 157 | 136  | 151 | 130 |

FIGURE 6.03  
2006 Pedestrian Crashes by Time of Day

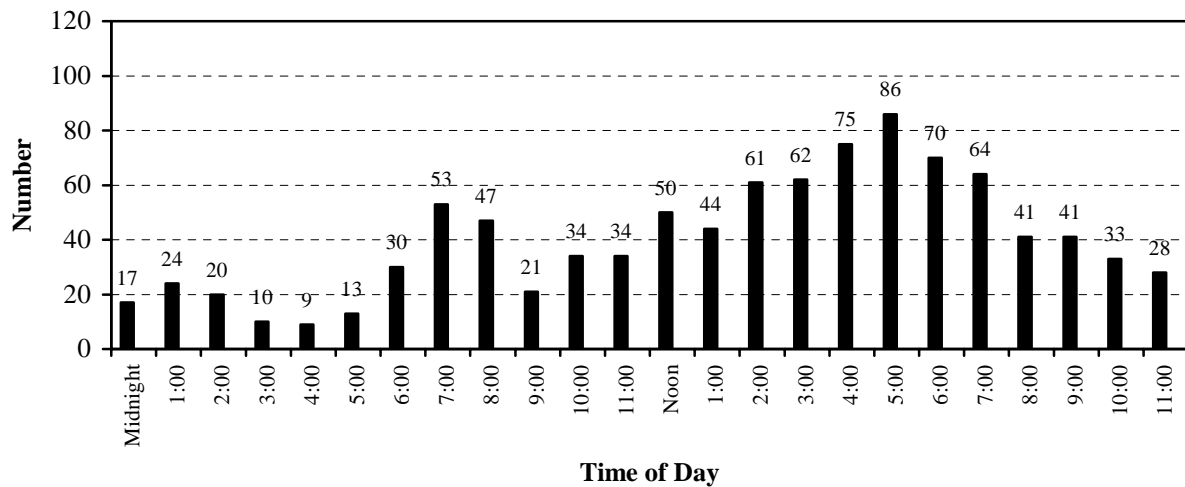


TABLE 6.06

**PRIOR ACTION OF VEHICLES IN 2006 PEDESTRIAN CRASHES**

| <b>Action</b>              | <b>Vehicles<br/>in Fatal<br/>Crashes</b> | <b>Vehicles<br/>in Injury<br/>Crashes</b> | <b>Vehicles<br/>in All<br/>Crashes*</b> |
|----------------------------|------------------------------------------|-------------------------------------------|-----------------------------------------|
| Going Straight             | 31                                       | 422                                       | 453                                     |
| Wrong Way Opposing Traffic | 1                                        | 4                                         | 5                                       |
| Turning Right on Red       | 0                                        | 17                                        | 17                                      |
| Turning Left on Red        | 0                                        | 2                                         | 2                                       |
| Turning Right              | 0                                        | 77                                        | 77                                      |
| Turning Left               | 3                                        | 204                                       | 207                                     |
| Making U Turn              | 0                                        | 1                                         | 1                                       |
| Starting From Parked       | 0                                        | 17                                        | 17                                      |
| Starting in Traffic        | 0                                        | 11                                        | 11                                      |
| Slowing in Traffic         | 0                                        | 8                                         | 8                                       |
| Parking                    | 1                                        | 1                                         | 2                                       |
| Avoiding Object in Road    | 2                                        | 11                                        | 13                                      |
| Changing Lanes             | 2                                        | 7                                         | 9                                       |
| Passing                    | 0                                        | 2                                         | 2                                       |
| Backing                    | 1                                        | 41                                        | 42                                      |
| All Others                 | 1                                        | 76                                        | 77                                      |
| Unknown                    | 1                                        | 12                                        | 13                                      |
| <b>Total</b>               | <b>43</b>                                | <b>913</b>                                | <b>956</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 2006**

| <b>Action</b>                              | <b><u>Pedestrians Killed</u></b> |                | <b><u>Pedestrians Injured</u></b> |                |
|--------------------------------------------|----------------------------------|----------------|-----------------------------------|----------------|
|                                            | <b>Number</b>                    | <b>Percent</b> | <b>Number</b>                     | <b>Percent</b> |
| Crossing Road (No Crosswalk and No Signal) | 11                               | 28.9%          | 249                               | 27.5%          |
| Crossing Against Signal                    | 3                                | 7.9            | 43                                | 4.7            |
| Crossing With Signal                       | 0                                | 0.0            | 124                               | 13.7           |
| Crossing In Crosswalk (No Signal)          | 5                                | 13.2           | 156                               | 17.2           |
| Walking In Road With Traffic               | 5                                | 13.2           | 44                                | 4.9            |
| Walking In Road Against Traffic            | 2                                | 5.3            | 10                                | 1.1            |
| Standing In Road                           | 1                                | 2.6            | 30                                | 3.3            |
| Emerging From Front/Behind Parked Vehicle  | 1                                | 2.6            | 10                                | 1.1            |
| Child Getting On/Off School Bus            | 0                                | 0.0            | 0                                 | 0.0            |
| Pushing/Working On Vehicle                 | 0                                | 0.0            | 1                                 | 0.1            |
| Working In Road                            | 1                                | 2.6            | 7                                 | 0.8            |
| Getting On/Off Vehicle                     | 0                                | 0.0            | 9                                 | 1.0            |
| Playing In Road                            | 0                                | 0.0            | 3                                 | 0.3            |
| Not In Road                                | 2                                | 5.3            | 27                                | 3.0            |
| Other Pedestrian Action                    | 1                                | 2.6            | 37                                | 4.1            |
| Unknown                                    | 6                                | 15.8           | 156                               | 17.2           |
| <b>Total*</b>                              | <b>38</b>                        | <b>100.0%</b>  | <b>906</b>                        | <b>100.0%</b>  |

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

TABLE 6.08

**CONTRIBUTING FACTORS IN 2006 PEDESTRIAN CRASHES**

| <b>Contributing Factors</b>                                    | <b>Attributed to<br/>Motor Vehicle Drivers</b> |                |
|----------------------------------------------------------------|------------------------------------------------|----------------|
|                                                                | <b>Number</b>                                  | <b>Percent</b> |
| <b>Human Factors</b>                                           |                                                |                |
| Failure to Yield Right of Way                                  | 227                                            | 29.1%          |
| Driver Inattention / Distraction                               | 190                                            | 24.3           |
| Vision Obscured                                                | 96                                             | 12.3           |
| Illegal or Unsafe Speed                                        | 32                                             | 4.1            |
| Chemical Impairment                                            | 25                                             | 3.2            |
| Improper / Unsafe Lane Use                                     | 21                                             | 2.7            |
| Disregard for Traffic Control Device                           | 18                                             | 2.3            |
| Unsafe Backing                                                 | 13                                             | 1.7            |
| Driver Inexperience                                            | 12                                             | 1.5            |
| Improper Parking/Starting/Stopping                             | 9                                              | 1.2            |
| Following Too Closely                                          | 5                                              | 0.6            |
| Driving Left of Center                                         | 5                                              | 0.6            |
| Improper Passing / Overtaking                                  | 4                                              | 0.5            |
| Improper Turn                                                  | 4                                              | 0.5            |
| Overcorrecting                                                 | 4                                              | 0.5            |
| Driver on Phone/CB                                             | 3                                              | 0.4            |
| Failure To Use Lights                                          | 2                                              | 0.3            |
| Improper / No Signal                                           | 1                                              | 0.1            |
| Impeding Traffic                                               | 1                                              | 0.1            |
| Other Human Factors                                            | 33                                             | 4.2            |
| <b>Vehicular Factors</b>                                       |                                                |                |
| Defective Brakes                                               | 5                                              | 0.6            |
| Skidding                                                       | 3                                              | 0.4            |
| Other Vehicular Factors                                        | 3                                              | 0.4            |
| <b>Miscellaneous Factors</b>                                   |                                                |                |
| Weather Conditions                                             | 24                                             | 3.1            |
| Other                                                          | 41                                             | 5.2            |
| Total Contributing Factors Cited                               | 781                                            | 100.0%         |
| Vehicles for Which There Was<br>"No Clear Contributing Factor" | 83                                             |                |
| Total Number of Drivers                                        | 956                                            |                |

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, 1997 - 2006**

| Year | Killed | Tested | Alcohol Concentration* |             |             |               |
|------|--------|--------|------------------------|-------------|-------------|---------------|
|      |        |        | (.00)                  | (.01 - .07) | (.08 - .09) | (.10 or more) |
| 1997 | 58     | 40     | 29 (73%)               | 2 (4%)      | 0 (0%)      | 9 (23%)       |
| 1998 | 56     | 43     | 21 (49%)               | 2 (5%)      | 0 (0%)      | 20 (47%)      |
| 1999 | 51     | 37     | 23 (62%)               | 3 (8%)      | 0 (0%)      | 11 (30%)      |
| 2000 | 41     | 27     | 16 (59%)               | 1 (4%)      | 0 (0%)      | 10 (37%)      |
| 2001 | 46     | 35     | 25 (71%)               | 1 (3%)      | 0 (0%)      | 9 (26%)       |
| 2002 | 50     | 31     | 20 (65%)               | 0 (0%)      | 0 (0%)      | 11 (35%)      |
| 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%)       |

\* 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

**2006 PEDESTRIAN FATALITIES'**  
**LEVEL OF ALCOHOL CONCENTRATION BY AGE**

| Age Group    | Killed | Tested | Alcohol Concentration |             |             |               |
|--------------|--------|--------|-----------------------|-------------|-------------|---------------|
|              |        |        | (.00)                 | (.01 - .07) | (.08 - .09) | (.10 or more) |
| 14 & Younger | 2      | 1      | 1                     | 0           | 0           | 0             |
| 15 - 19      | 6      | 4      | 4                     | 0           | 0           | 0             |
| 20 - 24      | 4      | 4      | 1                     | 0           | 0           | 3             |
| 25 - 29      | 2      | 2      | 1                     | 0           | 0           | 1             |
| 30 - 34      | 2      | 2      | 2                     | 0           | 0           | 0             |
| 35 - 39      | 1      | 1      | 0                     | 0           | 0           | 1             |
| 40 - 44      | 6      | 6      | 4                     | 1           | 0           | 1             |
| 45 - 49      | 2      | 1      | 1                     | 0           | 0           | 0             |
| 50 - 54      | 3      | 3      | 1                     | 0           | 0           | 2             |
| 55 - 59      | 2      | 2      | 2                     | 0           | 0           | 0             |
| 60 - 64      | 0      | 0      | 0                     | 0           | 0           | 0             |
| 65 - 69      | 1      | 1      | 1                     | 0           | 0           | 0             |
| 70 - 74      | 2      | 1      | 1                     | 0           | 0           | 0             |
| 75 - 79      | 1      | 0      | 0                     | 0           | 0           | 0             |
| 80 - 84      | 4      | 3      | 3                     | 0           | 0           | 0             |
| 85 & Older   | 0      | 0      | 0                     | 0           | 0           | 0             |
| Total        | 38     | 31     | 22                    | 1           | 0           | 8             |

TABLE 6.11

**2006 PEDESTRIAN FATALITIES' LEVEL OF ALCOHOL  
CONCENTRATION BY TIME OF DAY**

| <b>Time of Day</b> | <b>Killed</b> | <b>Tested</b> | <b>(.00)</b> | <b>Alcohol Concentration</b> |                    |                      |
|--------------------|---------------|---------------|--------------|------------------------------|--------------------|----------------------|
|                    |               |               |              | <b>(.01 - .07)</b>           | <b>(.08 - .09)</b> | <b>(.10 or more)</b> |
| Midnight - 2:59 AM | 5             | 4             | 1            | 1                            | 0                  | 2                    |
| 3:00 - 5:59 AM     | 6             | 6             | 4            | 0                            | 0                  | 2                    |
| 6:00 - 8:59 AM     | 5             | 4             | 4            | 0                            | 0                  | 0                    |
| 9:00 - 11:59 AM    | 1             | 0             | 0            | 0                            | 0                  | 0                    |
| Noon - 2:59 PM     | 1             | 1             | 1            | 0                            | 0                  | 0                    |
| 3:00 - 5:59 PM     | 9             | 7             | 7            | 0                            | 0                  | 0                    |
| 6:00 - 8:59 PM     | 6             | 5             | 5            | 0                            | 0                  | 0                    |
| 9:00 - 11:59 PM    | 5             | 4             | 0            | 0                            | 0                  | 4                    |
| Total              | 38            | 31            | 22           | 1                            | 0                  | 8                    |

## 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.

### **Number of bicycle crashes decreases**

In 2006, there were 944 bicycle crashes in Minnesota. This number represents a 2% decrease from the previous year.

### **Injuries decrease, fatalities increase**

The number of bicyclists injured decreased in 2006. There were 908 injuries reported, a 5% decrease from 2005. In addition, there were 8 bicyclist fatalities in 2006, 1 more fatality than the previous year.

### **Warm weather**

As expected, bicycle crashes are mostly a warm weather occurrence. In 2006, 7 of the 8 fatalities, 60% of the crashes, and 60% of the injuries occurred during the four-month period June through September.

### **Afternoon rush hour**

Bicycle crashes in 2006 were most prevalent in the three-hour period of 3:00-6:00 p.m. One-third (33%) of all bicycle crashes occurred during this period.

### **Big cities**

Generally, traffic crashes involving a bicycle and a motor vehicle tend to occur in areas with larger populations. This appears to be true once again in 2006. More than half (53%) bicycle crashes occurred in cities where the population was over 50,000 people. Only 10% of all bicycle crashes occurred in rural (defined as less than 5,000 people) areas.

### **Young people at risk**

Of all the bicyclists injured in 2006, more than half (58%) were less than 25 years of age. Nearly two out of five (38%) of bicyclist fatalities were less than 15 years of age.

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

Males were nearly three times more likely than females (651 to 231) to be injured in bicycle crashes. In 2006, 6 of the 8 bicyclists killed and 72% of the bicyclists injured were male.

### **Actions by bicyclists prior to crash**

Bicyclists are supposed to ride with traffic. The most commonly occurring action by bicyclists prior to the crash (15% of the total) was attempting to ride across the road. However, the prior action indicated as "other" or "unknown" was cited for 41% of bicyclists.

### **Contributing factors**

Failure to yield the right of way was cited most often in 2006 for both the bicyclists and other motor vehicle drivers. For bicyclists, two other factors were often cited. These were disregard for traffic control device and non-motorist error (a violation committed by the bicyclist separate from those listed).

TABLE 7.01

**BICYCLE CRASH SUMMARY, 1997- 2006**

|                    | 1997  | 1998  | 1999  | 2000  | 2001  | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------|-------|-------|-------|-------|-------|------|------|------|------|------|
| Bicycle Crashes    | 1,384 | 1,363 | 1,106 | 1,137 | 1,016 | 909  | NA   | 985  | 965  | 944  |
| Bicyclists Killed  | 7     | 9     | 8     | 14    | 7     | 7    | 6    | 10   | 7    | 8    |
| Bicyclists Injured | 1,348 | 1,310 | 1,060 | 1,080 | 960   | 860  | NA   | 937  | 952  | 908  |

TABLE 7.02

**2006 BICYCLE CRASHES BY MONTH**

| Month     | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total Crashes | Bicyclists Killed | Bicyclists Injured |
|-----------|---------------|----------------|-------------------------|---------------|-------------------|--------------------|
| January   | 0             | 11             | 0                       | 11            | 0                 | 11                 |
| February  | 0             | 8              | 1                       | 9             | 0                 | 8                  |
| March     | 0             | 11             | 0                       | 11            | 0                 | 11                 |
| April     | 0             | 69             | 6                       | 75            | 0                 | 69                 |
| May       | 1             | 116            | 5                       | 122           | 1                 | 118                |
| June      | 3             | 154            | 6                       | 163           | 3                 | 156                |
| July      | 1             | 136            | 5                       | 142           | 1                 | 139                |
| August    | 3             | 147            | 10                      | 160           | 3                 | 150                |
| September | 0             | 100            | 2                       | 102           | 0                 | 101                |
| October   | 0             | 70             | 3                       | 73            | 0                 | 73                 |
| November  | 0             | 45             | 3                       | 48            | 0                 | 46                 |
| December  | 0             | 26             | 2                       | 28            | 0                 | 26                 |
| Total     | 8             | 893            | 43                      | 944           | 8                 | 908                |

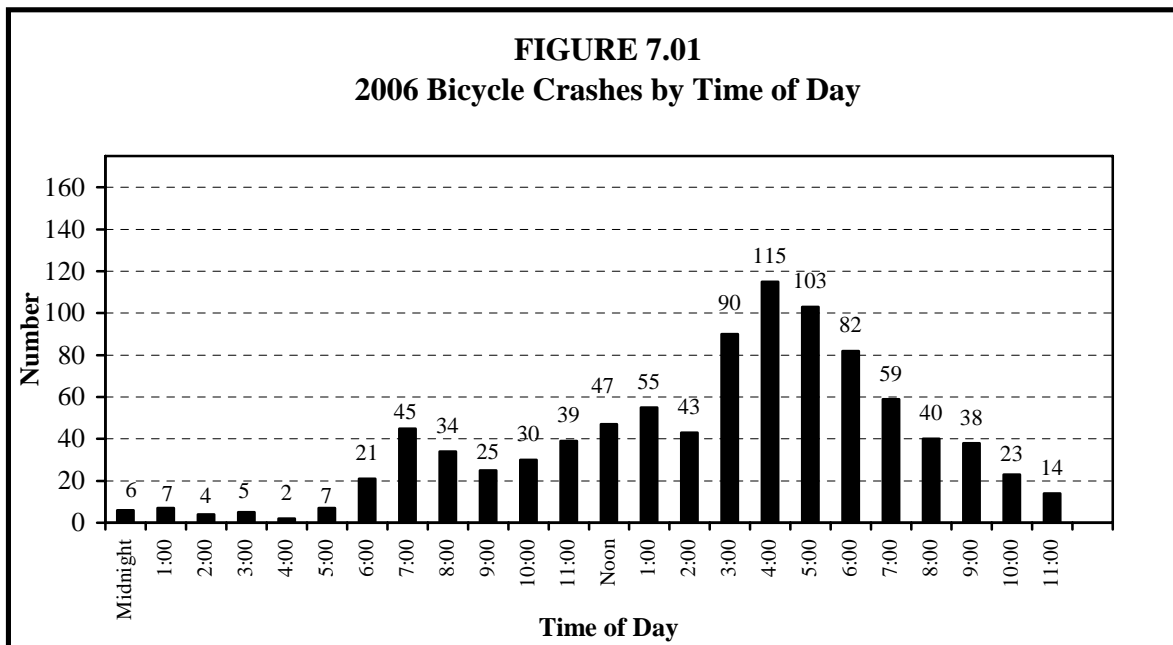




TABLE 7.03

**2006 BICYCLE CRASHES BY TIME AND DAY**

| <b>Time of Day</b> | <b>Total</b> | <b>Sunday</b> | <b>Monday</b> | <b>Tuesday</b> | <b>Wednesday</b> | <b>Thursday</b> | <b>Friday</b> | <b>Saturday</b> |
|--------------------|--------------|---------------|---------------|----------------|------------------|-----------------|---------------|-----------------|
| Midnight - 2:59 AM | 17           | 4             | 2             | 1              | 1                | 1               | 5             | 3               |
| 3:00 - 5:59 AM     | 14           | 3             | 2             | 1              | 5                | 1               | 2             | 0               |
| 6:00 - 8:59 AM     | 100          | 3             | 18            | 20             | 21               | 22              | 12            | 4               |
| 9:00 - 11:59 AM    | 94           | 5             | 7             | 29             | 15               | 8               | 17            | 13              |
| Noon - 2:59 PM     | 145          | 18            | 16            | 27             | 17               | 16              | 29            | 22              |
| 3:00 - 5:59 PM     | 308          | 16            | 57            | 46             | 57               | 53              | 51            | 28              |
| 6:00 - 8:59 PM     | 181          | 17            | 36            | 35             | 28               | 22              | 24            | 19              |
| 9:00 - 11:59 PM    | 75           | 8             | 7             | 10             | 8                | 8               | 24            | 10              |
| Unknown            | 10           | 0             | 1             | 2              | 5                | 1               | 1             | 0               |
| <b>Total</b>       | <b>944</b>   | <b>74</b>     | <b>146</b>    | <b>171</b>     | <b>157</b>       | <b>132</b>      | <b>165</b>    | <b>99</b>       |

TABLE 7.04

**2006 BICYCLE CRASHES BY POPULATION OF AREA**

| <b>Population of City or Township</b> | <b>Fatal Crashes</b> | <b>Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Bicyclists Killed</b> | <b>Bicyclists Injured</b> |
|---------------------------------------|----------------------|-----------------------|--------------------------------|----------------------|--------------------------|---------------------------|
| 100,000 and Over                      | 1                    | 339                   | 24                             | 364                  | 1                        | 343                       |
| 50,000 - 99,999                       | 3                    | 130                   | 5                              | 138                  | 3                        | 133                       |
| 25,000 - 49,999                       | 0                    | 123                   | 5                              | 128                  | 0                        | 127                       |
| 10,000 - 24,999                       | 1                    | 163                   | 3                              | 167                  | 1                        | 165                       |
| 5,000 - 9,999                         | 0                    | 49                    | 3                              | 52                   | 0                        | 49                        |
| 2,500 - 4,999                         | 0                    | 29                    | 1                              | 30                   | 0                        | 31                        |
| 1,000 - 2,499                         | 0                    | 21                    | 0                              | 21                   | 0                        | 21                        |
| Under 1,000                           | 3                    | 39                    | 2                              | 44                   | 3                        | 39                        |
| <b>Total</b>                          | <b>8</b>             | <b>893</b>            | <b>43</b>                      | <b>944</b>           | <b>8</b>                 | <b>908</b>                |

**FIGURE 7.02**  
**Bicyclists Killed and Injured by Age and Gender, 2006**

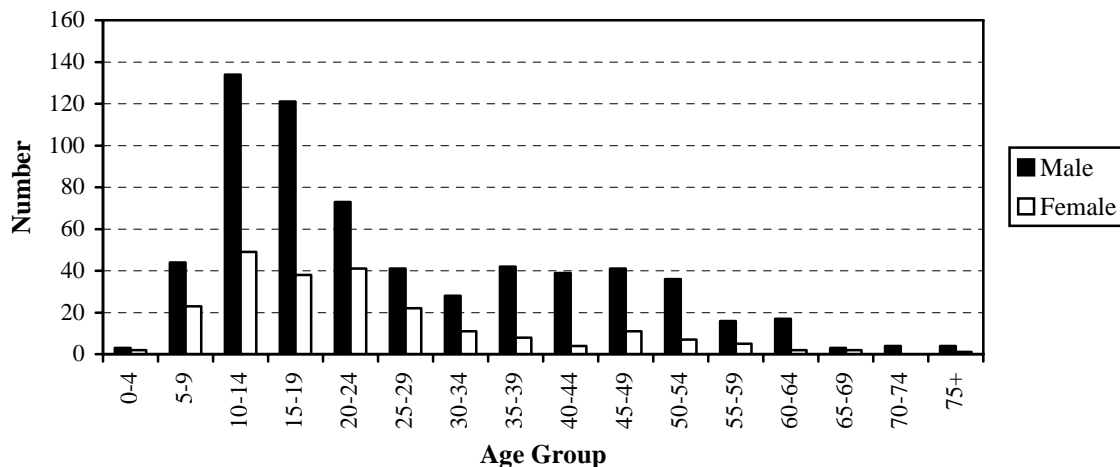


TABLE 7.05

**BICYCLISTS KILLED OR INJURED BY AGE AND GENDER, 2006**

| Age Group  | <u>Killed</u> |   |       | <u>Injured</u> |    |        |                 |    |        |              |     |        | <u>Total</u> |     |        |
|------------|---------------|---|-------|----------------|----|--------|-----------------|----|--------|--------------|-----|--------|--------------|-----|--------|
|            |               |   |       | <u>Severe</u>  |    |        | <u>Moderate</u> |    |        | <u>Minor</u> |     |        |              |     |        |
|            | M             | F | Total | M              | F  | Total* | M               | F  | Total* | M            | F   | Total* | M            | F   | Total* |
| 00 – 04    | 0             | 0 | 0     | 0              | 0  | 0      | 3               | 0  | 3      | 0            | 2   | 2      | 3            | 2   | 5      |
| 05 – 09    | 1             | 1 | 2     | 4              | 3  | 7      | 17              | 9  | 26     | 22           | 10  | 32     | 43           | 22  | 65     |
| 10 – 14    | 1             | 0 | 1     | 6              | 5  | 11     | 54              | 17 | 71     | 73           | 27  | 100    | 133          | 49  | 182    |
| 15 – 19    | 2             | 0 | 2     | 4              | 1  | 5      | 50              | 11 | 63     | 65           | 26  | 91     | 119          | 38  | 159    |
| 20 – 24    | 1             | 1 | 2     | 3              | 2  | 5      | 26              | 22 | 48     | 43           | 16  | 60     | 72           | 40  | 113    |
| 25 – 29    | 0             | 0 | 0     | 6              | 2  | 8      | 17              | 9  | 26     | 18           | 11  | 30     | 41           | 22  | 64     |
| 30 – 34    | 0             | 0 | 0     | 3              | 1  | 4      | 14              | 5  | 19     | 11           | 5   | 16     | 28           | 11  | 39     |
| 35 – 39    | 0             | 0 | 0     | 2              | 0  | 2      | 14              | 5  | 19     | 26           | 3   | 29     | 42           | 8   | 50     |
| 40 – 44    | 0             | 0 | 0     | 2              | 0  | 2      | 21              | 3  | 24     | 16           | 1   | 17     | 39           | 4   | 43     |
| 45 – 49    | 0             | 0 | 0     | 4              | 2  | 6      | 22              | 2  | 24     | 15           | 7   | 22     | 41           | 11  | 52     |
| 50 – 54    | 0             | 0 | 0     | 3              | 1  | 4      | 15              | 0  | 15     | 18           | 6   | 24     | 36           | 7   | 43     |
| 55 – 59    | 0             | 0 | 0     | 2              | 1  | 3      | 7               | 2  | 9      | 7            | 2   | 9      | 16           | 5   | 21     |
| 60 – 64    | 0             | 0 | 0     | 1              | 0  | 1      | 7               | 2  | 9      | 9            | 0   | 9      | 17           | 2   | 19     |
| 65 – 69    | 0             | 0 | 0     | 0              | 1  | 1      | 1               | 1  | 2      | 2            | 0   | 3      | 3            | 2   | 6      |
| 70 – 74    | 0             | 0 | 0     | 0              | 0  | 0      | 1               | 0  | 1      | 3            | 0   | 3      | 4            | 0   | 4      |
| 75 & Older | 1             | 0 | 1     | 0              | 0  | 0      | 2               | 0  | 2      | 1            | 1   | 2      | 3            | 1   | 4      |
| Not Stated | 0             | 0 | 0     | 0              | 0  | 1      | 3               | 4  | 10     | 8            | 3   | 28     | 11           | 7   | 39     |
| Total      | 6             | 2 | 8     | 40             | 19 | 60     | 274             | 92 | 371    | 337          | 120 | 477    | 651          | 231 | 908    |

\* 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 2006 CRASHES**

| <u>Prior Action</u>       | <u>Bicyclists<br/>in Fatal<br/>Crashes</u> | <u>Bicyclists<br/>in Injury<br/>Crashes</u> | <u>Bicyclists<br/>in Property<br/>Damage<br/>Crashes</u> | <u>Bicyclists<br/>in All<br/>Crashes*</u> |
|---------------------------|--------------------------------------------|---------------------------------------------|----------------------------------------------------------|-------------------------------------------|
| Riding With Traffic       | 1                                          | 291                                         | 16                                                       | 308                                       |
| Riding Against Traffic    | 0                                          | 79                                          | 2                                                        | 81                                        |
| Making Left Turn          | 1                                          | 17                                          | 3                                                        | 21                                        |
| Making Right Turn         | 0                                          | 6                                           | 1                                                        | 7                                         |
| Making U-Turn             | 0                                          | 1                                           | 0                                                        | 1                                         |
| Riding Across Road        | 2                                          | 130                                         | 12                                                       | 144                                       |
| Slowing/Stopping/Starting | 0                                          | 13                                          | 0                                                        | 13                                        |
| Other/Unknown             | 4                                          | 371                                         | 26                                                       | 401                                       |
| Total                     | 8                                          | 908                                         | 60                                                       | 976                                       |

\* 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 2006 BICYCLE CRASHES**

| <b>Contributing Factors</b>        | <b>Attributed to<br/>Bicyclists</b> |                | <b>Attributed to<br/>Motor Vehicle Drivers</b> |                |
|------------------------------------|-------------------------------------|----------------|------------------------------------------------|----------------|
|                                    | <b>Number</b>                       | <b>Percent</b> | <b>Number</b>                                  | <b>Percent</b> |
| <b>Human Factors</b>               |                                     |                |                                                |                |
| Failure to Yield Right of Way      | 142                                 | 26.2%          | 218                                            | 36.3%          |
| Non-Motorist Error                 | 92                                  | 17.0           | 0                                              | 0.0            |
| Disregard Traffic Control Device   | 78                                  | 14.4           | 19                                             | 3.2            |
| Driver Inattention/Distracted      | 45                                  | 8.3            | 167                                            | 27.8           |
| Improper/Unsafe Lane Use           | 35                                  | 6.5            | 17                                             | 2.8            |
| Vision Obscured                    | 17                                  | 3.1            | 51                                             | 8.5            |
| Driver Inexperience                | 11                                  | 2.0            | 8                                              | 1.3            |
| Chemical Impairment                | 9                                   | 1.7            | 10                                             | 1.7            |
| Driving Left of Center             | 8                                   | 1.5            | 3                                              | 0.5            |
| Illegal or Unsafe Speed            | 7                                   | 1.3            | 17                                             | 2.8            |
| Failure to use Lights              | 6                                   | 1.1            | 2                                              | 0.3            |
| Improper Passing/Overtaking        | 4                                   | 0.7            | 8                                              | 1.3            |
| Impeding Traffic                   | 4                                   | 0.7            | 4                                              | 0.7            |
| Improper Park/Start/Stop           | 3                                   | 0.6            | 7                                              | 1.2            |
| Following Too Closely              | 1                                   | 0.2            | 3                                              | 0.5            |
| Improper Turn                      | 1                                   | 0.2            | 12                                             | 2.0            |
| Unsafe Backing                     | 0                                   | 0.0            | 2                                              | 0.3            |
| Driver On Phone/CB                 | 0                                   | 0.0            | 4                                              | 0.7            |
| Improper/No Signal                 | 0                                   | 0.0            | 1                                              | 0.2            |
| Overcorrecting                     | 0                                   | 0.0            | 4                                              | 0.7            |
| Other Human Factors                | 15                                  | 2.8            | 12                                             | 2.0            |
| <b>Vehicular Factors</b>           |                                     |                |                                                |                |
| Defective Brakes                   | 14                                  | 2.6            | 0                                              | 0.0            |
| Skidding                           | 0                                   | 0.0            | 1                                              | 0.2            |
| Other Vehicular Factors            | 2                                   | 0.4            | 0                                              | 0.0            |
| <b>Miscellaneous Factors</b>       |                                     |                |                                                |                |
| Weather Conditions                 | 1                                   | 0.2            | 3                                              | 0.5            |
| Other                              | 47                                  | 8.7            | 28                                             | 4.7            |
| Total                              | 542                                 | 100.0%         | 601                                            | 100.0%         |
| Vehicles for Which There Was       |                                     |                |                                                |                |
| “No Clear Contributing Factor”     | 317                                 |                | 391                                            |                |
| Total Number of Bicyclists/Drivers | 958                                 |                | 949                                            |                |

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 now identified**

Changes in the crash reporting system in 2003 now make it possible to identify crashes in which a school bus was indirectly involved. In 2006, there were 200 crashes resulting in 2 fatalities and 116 injuries in which a school bus was indirectly involved. Both of the fatalities were passengers in other vehicles.

### **Number of crashes decreases**

School bus crashes have decreased. In 2006, there were 625 traffic crashes directly involving at least one school bus. This is a 13% decrease from the previous year.

### **One death in 2006**

In 2006, there was one fatal school bus crash resulting in one death. The fatality was the driver of a motorcycle that collided with a school bus.

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

As would be expected, nearly two out of three (63%) school bus crashes in 2006 occurred during the time periods of 6:00-9:00 a.m. and 3:00-6:00 p.m. In addition, nearly three out of four (72%) of school bus crash injuries occurred during these two time periods. Not surprisingly, few crashes (7% of the total) occurred during the summer months of June, July, and August.

### **School bus stop arm**

Forty-one percent of school bus crashes occurred where there was no traffic control device. Only 3% of the crashes occurred when the school bus stop arm was deployed. However, nine injuries occurred in crashes where the school bus stop arm was in use.

### **Contributing factors**

Although there were 625 school bus crashes in 2006, a few involved more than one school bus. In all there were 636 school buses in crashes. For 43% of the school bus drivers, police showed there was “no clear contributing factor.” This compares favorably to the 31% of other motor vehicle drivers for whom there was “no clear contributing factor.” For the school bus drivers, the two contributing factors mentioned most often were failure to yield right of way (18%), and driver inattention or distraction (19%). The third most frequently cited contributing factor was improper turn (8%).

TABLE 8.01

**SCHOOL BUS CRASH SUMMARY, 1997 - 2006**

|                                | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|--------------------------------|------|------|------|------|------|------|------|------|------|------|
| Total Crashes                  | 961  | 782  | 782  | 890  | 852  | 719  | NA   | 702  | 717  | 625  |
| Fatal Crashes                  | 4    | 3    | 5    | 2    | 4    | 3    | 3    | 3    | 7    | 1    |
| Persons Killed                 | 7    | 3    | 5    | 2    | 4    | 5    | 3    | 3    | 7    | 1    |
| Injury Crashes                 | 211  | 197  | 172  | 203  | 182  | 144  | NA   | 150  | 140  | 137  |
| Persons Injured                | 408  | 371  | 328  | 388  | 355  | 299  | NA   | 266  | 250  | 241  |
| Property Damage Crashes        | 746  | 582  | 605  | 685  | 666  | 572  | NA   | 549  | 570  | 487  |
| School Buses Directly Involved | 979  | 790  | 789  | 903  | 857  | 731  | NA   | 708  | 724  | 631  |

TABLE 8.02

**2006 SCHOOL BUS CRASHES BY TIME OF DAY**

| <b>Time of Day</b> | <b>Fatal Crashes</b> | <b>Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|--------------------|----------------------|-----------------------|--------------------------------|----------------------|---------------|----------------|
| Midnight - 2:59 AM | 0                    | 2                     | 6                              | 8                    | 0             | 2              |
| 3:00 - 5:59 AM     | 0                    | 1                     | 6                              | 7                    | 0             | 1              |
| 6:00 - 8:59 AM     | 0                    | 50                    | 156                            | 206                  | 0             | 97             |
| 9:00 - 11:59 AM    | 0                    | 17                    | 51                             | 68                   | 0             | 27             |
| Noon - 2:59 PM     | 1                    | 23                    | 99                             | 123                  | 1             | 35             |
| 3:00 - 5:59 PM     | 0                    | 42                    | 144                            | 186                  | 0             | 76             |
| 6:00 - 8:59 PM     | 0                    | 2                     | 19                             | 21                   | 0             | 3              |
| 9:00 - 11:59 PM    | 0                    | 0                     | 2                              | 2                    | 0             | 0              |
| Unknown            | 0                    | 0                     | 4                              | 4                    | 0             | 0              |
| Total              | 1                    | 137                   | 487                            | 625                  | 1             | 241            |

TABLE 8.03

**2006 SCHOOL BUS CRASHES BY MONTH**

| <b>Month</b> | <b>Fatal Crashes</b> | <b>Injury Crashes</b> | <b>Property Damage Crashes</b> | <b>Total Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|--------------|----------------------|-----------------------|--------------------------------|----------------------|---------------|----------------|
| January      | 0                    | 21                    | 53                             | 74                   | 0             | 30             |
| February     | 0                    | 15                    | 68                             | 83                   | 0             | 29             |
| March        | 0                    | 18                    | 60                             | 78                   | 0             | 31             |
| April        | 1                    | 9                     | 33                             | 43                   | 1             | 16             |
| May          | 0                    | 16                    | 45                             | 61                   | 0             | 26             |
| June         | 0                    | 5                     | 15                             | 20                   | 0             | 5              |
| July         | 0                    | 3                     | 12                             | 15                   | 0             | 3              |
| August       | 0                    | 2                     | 9                              | 11                   | 0             | 2              |
| September    | 0                    | 11                    | 52                             | 63                   | 0             | 20             |
| October      | 0                    | 8                     | 44                             | 52                   | 0             | 13             |
| November     | 0                    | 8                     | 51                             | 59                   | 0             | 13             |
| December     | 0                    | 21                    | 45                             | 66                   | 0             | 53             |
| Total        | 1                    | 137                   | 487                            | 625                  | 1             | 241            |

TABLE 8.04

**AGE AND GENDER OF PERSONS INJURED  
IN 2006 SCHOOL BUS CRASHES**

| Age Group  | Total* | In Other |            |         | Male | Female |
|------------|--------|----------|------------|---------|------|--------|
|            |        | In Bus   | Pedestrian | Vehicle |      |        |
| 00 - 04    | 3      | 1        | 0          | 2       | 3    | 0      |
| 05 - 09    | 31     | 26       | 0          | 5       | 17   | 14     |
| 10 - 14    | 23     | 23       | 0          | 0       | 11   | 12     |
| 15 - 19    | 36     | 10       | 2          | 24      | 16   | 20     |
| 20 - 24    | 17     | 2        | 1          | 14      | 8    | 9      |
| 25 - 29    | 15     | 1        | 0          | 14      | 8    | 7      |
| 30 - 34    | 9      | 2        | 0          | 7       | 1    | 8      |
| 35 - 39    | 15     | 3        | 0          | 12      | 4    | 11     |
| 40 - 44    | 13     | 5        | 0          | 8       | 8    | 5      |
| 45 - 49    | 10     | 1        | 1          | 8       | 2    | 8      |
| 50 - 54    | 9      | 3        | 0          | 6       | 4    | 5      |
| 55 - 59    | 13     | 4        | 2          | 7       | 10   | 3      |
| 60 - 64    | 5      | 0        | 1          | 4       | 2    | 3      |
| 65 & Older | 16     | 5        | 2          | 9       | 8    | 8      |
| Unknown    | 21     | 19       | 0          | 2       | 8    | 10     |
| Total      | 236    | 105      | 9          | 122     | 110  | 123    |

\* There were three cases where the gender of the person was not stated.

TABLE 8.05

**PERSONS KILLED OR INJURED  
IN 2006 SCHOOL BUS CRASHES BY POPULATION OF AREA**

| Population of<br>City or Township | Killed | Injured |          |       | Total |
|-----------------------------------|--------|---------|----------|-------|-------|
|                                   |        | Severe  | Moderate | Minor |       |
| 100,000 and Over                  | 1      | 3       | 10       | 34    | 47    |
| 50,000 - 99,999                   | 0      | 2       | 5        | 16    | 23    |
| 25,000 - 49,999                   | 0      | 1       | 12       | 17    | 30    |
| 10,000 - 24,999                   | 0      | 6       | 12       | 40    | 58    |
| 5,000 - 9,999                     | 0      | 0       | 8        | 10    | 18    |
| 2,500 - 4,999                     | 0      | 0       | 0        | 9     | 9     |
| 1,000 - 2,499                     | 0      | 0       | 1        | 1     | 2     |
| Under 1,000                       | 0      | 5       | 13       | 36    | 54    |
| Total                             | 1      | 17      | 61       | 163   | 241   |

TABLE 8.06

**2006 SCHOOL BUS CRASHES BY FIRST HARMFUL EVENT**

| <b>First Harmful Event</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|----------------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------|----------------|
| <b>Collision With:</b>     |                          |                           |                                        |                          |               |                |
| Other Motor Vehicle        | 1                        | 107                       | 376                                    | 484                      | 1             | 196            |
| Parked Motor Vehicle       | 0                        | 10                        | 80                                     | 90                       | 0             | 18             |
| Bicycle                    | 0                        | 5                         | 0                                      | 5                        | 0             | 5              |
| Pedestrian                 | 0                        | 8                         | 0                                      | 8                        | 0             | 8              |
| Fixed Object               | 0                        | 3                         | 17                                     | 20                       | 0             | 8              |
| <b>Non-collision:</b>      |                          |                           |                                        |                          |               |                |
| Overturn                   | 0                        | 1                         | 1                                      | 2                        | 0             | 1              |
| <b>Other/Unknown</b>       | 0                        | 3                         | 13                                     | 16                       | 0             | 5              |
| <b>Total</b>               | <b>1</b>                 | <b>137</b>                | <b>487</b>                             | <b>625</b>               | <b>1</b>      | <b>241</b>     |

TABLE 8.07

**2006 SCHOOL BUS CRASHES BY TRAFFIC CONTROL DEVICE**

| <b>Traffic<br/>Control Device</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|-----------------------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------|----------------|
| Traffic Signal                    | 0                        | 36                        | 104                                    | 140                      | 0             | 73             |
| Overhead Flashers                 | 0                        | 0                         | 1                                      | 1                        | 0             | 0              |
| Stop Sign--All Approaches         | 0                        | 2                         | 26                                     | 28                       | 0             | 2              |
| Other Stop Sign                   | 0                        | 35                        | 92                                     | 127                      | 0             | 66             |
| Yield Sign                        | 0                        | 2                         | 6                                      | 8                        | 0             | 3              |
| School Bus Stop Arm               | 0                        | 7                         | 10                                     | 17                       | 0             | 9              |
| Railroad Crossing Device          | 0                        | 0                         | 6                                      | 6                        | 0             | 0              |
| No Passing Zone                   | 0                        | 2                         | 1                                      | 3                        | 0             | 6              |
| Not Applicable                    | 0                        | 48                        | 208                                    | 256                      | 0             | 76             |
| Other                             | 1                        | 3                         | 12                                     | 16                       | 1             | 4              |
| Unknown                           | 0                        | 2                         | 21                                     | 23                       | 0             | 2              |
| <b>Total</b>                      | <b>1</b>                 | <b>137</b>                | <b>487</b>                             | <b>625</b>               | <b>1</b>      | <b>241</b>     |

TABLE 8.08

**CONTRIBUTING FACTORS IN 2006 SCHOOL BUS CRASHES**

| <b>Contributing Factors</b>                                    | <b>Attributed to<br/>School Bus Drivers</b> |                | <b>Attributed to<br/>Drivers of<br/>Other Vehicles</b> |                |
|----------------------------------------------------------------|---------------------------------------------|----------------|--------------------------------------------------------|----------------|
|                                                                | <b>Number</b>                               | <b>Percent</b> | <b>Number</b>                                          | <b>Percent</b> |
| <b>Human Factors</b>                                           |                                             |                |                                                        |                |
| Driver Inattention/Distracted                                  | 61                                          | 19.1%          | 97                                                     | 21.6%          |
| Failure to Yield Right of Way                                  | 56                                          | 17.5           | 73                                                     | 16.2           |
| Improper Turn                                                  | 27                                          | 8.4            | 11                                                     | 2.4            |
| Improper/Unsafe Lane Use                                       | 26                                          | 8.1            | 21                                                     | 4.7            |
| Unsafe Backing                                                 | 16                                          | 5.0            | 11                                                     | 2.4            |
| Following Too Closely                                          | 12                                          | 3.8            | 41                                                     | 9.1            |
| Driver Inexperience                                            | 10                                          | 3.1            | 18                                                     | 4.0            |
| Vision Obscured                                                | 9                                           | 2.8            | 14                                                     | 3.1            |
| Improper Park/Start/Stop                                       | 7                                           | 2.2            | 16                                                     | 3.6            |
| Disregard Traffic Control Device                               | 7                                           | 2.2            | 24                                                     | 5.3            |
| Improper Passing/Overtaking                                    | 7                                           | 2.2            | 12                                                     | 2.7            |
| Illegal/Unsafe Speed                                           | 5                                           | 1.6            | 34                                                     | 7.6            |
| Improper/No Signal                                             | 3                                           | 0.9            | 1                                                      | 0.2            |
| Driving Left of Center                                         | 2                                           | 0.6            | 3                                                      | 0.7            |
| Overcorrecting                                                 | 1                                           | 0.3            | 5                                                      | 1.1            |
| Chemical Impairment                                            | 1                                           | 0.3            | 4                                                      | 0.9            |
| Impeding Traffic                                               | 0                                           | 0.0            | 1                                                      | 0.2            |
| Non-Motorist Error                                             | 0                                           | 0.0            | 1                                                      | 0.2            |
| Driver On Phone/CB                                             | 0                                           | 0.0            | 1                                                      | 0.2            |
| Other Human Factors                                            | 8                                           | 2.5            | 5                                                      | 1.1            |
| <b>Vehicular Factors</b>                                       |                                             |                |                                                        |                |
| Skidding                                                       | 14                                          | 4.4            | 28                                                     | 6.2            |
| Defective Brakes                                               | 3                                           | 0.9            | 2                                                      | 0.4            |
| Other Vehicular Factors                                        | 4                                           | 1.3            | 2                                                      | 0.4            |
| <b>Miscellaneous Factors</b>                                   |                                             |                |                                                        |                |
| Weather Conditions                                             | 20                                          | 6.3            | 19                                                     | 4.2            |
| Other                                                          | 21                                          | 6.6            | 6                                                      | 1.3            |
| Total                                                          | 320                                         | 100%           | 450                                                    | 100%           |
| Vehicles for Which There Was<br>"No Clear Contributing Factor" | 273                                         |                | 198                                                    |                |
| Total Number of Drivers                                        | 636                                         |                | 637                                                    |                |

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. In 2006, 16% of all motor-vehicle/train crashes in Minnesota resulted in a fatality. Motor vehicle/train crashes may be few in number, but they are more likely to be serious. Thus, traffic safety officials are concerned with these types of crashes.

### **Number of train crashes decreases**

Over the years, the number of motor-vehicle/train crashes in Minnesota has been declining. The calendar year 2006 was no exception. Fifty-one motor vehicle/train crashes were reported in 2006, one less than the previous year.

### **Number of fatalities increases**

However, the number of vehicle/train crash fatalities increased: nine persons were killed in 2006 compared to six in 2005.

### **Railroad crossbuck and stop sign sites**

Railroad crossings without some type of flashing light or a gate are very dangerous. Twenty-four (47%) of the fifty-one motor-vehicle/train crashes, including five of the eight fatal crashes, occurred at a railroad crossing signed only by a railroad crossbuck or a stop sign. Only 3 crashes, including one fatal crash, 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 2006, 64% of the total crashes, 47% of the injuries, and all of the fatalities occurred in rural areas.

### **Contributing factors**

For the motor vehicles involved in train crashes, failure to yield right of way, driver inattention or distraction, and disregard for traffic control device were the three contributing factors cited most often by officers at the scene. These three accounted for 66% of all contributing factors cited.

TABLE 9.01

**MOTOR VEHICLE / TRAIN CRASH SUMMARY, 1997 - 2006**

|                         | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
|-------------------------|------|------|------|------|------|------|------|------|------|------|
| Total Crashes           | 107  | 108  | 84   | 79   | 70   | 77   | NA   | 72   | 52   | 51   |
| Fatal Crashes           | 6    | 9    | 8    | 3    | 5    | 6    | 5    | 12   | 5    | 8    |
| Persons Killed          | 6    | 11   | 10   | 4    | 6    | 9    | 8    | 13   | 6    | 9    |
| Injury Crashes          | 36   | 47   | 32   | 32   | 22   | 27   | NA   | 21   | 22   | 10   |
| Persons Injured         | 46   | 64   | 50   | 43   | 28   | 37   | NA   | 27   | 29   | 15   |
| Property Damage Crashes | 65   | 52   | 44   | 44   | 43   | 44   | NA   | 39   | 25   | 33   |

TABLE 9.02

**2006 MOTOR VEHICLE / TRAIN CRASHES BY MONTH**

| Month     | Fatal Crashes | Injury Crashes | Property Damage Crashes | Total | Killed | Injured |
|-----------|---------------|----------------|-------------------------|-------|--------|---------|
| January   | 1             | 2              | 6                       | 9     | 1      | 2       |
| February  | 0             | 0              | 1                       | 1     | 0      | 0       |
| March     | 1             | 1              | 3                       | 5     | 1      | 2       |
| April     | 0             | 1              | 2                       | 3     | 0      | 1       |
| May       | 1             | 0              | 2                       | 3     | 1      | 0       |
| June      | 0             | 0              | 2                       | 2     | 0      | 0       |
| July      | 1             | 1              | 1                       | 3     | 1      | 2       |
| August    | 0             | 2              | 4                       | 6     | 0      | 2       |
| September | 0             | 1              | 4                       | 5     | 0      | 1       |
| October   | 0             | 0              | 2                       | 2     | 0      | 0       |
| November  | 0             | 1              | 2                       | 3     | 0      | 2       |
| December  | 4             | 1              | 4                       | 9     | 5      | 3       |
| Total     | 8             | 10             | 33                      | 51    | 9      | 15      |

TABLE 9.03

**2006 MOTOR VEHICLE / TRAIN CRASHES BY TIME AND DAY**

| Time of Day        | Total | Sunday | Monday | Tuesday | Wednesday | Thursday | Friday | Saturday |
|--------------------|-------|--------|--------|---------|-----------|----------|--------|----------|
| Midnight - 2:59 AM | 4     | 0      | 1      | 1       | 0         | 0        | 1      | 1        |
| 3:00 - 5:59 AM     | 1     | 1      | 0      | 0       | 0         | 0        | 0      | 0        |
| 6:00 - 8:59 AM     | 8     | 0      | 1      | 2       | 0         | 3        | 1      | 1        |
| 9:00 - 11:59 AM    | 5     | 0      | 0      | 2       | 0         | 2        | 1      | 0        |
| Noon - 2:59 PM     | 6     | 0      | 2      | 2       | 0         | 1        | 1      | 0        |
| 3:00 - 5:59 PM     | 13    | 2      | 2      | 3       | 2         | 1        | 2      | 1        |
| 6:00 - 8:59 PM     | 6     | 1      | 2      | 1       | 1         | 0        | 0      | 1        |
| 9:00 - 11:59 PM    | 8     | 1      | 1      | 0       | 0         | 1        | 3      | 2        |
| Unknown            | 0     | 0      | 0      | 0       | 0         | 0        | 0      | 0        |
| Total              | 51    | 5      | 9      | 11      | 3         | 8        | 9      | 6        |

TABLE 9.04

**2006 MOTOR VEHICLE / TRAIN CRASHES  
BY TRAFFIC CONTROL DEVICE**

| <b>Traffic<br/>Control Device</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|-----------------------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------|----------------|
| RR Crossing Stop Sign             | 4                        | 1                         | 1                                      | 6                        | 4             | 2              |
| RR Crossbuck                      | 1                        | 0                         | 8                                      | 9                        | 1             | 0              |
| RR Flashing Lights                | 0                        | 1                         | 2                                      | 3                        | 0             | 1              |
| RR Overhead Flashers              |                          |                           |                                        |                          |               |                |
| Plus Gate                         | 0                        | 1                         | 5                                      | 6                        | 0             | 2              |
| RR Crossing Gate                  | 1                        | 2                         | 0                                      | 3                        | 1             | 2              |
| Stop Sign                         | 2                        | 1                         | 6                                      | 9                        | 3             | 1              |
| Other Device                      | 0                        | 1                         | 6                                      | 7                        | 0             | 2              |
| Unknown                           | 0                        | 0                         | 1                                      | 1                        | 0             | 0              |
| Not Applicable                    | 0                        | 3                         | 4                                      | 7                        | 0             | 5              |
| <b>Total</b>                      | <b>8</b>                 | <b>10</b>                 | <b>33</b>                              | <b>51</b>                | <b>9</b>      | <b>15</b>      |

TABLE 9.05

**AGE OF PERSONS KILLED OR INJURED IN 2006  
MOTOR VEHICLE / TRAIN CRASHES**

| <b>Age Group</b> | <b>Killed</b> | <b>Injured</b> |                 |              | <b>Total</b> |
|------------------|---------------|----------------|-----------------|--------------|--------------|
|                  |               | <b>Severe</b>  | <b>Moderate</b> | <b>Minor</b> |              |
| 00 - 04          | 0             | 1              | 0               | 0            | 1            |
| 05 - 09          | 0             | 1              | 0               | 0            | 1            |
| 10 - 14          | 0             | 0              | 0               | 0            | 0            |
| 15 - 19          | 0             | 0              | 1               | 1            | 2            |
| 20 - 24          | 3             | 1              | 1               | 1            | 3            |
| 25 - 29          | 0             | 0              | 0               | 2            | 2            |
| 30 - 34          | 0             | 0              | 0               | 1            | 1            |
| 35 - 39          | 2             | 0              | 1               | 0            | 1            |
| 40 - 44          | 0             | 0              | 0               | 0            | 0            |
| 45 - 49          | 0             | 1              | 0               | 0            | 1            |
| 50 - 54          | 0             | 0              | 0               | 1            | 1            |
| 55 - 59          | 1             | 0              | 0               | 0            | 0            |
| 60 - 64          | 0             | 0              | 0               | 0            | 0            |
| 65 - 69          | 1             | 0              | 0               | 0            | 0            |
| 70 - 74          | 2             | 0              | 1               | 1            | 2            |
| 75 - 79          | 0             | 0              | 0               | 0            | 0            |
| 80 & Older       | 0             | 0              | 0               | 0            | 0            |
| Not Stated       | 0             | 0              | 0               | 0            | 0            |
| <b>Total</b>     | <b>9</b>      | <b>4</b>       | <b>4</b>        | <b>7</b>     | <b>15</b>    |

TABLE 9.06

**2006 MOTOR VEHICLE / TRAIN CRASHES BY POPULATION OF AREA**

| <b>Population of<br/>City or Township</b> | <b>Fatal<br/>Crashes</b> | <b>Injury<br/>Crashes</b> | <b>Property<br/>Damage<br/>Crashes</b> | <b>Total<br/>Crashes</b> | <b>Killed</b> | <b>Injured</b> |
|-------------------------------------------|--------------------------|---------------------------|----------------------------------------|--------------------------|---------------|----------------|
| 100,000 and Over                          | 0                        | 1                         | 5                                      | 6                        | 0             | 2              |
| 50,000 - 99,999                           | 0                        | 1                         | 2                                      | 3                        | 0             | 2              |
| 25,000 - 49,999                           | 0                        | 0                         | 1                                      | 1                        | 0             | 0              |
| 10,000 - 24,999                           | 0                        | 3                         | 3                                      | 6                        | 0             | 3              |
| 5,000 - 9,999                             | 0                        | 1                         | 1                                      | 2                        | 0             | 1              |
| 2,500 - 4,999                             | 2                        | 1                         | 4                                      | 7                        | 3             | 1              |
| 1,000 - 2,499                             | 1                        | 0                         | 2                                      | 3                        | 1             | 1              |
| Under 1,000                               | 5                        | 3                         | 15                                     | 23                       | 5             | 5              |
| Total                                     | 8                        | 10                        | 33                                     | 51                       | 9             | 15             |

TABLE 9.07

**CONTRIBUTING FACTORS  
IN 2006 MOTOR VEHICLE / TRAIN CRASHES**

| <b>Contributing Factor</b>                                     | <b>Number</b> | <b>Percent</b> |
|----------------------------------------------------------------|---------------|----------------|
| <b>Human Factors</b>                                           |               |                |
| Failure to Yield Right of Way                                  | 18            | 26.9%          |
| Driver Inattention/Distracted                                  | 13            | 19.4           |
| Disregard for Traffic Control Device                           | 13            | 19.4           |
| Illegal or Unsafe Speed                                        | 4             | 6.0            |
| Chemical Impairment                                            | 4             | 6.0            |
| Vision Obscured                                                | 3             | 4.5            |
| Improper/Park/Start/Stop                                       | 2             | 3.0            |
| Driver Inexperience                                            | 2             | 3.0            |
| Improper/Unsafe Lane Usage                                     | 1             | 1.5            |
| Improper Passing/Overtaking                                    | 1             | 1.5            |
| Other Human Factor                                             | 1             | 1.5            |
| <b>Vehicular Factors</b>                                       |               |                |
| Skidding                                                       | 2             | 3.0            |
| Other Vehicular Factor                                         | 1             | 1.5            |
| <b>Other</b>                                                   |               |                |
| Weather                                                        | 1             | 1.5            |
| Other Contributing Factor                                      | 1             | 1.5            |
| Total                                                          | 67            | 100.0%         |
| Vehicles for Which There Was<br>"No Clear Contributing Factor" | 21            |                |
| Number of Drivers                                              | 78            |                |

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.

## 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 trafficway 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.