Minnesota Motor Vehicle Crash Facts

2003

MINNESOTA MOTOR VEHICLE CRASH FACTS 2003

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

Produced by:
Office of Traffic Safety
Minnesota Department of Public Safety
444 Cedar Street, Suite 150
St. Paul, MN 55101-5150
(651) 296-9489
(651) 297-4516
[TTY (651) 282-6555]
< http://www.dps.state.mn.us/trafsafe >

For more copies, contact:

Office of Communications
Minnesota Department of Public Safety
444 Cedar Street, Suite 155
St. Paul, MN 55101-5155
Phone (651) 296-6652
[TTY (651) 282-6555]

MINNESOTA DEPARTMENT OF PUBLIC SAFETY

Office of the Commissioner

445 Minnesota St., Suite 1000 • St. Paul , MN 55101-5000
Ph: 651-296-6642 • Fax: 651-297-5728 • TTY: 651-282-6555
www.dps.state.mn.us

Alcohol and Gambling Enforcement

Bureau of Criminal Apprehension

Capitol Security

Division of Homeland Security and Emergency Management

Office of Justice Programs

Driver and Vehicle Services

State Fire Marshal and Office of Pipeline Safety

Minnesota State Patrol

Office of Traffic Safety

October 2004

Minnesota Motor Vehicle *Crash Facts* is a compilation and analysis of crashes that occurred on Minnesota roadways in 2003. *Crash Facts* is an expression of the Department of Public Safety's commitment to programs that promote traffic safety and its support for vigorous enforcement of traffic safety laws.

Motor vehicles have become a necessary part of our lives. We depend on and benefit from our vehicles, but we must acknowledge a motor vehicle can be--and often is--a tool of violence, destruction, and death. The National Safety Council reports that more people between the ages of 1 and 34 die from traffic crashes than from any other cause, including homicide, suicide, natural diseases, and all other categories of unintended injury, such as drowning or fires. Also, traffic crashes may cause lifetime disabilities such as severe, permanent brain injury. Further, traffic crashes are the most frequent cause of paraplegia and quadriplegia among persons of all ages.

The Minnesota Department of Public Safety is charged to promote traffic safety, and we take that charge seriously. We will do everything in our power to increase safety on public roadways and will enforce the laws as aggressively as we can. But the extent of what government can do is very limited compared to what citizens themselves can do to protect themselves from needless death and from painful and crippling injury.

What you can do is actually very simple, easy to remember, and not costly:

- When you are driving, pay attention! Driving should never be treated as a task that is secondary to any other activity.
- Always wear your seat belt! Seat belts reduce your chances of suffering death or severe injury in a serious crash by 40 to 60%.
- Always drive at speeds that are legal and safe for conditions! Illegal or unsafe speed is the most frequently cited contributing factor in fatal crashes.
- Never drive impaired! Impairment of driving abilities by alcohol begins with the first drink and increases rapidly thereafter. Legal and illegal drugs impair abilities as well.

If we all do the most we can, together we will make our state the safest state.

Sincerely,

Michael Campion
Commissioner

MINNESOTA DEPARTMENT OF PUBLIC SAFETY

Office of Traffic Safety

444 Cedar St, Suite 150 • St. Paul, MN 55101-5150
Ph: 651-296-6954 • Fax: 651-297-4844 • TTY: 651-282-6555
www.dps.state.mn.us/ots

Alcohol and Gambling Enforcement

Bureau of Criminal Apprehension

Capitol Security

Division of Homeland Security and Emergency Management

Office of Justice Programs

Driver and Vehicle Services

State Fire Marshal and Office of Pipeline Safety

Minnesota State Patrol

Office of Traffic Safety

October 2004

To: 2003 *Crash Facts* Readers

Historically, the Department of Public Safety's (DPS) annual Crash Facts publication has included a wide range of statistics encompassing fatal, injury and property damage crashes. However, the *2003 Crash Facts* focuses solely on fatal crashes.

This revision in content is the result of DPS implementing new crash reporting systems statewide in 2003. This process has encountered challenges resulting in some data error in injury and property damage crashes. Despite potentially inaccurate or misleading data in injury and property damage crashes, DPS is confident in the rigorous accuracy of the fatal crash statistics in this publication.

DPS regrets this departure from its annual reporting and publication practice. Every effort is being employed to enhance data collection and improve data quality, as well as to ensure that subsequent *Crash Facts* will contain its usual comprehensive content.

TABLE OF CONTENTS

INTRODUCTION

At the end of the 2003 calendar year, 3,788,179 people held Minnesota driver licenses and 4,555,007 motor vehicles were registered in the state. Vehicles traveled approximately fifty-five billion miles on public roadways in the state. There were 655 traffic fatalities in 2003. This report provides a statistical summary of those fatal crashes.

The purpose of *Crash Facts* is to provide summary statistical information about the fatal 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, though, the experience of the last two 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, 2003 Edition*, p. 10-11).

It is possible to estimate economic costs of traffic fatalities, although the results can vary depending on definitions and estimating procedures. Many states use the National Safety Council's economic cost figure of $1,090,000 per traffic fatality (this estimate is based upon 2002 data). Thus, the total economic loss from 2003 traffic fatalities in Minnesota was $713,950,000.

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 physical impairment (usually by alcohol). 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. Last year, there were 42,643 traffic fatalities throughout the country and 655 in Minnesota. The respective rates per hundred million miles of travel were 1.5 and 1.2. 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 accidents."

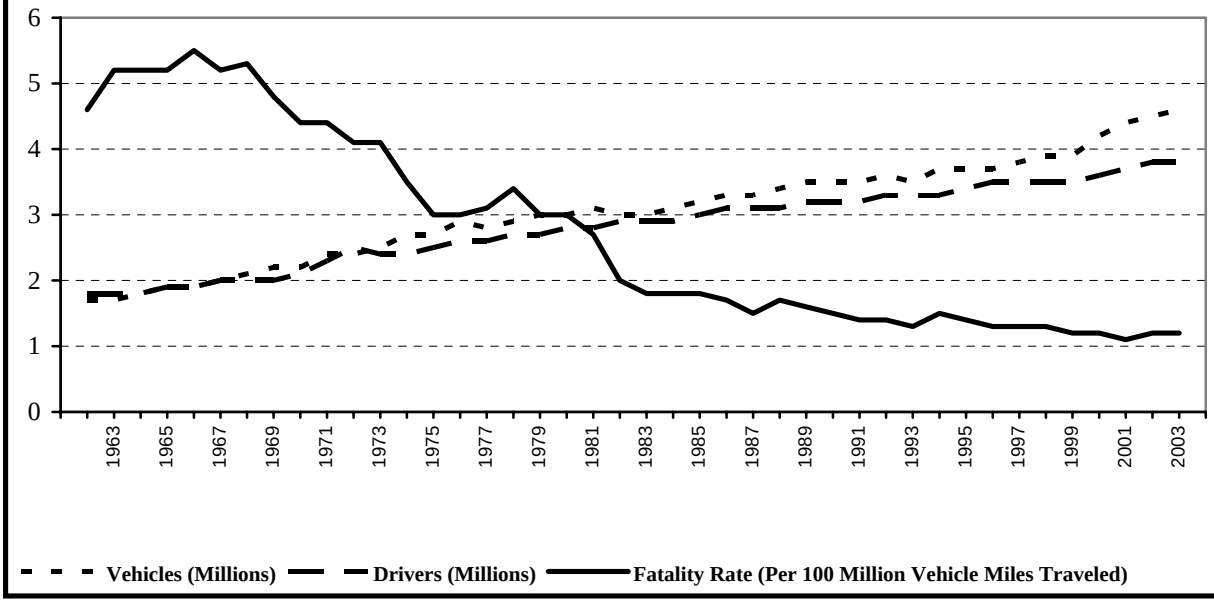
Section 169.09 specifies that a driver involved in an accident that results in injury to or death of any person or total property damage of $1,000 or more must submit a report within ten days of the crash. The law enforcement officer who investigates the crash must also submit a report within ten days.

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 fatal 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 fatal crashes. Section III is about the use of safety equipment by occupants of vehicles involved in fatal crashes required to be equipped with passenger protection systems, including child safety seats and safety belts. The following five sections focus on fatal 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 fatal collisions between motor vehicles and trains.

FIGURE 1

Vehicles, Drivers, and Fatality Rate, 1962-2003



I. ALL FATAL CRASHES

Overview of Fatal Traffic Crashes in Minnesota
In the past decade, approximately 575 fatal crashes each year are 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. By the end of the calendar year 2003:

- The population of Minnesota approached 5.1 million.
- Over 4.5 million motor vehicles were registered.
- There were almost 3.8 million licensed drivers.
- Over 55 *billion* miles were driven.

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.

Fatal Traffic Crashes in 2003
There were 583 fatal crashes on Minnesota roads in 2003 resulting in 655 deaths, a slight decrease from 2002. In actuality, the number of traffic deaths has been very high in the past few years. Since 1997, Minnesota has averaged 626 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.

WHO was involved?
Traffic crashes are the leading cause of death to young people. In the state last year, 256 people under age 30 died in crashes. That represents 39% of all traffic deaths. 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 citizens make up 12% of the state's population, but accounted for 16% of the traffic fatalities.

WHY they happened
About one-third of all fatal 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. "Physical impairment" (typically meaning alcohol impairment) is the third most cited factor for all age groups after age 20. In multiple-vehicle crashes, "failure to yield right of way" is cited most often overall, but for younger drivers, "illegal or unsafe speed" is cited the most. "Driver inattention or distraction" is next on the list for all drivers as a significant contributing factor in multiple-vehicle fatal crashes.

WHAT the conditions were
Victims of fatal crashes are mostly car, pickup, sport utility vehicle (SUV) or van occupants. Of the 655 traffic fatalities, 517 (79%) were from these 4 vehicle types. There were also 52 pedestrians, 62 motorcyclists, and 6 bicyclists who died in traffic crashes. There were no deaths among school bus occupants, and only 5 fatalities among commercial truck occupants.

A collision with another vehicle is the leading fatal crash type. Almost half (44%) of the fatal crashes involve one vehicle colliding with another vehicle. In fatal crashes, collisions with fixed objects and overturns are also common, with each of these crash types contributing 19% to the total.

Most fatal crashes occur in good driving conditions. Almost half (49%) of the fatal crashes occurred during daylight hours. Also, a majority of fatal crashes occurred in good weather conditions. Over half (60%) of the fatal crashes occurred during “clear” weather. Road surface conditions where crashes occurred were usually good. For fatal crashes, 75% were on dry roads, 8% were on wet roads, and 13% were on snowy or icy roads.

WHERE they happened
Fatal crashes tend to occur on roads in rural areas that permit high speeds and do not have interstate-type safety designs. In the year 2003, 401 (69%) of all fatal crashes occurred in rural areas, which are defined as having a population of less than 5,000 people. And, 417 (72%) of all fatal crashes occurred on trunk or county state aid highways, and 314 of those were in rural areas. The seven county metro area, with over half the state's population, accounted for only 28% of the fatal crashes.

Can traffic crashes be prevented?
In the past two decades, approximately 600 people have been killed on our roadways each and every year. We must acknowledge the fact that Minnesota is experiencing an “epidemic” concerning fatal traffic crashes. In a public health sense, epidemics that kill fewer people are usually attacked vigorously until they are no longer a threat to the public. 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.

Thus, 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 - 2003

Year	Total Crashes	Persons Killed	Persons Injured	Licensed Drivers (million)	Motor Vehicles (MV) (million)	State Population (million)	Vehicle Miles Traveled (VMT) (billion)	Crash Rates Per 100,000 MV	Crash Rates Per 100,000 Population	Crash Rates Per 100 Mil VMT	Fatality Rates Per 100,000 MV	Fatality Rates Per 100,000 Population	Fatality Rates Per 100 Mil 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	NA	655	NA	3.79	4.56	5.09	55.4	NA	NA	NA	14.4	12.9	1.18

Note:

(1) Statistics are susceptible to error from different sources. For example, the number of "total crashes" or "persons injured" cannot include the number of crashes or persons injured that by law should have been reported to the state but were not. Fatalities are not likely to be unreported, but even they are subject to error. Estimates of population and of miles traveled are subject to the errors of the estimating procedures, which may vary over time, and which will influence the rates shown, as well.

(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 from the Driver and Vehicle Services Division, Minnesota Department of Public Safety.

TABLE 1.02

FATAL TRAFFIC CRASH TRENDS
1998 - 2003

	1998	1999	2000	2001	2002	2003	Record High	
Fatal Crashes	**575**	**567**	**557**	**508**	**590**	**583**	**878**	**(1973)**
Total Fatalities	**650**	**626**	**625**	**568**	**657**	**655**	**1,060**	**(1968)**
Pedestrian	56	51	41	46	50	52	157	(1971)
Motor Vehicle/Train[2]	11	10	4	6	9	5	62	(1932)
Bicycle	9	8	14	7	7	6	24	(1977)
Motorcycle	40	29	35	42	47	62	121	(1980)
All Terrain Vehicle	7	7	5	4	1	4	9	(1986)
Snowmobile	2	8	5	3	2	2	9	(1984)
Motor Vehicle Occupants	532	516	520	460	544	526	544	(2002)[1]
Minnesota Fatality Rate[3]	1.34	1.24	1.19	1.07	1.21	1.18	23.6	(1934)
U.S. Fatality Rate[3]	1.6	1.5	1.6	1.5	1.5	1.5	18.0	(1925)

[1] The available records on which this "record high" is based only go back to 1984.
[2] Fatalities occurring in motor vehicle/train crashes are included in other categories as well.
[3] Rate is based on 100 million vehicle miles of travel.

TABLE 1.03

2003 FATALITIES BY TRAFFIC ROLE, GENDER, AND AGE

Type of Vehicle	Position in Vehicle	Gender	Age 0-9	10-19	20-29	30-39	40-49	50-59	60-69	70 & Older	Total
Car or Truck	Driver	Male	0	42	62	40	52	33	17	35	281
		Female	0	13	16	21	15	9	6	14	94
	Passenger	Male	6	19	18	10	5	5	0	5	68
		Female	6	18	9	4	10	4	9	15	75
		Unk	0	0	0	1	0	0	0	0	1
	Unknown	Male	0	1	4	0	0	0	0	1	6
		Female	0	1	0	0	0	0	0	0	1
Motorcycle	Operator	Male	0	3	14	7	12	7	3	3	49
		Female	0	0	0	0	3	0	0	0	3
		Unk	0	0	0	0	1	0	0	0	1
	Passenger	Male	0	1	0	0	0	0	0	0	1
		Female	0	0	1	3	3	1	0	0	8
Motor scooter or Moped	Driver	Male	0	0	0	0	1	0	0	0	1
		Female	0	0	0	0	1	0	0	0	1
	Passenger	Male	0	0	0	0	0	0	0	0	0
		Female	0	0	0	0	0	0	0	0	0
All Terrain Vehicle	Driver	Male	0	0	1	0	1	1	0	0	3
		Female	0	0	0	0	0	0	0	0	0
	Passenger	Male	0	0	0	0	0	0	0	0	0
		Female	0	1	0	0	0	0	0	0	1
Snowmobile	Driver	Male	0	2	0	0	0	0	0	0	2
		Female	0	0	0	0	0	0	0	0	0
	Passenger	Male	0	0	0	0	0	0	0	0	0
		Female	0	0	0	0	0	0	0	0	0
Other Motor Vehicle	Driver	Male	0	0	0	0	1	0	0	0	1
		Female	0	0	0	0	0	0	0	0	0
	Passenger	Male	0	0	0	0	0	0	0	0	0
		Female	0	0	0	0	0	0	0	0	0
	Unknown	Male	0	0	0	0	0	0	0	0	0
		Female	0	0	0	0	0	0	0	0	0
Bicyclist		Male	0	4	0	0	0	0	0	1	5
		Female	0	1	0	0	0	0	0	0	1
Pedestrian		Male	1	2	6	7	4	4	2	6	32
		Female	2	2	0	2	3	3	3	5	20
Total Fatalities		Male	7	74	105	64	76	50	22	51	449
		Female	8	36	26	30	35	17	18	34	204
		Unk	0	0	0	1	1	0	0	0	2
		Total	15	110	131	95	112	67	40	85	655

TABLE 1.04

AGE AND GENDER OF PERSONS KILLED IN 2003 CRASHES

	Persons Killed		
Age Group	**Male**	**Female**	**Total**
0 - 3	3	2	5
4 - 10	4	6	10
11 - 14	14	3	17
Total Under 15	21	11	32
15	4	1	5
16	7	8	15
17	18	8	26
18	15	9	24
19	16	7	23
20	13	7	20
Total 15 - 20	73	40	113
Total Under 21	94	51	145
0 - 4	4	3	7
5 - 9	3	5	8
10 - 14	14	3	17
15 - 19	60	33	93
20 - 24	65	15	80
25 - 29	40	11	51
30 - 34	35	12	47
35 - 39	29	18	48
40 - 44	33	21	55
45 - 49	43	14	57
50 - 54	32	12	44
55 - 59	18	5	23
60 - 64	11	12	23
65 - 69	11	6	17
70 - 74	11	10	21
75 - 79	15	5	20
80 - 84	13	9	22
85 & Older	12	10	22
Not Stated	0	0	0
Total *	449	204	655

*Note: the total of 655 includes twopersons for whom gender was not stated.
See Figure 1.01 on page 12 for a graphic depiction of how many persons are killed by age and gender groups.

TABLE 1.05

AGE AND GENDER OF DRIVERS IN 2003 FATAL CRASHES

	Drivers in Fatal Crashes			
Age Group	**Male**	**Female**	**Not Stated**	**Total**
14 & Younger	5	1	0	6
15	1	2	0	3
16	10	9	0	19
17	24	9	0	33
18	22	6	0	28
19	26	6	0	32
20	14	5	0	19
Total Under 21	102	38	0	140
0 - 4	0	0	0	0
5 - 9	0	0	0	0
10 - 14	5	1	0	6
15 - 19	83	32	0	115
20 - 24	85	23	0	108
25 - 29	55	17	0	72
30 - 34	69	25	0	94
35 - 39	50	27	0	77
40 - 44	59	21	1	81
45 - 49	67	18	0	85
50 - 54	44	18	1	63
55 - 59	37	11	0	48
60 - 64	24	3	0	27
65 - 69	21	6	0	27
70 - 74	16	5	0	21
75 - 79	16	5	0	21
80 - 84	12	5	0	17
85 & Older	8	7	0	15
Not Stated	0	0	1	1
Total	651	224	3	878

(Pedestrians and bicyclists are not shown in this table.)

TABLE 1.06

LICENSED VS. FATAL CRASH-INVOLVED DRIVERS BY AGE, 2003

Age Group	Percentage of All Licensed Drivers	Percentage of Drivers in Fatal Crashes
14 & Younger	0.0%	0.7%
15	0.8	0.3
16	1.5	2.1
17	1.6	3.7
18	1.8	3.1
19	1.8	3.6
20	1.8	2.1
Total Under 21	9.3%	15.7%
15 - 19	7.5%	13.1%
20 - 24	9.3	12.3
25 - 29	8.6	8.2
30 - 34	8.8	10.7
35 - 39	9.4	8.8
40 - 44	10.8	9.2
45 - 49	10.2	9.7
50 - 54	8.9	7.2
55 - 59	7.0	5.5
60 - 64	5.3	3.1
65 - 69	4.1	3.1
70 - 74	3.5	2.4
75 - 79	3.0	2.4
80 - 84	2.2	1.9
85 & Older	1.6	1.7
Age Not Stated	0.0	0.1
Total Percent	100.0%	100.0%
Total Number	3,788,179	

See Figure 1.02 on page 12 for a graphic depiction of crash-involved drivers compared to licensed drivers by age group.

FIGURE 1.01
Age and Gender of Persons Killed, 2003

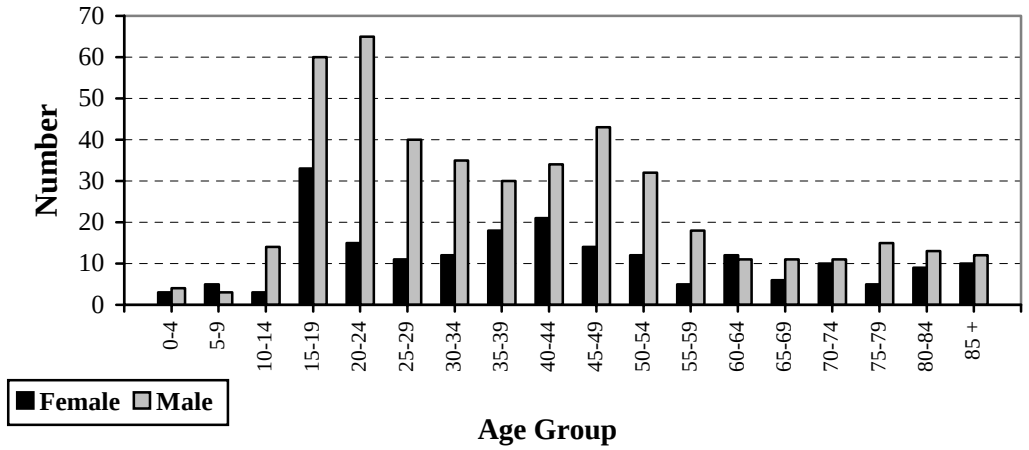


FIGURE 1.02
Licensed vs Fatal Crash-Involved Drivers by Age, 2003

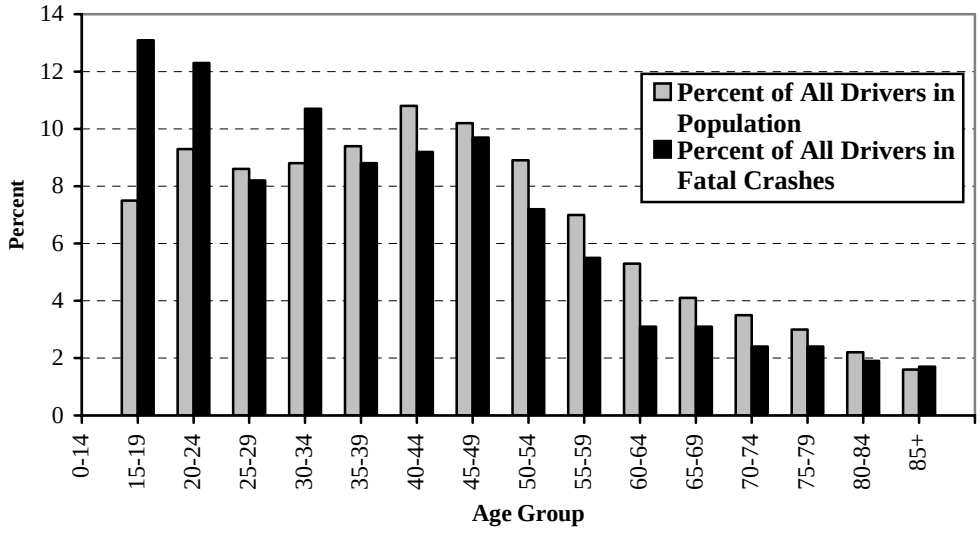


TABLE 1.07

PERCENTAGE OF DRIVERS IN 2003 FATAL CRASHES BY AGE AND FIRST HARMFUL EVENT

	Age Group							All
First Harmful Event	**15-19**	**20-24**	**25-29**	**30-34**	**35-64**	**65-79**	**80 +**	**Ages**
Collision With:								
Other Motor Vehicle	60.9%	51.8%	55.6%	69.2%	62.5%	68.1%	65.6%	61.6%
Parked Motor Vehicle	0.0	0.0	1.4	0.0	0.5	1.4	6.2	0.7
Railroad Train	0.0	0.9	0.0	1.1	1.0	0.0	0.0	0.7
Bicycle	2.6	0.9	1.4	0.0	0.3	0.0	0.0	0.7
Pedestrian	2.6	0.9	6.9	4.3	7.4	7.2	0.0	5.4
Deer	0.9	0.0	1.4	0.0	1.0	0.0	0.0	0.7
Other Animal	0.0	0.0	0.0	0.0	0.5	0.0	3.1	0.3
Fixed Object	11.3	17.6	15.3	9.6	11.6	13.0	18.8	12.6
Other Object	2.6	1.8	0.0	1.1	0.8	0.0	0.0	1.1
Non-Collision:								
Overturn	15.6	20.4	13.9	14.9	11.3	2.9	3.1	12.5
Other Non-Collision	0.9	0.9	1.4	0.0	0.8	2.9	3.1	1.0
Other or Unknown	2.6	4.6	2.8	0.0	2.4	4.4	0.0	2.6
Total Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Drivers	115	108	72	94	388	69	32	878

Percentages are based on the number of crash-involved drivers in each age group (some driver ages are not available). They may not sum to 100% due to rounding. Bicyclists and pedestrians are not included.

TABLE 1.08

DRIVERS IN 2003 FATAL CRASHES BY PHYSICAL CONDITION*

Physical Condition	**Drivers in Fatal Crashes**
Normal	450
Under the Influence	64
Had Been Drinking	70
Had Been Using Drugs	4
Asleep	2
Fatigued	6
Ill	3
Physical Disability	1
Other	11
Not Applicable	1
Unknown	266
Total	878

* 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 FATAL CRASHES: CONTRIBUTING FACTORS, BY PERCENT, WITHIN DRIVER AGE GROUPS, 2003

	Age Group							All
Contributing Factor	**15-19**	**20-24**	**25-29**	**30-34**	**35-64**	**65-79**	**80+**	**Ages**
Human Factors								
Illegal/Unsafe Speed	30.2%	33.8%	48.6%	27.8%	31.1%	12.5%	0.0%	31.3%
Chemical Impairment	5.7	28.4	28.6	22.2	19.4	6.2	0.0	19.3
Overcorrecting	15.1	6.8	2.9	19.4	6.8	12.5	14.3	9.5
Driver Inattention/Distraction	9.4	8.1	2.9	13.9	7.8	12.5	0.0	8.3
Improper/Unsafe Lane Use	7.6	6.8	2.9	2.8	7.8	12.5	14.3	6.8
Driving Left of Center--Not Passing	3.8	1.4	2.9	0.0	1.9	6.2	0.0	2.2
Driver Inexperience	3.8	1.4	0.0	0.0	1.9	0.0	0.0	1.8
Improper Parking/Starting/Stopping	0.0	0.0	0.0	2.8	1.0	0.0	0.0	0.6
Improper Passing/Overtaking	0.0	1.4	2.9	0.0	0.0	0.0	0.0	0.6
Failure to Yield Right of Way	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.3
Disregard for Traffic Control Device	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.3
Other Human Factors	5.7	2.7	2.9	2.8	5.8	18.8	28.6	5.5
Vehicular Factors								
Skidding	13.2	5.4	2.9	2.8	7.8	6.2	0.0	7.1
Defective Equipment	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.6
Other Vehicular Factor	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.3
Miscellaneous Factors								
Weather	3.8	1.4	2.9	5.6	4.8	12.5	14.3	4.3
Other	1.9	0.0	0.0	0.0	1.0	0.0	28.6	1.2
Total Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Contributing Factors Cited	53	74	35	36	103	16	7	326
Drivers for Whom There Was "No Clear Contributing Factor"	0	1	1	1	19	1	0	23
Total Number of Drivers	34	45	22	21	94	16	7	242

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 fatal crashes, see Table 1.10. For contributing factors in all fatal crashes, see Table 1.19.

TABLE 1.10

MULTIPLE-VEHICLE FATAL CRASHES:
CONTRIBUTING FACTORS, BY PERCENT, WITHIN DRIVER AGE GROUPS, 2003

	Age Group							All
Contributing Factor	**15-19**	**20-24**	**25-29**	**30-34**	**35-64**	**65-79**	**80 +**	**Ages**
Human Factors								
Failure to Yield Right of Way	13.8%	11.9%	12.8%	12.2%	12.9%	42.5%	46.4%	17.0%
Illegal or Unsafe Speed	17.0	11.9	30.8	14.3	16.7	5.0	7.1	15.6
Driver Inattention or Distraction	12.8	10.4	10.3	14.3	16.7	10.0	14.3	13.8
Driving Left of Center (Not Passing)	8.5	10.4	5.1	8.2	8.1	7.5	0.0	7.8
Improper or Unsafe Lane Use	5.3	11.9	5.1	8.2	6.4	5.0	10.7	7.0
Disregard of Traffic Control Device	11.7	6.0	2.6	12.2	3.8	7.5	3.6	6.6
Chemical Impairment	1.1	10.4	15.4	8.2	5.9	0.0	0.0	5.6
Vision Obscured	5.3	1.5	0.0	0.0	3.8	0.0	3.6	2.9
Improper Passing or Overtaking	3.2	1.5	2.6	0.0	2.2	0.0	0.0	1.8
Following Too Closely	0.0	6.0	2.6	0.0	1.6	0.0	0.0	1.6
Driver Inexperience	4.3	0.0	0.0	0.0	0.0	0.0	3.6	1.4
Improper Turn	1.1	1.5	0.0	0.0	0.5	5.0	0.0	1.0
Improper Parking, Starting, or Stopping	1.1	0.0	2.6	0.0	0.0	2.5	3.6	0.8
Impeding Traffic	0.0	0.0	0.0	2.0	0.5	2.5	0.0	0.6
Overcorrecting	1.1	1.5	0.0	0.0	0.5	0.0	0.0	0.6
Improper or No Signal	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.2
Driver on Cell Phone or CB Radio	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.2
Other Human Factors	0.0	3.0	0.0	6.1	4.8	0.0	3.6	2.9
Vehicular Factors								
Skidding	6.4	4.5	2.6	2.0	3.2	5.0	0.0	3.7
Defective Equipment	0.0	3.0	0.0	0.0	1.1	0.0	0.0	0.8
Other Vehicular Factor	0.0	0.0	0.0	0.0	0.5	2.5	0.0	0.0
Miscellaneous Factors								
Weather	7.4	1.5	0.0	10.2	4.8	5.0	3.6	4.9
Other	0.0	3.0	7.7	0.0	5.4	0.0	0.0	2.9
Total Percent	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Total Contributing Factors Cited	94	67	39	49	186	40	28	513
Drivers for Whom There Was "No Clear Contributing Factor"	22	24	25	36	161	23	7	298
Total Number of Drivers	80	63	49	72	287	53	25	636

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 fatal crashes, see Table 1.09. For contributing factors in all fatal crashes, see Table 1.19.

TABLE 1.11

PERSONS KILLED BY TYPE OF VEHICLE OCCUPIED, 2003

Vehicle Type	Killed
Automobile	299
Pickup Truck	94
Sport Utility Vehicle	81
Van	43
Motorhome/Camper	0
Taxi Cab	3
Police Vehicle	0
Fire Department Vehicle	0
School Bus	0
Other Bus	0
Ambulance	0
Military Vehicle	0
Snowmobile	2
All Terrain Vehicle	4
Farm Tractor or Equipment	0
Motorcycle*	62
Motor scooter/Motorbike*	1
Motorized Bicycle (Moped)*	1
Hit and Run Vehicle	1
Road Maintenance Vehicle	0
Other Public Owned Vehicle	0
Single Truck (2-axle, 6-tire)	1
Single Truck (3 or more axles)	0
Single Truck with Trailer	0
Truck Tractor with No Trailer	0
Truck Tractor with Semi Trailer	4
Truck Tractor with Double Trailers	0
Other or Unknown Truck Type	0
Other or Unknown Motor Vehicle	1
Bicycle	6
Pedestrian	52
Total	655

* 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.

TABLE 1.12

DRIVER LICENSE* SUMMARY BY AGE, 1998 - 2003

Age	1998	1999	2000	2001	2002	2003
15	24,610	24,944	28,479	27,878	28,880	29,800
16	50,028	52,576	55,792	56,361	55,286	55,614
17	60,389	59,336	60,724	62,068	63,011	61,329
18	64,337	60,177	65,830	64,963	66,876	67,491
19	66,023	67,779	68,697	69,232	68,609	69,792
20	64,484	67,816	69,306	70,351	70,985	69,385
Under 21	329,871	332,629	348,828	350,853	353,647	353,411
15 – 19	265,387	264,812	279,522	280,502	282,662	284,026
20 – 24	302,019	316,452	327,545	339,486	352,022	352,818
25 – 29	318,360	316,642	310,399	309,079	320,420	326,355
30 – 34	347,382	346,159	347,932	344,952	343,933	333,363
35 – 39	405,914	401,755	391,515	377,905	366,661	354,509
40 – 44	389,126	398,519	405,043	408,621	411,413	408,428
45 – 49	340,673	352,585	362,105	368,930	379,702	386,086
50 – 54	273,059	290,428	306,566	316,321	325,664	335,331
55 – 59	210,483	218,555	222,828	238,022	252,631	264,204
60 – 64	165,519	170,263	174,735	180,723	192,074	200,322
65 – 69	144,903	145,284	145,334	146,107	149,272	154,103
70 – 74	134,081	134,225	133,774	133,205	132,368	131,255
75 – 79	108,977	111,888	112,404	111,876	113,370	114,350
80 – 84	73,848	76,147	76,888	78,351	80,361	82,681
85 & Older	46,310	51,903	52,854	51,419	54,940	60,348
Total	3,526,041	3,595,617	3,649,444	3,685,499	3,757,493	3,788,179

* 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. The 1999 totals for ages 15, 16, and 17 have recently been revised by DVS and are included above.

TABLE 1.13

MOTOR VEHICLE REGISTRATIONS, 1998 - 2003

Type of Vehicle*	1998	1999	2000	2001	2002	2003
Passenger Cars	2,798,548	2,774,170	2,957,883	3,072,081	3,156,906	3,196,960
Pickups	723,543	747,650	821,148	866,434	890,648	895,409
Trucks	165,491	172,487	182,469	190,314	194,695	197,952
Recreational Vehicles	39,034	39,569	39,827	39,649	39,584	39,828
Motorcycles	118,275	122,676	132,352	142,822	149,360	161,793
Motorized Bicycles	5,643	5,656	5,819	6,277	6,500	7,493
School Buses	5,887	6,012	6,017	5,926	5,938	5,979
Buses	4,648	4,860	5,018	5,037	5,001	5,058
Van Pool	287	315	260	267	246	219
Tax Exempt Vehicles	42,978	45,476	45,233	48,008	41,271	44,316
Motor Vehicle Subtotal	3,904,334	3,918,871	4,196,026	4,376,815	4,490,149	4,555,007
Trailers	1,028,612	1,000,730	1,122,330	1,052,751	875,677	1,357,019
Classic Motor Vehicles	111,492	116,863	121,934	127,239	132,964	139,784
Classic Motorcycles	2,966	3,314	3,666	4,077	4,599	5,110
Total Registrations	5,047,404	5,039,778	5,443,956	5,560,882	5,503,389	6,056,920

* 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 1.14) 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.

TABLE 1.14

TYPES OF MOTOR VEHICLES IN 2003 FATAL CRASHES

Motor Vehicle Type*	Vehicles in Fatal Crashes
Automobile	389
Pickup Truck	150
Van	71
Sport Utility Vehicle	119
Motorhome/Camper	1
Taxicab	4
Police Vehicle	2
Fire Department Vehicle	2
School Bus	3
Other Bus	2
Ambulance	0
Military Vehicle	0
Snowmobile**	2
All Terrain Vehicle**	4
Farm Tractor or Equipment	2
Motorcycle*	61
Motor scooter/Motorbike*	1
Motorized Bicycle (Moped)*	1
Hit and Run Vehicle	5
Road Maintenance Vehicle	1
Other Public Owned Vehicle	1
Single Truck (2-axle, 6-tire)	13
Single Truck (3 or more axles)	6
Single Truck with Trailer	6
Truck Tractor with No Trailer	4
Truck Tractor with Semi Trailer	40
Truck Tractor with Double Trailers	1
Other or Unknown Truck Type	1
Other or Unknown Motor Vehicle	8
Total***	900

* 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.

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

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

TABLE 1.15

2003 FATAL CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Killed
Collision With:		
Another Motor Vehicle	258	312
Parked Motor Vehicle	4	5
Railroad Train	5	8
Bicycle	6	6
Pedestrian	47	48
Deer	5	5
Other Animal	3	3
Fixed Object	109	113
Non-Collision:		
Overturn	109	118
Fire/Explosion	1	1
Submersion	5	5
Other Non-Collision	3	3
Other or Unknown	28	28
Total	583	655

TABLE 1.16

2003 "HIT-AND-RUN" FATAL CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Killed
Collision With:		
Other Motor Vehicle	3	3
Parked Motor Vehicle	0	0
Railroad Train	0	0
Bicycle	0	0
Pedestrian	7	7
Deer	0	0
Other Animal	0	0
Fixed Object	1	1
Non-Collision:		
Overturn	1	1
Fire/Explosion	0	0
Submersion	0	0
Other Non-Collision	0	0
Other or Unknown	1	1
Total	13	13

TABLE 1.17

2003 FATAL CRASHES BY TRAFFIC CONTROL DEVICE

Traffic Control Device	Fatal Crashes	Killed
Not Applicable	414	461
Traffic Signal	39	42
Overhead Flashers	0	0
Stop Sign-All Approaches	5	5
Other Stop Sign	77	88
Yield Sign	10	13
Flagman, Officer, or School Patrol	0	0
School Bus Stop Arm	2	2
School Zone Sign	0	0
No Passing Zone	14	17
RR Crossing Gate	0	0
RR Flashing Lights	1	1
RR Crossing Stop Sign	1	1
RR Other	3	6
Other	6	7
Unknown	11	12
Total	583	655

TABLE 1.18

2003 FATAL CRASHES BY WEATHER CONDITION

Weather Condition	Fatal Crashes	Killed
Clear	348	395
Cloudy	153	171
Rain	16	19
Snow	28	30
Sleet/Hail/Freezing Rain	12	12
Fog/Smog/Smoke	6	6
Blowing Sand/Dust	6	7
Severe Crosswinds	0	0
Other	1	1
Not Stated/Unknown	13	14
Total	583	655

TABLE 1.19

CONTRIBUTING FACTORS IN 2003 FATAL CRASHES

Contributing Factors	Percent of Factors Cited in Fatal Crashes	Number of Crashes in which the Factor was Cited	Number of People Killed
Human Factors			
Illegal/Unsafe Speed	20.8%	179	195
Driver Inattention/Distraction	11.4	99	113
Chemical Impairment	10.7	94	102
Failure to Yield Right of Way	10.2	87	101
Improper/Unsafe Lane Use	6.6	57	68
Driving Left of Center (Not Passing)	5.5	48	64
Disregard Traf Contr Device	4.3	37	45
Overcorrecting	3.9	34	39
Non-Motorist Error	1.7	14	15
Vision Obscured	1.7	14	16
Driver Inexperience	1.5	13	14
Improper Passing/Overtaking	1.2	11	14
Following Too Closely	0.9	8	9
Improper Park/Start/Stop	0.7	6	9
Improper Turn	0.6	5	5
Impeding Traffic	0.3	3	3
Improper or No Signal	0.1	1	1
Driver on Phone or CB Radio	0.1	1	1
Other Human Factor	4.2	37	37
Vehicular Factors			
Skidding	4.8	42	46
Defective Equipment	0.8	7	8
Other Vehicular Factor	0.3	3	4
Miscellaneous Factors			
Weather	4.4	34	37
Other	3.1	25	27

Total Percent	100.0%
Total Contributing Factors	878
Vehicles Where There Was "No Clear Contributing Factor"	341
Total Number of Vehicles	959

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 in fatal crashes by age of drivers, see tables 1.09 and 1.10.

TABLE 1.20

2003 FATAL CRASHES BY LIGHT CONDITION

Light Condition	Fatal Crashes	Killed
Daylight	286	320
Dawn (Morning)	11	11
Dusk (Evening)	15	17
Dark/Street Lights On	77	86
Dark/No Street Lights	186	211
Other/Unknown	8	10
Total	583	655

TABLE 1.21

2003 FATAL CRASHES BY ROAD SURFACE CONDITION

Road Surface Condition	Fatal Crashes	Killed
Dry	438	500
Wet	51	57
Snow/Slush	26	27
Ice or Packed Snow	50	51
Other	14	16
Not Stated/Unknown	4	4
Total	583	655

TABLE 1.22

2003 FATAL CRASHES BY ROAD DESIGN

Road Design	Fatal Crashes	Killed
Freeway (Including Ramps)	68	74
Other Divided Highway	85	97
One-Way Street	3	3
4-6 Lanes Undivided	26	27
3 Lanes	6	6
2-Lane--2-Way	372	423
Alley/Driveway	3	3
Other	20	22
Not Stated/Unknown	0	0
Total	583	655

TABLE 1.23

2003 FATAL CRASHES BY DIAGRAM

Diagram	Fatal Crashes	Killed
Rear End	28	30
Sideswipe Passing	12	13
Left Turn -- Oncoming Traffic	15	15
Ran Off Road - Left	99	106
Right Angle	113	135
Right Turn -- Cross Street Traffic	1	1
Ran Off Road - Right	101	106
Head On	99	128
Sideswipe Opposing	4	4
Not Applicable	31	33
Other / Unknown / Incomplete	80	84
Total	583	655

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 1.24

2003 FATAL CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Killed
100,000 & Over	34	37
50,000 - 99,999	31	31
25,000 - 49,999	37	44
10,000 - 24,999	53	63
5,000 - 9,999	27	28
2,500 - 4,999	12	13
1,000 - 2,499	17	17
Under 1,000	372	422
Total	583	655

TABLE 1.25

2003 FATAL CRASHES BY TYPE OF ROADWAY

Type of Roadway	Fatal Crashes	Killed
Urban		
Interstate	28	30
US Trunk Highway	26	32
MN Trunk Highway	30	36
County State Aid Highway	47	53
County Road	6	6
Township Road	0	0
Local Street	43	44
Other Road	2	2
Total	182	203
Rural		
Interstate	28	31
US Trunk Highway	61	72
MN Trunk Highway	108	123
County State Aid Highway	145	164
County Road	21	22
Township Road	30	32
Local Street	6	6
Other Road	2	2
Total	401	452
All Roadways		
Interstate	56	61
US Trunk Highway	87	104
MN Trunk Highway	138	159
County State Aid Highway	192	217
County Road	27	28
Township Road	30	32
Local Street	49	50
Other Road	4	4
Total	583	655

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

TABLE 1.26

2003 COUNTY FATAL CRASH REPORT

County	Fatal Crashes	Killed 2003	Average Killed 1998-2002
Aitkin	4	4	5
Anoka	27	32	26
Becker	7	8	8
Beltrami	5	6	6
Benton	3	3	10
Big Stone	0	0	1
Blue Earth	12	14	8
Brown	3	3	3
Carlton	4	6	7
Carver	8	10	12
Cass	11	11	13
Chippewa	0	0	2
Chisago	10	10	9
Clay	8	8	10
Clearwater	2	2	5
Cook	1	1	2
Cottonwood	2	2	3
Crow Wing	11	11	13
Dakota	14	14	27
Dodge	3	3	5
Douglas	6	6	5
Faribault	5	5	2
Fillmore	2	3	4
Freeborn	7	7	6
Goodhue	11	11	10
Grant	1	1	2
Hennepin	58	62	58
Houston	3	3	3
Hubbard	6	6	6
Isanti	9	12	5
Itasca	12	14	8
Jackson	2	3	3
Kanabec	1	1	6
Kandiyohi	10	11	8

TABLE 1.26 CONTINUED

2003 COUNTY FATAL CRASH REPORT

County	Fatal Crashes	Killed 2003	Average Killed 1998-2002
Kittson	2	3	1
Koochiching	3	3	1
Lac Qui Parle	2	2	1
Lake	3	3	2
Lake of the Woods	1	1	2
Le Sueur	2	2	6
Lincoln	3	5	2
Lyon	2	3	4
McLeod	4	4	6
Mahnomen	5	5	3
Marshall	0	0	3
Martin	2	2	4
Meeker	6	7	5
Mille Lacs	5	5	6
Morrison	8	10	10
Mower	4	4	6
Murray	2	3	1
Nicollet	5	11	3
Nobles	1	1	5
Norman	2	3	2
Olmsted	13	15	19
Otter Tail	10	10	12
Pennington	1	1	3
Pine	11	12	8
Pipestone	0	0	3
Polk	4	4	5
Pope	2	3	2
Ramsey	27	31	30
Red Lake	0	0	2
Redwood	1	1	3
Renville	6	7	6
Rice	11	11	13
Rock	0	0	2

TABLE 1.26 CONTINUED

2003 COUNTY FATAL CRASH REPORT

County	Fatal Crashes	Killed 2003	Average Killed 1998-2002
Roseau	2	3	4
St. Louis	29	29	27
Scott	14	18	16
Sherburne	14	15	10
Sibley	4	4	2
Stearns	19	21	18
Steele	7	7	5
Stevens	2	2	1
Swift	1	2	2
Todd	6	6	5
Traverse	0	0	1
Wabasha	6	8	6
Wadena	3	4	3
Waseca	2	2	3
Washington	18	24	13
Watonwan	3	3	1
Wilkin	2	2	2
Winona	12	15	10
Wright	19	20	12
Yellow Medicine	4	5	4
Minnesota Total	583	655	625

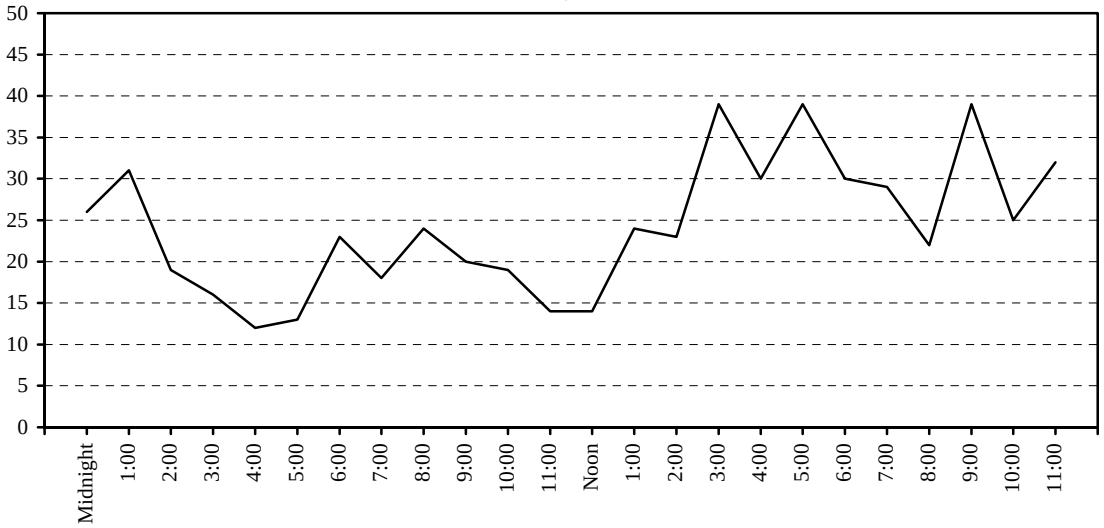
TABLE 1.27

2003 FATAL CRASHES BY TIME AND DAY

Hour Beginning	All Days	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Midnight	26	3	1	3	2	3	6	8
1:00	31	8	3	7	2	1	2	8
2:00	19	8	1	1	2	2	1	4
3:00	16	6	0	0	3	2	2	3
4:00	12	3	2	0	2	0	2	3
5:00	13	4	1	1	1	3	0	3
6:00	23	1	3	5	5	1	6	2
7:00	18	3	3	0	1	1	4	6
8:00	24	4	0	5	2	5	3	5
9:00	20	5	0	2	5	5	1	2
10:00	19	2	1	4	2	2	3	5
11:00	14	1	5	2	0	3	0	3
Noon	14	2	0	2	1	3	3	3
1:00	24	3	3	4	5	4	1	4
2:00	23	8	4	2	3	2	1	3
3:00	39	5	7	7	3	5	6	6
4:00	30	2	5	3	4	4	7	5
5:00	39	8	5	2	5	4	8	7
6:00	30	4	3	5	3	1	6	8
7:00	29	6	5	5	5	4	1	3
8:00	22	2	4	4	1	5	3	3
9:00	39	3	8	6	2	6	8	6
10:00	25	2	1	3	4	3	7	5
11:00	32	3	2	0	4	5	9	9
Unknown	2	1	0	1	0	0	0	0
Total	583	97	67	74	67	74	90	114

FIGURE 1.03

Fatal Crashes by Time, 2003



Time of Day

TABLE 1.28

2003 FATAL CRASHES BY MONTH

Month	Fatal Crashes	Killed
January	59	65
February	26	28
March	40	41
April	54	56
May	59	72
June	45	49
July	52	64
August	56	64
September	52	58
October	55	63
November	44	47
December	41	48
Total	583	655

TABLE 1.29

HOLIDAY CRASH SUMMARY, 1998 - 2003

Holiday Period	Year	Hours*	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Total Crashes	Killed	Injured
Memorial Day	1998	78	6	214	356	576	8	332
(For 2003, the holiday	1999	78	5	215	375	595	8	347
period was 6 PM Fri.,	2000	78	4	215	441	660	4	327
May 23 - midnight	2001	78	7	169	388	564	7	260
Monday, May 26.)	2002	78	6	208	387	601	7	297
	2003	78	6	NA	NA	NA	6	NA
July 4th	1998	78	8	287	432	727	10	473
(For 2003, the holiday	1999	78	5	236	376	617	6	358
period was 6 PM Thu,	2000	102	12	302	524	838	14	503
July 3 - midnight	2001	30	2	122	161	285	3	189
Sunday, July 6.)	2002	102	6	342	606	954	6	541
	2003	78	3	NA	NA	NA	3	NA
Labor Day	1998	78	7	212	344	563	10	360
(For 2003, the holiday	1999	78	7	212	344	563	7	348
period was 6 PM Fri.,	2000	78	6	218	426	650	8	347
Aug 29 – midnight	2001	78	4	220	394	618	4	326
Monday, Sep 1.)	2002	78	7	233	389	629	7	377
	2003	78	7	NA	NA	NA	9	NA
Thanksgiving	1998	102	11	292	637	940	17	447
(For 2003, the holiday	1999	102	6	309	729	1,044	6	564
period was 6 PM Wed.,	2000	102	8	252	658	918	10	393
Nov 26 – midnight	2001	102	9	309	698	1,016	10	473
Sunday, Nov 30.)	2002	102	8	232	593	833	8	357
	2003	102	5	NA	NA	NA	6	NA
Christmas	1998	78	6	227	514	747	8	365
(For 2003, the holiday	1999	78	12	285	854	1,151	14	435
period was 6 PM Wed,	2000	78	2	245	812	1,059	2	351
Dec 24 – midnight	2001	102	9	491	1,552	2,052	10	719
Sunday, Dec 28.)	2002	30	1	37	84	122	1	56
	2003	102	4	NA	NA	NA	4	NA
New Year's	1998/99	78	2	296	937	1,235	3	419
(For 2003, the	1999/00	78	6	240	564	810	6	380
holiday period was	2000/01	78	6	196	684	886	7	300
6 PM Wed, Dec. 31 -	2001/02	102	8	213	760	981	11	342
midnight Sunday,	2002/03	30	5	56	112	173	5	84
Jan 4, 2004.)	2003/04	102	7	NA	NA	NA	10	NA

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

II: ALCOHOL - RELATED FATAL 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

Once a crash is so classified, no matter whether it was a driver, pedestrian, or bicyclist that was drinking, then every fatality 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. For example, in 2003, nine drinking pedestrians died after colliding with a vehicle driven by a non-drinking driver. (Five 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 - 2003

Drinking and driving remains a serious problem in Minnesota and across the nation 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, 39% of all deaths were alcohol-related. In all, 255 people died in crashes that were "known" to be alcohol-related. (The NHTSA estimate is 267).

Impaired driving incidents (DWI's) remain steady

There were 32,193 impaired driving incidents last year in Minnesota. This number represents a slight drop of two percent from 2002. 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 71% of the DWI offenders last year. Arrests of females are increasing slightly, though. In 2003, they accounted for 20% 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 51% 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 41% of all traffic deaths, and for fully 55% 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, 177 (69%) of the 255 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 themselves. The remaining 78 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 fatal crashes occur on Saturdays and Sundays. Combined, these two days accounted for almost half (47%) of all alcohol-related fatal crashes. The late night hours from 9:00 PM to 3:00 AM accounted for 54% of the alcohol-related fatal crashes.

Alcohol crashes usually involve just the single vehicle

Only 27% of the alcohol-related fatal crashes involved more than one vehicle. A majority of the other alcohol fatal crashes involved a single vehicle colliding with a fixed object (26%), or a single vehicle losing control and overturning (30%).

The proportion of all deaths that are known to be alcohol-related may fluctuate each year

Across the last 10 years, 1994 through 2003, we have seen the percentage of all deaths that were known to be alcohol-related hit a low of 30% (1997) yet also hit a worrisome high of 42% (1998). In 2003, this percentage was 39%. The base for this percentage--the total number of deaths--is large enough, at around 600 per year, that one would not expect such volatility in the proportion.

The explanation that comes first to mind is that inconsistencies in record-keeping cause the appearance of erratic changes. However, in Minnesota, more effort is invested in accurate data keeping on this problem than on almost any other aspect of traffic safety. 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 31) that compensates for missing data, and NHTSA's estimates of alcohol-related deaths for Minnesota show the same erratic fluctuation in the recent years.

To date, we have no explanation that feels immediately or overwhelmingly persuasive. Still, here is a conjecture: In recent years, Minnesota experienced sharply contrasting winters. Early 2000 is remembered for its mildness and early 1999 is remembered for its harshness. Again, the early months of 1998 were mild. Perhaps the climate--the mere niceness of the weather--causes drinking drivers to be out in greater numbers. Many other factors are at work here also. Speeding and driver inattention continue to be two of the most often reported contributing factors. Plus, we know aggressive driving is on the increase. In conjunction with all of these factors, drinking and driving makes for a volatile mixture. A mixture that will surely result in fluctuating amounts of tragic alcohol-related death and injury.

TABLE 2.01

ALCOHOL-RELATED FATAL CRASH SUMMARY, 1980 - 2003

	Alcohol Concentration Test Results on Fatally Injured Drivers Only									All Traffic Fatalities				
	Drivers Killed			Results on Drivers Tested							Alcohol-Related Fatalities			
	Total	Tested for Alcohol		Negative for alcohol		.01 to .09 alcohol		.10 or higher alcohol		Total	Known *		Estimated **	
Year		number	% of total	number	% of tested	number	% of tested	number	% of tested		number	% of total	number	% of Total
1980	519	337	65	103	31	37	11	197	58	863				
1981	437	288	66	110	38	28	10	150	52	763				
1982	321	232	72	106	46	14	6	112	48	581			322	56
1983	345	258	75	113	44	28	11	117	45	558			314	56
1984	383	318	83	133	42	36	11	149	47	584	305	52	332	57
1985	372	295	79	156	53	31	10	108	37	610	261	43	287	47
1986	347	281	81	143	51	24	8	114	41	572	264	46	284	50
1987	297	265	89	132	50	18	7	115	43	530	224	42	248	47
1988	361	313	87	163	52	32	10	118	38	615	277	45	294	48
1989	368	313	85	158	51	26	8	129	41	605	275	45	289	48
1990	334	260	78	129	50	23	9	108	41	568	235	41	258	46
1991	327	242	74	135	56	22	9	85	35	531	212	40	233	44
1992	344	237	69	135	57	13	5	89	38	581	229	39	240	41
1993	355	283	80	174	61	19	7	90	32	538	196	36	216	40
1994	377	303	80	183	60	23	8	97	32	644	226	35	250	39
1995	383	343	90	198	58	30	9	115	34	597	246	41	269	45
1996	359	314	87	209	67	22	7	83	26	576	205	36	222	38
1997	384	345	90	226	66	19	6	100	29	600	178	30	197	33
1998	406	369	91	218	59	29	8	122	33	650	273	42	285	44
1999	426	370	87	254	69	16	4	100	27	626	195	31	206	33
2000	403	375	93	226	60	22	6	127	34	625	245	39	258	41
2001	361	322	89	198	62	23	7	101	31	568	211	37	226	40
2002	430	365	85	223	61	24	7	118	32	657	239	36	255	39
2003	435	376	86	219	58	23	6	134	36	655	255	39	267	41

* For explanation of the difference between “known” and “estimated” alcohol-related fatalities, see page 31.

** 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 - 2003

		Gender						Area of State			
		Male		Female		Not Stated		Metro		Non-Metro	
Year	Total	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1994	29,739	23,167	77.9	5,294	17.8	1,278	4.3	15,477	52.0	14,262	48.0
1995	30,255	23,206	76.7	5,416	17.9	1,633	5.4	15,678	51.8	14,577	48.2
1996	30,515	23,527	77.1	5,371	17.6	1,617	5.3	15,774	51.7	14,741	48.3
1997	30,905	23,612	76.4	5,717	18.5	1,576	5.1	15,954	51.6	14,951	48.4
1998	32,001	24,161	75.5	6,048	18.9	1,792	5.6	16,537	51.7	15,464	48.3
1999	34,529	25,897	75.0	6,491	18.8	2,141	6.2	17,126	49.6	17,403	50.4
2000	34,803	25,685	73.8	6,752	19.4	2,366	6.8	16,739	48.1	18,064	51.9
2001	33,305	24,379	73.2	6,495	19.5	2,431	7.3	16,284	48.9	17,021	51.1
2002	32,948	23,775	72.2	6,518	19.8	2,655	8.1	16,147	49.0	16,801	51.0
2003	32,193	22,915	71.2	6,482	20.1	2,796	8.7	15,972	49.6	16,221	50.4

* Note: The above table corrects errors reported in the 1998--2002 versions of this publication. For this year, a programming error was discovered and corrected. If a person does not have a Minnesota driver's license, and incurs an impaired driving incident, a record is created. The new record does not show the person's gender. The programming error was that all such persons were classified as female.

** This error is now corrected for *all* years in the above table. However, it now appears that the proportion of violators with gender "not stated" is increasing over time. This is *not* so. Rather, as violator's age, many do eventually get Minnesota driver's licenses, which do record gender. Thus, as time passes, the gender of more and more past violators becomes known. The table above merely uses 2004 information that was not available at the time of the original violation.

TABLE 2.03

IMPAIRED DRIVING INCIDENTS ("DWIs") FOR SELECTED AGE GROUPS, 1990 - 2003

		Age										
Year	Total	0-14	15	16	17	18	19	20	Total Under 21	21-34	35-49	50 & Older
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

FIGURE 2.01

PERCENT OF IMPAIRED DRIVING INCIDENTS ("DWIs") COMMITTED BY OFFENDERS IN FOUR AGE GROUPS, 1990 - 2003

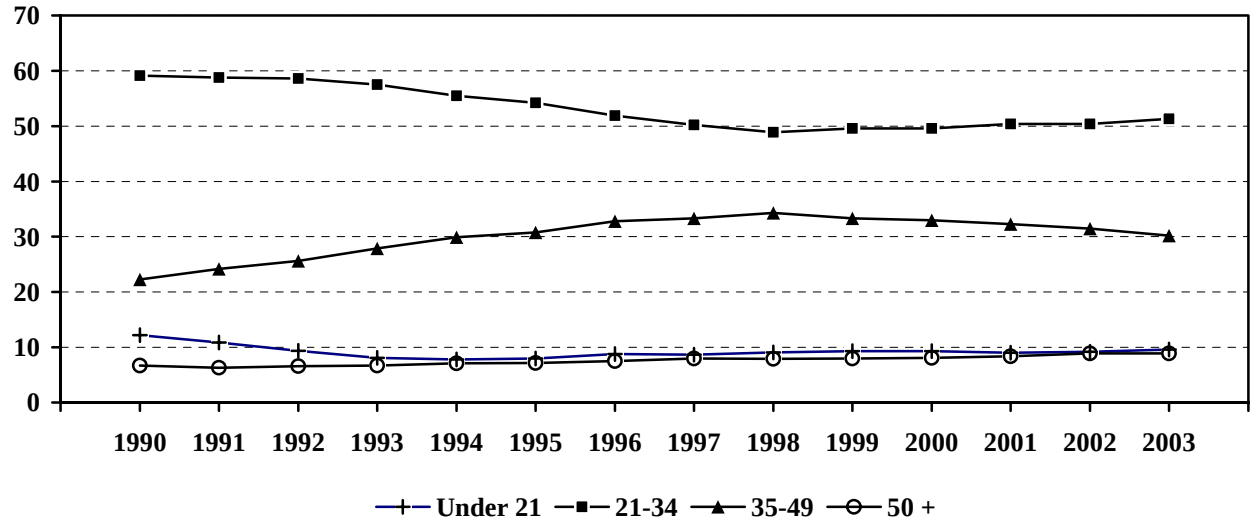


TABLE 2.04

IMPAIRED DRIVING INCIDENTS ("DWIs") BY AGE, 1990 - 2003

	Age Group																
Year	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+	Total
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

TABLE 2.05

AGE OF PERSONS KILLED IN ALL CRASHES AND IN ALCOHOL - RELATED CRASHES, 2003

	Persons Killed	
Age Group	All	Alcohol-Related[1]
0 - 4	7	1
5 - 9	8	1
10 - 14	17	4
15	5	1
16	15	2
17	26	6
18	24	7
19	23	6
20	20	7
Total Under 21	145	35
0 - 14	32	6
15 - 19	93	22
20 - 24	80	53
25 - 29	51	36
30 - 34	47	30
35 - 39	48	27
40 - 44	55	25
45 - 49	57	22
50 - 54	44	15
55 - 59	23	7
60 - 64	23	5
65 - 69	17	3
70 - 74	21	2
75 - 79	20	1
80 - 84	22	1
85 & Older	22	0
Not Stated	0	0
Total	655	255

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

***** As shown, there were 255 alcohol-related traffic deaths in year 2003. Twenty-three of those deaths were to pedestrians, and 13 of those 23 pedestrians were drinking. In 5 of the 13 crashes involving drinking pedestrians, the motor vehicle driver had also been drinking.

TABLE 2.06

2003 ALCOHOL - RELATED FATALITIES' LEVEL OF ALCOHOL CONCENTRATION BY TRAFFIC ROLE

Traffic Role	Killed	Tested	Alcohol Concentration (.00)	(.01 - .09)	(.10 or more)
Car or Truck Driver	157	149	13	16	120
Car or Truck Passenger	44	23	4	6	13
Motorcycle Driver	21	20	1	6	13
Motorcycle Passenger	7	6	2	1	3
Snowmobile Driver	0	0	0	0	0
ATV Driver	1	1	0	0	1
Pedestrian	23	17	4	3	10
Bicyclist	0	0	0	0	0
Other/Unknown	2	1	0	1	0
Total	255	217	24	33	160

TABLE 2.07

PERCENT OF DEATHS, INJURIES, AND PROPERTY DAMAGE CRASHES DETERMINED TO BE ALCOHOL - RELATED, 1994 - 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Deaths* (Known)	35%	41%	36%	30%	42%	31%	39%	37%	36%	39%
(Estimated)	39%	45%	38%	33%	44%	33%	41%	40%	39%	41%
Injuries**	11%	11%	11%	11%	11%	10%	10%	10%	10%	NA
Property Damage Crashes**	4%	4%	4%	4%	4%	4%	4%	4%	4%	NA

* Based on alcohol test results plus officer's perception of possible alcohol involvement as noted on crash report. See pp. 31-32 regarding known and estimated alcohol-related fatalities.

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

TABLE 2.08

FIRST HARMFUL EVENT IN ALCOHOL-RELATED FATAL CRASHES AND ALL FATAL CRASHES, 2003

First Harmful Event	All Fatal Crashes Number	Percent	Alcohol-Related Fatal Crashes * Number	Percent
Collision with:				
Another Motor Vehicle	258	44.2%	61	26.8%
Parked Motor Vehicle	4	0.7	1	0.4
Railroad Train	5	0.9	2	0.9
Bicycle	6	1.0	0	0.0
Pedestrian	47	8.1	23	10.1
Deer	5	0.9	0	0.0
Other Animal	3	0.5	0	0.0
Fixed Object	109	18.7	59	25.9
Non-Collision:				
Overturn	109	18.7	68	29.8
Fire/Explosion or Submersion	6	1.0	1	0.4
Other/Unknown	31	5.3	13	5.7
Total	583	100.0%	228	100.0%

* 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, 1994 - 2003

Year	Killed	Tested	Alcohol Concentration* (.00)	(.01 - .09)	(.10 or more)
1994	377	303	183 (60%)	23 (8%)	97 (32%)
1995	383	343	198 (58%)	30 (9%)	115 (34%)
1996	359	314	209 (67%)	22 (7%)	83 (26%)
1997	384	345	226 (66%)	19 (5%)	100 (29%)
1998	406	369	218 (59%)	29 (8%)	122 (33%)
1999	426	370	254 (69%)	16 (4%)	100 (27%)
2000	403	375	226 (60%)	22 (6%)	127 (34%)
2001	361	322	198 (61%)	23 (7%)	101 (31%)
2002	430	365	223 (61%)	24 (7%)	118 (32%)
2003	435	376	219 (58%)	23 (6%)	134 (36%)

* Percents based on drivers tested.

TABLE 2.10

DRIVERS KILLED WHO TESTED .01 OR HIGHER, 1994 - 2003 ("Any Alcohol")

Year	Total	Male		Female		Occurred Between Midnight - 3 AM		Under Legal Age	
1994	120	100	(83%)	20	(17%)	24	(20%)	15	(13%)
1995	145	121	(83%)	24	(17%)	43	(30%)	12	(8%)
1996	105	81	(77%)	24	(23%)	31	(30%)	16	(15%)
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%)

TABLE 2.11

DRIVERS KILLED WHO TESTED .10 OR HIGHER, 1994 - 2003 ("Over Limit")

Year	Total	Male		Female		Occurred Between Midnight - 3 AM		Under Legal Age	
1994	97	83	(86%)	14	(14%)	20	(21%)	8	(8%)
1995	115	97	(84%)	18	(16%)	38	(33%)	6	(5%)
1996	83	65	(78%)	18	(22%)	25	(30%)	13	(16%)
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%)

Figure 2.02

Killed Drivers Tested for Alcohol: Percent over .01 Alcohol Level and Percent over .10 Alcohol Level, 1971 - 2003

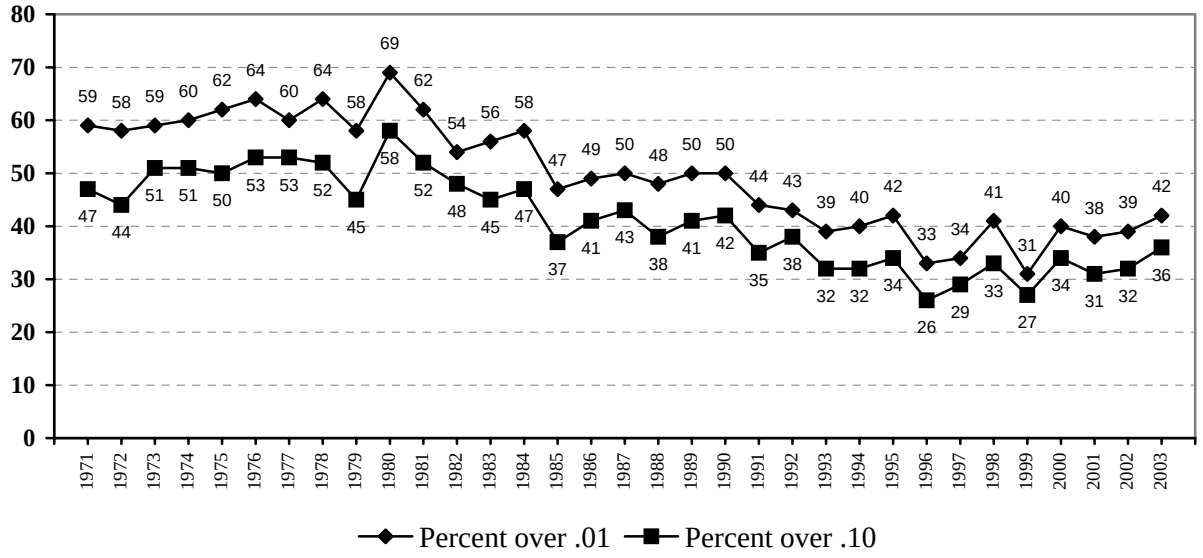


FIGURE 2.03

Percent of Drivers Killed Who Had Been Drinking, by Age, 2003

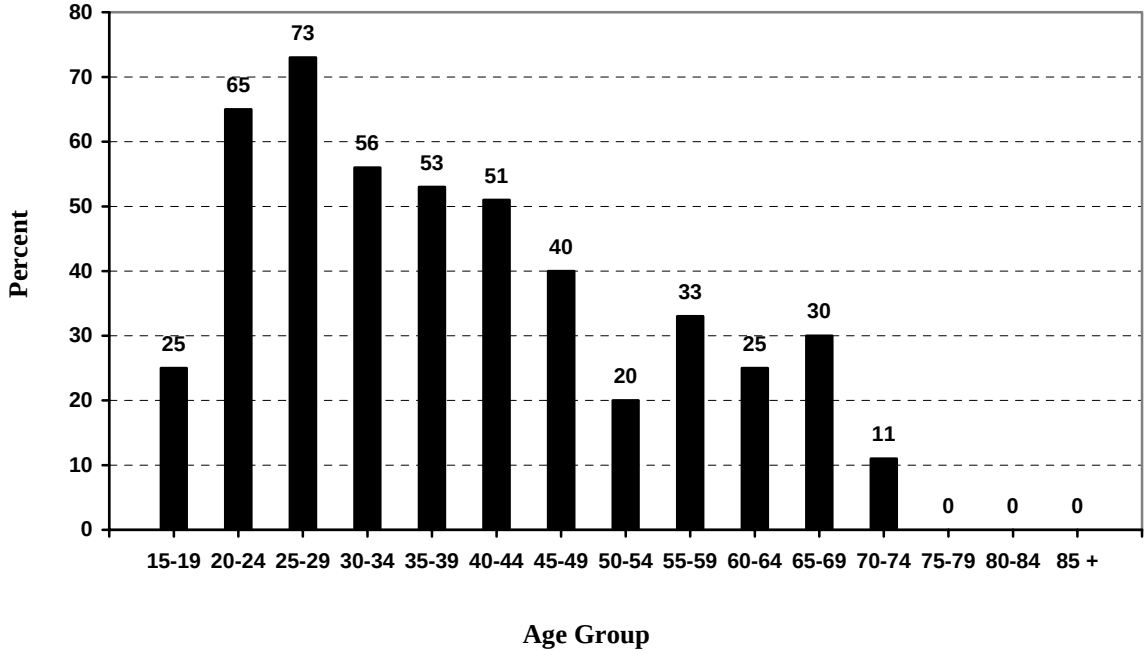


TABLE 2.12

2003 DRIVER FATALITIES' LEVEL OF ALCOHOL CONCENTRATION BY AGE

			Alcohol Concentration						Alcohol Concentration						
			(.00)		(.01 - .09)		(.10 or more)								
Age	Killed	Tested	number	percent	number	percent	number	percent	.00	.01-.04	.05-.09	.10-.14	.15-.19	.20-.24	.25& over
14 & Younger	3	2	2		0		0		2	0	0	0	0	0	0
15	1	1	1		0		0		1	0	0	0	0	0	0
16	9	8	7		0		1		7	0	0	0	0	0	1
17	17	16	11		3		2		11	1	2	2	0	0	0
18	16	13	10		0		3		10	0	0	2	1	0	0
19	14	14	10		1		3		10	1	0	1	0	2	0
20	8	6	5		1		0		5	0	1	0	0	0	0
Under 21	68	60	46		5		9		46	2	3	5	1	2	1
14 & Younger	3	2	2	100.0	0	0.0	0	0.0	2	0	0	0	0	0	0
15 - 19	57	52	39	75.0	4	7.7	9	17.3	39	2	2	5	1	2	1
20 - 24	58	55	19	34.6	5	9.1	31	56.4	19	1	4	4	12	14	1
25 - 29	35	30	8	26.7	4	13.3	18	60.0	8	1	3	4	5	8	1
30 - 34	35	32	14	43.8	2	6.2	16	50.0	14	0	2	4	3	4	5
35 - 39	33	30	14	46.7	3	10.0	13	43.3	14	2	1	3	5	4	1
40 - 44	39	35	17	48.6	3	8.6	15	42.9	17	2	1	1	5	5	4
45 - 49	47	40	24	60.0	1	2.5	15	37.5	24	1	0	3	5	4	3
50 - 54	32	30	24	80.0	1	3.3	5	16.7	24	0	1	1	0	4	0
55 - 59	18	15	10	66.7	0	0.0	5	33.3	10	0	0	0	2	2	1
60 - 64	12	12	9	75.0	0	0.0	3	25.0	9	0	0	1	0	1	1
65 - 69	14	10	7	70.0	0	0.0	3	30.0	7	0	0	3	0	0	0
70 - 74	13	9	8	88.9	0	0.0	1	11.1	8	0	0	0	0	1	0
75 - 79	16	13	13	100.0	0	0.0	0	0.0	13	0	0	0	0	0	0
80 - 84	11	6	6	100.0	0	0.0	0	0.0	6	0	0	0	0	0	0
85 +	12	5	5	100.0	0	0.0	0	0.0	5	0	0	0	0	0	0
Total	435	376	219	58.2	23	6.1	134	35.6	219	9	14	29	38	49	18

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

TABLE 2.13

2003 ALCOHOL - RELATED FATAL CRASHES BY MONTH

Month	Fatal Crashes	Killed
January	26	28
February	8	9
March	17	17
April	21	22
May	23	25
June	13	15
July	22	31
August	26	29
September	18	20
October	26	30
November	11	11
December	17	18
Total	228	255

TABLE 2.14

2003 ALCOHOL - RELATED FATAL CRASHES BY ROADWAY TYPE

Roadway Type	Fatal Crashes	Killed
Urban Interstate	13	14
Rural Interstate	5	6
Urban Trunk Hwy	22	24
Rural Trunk Hwy	49	59
County State Aid Hwy	93	103
County Road	17	18
Township Road	14	15
Local Street	14	15
Other	1	1
Total	228	255

FIGURE 2.04

2003 Alcohol-Related Fatal Crashes by Time of Day

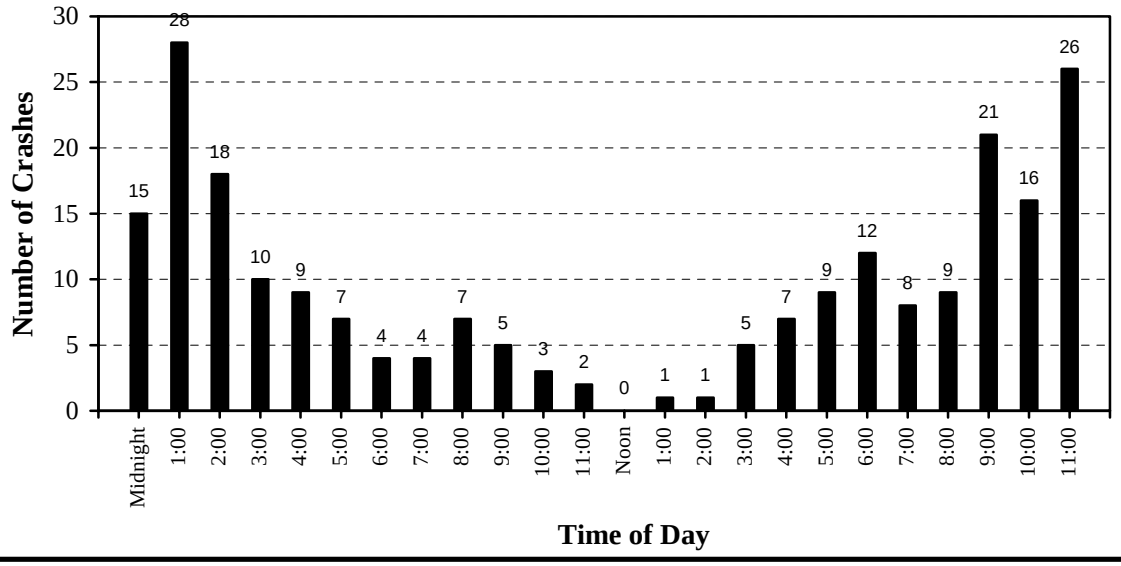


FIGURE 2.05

2003 Alcohol-Related Fatal Crashes by Day of Week

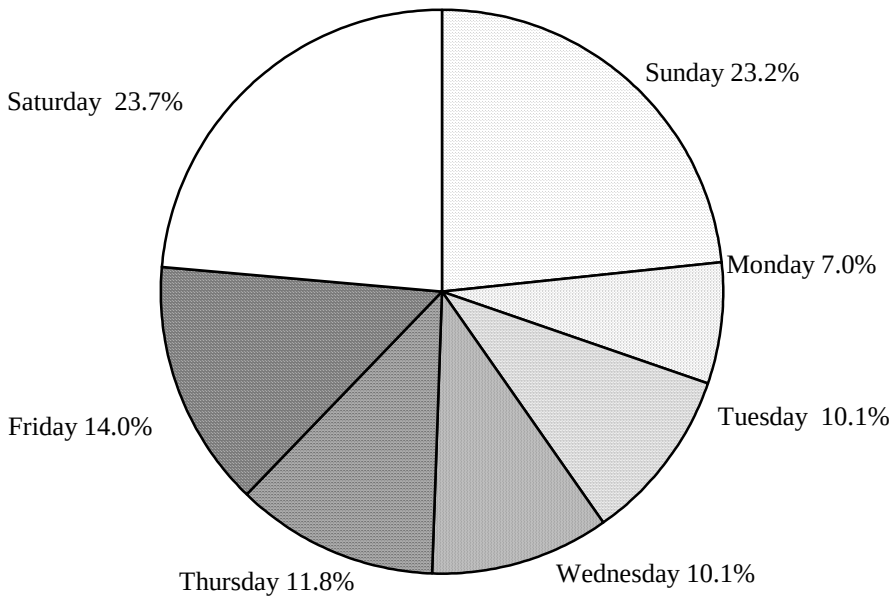


TABLE 2.15

2003 ALCOHOL-RELATED FATAL CRASHES BY TIME OF DAY AND DAY OF WEEK

Hour Beginning	Sun-day	Mon-day	Tues-day	Wednes-day	Thurs-day	Fri-day	Satur-day	Total Crashes	Total Killed
Midnight	2	0	2	1	2	3	5	15	21
1:00 AM	8	3	7	2	0	1	7	28	34
2:00 AM	8	1	1	2	1	1	4	18	20
3:00 AM	5	0	0	1	1	1	2	10	11
4:00 AM	3	1	0	1	0	1	3	9	9
5:00 AM	3	0	0	1	1	0	2	7	7
6:00 AM	0	0	1	2	0	1	0	4	4
7:00 AM	2	0	0	0	0	0	2	4	4
8:00 AM	1	0	0	1	2	0	3	7	8
9:00 AM	3	0	0	0	2	0	0	5	5
10:00 AM	1	0	2	0	0	0	0	3	4
11:00 AM	0	0	1	0	0	0	1	2	2
Noon	0	0	0	0	0	0	0	0	0
1:00 PM	1	0	0	0	0	0	0	1	1
2:00 PM	1	0	0	0	0	0	0	1	3
3:00 PM	2	0	0	0	1	1	1	5	5
4:00 PM	0	0	0	2	1	2	2	7	7
5:00 PM	2	1	0	0	3	0	3	9	10
6:00 PM	1	1	2	1	1	2	4	12	12
7:00 PM	1	2	1	2	0	1	1	8	8
8:00 PM	1	1	2	0	2	1	2	9	9
9:00 PM	3	3	3	1	3	5	3	21	24
10:00 PM	2	1	1	2	3	4	3	16	16
11:00 PM	2	2	0	4	4	8	6	26	30
Unknown	1	0	0	0	0	0	0	1	1
Total	53	16	23	23	27	32	54	228	255

III: SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS IN 2003 FATAL 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 fatal 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 12% of the persons killed in 2003. Assuming, however, that reporting behavior does not change radically from year to year, the data presented here are useful in indicating general trends in usage.

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. (California has a primary seat belt law and has reached a 90% seat belt use rate).

Seat belt use holds steady in 2003
According to the August 2003 observational survey, belt use among front-seat occupants averaged 79% across all of Minnesota—a decrease of just one percentage point from 2002.

Occupant fatalities decrease in 2003
In 2003, 526 motor vehicle occupants died in crashes --a 3% decrease from the year 2002. Young occupants who were killed remain the most likely to not wear a seat belt. In fact, 156 (30%) of the 526 vehicle occupants killed were in the age group of 15-24.

Males most at risk
Motor vehicle occupants who were killed in 2003 were mostly male (2 of every 3). Also, one of every three occupant deaths occurred on a County State Aid Highway (CSAH). Indeed, most occupant deaths occur in the rural parts of Minnesota, and the occupants who die there are most likely to not have been wearing a restraint. In fact, of the occupants who died in the northwest part of Minnesota, 83% of them were not wearing a restraint at the time of death.

Ejection rate among those killed alarming.
Of the 526 vehicle occupants who died in 2003, 165, or 31% (almost one of every three) were either ejected or partially ejected from the motor vehicle. This statistic alone indicates the importance of wearing a seat belt. According to current estimates, about half of this group would have survived if they had been restrained at the time of the crash.

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	
	Whole State	Metro	Non-Metro	Major Roads	Local Roads
June 1986	20%	30%	15%	23%	17%
August 1986	33	43	26	35	31
August 1987	32	40	28	35	29
August 1988	47	51	45	48	46
August 1989	44	52	40	44	45
August 1990	47	54	42	49	46
August 1991	53	62	47	53	52
August 1992	51	62	46	55	48
August 1993	55	59	52	57	53
August 1994*	57	58	54	65	54
August 1995	65	68	56	68	64
August 1996	64	67	58	68	62
August 1997	65	67	59	69	63
August 1998	64	67	56	68	63
August 1999	72	73	68	72	68
August 2000	73	74	69	75	71
August 2001	74	75	72	75	69
August 2002	80	83	72	81	76
August 2003	79	NA	NA	NA	NA

The seat belt law, which requires all front seat passengers and all passengers under the age of eleven to wear safety belts, became effective in Minnesota on August 1, 1986. The June 1986 survey was conducted prior to the implementation of the law; all other studies were conducted after the law went into effect.

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. The new survey design uses different sites and is not strictly comparable to the prior design.

TABLE 3.02

MOTOR VEHICLE OCCUPANTS KILLED BY EJECTION STATUS, 2003

Ejection Status	Number	Percent
Not Ejected	346	65.8
Partly Ejected	27	5.1
Ejected	138	26.2
Not Stated	15	2.9
Total	526	100.0

TABLE 3.03

MOTOR VEHICLE OCCUPANTS KILLED, BY AGE, 2003

Age Group	Killed
0 - 4	6
5 - 9	6
10 - 14	7
15 - 19	87
20 - 24	69
25 - 29	40
30 - 34	38
35 - 39	38
40 - 44	38
45 - 49	44
50 - 54	33
55 - 59	18
60 - 64	16
65 - 69	16
70 - 74	19
75 - 79	15
80 - 84	18
85 & Older	18
Not Stated	0
Total	526

FIGURE 3.01
Safety Equipment Use Among Motor Vehicle Occupants Killed by Age, 2003

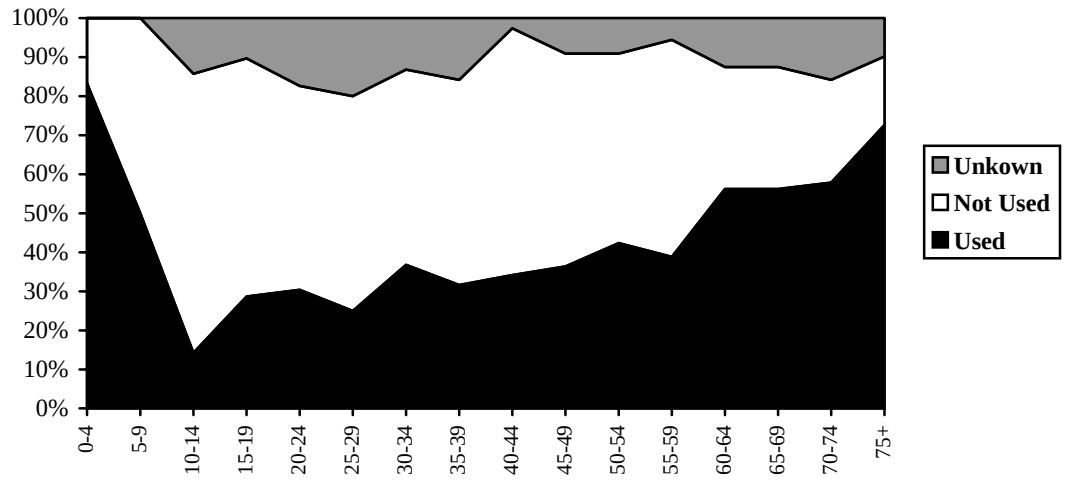


TABLE 3.04

SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS KILLED BY GENDER, 2003

	Killed		
	Female	**Male**	**Total**
Used	88	119	207
Not Used	72	185	257
Unknown	10	52	62
Total	170	356	526

TABLE 3.05

SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS KILLED BY AGE, 2003

Age Group	Restraint Use	Killed #	Killed %
0 – 3 Years	Used	3	75.0
	Not Used	1	25.0
	Unknown	0	0.0
	Subtotal	4	100.0
4 – 10 Years	Used	5	62.5
	Not Used	3	37.5
	Unknown	0	0.0
	Subtotal	8	100.0
Total 0 – 10 Years	Used	8	66.7
	Not Used	4	33.3
	Unknown	0	0.0
	Subtotal	12	100.0
0 – 4 Years	Used	5	83.3
	Not Used	1	16.7
	Unknown	0	0.0
	Subtotal	6	100.0
5 – 9 Years	Used	3	50.0
	Not Used	3	50.0
	Unknown	0	0.0
	Subtotal	6	100.0
10 – 14 Years	Used	1	14.3
	Not Used	5	71.4
	Unknown	1	14.3
	Subtotal	7	100.0
15 – 19 Years	Used	25	28.7
	Not Used	53	60.9
	Unknown	9	10.3
	Subtotal	87	100.0
20 – 24 Years	Used	21	30.4
	Not Used	36	52.2
	Unknown	12	17.4
	Subtotal	69	100.0
25 – 29 Years	Used	10	25.0
	Not Used	22	55.0
	Unknown	8	20.0
	Subtotal	40	100.0
30 – 34 Years	Used	14	36.8
	Not Used	19	50.0
	Unknown	5	13.2
	Subtotal	38	100.0
35 – 39 Years	Used	12	31.6
	Not Used	20	52.6
	Unknown	6	15.8
	Subtotal	38	100.0

TABLE 3.05 CONTINUED

SAFETY EQUIPMENT USE BY VEHICLE OCCUPANTS KILLED BY AGE, 2003

Age Group	Restraint Use	Killed #	Killed %
40 – 44 Years	Used	13	34.2
	Not Used	24	63.2
	Unknown	1	2.6
	Subtotal	38	100.0
45 – 49 Years	Used	16	36.4
	Not Used	24	54.6
	Unknown	4	9.1
	Subtotal	44	100.0
50 – 54 Years	Used	14	42.4
	Not Used	16	48.5
	Unknown	3	9.1
	Subtotal	33	100.0
55 – 59 Years	Used	7	38.9
	Not Used	10	55.6
	Unknown	1	5.6
	Subtotal	18	100.0
60 – 64 Years	Used	9	56.2
	Not Used	5	31.2
	Unknown	2	12.5
	Subtotal	16	100.0
65 – 69 Years	Used	9	56.2
	Not Used	5	31.2
	Unknown	2	12.5
	Subtotal	16	100.0
70 – 74 Years	Used	11	57.9
	Not Used	5	26.3
	Unknown	3	15.8
	Subtotal	19	100.0
75 & Older	Used	37	72.6
	Not Used	9	17.6
	Unknown	5	9.8
	Subtotal	51	100.0
Age Not Stated	Used	0	0.0
	Not Used	0	0.0
	Unknown	0	0.0
	Subtotal	0	0.0
All Ages	Used	207	39.4
	Not Used	257	48.9
	Unknown	62	11.8
	Subtotal	526	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, 1994 - 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Killed										
Used	25.4	27.1	30.3	37.5	30.3	31.6	29.4	31.1	37.9	39.4
Not Used	56.3	48.3	52.6	45.9	48.7	50.0	54.4	54.8	55.0	48.9
Unknown	18.3	24.6	17.1	16.6	21.0	18.4	16.2	14.1	7.2	11.8
Injured										
Severe Injuries										
Used	43.0	41.7	44.8	45.4	43.8	44.9	45.7	47.1	46.0	NA
Not Used	37.6	37.2	35.9	35.2	36.0	34.2	33.5	34.4	34.5	NA
Unknown	19.4	21.1	19.3	19.4	20.1	20.9	20.8	18.5	19.5	NA
Moderate Injuries										
Used	54.5	55.3	57.5	59.0	59.3	61.0	63.1	65.3	65.1	NA
Not Used	29.6	28.4	27.4	25.7	26.0	24.6	22.9	21.1	21.1	NA
Unknown	15.9	16.2	15.1	15.3	14.7	14.4	14.0	13.5	13.8	NA
Minor Injuries										
Used	65.0	66.8	67.9	69.5	69.9	71.1	72.6	73.6	73.7	NA
Not Used	16.0	15.2	14.6	13.1	13.4	12.7	11.9	11.2	10.6	NA
Unknown	19.0	18.0	17.5	17.4	16.7	16.2	15.5	15.2	15.7	NA
Total Injured										
Used	59.9	61.1	62.9	64.2	64.4	65.7	67.6	69.2	69.0	NA
Not Used	22.1	21.2	20.3	18.9	19.4	18.4	17.1	16.0	15.7	NA
Unknown	18.0	17.6	16.8	16.8	16.2	15.9	15.3	14.8	15.3	NA

TABLE 3.07

SAFETY EQUIPMENT USE BY MOTOR VEHICLE OCCUPANTS KILLED BY ROADWAY TYPE, 2003

	Used		Not Used		Unknown		Total	
Roadway Type	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
Interstate	27	52.9	19	37.2	5	9.8	51	100.0%
US Trunk Hwy	35	38.5	51	56.0	5	5.5	91	100.0%
MN Trunk Hwy	62	46.3	59	44.0	13	9.7	134	100.0%
CSAH	66	39.3	82	48.8	20	11.9	168	100.0%
County Road	6	24.0	14	56.0	5	20.0	25	100.0%
Township Road	2	7.7	20	76.9	4	15.4	26	100.0%
Local Street	9	31.0	10	34.5	10	34.5	29	100.0%
Other Road	0	0.0	2	100.0	0	0.0	2	100.0%
Total	207	39.4	257	48.9	62	11.8	526	100.0%

CSAH = County State Aid Highway

TABLE 3.08

SAFETY EQUIPMENT USE BY MOTOR VEHICLE OCCUPANTS KILLED BY REGION OF THE STATE, 2003

EMS Region	Percent Used	Percent Not Used	Percent Unknown	Number of People
Metropolitan	40.7	41.4	17.9	140
Central	44.4	43.6	12.0	117
Northeast	37.5	56.2	6.2	48
Northwest	13.3	83.3	3.3	30
South Central	42.9	48.6	8.6	35
Southeast	37.1	54.3	8.6	70
Southwest	37.0	57.4	5.6	54
West Central	46.9	31.2	21.9	32
Statewide	39.4	48.9	11.8	526

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

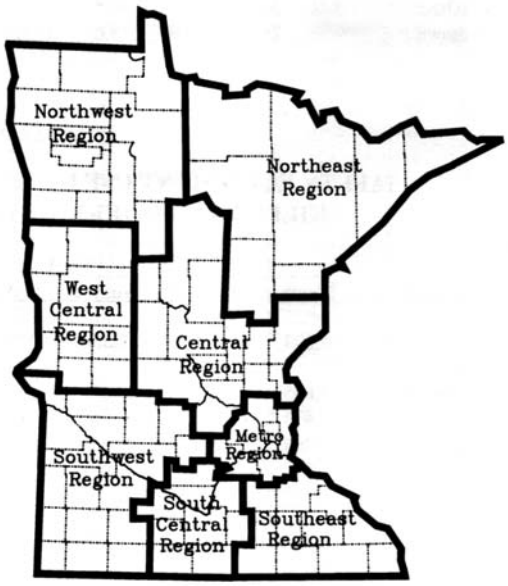


TABLE 3.09

AIRBAG DEPLOYMENTS, 1996 - 2003

		Airbag Deployed		Deployment Not Indicated			
Year	Injury Severity	Belt Used	Belt Not Used	Belt Used	Belt Not Used	Belt Use Unknown	Total
1996	Killed	11	8	129	235	79	462
	Severe Injury	67	21	1,298	1,074	590	3,050
	Moderate Injury	356	62	7,964	3,897	2,188	14,467
	Minor Injury	401	47	17,699	3,851	4,653	26,651
	No Apparent Injury	973	51	103,909	8,574	98,418	211,925
	Total	1,808	189	130,999	17,631	105,928	256,555
1997	Killed	12	15	171	209	81	488
	Severe Injury	73	30	1,273	1,012	576	2,964
	Moderate Injury	443	63	7,785	3,524	2,140	13,955
	Minor Injury	457	44	16,549	3,164	4,250	24,464
	No Apparent Injury	1,142	66	98,069	7,600	89,634	196,511
	Total	2,127	218	123,847	15,509	96,681	238,382
1998	Killed	17	8	144	251	112	532
	Severe Injury	88	26	1,129	974	559	2,776
	Moderate Injury	565	113	7,841	3,572	2,079	14,170
	Minor Injury	640	75	15,815	3,082	3,934	23,546
	No Apparent Injury	1,436	89	93,842	7,044	83,677	186,088
	Total	2,746	311	118,771	14,923	90,361	227,112
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	1,777	87	101,556	6,597	84,477	194,494
	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	2,106	107	111,072	6,275	87,803	207,363
	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	2,141	105	105,404	5,519	82,566	195,735
	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	2,441	130	101,861	5,022	79,687	189,141
	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

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 license and registrations on the rise
Minnesota now has its highest level of licensed motorcycle operators ever (335,862). It also has its highest number of registered motorcycles (161,793) since 1981.

Fatalities increase
In 2003, 62 motorcyclists were killed in traffic crashes compared to just 47 motorcyclist fatalities in 2002: a 32% increase over the previous year

Risk factors: alcohol and no helmet
State law requires that drivers who die in traffic crashes be tested for blood alcohol level. In 2003, 53 motorcycle operators were killed and 46 of them were tested. Nineteen (41%) of the 46 drivers tested positive for alcohol, and 13 of those 19 tested at .10 or greater.

A second risk factor is helmet non-use. Currently, Minnesota does not have a mandatory helmet use law for motorcyclists 18 or older. The need for helmet laws may be debated, but the benefits helmets offer are clear: they protect the head in the event of a collision. In 2003, only 18 (29%) of the 62 motorcycle riders killed were known to be wearing a helmet.

Operator training is essential
In 2003, 61 motorcycle drivers in fatal crashes, 26% of the total, did not have a valid endorsement to drive a motorcycle. This may indicate that further training is needed for a large segment of the motorcycle driver population.

Males are most often victims
In 2003, 50 of the 62 motorcyclists killed were male. This year, males account for 81% of all motorcyclists killed.

TABLE 4.01

MOTORCYCLE CRASH SUMMARY, 1980 - 2003

	Motorcycle Crashes				Killed		Injured				Mcy deaths per 10000 Reg. Mcy	Fatal Crash Rate Per 100 Crashes	
Year	Fatal	Injury	PDO*	Total	Mcy	Other	Mcy	Other	Licensed Operators	Registered Motorcycles		For Mcy	For all crashes
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(i)	(j)	(k)	(l)	(m)	(n)
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
Record High*	112	2,728	537	3,308	121	9	3,359	NA	335,862	166,151	NA	4.7	0.8
(year)	(1980)	(1980)	(1976)	(1980)	(1980)	(1975)	(1980)		(2003)	(1981)		(2003)	(1970)

* Notes: The abbreviation PDO stands for “property damage only” -- a crash in which no one is killed or injured. The abbreviations 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 1.13 on page 18.

TABLE 4.02

2003 FATAL MOTORCYCLE CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Motorcyclists Killed
Collision With:		
Other Motor Vehicle	29	32
Parked Motor Vehicle	0	0
Bicycle	0	0
Pedestrian	0	0
Deer	4	4
Other Animal	1	1
Fixed Object	12	12
Other / Unknown	12	13
Total	58	62

TABLE 4.03

2003 FATAL MOTORCYCLE CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Motorcyclists Killed
100,000 and Over	3	3
50,000 - 99,999	3	3
25,000 - 49,999	4	4
10,000 - 24,999	6	8
5,000 - 9,999	4	4
2,500 - 4,999	2	2
1,000 - 2,499	1	1
Under 1,000	35	37
Total	58	62

TABLE 4.04

2003 FATAL MOTORCYCLE CRASHES BY MONTH

Month	Fatal Crashes	Motorcyclists Killed
January	0	0
February	0	0
March	0	0
April	8	8
May	7	7
June	9	10
July	5	5
August	11	13
September	13	14
October	5	5
November	0	0
December	0	0
Total	58	62

TABLE 4.05

2003 FATAL MOTORCYCLE CRASHES BY TIME OF DAY

Time of Crash	Fatal Crashes
Midnight - 2:59AM	4
3:00 - 5:59AM	3
6:00 - 8:59AM	2
9:00 – 11:59AM	3
12:00 – 2:59PM	9
3:00 – 5:59PM	16
6:00 – 8:59PM	13
9:00 – 11:59PM	8
Total	58

TABLE 4.06

MOTORCYCLISTS KILLED BY AGE AND GENDER, 2003

	Killed		
Age Group	**M**	**F**	**Total**
0 - 4	0	0	0
5 - 9	0	0	0
10 - 14	3	0	3
15 - 19	1	0	1
20 - 24	7	0	7
25 - 29	7	1	8
30 - 34	4	1	5
35 - 39	3	2	5
40 - 44	5	4	10
45 - 49	7	2	9
50 - 54	4	1	5
55 - 59	3	0	3
60 - 64	2	0	2
65 - 69	1	0	1
70 & Older	3	0	3
Total	50	11	62

TABLE 4.07

HELMET USE BY MOTORCYCLISTS KILLED, 1994 - 2003

	Helmet Used		Helmet Not Used		Helmet Use Unknown		Total	
Year	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**	**Number**	**Percent**
1994	3	7.0	30	69.8	10	23.3	43	100.0
1995	1	2.9	30	85.7	4	11.4	35	100.0
1996	9	21.4	29	69.1	4	9.5	42	100.0
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

TABLE 4.08

ENDORSEMENT STATUS OF MOTORCYCLE OPERATORS INVOLVED IN FATAL CRASHES, 1994 - 2003

	Valid Endorsement*		No License or Permit Only		Canceled, Suspended, Revoked		No Endorsement		Total** For Year	
Year	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1994	33	75.0	0	0.0	3	6.8	7	15.9	44	100.0
1995	21	65.6	0	0.0	5	15.6	6	18.8	32	100.0
1996	27	64.3	0	0.0	4	9.5	9	21.4	42	100.0
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

* 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, 1989 - 2003

			Alcohol Concentration*		
Year	Killed	Tested	(.00)	(.01 - .09)	(.10 or more)
1989	31	30	9 (30%)	3 (10%)	18 (60%)
1990	43	35	10 (29%)	5 (14%)	20 (57%)
1991	36	30	13 (43%)	3 (10%)	14 (47%)
1992	23	21	10 (48%)	0 (0%)	11 (52%)
1993	29	26	9 (35%)	3 (12%)	14 (54%)
1994	36	27	17 (63%)	2 (7%)	8 (30%)
1995	25	22	7 (32%)	2 (9%)	13 (59%)
1996	38	36	22 (61%)	4 (11%)	10 (28%)
1997	22	19	7 (37%)	3 (16%)	9 (47%)
1998	36	35	15 (43%)	2 (6%)	18 (51%)
1999	28	22	12 (55%)	2 (9%)	8 (36%)
2000	32	32	22 (69%)	1 (3%)	9 (28%)
2001	36	31	17 (55%)	6 (19%)	8 (26%)
2002	41	40	24 (60%)	3 (8%)	13 (32%)
2003	53	46	27 (59%)	6 (13%)	13 (28%)

*Percentages are based on those motorcycle drivers tested.

TABLE 4.10

2003 MOTORCYCLE DRIVER FATALITIES' LEVEL OF ALCOHOL CONCENTRATION BY AGE

					Alcohol Concentration						
			Alcohol Concentration*			.01-	.05-	.10-	.15-	.20-	.25 &
Age	Killed	Tested	(.01 - .09)	(.10 or more)	.00	.04	.09	.14	.19	.24	Over
14 & Younger	2	1	0	0	1	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0
19	1	1	0	0	1	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0
Under 21	3	2	0	0	2	0	0	0	0	0	0
14 & Younger	2	1	0	0	1	0	0	0	0	0	0
15 – 19	1	1	0	0	1	0	0	0	0	0	0
20 – 24	7	7	1	2	4	0	1	1	1	0	0
25 – 29	7	5	1	2	2	1	0	2	0	0	0
30 – 34	4	4	2	1	1	0	2	0	1	0	0
35 – 39	3	3	0	1	2	0	0	1	0	0	0
40 – 44	7	7	2	2	3	2	0	0	1	1	0
45 – 49	9	7	0	4	3	0	0	1	2	0	1
50 – 54	4	3	0	0	3	0	0	0	0	0	0
55 – 59	3	2	0	1	1	0	0	0	1	0	0
60 & Older	6	6	0	0	6	0	0	0	0	0	0
Total	53	46	6	13	27	3	3	5	6	1	1

* Percentages are based on those motorcycle drivers test

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.

Fatalities decrease
There were 71 fatal truck crashes, killing 78 people, in 2003. This was a 6% decrease from the previous year. Truck crash fatalities accounted for 11% of all traffic fatalities in 2003.

Persons killed are usually in the other vehicles
In two-vehicle collisions, heavier vehicles have the clear safety advantage. Only 5 of the 78 people killed in truck-involved crashes were in the trucks. The other 73 included five pedestrians, seven motorcyclists, and fifty-nine people who were in cars, pickups, or vans.

Physical condition
For other motorists, and even more so for the truck drivers, it is quite rare that officers report the presence of any type of impairing physical condition, such as fatigue or the use of alcohol or drugs. None of the truck drivers, and only three of the other vehicle drivers were reported as having such an impairment.

Driving conditions
Most fatal truck crashes occurred on dry roads in clear weather. However, 27% of the fatal truck 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. Sixty-two percent of the fatal truck crashes occurred in the rural areas of Minnesota.

TABLE 5.01

TRUCK CRASH SUMMARY, 1994 - 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Crashes	**5,132**	**4,752**	**5,358**	**4,991**	**4,761**	**5,156**	**5,306**	**4,976**	**4,409**	**NA**
Fatal Crashes	81	77	60	90	85	84	73	61	76	71
Persons Killed	94	86	79	105	97	94	90	67	87	78
Injury Crashes	1,369	1,277	1,473	1,389	1,408	1,400	1,371	1,287	1,179	NA
Severe	151	153	176	163	180	150	134	127	82	NA
Moderate	481	470	516	505	492	567	490	479	449	NA
Minor	737	654	781	721	736	683	747	681	648	NA
Persons Injured	1,902	1,869	2,074	2,042	2,031	2,026	1,903	1,785	1,674	NA
Severe	203	196	217	215	219	212	173	157	115	NA
Moderate	630	645	708	721	700	782	659	632	597	NA
Minor	1,069	1,028	1,149	1,106	1,112	1,032	1,071	996	962	NA
Property Damage	3,682	3,398	3,825	3,512	3,268	3,672	3,862	3,628	3,154	NA

TABLE 5.02

PERSONS KILLED IN 2003 TRUCK CRASHES BY VEHICLE OCCUPIED

Vehicle Type	Killed
Automobile	45
Pickup Truck	9
Van	5
Motorcycle	7
Two-Axle, Six-Tire, Single Unit Truck or Stepvan	1
Truck Tractor with Semi Trailer	4
Pedestrian	5
Snowmobile/ATV	2
Total	78

TABLE 5.03

AGE OF TRUCK DRIVERS IN 2003 FATAL CRASHES

Driver Age	Truck or Truck Tractor	Truck with Semi-Trailer	Truck with Twin Trailer	Truck with Other Trailer	Total
15 – 19	0	1	0	0	1
20 – 24	0	0	0	0	0
25 – 29	1	2	0	0	3
30 – 34	5	5	0	1	11
35 – 39	2	5	0	0	7
40 – 44	3	7	0	2	12
45 – 49	5	7	0	1	13
50 – 54	1	4	0	0	5
55 – 59	2	4	1	1	8
60 – 64	2	2	0	0	4
65 & Older	3	2	0	0	5
Not Stated	0	0	0	0	0
Total*	24	39	1	5	69

* There were 71 fatal truck crashes in 2003 involving 72 trucks. However, 3 of these trucks were parked vehicles. This table tabulates the ages for the remaining 69 trucks where it was possible to identify a driver.

TABLE 5.04

DRIVERS IN 2003 FATAL TRUCK CRASHES BY PHYSICAL CONDITION*

	Truck Driver		Other Driver	
Physical Condition	Number	Percent	Number	Percent
Normal	66	96.0%	38	53.5%
Under the Influence	0	0.0	3	4.2
Had Been Drinking	0	0.0	0	0.0
Driver >.04 BAC	0	0.0	0	0.0
Had Been Using Drugs	0	0.0	0	0.0
Asleep	0	0.0	1	1.4
Fatigued	0	0.0	0	0.0
Ill	1	1.5	0	0.0
Other	0	0.0	0	0.0
Unknown	2	2.9	29	39.4
Total **	69	100.0%	71	100.0%

*As noted by police officer on accident report.

**There were 72 trucks in fatal crashes in 2003. However, 3 of these trucks were parked vehicles. This table tabulates the ages for the remaining 69 trucks where it was possible to identify a driver. Also, there were 76 non-truck motor vehicles in 2003 fatal truck crashes. However 5 of them were parked, leaving 71 for which an apparent physical condition was recorded for the driver.

TABLE 5.05

2003 FATAL TRUCK CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Killed
Collision With:		
Other Motor Vehicle	59	66
Parked Motor Vehicle	2	2
Railroad Train	0	0
Bicycle	0	0
Pedestrian	4	4
Deer	0	0
Other Animal	0	0
Fixed Object	2	2
Other Object	0	1
Non-Collision:		
Overturn	1	1
Jackknife	0	0
Fire or Explosion	0	0
Other	3	2
Total	71	78

TABLE 5.06

2003 FATAL TRUCK CRASHES BY MONTH

Month	Fatal Crashes	Killed
January	6	7
February	6	7
March	1	1
April	7	8
May	3	3
June	4	4
July	6	6
August	6	7
September	6	6
October	11	13
November	5	5
December	10	11
Total	71	78

TABLE 5.07

2003 FATAL TRUCK CRASHES BY ROAD SURFACE CONDITION

Road Surface Condition	Fatal Crashes	Killed
Dry	49	54
Wet	7	8
Water Standing/Moving	0	0
Snow or Slush	5	5
Ice or Packed Snow	7	7
Muddy	0	0
Debris	0	0
Other	3	4
Unknown	0	0
Total	71	78

TABLE 5.08

2003 FATAL TRUCK CRASHES BY WEATHER CONDITION

Weather Condition	Fatal Crashes	Killed
Clear	43	48
Cloudy	17	18
Rain	1	1
Snow	6	6
Sleet/Hail/Freezing Rain	1	1
Fog/Smog/Smoke	0	0
Blowing Sand/Dust/Snow	3	4
Severe Cross Winds	0	0
Other	0	0
Unknown	0	0
Total	71	78

TABLE 5.09

2003 FATAL TRUCK CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Killed
100,000 & Over	5	5
50,000 - 99,999	4	4
25,000 - 49,999	3	3
10,000 - 24,999	3	3
5,000 - 9,999	6	6
2,500 - 4,999	1	1
1,000 - 2,499	5	5
Under 1,000	44	51
Total	71	78

TABLE 5.10

2003 FATAL TRUCK CRASHES BY TYPE OF ROADWAY

Roadway Type	Fatal Crashes	Killed
Interstate Highway	11	11
US Trunk Highway	24	28
State Trunk Highway	21	22
County State-Aid Highway	12	14
County Road	0	0
Township Road	0	0
Local Street	3	3
Other Road	0	0
Total	71	78

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.

Slight increase in pedestrian deaths
In 2003, fifty-two pedestrians were killed, two more and a 4% increase from the previous year.

Prior actions of vehicles and pedestrians
Regarding the motor vehicles that were involved in fatal pedestrian crashes in 2003, 61% of them were simply going straight ahead on the roadway prior to the crash. As might be expected, one out of three pedestrians killed, were trying to cross a road where there was no crosswalk and no signal.

Pedestrians and alcohol
Of the 52 pedestrians killed, 36 were tested for alcohol. Of those tested, 28% had concentrations over the legal driving limit of .10.

TABLE 6.01

PEDESTRIAN CRASH SUMMARY, 1994 - 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Pedestrian Crashes	1,409	1,458	1,378	1,419	1,400	1,329	1,253	1,175	1,151	NA
Pedestrians Killed	53	49	46	58	56	51	41	46	50	52
Pedestrians Injured	1,400	1,471	1,388	1,434	1,410	1,330	1,269	1,184	1,149	NA

TABLE 6.02

PEDESTRIANS KILLED BY AGE AND GENDER, 2003

Age Group	Killed M	F	Total
0 – 4	1	0	1
5 - 9	0	2	2
10 - 14	2	0	2
15 - 19	0	2	2
20 - 24	3	0	3
25 - 29	3	0	3
30 - 34	4	0	4
35 - 39	3	2	5
40 - 44	1	3	4
45 - 49	3	0	3
50 - 54	3	3	6
55 - 59	1	0	1
60 - 64	2	3	5
65 - 69	0	0	0
70 - 74	0	1	1
75 - 79	1	2	3
80 - 84	3	1	4
85 & Older	2	1	3
Unknown	0	0	0
Total	32	20	52

FIGURE 6.01
Pedestrian Fatalities by Age Group, 1994-2003 Combined

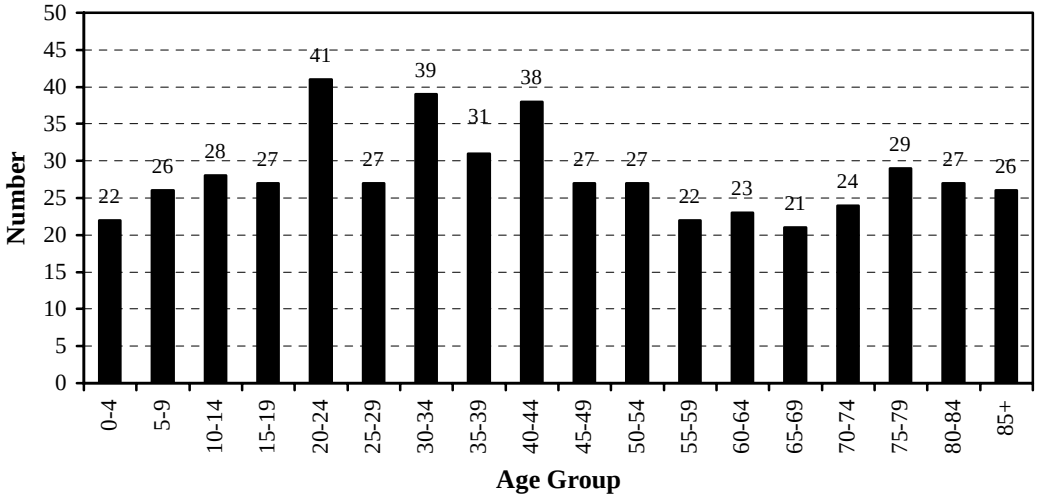


FIGURE 6.02
Pedestrians Killed
by Age and Gender, 2003

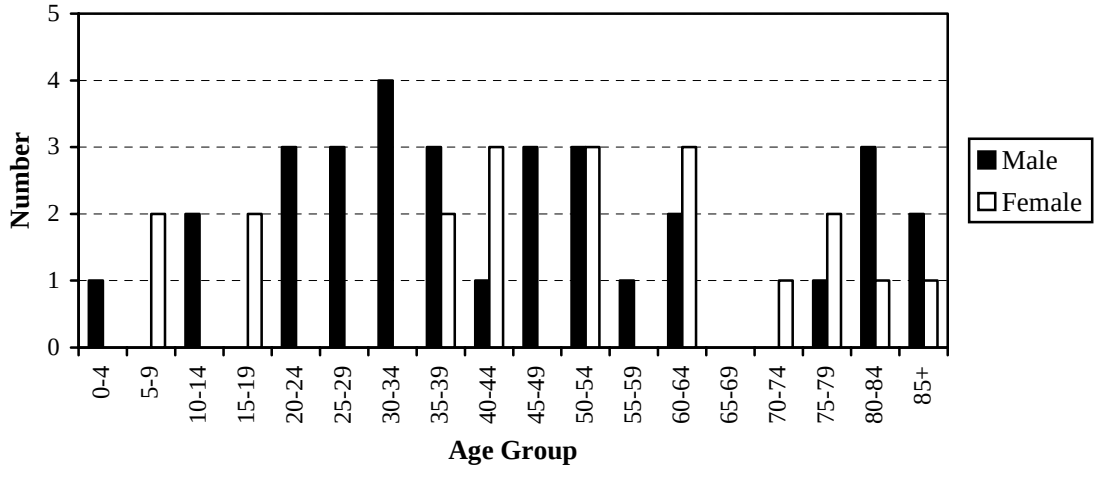


TABLE 6.03

2003 FATAL PEDESTRIAN CRASHES BY MONTH

Month	Fatal Crashes	Pedestrians Killed
January	7	7
February	1	1
March	5	6
April	1	1
May	5	5
June	5	5
July	1	1
August	8	8
September	5	5
October	4	4
November	5	5
December	4	4
Total	51	52

TABLE 6.04

2003 FATAL PEDESTRIAN CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Pedestrians Killed
100,000 and Over	7	7
50,000 - 99,999	4	4
25,000 - 49,999	9	10
10,000 - 24,999	5	5
5,000 - 9,999	4	4
2,500 - 4,999	1	1
1,000 - 2,499	2	2
Under 1,000	19	19
Total	51	52

TABLE 6.05

2003 FATAL PEDESTRIAN CRASHES BY TIME OF DAY

Time of Day	Fatal Crashes
Midnight - 2:59 AM	8
3:00 - 5:59 AM	3
6:00 - 8:59 AM	5
9:00 - 11:59 AM	3
Noon - 2:59 PM	4
3:00 - 5:59 PM	12
6:00 - 8:59 PM	5
9:00 - 11:59 PM	11
Unknown	0
Total	51

TABLE 6.06

PRIOR ACTION OF VEHICLES IN FATAL PEDESTRIAN CRASHES, 2003

Action	Vehicles in Fatal Crashes*
Going Straight	35
Wrong Way Opposing Traffic	0
Turning Right on Red	0
Turning Right	1
Turning Left on Red	0
Turning Left	5
Making U Turn	0
Starting From Parked	1
Starting in Traffic	0
Slowing in Traffic	1
Parking	0
Avoiding Object in Road	3
Changing Lanes	1
Passing	0
Backing	0
All Others	9
Unknown	1
Total	57

* 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 IN 2003

Action	Pedestrians Killed Number	Percent
Crossing Road (No Crosswalk and No Signal)	8	15.4%
Crossing Against Signal	2	3.9
Crossing With Signal	0	0.0
Crossing In Crosswalk (No Signal)	5	9.6
Walking In Road With Traffic	3	5.8
Walking In Road Against Traffic	1	1.9
Standing In Road	3	5.8
Emerging From Front/Behind Parked Vehicle	1	1.9
Child Getting On/Off School Bus	1	1.9
Pushing/Working On Vehicle	0	0.0
Working In Road	2	3.9
Getting On/Off Vehicle	2	3.9
Playing In Road	0	0.0
Not In Road	3	5.8
Other Pedestrian Action	1	1.9
Unknown	20	38.5
Total*	52	100.0%

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

TABLE 6.08

PEDESTRIAN FATALITIES' LEVEL OF ALCOHOL CONCENTRATION, 1994 - 2003

Year	Killed	Tested	Alcohol Concentration* (.00)	(.01 - .09)	(.10 or more)
1994	53	26	18 (69%)	1 (4%)	7 (27%)
1995	49	38	24 (63%)	2 (5%)	12 (32%)
1996	46	34	23 (68%)	0 (0%)	11 (32%)
1997	58	40	29 (73%)	2 (5%)	9 (23%)
1998	56	43	21 (49%)	2 (5%)	20 (47%)
1999	51	37	23 (62%)	3 (8%)	11 (30%)
2000	41	27	16 (59%)	1 (4%)	10 (37%)
2001	46	35	25 (71%)	1 (3%)	9 (26%)
2002	50	31	20 (65%)	0 (0%)	11 (35%)
2003	52	36	23 (64%)	3 (8%)	10 (28%)

* 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 6.09

2003 PEDESTRIAN FATALITIES' LEVEL OF ALCOHOL CONCENTRATION BY AGE

Age Group	Killed	Tested	Alcohol Concentration (.00)	(.01 - .09)	(.10 or more)
14 & Younger	5	2	2	0	0
15 - 19	2	0	0	0	0
20 – 24	3	3	0	1	2
25 - 29	3	2	1	0	1
30 - 34	4	3	0	0	3
35 - 39	5	5	1	2	2
40 - 44	4	3	3	0	0
45 - 49	3	3	2	0	0
50 - 54	6	4	2	0	2
55 - 59	1	1	1	0	0
60 - 64	5	5	5	0	0
65 - 69	0	0	0	0	0
70 - 74	1	1	1	0	0
75 - 79	3	1	1	0	0
80 - 84	4	2	2	0	0
85 & Older	3	2	2	0	0
Total	52	37	23	3	10

TABLE 6.10

2003 PEDESTRIAN FATALITIES' LEVEL OF ALCOHOL CONCENTRATION BY TIME OF DAY

Time of Day	Killed	Tested	Alcohol Concentration (.00)	(.01 - .09)	(.10 or more)
Midnight - 2:59 AM	8	4	1	0	3
3:00 - 5:59 AM	3	3	0	1	2
6:00 - 8:59 AM	5	3	3	0	0
9:00 - 11:59 AM	3	3	3	0	0
Noon - 2:59 PM	4	1	1	0	0
3:00 - 5:59 PM	12	11	10	1	0
6:00 - 8:59 PM	6	2	0	0	2
9:00 - 11:59 PM	11	10	5	1	3
Unknown	0	0	0	0	0
Total	52	37	23	3	10

VII: BICYCLE CRASHES

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

Young people and males at risk
Five of the six bicyclist fatalities in 2003 were less than 25 years of age and all but one of the bicyclists killed were male.

Warm weather
As expected, bicycle crashes are mostly a warm weather occurrence. In 2003, all 6 fatalities occurred in the five-month period of May through September.

TABLE 7.01

BICYCLE CRASH SUMMARY, 1994- 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Bicycle Crashes	1,436	1,333	1,337	1,384	1,363	1,106	1,137	1,016	909	NA
Bicyclists Killed	16	5	6	7	9	8	14	7	7	6
Bicyclists Injured	1,359	1,283	1,281	1,348	1,310	1,060	1,080	960	860	NA

TABLE 7.02

2003 FATAL BICYCLE CRASHES BY MONTH

Month	Fatal Crashes	Bicyclists Killed
January	0	0
February	0	0
March	0	0
April	0	0
May	1	1
June	3	3
July	0	0
August	0	0
September	2	2
October	0	0
November	0	0
December	0	0
Total	6	6

TABLE 7.03

2003 FATAL BICYCLE CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Bicyclists Killed
100,000 and Over	2	2
50,000 - 99,999	0	0
25,000 - 49,999	0	0
10,000 - 24,999	3	3
5,000 - 9,999	0	0
2,500 - 4,999	0	0
1,000 - 2,499	1	1
Under 1,000	0	0
Total	6	6

TABLE 7.04

BICYCLISTS KILLED BY AGE AND GENDER, 2003

	Killed		
Age Group	**M**	**F**	**Total**
0 – 4	0	0	0
5 – 9	0	0	0
10 – 14	4	0	4
15 – 19	0	1	1
20 – 24	0	0	0
25 – 29	0	0	0
30 – 34	0	0	0
35 – 39	0	0	0
40 – 44	0	0	0
45 – 49	0	0	0
50 – 54	0	0	0
55 – 59	0	0	0
60 – 64	0	0	0
65 – 69	0	0	0
70 – 74	0	0	0
75 & Older	1	0	1
Not Stated	0	0	0
Total	5	1	6

TABLE 7.05

PRIOR ACTION OF BICYCLISTS INVOLVED IN 2003 FATAL CRASHES

Prior Action	**Bicyclists In Fatal Crashes**
Riding Across Road	1
Riding Against Traffic	0
Riding With Traffic	1
Making Left Turn	0
Making Right Turn	0
Slowing/Stopping/Start	0
Other/Unknown	4
Total	6

VIII: SCHOOL BUS CRASHES

As a general rule, school bus travel is very safe. The school bus is usually 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, 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.

Three deaths in 2003

In 2003, there were three fatal school bus crashes resulting in three deaths. One of the three fatalities was a driver of another vehicle that collided with a school bus. One fatality was an eighty-eight-year-old pedestrian who was struck by a school bus at an intersection. The third fatality was a five-year-old girl that had just gotten off the school bus, and was then struck by the school bus.

TABLE 8.01

SCHOOL BUS CRASH SUMMARY, 1994 - 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Crashes	821	898	1,041	961	782	782	890	852	719	NA
Fatal Crashes	2	2	6	4	3	5	2	4	3	3
Persons Killed	2	2	8	7	3	5	2	4	5	3
Injury Crashes	210	216	241	211	197	172	203	182	144	NA
Persons Injured	401	457	472	408	371	328	388	355	299	NA
Property Damage Crashes	609	680	794	746	582	605	685	666	572	NA
School Buses Involved	884	906	1,050	979	790	789	903	857	731	NA

TABLE 8.02

2003 FATAL SCHOOL BUS CRASHES BY TIME OF DAY

Time of Day	Fatal Crashes	Killed
Midnight - 2:59 AM	0	0
3:00 - 5:59 AM	0	0
6:00 - 8:59 AM	1	1
9:00 - 11:59 AM	0	0
Noon - 2:59 PM	0	0
3:00 - 5:59 PM	2	2
6:00 - 8:59 PM	0	0
9:00 - 11:59 PM	0	0
Unknown	0	0
Total	3	3

TABLE 8.03

2003 FATAL SCHOOL BUS CRASHES BY MONTH

Month	Fatal Crashes	Killed
January	0	0
February	0	0
March	0	0
April	1	1
May	0	0
June	0	0
July	0	0
August	0	0
September	1	1
October	0	0
November	1	1
December	0	0
Total	3	3

TABLE 8.04

PERSONS KILLED IN 2003 SCHOOL BUS CRASHES BY POPULATION OF AREA

City Population	Killed
100,000 and Over	0
50,000 - 99,999	0
25,000 - 49,999	1
10,000 - 24,999	0
5,000 - 9,999	1
2,500 - 4,999	0
1,000 - 2,499	0
Under 1,000	1
Total	3

TABLE 8.05

2003 FATAL SCHOOL BUS CRASHES BY FIRST HARMFUL EVENT

First Harmful Event	Fatal Crashes	Killed
Collision With:		
Other Motor Vehicle	1	1
Parked Motor Vehicle	0	0
Bicycle	0	0
Pedestrian	2	2
Deer or Other Animal	0	0
Fixed Object	0	0
Non-collision:		
Overturn	0	0
Other/Unknown	0	0
Total	3	3

TABLE 8.06

2003 FATAL SCHOOL BUS CRASHES BY TRAFFIC CONTROL DEVICE

Traffic Control Device	Fatal Crashes	Killed
Not Applicable	1	1
Traffic Signal	0	0
Stop Sign--All Approaches	1	1
Other Stop Sign	0	0
Yield Sign	0	0
School Zone Sign	0	0
School Bus Stop Arm	1	1
Officer/Flag Person	0	0
Railroad Crossing Device	0	0
Other	0	0
Unknown	0	0
Total	3	3

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 for the purpose of this publication.

Statewide on average, about one-half of one percent of all motor vehicle crashes result in a fatality. Motor vehicle/train crashes may be few in numbers, but they are more likely to be serious. Thus, these types of crashes are a cause for concern.

Number of fatalities decrease
In 2003, the number of fatalities decreased: eight people were killed in 2003 compared to nine in 2002.

Most fatal crashes occurred in rural areas
Fatal motor vehicle crashes involving a train are a predominantly rural phenomenon, defined as an area with less than 5,000 population. In 2003, 50% of the fatalities occurred in rural areas, and all eight fatalities occurred in areas with less than 25,000 population.

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

TABLE 9.01

MOTOR VEHICLE / TRAIN CRASH SUMMARY, 1994 – 2003

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Total Crashes	144	132	124	107	108	84	79	70	77	NA
Fatal Crashes	14	15	8	6	9	8	3	5	6	5
Persons Killed	17	16	8	6	11	10	4	6	9	8
Injury Crashes	51	30	45	36	47	32	32	22	27	NA
Persons Injured	75	34	50	46	64	50	43	28	37	NA
Property Damage Crashes	79	87	71	65	52	44	44	43	44	NA

TABLE 9.02

2003 FATAL MOTOR VEHICLE / TRAIN CRASHES BY MONTH

Month	Fatal Crashes	Killed
January	1	1
February	1	1
March	1	1
April	0	0
May	0	0
June	0	0
July	0	0
August	0	0
September	1	4
October	0	0
November	0	0
December	1	1
Total	5	8

TABLE 9.03

2003 FATAL MOTOR VEHICLE / TRAIN CRASHES BY TRAFFIC CONTROL DEVICE

Control Device	Fatal Crashes	Killed
RR Crossing Stop Sign	1	1
RR Crossbuck	2	2
RR Flashing Lights	1	1
RR Overhead Flashers Plus Gate	1	4
RR Overhead Flashers	0	0
RR Crossing Gate	0	0
Stop Sign	0	0
Other Device	0	0
Unknown	0	0
Not Applicable	0	0
Total	5	8

TABLE 9.04

AGE OF PERSONS KILLED IN 2003 MOTOR VEHICLE / TRAIN CRASHES

Age Group	Killed
0-4	0
5-9	0
10-14	0
15-19	2
20-24	3
25-29	0
30-34	1
35-39	0
40-44	0
45-49	1
50-54	1
55-59	0
60-69	0
70-79	0
80 & Older	0
Not Stated	0
Total	8

TABLE 9.05

2003 FATAL MOTOR VEHICLE / TRAIN CRASHES BY POPULATION OF AREA

Population of City or Township	Fatal Crashes	Killed
100,000 and Over	0	0
50,000 - 99,999	0	0
25,000 - 49,999	0	0
10,000 - 24,999	1	4
5,000 - 9,999	0	0
2,500 - 4,999	1	1
1,000 - 2,499	0	0
Under 1,000	3	3
Total	5	8

TABLE 9.06

CONTRIBUTING FACTORS IN 2003 FATAL MOTOR VEHICLE / TRAIN CRASHES

Contributing Factor	Number
Human Factors	
Failure to Yield Right of Way	2
Driver Inattention / Distraction	2
Disregard for Traffic Control Device	2
Chemical Impairment	1
Total	7
Vehicles for Which There Was "No Clear Contributing Factor"	3
Number of Drivers	7

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. 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 under 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 motorscooter/motorbike.

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

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

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

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

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

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

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

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

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

Rural -- Having a population of under 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 stepvan, (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.