



Alcohol
and Gambling
Enforcement

Bureau of
Criminal
Apprehension

Driver
and Vehicle
Services

Emergency
Communication
Networks

Homeland
Security and
Emergency
Management

Minnesota
State Patrol

Office of
Communications

Office of
Justice Programs

Office of
Pipeline Safety

Office of
Traffic Safety

State Fire
Marshal

Office of Traffic Safety

445 Minnesota Street • Suite 1620 • Saint Paul, Minnesota 55101

Phone: 651.201.7065 • dps.mn.gov

June 30, 2023

In 2022, there were 444 traffic fatalities in Minnesota. As a result of these deaths, hundreds of families mourn the loss of a loved one and their lives are forever changed by a preventable event. The term preventable I not used lightly in this context. Every one of these deaths were not an inevitable fact of life. They all resulted from a preventable event.

These tragic traffic events include the story of a crash involving the death of a 6-week old newborn when her mother's vehicle was struck by a passenger van which failed to stop. Three family members (two sons and their mother) died together as their SUV collided with a semi in an intersection. An elderly couple was killed by a driver who failed to stop at a stop sign. Not only was that driver speeding at 100mph, but his toxicology results showed a blood alcohol concentration of .228, plus methamphetamine, amphetamine, fentanyl, and marijuana. Each of these deaths was *preventable*.

Minnesota Motor Vehicle Crash Facts 2022 contains statistics and information that will be used by our traffic safety partners, legislators, media and the motoring public. It is derived from law enforcement reports and investigations that describes how and why crashes happened, where they occurred in our state and who was involved. Our law enforcement partners and the detailed investigations they conduct allow us to build a robust and strong database that helps us develop the projects, programs, and messaging that contributes to preventing future crashes.

The 444 deaths in 2022 were a 9% decrease from the 488 deaths in 2021. There was a 10% increase in the total number of crashes in 2022 over 2021, but this was due to a harsh winter with many property damage crashes reported. Crashes involving serious injuries increased 13% in 2022. Regardless of the severity of the crash, specific driver behaviors contribute to crashes.

The top four behaviors in Minnesota's 2022 traffic fatalities continue to be:

- Speed: 130 deaths
- Unbuckled motorists: 87 deaths
- Drunk Driving: 86 deaths
- Distractions: 22 deaths

Driving smart is essential to coming home at the end of the day. Together we can save lives by paying attention to the road, buckling up, driving the speed limit and always lining up a sober ride.

Sincerely,

A handwritten signature in cursive script that reads "Michael J. Hanson".

Director Mike Hanson

Table of Contents

Introduction	4
Chapter 1 – All Crashes – Who, What, When, Where	6
Chapter 2 – Alcohol-Related Crashes	28
Chapter 3 – Occupant Protection	38
Chapter 4 – Motorcycle Crashes	45
Chapter 5 – Truck Crashes	50
Chapter 6 – Pedestrian Crashes	55
Chapter 7 – Bicycle Crashes	61
Chapter 8 – School Bus Crashes	65
Chapter 9 – Motor Vehicle/Train Crashes	69
Chapter 10 – Crashes Involving Teen Drivers	72
Chapter 11 – Crashes Involving Senior Drivers	75
Chapter 12 – Contributing Factors – Why	78
Single-Vehicle Crashes	79
Multiple-Vehicle Crashes	80
All Crashes, by Crash Severity	81
Motorcycle Crashes	82
Truck Crashes	83
Pedestrian Crashes	84
Bicycle Crashes	85
School Bus Crashes	86
Motor Vehicle/Train Crashes	87
Teen-Involved Crashes	88
Senior-Involved Crashes	89
Driver Behaviors, All Ages	90
Driver Behaviors, Age Groups	91
Appendix	97
Definitions	97
Big 4 Trends	100
Impaired Driving Facts.....	101
Minnesota Facts	120

Introduction

At the end of the 2022 calendar year, 4,649,970 people held Minnesota driver licenses and 6,229,825 motor vehicles were registered in the state. Vehicles traveled over 57.2 billion miles on public roadways. There were 70,266 traffic crashes; 444 people died and 23,704 people were injured in those crashes. This report provides a statistical summary of those crashes.

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

Cost of traffic crashes

The use of motor vehicles for getting from one place to another results in significant costs to society. The National Safety Council reports that motor vehicle crashes (from all causes) are the leading cause of preventable death among persons aged 4 to 21, and the second leading cause of preventable death for every age from 22 to 67.

It is possible to estimate economic costs of traffic crashes, although the results can vary depending on definitions and estimating procedures. Many states use cost figures released by the National Safety Council, the

most recent of which use 2022 data. Based upon those, the total economic loss from 2022 traffic crashes in Minnesota was \$2,239,203,500, a figure that is calculated as follows:

Count	Severity	@	Cost	=	Economic Loss
444	Deaths	@	\$1,778,000	=	\$789,432,000
1,910	Serious Injuries	@	\$155,000	=	\$296,050,000
8,047	Minor Injuries	@	\$40,000	=	\$321,880,000
13,747	Possible Injuries	@	\$24,000	=	\$329,928,000
88,055	PDO Crashes	@	\$5,700	=	\$501,913,500
Total:					\$2,239,203,500

Legislative requirement

Minnesota Motor Vehicle Crash Facts is produced annually by the Minnesota Department of Public Safety, Office of Traffic Safety, in accordance with state law. Minnesota Statutes, Section 169.10, requires that traffic crashes be reported to the Department. Section 169.10 then requires the Department to “... tabulate all crash reports and publish annually statistical information based thereon as to the number and circumstances of traffic crashes...”

Factors affecting traffic crashes

Any single crash may have many contributing factors associated with the crash event. There are several factors that affect the majority of traffic crashes and these factors can be categorized into these areas:

- Behavioral Factors
 - Vehicle Factors
- Roadway Characteristics
- Environmental Factors

The Contributing Factors section of this report will delve into the frequency of these circumstances affecting crashes.

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.

Since the 1960s, both the rate and the number of fatalities have declined in a fairly steady pattern. In 2022, there were 46,270 traffic fatalities throughout the country (according to preliminary data from National Safety Council) and 444 in Minnesota. The respective fatality rates per hundred million miles of travel were 1.46 and 0.77.

These declines are the result of conscious decision-making on traffic safety issues. The National Highway Traffic Safety Administration (originally called the National Highway Safety Bureau) was established in the US Department of Transportation in 1967. Since then, it has promoted and Congress has passed

legislation mandating the manufacture of safer cars. At the same time, the federal interstate highway system has expanded, contributing to a safer roadway environment.

Simultaneously there has been an effort to change human behavior factors. Minnesota was a leader among the states in the development of innovative drunk driving countermeasures. The Legislature made significant amendments to the DWI law in 1971, 1976, 1978, and in almost every year of the 1980s. It also passed the child passenger protection law in 1981 and the secondary seat belt law in 1986. In 2009 the law was updated to 'Primary.' It subsequently amended those laws, closing loopholes, broadening their scope and strengthening penalties.

The benefits of action in these areas are clear and shown in the graphs below. Figure 1 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. Figure 2 shows Minnesota traffic fatalities are trending downward.

Figure 1: Vehicles, Drivers, and Fatality Rate

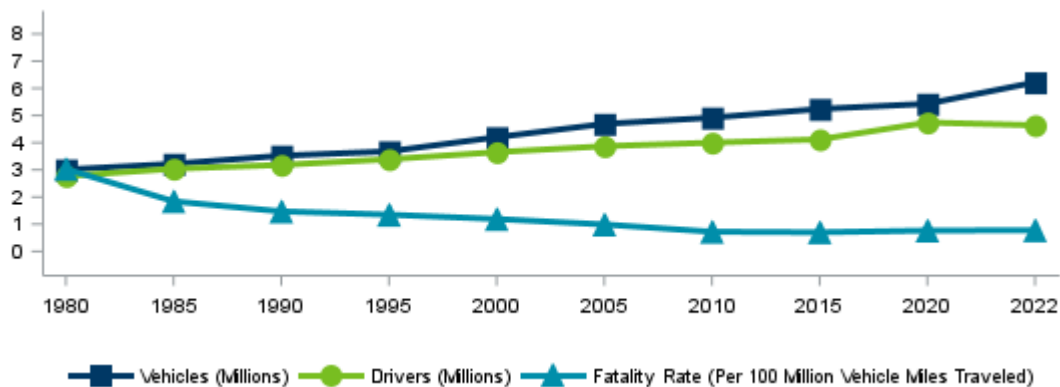
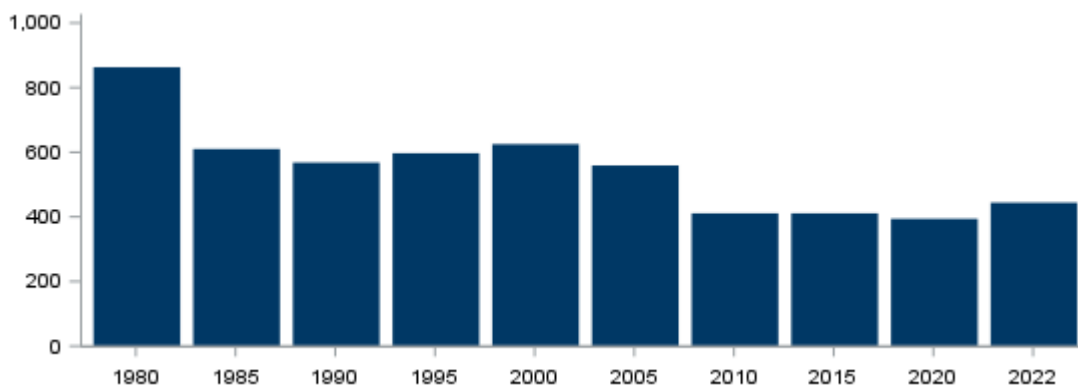


Figure 2: Minnesota Traffic Fatalities



All Crashes

Overview of Traffic Crashes

In 2022, 70,266 traffic crashes were reported. Reducing the number of traffic crashes remains a challenge each year for public safety officials. With a population of 5.71 million, Minnesota has:

4.6 million licensed drivers	6.2 million registered vehicles	57.2 billion miles driven
---------------------------------------	--	------------------------------------

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

Crashes increase and fatalities increase in 2022. The 70,266 traffic crashes reported to the Department of Public Safety represent an increase of 10% from 2021. There were 444 deaths on Minnesota roads, a 9% decrease from the previous year. Our roads are relatively safe. Traffic deaths in Minnesota have decreased dramatically in the past decades. There are many factors for the continued improvement in traffic safety, but much can be credited to strengthened traffic safety laws, enhanced enforcement, education and outreach, engineering and emergency trauma care. These elements are all part of the state's *Toward Zero Deaths (TZD)* initiative — a multidisciplinary program addressing traffic issues at the local level.

Traffic Crashes in 2022

The following facts give an overall picture of 2022 traffic crashes.

146,244

people involved in crashes

123,392

motor vehicles involved in
crashes

Minnesota crash rates for 2022 were:

1,229 crashes per 100K population	1,127 crashes per 100K vehicles	123 crashes per 100M VMT
--	--	-----------------------------------

Minnesota fatality rates for 2022 were:

7.7 fatalities per 100K population	7.1 fatalities per 100K vehicles	0.77 fatalities per 100M VMT
---	---	---------------------------------------

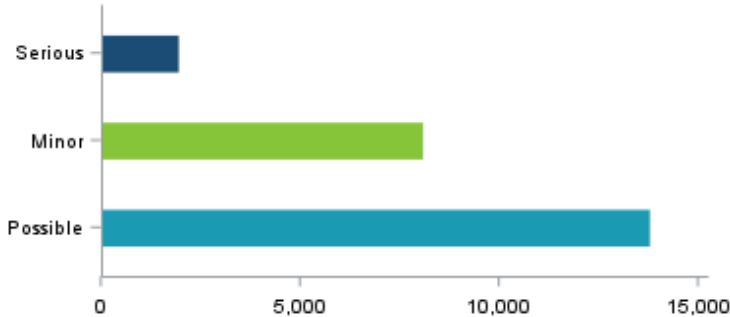
\$2.23 billion

economic loss to
Minnesota

444
people
died

23,704
people
were injured

Crash Injuries



8,025
crashes
classified as
“hit-and-run”

34%
of crashes
involved only
one vehicle

Can traffic crashes be prevented?

On average over the past decade, about 400 people have been killed and 30,500 injured every year on our roadways. Minnesota’s traffic crashes are cause for concern. In a public health sense, epidemics that kill and injure fewer people are often attacked vigorously until they are no longer a threat to public safety.

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

**The message is simple:
Driving is a privilege;
aggressive driving is not.
Buckle up.
Drive at safe speeds.
Pay attention.
Never drive impaired.**

Crash severity vs injury severity

When crashes occur, vehicles and property get damaged, and people get injured. Frequently, the number of crashes differs from the number of injuries. The highest level of injury suffered by a person involved in a crash is what defines the crash severity.

Table 1.01: Traffic Crash Trends

	2018	2019	2020	2021	2022	Record High	
Fatal Crashes	349	333	369	451	418	878	1973
Injury Crashes	20,244	19,902	15,071	17,483	17,367	33,868	1978
Serious	1,341	1,297	1,310	1,451	1,635	5,109	1984
Minor	7,327	7,260	5,940	6,840	6,330	12,326	1985
Possible	11,576	11,345	7,821	9,192	9,402	18,578	1996
PDO Crashes	58,622	60,401	41,687	45,817	52,481	94,810	1975
Total Crashes	79,215	80,636	57,127	63,751	70,266	123,106	1975
Total Injuries	27,877	27,260	20,529	24,083	23,704	50,332	1978
Serious	1,660	1,520	1,569	1,723	1,910	6,573	1984
Minor	9,429	9,346	7,656	8,912	8,047	17,670	1985
Possible	16,788	16,394	11,304	13,448	13,747	28,631	1996
Total Fatalities	381	364	394	488	444	1,060	1968
MN Fatality Rate	0.63	0.60	0.76	0.85	0.77	24	1934
U.S. Fatality Rate	1.25	1.1	1.37	1.43	1.35	18	1925
MN Economic Loss (billions)	\$1.79	\$1.87	\$1.87	\$2.03	\$2.23	\$2.23	2022

Who, what, when, where?

This chapter will look at the specifics of crashes in Minnesota in the past year. The contributing circumstances, or 'why' the crash occurred, will be examined in the Contributing Factors chapter.

Who was involved in crashes?

Among drivers, young people and males are over-represented in traffic crashes in Minnesota. Generally, younger people represent higher portions of crash-involved drivers than their portion of licensed drivers. Drivers age 15-24 are the worst from this perspective. In 2022, they represented just 14% of the licensed drivers, but 24% of all crash-involved drivers. By contrast, drivers over age 65 made up 19% of the driving population, but accounted for just 11% of the crash-involved drivers. Figure 1.01 graph compares the portions of licensed and crash-involved drivers within age groups.

Crash-involved drivers are also more likely to be males: 75% of drivers in fatal crashes were male; 59% of drivers in all crashes were male.

Traffic crashes are a leading cause of death in young people. In the state last year, 104 people under age 30 died in crashes, representing 23% of all traffic deaths. As noted, the National Safety Council reports that crashes are the leading cause of death among persons aged 1 to 24.

Among people injured, young people especially pay the price. There were 9,482 people under age 30 who were injured, representing 40% of the total number of people injured.

Figure 1.01: Licensed vs Crash-Involved Drivers by Age

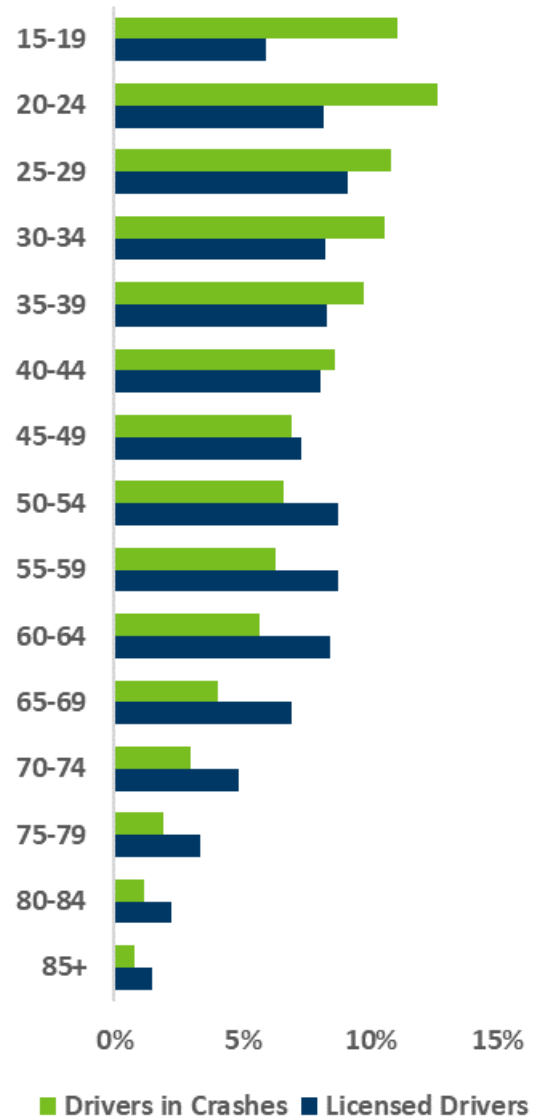


Table 1.02: Age and Gender of Drivers in Crashes

Age Group	Drivers in Fatal Crashes				Drivers in All Crashes			
	Male	Female	Unk	Total	Male	Female	Unk	Total
<15	1	0	0	1	59	18	2	79
15-19	34	12	0	46	6,862	5,722	81	12,665
20-24	39	8	0	47	8,044	6,120	229	14,393
25-29	39	20	0	59	7,214	5,047	102	12,363
30-34	41	13	0	54	7,076	4,886	115	12,077
35-39	51	9	0	60	6,609	4,401	97	11,107
40-44	53	14	0	67	5,830	3,965	76	9,871
45-49	47	10	0	57	4,857	3,032	35	7,924
50-54	24	12	0	36	4,776	2,782	28	7,586
55-59	40	13	0	53	4,502	2,648	12	7,162
60-64	31	11	0	42	4,107	2,375	11	6,493
65-69	18	8	0	26	2,897	1,718	9	4,624
70-74	23	9	0	32	2,103	1,312	10	3,425
75-79	20	7	0	27	1,316	899	2	2,217
80-84	10	7	0	17	755	590	2	1,347
85+	13	4	0	17	523	345	8	876
Unk	2	1	0	3	19	1	34	54
Total	486	158	0	644	67,549	45,861	853	114,263

Table 1.02 above details driver counts in fatal and all crashes. As previously mentioned, young persons and males are involved in crashes more frequently but the disparity between male and female crash-involvement actually increases with age. The Figure 1.02 graph below examines the percentage of gap between male and female crash-involvement at different age groups.

Figure 1.02: Crash-Involvement Gender Gap

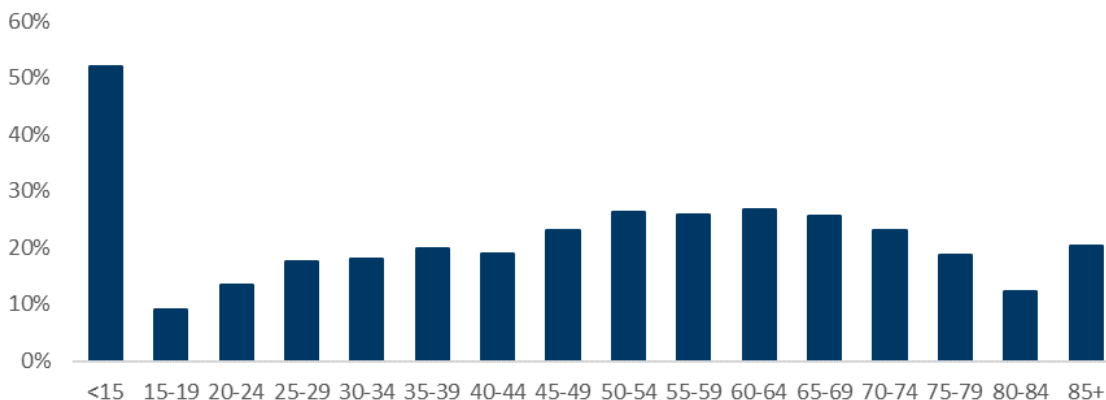


Table 1.03: Driver Physical Condition* in Crashes

Driver Physical Condition	Fatal Crashes	Injury Crashes	PDO Crashes	All Crashes
Apparently Normal	343	26,958	78,275	105,576
Physical Disability	2	66	59	127
Medical Issue	9	394	248	651
Emotional	9	175	189	373
Asleep or Fatigued	7	333	610	950
Had Been Drinking Alcohol	111	1,230	1,879	3,220
Had Been Taking Illicit Drugs	72	241	257	570
Had Been Taking Medications	3	77	110	190
Other	12	183	257	452
Unknown	720	30,551	85,146	116,417
Total	1,288	60,208	167,030	228,526

*As noted by police officer on crash report. Officers are allowed to enter up to two physical conditions for each driver. Due to this, totals will not match the total number of drivers.

Figure 1.03: Age and Gender of Persons Killed or Injured

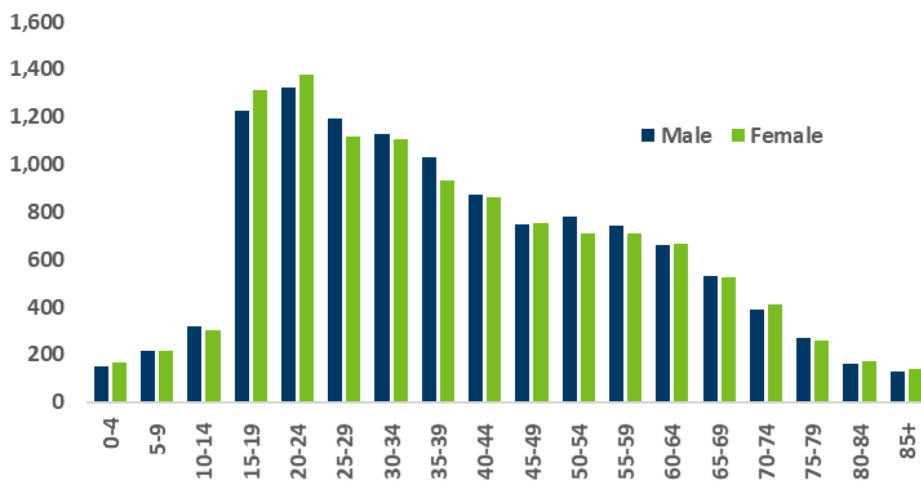


Figure 1.04: Fatalities by Gender

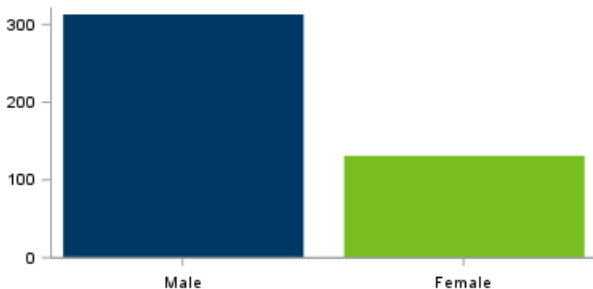
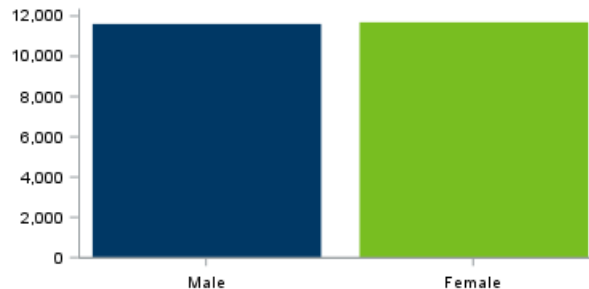


Figure 1.05: Injuries by Gender



71%

male
fatalities

50%

female
injuries

Table 1.04: Persons Involved by Type of Vehicle Occupied and Injury Severity

Vehicle Type	Killed	Serious Injuries	Minor Injuries	Possible Injuries	Total Injuries	No Injuries	Total Persons
Car	152	610	3,405	6,391	10,406	53,509	64,067
Pickup Truck	36	177	740	1,212	2,129	15,538	17,703
Sport Utility Vehicle	87	352	2,136	4,366	6,854	36,865	43,806
Van	7	56	341	671	1,068	5,950	7,025
Motorhome/Camper	0	0	6	4	10	65	75
Limousine	0	0	1	0	1	4	5
Taxi Cab	1	6	29	82	117	290	408
Police Vehicle	0	1	30	46	77	756	833
Fire Department Vehicle	0	0	1	2	3	77	80
School Bus	0	0	14	56	70	1,516	1,586
Other Bus	0	0	16	49	65	477	542
Ambulance	0	0	5	10	15	165	180
Military Vehicle	0	0	1	1	2	11	13
Snowmobile	1	4	10	6	20	11	32
All-Terrain Vehicle	14	63	61	44	168	57	239
Farm Tractor or Equipment	1	1	9	6	16	144	161
Motorcycle	80	293	402	188	883	170	1,133
Moped/Motor Scooter	2	13	19	14	46	5	53
Single Truck (2-axle, 6 tire)	0	3	15	11	29	471	500
Single Truck (3+ axles)	0	4	10	11	25	311	336
Truck with Trailer	3	6	29	31	66	939	1,008
Truck No Trailer	0	0	2	1	3	74	77
Truck Semi Trailer	4	8	59	51	118	1,826	1,948
Truck Double Trailer	0	0	1	0	1	48	49
Truck Triple Trailer	0	0	0	0	0	2	2
Other/Unknown Truck Type	4	13	27	40	80	1,334	1,418
Bicycle	6	82	270	147	499	76	581
Pedestrian	45	204	371	233	808	149	1,002
Other Vehicle	1	15	36	74	125	1,190	1,316
Unknown Vehicle Type	0	0	1	0	1	66	67
Total	444	1,911	8,047	13,747	23,705	122,096	146,245

What were the conditions?

Three categories of crashes exist.

- **Collisions with non-fixed objects** – these crashes occur when a motor vehicle collides with another movable object (another motor vehicle, a non-motorist, or an animal).
- **Collisions with fixed objects** – these crashes occur when a motor vehicle collides with a permanent object (usually a traffic sign or barrier, or something in the physical environment such as a ditch, embankment, or tree).
- **Non-Collisions** – these occur when vehicles are hit by objects or cargo falling off another vehicle, overturns and rollovers, jack-knifed semi-trucks, car fires and explosions.

The vast majority of crashes are collisions with non-fixed objects.

Figure 1.06: Crash Types

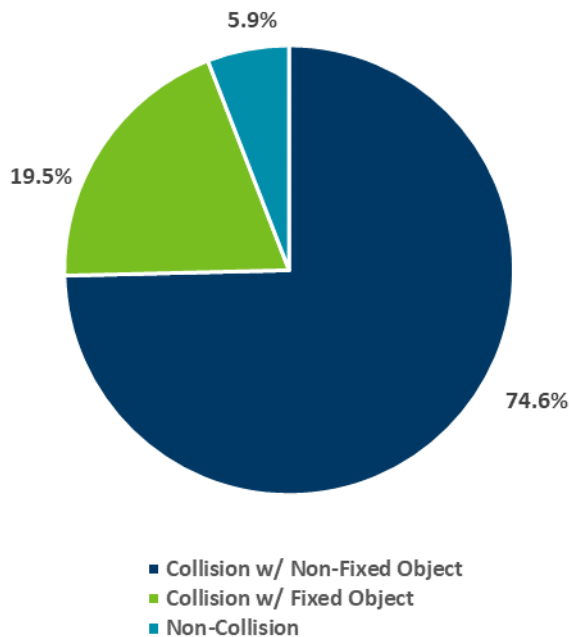


Table 1.06: Crash Type Counts

Collision w/ Non-Fixed Object	
Motor Vehicle in Transport	46,041
Parked Motor Vehicle	3,637
Falling Cargo	100
Pedestrian	728
Bicycle	526
Deer/Animal	1,351
Train	45
Collision w/ Fixed Object	
Pole/Sign/Parking Meter	4,105
Construction Equipment	33
Bridge	243
Culvert/Curb	271
Ditch/Embankment	1,048
Snowbank	217
Barrier	4,844
Mailbox/Hydrant	457
Tree/Shrubbery	1,183
Fence	407
Other/Unknown	891
Non-Collision	
Object Set in Motion By MV	177
Overturn/Rollover	2,934
Submersion	22
Fire/Explosion	37
Other Non-Collision	969

According to crash reports, the majority of crashes occur in good driving conditions – daylight hours, clear weather, good roads

Table 1.05: Crash Type and Crash Severity

Crash Type	Fatal	Injury	PDO	Total Crashes
Non-Fixed Object	260	13,173	38,995	52,428
Fixed Object	85	2,593	11,021	13,699
Non-Collision	73	1,601	2,465	4,139
Total	418	17,367	52,481	70,266

Table 1.07: Crashes by Weather Condition

Weather Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Clear	299	12,094	33,657	46,050	320	16,610
Cloudy	65	2,666	7,766	10,497	68	3,670
Rain	18	706	1,920	2,644	19	960
Snow	20	1,268	6,356	7,644	21	1,652
Sleet/Hail	1	149	523	673	1	182
Fog/Smog/Smoke	5	41	110	156	5	63
Blowing Sand/Soil/Dirt	2	299	1,373	1,674	2	396
Severe Crosswinds	1	35	133	169	1	46
Other Weather	1	24	55	80	1	27
Unknown	6	85	588	679	6	99
Total	418	17,367	52,481	70,266	444	23,705

72%
fatal crashes
occurred during
clear weather

Most
crashes happen where
no traffic control
device is located

Table 1.08: Crashes by Traffic Control Device

Traffic Control Device	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
None	257	8,648	29,034	37,939	259	11,940
RR Crossing Device	2	19	59	80	2	25
Traffic Control Signal	49	4,328	9,779	14,156	35	5,831
Flashing Overhead Signal	0	25	87	112	0	27
Yield Sign	6	281	1,131	1,418	4	305
Stop Sign	46	2,118	4,823	6,987	42	2,233
Warning Sign	2	19	123	144	2	20
Flagger, Police, Crossing Guard	0	11	32	43	0	17
School Zone Sign	0	6	13	19	0	2
Other	5	59	193	257	4	69
Not Applicable	37	1,360	4,474	5,871	35	1,665
Unknown	14	493	1,055	3,157	61	1,571
Total	418	17,367	50,803	70,183	444	23,705

Table 1.09: Crashes by Road Surface Condition

Road Surface	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Dry	323	12,129	31,412	43,864	346	16,790
Wet	46	1,721	4,866	6,633	47	2,329
Snow	18	1,707	8,338	10,063	19	2,228
Ice/Frost	16	1,542	7,085	8,643	17	2,009
Sand	0	6	4	10	0	0
Ruts, Holes, Bumps	0	5	5	10	0	0
Other	11	187	310	508	11	267
Unknown	4	70	461	535	4	82
Total	418	17,367	52,481	70,266	444	23,705

Table 1.10: Crashes by Road Design

Road Design	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
One Way Trafficway	14	771	2,960	3,745	16	988
Two-Way, Not Divided	272	8,767	22,465	31,504	262	11,204
Two-Way, Not Divided, Left Turn Lane	2	341	885	1,228	2	462
Two-Way, Divided, Unprotected Median	47	1,895	4,752	6,694	40	2,679
Two-Way, Divided, Median Barrier	62	4,749	17,553	22,364	60	6,374
Other	9	382	1,308	1,699	8	434
Unknown	12	462	880	2,949	56	1,564
Total	418	17,367	50,803	70,183	444	23,705

Only 19%
of fatal crashes
occurred on
wet, snowy, or icy roads

Over half
of fatalities
occurred on two-way,
not divided roads

Hit-and-Run Crashes

In 2022, there were 8,025 crashes classified as Hit-and-Run. This represents 11% of all crashes in the state. Figure 1.07 examines the increases in Hit-and-Run crashes in the past decade.

Table 1.11: Hit-and-Run Crashes

Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
12	976	7,037	8,025	12	1,180

Figure 1.07: Hit-and-Run Crash Trends

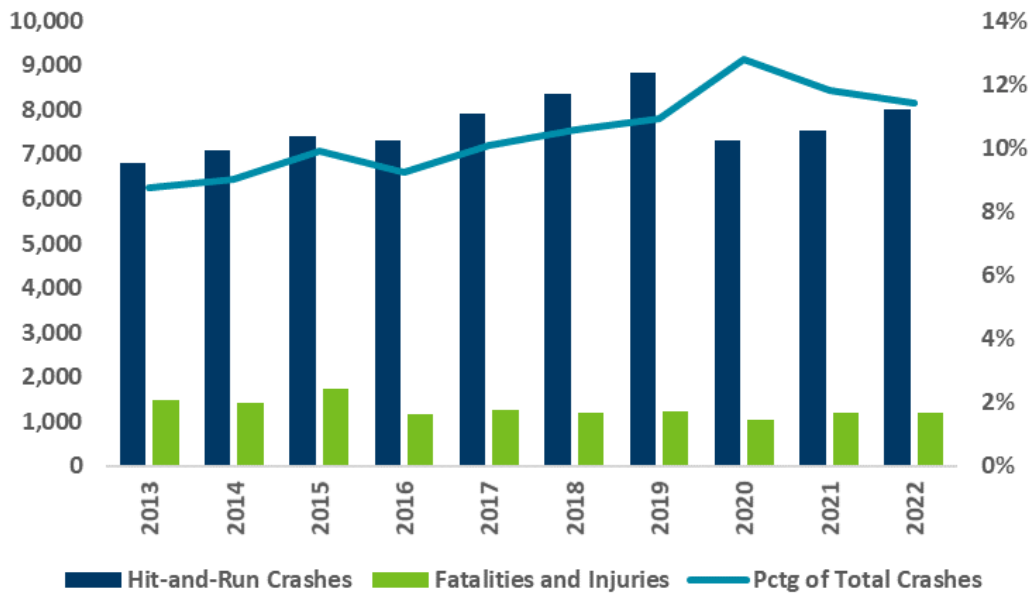
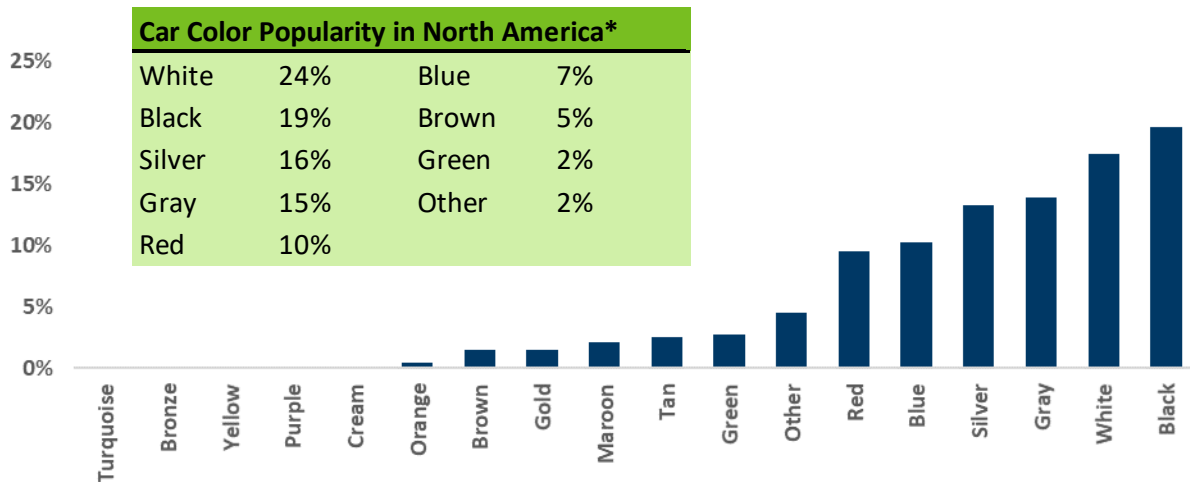


Figure 1.08: Vehicle Color of Cars (Passenger Cars, Trucks, or Vans) in Minnesota Crashes



*According to Wikipedia and DuPont Paint – Car Color Popularity in North America

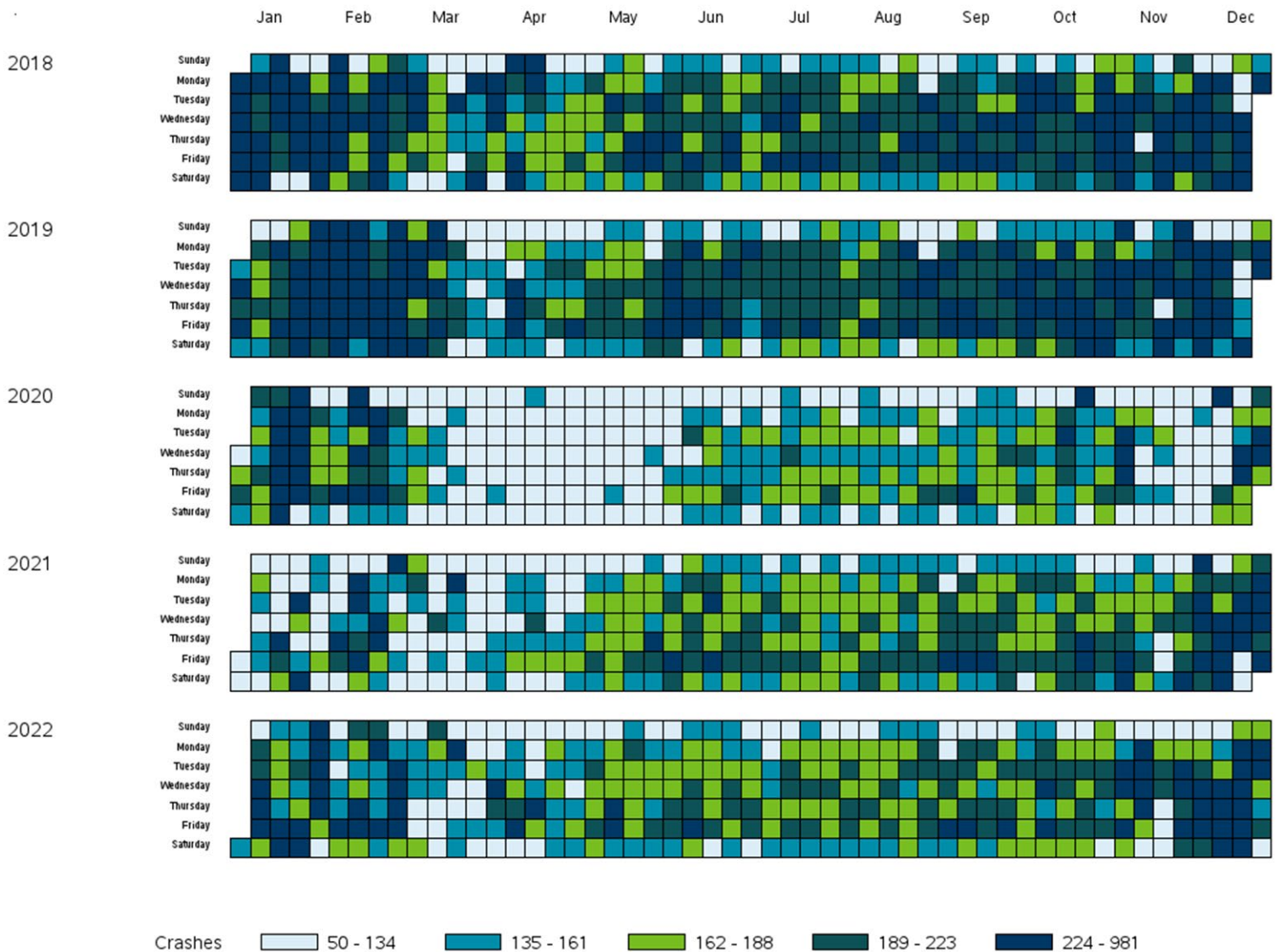
Table 1.12: Types of Motor Vehicles in Crashes

Vehicle Type	Vehicles In Fatal Crashes	Vehicles in Injury Crashes	Vehicles in PDO Crashes	Vehicles in All Crashes
Car	229	13,976	40,748	54,953
Pickup Truck	85	3,562	11,380	15,027
Sport Utility Vehicle	150	9,309	25,480	34,939
Van	16	1,407	3,693	5,116
Motorhome/Camper	1	10	53	64
Limousine	0	1	4	5
Taxi Cab	2	101	125	228
Police Vehicle	1	117	616	734
Fire Department Vehicle	0	11	43	54
School Bus	3	92	416	511
Other Bus	0	83	244	327
Ambulance	0	14	67	81
Military Vehicle	0	3	10	13
Snowmobile	1	20	9	30
All-Terrain Vehicle	14	131	25	170
Farm Tractor or Equipment	2	51	112	165
Motorcycle	82	832	136	1,050
Moped/Motor Scooter	2	45	6	53
Single Truck (2-axle, 6 tire)	5	96	344	445
Single Truck (3+ axles)	4	83	241	328
Truck with Trailer	12	191	720	923
Truck No Trailer	0	14	58	72
Truck Semi Trailer	27	405	1,439	1,871
Truck Double Trailer	1	4	43	48
Truck Triple Trailer	0	0	2	2
Other/Unknown Truck Type	17	238	1,022	1,277
Other Vehicle	5	252	1,019	1,276
Unknown Vehicle Type	3	478	3,149	3,630
Total	662	31,526	91,204	123,392

When did crashes occur?

As a general rule, harsh winter weather results in more traffic crashes. In other words, there are more “fender-benders” during icy and snowy conditions. Due to our Minnesota weather, December, January, and February see more crashes. As a general rule, warmer weather produces fewer crashes, but more fatalities and serious injuries. Examining the days of the week, the fewest crashes occur on Sundays.

Figure 1.09: Heat Map of Traffic Crashes in Minnesota



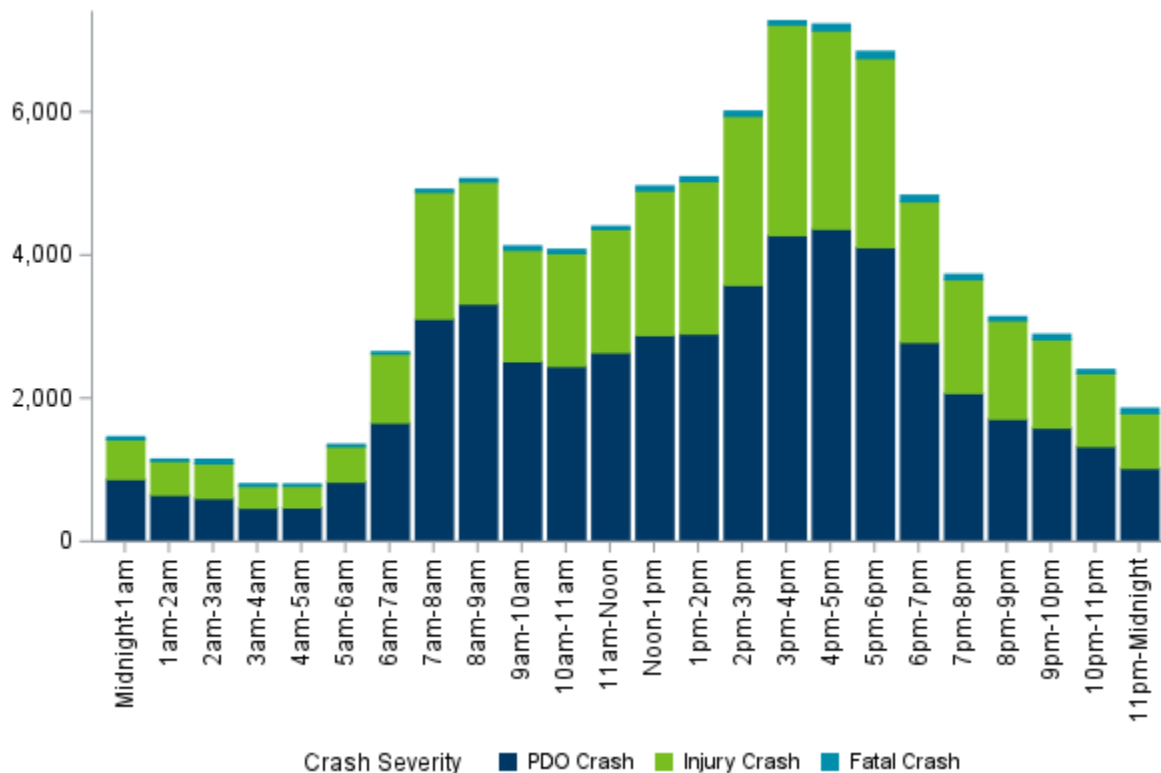
Most crashes occur
on **Fridays**

Winter
means lots of crashes

Table 1.13: Crashes, Fatalities, and Injuries by Month

Month	Fatal	Injury	PDO	Total	Killed	Injured
	Crashes	Crashes	Crashes	Crashes		
January	14	1,445	5,984	7,443	14	1,915
February	26	1,297	4,925	6,248	27	1,768
March	19	1,071	3,431	4,521	20	1,441
April	26	1,121	3,306	4,453	27	1,529
May	45	1,475	3,730	5,250	45	2,077
June	42	1,542	3,614	5,198	46	2,090
July	54	1,551	3,566	5,171	56	2,176
August	45	1,603	3,719	5,367	53	2,232
September	50	1,588	3,818	5,456	53	2,165
October	42	1,589	3,942	5,573	45	2,183
November	29	1,510	5,199	6,738	31	2,044
December	26	1,575	7,247	8,848	27	2,085
Total	418	17,367	52,481	70,266	444	23,705

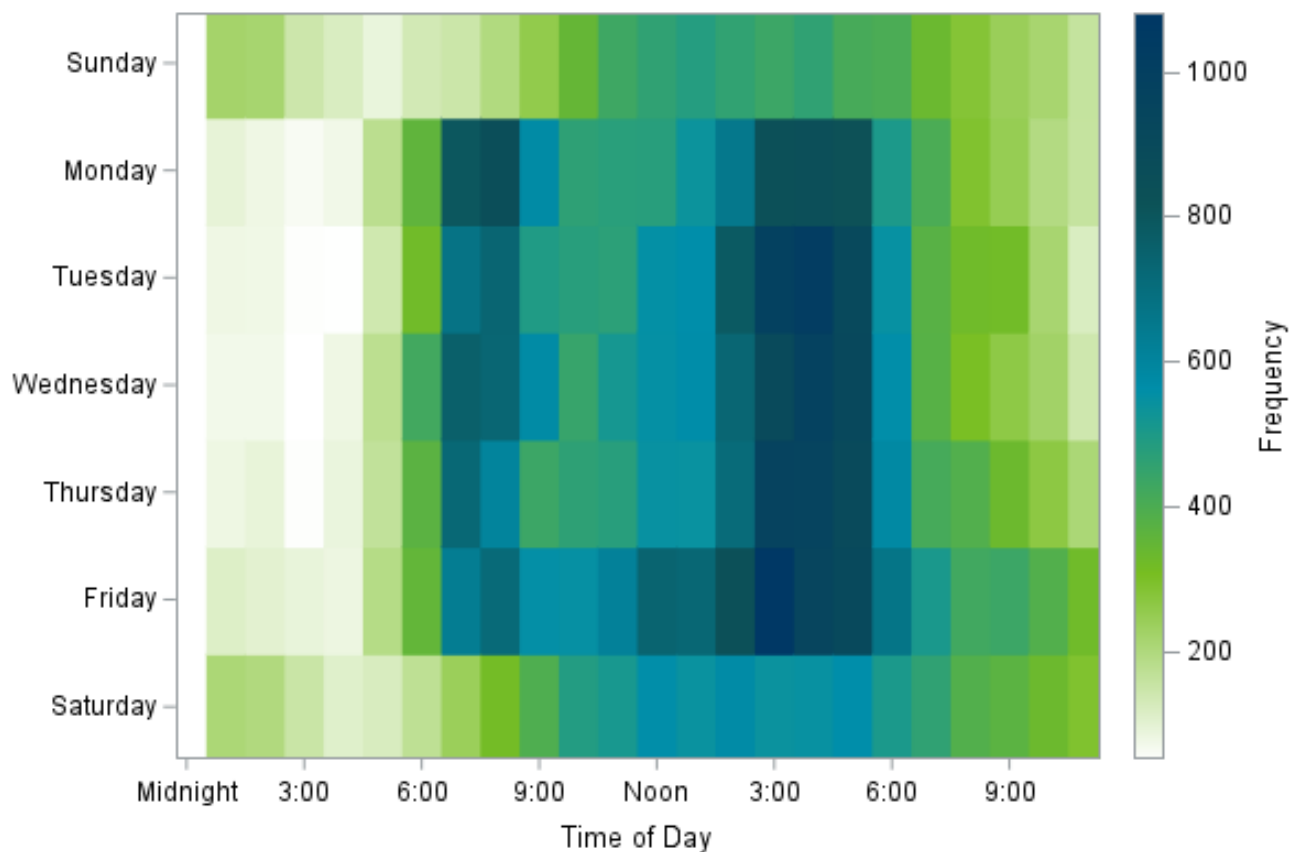
Figure 1.10: Crashes by Time and Crash Severity



When do most crashes occur?

It's not surprising that most crashes occur at peak driving times. Weekdays see higher traffic volume as people are out and about more commuting to and from work and school, particularly during the morning and afternoon rush hour periods (6am-9am and 3pm-6pm). The frequency of crashes during these times is evidenced by the dark blue in the heat map. Minnesota roads see less traffic on Saturdays and Sundays, and therefore fewer crashes; this is shown by the lighter blues and greens in the heat map.

Figure 1.11: Heat Map of Crashes



Lots of crashes on
Friday
afternoons

Early
mornings
see the fewest crashes

Figure 1.12: Daily Crashes by Time and Crash Severity

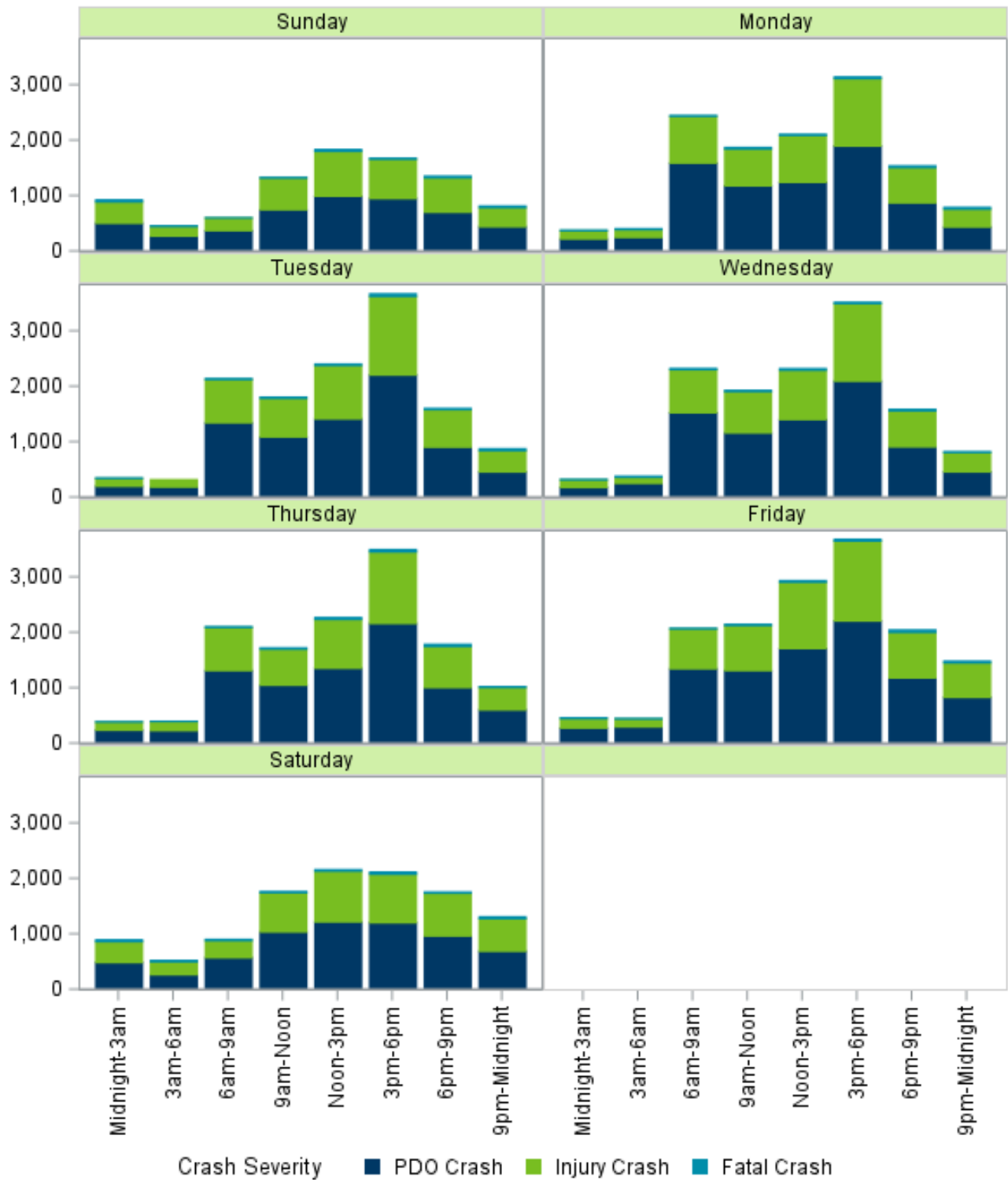


Table 1.14: Crashes by Light Condition

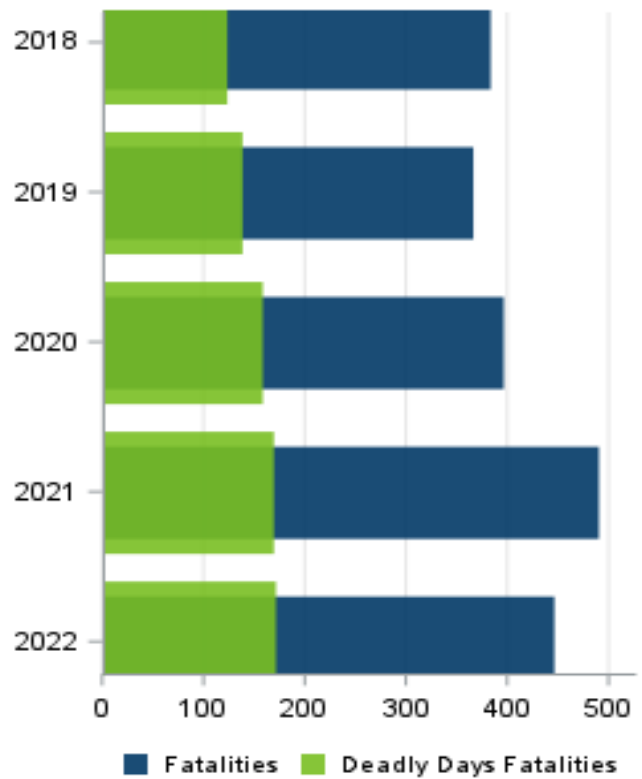
Light Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Daylight	229	11,949	35,698	47,876	245	16,368
Sunrise	6	363	1,225	1,594	6	458
Sunset	19	541	1,383	1,943	19	782
Dark/Street Lights On	78	3,130	9,949	13,157	82	4,286
Dark/No Street Lights	83	1,350	3,764	5,197	89	1,769
Other	3	34	462	499	3	42
Total	418	17,367	52,481	70,266	444	23,705

Holidays are problematic for traffic safety

While most crashes do occur during winter months or in good driving conditions, holidays generally have higher crash rates than non-holiday time periods. Celebrations, additional travel and alcohol consumption during holidays create a dangerous traffic safety environment. NHTSA defines reporting guidelines for six holidays during the calendar year with varying durations to accommodate additional travel. Those holidays are displayed in Figure 1.14.

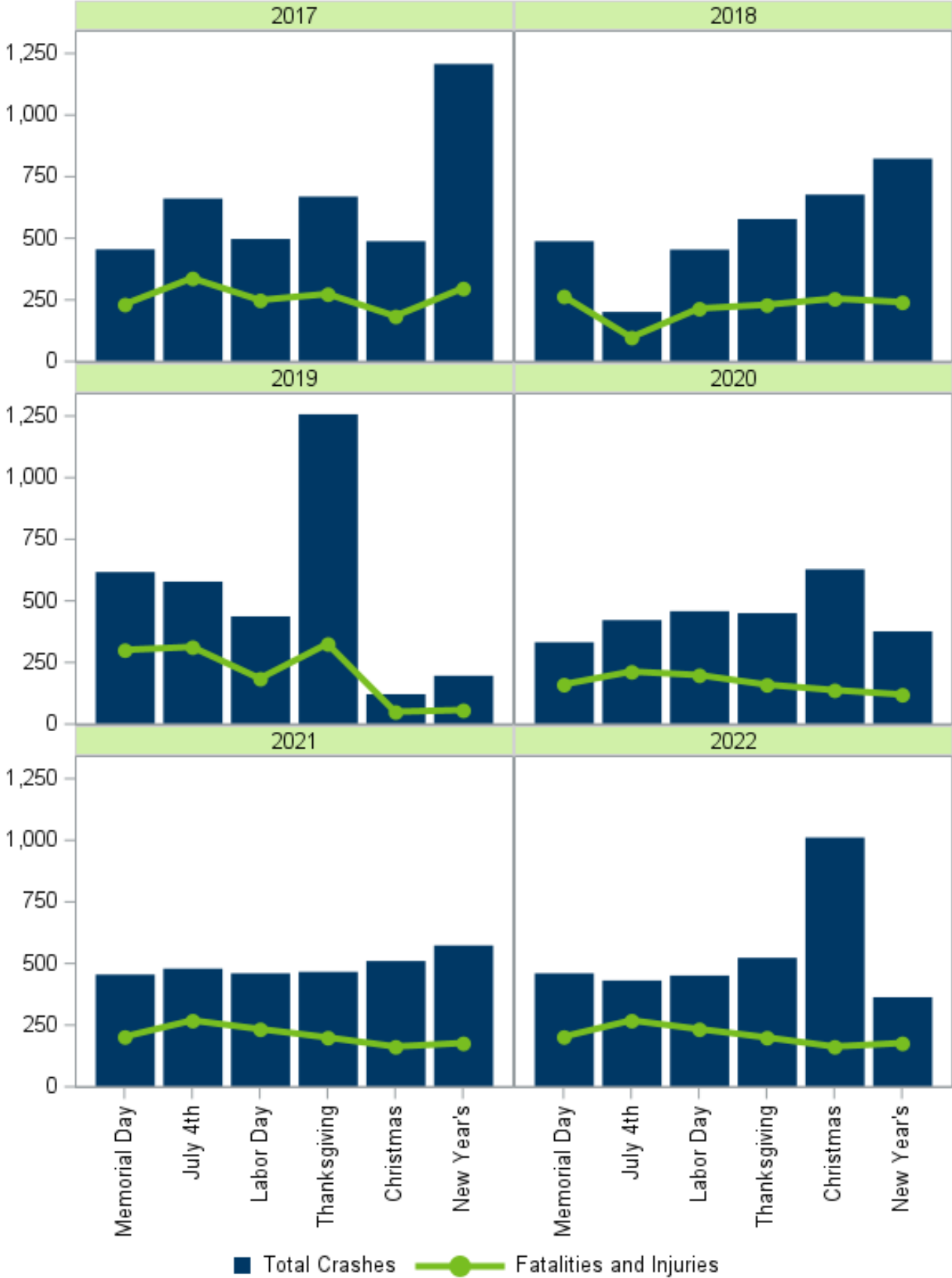
Aside from the six NHTSA holidays, other days and events, such as the Super Bowl, St. Patrick’s Day, Cinco de Mayo, Halloween, hunting and fishing opening weekends, and the time period between Memorial Day and Labor Day (called the 100 Deadly Days of Summer) can have spikes in DWIs and traffic crashes.

Figure 1.13: 100 Deadly Days of Summer



38%
of fatalities
occurred during
the 100 deadly days

Figure 1.14: Holiday Crashes



Where did crashes happen?

The seven county metro area is home to over half of the state's population, and the majority of traffic crashes occur there. Over three-fourths of all crashes happened inside cities of 5,000 or more population; these areas are defined as urban cities. Fatal crashes, however, tend to occur on roads in rural areas that permit high speeds and do not have interstate-type safety designs.

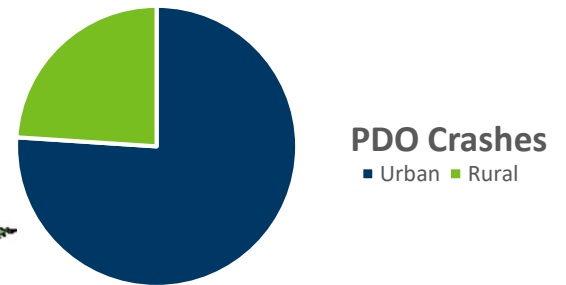
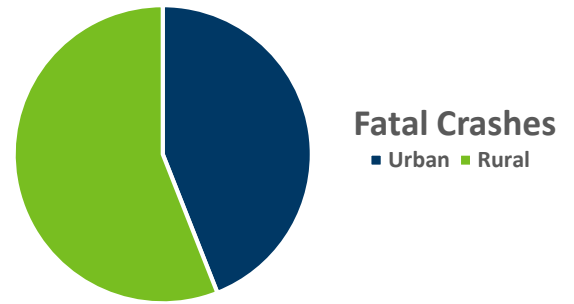
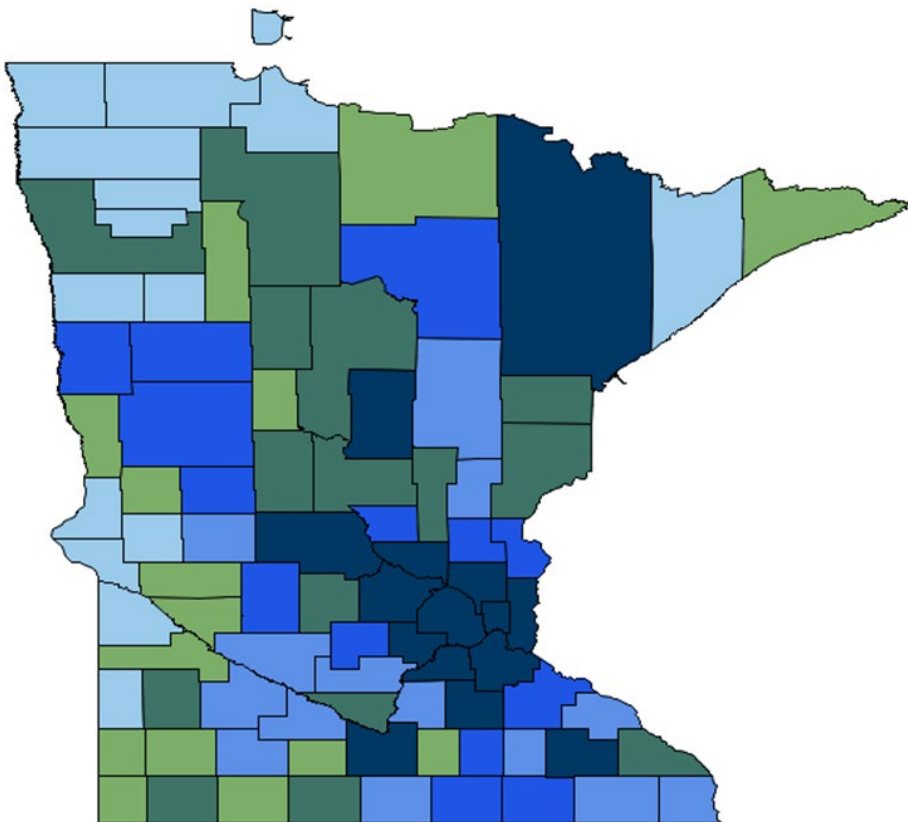


Figure 1.15: Fatal and Injury Crashes Plotted by County



Fatal and Injury Crashes

3 - 62	67 - 112	113 - 179
184 - 322	336 - 613	695 - 17,089

Speed
 is frequently a
 factor in
 fatal crashes

56%
 fatal crashes
 occur in rural
 areas

Table 1.15: County Crash Report

County	Fatal	Injury	PDO	Total	Killed	Injured
	Crashes	Crashes	Crashes	Crashes		
Aitkin	1	41	82	124	1	56
Anoka	23	1,081	3,142	4,246	28	1,542
Becker	1	115	214	330	1	158
Beltrami	1	84	186	271	1	122
Benton	3	148	292	443	4	207
Big Stone	1	5	23	29	1	8
Blue Earth	9	278	921	1,208	9	365
Brown	0	49	178	227	0	63
Carlton	4	81	327	412	5	108
Carver	9	247	894	1,150	9	348
Cass	7	97	172	276	8	137
Chippewa	0	34	83	117	0	49
Chisago	6	145	437	588	6	197
Clay	6	119	461	586	8	170
Clearwater	1	26	33	60	1	36
Cook	1	21	37	59	1	24
Cottonwood	4	37	76	117	4	55
Crow Wing	7	217	606	830	7	306
Dakota	24	1,426	4,895	6,345	24	1,994
Dodge	2	39	103	144	2	52
Douglas	4	133	315	452	5	181
Faribault	3	47	73	123	3	66
Fillmore	1	44	92	137	1	59
Freeborn	5	114	396	515	5	150
Goodhue	5	148	639	792	5	203
Grant	1	21	58	80	1	27
Hennepin	60	4,822	14,036	18,918	61	6,415
Houston	1	50	85	136	2	56
Hubbard	1	56	120	177	1	89
Isanti	7	141	271	419	7	210
Itasca	4	104	332	440	4	147
Jackson	1	32	86	119	1	48
Kanabec	5	42	80	127	5	63
Kandiyohi	7	148	395	550	11	213
Kittson	1	3	8	12	1	6

Table 1.15: County Crash Report, continued

County	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Koochiching	0	25	16	41	0	33
Lac Qui Parle	0	8	16	24	0	11
Lake	1	21	72	94	1	27
Lake of Woods	0	1	4	5	0	1
Le Sueur	3	54	183	240	3	68
Lincoln	2	9	20	31	2	9
Lyon	3	75	237	315	3	105
McLeod	4	100	348	452	5	146
Mahnomen	2	14	19	35	2	23
Marshall	0	10	26	36	0	18
Martin	4	60	136	200	4	79
Meeker	2	73	120	195	2	93
Mille Lacs	3	98	170	271	3	141
Morrison	5	82	193	280	5	103
Mower	4	94	403	501	4	117
Murray	4	24	24	52	4	38
Nicollet	0	86	375	461	0	118
Nobles	4	69	231	304	4	113
Norman	1	16	31	48	1	19
Olmsted	7	492	1,425	1,924	7	692
Otter Tail	9	178	549	736	9	232
Pennington	0	12	24	36	0	16
Pine	7	88	317	412	8	105
Pipestone	2	28	33	63	2	35
Polk	1	79	205	285	2	100
Pope	4	40	72	116	4	53
Ramsey	29	1,763	6,278	8,070	31	2,316
Red Lake	0	5	9	14	0	8
Redwood	0	37	96	133	0	53
Renville	4	50	87	141	4	70
Rice	4	203	592	799	4	272
Rock	1	29	64	94	1	36
Roseau	2	15	45	62	2	20
Saint Louis	14	499	1,569	2,082	15	651
Scott	12	407	1,129	1,548	13	607

Table 1.15: County Crash Report, continued

County	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Sherburne	7	274	889	1,170	7	413
Sibley	4	38	71	113	4	59
Stearns	10	451	1,414	1,875	10	627
Steele	2	112	469	583	2	154
Stevens	1	18	52	71	1	26
Swift	1	21	30	52	1	30
Todd	3	82	138	223	3	120
Traverse	0	8	13	21	0	11
Wabasha	6	48	121	175	6	66
Wadena	2	28	70	100	2	35
Waseca	1	23	141	165	1	26
Washington	8	626	1,987	2,621	9	833
Watonwan	0	25	90	115	0	35
Wilkin	1	33	112	146	1	46
Winona	5	100	249	354	5	145
Wright	10	416	1,322	1,748	11	578
Yellow Medicine	3	25	47	75	3	43
Total	418	17,367	52,481	70,266	444	23,705

Table 1.16: Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	48	2,982	8,912	11,942	50	3,968
100,000-249,999	2	380	1,056	1,438	2	532
50,000-99,999	46	3,324	10,076	13,446	48	4,576
25,000-49,999	36	2,025	6,531	8,592	40	2,689
10,000-24,999	43	2,816	10,233	13,092	46	3,821
5,000-9,999	9	924	3,095	4,028	9	1,237
2,500-4,999	13	650	1,976	2,639	15	856
1,000-2,499	42	578	1,774	2,394	45	822
Townships/Rural	179	3,688	8,828	12,695	189	5,204
Total	418	17,367	52,481	70,266	444	23,705

Table 1.17: Crashes by Type of Roadway

Type of Roadway	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Urban						
Interstate	24	1,395	6,231	7,650	27	1,821
US Trunk Hwy	13	796	3,179	3,988	13	1,123
MN Trunk Hwy	22	1,382	4,554	5,958	22	1,942
County State Aid Hwy	48	3,020	7,205	10,273	52	4,208
County Road	5	88	210	303	5	116
Township Road	0	1	9	10	0	1
Municipal State Aid Hwy	28	2,902	8,020	10,950	28	3,874
Municipal Street	14	1,731	6,042	7,787	15	2,257
Other Road	30	1,136	4,453	5,619	33	1,481
Urban Total	184	12,451	39,903	52,538	195	16,823
Rural						
Interstate	13	421	1,978	2,412	13	557
US Trunk Hwy	30	793	2,145	2,968	31	1,169
MN Trunk Hwy	80	1,164	2,517	3,761	91	1,774
County State Aid Hwy	73	1,404	2,965	4,442	75	1,912
County Road	6	200	344	550	6	260
Township Road	19	345	716	1,080	19	472
Municipal State Aid Hwy	0	18	34	52	0	20
Municipal Street	4	211	972	1,187	4	274
Other Road	9	360	907	1,276	10	444
Rural Total	234	4,916	12,578	17,728	249	6,882
All Roadways						
Interstate	37	1,816	8,209	10,062	40	2,378
US Trunk Hwy	43	1,589	5,324	6,956	44	2,292
MN Trunk Hwy	102	2,546	7,071	9,719	113	3,716
County State Aid Hwy	121	4,424	10,170	14,715	127	6,120
County Road	11	288	554	853	11	376
Township Road	19	346	725	1,090	19	473
Municipal State Aid Hwy	28	2,920	8,054	11,002	28	3,894
Municipal Street	18	1,942	7,014	8,974	19	2,531
Other Road	39	1,496	5,360	6,895	43	1,925
Total	418	17,367	52,481	70,266	444	23,705

Alcohol-Related Crashes

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. “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 Services, 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 laws call for, the number of impaired driving incidents on record is almost the same as the number of arrests.

Alcohol-related crashes

While the term “impaired driving” covers many possible types of impairment, the term “alcohol-related” is restrictive: *only* alcohol-related crashes are counted. For example, if a driver tests positive for cocaine, but negative for alcohol, the crash will not be counted in this section. A crash is classified as “alcohol-related” if any driver, pedestrian, or bicyclist is shown by a chemical test to be positive for alcohol. Thus, alcohol at the *.01-or-higher* level makes the crash alcohol-related.

In the absence of test data, if the officer reports that he or she believes the person had been drinking, or was under the influence, the crash is also classified as alcohol-related. Once a crash is so classified, no matter whether it was a driver, pedestrian, or bicyclist that was drinking, then every fatality and injury in the crash is classified as alcohol-related.

Drunk driving-related crashes

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

25,872
DWI
arrests

3,992
alcohol-
related
crashes

145
alcohol-
related
deaths

Reported perceptions are conservative

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

Important caveats to the definition

Not all alcohol-related traffic fatalities involve a drinking driver. 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, one year, ten drinking pedestrians in separate incidents died after colliding with a vehicle driven by a non-drinking driver. Additionally, the definition given above makes an assumption that the person drinking caused, or contributed significantly to the crash. Experts who study fatal traffic crashes in detail confirm that this is almost always true, but it is important to recognize that the assumption is not invariably true. There will be exceptions to the rule. Sometimes a crash is alcohol-related, but is not classified as such due to inadequate data. For example, a drunk driver may die in a crash wherein the circumstance render it impossible to test the remains for intoxicants.

“Known” versus “estimated” alcohol-related deaths

Testing drivers for alcohol is the key to accurately classifying crashes. Minnesota is much better at testing than most states. Because many drivers are still not tested, the National Highway Traffic Safety Administration (NHTSA) developed a sophisticated statistical procedure that estimates how many fatalities really were alcohol-related. The idea that a computerized statistical procedure can accurately make such estimates initially invites skepticism. However, NHTSA developed the procedure with the greatest care over many years. Tests of the procedure, performed by having it make

estimates for datasets from which critical data was removed and then comparing the estimates against the true parameters (putting back in the data that has been removed), show that the procedure is accurate to within about plus or minus one percentage point. Table 2.06 shows 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

Drinking and driving remains a serious problem in Minnesota and across the nation. For 2022, the National Safety Council has made a conservative estimate of \$408 million as the cost of alcohol-related crashes in Minnesota. Predictably, there is a strong positive relationship between alcohol use and crash severity. That is, as crash severity increases, alcohol is more likely to have been a factor in the crash. This connection can be seen in the Figure 2.01 graph.

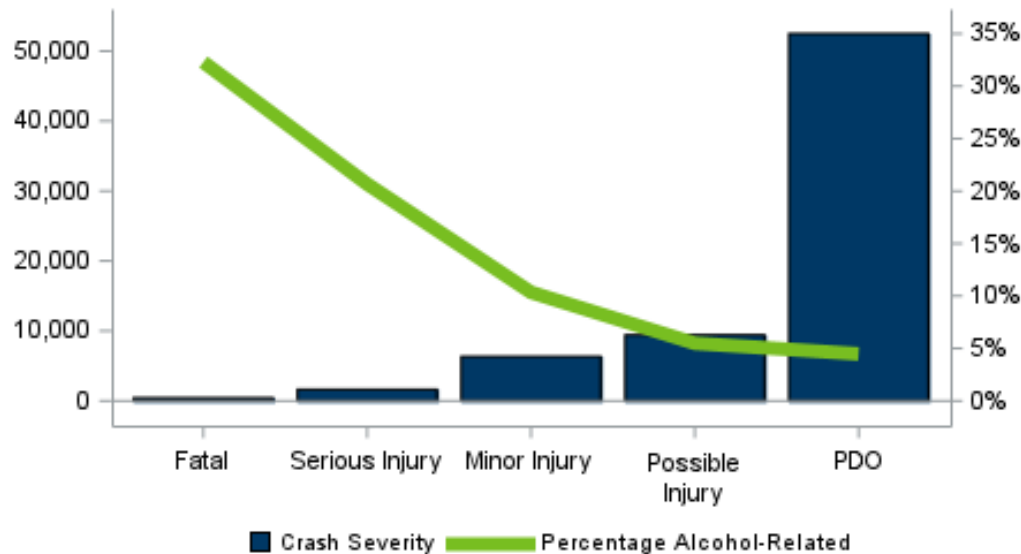
1 in 7

**Minnesota drivers has a
DWI
on record**

Over 40%

**will
re-offend**

Figure 2.01: Percentage of Alcohol-Related Crashes by Crash Severity



Drinking drivers themselves pay the price

Young people may have better reflexes than their elders, but as drivers they take more risks and have less experience than older people. They pay a clear price for this. Drivers aged 15-34 accounted for 26% of all traffic deaths and for 9% of the alcohol-related deaths. It is also the drinkers themselves who are more likely to pay the price for their dangerous behavior. In 2022, 90 (62%) of the 145 people who died in alcohol-related crashes were themselves the people whose drinking behavior was a main factor which led to the crash to be classified as alcohol-related. In short, drinking drivers, pedestrians and bicyclists mostly kill and injure themselves.

Majority
of alcohol-related fatalities
test above the legal limit

.15 BAC
is the average BAC in fatal
alcohol-related crashes

Success story in Minnesota

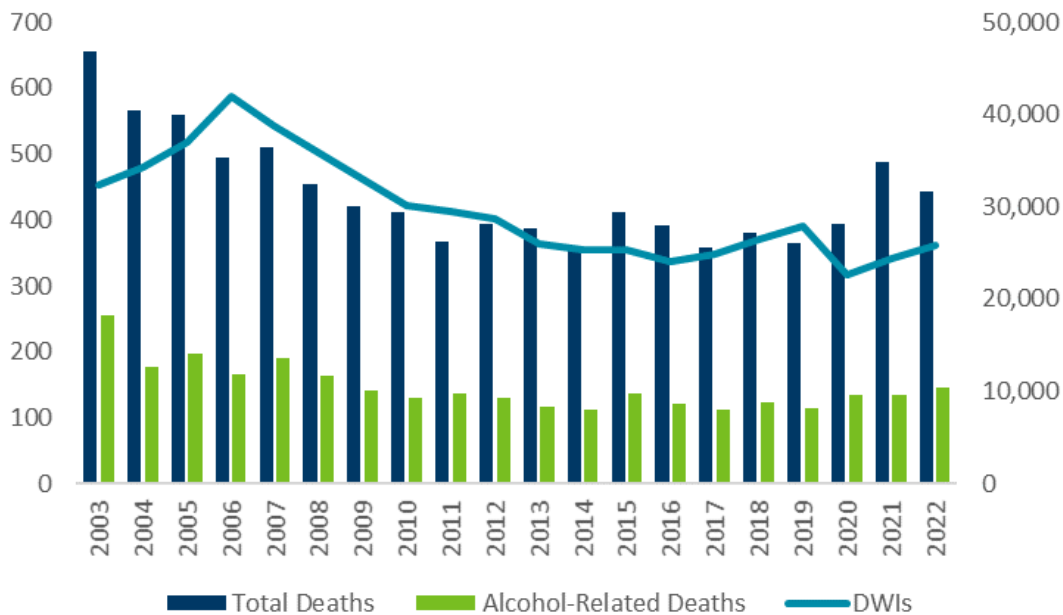
In reality, the percentage of alcohol-related traffic fatalities in Minnesota has steadily decreased in the past half-century. In the 1960s, around 60% of all traffic deaths per year were alcohol-related. Today, this percentage hovers around 33%. This is a great success story for Minnesota and the nation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

Changes in drinking and driving behaviors are evidenced by reductions in alcohol-related crashes and the percentage of total deaths that are alcohol-related. In 1998, 42% of all traffic fatalities were alcohol-related; this number has decreased 10% in the past decade.

Table 2.01: Overview of Traffic Safety and Alcohol Statistics

Year	Total Deaths	DWIs	Deaths (Any)		Deaths .08%+		Deaths Drunk Driving (.08%+)	
			Alcohol	% of Total Deaths	Alcohol	% of Total Deaths	Alcohol	% of Total Deaths
2013	387	26,032	117	30%	95	25%	81	21%
2014	361	25,386	111	31%	91	25%	88	24%
2015	411	25,027	137	33%	107	26%	95	23%
2016	392	23,392	121	31%	90	23%	73	19%
2017	358	24,862	113	32%	84	23%	72	20%
2018	381	26,414	123	32%	96	25%	84	22%
2019	364	27,378	114	31%	107	29%	89	24%
2020	394	22,653	135	34%	89	23%	79	20%
2021	488	24,324	135	28%	83	17%	74	15%
2022	444	25,872	145	33%	96	22%	86	19%

Figure 2.02: Portion of Total Deaths and Alcohol-Related Deaths to DWIs



Minnesota’s legal limit was lowered from .10 to .08 in 2005.

A look at age and gender

In Minnesota, a person can legally buy alcohol at age 21 and drinking and driving too often follows that. Impaired driving is essentially a problem among young adults and males. When gender was stated, males made up 71% of the DWI offenders in 2022. Those age 20 to 34 years old incurred 48% of the DWI incidents in 2022. Regarding alcohol-related crashes, those age 20 to 34 years old suffered 38% of the fatalities and 23% of the serious injuries.

Figure 2.03: Impaired Driving Incidents (“DWIs”) by Age Group

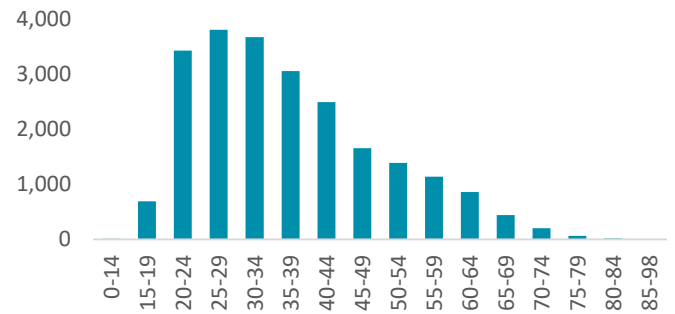


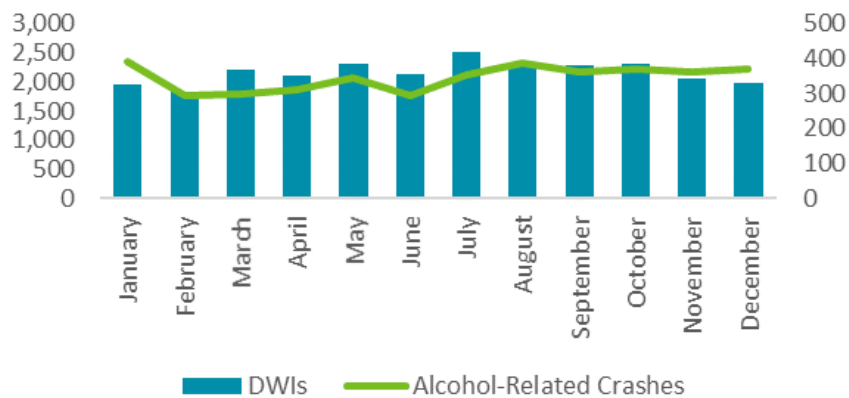
Table 2.02: Age of Persons Killed and Injured in All Crashes and Alcohol-Related Crashes

Age Group	Killed	Alcohol Related	Serious Injuries	Alcohol Related	Minor Injuries	Alcohol Related	Possible Injuries	Alcohol Related	Total Injuries	Alcohol Related
00-04	7	0	9	1	78	4	244	14	331	19
05-09	3	0	24	2	154	10	270	11	448	23
10-14	5	1	46	2	213	14	378	14	637	30
15	1	1	25	1	82	5	129	7	236	13
16	7	2	47	3	181	18	311	5	539	26
17	6	1	37	4	233	14	319	13	589	31
18	8	4	41	11	243	23	351	17	635	51
19	8	3	46	13	220	16	299	19	565	48
20	5	3	40	14	165	20	330	18	535	52
<21	50	15	315	51	1,569	124	2,631	118	4,515	293
00-14	15	1	79	5	445	28	892	39	1,416	72
15-19	30	11	196	32	959	76	1,409	61	2,564	169
20-24	27	12	212	65	931	141	1,583	131	2,726	337
25-29	28	14	162	67	818	137	1,337	111	2,317	315
30-34	29	16	187	54	747	116	1,302	94	2,236	264
35-39	37	16	183	56	639	78	1,127	81	1,949	215
40-44	38	24	136	27	534	69	1,056	72	1,726	168
45-49	32	13	109	23	470	70	901	65	1,480	158
50-54	33	10	130	26	449	46	891	49	1,470	121
55-59	39	9	131	18	482	49	811	37	1,424	104
60-64	30	5	140	27	453	29	709	31	1,302	87
65-69	22	5	84	15	355	32	603	28	1,042	75
70-74	24	2	69	6	287	13	426	24	782	43
75-79	22	4	35	3	198	5	273	5	506	13
80-84	18	1	30	1	131	3	155	3	316	7
85+	20	2	17	0	96	1	132	2	245	3
Unk	0	0	11	2	53	3	140	5	204	10
Total	444	145	1,911	427	8,047	896	13,747	838	23,705	2,161

Table 2.03: Alcohol-Related Crashes by Month

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
January	4	117	271	392	4	163
February	8	91	196	295	8	132
March	5	98	194	297	6	129
April	9	101	199	309	9	143
May	13	140	192	345	13	207
June	9	133	152	294	10	187
July	20	147	186	353	20	206
August	21	162	204	387	25	227
September	16	155	190	361	18	218
October	13	153	204	370	15	196
November	10	151	198	359	10	211
December	7	108	255	370	7	142
Total	135	1,556	2,441	4,132	145	2,161

Figure 2.04: Drunk Driving Arrests (“DWIs”) with Alcohol-Related Crashes by Month



27%
DWIs in
summertime

July
had the most
DWIs

When the alcohol-related crashes occur: weekends, late night

Most alcohol-related crashes occur on Fridays, Saturdays and Sundays. Combined, these three days accounted for 40% of all traffic crashes, but 60% of the alcohol-related crashes.

The late night hours 9pm to 3am accounted for 13% of all crashes, but 48% of the alcohol-related crashes.

Figure 2.05: Alcohol-Related Crashes by Day of Week

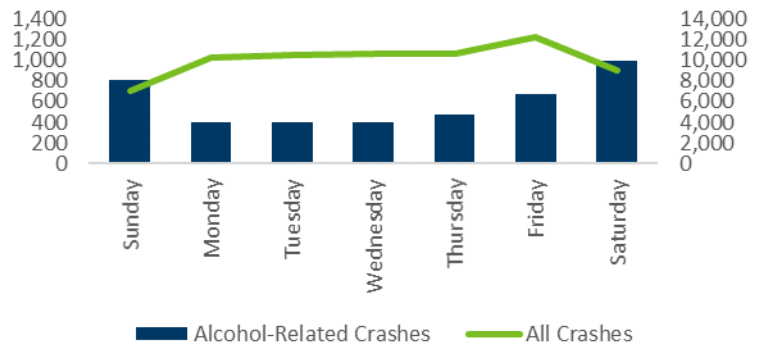


Figure 2.06: Alcohol-Related Crashes by Time of Day



Figure 2.07: Heat Map of Alcohol-Related Crashes

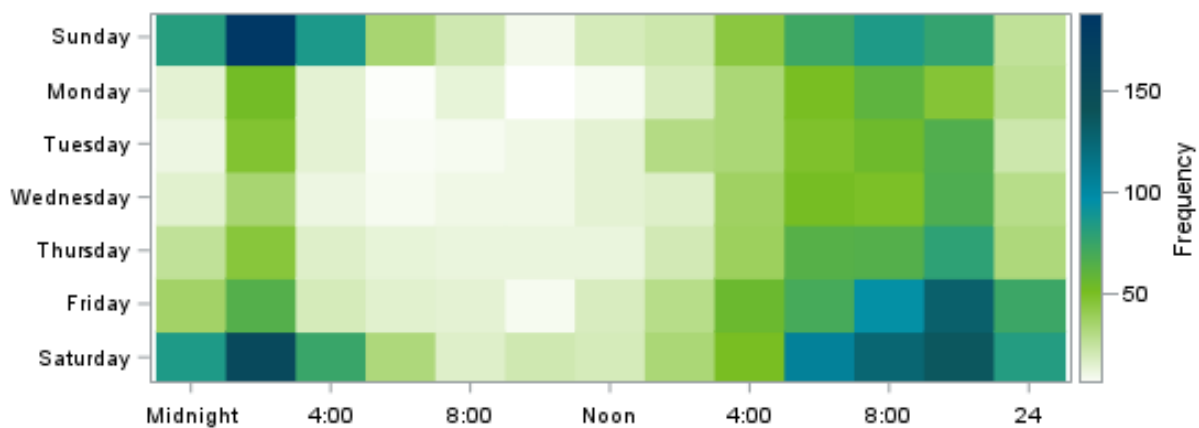


Table 2.04: Alcohol-Related Crashes by Roadway Type

Roadway Type	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Interstate	12	158	284	454	13	229
US Trunk Hwy	11	145	203	359	11	210
MN Trunk Hwy	32	200	311	543	36	305
County State Aid Hwy	37	433	517	987	41	613
County Road	3	33	34	70	3	40
Township Road	9	77	73	159	9	100
Municipal State Aid Hwy	11	188	331	530	11	238
Municipal Street	7	165	386	558	8	216
Other Road	13	157	302	472	13	210
Total	135	1,556	2,441	4,132	145	2,161

Table 2.05: First Harmful Event in Fatal Alcohol-Related Crashes and All Fatal Crashes

First Harmful Event	Number of Fatal Crashes	% of Fatal Crashes	Number of Alcohol-Related Fatal Crashes	% of Alcohol-Related Fatal Crashes
Collision with:				
Another Motor Vehicle	200	47.8%	45	33.3%
Fixed Object	84	20.1%	37	27.4%
Pedestrian	43	10.3%	19	14.1%
Bicycle	6	1.4%	3	2.2%
Parked Motor Vehicle	2	0.5%	1	0.7%
Deer/Other Animal	8	1.9%	1	0.7%
Railroad Train	1	0.2%	0	0.0%
Unknown Collision w/ Fixed Object	1	0.2%	0	0.0%
Non-Collision:				
Overturn/Rollover	55	13.2%	26	19.3%
Submersion	1	0.2%	1	0.7%
Other Non-Collision	17	4.1%	2	1.5%
Total	418	100%	135	100%

Test results for killed drivers

Minnesota is consistently at or near the top among the states in the proportion of drivers in fatal crashes who are tested for alcohol. Also, NHTSA developed a procedure (explained on page 29) that compensates for missing data. In 2022, there were 332 motor vehicle drivers who were killed. Of the 332 killed drivers, the Department of Public Safety was able to obtain alcohol test results for 192 (58%). Of the 192 tested, 119 (62%) tested negative, 13 (7%) tested between .01 and .07, 4 (2%) tested between .08 and .09 and 56 (29%) tested .10 or greater.

Figure 2.08: Percent of Drivers Killed Who Had Been Drinking, by Age

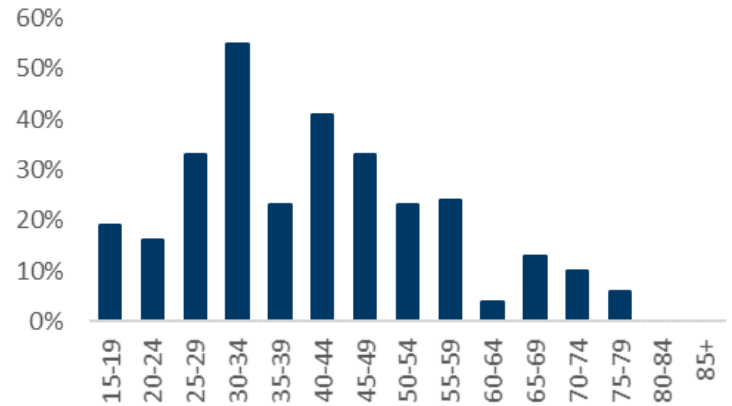


Table 2.06: Alcohol-Related Fatal Crash Summary, 2013-2022

Year	Alcohol Test Results on Killed Drivers											All Traffic Fatalities				
	Drivers Killed			Results on Drivers Tested								Drunk Driving-Related Fatalities**				
	Total	Tested for Alcohol		Negative for Alcohol		.01 to .07 Alcohol		.08 to .09 Alcohol		.10 or Higher Alcohol		Total Killed	Known*		Estimated**	
		N	% of Tested	N	% of Tested	N	% of Tested	N	% of Tested	N	% of Tested		N	% of Total	N	% of Total
2013	259	219	85%	151	69%	10	5%	3	1%	55	25%	387	81	21%	112	29%
2014	248	200	81%	129	65%	8	4%	3	2%	60	30%	361	88	24%	119	33%
2015	289	239	83%	139	58%	22	9%	6	3%	72	30%	411	95	23%	115	28%
2016	263	209	79%	139	67%	12	6%	2	1%	56	27%	392	73	19%	94	24%
2017	252	207	82%	144	70%	11	5%	2	1%	50	24%	358	72	20%	104	29%
2018	265	222	84%	139	63%	13	6%	11	5%	59	27%	381	84	22%	110	29%
2019	237	202	85%	137	68%	3	1%	4	2%	58	29%	364	89	24%	102	28%
2020	277	75	27%	12	16%	3	4%	4	5%	56	75%	394	79	20%	118	30%
2021	351	171	49%	108	63%	11	6%	0	0%	52	30%	488	74	15%	***	***
2022	332	192	58%	119	62%	13	7%	4	2%	56	29%	444	86	19%	***	***

* For explanation of the difference between “known” and “estimated” alcohol-related fatalities, see page 29.

** Starting in 2013, NHTSA improved its method of estimating the true percentage of alcohol-related fatalities for each year. This percentage is based on impaired-related fatalities and excludes pedestrians and bicyclists.

*** Data not available at time of printing.

Table 2.07: Driver Fatalities' Level of Alcohol Concentration by Age

Age	Killed Tested		Alcohol Concentration													
			0.00		.01 - .07		.08 - .09		.10 - .14		.15 - .19		.20 - .24		.25+	
			#	%	#	%	#	%	#	%	#	%	#	%	#	%
00-14	2	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
15-19	21	11	7	63.6%	1	9.1%	0	0.0%	2	18.2%	0	0.0%	0	0.0%	1	9.1%
20-24	19	14	11	78.6%	0	0.0%	0	0.0%	0	0.0%	3	21.4%	0	0.0%	0	0.0%
25-29	24	14	6	42.9%	1	7.1%	0	0.0%	2	14.3%	2	14.3%	2	14.3%	1	7.1%
30-34	22	18	6	33.3%	2	11.1%	1	5.6%	4	22.2%	2	11.1%	2	11.1%	1	5.6%
35-39	31	19	12	63.2%	3	15.8%	0	0.0%	0	0.0%	1	5.3%	3	15.8%	0	0.0%
40-44	29	20	8	40.0%	3	15.0%	0	0.0%	1	5.0%	6	30.0%	1	5.0%	1	5.0%
45-49	27	16	7	43.8%	0	0.0%	1	6.3%	2	12.5%	1	6.3%	4	25.0%	1	6.3%
50-54	22	14	9	64.3%	1	7.1%	0	0.0%	1	7.1%	1	7.1%	1	7.1%	1	7.1%
55-59	29	20	13	65.0%	0	0.0%	1	5.0%	1	5.0%	2	10.0%	2	10.0%	1	5.0%
60-64	25	12	11	91.7%	1	8.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
65-69	15	7	5	71.4%	0	0.0%	0	0.0%	0	0.0%	2	28.6%	0	0.0%	0	0.0%
70-74	21	8	6	75.0%	1	12.5%	0	0.0%	0	0.0%	0	0.0%	1	12.5%	0	0.0%
75-79	17	7	6	85.7%	0	0.0%	1	14.3%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
80-84	14	7	7	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
85+	14	4	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	332	192	119	62.0%	13	6.8%	4	2.1%	13	6.8%	20	10.4%	16	8.3%	7	3.6%

Table 2.08: Drunk Driving-Related Fatalities and Alcohol-Related Injuries by Gender and Traffic Role

	Male		Female		Total Killed	Male		Female		Total Possible Injuries	Total Injuries
	Killed	Killed	Serious Injuries	Serious Injuries		Minor Injuries	Minor Injuries	Possible Injuries	Possible Injuries		
Driver	12	60	72	61	210	207	459	208	405	1,566	
Passenger	7	6	13	59	42	94	86	116	80	493	
Pedestrian	0	1	1	12	28	10	25	3	10	88	
Bicyclist	0	0	0	1	4	1	2	0	1	14	
Total	19	67	86	133	284	312	572	327	496	2,161	

Note: Sometimes gender is not reported on the crash report. This causes the total to be greater than the sum of serious, minor and possible injury columns. The term drunk driving-related pertains to fatal motor vehicle crashes in which a driver tests positive for alcohol at the .08% level or above.

Occupant Protection

A brief history of restraint legislation

Over the years, the Minnesota Legislature enacted laws mandating safety equipment use. The Child Passenger Protection Act took effect in 1982 requiring children under age four to be properly restrained in a federally approved child car seat. The state's safety belt law went into effect in 1986 requiring all front seat occupants (and children ages four through ten, regardless of seating position) to be restrained. The 1986 belt law was 'Secondary' in nature. Thus, an officer could not issue a citation for non-belt use unless there was another moving violation. In 2009 the law was updated to 'Primary'. In addition, passengers in all seating positions must wear a seat belt or be in the correct child restraint (including children aged four through seven, who must be in a 'booster seat').

Restraint use studies

Observational surveys of safety belt use conducted annually at random sites show that legislation affects safety belt wearing behavior, thus, saving lives and preventing injuries. In June 1986, just 20% of front seat occupants used seat belts. Since then, the usage rate has increased, as seen in Figure 3.01. No study was conducted in 2020.

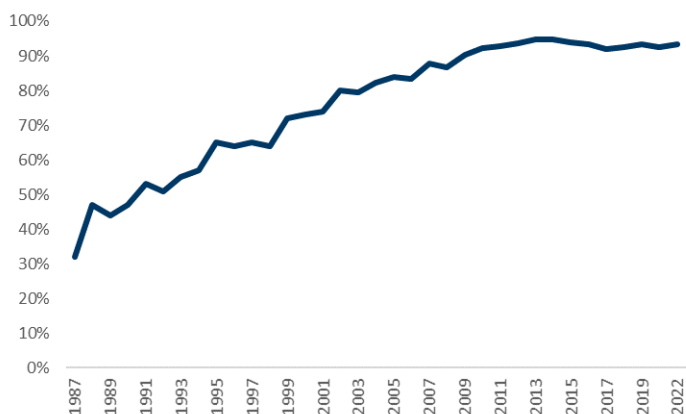
Minnesota usage rates for 2022 were:

93.3%
overall
use rate

87.0%
male
use rate

95.5%
female
use rate

Figure 3.01: Seat Belt Usage Trends



Seatbelts save over
15,000
lives every year

Figure 3.02: Seat Belt Usage by Vehicle Type

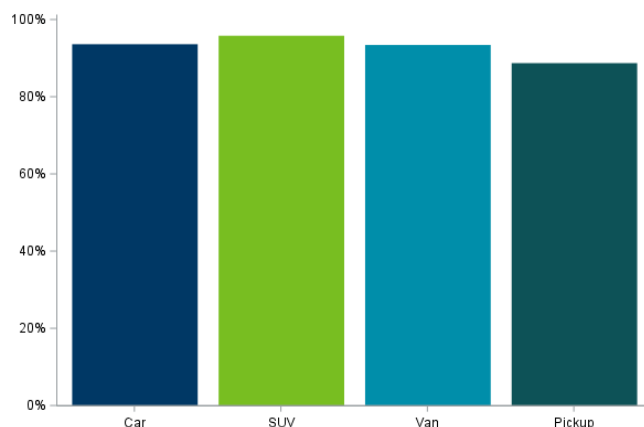


Table 3.01: Motor Vehicle Occupants Killed or Injured by Ejection Status

Ejection Status	Killed	Serious Injuries	Minor Injuries	Possible Injuries	Total Killed or Injured
Ejected	38	56	28	7	129
Not Ejected	238	1,122	6,717	12,771	20,848
Not Stated	9	56	103	194	362
Partially Ejected	10	8	17	22	57
Total	295	1,242	6,865	12,994	21,396

Figure 3.03: Safety Equipment Use by Motor Vehicle Occupants Killed or Injured

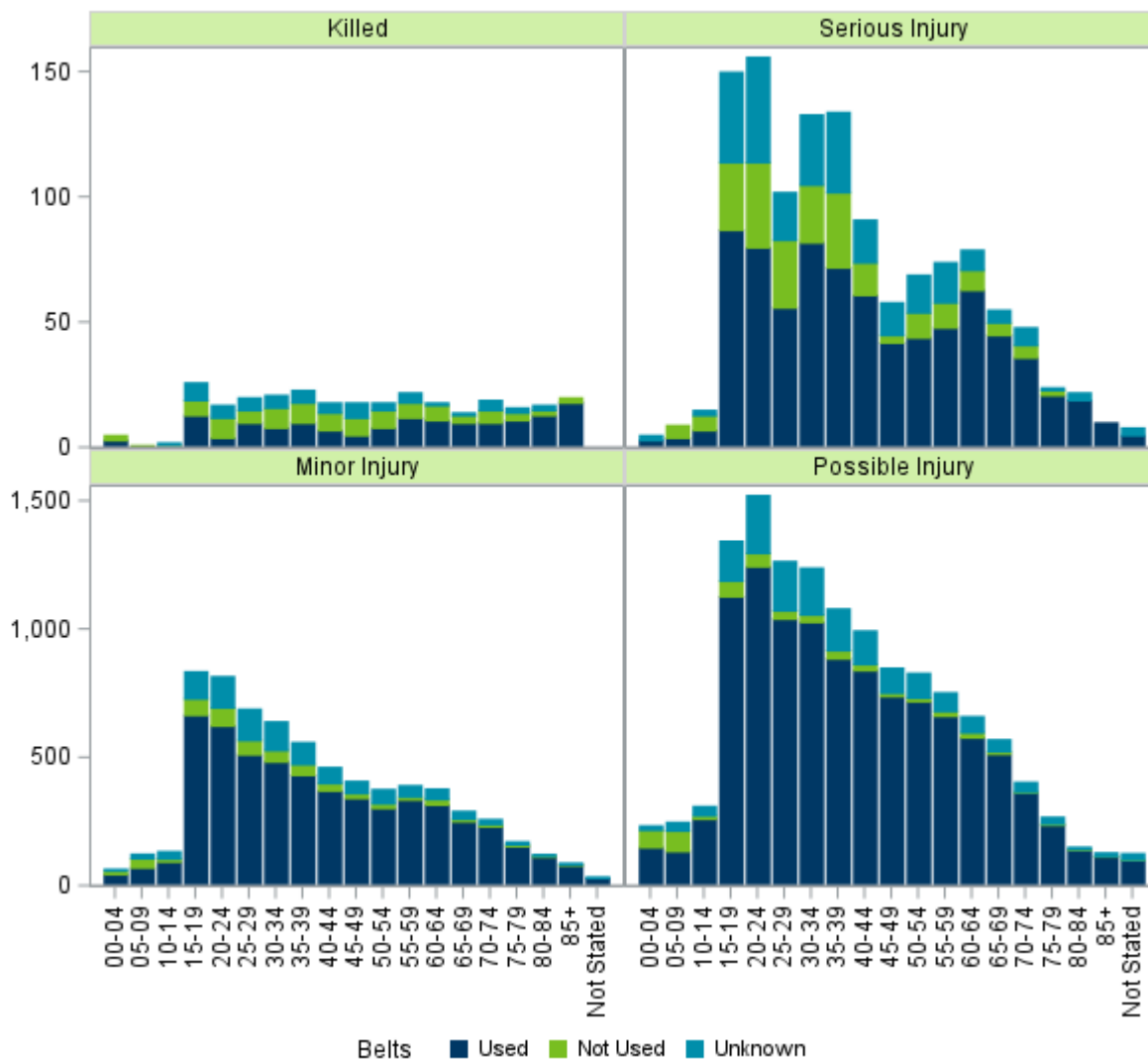


Figure 3.04: Safety Equipment Use Counts by Motor Vehicle Occupants Where Gender and Injury Severity is Known

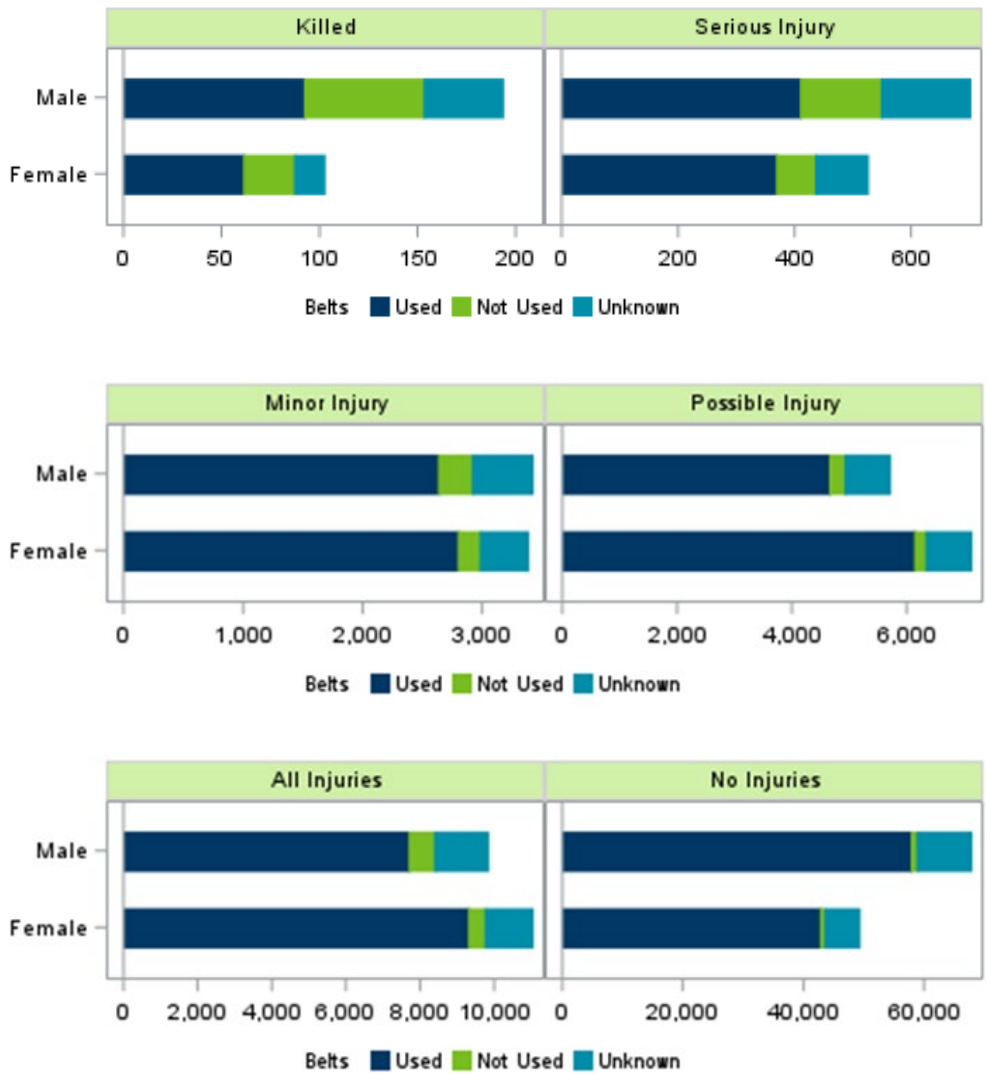


Table 3.02: Motor Vehicle Occupants Killed or Injured by Seat Belt Usage

Seat Belt Usage	Fatalities		Serious Injuries		Total Injuries	
	#	%	#	%	#	%
Not Used	87	29.5%	208	16.7%	1,163	5.5%
Unknown	55	18.6%	249	20.0%	2,780	13.2%
Used	153	51.9%	785	63.2%	17,158	81.3%

Regional differences in seat belt usage rates

While it is true that Minnesota has a high seat belt compliance rate, a marked difference exists in different regions across the state. The annual statewide seat belt observational study and localized observational studies conducted by TZD experts, attitudinal surveys and crash reports have all documented these regional differences. Notably, the Northwest region of the state has the lowest seat belt usage rate.

Table 3.03: Safety Equipment Use by Motor Vehicle Occupants Killed or Injured by Region of the State

Region	Used	Not Used	Unknown	Killed or Injured
Metropolitan	79.6%	4.2%	16.2%	12,649
Central	84.9%	7.0%	8.1%	2,960
Northeast	82.8%	8.2%	9.0%	938
Northwest	78.6%	11.3%	10.1%	415
South Central	81.6%	7.6%	10.8%	787
Southeast	84.4%	7.3%	8.3%	1,745
Southwest	77.9%	11.5%	10.6%	1,069
West Central	81.8%	9.5%	8.8%	833
Statewide	80.9%	5.8%	13.3%	21,396

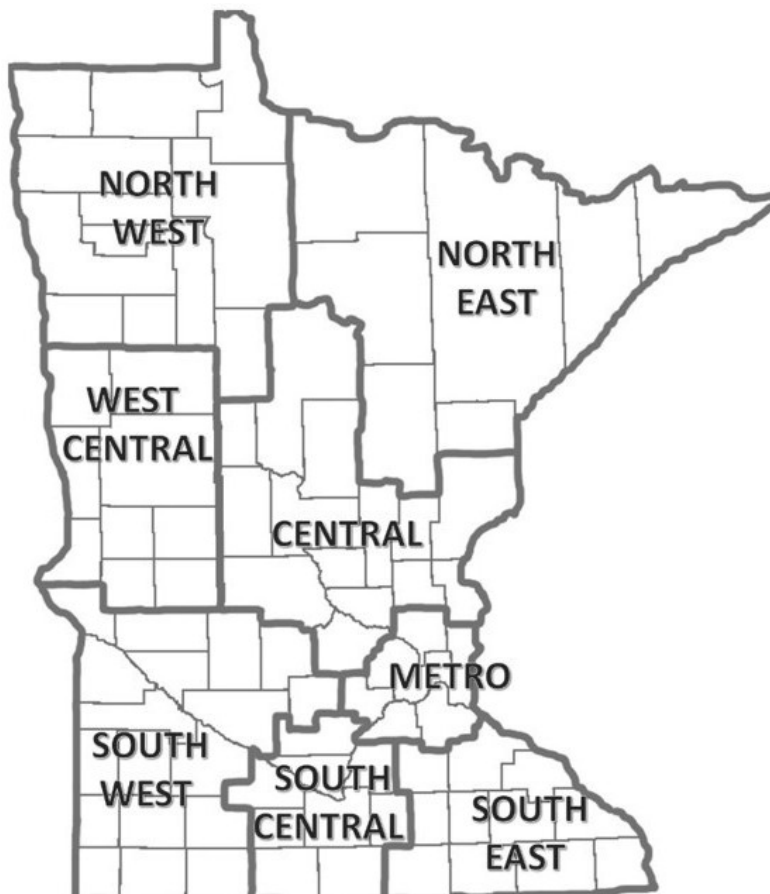


Table 3.04: Safety Equipment Use by Motor Vehicle Occupants Killed or Injured, by Age and Injury Severity

Age Group	Restraint Use	Fatalities		Serious		Minor		Possible		Total Injuries	
		N	%	N	%	N	%	N	%	N	%
0-3 Years	Not Used	2	33.3%	0	0.0%	9	6.3%	48	12.4%	57	10.5%
	Unknown	0	0.0%	1	8.3%	4	2.8%	10	2.6%	15	2.8%
	Used	3	50.0%	3	25.0%	31	21.7%	120	31.1%	154	28.5%
Subtotal		5	83.3%	4	33.3%	44	30.8%	178	46.1%	226	41.8%
4-7 Years	Not Used	1	16.7%	5	41.7%	38	26.6%	92	23.8%	135	25.0%
	Unknown	0	0.0%	1	8.3%	11	7.7%	24	6.2%	36	6.7%
	Used	0	0.0%	2	16.7%	50	35.0%	92	23.8%	144	26.6%
Subtotal		1	16.7%	8	66.7%	99	69.2%	208	53.9%	315	58.2%
Total 0-7 Years	Not Used	3	50.0%	5	41.7%	47	32.9%	140	36.3%	192	35.5%
	Unknown	0	0.0%	2	16.7%	15	10.5%	34	8.8%	51	9.4%
	Used	3	50.0%	5	41.7%	81	56.6%	212	54.9%	298	55.1%
Total		6	100.0%	12	100.0%	143	100.0%	386	100.0%	541	100.0%
00-04 Years	Not Used	2	0.7%	0	0.0%	14	0.2%	68	0.5%	82	0.4%
	Unknown	0	0.0%	2	0.2%	6	0.1%	16	0.1%	24	0.1%
	Used	3	1.0%	3	0.2%	46	0.7%	151	1.2%	200	0.9%
Subtotal		5	1.7%	5	0.4%	66	1.0%	235	1.8%	306	1.5%
05-09 Years	Not Used	1	0.3%	5	0.4%	36	0.5%	80	0.6%	121	0.6%
	Unknown	0	0.0%	0	0.0%	17	0.2%	33	0.3%	50	0.2%
	Used	0	0.0%	4	0.3%	72	1.0%	136	1.0%	212	1.0%
Subtotal		1	0.3%	9	0.7%	125	1.8%	249	1.9%	383	1.8%
10-14 Years	Not Used	1	0.3%	6	0.5%	12	0.2%	13	0.1%	31	0.1%
	Unknown	1	0.3%	2	0.2%	28	0.4%	36	0.3%	66	0.3%
	Used	0	0.0%	7	0.6%	95	1.4%	262	2.0%	364	1.7%
Subtotal		2	0.7%	15	1.2%	135	2.0%	311	2.4%	461	2.2%
15-19 Years	Not Used	6	2.0%	27	2.2%	64	0.9%	61	0.5%	152	0.7%
	Unknown	7	2.4%	36	2.9%	105	1.5%	155	1.2%	296	1.4%
	Used	13	4.4%	87	7.0%	667	9.7%	1,129	8.7%	1,883	8.9%
Subtotal		26	8.8%	150	12.1%	836	12.2%	1,345	10.4%	2,331	11.0%
20-24 Years	Not Used	8	2.7%	34	2.7%	71	1.0%	52	0.4%	157	0.7%
	Unknown	5	1.7%	42	3.4%	121	1.8%	225	1.7%	388	1.8%
	Used	4	1.4%	80	6.4%	625	9.1%	1,246	9.6%	1,951	9.2%
Subtotal		17	5.8%	156	12.6%	817	11.9%	1,523	11.7%	2,496	11.8%
25-29 Years	Not Used	5	1.7%	27	2.2%	56	0.8%	32	0.2%	115	0.5%
	Unknown	5	1.7%	19	1.5%	121	1.8%	192	1.5%	332	1.6%
	Used	10	3.4%	56	4.5%	513	7.5%	1,042	8.0%	1,611	7.6%
Subtotal		20	6.8%	102	8.2%	690	10.1%	1,266	9.7%	2,058	9.8%
30-34 Years	Not Used	8	2.7%	23	1.9%	45	0.7%	29	0.2%	97	0.5%
	Unknown	5	1.7%	28	2.3%	111	1.6%	182	1.4%	321	1.5%
	Used	8	2.7%	82	6.6%	485	7.1%	1,029	7.9%	1,596	7.6%
Subtotal		21	7.1%	133	10.7%	641	9.3%	1,240	9.5%	2,014	9.5%
35-39 Years	Not Used	8	2.7%	30	2.4%	42	0.6%	32	0.2%	104	0.5%
	Unknown	5	1.7%	32	2.6%	85	1.2%	162	1.2%	279	1.3%
	Used	10	3.4%	72	5.8%	433	6.3%	887	6.8%	1,392	6.6%
Subtotal		23	7.8%	134	10.8%	560	8.2%	1,081	8.3%	1,775	8.4%

Table 3.04: Safety Equipment Use by Motor Vehicle Occupants Killed or Injured, by Age and Injury Severity, continued

Age	Restraint	Fatalities		Serious		Minor		Possible		Total Injuries	
		N	%	N	%	N	%	N	%	N	%
40-44 Years	Not Used	7	2.4%	13	1.0%	29	0.4%	24	0.2%	66	0.3%
	Unknown	4	1.4%	17	1.4%	62	0.9%	130	1.0%	209	1.0%
	Used	7	2.4%	61	4.9%	372	5.4%	841	6.5%	1,274	6.0%
Subtotal		18	6.1%	91	7.3%	463	6.7%	995	7.7%	1,549	7.3%
45-49 Years	Not Used	7	2.4%	3	0.2%	19	0.3%	13	0.1%	35	0.2%
	Unknown	6	2.0%	13	1.0%	47	0.7%	97	0.7%	157	0.7%
	Used	5	1.7%	42	3.4%	343	5.0%	740	5.7%	1,125	5.3%
Subtotal		18	6.1%	58	4.7%	409	6.0%	850	6.5%	1,317	6.2%
50-54 Years	Not Used	7	2.4%	10	0.8%	18	0.3%	14	0.1%	42	0.2%
	Unknown	3	1.0%	15	1.2%	55	0.8%	96	0.7%	166	0.8%
	Used	8	2.7%	44	3.5%	304	4.4%	720	5.5%	1,068	5.1%
Subtotal		18	6.1%	69	5.6%	377	5.5%	830	6.4%	1,276	6.0%
55-59 Years	Not Used	6	2.0%	10	0.8%	12	0.2%	19	0.1%	41	0.2%
	Unknown	4	1.4%	16	1.3%	43	0.6%	72	0.6%	131	0.6%
	Used	12	4.1%	48	3.9%	337	4.9%	663	5.1%	1,048	5.0%
Subtotal		22	7.5%	74	6.0%	392	5.7%	754	5.8%	1,220	5.8%
60-64 Years	Not Used	6	2.0%	8	0.6%	22	0.3%	20	0.2%	50	0.2%
	Unknown	1	0.3%	8	0.6%	40	0.6%	62	0.5%	110	0.5%
	Used	11	3.7%	63	5.1%	317	4.6%	579	4.5%	959	4.5%
Subtotal		18	6.1%	79	6.4%	379	5.5%	661	5.1%	1,119	5.3%
65-69 Years	Not Used	3	1.0%	5	0.4%	10	0.1%	10	0.1%	25	0.1%
	Unknown	1	0.3%	5	0.4%	30	0.4%	46	0.4%	81	0.4%
	Used	10	3.4%	45	3.6%	252	3.7%	515	4.0%	812	3.8%
Subtotal		14	4.7%	55	4.4%	292	4.3%	571	4.4%	918	4.4%
70-74 Years	Not Used	5	1.7%	5	0.4%	9	0.1%	3	0.0%	17	0.1%
	Unknown	4	1.4%	7	0.6%	19	0.3%	38	0.3%	64	0.3%
	Used	10	3.4%	36	2.9%	232	3.4%	364	2.8%	632	3.0%
Subtotal		19	6.4%	48	3.9%	260	3.8%	405	3.1%	713	3.4%
75+ Years	Not Used	7	2.4%	2	0.2%	14	0.2%	10	0.1%	26	0.1%
	Unknown	4	1.4%	4	0.3%	23	0.3%	47	0.4%	74	0.4%
	Used	42	14.2%	50	4.0%	350	5.1%	494	3.8%	894	4.2%
Subtotal		53	18.0%	56	4.5%	387	5.6%	551	4.2%	994	4.7%
Age Not Stated	Not Used	0	0.0%	0	0.0%	0	0.0%	2	0.0%	2	0.0%
	Unknown	0	0.0%	3	0.2%	5	0.1%	24	0.2%	32	0.2%
	Used	0	0.0%	5	0.4%	31	0.5%	101	0.8%	137	0.6%
Subtotal		0	0.0%	8	0.6%	36	0.5%	127	1.0%	171	0.8%
All Ages	Not Used	87	29.5%	208	16.7%	473	6.9%	482	3.7%	1,163	5.5%
	Unknown	55	18.6%	249	20.0%	918	13.4%	1,613	12.4%	2,780	13.2%
	Used	153	51.9%	785	63.2%	5,474	79.7%	10,899	83.9%	17,158	81.3%
Total		295	100.0%	1,242	100.0%	6,865	100.0%	12,994	100.0%	21,101	100.0%

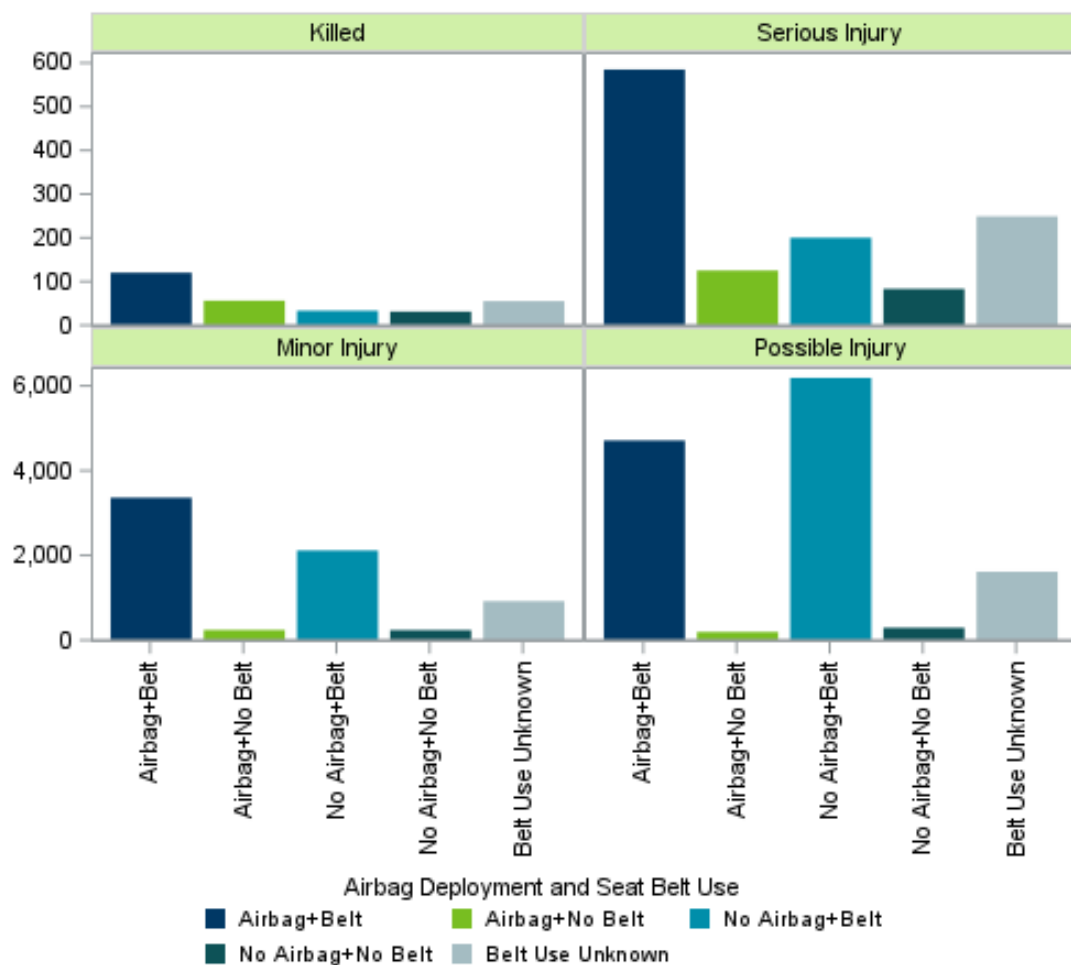
Percentages may not sum to 100% due to rounding. Persons aged 0 through 3 and 4 through 7 years old are categorized separately because Minnesota law makes special provisions for these age groups.

Table 3.05: Safety Equipment Use by Motor Vehicle Occupants Killed or Injured by Roadway Type

Roadway Type	Used		Not Used		Unknown		Total	
	#	%	#	%	#	%	#	%
Interstate	2,094	89.7%	166	7.1%	75	3.2%	2,335	100%
US Trunk Hwy	1,952	88.5%	141	6.4%	113	5.1%	2,206	100%
MN Trunk Hwy	3,032	86.2%	218	6.2%	267	7.6%	3,517	100%
CSAH	4,322	78.4%	288	5.2%	901	16.3%	5,511	100%
County Road	251	74.7%	35	10.4%	50	14.9%	336	100%
Township Road	278	70.7%	59	15.0%	56	14.2%	393	100%
MSAH	2,590	76.7%	134	4.0%	653	19.3%	3,377	100%
Municipal Street	1,480	71.0%	110	5.3%	494	23.7%	2,084	100%
Other Road	1,312	80.1%	99	6.0%	226	13.8%	1,637	100%
Total	17,311	80.9%	1,250	5.8%	2,835	13.3%	21,396	100%

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

Figure 3.05: Airbag Deployment by Injury Severity



Motorcycle Crashes

Motorcycle crash summary

After decades of increasing motorcycle registrations and licenses, Minnesota started seeing declining registrations in 2015 and operator licenses in 2016. Motorcycle crashes have decreased over the decades as well, but counts do fluctuate due to Minnesota weather determining the length of the riding season each year. Nevertheless, motorcyclist crash involvement remains very worrisome to traffic safety officials. When a motorcycle is involved in a crash, the chances for a fatality are greatly increased.

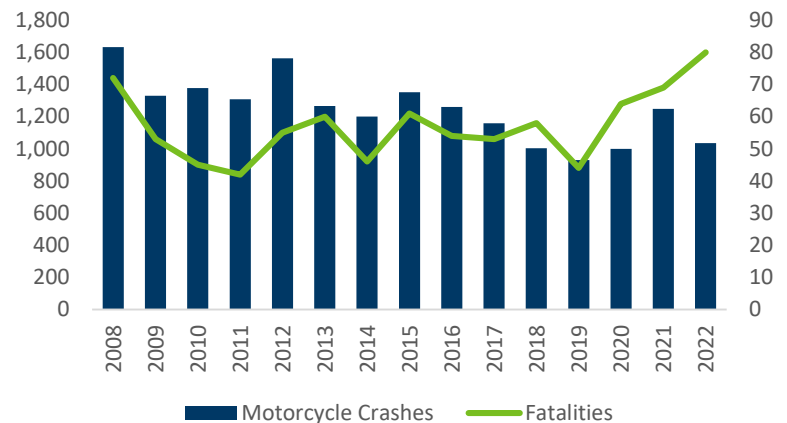
2022 Motorcycle Stats:

80 motor- cyclists killed	883 motor- cyclists injured	7.5 fatal crash rate (per 100)
--	--	---

Helmet use

Minnesota does not have a mandatory helmet use law for motorcyclists 18 or older. Laws may be debated, but the benefits helmets offer are clear; they protect the head in the event of a crash. In 2022, only 21 (26%) of the 80 motorcycle riders killed were known to be wearing a helmet. Of the 883 motorcyclists injured, only 392 (44%) were known to be wearing a helmet.

Figure 4.01: Motorcycle Crash Trends



Operator training is essential

In addition to the newly endorsed younger drivers each year, a large number of middle-aged people are returning to motorcycling. The crash data indicates the importance of proper operator training. In 2022, 29% of motorcycle operators that were involved in a fatal crash did not have a valid endorsement to drive a motorcycle. Further training is needed for a large segment of the motorcycle driver population.

87%
motorcyclist
fatalities and injuries
are males

Table 4.01: Motorcycle Crash Summary

Year	Motorcycle Crashes				Killed		Injured		Licensed Operators	Registered Motorcycles	Fatal Crash Rate Per 100 Crashes		
	Fatal	Injury	PDO	Total	Mcy	Other	Mcy	Other			Reg. Mcy	Mcy Crashes	All Crashes
2013	59	1,047	160	1,266	60	2	1,143	52	409,943	235,909	2.5	4.7	0.5
2014	44	1,005	152	1,201	46	1	1,117	44	414,346	236,040	1.9	3.7	0.4
2015	58	1,103	191	1,352	61	1	1,232	81	414,782	238,243	2.6	4.3	0.5
2016	54	1,042	164	1,260	54	6	1,153	78	416,967	227,746	2.4	4.3	0.5
2017	52	944	163	1,159	53	1	1,046	63	416,693	223,443	2.4	4.5	0.4
2018	57	819	128	1,004	58	1	913	39	414,580	223,849	2.6	5.7	0.4
2019	43	762	125	930	44	0	840	49	412,104	216,773	2.6	4.6	0.4
2020	64	831	105	1,000	64	3	926	33	412,104	216,773	2.9	6.4	0.6
2021	68	891	149	1,108	69	0	998	26	397,023	245,799	2.7	6.1	0.7
2022	78	812	145	1,035	80	2	883	44	278,644	275,946	2.9	7.5	0.6
Record High* (year)	112 (1980)	2,728 (1980)	537 (1976)	3,308 (1980)	121 (1980)	9 (1975)	3,359 (1980)	207 (1984)	416,967 (2016)	275,946 (2022)	7.7 (1980)	7.5 (2022)	0.8 (1970)

PDO stands for “property damage only” – a crash in which no one is killed or injured. MCY stands for “motorcyclist” or “motorcycle”.
 *The record high shown is for the period of time back to year 1970.

Figure 4.02: Motorcyclists Killed or Injured by Age and Gender

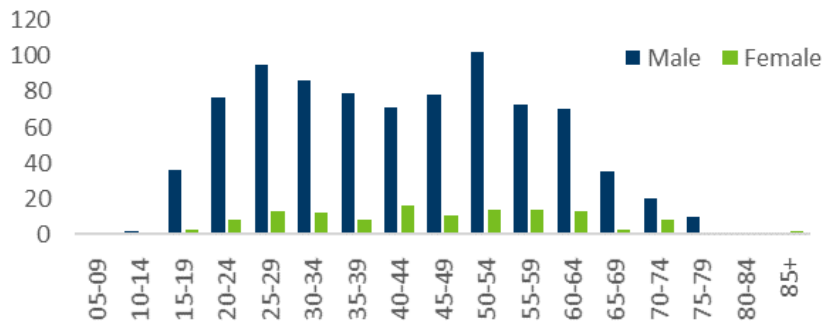


Figure 4.03: Heat Map of Motorcycle Crashes (2021-2022)

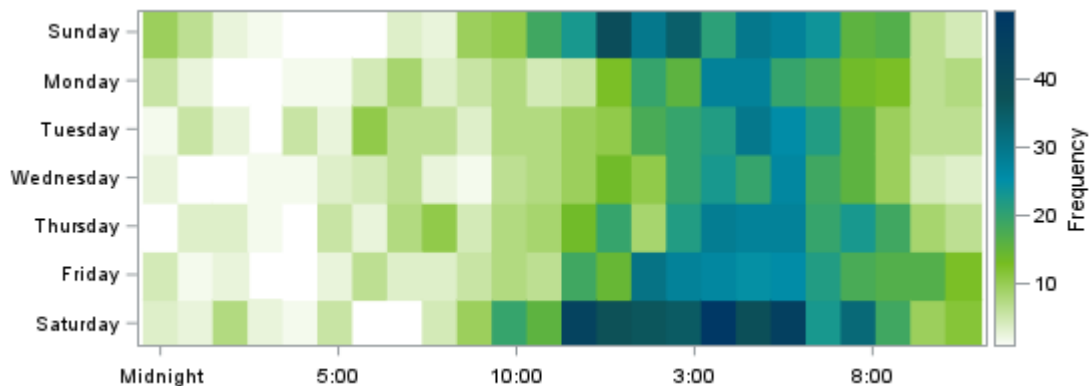


Table 4.02: Motorcycle Crashes by First Harmful Event

First Harmful Event	Fatal	Injury	PDO	Total	Killed	Injured
	Crashes	Crashes	Crashes	Crashes		
Collision With:						
Other Motor Vehicle	26	361	92	479	27	389
Parked Motor Vehicle	0	9	10	19	0	8
Bicycle	0	0	1	1	0	0
Pedestrian	1	5	0	6	1	5
Deer	6	52	1	59	6	61
Other Animal	1	25	2	28	1	27
Railroad Train	0	0	0	0	0	0
Anything Set in Motion by MV	0	1	1	2	0	1
Fixed Object	20	118	11	149	21	130
Non-Collision:						
Overturn/Rollover	13	113	11	137	13	124
Unknown Collision with Fixed Object	1	2	0	3	1	3
Other Non-Collision	10	126	16	152	10	135
Total	78	812	145	1,035	80	883

Table 4.03: Motorcycle Crashes by Roadway Type

Roadway Type	Fatal	Injury	PDO	Total	Killed	Injured
	Crashes	Crashes	Crashes	Crashes		
Interstate	7	56	12	75	7	62
US Trunk Hwy	3	61	17	81	3	66
MN Trunk Hwy	15	145	22	182	15	160
County State Aid Hwy	30	265	37	332	31	296
County Road	2	20	1	23	2	21
Township Road	3	22	2	27	3	24
Municipal State Aid Hwy	4	106	23	133	4	109
Municipal Street	4	77	18	99	4	80
Other Road	10	60	13	83	11	65
Total	78	812	145	1,035	80	883

Table 4.04: Motorcycle Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	11	92	23	126	11	95
100,000-249,999	1	9	4	14	1	9
50,000-99,999	6	117	22	145	7	122
25,000-49,999	9	73	15	97	9	75
10,000-24,999	8	116	38	162	8	125
5,000-9,999	0	46	11	57	0	46
2,500-4,999	4	38	2	44	5	45
1,000-2,499	5	43	9	57	5	49
Townships/Rural	34	278	21	333	34	317
Total	78	812	145	1,035	80	883

Table 4.05: Motorcycle Crashes by Month

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
January	0	0	0	0	0	0
February	0	0	0	0	0	0
March	0	3	0	3	0	3
April	1	31	4	36	1	30
May	16	109	24	149	16	120
June	14	145	25	184	15	152
July	19	156	20	195	19	172
August	11	137	32	180	12	152
September	14	127	20	161	14	142
October	2	87	13	102	2	94
November	1	17	6	24	1	18
December	0	0	1	1	0	0
Total	78	812	145	1,035	80	883

Table 4.06: Helmet Use by Motorcyclists Killed or Injured

Injury Severity	Helmet Used		Helmet Not Used		Unknown Helmet		Total	
	#	%	#	%	#	%	#	%
Killed	21	26.3%	57	71.3%	2	2.5%	80	100.0%
Injured	392	44.4%	427	48.4%	63	7.1%	883	100.0%

Table 4.07: Endorsement Status of Motorcycle Drivers Involved in Fatal Crashes*

Valid Endorsement		Permit Only		Canceled, Suspended, Revoked		No Endorsement		Total for Year	
#	%	#	%	#	%	#	%	#	%
58	70.7%	0	0.0%	13	15.9%	20	24.4%	82	100.0%

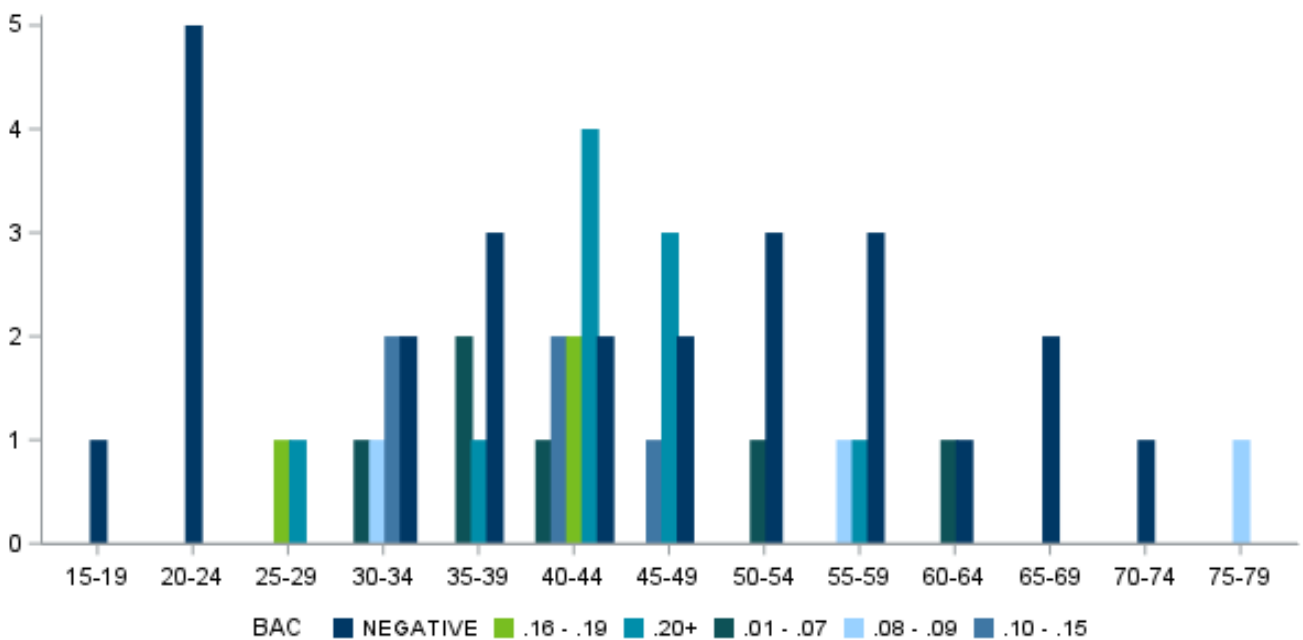
A valid endorsement means that the driver’s license has been “endorsed” to permit operation of a motorcycle.

* Row may not add up to total due to the unknown status of some motorcycle operators.

Table 4.08: Alcohol Use by Killed Motorcycle Drivers

Killed	Tested	Negative	.01 - .07	.08 - .09	.10 - .15	.16 - .19	.20+
76	52	25	6	3	5	3	10

Figure 4.04: Motorcycle Driver Fatalities’ Level of Alcohol Concentration by Age



Truck Crashes

Truck crash summary

This section summarizes data on crashes involving trucks, also known as commercial motor vehicles (CMVs). On the crash report form, commercial motor vehicles are identified as any of the following eight types of trucks: (1) two-axle, six-tire single unit truck or step van, (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, (9) or other single-unit truck. A crash involving a vehicle classified as a CMV on the police crash report with any of these vehicle configurations is classified as a truck crash. Pickup trucks, buses, and vans are not counted as trucks in this section.

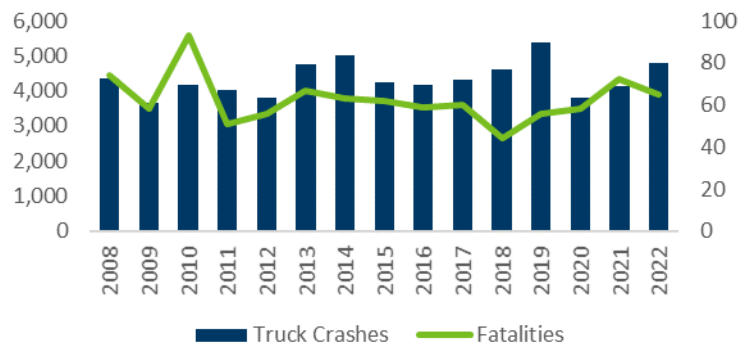
2022 Truck Crash Stats:



Fatalities and injuries are mostly in other vehicles

In two-vehicle collisions, heavier vehicles have the clear safety advantage. Only 8 of the 55 people killed in truck-involved multiple vehicle crashes were in trucks. Of the 1,054 people injured in multi-vehicle collisions, only 141 (11%) were truck occupants.

Figure 5.01: Truck Crash Trends



Driving conditions considered

Driving conditions can vary from day to day in Minnesota, but most truck crashes occur on dry roads in clear weather. However, operating large trucks on surfaces reported to be wet, covered with snow, slush, ice or packed snow provide additional challenges for truck drivers.

Rural
areas see more
truck crashes

Figure 5.02: Truck Crashes by Day of Week

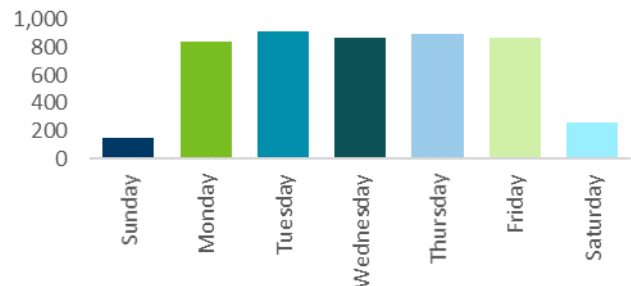


Table 5.01: Truck Crashes by First Harmful Event

First Harmful Event	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Collision With:						
Other Motor Vehicle	51	755	2,633	3,439	55	1,054
Parked Motor Vehicle	1	20	172	193	1	23
Bicycle	1	4	0	5	1	5
Pedestrian	4	9	0	13	4	11
Deer	0	2	5	7	0	2
Other Animal	0	2	11	13	0	2
Railroad Train	0	3	3	6	0	2
Set in Motion by MV	0	1	16	17	0	1
Fixed Object	2	48	580	630	2	55
Non-Collision:						
Overturn/Rollover	2	107	155	264	2	114
Submersion	0	0	0	0	0	0
Fire/Explosion	0	0	4	4	0	0
Other Non-Collision	0	14	192	206	0	15
Total	61	965	3,771	4,797	65	1,284

Table 5.02: Truck Crashes by Month

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
January	3	74	369	446	3	89
February	6	84	351	441	6	126
March	5	54	216	275	5	65
April	3	70	241	314	3	86
May	5	77	274	356	5	97
June	7	70	262	339	7	91
July	8	77	264	349	10	121
August	3	82	299	384	5	126
September	7	82	295	384	7	106
October	8	95	261	364	8	114
November	4	104	384	492	4	132
December	2	96	555	653	2	131
Total	61	965	3,771	4,797	65	1,284

Figure 5.03: Heat Map of Truck Crashes

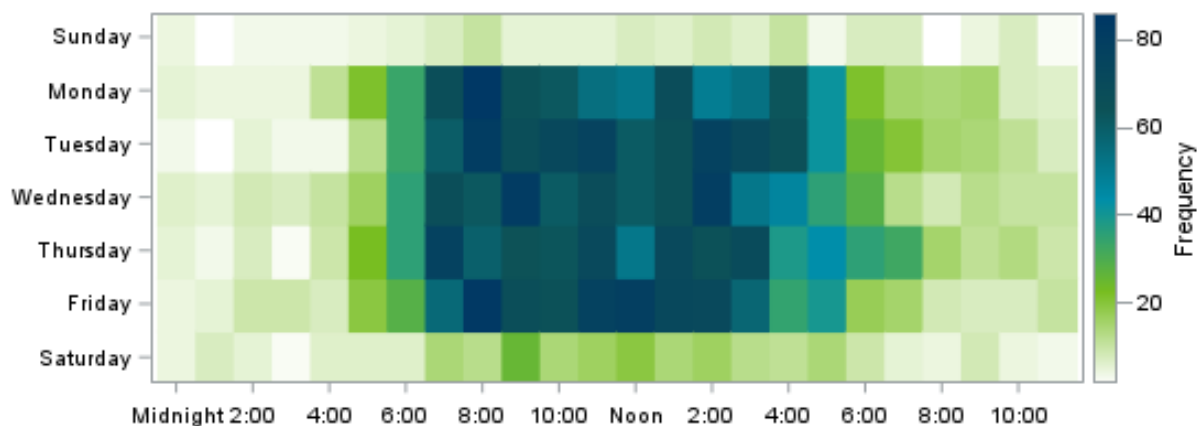


Table 5.03: Truck Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	3	81	388	472	3	105
100,000-249,000	0	7	56	63	0	7
50,000-99,999	5	129	613	747	5	169
25,000-49,999	5	89	409	503	7	115
10,000-24,999	5	110	631	746	5	143
5,000-9,999	1	44	173	218	1	63
2,500-4,999	1	51	173	225	1	67
1,000-2,499	3	50	186	239	3	73
Township/Rural	38	404	1,142	1,584	40	542
Total	61	965	3,771	4,797	65	1,284

Table 5.04: Truck Crashes by Type of Roadway

Type of Roadway	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Interstate	12	227	1,082	1,321	14	308
US Trunk Hwy	10	156	548	714	10	218
MN Trunk Hwy	19	204	583	806	21	277
County State Aid Hwy	10	179	522	711	10	231
County Road	0	11	36	47	0	13
Township Road	1	25	37	63	1	28
Municipal State Aid Hwy	2	50	290	342	2	63
Municipal Street	3	40	325	368	3	51
Other Road	4	73	348	425	4	95
Total	61	965	3,771	4,797	65	1,284

Table 5.05: Truck Crashes by Road Surface Condition

Road Surface Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Dry	50	611	2,228	2,889	54	824
Wet	6	97	297	400	6	129
Snow	1	117	607	725	1	152
Slush	1	15	44	60	1	19
Ice/Frost	2	111	564	677	2	141
Water - Standing/Moving	0	0	4	4	0	0
Mud, Dirt, Gravel	0	10	14	24	0	11
Oily	0	0	1	1	0	0
Ruts, Holes, Bumps	0	0	1	1	0	0
Other	0	4	2	6	0	7
Unknown	1	0	9	10	1	1
Total	61	965	3,771	4,797	65	1,284

Table 5.06: Truck Crashes by Weather Condition Cited*

Weather Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Clear	42	575	2,192	2,809	46	759
Cloudy	14	179	686	879	14	244
Rain	1	52	139	192	1	69
Snow	2	138	598	738	2	186
Sleet/Hail	2	16	74	92	2	21
Fog/Smog/Smoke	0	4	14	18	0	4
Blowing Sand/Soil/Dirt	1	57	304	362	1	69
Severe Crosswinds	1	30	76	107	1	40
Other Weather	1	3	12	16	1	6
Unknown	4	0	15	19	4	2
Total	68	1,054	4,110	5,232	72	1,400

* Officers may report up to two weather conditions so the totals listed may differ than the number of crashes, injuries and fatalities.

Most truck crashes
occur on
dry roads

Usually
clear weather
for truck crashes

Table 5.07: Drivers in Truck Crashes by Physical Condition*

Physical Condition	Truck Drivers	%	Other Drivers	%
Normal	4,869	96.6%	3,471	92.9%
Disability	1	0.0%	2	0.1%
Medical	14	0.3%	19	0.5%
Emotional	2	0.0%	13	0.3%
Asleep	31	0.6%	33	0.9%
Drinking	8	0.2%	75	2.0%
Drugs	4	0.1%	15	0.4%
Medications	1	0.0%	7	0.2%
Other	7	0.1%	12	0.3%
Unknown	101	2.0%	89	2.4%
Total**	5,038	100.0%	3,736	100.0%

*As noted by police officer on crash report.

**This table tabulates the apparent physical condition of drivers where it was possible to identify a driver. Officers may document up to two physical condition factors for drivers, so total counts may differ than the number of drivers.

Table 5.08: Persons Killed or Injured in Truck Crashes by Vehicle Occupied

Vehicle Type	Fatalities	Serious Injuries	Minor Injuries	Possible Injuries	Total Fatalities & Injuries
Passenger Car	16	47	155	249	467
Pickup	7	23	49	76	155
Sport Utility Vehicle	21	26	96	162	305
Passenger Van	1	5	20	25	51
Cargo Van	0	2	3	3	8
School Bus	0	0	0	2	2
Transit Bus	0	0	0	11	11
ATV	0	1	0	0	1
UTV	1	0	0	0	1
Motorcycle	5	5	2	0	12
Light Trucks <10,000 lbs.	0	1	0	4	5
Medium/Heavy Trucks <10,000 lbs.	9	33	132	128	302
Farm Vehicle (Tractor, Combine)	0	0	3	1	4
Pedestrian	4	4	5	4	17
Bicycle	1	0	4	1	6
Other	0	1	0	1	2
Total	65	148	469	667	1,349

Pedestrian Crashes

This section deals with motor vehicle crashes that injure or kill pedestrians. Crashes involving pedestrians and trains or pedestrians and bicycles are not included in this section. A motor vehicle must be involved in the crash.

An historical look at pedestrian crashes reveals an increasing trend of crashes, fatalities, and injuries for pedestrians. This is cause for alarm for traffic safety professionals as pedestrians represent the most vulnerable of road users.

Recent years have had about one thousand pedestrian crashes per year, (most of which include fatalities or injuries to the pedestrian), with the vast majority occurring in urban areas. In 2022, 87% of pedestrian crashes occurred in urban areas with populations of over 5,000.

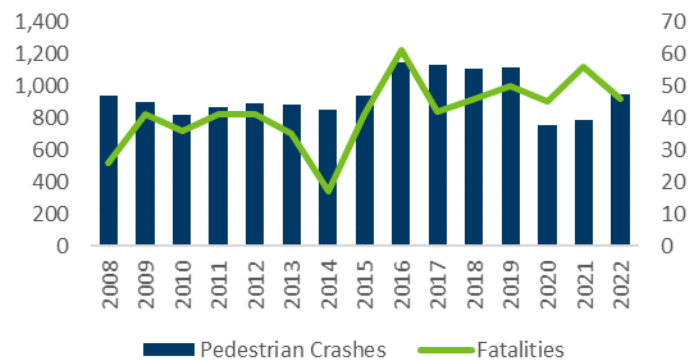
2022 Pedestrian Crash Stats:



When pedestrian crashes occur

In 2022, 27% of pedestrian crashes occurred during the weekday rush hour time period (defined as Monday-Friday 6am-9am and 3pm-6pm). This makes sense as 33% of all traffic crashes and 30% of all fatal and injury crashes occurred during this same driving time frame.

Figure 6.01: Pedestrian Crash Trends



Pedestrian and vehicle behavior

Forty-seven percent (47%) of pedestrians killed and 62% of pedestrians injured were walking across traffic in the roadway. Vehicles involved in pedestrian crashes usually were moving forwards prior to the crash. Minnesota law states pedestrians have the right-of-way at crosswalks. Motorists are expected to treat every corner and intersection as a crosswalk (whether marked or not), but pedestrian safety is a two-way street. Motorists need to see pedestrians, and pedestrians need to be seen. High visibility garments help drivers see pedestrians.

Figure 6.02: Pedestrian Crashes by Day of Week

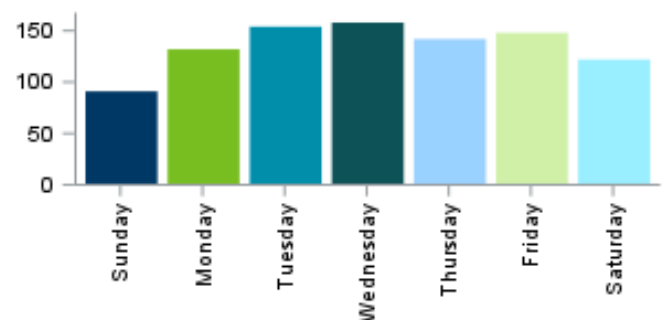
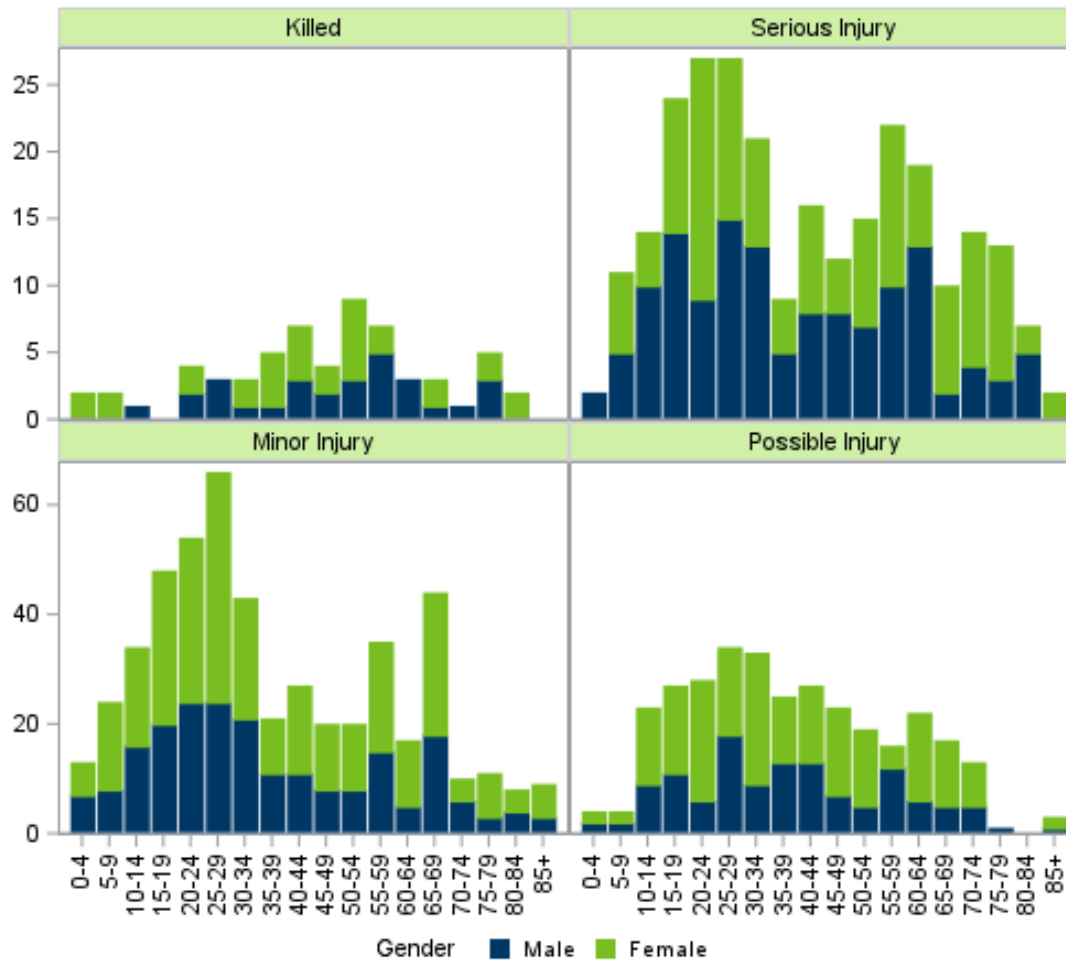


Figure 6.03: Pedestrian Injuries by Age and Gender



Vehicles are usually
moving forward
 prior to collisions with
 pedestrians

56%
 of pedestrian
 crashes occur in
daylight

Contributing factor data in pedestrian crashes shows
54% attributed to drivers and **46%**
 attributed to pedestrians

Table 6.01: Prior Action of Vehicles in Pedestrian Crashes

Prior Action	Vehicles in Fatal Crashes	Vehicles in Injury Crashes	Vehicles in All Crashes
Entering/Leaving Parked Position	0	39	39
Moving Forward	38	429	467
Turning Right	0	87	87
Turning Left	4	164	168
Slowing	0	17	17
Swerved/Attempted to Avoid Object	2	16	18
Changing Lanes	0	1	1
Overtaking/Passing	0	3	3
Leaving Traffic Lane	0	1	1
Entering Traffic Lane	0	2	2
Negotiating a Curve	3	5	8
Backing	0	21	21
Vehicle Stopped/Stalled in Roadway	1	15	16
Other	0	7	7
Unknown	3	38	41
Total	51	845	896

Table 6.02: Prior Action of Pedestrians Killed or Injured in Pedestrian Crashes

Action	Pedestrians Killed		Pedestrians Injured	
	Killed	%	Injured	%
Walking Across Traffic/Roadway	21	46.7%	499	61.8%
Standing/Stopped	2	4.4%	40	5.0%
Walking With Traffic	4	8.9%	51	6.3%
Walking Against Traffic	1	2.2%	23	2.8%
Walking on Sidewalk	0	0.0%	29	3.6%
In Roadway (Working, Playing)	8	17.8%	39	4.8%
Adjacent to Roadway (Shoulder, Median)	0	0.0%	14	1.7%
Going to or From School	0	0.0%	4	0.5%
Going to or From School Bus	0	0.0%	2	0.2%
Working in Traffic/Roadway	0	0.0%	7	0.9%
Going to or From Public Transit	0	0.0%	2	0.2%
Other Pedestrian Action	3	6.7%	66	8.2%
Unknown	6	13.3%	32	4.0%
Total	45	100.0%	808	100.0%

Table 6.03: Pedestrian Crashes by Month

Month	Fatal Crashes	Injury Crashes	Total Crashes	Killed	Injured
January	2	40	42	2	39
February	3	39	42	3	40
March	3	54	57	3	60
April	3	38	41	3	41
May	2	53	55	2	58
June	5	77	82	6	80
July	2	84	86	2	85
August	3	87	90	3	88
September	4	108	112	4	110
October	7	79	86	7	79
November	3	64	67	3	67
December	7	57	64	7	61
Total	44	780	824	45	808

October

(early sunsets and shorter daylight hours)

usually has most pedestrian crashes

Pedestrian crashes frequently occur in the

afternoon

Figure 6.04: Heat Map of Pedestrian Crashes (2021-2022)

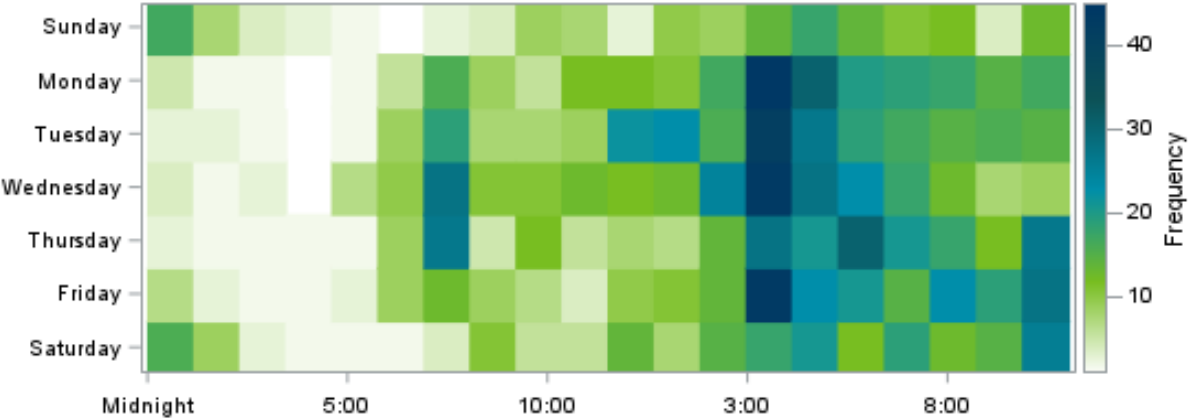


Table 6.04: Pedestrian Crashes by Population of Area

Population of Area	Fatal	Injury	Total	Killed	Injured
	Crashes	Crashes	Crashes		
250,000+	12	330	342	12	341
100,000-249,999	0	23	23	0	24
50,000-99,999	9	102	111	9	107
25,000-49,999	10	101	111	11	102
10,000-24,999	2	114	116	2	119
5,000-9,999	0	24	24	0	26
2,500-4,999	0	15	15	0	15
1,000-2,499	5	20	25	5	21
Townships/Rural	6	51	57	6	53
Total	44	780	824	45	808

Table 6.05: Pedestrian Crashes by Type of Roadway

Type of Roadway	Fatal	Injury	Total	Killed	Injured
	Crashes	Crashes	Crashes		
Interstate	3	7	10	3	7
US Trunk Hwy	2	26	28	2	28
MN Trunk Hwy	8	65	73	8	65
County State Aid Hwy	13	184	197	14	193
County Road	0	7	7	0	8
Township Road	0	6	6	0	6
Municipal State Aid Hwy	8	223	231	8	228
Municipal Street	3	175	178	3	180
Other Road	7	87	94	7	93
Total	44	780	824	45	808

87%
pedestrian crashes
occur in
urban areas

Rural areas had 15% of
pedestrian crashes, but
24%
of the fatalities

Figure 6.05: Pedestrian Fatalities and Injuries by Crash Location on the Road

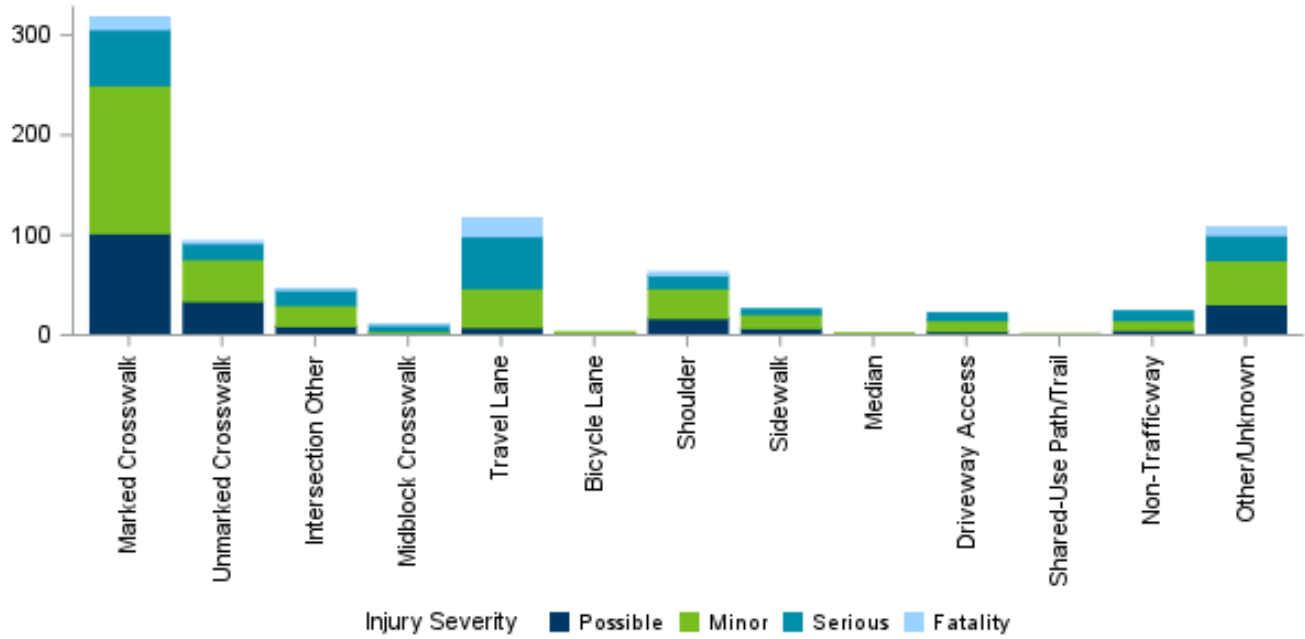
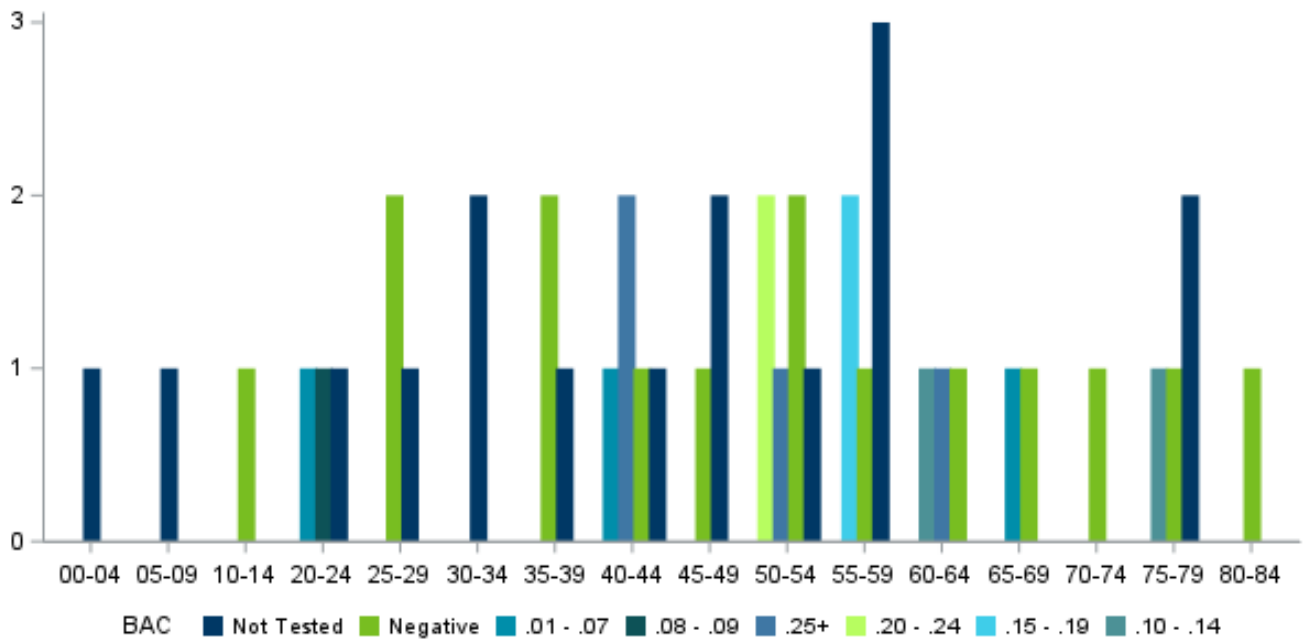


Table 6.06: Pedestrian Fatalities' Level of Alcohol Concentration

Killed	Tested	0.00	.01-.07	.08-.09	.10-.14	.15-.19	.20-.24	.25+	Pending
45	29	15	3	1	2	2	2	1	3

Figure 6.06: Pedestrian Fatalities' Level of Alcohol Concentration by Age



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.

2022 Bicycle Crash Stats:



When bicycle crashes occur

Bicycle crashes are mostly a warm weather occurrence. However, in 2022, there were bicycle crashes during each month of the year. The bulk of bicycle crashes occur during the timeframe of 3pm-6pm during the week, Monday-Friday and on weekends. In 2022, 50% of all bicycle crashes happened at that time.

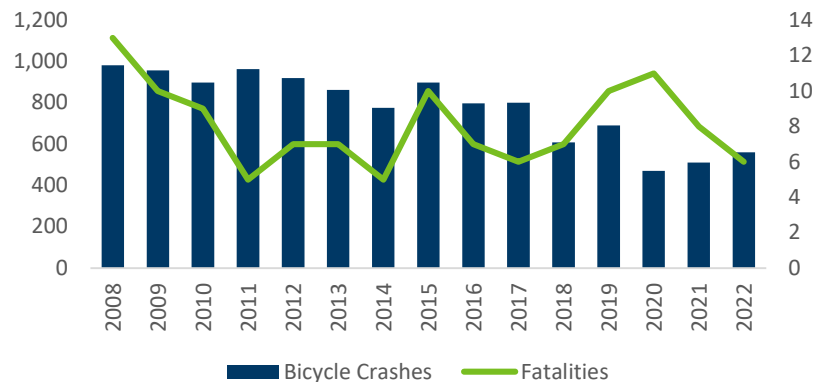
Where bicycle crashes occur

Traffic crashes involving a bicycle and a motor vehicle tend to occur in areas with larger populations where the bicycle is used frequently for transportation instead of recreation. Over nine out of ten (93%) bicycle crashes occurred in cities where the population was over 5,000 people.

Bicyclist age and gender

Males were three times more likely than females to be injured in a bicycle crash. Fifty-nine percent (59%) of injured bicyclists were over the age of 25. See Table 7.01.

Figure 7.01: Bicycle Crash Trends



51%
bicyclists were
cycling
across traffic
prior to crash

Figure 7.02: Bicycle Crashes by Day of Week

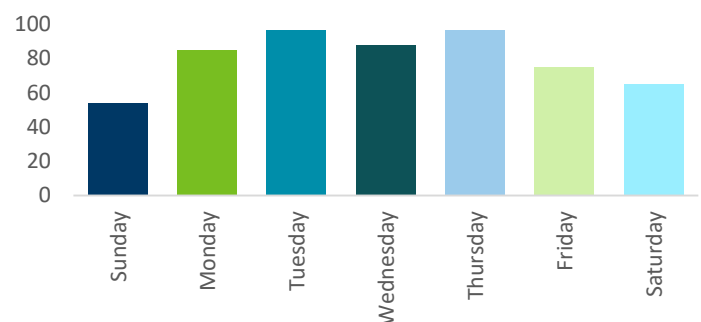


Table 7.01: Bicyclists Killed or Injured by Age and Gender*

Age Group	Fatalities			Serious Injuries			Minor Injuries			Possible Injuries			Total Injuries		
	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
00-04	0	0	0	0	0	0	0	1	1	0	1	1	0	2	2
05-09	0	1	1	1	2	3	3	2	5	2	0	2	6	4	10
10-14	0	1	1	6	5	12	28	8	37	13	6	20	47	19	69
15-19	2	0	2	6	1	9	27	11	40	16	5	21	49	17	70
20-24	0	0	0	5	2	9	14	6	23	6	3	11	25	11	43
25-29	0	0	0	1	1	2	11	7	22	7	3	13	19	11	37
30-34	0	0	0	2	0	6	12	3	19	5	2	11	19	5	36
35-39	0	0	0	1	4	6	11	5	17	4	2	7	16	11	30
40-44	1	0	1	2	1	4	8	5	18	2	1	4	12	7	26
45-49	0	0	0	1	0	1	3	4	8	10	0	12	14	4	21
50-54	1	0	1	1	1	4	8	1	10	7	2	12	16	4	26
55-59	0	0	0	2	1	4	13	3	18	4	2	9	19	6	31
60-64	0	0	0	7	3	11	9	2	14	8	1	11	24	6	36
65-69	0	0	0	4	1	6	10	1	14	2	0	3	16	2	23
70-74	0	0	0	1	1	2	2	1	4	2	0	3	5	2	9
75+	0	0	0	1	0	2	5	1	8	2	0	2	8	1	12
Not Stated	0	0	0	0	0	1	1	3	12	0	1	5	1	4	18
Total	4	2	6	41	23	82	165	64	270	90	29	147	296	116	499

* Gender is not always stated on the crash report. This may cause rows to not add up to the total.

Table 7.02: Prior Action of Bicyclists Involved in Crashes

Prior Action	Bicyclists In Fatal Crashes	Bicyclists In Injury Crashes	Bicyclists In PDO Crashes	Bicyclists In All Crashes*
Cycling Across Traffic	4	257	30	291
Cycling with Traffic	0	93	10	103
Cycling Against Traffic	0	25	3	28
Cycling on Sidewalk	1	49	13	63
Standing/Stopped	0	6	3	9
In Roadway - Other	0	19	7	26
Adjacent to Roadway	0	9	1	10
Other/Unknown	1	41	9	51
Total	6	499	76	581

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

Table 7.03: Bicycle Crashes by Month

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
January	0	4	1	5	0	5
February	0	3	1	4	0	3
March	0	8	1	9	0	8
April	0	11	7	18	0	11
May	0	46	3	49	0	46
June	1	84	12	97	1	85
July	2	68	8	78	2	70
August	2	96	12	110	2	101
September	1	82	10	93	1	83
October	0	62	10	72	0	62
November	0	21	1	22	0	21
December	0	4	0	4	0	4
Total	6	489	66	561	6	499

Summertime
 sees most
 bicycle crashes

Weekdays had
79%
 of bicycle
 crashes

Figure 7.03: Bicycle Crashes by Day of Week and Time of Day

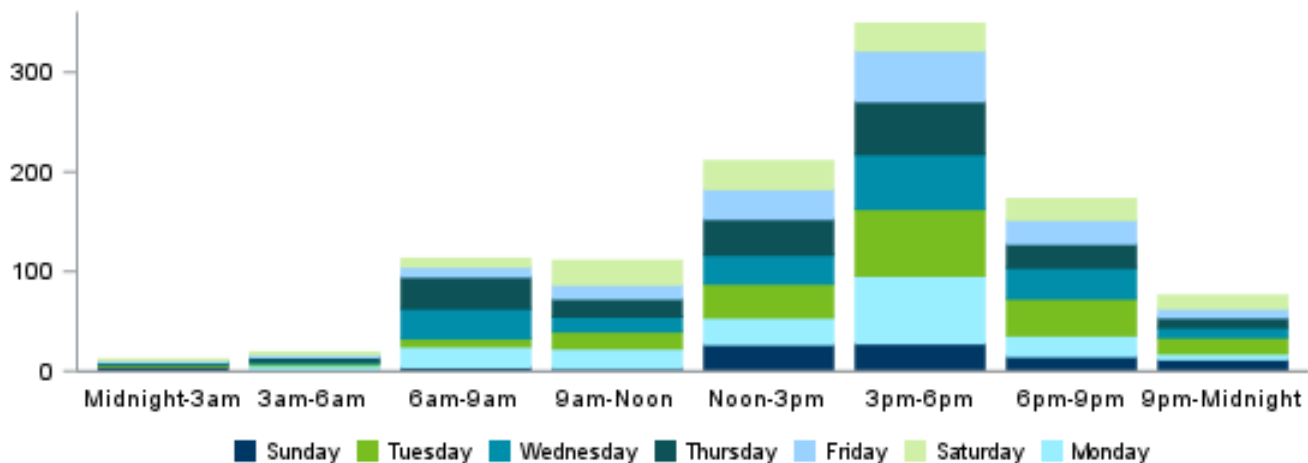


Figure 7.04: Bicycle Crashes by Time of Day, Compared to Pedestrian Crashes

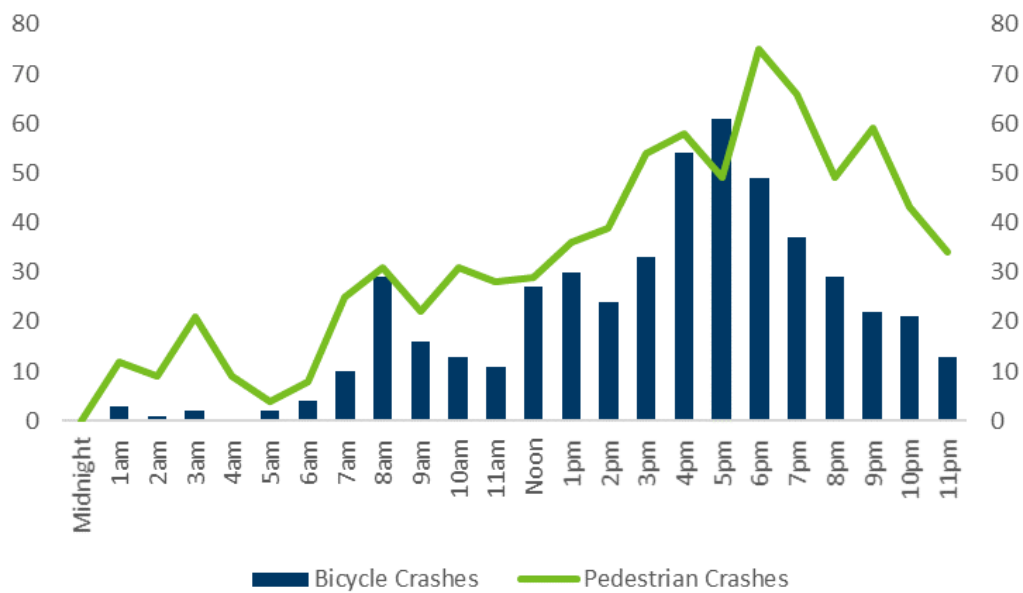


Table 7.04: Bicycle Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	0	158	24	182	0	159
100,000-249,000	0	18	0	18	0	18
50,000-99,999	0	93	12	105	0	96
25,000-49,999	1	65	13	79	1	68
10,000-24,999	3	96	13	112	3	96
5,000-9,999	0	22	3	25	0	21
2,500-4,999	1	10	1	12	1	10
1,000-2,499	0	7	0	7	0	7
Townships/Rural	1	20	0	21	1	24
Total	6	489	66	561	6	499

School Bus Crashes

Crashes included in this section are those in which at least one school bus was physically involved. In some cases, a crash could be seen as involving a school bus (albeit indirectly), yet not be counted as a school bus crash. One such case would be a crash in which a person gets off the bus, crosses a street and is struck by another vehicle. Such a case could be called an indirect school bus crash; indirect school bus crashes are tracked in the crash reporting system. In 2022, there were 66 crashes resulting in one fatality and 25 injuries in which a school bus was indirectly involved.

School bus travel is a very safe method of travel. The school bus is a large and heavy vehicle that provides good protection for its occupants. Frequently, injuries resulting from school bus crashes are pedestrians or occupants of other vehicles instead of school bus passengers.

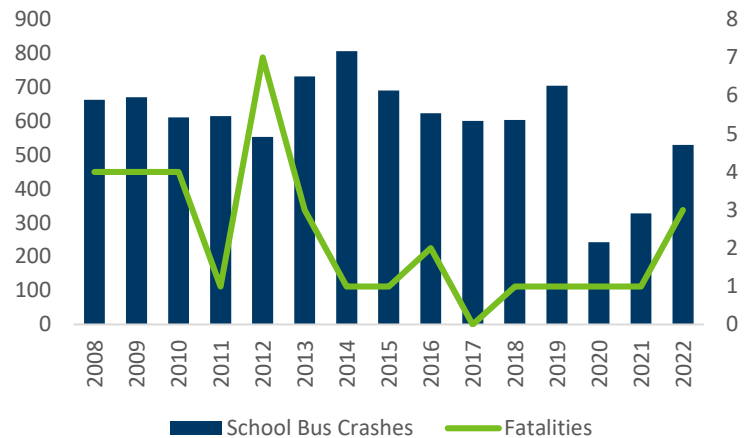
2022 School Bus Crash Stats:



When school bus crashes occur

Not surprising, but school bus crashes occur when school buses are in use. The morning and afternoon time periods of 6am-9am and 3pm-6pm see the majority of school bus crashes. Almost all school bus crashes occur Monday-Friday and during the months of September-June. Daylight hours and clear weather conditions exist during most school bus crashes.

Figure 8.01: School Bus Crash Trends



Road conditions

contribute to many school bus crashes

Figure 8.02: School Bus Crashes by Day of Week

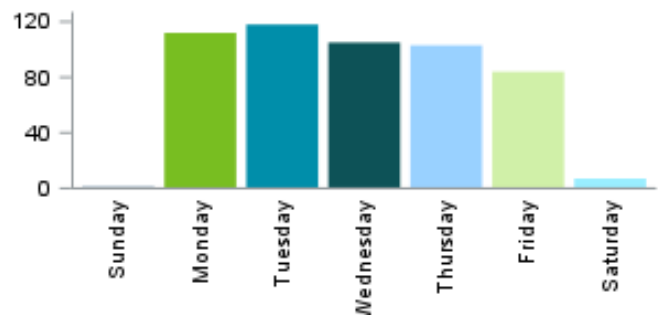


Figure 8.03: Age of Persons Injured in School Bus Crashes, by Their Location

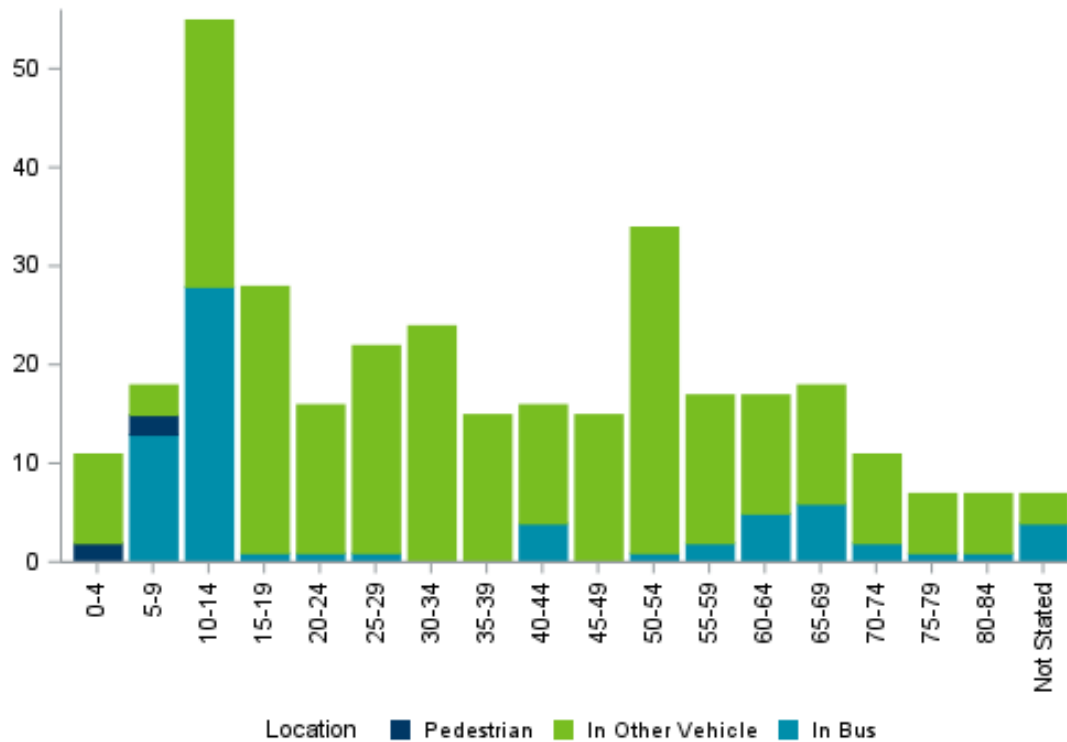


Table 8.01: School Bus Crashes by First Harmful Event

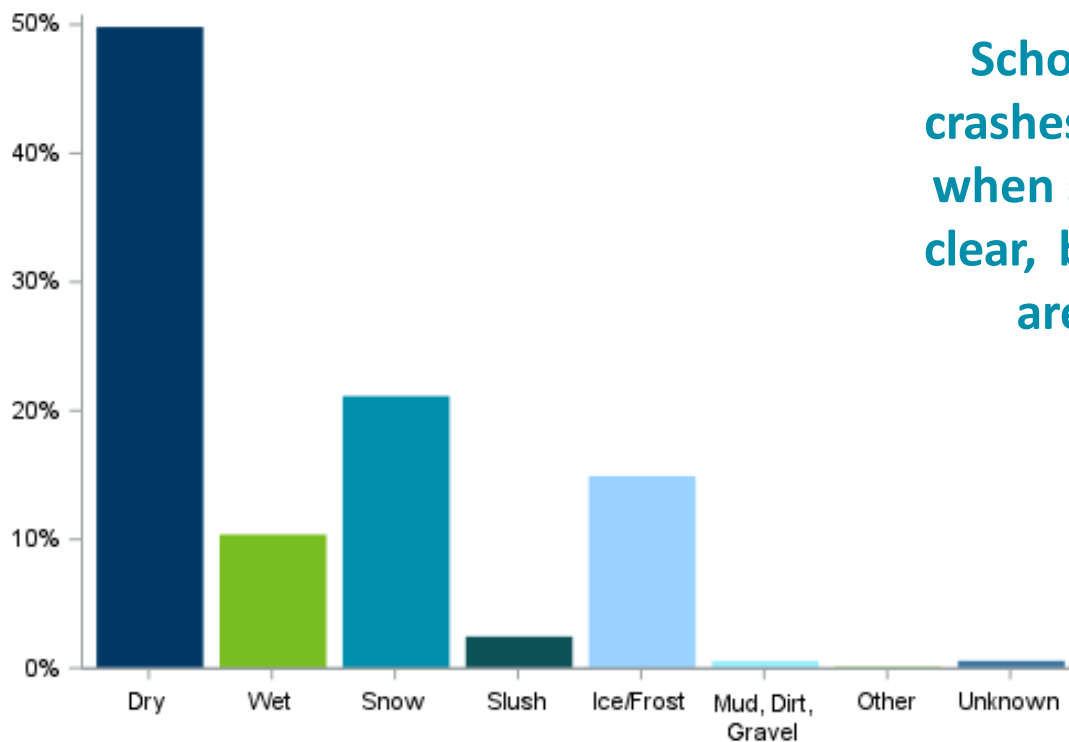
First Harmful Event	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Collision With:						
Other Motor Vehicle	3	84	359	446	3	150
Parked Motor Vehicle	0	2	55	57	0	4
Pedestrian	0	1	0	1	0	1
Object Set in Motion	0	0	1	1	0	0
Fixed Object	0	4	17	21	0	5
Non-Collision:						
Overturn/Rollover	0	0	2	2	0	0
Other Non-Collision	0	0	2	2	0	0
Total	3	91	436	530	3	160

Table 8.02: School Bus Crashes by Weather Condition*

Weather Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Clear	1	61	273	335	1	94
Cloudy	0	15	87	102	0	33
Rain	1	6	14	21	1	17
Snow	1	14	70	85	1	30
Sleet/Hail	0	1	9	10	0	1
Fog/Smog/Smoke	0	0	0	0	0	0
Blowing Sand/Soil/Dirt	0	2	9	11	0	3
Other Weather	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
Total	3	99	462	564	3	178

* Officers may document more than one weather condition per crash. This may cause the total row to be greater than the total number of school bus crashes.

Figure 8.04: School Bus Crashes by Road Surface Conditions



School bus crashes happen when skies are clear, but roads are not

Figure 8.05: School Bus Crashes by Month and Time of Day

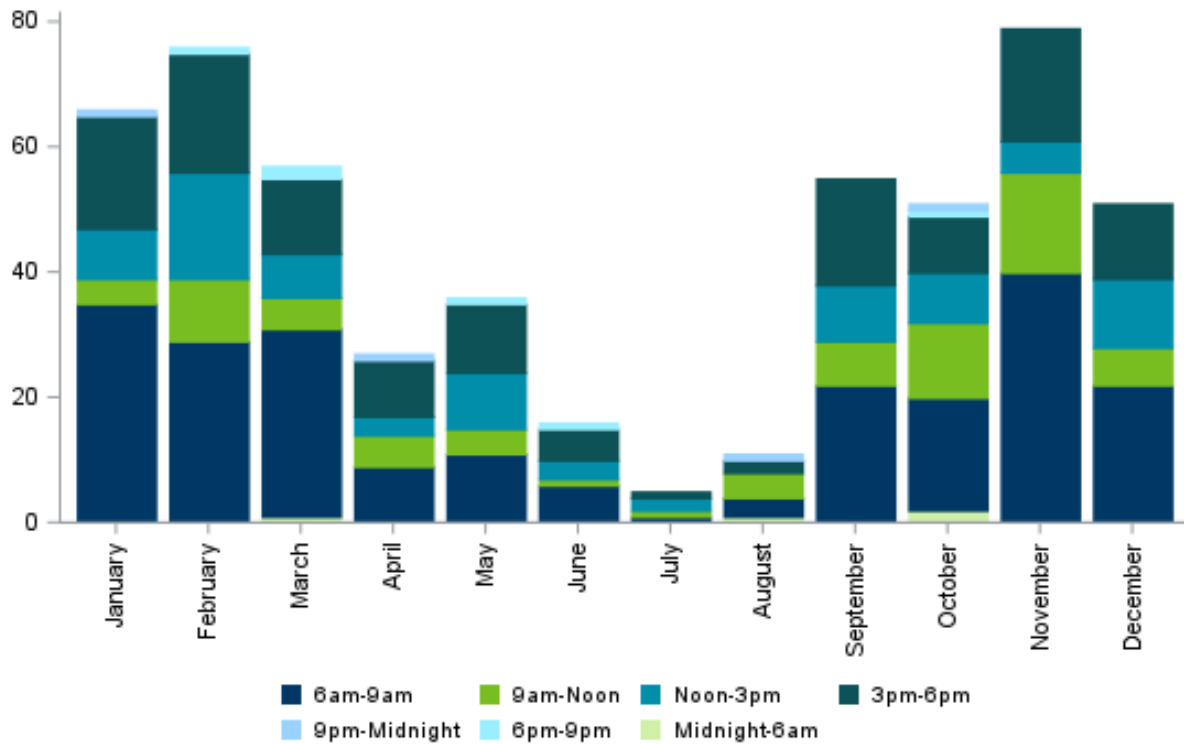


Table 8.03: School Bus Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	1	18	83	102	1	28
100,000-249,999	0	3	6	9	0	11
50,000-99,999	1	23	79	103	1	29
25,000-49,999	0	11	53	64	0	22
10,000-24,999	0	15	116	131	0	27
5,000-9,999	1	4	23	28	1	13
2,500-4,999	0	2	25	27	0	2
1,000-2,499	0	2	12	14	0	4
Townships/Rural	0	13	39	52	0	24
Total	3	91	436	530	3	160

MV/Train Crashes

Crashes reported in this section involve motor vehicles and trains. Collisions with trains and pedestrians or trains and bicyclists are not counted as traffic crashes in this publication.

In the past decade or so, Minnesota has made progress related to train crashes. In the 1990s, there were around one hundred motor vehicle/train crashes per year with about ten fatalities each year. These numbers have dropped and the state currently hovers around fifty motor vehicle/train crashes with one or two fatalities a year. That success can be attributed to improvements in traffic control signals, including flashing lights and gates, which make railroad crossings more visible.

2022 Motor Vehicle/Train Crash Stats:



56%
motor vehicle/train
crashes occurred
in rural areas
in 2022

Figure 9.01: Motor Vehicle/Train Crash Trends



Figure 9.02: Motor Vehicle/Train Crashes by Traffic Control Device

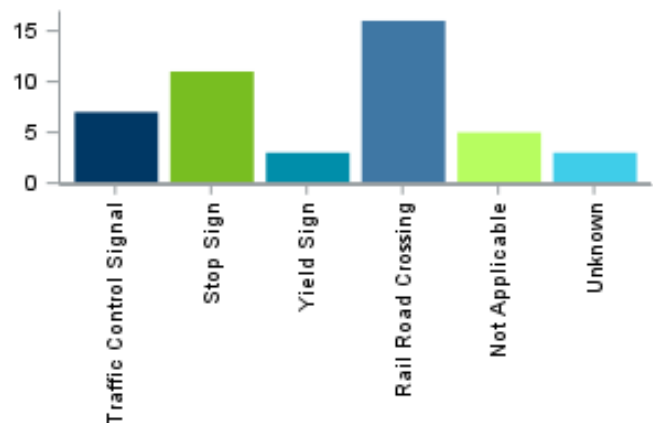


Figure 9.03: Motor Vehicle/Train Crashes by Day of Week

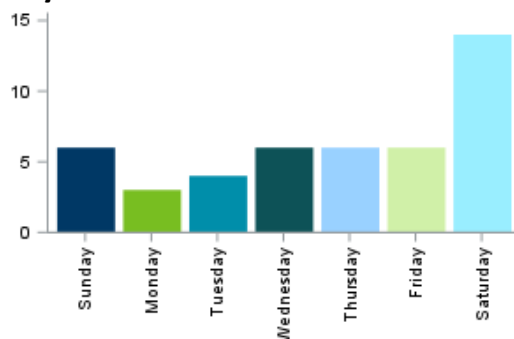


Figure 9.04: Motor Vehicle/Train Crashes by Day of Week and Time of Day

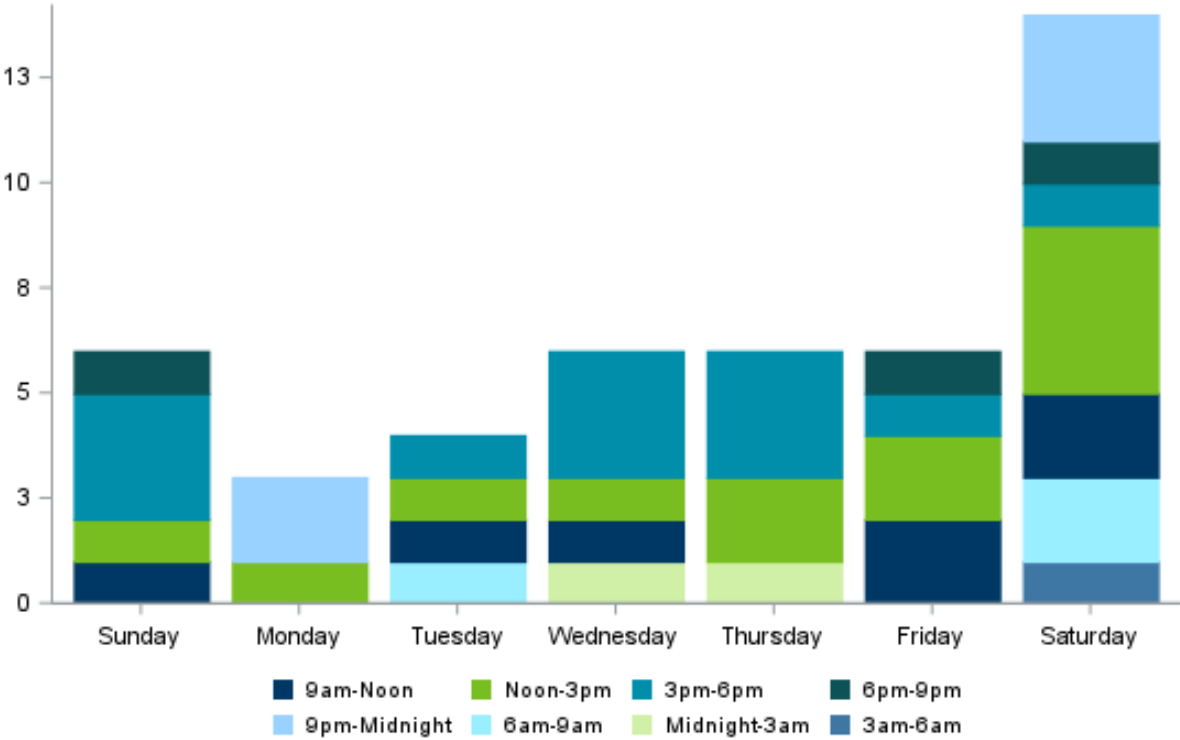


Figure 9.05: Motor Vehicle/Train Crashes by Month and Crash Severity

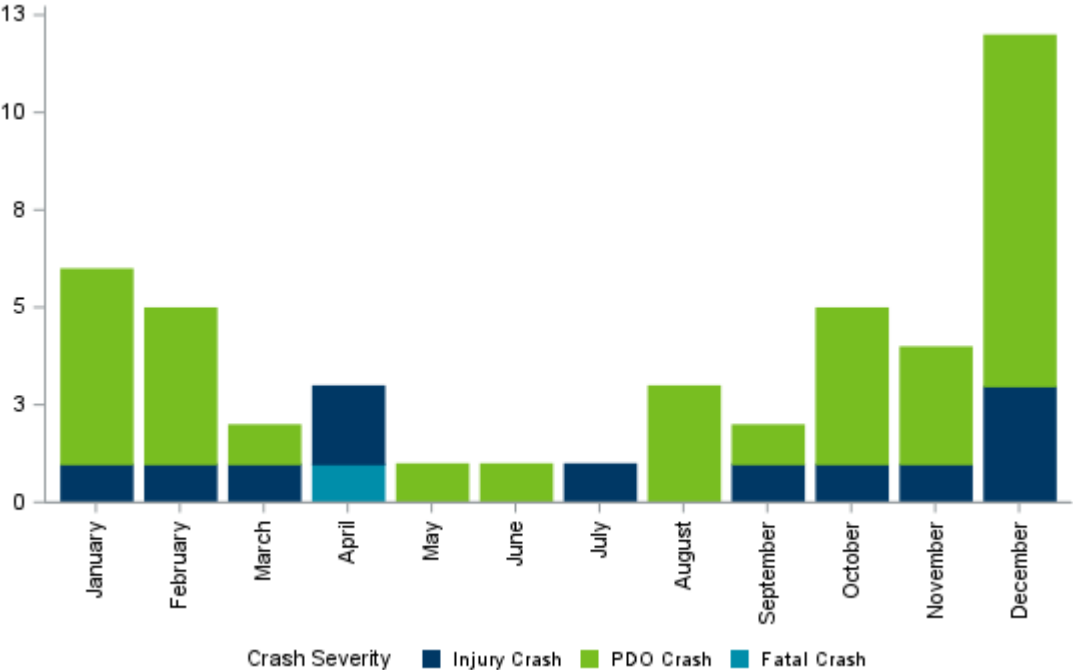


Table 9.01: Motor Vehicle/Train Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	0	5	6	11	0	6
50,000-99,999	0	0	2	2	0	0
25,000-49,999	0	2	1	3	0	2
10,000-24,999	0	0	1	1	0	0
5,000-9,999	0	0	3	3	0	0
2,500-4,999	0	0	3	3	0	0
1,000-2,499	0	0	2	2	0	0
Townships/Rural	1	5	14	20	1	5
Total	1	12	32	45	1	13

Teen Driver Crashes

Teen drivers in Minnesota continue to be overrepresented in traffic crashes due to driver inexperience, distractions, speeding/risk-taking and seat belt non-use. The greatest crash risk occurs during the first months of independent driving. To combat this problem, laws such as no cell phone use, no texting, primary seat belt and nighttime and passenger limitations have helped reduce teen traffic deaths and injuries.

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

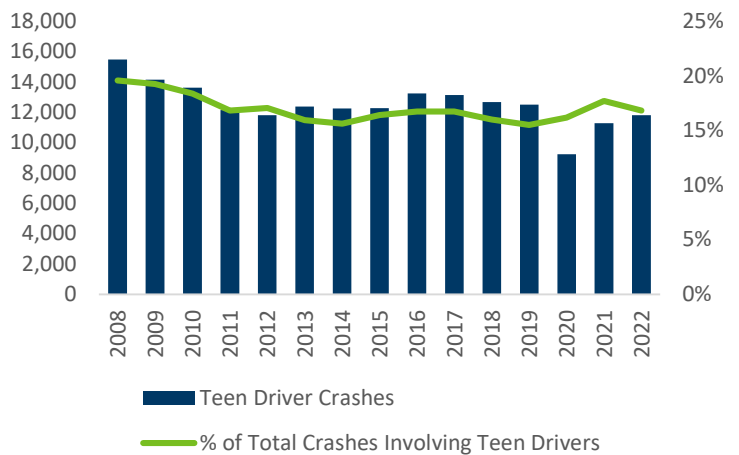
2022 Teen Driver Crash Stats:

11,814 crashes with teen drivers	47 fatalities in teen driver crashes	4,136 injuries in teen driver crashes
---	---	--

Teen driver crashes defined

The definition of a teen-involved crash used here is any crash with at least one teen driver (ages 15-19) of any motor vehicle involved. Teen pedestrians or bicyclists are not included.

Figure 10.01: Teen Driver Crash Trends



Teens represent
6% of drivers,
but account
for
17% of crashes

Figure 10.02: Teen Driver Crashes by Day of Week

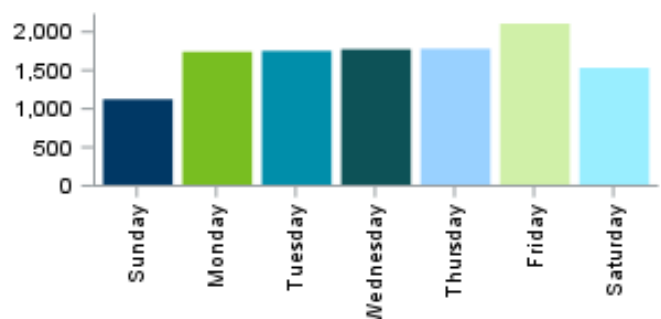


Figure 10.03: Teen Driver Crashes by Age and Gender

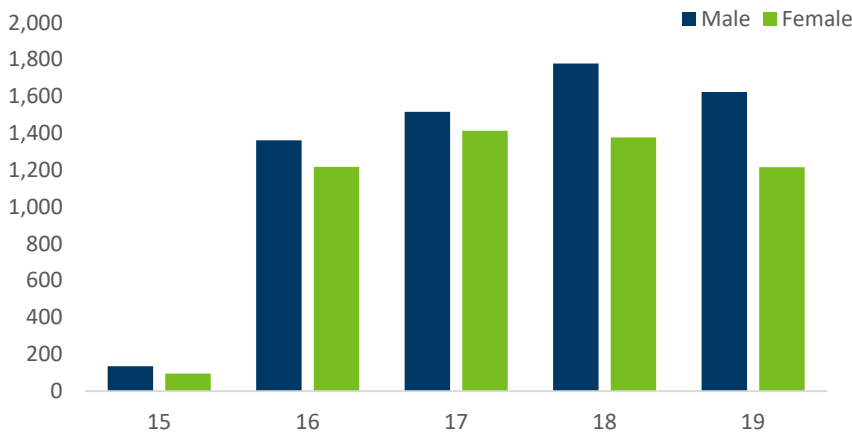


Table 10.01: Teen Driver Crashes by Month

Month	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes	Possible Injury Crashes	PDO Crashes	Total Crashes
January	0	11	83	144	993	1,231
February	2	6	69	144	787	1,008
March	5	13	53	89	539	699
April	2	17	57	99	544	719
May	6	17	119	139	655	936
June	3	15	123	138	700	979
July	4	30	103	131	643	911
August	8	36	94	128	621	887
September	9	18	87	133	707	954
October	3	15	100	145	700	963
November	1	14	91	158	879	1,143
December	2	13	70	165	1,134	1,384
Total	45	205	1,049	1,613	8,902	11,814

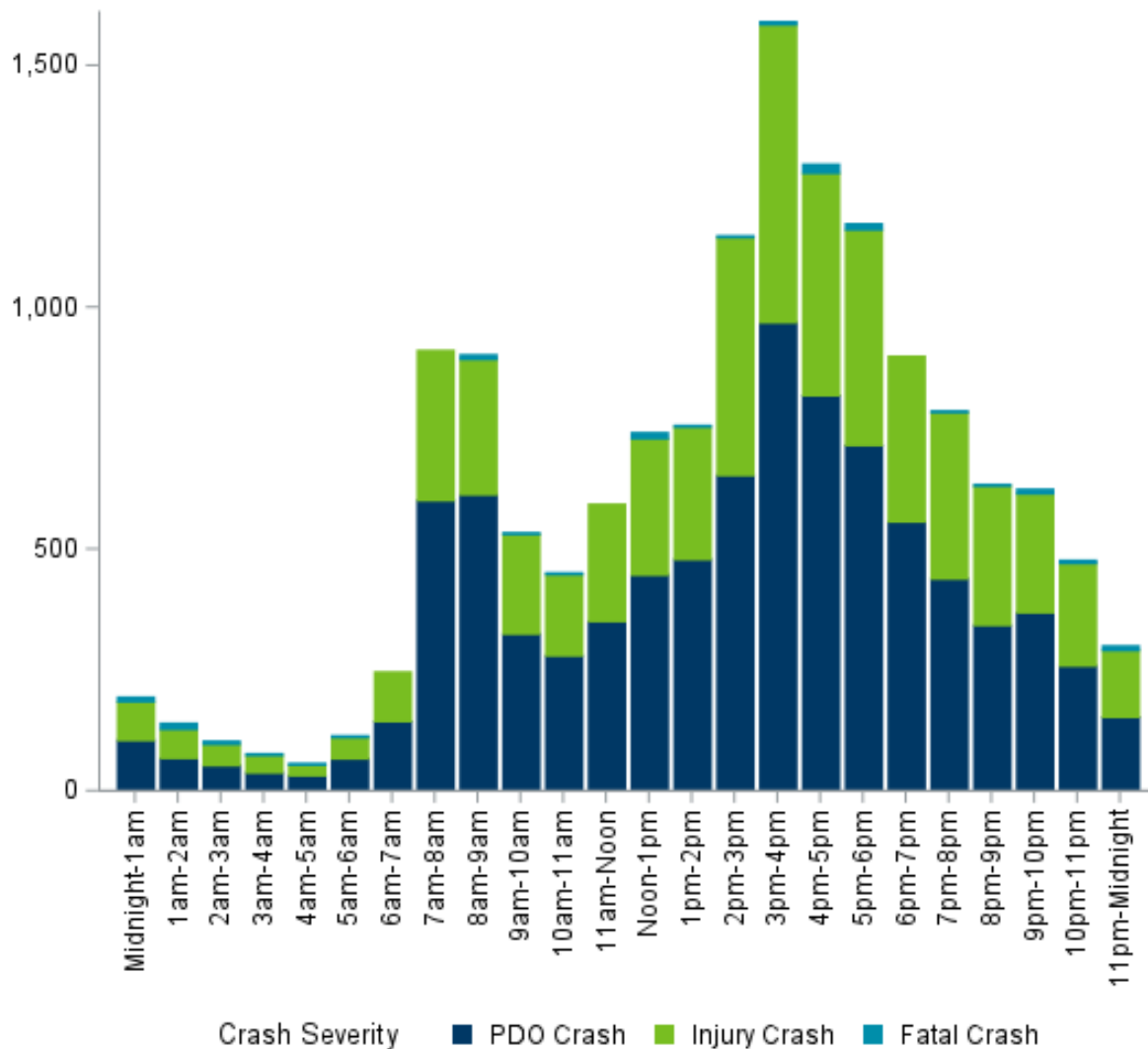
Teen driver crashes follow the same crash severity proportions as all other crashes

Mornings and afternoons have most teen driver crashes

Table 10.02: Teen Driver Crashes by Day of Week

Day of Week	Crash Severity			PDO Crashes	Total Crashes
	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes		
Sunday	9	28	136	162	1,124
Monday	7	28	138	219	1,742
Tuesday	7	22	159	232	1,753
Wednesday	4	34	132	233	1,774
Thursday	4	26	140	249	1,781
Friday	2	38	179	308	2,108
Saturday	12	29	165	210	1,532
Total	45	205	1,049	1,613	8,902

Figure 10.04: Teen Driver Crashes by Crash Severity and Time of Day



Senior Driver Crashes

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

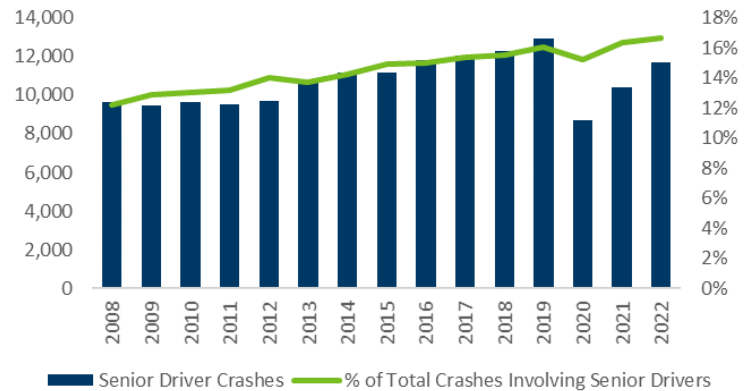
2022 Senior Driver Crash Stats:

11,670 crashes with senior drivers	121 fatalities in senior driver crashes	4,779 injuries in senior driver crashes
---	--	--

Senior driver crashes defined

The definition of a senior-involved crash used here is any crash with at least one senior driver (ages 65 and above) of any motor vehicle. Senior pedestrians or bicyclists are not included.

Figure 11.01: Senior Driver Crash Trends



Seniors represent
19% of drivers,
but account
for
17% of crashes

Figure 11.02: Senior Driver Crashes by Day of Week

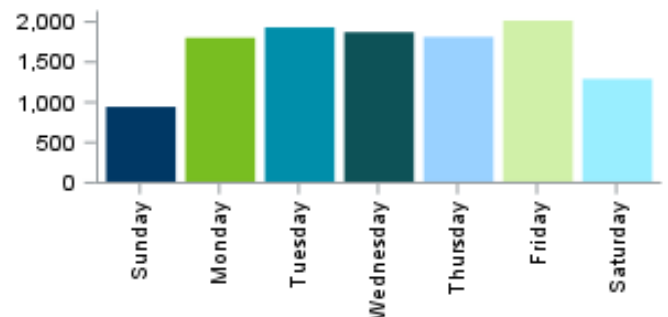


Figure 11.03: Senior Driver Crashes by Age and Gender

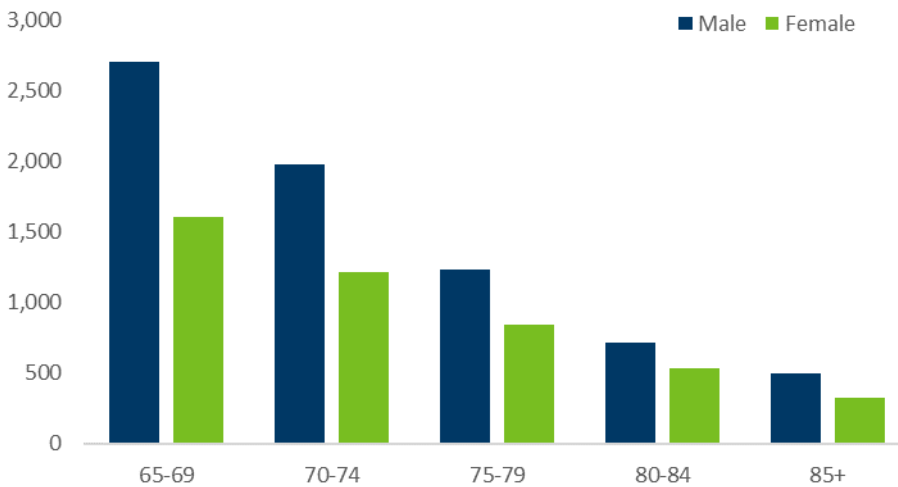


Table 11.01: Senior Driver Crashes by Month

Month	Serious		Minor	Possible	PDO	Total
	Fatal	Injury	Injury	Injury		
	Crashes	Crashes	Crashes	Crashes	Crashes	Crashes
January	4	10	91	152	783	1,040
February	8	19	60	137	610	834
March	3	14	66	96	473	652
April	8	20	79	103	515	725
May	10	26	122	168	687	1,013
June	8	33	110	150	632	933
July	16	30	132	141	657	976
August	5	34	140	168	689	1,036
September	15	34	126	158	664	997
October	19	27	117	164	688	1,015
November	11	19	116	175	805	1,126
December	8	14	109	180	1,012	1,323
Total	115	280	1,268	1,792	8,215	11,670

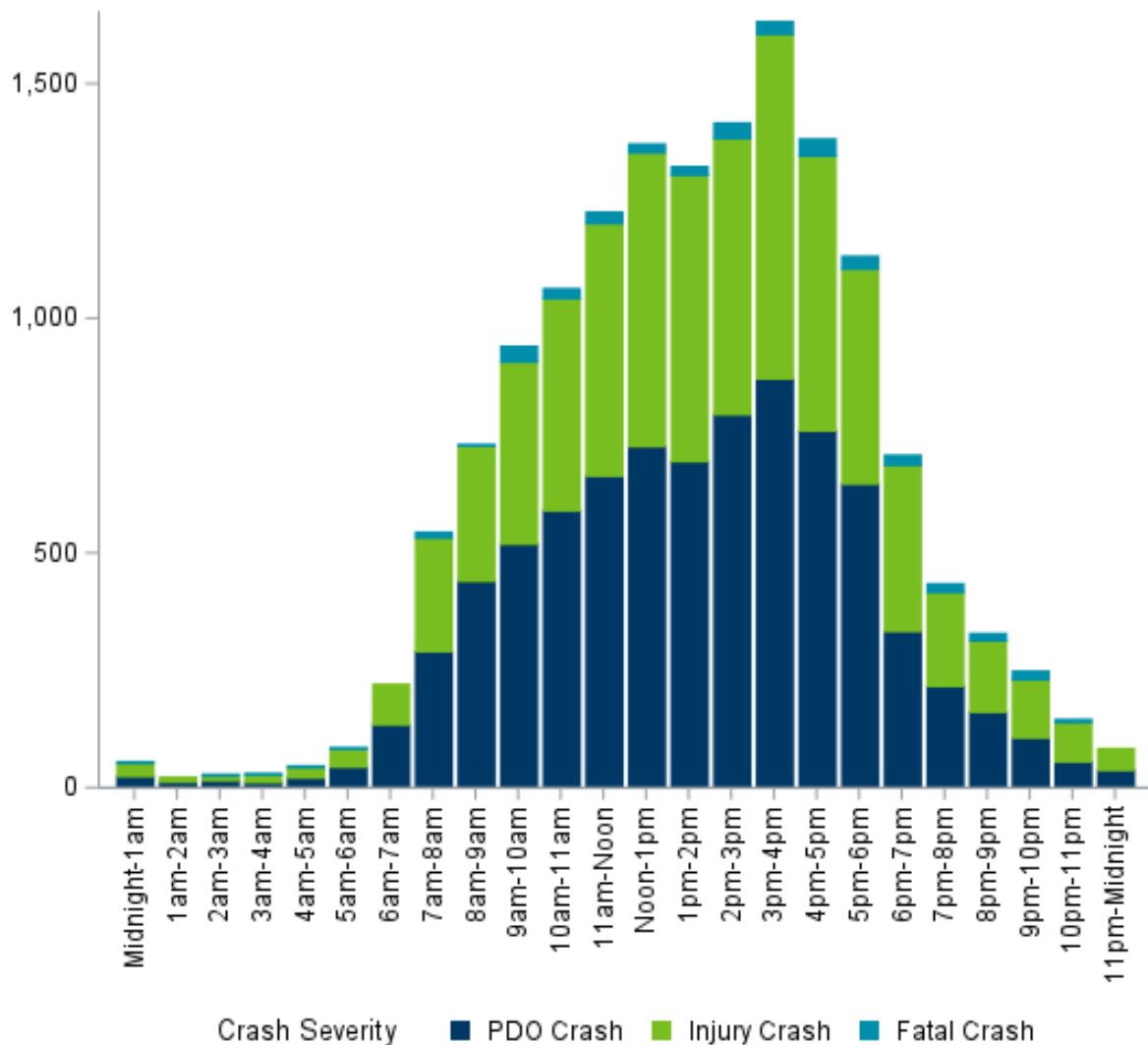
Senior drivers are disproportionately involved in fatal and injury crashes compared to the total driving population

No spike in morning crashes for senior drivers

Table 11.02: Senior Driver Crashes by Day of Week

Day of Week	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes	Possible Injury Crashes	PDO Crashes	Total Crashes
Sunday	9	33	126	152	624	944
Monday	15	42	194	286	1,266	1,803
Tuesday	17	40	218	302	1,354	1,931
Wednesday	20	41	188	267	1,356	1,872
Thursday	17	32	193	255	1,316	1,813
Friday	17	51	205	337	1,406	2,016
Saturday	20	41	144	193	893	1,291
Total	115	280	1,268	1,792	8,215	11,670

Figure 11.04: Senior Driver Crashes by Crash Severity and Time of Day



Contributing Factors

Why do crashes occur?

There are many factors which may contribute to traffic crashes. Any one crash could have multiple factors which led to the crash occurring. Circumstances relating to the working condition of the vehicle could contribute to a crash. Circumstances relating to the driving environment could also contribute to a crash. Sometimes roadway characteristics contribute to a crash. However, the vast majority of factors contributing to crashes are the human factors. In short, people cause most crashes.

This chapter will examine the 'why' crashes occur by looking into the factors that contribute to crashes.

Reporting of contributing factors

Contributing factors for crashes, vehicles, and drivers are documented on the crash report. Law enforcement officers are able to associate up to eight contributing factors for each driver involved in a single crash.

Aside from contributing factors, other behavioral elements are also documented on the crash report. Use of alcohol and drugs, driver distraction and driver speeding are reported as well. These data provide a picture of why the crash occurred.

Crash Facts historically included tables for contributing factors within the topic chapters. While that seems to be an appropriate place for that data, the bigger picture is missed when looking only at contributing factors for a specific type of crash. In crashes involving multiple

vehicles and crashes involving motor vehicles and non-motorists, the data reveals that the same factors contribute to those crashes. It is true in crashes involving specific vehicle types (motorcycles, large trucks, or school buses) that certain factors tend to be more prevalent. For example, road conditions are more important to motorcycle operation and following too closely is common in crashes with large heavy vehicles due to greater distances needed for stopping or reducing speeds.

Failure to Yield Right of Way

is the most frequent
human factor

The most common contributing factor in single-vehicle crashes is:

**Careless/
Negligent/
Erratic Driving**

Combining behavioral elements from the crash report with the human factor contributing data revealed the most common behavior leading to crashes was:

Speeding

Table 12.01: Single-Vehicle Crashes: Contributing Factors, by Driver Age Groups

Contributing Factors	Type	All							
		15-19	20-24	25-29	30-34	35-64	65-79	80+	Ages
Road Surface Conditions	Misc.	29.60%	30.00%	29.10%	28.20%	28.80%	25.90%	18.50%	28.70%
Ran Off Road	Human	11.40%	10.10%	10.60%	10.20%	11.50%	14.20%	13.40%	11.20%
Failed to Keep in Proper Lane	Human	9.00%	10.40%	11.40%	11.00%	11.10%	12.40%	13.70%	10.80%
Other Human Factor	Human	7.10%	8.30%	8.50%	9.00%	9.20%	11.80%	15.80%	8.80%
Driver Swerved	Human	7.50%	7.70%	6.90%	7.20%	7.20%	6.80%	4.90%	7.20%
Overcorrecting/Oversteering	Human	7.70%	6.50%	6.50%	6.20%	5.50%	4.80%	3.60%	6.10%
Driver Speeding	Human	7.70%	6.70%	5.90%	6.40%	5.20%	2.80%	2.10%	5.90%
Careless, Negligent, or Erratic Driving	Human	5.00%	5.90%	6.60%	5.70%	5.60%	3.40%	5.20%	5.50%
Driver Distracted	Human	2.70%	2.30%	2.40%	2.60%	2.30%	2.70%	4.00%	2.50%
Other Vehicular Factor	Vehicle	2.70%	2.10%	2.10%	2.50%	2.40%	2.20%	1.80%	2.40%
Defective Brakes	Vehicle	1.40%	1.50%	1.30%	1.20%	1.60%	1.00%	1.50%	1.40%
Following Too Closely	Human	1.10%	1.60%	1.20%	1.50%	1.30%	1.00%	0.00%	1.30%
Improper Turn/Merge	Human	1.00%	0.80%	1.10%	0.90%	1.30%	2.00%	2.70%	1.20%
Reckless or Aggressive Driving	Human	1.30%	0.90%	0.90%	1.50%	0.70%	0.10%	0.00%	0.90%
Disregard Other Traffic Signs	Human	0.30%	0.50%	0.60%	0.50%	0.50%	0.60%	0.90%	0.50%
Vision Obscured	Vehicle	0.40%	0.50%	0.50%	0.20%	0.50%	1.00%	2.10%	0.50%
Failure to Yield Right-of-Way	Human	0.30%	0.30%	0.10%	0.60%	0.60%	1.20%	0.90%	0.50%
Other Miscellaneous Factor	Misc.	0.40%	0.30%	0.40%	0.50%	0.50%	0.80%	0.30%	0.50%
Ran Stop Sign	Human	0.40%	0.40%	0.50%	0.50%	0.40%	0.50%	0.30%	0.40%
Disregard Other Road Markings	Human	0.20%	0.40%	0.50%	0.50%	0.40%	0.60%	1.20%	0.40%
Improper Backing	Human	0.10%	0.30%	0.20%	0.30%	0.40%	1.20%	2.70%	0.40%
Defective Steering	Vehicle	0.40%	0.30%	0.40%	0.20%	0.20%	0.10%	0.60%	0.30%
Congestion Backup, Non-Recurring Incident	Misc.	0.10%	0.30%	0.20%	0.40%	0.30%	0.30%	0.00%	0.30%
Work Zone	Misc.	0.10%	0.10%	0.30%	0.20%	0.20%	0.50%	0.90%	0.20%
Obstruction in Roadway	Misc.	0.20%	0.20%	0.30%	0.20%	0.30%	0.20%	0.60%	0.20%
Wrong Side/Wrong Way	Human	0.10%	0.20%	0.20%	0.20%	0.20%	0.30%	0.60%	0.20%
Shoulders (Non,Low,Soft,High)	Misc.	0.30%	0.10%	0.10%	0.10%	0.20%	0.50%	0.00%	0.20%
Debris	Misc.	0.10%	0.20%	0.20%	0.20%	0.20%	0.10%	0.00%	0.20%
Improper Passing	Human	0.40%	0.20%	0.10%	0.20%	0.10%	0.20%	0.00%	0.20%
Ruts/Holes/Bumps	Misc.	0.20%	0.10%	0.10%	0.20%	0.20%	0.10%	0.90%	0.20%
Congestion Backup, Prior Crash	Misc.	0.10%	0.10%	0.10%	0.20%	0.20%	0.10%	0.00%	0.10%
Congestion Backup, Other	Misc.	0.00%	0.10%	0.20%	0.10%	0.20%	0.20%	0.60%	0.10%
Defective Wheels	Vehicle	0.20%	0.10%	0.20%	0.10%	0.10%	0.00%	0.00%	0.10%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.02: Multiple-Vehicle Crashes: Contributing Factors, by Driver Age Groups

Contributing Factors	Type									All
		15-19	20-24	25-29	30-34	35-64	65-79	80+	Ages	
Road Surface Conditions	Misc.	21.10%	23.20%	25.30%	27.90%	30.40%	23.30%	15.20%	26.40%	
Failure to Yield Right-of-Way	Human	15.90%	10.90%	10.10%	9.90%	11.50%	20.20%	31.40%	12.80%	
Following Too Closely	Human	15.00%	14.90%	13.70%	11.80%	10.70%	8.10%	5.20%	12.00%	
Other Human Factor	Human	6.30%	6.10%	6.70%	6.40%	6.20%	6.30%	5.60%	6.30%	
Driver Distracted	Human	6.30%	5.20%	4.80%	4.40%	3.40%	3.10%	2.70%	4.20%	
Improper Turn/Merge	Human	3.60%	3.60%	3.50%	3.70%	4.20%	5.80%	6.30%	4.10%	
Failed to Keep in Proper Lane	Human	3.10%	3.90%	3.90%	4.10%	4.10%	5.00%	6.50%	4.00%	
Careless, Negligent, or Erratic Driving	Human	3.00%	3.90%	4.50%	4.20%	3.00%	2.50%	1.90%	3.40%	
Driver Swerved	Human	3.00%	3.20%	3.10%	3.00%	3.00%	2.10%	1.50%	2.90%	
Ran Red Light	Human	2.40%	2.60%	2.10%	2.60%	2.40%	3.00%	4.20%	2.50%	
Congestion Backup, Other	Misc.	1.80%	2.20%	2.20%	2.20%	2.40%	1.80%	0.70%	2.20%	
Driver Speeding	Human	2.90%	3.00%	2.70%	2.40%	1.70%	1.10%	0.60%	2.20%	
Congestion Backup, Non-Recurring Incident	Misc.	1.50%	2.20%	2.20%	2.50%	2.30%	1.60%	0.90%	2.10%	
Other Vehicular Factor	Vehicle	2.40%	2.10%	1.90%	2.00%	2.00%	2.00%	2.70%	2.10%	
Vision Obscured	Vehicle	2.00%	1.40%	1.50%	1.40%	1.50%	2.30%	2.50%	1.60%	
Disregard Other Traffic Signs	Human	1.40%	1.40%	1.60%	1.30%	1.40%	2.00%	3.10%	1.50%	
Ran Stop Sign	Human	1.50%	1.40%	1.10%	1.20%	1.20%	1.50%	2.50%	1.30%	
Work Zone	Misc.	0.70%	0.90%	1.00%	1.20%	1.20%	1.30%	1.10%	1.10%	
Overcorrecting/Oversteering	Human	0.80%	1.20%	1.20%	1.00%	0.90%	0.60%	0.50%	0.90%	
Congestion Backup, Prior Crash	Misc.	0.70%	0.90%	1.00%	1.10%	0.90%	0.70%	0.20%	0.90%	
Defective Brakes	Vehicle	1.10%	1.30%	1.10%	0.70%	0.60%	0.60%	0.50%	0.80%	
Improper Passing	Human	0.60%	0.70%	0.80%	0.60%	0.70%	0.90%	0.50%	0.70%	
Reckless or Aggressive Driving	Human	0.50%	0.80%	0.90%	1.00%	0.70%	0.20%	0.10%	0.70%	
Improper Backing	Human	0.40%	0.60%	0.40%	0.70%	0.80%	1.20%	0.80%	0.70%	
Other Miscellaneous Factor	Misc.	0.60%	0.50%	0.60%	0.50%	0.70%	0.70%	0.50%	0.60%	
Disregard Other Road Markings	Human	0.30%	0.50%	0.40%	0.60%	0.50%	0.60%	0.40%	0.50%	
Wrong Side/Wrong Way	Human	0.20%	0.30%	0.50%	0.50%	0.40%	0.50%	0.80%	0.40%	
Ran Off Road	Human	0.30%	0.30%	0.40%	0.30%	0.40%	0.10%	0.10%	0.30%	
Obstruction in Roadway	Misc.	0.20%	0.20%	0.20%	0.20%	0.20%	0.20%	0.30%	0.20%	
Passing on Shoulder	Human	0.00%	0.10%	0.20%	0.10%	0.10%	0.20%	0.10%	0.10%	
Traffic Control Device Inoperative/Missing/Obscured	Misc.	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%	
Debris	Misc.	0.00%	0.10%	0.00%	0.10%	0.10%	0.10%	0.00%	0.10%	
Defective Wheels	Vehicle	0.10%	0.10%	0.10%	0.10%	0.00%	0.10%	0.00%	0.00%	
Worn/Travel-Polished Surface	Misc.	0.10%	0.10%	0.00%	0.10%	0.00%	0.00%	0.00%	0.00%	

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.03: Contributing Factors in Crashes, by Crash Severity

		Factors Cited in Fatal Crashes		Factors Cited in Injury Crashes		Factors Cited in PDO Crashes	
Contributing Factor	Type	#	%	#	%	#	%
Other Human Factor	Human	156	16.70%	5,482	17.00%	12,903	14.80%
Other Vehicular Factor	Vehicle	106	11.30%	2,706	8.40%	6,206	7.10%
Failed to Keep in Proper Lane	Human	83	8.80%	1,323	4.10%	4,558	5.20%
Driver Speeding	Human	78	8.30%	986	3.00%	2,121	2.40%
Other Roadway Factor	Misc.	71	7.60%	2,643	8.20%	6,650	7.60%
Road Surface Condition	Misc.	64	6.80%	5,320	16.50%	20,717	23.80%
Failure to Yield Right-of-Way	Human	60	6.40%	3,038	9.40%	5,746	6.60%
Ran Off Road	Human	52	5.50%	916	2.80%	2,467	2.80%
Careless, Negligent, or Erratic Driving	Human	48	5.10%	1,314	4.00%	2,677	3.00%
Non-motorist Error	Human	40	4.20%	424	1.30%	49	0.00%
Disregard Traffic Control Device	Human	28	2.90%	1,195	3.70%	1,425	1.60%
Wrong Side or Wrong Way	Human	27	2.80%	157	0.40%	177	0.20%
Reckless or Aggressive Driving	Human	26	2.70%	297	0.90%	462	0.50%
Over-correcting / Over Steering	Human	21	2.20%	651	2.00%	1,722	1.90%
Disregard Other Traffic Signs	Human	12	1.20%	436	1.30%	682	0.70%
Driver Distracted	Human	12	1.20%	1,179	3.60%	2,542	2.90%
Swerved or Avoided	Human	12	1.20%	927	2.80%	3,227	3.70%
Defective Equipment	Vehicle	9	0.90%	331	1.00%	980	1.10%
Disregard Other Road Markings	Human	6	0.60%	131	0.40%	319	0.30%
Improper Passing	Human	6	0.60%	122	0.30%	428	0.40%
Following Too Closely	Human	5	0.50%	1,673	5.10%	6,452	7.40%
Improper Turn/Merge	Human	5	0.50%	535	1.60%	2,567	2.90%
Passing on Shoulder	Human	3	0.30%	21	0.00%	67	0.00%
Vision Obscured	Vehicle	3	0.30%	334	1.00%	1,008	1.10%
Oversize/Overweight Trucks	Vehicle	1	0.10%	3	0.00%	35	0.00%
Improper Backing	Human	0	0.00%	44	0.10%	731	0.80%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.04: Contributing Factors in Motorcycle Crashes

Contributing Factors	Type	Single Vehicle Crashes		Multiple Vehicle Crashes			
		Attributed to MC Drivers		Attributed to Other Drivers		Attributed to MC Drivers	
		#	%	#	%	#	%
Ran Off Road	Human	66	11.50%	0	0	5	1.80%
Other Human Factor	Human	61	10.60%	18	6.00%	15	5.50%
Driver Speeding	Human	55	9.50%	2	0.70%	34	12.40%
Failed to Keep in Proper Lane	Human	53	9.20%	9	3.00%	18	6.60%
Careless, Negligent, or Erratic Driving	Human	46	8.00%	15	5.00%	22	8.00%
Driver Swerved	Human	44	7.60%	1	0.30%	7	2.60%
Overcorrecting/Oversteering	Human	42	7.30%	0	0	12	4.40%
Other Vehicular Factor	Vehicle	33	5.70%	10	3.30%	5	1.80%
Road Surface Conditions	Misc.	18	3.10%	4	1.30%	6	2.20%
Reckless or Aggressive Driving	Human	15	2.60%	4	1.30%	11	4.00%
Debris	Misc.	13	2.30%	1	0.30%	1	0.40%
Failure to Yield Right-of-Way	Human	12	2.10%	118	39.10%	19	6.90%
Ruts/Holes/Bumps	Misc.	11	1.90%	0	0	1	0.40%
Following Too Closely	Human	9	1.60%	22	7.30%	41	15.00%
Improper Passing	Human	9	1.60%	1	0.30%	11	4.00%
Improper Turn/Merge	Human	9	1.60%	23	7.60%	9	3.30%
Defective Brakes	Vehicle	9	1.60%	2	0.70%	2	0.70%
Other Miscellaneous Factor	Misc.	9	1.60%	2	0.70%	2	0.70%
Obstruction in Roadway	Misc.	8	1.40%	1	0.30%	1	0.40%
Defective Tire/Tire Failure	Vehicle	7	1.20%	0	0	0	0.00%
Driver Distracted	Human	6	1.00%	10	3.30%	7	2.60%
Congestion Backup, Other	Misc.	5	0.90%	2	0.70%	2	0.70%
Defective Steering	Vehicle	5	0.90%	1	0.30%	2	0.70%
Defective Power Train	Vehicle	3	0.50%	0	0	0	0.00%
In Roadway Improperly	Human	3	0.50%	0	0	0	0.00%
Failure to Obey Traffic Signs/Signals/Officer	Human	2	0.30%	0	0	0	0.00%
Work Zone	Misc.	2	0.30%	6	2.00%	6	2.20%
Congestion Backup, Non-Recurring Incident	Misc.	2	0.30%	8	2.60%	4	1.50%
Vision Obscured	Vehicle	2	0.30%	18	6.00%	3	1.10%
Ran Stop Sign	Human	2	0.30%	3	1.00%	4	1.50%
Disregard Other Traffic Signs	Human	2	0.30%	6	2.00%	5	1.80%
Disregard Other Road Markings	Human	2	0.30%	2	0.70%	4	1.50%
Passing on Shoulder	Human	2	0.30%	0	0	1	0.40%
Shoulders (Non,Low,Soft,High)	Misc.	1	0.20%	0	0	0	0.00%
Congestion Backup, Prior Crash	Misc.	1	0.20%	2	0.70%	2	0.70%
Improper Backing	Human	1	0.20%	2	0.70%	0	0.00%
Defective Suspension	Vehicle	1	0.20%	0	0	0	0.00%
Defective Wheels	Vehicle	1	0.20%	1	0.30%	0	0.00%
No Improper Action	Human	1	0.20%	0	0.00%	0	0.00%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.05: Contributing Factors in Truck Crashes

Contributing Factors	Type	Attributed to Truck Vehicles		Attributed to Non-Truck Vehicles*	
		#	%	#	%
Road Surface Conditions	Misc.	1,522	30.50%	1,211	27.30%
Failed to Keep in Proper Lane	Human	426	8.50%	371	8.40%
Other Human Factor	Human	426	8.50%	314	7.10%
Improper Turn/Merge	Human	267	5.40%	266	6.00%
Following Too Closely	Human	266	5.30%	263	5.90%
Failure to Yield Right-of-Way	Human	256	5.10%	432	9.70%
Ran Off Road	Human	243	4.90%	19	0.40%
Driver Swerved	Human	226	4.50%	224	5.00%
Careless, Negligent, or Erratic Driving	Human	138	2.80%	171	3.90%
Other Vehicular Factor	Vehicle	119	2.40%	79	1.80%
Vision Obscured	Vehicle	104	2.10%	53	1.20%
Improper Backing	Human	102	2.00%	18	0.40%
Driver Speeding	Human	102	2.00%	127	2.90%
Overcorrecting/Oversteering	Human	99	2.00%	95	2.10%
Driver Distracted	Human	85	1.70%	125	2.80%
Work Zone	Misc.	68	1.40%	68	1.50%
Defective Brakes	Vehicle	58	1.20%	31	0.70%
Congestion Backup, Non-Recurring Incident	Misc.	54	1.10%	60	1.40%
Congestion Backup, Other	Misc.	54	1.10%	86	1.90%
Congestion Backup, Prior Crash	Misc.	51	1.00%	67	1.50%
Disregard Other Traffic Signs	Human	49	1.00%	34	0.80%
Ran Red Light	Human	40	0.80%	47	1.10%
Ran Stop Sign	Human	37	0.70%	43	1.00%
Other Miscellaneous Factor	Misc.	31	0.60%	20	0.50%
Improper Passing	Human	30	0.60%	97	2.20%
Oversize/Overweight Trucks	Vehicle	26	0.50%	2	0.00%
Disregard Other Road Markings	Human	25	0.50%	21	0.50%
Shoulders (Non,Low,Soft,High)	Misc.	17	0.30%	2	0.00%
Obstruction in Roadway	Misc.	16	0.30%	17	0.40%
Wrong Side/Wrong Way	Human	11	0.20%	19	0.40%
Reckless or Aggressive Driving	Human	7	0.10%	20	0.50%
Defective Wheels	Vehicle	5	0.10%	6	0.10%
Passing on Shoulder	Human	0	0.00%	11	0.20%

* Pedestrians and Bicyclists are included in Non-Trucks

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.06: Contributing Factors in Pedestrian Crashes

Contributing Factors	Type	Attributed to Pedestrians		Attributed to MV Drivers	
		#	%	#	%
Dart/Dash	Human	113	20.00%	0	0.00%
Road Surface Conditions	Misc.	84	14.90%	103	15.40%
In Roadway Improperly	Human	66	11.70%	0	0.00%
Failure to Obey Traffic Signs/Signals/Officer	Human	59	10.50%	0	0.00%
Not Visible	Human	54	9.60%	0	0.00%
Other Human Factor	Human	54	9.60%	68	10.20%
Failure to Yield Right-of-Way	Human	47	8.30%	172	25.70%
Wrong Way Riding or Walking	Human	13	2.30%	0	0.00%
Entering/Exiting Parked/Standing Vehicle	Human	13	2.30%	0	0.00%
Inattentive/Distracted	Human	12	2.10%	0	0.00%
Other Miscellaneous Factor	Misc.	11	2.00%	9	1.30%
Disabled Vehicle Related	Human	9	1.60%	0	0.00%
Work Zone	Misc.	5	0.90%	5	0.70%
Improper Passing	Human	4	0.70%	5	0.70%
Shoulders (Non,Low,Soft,High)	Misc.	4	0.70%	5	0.70%
Congestion Backup, Other	Misc.	3	0.50%	2	0.30%
Obstruction in Roadway	Misc.	3	0.50%	4	0.60%
Congestion Backup, Prior Crash	Misc.	3	0.50%	4	0.60%
Improper Turn/Merge	Human	3	0.50%	7	1.00%
Debris	Misc.	1	0.20%	1	0.10%
Ruts/Holes/Bumps	Misc.	1	0.20%	1	0.10%
Traffic Control Device Inoperative/Missing/Obscured	Misc.	1	0.20%	1	0.10%
Congestion Backup, Non-Recurring Incident	Misc.	1	0.20%	1	0.10%
Vision Obscured	Vehicle	0	0.00%	53	7.90%
Driver Distracted	Human	0	0.00%	38	5.70%
Careless, Negligent, or Erratic Driving	Human	0	0.00%	32	4.80%
Other Vehicular Factor	Vehicle	0	0.00%	29	4.30%
Driver Swerved	Human	0	0.00%	19	2.80%
Disregard Other Traffic Signs	Human	0	0.00%	18	2.70%
Failed to Keep in Proper Lane	Human	0	0.00%	18	2.70%
Reckless or Aggressive Driving	Human	0	0.00%	18	2.70%
Driver Speeding	Human	0	0.00%	10	1.50%
Improper Backing	Human	0	0.00%	8	1.20%
Ran Red Light	Human	0	0.00%	8	1.20%
Ran Off Road	Human	0	0.00%	7	1.00%
Disregard Other Road Markings	Human	0	0.00%	6	0.90%
Wrong Side/Wrong Way	Human	0	0.00%	5	0.70%
Following Too Closely	Human	0	0.00%	3	0.40%
Defective Brakes	Vehicle	0	0.00%	3	0.40%
Ran Stop Sign	Human	0	0.00%	3	0.40%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.07: Contributing Factors in Bicycle Crashes

Contributing Factors	Type	Attributed to Bicyclists		Attributed to MV Drivers	
		#	%	#	%
Failure to Obey Traffic Signs/Signals/Officer	Human	79	27.80%	0	0.00%
Failure to Yield Right-of-Way	Human	48	16.90%	102	41.80%
Dart/Dash	Human	42	14.80%	1	0.40%
Other Human Factor	Human	29	10.20%	19	7.80%
Wrong Way Riding or Walking	Human	18	6.30%	0	0.00%
In Roadway Improperly	Human	12	4.20%	0	0.00%
Not Visible	Human	12	4.20%	0	0.00%
Road Surface Conditions	Misc.	11	3.90%	9	3.70%
Improper Turn/Merge	Human	9	3.20%	6	2.50%
Entering/Exiting Parked/Standing Vehicle	Human	7	2.50%	0	0.00%
Inattentive/Distracted	Human	4	1.40%	0	0.00%
Improper Passing	Human	3	1.10%	0	0.00%
Work Zone	Misc.	2	0.70%	2	0.80%
Traffic Control Device Inoperative/Missing/Obscured	Misc.	2	0.70%	2	0.80%
Congestion Backup, Non-Recurring Incident	Misc.	2	0.70%	2	0.80%
Ruts/Holes/Bumps	Misc.	1	0.40%	1	0.40%
Shoulders (Non,Low,Soft,High)	Misc.	1	0.40%	0	0.00%
Congestion Backup, Prior Crash	Misc.	1	0.40%	1	0.40%
Other Miscellaneous Factor	Misc.	1	0.40%	1	0.40%
Vision Obscured	Vehicle	0	0.00%	22	9.00%
Driver Distracted	Human	0	0.00%	17	7.00%
Disregard Other Traffic Signs	Human	0	0.00%	12	4.90%
Careless, Negligent, or Erratic Driving	Human	0	0.00%	12	4.90%
Failed to Keep in Proper Lane	Human	0	0.00%	8	3.30%
Other Vehicular Factor	Vehicle	0	0.00%	8	3.30%
Ran Red Light	Human	0	0.00%	4	1.60%
Ran Stop Sign	Human	0	0.00%	4	1.60%
Driver Swerved	Human	0	0.00%	4	1.60%
Defective Brakes	Vehicle	0	0.00%	2	0.80%
Driver Speeding	Human	0	0.00%	2	0.80%
Improper Backing	Human	0	0.00%	1	0.40%
Disregard Other Road Markings	Human	0	0.00%	1	0.40%
Overcorrecting/Oversteering	Human	0	0.00%	1	0.40%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.08: Contributing Factors in School Bus Crashes

Contributing Factors	Type	Attributed to School Bus Drivers		Attributed to Drivers of Other Vehicles	
		#	%	#	%
Road Surface Conditions	Misc.	566	48.70%	176	34.50%
Failure to Yield Right-of-Way	Human	239	20.60%	54	10.60%
Improper Turn/Merge	Human	55	4.70%	20	3.90%
Following Too Closely	Human	50	4.30%	24	4.70%
Overcorrecting/Oversteering	Human	39	3.40%	4	0.80%
Other Human Factor	Human	36	3.10%	41	8.00%
Vision Obscured	Vehicle	32	2.80%	12	2.40%
Driver Distracted	Human	28	2.40%	16	3.10%
Improper Backing	Human	19	1.60%	7	1.40%
Disregard Other Traffic Signs	Human	13	1.10%	11	2.20%
Other Miscellaneous Factor	Misc.	11	0.90%	5	1.00%
Other Vehicular Factor	Vehicle	11	0.90%	16	3.10%
Careless, Negligent, or Erratic Driving	Human	8	0.70%	15	2.90%
Non-Highway Work	Misc.	7	0.60%	0	0.00%
Ran Off Road	Human	7	0.60%	1	0.20%
Failed to Keep in Proper Lane	Human	6	0.50%	12	2.40%
Driver Swerved	Human	6	0.50%	21	4.10%
Defective Brakes	Vehicle	4	0.30%	5	1.00%
Congestion Backup, Other	Misc.	4	0.30%	5	1.00%
Ran Red Light	Human	4	0.30%	12	2.40%
Improper Passing	Human	3	0.30%	4	0.80%
Congestion Backup, Non-Recurring Incident	Misc.	3	0.30%	3	0.60%
Driver Speeding	Human	3	0.30%	20	3.90%
Work Zone	Misc.	2	0.20%	2	0.40%
Disregard Other Road Markings	Human	2	0.20%	1	0.20%
Congestion Backup, Prior Crash	Misc.	1	0.10%	0	0.00%
Truck Coupling/Trailer Hitch/Safety Chains	Vehicle	1	0.10%	0	0.00%
Ran Stop Sign	Human	1	0.10%	13	2.50%
Wrong Side/Wrong Way	Human	1	0.10%	2	0.40%
Reckless or Aggressive Driving	Human	0	0.00%	7	1.40%
Defective Wheels	Vehicle	0	0.00%	1	0.20%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.09: Contributing Factors in Motor Vehicle/Train Crashes

Contributing Factors	Type	#	%
Road Surface Conditions	Misc.	16	21.90%
Disregard Other Traffic Signs	Human	12	16.40%
Failure to Yield Right-of-Way	Human	9	12.30%
Other Human Factor	Human	7	9.60%
Disregard Other Road Markings	Human	5	6.80%
Careless, Negligent, or Erratic Driving	Human	4	5.50%
Ran Stop Sign	Human	3	4.10%
Driver Distracted	Human	3	4.10%
Other Vehicular Factor	Vehicle	3	4.10%
Work Zone	Misc.	2	2.70%
Vision Obscured	Vehicle	2	2.70%
Obstruction in Roadway	Misc.	1	1.40%
Improper Turn/Merge	Human	1	1.40%
Defective Brakes	Vehicle	1	1.40%
Ran Off Road	Human	1	1.40%
Failed to Keep in Proper Lane	Human	1	1.40%
Driver Swerved	Human	1	1.40%
Driver Speeding	Human	1	1.40%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.10: Contributing Factors in Teen-Involved Crashes

Contributing Factors	Type	Attributed to Teen Drivers		Attributed to Other Vehicle Driver	
		#	%	#	%
Failure to Yield Right-of-Way	Human	1,387	14.50%	675	23.80%
Following Too Closely	Human	1,323	13.80%	485	17.10%
Other Human Factor	Human	901	9.40%	291	10.30%
Driver Distracted	Human	692	7.20%	144	5.10%
Failed to Keep in Proper Lane	Human	684	7.10%	124	4.40%
Driver Swerved	Human	618	6.40%	157	5.50%
Driver Speeding	Human	605	6.30%	49	1.70%
Ran Off Road	Human	526	5.50%	15	0.50%
Careless, Negligent, or Erratic Driving	Human	510	5.30%	124	4.40%
Overcorrecting/Oversteering	Human	414	4.30%	28	1.00%
Improper Turn/Merge	Human	360	3.80%	153	5.40%
Other Vehicular Factor	Vehicle	342	3.60%	117	4.10%
Vision Obscured	Vehicle	215	2.20%	74	2.60%
Ran Red Light	Human	207	2.20%	83	2.90%
Defective Brakes	Vehicle	159	1.70%	27	1.00%
Ran Stop Sign	Human	139	1.50%	60	2.10%
Disregard Other Traffic Signs	Human	133	1.40%	69	2.40%
Reckless or Aggressive Driving	Human	106	1.10%	17	0.60%
Improper Passing	Human	74	0.80%	30	1.10%
Improper Backing	Human	71	0.70%	31	1.10%
Disregard Other Road Markings	Human	37	0.40%	27	1.00%
Wrong Side/Wrong Way	Human	25	0.30%	12	0.40%
Defective Steering	Vehicle	22	0.20%	2	0.10%
Defective Wheels	Vehicle	17	0.20%	1	0.00%
Defective Power Train	Vehicle	7	0.10%	3	0.10%
Defective Suspension	Vehicle	5	0.10%	3	0.10%
Passing on Shoulder	Human	5	0.10%	2	0.10%
Failure to Obey Traffic Signs/Signals/Officer	Human	0	0.00%	8	0.30%
Dart/Dash	Human	0	0.00%	8	0.30%
Not Visible	Human	0	0.00%	7	0.20%

Human Factor • Vehicular Factor • Miscellaneous Factor

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

Table 12.11: Contributing Factors in Senior-Involved Crashes

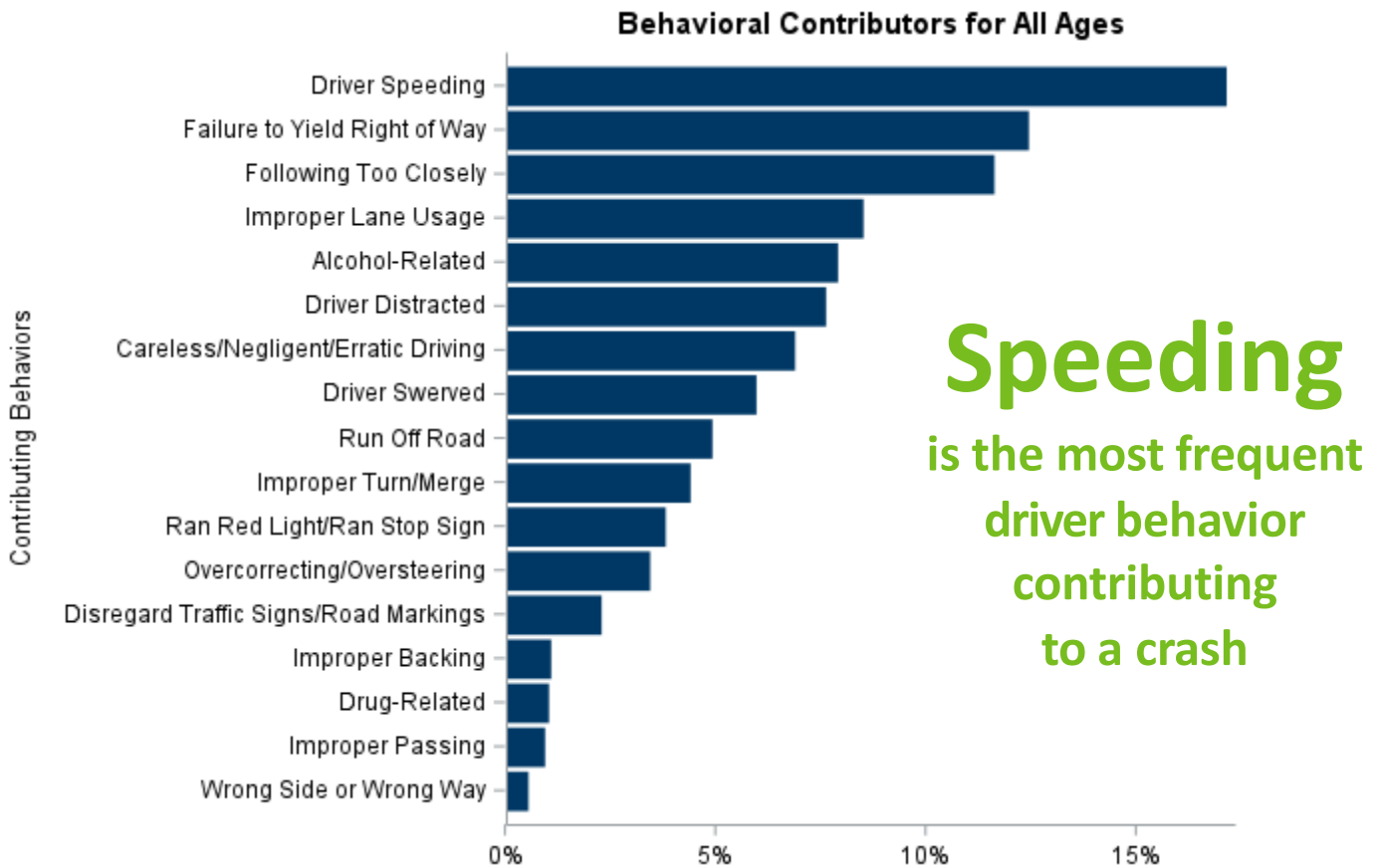
Contributing Factors	Type	Attributed to Senior Drivers		Attributed to Other Vehicle Driver	
		#	%	#	%
Failure to Yield Right-of-Way	Human	1,594	23.30%	836	17.90%
Other Human Factor	Human	774	11.30%	422	9.00%
Failed to Keep in Proper Lane	Human	667	9.80%	264	5.70%
Following Too Closely	Human	527	7.70%	813	17.40%
Improper Turn/Merge	Human	463	6.80%	245	5.20%
Ran Off Road	Human	318	4.70%	25	0.50%
Driver Swerved	Human	289	4.20%	224	4.80%
Driver Distracted	Human	288	4.20%	356	7.60%
Careless, Negligent, or Erratic Driving	Human	260	3.80%	224	4.80%
Ran Red Light	Human	222	3.30%	211	4.50%
Other Vehicular Factor	Vehicle	213	3.10%	141	3.00%
Vision Obscured	Vehicle	208	3.00%	116	2.50%
Disregard Other Traffic Signs	Human	171	2.50%	100	2.10%
Overcorrecting/Oversteering	Human	151	2.20%	50	1.10%
Improper Backing	Human	145	2.10%	44	0.90%
Ran Stop Sign	Human	128	1.90%	119	2.50%
Driver Speeding	Human	126	1.80%	171	3.70%
Defective Brakes	Vehicle	68	1.00%	70	1.50%
Improper Passing	Human	64	0.90%	52	1.10%
Disregard Other Road Markings	Human	55	0.80%	26	0.60%
Wrong Side/Wrong Way	Human	50	0.70%	26	0.60%
Reckless or Aggressive Driving	Human	12	0.20%	42	0.90%
Passing on Shoulder	Human	11	0.20%	8	0.20%
Defective Steering	Vehicle	6	0.10%	4	0.10%
Defective Power Train	Vehicle	5	0.10%	2	0.00%
Oversize/Overweight Trucks	Vehicle	4	0.10%	2	0.00%
Failure to Obey Traffic Signs/Signals/Officer	Human	0	0.00%	17	0.40%
Dart/Dash	Human	0	0.00%	27	0.60%
In Roadway Improperly	Human	0	0.00%	12	0.30%
Not Visible	Human	0	0.00%	9	0.20%

Human Factor • Vehicular Factor • Miscellaneous Factor

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

Figure 12.01: Driver Behaviors by Age Groups

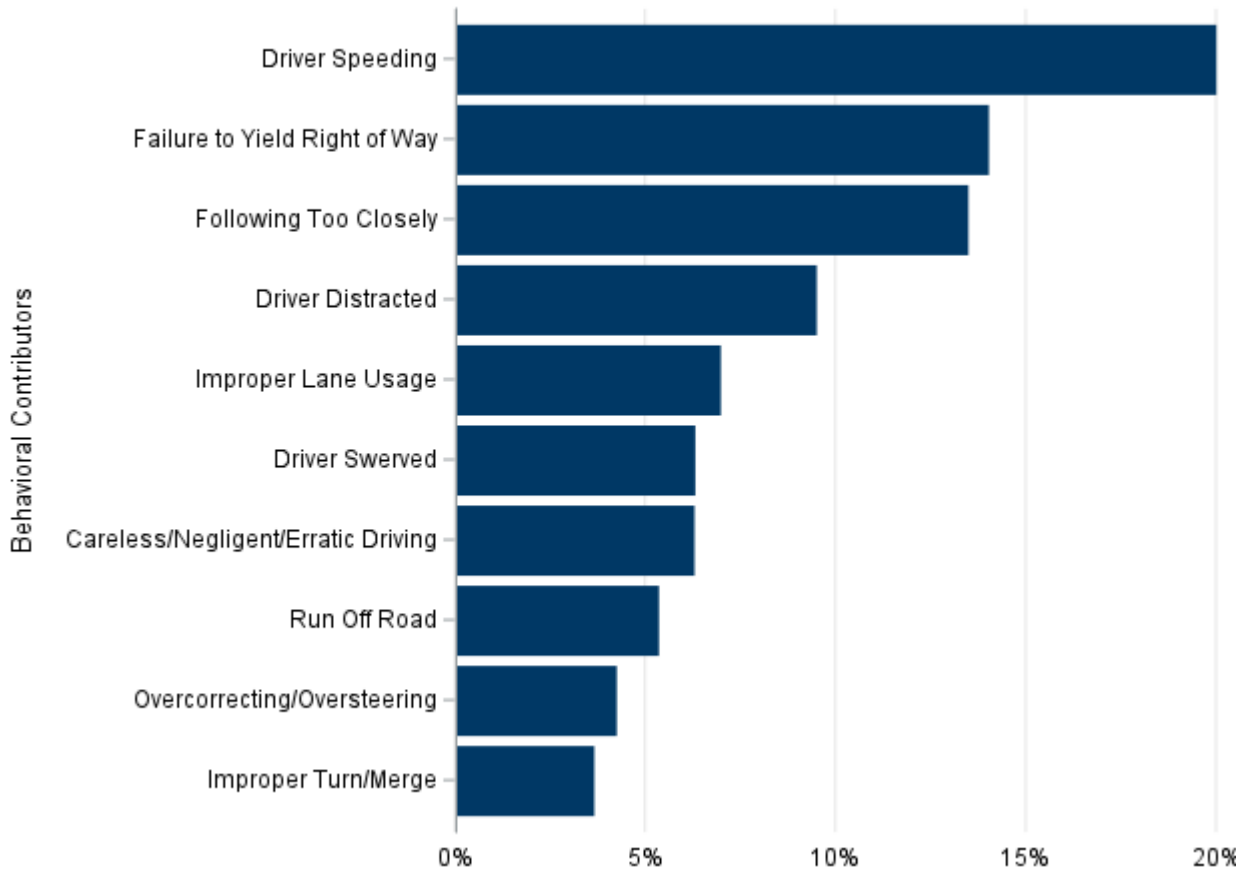
The graphs on the following pages combine data from the behavioral elements in the crash report with the human factors data from the contributing factor section of the crash report. The graphs examine which behaviors drivers exhibit most by different age groups. This provides a complete picture of what drivers are doing that is resulting in crashes on Minnesota roads.



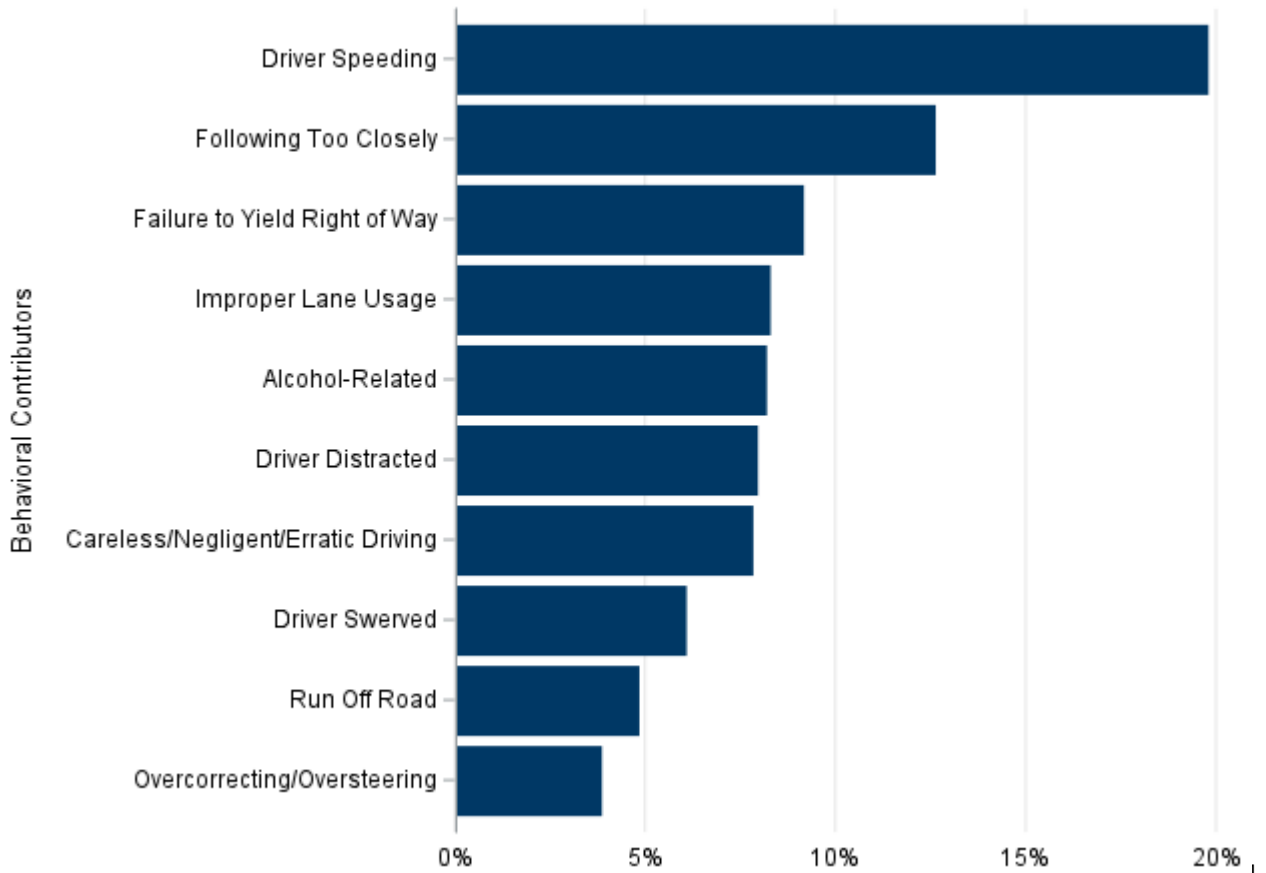
Driver distraction
 played a role in
7.6%
 of all crashes

8.9%
 related to alcohol
 or drug use

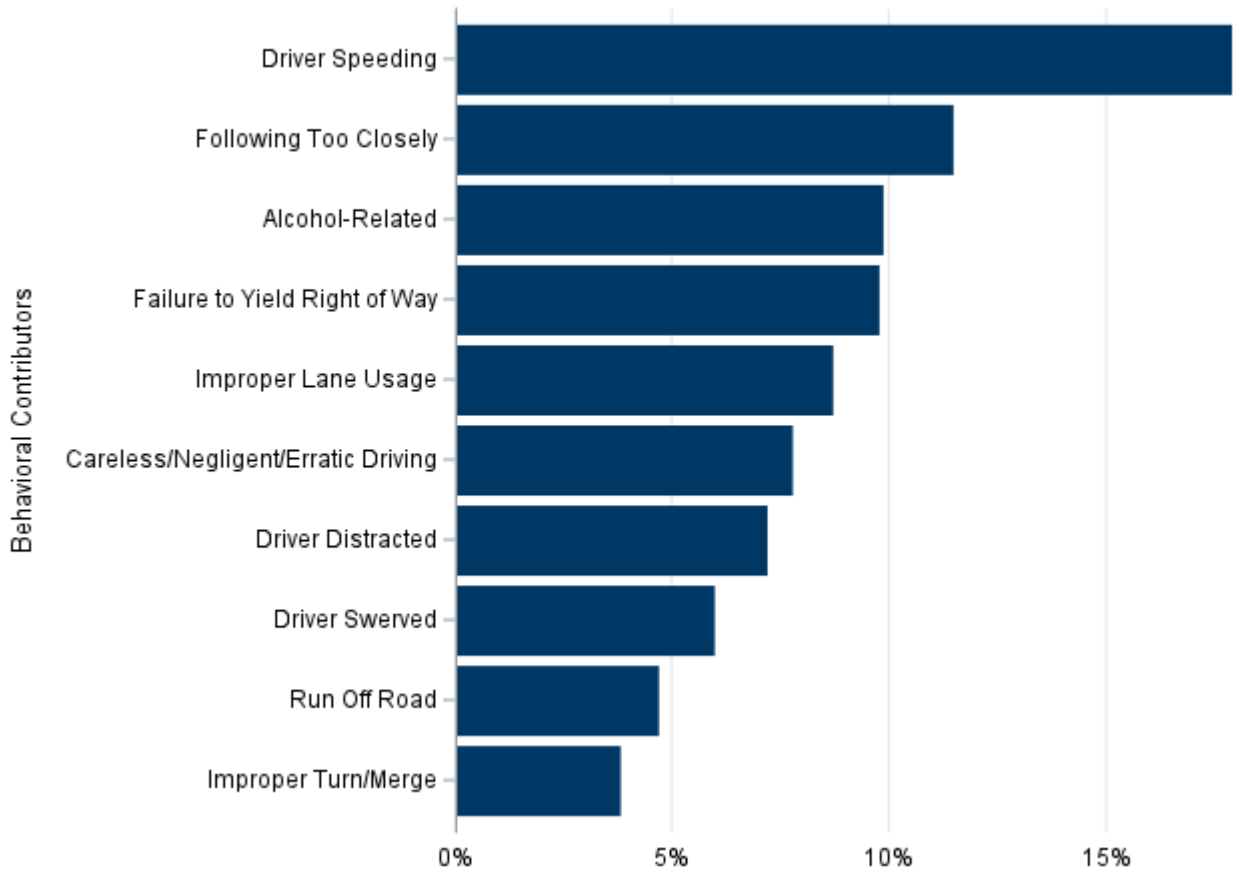
Top 10 Behavioral Contributors for Age 15-19



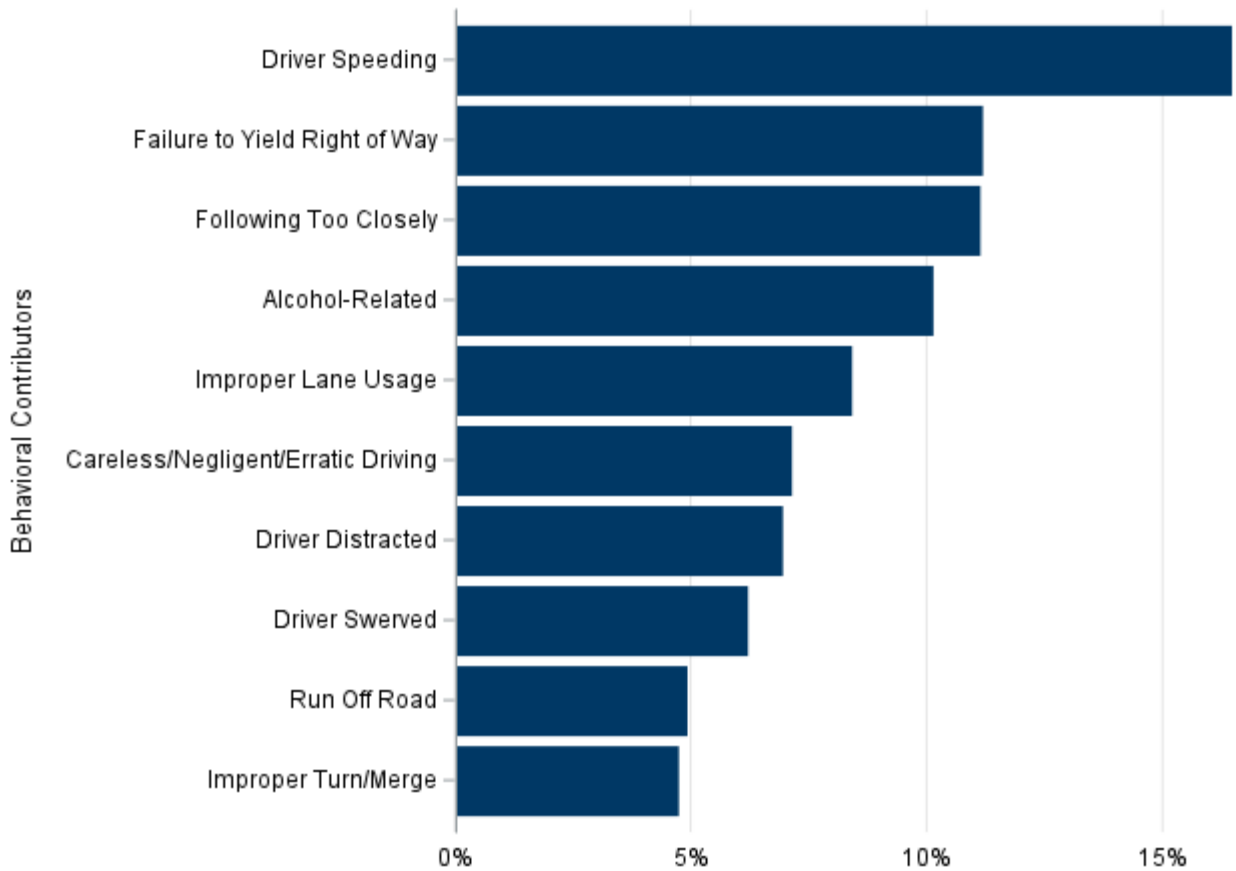
Top 10 Behavioral Contributors for Age 20-29



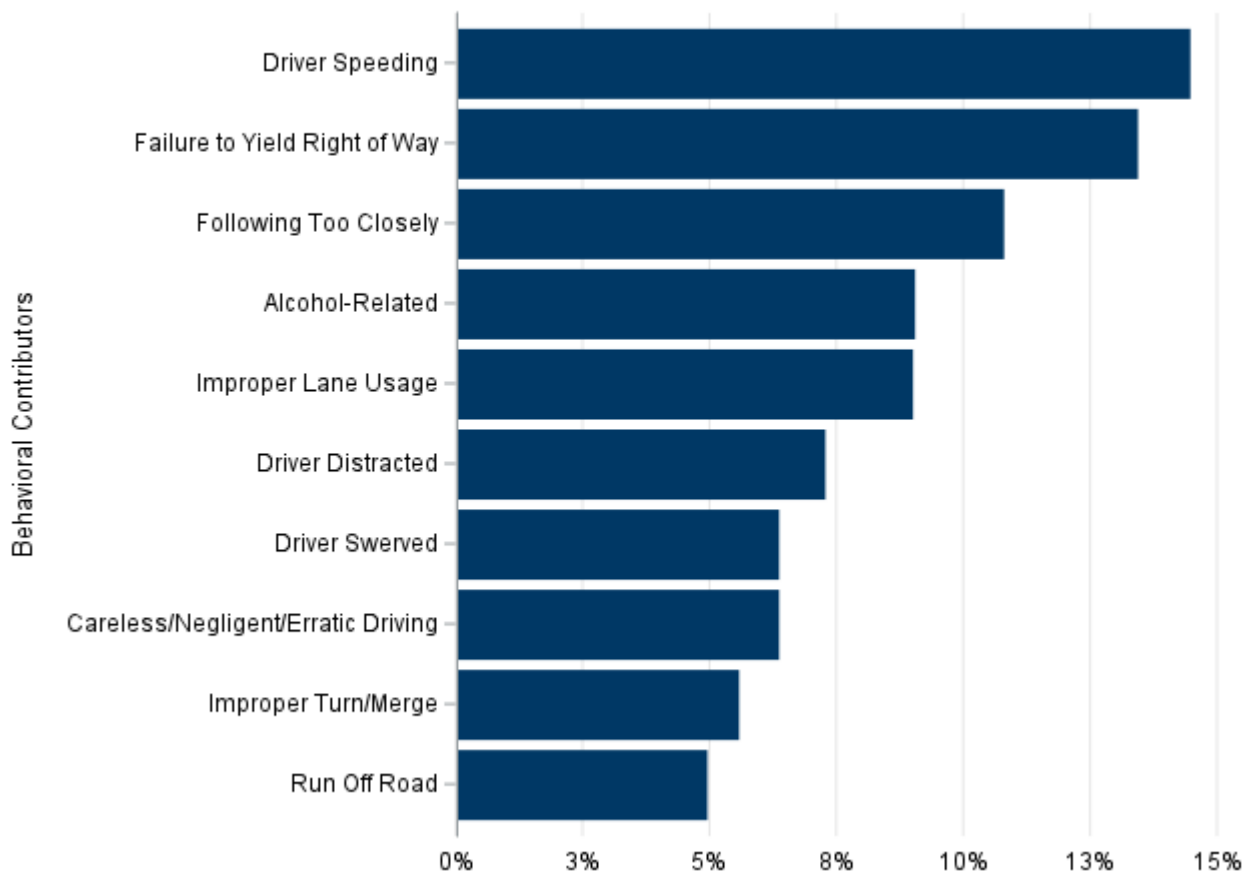
Top 10 Behavioral Contributors for Age 30-39



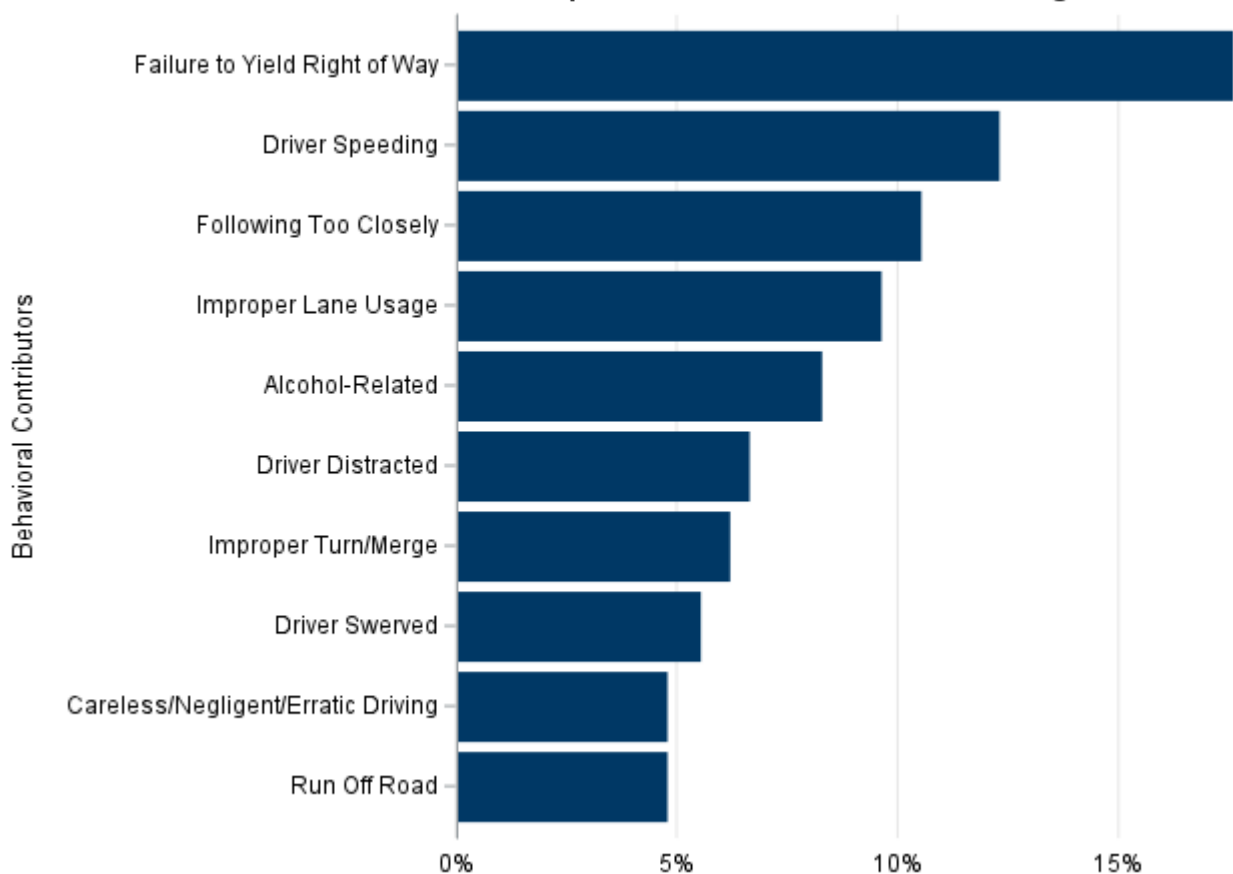
Top 10 Behavioral Contributors for Age 40-49



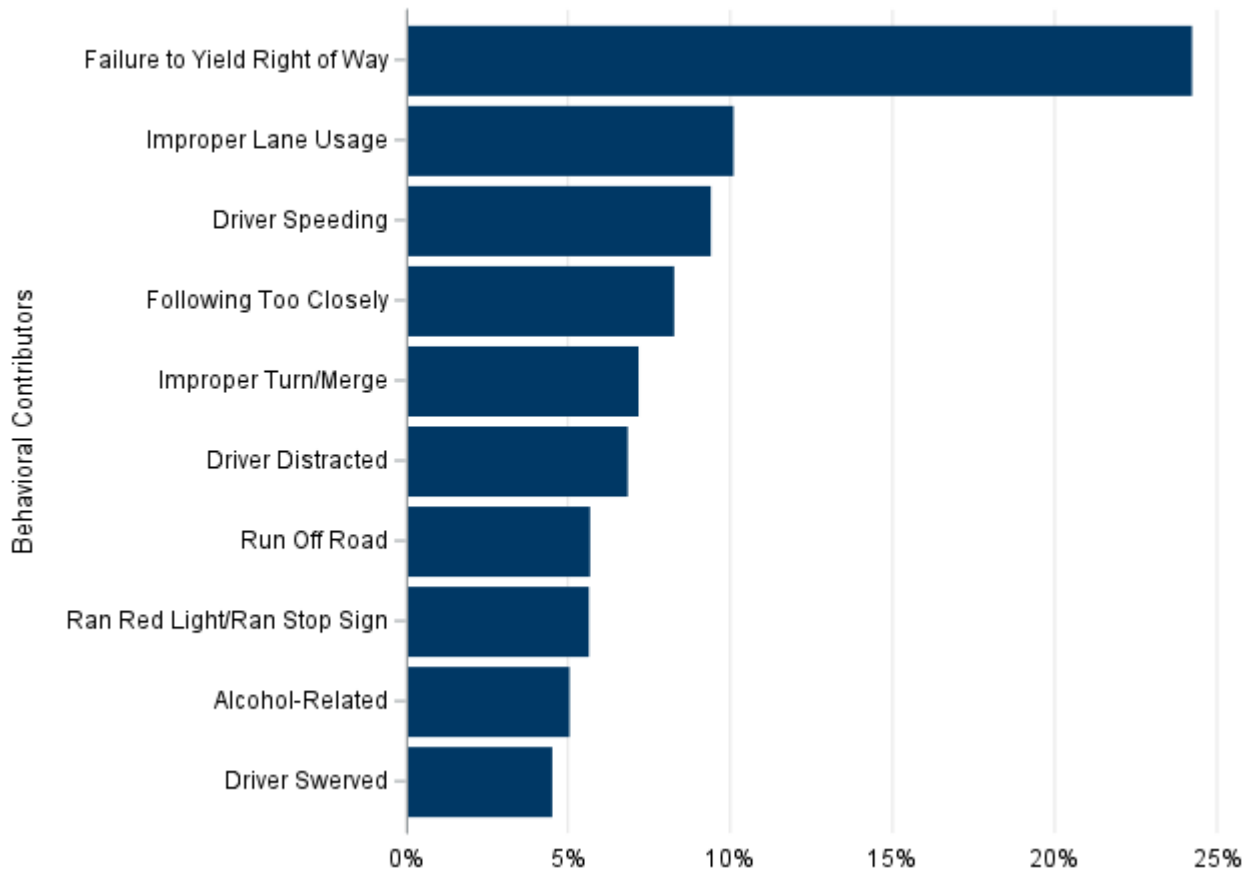
Top 10 Behavioral Contributors for Age 50-59



Top 10 Behavioral Contributors for Age 60-69



Top 10 Behavioral Contributors for Age 70-79



Top 10 Behavioral Contributors for Age 80+

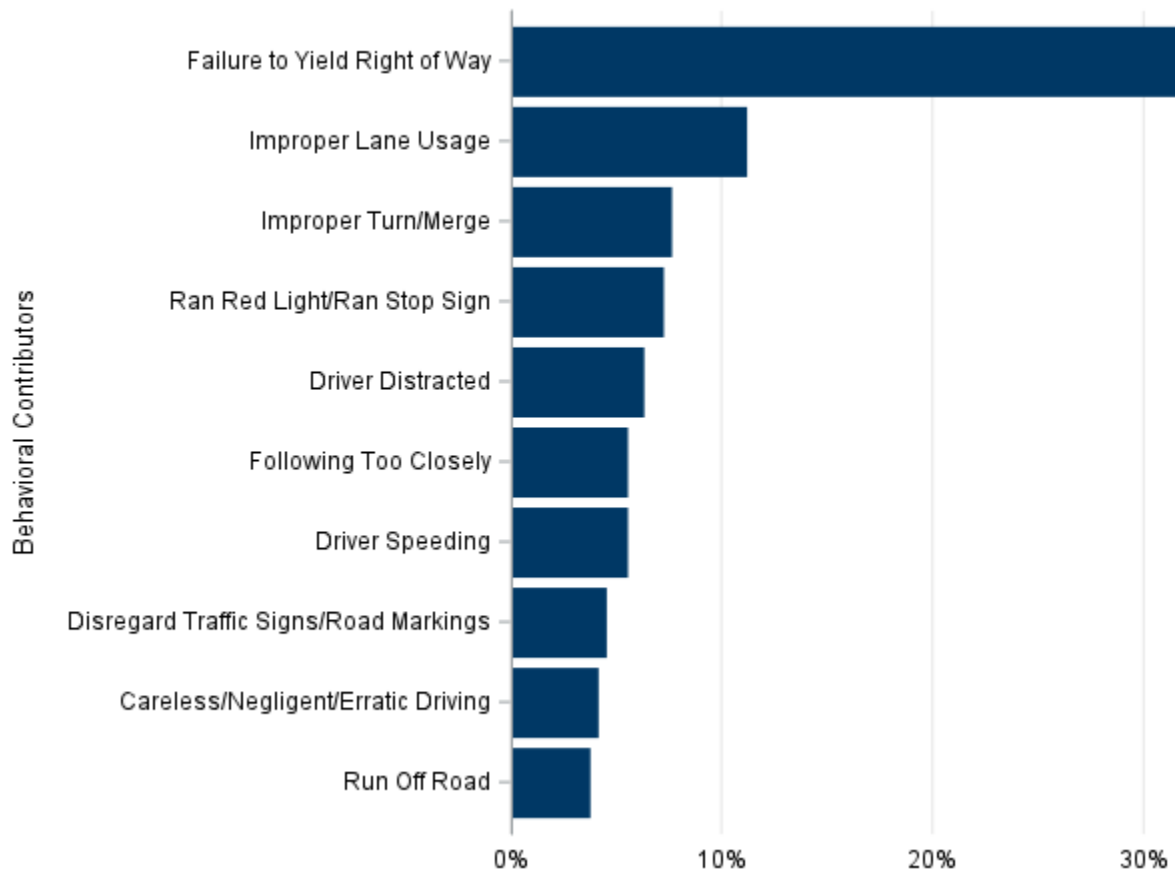


Table 12.12: Behavioral Contributors for Male Drivers, by Age Group

Contributing Behaviors	Age 15-19		Age 20-29		Age 30-39		Age 40-49		Age 50-59	
	#	%	#	%	#	%	#	%	#	%
Fail to Yield Right of Way	697	12.3%	964	8.0%	768	8.6%	573	9.6%	550	11.4%
Following Too Closely	703	12.4%	1,398	11.6%	960	10.8%	656	11.0%	542	11.3%
Improper Passing	62	1.1%	117	1.0%	74	0.8%	52	0.9%	63	1.3%
Improper Turn/Merge	193	3.4%	397	3.3%	331	3.7%	288	4.8%	265	5.5%
Improper Backing	36	0.6%	98	0.8%	86	1.0%	82	1.4%	71	1.5%
Run Off Road	306	5.4%	620	5.1%	435	4.9%	306	5.1%	236	4.9%
Ran Red Light/Stop Sign	192	3.4%	400	3.3%	306	3.4%	204	3.4%	144	3.0%
Disregard Traffic Signs	91	1.6%	250	2.1%	192	2.2%	125	2.1%	112	2.3%
Wrong Side/Wrong Way	17	0.3%	55	0.5%	50	0.6%	39	0.7%	31	0.6%
Improper Lane Usage	428	7.5%	1,001	8.3%	791	8.9%	520	8.7%	445	9.2%
Careless/Negligent/Erratic	432	7.6%	1,058	8.8%	770	8.6%	458	7.7%	340	7.1%
Driver Swerved	352	6.2%	710	5.9%	493	5.5%	355	5.9%	296	6.2%
Overcorrecting/Oversteering	220	3.9%	448	3.7%	301	3.4%	198	3.3%	143	3.0%
Driver Distracted	522	9.2%	917	7.6%	604	6.8%	377	6.3%	335	7.0%
Driver Speeding	1,213	21.3%	2,422	20.1%	1,637	18.4%	1,014	17.0%	709	14.7%
Alcohol-Related	185	3.3%	1,067	8.8%	963	10.8%	646	10.8%	471	9.8%
Drug-Related	37	0.7%	142	1.2%	156	1.7%	76	1.3%	59	1.2%
Total	5,686		12,064		8,917		5,969		4,812	

■ Over 10% of behavioral factors for this age group.

Contributing Behaviors	Age 60-69		Age 70-79		Age 80+		Age Unk		Total
	#	%	#	%	#	%	#	%	
Fail to Yield Right of Way	509	14.5%	401	21.2%	246	32.9%	7	10.1%	4,715
Following Too Closely	374	10.6%	158	8.4%	41	5.5%	2	2.9%	4,834
Improper Passing	39	1.1%	23	1.2%	5	0.7%	2	2.9%	437
Improper Turn/Merge	204	5.8%	133	7.0%	49	6.6%	2	2.9%	1,862
Improper Backing	85	2.4%	43	2.3%	15	2.0%	0	0.0%	516
Run Off Road	174	4.9%	121	6.4%	31	4.1%	8	11.6%	2,237
Ran Red Light/Stop Sign	150	4.3%	100	5.3%	48	6.4%	0	0.0%	1,544
Disregard Traffic Signs	95	2.7%	61	3.2%	31	4.1%	1	1.4%	958
Wrong Side/Wrong Way	17	0.5%	18	1.0%	9	1.2%	1	1.4%	237
Improper Lane Usage	342	9.7%	192	10.1%	79	10.6%	6	8.7%	3,804
Careless/Negligent/Erratic	189	5.4%	68	3.6%	35	4.7%	14	20.3%	3,364
Driver Swerved	201	5.7%	88	4.7%	26	3.5%	1	1.4%	2,522
Overcorrecting/Oversteering	99	2.8%	41	2.2%	13	1.7%	4	5.8%	1,467
Driver Distracted	238	6.8%	123	6.5%	50	6.7%	0	0.0%	3,166
Driver Speeding	449	12.8%	199	10.5%	54	7.2%	18	26.1%	7,715
Alcohol-Related	322	9.1%	115	6.1%	15	2.0%	2	2.9%	3,786
Drug-Related	34	0.0%	8	0.0%	0	0.0%	1	0.0%	513
Total	3,521		1,892		747		69		43,677

■ Over 10% of behavioral factors for this age group.

Table 12.13: Behavioral Contributors for Female Drivers, by Age Group

Contributing Behaviors	Age 15-19		Age 20-29		Age 30-39		Age 40-49		Age 50-59	
	#	%	#	%	#	%	#	%	#	%
Fail to Yield Right of Way	673	16.5%	803	11.0%	590	11.8%	460	14.0%	433	17.2%
Following Too Closely	608	14.9%	1,057	14.5%	636	12.7%	370	11.3%	245	9.7%
Improper Passing	17	0.4%	46	0.6%	47	0.9%	25	0.8%	25	1.0%
Improper Turn/Merge	161	4.0%	269	3.7%	198	4.0%	150	4.6%	143	5.7%
Improper Backing	27	0.7%	40	0.6%	38	0.8%	29	0.9%	22	0.9%
Run Off Road	210	5.2%	308	4.2%	217	4.3%	148	4.5%	125	5.0%
Ran Red Light/Stop Sign	149	3.7%	240	3.3%	209	4.2%	148	4.5%	114	4.5%
Disregard Traffic Signs	74	1.8%	147	2.0%	103	2.1%	91	2.8%	63	2.5%
Wrong Side/Wrong Way	8	0.2%	20	0.3%	35	0.7%	10	0.3%	12	0.5%
Improper Lane Usage	253	6.2%	584	8.0%	412	8.2%	257	7.8%	213	8.5%
Careless/Negligent/Erratic	171	4.2%	427	5.9%	303	6.1%	195	5.9%	124	4.9%
Driver Swerved	262	6.4%	471	6.5%	334	6.7%	217	6.6%	168	6.7%
Overcorrecting/Oversteering	192	4.7%	296	4.1%	177	3.5%	88	2.7%	73	2.9%
Driver Distracted	402	9.9%	629	8.7%	401	8.0%	267	8.1%	196	7.8%
Driver Speeding	737	18.1%	1,393	19.2%	843	16.9%	506	15.4%	348	13.8%
Alcohol-Related	115	2.8%	496	6.8%	397	7.9%	288	8.8%	186	7.4%
Drug-Related	11	0.3%	42	0.6%	57	1.1%	34	1.0%	23	0.9%
Total	4,070		7,268		4,997		3,283		2,513	

■ Over 10% of behavioral factors for this age group.

Contributing Behaviors	Age 60-69		Age 70-79		Age 80+		Age Unk		Total
	#	%	#	%	#	%	#	%	
Fail to Yield Right of Way	442	23.3%	326	29.3%	197	36.2%	1	5.0%	3,925
Following Too Closely	195	10.3%	89	8.0%	30	5.5%	1	5.0%	3,231
Improper Passing	15	0.8%	18	1.6%	3	0.6%	0	0.0%	196
Improper Turn/Merge	130	6.8%	80	7.2%	49	9.0%	2	10.0%	1,182
Improper Backing	28	1.5%	18	1.6%	11	2.0%	0	0.0%	213
Run Off Road	84	4.4%	47	4.2%	17	3.1%	1	5.0%	1,157
Ran Red Light/Stop Sign	90	4.7%	68	6.1%	45	8.3%	2	10.0%	1,065
Disregard Traffic Signs	48	2.5%	44	4.0%	27	5.0%	0	0.0%	597
Wrong Side/Wrong Way	8	0.4%	9	0.8%	6	1.1%	0	0.0%	108
Improper Lane Usage	178	9.4%	109	9.8%	64	11.8%	1	5.0%	2,071
Careless/Negligent/Erratic	69	3.6%	35	3.1%	17	3.1%	5	25.0%	1,346
Driver Swerved	98	5.2%	45	4.0%	16	2.9%	0	0.0%	1,611
Overcorrecting/Oversteering	46	2.4%	21	1.9%	9	1.7%	0	0.0%	902
Driver Distracted	121	6.4%	81	7.3%	31	5.7%	2	10.0%	2,130
Driver Speeding	217	11.4%	82	7.4%	16	2.9%	5	25.0%	4,147
Alcohol-Related	123	6.5%	35	3.1%	6	1.1%	0	0.0%	1,646
Drug-Related	9	0.5%	5	0.4%	0	0.0%	0	0.0%	181
Total	1,901		1,112		544		20		25,708

■ Over 10% of behavioral factors for this age group.

Definitions

Accident - See motor vehicle crash.

Alcohol Concentration - Level of alcohol in a person's body as measured by blood, breath or urine.

Alcohol-Related Fatal Crash - 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 - Death resulting from an alcohol-related crash.

Alcohol-Related Injury - Non-fatal injury resulting from an alcohol-related crash.

Alcohol-Related Injury Crash - 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.

Alcohol-Related Property Damage Crash - 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.

BAC – Blood alcohol content

BCA – Minnesota Bureau of Criminal Apprehension

Bicycle Crash - Motor vehicle crash involving one or more bicycles.

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

CMV – Commercial Motor Vehicle. Any vehicle can be used commercially, but for the purposes of this report, a large truck used for transporting goods.

Crash - See motor vehicle crash.

CSAH - County State Aid Highway

DPS - Department of Public Safety

Driver - 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.

Drunk Driving – Considered drunk driving when a motor vehicle driver tests above .08% level or above.

Economic Loss - 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 - Motor vehicle crash on a public trafficway in which at least one person dies unintentionally as a result of the crash. The death must occur within 30 days of the crash.

Fatal Injury - Injury that results in an unintentional death within 30 days of the crash.

First Harmful Event - First event during a crash that caused injury or property damage.

GHSA - Governors Highway Safety Association

MC or MCY – Motorcycle

Metro - The Twin Cities metropolitan area of the state.

Minor Injury - Injury not incapacitating but evident to observers at the scene of the crash in which the injury occurred.

MMUCC - Model Minimum Uniform Crash Criteria. Federal standards and guidelines for crash reporting.

MN - Minnesota

MnDOT - Minnesota Department of Transportation

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

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

MVO – Motor vehicle occupant

Motorcycle- Two-wheeled or three-wheeled motor vehicle having one or more riding saddles and having an engine of more than 50 cc, more than 2 brake horsepower, or the capability of speeds over 30 mph on a flat surface. Otherwise, it is classified as a motorized bicycle or motor scooter/motorbike.

Motorcycle Crash - Motor vehicle crash involving one or more motorcycles.

MSAH – Municipal State Aid Highway

NHTSA - National Highway Traffic and Safety Administration

Occupant - 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 - Occupant of a motor vehicle other than the driver.

PDO Crash – Crash where only property is damaged. No injuries result from the crash.

Pedestrian - 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.

Possible Injury - Injury reported or claimed that is not a fatal injury, incapacitating injury or non-incapacitating injury.

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

Rural - An area having a population of fewer than 5,000.

School Bus Crash - 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.

Serious Injury - Any injury, other than a fatal injury, preventing the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.

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

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

TZD - Toward Zero Deaths is a statewide traffic safety initiative aimed at reducing the number of traffic fatalities to zero.

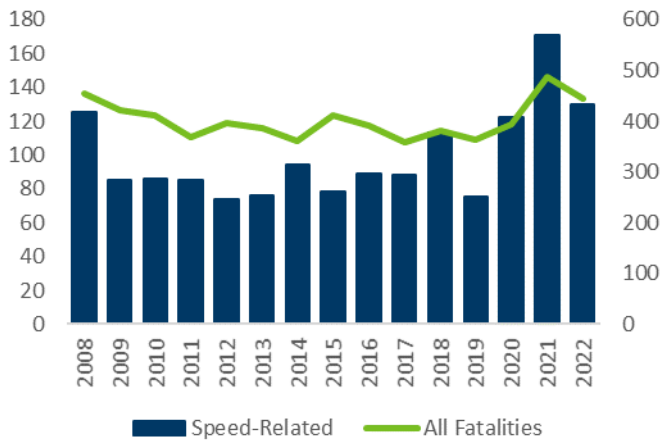
Urban - An area having a population of 5,000 or more.

Big 4 Trends

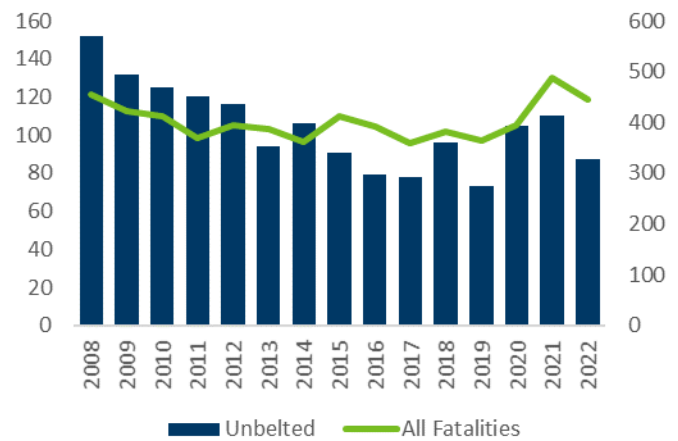
Speed, belts, booze, distraction

Known as 'The Big 4', these behaviors are frequently cited factors in fatal traffic crashes. Traffic safety professionals have long understood the inherent risks of these dangerous driving behaviors, and have therefore emphasized the importance of implementing countermeasure strategies that help reduce their prevalence. Over the past 15 years, Minnesota has made strides in reducing crashes attributable to these 'Big 4' behaviors, but they are still major contributors to traffic fatalities and injuries.

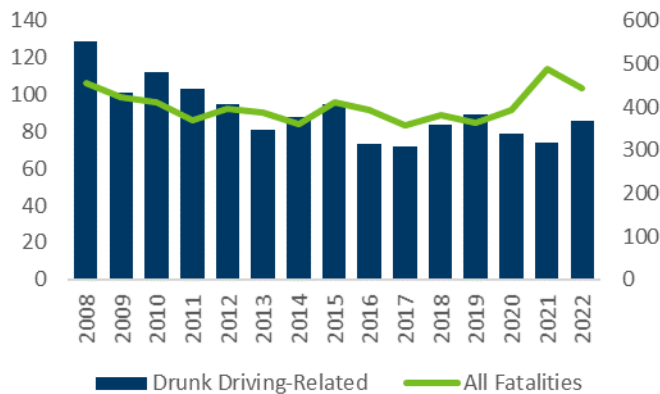
Speed-Related Fatality Trends



Unbelted Fatality Trends



Drunk Driving-Related Fatality Trends



Distraction-Related Fatality Trends



Impaired Driving Facts

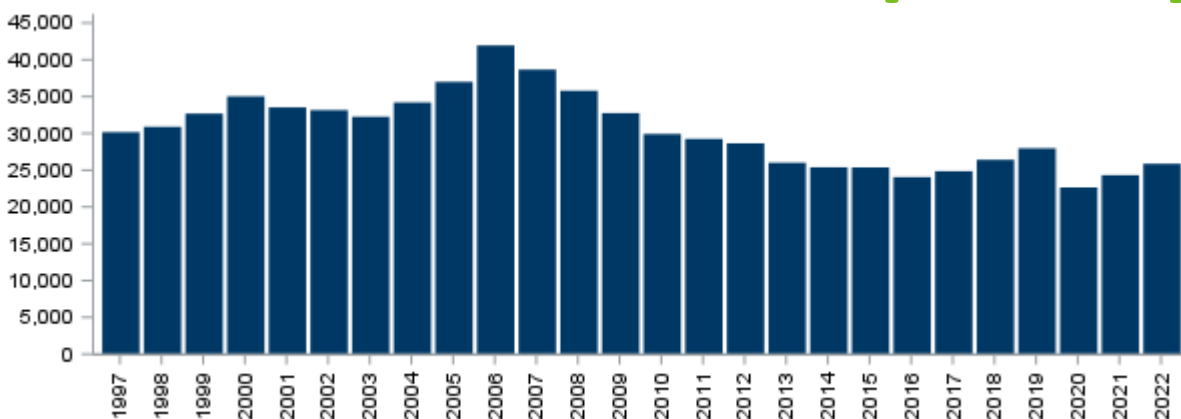
Summary

Alcohol and drug impairment is one of the most dangerous driving behaviors seen on our roads. Chapter 2 of this report examined alcohol-related crashes. While impaired driving may result in a traffic crash, the majority of impaired driving incidents (frequently called “DWIs”) do not result in traffic crashes. The next several pages will look into key factors pertaining to impaired driving in Minnesota.

An Historical Look

The graph below displays DWIs on record showing yearly counts are trending downwards. For example: 2000 had 35,034 DWI arrests, 2010 had 29,918 DWI arrests, and 2020 had 22,653 DWI arrests.

IDF Figure 1: DWIs on Record



Coinciding with the reductions in DWI counts, there has been a decrease in public acceptance for drinking and driving. Stiffer legal penalties exist now for drivers facing impaired driving charges. The introduction of rideshare services, such as Uber and Lyft and community programs like JOYRIDE, which have been implemented across the state, provide options for impaired drivers that did not exist decades ago. Yet, with all the available options and potential consequences, some drivers still opt to drive impaired and the state sees an average of:

71
DWIs
per day

IDF Table 1: Impaired Driving Overview

Year	Arrests & Incidents			Tests			CVO		Related Incidents		
	DWI Arrests	IC Violations	Convictions	Taken	Refused	Taken & Refused	Fatalities	Injuries	Drugs	Not A Drop	Commercial
2002	33,159	32,155	32,286	28,712	1,108	2,466	39	281	380	10	25
2003	32,352	31,336	31,498	27,935	1,649	1,914	38	314	517	7	40
2004	34,351	33,239	33,390	29,860	1,612	1,918	21	279	664	6	20
2005	37,073	35,803	35,979	32,302	1,848	1,829	34	289	800	9	39
2006	42,000	40,532	40,697	36,995	1,293	2,409	24	296	676	9	40
2007	38,760	37,389	37,544	34,247	980	2,317	39	259	632	9	36
2008	35,864	34,513	34,624	31,293	1,717	1,614	34	231	608	6	57
2009	32,994	31,644	31,779	28,485	1,666	1,628	36	262	769	7	156
2010	30,084	28,813	28,946	25,565	1,511	1,870	38	249	862	6	185
2011	29,479	28,105	28,245	24,861	1,498	1,886	29	241	942	11	281
2012	28,649	27,277	27,403	23,873	1,478	2,052	22	227	1,035	6	661
2013	26,014	24,723	24,872	21,217	1,412	2,243	35	194	1,167	5	588
2014	25,392	24,154	24,288	20,593	1,445	2,250	17	197	1,354	8	468
2015	25,374	24,148	24,275	20,524	1,587	2,164	15	175	1,679	10	471
2016	24,059	23,045	23,203	19,724	1,426	2,053	16	185	1,529	5	427
2017	24,862	24,045	24,171	20,784	1,641	1,746	24	178	2,231	3	437
2018	26,414	22,715	22,804	19,610	1,650	1,544	8	190	2,640	14	357
2019	27,975	24,884	24,975	21,373	2,084	1,518	17	184	3,182	8	290
2020	22,653	20,046	20,199	17,292	1,807	1,100	16	152	3,890	8	266
2021	24,324	21,252	21,362	18,137	2,188	1,037	7	116	3,468	6	195
2022	25,872	22,833	22,949	19,354	2,519	1,076	18	104	3,261	4	213

DWI Arrests - Prior to 2017, DVS impaired driving incidents are listed. Since 2018, DWI arrests from eCharging are listed.

IC Violations - Implied Consent Violations includes incidents where individuals either took or failed tests for alcohol or controlled substances, or refused to take the test.

Convictions – As judicial outcomes are decided these numbers change. The State expects to see approximately 85% of driving while impaired cases resulting in criminal convictions.

Tests – Incidents may involve scenarios of taking tests, refusing to take tests, or refusing and taking tests for controlled substances.

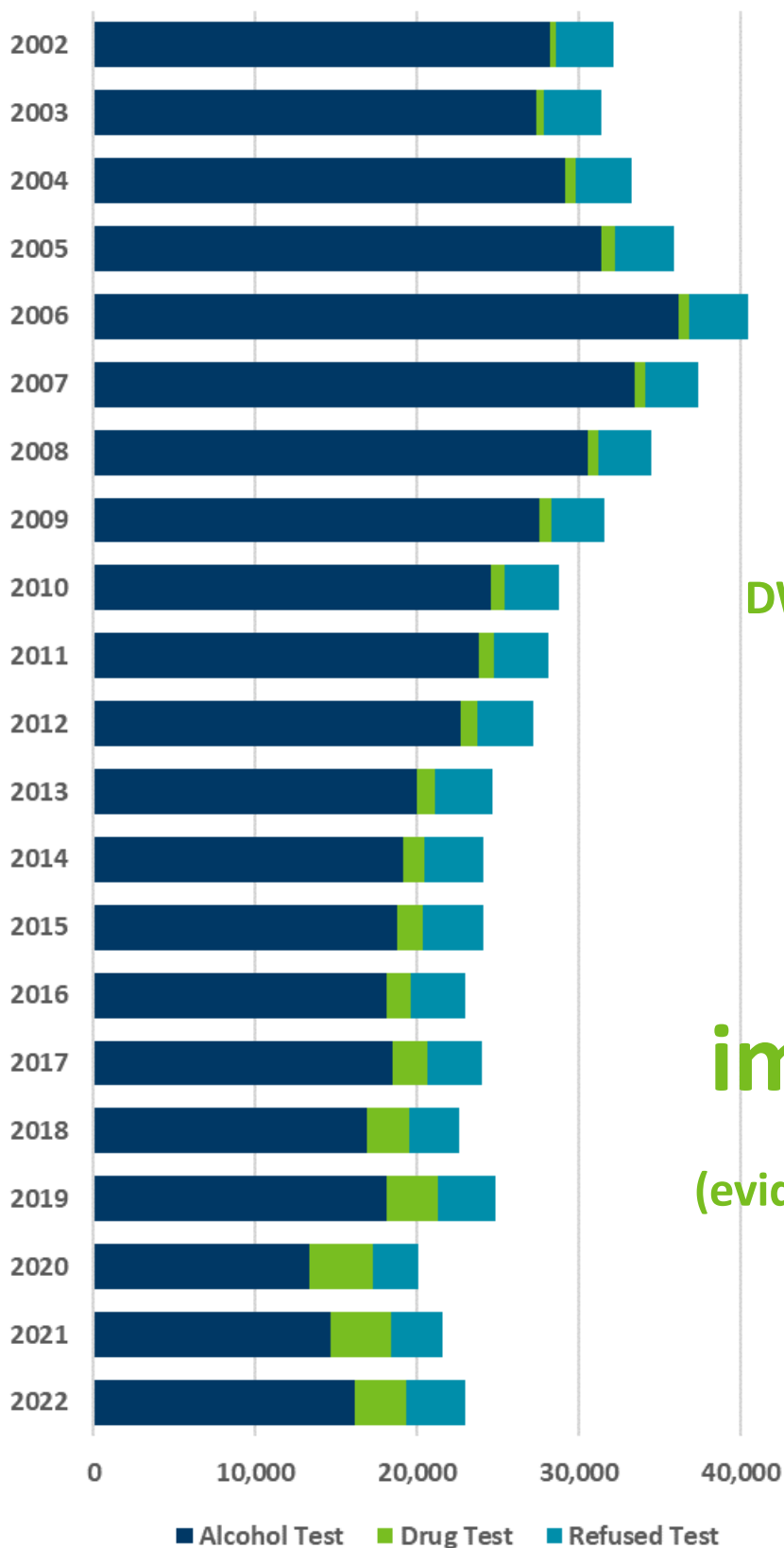
CVO – Criminal Vehicular Operation of a motor vehicle may result in fatalities or injuries. Those counts are detailed in the fatalities and injuries columns.

Drugs – Counts of implied consent violations or criminal convictions, or both, for driving while impaired by a controlled substance (“drugs”).

Not A Drop – The ‘not a drop’ law took effect June 1, 1993 and made it illegal for persons under age 21 to drive while having any amount of alcohol whatsoever (as opposed to being over the per-se illegal level of alcohol). Not a Drop violations are not included in impaired driving counts in other parts of this report.

Commercial – Commercial vehicle drivers found to have an alcohol concentration of 0.04% or higher, but less than the per se illegal level, are disqualified from operating a commercial vehicle. These commercial incidents are not included with the impaired driving counts.

IDF Figure 2: Impaired Driving Incidents Under Three Arrest Scenarios

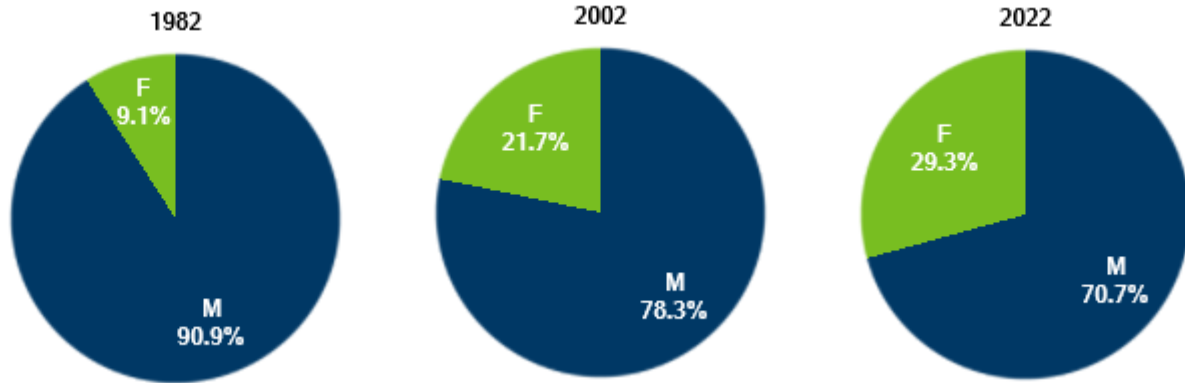


DWI incident counts
are decreasing,
but
**drug
impairment**
(evidenced by drug tests)
is increasing

Who are impaired driving violators?

As current law dictates, an impaired driving incident stays on a driver's record permanently. Driver's license records provide limited demographic data on impaired drivers, but a strong relationship exists between impaired driving with gender and age.

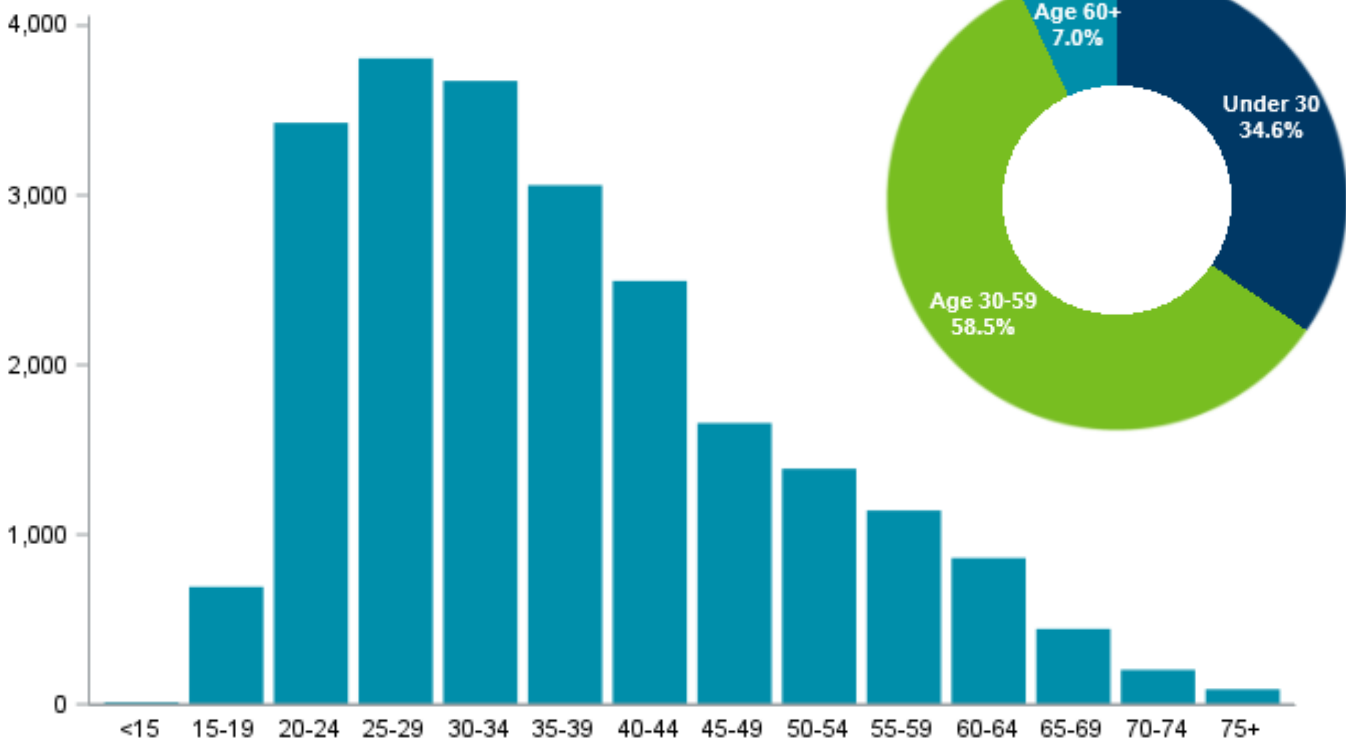
IDF Figure 3: Gender in Impaired Driving Incidents



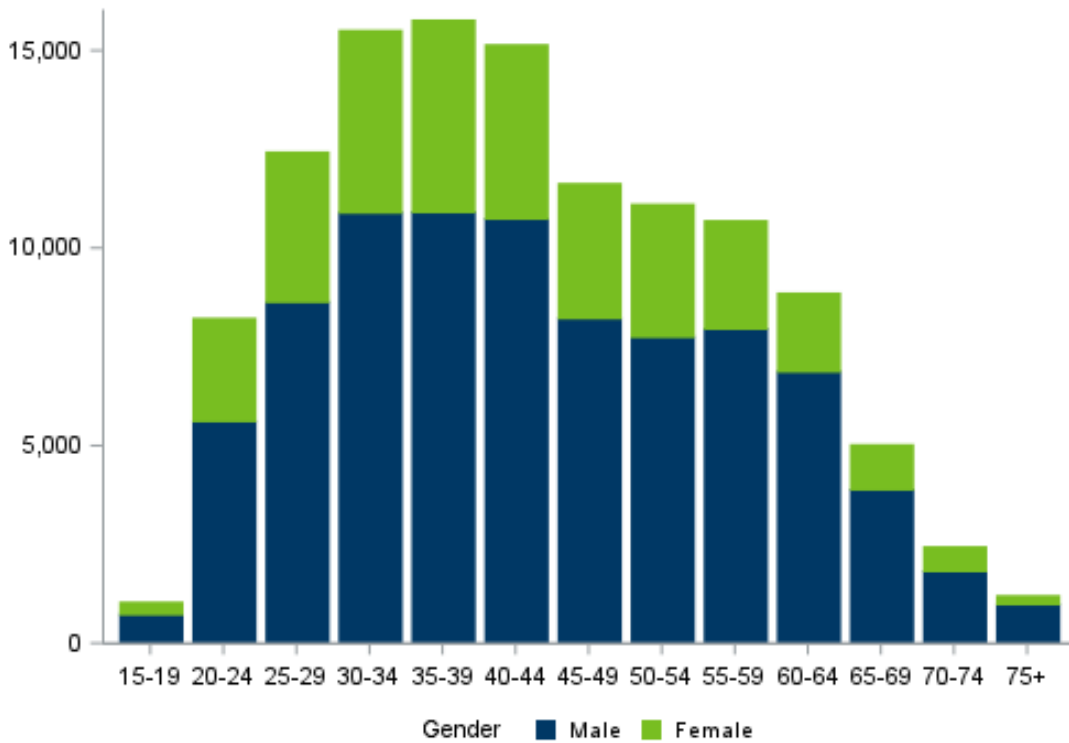
**Female DWIs increasing,
but predominately
a male issue**

**70% +
Male**

IDF Figure 4: Age of Offenders in DWI Incidents



IDF Figure 5: Gender and Age Group in DWI Incidents



IDF Table 2: Under Age 21 Impaired Driving

Year	DWI Incidents								Not A Drop Violations							
	<15	15	16	17	18	19	20	Total	<15	15	16	17	18	19	20	Total
2018	0%	0%	3%	8%	21%	29%	40%	1,134	1%	2%	6%	13%	17%	33%	28%	356
2019	1%	1%	2%	9%	19%	28%	40%	1,142	0%	2%	3%	13%	18%	28%	36%	289
2020	0%	1%	4%	8%	22%	29%	36%	1,197	0%	3%	7%	15%	23%	27%	24%	266
2021	0%	1%	3%	9%	20%	31%	35%	1,095	1%	0%	11%	13%	30%	24%	21%	195
2022	1%	1%	3%	9%	19%	30%	37%	1,109	0%	0%	7%	11%	30%	24%	27%	213

**DWI average
BAC is
0.139
for <21**

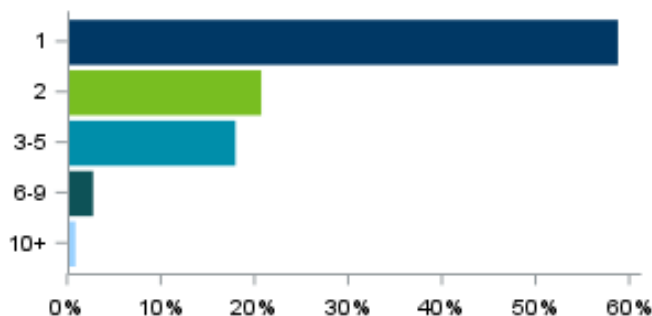
**NAD average
BAC is
0.058
for <21**

Recidivism and impaired driving

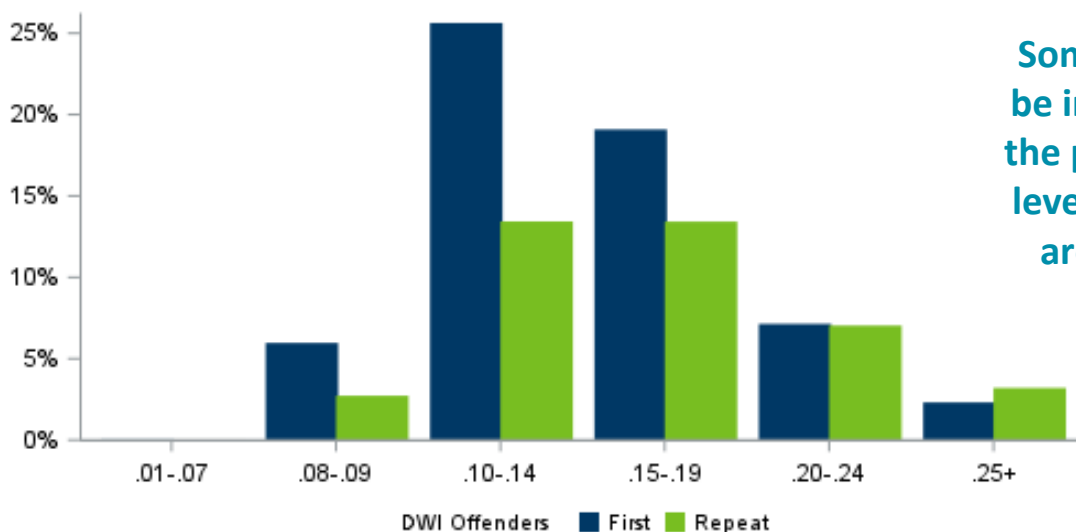
A perception exists that impaired driving is a problem caused by a small subset of the population who are chemically dependent individuals that drink and drive all the time. While recidivism is a key component in the impaired driving discussion, the majority of impaired driving violators are first time offenders and a small numbers of offenders have many incidents on record.

58%
first time
DWI offenders

IDF Figure 6: Percentage of Impaired Driving Offenders by Number of Incidents



IDF Figure 7: BAC Among First Time Offenders and Repeat Offenders



Some people may be impaired below the per se 0.08 BAC level. <1% of DWIs are under 0.08.

609,822

Minnesotans
have an
impaired driving
incident
on their
driving record

Average BAC for
DWI offenders is

0.155
nearly twice
the 0.08 legal limit

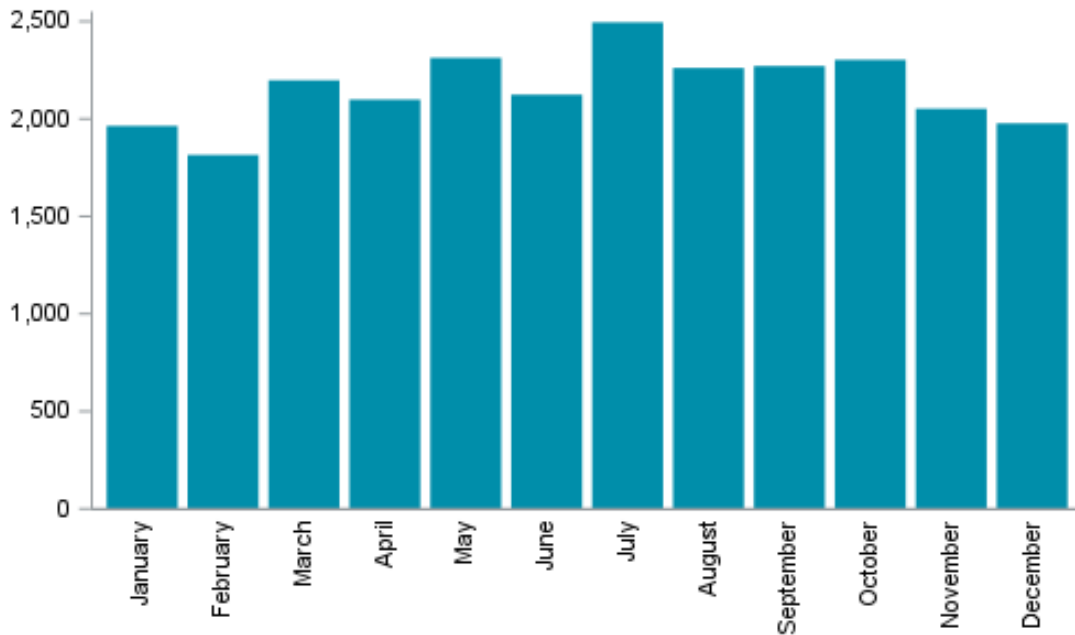
IDF Table 3: Minnesota Residents With Impaired Driving Incidents on Record, by Total Number on Record and Age

Total Incidents on Record	Age 00-19	Age 20-29	Age 30-39	Age 40-49	Age 50-59	Age 60-69	Age 70-79	Age 80+	Total
1	793	27,429	73,485	81,543	75,085	58,679	24,597	15,538	357,149
2	12	2,466	20,142	28,627	31,888	26,296	10,036	5,506	124,973
3	37	3,027	9,763	14,132	16,541	15,174	5,715	3,042	67,431
4	3	364	1,904	3,950	6,736	7,508	2,810	1,496	24,771
5	2	598	1,999	2,611	3,921	4,358	1,656	797	15,942
6	0	78	479	810	1,620	2,029	809	415	6,240
7	0	125	555	816	1,202	1,505	531	279	5,013
8	0	25	168	271	571	822	342	155	2,354
9	0	13	163	267	537	620	200	106	1,906
10	0	4	60	99	244	391	174	70	1,042
11	0	5	39	93	256	350	127	44	914
12	0	1	17	41	123	211	81	38	512
13	0	0	8	30	103	179	68	39	427
14	0	0	4	12	74	103	47	31	271
15	0	0	3	12	53	83	37	28	216
16	0	0	0	9	42	68	24	13	156
17	0	0	1	5	27	38	19	13	103
18	0	0	0	8	23	36	15	8	90
19	0	0	0	4	24	25	14	3	70
20	0	0	0	0	13	29	8	6	56
21	0	0	0	2	8	16	8	4	38
22	0	0	0	0	7	8	4	1	20
23	0	0	0	0	6	9	9	3	27
24	0	0	0	0	3	16	7	5	31
25	0	0	0	0	3	3	3	0	9
26	0	0	0	0	2	8	3	2	15
27	0	0	0	0	2	4	3	0	9
28	0	0	0	0	1	7	3	0	11
29	0	0	0	1	0	3	3	0	7
30	0	0	0	0	0	4	2	0	6
31	0	0	0	0	1	0	2	1	4
32	0	0	0	0	0	2	0	0	2
33	0	0	0	0	0	1	0	0	1
34	0	0	0	0	0	1	0	0	1
35	0	0	0	0	0	0	1	0	1
41	0	0	0	0	0	1	0	0	1
45	0	0	0	0	1	1	0	0	2
53	0	0	0	0	0	0	0	1	1
Total Persons	847	34,135	108,790	133,343	139,117	118,588	47,358	27,644	609,822

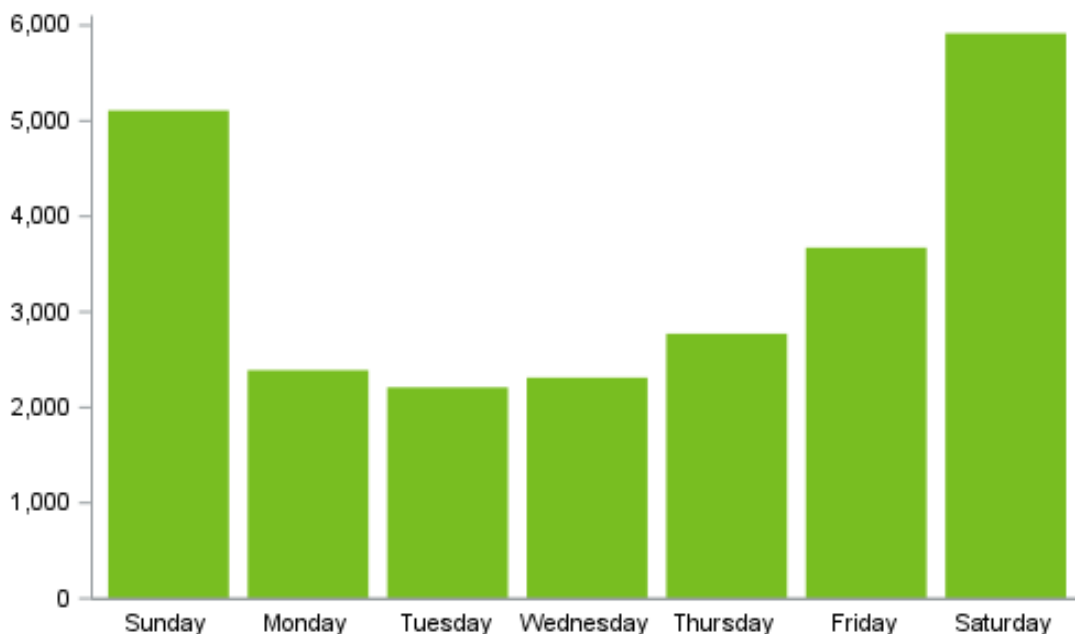
When does impaired driving occur?

For many people alcohol consumption is determined by work and social schedules and the events and activities that fill up their calendar. As a result, alcohol consumption increases at specific times of the year, specific days of the week, and specific hours of the day. These patterns are reflected in monthly, daily, and hourly impaired driving arrest data.

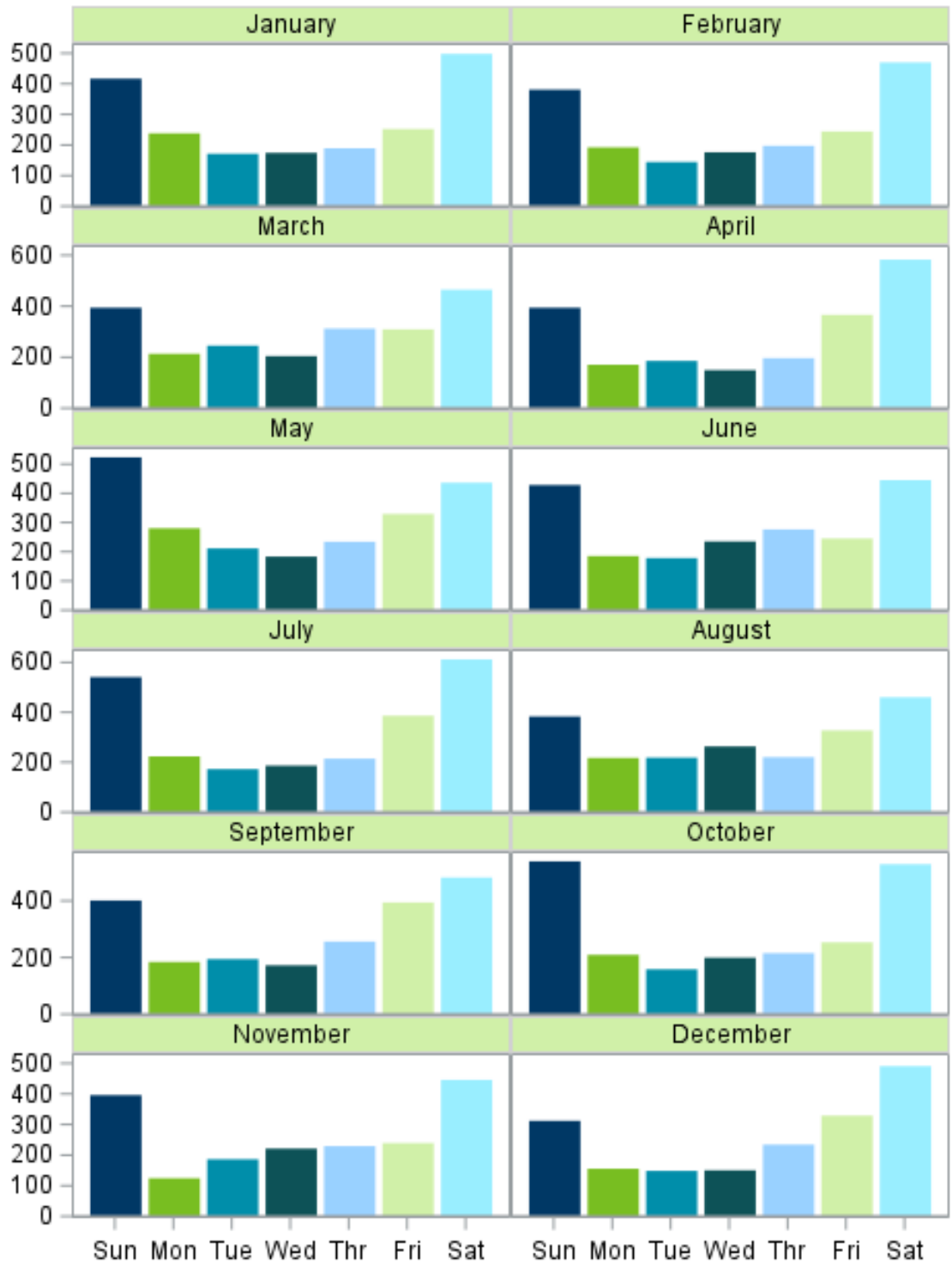
IDF Figure 8: DWI Arrests by Month



IDF Figure 9: DWI Incidents by Day of Week



IDF Figure 10: Impaired Driving Incidents by Month and Day of Week



IDF Table 4: DWI Arrests – Top 10 Days

Date	Weekday	DWI Arrests
7/9/2022	Saturday	153
11/26/2022	Saturday	144
9/3/2022	Saturday	143
3/19/2022	Saturday	142
10/30/2022	Sunday	142
4/16/2022	Saturday	139
8/13/2022	Saturday	137
9/10/2022	Saturday	135
12/31/2022	Saturday	135
7/17/2022	Sunday	132

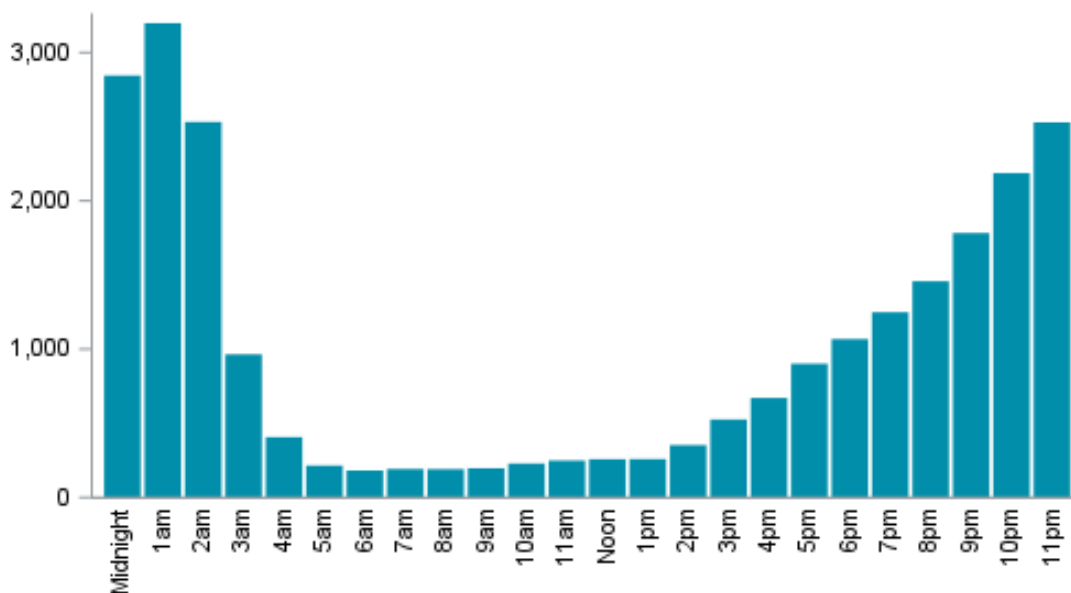
IDF Table 5: DWI Incidents – Holidays

Holiday	DWI Incidents	DWIs Per Hour
New Year's Day	507	3.52
Super Bowl	134	2.79
Valentine's Day	35	0.73
St. Patrick's Day	172	3.58
Cinco de Mayo	191	2.65
Memorial Day	402	3.35
July 4th	411	3.43
Labor Day	444	3.70
Halloween	358	3.73
Thanksgiving	477	3.31
Christmas	242	2.02

Weekend days
 have the most
 DWI arrests

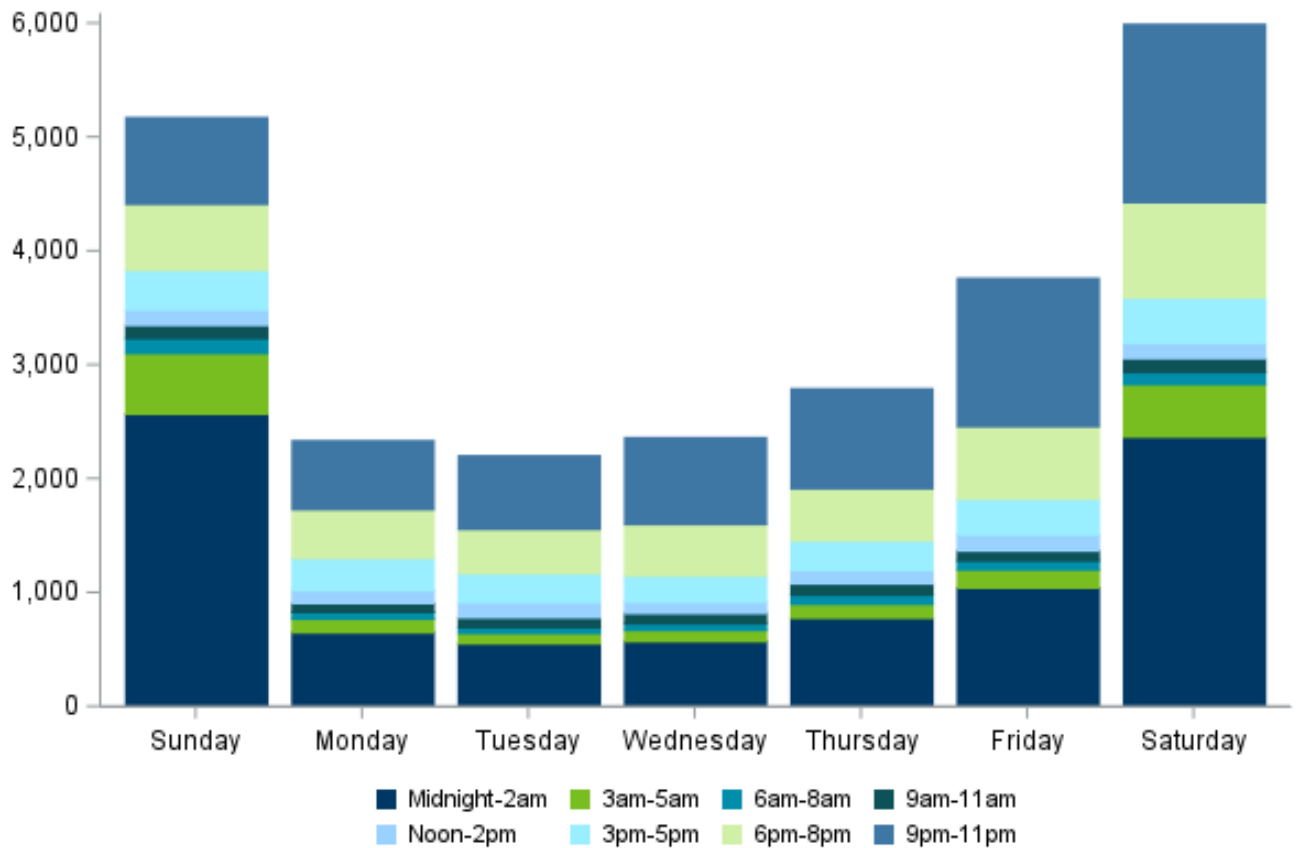
This year,
Halloween
 had highest DWIs per hour,
 followed by Labor Day and
 St. Patrick's Day

IDF Figure 11: DWI Arrests by Hour of Day



Source: eCharging

IDF Figure 12: DWI Arrests by Day of Week and Time of Day

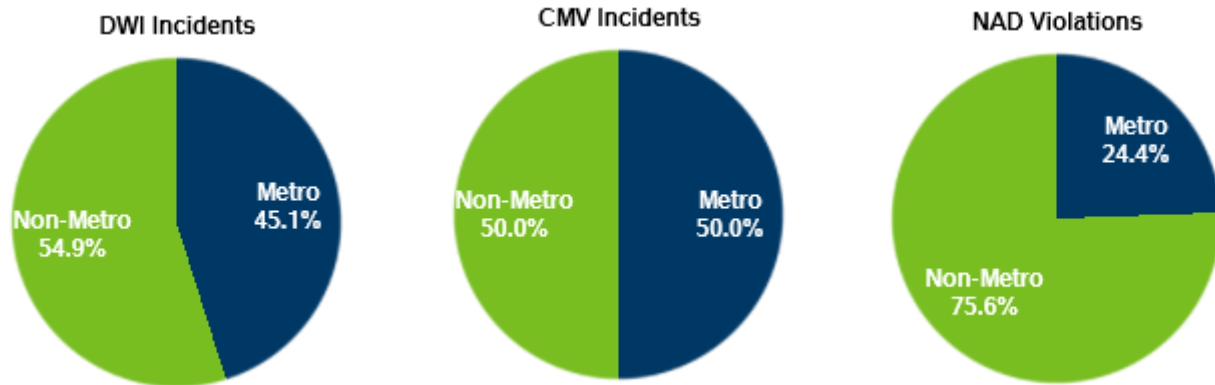


IDF Table 6: Monthly DWI Arrests by Time of Day

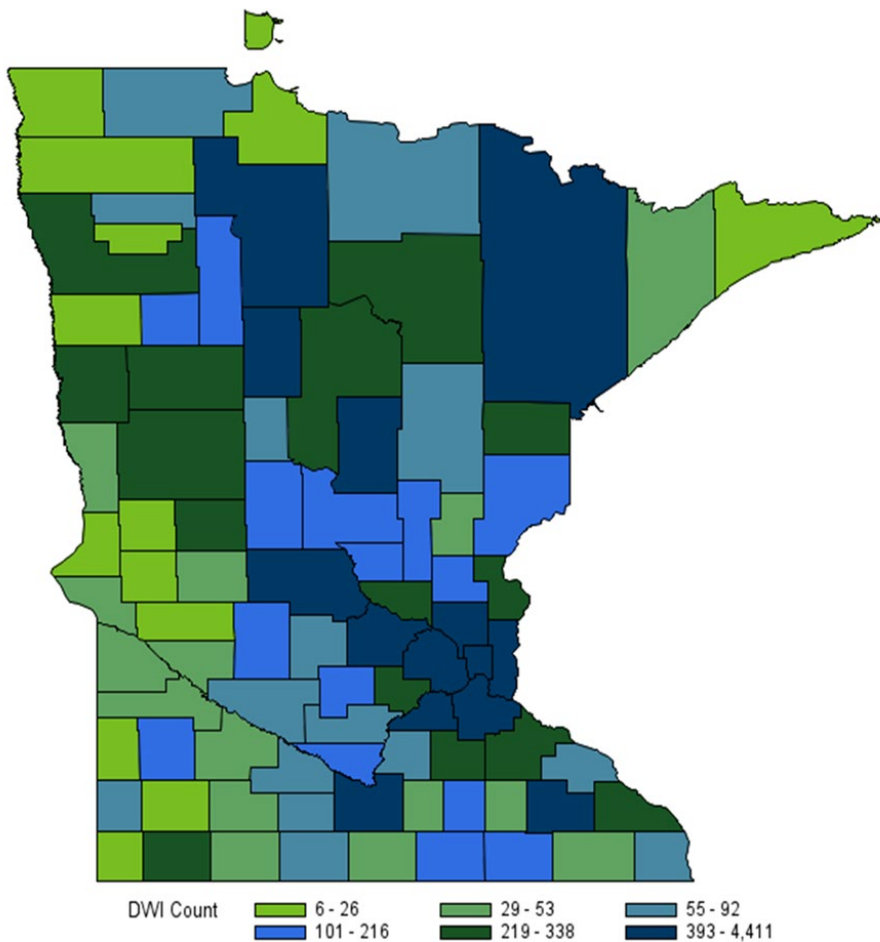
		Percentage Per Month							
Month	DWI Arrests	12am-2am	3am-5am	6am-8am	9am-11am	12pm-2pm	3pm-5pm	6pm-8pm	9pm-11pm
January	1,912	31.9%	6.5%	2.2%	3.1%	4.8%	9.0%	15.7%	26.8%
February	1,746	34.4%	6.1%	2.1%	2.5%	4.2%	9.1%	15.8%	25.8%
March	2,102	34.7%	6.9%	2.4%	2.6%	3.2%	7.3%	15.1%	27.9%
April	2,025	37.2%	6.3%	2.5%	2.7%	3.2%	8.1%	14.6%	25.3%
May	2,204	36.3%	6.4%	2.0%	2.9%	3.2%	7.7%	14.0%	27.4%
June	2,026	36.0%	6.9%	2.2%	3.3%	2.8%	8.2%	13.8%	26.9%
July	2,350	37.6%	6.9%	2.6%	2.5%	3.2%	8.3%	14.9%	24.0%
August	2,016	32.5%	6.8%	2.5%	3.1%	3.4%	8.6%	15.0%	28.1%
September	2,198	32.5%	5.5%	2.6%	3.0%	3.7%	9.6%	16.7%	26.3%
October	2,200	34.5%	6.5%	2.1%	3.0%	3.5%	8.8%	16.8%	24.9%
November	1,955	34.9%	6.6%	1.8%	2.1%	3.4%	8.3%	15.4%	27.4%
December	1,911	34.3%	5.9%	2.3%	2.1%	4.1%	9.3%	16.2%	25.9%

Where does impaired driving occur?

While over half of the state’s population resides in the seven county metro area and the majority of traffic crash occur there, the majority of impaired driving incidents happen outside of the metro area. See IDF Figure 13 below. Impaired driving incidents involving commercial vehicles (0.04% or higher BAC) and ‘Not A Drop’ violations (for those under age 21) occur mostly outside of the metro area.



IDF Figure 14: DWI Incidents Plotted by County



55%
of DWIs
outside
metro area

IDF Table 7: Impaired Driving by County of Incident

County	2018	2019	2020	2021	2022	Last 5		
						Years	Avg	Rank
Aitkin	169	139	128	133	98	667	133	38 of 87
Anoka	1,385	1,374	1,092	1,329	1,196	6,376	1,275	4 of 87
Becker	257	250	196	191	251	1,145	229	26 of 87
Beltrami	443	560	669	568	627	2,867	573	10 of 87
Benton	173	169	164	219	178	903	181	30 of 87
Big Stone	17	23	28	32	32	132	26	79 of 87
Blue Earth	479	479	372	487	424	2,241	448	12 of 87
Brown	65	60	60	66	81	332	66	59 of 87
Carlton	147	188	216	274	262	1,087	217	28 of 87
Carver	255	236	240	204	242	1,177	235	25 of 87
Cass	195	238	186	220	291	1,130	226	27 of 87
Chippewa	64	57	63	49	46	279	56	65 of 87
Chisago	245	251	218	226	266	1,206	241	24 of 87
Clay	433	365	220	262	275	1,555	311	15 of 87
Clearwater	80	66	45	69	122	382	76	53 of 87
Cook	36	40	19	19	22	136	27	78 of 87
Cottonwood	61	55	65	59	62	302	60	62 of 87
Crow Wing	421	461	327	452	431	2,092	418	13 of 87
Dakota	1,818	1,792	1,252	1,425	1,400	7,687	1,537	3 of 87
Dodge	74	106	97	75	55	407	81	52 of 87
Douglas	184	183	230	301	346	1,244	249	22 of 87
Faribault	78	73	67	66	58	342	68	57 of 87
Fillmore	50	34	40	41	40	205	41	71 of 87
Freeborn	111	213	164	156	143	787	157	35 of 87
Goodhue	253	253	216	262	276	1,260	252	21 of 87
Grant	19	26	19	39	29	132	26	79 of 87
Hennepin	6,052	5,838	4,043	4,066	4,845	24,844	4,969	1 of 87
Houston	87	99	66	70	92	414	83	51 of 87
Hubbard	116	162	227	246	475	1,226	245	23 of 87
Isanti	116	105	97	126	117	561	112	42 of 87
Itasca	340	315	291	308	289	1,543	309	16 of 87
Jackson	36	58	56	64	47	261	52	67 of 87
Kanabec	31	34	27	56	63	211	42	70 of 87
Kandiyohi	186	190	138	162	152	828	166	34 of 87
Kittson	13	22	7	14	5	61	12	86 of 87

IDF Table 7: Impaired Driving by County of Incident, continued

County	2018	2019	2020	2021	2022	Last 5		
						Years	Avg	Rank
Koochiching	77	73	59	54	63	326	65	60 of 87
Lac Qui Parle	17	38	30	27	30	142	28	76 of 87
Lake	58	61	8	32	33	192	38	72 of 87
Lake of the Woods	28	37	32	24	20	141	28	77 of 87
Le Sueur	73	93	93	74	101	434	87	49 of 87
Lincoln	24	29	15	17	15	100	20	83 of 87
Lyon	111	104	86	80	107	488	98	46 of 87
McLeod	192	167	145	133	141	778	156	36 of 87
Mahnomen	81	92	82	102	154	511	102	44 of 87
Marshall	37	45	26	23	21	152	30	75 of 87
Martin	66	87	79	108	85	425	85	50 of 87
Meecker	86	113	91	110	75	475	95	48 of 87
Mille Lacs	148	176	148	176	198	846	169	32 of 87
Morrison	94	116	88	116	181	595	119	41 of 87
Mower	302	353	286	219	233	1,393	279	18 of 87
Murray	17	20	14	11	19	81	16	85 of 87
Nicollet	151	136	110	104	127	628	126	39 of 87
Nobles	150	155	148	145	233	831	166	33 of 87
Norman	16	21	19	20	18	94	19	84 of 87
Olmsted	848	563	595	520	747	3,273	655	8 of 87
Otter Tail	253	281	275	291	331	1,431	286	17 of 87
Pennington	105	129	92	137	97	560	112	43 of 87
Pine	116	110	111	191	179	707	141	37 of 87
Pipestone	73	87	71	67	75	373	75	54 of 87
Polk	191	250	236	191	219	1,087	217	28 of 87
Pope	53	49	38	48	42	230	46	69 of 87
Ramsey	2,455	2,729	2,011	1,888	2,118	11,201	2,240	2 of 87
Red Lake	16	17	31	19	20	103	21	82 of 87
Redwood	59	85	64	57	51	316	63	61 of 87
Renville	77	104	92	102	102	477	95	47 of 87
Rice	245	268	233	284	337	1,367	273	19 of 87
Rock	41	38	39	32	25	175	35	74 of 87
Roseau	66	69	64	75	78	352	70	55 of 87
Saint Louis	1,103	1,280	952	1,189	1,197	5,721	1,144	5 of 87
Scott	672	651	474	558	621	2,976	595	9 of 87

IDF Table 7: Impaired Driving by County of Incident, continued

County	2018	2019	2020	2021	2022	Last 5 Years	Avg	Rank
Sherburne	425	421	331	455	392	2,024	405	14 of 87
Sibley	50	93	80	57	71	351	70	56 of 87
Stearns	702	770	696	666	823	3,657	731	7 of 87
Steele	126	160	177	164	226	853	171	31 of 87
Stevens	39	37	11	16	20	123	25	81 of 87
Swift	40	36	41	33	26	176	35	73 of 87
Todd	96	108	122	136	166	628	126	39 of 87
Traverse	8	13	9	11	14	55	11	87 of 87
Wabasha	87	102	96	123	100	508	102	45 of 87
Wadena	75	76	72	59	60	342	68	57 of 87
Waseca	71	61	55	54	51	292	58	63 of 87
Washington	1,036	1,096	837	927	930	4,826	965	6 of 87
Watsonwan	45	48	57	39	75	264	53	66 of 87
Wilkin	47	71	62	58	48	286	57	64 of 87
Winona	300	281	184	244	314	1,323	265	20 of 87
Wright	518	571	486	531	427	2,533	507	11 of 87
Yellow Medicine	60	49	37	48	41	235	47	68 of 87
MN Total	26,146	26,994	21,507	23,048	25,117	122,812	24,562	

24%
of drivers
 were drinking at an
 on-sale retailer prior to
 their DWI according to the
Place of Last Drink (POLD)
 database

11%
 of population
 has impaired
 driving incident
 on record

IDF Table 8: Percentage of Residents with Impaired Driving Incidents on Record

County	% w			County	% w		
	Pop	DWIs	Rank		Pop	DWIs	Rank
Aitkin	15,547	18.0%	5 of 87	Marshall	8,920	8.3%	80 of 87
Anoka	373,799	8.3%	79 of 87	Martin	19,779	12.2%	41 of 87
Becker	35,987	17.1%	8 of 87	Meeker	23,430	10.4%	64 of 87
Beltrami	46,765	15.8%	12 of 87	Mille Lacs	26,567	15.8%	13 of 87
Benton	42,258	9.9%	66 of 87	Morrison	34,253	10.4%	63 of 87
Big Stone	5,136	10.8%	57 of 87	Mower	40,290	13.9%	26 of 87
Blue Earth	70,642	13.6%	27 of 87	Murray	8,014	8.4%	77 of 87
Brown	25,918	10.5%	61 of 87	Nicollet	34,973	10.5%	60 of 87
Carlton	36,453	13.1%	32 of 87	Nobles	22,563	16.5%	10 of 87
Carver	111,686	5.7%	87 of 87	Norman	6,318	11.2%	50 of 87
Cass	30,516	13.0%	33 of 87	Olmsted	168,427	8.7%	76 of 87
Chippewa	12,646	10.6%	59 of 87	Otter Tail	60,915	11.1%	51 of 87
Chisago	57,440	9.7%	68 of 87	Pennington	14,010	14.7%	23 of 87
Clay	67,214	17.4%	7 of 87	Pine	28,615	13.3%	30 of 87
Clearwater	8,473	14.8%	22 of 87	Pipestone	9,373	15.5%	16 of 87
Cook	5,726	17.7%	6 of 87	Polk	31,069	20.1%	3 of 87
Cottonwood	11,466	10.7%	58 of 87	Pope	11,401	11.7%	46 of 87
Crow Wing	67,209	13.0%	35 of 87	Ramsey	565,465	8.8%	75 of 87
Dakota	452,281	9.0%	72 of 87	Red Lake	3,890	15.6%	15 of 87
Dodge	21,101	8.4%	78 of 87	Redwood	15,236	12.0%	43 of 87
Douglas	39,906	15.8%	11 of 87	Renville	14,420	15.4%	17 of 87
Faribault	13,732	12.6%	39 of 87	Rice	67,985	10.5%	62 of 87
Fillmore	21,336	11.2%	48 of 87	Rock	9,710	9.6%	69 of 87
Freeborn	30,787	15.2%	19 of 87	Roseau	15,241	14.3%	25 of 87
Goodhue	48,002	13.3%	31 of 87	St. Louis	200,231	12.6%	38 of 87
Grant	6,092	9.9%	67 of 87	Scott	157,228	8.9%	74 of 87
Hennepin	1,320,307	10.0%	65 of 87	Sherburne	99,787	9.0%	73 of 87
Houston	18,789	15.0%	20 of 87	Sibley	14,719	11.9%	44 of 87
Hubbard	21,620	12.7%	36 of 87	Stearns	160,587	11.5%	47 of 87
Isanti	42,131	8.1%	84 of 87	Steele	37,655	10.9%	55 of 87
Itasca	45,002	15.2%	18 of 87	Stevens	9,653	9.1%	71 of 87
Jackson	9,905	14.8%	21 of 87	Swift	9,856	10.9%	54 of 87
Kanabec	15,969	12.5%	40 of 87	Todd	25,373	11.2%	49 of 87
Kandiyohi	44,179	11.8%	45 of 87	Traverse	3,300	13.0%	34 of 87
Kittson	4,105	10.8%	56 of 87	Wabasha	21,300	13.4%	29 of 87
Koochiching	11,687	16.7%	9 of 87	Wadena	14,131	10.9%	53 of 87
Lac qui Parle	6,557	8.2%	82 of 87	Waseca	18,917	11.0%	52 of 87
Lake	10,917	9.4%	70 of 87	Washington	276,397	8.3%	81 of 87
Lake of Woods	3,679	23.1%	2 of 87	Watsonwan	11,265	12.6%	37 of 87
Le Sueur	28,965	8.2%	83 of 87	Wilkin	6,485	19.8%	4 of 87
Lincoln	5,562	8.0%	85 of 87	Winona	49,134	14.4%	24 of 87
Lyon	25,092	13.6%	28 of 87	Wright	146,329	7.2%	86 of 87
McLeod	36,807	12.1%	42 of 87	Yellow Medicine	9,255	15.7%	14 of 87
Mahnomen	5,411	29.4%	1 of 87	MN Total	5,742,036	10.6%	

■ Top 15 Ranking

IDF Table 9: Criminal Conviction Rates by Judicial District (2018-2022)

District and County	All Violators			1st-Time Violators			2nd-Time Violators			3rd/More Violators		
	All Incidents	Convictions	Conviction Rate	All Incidents	Convictions	Conviction Rate	All Incidents	Convictions	Conviction Rate	All Incidents	Convictions	Conviction Rate
Judicial Dist 1												
Carver	2,055	1,055	51.3%	626	626	100%	704	152	21.6%	725	277	38.2%
Dakota	13,204	6,894	52.2%	4,059	4,053	99.9%	4,343	920	21.2%	4,802	1,921	40.0%
Goodhue	2,137	1,098	51.4%	630	629	99.8%	686	148	21.6%	821	321	39.1%
Le Sueur	732	363	49.6%	195	195	100%	240	62	25.8%	297	106	35.7%
McLeod	1,316	693	52.7%	390	390	100%	427	109	25.5%	499	194	38.9%
Scott	5,264	2,707	51.4%	1,526	1,526	100%	1,730	418	24.2%	2,008	763	38.0%
Sibley	580	301	51.9%	143	143	100%	179	49	27.4%	258	109	42.2%
Subtotal:	25,288	13,111	51.8%	7,569	7,562	99.9%	8,309	1,858	22.4%	9,410	3,691	39.2%
Judicial Dist 2												
Ramsey	18,947	9,895	52.2%	5,931	5,926	99.9%	6,228	1,132	18.2%	6,788	2,837	41.8%
Judicial Dist 3												
Dodge	676	351	51.9%	178	177	99.4%	203	55	27.1%	295	119	40.3%
Fillmore	347	176	50.7%	96	96	100%	115	26	22.6%	136	54	39.7%
Freeborn	1,311	680	51.9%	404	404	100%	433	82	18.9%	474	194	40.9%
Houston	731	375	51.3%	244	244	100%	267	46	17.2%	220	85	38.6%
Mower	2,282	1,236	54.2%	691	691	100%	692	143	20.7%	899	402	44.7%
Olmsted	5,596	2,946	52.6%	1,751	1,749	99.9%	1,813	346	19.1%	2,032	851	41.9%
Rice	2,445	1,255	51.3%	715	715	100%	797	163	20.5%	933	377	40.4%
Steele	1,478	756	51.2%	446	446	100%	491	96	19.6%	541	214	39.6%
Wabasha	968	487	50.3%	281	281	100%	326	79	24.2%	361	127	35.2%
Waseca	518	260	50.2%	164	164	100%	181	30	16.6%	173	66	38.2%
Winona	2,310	1,191	51.6%	831	831	100%	843	111	13.2%	636	249	39.2%
Subtotal:	18,662	9,713	52.0%	5,801	5,798	99.9%	6,161	1,177	19.1%	6,700	2,738	40.9%
Judicial Dist 4												
Hennepin	42,891	22,272	51.9%	13,623	13,617	100%	14,531	2,673	18.4%	14,737	5,982	40.6%
Judicial Dist 5												
Blue Earth	3,953	2,058	52.1%	1,379	1,379	100%	1,408	204	14.5%	1,166	475	40.7%
Brown	574	295	51.4%	183	183	100%	211	50	23.7%	180	62	34.4%
Cottonwood	547	294	53.7%	195	193	99.0%	187	34	18.2%	165	67	40.6%
Faribault	602	313	52.0%	169	169	100%	186	46	24.7%	247	98	39.7%
Jackson	435	221	50.8%	143	143	100%	160	27	16.9%	132	51	38.6%
Lincoln	150	78	52.0%	54	54	100%	58	9	15.5%	38	15	39.5%
Lyon	886	472	53.3%	307	307	100%	303	49	16.2%	276	116	42.0%
Martin	754	392	52.0%	225	225	100%	250	58	23.2%	279	109	39.1%
Murray	156	81	51.9%	30	30	100%	40	14	35.0%	86	37	43.0%
Nicollet	1,057	546	51.7%	337	337	100%	363	77	21.2%	357	132	37.0%
Nobles	1,594	829	52.0%	559	559	100%	550	58	10.5%	485	212	43.7%
Pipestone	601	324	53.9%	207	206	99.5%	194	33	17.0%	200	85	42.5%
Redwood	561	291	51.9%	154	154	100%	169	35	20.7%	238	102	42.9%
Rock	293	153	52.2%	107	107	100%	106	12	11.3%	80	34	42.5%
Watonwan	491	256	52.1%	167	167	100%	171	27	15.8%	153	62	40.5%
Subtotal:	12,654	6,603	52.2%	4,216	4,213	99.9%	4,356	733	16.8%	4,082	1,657	40.6%

IDF Table 9: Criminal Conviction Rates by Judicial District (2018-2022), continued

District and County	All Violators			1st-Time Violators			2nd-Time Violators			3rd/More Violators		
	All Incidents	Convictions	Conviction Rate	All Incidents	Convictions	Conviction Rate	All Incidents	Convictions	Conviction Rate	All Incidents	Convictions	Conviction Rate
Judicial Dist 6												
Carlton	1,901	986	51.9%	534	534	100%	558	107	19.2%	809	345	42.6%
Cook	237	123	51.9%	73	73	100%	80	20	25.0%	84	30	35.7%
Lake	359	188	52.4%	104	104	100%	108	22	20.4%	147	62	42.2%
St. Louis	10,011	5,231	52.3%	3,020	3,019	100%	3,274	689	21.0%	3,717	1,523	41.0%
Subtotal:	12,508	6,528	52.2%	3,731	3,730	100%	4,020	838	20.8%	4,757	1,960	41.2%
Judicial Dist 7												
Becker	2,133	1,110	52.0%	600	600	100%	627	114	18.2%	906	396	43.7%
Benton	1,442	752	52.1%	412	412	100%	443	102	23.0%	587	238	40.5%
Clay	2,810	1,445	51.4%	958	958	100%	994	130	13.1%	858	357	41.6%
Douglas	2,134	1,142	53.5%	623	623	100%	655	153	23.4%	856	366	42.8%
Mille Lacs	1,550	793	51.2%	381	381	100%	445	119	26.7%	724	293	40.5%
Morrison	1,107	560	50.6%	281	281	100%	320	74	23.1%	506	205	40.5%
Otter Tail	2,613	1,374	52.6%	789	789	100%	839	193	23.0%	985	392	39.8%
Stearns	6,432	3,357	52.2%	1,999	1,997	99.9%	2,137	400	18.7%	2,296	960	41.8%
Todd	1,140	579	50.8%	324	324	100%	359	78	21.7%	457	177	38.7%
Wadena	587	305	52.0%	149	149	100%	164	38	23.2%	274	118	43.1%
Subtotal:	21,948	11,417	52.0%	6,516	6,514	100%	6,983	1,401	20.1%	8,449	3,502	41.4%
Judicial Dist 8												
Big Stone	245	130	53.1%	71	71	100%	72	19	26.4%	102	40	39.2%
Chippewa	461	244	52.9%	141	141	100%	146	33	22.6%	174	70	40.2%
Grant	239	128	53.6%	74	74	100%	77	17	22.1%	88	37	42.0%
Kandiyohi	1,487	771	51.8%	491	491	100%	508	92	18.1%	488	188	38.5%
Lac Qui Parle	243	125	51.4%	74	74	100%	85	19	22.4%	84	32	38.1%
Meeker	859	433	50.4%	232	232	100%	274	69	25.2%	353	132	37.4%
Pope	420	214	51.0%	115	115	100%	139	41	29.5%	166	58	34.9%
Renville	797	426	53.5%	227	227	100%	227	50	22.0%	343	149	43.4%
Stevens	202	107	53.0%	72	72	100%	70	12	17.1%	60	23	38.3%
Swift	299	153	51.2%	82	82	100%	88	19	21.6%	129	52	40.3%
Traverse	96	51	53.1%	30	30	100%	31	6	19.4%	35	15	42.9%
Wilkin	507	270	53.3%	181	181	100%	181	31	17.1%	145	58	40.0%
Yellow Medicine	395	209	52.9%	112	112	100%	122	28	23.0%	161	69	42.9%
Subtotal:	6,250	3,261	52.2%	1,902	1,902	100%	2,020	436	21.6%	2,328	923	39.6%

IDF Table 9: Criminal Conviction Rates by Judicial District (2018-2022), continued

District and County	All Violators			1st-Time Violators			2nd-Time Violators			3rd/More Violators		
	All Incidents	Convictions	Convict Rate	All Incidents	Convictions	Convict Rate	All Incidents	Convictions	Convict Rate	All Incidents	Convictions	Convict Rate
Judicial Dist 9												
Aitkin	1,149	603	52.5%	299	299	100%	336	93	27.7%	514	211	41.1%
Beltrami	4,926	2,694	54.7%	1,311	1,311	100%	1,273	257	20.2%	2,342	1,126	48.1%
Cass	2,017	1,065	52.8%	486	486	100%	537	134	25.0%	994	445	44.8%
Clearwater	668	352	52.7%	148	148	100%	170	48	28.2%	350	156	44.6%
Crow Wing	3,702	1,936	52.3%	1,054	1,054	100%	1,120	265	23.7%	1,528	617	40.4%
Hubbard	2,164	1,166	53.9%	538	538	100%	538	123	22.9%	1,088	505	46.4%
Itasca	2,828	1,497	52.9%	705	704	99.9%	779	218	28.0%	1,344	575	42.8%
Kittson	127	62	48.8%	33	33	100%	39	8	20.5%	55	21	38.2%
Koochiching	577	296	51.3%	176	176	100%	197	53	26.9%	204	67	32.8%
Lake of Woods	263	132	50.2%	66	66	100%	82	22	26.8%	115	44	38.3%
Mahnomen	911	485	53.2%	234	234	100%	240	42	17.5%	437	209	47.8%
Marshall	250	130	52.0%	66	66	100%	69	16	23.2%	115	48	41.7%
Norman	186	97	52.2%	52	52	100%	58	14	24.1%	76	31	40.8%
Pennington	972	504	51.9%	301	300	99.7%	318	61	19.2%	353	143	40.5%
Polk	2,501	1,418	56.7%	811	810	99.9%	745	158	21.2%	945	450	47.6%
Red Lake	143	77	53.8%	38	38	100%	43	10	23.3%	62	29	46.8%
Roseau	644	332	51.6%	199	199	100%	220	43	19.5%	225	90	40.0%
Subtotal:	24,028	12,846	53.5%	6,517	6,514	100%	6,764	1,565	23.1%	10,747	4,767	44.4%
Judicial Dist												
Anoka	11,037	5,663	51.3%	3,134	3,131	99.9%	3,596	900	25.0%	4,307	1,632	37.9%
Chisago	2,174	1,115	51.3%	616	616	100%	691	166	24.0%	867	333	38.4%
Isanti	1,009	515	51.0%	262	262	100%	313	90	28.8%	434	163	37.6%
Kanabec	375	203	54.1%	108	108	100%	119	38	31.9%	148	57	38.5%
Pine	1,280	657	51.3%	330	330	100%	360	94	26.1%	590	233	39.5%
Sherburne	3,323	1,733	52.2%	1,014	1,014	100%	1,120	266	23.8%	1,189	453	38.1%
Washington	8,410	4,323	51.4%	2,625	2,625	100%	2,894	592	20.5%	2,891	1,106	38.3%
Wright	4,326	2,206	51.0%	1,163	1,161	99.8%	1,359	374	27.5%	1,804	671	37.2%
Subtotal:	31,934	16,415	51.4%	9,252	9,247	99.9%	10,452	2,520	24.1%	12,230	4,648	38.0%

IDF Table 10: Ignition Interlock Program Participation

End-of-Year Counts	2019	2020	2021	2022	An interlock is a breath testing system installed on a motor vehicle that prevents the vehicle from operating when a predetermined level of blood alcohol is detected.
Drivers required to have ignition interlock	3,445	5,542	5,542	9,217	
Enrolled participants	11,828	10,463	11,987	14,104	
Eligible participants	29,274	22,858	25,526	29,010	
Device installations	10,333	8,113	10,043	11,301	

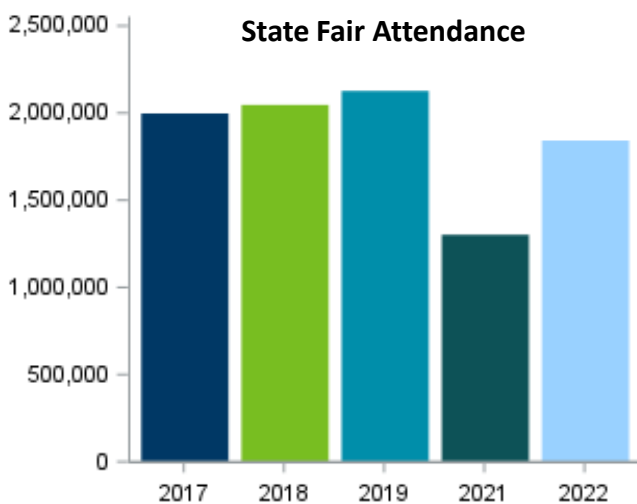
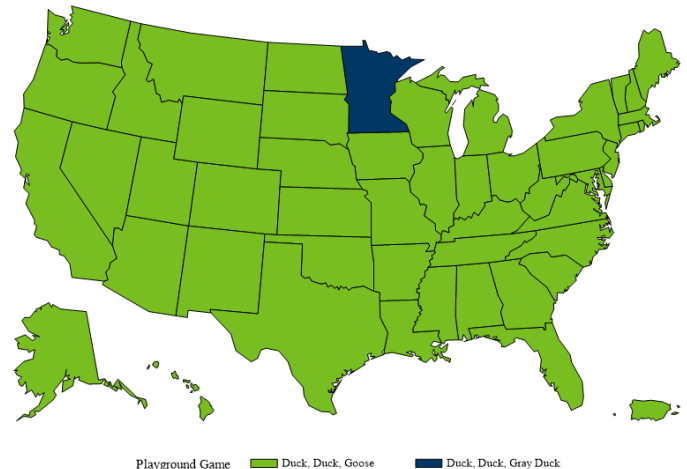
Minnesota Facts

Did you know?

The great state of Minnesota became the 32nd U.S. state on May 11, 1858. The name Minnesota is derived from two Native American Indian words, “minni” (meaning water) and “sotah” (meaning sky-tinted or cloudy). Covering 86,943 square miles it is the 12th largest state in area and the 22nd most populous state. Minnesota is filled with lakes (actually more than 10,000 of them), forests, rivers, wild life, parks, camping grounds, and bike trails. Minnesota is home to the Mall of America in Bloomington, which is the largest shopping center in the United States (9.5 million square feet). The city of Minneapolis has the largest continuous skyway system in the world; it connects 80 downtown blocks.

Nicknames for Minnesota include the Gopher State, the Land of 10,000 Lakes, the North Star State, and the Bread and Butter State.

Minnesotans are known for being kind (Minnesota Nice), nature lovers (outdoor activities are popular), hearty (can withstand extreme cold weather), unable to quickly exit a family gathering (the long Minnesota goodbye), and enjoying an annual get-together where any type of food imaginable is served on a stick (the Minnesota State Fair).



Prince is the most famous Minnesotan, and in his honor, purple is the official state color.

MN Inventions:
Masking and Scotch Tape
Wheaties and Cheerios cereals
Bisquick
Honeycrisp and Sweet Tango apples
bundt pans
automatic pop-up toasters
staplers
snowmobiles
in-line roller skates

Minnesota is filled with tourist attractions and landmarks that showcase the state’s natural and seasonal beauty. Some of the top-rated attractions include: Boundary Waters Canoe Area, Lake Itasca (the humble beginning of the mighty Mississippi River), the Cathedral of St. Paul, the North Shore Scenic Drive of Lake Superior, and Split Rock Lighthouse. Tourism provides \$15 billion to Minnesota’s economy.

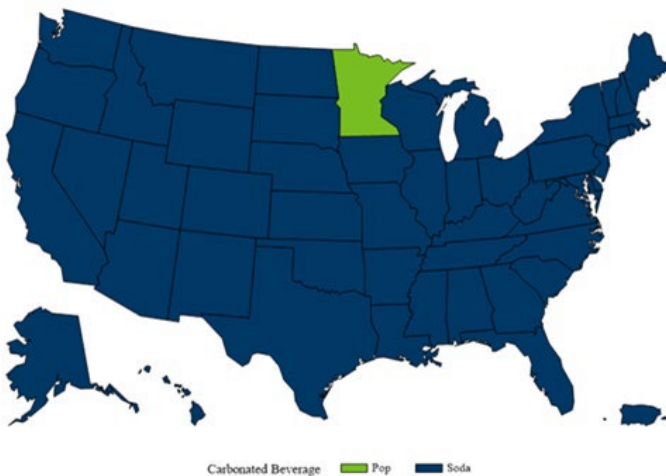
Unlike many states, all major professional sports leagues (MLB, NFL, NBA, WNBA and NHL) are represented with Minnesota teams. Hockey at all levels is appreciated by Minnesotans, and the United States Hockey Hall of Fame is located in Eveleth, Minnesota.

Vikings football fans celebrate with a SKOL chant; the word ‘skol’ is Icelandic and means ‘cheers’.

Minnesotans are known across the nation for their “accent” or how they pronounce words by elongating “a” and “o” vowel sounds. Several distinctly “Minnesotan” sayings exist as well. To the right are some translations for these sayings.

Saying	Meaning
"You betcha!"	Agreement
Have a "little lunch"	Lunch - regardless of meal size
"Oh, for cute"	Used when something is adorable
"Up North"	Referring to the cabin, lake, or woods regardless of direction
Eat some "bars"	Any dessert (brownies, cookies, cereal treats) cut into squares or rectangles
"Uff-da"	An exclamation used for a variety of emotions
"and that"	Punctuation
"Hot Dish"	A casserole

In ‘sota, we call it “pop”



Minnesota is home to more than **50 different** mosquito species

Winter, spring, summer, and fall provide wildly different weather across the state, but true Minnesotans know there are really only two seasons.

