

Office of Traffic Safety

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2021 was a devastating year in traffic safety. Road fatalities increased over the previous year and the 488 traffic fatalities proved to be the most since 2007. In a year when mileage on our roads returned to pre-COVID-19 levels, motorists exhibited dangerous driving behaviors which resulted in far too many preventable lost loved ones. In an already difficult year, these tragedies caused even more pain and sorrow and have forever changed the lives of hundreds of families.

The tragedies included an ATV driver who was ejected from the vehicle while being towed. A 4-year-old who climbed onto a trailer unbeknownst to the driver, her father. A passenger/patient was killed when an ambulance was struck by a dump truck. Four married couples died together in fatal crashes.

Minnesota Motor Vehicle Crash Facts 2021 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.

During 2021, the COVID-19 pandemic kept many people at home. The total number of crashes increased from 2020, but was still lower than previous years. While there were fewer total number of crashes, the number of fatal crashes increased due to an increase in speeding, unbelted motorists and alcohol-related fatalities. Alarming drug-related fatalities increased to a level unseen previously.

The top four contributing factors in Minnesota 2021 traffic fatalities continue to be:

- Speed: 171 deaths compared with 122 in 2020.
- Unbuckled motorists: 110 deaths compared with 105 in 2020.
- Drunk Driving: 74 deaths compared with 79 in 2020.
- Distractions: 27 deaths compared with 32 in 2020.

The Minnesota Department of Public Safety uses this information to determine future traffic safety initiatives that will lead to safer roads, more efficient safety programs and improved driver behavior.

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,

Director Mike Hanson

Department of Public Safety, Office of Traffic Safety

Alcohol
and Gambling
Enforcement

Bureau of Criminal
Apprehension

Driver
and Vehicle
Services

Emergency
Communication
Networks

Homeland
Security and
Emergency
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Minnesota
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Introduction

At the end of the 2021 calendar year, 4,161,269 people held Minnesota driver licenses and 6,428,184 motor vehicles were registered in the state. Vehicles traveled over 57.2 billion miles on public roadways. There were 63,751 traffic crashes; 488 people died and 24,083 people were injured in those crashes. This report provides a statistical summary of those crashes.

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

Cost of traffic crashes

The use of motor vehicles for getting from one place to another results in significant costs to society. The National Safety Council reports that crashes (from all causes) are the leading cause of death among persons aged 1 to 24, the second leading cause of unintentional injury-related death for all ages combined and the fifth leading cause of death among all persons (Injury Facts, 2016 Edition, p. 14-15,18).

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 2020 data. Based upon those, the total economic loss from 2021 traffic crashes in Minnesota was \$2,034,606,400, a figure that is calculated as follows:

Count	Severity	@ Cost	= Economic Loss
488	Deaths	@ \$1,750,000	= \$854,000,000
1,723	Serious Injuries	@ \$101,000	= \$174,023,000
8,912	Minor Injuries	@ \$29,200	= \$260,230,400
13,448	Possible Injuries	@ \$23,900	= \$321,407,200
90,414	PDO Crashes	@ \$4,700	= \$424,945,800
Total:			\$2,034,606,400

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 2021, there were 46,020 traffic fatalities throughout the country (according to preliminary data from National Safety Council) and 488 in Minnesota. The respective fatality rates per hundred million miles of travel were 1.43 and 0.85.

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

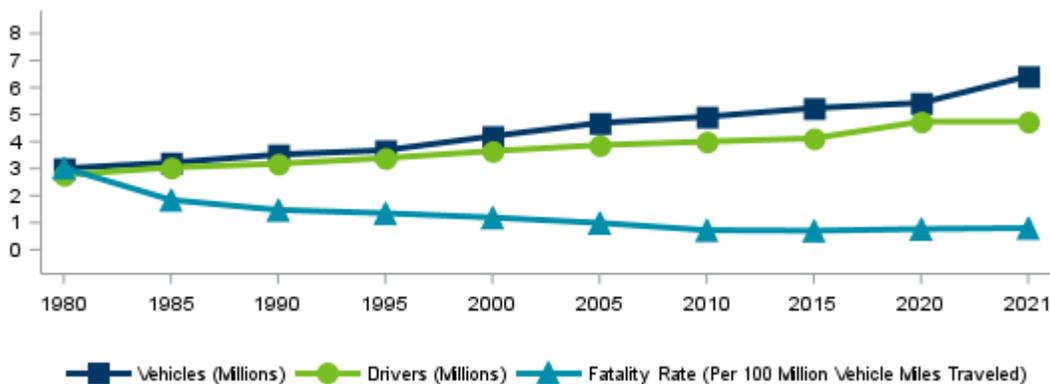
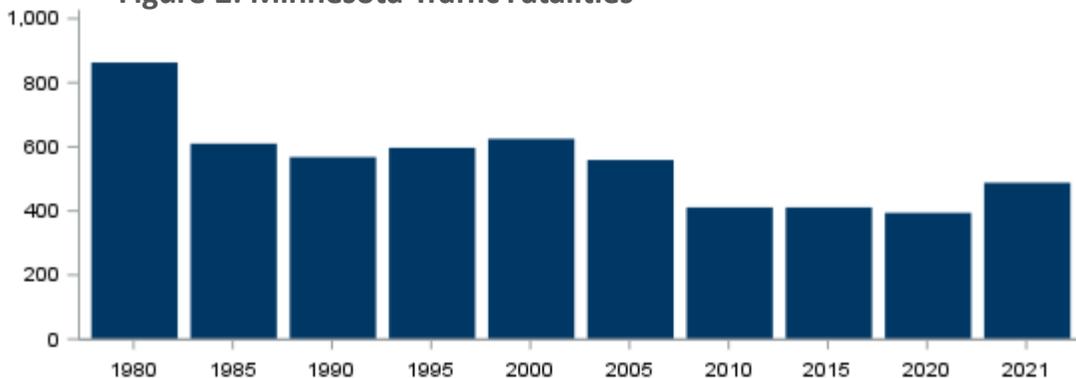


Figure 2: Minnesota Traffic Fatalities



All Crashes

Overview of Traffic Crashes

In 2021, 63,751 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:

4.2 million licensed drivers	6.4 million registered vehicles	57.2 billion miles driven
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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 2021. The 63,751 traffic crashes reported to the Department of Public Safety represent an increase of 12% from 2020. There were 488 deaths on Minnesota roads, a 24% increase from the previous year. These drastic changes are atypical and a byproduct of the COVID-19 pandemic. 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 2021

The following facts give an overall picture of 2021 traffic crashes.

134,917

people involved in crashes

115,554

motor vehicles involved in
crashes

Minnesota crash rates for 2021 were:

1,116 crashes per 100K population	991 crashes per 100K vehicles	105 crashes per 100M VMT
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Minnesota fatality rates for 2021 were:

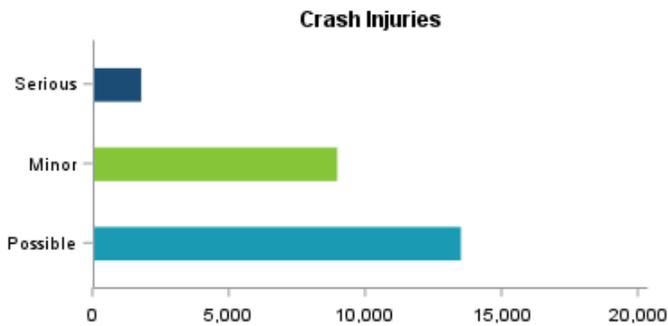
8.5 fatalities per 100K population	7.5 fatalities per 100K vehicles	0.85 fatalities per 100M VMT
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\$2.03 billion

economic loss to
Minnesota

488
people
died

24,083
people
were injured



7,532
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

	2017	2018	2019	2020	2021	Record High	
Fatal Crashes	341	349	333	369	451	878	1973
Injury Crashes	21,272	20,244	19,902	15,071	17,483	33,868	1978
Serious	1,561	1,341	1,297	1,310	1,451	5,109	1984
Minor	8,199	7,327	7,260	5,940	6,840	12,326	1985
Possible	11,512	11,576	11,345	7,821	9,192	18,578	1996
PDO Crashes	56,852	58,622	60,401	41,687	45,817	94,810	1975
Total Crashes	78,465	79,215	80,636	57,127	63,751	123,106	1975
Total Injuries	29,412	27,877	27,260	20,529	24,083	50,332	1978
Serious	1,849	1,660	1,520	1,569	1,723	6,573	1984
Minor	10,539	9,429	9,346	7,656	8,912	17,670	1985
Possible	17,024	16,788	16,394	11,304	13,448	28,631	1996
Total Fatalities	358	381	364	394	488	1,060	1968
MN Fatality Rate	0.63	0.63	0.60	0.76	0.85	24	1934
U.S. Fatality Rate	1.25	1.25	1.1	1.37	1.43	18	1925
MN Economic Loss (billions)	\$1.79	\$1.79	\$1.87	\$1.87	\$2.03	\$2.03	2021

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 aged 25-29 are the worst from this perspective. In 2021, they represented just 9% of the licensed drivers, but 11% 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, 133 people under age 30 died in crashes, representing 27% 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 9,939 people under age 30 who were injured, representing 41% of the total number of people injured.

Figure 1.01: Licensed vs Crash-Involved Drivers by Age

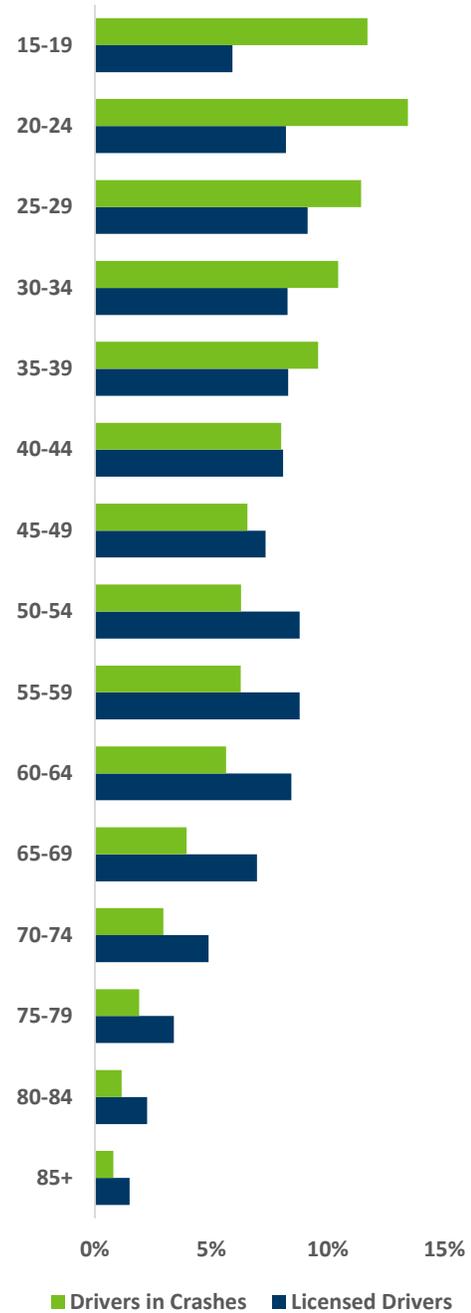


Table 1.02: Age and Gender of Drivers in Crashes

Age Group	Unk				Unk			
	Male Drivers in Fatal Crashes	Female Drivers in Fatal Crashes	Gender Drivers in Fatal Crashes	Total in Fatal Crashes	Male Drivers in All Crashes	Female Drivers in All Crashes	Gender Drivers in All Crashes	Total in All Crashes
<15	1	0	0	1	30	18	2	50
15-19	31	18	0	49	6,386	5,657	74	12,117
20-24	32	21	3	56	7,727	6,010	188	13,925
25-29	53	11	0	64	6,946	4,800	95	11,841
30-34	52	22	0	74	6,420	4,304	93	10,817
35-39	47	14	0	61	5,914	3,932	76	9,922
40-44	44	11	0	55	5,006	3,227	58	8,291
45-49	39	7	0	46	4,166	2,586	28	6,780
50-54	42	7	0	49	3,991	2,478	34	6,503
55-59	34	10	0	44	4,053	2,412	20	6,485
60-64	45	8	0	53	3,687	2,141	6	5,834
65-69	24	9	0	33	2,488	1,597	2	4,087
70-74	22	11	0	33	1,810	1,227	7	3,044
75-79	20	8	0	28	1,169	803	4	1,976
80-84	8	5	0	13	656	538	2	1,196
85+	12	7	0	19	490	333	6	829
Unk	0	0	0	0	16	11	46	73
Total	506	169	3	678	60,955	42,074	741	103,770

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

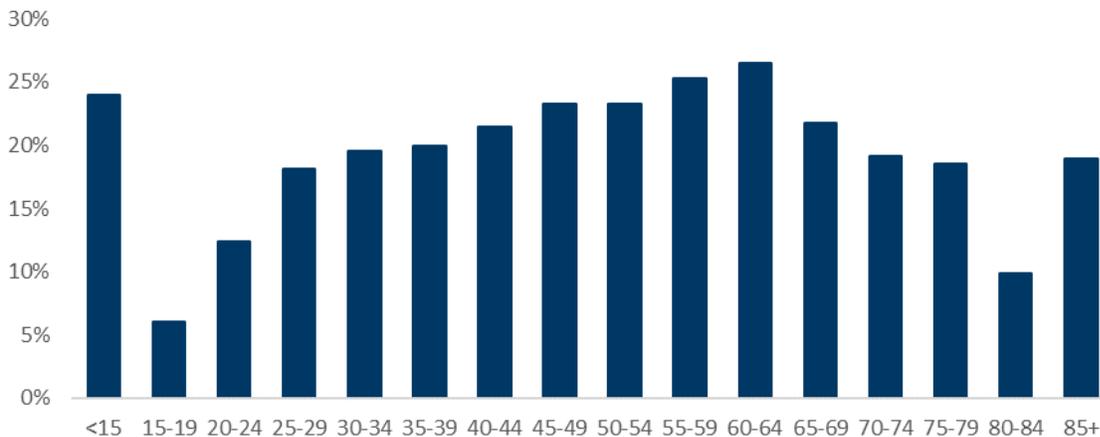


Table 1.03: Driver Physical Condition* in Crashes

Driver Physical Condition	Fatal Crashes	Injury Crashes	PDO Crashes	All Crashes
Apparently Normal	357	26,740	67,508	94,605
Physical Disability	3	72	50	125
Medical Issue	10	441	248	699
Emotional	4	181	172	357
Asleep or Fatigued	5	393	687	1,085
Had Been Drinking Alcohol	85	1,343	1,851	3,279
Had Been Taking Illicit Drugs	41	335	337	713
Had Been Taking Medications	4	91	100	195
Other	10	180	262	452
Unknown	837	30,728	74,465	106,030
Total	1,356	60,504	145,680	207,540

*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

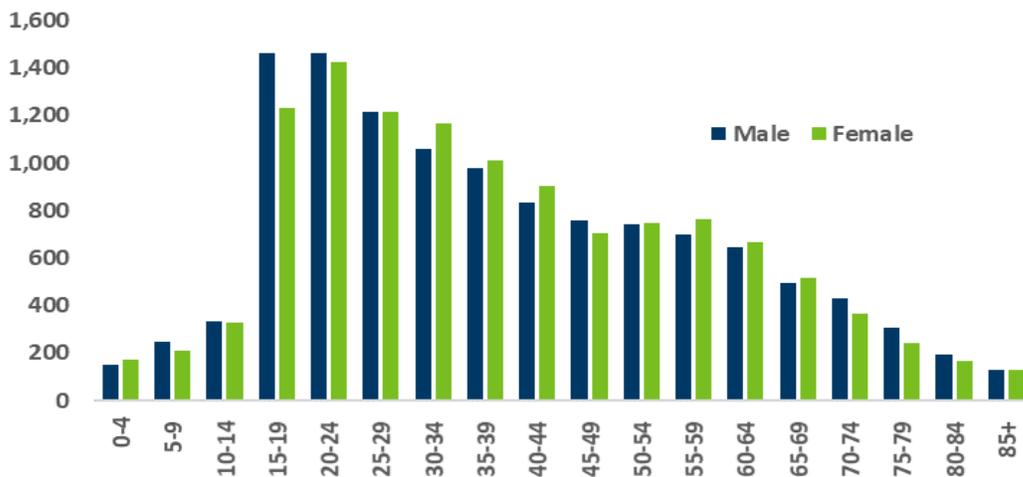


Figure 1.04: Fatalities by Gender

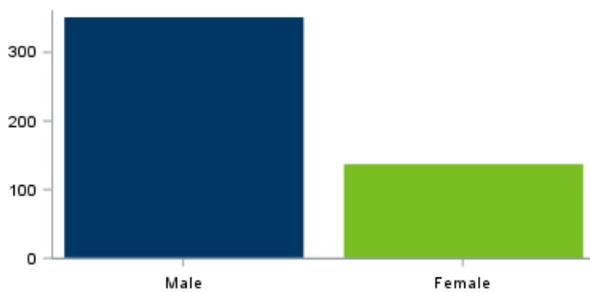
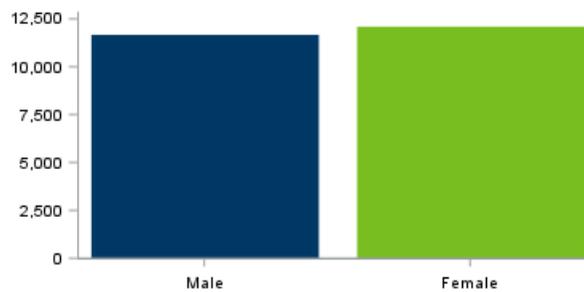


Figure 1.05: Injuries by Gender



72%
male
fatalities
51%
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	173	583	3,898	6,632	11,113	51,143	62,429
Pickup Truck	61	178	886	1,142	2,206	14,228	16,495
Sport Utility Vehicle	82	332	2,359	4,097	6,788	32,392	39,262
Van	4	42	326	573	941	4,555	5,500
Motorhome/Camper	0	0	15	19	34	112	146
Limousine	0	0	0	1	1	5	6
Police Vehicle	0	0	0	0	0	3	3
Fire Department Vehicle	0	0	0	0	0	11	11
School Bus	0	4	25	42	71	944	1,015
Other Bus	0	0	17	32	49	357	406
Ambulance	2	1	5	12	18	109	129
Snowmobile	0	3	2	1	6	5	11
All-Terrain Vehicle	12	16	26	4	46	49	107
Farm Tractor or Equipment	1	1	9	7	17	105	123
Motorcycle	69	280	500	218	998	182	1,249
Moped/Motor Scooter	0	22	32	11	65	7	72
Single Truck (2-axle, 6 tire)	1	1	21	16	38	342	381
Single Truck (3+ axles)	3	4	14	10	28	275	306
Truck with Trailer	2	1	18	20	39	723	764
Truck No Trailer	0	0	2	0	2	57	59
Truck Semi Trailer	4	4	43	71	118	1,625	1,747
Truck Double Trailer	1	2	0	1	3	36	40
Truck Triple Trailer	0	0	0	0	0	1	1
Other/Unknown Truck Type	3	4	32	37	73	874	950
Bicycle	8	54	258	151	463	45	516
Pedestrian	56	169	312	229	710	79	845
Other	4	12	60	49	121	1,257	1,382
Unknown Vehicle Type	2	10	52	73	135	825	962
Total	488	1,723	8,912	13,448	24,083	110,346	134,917

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

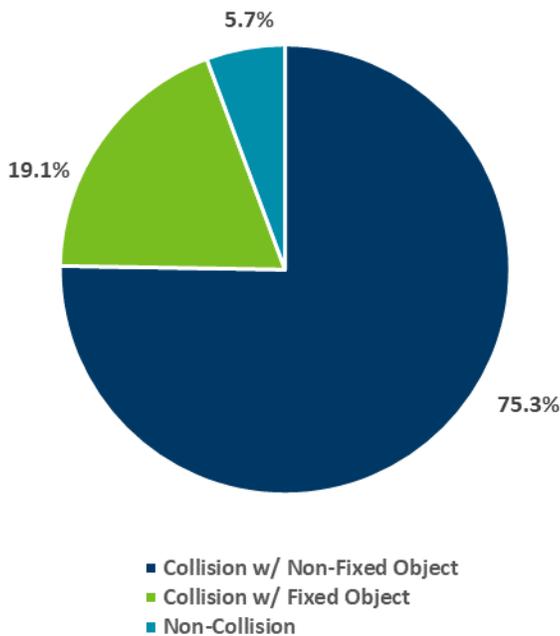


Table 1.06: Crash Type Counts

Collision w/ Non-Fixed Object	
Motor Vehicle in Transport	41,844
Parked Motor Vehicle	3,487
Falling Cargo	95
Pedestrian	595
Bicycle	482
Deer/Animal	1,428
Train	46
Collision w/ Fixed Object	
Pole/Sign/Parking Meter	3,510
Construction Equipment	30
Bridge	234
Culvert/Curb	244
Ditch/Embankment	1,094
Snowbank	103
Barrier	3,954
Mailbox/Hydrant	414
Tree/Shrubbery	1,160
Fence	467
Other/Unknown	954
Non-Collision	
Object Set in Motion By MV	180
Overturn/Rollover	2,491
Submersion	27
Fire/Explosion	22
Other Non-Collision	890

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	259	13,075	34,643	47,977
Fixed Object	99	2,796	9,269	12,164
Non-Collision	93	1,612	1,905	3,610
Total	451	17,483	45,817	63,751

Table 1.07: Crashes by Weather Condition

Weather Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Clear	325	12,702	31,317	44,344	354	17,611
Cloudy	70	2,594	6,693	9,357	76	3,577
Rain	18	819	2,181	3,018	19	1,106
Snow	14	865	3,816	4,695	15	1,129
Sleet/Hail	3	91	295	389	3	120
Fog/Smog/Smoke	8	147	250	405	8	207
Blowing Sand/Soil/Dirt	4	125	505	634	4	162
Severe Crosswinds	2	19	53	74	2	23
Other Weather	0	34	56	90	0	39
Unknown	7	87	651	745	7	109
Total	451	17,483	45,817	63,751	488	24,083

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	296	8,725	26,111	35,132	294	12,099
RR Crossing Device	1	18	63	82	1	32
Traffic Control Signal	51	4,387	9,134	13,572	37	5,970
Flashing Overhead Signal	0	34	64	98	0	42
Yield Sign	4	301	878	1,183	6	317
Stop Sign	43	2,307	4,523	6,873	44	2,575
Warning Sign	2	42	130	174	2	55
Flagger, Police, Crossing Guard	2	16	36	54	1	29
School Zone Sign	1	10	9	20	1	13
Other	4	72	166	242	2	82
Not Applicable	37	1,250	3,826	5,113	29	1,529
Unknown	10	321	877	1,208	71	1,340
Total	451	17,483	45,817	63,751	488	24,083

Table 1.09: Crashes by Road Surface Condition

Road Surface	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Dry	358	13,476	31,814	45,648	390	18,697
Wet	42	1,800	4,650	6,492	44	2,488
Snow	15	969	4,661	5,645	18	1,275
Ice/Frost	18	924	3,808	4,750	18	1,190
Sand	0	9	3	12	0	0
Ruts, Holes, Bumps	0	5	1	6	0	0
Other	13	219	331	563	13	337
Unknown	5	81	549	635	5	96
Total	451	17,483	45,817	63,751	488	24,083

Table 1.10: Crashes by Road Design

Road Design	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
One Way Trafficway	9	788	2,827	3,624	4	991
Two-Way, Not Divided	297	9,059	20,835	30,191	291	11,846
Two-Way, Not Divided, Left Turn Lane	10	359	833	1,202	8	486
Two-Way, Divided, Unprotected Median	51	1,903	4,211	6,165	51	2,727
Two-Way, Divided, Median Barrier	67	4,686	15,182	19,935	62	6,314
Other	9	387	1,200	1,596	4	393
Unknown	8	301	729	1,038	68	1,326
Total	451	17,483	45,817	63,751	488	24,083

Only 17%
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 2021, there were 7,532 crashes classified as Hit-and-Run. This represents 12% 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
19	927	6,586	7,532	19	1,171

Figure 1.07: Hit-and-Run Crash Trends

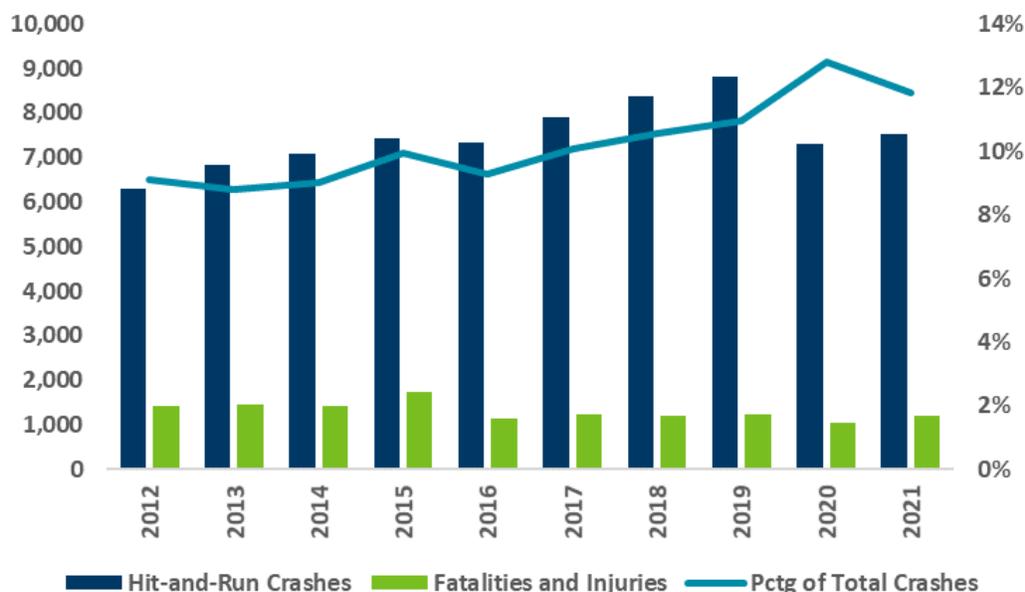
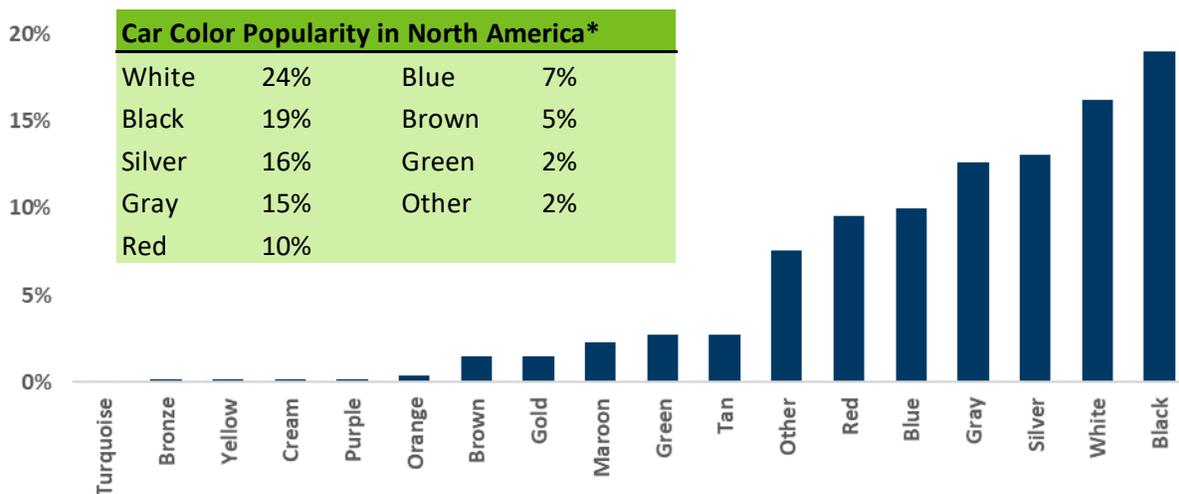


Figure 1.08: Vehicle Color (Passenger Cars, Trucks, or Vans) of Cars in Minnesota Crashes



Car Color Popularity in North America*			
White	24%	Blue	7%
Black	19%	Brown	5%
Silver	16%	Green	2%
Gray	15%	Other	2%
Red	10%		

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

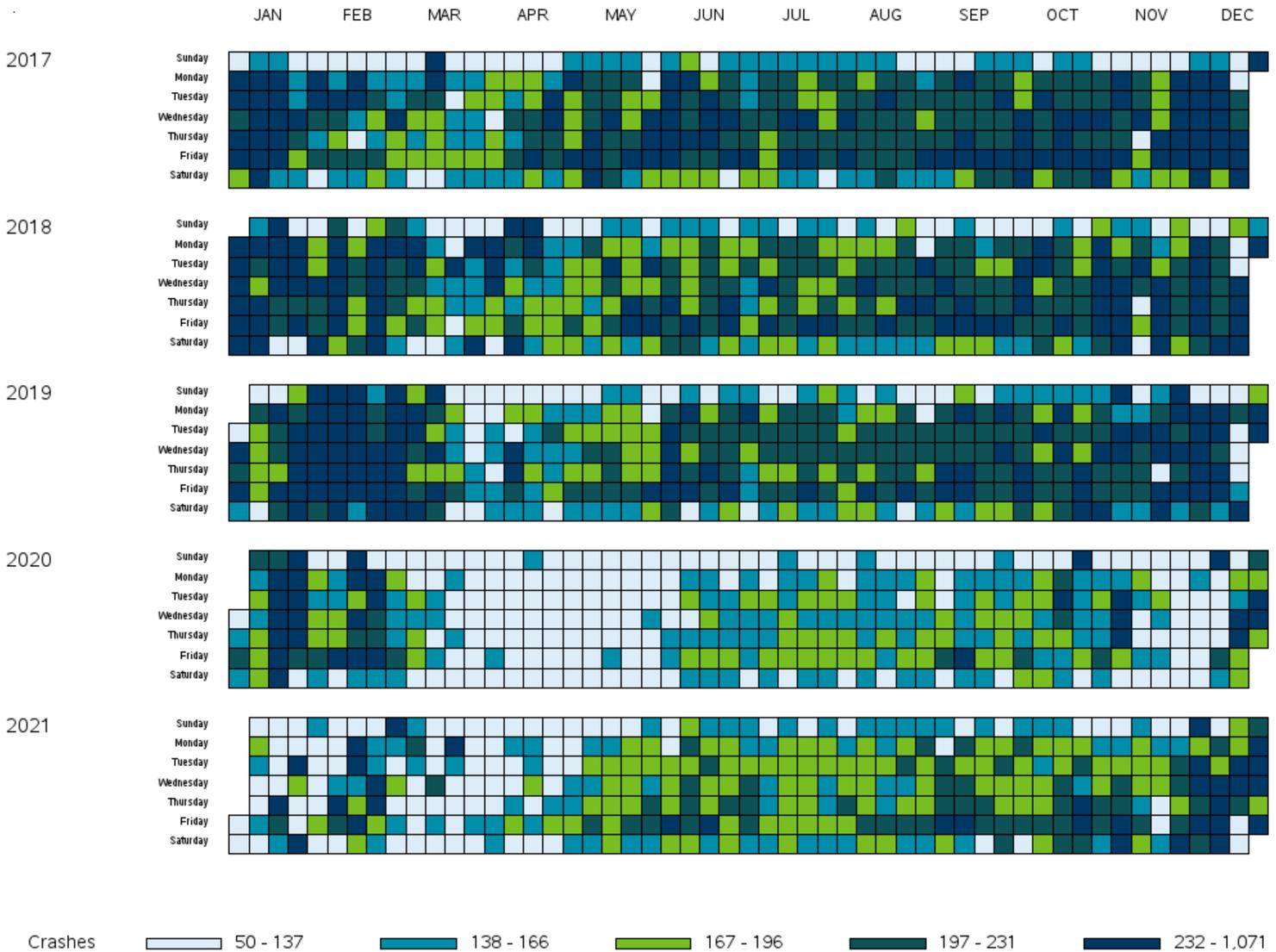
Table 1.12: Types of Motor Vehicles in Crashes

Vehicle Type	Vehicles In Fatal Crashes	Vehicles in Injury Crashes	Vehicles in PDO Crashes	Vehicles in All Crashes
Car	253	14,879	39,132	54,264
Pickup Truck	115	3,559	10,490	14,164
Sport Utility Vehicle	147	9,153	22,530	31,830
Van	13	1,149	2,781	3,943
Motorhome/Camper	0	14	60	74
Limousine	0	1	3	4
Police Vehicle	0	0	3	3
Fire Department Vehicle	0	2	8	10
School Bus	1	65	264	330
Other Bus	2	87	209	298
Ambulance	1	13	54	68
Military Vehicle	0	0	1	1
Snowmobile	0	6	5	11
All-Terrain Vehicle	13	38	18	69
Farm Tractor or Equipment	4	35	85	124
Motorcycle	71	914	155	1,140
Moped/Motor Scooter	0	62	5	67
Single Truck (2-axle, 6 tire)	5	82	265	352
Single Truck (3+ axles)	6	75	222	303
Truck with Trailer	9	152	576	737
Truck No Trailer	0	11	52	63
Truck Semi Trailer	40	353	1,274	1,667
Truck Double Trailer	1	9	28	38
Truck Triple Trailer	0	0	1	1
Other/Unknown Truck Type	10	208	687	905
Other	7	279	1,085	1,371
Unknown Vehicle Type	8	562	3,148	3,718
Total	706	31,708	83,141	115,555

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



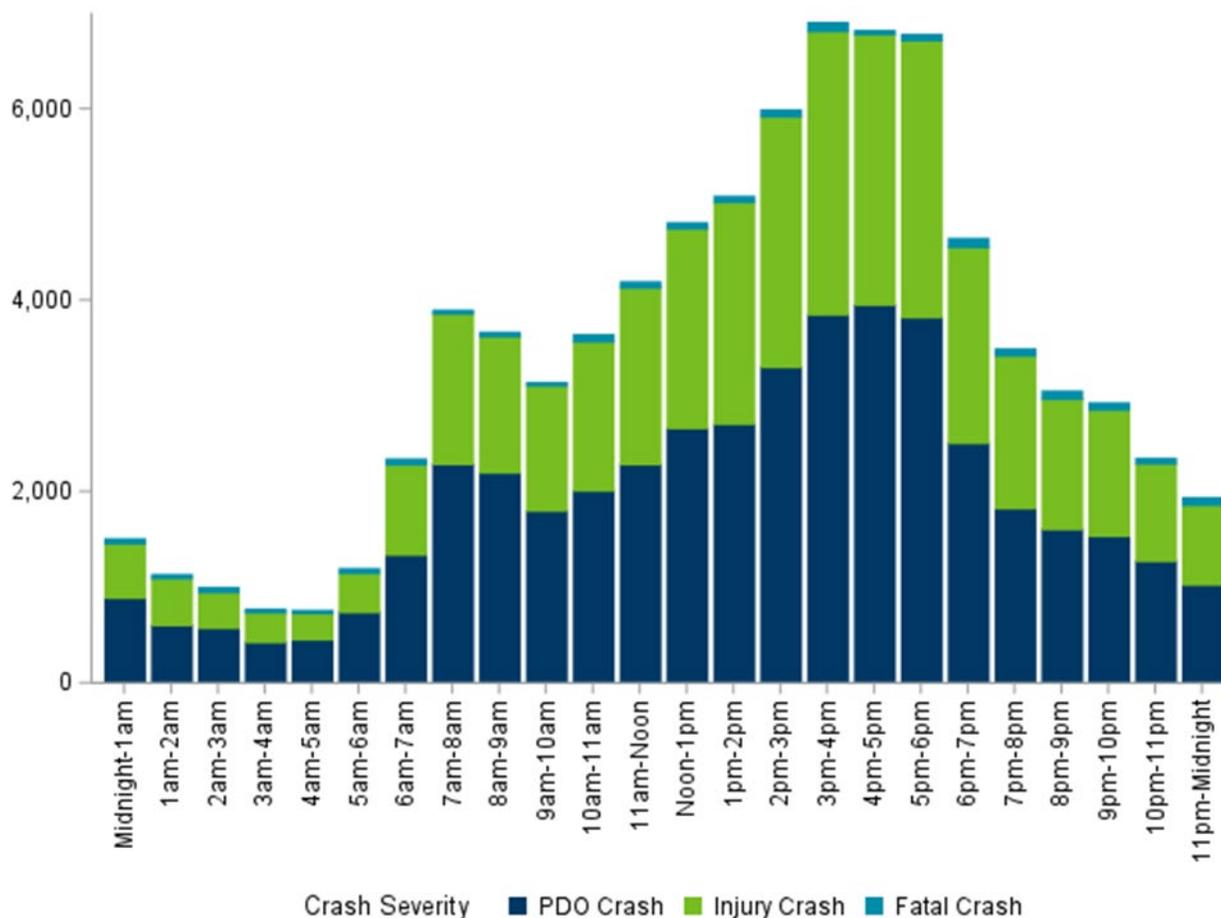
Most crashes occur
on **Fridays**

Winter
means lots of crashes

Table 1.13: Crashes, Fatalities, and Injuries by Month

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
January	17	991	3,417	4,425	17	1,327
February	26	1,172	4,268	5,466	28	1,543
March	29	1,121	3,070	4,220	30	1,537
April	30	1,228	2,793	4,051	35	1,705
May	46	1,568	3,459	5,073	50	2,156
June	45	1,695	3,891	5,631	48	2,359
July	39	1,737	3,515	5,291	45	2,458
August	50	1,667	3,703	5,420	54	2,364
September	48	1,698	3,704	5,450	51	2,332
October	50	1,615	3,991	5,656	54	2,259
November	41	1,365	3,796	5,202	46	1,864
December	30	1,626	6,210	7,866	30	2,179
Total	451	17,483	45,817	63,751	488	24,083

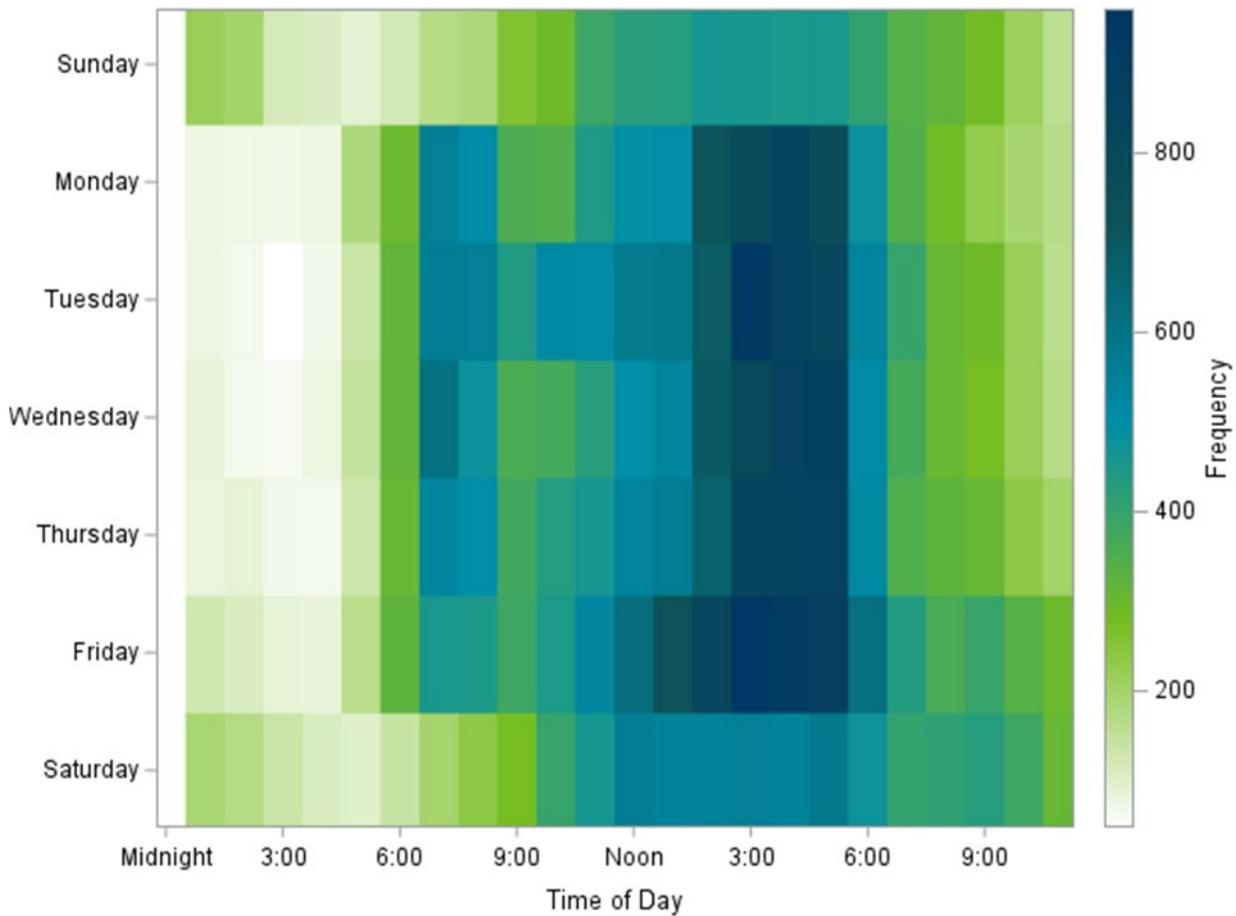
Figure 1.10: Crashes by Time and Crash Severity



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

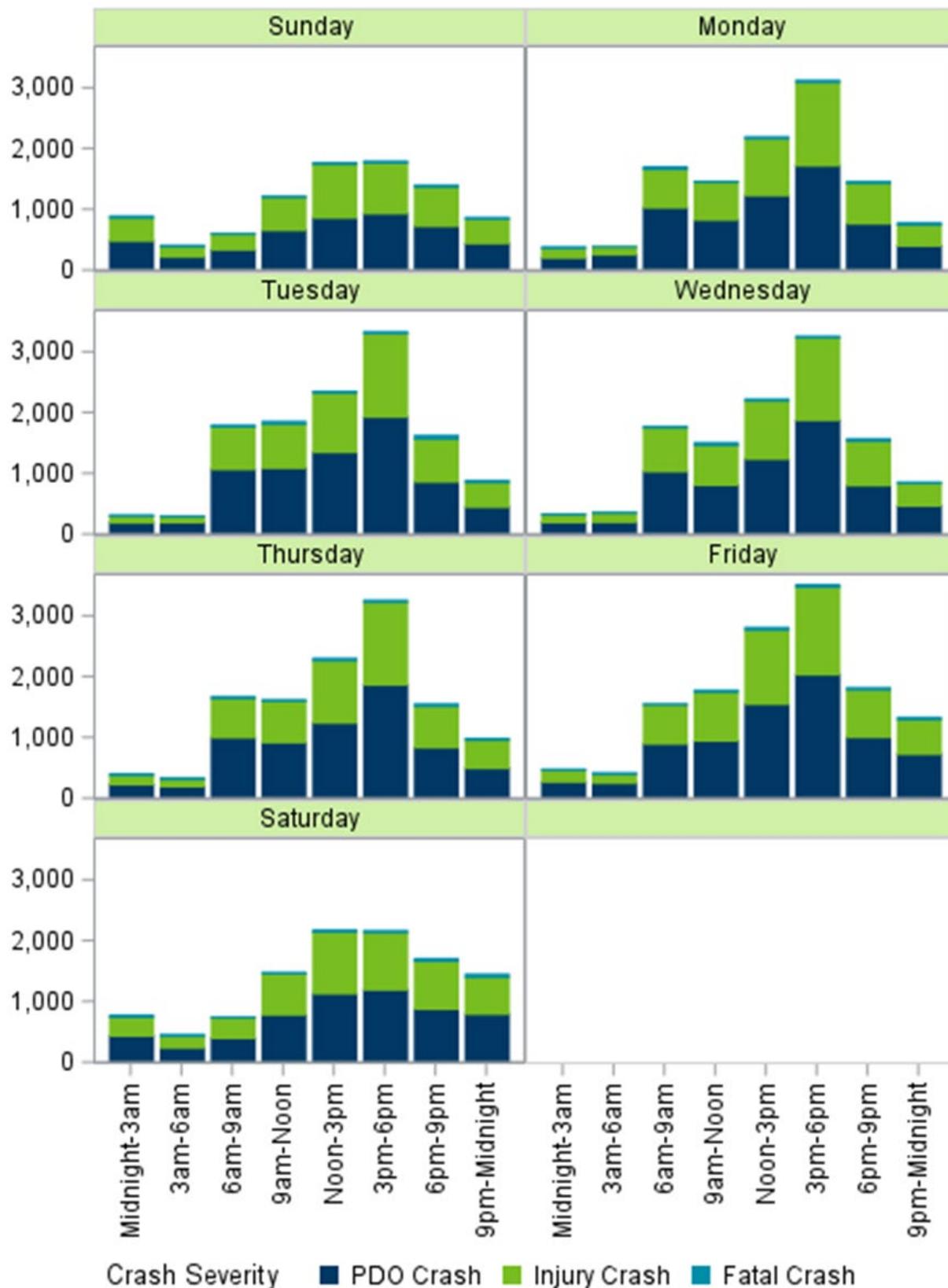


Table 1.14: Crashes by Light Condition

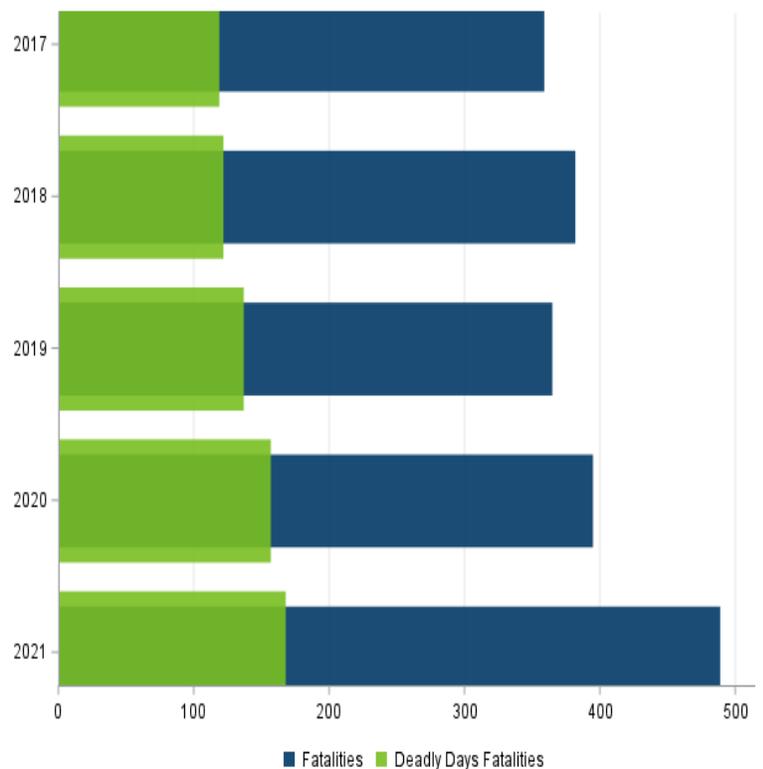
Light Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Daylight	234	12,138	30,680	43,052	258	16,868
Sunrise	10	349	1,067	1,426	11	443
Sunset	18	560	1,199	1,777	18	802
Dark/Street Lights On	78	2,940	8,822	11,840	82	3,999
Dark/No Street Lights	107	1,448	3,551	5,106	115	1,913
Other	4	48	498	550	4	58
Total	451	17,483	45,817	63,751	488	24,083

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.

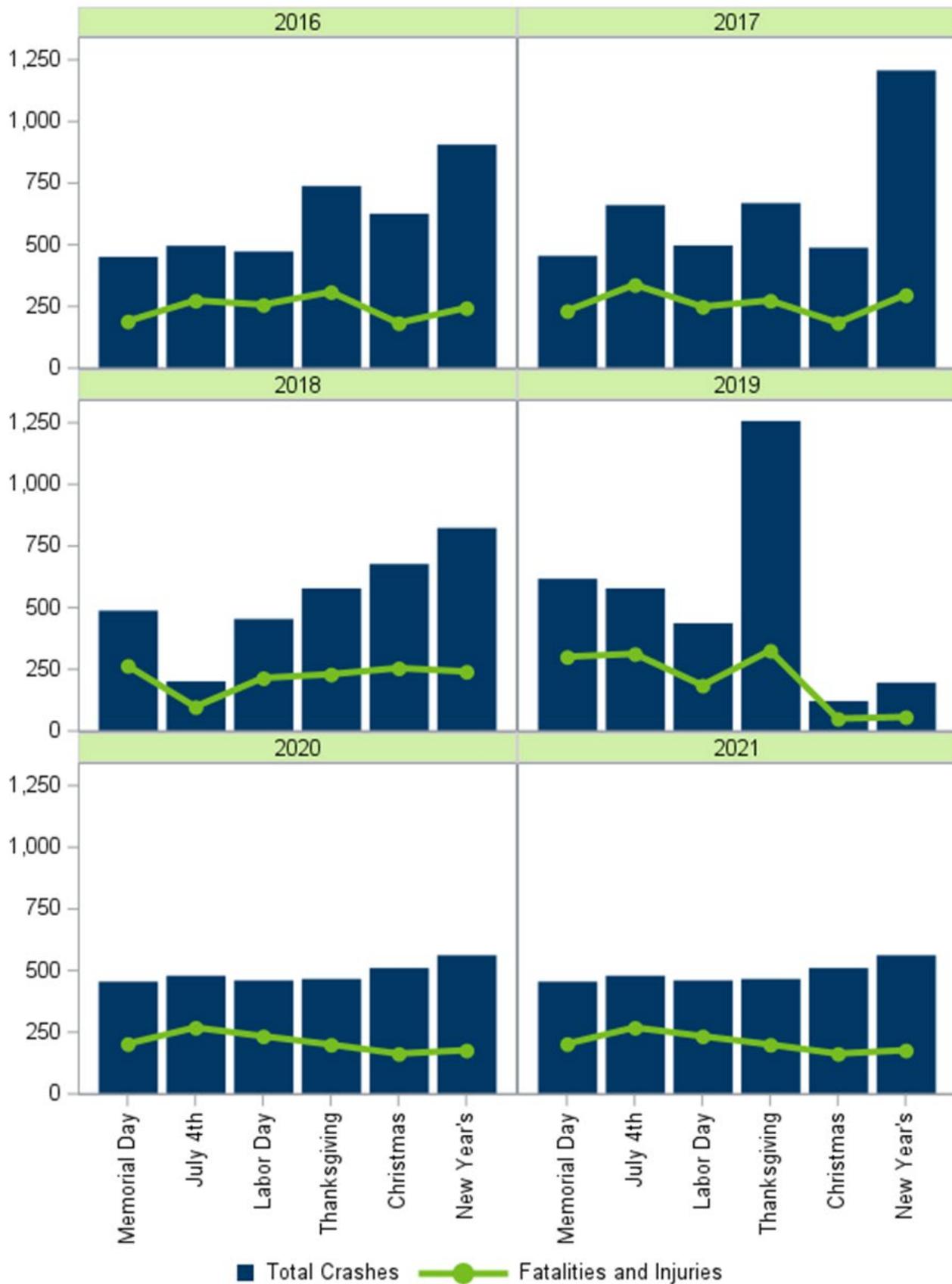
Aside from the six NHTSA holidays, other days and events, such as the Super Bowl, St. Patrick’s Day, Cinco de Mayo, Halloween, hunting and fishing opening weekends, and the time period between Memorial Day and Labor Day (called the 100 Deadly Days of Summer) can have spikes in DWIs and traffic crashes.

Figure 1.13: 100 Deadly Days of Summer



34%
of fatalities
occurred during
the 100 deadly
days in 2021

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.

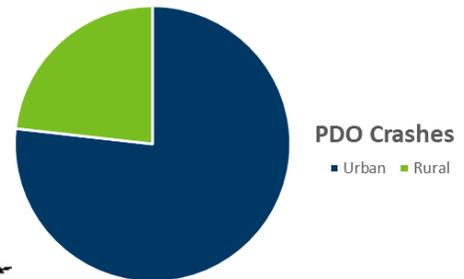
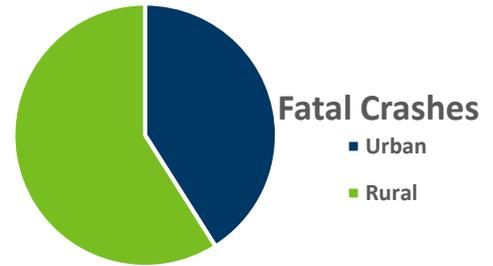
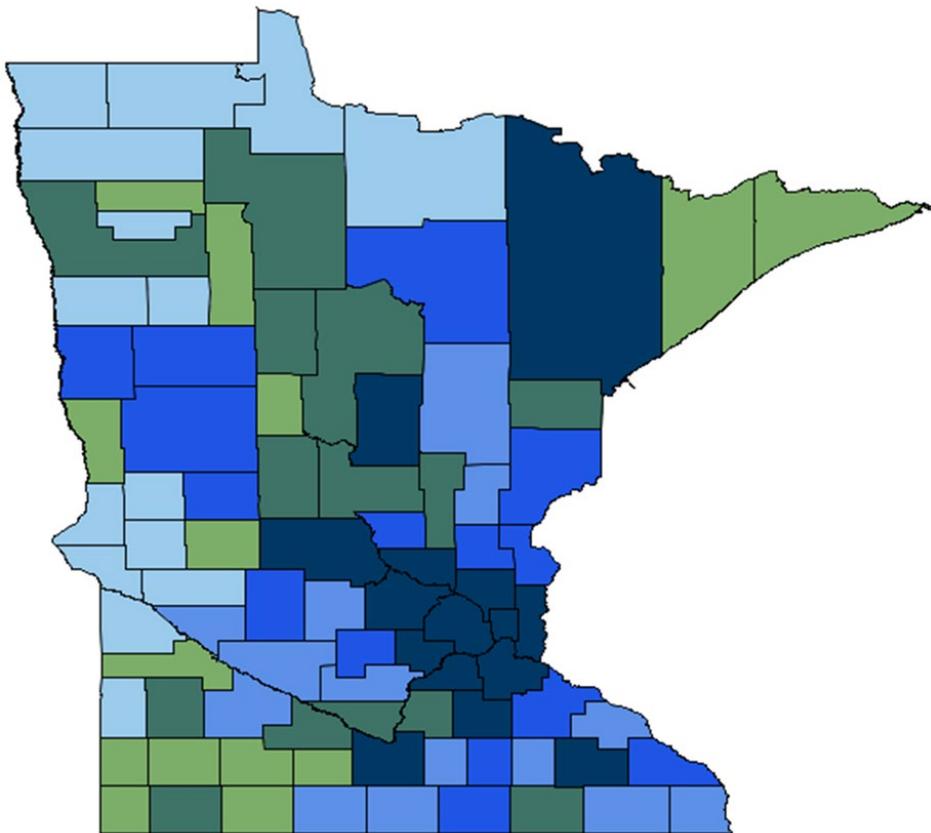


Figure 1.15: Fatal and Injury Crashes Plotted By County



In urban and rural areas,
Speed
 is frequently a
 factor in
 fatal crashes

59%
 fatal crashes
 occur in rural
 areas

Table 1.15: County Crash Report

County	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Aitkin	1	42	92	135	2	56
Anoka	25	947	2,566	3,538	27	1,356
Becker	5	101	200	306	5	143
Beltrami	8	70	129	207	8	98
Benton	4	179	398	581	5	250
Big Stone	0	13	12	25	0	16
Blue Earth	2	256	770	1,028	2	352
Brown	0	64	147	211	0	95
Carlton	5	92	238	335	7	120
Carver	13	261	664	938	13	368
Cass	10	84	155	249	12	132
Chippewa	3	42	67	112	3	58
Chisago	10	160	382	552	12	222
Clay	3	105	390	498	3	131
Clearwater	3	21	28	52	3	28
Cook	0	19	31	50	0	27
Cottonwood	0	30	60	90	0	52
Crow Wing	10	241	518	769	11	338
Dakota	16	1,331	3,782	5,129	18	1,820
Dodge	3	51	98	152	3	78
Douglas	10	133	238	381	13	185
Faribault	3	63	57	123	3	91
Fillmore	2	56	93	151	2	71
Freeborn	1	110	343	454	1	134
Goodhue	7	161	513	681	8	212
Grant	1	15	58	74	1	31
Hennepin	68	4,830	12,200	17,098	74	6,610
Houston	2	36	82	120	2	45
Hubbard	1	84	104	189	1	133
Isanti	4	142	253	399	4	193
Itasca	7	132	295	434	8	184
Jackson	3	33	70	106	4	44
Kanabec	4	35	60	99	4	49
Kandiyohi	6	158	408	572	6	242
Kittson	0	11	6	17	0	13

Table 1.15: County Crash Report, continued

County	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Koochiching	0	15	12	27	0	23
Lac Qui Parle	0	14	17	31	0	22
Lake	3	19	79	101	3	28
Lake of the Woods	1	6	7	14	1	8
Le Sueur	5	76	179	260	8	109
Lincoln	0	15	15	30	0	19
Lyon	2	63	169	234	2	91
Mahnomen	1	16	16	33	1	25
Marshall	1	11	16	28	1	14
Martin	1	53	125	179	1	85
Mcleod	7	125	277	409	7	199
Meeker	1	63	121	185	1	86
Mille Lacs	5	85	111	201	5	119
Morrison	7	86	180	273	8	110
Mower	4	97	309	410	4	143
Murray	2	21	36	59	3	28
Nicollet	5	93	270	368	5	114
Nobles	0	71	214	285	0	95
Norman	0	15	17	32	0	18
Olmsted	6	519	1,399	1,924	6	685
Otter Tail	9	179	425	613	9	255
Pennington	2	22	35	59	2	32
Pine	7	102	266	375	7	147
Pipestone	1	22	24	47	1	24
Polk	3	72	145	220	3	102
Pope	2	20	53	75	2	30
Ramsey	34	1,667	5,609	7,310	36	2,219
Red Lake	1	2	6	9	2	2
Redwood	1	39	81	121	1	61
Renville	2	47	69	118	2	66
Rice	5	226	526	757	5	321
Rock	1	29	85	115	2	44
Roseau	1	13	19	33	1	15
Scott	6	393	827	1,226	6	536
Sherburne	6	292	854	1,152	6	411

Table 1.15: County Crash Report, continued

County	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Sibley	2	46	101	149	2	67
St. Louis	18	537	1,595	2,150	19	733
Stearns	18	584	2,114	2,716	18	800
Steele	0	108	379	487	0	145
Stevens	0	14	26	40	0	24
Swift	1	16	47	64	1	20
Todd	3	74	118	195	4	113
Traverse	1	11	16	28	1	11
Wabasha	2	49	85	136	2	69
Wadena	3	29	51	83	4	43
Waseca	1	45	111	157	1	63
Washington	10	583	1,524	2,117	10	808
Watonwan	1	32	66	99	1	43
Wilkin	1	32	75	108	1	41
Winona	3	111	178	292	3	145
Wright	14	482	1,189	1,685	14	649
Yellow Medicine	1	34	42	77	1	46
Total	451	17,483	45,817	63,751	488	24,083

Table 1.16: Crashes By Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	47	3,035	8,406	11,488	50	4,128
100,000-249,999	4	373	1,041	1,418	4	484
50,000-99,999	47	3,324	9,139	12,510	53	4,639
25,000-49,999	33	1,915	5,335	7,283	34	2,619
10,000-24,999	42	2,807	8,499	11,348	43	3,776
5,000-9,999	12	952	2,757	3,721	13	1,300
2,500-4,999	30	582	1,720	2,332	32	814
1,000-2,499	28	628	1,532	2,188	31	892
Townships/Rural	208	3,867	7,388	11,463	228	5,431
Total	451	17,483	45,817	63,751	488	24,083

Table 1.17: Crashes by Type of Roadway

Type of Roadway	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Urban						
Interstate	19	1,316	5,434	6,769	20	1,716
US Trunk Hwy	18	826	2,647	3,491	18	1,164
MN Trunk Hwy	32	1,442	3,867	5,341	33	1,993
County State Aid Hwy	54	2,972	6,388	9,414	61	4,279
County Road	1	113	224	338	1	153
Township Road	0	6	15	21	0	12
Municipal State Aid Hw	31	2,945	7,412	10,388	34	3,924
Municipal Street	20	1,886	5,912	7,818	20	2,537
Other Road	10	900	3,278	4,188	10	1,168
Urban Total	185	12,406	35,177	47,768	197	16,946
Rural						
Interstate	13	387	1,646	2,046	14	547
US Trunk Hwy	37	863	1,652	2,552	41	1,260
MN Trunk Hwy	77	1,228	2,059	3,364	87	1,812
County State Aid Hwy	86	1,528	2,672	4,286	95	2,081
County Road	16	212	394	622	17	294
Township Road	14	378	662	1,054	14	507
Municipal State Aid Hw	0	9	33	42	0	12
Municipal Street	7	243	883	1,133	7	322
Other Road	16	229	639	884	16	302
Rural Total	266	5,077	10,640	15,983	291	7,137
All Roadways						
Interstate	32	1,703	7,080	8,815	34	2,263
US Trunk Hwy	55	1,689	4,299	6,043	59	2,424
MN Trunk Hwy	109	2,670	5,926	8,705	120	3,805
County State Aid Hwy	140	4,500	9,060	13,700	156	6,360
County Road	17	325	618	960	18	447
Township Road	14	384	677	1,075	14	519
Municipal State Aid Hw	31	2,954	7,445	10,430	34	3,936
Municipal Street	27	2,129	6,795	8,951	27	2,859
Other Road	26	1,129	3,917	5,072	26	1,470
Total	451	17,483	45,817	63,751	488	24,083

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.

24,324
DWI
arrests

3,922
alcohol-
related
crashes

135
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 are 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 2019, the National Safety Council has made a conservative estimate of \$279 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.

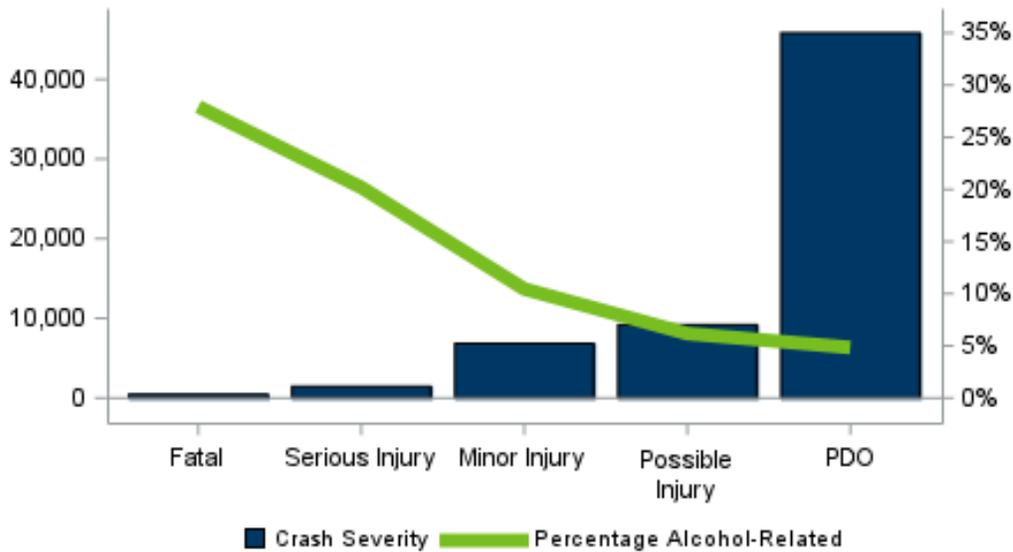
1 in 7

**Minnesota drivers
has a DWI
on record**

Half

**of those drivers
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 33% 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 2021, 74 (55%) of the 135 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

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

Success story in Minnesota

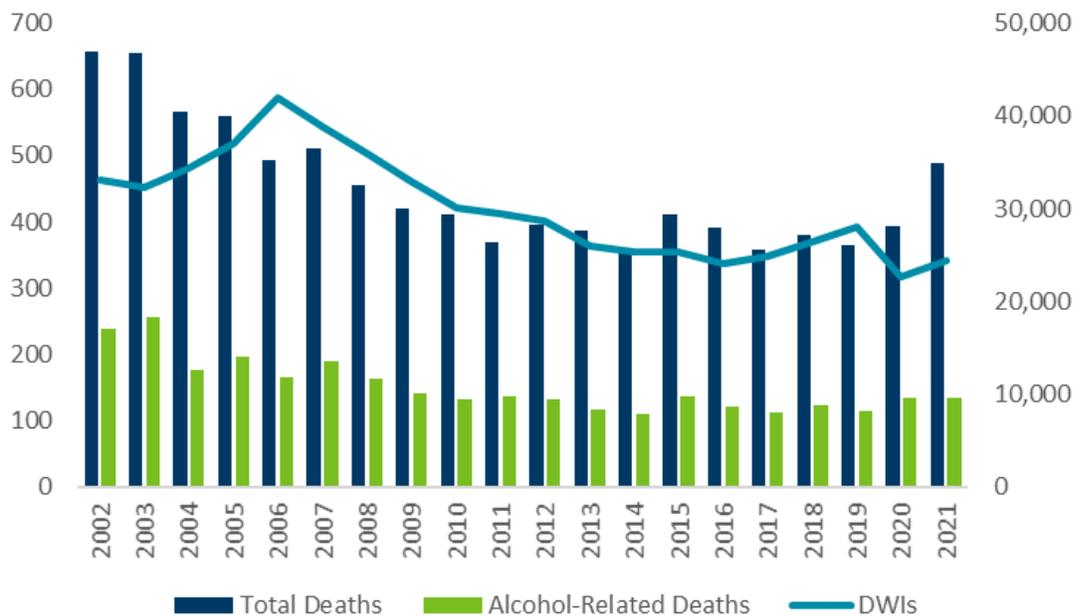
In reality, the percentage of alcohol-related traffic fatalities in Minnesota has steadily decreased in the past half-century. In the 1960s, around 60% of all traffic deaths per year were alcohol-related. Today, this percentage hovers around 33%. This is a great success story for Minnesota and the nation 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	DWI	Deaths (Any)		Deaths .08%+		Deaths Drunk (.08%+)	
			Alcohol	% of Total Deaths	Alcohol	% of Total Deaths	Alcohol	% of Total Deaths
2012	395	28,658	131	33%	104	26%	95	24%
2013	387	26,032	117	30%	95	25%	81	21%
2014	361	25,386	111	31%	91	25%	88	24%
2015	411	25,027	137	33%	107	26%	95	23%
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%

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 72% of the DWI offenders in 2021. Those age 20 to 34 years old incurred 50% of the DWI incidents in 2021. 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

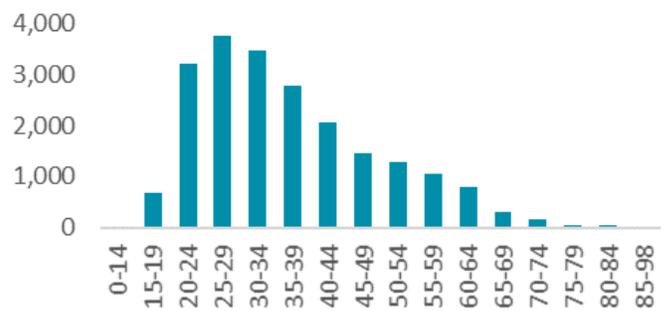


Table 2.02: Age of Persons Killed and Injured in All Crashes and Alcohol-Related Crashes

Age Group	Killed	Alcohol Related	Serious Injuries	Alcohol Related	Minor Injuries	Alcohol Related	Possible Injuries	Alcohol Related	Total Injuries	Alcohol Related
00-04	5	3	11	2	86	9	234	22	331	33
05-09	2	0	24	4	143	19	301	16	468	39
10-14	5	0	40	6	267	16	363	19	670	41
15	3	0	24	4	98	2	116	5	238	11
16	7	2	38	4	225	9	266	8	529	21
17	8	1	38	5	260	25	330	8	628	38
18	4	2	33	7	247	16	349	20	629	43
19	10	4	52	13	272	25	360	24	684	62
20	6	2	50	13	234	23	347	28	631	64
<21	50	14	310	58	1,832	144	2,666	150	4,808	352
00-14	12	3	75	12	496	44	898	57	1,469	113
15-19	32	9	185	33	1,102	77	1,421	65	2,708	175
20-24	43	16	204	68	1,066	163	1,620	140	2,890	371
25-29	40	15	176	61	911	152	1,338	132	2,425	345
30-34	47	20	146	36	820	115	1,240	105	2,206	256
35-39	38	18	138	29	728	99	1,105	84	1,971	212
40-44	32	7	129	33	605	71	982	75	1,716	179
45-49	30	8	103	22	481	49	855	55	1,439	126
50-54	29	12	135	34	512	44	823	45	1,470	123
55-59	35	9	125	24	497	55	814	45	1,436	124
60-64	34	11	96	19	497	35	690	33	1,283	87
65-69	32	6	88	5	363	19	533	27	984	51
70-74	24	1	52	3	314	13	412	17	778	33
75-79	27	0	25	1	211	10	283	5	519	16
80-84	14	0	23	1	162	5	165	4	350	10
85+	19	0	21	1	100	2	121	0	242	3
Unk	0	0	2	0	47	3	148	1	197	4
Total	488	135	1,723	382	8,912	956	13,448	890	24,083	2,228

Table 2.03: Alcohol-Related Crashes by Month

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
January	5	81	162	248	5	102
February	7	108	204	319	9	146
March	5	103	171	279	5	126
April	9	109	153	271	10	134
May	16	154	188	358	18	210
June	14	171	189	374	14	222
July	10	188	169	367	11	273
August	18	159	204	381	18	228
September	9	164	198	371	9	219
October	18	145	273	436	19	209
November	11	147	179	337	13	191
December	4	122	238	364	4	168
Total	126	1,651	2,328	4,105	135	2,228

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



28%
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 41% of all traffic crashes, but 56% of the alcohol-related crashes.

The late night hours 9pm to 3am accounted for 14% of all crashes, but 48% of the alcohol-related crashes.

Figure 2.05: Alcohol-Related Crashes by Day of Week

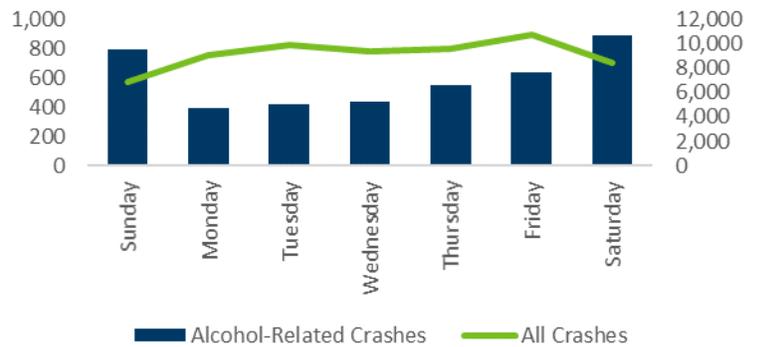


Figure 2.06: Alcohol-Related Crashes by Time of Day

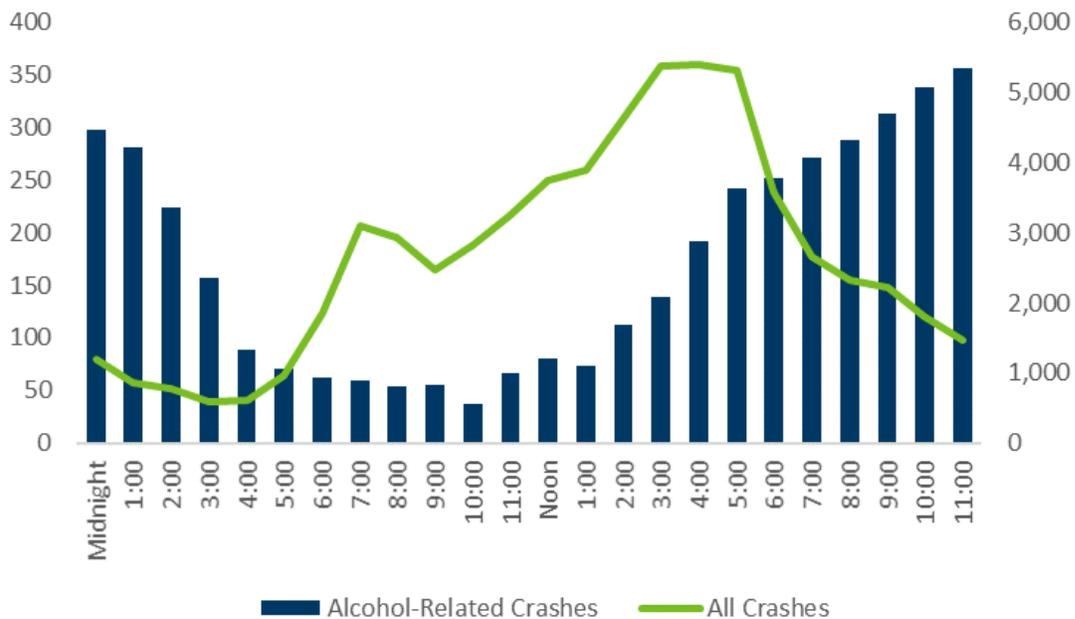


Figure 2.07: Heat Map of Alcohol-Related Crashes

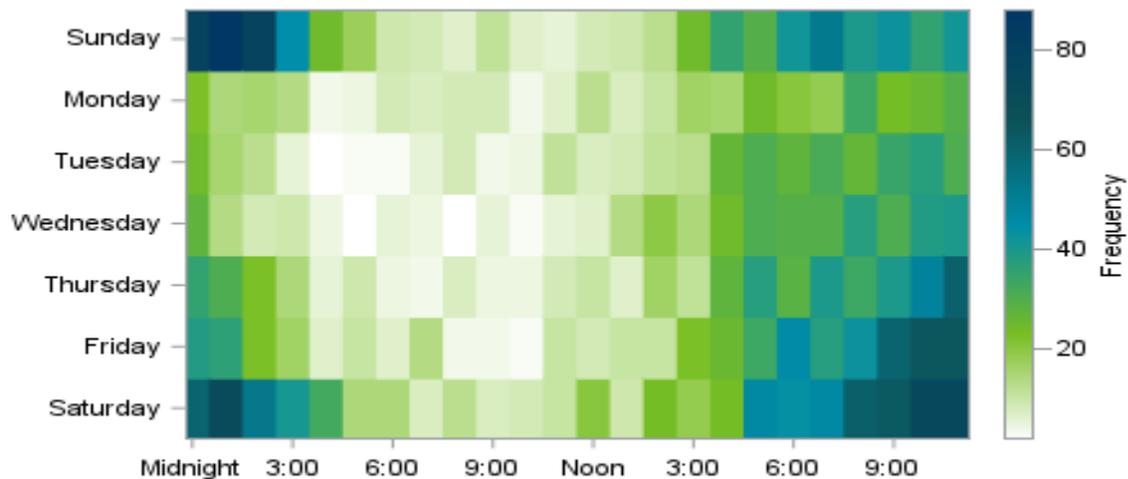


Table 2.04: Alcohol-Related Crashes by Roadway Type

Roadway Type	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Interstate	9	148	287	444	10	203
US Trunk Hwy	10	169	202	381	11	252
MN Trunk Hwy	23	246	259	528	25	357
County State Aid Hwy	43	444	448	935	46	601
County Road	8	47	44	99	8	59
Township Road	7	72	72	151	7	89
Municipal State Aid Hwy	9	220	365	594	11	283
Municipal Street	7	195	419	621	7	245
Other Road	10	110	232	352	10	139
Total	126	1,651	2,328	4,105	135	2,228

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	188	41.70%	30	23.80%
Fixed Object	98	21.70%	36	28.60%
Pedestrian	54	12.00%	14	11.10%
Bicycle	8	1.77%	2	1.59%
Parked Motor Vehicle	3	0.67%	0	0.00%
Deer/Other Animal	3	0.67%	0	0.00%
Railroad Train	3	0.67%	0	0.00%
Unknown Collision w/ Fixed Object	1	0.22%	1	0.79%
Non-Collision:				
Overturn/Rollover	85	18.80%	39	31.00%
Submersion	0	0.00%	0	0.00%
Other Non-Collision	8	1.77%	3	2.38%
Total	451	100%	126	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 2021, there were 351 motor vehicle drivers who were killed. Of the 351 killed drivers, the Department of Public Safety was able to obtain alcohol test results for 171 (49%). Of the 171 tested, 108 (63%) tested negative, 11 (6%) tested between .01 and .07, 0 (0%) tested between .08 and .09 and 52 (30%) tested .10 or greater.

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

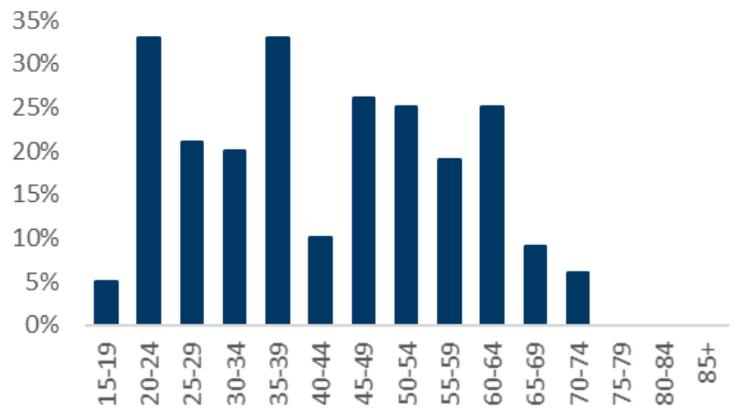


Table 2.06: Alcohol-Related Fatal Crash Summary, 2013-2021

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%	***	***

* 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	0	0	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
15-19	20	7	6	85.7%	0	0.0%	0	0.0%	1	14.3%	0	0.0%	0	0.0%	0	0.0%
20-24	27	18	9	50.0%	2	11.1%	0	0.0%	3	16.7%	0	0.0%	4	22.2%	0	0.0%
25-29	33	14	7	50.0%	0	0.0%	0	0.0%	0	0.0%	2	14.3%	3	21.4%	2	14.3%
30-34	40	20	12	60.0%	1	5.0%	0	0.0%	2	10.0%	1	5.0%	4	20.0%	0	0.0%
35-39	30	20	10	50.0%	1	5.0%	0	0.0%	0	0.0%	3	15.0%	1	5.0%	5	25.0%
40-44	30	10	7	70.0%	0	0.0%	0	0.0%	0	0.0%	1	10.0%	2	20.0%	0	0.0%
45-49	23	12	6	50.0%	0	0.0%	0	0.0%	1	8.3%	2	16.7%	2	16.7%	1	8.3%
50-54	24	15	9	60.0%	2	13.3%	0	0.0%	1	6.7%	0	0.0%	2	13.3%	1	6.7%
55-59	21	9	5	55.6%	1	11.1%	0	0.0%	0	0.0%	2	22.2%	0	0.0%	1	11.1%
60-64	24	14	8	57.1%	4	28.6%	0	0.0%	1	7.1%	0	0.0%	0	0.0%	1	7.1%
65-69	22	12	10	83.3%	0	0.0%	0	0.0%	0	0.0%	1	8.3%	1	8.3%	0	0.0%
70-74	16	7	6	85.7%	0	0.0%	0	0.0%	1	14.3%	0	0.0%	0	0.0%	0	0.0%
75-79	19	5	5	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
80-84	9	3	3	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
85+	13	5	5	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%
Total	351	171	108	63.2%	11	6.4%	0	0.0%	10	5.8%	12	7.0%	19	11.1%	11	6.4%

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

	Male		Female		Male		Female		Male		Female		Total
	Killed	Killed	Total Killed	Serious Injuries	Serious Injuries	Minor Injuries	Minor Injuries	Possible Injuries	Possible Injuries	Possible Injuries	Possible Injuries		
Driver	16	42	58	66	193	246	469	246	400			1,646	
Passenger	5	9	14	45	38	105	88	113	84			482	
Pedestrian	1	1	2	12	11	12	20	5	14			76	
Bicyclist	0	0	0	0	8	0	6	0	9			24	
Total	22	52	74	123	250	363	583	364	507			2,228	

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.

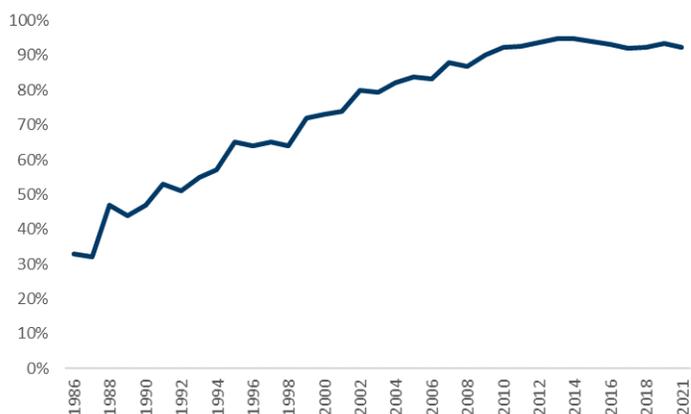
Minnesota usage rates for 2021 were:

92.4%
overall
use rate

90.2%
male
use rate

95.0%
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

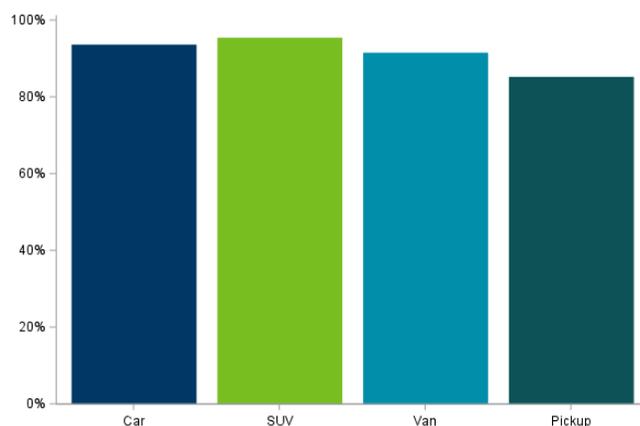


Table 3.01: Motor Vehicle Occupants Killed or Injured by Ejection Status

Ejection Status	Killed	Serious Injuries	Minor Injuries	Possible Injuries	Total Killed or Injured
Ejected	60	96	39	14	209
Not Ejected	256	1,000	7,518	12,520	21,294
Not Stated	4	50	118	161	333
Partially Ejected	20	20	22	22	84
Total	340	1,166	7,697	12,717	21,920

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

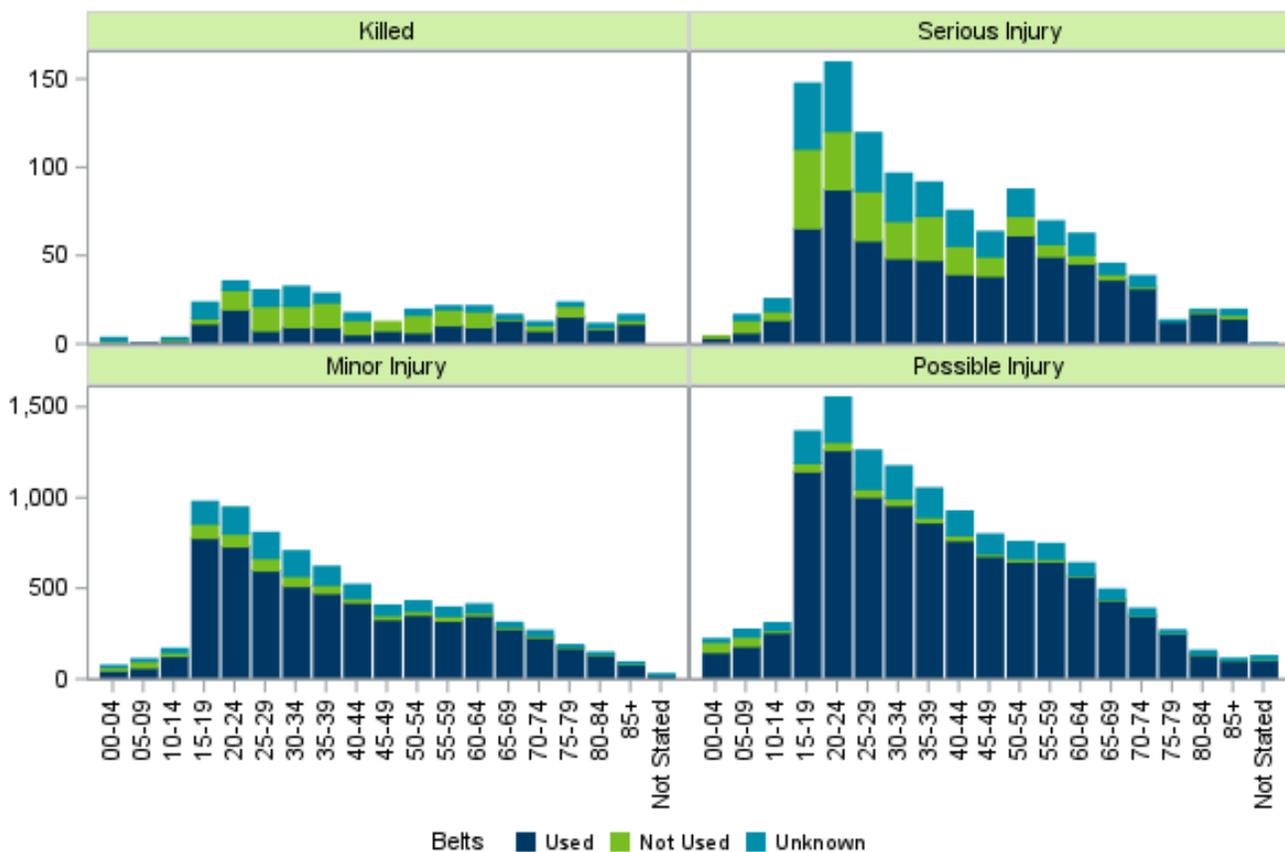


Figure 3.04: Safety Equipment Use Counts by Motor Vehicle Occupants Where Gender and Injury Severity is Known

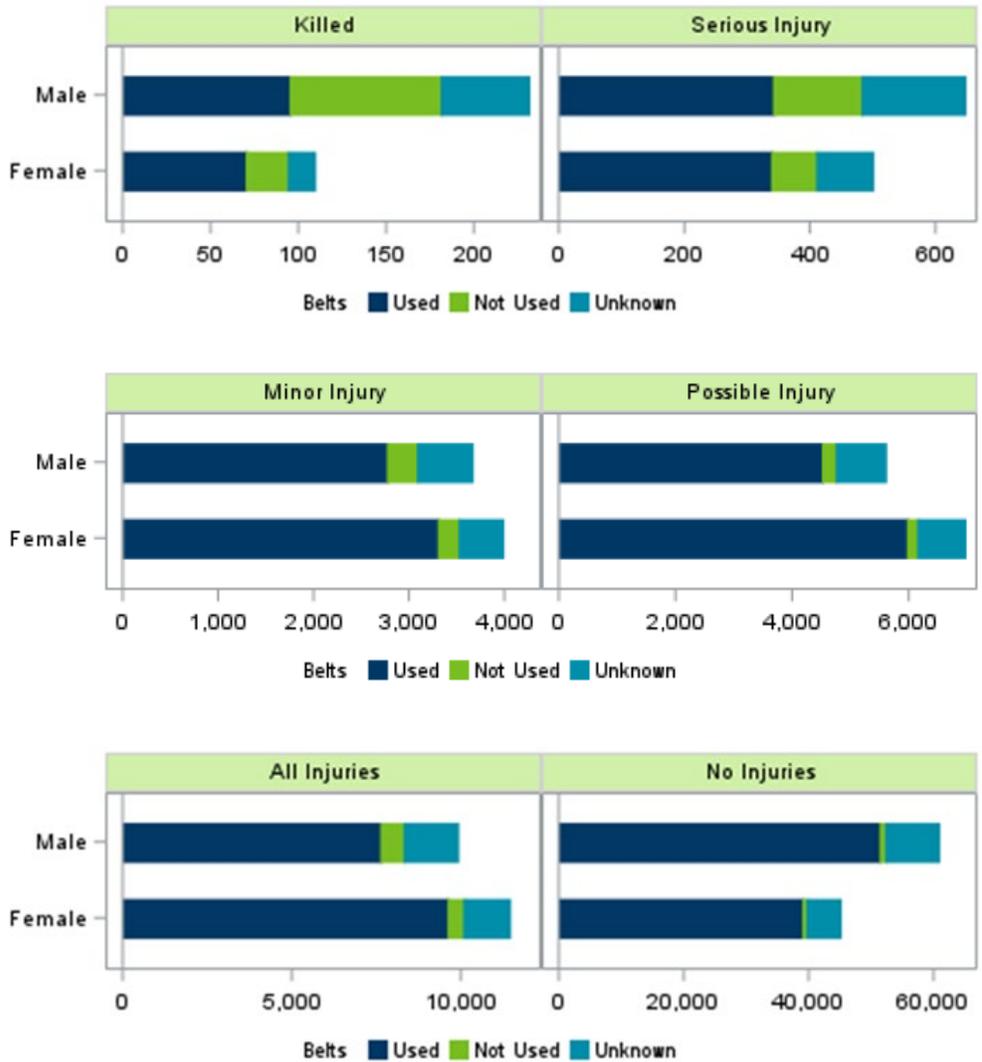


Table 3.02: Motor Vehicle Occupants Killed or Injured by Seat Belt Usage

Seat Belt Usage	Fatalities		Serious Injuries		Total Injuries	
	#	%	#	%	#	%
Not Used	110	32.4%	222	19.0%	1,183	5.5%
Unknown	65	19.1%	257	22.0%	3,012	14.0%
Used	165	48.5%	687	58.9%	17,385	80.6%

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	78.8%	3.9%	17.3%	12,376
Central	83.7%	7.2%	9.1%	3,336
Northeast	80.0%	9.0%	11.1%	1,094
Northwest	77.6%	10.5%	12.0%	459
South Central	79.9%	7.7%	12.4%	943
Southeast	85.0%	7.4%	7.6%	1,817
Southwest	76.8%	11.8%	11.4%	1,125
West Central	79.7%	10.3%	10.0%	770
Statewide	80.6%	5.9%	14.0%	21,920



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	1	25.0%	0	0.0%	10	6.8%	41	10.9%	51	9.5%
	Unknown	2	50.0%	0	0.0%	5	3.4%	12	3.2%	17	3.2%
	Used	1	25.0%	1	6.7%	32	21.6%	124	33.0%	157	29.1%
Subtotal		4	100.0%	1	6.7%	47	31.8%	177	47.1%	225	41.7%
4-7 Years	Not Used	0	0.0%	7	46.7%	40	27.0%	67	17.8%	114	21.2%
	Unknown	0	0.0%	1	6.7%	14	9.5%	23	6.1%	38	7.1%
	Used	0	0.0%	6	40.0%	47	31.8%	109	29.0%	162	30.1%
Subtotal		0	0.0%	14	93.3%	101	68.2%	199	52.9%	314	58.3%
Total 0-7 Years	Not Used	1	25.0%	7	46.7%	50	33.8%	108	28.7%	165	30.6%
	Unknown	2	50.0%	1	6.7%	19	12.8%	35	9.3%	55	10.2%
	Used	1	25.0%	7	46.7%	79	53.4%	233	62.0%	319	59.2%
Total		4	100.0%	15	100.0%	148	100.0%	376	100.0%	539	100.0%
00-04 Years	Not Used	1	0.3%	1	0.1%	19	0.2%	57	0.4%	77	0.4%
	Unknown	2	0.6%	0	0.0%	9	0.1%	16	0.1%	25	0.1%
	Used	1	0.3%	4	0.3%	51	0.7%	153	1.2%	208	1.0%
Subtotal		4	1.2%	5	0.4%	79	1.0%	226	1.8%	310	1.4%
05-09 Years	Not Used	0	0.0%	7	0.6%	37	0.5%	53	0.4%	97	0.4%
	Unknown	0	0.0%	3	0.3%	11	0.1%	39	0.3%	53	0.2%
	Used	1	0.3%	7	0.6%	67	0.9%	186	1.5%	260	1.2%
Subtotal		1	0.3%	17	1.5%	115	1.5%	278	2.2%	410	1.9%
10-14 Years	Not Used	1	0.3%	5	0.4%	19	0.2%	12	0.1%	36	0.2%
	Unknown	1	0.3%	7	0.6%	21	0.3%	40	0.3%	68	0.3%
	Used	2	0.6%	14	1.2%	132	1.7%	262	2.1%	408	1.9%
Subtotal		4	1.2%	26	2.2%	172	2.2%	314	2.5%	512	2.4%
15-19 Years	Not Used	3	0.9%	45	3.9%	79	1.0%	47	0.4%	171	0.8%
	Unknown	9	2.6%	37	3.2%	121	1.6%	175	1.4%	333	1.5%
	Used	12	3.5%	66	5.7%	783	10.2%	1,149	9.0%	1,998	9.3%
Subtotal		24	7.1%	148	12.7%	983	12.8%	1,371	10.8%	2,502	11.6%
20-24 Years	Not Used	11	3.2%	33	2.8%	71	0.9%	45	0.4%	149	0.7%
	Unknown	5	1.5%	39	3.3%	145	1.9%	247	1.9%	431	2.0%
	Used	20	5.9%	88	7.5%	736	9.6%	1,267	10.0%	2,091	9.7%
Subtotal		36	10.6%	160	13.7%	952	12.4%	1,559	12.3%	2,671	12.4%
25-29 Years	Not Used	14	4.1%	28	2.4%	69	0.9%	44	0.3%	141	0.7%
	Unknown	9	2.6%	33	2.8%	140	1.8%	213	1.7%	386	1.8%
	Used	8	2.4%	59	5.1%	603	7.8%	1,009	7.9%	1,671	7.7%
Subtotal		31	9.1%	120	10.3%	812	10.5%	1,226	10.0%	2,198	10.2%
30-34 Years	Not Used	12	3.5%	21	1.8%	56	0.7%	38	0.3%	115	0.5%
	Unknown	11	3.2%	27	2.3%	138	1.8%	178	1.4%	343	1.6%
	Used	10	2.9%	49	4.2%	517	6.7%	963	7.6%	1,529	7.1%
Subtotal		33	9.7%	97	8.3%	711	9.2%	1,179	9.3%	1,987	9.2%
35-39 Years	Not Used	14	4.1%	25	2.1%	46	0.6%	28	0.2%	99	0.5%
	Unknown	5	1.5%	19	1.6%	101	1.3%	160	1.3%	280	1.3%
	Used	10	2.9%	48	4.1%	478	6.2%	869	6.8%	1,395	6.5%
Subtotal		29	8.5%	92	7.9%	625	8.1%	1,057	8.3%	1,774	8.2%

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

Age Group	Restraint Use	Fatalities		Serious		Minor		Possible		Total Injuries	
		N	%	N	%	N	%	N	%	N	%
40-44 Years	Not Used	8	2.4%	16	1.4%	24	0.3%	29	0.2%	69	0.3%
	Unknown	4	1.2%	20	1.7%	74	1.0%	132	1.0%	226	1.0%
	Used	6	1.8%	40	3.4%	427	5.5%	769	6.0%	1,236	5.7%
Subtotal		18	5.3%	76	6.5%	525	6.8%	930	7.3%	1,531	7.1%
45-49 Years	Not Used	5	1.5%	11	0.9%	23	0.3%	12	0.1%	46	0.2%
	Unknown	0	0.0%	14	1.2%	54	0.7%	108	0.8%	176	0.8%
	Used	8	2.4%	39	3.3%	334	4.3%	683	5.4%	1,056	4.9%
Subtotal		13	3.8%	64	5.5%	411	5.3%	803	6.3%	1,278	5.9%
50-54 Years	Not Used	10	2.9%	11	0.9%	21	0.3%	16	0.1%	48	0.2%
	Unknown	3	0.9%	15	1.3%	55	0.7%	93	0.7%	163	0.8%
	Used	7	2.1%	62	5.3%	359	4.7%	653	5.1%	1,074	5.0%
Subtotal		20	5.9%	88	7.5%	435	5.7%	762	6.0%	1,285	6.0%
55-59 Years	Not Used	9	2.6%	7	0.6%	26	0.3%	14	0.1%	47	0.2%
	Unknown	2	0.6%	13	1.1%	48	0.6%	84	0.7%	145	0.7%
	Used	11	3.2%	50	4.3%	326	4.2%	653	5.1%	1,029	4.8%
Subtotal		22	6.5%	70	6.0%	400	5.2%	751	5.9%	1,221	5.7%
60-64 Years	Not Used	9	2.6%	5	0.4%	16	0.2%	5	0.0%	26	0.1%
	Unknown	3	0.9%	12	1.0%	46	0.6%	68	0.5%	126	0.6%
	Used	10	2.9%	46	3.9%	355	4.6%	571	4.5%	972	4.5%
Subtotal		22	6.5%	63	5.4%	417	5.4%	644	5.1%	1,124	5.2%
65-69 Years	Not Used	1	0.3%	3	0.3%	10	0.1%	6	0.0%	19	0.1%
	Unknown	2	0.6%	6	0.5%	24	0.3%	54	0.4%	84	0.4%
	Used	14	4.1%	37	3.2%	282	3.7%	439	3.5%	758	3.5%
Subtotal		17	5.0%	46	3.9%	316	4.1%	499	3.9%	861	4.0%
70-74 Years	Not Used	3	0.9%	1	0.1%	10	0.1%	2	0.0%	13	0.1%
	Unknown	2	0.6%	6	0.5%	27	0.4%	37	0.3%	70	0.3%
	Used	8	2.4%	32	2.7%	234	3.0%	354	2.8%	620	2.9%
Subtotal		13	3.8%	39	3.3%	271	3.5%	393	3.1%	703	3.3%
75+ Years	Not Used	9	2.6%	3	0.3%	14	0.2%	8	0.1%	25	0.1%
	Unknown	7	2.1%	5	0.4%	28	0.4%	44	0.3%	77	0.4%
	Used	37	10.9%	46	3.9%	399	5.2%	501	3.9%	946	4.4%
Subtotal		53	15.6%	54	4.6%	441	5.7%	553	4.3%	1,048	4.9%
Age Not Stated	Not Used	0	0.0%	0	0.0%	0	0.0%	5	0.0%	5	0.0%
	Unknown	0	0.0%	1	0.1%	6	0.1%	19	0.1%	26	0.1%
	Used	0	0.0%	0	0.0%	26	0.3%	108	0.8%	134	0.6%
Subtotal		0	0.0%	1	0.1%	32	0.4%	132	1.0%	165	0.8%
All Ages	Not Used	110	32.4%	222	19.0%	540	7.0%	421	3.3%	1,183	5.5%
	Unknown	65	19.1%	257	22.0%	1,048	13.6%	1,707	13.4%	3,012	14.0%
	Used	165	48.5%	687	58.9%	6,109	79.4%	10,589	83.3%	17,385	80.6%
Total		340	100.0%	1,166	100.0%	7,697	100.0%	12,717	100.0%	21,580	100.0%

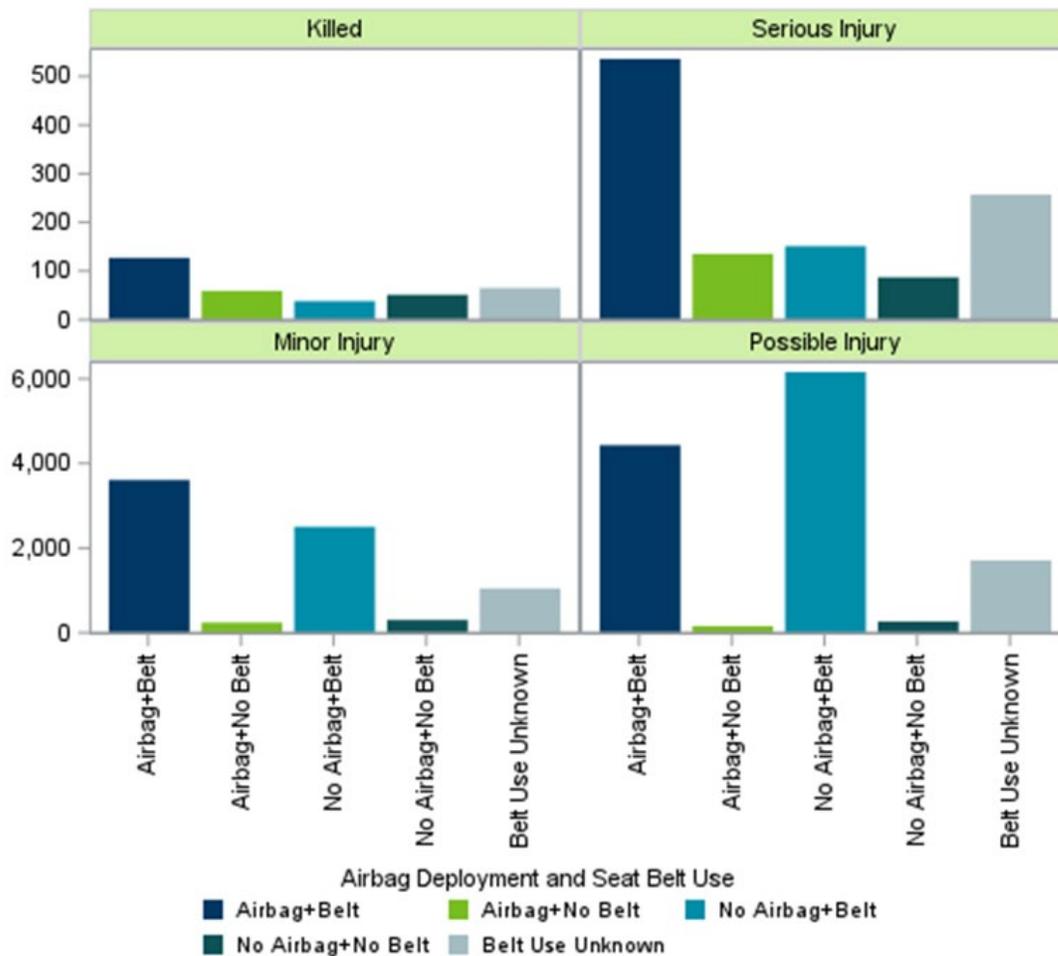
Percentages may not sum to 100% due to rounding. Persons aged 0 through 3 and 4 through 7 years old are categorized separately because Minnesota law makes special provisions for these age groups.

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

Roadway Type	Used		Not Used		Unknown		Total	
	#	%	#	%	#	%	#	%
CSAH	4,503	78.4%	314	5.5%	926	16.1%	5,743	100.0%
County Road	289	73.9%	49	12.5%	53	13.6%	391	100.0%
Interstate	1,971	89.6%	133	6.0%	96	4.4%	2,200	100.0%
MN Trunk Hwy	3,077	85.0%	265	7.3%	279	7.7%	3,621	100.0%
MSAH	2,656	77.3%	116	3.4%	664	19.3%	3,436	100.0%
Municipal Street	1,658	68.8%	120	5.0%	632	26.2%	2,410	100.0%
Other Road	1,046	79.7%	77	5.9%	189	14.4%	1,312	100.0%
Township Road	17,550	80.1%	1,293	5.9%	3,077	14.0%	21,920	100.0%
US Trunk Hwy	322	67.5%	70	14.7%	85	17.8%	477	100.0%
Total	2,028	87.0%	149	6.4%	153	6.6%	2,330	100.0%

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.

2021 Motorcycle Stats:

69
motor-
cyclists
killed

998
motor-
cyclists
injured

6.1
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 2021, only 23 (33%) of the 69 motorcycle riders killed were known to be wearing a helmet. Of the 998 motorcyclists injured, only 424 (43%) 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 2021, 32% 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.

85%

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
2012	51	1,320	192	1,563	55	0	1,454	68	404,967	237,278	2.3	3.3	0.5
2013	59	1,047	160	1,266	60	2	1,143	52	409,943	235,909	2.5	4.7	0.5
2014	44	1,005	152	1,201	46	1	1,117	44	414,346	236,040	1.9	3.7	0.4
2015	58	1,103	191	1,352	61	1	1,232	81	414,782	238,243	2.6	4.3	0.5
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
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)	245,799 (2021)	7.7 (1980)	5.7 (2018)	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 (2020-2021)

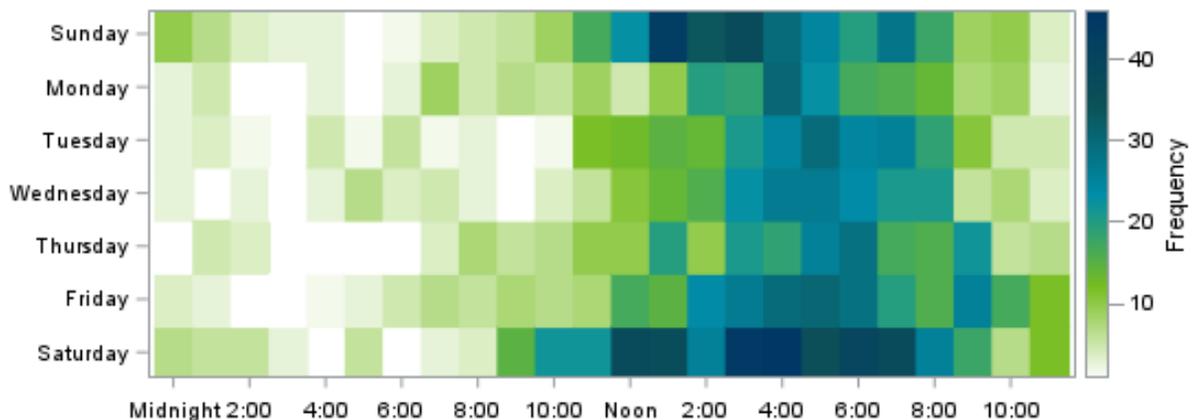


Table 4.02: Motorcycle Crashes by First Harmful Event

First Harmful Event	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Collision With:						
Other Motor Vehicle	35	359	95	489	35	406
Parked Motor Vehicle	0	8	11	19	0	8
Bicycle	0	1	0	1	0	0
Pedestrian	0	2	0	2	0	1
Deer	2	60	1	63	2	69
Other Animal	1	23	3	27	1	25
Railroad Train	0	0	0	0	0	0
Anything Set in Motion by MV	0	3	1	4	0	3
Fixed Object	15	130	14	159	15	143
Non-Collision:						
Overturn/Rollover	11	125	7	143	12	148
Unknown Collision with Fixed Object	1	7	0	8	1	8
Other Non-Collision	3	173	17	193	3	187
Total	68	891	149	1,108	69	998

Table 4.03: Motorcycle Crashes by Roadway Type

Roadway Type	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Interstate	4	59	10	73	4	70
US Trunk Hwy	7	74	20	101	7	93
MN Trunk Hwy	13	146	19	178	13	166
County State Aid Hwy	23	309	40	372	23	346
County Road	2	32	2	36	3	35
Township Road	0	27	1	28	0	31
Municipal State Aid Hwy	5	117	30	152	5	120
Municipal Street	7	78	13	98	7	86
Other Road	7	49	14	70	7	51
Total	68	891	149	1,108	69	998

Table 4.04: Motorcycle Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	4	104	28	136	4	113
100,000-249,999	0	8	2	10	0	9
50,000-99,999	15	111	28	154	15	122
25,000-49,999	9	77	17	103	9	82
10,000-24,999	8	147	24	179	8	162
5,000-9,999	1	43	7	51	1	47
2,500-4,999	5	39	8	52	5	41
1,000-2,499	2	50	6	58	2	53
Townships/Rural	24	312	29	365	25	369
Total	68	891	149	1,108	69	998

Table 4.05: Motorcycle Crashes by Month

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
January	2	0	2	0	2	0
February	0	0	0	0	0	0
March	1	23	5	29	1	25
April	3	65	15	83	3	68
May	10	114	18	142	10	134
June	19	161	31	211	20	179
July	11	170	23	204	11	196
August	6	145	24	175	6	161
September	11	127	18	156	11	141
October	5	69	11	85	5	76
November	2	14	4	20	2	15
December	0	1	0	1	0	1
Total	68	891	149	1,108	69	998

Table 4.06: Helmet Use by Motorcyclists Killed or Injured

Injury Severity	Helmet Used		Helmet Not Used		Unknown Helmet		Total	
	#	%	#	%	#	%	#	%
Killed	23	33.3%	44	63.8%	2	2.9%	69	100.0%
Injured	424	42.5%	504	50.5%	68	6.8%	998	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		
		#	%	#	%		#	%	
47	66.2%	0	0	11	15.5%	23	32.4%	71	100.0%

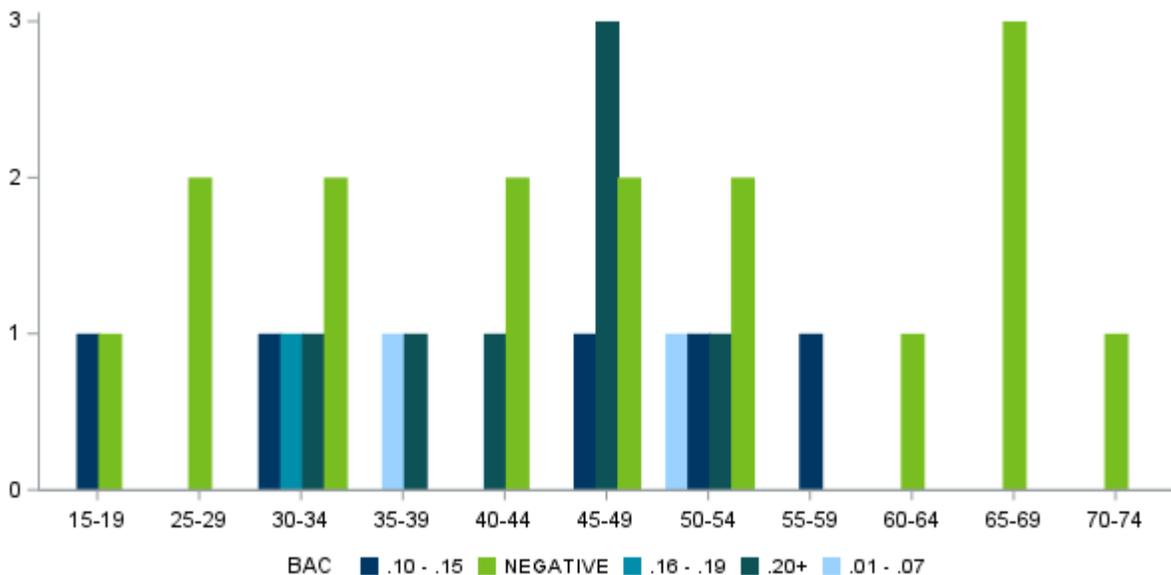
A valid endorsement means that the driver’s license has been “endorsed” to permit operation of a motorcycle.

* 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+
67	31	16	2	0	5	1	7

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.

2021 Truck Crash Stats:



Fatalities and injuries are mostly in other vehicles

In two-vehicle collisions, heavier vehicles have the clear safety advantage. Only 4 of the 55 people killed in truck-involved multiple vehicle crashes were in trucks. Of the 1,029 people injured in multi-vehicle collisions, only 170 (14%) 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

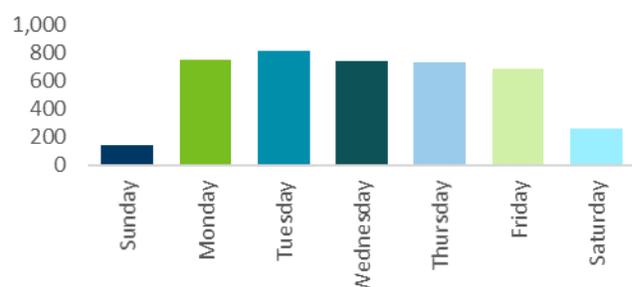


Table 5.01: Truck Crashes by First Harmful Event

First Harmful Event	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Collision With:						
Other Motor Vehicle	50	711	2,207	2,968	55	1,029
Parked Motor Vehicle	2	25	158	185	2	28
Bicycle	1	3	0	4	1	3
Pedestrian	3	12	0	15	3	13
Deer	0	0	4	4	0	0
Other Animal	1	0	11	12	1	0
Railroad Train	0	2	1	3	0	1
Set in Motion by MV	0	3	19	22	0	3
Fixed Object	1	60	436	497	1	67
Non-Collision:						
Overturn/Rollover	9	88	146	243	9	90
Submersion	0	0	1	1	0	0
Fire/Explosion	0	0	3	3	0	0
Other Non-Collision	0	12	151	163	0	14
Total	67	916	3,137	4,120	72	1,248

Table 5.02: Truck Crashes by Month

Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
January	3	46	234	283	3	66
February	5	62	233	300	5	82
March	6	59	232	297	6	78
April	6	60	164	230	7	87
May	3	83	219	305	3	102
June	4	81	278	363	5	107
July	10	66	210	286	11	85
August	2	86	274	362	2	119
September	12	88	280	380	12	147
October	6	98	285	389	8	128
November	8	69	243	320	8	91
December	2	118	485	605	2	156
Total	67	916	3,137	4,120	72	1,248

Figure 5.03: Heat Map of Truck Crashes

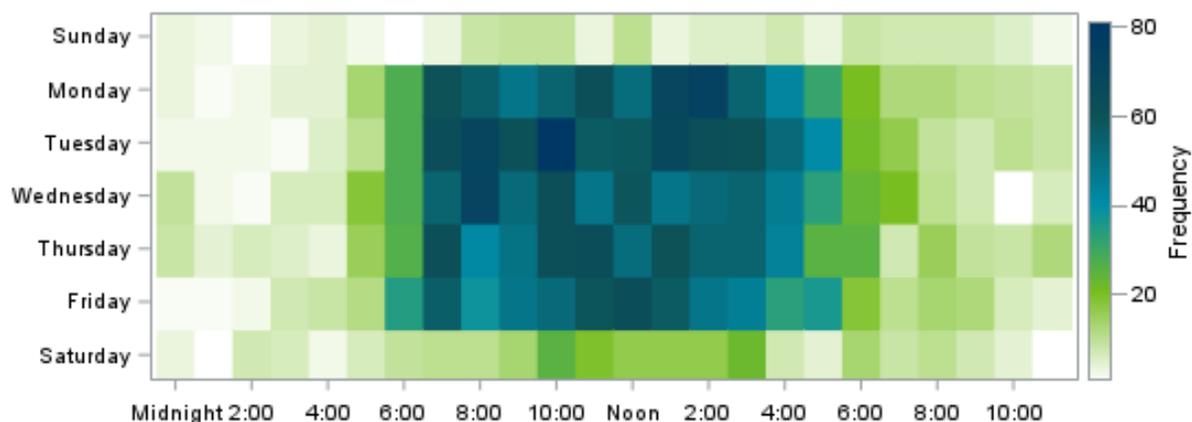


Table 5.03: Truck Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	1	77	338	416	1	99
100,000-249,000	0	8	36	44	0	12
50,000-99,999	4	125	576	705	5	156
25,000-49,999	2	73	305	380	2	97
10,000-24,999	3	129	515	647	3	165
5,000-9,999	2	52	176	230	2	74
2,500-4,999	7	34	170	211	8	48
1,000-2,499	2	56	146	204	3	80
Township/Rural	46	362	875	1,283	48	517
Total	67	916	3,137	4,120	72	1,248

Table 5.04: Truck Crashes by Type of Roadway

Type of Roadway	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Interstate	9	193	919	1,121	9	280
US Trunk Hwy	11	167	425	603	12	237
MN Trunk Hwy	27	194	464	685	28	260
County State Aid Hwy	14	158	437	609	17	224
County Road	1	11	39	51	1	12
Township Road	2	28	46	76	2	34
Municipal State Aid Hwy	1	57	264	322	1	76
Municipal Street	2	50	293	345	2	58
Other Road	0	58	250	308	0	67
Total	67	916	3,137	4,120	72	1,248

Table 5.05: Truck Crashes by Road Surface Condition

Road Surface Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Dry	53	685	2,115	2,853	58	938
Wet	6	101	319	426	6	141
Snow	2	50	323	375	2	71
Slush	0	6	24	30	0	7
Ice/Frost	4	59	317	380	4	74
Water - Standing/Moving	0	1	3	4	0	1
Mud, Dirt, Gravel	1	9	23	33	1	10
Debris	0	1	1	2	0	2
Ruts, Holes, Bumps	0	0	0	0	0	0
Other	1	3	2	6	1	3
Unknown	0	1	10	11	0	1
Total	67	916	3,137	4,120	72	1,248

Table 5.06: Truck Crashes by Weather Condition Cited*

Weather Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Clear	44	602	2,002	2,648	48	833
Cloudy	18	186	539	743	19	245
Rain	3	51	187	241	3	65
Snow	3	53	344	400	3	72
Sleet/Hail	1	7	51	59	1	11
Fog/Smog/Smoke	4	23	38	65	4	36
Blowing Sand/Soil/Dirt	2	26	135	163	2	37
Severe Crosswinds	1	10	35	46	1	10
Other Weather	0	4	5	9	0	4
Unknown	0	1	16	17	0	1
Total	76	963	3,352	4,391	81	1,314

* 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	4,139	96.4%	3,029	92.2%
Disability	0	0.0%	3	0.1%
Medical	17	0.4%	18	0.5%
Emotional	2	0.0%	12	0.4%
Asleep	32	0.7%	33	1.0%
Drinking	10	0.2%	47	1.4%
Drugs	4	0.1%	25	0.8%
Medications	2	0.0%	9	0.3%
Other	7	0.2%	14	0.4%
Unknown	81	1.9%	97	3.0%
Total**	4,294	100.0%	3,287	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	26	30	163	235	454
Pickup	9	14	52	47	122
Sport Utility Vehicle	12	26	110	151	299
Passenger Van	0	3	14	24	41
Cargo Van	0	0	4	3	7
School Bus	0	0	11	6	17
Transit Bus	0	0	0	2	2
ATV	0	0	1	0	1
Motorcycle	3	0	5	0	8
Moped or Motor Scooter	0	0	1	0	1
Light Trucks <10,000 lbs.	0	0	8	5	13
Medium/Heavy Trucks <10,000 lbs.	16	17	130	158	321
Farm Vehicle (Tractor, Combine)	1	0	2	0	3
Pedestrian	4	8	8	3	23
Bicycle	1	1	2	0	4
Other	0	0	1	3	4
Total	72	99	512	637	1,320

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 2021, 86% of pedestrian crashes occurred in urban areas with populations of over 5,000.

2021 Pedestrian Crash Stats:



When pedestrian crashes occur

In 2021, 28% of pedestrian crashes occurred during the weekday rush hour time period (defined as Monday-Friday 6am-9am and 3pm-6pm). This makes sense as 31% of all traffic crashes and 29% of all fatal and injury crashes occurred during this same driving time frame.

Figure 6.01: Pedestrian Crash Trends



Pedestrian and vehicle behavior

Thirty-nine percent (39%) of pedestrians killed and 57% 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

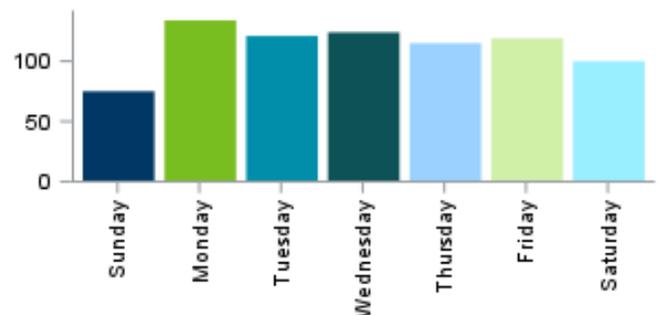
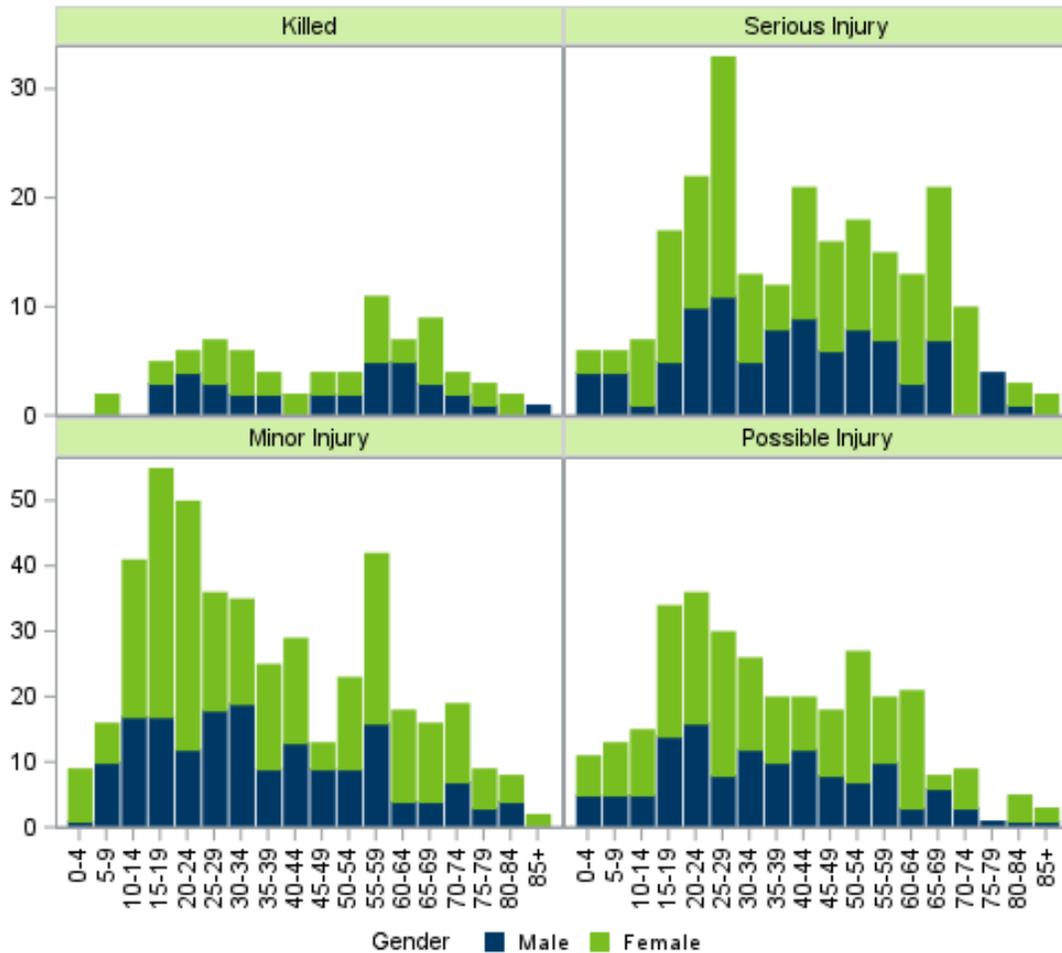


Figure 6.03: Pedestrian Injuries by Age and Gender



Vehicles are usually
moving forward
 prior to collisions with
 pedestrians

56%
 of pedestrian
 crashes occur in
daylight

Contributing factor data in pedestrian crashes shows
59% attributed to drivers and **41%**
 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	3	44	47
Moving Forward	45	406	451
Wrong Way into Opposing Traffic	0	0	0
Turning Right	3	57	60
Turning Left	2	135	137
Making a U Turn	0	0	0
Slowing	0	12	12
Swerved/Attempted to Avoid Object	1	5	6
Changing Lanes	1	1	2
Overtaking/Passing	1	1	2
Leaving Traffic Lane	1	1	2
Entering Traffic Lane	0	4	4
Negotiating a Curve	0	2	2
Backing	0	32	32
Vehicle Stopped/Stalled in Roadway	3	21	24
Other	0	6	6
Unknown	6	27	33
Total	66	754	820

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

Action	Pedestrians		Pedestrians	
	Killed	%	Injured	%
Walking Across Traffic/Roadway	22	39.3%	402	56.6%
Standing/Stopped	5	8.9%	51	7.2%
Walking With Traffic	3	5.4%	51	7.2%
Walking Against Traffic	2	3.6%	15	2.1%
Walking on Sidewalk	3	5.4%	30	4.2%
In Roadway (Working, Playing)	6	10.7%	49	6.9%
Adjacent to Roadway (Shoulder, Median)	0	0.0%	12	1.7%
Going to or From School	0	0.0%	3	0.4%
Going to or From School Bus	0	0.0%	1	0.1%
Working in Traffic/Roadway	1	1.8%	6	0.8%
Going to or From Public Transit	1	1.8%	3	0.4%
Other Pedestrian Action	2	3.6%	63	8.9%
Unknown	11	19.6%	24	3.4%
Total	56	100.0%	710	100.0%

Table 6.03: Pedestrian Crashes by Month

Month	Fatal	Injury	Total	Killed	Injured
	Crashes	Crashes	Crashes		
January	3	29	32	3	30
February	3	37	40	3	42
March	3	38	41	3	42
April	3	48	51	3	48
May	6	72	78	6	78
June	6	51	57	6	52
July	3	59	62	3	61
August	7	66	73	7	76
September	5	88	93	5	84
October	10	80	90	10	85
November	4	57	61	4	61
December	3	50	53	3	51
Total	56	675	731	56	710

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

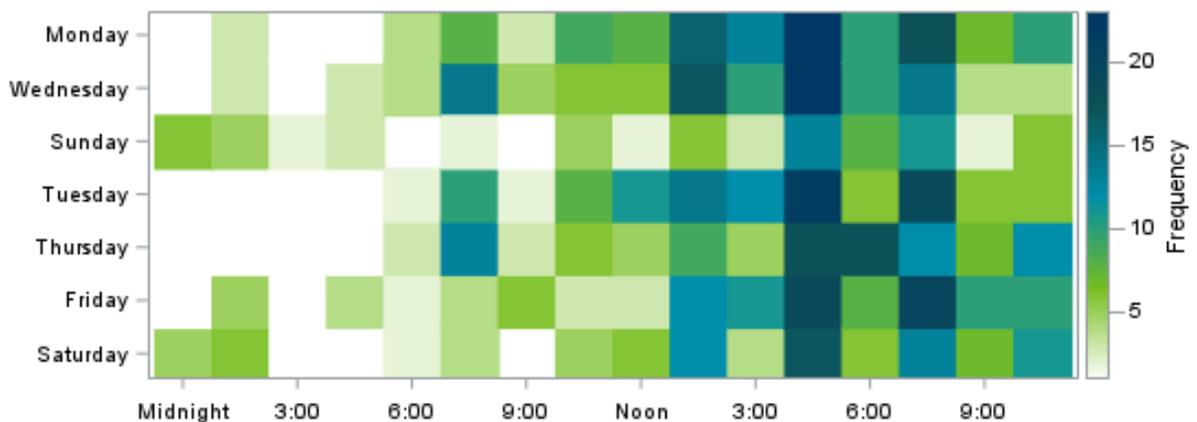


Table 6.04: Pedestrian Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	Total Crashes	Killed	Injured
250,000+	17	292	309	17	310
100,000-249,999	1	19	20	1	19
50,000-99,999	8	98	106	8	109
25,000-49,999	4	68	72	4	70
10,000-24,999	12	90	102	12	91
5,000-9,999	2	33	35	2	35
2,500-4,999	3	24	27	3	26
1,000-2,499	0	17	17	0	16
Townships/Rural	9	34	43	9	34
Total	56	675	731	56	710

Table 6.05: Pedestrian Crashes by Type of Roadway

Type of Roadway	Fatal Crashes	Injury Crashes	Total Crashes	Killed	Injured
Interstate	0	11	11	0	12
US Trunk Hwy	5	22	27	5	22
MN Trunk Hwy	11	43	54	11	47
County State Aid Hwy	19	160	179	19	171
County Road	0	6	6	0	6
Township Road	0	3	3	0	2
Municipal State Aid Hwy	7	192	199	7	196
Municipal Street	12	177	189	12	186
Other Road	2	61	63	2	68
Total	56	675	731	56	710

86%
pedestrian crashes
occur in
urban areas

Rural areas had 15% of
pedestrian crashes, but
21%
of the fatalities

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

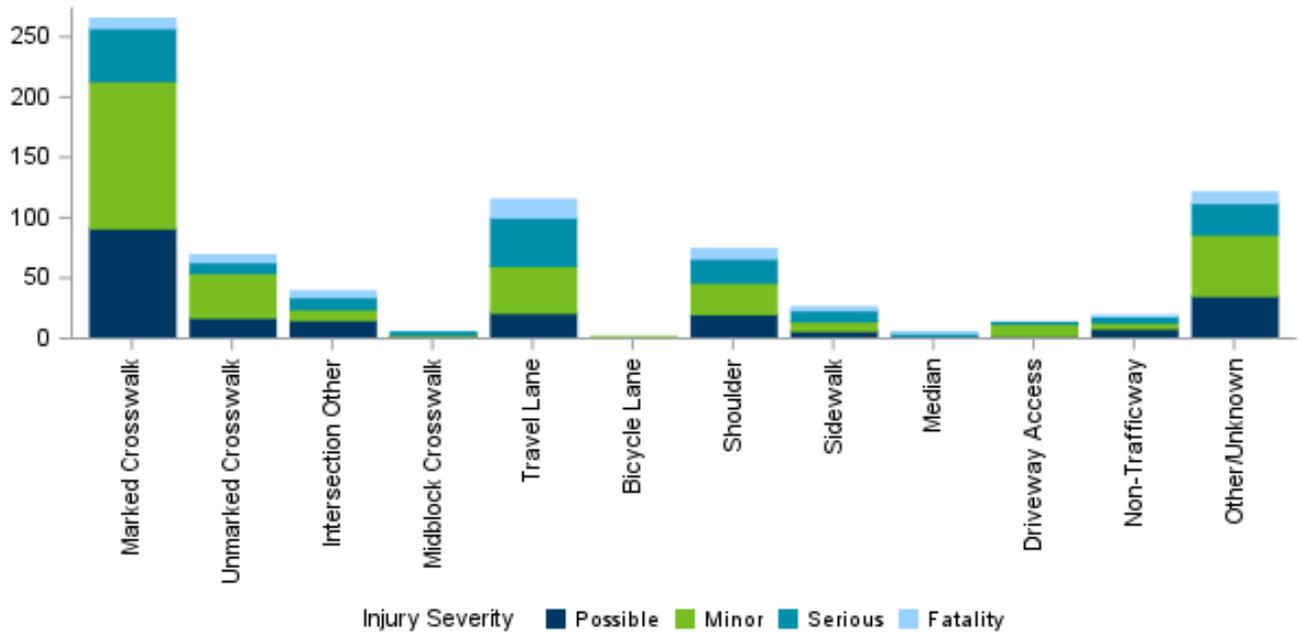
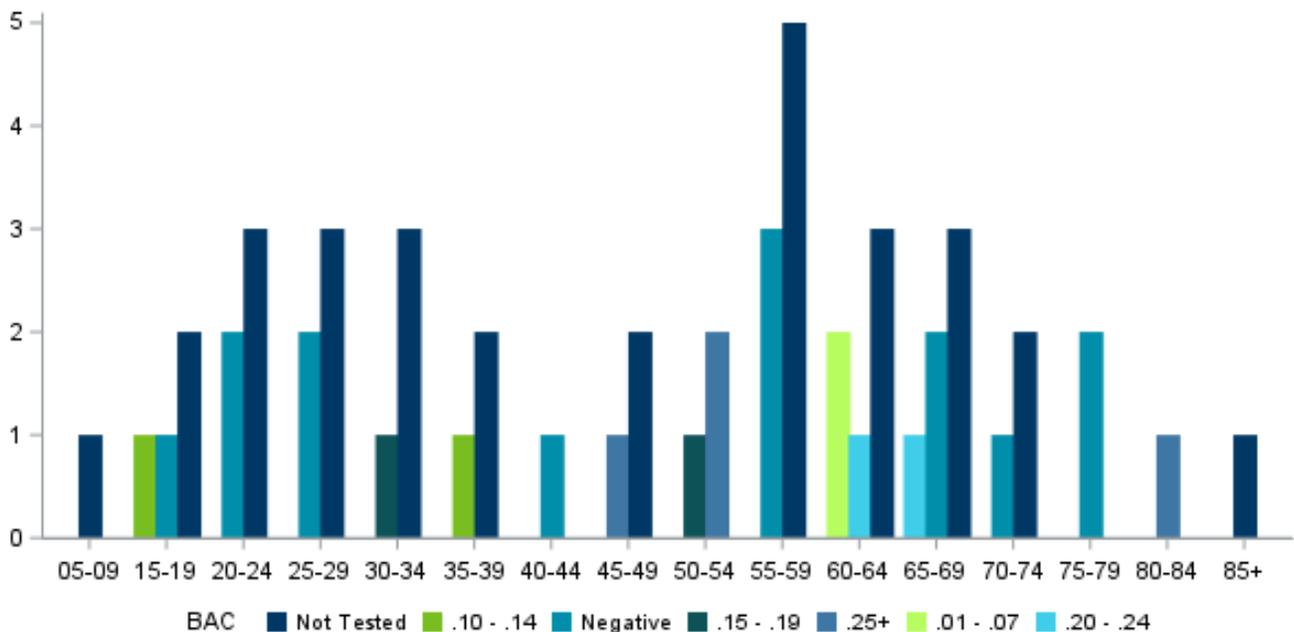


Table 6.06: Pedestrian Fatalities' Level of Alcohol Concentration

Killed	Tested	0.00	.01-.07	.08-.09	.10-.14	.15-.19	.20-.24	.25+
56	24	14	2	0	2	2	2	2

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.

2021 Bicycle Crash Stats:



When bicycle crashes occur

Bicycle crashes are mostly a warm weather occurrence. However, in 2021, 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 2021, 47% of all bicycle crashes happened at that time.

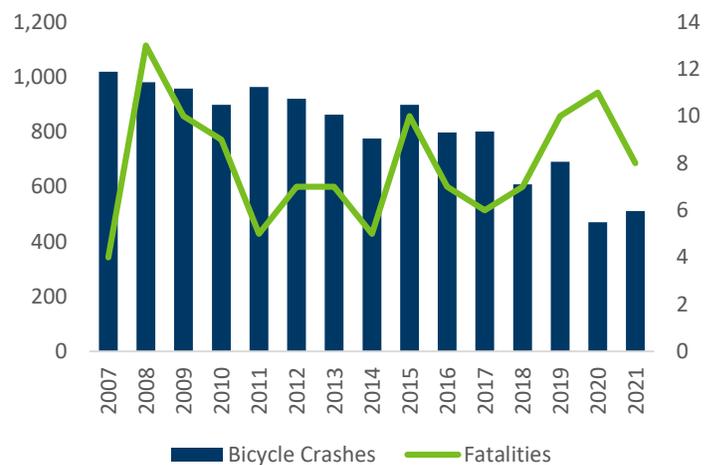
Where bicycle crashes occur

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 (91%) 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. Sixty percent (60%) of injured bicyclists were over the age of 25. See Table 7.01.

Figure 7.01: Bicycle Crash Trends



50%

bicyclists were
cycling
across traffic
prior to crash

Figure 7.02: Bicycle Crashes by Day of Week

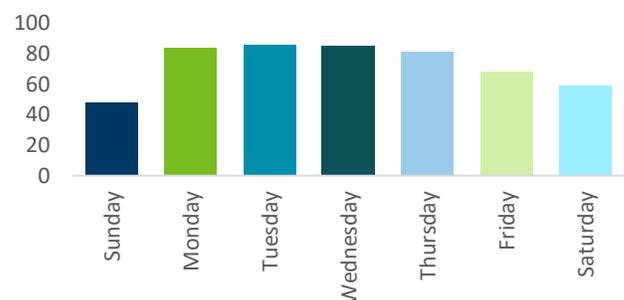


Table 7.01: Bicyclists Killed or Injured by Age and Gender*

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	1	0	1	0	1	1	0	0	0	1	1	2
05-09	0	0	0	0	1	1	6	1	7	6	1	7	12	3	15
10-14	0	0	0	2	3	5	29	12	41	16	7	23	47	22	69
15-19	0	0	0	7	3	10	30	11	42	14	0	15	51	14	67
20-24	0	0	0	1	0	2	9	6	15	5	3	9	15	9	26
25-29	0	0	0	7	0	7	4	1	6	6	3	11	17	4	24
30-34	0	0	0	4	2	6	13	7	22	9	2	13	26	11	41
35-39	1	0	1	2	0	2	8	4	14	6	2	9	16	6	25
40-44	0	0	0	4	0	4	8	1	11	10	0	11	22	1	26
45-49	1	0	1	1	1	2	9	0	10	5	0	6	15	1	18
50-54	0	0	0	2	0	2	7	5	14	11	0	11	20	5	27
55-59	0	0	0	4	0	4	7	4	13	13	2	15	24	6	32
60-64	1	0	1	1	0	1	17	3	20	4	1	6	22	4	27
65-69	1	0	1	1	2	4	16	3	20	5	1	6	22	6	30
70-74	2	1	3	2	0	2	2	2	5	2	0	2	6	2	9
75+	1	0	1	1	0	1	3	0	4	2	0	2	6	0	7
Not Stated	0	0	0	0	0	0	0	1	13	0	0	5	0	1	18
Total	7	1	8	40	12	54	168	62	258	114	22	151	322	96	463

* 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	1	233	24	258
Cycling with Traffic	3	101	10	114
Cycling Against Traffic	0	29	0	29
Cycling on Sidewalk	1	50	3	54
Standing/Stopped	2	0	2	4
In Roadway - Other	1	15	2	18
Adjacent to Roadway	0	11	0	11
Other/Unknown	0	24	4	28
Total	8	463	45	516

* 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	1	3	3	7	1	3
February	0	3	1	4	0	3
March	0	25	2	27	0	25
April	1	28	3	32	1	28
May	0	44	5	49	0	44
June	1	79	3	83	1	81
July	0	56	3	59	0	55
August	2	74	8	84	2	75
September	1	68	8	77	1	68
October	2	53	6	61	2	53
November	0	24	0	24	0	24
December	0	4	0	4	0	4
Total	8	463	42	511	8	463

Summertime
 sees most
 bicycle crashes

Weekdays had
79%
 of bicycle
 crashes

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

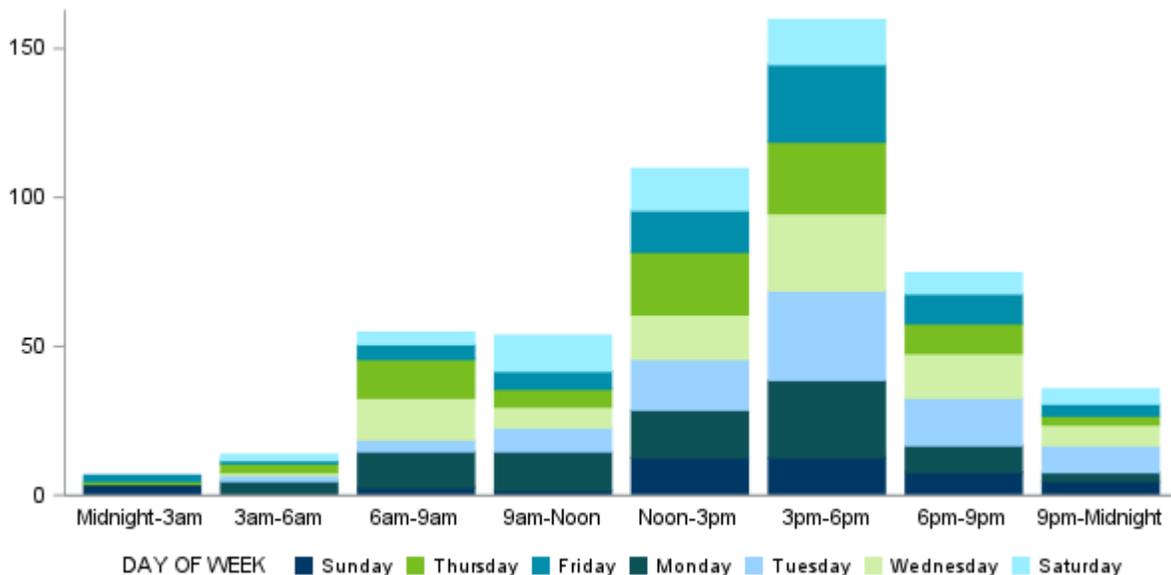


Figure 7.04: Bicycle Crashes by Time of Day, Compared to Pedestrian Crashes

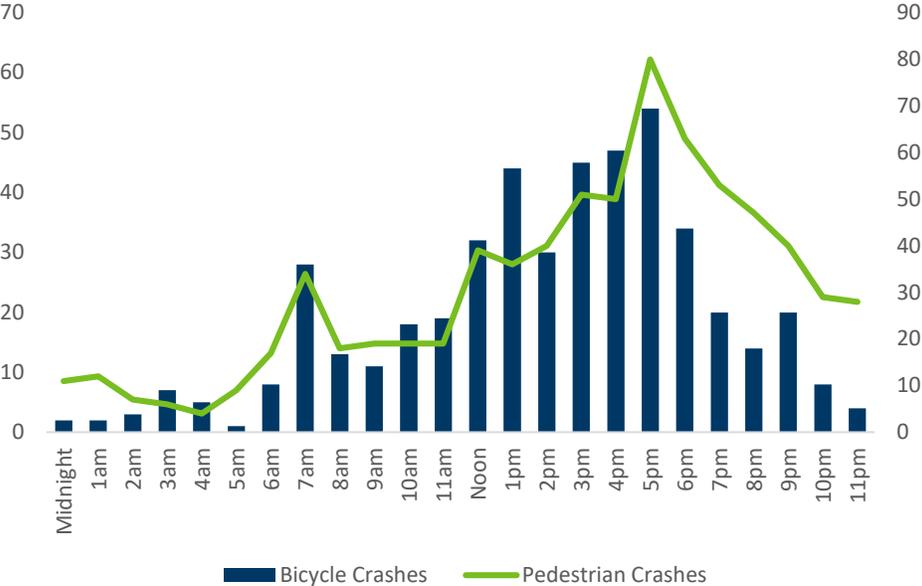


Table 7.04: Bicycle Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	0	131	17	148	0	132
100,000-249,000	0	13	1	14	0	13
50,000-99,999	1	94	4	99	1	94
25,000-49,999	0	58	3	61	0	58
10,000-24,999	2	95	13	110	2	95
5,000-9,999	1	29	2	32	1	30
2,500-4,999	1	17	1	19	1	17
1,000-2,499	2	9	0	11	2	9
Townships/Rural	1	15	1	17	1	15
Total	8	461	42	511	8	463

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 2021, there were 61 crashes resulting in one fatality and 26 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.

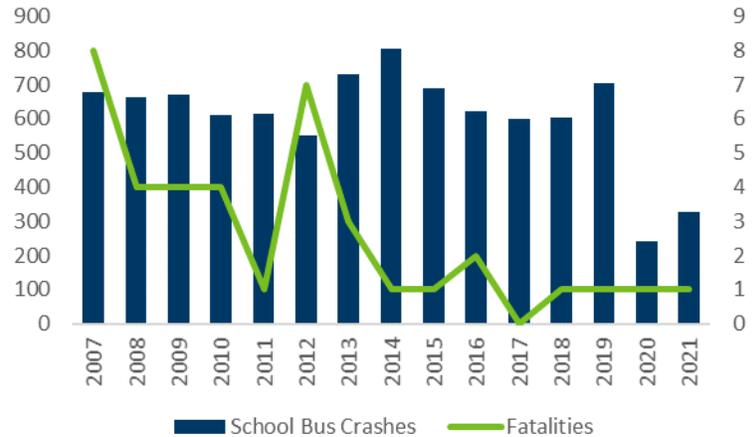
2021 School Bus Crash Stats:



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

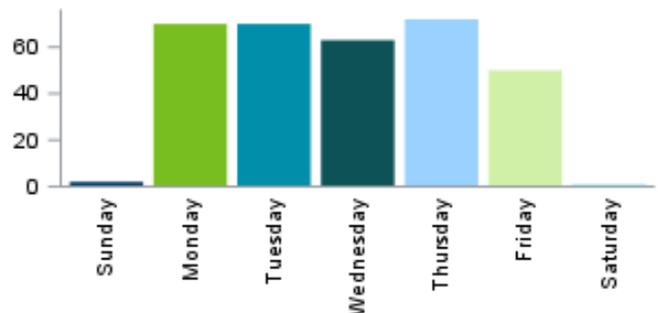


Figure 8.03: Age of Persons Injured in School Bus Crashes, by Their Location

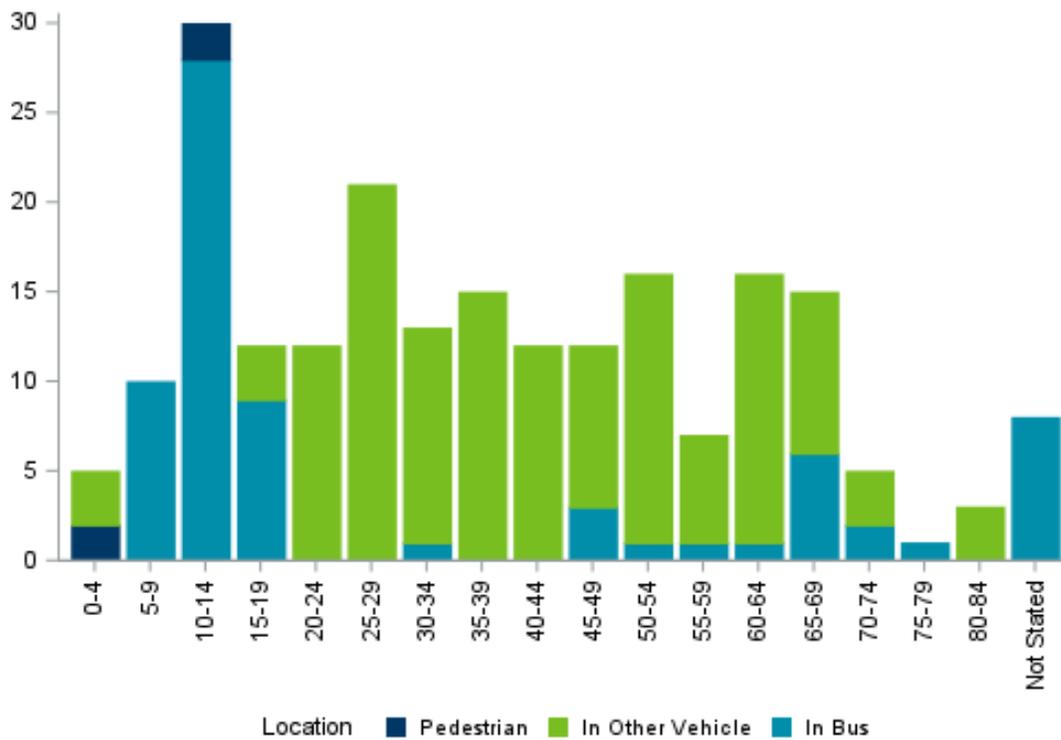


Table 8.01: School Bus Crashes by First Harmful Event

First Harmful Event	Fatal	Injury	PDO	Total	Killed	Injured
	Crashes	Crashes	Crashes	Crashes		
Collision With:						
Other Motor Vehicle	1	55	221	277	1	105
Parked Motor Vehicle	0	2	35	37	0	4
Pedestrian	0	2	0	2	0	2
Deer	0	0	0	0	0	0
Other Animal	0	0	0	0	0	0
Fixed Object	0	3	7	10	0	3
Non-Collision:						
Overturn/Rollover	0	1	0	1	0	1
Other Non-Collision	0	1	0	1	0	4
Total	1	64	263	328	1	119

Table 8.02: School Bus Crashes by Weather Condition*

Weather Condition	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
Clear	1	47	177	225	1	97
Cloudy	0	10	56	66	0	13
Rain	0	1	14	15	0	1
Snow	0	5	19	24	0	7
Sleet/Hail	0	1	2	3	0	1
Fog/Smog/Smoke	0	0	0	0	0	0
Blowing Sand/Soil/Dirt	0	1	1	2	0	1
Other Weather	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
Total	1	65	269	335	1	120

* 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.

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

Wet, snowy, icy roads usually contribute to

over half of school bus crashes. However, in 2021, most occurred on dry roads.

Figure 8.04: School Bus Crashes by Road Surface Conditions

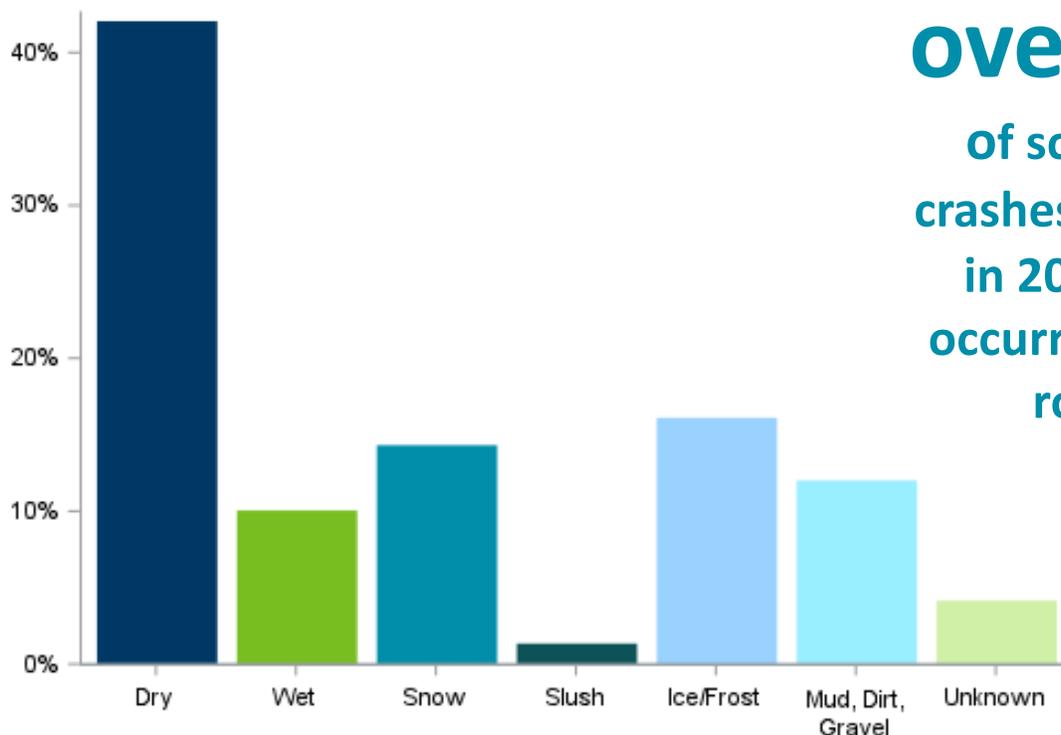


Figure 8.05: School Bus Crashes by Month and Time of Day

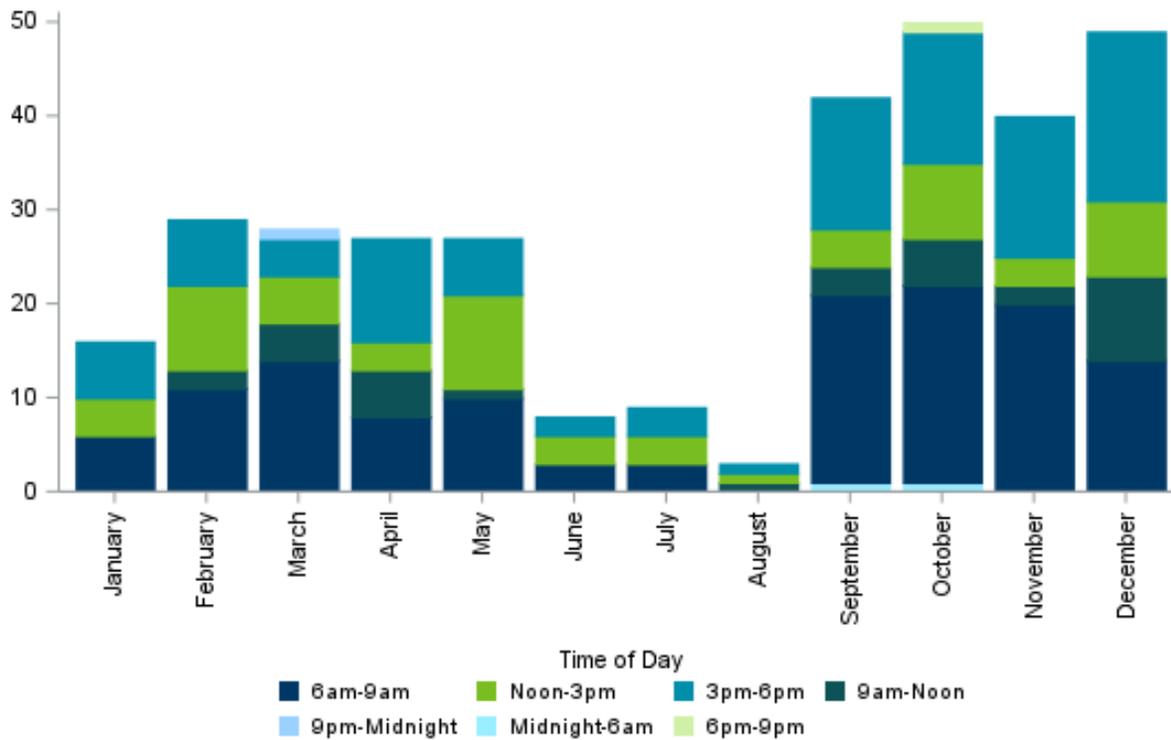


Table 8.03: School Bus Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	0	10	41	51	0	15
100,000-249,999	0	2	6	8	0	2
50,000-99,999	0	10	60	70	0	11
25,000-49,999	0	7	26	33	0	15
10,000-24,999	0	10	74	84	0	12
5,000-9,999	0	3	18	21	0	3
2,500-4,999	0	6	13	19	0	17
1,000-2,499	0	4	6	10	0	16
Townships/Rural	1	12	19	32	1	28
Total	1	64	263	328	1	119

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.

2021 Motor Vehicle/Train Crash Stats:



49%
motor vehicle/train
crashes occurred
in rural areas
in 2021

Figure 9.01: Motor Vehicle/Train Crash Trends



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

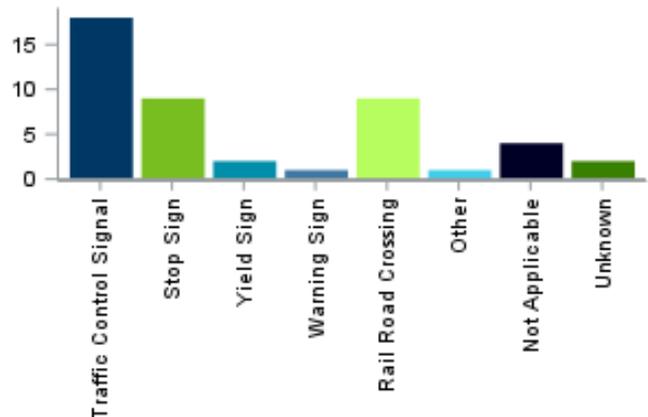


Figure 9.03: Motor Vehicle/Train Crashes by Day of Week

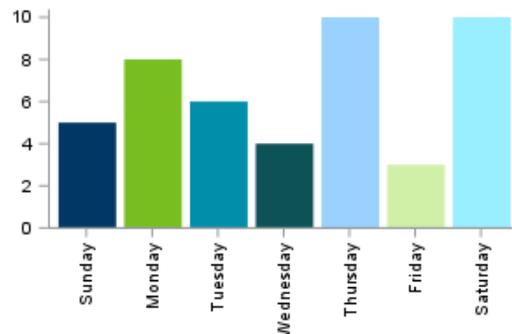


Figure 9.04: Motor Vehicle/Train Crashes by Day of Week and Time of Day

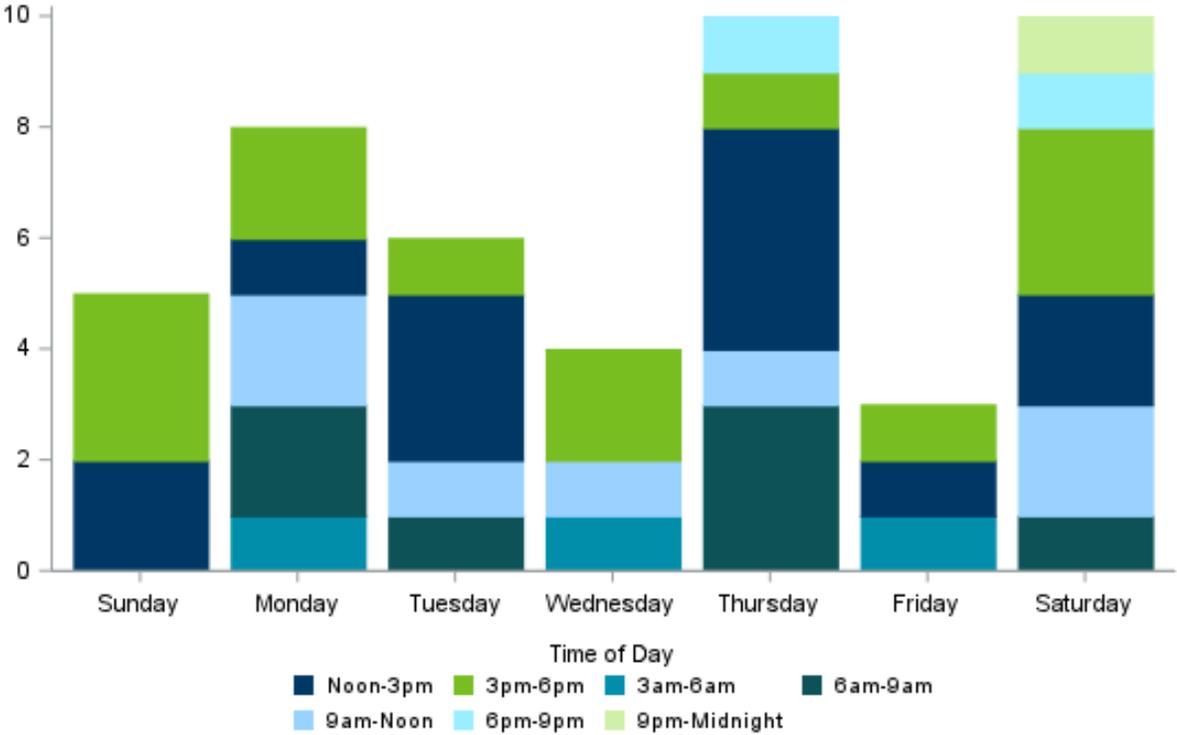


Figure 9.05: Motor Vehicle/Train Crashes by Month and Crash Severity

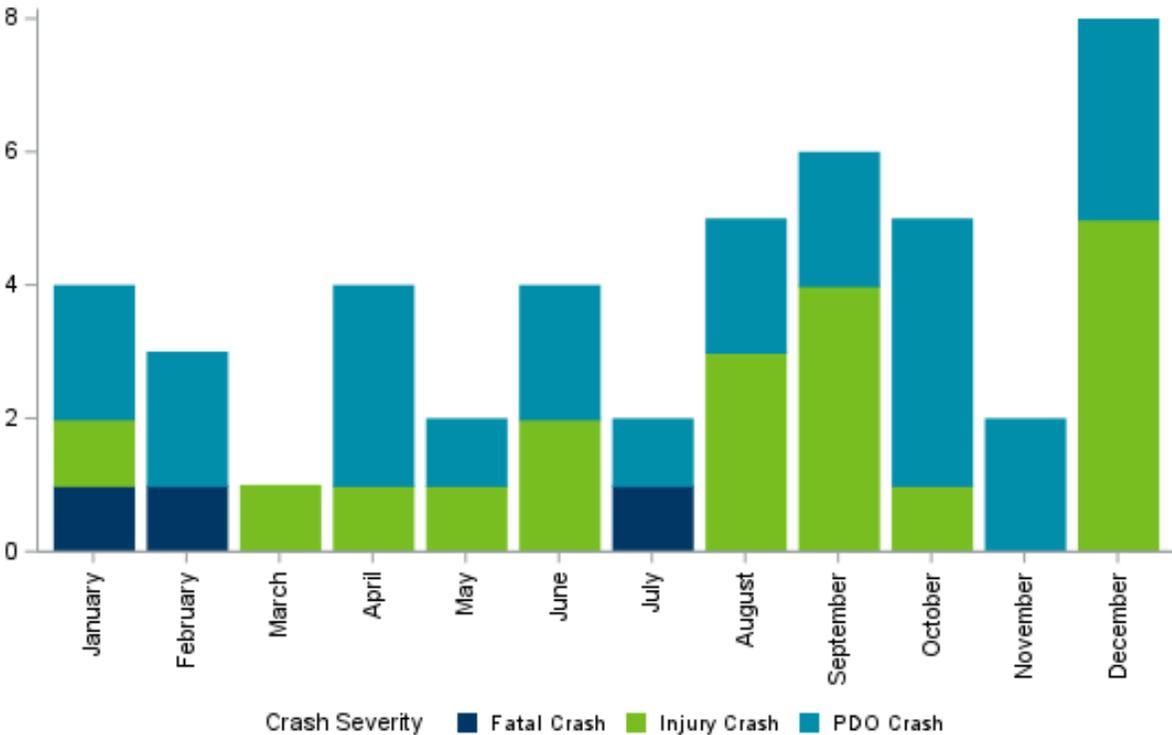


Table 9.01: Motor Vehicle/Train Crashes by Population of Area

Population of Area	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Killed	Injured
250,000+	1	6	11	18	1	5
50,000-99,999	0	2	0	2	0	2
25,000-49,999	0	1	2	3	0	2
10,000-24,999	0	1	1	2	0	1
5,000-9,999	0	0	2	2	0	0
2,500-4,999	2	0	0	2	2	0
1,000-2,499	0	1	0	1	0	1
Townships/Rural	0	8	8	16	0	8
Total	3	19	24	46	3	19

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.

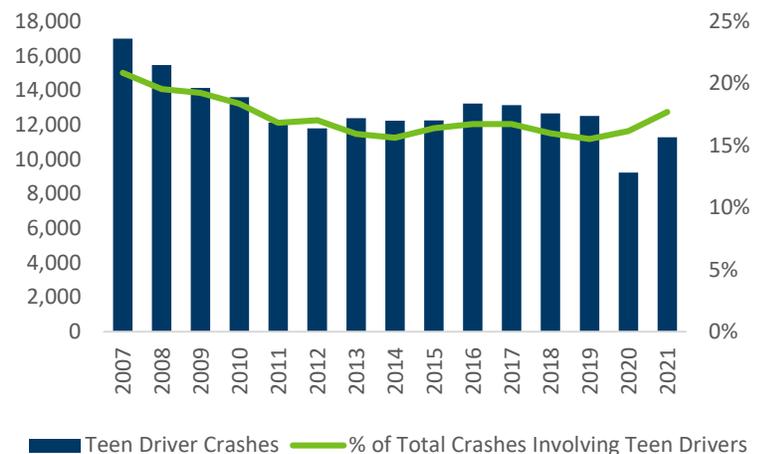
2021 Teen Driver Crash Stats:

11,283 crashes with teen drivers	54 fatalities in teen driver crashes	4,476 injuries in teen driver crashes
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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
9% of drivers,
but account
for
18% of crashes

Figure 10.02: Teen Driver Crashes by Day of Week

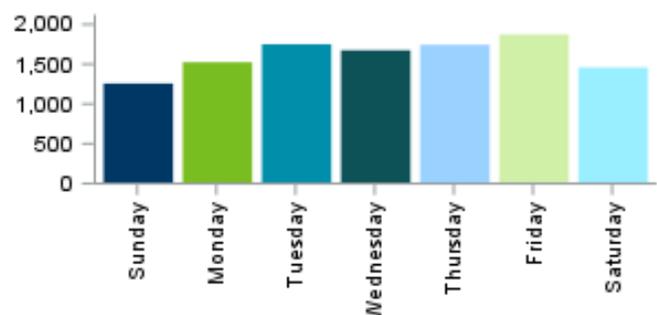


Figure 10.03: Teen Driver Crashes by Age and Gender

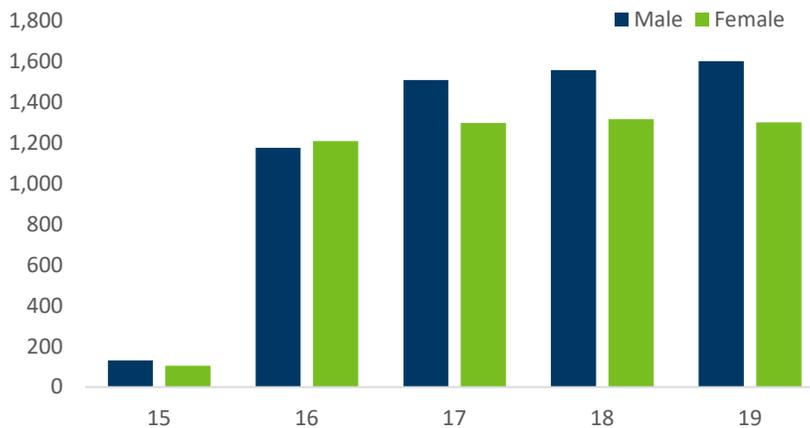


Table 10.01: Teen Driver Crashes by Month

Month	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes	Possible Injury Crashes	PDO Crashes	Total Crashes
January	1	8	67	94	530	700
February	3	11	67	119	651	851
March	3	16	61	107	480	667
April	6	12	89	112	493	712
May	2	16	112	147	647	924
June	6	30	124	154	794	1,108
July	4	26	125	154	685	994
August	5	23	114	169	730	1,041
September	9	18	100	148	693	968
October	1	25	124	159	707	1,016
November	3	15	88	134	697	937
December	4	14	92	161	1,094	1,365
Total	47	214	1,163	1,658	8,201	11,283

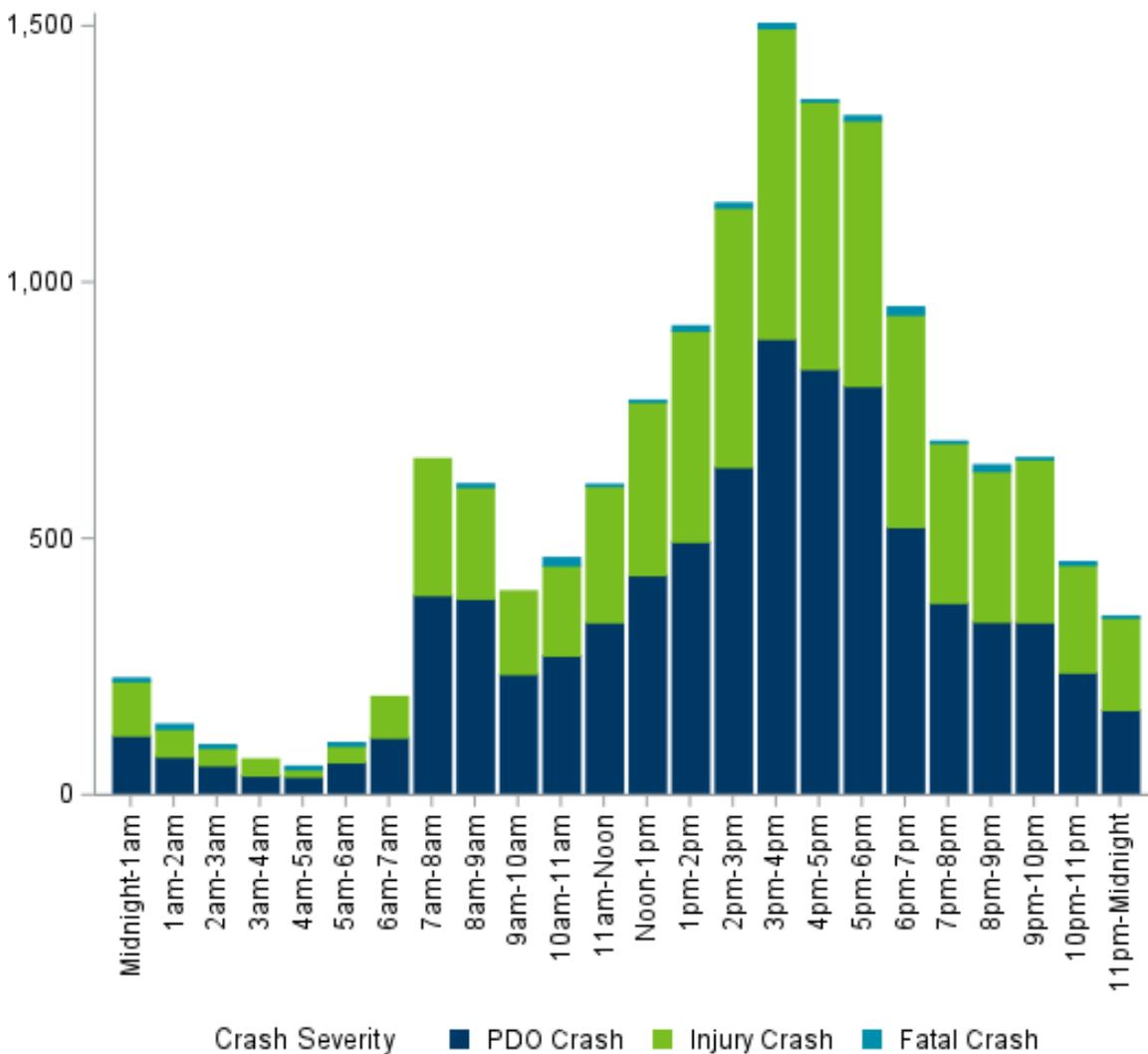
Teen driver crashes follow the same crash severity proportions as all other crashes

Mornings and afternoons have most teen driver crashes

Table 10.02: Teen Driver Crashes by Day of Week

Day of Week	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes	Possible Injury Crashes	PDO Crashes	Total Crashes
Sunday	6	46	166	199	840	1,257
Monday	4	25	146	230	1,119	1,524
Tuesday	6	29	152	253	1,310	1,750
Wednesday	5	31	148	243	1,248	1,675
Thursday	13	32	182	259	1,258	1,744
Friday	8	23	194	261	1,388	1,874
Saturday	5	28	175	213	1,038	1,459
Total	47	214	1,163	1,658	8,201	11,283

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.

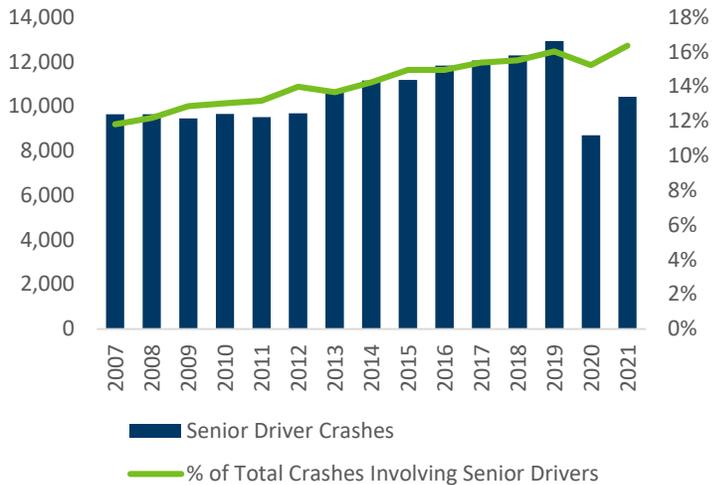
2021 Senior Driver Crash Stats:

10,432 crashes with senior drivers	128 fatalities in senior driver crashes	4,941 injuries in senior driver crashes
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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
20% of drivers,
but account
for
16% of crashes

Figure 11.02: Senior Driver Crashes by Day of Week

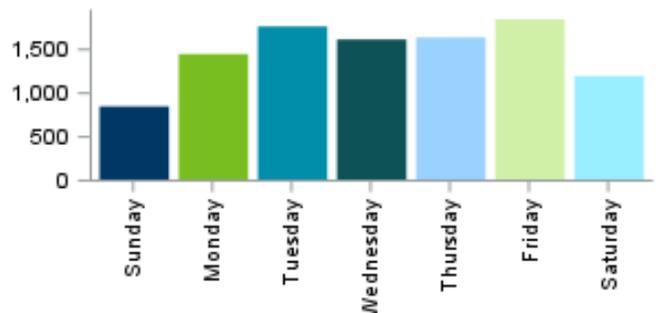


Figure 11.03: Senior Driver Crashes by Age and Gender

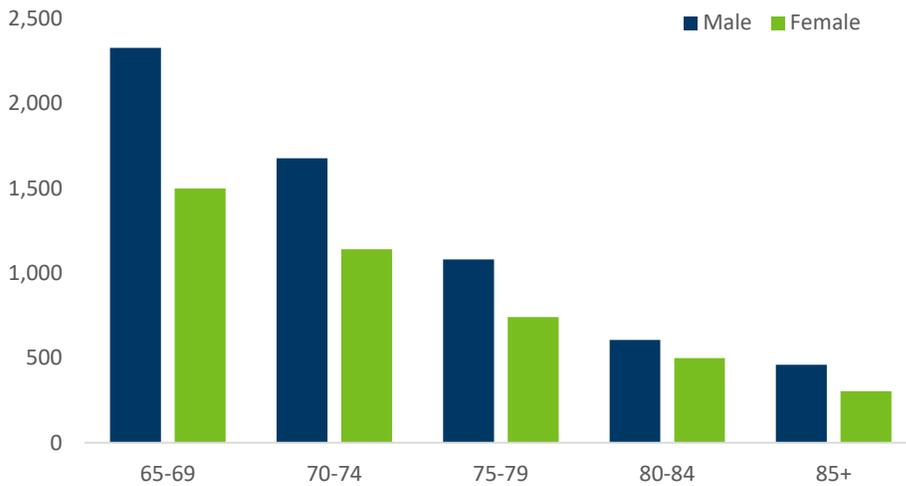


Table 11.01: Senior Driver Crashes by Month

Month	Fatal Crashes	Serious Injury Crashes	Minor Injury Crashes	Possible Injury Crashes	PDO Crashes	Total Crashes
January	4	3	63	74	407	551
February	5	16	69	84	475	649
March	9	10	83	102	426	630
April	6	11	73	117	434	641
May	7	22	107	159	554	849
June	14	34	139	164	660	1,011
July	8	22	140	168	630	968
August	16	22	159	179	660	1,036
September	10	31	152	164	640	997
October	11	22	127	181	640	981
November	14	17	84	142	588	845
December	13	18	117	183	874	1,205
Total	117	228	1,313	1,717	6,988	10,363

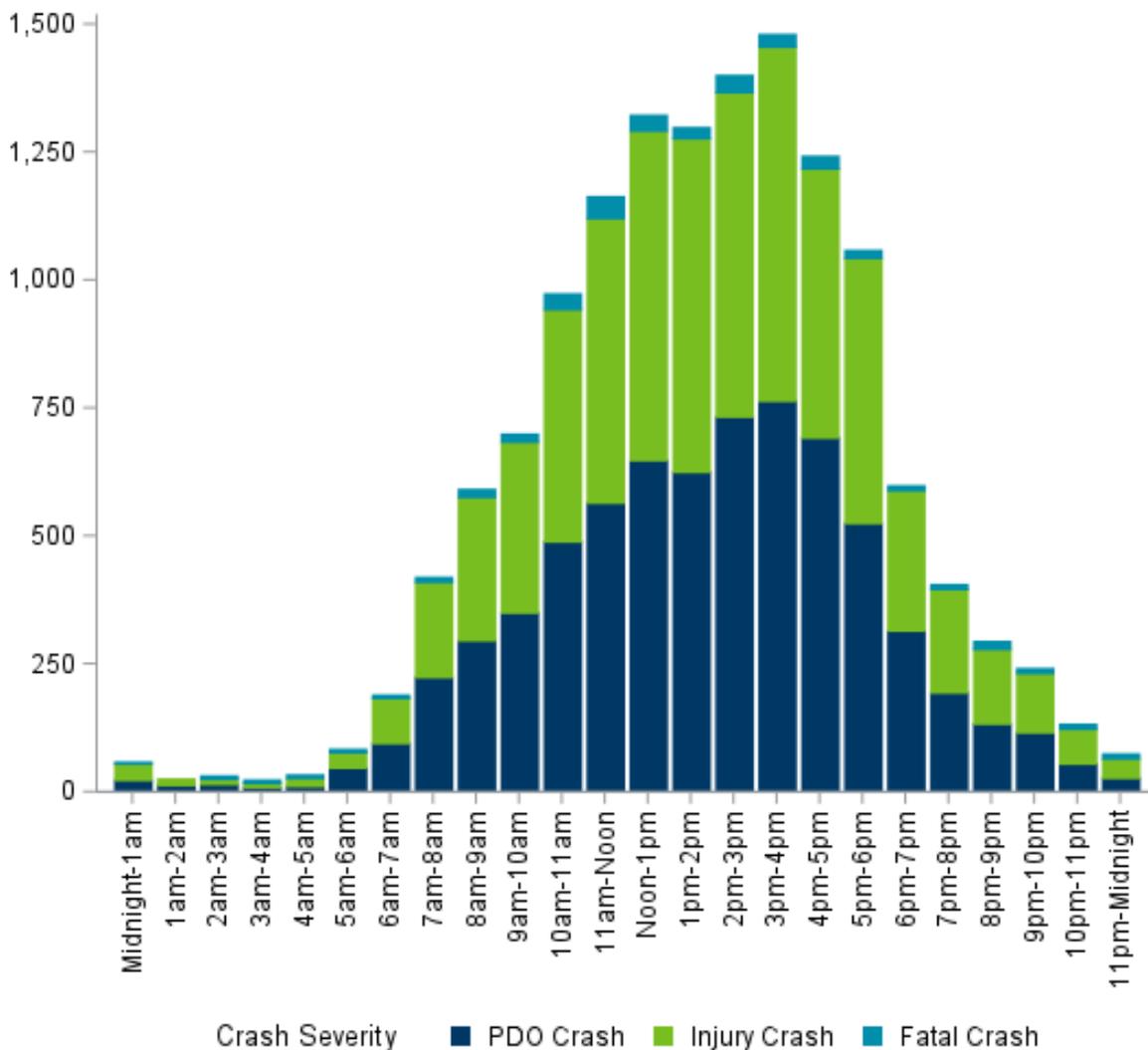
Senior drivers are disproportionately involved in fatal and injury crashes compared to the total driving population

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	11	21	122	150	545	849
Monday	17	33	184	225	990	1,449
Tuesday	18	45	216	284	1,202	1,765
Wednesday	19	33	199	278	1,087	1,616
Thursday	20	26	209	268	1,116	1,639
Friday	21	33	219	302	1,272	1,847
Saturday	11	37	164	210	776	1,198
Total	117	228	1,313	1,717	6,988	10,363

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
contributing 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	15-19	20-24	25-29	30-34	35-64	65-79	80+	All Ages
Road Surface Conditions	Misc.	23.70%	23.90%	22.70%	23.10%	22.40%	19.80%	15.10%	22.80%
Ran Off Road	Human	12.00%	11.90%	11.60%	12.40%	13.20%	16.50%	17.90%	12.70%
Failed to Keep in Proper Lane	Human	8.20%	11.00%	11.30%	11.20%	11.30%	12.60%	15.50%	10.80%
Other Human Factor	Human	7.20%	7.80%	9.60%	10.30%	10.30%	11.50%	16.30%	9.40%
Overcorrecting/Oversteering	Human	9.70%	7.40%	7.40%	6.20%	6.60%	6.80%	5.60%	7.30%
Driver Speeding	Human	9.50%	8.80%	7.30%	7.60%	5.60%	2.90%	1.20%	7.10%
Careless, Negligent, or Erratic Driving	Human	5.70%	7.40%	8.50%	7.50%	6.20%	4.10%	2.00%	6.70%
Driver Swerved	Human	7.00%	5.90%	6.80%	6.20%	6.90%	7.00%	2.80%	6.60%
Driver Distracted	Human	4.60%	3.50%	3.70%	3.50%	3.20%	4.60%	5.60%	3.70%
Other Vehicular Factor	Vehicle	2.70%	2.10%	1.80%	2.20%	2.40%	2.80%	2.40%	2.30%
Defective Brakes	Vehicle	2.00%	1.90%	1.30%	1.60%	1.80%	1.40%	1.60%	1.70%
Reckless or Aggressive Driving	Human	1.40%	1.30%	1.80%	1.60%	1.00%	0.10%	0	1.30%
Improper Turn/Merge	Human	0.80%	0.80%	0.60%	1.00%	1.20%	1.60%	1.60%	1.00%
Disregard Other Traffic Signs	Human	0.40%	0.70%	0.90%	0.70%	0.90%	0.70%	1.60%	0.70%
Ran Stop Sign	Human	0.80%	0.50%	0.60%	0.40%	0.80%	0.70%	0.80%	0.70%
Other Miscellaneous Factor	Misc.	0.80%	0.70%	0.30%	0.50%	0.50%	0.70%	0.40%	0.60%
Vision Obscured	Vehicle	0.30%	0.50%	0.30%	0.30%	0.50%	1.10%	2.40%	0.50%
Disregard Other Road Markings	Human	0.30%	0.40%	0.40%	0.40%	0.50%	0.40%	1.20%	0.40%
Defective Steering	Vehicle	0.30%	0.50%	0.30%	0.40%	0.40%	0.40%	0.40%	0.40%
Following Too Closely	Human	0.30%	0.40%	0.40%	0.30%	0.30%	0.60%	0.00%	0.40%
Debris	Misc.	0.30%	0.20%	0.10%	0.20%	0.40%	0.20%	0.80%	0.30%
Improper Backing	Human	0.20%	0.10%	0.40%	0.30%	0.30%	0.70%	0.40%	0.30%
Work Zone	Misc.	0.10%	0.20%	0.10%	0.20%	0.50%	0.40%	0.00%	0.30%
Wrong Side/Wrong Way	Human	0.10%	0.10%	0.30%	0.30%	0.30%	0.30%	1.60%	0.20%
Shoulders (Non,Low,Soft,High)	Misc.	0.30%	0.30%	0.10%	0.20%	0.30%	0.20%	0.80%	0.20%
Obstruction in Roadway	Misc.	0.20%	0.10%	0.30%	0.10%	0.30%	0.50%	0.00%	0.20%
Improper Passing	Human	0.20%	0.30%	0.20%	0.10%	0.20%	0.10%	0.00%	0.20%
Ruts/Holes/Bumps	Misc.	0.30%	0.10%	0.10%	0.10%	0.20%	0.40%	0.00%	0.20%
Defective Wheels	Vehicle	0.10%	0.20%	0.10%	0.20%	0.20%	0.20%	0.00%	0.20%
Failure to Yield Right-of-Way	Human	0.10%	0.10%	0.10%	0.20%	0.10%	0.20%	0.40%	0.10%
Congestion Backup, Prior Crash	Misc.	0.00%	0.10%	0.10%	0.10%	0.20%	0.10%	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.	13.30%	14.60%	16.30%	17.00%	20.30%	15.20%	6.70%	16.90%
Failure to Yield Right-of-Way	Human	17.70%	12.70%	12.20%	12.10%	13.70%	23.10%	36.00%	15.10%
Following Too Closely	Human	15.40%	16.30%	14.80%	13.10%	11.80%	8.60%	6.60%	13.10%
Other Human Factor	Human	6.40%	6.00%	7.20%	7.40%	7.00%	7.00%	7.00%	6.80%
Driver Distracted	Human	8.30%	7.20%	6.20%	6.10%	5.10%	4.20%	3.40%	6.00%
Improper Turn/Merge	Human	4.10%	3.80%	3.50%	3.40%	4.60%	6.40%	8.60%	4.40%
Failed to Keep in Proper Lane	Human	3.60%	4.40%	4.40%	4.20%	4.40%	4.80%	5.80%	4.30%
Careless, Negligent, or Erratic Driving	Human	3.90%	5.10%	5.00%	5.10%	3.80%	2.30%	2.30%	4.10%
Congestion Backup, Other	Misc.	2.50%	3.40%	3.40%	3.30%	3.70%	3.10%	0.90%	3.30%
Ran Red Light	Human	2.40%	2.60%	2.50%	3.00%	2.60%	3.10%	3.30%	2.70%
Congestion Backup, Non-Recurring Incident	Misc.	1.70%	2.50%	2.50%	2.60%	2.60%	1.80%	1.10%	2.30%
Driver Speeding	Human	3.10%	3.30%	3.00%	2.80%	1.50%	0.90%	0.60%	2.30%
Driver Swerved	Human	2.20%	2.10%	2.40%	2.40%	2.10%	1.70%	1.00%	2.10%
Disregard Other Traffic Signs	Human	1.80%	2.00%	1.60%	1.90%	1.90%	2.60%	3.70%	2.00%
Other Vehicular Factor	Vehicle	2.10%	1.50%	1.90%	2.20%	1.80%	1.90%	1.40%	1.90%
Vision Obscured	Vehicle	1.60%	1.40%	1.50%	1.50%	1.70%	2.60%	2.50%	1.70%
Work Zone	Misc.	1.00%	1.30%	1.30%	1.50%	1.90%	1.90%	1.40%	1.60%
Ran Stop Sign	Human	1.40%	1.60%	1.40%	1.40%	1.20%	1.50%	2.40%	1.40%
Congestion Backup, Prior Crash	Misc.	0.60%	1.40%	1.20%	1.00%	1.30%	0.50%	0.60%	1.10%
Defective Brakes	Vehicle	1.50%	1.20%	1.30%	1.20%	0.70%	0.50%	0.40%	1.00%
Improper Passing	Human	0.70%	0.70%	1.10%	0.80%	0.90%	1.40%	0.90%	0.90%
Reckless or Aggressive Driving	Human	0.80%	0.90%	1.30%	1.50%	0.70%	0.10%	0.10%	0.80%
Overcorrecting/Oversteering	Human	1.00%	1.30%	0.80%	1.00%	0.50%	0.50%	0.20%	0.80%
Improper Backing	Human	0.50%	0.50%	0.50%	0.50%	1.00%	1.10%	0.70%	0.70%
Other Miscellaneous Factor	Misc.	0.60%	0.50%	0.70%	0.50%	0.70%	0.70%	0.30%	0.60%
Disregard Other Road Markings	Human	0.50%	0.50%	0.50%	0.60%	0.60%	0.60%	0.50%	0.60%
Wrong Side/Wrong Way	Human	0.30%	0.40%	0.50%	0.60%	0.40%	0.60%	0.90%	0.40%
Ran Off Road	Human	0.40%	0.30%	0.30%	0.20%	0.30%	0.30%	0.40%	0.30%
Obstruction in Roadway	Misc.	0.10%	0.10%	0.30%	0.20%	0.20%	0.30%	0.10%	0.20%
Traffic Control Device Inoperative/Missing/Obscured	Misc.	0.10%	0.10%	0.10%	0.20%	0.20%	0.20%	0.10%	0.10%
Debris	Misc.	0.00%	0.00%	0.10%	0.30%	0.10%	0.20%	0.10%	0.10%
Passing on Shoulder	Human	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%	0.10%
Defective Steering	Vehicle	0.10%	0.10%	0.00%	0.10%	0.00%	0.00%	0.00%	0.10%

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	178	18.10%	5,462	17.80%	11,568	16.30%
Other Vehicular Factor	Vehicle	96	9.70%	2,445	7.90%	5,017	7.00%
Driver Speeding	Human	95	9.60%	1,141	3.70%	1,748	2.40%
Failed to Keep in Proper Lane	Human	83	8.40%	1,263	4.10%	3,843	5.40%
Road Surface Condition	Misc.	64	6.50%	3,397	11.10%	11,707	16.50%
Failure to Yield Right-of-Way	Human	61	6.20%	3,242	10.50%	5,466	7.70%
Ran Off Road	Human	58	5.90%	951	3.10%	2,072	2.90%
Other Roadway Factor	Misc.	57	5.80%	2,581	8.40%	6,368	8.90%
Careless, Negligent, or Erratic Driving	Human	56	5.70%	1,448	4.70%	2,633	3.70%
Non-motorist Error	Human	36	3.60%	345	1.10%	20	0.00%
Disregard Traffic Control Device	Human	30	3.00%	1,198	3.90%	1,219	1.70%
Over-correcting / Over Steering	Human	30	3.00%	645	2.10%	1,474	2.00%
Reckless or Aggressive Driving	Human	25	2.50%	341	1.10%	474	0.60%
Wrong Side or Wrong Way	Human	25	2.50%	155	0.50%	150	0.20%
Driver Distracted	Human	16	1.60%	1,502	4.90%	2,946	4.10%
Improper Passing	Human	13	1.30%	128	0.40%	431	0.60%
Disregard Other Traffic Signs	Human	12	1.20%	518	1.60%	761	1.00%
Defective Equipment	Vehicle	11	1.10%	401	1.30%	954	1.30%
Disregard Other Road Markings	Human	8	0.80%	120	0.30%	300	0.40%
Improper Turn/Merge	Human	8	0.80%	525	1.70%	2,256	3.10%
Following Too Closely	Human	6	0.60%	1,662	5.40%	5,706	8.00%
Swerved or Avoided	Human	6	0.60%	694	2.20%	2,137	3.00%
Vision Obscured	Vehicle	6	0.60%	357	1.10%	817	1.10%
Oversize/Overweight Trucks	Vehicle	1	0.10%	0	0.00%	19	0.00%
Improper Backing	Human	0	0.00%	59	0.10%	654	0.90%
Passing on Shoulder	Human	0	0.00%	13	0.00%	62	0.00%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.04: Contributing Factors in Motorcycle Crashes

Contributing Factors	Type	Single Vehicle Attributed to MC Drivers		Multiple Vehicle Attributed to Other Drivers		Attributed to MC Drivers	
		#	%	#	%	#	%
Other Human Factor	Human	78	12.70%	16	5.60%	22	7.90%
Driver Speeding	Human	75	12.20%	2	0.70%	27	9.70%
Ran Off Road	Human	70	11.40%	0	0.00%	6	2.20%
Careless, Negligent, or Erratic Driving	Human	54	8.80%	17	5.90%	26	9.40%
Driver Swerved	Human	49	8.00%	2	0.70%	12	4.30%
Failed to Keep in Proper Lane	Human	41	6.70%	12	4.20%	9	3.20%
Overcorrecting/Oversteering	Human	41	6.70%	0	0	6	2.20%
Road Surface Conditions	Misc.	28	4.60%	3	1.00%	4	1.40%
Other Vehicular Factor	Vehicle	27	4.40%	6	2.10%	9	3.20%
Reckless or Aggressive Driving	Human	23	3.70%	1	0.30%	12	4.30%
Other Miscellaneous Factor	Misc.	15	2.40%	3	1.00%	3	1.10%
Failure to Yield Right-of-Way	Human	14	2.30%	120	42.00%	19	6.80%
Debris	Misc.	13	2.10%	0	0.00%	2	0.70%
Obstruction in Roadway	Misc.	9	1.50%	0	0.00%	1	0.40%
Driver Distracted	Human	9	1.50%	13	4.50%	10	3.60%
Following Too Closely	Human	8	1.30%	13	4.50%	40	14.40%
Improper Passing	Human	8	1.30%	4	1.40%	11	4.00%
Defective Tire/Tire Failure	Vehicle	7	1.10%	0	0.00%	1	0.40%
Improper Turn/Merge	Human	6	1.00%	20	7.00%	8	2.90%
Ruts/Holes/Bumps	Misc.	5	0.80%	0	0.00%	0	0.00%
Work Zone	Misc.	4	0.70%	2	0.70%	2	0.70%
Defective Brakes	Vehicle	4	0.70%	0	0.00%	4	1.40%
Vision Obscured	Vehicle	4	0.70%	12	4.20%	6	2.20%
Disregard Other Traffic Signs	Human	4	0.70%	8	2.80%	6	2.20%
Shoulders (Non,Low,Soft,High)	Misc.	3	0.50%	0	0.00%	0	0.00%
Congestion Backup, Prior Crash	Misc.	2	0.30%	2	0.70%	2	0.70%
Congestion Backup, Other	Misc.	2	0.30%	3	1.00%	4	1.40%
Defective Wheels	Vehicle	2	0.30%	1	0.30%	0	0.00%
Dart/Dash	Human	2	0.30%	0	0.00%	0	0.00%
Ran Stop Sign	Human	2	0.30%	4	1.40%	4	1.40%
Congestion Backup, Non-Recurring Incident	Misc.	1	0.20%	4	1.40%	5	1.80%
Defective Lights	Vehicle	1	0.20%	4	1.40%	1	0.40%
Defective Windows/Windshield	Vehicle	1	0.20%	0	0.00%	0	0.00%
Defective Steering	Vehicle	1	0.20%	0	0.00%	0	0.00%
Ran Red Light	Human	1	0.20%	5	1.70%	7	2.50%
Disregard Other Road Markings	Human	1	0.20%	2	0.70%	3	1.10%

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.	908	22.70%	630	17.20%
Failed to Keep in Proper Lane	Human	340	8.50%	357	9.80%
Other Human Factor	Human	338	8.50%	292	8.00%
Failure to Yield Right-of-Way	Human	262	6.60%	476	13.00%
Following Too Closely	Human	255	6.40%	228	6.20%
Improper Turn/Merge	Human	215	5.40%	253	6.90%
Ran Off Road	Human	209	5.20%	19	0.50%
Driver Swerved	Human	147	3.70%	153	4.20%
Careless, Negligent, or Erratic Driving	Human	128	3.20%	176	4.80%
Work Zone	Misc.	110	2.80%	95	2.60%
Driver Distracted	Human	104	2.60%	119	3.30%
Overcorrecting/Oversteering	Human	103	2.60%	61	1.70%
Other Vehicular Factor	Vehicle	100	2.50%	33	0.90%
Improper Backing	Human	96	2.40%	9	0.20%
Driver Speeding	Human	79	2.00%	131	3.60%
Defective Brakes	Vehicle	66	1.70%	30	0.80%
Vision Obscured	Vehicle	63	1.60%	32	0.90%
Congestion Backup, Non-Recurring Incident	Misc.	60	1.50%	80	2.20%
Congestion Backup, Other	Misc.	60	1.50%	67	1.80%
Disregard Other Traffic Signs	Human	55	1.40%	54	1.50%
Ran Red Light	Human	48	1.20%	26	0.70%
Other Miscellaneous Factor	Misc.	40	1.00%	27	0.70%
Congestion Backup, Prior Crash	Misc.	39	1.00%	55	1.50%
Improper Passing	Human	34	0.90%	89	2.40%
Ran Stop Sign	Human	23	0.60%	47	1.30%
Shoulders (Non,Low,Soft,High)	Misc.	21	0.50%	3	0.10%
Disregard Other Road Markings	Human	19	0.50%	19	0.50%
Oversize/Overweight Trucks	Vehicle	14	0.40%	0	0.00%
Debris	Misc.	13	0.30%	17	0.50%
Obstruction in Roadway	Misc.	9	0.20%	5	0.10%
Wrong Side/Wrong Way	Human	4	0.10%	21	0.60%
Reckless or Aggressive Driving	Human	3	0.10%	23	0.60%

* 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	76	17.30%	0	0.00%
Road Surface Conditions	Misc.	59	13.40%	53	9.50%
In Roadway Improperly	Human	58	13.20%	0	0.00%
Failure to Yield Right-of-Way	Human	53	12.00%	100	17.90%
Not Visible	Human	52	11.80%	0	0.00%
Failure to Obey Traffic Signs/Signals/Officer	Human	38	8.60%	0	0.00%
Other Human Factor	Human	32	7.30%	71	12.70%
Inattentive/Distraction	Human	15	3.40%	0	0.00%
Disabled Vehicle Related	Human	13	3.00%	0	0.00%
Other Miscellaneous Factor	Misc.	8	1.80%	10	1.80%
Entering/Exiting Parked/Standing Vehicle	Human	8	1.80%	0	0.00%
Wrong Way Riding or Walking	Human	7	1.60%	0	0.00%
Obstruction in Roadway	Misc.	5	1.10%	2	0.40%
Improper Passing	Human	4	0.90%	6	1.10%
Work Zone	Misc.	3	0.70%	5	0.90%
Congestion Backup, Other	Misc.	3	0.70%	5	0.90%
Congestion Backup, Prior Crash	Misc.	3	0.70%	3	0.50%
Shoulders (Non,Low,Soft,High)	Misc.	2	0.50%	2	0.40%
Improper Turn/Merge	Human	1	0.20%	11	2.00%
Careless, Negligent, or Erratic Driving	Human	0	0.00%	51	9.10%
Vision Obscured	Vehicle	0	0.00%	45	8.10%
Driver Speeding	Human	0	0.00%	31	5.60%
Driver Distracted	Human	0	0.00%	28	5.00%
Reckless or Aggressive Driving	Human	0	0.00%	27	4.80%
Other Vehicular Factor	Vehicle	0	0.00%	22	3.90%
Disregard Other Traffic Signs	Human	0	0.00%	12	2.20%
Overcorrecting/Oversteering	Human	0	0.00%	12	2.20%
Failed to Keep in Proper Lane	Human	0	0.00%	10	1.80%
Improper Backing	Human	0	0.00%	9	1.60%
Ran Red Light	Human	0	0.00%	9	1.60%
Driver Swerved	Human	0	0.00%	9	1.60%
Ran Stop Sign	Human	0	0.00%	7	1.30%
Disregard Other Road Markings	Human	0	0.00%	5	0.90%
Ran Off Road	Human	0	0.00%	4	0.70%
Following Too Closely	Human	0	0.00%	3	0.50%
Defective Brakes	Vehicle	0	0.00%	2	0.40%
Wrong Side/Wrong Way	Human	0	0.00%	2	0.40%
Passing on Shoulder	Human	0	0.00%	2	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 Yield Right-of-Way	Human	58	24.90%	117	41.50%
Failure to Obey Traffic Signs/Signals/Officer	Human	50	21.50%	0	0.00%
Dart/Dash	Human	27	11.60%	0	0.00%
Wrong Way Riding or Walking	Human	19	8.20%	0	0.00%
Other Human Factor	Human	18	7.70%	39	13.80%
Not Visible	Human	16	6.90%	0	0.00%
Inattentive/Distracted	Human	11	4.70%	0	0.00%
Improper Turn/Merge	Human	9	3.90%	10	3.50%
In Roadway Improperly	Human	9	3.90%	0	0.00%
Road Surface Conditions	Misc.	7	3.00%	7	2.50%
Entering/Exiting Parked/Standing Vehicle	Human	3	1.30%	0	0.00%
Work Zone	Misc.	2	0.90%	2	0.70%
Non-Highway Work	Misc.	1	0.40%	2	0.70%
Improper Passing	Human	1	0.40%	1	0.40%
Congestion Backup, Non-Recurring Incident	Misc.	1	0.40%	1	0.40%
Other Miscellaneous Factor	Misc.	1	0.40%	1	0.40%
Vision Obscured	Vehicle	0	0.00%	25	8.90%
Driver Distracted	Human	0	0.00%	17	6.00%
Careless, Negligent, or Erratic Driving	Human	0	0.00%	16	5.70%
Other Vehicular Factor	Vehicle	0	0.00%	8	2.80%
Disregard Other Traffic Signs	Human	0	0.00%	6	2.10%
Ran Stop Sign	Human	0	0.00%	5	1.80%
Driver Speeding	Human	0	0.00%	5	1.80%
Ran Red Light	Human	0	0.00%	4	1.40%
Failed to Keep in Proper Lane	Human	0	0.00%	4	1.40%
Driver Swerved	Human	0	0.00%	3	1.10%
Following Too Closely	Human	0	0.00%	2	0.70%
Ran Off Road	Human	0	0.00%	2	0.70%
Reckless or Aggressive Driving	Human	0	0.00%	2	0.70%
Defective Brakes	Vehicle	0	0.00%	1	0.40%
Disregard Other Road Markings	Human	0	0.00%	1	0.40%
Wrong Side/Wrong Way	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.	146	26.00%	63	24.80%
Failure to Yield Right-of-Way	Human	106	18.90%	27	10.60%
Other Human Factor	Human	71	12.70%	24	9.40%
Driver Distracted	Human	61	10.90%	25	9.80%
Failed to Keep in Proper Lane	Human	27	4.80%	11	4.30%
Following Too Closely	Human	26	4.60%	13	5.10%
Ran Off Road	Human	22	3.90%	1	0.40%
Improper Turn/Merge	Human	21	3.70%	11	4.30%
Vision Obscured	Vehicle	18	3.20%	9	3.50%
Careless, Negligent, or Erratic Driving	Human	14	2.50%	9	3.50%
Disregard Other Traffic Signs	Human	12	2.10%	7	2.80%
Improper Backing	Human	7	1.20%	8	3.10%
Work Zone	Misc.	7	1.20%	2	0.80%
Other Vehicular Factor	Vehicle	5	0.90%	10	3.90%
Driver Swerved	Human	3	0.50%	9	3.50%
Ran Stop Sign	Human	3	0.50%	5	2.00%
Overcorrecting/Oversteering	Human	3	0.50%	1	0.40%
Other Miscellaneous Factor	Misc.	3	0.50%	1	0.40%
Driver Speeding	Human	2	0.40%	4	1.60%
Improper Passing	Human	1	0.20%	1	0.40%
Congestion Backup, Other	Misc.	1	0.20%	1	0.40%
Congestion Backup, Prior Crash	Misc.	1	0.20%	0	0.00%
Wrong Side/Wrong Way	Human	1	0.20%	0	0.00%
Ran Red Light	Human	0	0.00%	6	2.40%
Reckless or Aggressive Driving	Human	0	0.00%	3	1.20%
Defective Brakes	Vehicle	0	0.00%	2	0.80%
Dart/Dash	Human	0	0.00%	1	0.40%

Human Factor • Vehicular Factor • Miscellaneous Factor

Table 12.09: Contributing Factors in Motor Vehicle/Train Crashes

Contributing Factors	Type	#	%
Disregard Other Traffic Signs	Human	12	18.20%
Failure to Yield Right-of-Way	Human	11	16.70%
Road Surface Conditions	Misc.	8	12.10%
Ran Stop Sign	Human	5	7.60%
Other Vehicular Factor	Vehicle	5	7.60%
Improper Turn/Merge	Human	4	6.10%
Vision Obscured	Vehicle	3	4.50%
Other Human Factor	Human	3	4.50%
Ran Red Light	Human	2	3.00%
Disregard Other Road Markings	Human	2	3.00%
Reckless or Aggressive Driving	Human	2	3.00%
Driver Swerved	Human	2	3.00%
Driver Speeding	Human	2	3.00%
Work Zone	Misc.	1	1.50%
Defective Brakes	Vehicle	1	1.50%
Wrong Side/Wrong Way	Human	1	1.50%
Careless, Negligent, or Erratic Driving	Human	1	1.50%
Driver Distracted	Human	1	1.50%

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	1,432	15.20%	705	25.00%
Following Too Closely	Human	1,234	13.10%	491	17.40%
Driver Distracted	Human	875	9.30%	169	6.00%
Other Human Factor	Human	819	8.70%	285	10.10%
Driver Speeding	Human	614	6.50%	63	2.20%
Failed to Keep in Proper Lane	Human	612	6.50%	125	4.40%
Careless, Negligent, or Erratic Driving	Human	553	5.90%	128	4.50%
Ran Off Road	Human	465	4.90%	7	0.20%
Driver Swerved	Human	459	4.90%	92	3.30%
Overcorrecting/Oversteering	Human	442	4.70%	17	0.60%
Improper Turn/Merge	Human	364	3.90%	155	5.50%
Other Vehicular Factor	Vehicle	284	3.00%	85	3.00%
Defective Brakes	Vehicle	196	2.10%	25	0.90%
Ran Red Light	Human	189	2.00%	79	2.80%
Disregard Other Traffic Signs	Human	159	1.70%	74	2.60%
Vision Obscured	Vehicle	154	1.60%	82	2.90%
Ran Stop Sign	Human	144	1.50%	60	2.10%
Reckless or Aggressive Driving	Human	126	1.30%	26	0.90%
Improper Backing	Human	81	0.90%	28	1.00%
Improper Passing	Human	61	0.60%	24	0.90%
Disregard Other Road Markings	Human	54	0.60%	29	1.00%
Wrong Side/Wrong Way	Human	27	0.30%	21	0.70%
Defective Steering	Vehicle	26	0.30%	2	0.10%
Defective Wheels	Vehicle	9	0.10%	2	0.10%
Passing on Shoulder	Human	9	0.10%	7	0.20%
Dart/Dash	Human	0	0.00%	6	0.20%
Not Visible	Human	0	0.00%	12	0.40%

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

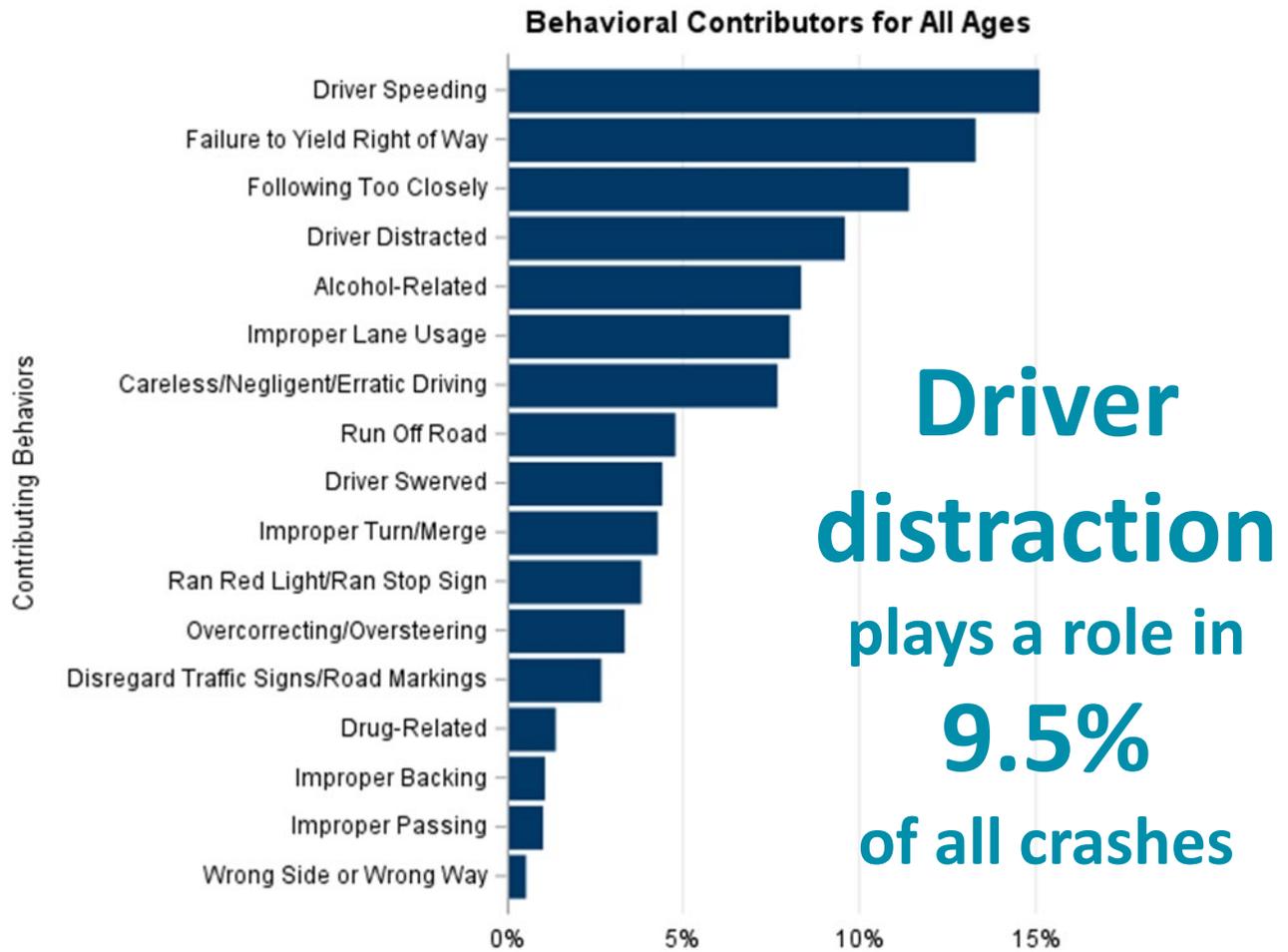
Contributing Factors	Type	Attributed to Senior Drivers		Attributed to Other Vehicle Driver	
		#	%	#	%
Failure to Yield Right-of-Way	Human	1,576	25.30%	882	20.20%
Other Human Factor	Human	679	10.90%	401	9.20%
Failed to Keep in Proper Lane	Human	542	8.70%	219	5.00%
Following Too Closely	Human	491	7.90%	745	17.00%
Improper Turn/Merge	Human	451	7.30%	236	5.40%
Driver Distracted	Human	337	5.40%	388	8.90%
Ran Off Road	Human	273	4.40%	7	0.20%
Careless, Negligent, or Erratic Driving	Human	215	3.50%	227	5.20%
Ran Red Light	Human	192	3.10%	186	4.30%
Driver Swerved	Human	192	3.10%	128	2.90%
Vision Obscured	Vehicle	189	3.00%	101	2.30%
Disregard Other Traffic Signs	Human	189	3.00%	141	3.20%
Other Vehicular Factor	Vehicle	174	2.80%	91	2.10%
Overcorrecting/Oversteering	Human	127	2.00%	35	0.80%
Improper Backing	Human	116	1.90%	57	1.30%
Ran Stop Sign	Human	114	1.80%	92	2.10%
Driver Speeding	Human	92	1.50%	130	3.00%
Improper Passing	Human	77	1.20%	52	1.20%
Defective Brakes	Vehicle	56	0.90%	81	1.90%
Wrong Side/Wrong Way	Human	50	0.80%	23	0.50%
Disregard Other Road Markings	Human	48	0.80%	39	0.90%
Defective Steering	Vehicle	9	0.10%	3	0.10%
Reckless or Aggressive Driving	Human	9	0.10%	39	0.90%
Defective Power Train	Vehicle	7	0.10%	3	0.10%
Passing on Shoulder	Human	5	0.10%	7	0.20%
Defective Wheels	Vehicle	3	0.00%	6	0.10%
Failure to Obey Traffic Signs/Signals/Officer	Human	0	0.00%	13	0.30%
Dart/Dash	Human	0	0.00%	12	0.30%
In Roadway Improperly	Human	0	0.00%	6	0.10%
Not Visible	Human	0	0.00%	12	0.30%

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.

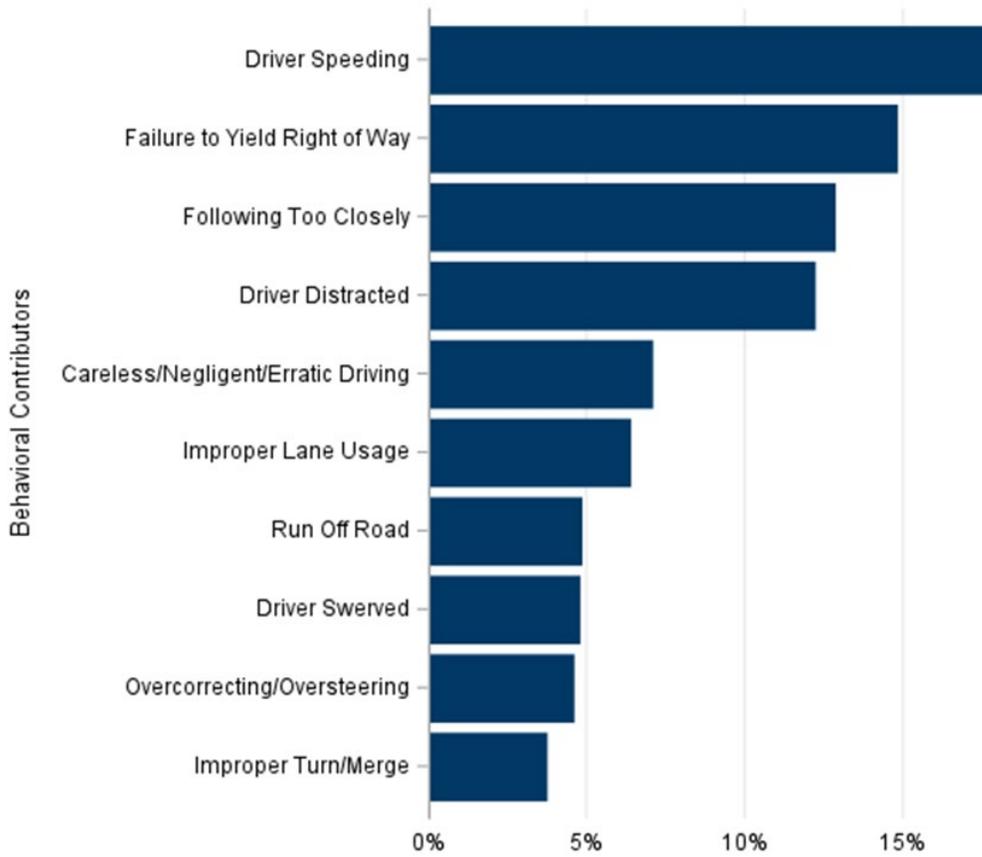


Driver distraction plays a role in 9.5% of all crashes

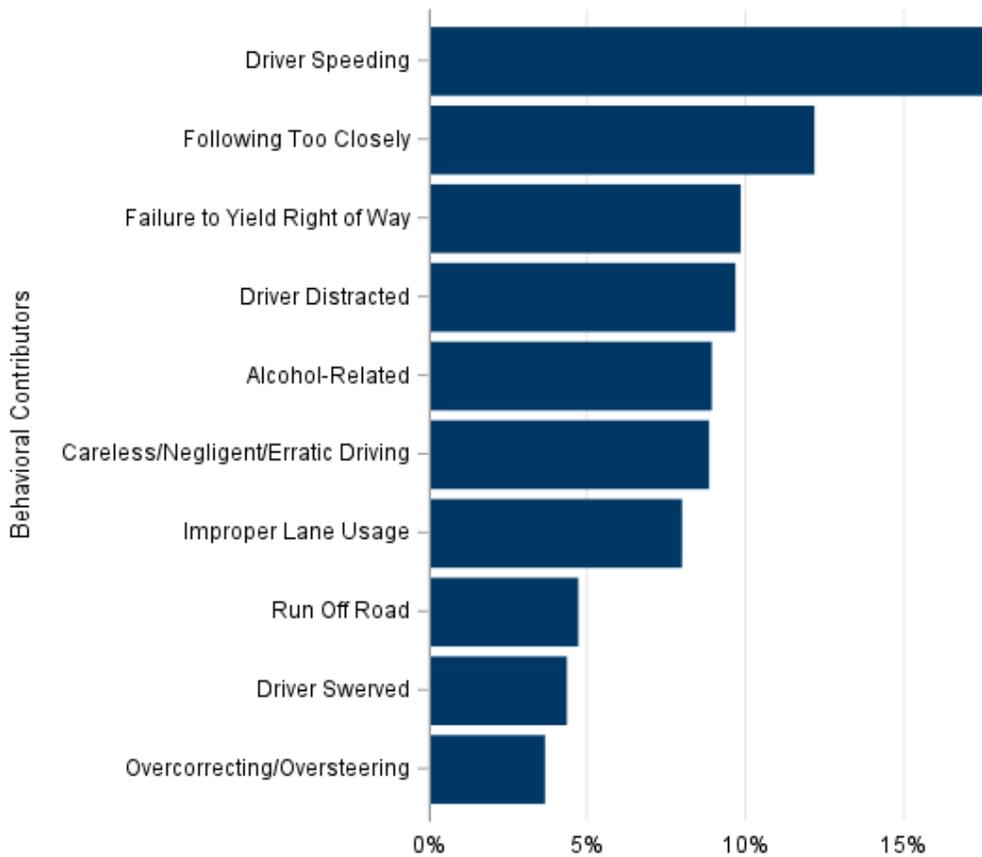
Driver speeding is the most frequent behavior contributing to a crash

9.6% related to alcohol or drug use

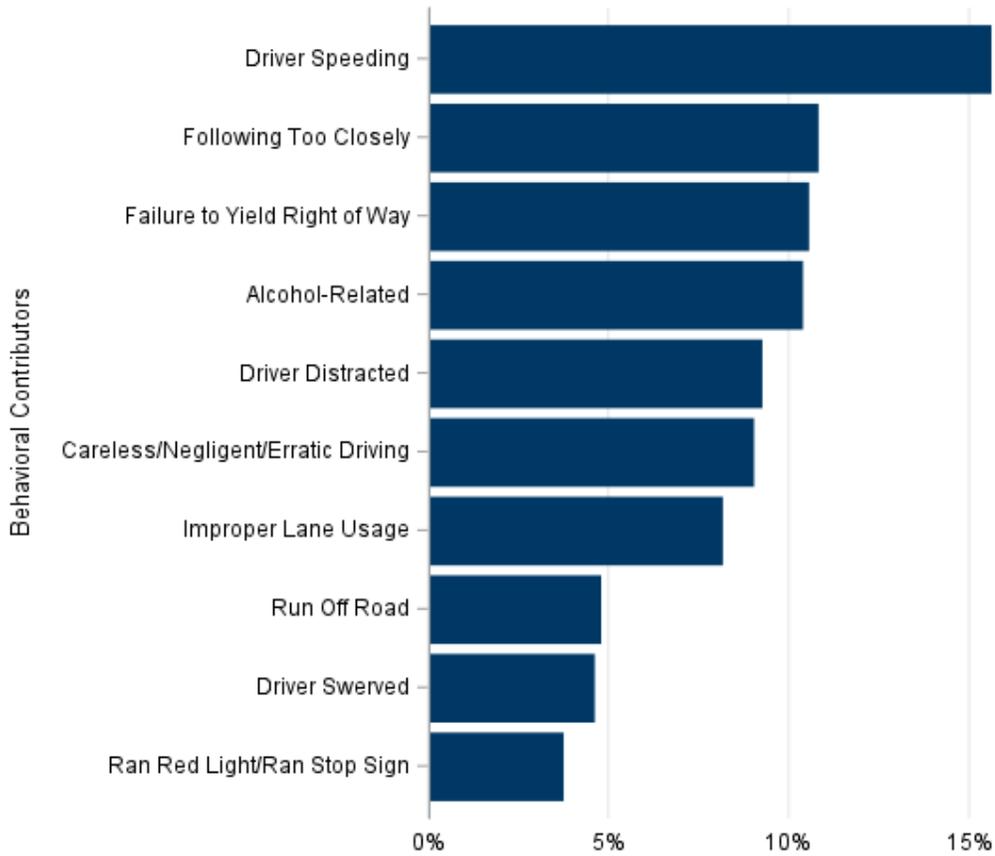
Top 10 Behavioral Contributors for Age 15-19



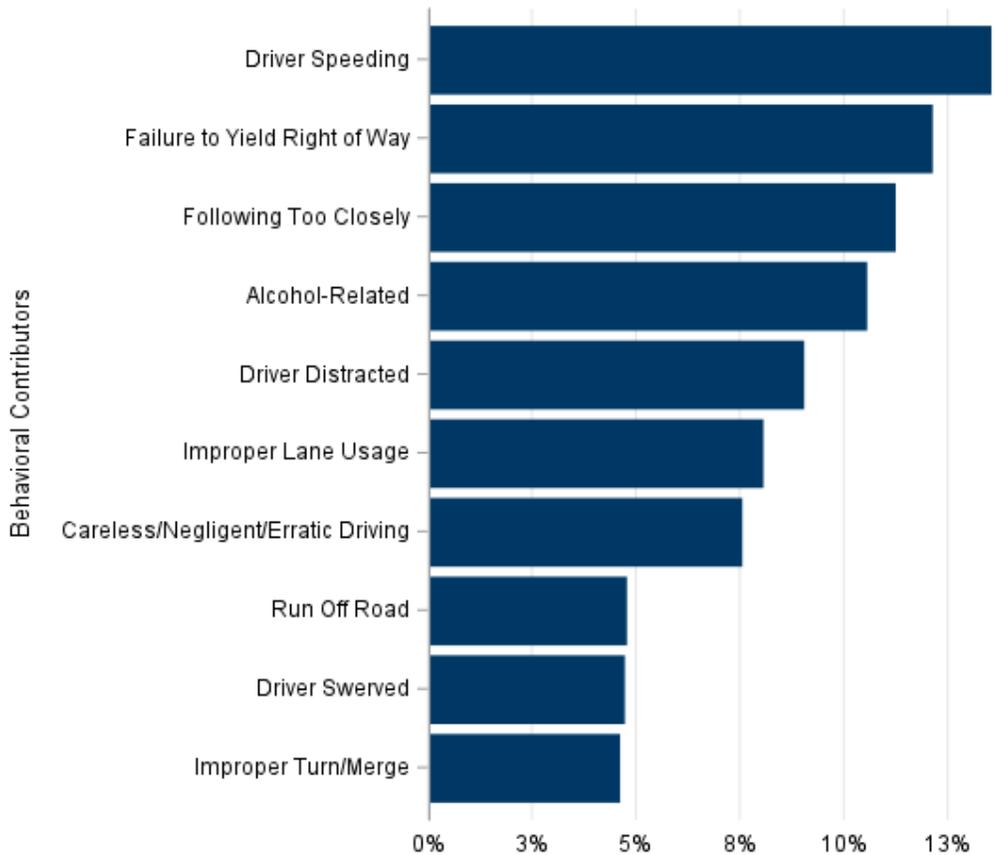
Top 10 Behavioral Contributors for Age 20-29



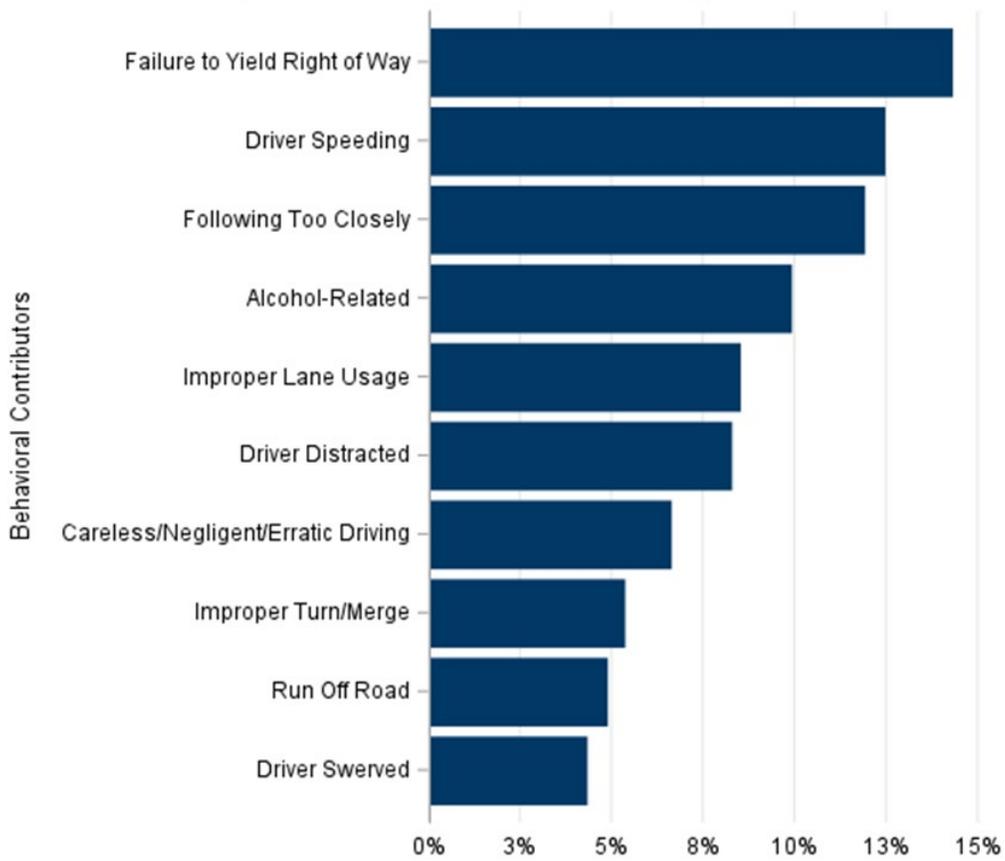
Top 10 Behavioral Contributors for Age 30-39



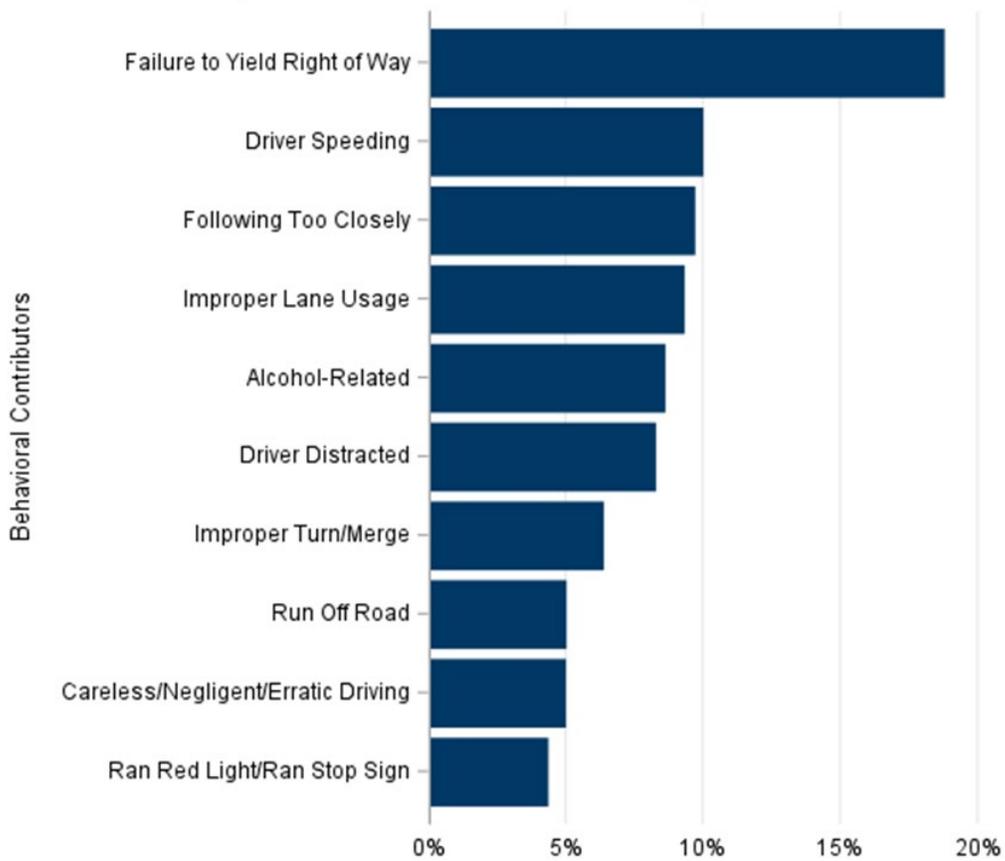
Top 10 Behavioral Contributors for Age 40-49



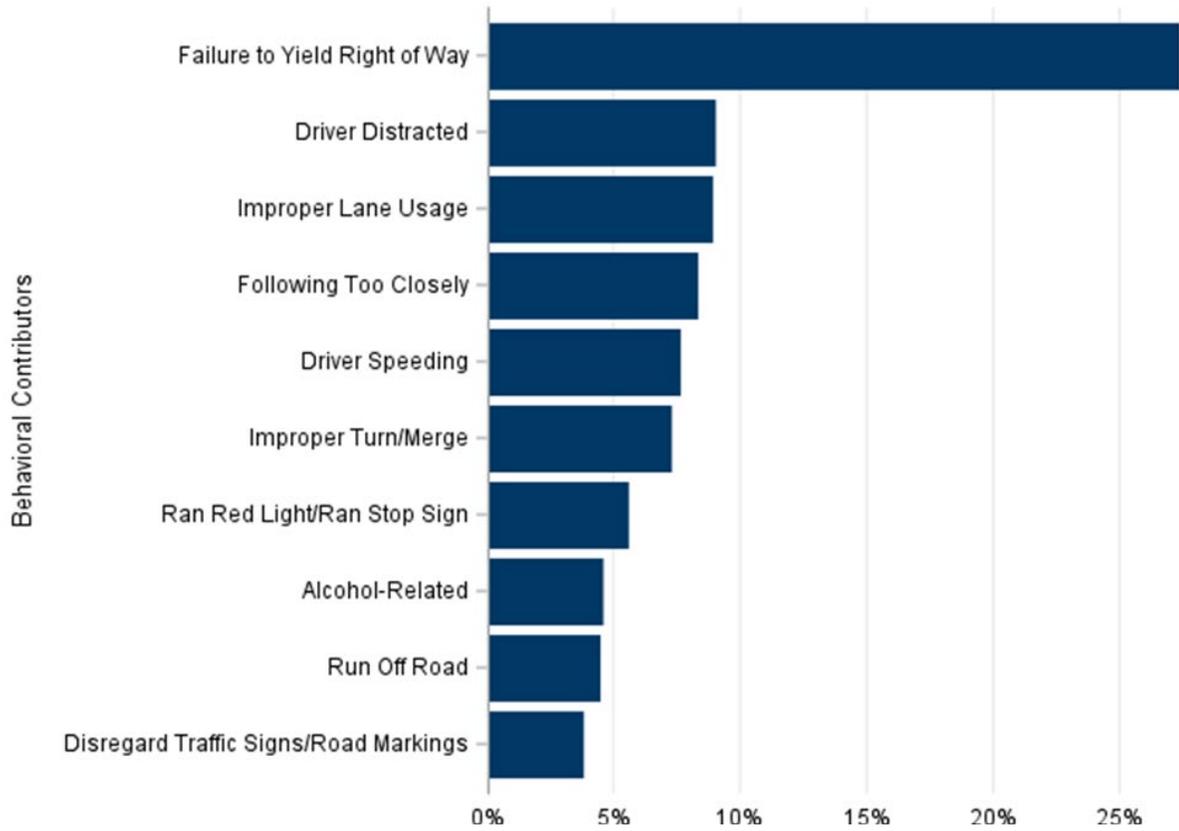
Top 10 Behavioral Contributors for Age 50-59



Top 10 Behavioral Contributors for Age 60-69



Top 10 Behavioral Contributors for Age 70-79



Top 10 Behavioral Contributors for Age 80+

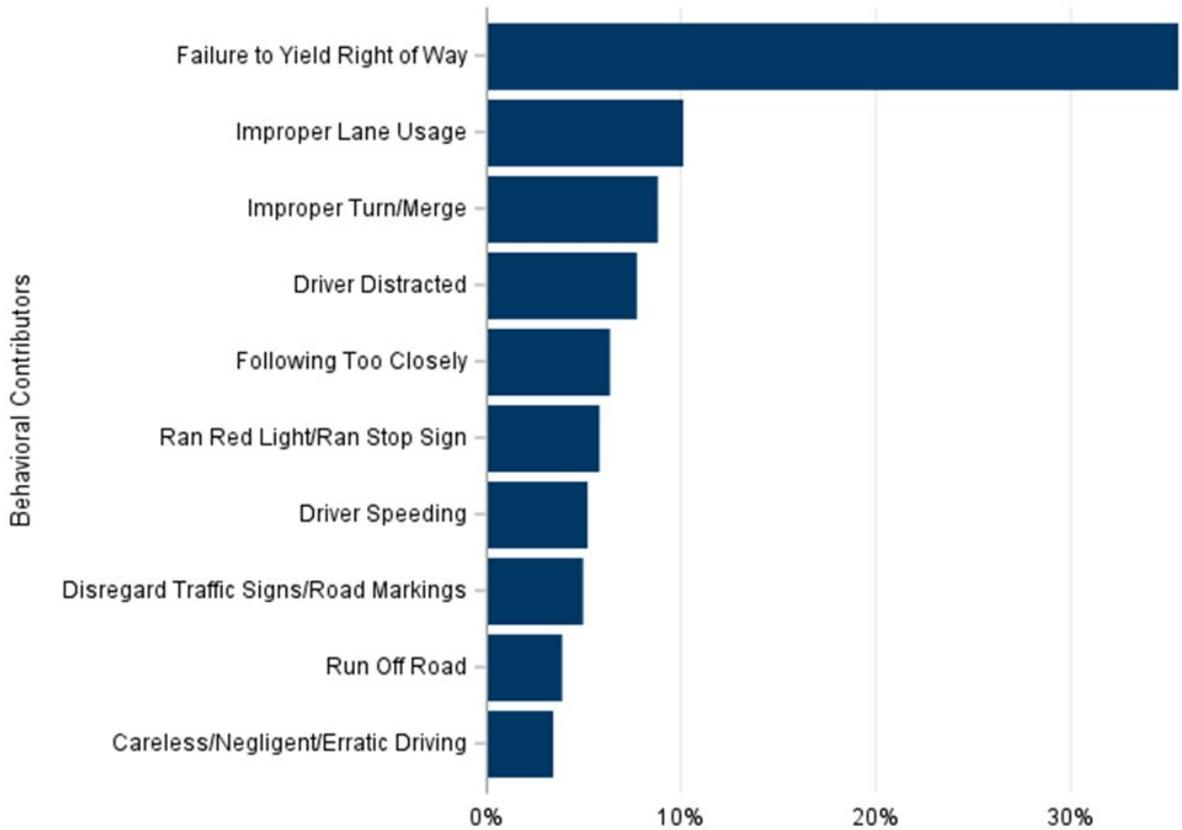


Table 12.12: Behavioral Contributors for Male Drivers, by Age Group

Contributing Behaviors	Age 15-19		Age 20-29		Age 30-39		Age 40-49		Age 50-59	
	#	%	#	%	#	%	#	%	#	%
Fail to Yield Right of Way	696	12.9%	1,042	8.7%	739	8.9%	508	9.9%	516	12.5%
Following Too Closely	647	11.9%	1,351	11.3%	887	10.6%	583	11.3%	478	11.6%
Improper Passing	40	0.7%	117	1.0%	73	0.9%	73	1.4%	43	1.0%
Improper Turn/Merge	176	3.3%	365	3.0%	285	3.4%	203	3.9%	214	5.2%
Improper Backing	39	0.7%	83	0.7%	74	0.9%	66	1.3%	58	1.4%
Run Off Road	274	5.1%	623	5.2%	427	5.1%	272	5.3%	220	5.3%
Ran Red Light/Stop Sign	185	3.4%	407	3.4%	288	3.4%	180	3.5%	140	3.4%
Disregard Traffic Signs	121	2.2%	262	2.2%	203	2.4%	139	2.7%	107	2.6%
Wrong Side/Wrong Way	13	0.2%	47	0.4%	51	0.6%	22	0.4%	21	0.5%
Improper Lane Usage	349	6.4%	956	8.0%	685	8.2%	417	8.1%	374	9.0%
Careless/Negligent/Erratic	457	8.4%	1,154	9.6%	836	10.0%	444	8.6%	299	7.2%
Driver Swerved	237	4.4%	523	4.4%	387	4.6%	240	4.7%	178	4.3%
Overcorrecting/Oversteering	230	4.2%	404	3.4%	254	3.0%	138	2.7%	124	3.0%
Driver Distracted	667	12.3%	1,074	9.0%	703	8.4%	450	8.7%	323	7.8%
Driver Speeding	1,064	19.6%	2,224	18.6%	1,383	16.6%	758	14.7%	565	13.7%
Alcohol-Related	184	3.4%	1,131	9.4%	910	10.9%	554	10.7%	425	10.3%
Drug-Related	36	0.7%	225	1.9%	165	2.0%	107	2.1%	48	1.2%
Total	5,415		11,988		8,350		5,154		4,133	

n 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	471	15.7%	358	24.0%	237	32.2%	5	9.8%	4,572
Following Too Closely	293	9.8%	135	9.0%	45	6.1%	1	2.0%	4,420
Improper Passing	35	1.2%	27	1.8%	5	0.7%	1	2.0%	414
Improper Turn/Merge	188	6.3%	91	6.1%	64	8.7%	2	3.9%	1,588
Improper Backing	72	2.4%	37	2.5%	11	1.5%	0	0.0%	440
Run Off Road	177	5.9%	74	5.0%	34	4.6%	0	0.0%	2,101
Ran Red Light/Stop Sign	102	3.4%	65	4.4%	46	6.3%	0	0.0%	1,413
Disregard Traffic Signs	95	3.2%	50	3.4%	38	5.2%	3	5.9%	1,018
Wrong Side/Wrong Way	16	0.5%	13	0.9%	10	1.4%	2	3.9%	195
Improper Lane Usage	281	9.4%	143	9.6%	77	10.5%	2	3.9%	3,284
Careless/Negligent/Erratic	158	5.3%	60	4.0%	21	2.9%	14	27.5%	3,443
Driver Swerved	144	4.8%	59	4.0%	14	1.9%	0	0.0%	1,782
Overcorrecting/Oversteering	79	2.6%	32	2.1%	14	1.9%	1	2.0%	1,276
Driver Distracted	236	7.9%	133	8.9%	49	6.7%	3	5.9%	3,638
Driver Speeding	339	11.3%	127	8.5%	44	6.0%	11	21.6%	6,515
Alcohol-Related	286	9.5%	80	5.4%	25	3.4%	6	11.8%	3,601
Drug-Related	28	0.9%	8	0.5%	1	0.1%	0	0.0%	618
Total	3,000		1,492		735		51		40,318

n 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	713	17.3%	846	11.7%	616	13.6%	436	16.4%	381	17.9%
Following Too Closely	582	14.1%	990	13.7%	503	11.1%	298	11.2%	269	12.6%
Improper Passing	30	0.7%	58	0.8%	41	0.9%	26	1.0%	28	1.3%
Improper Turn/Merge	180	4.4%	249	3.5%	184	4.1%	155	5.8%	122	5.7%
Improper Backing	35	0.8%	50	0.7%	32	0.7%	27	1.0%	31	1.5%
Run Off Road	186	4.5%	277	3.8%	186	4.1%	100	3.8%	84	3.9%
Ran Red Light/Stop Sign	146	3.5%	246	3.4%	189	4.2%	126	4.7%	100	4.7%
Disregard Traffic Signs	89	2.2%	168	2.3%	121	2.7%	75	2.8%	69	3.2%
Wrong Side/Wrong Way	13	0.3%	32	0.4%	27	0.6%	12	0.5%	8	0.4%
Improper Lane Usage	256	6.2%	568	7.9%	362	8.0%	209	7.9%	157	7.4%
Careless/Negligent/Erratic	213	5.2%	524	7.3%	321	7.1%	143	5.4%	111	5.2%
Driver Swerved	220	5.3%	308	4.3%	205	4.5%	126	4.7%	91	4.3%
Overcorrecting/Oversteering	208	5.0%	292	4.1%	149	3.3%	77	2.9%	59	2.8%
Driver Distracted	503	12.2%	781	10.8%	487	10.8%	257	9.7%	192	9.0%
Driver Speeding	622	15.1%	1,173	16.3%	622	13.8%	298	11.2%	215	10.1%
Alcohol-Related	116	2.8%	555	7.7%	411	9.1%	260	9.8%	193	9.1%
Drug-Related	17	0.4%	91	1.3%	67	1.5%	31	1.2%	20	0.9%
Total	4,129		7,208		4,523		2,656		2,130	

n 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	407	24.2%	348	31.9%	223	39.6%	2	5.1%	3,972
Following Too Closely	160	9.5%	79	7.2%	37	6.6%	0	0.0%	2,918
Improper Passing	19	1.1%	10	0.9%	7	1.2%	0	0.0%	219
Improper Turn/Merge	108	6.4%	96	8.8%	50	8.9%	2	5.1%	1,146
Improper Backing	28	1.7%	12	1.1%	5	0.9%	3	7.7%	223
Run Off Road	54	3.2%	39	3.6%	16	2.8%	6	15.4%	948
Ran Red Light/Stop Sign	100	5.9%	78	7.2%	29	5.2%	0	0.0%	1,014
Disregard Traffic Signs	72	4.3%	47	4.3%	25	4.4%	1	2.6%	667
Wrong Side/Wrong Way	15	0.9%	11	1.0%	6	1.1%	0	0.0%	124
Improper Lane Usage	151	9.0%	85	7.8%	52	9.2%	3	7.7%	1,843
Careless/Negligent/Erratic	74	4.4%	30	2.8%	22	3.9%	7	17.9%	1,445
Driver Swerved	56	3.3%	25	2.3%	5	0.9%	1	2.6%	1,037
Overcorrecting/Oversteering	34	2.0%	23	2.1%	5	0.9%	5	12.8%	852
Driver Distracted	150	8.9%	98	9.0%	51	9.1%	2	5.1%	2,521
Driver Speeding	128	7.6%	69	6.3%	22	3.9%	6	15.4%	3,155
Alcohol-Related	114	6.8%	36	3.3%	8	1.4%	1	2.6%	1,694
Drug-Related	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
Total	1,670		1,086		563		39		23,778

n 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.

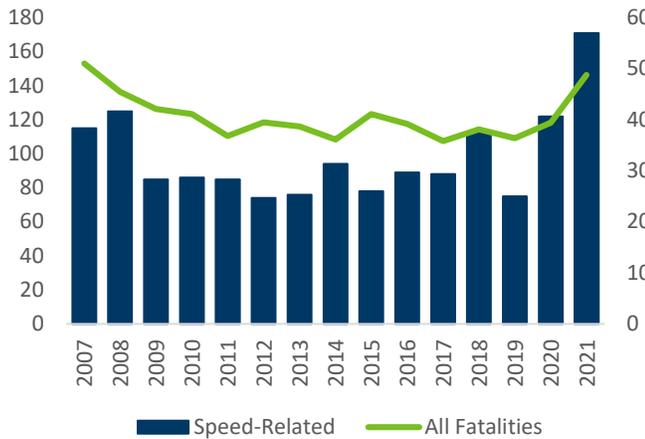
Urban - An area having a population of 5,000 or more.

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.

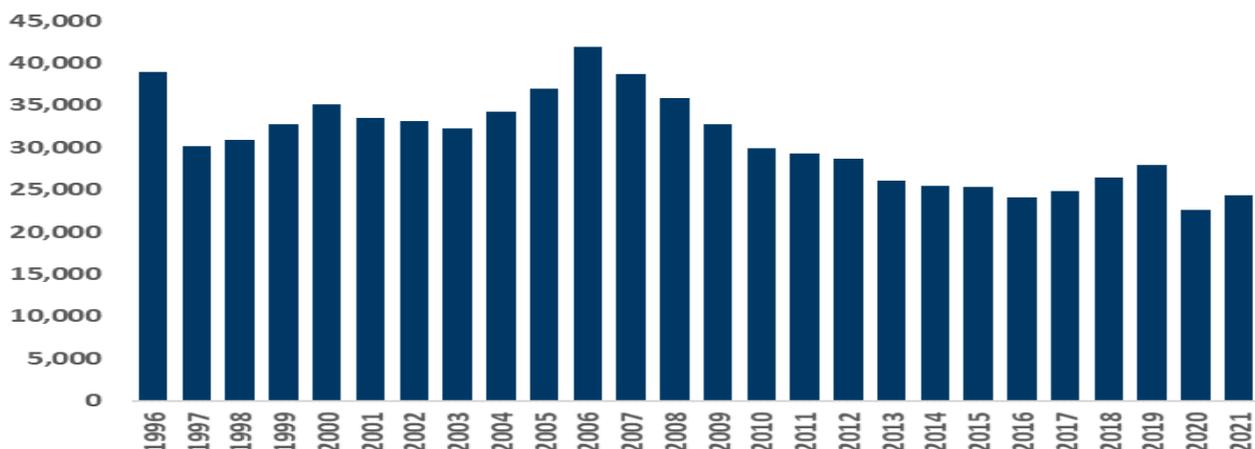
An Historical Look

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.

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:

67
DWIs
per day

IDF Figure 1: DWIs on Record



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
2001	33,541	32,629	32,710	29,091	1,196	2,423	26	218	377	10	36
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

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.

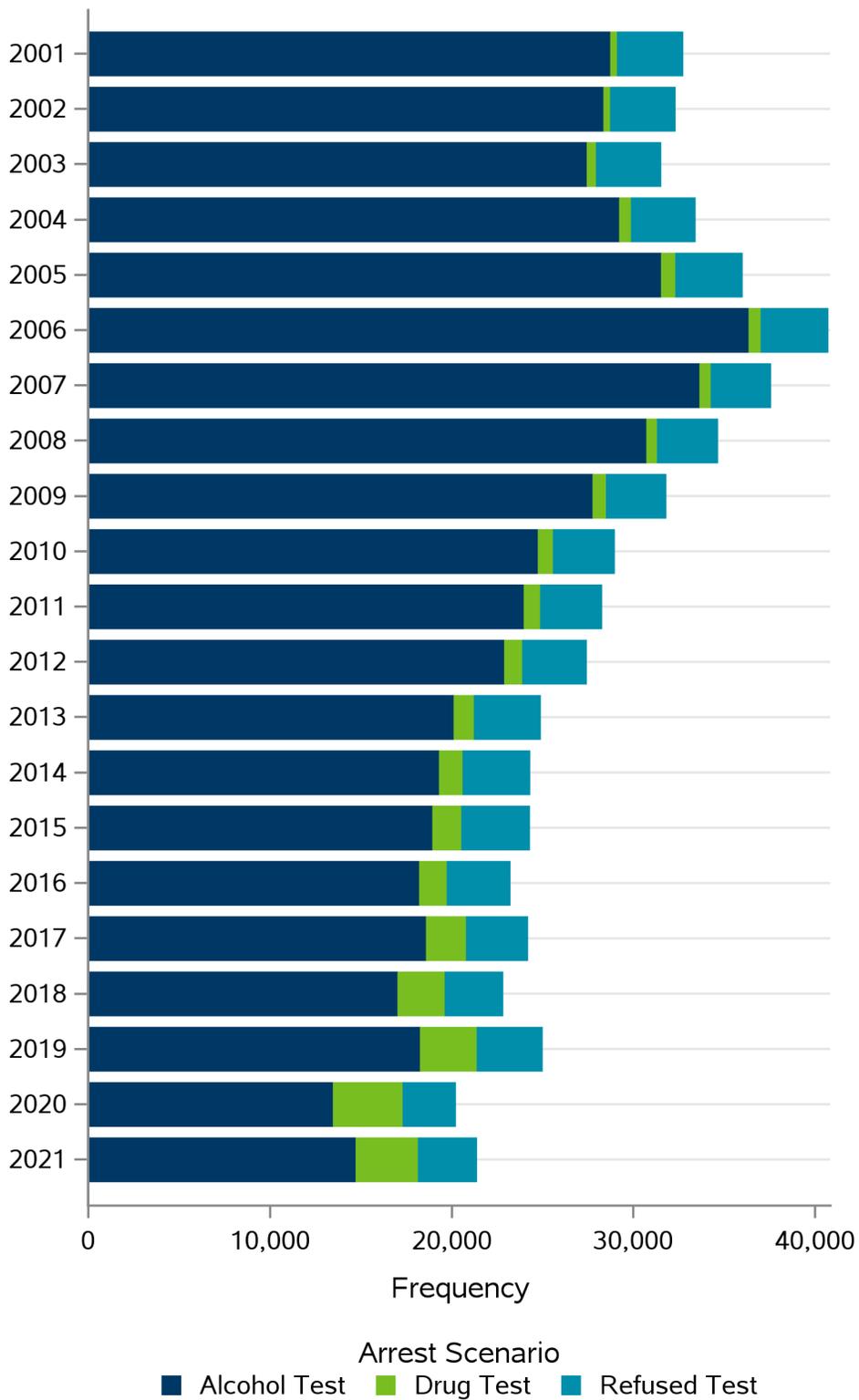
CVO – Criminal Vehicular Operation of a motor vehicle may result in fatalities or injuries. Those counts are detailed in the fatalities and injuries columns.

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.

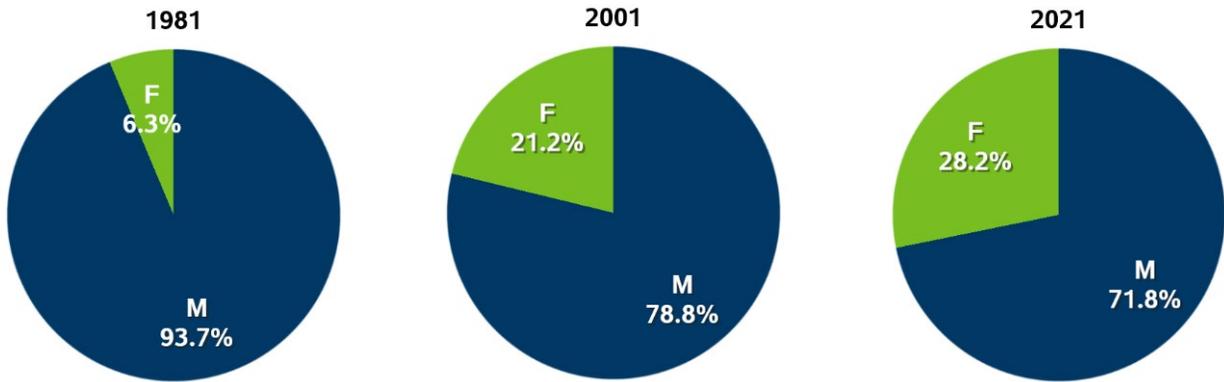
IDF Figure 2: Impaired Driving Incidents Under Three Arrest Scenarios



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.

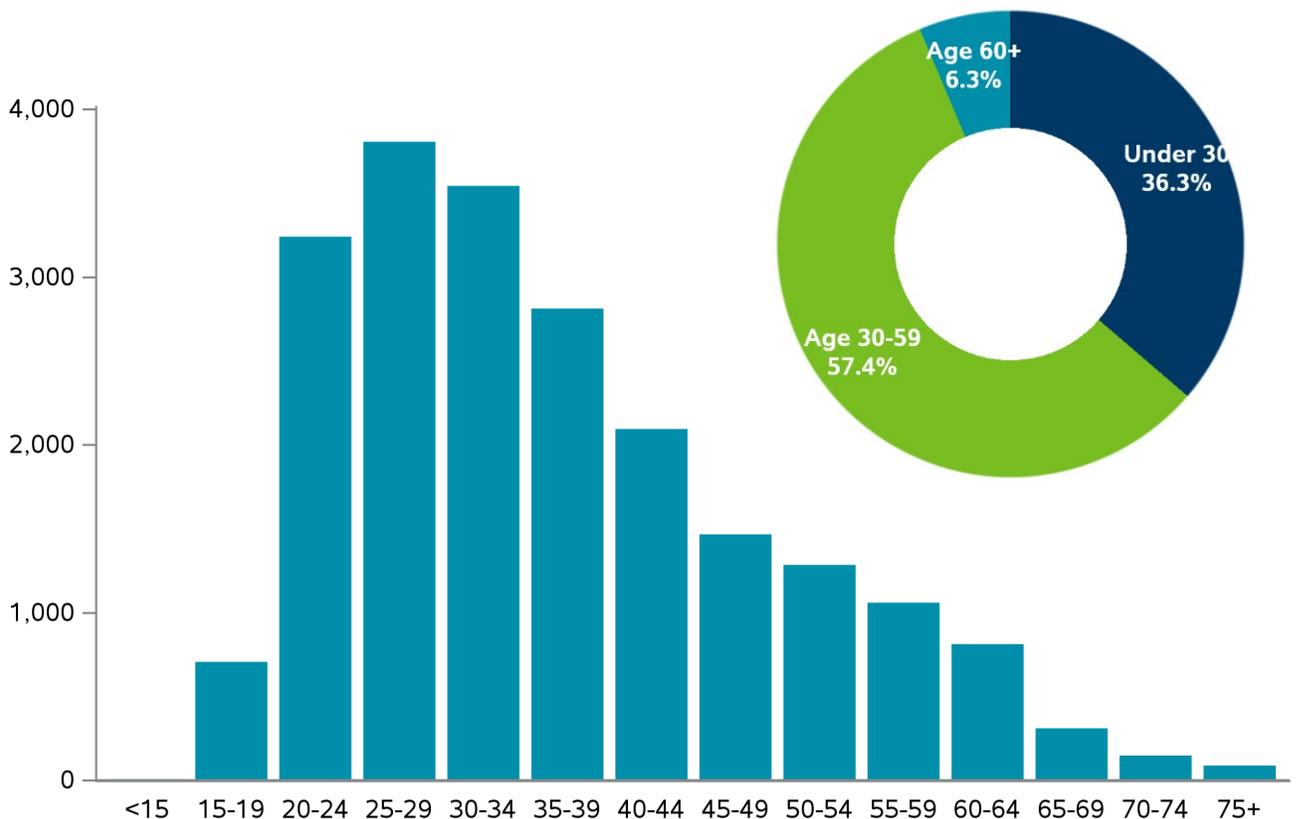
IDF Figure 3: Gender in Impaired Driving Incidents



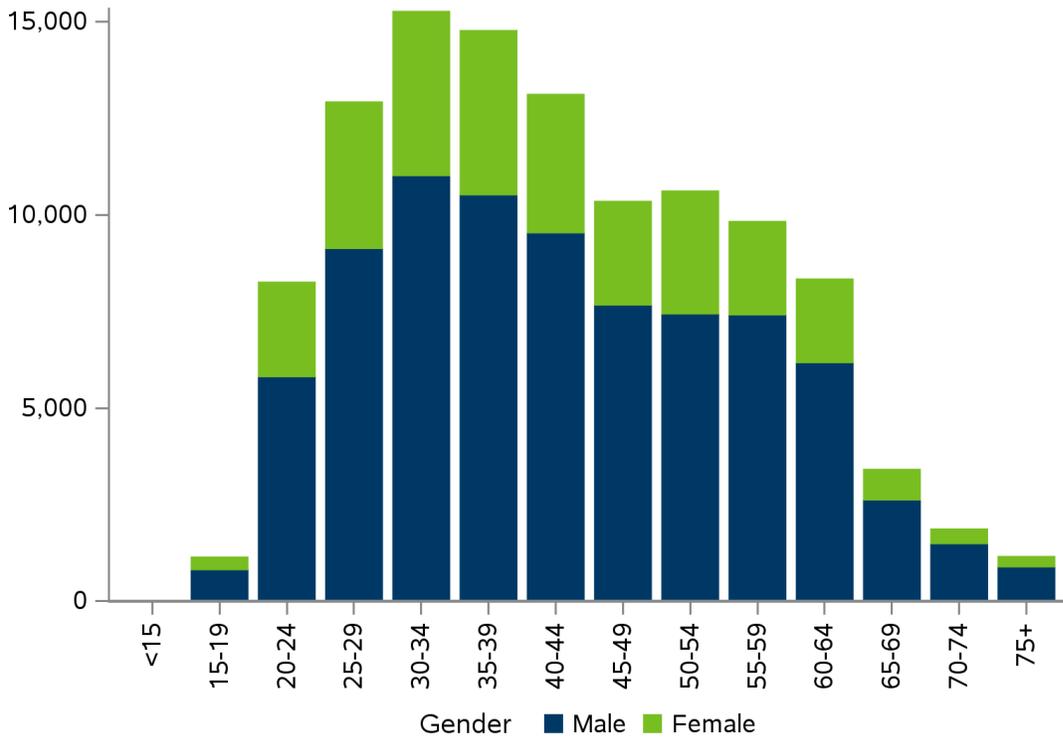
Female DWIs increasing,
but predominately
a male issue

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
2017	0%	0%	3%	7%	21%	31%	38%	1,227	0%	1%	5%	12%	24%	30%	27%	437
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

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

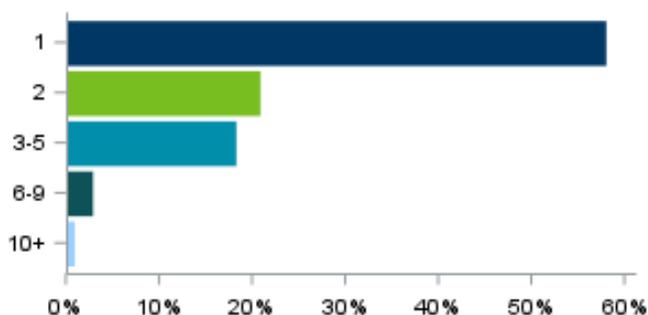
**NAD average
BAC is
0.058
for <21**

Recidivism and impaired driving

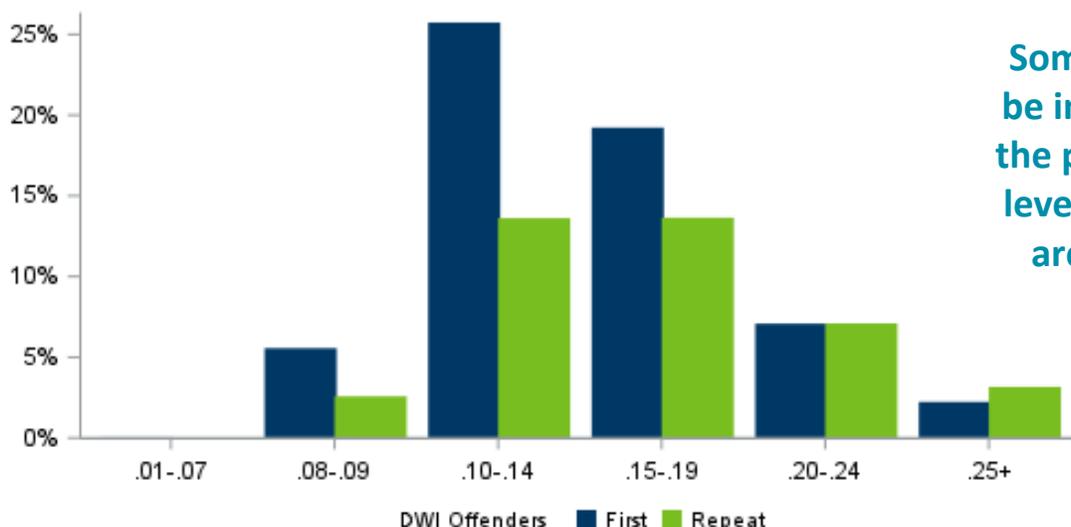
A perception exists that impaired driving is a problem caused by a small subset of the population who are chemically dependent individuals that drink and drive all the time. While recidivism is an key component in the impaired driving discussion, the majority of impaired driving violators are first time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

57%
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.

629,830

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

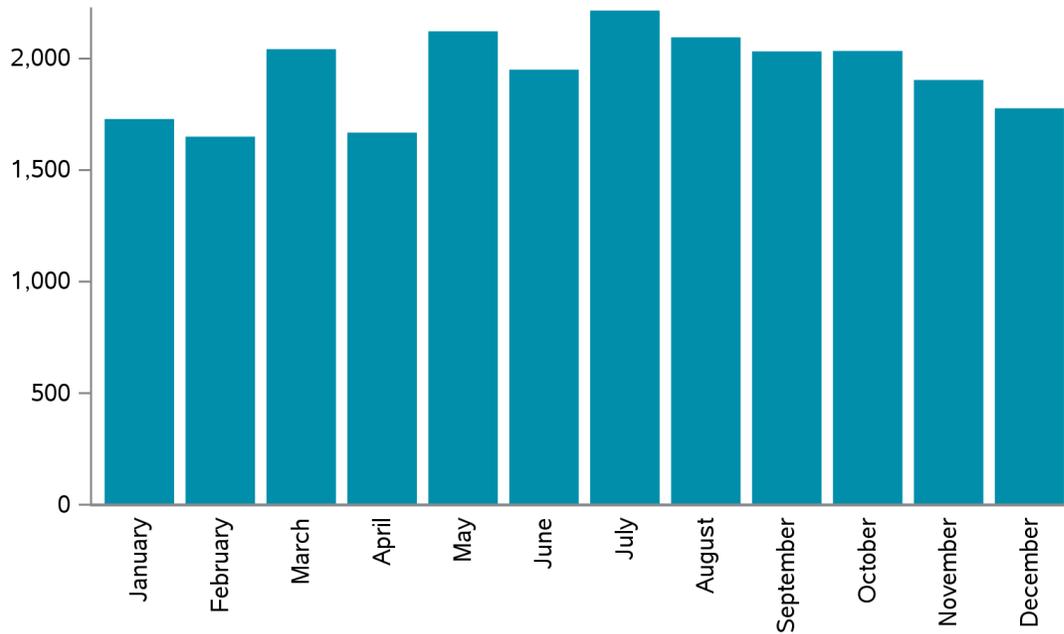
IDF Table 3: Minnesota Residents With Impaired Driving Incidents on Record, By Total Number on Record and Age

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	814	28,716	77,261	80,749	77,932	58,169	24,721	15,843	364,205
2	16	3,342	22,435	28,970	33,761	26,127	10,101	5,480	130,232
3	31	2,875	10,626	14,389	18,282	15,314	5,760	3,084	70,361
4	3	381	2,084	4,227	7,715	7,860	2,908	1,511	26,689
5	2	556	1,964	2,733	4,583	4,533	1,715	765	16,851
6	0	83	504	851	1,906	2,220	843	412	6,819
7	0	120	556	847	1,437	1,588	565	274	5,387
8	0	28	184	281	713	877	373	168	2,624
9	0	16	157	270	639	673	220	111	2,086
10	0	7	61	118	299	436	178	78	1,177
11	0	5	30	94	321	372	120	49	991
12	0	0	19	36	165	226	89	43	578
13	0	0	7	38	134	210	71	35	495
14	0	0	2	12	101	110	48	26	299
15	0	0	1	14	82	93	37	21	248
16	0	0	0	11	51	91	17	14	184
17	0	0	1	7	33	49	19	10	119
18	0	0	1	4	27	39	17	7	95
19	0	0	0	4	32	31	18	3	88
20	0	0	0	2	24	29	10	7	72
21	0	0	0	2	14	15	9	7	47
22	0	0	0	1	9	12	4	1	27
23	0	0	0	1	6	8	10	4	29
24	0	0	0	0	4	16	9	4	33
25	0	0	0	0	3	5	5	0	13
26	0	0	0	0	3	15	4	1	23
27	0	0	0	0	4	3	4	0	11
28	0	0	0	0	2	10	1	0	13
29	0	0	0	1	2	2	2	0	7
30	0	0	0	0	4	5	2	0	11
31	0	0	0	0	1	2	1	1	5
32	0	0	0	1	0	1	0	0	2
33	0	0	0	0	1	1	0	0	2
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	1	1	0	0	2
45	0	0	0	0	2	0	0	0	2
53	0	0	0	0	0	0	0	1	1
Total Persons	866	36,129	115,893	133,663	148,293	119,144	47,882	27,960	629,830

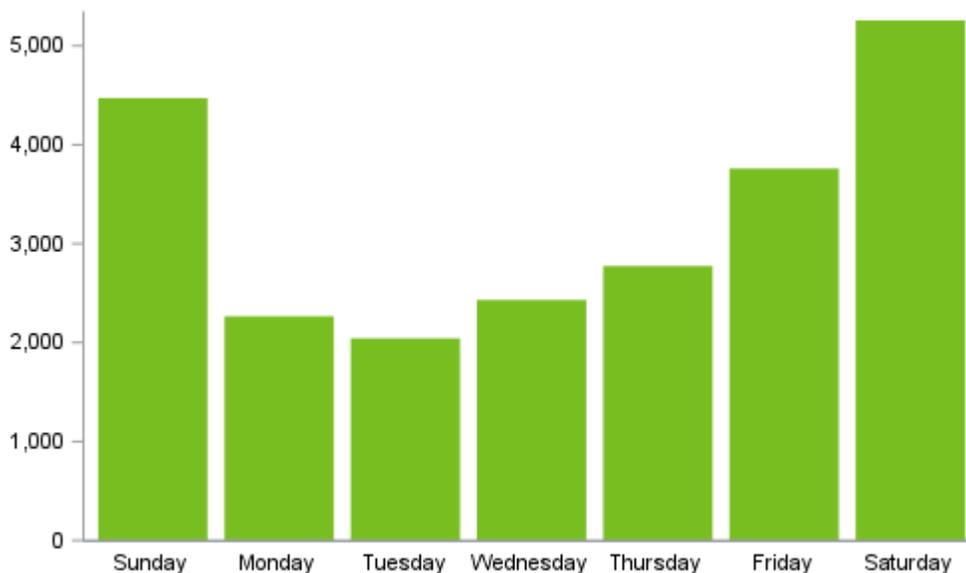
When does impaired driving occur?

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.

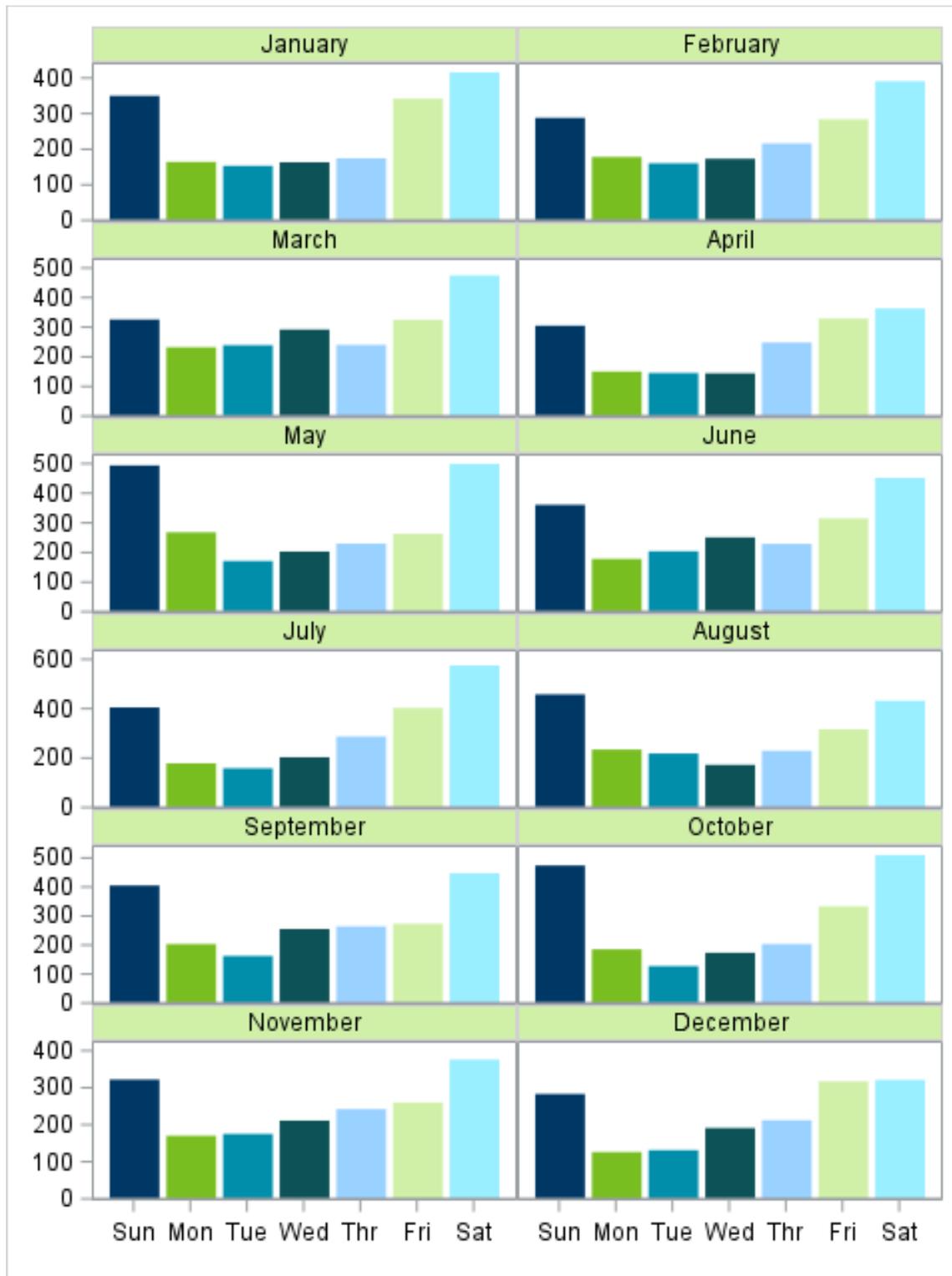
IDF Figure 8: DWI Arrests by Month



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
10/30/2021	Saturday	143
9/18/2021	Saturday	131
2/27/2021	Saturday	127
10/31/2021	Sunday	126
7/3/2021	Saturday	123
8/14/2021	Saturday	120
5/16/2021	Sunday	119
9/4/2021	Saturday	119
3/13/2021	Saturday	118
7/17/2021	Saturday	118

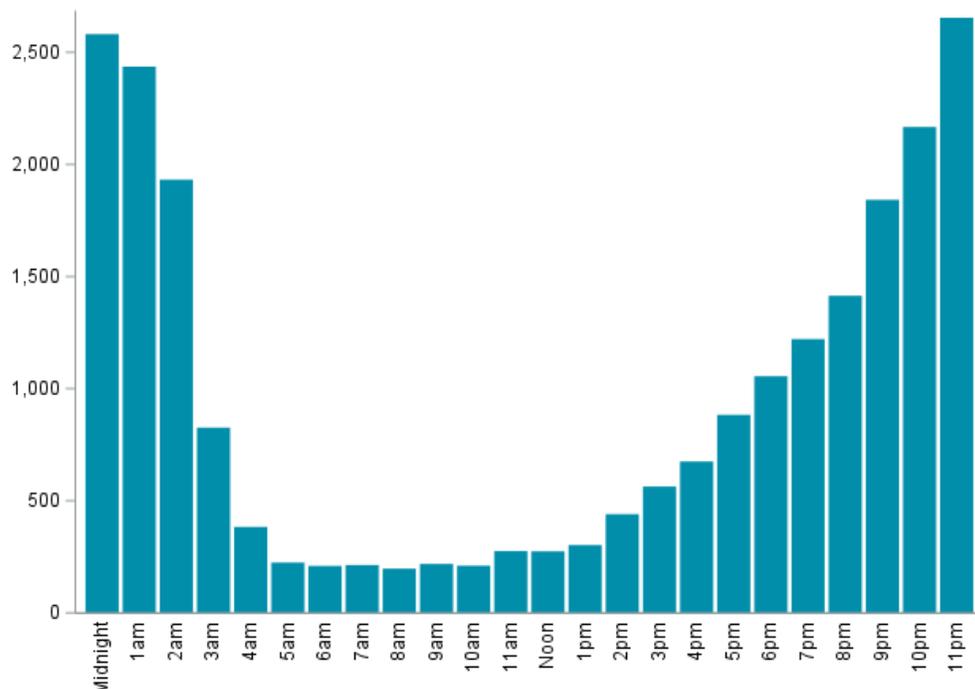
IDF Table 5: DWI Incidents – Holidays

Holiday	DWI Incidents	DWIs Per Hour
New Year's Day	300	2.5
Super Bowl	88	1.83
Valentine's Day	108	2.25
St. Patrick's Day	134	2.79
Cinco de Mayo	138	1.92
Memorial Day	363	3.03
July 4th	381	3.18
Labor Day	387	3.23
Halloween	379	3.95
Thanksgiving	424	2.94
Christmas	227	1.89

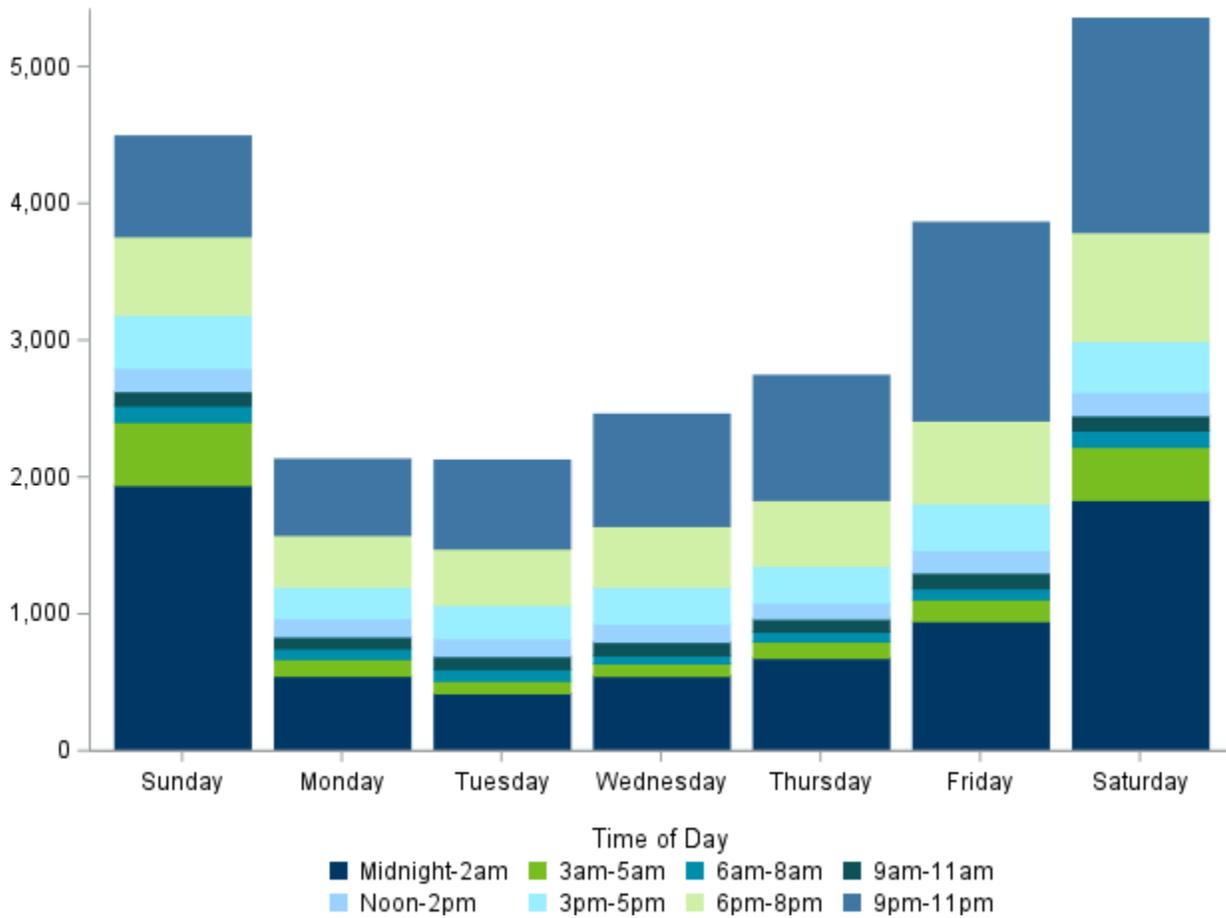
Weekend days
have the most
DWI arrests

This year,
Halloween
had highest DWIs per hour,
followed by Labor Day and
July 4th holiday

IDF Figure 11: DWI Arrests By Hour of Day



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

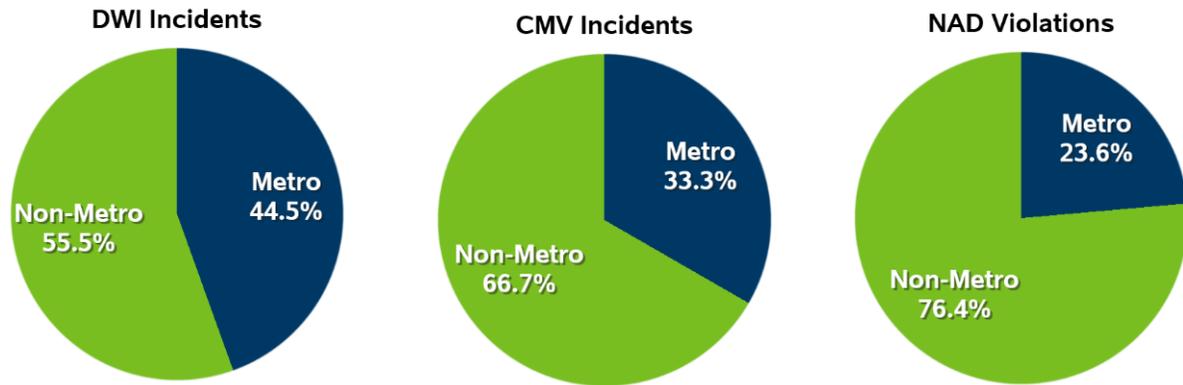


IDF Table 6: Monthly DWI Arrests By Time of Day

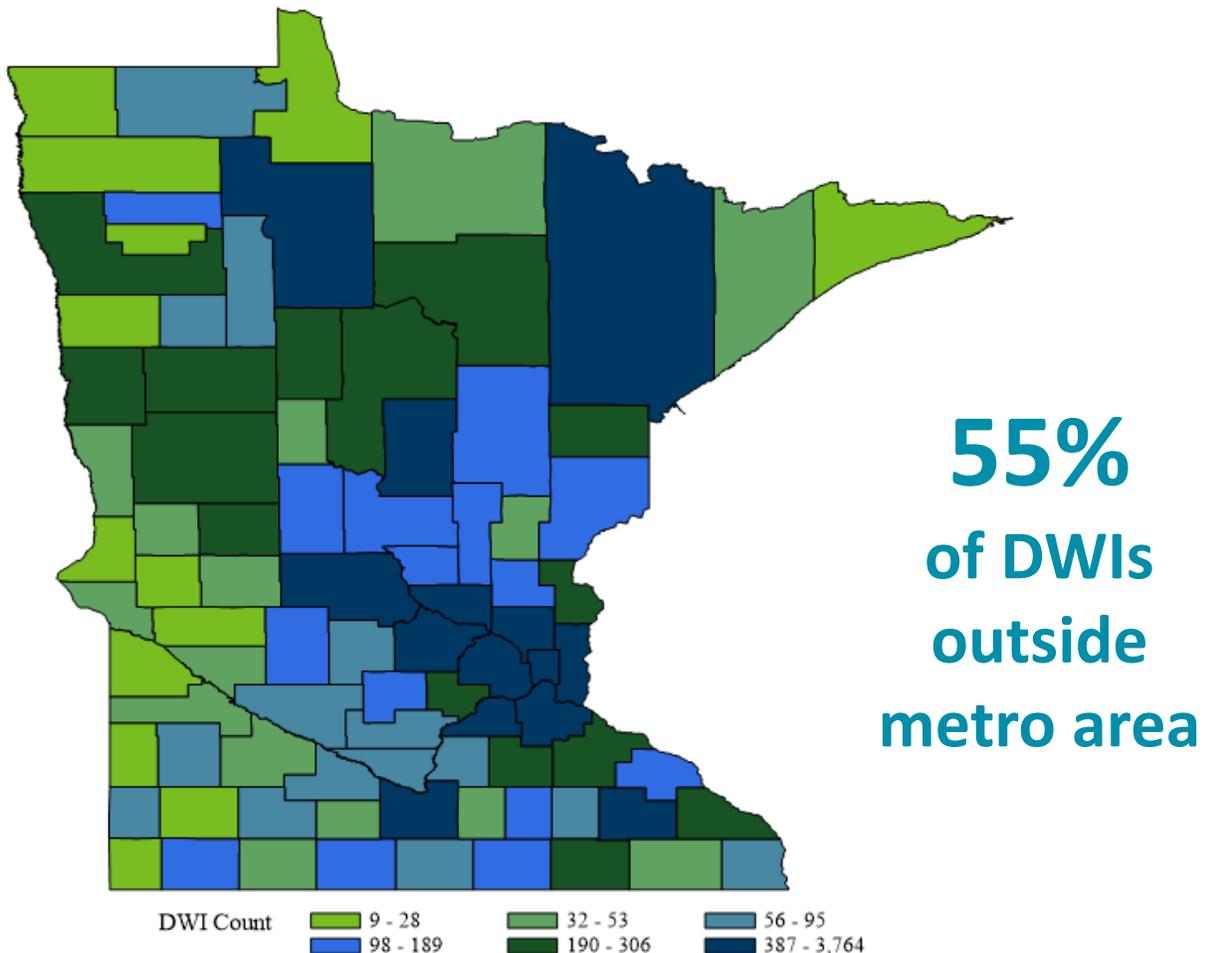
		Percentage Per Month							
Month	DWI Arrests	12am-2am	3am-5am	6am-8am	9am-11am	12pm-2pm	3pm-5pm	6pm-8pm	9pm-11pm
January	1,727	23.3%	7.2%	2.8%	2.9%	5.9%	9.6%	17.7%	30.6%
February	1,648	24.1%	5.0%	2.2%	1.9%	5.5%	9.5%	17.2%	34.6%
March	2,040	21.7%	5.1%	3.1%	3.1%	4.3%	10.4%	17.8%	34.4%
April	1,666	23.0%	5.9%	3.5%	3.8%	4.7%	7.1%	18.8%	33.0%
May	2,120	32.7%	5.6%	2.8%	3.3%	4.1%	8.8%	15.2%	27.6%
June	1,948	32.8%	6.0%	2.2%	3.4%	4.5%	8.7%	15.3%	27.2%
July	2,213	33.2%	7.5%	2.5%	2.8%	3.8%	8.0%	14.1%	28.0%
August	2,093	32.6%	7.2%	2.9%	2.5%	3.9%	9.6%	14.1%	27.2%
September	2,030	33.8%	7.1%	2.9%	3.2%	3.5%	8.7%	14.9%	25.9%
October	2,032	34.7%	6.6%	2.4%	3.1%	4.3%	9.6%	15.6%	23.7%
November	1,902	32.8%	5.3%	2.3%	3.4%	4.3%	8.9%	15.6%	27.6%
December	1,775	31.5%	5.2%	2.6%	2.8%	4.5%	10.7%	15.8%	27.0%

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



IDF Table 7: Impaired Driving By County of Incident

County	2017	2018	2019	2020	2021	Last 5		
						Years	Avg	Rank
Aitkin	156	169	139	128	133	725	145	36 of 87
Anoka	1,294	1,385	1,374	1,092	1,329	6,474	1,295	4 of 87
Becker	235	257	250	196	191	1,129	226	25 of 87
Beltrami	384	443	560	669	568	2,624	525	10 of 87
Benton	153	173	169	164	219	878	176	29 of 87
Big Stone	21	17	23	28	32	121	24	81 of 87
Blue Earth	383	479	479	372	487	2,200	440	12 of 87
Brown	80	65	60	60	66	331	66	60 of 87
Carlton	155	147	188	216	274	980	196	28 of 87
Carver	299	255	236	240	204	1,234	247	21 of 87
Cass	202	195	238	186	220	1,041	208	27 of 87
Chippewa	59	64	57	63	49	292	58	64 of 87
Chisago	239	245	251	218	226	1,179	236	23 of 87
Clay	407	433	365	220	262	1,687	337	15 of 87
Clearwater	56	80	66	45	69	316	63	61 of 87
Cook	27	36	40	19	19	141	28	78 of 87
Cottonwood	55	61	55	65	59	295	59	63 of 87
Crow Wing	394	421	461	327	452	2,055	411	13 of 87
Dakota	1,537	1,818	1,792	1,252	1,425	7,824	1,565	3 of 87
Dodge	77	74	106	97	75	429	86	49 of 87
Douglas	164	184	183	230	301	1,062	212	26 of 87
Faribault	67	78	73	67	66	351	70	55 of 87
Fillmore	51	50	34	40	41	216	43	70 of 87
Freeborn	143	111	213	164	156	787	157	33 of 87
Goodhue	188	253	253	216	262	1,172	234	24 of 87
Grant	20	19	26	19	39	123	25	80 of 87
Hennepin	5,858	6,052	5,838	4,043	4,066	25,857	5,171	1 of 87
Houston	75	87	99	66	70	397	79	52 of 87
Hubbard	96	116	162	227	246	847	169	31 of 87
Isanti	124	116	105	97	126	568	114	40 of 87
Itasca	278	340	315	291	308	1,532	306	16 of 87
Jackson	36	36	58	56	64	250	50	67 of 87
Kanabec	46	31	34	27	56	194	39	73 of 87
Kandiyohi	192	186	190	138	162	868	174	30 of 87
Kittson	12	13	22	7	14	68	14	86 of 87

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

County	2017	2018	2019	2020	2021	Last 5		
						Years	Avg	Rank
Koochiching	76	77	73	59	54	339	68	59 of 87
Lac Qui Parle	17	17	38	30	27	129	26	79 of 87
Lake	49	58	61	8	32	208	42	71 of 87
Lake of the Woods	26	28	37	32	24	147	29	77 of 87
Le Sueur	87	73	93	93	74	420	84	50 of 87
Lincoln	13	24	29	15	17	98	20	83 of 87
Lyon	118	111	104	86	80	499	100	45 of 87
McLeod	185	192	167	145	133	822	164	32 of 87
Mahnomen	88	81	92	82	102	445	89	48 of 87
Marshall	37	37	45	26	23	168	34	75 of 87
Martin	75	66	87	79	108	415	83	51 of 87
Meeker	76	86	113	91	110	476	95	47 of 87
Mille Lacs	113	148	176	148	176	761	152	35 of 87
Morrison	99	94	116	88	116	513	103	43 of 87
Mower	286	302	353	286	219	1,446	289	17 of 87
Murray	16	17	20	14	11	78	16	85 of 87
Nicollet	142	151	136	110	104	643	129	39 of 87
Nobles	127	150	155	148	145	725	145	36 of 87
Norman	15	16	21	19	20	91	18	84 of 87
Olmsted	743	848	563	595	520	3,269	654	8 of 87
Otter Tail	305	253	281	275	291	1,405	281	18 of 87
Pennington	100	105	129	92	137	563	113	41 of 87
Pine	120	116	110	111	191	648	130	38 of 87
Pipestone	68	73	87	71	67	366	73	53 of 87
Polk	322	191	250	236	191	1,190	238	22 of 87
Pope	51	53	49	38	48	239	48	68 of 87
Ramsey	2,121	2,455	2,729	2,011	1,888	11,204	2,241	2 of 87
Red Lake	35	16	17	31	19	118	24	82 of 87
Redwood	91	59	85	64	57	356	71	54 of 87
Renville	102	77	104	92	102	477	95	46 of 87
Rice	239	245	268	233	284	1,269	254	20 of 87
Rock	51	41	38	39	32	201	40	72 of 87
Roseau	76	66	69	64	75	350	70	56 of 87
St. Louis	1,037	1,103	1,280	952	1,189	5,561	1,112	5 of 87
Scott	591	672	651	474	558	2,946	589	9 of 87

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

County	2017	2018	2019	2020	2021	Last 5		
						Years	Avg	Rank
Sherburne	373	425	421	331	455	2,005	401	14 of 87
Sibley	68	50	93	80	57	348	70	57 of 87
Stearns	717	702	770	696	666	3,551	710	7 of 87
Steele	151	126	160	177	164	778	156	34 of 87
Stevens	50	39	37	11	16	153	31	76 of 87
Swift	38	40	36	41	33	188	38	74 of 87
Todd	83	96	108	122	136	545	109	42 of 87
Traverse	12	8	13	9	11	53	11	87 of 87
Wabasha	99	87	102	96	123	507	101	44 of 87
Wadena	66	75	76	72	59	348	70	57 of 87
Waseca	63	71	61	55	54	304	61	62 of 87
Washington	941	1,036	1,096	837	927	4,837	967	6 of 87
Watonwan	37	45	48	57	39	226	45	69 of 87
Wilkin	38	47	71	62	58	276	55	65 of 87
Winona	317	300	281	184	244	1,326	265	19 of 87
Wright	492	518	571	486	531	2,598	520	11 of 87
Yellow Medicine	57	60	49	37	48	251	50	66 of 87
MN Total	24,862	26,414	27,975	22,653	23,194	125,098	25,020	

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	15,883	18.7%	7 of 87	Marshall	9,195	8.5%	82 of 87
Anoka	367,361	8.8%	76 of 87	Martin	19,416	12.9%	42 of 87
Becker	34,525	18.4%	8 of 87	Meeker	23,453	10.8%	63 of 87
Beltrami	48,547	15.6%	21 of 87	Mille Lacs	26,808	16.3%	15 of 87
Benton	42,026	10.3%	70 of 87	Morrison	34,070	10.8%	61 of 87
Big Stone	4,994	11.1%	60 of 87	Mower	39,822	14.5%	26 of 87
Blue Earth	68,478	14.3%	28 of 87	Murray	8,014	8.8%	77 of 87
Brown	24,657	11.4%	58 of 87	Nicollet	34,499	10.8%	62 of 87
Carlton	36,018	13.9%	33 of 87	Nobles	21,284	17.4%	11 of 87
Carver	109,757	6.0%	86 of 87	Norman	6,063	12.0%	49 of 87
Cass	30,583	13.6%	38 of 87	Olmsted	164,098	9.1%	75 of 87
Chippewa	11,497	12.0%	47 of 87	Otter Tail	58,974	11.7%	52 of 87
Chisago	58,400	10.0%	71 of 87	Pennington	13,957	15.2%	23 of 87
Clay	64,837	18.4%	9 of 87	Pine	29,912	13.3%	40 of 87
Clearwater	8,827	14.3%	29 of 87	Pipestone	9,123	15.8%	18 of 87
Cook	5,577	19.1%	6 of 87	Polk	31,223	20.4%	5 of 87
Cottonwood	11,007	11.5%	56 of 87	Pope	11,711	11.8%	51 of 87
Crow Wing	65,838	13.7%	36 of 87	Ramsey	554,668	9.4%	73 of 87
Dakota	440,964	9.6%	72 of 87	Red Lake	4,244	14.5%	25 of 87
Dodge	21,435	8.5%	81 of 87	Redwood	14,924	12.7%	43 of 87
Douglas	38,684	16.9%	13 of 87	Renville	14,365	15.9%	17 of 87
Faribault	13,404	13.3%	39 of 87	Rice	68,190	10.6%	67 of 87
Fillmore	21,136	11.9%	50 of 87	Rock	9,057	10.6%	68 of 87
Freeborn	29,684	16.4%	14 of 87	Roseau	15,186	14.8%	24 of 87
Goodhue	46,463	14.3%	31 of 87	Scott	154,479	17.0%	12 of 87
Grant	5,921	10.6%	66 of 87	Sherburne	101,081	14.3%	30 of 87
Hennepin	1,289,597	10.6%	65 of 87	Sibley	14,469	64.2%	1 of 87
Houston	18,684	15.5%	22 of 87	St. Louis	197,225	9.0%	87 of 87
Hubbard	22,091	12.0%	48 of 87	Stearns	165,332	11.4%	59 of 87
Isanti	42,534	8.5%	83 of 87	Steele	36,382	11.5%	57 of 87
Itasca	45,367	15.7%	19 of 87	Stevens	9,964	9.1%	74 of 87
Jackson	9,699	15.6%	20 of 87	Swift	9,095	12.4%	45 of 87
Kanabec	16,610	12.9%	41 of 87	Todd	24,946	11.7%	53 of 87
Kandiyohi	44,066	12.3%	46 of 87	Traverse	3,163	14.1%	32 of 87
Kittson	4,388	10.8%	64 of 87	Wabasha	21,573	13.7%	37 of 87
Koochiching	11,623	17.5%	10 of 87	Wadena	13,559	11.6%	55 of 87
Lac qui Parle	6,500	8.6%	80 of 87	Waseca	18,456	11.7%	54 of 87
Lake	10,734	10.4%	69 of 87	Washington	273,063	8.7%	78 of 87
Lake of the Woods	3,749	23.1%	3 of 87	Watsonwan	10,567	13.7%	35 of 87
Le Sueur	29,784	8.3%	84 of 87	Wilkin	6,096	21.3%	4 of 87
Lincoln	5,552	8.7%	79 of 87	Winona	49,731	14.5%	27 of 87
Lyon	25,147	13.8%	34 of 87	Wright	144,569	7.5%	85 of 87
McLeod	36,091	12.7%	44 of 87	Yellow Medicine	9,439	16.3%	16 of 87
Mahnomen	5,617	29.4%	2 of 87	MN Total	5,739,781	10.9%	

■ Top 15 Ranking

IDF Table 9: Criminal Conviction Rates By Judicial District (2017-2021)

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 1												
Carver	2,070	1,132	54.7%	661	660	99.8%	680	201	29.6%	729	271	37.2%
Dakota	13,015	7,070	54.3%	4,135	4,128	99.8%	4,172	1,063	25.5%	4,708	1,879	39.9%
Goodhue	1,993	1,040	52.2%	568	568	100%	596	146	24.5%	829	326	39.3%
Le Sueur	685	367	53.6%	204	204	100%	217	70	32.3%	264	93	35.2%
McLeod	1,341	746	55.6%	407	407	100%	430	142	33.0%	504	197	39.1%
Scott	5,087	2,727	53.6%	1,572	1,569	99.8%	1,671	466	27.9%	1,844	692	37.5%
Sibley	575	309	53.7%	143	143	100%	171	53	31.0%	261	113	43.3%
Subtotal:	24,766	13,391	54.1%	7,690	7,679	99.9%	7,937	2,141	27.0%	9,139	3,571	39.1%
Judicial Dist 2												
Ramsey	18,569	10,018	54.0%	6,029	6,024	99.9%	6,041	1,333	22.1%	6,499	2,661	40.9%
Judicial Dist 3												
Dodge	701	376	53.6%	197	196	99.5%	211	67	31.8%	293	113	38.6%
Fillmore	363	195	53.7%	112	112	100%	117	31	26.5%	134	52	38.8%
Freeborn	1,302	700	53.8%	406	406	100%	421	100	23.8%	475	194	40.8%
Houston	691	360	52.1%	222	222	100%	244	54	22.1%	225	84	37.3%
Mower	2,382	1,318	55.3%	702	702	100%	691	176	25.5%	989	440	44.5%
Olmsted	5,506	3,010	54.7%	1,768	1,767	99.9%	1,747	426	24.4%	1,991	817	41.0%
Rice	2,195	1,168	53.2%	669	668	99.9%	695	170	24.5%	831	330	39.7%
Steele	1,355	716	52.8%	409	409	100%	446	112	25.1%	500	195	39.0%
Wabasha	941	495	52.6%	291	291	100%	313	80	25.6%	337	124	36.8%
Waseca	509	266	52.3%	166	166	100%	170	34	20.0%	173	66	38.2%
Winona	2,253	1,217	54.0%	830	829	99.9%	794	144	18.1%	629	244	38.8%
Subtotal:	18,198	9,821	54.0%	5,772	5,768	99.9%	5,849	1,394	23.8%	6,577	2,659	40.4%
Judicial Dist 4												
Hennepin	43,363	23,639	54.5%	14,314	14,308	100%	14,207	3,314	23.3%	14,842	6,017	40.5%
Judicial Dist 5												
Blue Earth	3,755	2,019	53.8%	1,319	1,319	100%	1,285	236	18.4%	1,151	464	40.3%
Brown	558	303	54.3%	177	177	100%	205	64	31.2%	176	62	35.2%
Cottonwood	526	291	55.3%	186	186	100%	175	35	20.0%	165	70	42.4%
Faribault	629	336	53.4%	181	181	100%	192	54	28.1%	256	101	39.5%
Jackson	424	219	51.7%	138	137	99.3%	155	32	20.6%	131	50	38.2%
Lincoln	152	81	53.3%	53	53	100%	60	13	21.7%	39	15	38.5%
Lyon	857	482	56.2%	307	307	100%	286	60	21.0%	264	115	43.6%
Martin	719	384	53.4%	213	212	99.5%	236	67	28.4%	270	105	38.9%
Murray	146	77	52.7%	27	27	100%	37	16	43.2%	82	34	41.5%
Nicollet	1,034	564	54.5%	337	337	100%	345	94	27.2%	352	133	37.8%
Nobles	1,353	719	53.1%	481	480	99.8%	461	62	13.4%	411	177	43.1%
Pipestone	581	322	55.4%	207	206	99.5%	195	42	21.5%	179	74	41.3%
Redwood	607	334	55.0%	177	177	100%	176	47	26.7%	254	110	43.3%
Rock	329	184	55.9%	128	128	100%	117	20	17.1%	84	36	42.9%
Watonwan	405	216	53.3%	139	139	100%	142	28	19.7%	124	49	39.5%
Subtotal:	12,075	6,531	54.1%	4,070	4,066	99.9%	4,067	870	21.4%	3,938	1,595	40.5%

IDF Table 9: Criminal Conviction Rates By Judicial District (2017-2021), 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 6												
Carlton	1,678	904	53.9%	486	486	100%	497	119	23.9%	695	299	43.0%
Cook	250	134	53.6%	76	76	100%	86	30	34.9%	88	28	31.8%
Lake	366	203	55.5%	107	107	100%	104	33	31.7%	155	63	40.6%
St. Louis	9,428	5,130	54.4%	2,993	2,991	99.9%	3,047	748	24.5%	3,388	1,391	41.1%
Subtotal:	11,722	6,371	54.4%	3,662	3,660	99.9%	3,734	930	24.9%	4,326	1,781	41.2%
Judicial Dist 7												
Becker	2,020	1,093	54.1%	594	594	100%	605	139	23.0%	821	360	43.8%
Benton	1,425	763	53.5%	418	418	100%	431	110	25.5%	576	235	40.8%
Clay	3,012	1,598	53.1%	998	998	100%	1,030	187	18.2%	984	413	42.0%
Douglas	1,807	989	54.7%	557	557	100%	552	133	24.1%	698	299	42.8%
Mille Lacs	1,347	708	52.6%	346	346	100%	388	115	29.6%	613	247	40.3%
Morrison	933	480	51.4%	235	235	100%	260	70	26.9%	438	175	40.0%
Otter Tail	2,553	1,385	54.2%	792	792	100%	832	225	27.0%	929	368	39.6%
Stearns	6,131	3,339	54.5%	1,987	1,983	99.8%	1,981	458	23.1%	2,163	898	41.5%
Todd	960	506	52.7%	297	297	100%	307	69	22.5%	356	140	39.3%
Wadena	583	313	53.7%	153	153	100%	158	46	29.1%	272	114	41.9%
Subtotal:	20,771	11,174	53.8%	6,377	6,373	99.9%	6,544	1,552	23.7%	7,850	3,249	41.4%
Judicial Dist 8												
Big Stone	216	116	53.7%	67	67	100%	66	18	27.3%	83	31	37.3%
Chippewa	510	270	52.9%	148	148	100%	157	43	27.4%	205	79	38.5%
Grant	232	124	53.4%	72	72	100%	73	18	24.7%	87	34	39.1%
Kandiyohi	1,515	821	54.2%	512	512	100%	507	118	23.3%	496	191	38.5%
Lac Qui Parle	212	113	53.3%	70	70	100%	75	19	25.3%	67	24	35.8%
Meeker	827	434	52.5%	237	237	100%	269	77	28.6%	321	120	37.4%
Pope	416	227	54.6%	122	122	100%	140	50	35.7%	154	55	35.7%
Renville	788	433	54.9%	221	221	100%	220	61	27.7%	347	151	43.5%
Stevens	248	138	55.6%	94	94	100%	84	16	19.0%	70	28	40.0%
Swift	313	168	53.7%	93	93	100%	88	21	23.9%	132	54	40.9%
Traverse	94	51	54.3%	28	27	96.4%	27	8	29.6%	39	16	41.0%
Wilkin	486	265	54.5%	183	183	100%	180	30	16.7%	123	52	42.3%
Yellow Medicine	423	228	53.9%	117	117	100%	131	35	26.7%	175	76	43.4%
Subtotal:	6,280	3,388	53.9%	1,964	1,963	99.9%	2,017	514	25.5%	2,299	911	39.6%

IDF Table 9: Criminal Conviction Rates By Judicial District (2017-2021), 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	1,255	677	53.9%	337	337	100%	355	108	30.4%	563	232	41.2%
Beltrami	4,476	2,488	55.6%	1,223	1,223	100%	1,161	255	22.0%	2,092	1,010	48.3%
Cass	1,845	1,014	55.0%	491	491	100%	504	141	28.0%	850	382	44.9%
Clearwater	555	300	54.1%	138	138	100%	145	41	28.3%	272	121	44.5%
Crow Wing	3,514	1,909	54.3%	1,029	1,028	99.9%	1,045	299	28.6%	1,440	582	40.4%
Hubbard	1,556	846	54.4%	394	394	100%	407	101	24.8%	755	351	46.5%
Itasca	2,755	1,502	54.5%	685	683	99.7%	748	245	32.8%	1,322	574	43.4%
Kittson	137	68	49.6%	35	35	100%	39	9	23.1%	63	24	38.1%
Koochiching	589	314	53.3%	183	183	100%	198	60	30.3%	208	71	34.1%
Lake of Woods	273	142	52.0%	73	73	100%	82	24	29.3%	118	45	38.1%
Mahnomen	815	437	53.6%	216	216	100%	218	41	18.8%	381	180	47.2%
Marshall	274	147	53.6%	71	71	100%	78	27	34.6%	125	49	39.2%
Norman	183	97	53.0%	49	49	100%	54	14	25.9%	80	34	42.5%
Pennington	978	521	53.3%	308	307	99.7%	311	66	21.2%	359	148	41.2%
Polk	2,558	1,506	58.9%	852	851	99.9%	743	197	26.5%	963	458	47.6%
Red Lake	174	98	56.3%	52	52	100%	50	15	30.0%	72	31	43.1%
Roseau	622	333	53.5%	189	189	100%	193	49	25.4%	240	95	39.6%
Subtotal:	22,559	12,399	55.0%	6,325	6,320	99.9%	6,331	1,692	26.7%	9,903	4,387	44.3%
Judicial Dist 10												
Anoka	10,956	5,856	53.5%	3,268	3,264	99.9%	3,493	1,013	29.0%	4,195	1,579	37.6%
Chisago	2,048	1,107	54.1%	604	604	100%	630	175	27.8%	814	328	40.3%
Isanti	993	540	54.4%	277	277	100%	297	106	35.7%	419	157	37.5%
Kanabec	364	203	55.8%	97	97	100%	105	38	36.2%	162	68	42.0%
Pine	1,148	617	53.7%	325	325	100%	321	86	26.8%	502	206	41.0%
Sherburne	3,222	1,758	54.6%	1,018	1,018	100%	1,038	301	29.0%	1,166	439	37.7%
Washington	8,195	4,412	53.8%	2,654	2,653	100%	2,764	691	25.0%	2,777	1,068	38.5%
Wright	4,351	2,295	52.7%	1,227	1,224	99.8%	1,348	412	30.6%	1,776	659	37.1%
Subtotal:	31,277	16,788	53.7%	9,470	9,462	99.9%	9,996	2,822	28.2%	11,811	4,504	38.1%

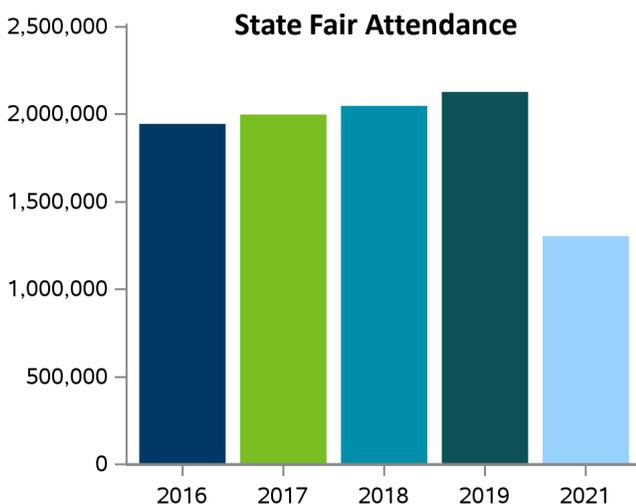
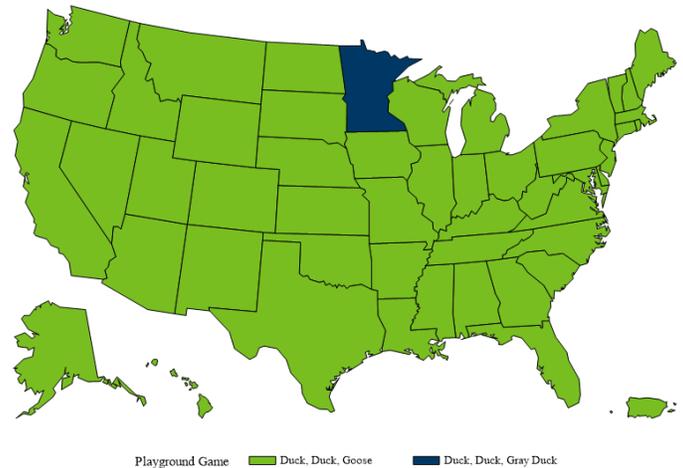
Minnesota Facts

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.

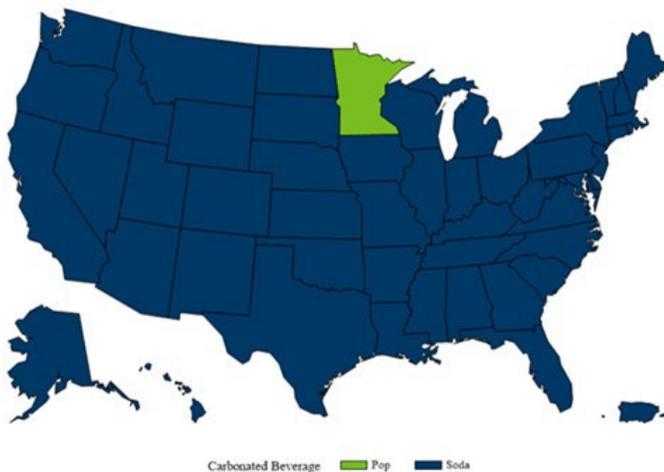
Unlike many states, all major professional sports leagues (MLB, NFL, NBA, WNBA and NHL) are represented with Minnesota teams. Hockey at all levels is appreciated by Minnesotans, and the United States Hockey Hall of Fame is located in Eveleth, Minnesota.

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.

