

**A Report on the
State of
Traffic Safety in
Minnesota in 2023**

**Advisory Council on Traffic Safety
January 2024**



Alcohol
and Gambling
Enforcement

Bureau of
Criminal
Apprehension

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Minnesota Department of Public Safety

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The Minnesota Department of Public Safety (DPS) / Office of Traffic Safety (OTS) has prepared this report documenting the status of traffic safety in 2023. Minnesota continues to work tirelessly to prevent serious and fatal motor vehicle crashes on its roads, and 2023 was a challenging year that also provided us with opportunities for positive change. We continue to see positive trends for the second year in a row. Preliminary statistics indicate that Minnesota will experience an approximate 8 percent reduction in fatalities compared to 2022. When combined with the near 10 percent reduction in 2022, we have nearly erased the horrific increases that commenced in 2019-2020. While this represents a positive trend, much work remains.

Fortunately for Minnesota, the highly professional and passionate members of OTS are committed to providing a high performance and exhibiting excellence in our state. This extends to our many partners in the Toward Zero Deaths program as well. Our ability to deliver was recognized by a great deal of interest and success during our last legislative session. The state of Minnesota has made an unprecedented investment in improving traffic safety by investing nearly \$20 million dollars in efforts that will be led by OTS in partnership with the Minnesota Departments of Transportation (MnDOT) and Minnesota Department of Health (MDH). This includes the first ever legislatively authorized Advisory Council on Traffic Safety. The second major initiative is the creation and funding for a Data Analytics and Innovation Center that will also become part of DPS/OTS. Together, these two initiatives will lead to great success, lives saved, and improved program development and delivery.

We acknowledge that we have much work to do in many areas in order to improve safety for all Minnesotans and those who use our roads. The staff and leadership of DPS/OTS are proud of our work and the accomplishments we have made with our traffic safety partners working toward a common goal: zero deaths. We look forward to continuing this work in the upcoming years.

Respectfully submitted by,

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Chair, A.C.T.S.

Catherine Diamond, Minnesota Department of Health
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Report requirements

Sec. 80.

Minnesota Statutes 2022, section 299A.01, is amended by adding a subdivision to read:

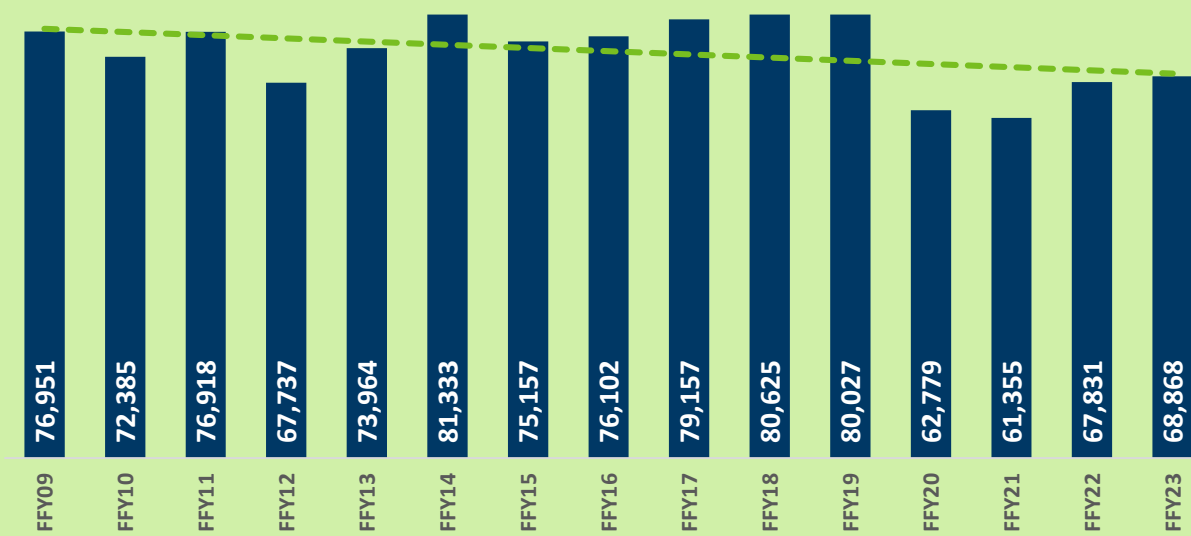
Subd. 8. Traffic safety report. Annually by January 15, the commissioner of public safety must submit a traffic safety report to the governor and the chairs and ranking minority members of the legislative committees with jurisdiction over traffic safety and enforcement. In preparing the report, the commissioner must seek advice and comments from the Advisory Council on Traffic Safety under section 4.076. The report must analyze the safety of Minnesota's roads and transportation system, including but not limited to:

- (1) injuries and fatalities that occur on or near a roadway or other transportation system facility;
- (2) factors that caused crashes resulting in injuries and fatalities;
- (3) roadway and system improvements broadly and at specific locations that could reduce injuries and fatalities;
- (4) enforcement and education efforts that could reduce injuries and fatalities;
- (5) other safety improvements or programs to improve the quality of the roadway and transportation use experience; and
- (6) existing resources and resource gaps for roadway and transportation system safety improvements.

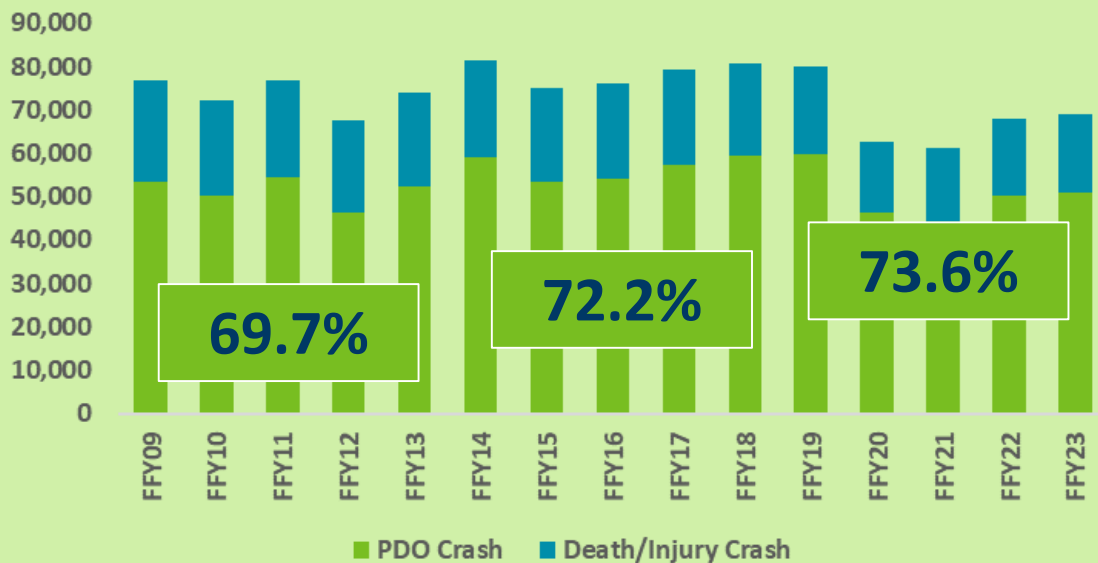
Crashes, fatalities, and serious injuries

The following graphs depict reported crashes for federal fiscal years 2009 through 2023. Over these 15 years, the total number of crashes has decreased slightly and is trending downwards. Most crashes do not involve deaths or injuries to persons involved, but the vehicles in the collision or other property are damaged. These crashes are called property damage only (PDO). Historically, the portion of crashes categorized as PDO is around 70 percent. However, this portion is increasing, which means progress has been made in traffic safety in Minnesota.

Crash trends



PDO portion is increasing

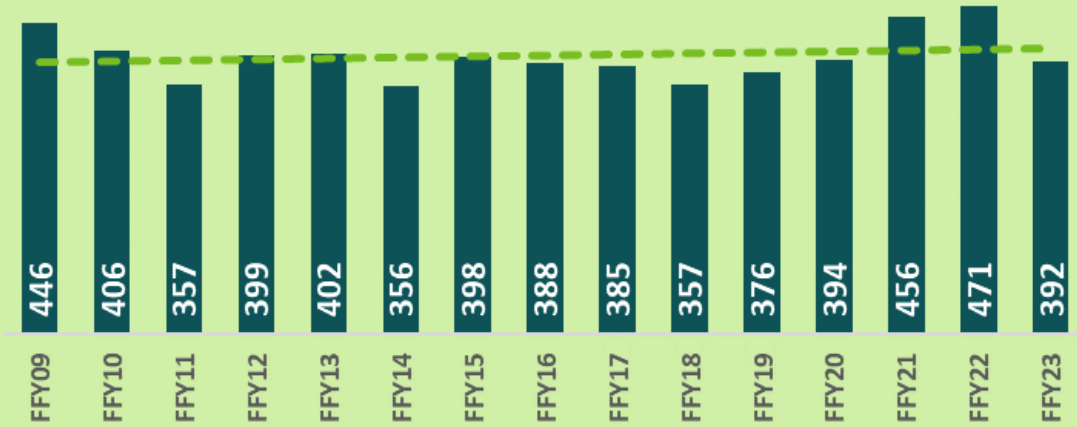


Traffic safety initiatives tend to focus on the prevention of severe crashes resulting in fatalities and serious injuries. Fatal and serious injury crashes represent a small portion of the total crashes, but these crashes are the most devastating and unfortunately, almost always preventable.

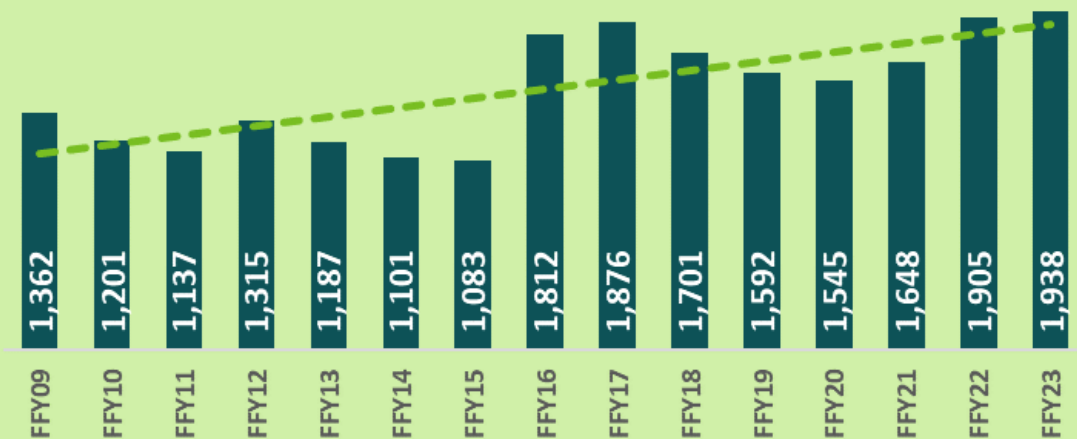
Trends for the past 15 fiscal years show that fatalities are increasing just slightly. Much progress had been made prior to the COVID-19 years. For example, the calendar year 2018 saw 358 fatalities. The state had not seen that low of a number in annual traffic deaths since 1926 when there were 326 deaths. The COVID-19 pandemic proved troublesome for Minnesota roads. As a result, the state is currently trying to recover and get back to pre-pandemic numbers.

On Jan 1, 2016, DPS launched MNCrash, an improved crash reporting system. This platform allowed Minnesota to move closer in line with federally standardized reporting categories. Slight wording changes to injury severity definitions within MNCrash resulted in a spike in serious injury counts. However, since calendar year 2016, the increase in serious injuries has continued, and the graph below displays an increasing trend.

Fatality Trends



Serious Injury Trends



Fatality rates

Comparatively speaking, Minnesota has a low fatality rate for traffic deaths. In relation to its population, Minnesota has the ninth lowest fatality rate in the nation. In relation to the number of registered motor vehicles, Minnesota ranks sixth in the nation. Relative to the miles traveled on its roads, Minnesota touts the third lowest fatality rate, at 0.85 in 2021. Only Massachusetts and Rhode Island had lower fatality rates per vehicle miles traveled (VMT).

The following table examines fatality rates per population, registered motor vehicles (MV) and vehicle miles traveled for each state in the nation. Data provided in this table is derived from the National Safety Council's Injury Facts.

Fatality Rates, by NHTSA Region (2021)

NHTSA Region	State	Fatalities	Fatality Rate per 100K Population	Rank	Fatality Rate per 10K MV	Rank	Fatality Rate per 100M VMT	Rank
1	Connecticut	298	9.2	6	1.08	11	1.03	11
	Massachusetts	417	6.6	1	0.80	3	0.71	1
	Maine	153	13.4	25	1.10	13	1.05	13
	New Hampshire	118	10.4	8	0.83	4	0.90	4
	Rhode Island	63	7.4	4	0.79	2	0.84	2
	Vermont	74	11.2	13	1.20	21	1.12	17
2	New Jersey	699	7.7	5	1.12	15	0.95	6
	New York	1,157	7	3	1.23	23	1.08	15
3	Delaware	136	14.7	27	2.88	49	1.34	29
	Maryland	561	10.7	12	1.14	17	0.99	9
	Pennsylvania	1,230	10.6	9	1.13	16	1.20	22
	Virginia	973	11.8	17	1.27	26	1.21	24
	West Virginia	280	16.8	33	2.30	45	1.74	44
4	Alabama	983	21	44	1.80	34	1.24	25
	Florida	3,738	17.9	36	1.95	39	1.72	43
	Georgia	1,797	18.3	39	1.97	42	1.49	36
	Kentucky	806	18.2	37	1.83	36	1.68	41
	Mississippi	772	29.4	50	3.24	50	1.89	49
	North Carolina	1,663	18.2	37	1.91	37	1.41	33
	South Carolina	1,198	23.7	47	2.35	46	2.08	50
	Tennessee	1,327	20.5	42	1.98	43	1.61	39
5	Illinois	1,334	11.6	14	1.21	22	1.37	30
	Indiana	932	14.7	27	1.49	31	1.19	21
	Michigan	1,136	13.3	24	1.19	20	1.17	20
	Minnesota	488	10.6	9	0.89	6	0.85	3
	Ohio	1,354	12.8	19	1.24	24	1.20	23
	Wisconsin	620	11.7	15	1.07	10	0.95	7

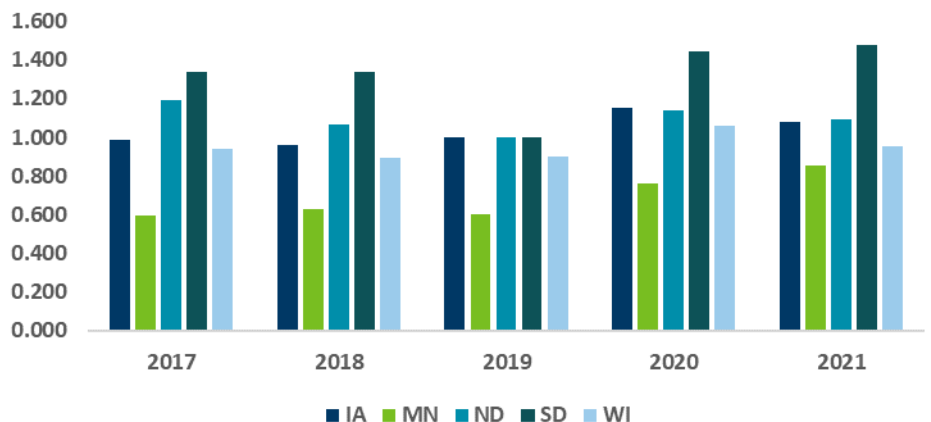
Fatality Rates, by NHTSA Region (2021), continued

NHTSA Region	State	Fatalities	Fatality Rate		Fatality Rate per		Fatality Rate per	
			per 100K Population	Rank	10K MV	Rank	100M VMT	Rank
6	Arkansas	693	24.2	48	1.95	40	1.80	48
	Louisiana	972	22.2	45	2.52	47	1.78	46
	New Mexico	481	22.3	46	2.58	48	1.79	47
	Oklahoma	762	20.7	43	2.27	44	1.70	42
	Texas	4,498	15.5	30	1.95	41	1.58	37
7	Iowa	356	11.7	15	0.93	7	1.08	14
	Kansas	424	16	31	1.63	33	1.34	28
	Missouri	1,016	17.2	34	1.81	35	1.27	26
	Nebraska	221	12.9	20	1.14	18	1.04	12
8	Colorado	691	13	21	1.36	27	1.28	27
	Montana	239	24.4	49	1.12	14	1.77	45
	North Dakota	101	15.4	29	1.09	12	1.09	16
	South Dakota	148	19.3	41	1.03	9	1.48	35
	Utah	328	10.6	9	1.16	19	0.98	8
	Wyoming	110	17.3	35	1.26	25	0.99	10
9	Arizona	1,180	18.8	40	1.95	38	1.60	38
	California	4,285	12.7	18	1.37	28	1.38	31
	Hawaii	94	6.6	1	0.76	1	0.94	5
	Nevada	385	13	21	1.44	30	1.42	34
10	Alaska	67	13.2	23	0.98	8	1.16	19
	Idaho	271	16.6	32	1.37	29	1.40	32
	Oregon	599	14.3	26	1.49	32	1.63	40
	Washington	670	9.9	7	0.84	5	1.16	18
	U.S. Total	42,939	14.2		1.52		1.37	

Bordering states

One theory used to explain Minnesota's low fatality rate relates to weather. Winter months in Minnesota produce more crashes, but those crashes are less severe and result in fewer deaths than crashes occurring during summer months. Using the weather theory, bordering states should exhibit similar fatality rates. However, this is not true. Minnesota's fatality rate per 100 million vehicle miles traveled has been consistently lower than fatality rates for Iowa, North Dakota, South Dakota, and Wisconsin.

Minnesota vs. Border States (Fatality Rate per 100M VMT)



Driver behavioral issues

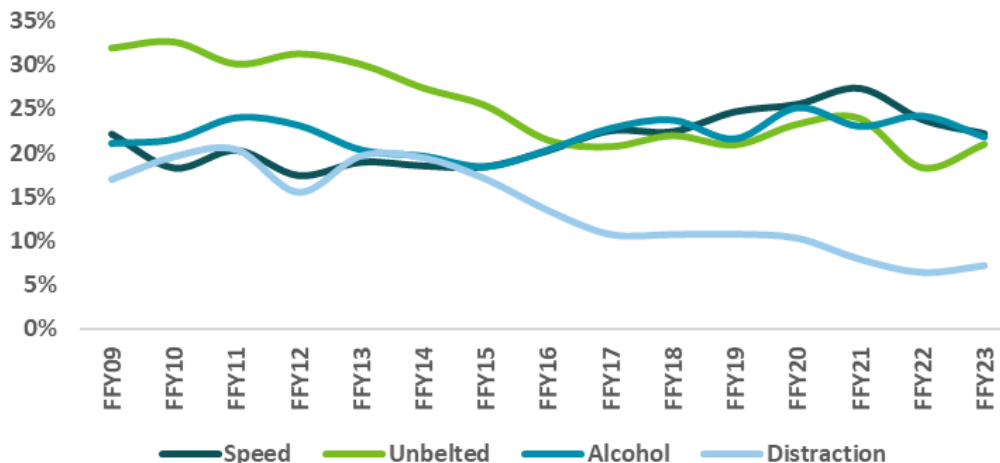
Government agencies, academic institutions, and private businesses have all conducted research into the causes of traffic crashes. Regardless of the researching entity, collectively, these studies have determined that driver errors cause at least 94% of traffic collisions. Common driver errors include speeding, distraction, and alcohol or drug impairment. These behaviors are bad decisions made by drivers and may result in crashes.

Another bad decision a driver -or passenger- can make is the error to not wear a seatbelt. While this behavior does not cause a traffic crash, it greatly increases the odds of injury or fatality resulting from a collision. A seatbelt protects the vehicle's occupants by reducing the likelihood of ejection.

Driver behaviors and motor vehicle occupant seatbelt usage are tracked on the crash report. These are important pieces of information for trend analysis and measuring changes in behaviors. They are known as the "Big Four Behaviors." The graph below examines how speeding, seatbelt non-use, alcohol, and distraction have changed since Federal Fiscal Year (FFY) 2009. Speeding and alcohol impairment have increased. Unbelted and distraction trends show declines. Each of these behaviors will be examined more closely on the following pages.

**Driver errors
cause
94 percent
of crashes.**

**Percentage of Fatalities and Serious Injuries
Attributed to Behaviors**



**Speeding is the most common
driver error.**

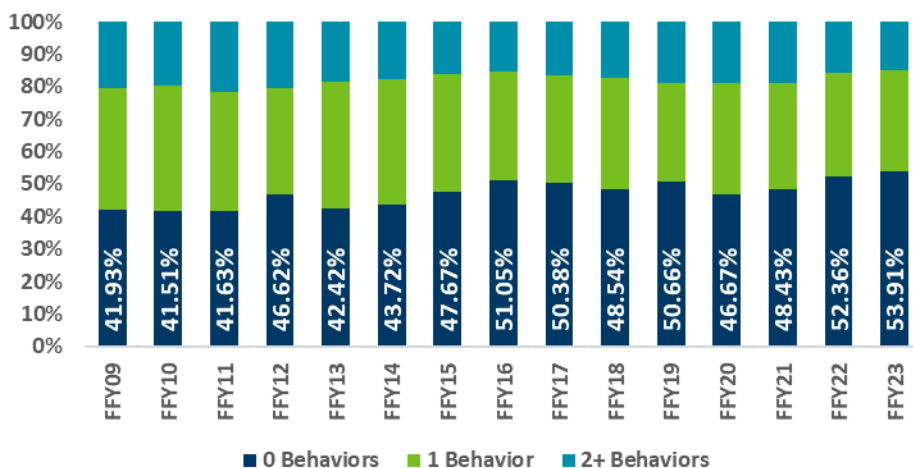
“Big four” behaviors

Since FFY 2009, 52.6 percent of Minnesota crashes had at least one of the Big 4 behaviors attributed to it. Just over 18% of crashes had two or more behaviors involved. With 94 percent of crashes involving driver error, reducing driver errors related to speed, alcohol use, distraction and seatbelt non-use is key to traffic safety.

The graph below examines the proportions of zero behaviors, one behavior, or two plus behaviors documented on crash reports over the years. The increase in the proportion of crashes with zero behaviors (the dark blue section in the bar graph) shows that efforts to educate drivers can reduce bad driver behaviors and driver errors.

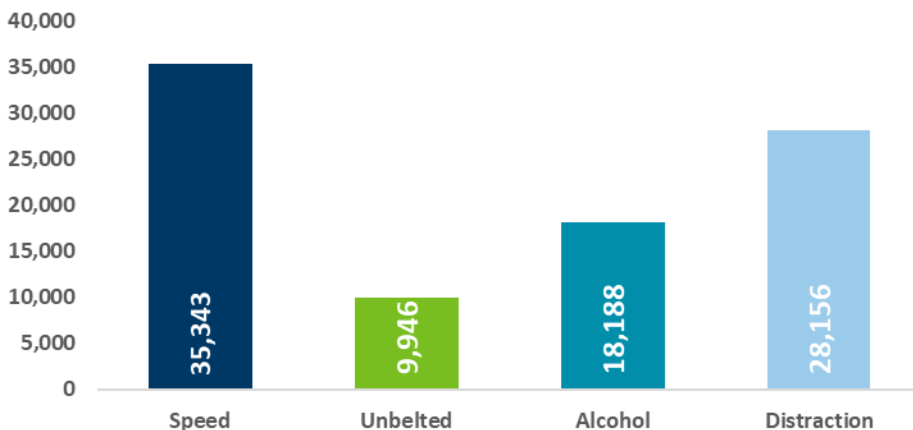
Another potential caveat for the increase in the proportion of zero behavior crashes is the reporting of distraction in crashes. Distraction reported in crashes has decreased since the 2016 release of MNCrash. This decrease in reporting could be swaying the increase in proportion of zero behavior crashes. Distraction and its reporting discrepancy will be discussed later.

Number of Big 4 Behaviors Attributed



Speeding + Alcohol and Unbelted + Alcohol are most frequent combinations

Killed or Injured by Attributed Behavior (Since FFY 2016)



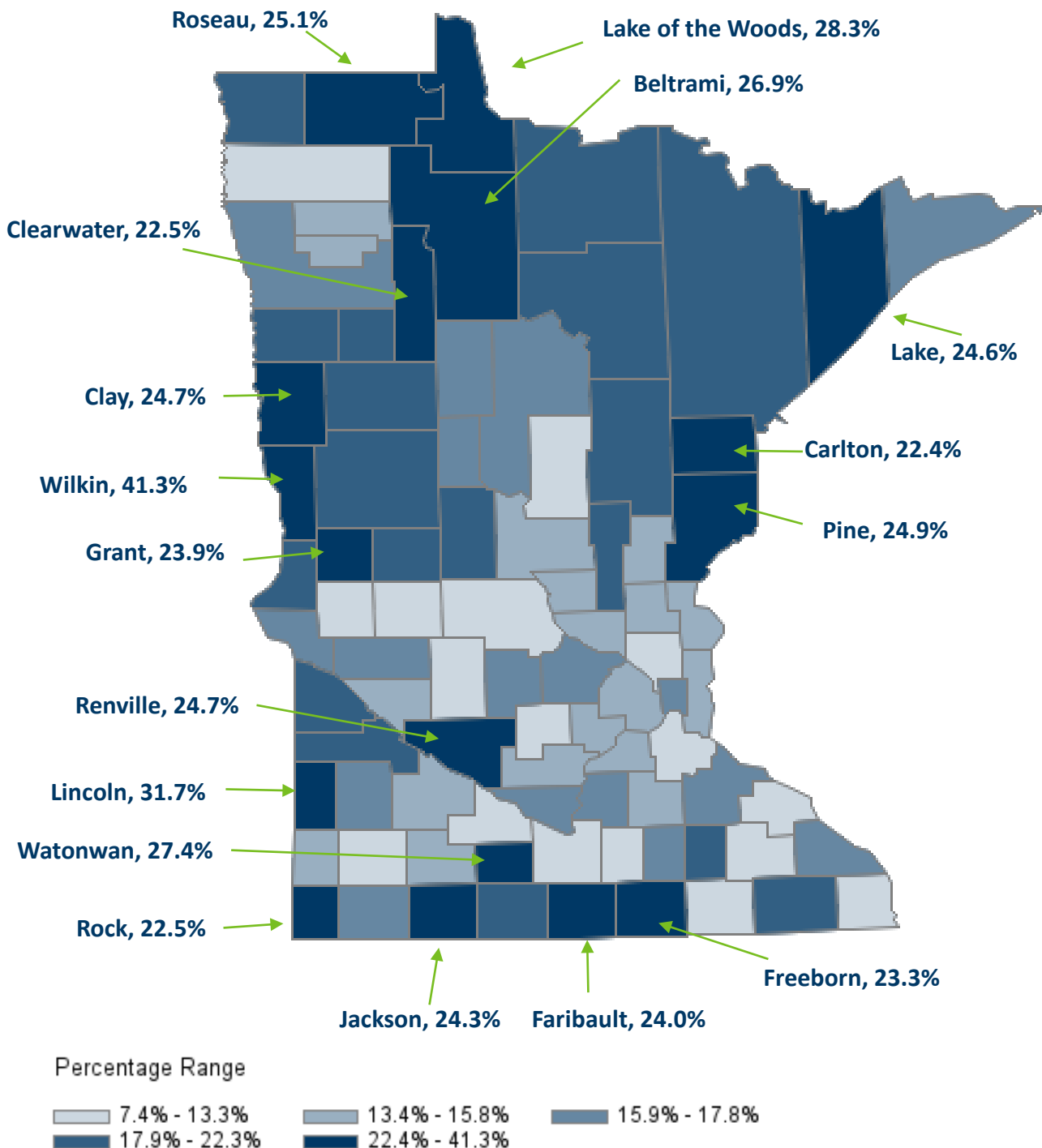
91,633 have been killed or injured since 2016.

On average, 11,454 people are killed or injured due to Big four behaviors every year.

Speeding

Speeding is by far the most common dangerous driving behavior. Since 2020, 15.8 percent of all crashes in Minnesota were attributed to driver speeding. While speeding-related crashes occur throughout the state, counties in the northern and southernmost areas of the state have higher percentages of their total crashes attributed to speeding. Combined data for the metro counties (Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington) shows just 14.2 percent of crashes resulting from speeding. The map below displays the percentage of speed-related crashes for each county. Of all 87 counties, Wilkin County had the highest percentage, at 41.3 percent.

Percentage of Speed-Related Crashes (2020-2023)



Speeding

The graph to the right examines injury severity in speed-related and non speed-related crashes. Resulting injuries are more severe when speed is involved in a crash. Since 2020, nearly one third (31.4 percent) of all fatalities, and 23.2 percent of all serious injuries resulted from speed-related crashes.

Even more so, increases in speed greatly increase the risk of injury. It is estimated for every 10 mph of increased speed, the risk of fatality doubles.

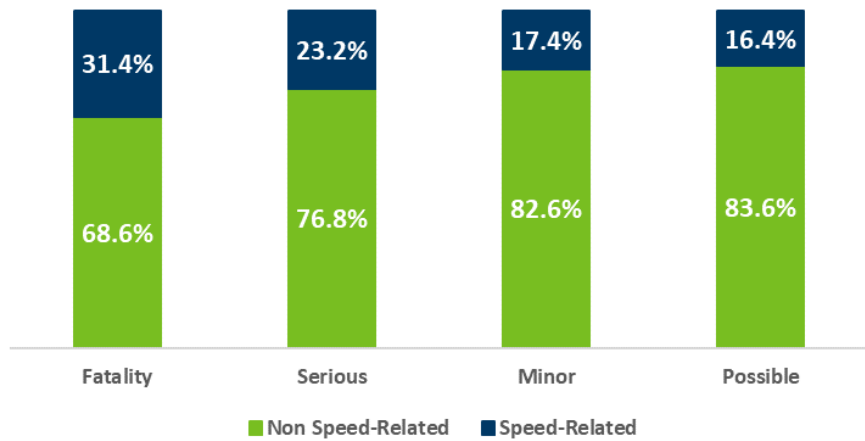
61.18 mph is the average speed in fatal crashes.

Adding speed into a crash scenario increases the extent of vehicle damage resulting from the crash. The graph to the right shows the level of vehicle damage in speed-related crashes and non-speed-related crashes.

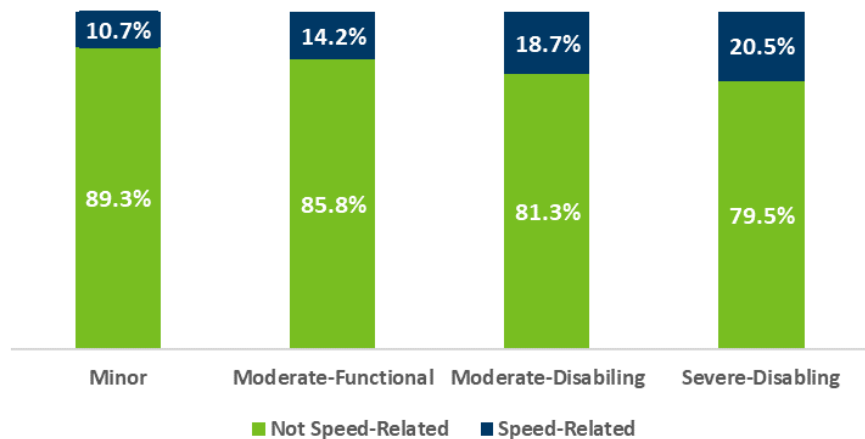
A larger portion of speed-related crashes are single vehicle crashes. Since 2020, 24.3 percent of single vehicle crashes involved speed. Most drivers are not experienced in maneuvering a vehicle at high speeds and as a result the chain reaction of events post-collision tend to be on the more severe side. The state crash report documents up to four events for a vehicle after a collision occurs. In speed-related single vehicle crashes, the most commonly occurring events for the vehicle are: run off the road to either left or right side (24.2 percent), rollover (13.1 percent), striking a cable median barrier (7.4 percent), hitting a concrete traffic barrier (6.0 percent), or hitting a guardrail (4.8 percent).

The table on the next page examines the issue of speeding from a county level perspective and the enforcement of speeding violations. Counts for speeding citations are compared to the percentage of speed-related crashes. The counties with the highest percentages of speed-related crashes are highlighted.

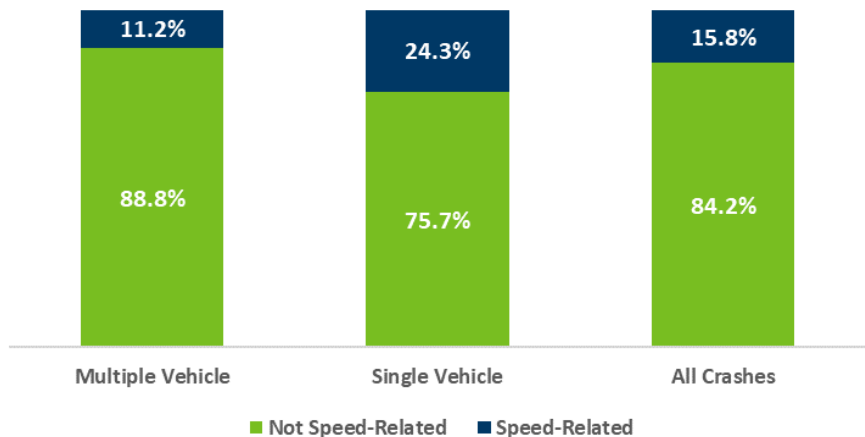
Injury severity increases if speed is involved



Vehicle damage increases if speed is involved



Speed involved in more single vehicle crashes



Citations						Citations					
County	Since 2020	Citations Trend*	% Speed Crashes	Crash Rank	Crash Trend*	County	Since 2020	Citations Trend*	% Speed Crashes	Crash Rank	Crash Trend*
Aitkin	4,594	Increasing	20.9%	28 of 87	Increasing	Marshall	885	Decreasing	11.4%	83 of 87	Decreasing
Anoka	17,411	Increasing	10.8%	86 of 87	Decreasing	Martin	3,024	Decreasing	20.1%	33 of 87	Increasing
Becker	4,935	Increasing	21.5%	26 of 87	Decreasing	Meeker	1,778	Increasing	17.3%	51 of 87	Increasing
Beltrami	2,924	Increasing	26.3%	12 of 87	Decreasing	Mille Lacs	4,261	Decreasing	22.5%	22 of 87	Decreasing
Benton	4,431	Increasing	15.2%	66 of 87	Decreasing	Morrison	6,051	Decreasing	16.7%	54 of 87	Decreasing
Big Stone	1,055	Increasing	13.6%	78 of 87	Increasing	Mower	3,138	Increasing	12.5%	81 of 87	Decreasing
Blue Earth	7,979	Increasing	14.7%	69 of 87	Decreasing	Murray	672	Increasing	13.0%	80 of 87	Decreasing
Brown	2,899	Decreasing	11.0%	84 of 87	Increasing	Nicollet	6,981	Increasing	17.9%	48 of 87	Decreasing
Carlton	11,206	Increasing	27.6%	9 of 87	Decreasing	Nobles	2,358	Increasing	19.6%	36 of 87	Increasing
Carver	7,298	Increasing	14.1%	74 of 87	Increasing	Norman	381	Decreasing	20.7%	30 of 87	Decreasing
Cass	2,759	Increasing	16.3%	57 of 87	Decreasing	Olmsted	17,368	Increasing	13.7%	77 of 87	Decreasing
Chippewa	2,962	Decreasing	15.6%	61 of 87	Increasing	Otter Tail	8,080	Increasing	23.0%	20 of 87	Decreasing
Chisago	9,001	Decreasing	16.4%	56 of 87	Decreasing	Pennington	1,559	Decreasing	19.9%	34 of 87	Increasing
Clay	7,207	Increasing	28.5%	6 of 87	Decreasing	Pine	6,724	Increasing	25.5%	15 of 87	Increasing
Clearwater	1,372	Increasing	25.1%	16 of 87	Decreasing	Pipestone	1,675	Increasing	18.7%	40 of 87	Increasing
Cook	2,287	Decreasing	17.0%	53 of 87	Increasing	Polk	5,460	Decreasing	19.2%	39 of 87	Decreasing
Cottonwood	3,619	Decreasing	18.0%	46 of 87	Increasing	Pope	1,425	Increasing	14.5%	71 of 87	Decreasing
Crow Wing	9,834	Increasing	11.0%	85 of 87	Decreasing	Ramsey	32,196	Increasing	15.3%	65 of 87	Decreasing
Dakota	27,802	Decreasing	13.4%	79 of 87	Decreasing	Red Lake	935	Increasing	18.4%	43 of 87	Increasing
Dodge	2,659	Decreasing	19.9%	35 of 87	Decreasing	Redwood	2,083	Decreasing	15.8%	59 of 87	Increasing
Douglas	5,121	Decreasing	26.2%	13 of 87	Increasing	Renville	3,216	Decreasing	22.8%	21 of 87	Decreasing
Faribault	2,956	Decreasing	27.1%	10 of 87	Increasing	Rice	5,709	Decreasing	16.5%	55 of 87	Decreasing
Fillmore	1,197	Decreasing	21.4%	27 of 87	Decreasing	Rock	2,244	Increasing	26.1%	14 of 87	Increasing
Freeborn	5,729	Decreasing	26.9%	11 of 87	Decreasing	Roseau	1,262	Decreasing	27.7%	8 of 87	Decreasing
Goodhue	15,018	Decreasing	18.1%	45 of 87	Decreasing	St. Louis	28,489	Increasing	20.2%	32 of 87	Decreasing
Grant	861	Decreasing	28.9%	5 of 87	Increasing	Scott	11,910	Increasing	15.1%	67 of 87	Decreasing
Hennepin	86,623	Increasing	14.1%	75 of 87	Decreasing	Sherburne	14,491	Increasing	15.6%	63 of 87	Decreasing
Houston	1,814	Increasing	13.9%	76 of 87	Decreasing	Sibley	3,252	Increasing	14.7%	68 of 87	Increasing
Hubbard	2,544	Increasing	22.0%	23 of 87	Decreasing	Stearns	18,460	Increasing	15.6%	62 of 87	Increasing
Isanti	4,603	Increasing	15.7%	60 of 87	Decreasing	Steele	8,248	Decreasing	19.3%	37 of 87	Decreasing
Itasca	6,371	Increasing	23.2%	19 of 87	Decreasing	Stevens	1,095	Increasing	9.2%	87 of 87	Decreasing
Jackson	4,790	Increasing	28.2%	7 of 87	Increasing	Swift	1,306	Increasing	17.2%	52 of 87	Increasing
Kanabec	935	Increasing	15.4%	64 of 87	Decreasing	Todd	2,964	Decreasing	22.0%	24 of 87	Decreasing
Kandiyohi	3,527	Increasing	12.3%	82 of 87	Decreasing	Traverse	448	Decreasing	17.3%	50 of 87	Decreasing
Kittson	794	Decreasing	17.9%	49 of 87	Increasing	Wabasha	1,479	Increasing	14.6%	70 of 87	Decreasing
Koochiching	912	Increasing	24.1%	17 of 87	Decreasing	Wadena	1,362	Increasing	18.0%	47 of 87	Decreasing
Lac Qui Parle	1,973	Decreasing	21.7%	25 of 87	Increasing	Waseca	1,356	Increasing	14.4%	72 of 87	Increasing
Lake	4,345	Increasing	23.9%	18 of 87	No Change	Washington	16,549	Increasing	16.0%	58 of 87	Decreasing
Lake of Woods	423	Increasing	30.0%	3 of 87	Decreasing	Watonwan	3,015	Decreasing	29.0%	4 of 87	Increasing
Le Sueur	5,286	Decreasing	18.3%	44 of 87	Decreasing	Wilkin	1,506	Increasing	44.3%	1 of 87	Decreasing
Lincoln	1,078	Increasing	32.0%	2 of 87	Decreasing	Winona	6,399	Increasing	20.9%	29 of 87	Increasing
Lyon	3,287	Increasing	18.5%	42 of 87	Decreasing	Wright	17,969	Increasing	18.5%	41 of 87	Decreasing
McLeod	6,422	Decreasing	14.2%	73 of 87	Decreasing	Yellow	2,121	Decreasing	19.3%	38 of 87	Decreasing
Mahnomen	849	Increasing	20.3%	31 of 87	Decreasing	Total	563,576	Increasing	15.8%		Decreasing

■ Top 15 Highest Percentages of Speed-Related Crashes

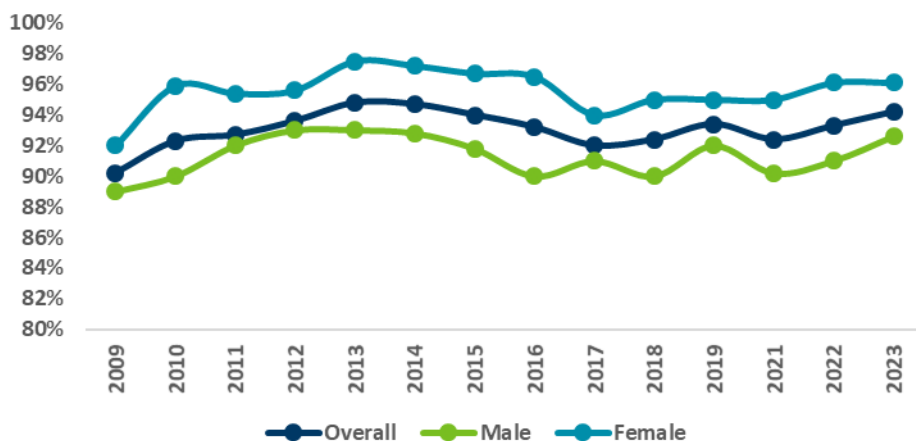
* Citation and crash trends compare the first three quarters of 2022 to the first three quarters of 2023.

Unbelted motorists

The use of a seatbelt provides a motor vehicle occupant (MVO) with an effective means of protection in the event of a collision. Upon impact, a seatbelt reacts to keep a vehicle occupant in their seat and inside the vehicle. Many states, including Minnesota, have mandatory seatbelt use laws, and as a result have high seatbelt usage rates. A statewide observational study in 2023 found 94.2 percent seatbelt usage on Minnesota roads.

Seatbelt Use Trends

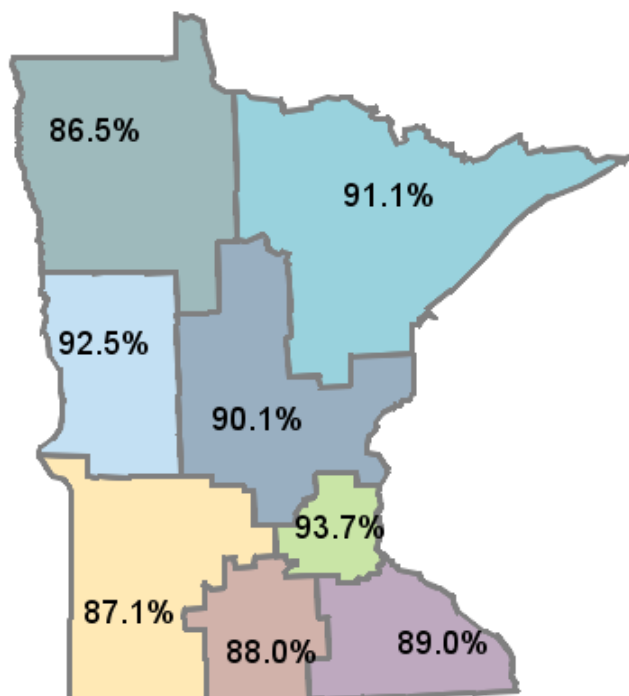
(No Study Conducted in 2020)



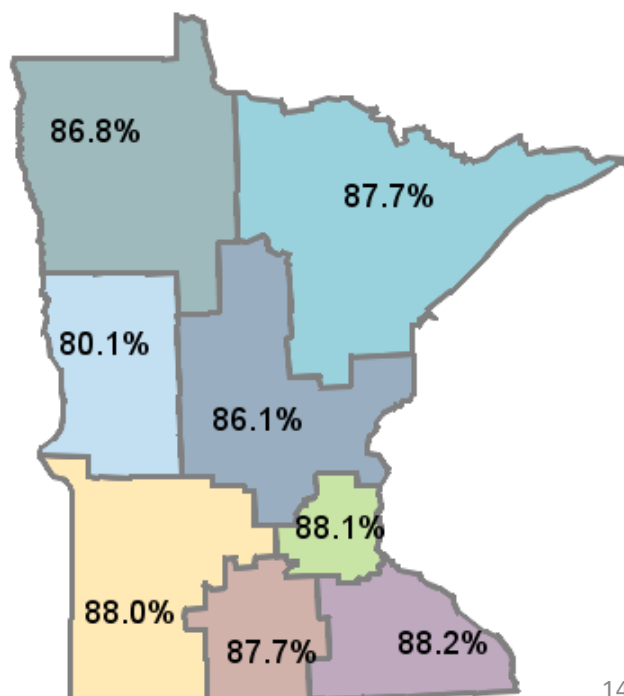
Female seatbelt use is consistently higher than male seatbelt use.

Each year MnDOT conducts regional observational seatbelt studies. These studies find differing rates across the regions. The Northwest and Southwest regions have the lowest seatbelt use rates. The map below on the left shows the percentage of seatbelt use by region in MnDOT's 2023 observational study. The map below on the right shows seatbelt use in crashes (2020-2023). Comparing the observed and actual seatbelt use in crashes, West Central is the only region outside of the observational study's 90 percent confidence band. West Central had 18.05 percent of crashes reported with unknown seatbelt use. Counties in the West Central region also have some of the highest percentages of speed-related crashes.

Seatbelt Use (Regional Observational Study)



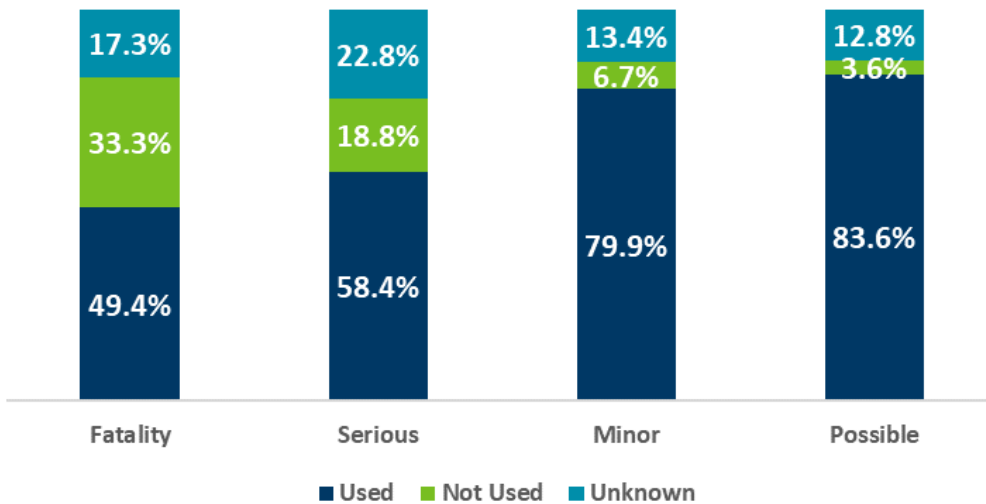
Seatbelt Use (All Crashes)



Unbelted motorists

Since seatbelts provide protection during collisions, it is no surprise that a strong correlation exists between injury severity and seatbelt usage. According to crash data (2020-2023), one-third of MVO fatalities involve seatbelt non-use. Almost 19 percent of serious injuries occur to individuals who were not wearing seatbelts at the time of the crash.

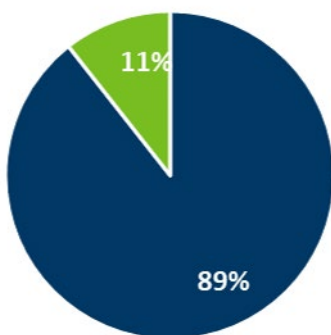
Injury Severity, by Seatbelt Usage



One-third of MVO deaths were unbelted.

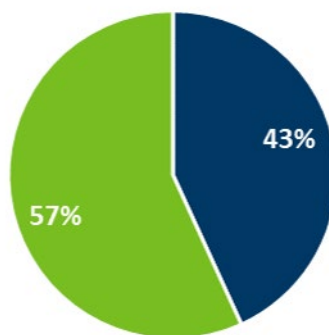
Resulting from a crash, a motor vehicle occupant may either be trapped inside the vehicle, be ejected from the vehicle, or neither trapped or ejected. The vast majority of occupants (98.5 percent) are neither trapped or ejected due to the crash. Whether or not a seatbelt was used directly relates to an MVO's ejection status, and ejection status directly relates to the extend of injuries an individual will suffer.

Trapped, by Seatbelt Use



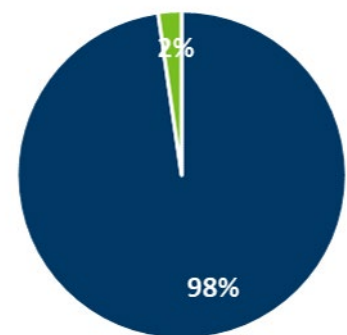
■ Used ■ Not Used

Ejected, by Seatbelt Use



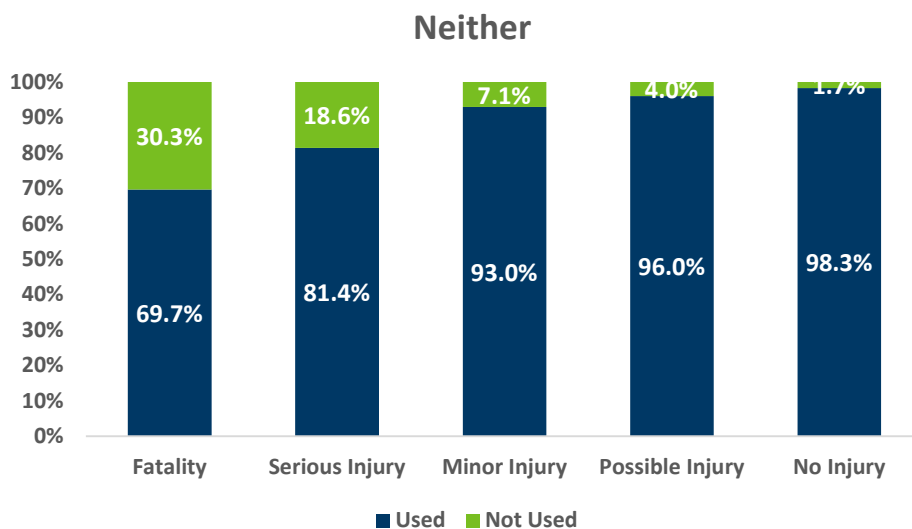
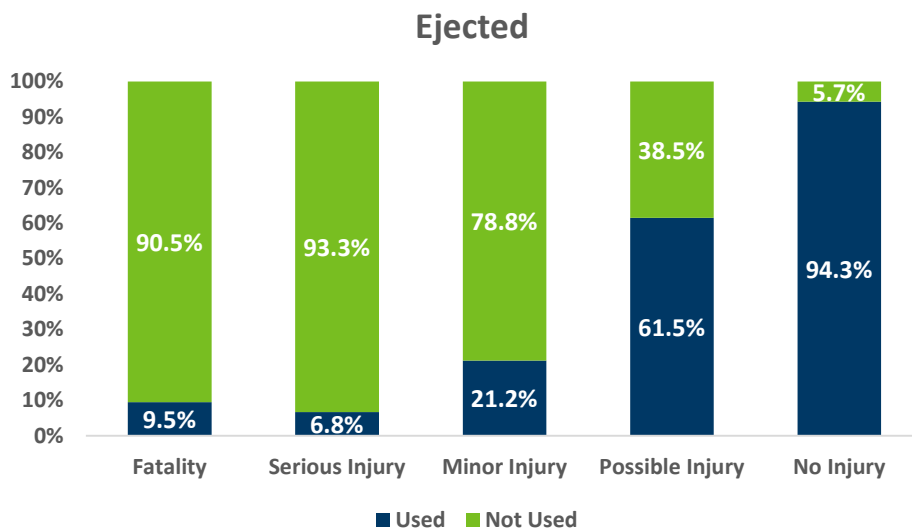
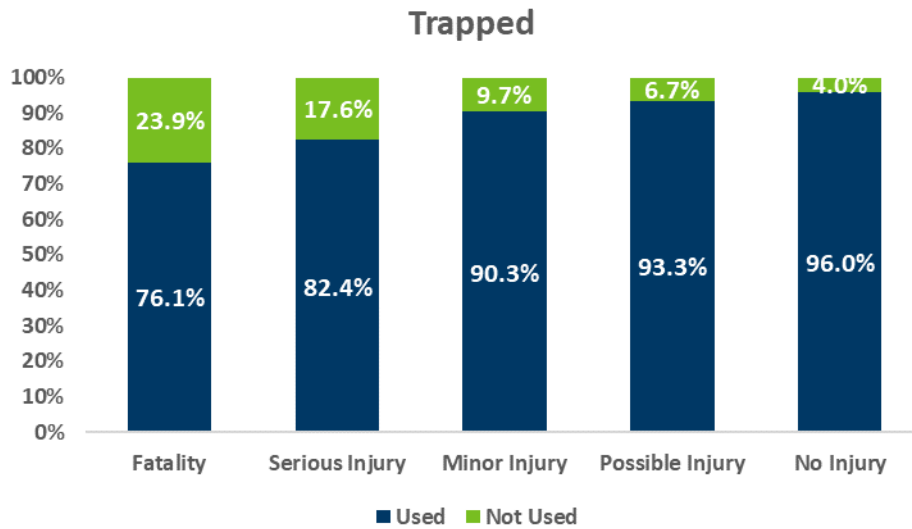
■ Used ■ Not Used

Neither, by Seatbelt Use



■ Used ■ Not Used

Unbelted motorists

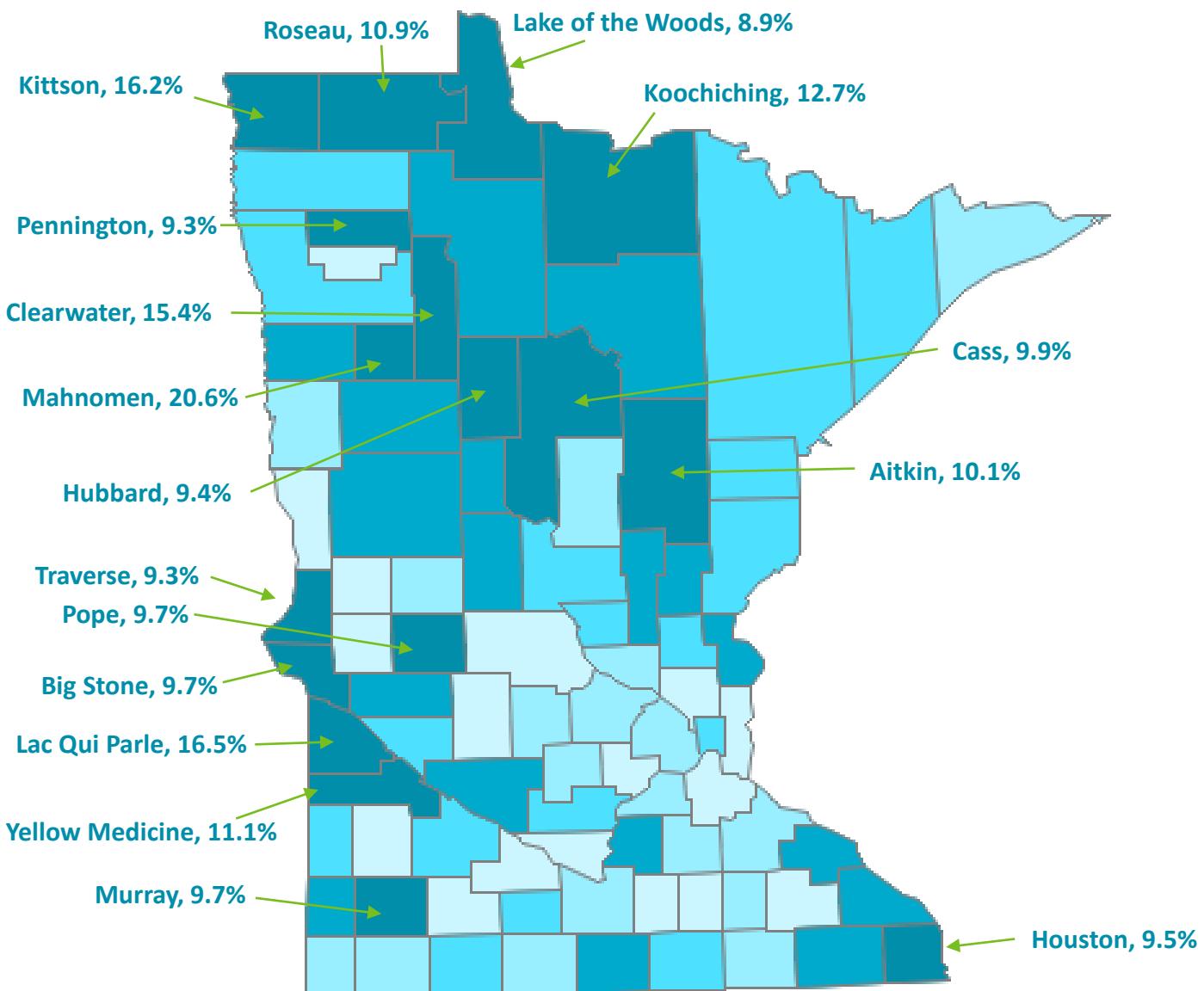


There have only been 22 fully ejected people who were not injured since 2020.

Alcohol impairment

Since 2020, 5.82 percent of all crashes in Minnesota were considered to be alcohol-related. This means either the law enforcement officer perceived alcohol was involved, or a person involved in the crash (driver or non-motorist) tested positively for alcohol. While alcohol-related crashes occur throughout the state, counties in the northern and western areas of the state have higher percentages of their total crashes related to alcohol consumption. The counties Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, and Washington comprise 53.69 percent of the state's alcohol-related crashes. The map below displays the percentage of alcohol-related crashes for each county. Of all 87 counties, Mahnomen County had the highest percentage, at 20.6 percent.

Percentage of Alcohol-Related Crashes (2020-2023)



Alcohol impairment

Since 2020, nearly one third (30.3 percent) of all fatal crashes, and 20.1 percent of all serious injury crashes were alcohol-related. Looking at data from years prior to 2020 yields similar percentages. Crashes involving alcohol tend to be more severe.

Arrests for driving while intoxicated (DWI) usually do not stem from traffic crashes, but these incidents could easily result in crashes since alcohol impairs a driver's ability to operate a motor vehicle. Minnesota averages around 25,000 DWI arrests and 4,000 alcohol-related crashes each year. Considering this connection and that almost one-third of fatalities are related to alcohol, getting alcohol impaired drivers off the roads is essential for traffic safety.

Connection between alcohol and crash severity

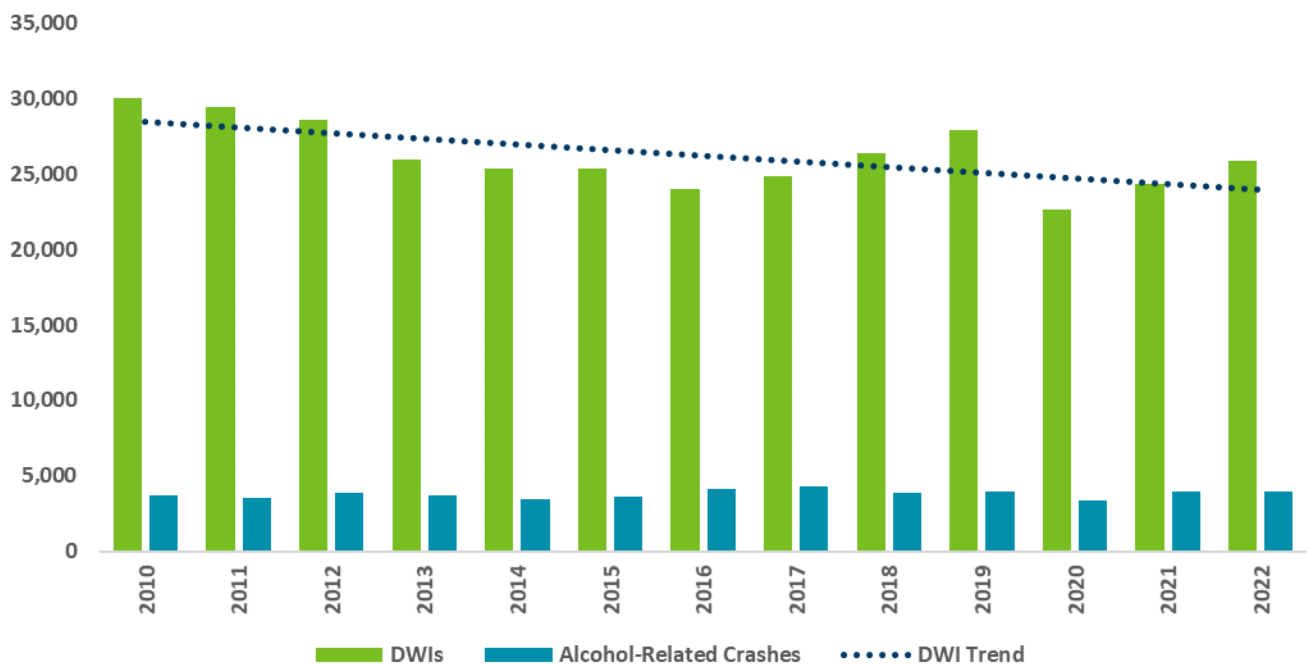


**Average BAC in
DWI arrests
0.1552**

**Average BAC in
fatal crashes
0.1725**

**Average BAC in
non-fatal crashes
0.1546**

DWI and Alcohol-Related Crash Counts

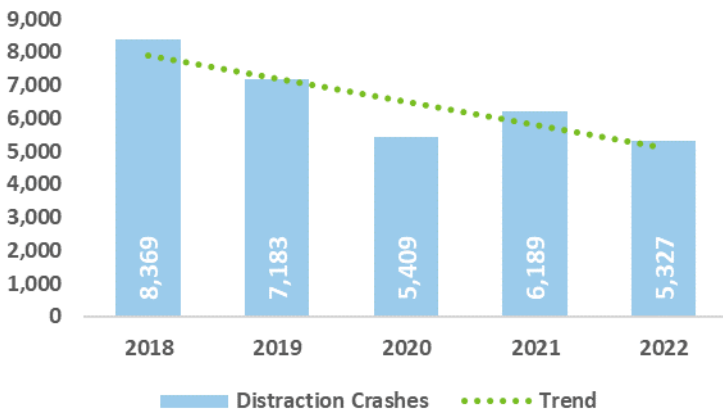


Distraction

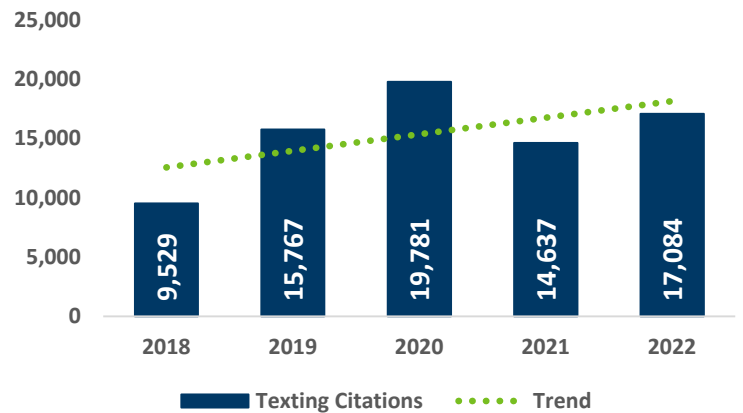
Of all the traffic safety topics, none is more challenging to analyze than distracted driving. Eating, grooming, playing with vehicle controls, using a cell phone, even conversing with passengers are all types of distraction. Because most crash reports are written after the crash occurred and a law enforcement officer did not witness the crash, officers must rely on witnesses or other people involved in a crash for information. When questioned by law enforcement regarding cell phone use during a crash many people are untruthful. This reporting data discrepancy results in an inaccurate picture of the problem of driver distraction.

Minnesota's Hands Free Law was enacted Aug. 1, 2019. Since then multiple surveys have questioned public awareness of this law. Overwhelmingly, the public knows using a cell phone while driving is illegal. Yet, they do it anyway. Reported cell phone use in crashes is more akin to self-reported data, and texting citations are more akin to observational data. Distraction in crash reports and citations issued for texting show a different picture.

Reported distraction trending down

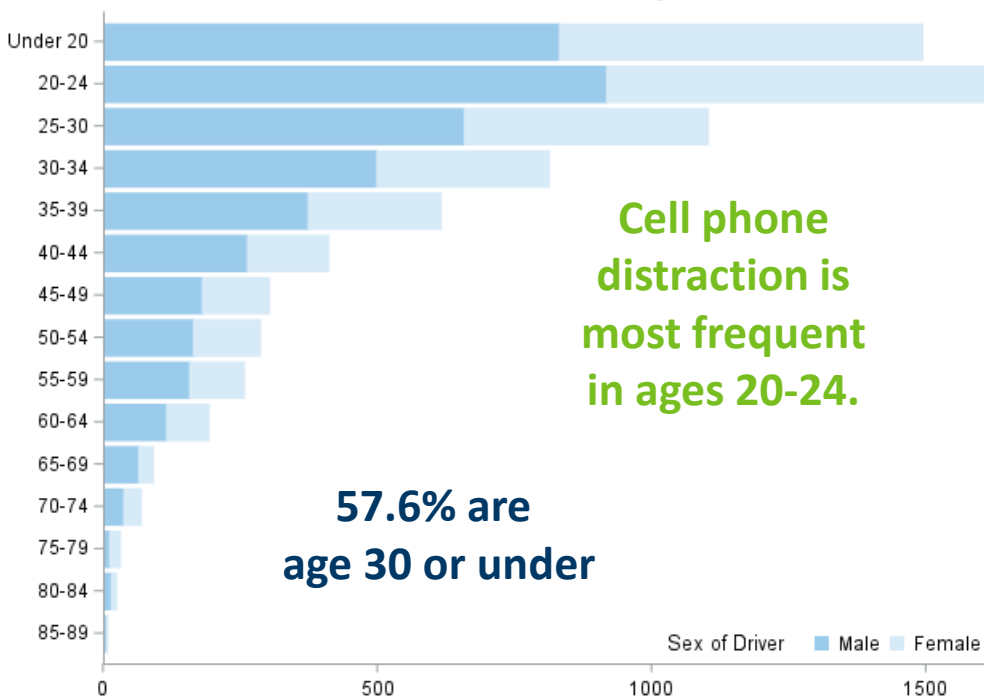


Texting citations trending up



In crashes where driver distraction by cell phone was documented most drivers were male (58.7 percent) and young (42.5 percent age 24 or under). Males at every age grouping outnumbered females except for age 75-79; in that age range, females had 63.3 percent of the cell phone distraction.

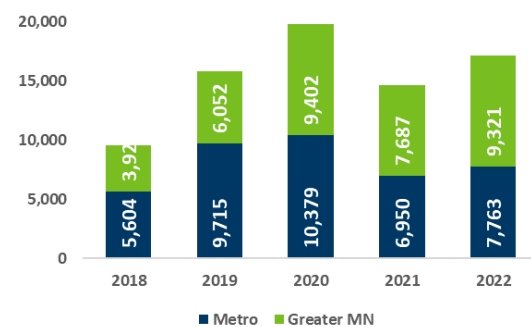
Drivers in Crashes Distracted by Cell Phones



Cell phone distraction is most frequent in ages 20-24.

Where are texting citations issued?

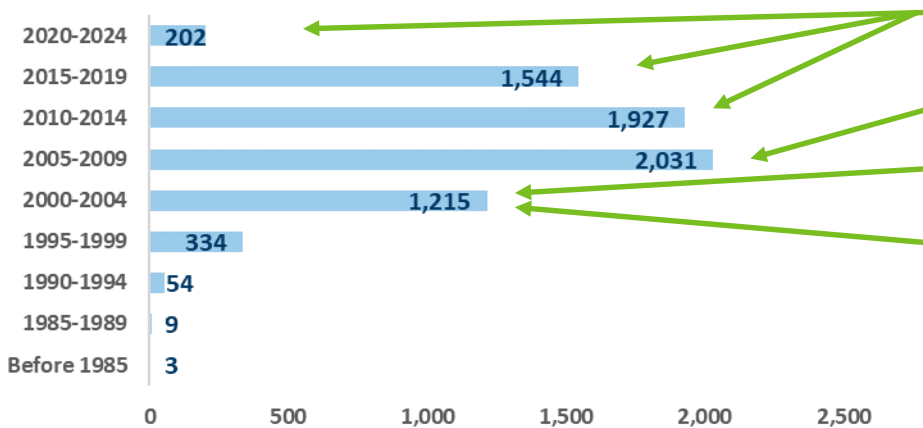
As expected, relative to population size, Hennepin, Ramsey, Dakota, and Anoka counties had the most texting citations issued. Since 2018, more than half (52.6 percent) of texting citations were issued in the metro counties.



Distraction

According to crash data from 2018-2022, drivers involved in crashes who were listed as distracted by cell phones overwhelmingly (96.5 percent) were driving passenger cars, SUVs, pickup trucks, or passenger vans. Also, they were driving vehicles with “normal” use meaning that the vehicle was functioning as transportation and not incident response, or farm use, or construction, or plowing. As noted previously, these drivers tended to be male and under age 24, but what vehicle were they driving? Is there any connection between vehicle age (thus lack of technology within the vehicle) and a driver being distracted? Were younger drivers distracted because they drove older vehicles? The tables and graph below examine those questions.

Year of Vehicle Driven by Drivers Who Were Distracted by Cell Phones



Timeline of Vehicle Technology Related to Cell Phones

- 2014** – Apple CarPlay and Android Auto
- 2012** – Autonomous Cars, first license
- 2009** – Smart Phone connected cars, becomes the infotainment system
- 2001** – “Modern Infotainment” Systems (includes knobs and dials)
- 2000-2001** – Bluetooth connection
- 1996** – “Connected Car” OnStar – features GPS location tracking

Driver Age	Year Vehicle Manufactured									Total
	<= 1985	1985-1989	1990-1994	1995-1999	2000-2004	2005-2009	2010-2014	2015-2019	2020-2024	
Under 20	0	1	10	73	307	527	389	175	16	1,498
20-24	0	2	18	89	282	460	420	311	30	1,612
25-30	1	2	7	50	168	297	293	260	31	1,109
30-34	2	0	4	39	149	219	204	176	22	815
35-39	0	1	4	29	81	144	166	168	24	617
40-44	0	0	1	12	49	108	122	104	17	413
45-49	0	1	1	8	48	73	83	76	12	302
50-54	0	0	3	9	43	70	70	76	15	286
55-59	0	1	3	8	43	48	69	77	7	256
60-64	0	1	2	9	21	43	49	52	15	192
65-69	0	0	1	4	11	20	20	30	4	90
70-74	0	0	0	0	6	10	22	24	7	69
75-79	0	0	0	2	4	5	11	8	0	30
80-84	0	0	0	2	3	5	6	5	2	23
85-89	0	0	0	0	0	2	3	2	0	7
Total	3	9	54	334	1,215	2,031	1,927	1,544	202	7,319

= Highest for age grouping
 = Highest for vehicle year grouping

Vehicles manufactured in 2014 or later (which are equipped with Apple CarPlay or Android Auto) represented 29.34 percent of the vehicles driven. Ninety-two percent of the vehicles were manufactured after 2000 and would have included Bluetooth technology. Vehicles built in 2007, 2008, and 2014 had the most distracted drivers.

In every grouping of manufacture years, the under age 24 were the largest group of distracted drivers. It did not matter how old the vehicle was or the level of technology in the vehicle younger drivers were more distracted by their cell phones than older drivers.

Contributing factors in crash data

Many factors may contribute to a crash occurring. Some factors relate to the functioning of the vehicle. Some factors relate to the driving environment on the roadway. Other factors pertain to actions of a driver or non-motorist. Frequently, there are multiple circumstances present in a scenario which lead to a crash. The MNCrash report allows officers to document the contributing factors from differing perspectives of road characteristics (crash), or behavioral actions (person), or vehicle defects or characteristics (vehicle). These factors may overlap and multiple factors can be documented per crash. The table below examines the contributing factors cited on crash reports from 2020-2023.

Contributing Factors	Type	15-19	20-29	30-39	40-49	50-59	60-69	70+	All Ages
Road Surface Conditions	Misc.	24.4%	24.8%	24.7%	26.4%	25.7%	25.5%	23.2%	24.9%
Ran Off Road	Human	11.2%	10.9%	11.7%	11.0%	12.4%	13.1%	15.3%	11.5%
Other Human Factor	Human	7.7%	8.5%	9.0%	11.1%	11.5%	13.1%	13.3%	9.5%
Failed to Keep in Proper Lane	Human	7.1%	9.4%	8.9%	8.2%	9.2%	8.9%	13.1%	8.9%
Careless, Negligent, or Erratic Driving	Human	8.5%	9.1%	9.1%	7.9%	6.6%	5.8%	4.4%	8.3%
Overcorrecting/Oversteering	Human	10.1%	7.9%	7.4%	6.4%	5.9%	6.5%	4.1%	7.6%
Driver Speeding	Human	9.3%	8.4%	6.8%	7.0%	5.8%	4.3%	2.5%	7.4%
Driver Swerved	Human	5.6%	6.1%	6.5%	6.6%	6.5%	5.4%	5.3%	6.1%
Driver Distracted	Human	4.3%	3.4%	3.2%	3.0%	3.6%	3.7%	3.5%	3.5%
Other Vehicular Factor	Vehicle	2.3%	1.9%	2.0%	2.0%	1.9%	2.6%	3.2%	2.1%
Defective Brakes	Vehicle	1.6%	1.5%	2.0%	1.7%	2.0%	1.6%	1.5%	1.7%
Reckless or Aggressive Driving	Human	1.6%	1.8%	1.2%	1.1%	0.4%	0.3%	0.2%	1.3%
Improper Turn/Merge	Human	1.1%	0.8%	0.9%	0.8%	1.3%	1.5%	1.2%	1.0%
Disregard Other Traffic Signs	Human	0.6%	0.6%	0.8%	0.7%	0.8%	0.6%	1.9%	0.7%
Ran Stop Sign	Human	0.6%	0.6%	0.5%	0.7%	0.6%	0.6%	0.5%	0.6%
Other Miscellaneous Factor	Misc.	0.4%	0.5%	0.5%	0.5%	0.6%	0.5%	0.7%	0.5%
Vision Obscured	Vehicle	0.3%	0.4%	0.4%	0.4%	0.4%	1.4%	1.9%	0.5%
Defective Steering	Vehicle	0.4%	0.4%	0.4%	0.4%	0.4%	0.1%	0.1%	0.4%
Disregard Other Road Markings	Human	0.3%	0.3%	0.4%	0.5%	0.3%	0.4%	0.6%	0.3%
Work Zone	Misc.	0.1%	0.3%	0.4%	0.3%	0.5%	0.4%	0.7%	0.3%
Following Too Closely	Human	0.3%	0.3%	0.4%	0.3%	0.4%	0.2%	0.0%	0.3%
Shoulders (Non,Low,Soft,High)	Misc.	0.5%	0.2%	0.3%	0.2%	0.3%	0.3%	0.4%	0.3%
Improper Backing	Human	0.1%	0.1%	0.3%	0.4%	0.3%	0.4%	0.6%	0.2%
Wrong Side/Wrong Way	Human	0.2%	0.3%	0.3%	0.0%	0.4%	0.2%	0.2%	0.2%
Debris	Misc.	0.1%	0.3%	0.3%	0.3%	0.2%	0.2%	0.0%	0.2%
Ruts/Holes/Bumps	Misc.	0.2%	0.1%	0.3%	0.2%	0.3%	0.2%	0.4%	0.2%
Defective Wheels	Vehicle	0.2%	0.1%	0.2%	0.4%	0.2%	0.2%	0.1%	0.2%
Obstruction in Roadway	Misc.	0.1%	0.2%	0.1%	0.2%	0.3%	0.4%	0.2%	0.2%
Failure to Yield Right-of-Way	Human	0.1%	0.1%	0.2%	0.2%	0.5%	0.2%	0.1%	0.2%
Improper Passing	Human	0.1%	0.2%	0.0%	0.1%	0.1%	0.2%	0.0%	0.1%
Defective Suspension	Vehicle	0.1%	0.2%	0.1%	0.2%	0.2%	0.1%	0.2%	0.1%

Human Factor • Vehicular Factor • Miscellaneous Factor

Focus areas

As mentioned before, any one crash may exhibit several factors or behaviors which contribute to that crash. These factors can be grouped into categories, or focus areas, for analysis and planning purposes. In order to prioritize traffic safety projects and strategies by emphasizing the most-needed and problematic issues, these focus areas are organized into four groupings.

The Core focus areas are given the most emphasis due to the large portion of fatal and serious injury crashes falling into this area. The Strategic focus area looks into emerging problems. The Connected focus area pertains to a smaller portion of crashes, but are connected to with other focus areas. The Support Solutions focus area represents safety techniques and systems that enhance multiple strategies. Having a strong Traffic Safety Culture will encompass these focus areas by reaching out to all groups in Minnesota, including diverse and underserved communities.

Core

- Inattentive drivers
- Impaired roadway users
- Intersections
- Speed
- Lane departure
- Unbelted vehicle occupants

Strategic

- Older drivers
- Pedestrians
- Younger drivers
- Work zones
- Commercial vehicles
- Motorcyclists

Connected

- Unlicensed drivers
- Bicyclists
- Trains

Support Solutions

- Traffic safety education and awareness
- EMS and trauma systems
- Vehicle safety enhancements
- Data management
- Management systems

Action oriented strategies

Pages 12-26 of Minnesota’s 2020-2024 Strategic Highway Safety Plan (SHSP) details specific action oriented strategies for core and strategic focus areas. The strategies were developed cooperatively by stakeholders across Minnesota during the 2018 TZD regional workshops and later refined by traffic safety experts at the Minnesota Safety Council, MDH, DPS, MnDOT and the TZD Leadership Team. These strategies seek to reduce crashes within a specific focus area.

Below is a condensed listing of these strategies:

Core Focus Areas	Strategic Focus Areas
Inattentive drivers strategies	Older drivers strategies
<ol style="list-style-type: none"> 1 Improve education and awareness about inattentive driving. 2 Provide more enforcement and legislative actions to lower inattentive driving rates. 3 Support the advancement of technology improvements and road design to reduce the impact of inattentive driving. 	<ol style="list-style-type: none"> 1 Increase public awareness of the safety risks faced by older drivers. 2 Evaluate fitness to drive. 3 Improve traffic design to benefit older drivers. 4 Improve transportation options.
Impaired roadway users strategies	Pedestrian strategies
<ol style="list-style-type: none"> 1 Increase public awareness to reduce impaired driving. 2 Support community-based initiatives to keep impaired drivers off the road. 3 Provide funding, training, and technology for impaired driving law enforcement. 4 Improve DWI law, adjudication process, and post-conviction sanctions to deter impaired driving. 	<ol style="list-style-type: none"> 1 Increase education and awareness for drivers and pedestrians. 2 Improve design and maintenance for pedestrian safety. 3 Promote policy changes that impact pedestrian safety.
Intersections strategies	Younger drivers strategies
<ol style="list-style-type: none"> 1 Improve safety through intersection roadway design changes and alternative intersections. 2 Improve corridor and signalized intersection safety through intersection traffic design and signal timing. 3 Update planning policy. 4 Increase education and enforcement of red light running. 	<ol style="list-style-type: none"> 1 Increase public awareness to improve the safety of younger drivers. 2 Improve driver education and the graduated driver license law.
Speeding strategies	Work zones strategies
<ol style="list-style-type: none"> 1 Increase education and awareness about safe speeds and aggressive driving. 2 Utilize enforcement to reduce speeding. 3 Improve road design and speed limit signing. 	<ol style="list-style-type: none"> 1 Reduce speeding within work zones. 2 Improve work zone notifications and education. 3 Use innovative work zone planning techniques. 4 Design safe work zones.
Lane departure strategies	Commercial vehicles strategies
<ol style="list-style-type: none"> 1 Design roadways to reduce the frequency and severity of lane departure crashes. 2 Evaluate new safety features. 	<ol style="list-style-type: none"> 1 Improve enforcement for commercial vehicles. 2 Improve the network of commercial vehicle rest areas. 3 Increase education on commercial vehicle safety. 4 Support new vehicle technology.
Unbelted vehicle occupants strategies	Motorcyclists strategies
<ol style="list-style-type: none"> 1 Increase public awareness to improve the use of seatbelts and child restraints. 2 Provide funding and training for seatbelt law enforcement. 3 Improve seatbelt and child passenger safety law and training programs. 	<ol style="list-style-type: none"> 1 Increase public awareness and education to improve motorcycle safety. 2 Improve motorcycle safety-related policies. 3 Improve highway design and maintenance policies.

Roadway and system improvements

The 2023-2026 State Transportation Improvement Program (STIP) provides a comprehensive listing of the four-year schedule of planned transportation projects in the state for fiscal years 2023, 2024, 2025, and 2026. Over \$10.5 billion in federal, state, and local funds have been allocated for transportation investments in state trunk highways, local roads, bridges, rail crossings, plus transit operation assistance.

Below is a link to MnDOT's STIP and listing of planned projects.

<https://www.dot.state.mn.us/planning/program/stip.html>

In addition to the comprehensive listing in the STIP, there are other initiatives targeting specific problematic locations. Targeting these problematic areas may reduce fatalities and serious injuries and put Minnesota on a path to achieving performance measure targets.

High risk rural route systems

The definition of a high risk rural road is provided on page 32 of the SHSP. A high risk rural road is functionally classified as a rural major collector, rural minor collector, or a rural local road. The road should have a fatal and serious injury crash rate above the statewide average for similarly classified roadways or a significant increase in expected traffic volumes so that the roadway could develop a fatal or serious injury crash rate above the threshold.

Rural roadways can be problematic in traffic safety due to a lack of engineered roadway safety features, an abundance of speeding drivers, and the proximity of available medical facilities for crash aftercare. Determining the specific rural roadways most problematic will allow for additional law enforcement patrols and targeting educational efforts.

On Dec. 13, 2023 the newly-formed Advisory Council on Traffic Safety met and made initial moves towards assembling a working group on the topic of high risk rural route systems in order to correctly determine which specific Minnesota roadways need increased enforcement, educational efforts, or potential engineering fixes. Advisory council members and non-members volunteered for this working group and this will be an ongoing endeavor going forwards.

Safe road zones

Also at the Dec. 13, 2023 meeting, volunteers were sought to form a working group on safe road zones. In accordance with the 2023 Transportation Omnibus Bill, this working group will make recommendations to the public safety commissioner related to the designation of specific road or highway segments as safe road zones. These designated roadway segments may be determined through an evaluation of data related to excessive speeding, crash history and risks to pedestrians, bicyclists, and other vulnerable road users, as well as intersection, and roadway design.

Once a road has been designated as a safe road zone, funding will be used for development and delivery of public awareness and educational campaigns about the safe road zones. Signage identifying the roadway as a safe road zone will be installed. In addition, coordinated and targeted law enforcement speed reduction efforts in the specified roadway segment will be implemented.

Enforcement and education efforts

The Highway Safety Plan (HSP) details the program areas, projects, countermeasures and strategies which OTS operates under. The HSP is required by NHTSA and the plan must also be approved by NHTSA. It has recently switched from an annual plan over to a three year plan. Determining the projects and planned activities for the highway safety plan is a constant endeavor throughout the year as projects are considered using data-driven decisions and may involve community and public participation efforts. Much of the HSP includes enforcement and education outreach efforts targeting traffic safety behaviors with the goal of reducing traffic deaths and serious injuries.

Police traffic services

The program area of police traffic services supports additional hours of law enforcement and resources to focus on prevention (deterrence) and education (behavior correction). A traffic stop may be viewed as an enforcement opportunity with a citation issued, or an educational opportunity with a public contact and a warning issued. The plan also provides assistance to allow officers to attend trainings and conferences to network and share best practices, as well as recognition honors for outstanding traffic safety work to inspire and motivate officers.

This support of police traffic services has enabled strong working partnerships between OTS and more than 200 local police departments, more than 70 sheriff's departments, two university police departments, and all districts of the Minnesota State Patrol. Minnesotans and Minnesota roads benefit from these strong partnerships.

Impaired driving enforcement

Alcohol and drug impaired driving constitutes a serious traffic safety problem. Impaired driving is a program area in the HSP, and many projects specifically relate to enforcement of impaired driving laws or the judicial aftermath of an impaired driving arrest. The drug recognition evaluator (DRE) program seeks to reduce drug impaired driving by providing specialized drug identification training to law enforcement officers. This provides officers with the tools needed to conduct tests and make drug-impaired driving arrests. There is also a DRE certification program available. Currently, there are more than 300 DRE officers in the state. Due to the legalization of cannabis, the DRE program will expand both in number of officers and available technology.

Paid and earned media

Educational paid media campaigns are used in conjunction with enforcement campaigns targeting specific types of enforcement (e.g. occupant protection, speeding, impaired driving, distracted driving). These paid media campaigns follow an annual calendar and run in concert with statewide and national campaigns. Along with traditional broadcast cable TV and radio spots, other media elements are used to reach targeted groups for campaigns. Some of these other media elements include digital billboards, gas station media, restaurant restroom displays, light rail train, bus and truck wraps and clings, out-of-home advertising, and social media posts. Additional earned media utilized include news releases, news conferences, media interviews, DPS blog posts, DPS videos, and traffic safety partner communications materials and educational collateral.

Enforcement and education efforts

Other education efforts

There are several other programs within the HSP focusing on educational efforts.

In the program area of occupant protection, there are projects providing education for car seat technicians to be certified and projects to provide child and restraint system trainings to caregivers and parents. Manuals and other instructional materials are produced and offered through car seat inspections, and virtual and in-person classroom education events.

There is a responsible beverage service project to train bar and wait staff on the issue of over-serving patrons.

Educating parents of teen drivers on the graduated driver license Laws is important because teenagers are more likely than any other age group to be involved in crashes. There is a project dedicated to providing educational materials and outreach activities for parents and teens to understand the laws and best practices for novice drivers.

An older driver working group has been assembled to develop educational content around the risks associated with aging drivers.

Safety improvements and programs

The Highway Safety Improvement Program (HSIP) is a federally-funded program designed to reduce roadway fatalities and serious injuries that occur on all public roads, including non State-owned roads and roadways located on tribal lands. The funding provides an opportunity for states to address specific transportation issues within the state. MnDOT distributes this funding geographically between its districts, as well as by jurisdiction.

Federal Highway Administration (FHWA) is the agency providing guidance to MnDOT for the HSIP requirements. A data-driven strategic approach to improving highway safety is required to secure funding. Three components are needed for Minnesota are: the Strategic Highway Safety Plan (SHSP), the State Highway Safety Improvement Program (HSIP), and the Railway-Highway Crossing Program (RHCP).

The FHWA requires the HSIP implementation plan to:

- Identify hazardous roadway features.
- Find projects to improve highway safety based on crash history, crash potential, or other data-supported means.
- Detail how HSIP funding will be utilized by projects, activities, and strategies to implement.
- Describe how those projects, activities, and strategies will help the State make progress toward achieving safety performance targets.
- Lay out the actions the state will undertake to achieve performance targets.

Engineers at MnDOT employ innovative processes and screening toolkits to identify roadways needing improvements. MnDOT also works with stakeholders across the state to ensure that projects from every part of the state are considered in a solicitation process. Eventually, both proactive and reactive projects get selected.

To utilize the HSIP funds, Minnesota's implementation plan includes a mix of reactive intersection projects (roundabouts), systemic intersection projects determined by crash and risk history, and local identified projects (edgeline striping and rumble strips). This mix of projects intentionally provides MnDOT an opportunity to enhance locations with known problematic crash histories as well as proactively addressing areas needing improvements. Current selected HSIP projects for 2022-2026 include infrastructure projects in these areas:

- * Run-off-road
- * Head-on
- * Intersections
- * Non-motorists

Additional details about the MnDOT's HSIP and HSIP Implementation Plan for 2022 can be viewed at the link below.

<https://www.dot.state.mn.us/trafficeng/safety/hsip.html>

Existing resources and resource gaps

The Advisory Council on Traffic Safety members are beginning to explore and identify the resources that would make the biggest safety difference on Minnesota's roads. This also applies to the legislative recommendations. The council has met twice focusing primarily on organizational structure and roles and responsibilities. Expect a much more robust submission in future reports.

A data-driven strategic approach to improving highway safety is the foundation for most of the work we do. In preparation for the OTS Data Analytic and Innovation Center, analysis has been conducted to determine what datasets and data systems exist and which datasets could be shared amongst our partners to maximize our efforts.

The grid on the following page is the result of initial analysis of datasets and data sources.

Gaps in datasets and data sources

Potential Dataset	Potential Source of Data																																					
	FARS (NHTSA)	Recall Database (NHTSA)	NHTSA	MNCRASH (OTS)	ROAR (OTS)	CrashMart (MnDOT)	LIRS (MnDOT)	MNDRIVE (DVS)	MNCICS (Courts)	eCharging (BCA)	HJIP (Henpin)	CODES (MDH)	Midas (MDH)	Billing System (MHA)	Trauma registry (MDH)	Death Registry (MDH)	State Demographer	DWI (BCA)	Out State Hospital	POLD (North)	NEXTGEN 911 (DPS)	CAD/RMS (MSP / LE)	EMSRB (BioSpatial)	Vendor (3rd party, insurance)	Google	LIMS (BCA)	CDR / AR Pro / IMS360 (MSP)	RTMC (511 & Monitoring)	Excel Report	Boarder States	Public (TBD)	MINGEO (MNIT)	TIM (DOT)	S3 (DOC)				
Automotive/Vehicle Data	●						●																	●														
Traffic Movement Data																								●														
Calls for Service																						●																
Citation Data								●	●	●	●																											
Court Disposition									●																													
Crash Data				●		●																															●	
Crash Data - Regional/National		●																																				
Crash Reconstruction Data																											●											
Dispatch Response Time Data																						●	●															
Driver Data (DL/Credential/Endorsement/History)								●	●																													
Driver testing and training data								●																														
DWI / DUI				●					●	●	●	●							●																			
DWI Probation																																					●	
EMS													●		●					●																		
Billing/Admission/Discharge/Transfers													●		●																							
EMS Injury Severity/Substance/Vital Statistics				●								●	●		●	●																						
EMS Linked Data													●																									
EMS Ambulance/Paramedic																								●														
Fatality/Death	●			●								●						●																		●		
Human Factors (Behaviors)				●		●		●	●	●	●													●														
Jurisdiction data																																					●	
Public Data																																					●	
Place of Last Drink																			●		●																	
Population																				●					●													
Roadway Data							●																	●														
Realtime Officer Reporting					●																																	
School Bus Stop Arm Violations																																						
Survey Data																																						
Toxicology																										●												
Traffic Incidents																																					●	
Vehicle Regsitration								●																														
MNCRASH Reporter Training																																				●		
Weather																								●														
Warnings																																					●	

● Primary source of data ● Secondary source of data

Appendix A - Definitions, data sources and acronyms

BAC	Blood Alcohol Concentration	MDH	Minnesota Department of Health
BCA	Bureau of Criminal Apprehension	MJB	Minnesota Judicial Branch
Big 4	Four driver behaviors (speeding, seatbelt non-use, alcohol impairment, and distraction) linked to highway deaths and injuries.	MNCrash	The state's crash reporting system used by law enforcement officers to enter data related to crashes.
Calendar Year	Calendar year runs January 1 through December 31st.	MnDOT	Minnesota Department of Transportation
Citation Data	Charges obtained from the Minnesota Judicial Branch (MJB) for speeding citations or texting violations cited by law enforcement officers.	MVO	Motor vehicle occupant
Crash Data	Information from crashes entered by law enforcement officials into the MNCrash reporting system. Yearly data up through 2022 has been sanitized and finalized. Data for calendar year 2023 is preliminary.	NHTSA	National Highway Traffic and Safety Administration
DPS	Department of Public Safety	NSC	National Safety Council
DWI	Driving While Intoxicated	OTS	Office of Traffic Safety
FARS Data	Fatality Analysis Reporting System (FARS) is statewide fatality data collected and reported to NHTSA.	PDO	A traffic crash involving damage to property and no injuries to persons involved.
Fatal Crash	A traffic crash in which a death has resulted.	Seatbelt Use	Data obtained from observational seatbelt use studies. MnDOT conducts an annual seatbelt use study at the regional level. DPS-OTS conducts a yearly statewide observational seatbelt use study as required by NHTSA.
Fatality Rate	Rate of roadway fatalities per 100K population, 10K registered motor vehicles, and 100M vehicle miles traveled as calculated by NHTSA.	Serious Injury Crash	A traffic crash in which a serious (life-changing) injury has resulted.
FHWA	Federal Highway Administration	SHSP	Strategic Highway Safety Plan (a joint plan by MnDOT, DPS-OTS, and MDH for projects and initiatives for a five year span).
Fiscal Year	The state fiscal year (SFY) runs July 1 through June 30. The federal fiscal year (FFY) runs October 1 through September 30.	STIP	Statewide Transportation Improvement Program
HRRR	High-Risk Rural Road	SUV	Sport Utility Vehicle
HSIP	Highway Safety Improvement Program (MnDOT's infrastructure improvements funded with money from the Federal Highway Administration).	TZD	Toward Zero Deaths - a statewide program aimed at reducing traffic related deaths.
HSP	Highway Safety Plan (OTS' plan for projects and initiatives for a three year span).	VMT	Vehicle Miles Traveled - an aggregate measure of road usage.
		YTD	Year-to-date

Appendix B

Reference documents

Strategic Highway Safety Plan (SHSP) 2020-2024

<https://www.dot.state.mn.us/trafficeng/safety/shsp/>

Highway Safety Plan (HSP)

<https://www.nhtsa.gov/document/minnesota-fy-2022-highway-safety-plan>

Highway Safety Improvement Program (HSIP)

<https://www.dot.state.mn.us/trafficeng/safety/hsip.html>

Highway Safety Improvement Program Implementation Plan (2022)

<https://www.dot.state.mn.us/trafficeng/safety/hsip.html>

State Transportation Improvement Program (STIP) 2023-2026

<https://www.dot.state.mn.us/planning/program/stip.html>

Minnesota Motor Vehicle Crash Facts 2022

<https://dps.mn.gov/divisions/ots/reports-statistics/Documents/2022a-crash-facts.pdf>

County Details Report 2022

https://dps.mn.gov/divisions/ots/reports-statistics/Documents/CountyRpt_2022.pdf

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