

# North Dakota 2008 CRASH SUMMARY



*prepared by*

**NORTH DAKOTA DEPARTMENT OF TRANSPORTATION**

Bismarck, North Dakota  
[www.dot.nd.gov](http://www.dot.nd.gov)

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- Purpose:** The North Dakota Crash Summary, produced annually by the North Dakota Department of Transportation (NDDOT), Traffic Safety Office, identifies and describes the trends and effects of traffic crashes in North Dakota. The statistics within the North Dakota Crash Summary describe factors that contribute to the occurrence of crashes, and crash-related injuries and fatalities. This summary is designed to heighten awareness about traffic safety by allowing safety program specialists, public health personnel, and other interested individuals to identify areas where programs may be focused in an effort to reduce traffic-related injuries and fatalities.
- Crash Data:** The data for this summary is derived from North Dakota crash reports. These reports are completed by law enforcement officers throughout the state who collect data from crash scenes on public roadways. Information is collected when a crash involves injuries, fatalities, or at least \$1,000 property damage. Crash reports are forwarded to the NDDOT for central collection. NDDOT reviews the crash report forms, and enters the data into a database called the Crash Reporting System (CRS).
- Other Data:** Data from the Office of the Attorney General, State Toxicologist, the North Dakota Highway Patrol, and the North Dakota Department of Health, Division of Emergency Medical Services (EMS) is also included.
- Private Property Crashes:** Private property crashes and non-traffic crashes are not included in this summary.
- Fatal Crashes** Additional information is collected on fatal crashes and compiled into a separate database, the Fatality Analysis Reporting System (FARS). This database was used for the reporting of alcohol and other drug-related crashes and fatalities.
- Fact Sheets:** In order to provide information at a glance, a North Dakota 2008 Fast Facts is included in the introduction section. Fast Facts provides an overview of the Crash Summary, and is useful when presenting information to others.
- Prepared By:** This report was prepared by the North Dakota Department of Transportation, Traffic Safety Office. For more information, please contact:  
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- Available At:** Printed copies of the *2008 North Dakota Crash Summary* are available at the North Dakota Drivers License and Traffic Safety Division. The summary is also available on the internet at [www.dot.nd.gov](http://www.dot.nd.gov).

## NORTH DAKOTA TRAFFIC DEATHS DECREASED AND SAFETY BELT USE STAYED STEADY IN 2008

104 people died on North Dakota roads in 2008, 7 less than in 2007.

NDDOT focused its safety efforts on:

- Statewide and local traffic safety programs that have increased awareness of traffic safety issues.
- High visibility enforcement campaigns (high volume multi-media in conjunction with increased, targeted law enforcement) specific to driver behavior (impaired driving and seat belt use).
- Improved engineering of roadway infrastructure.

In addition, seat belt use in North Dakota remained steady at 81.6 percent in 2008. This is almost even compared to 2007 and a significant achievement by traffic safety partners involved in occupant protection programs.

As improvements are made and progress continues, traffic safety must continue to be a top priority in North Dakota. In 2008:

- 50.96 percent of motor vehicle crash fatalities involved alcohol.
- 77 percent of individuals killed in motor vehicle crashes were not wearing seat belts.
- 31 percent of fatal motor vehicle crashes were speed related.

This 2008 North Dakota Crash Summary contains further details regarding motor vehicle crashes in North Dakota. This document exists to help various traffic safety partners advance motor vehicle safety on a statewide basis. Traffic safety partners include: law enforcement agencies, judicial personnel, legislators, news media, research analysts, health care providers, insurance companies, businesses, students, and others involved in traffic safety activities.

Crash statistics are a critical element of traffic safety programming. It is only through careful analysis of crashes that we learn about their causes and develop corresponding solutions through legislation, law enforcement, safety programs, and highway improvements.

As a partner in the highway safety community, your efforts will make North Dakota a safer place to live.

## ACKNOWLEDGEMENTS

Gratitude is extended to all law enforcement personnel at the city, county, and state levels who provide the accurate crash reports from which these statistics are obtained. Their efforts make this report a reliable source of information.

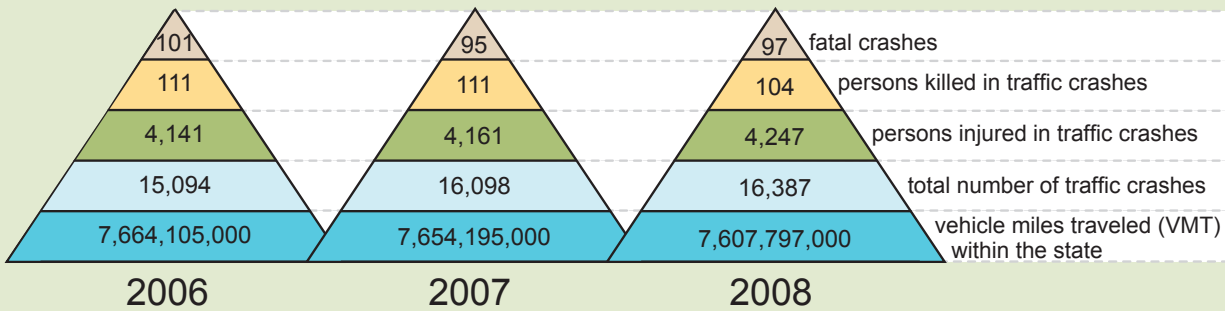


## 2008 North Dakota Crash Clock

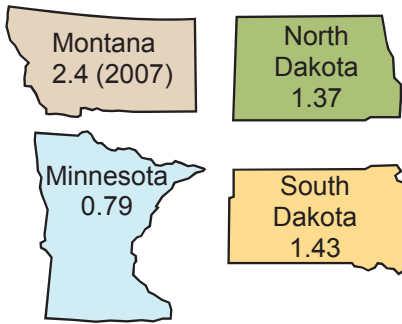
- ◇ One crash occurred every 32 minutes.
- ◇ One person was injured every 2.06 hours.
- ◇ One person died in a crash every 3.5 days.
- ◇ One unbelted occupant died every 14 days.
- ◇ One motorcyclist was in a crash every 1.37 days.
- ◇ One speed-related crash occurred every 3.37 hours.
- ◇ One teenage driver crash occurred every 2.47 hours.
- ◇ One alcohol-related crash occurred every 9.46 hours.
- ◇ One pedestrian was involved in a crash every 4 days.
- ◇ One pedalcycle was involved in a crash every 3.9 days.
- ◇ One driver was involved in a deer crash every 2.4 hours.
- ◇ One crash occurred in a roadway under construction every 3 days.



# ND 2008 FAST FACTS



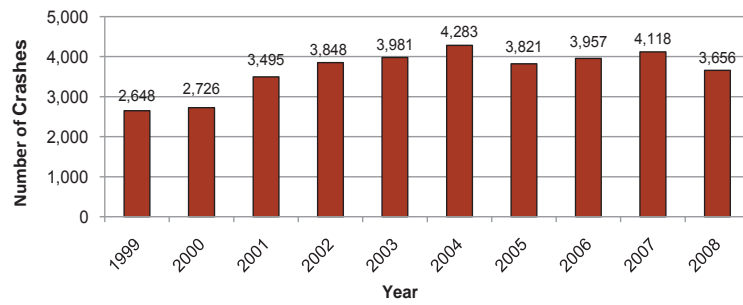
## SURROUNDING STATE ESTIMATED FATALITY RATE MAP



### 2008 National 1.28

Rate is based on estimated fatalities per 100 million vehicle miles traveled.

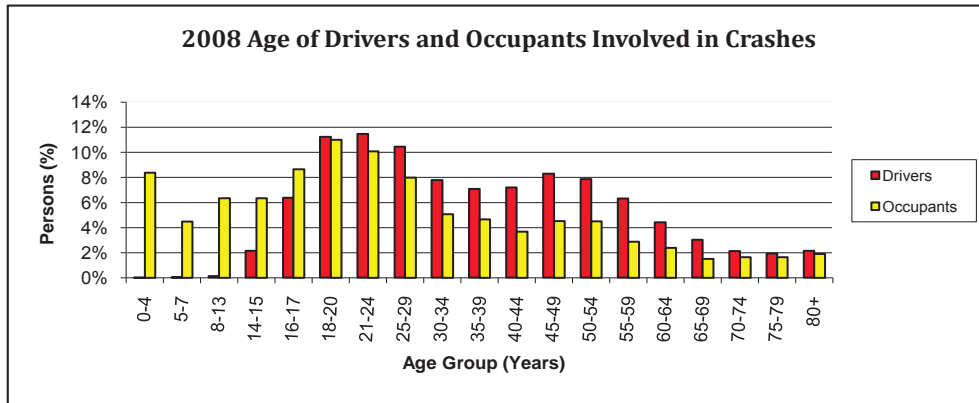
## ND Deer Crashes 1998-2008



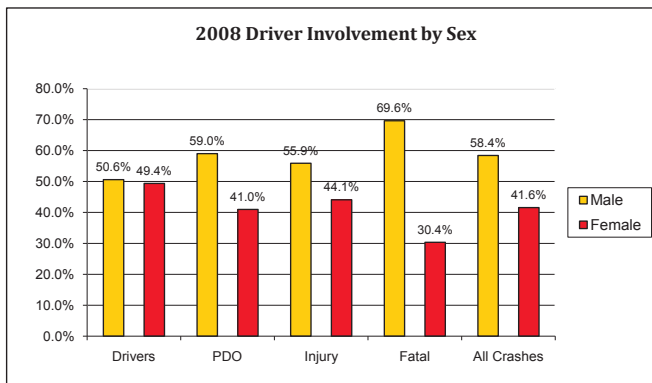
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## DID YOU KNOW THAT IN 2008 NORTH DAKOTA HAD . . .

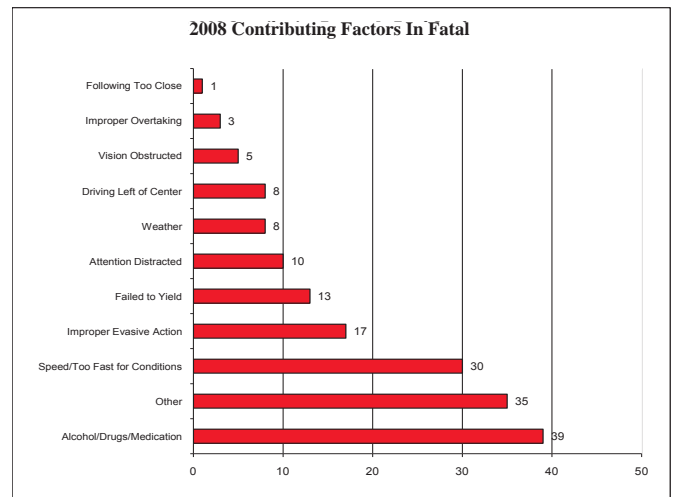
- ◇ 475,129 licensed drivers.
- ◇ 774,346 registered vehicles.
- ◇ An estimated economic loss due to motor vehicle crashes of \$478,345,200.
- ◇ 86.6 percent of fatal crashes occur in rural areas.
- ◇ The highest number of total crashes occur in the month of December.
- ◇ The highest number of total crashes occur on Friday.
- ◇ The most crashes occur at or around 5:00 p.m.
- ◇ 12.5 percent of fatal crashes involve out-of-state drivers.



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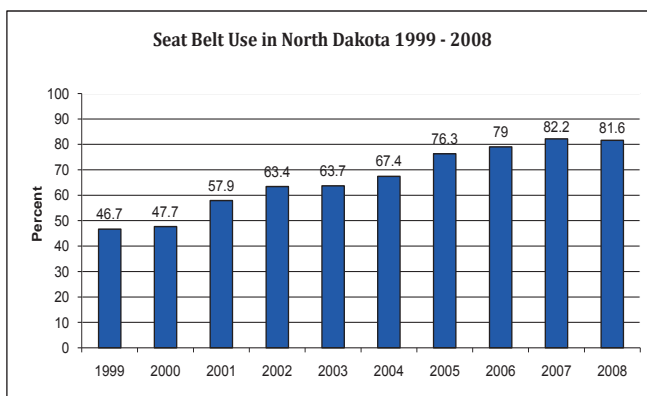
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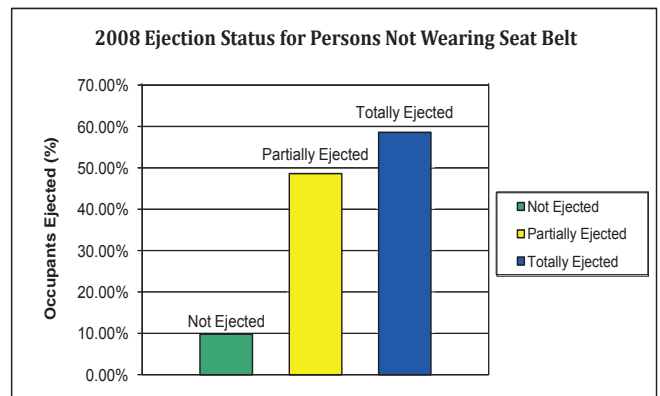
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## DID YOU KNOW THAT IN 2008 . . .

- ◇ Seat belt use in North Dakota was 81.6 percent.
- ◇ The highest percentage and number of unbelted drivers injured were age 14 to 17 (24.3%).
- ◇ 50 percent of killed back seat passengers were unbelted.



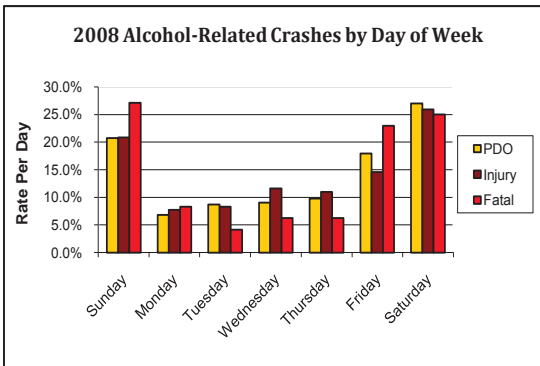
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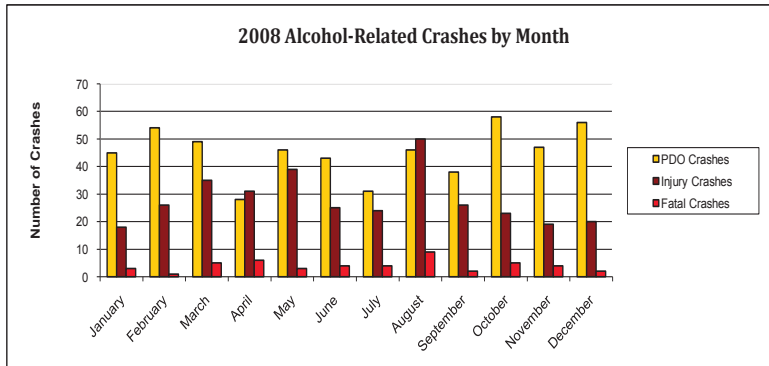
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## DID YOU KNOW THAT IN 2008 . . .

- ◇ 50.96 percent of all motor vehicle fatalities were alcohol-related.
- ◇ Sunday had the highest rate of alcohol-related fatal crashes.
- ◇ 38.68 percent of alcohol-related fatal crashes occurred between 11:00 p.m. and 1:59 a.m.
- ◇ 38.8 percent of drivers involved in alcohol-related crashes were 21-29 years of age.
- ◇ 88.5 percent of those blood tested for alcohol concentration registered an AC .10 percent or greater.



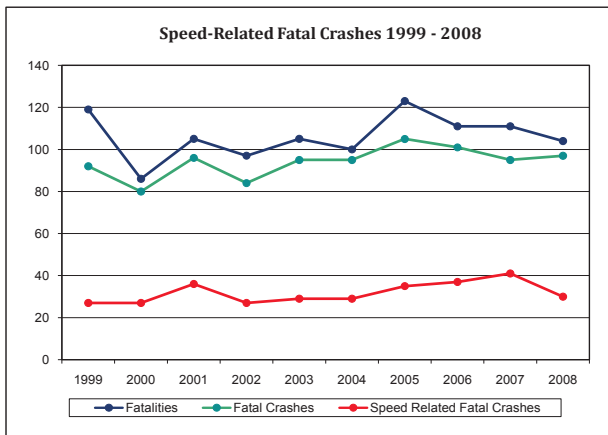
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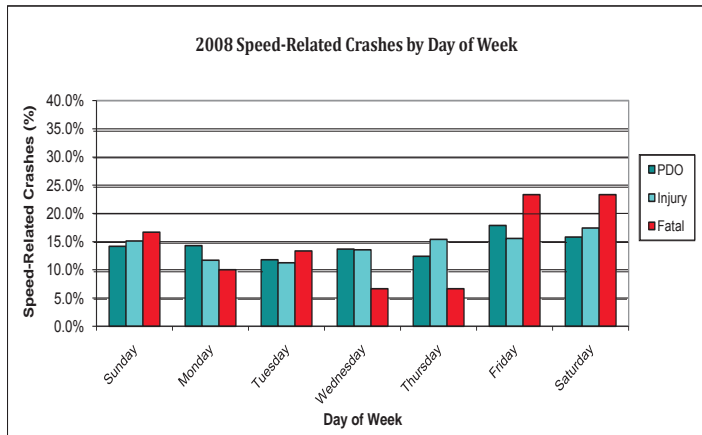
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## DID YOU KNOW THAT IN 2008 . . .

- ◇ Speed-related fatal crashes decreased by 26.8 percent.
- ◇ Friday and Saturday had the highest percentage of speed-related crashes.
- ◇ Female drivers aged 16-17 and 35-39 had the highest percentage of fatal speed-related crashes.



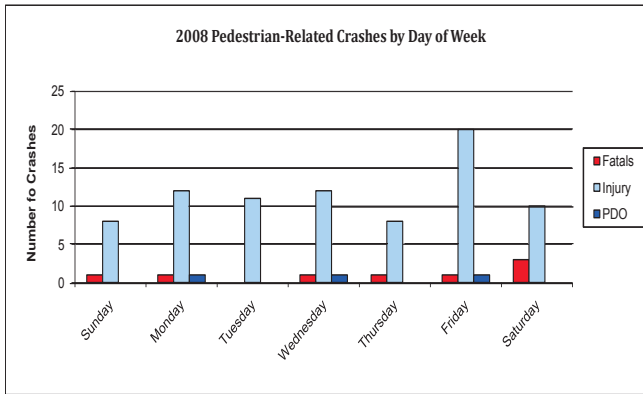
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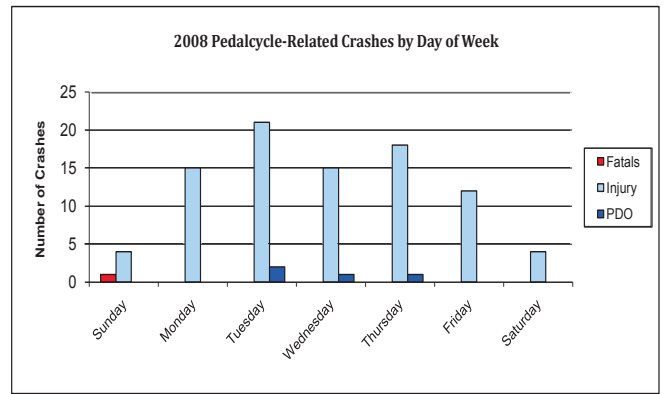
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DID YOU KNOW THAT IN 2008 . . .

- ◇ Eight pedestrians were killed in motor vehicle crashes.
- ◇ October had the highest number of pedestrian-motor vehicle crashes.
- ◇ Friday had the highest percentage of pedestrian-motor vehicle crashes.
- ◇ 89 pedalcyclists were injured in pedalcycle-motor vehicle crashes.
- ◇ Pedalcyclists ages 0-13 accounted for 22.3 percent of total pedalcycle-motor vehicle crashes.



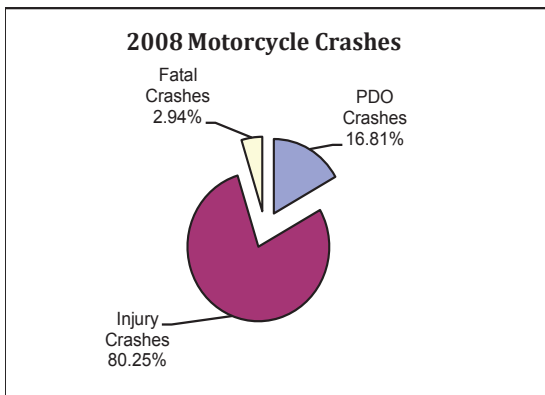
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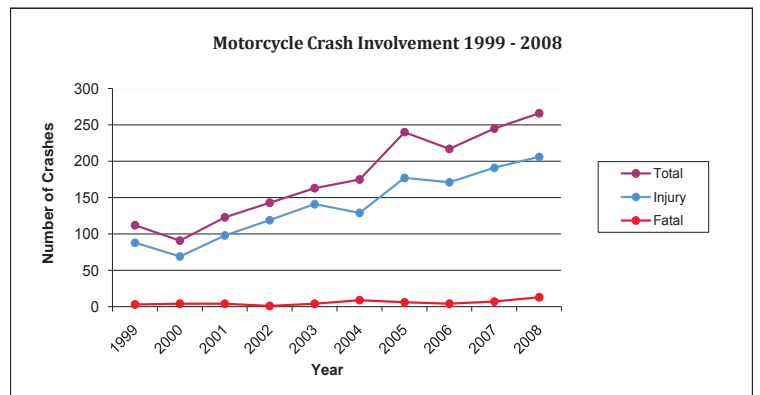
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DID YOU KNOW THAT IN 2008 . . .

- ◇ The highest percentage of total motorcycle crashes occurred on Saturday.
- ◇ The highest percentage of motorcyclists involved in crashes were aged 21-24 and 40-49.
- ◇ 32.7 percentage of motorcycle drivers involved in crashes wore a helmet.
- ◇ 44.78 percent of motorcycle safety course students were aged 35 or older.



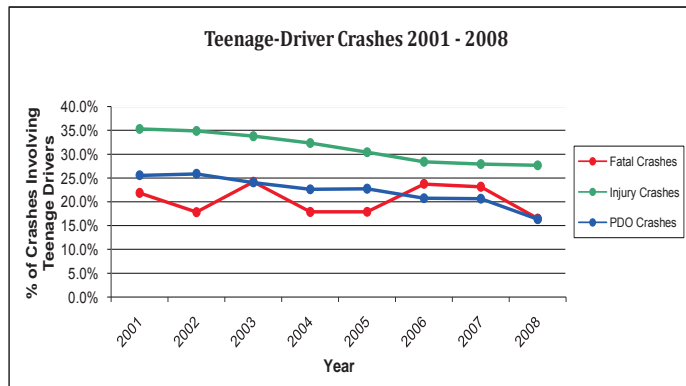
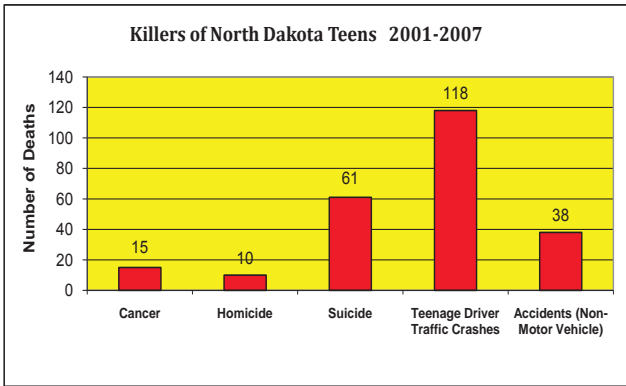
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## DID YOU KNOW THAT . . .

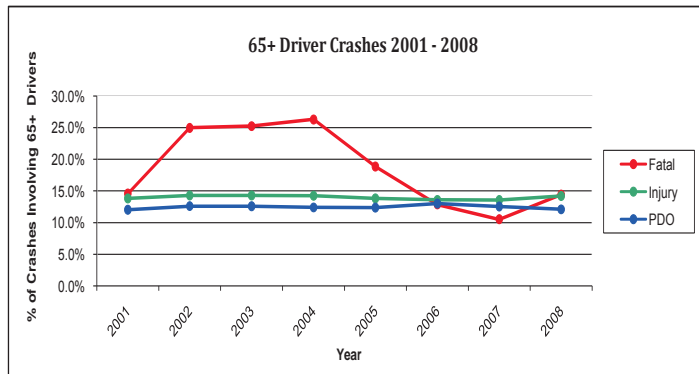
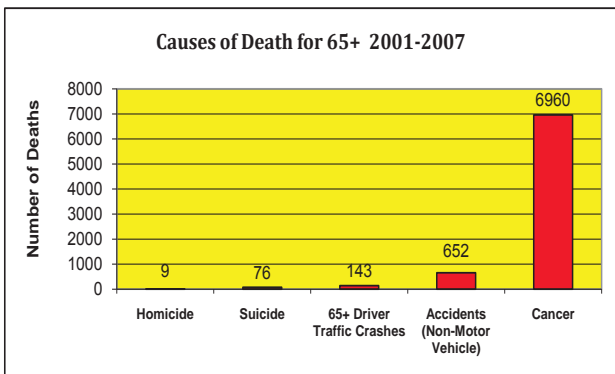
- ◇ From 2001 to 2008, 157 teenagers were killed in traffic crashes.
- ◇ Teenage drivers accounted for 24 percent of the total crashes.
- ◇ Speed and driving too fast for conditions was the number one contributing factor for teenage drivers involved in crashes.



Refer to page 107.

## DID YOU KNOW THAT . . .

- ◇ From 2001 to 2008, 141 persons aged 65 and older were killed in traffic crashes.
- ◇ Drivers aged 65 and older accounted for 12.5 percent of the total crashes.
- ◇ Failure to yield was the number one contributing factor for drivers aged 65 and older involved in crashes.



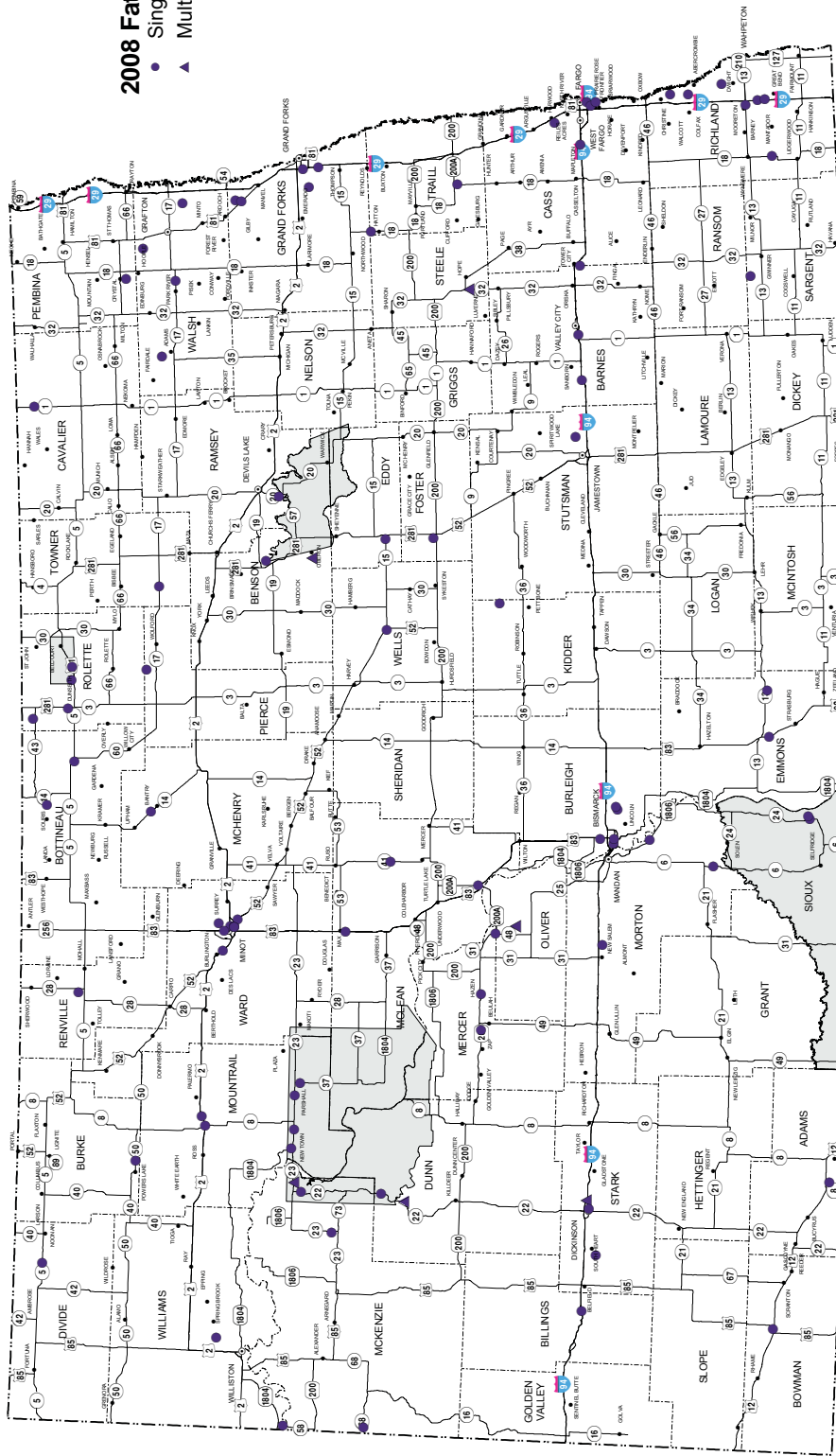
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An accident is defined as an unintentional injury. It could be a fall, a medical error, or injury that was not homicide or suicide.

FATAL CRASHES 2008

2008 Fatalities

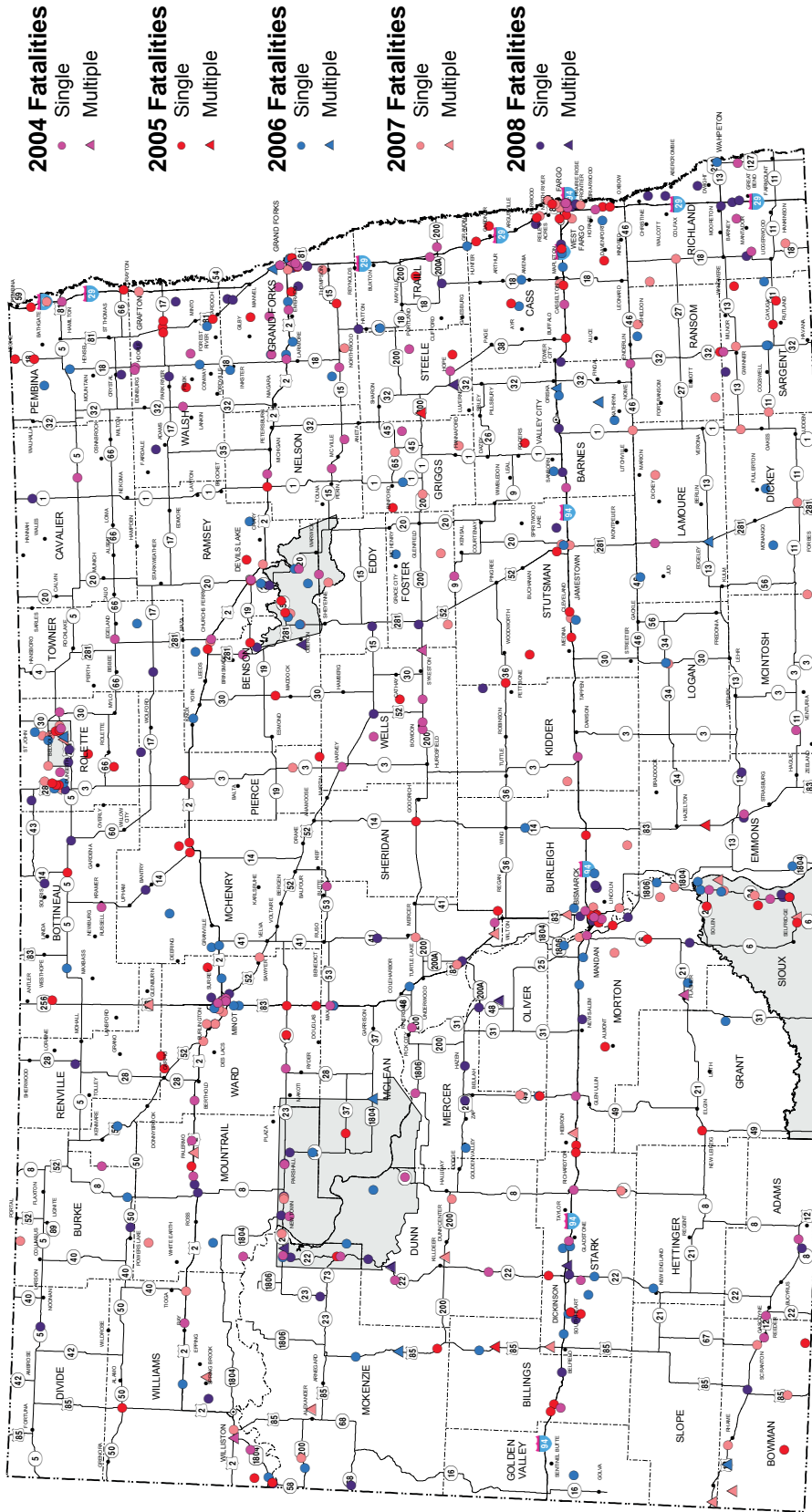
- Single
- ▲ Multiple



STATE OF NORTH DAKOTA  
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 IN COOPERATION WITH THE  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
 02/13/2009

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## FATAL CRASHES 2004 - 2008



STATE OF  
**NORTH DAKOTA**  
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 WITH THE ASSISTANCE OF  
 U.S. DEPARTMENT OF TRANSPORTATION  
 FEDERAL HIGHWAY ADMINISTRATION  
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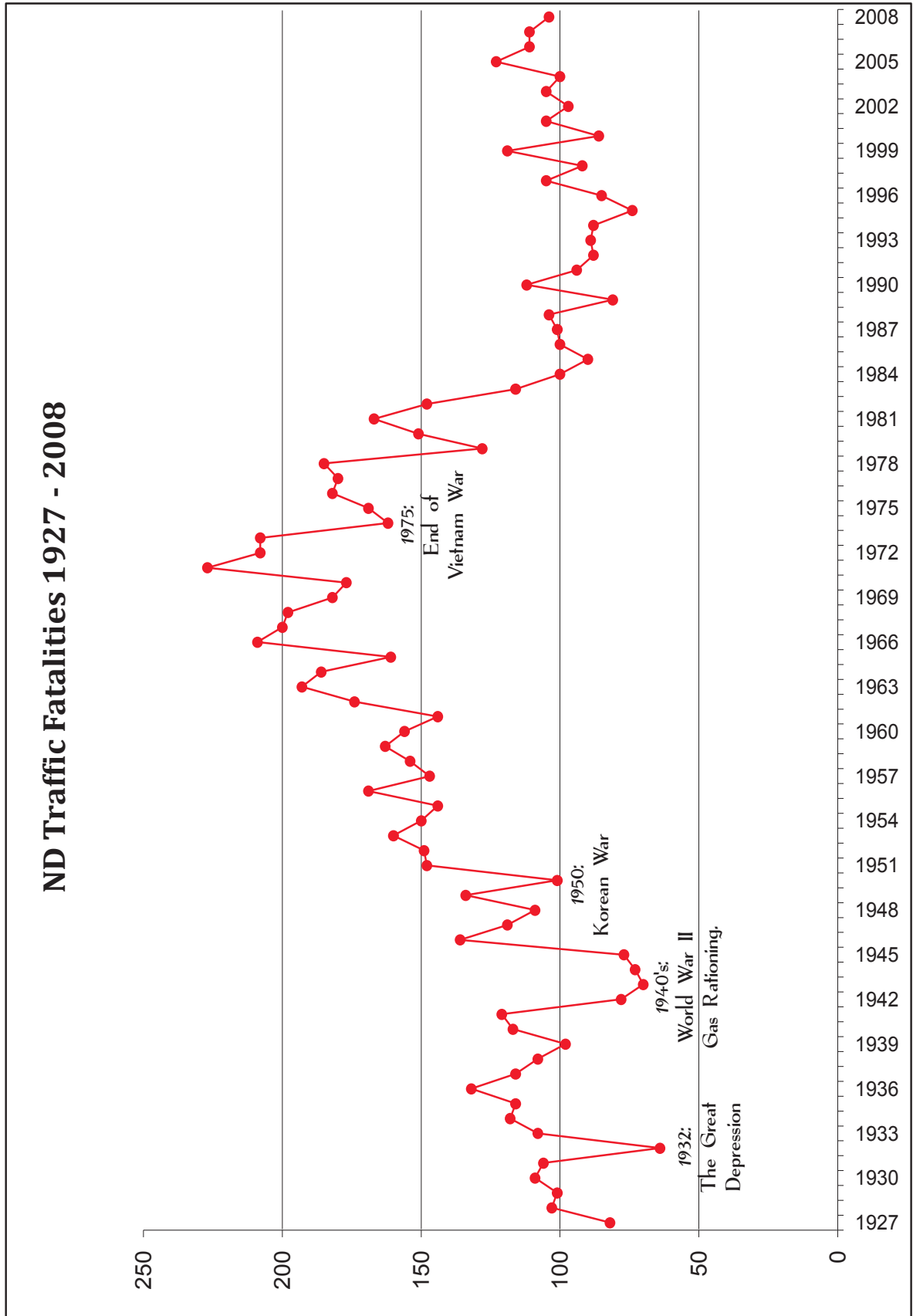
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## SECTION 1

# SYNOPSIS







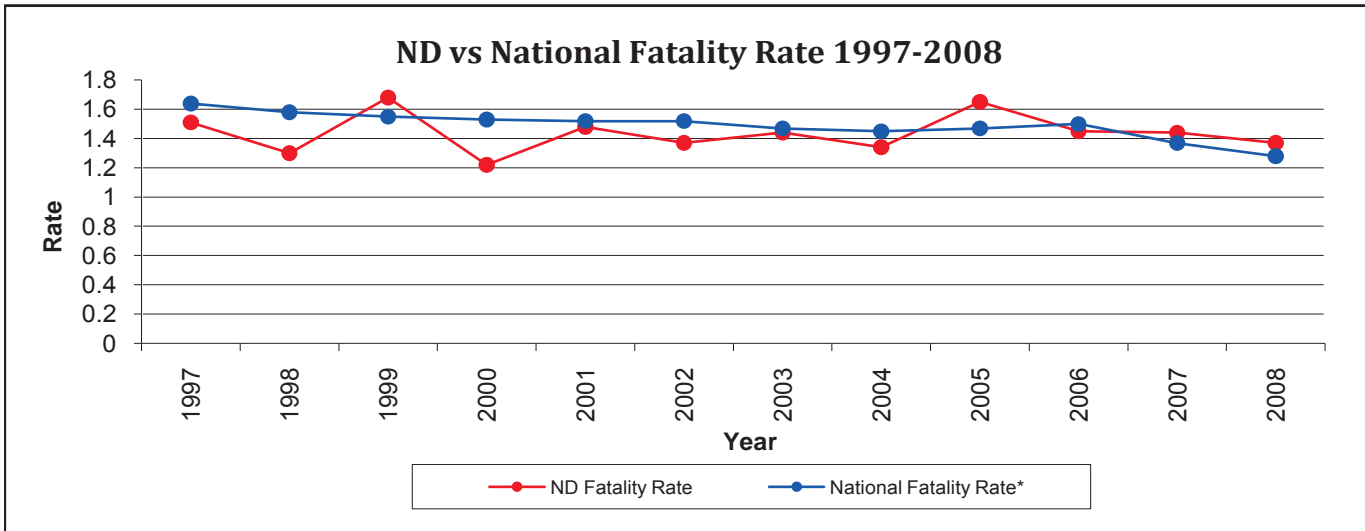
## ND Fatality Rate vs. National Fatality Rate 1997-2008

Year	ND Fatalities	ND Fatality Rate	National Fatalities*	National Fatality Rate**
1997	105	1.51	42,013	1.64
1998	92	1.30	41,501	1.58
1999	119	1.68	41,717	1.55
2000	86	1.22	41,945	1.53
2001	105	1.48	42,196	1.52
2002	97	1.37	43,005	1.52
2003	105	1.44	42,643	1.47
2004	100	1.34	42,800	1.45
2005	123	1.65	42,850	1.47
2006	111	1.45	44,500	1.50
2007	111	1.44	41,059	1.37
2008	104	1.37	31,110	1.28

\* Source: Fatality Analysis Reporting system

\*\* Rate is based on fatalities per 100 million vehicle miles traveled.

2008 national fatality numbers are based on National Highway Traffic Safety Administration estimates.

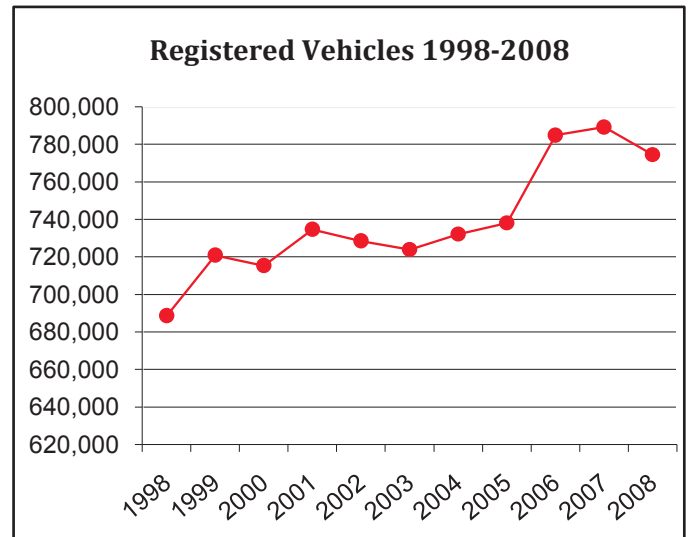
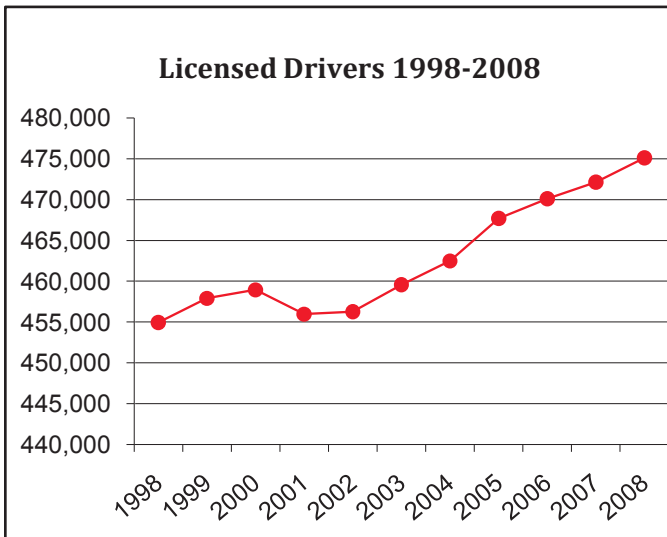


There were 104 people who died on North Dakota roadways in 2008. This is a decrease of 6.3 percent from 2007. The fatality rate per 100 million vehicle miles traveled (VMT) was 1.37 in North Dakota, compared to 1.44 fatalities per 100 million VMT in North Dakota in 2007. Nationally, there were 1.28 fatalities per 100 million VMT nationally in 2008.

The North Dakota Department of Transportation (NDDOT) has strong partnerships throughout the state to promote traffic safety. Through the efforts of nine Safe Communities coalitions and numerous law enforcement agencies, traffic safety is promoted in a number of venues through social messaging and enforcement efforts. NDDOT develops and provides safety promotion materials, education, and public awareness campaigns to enhance their work.

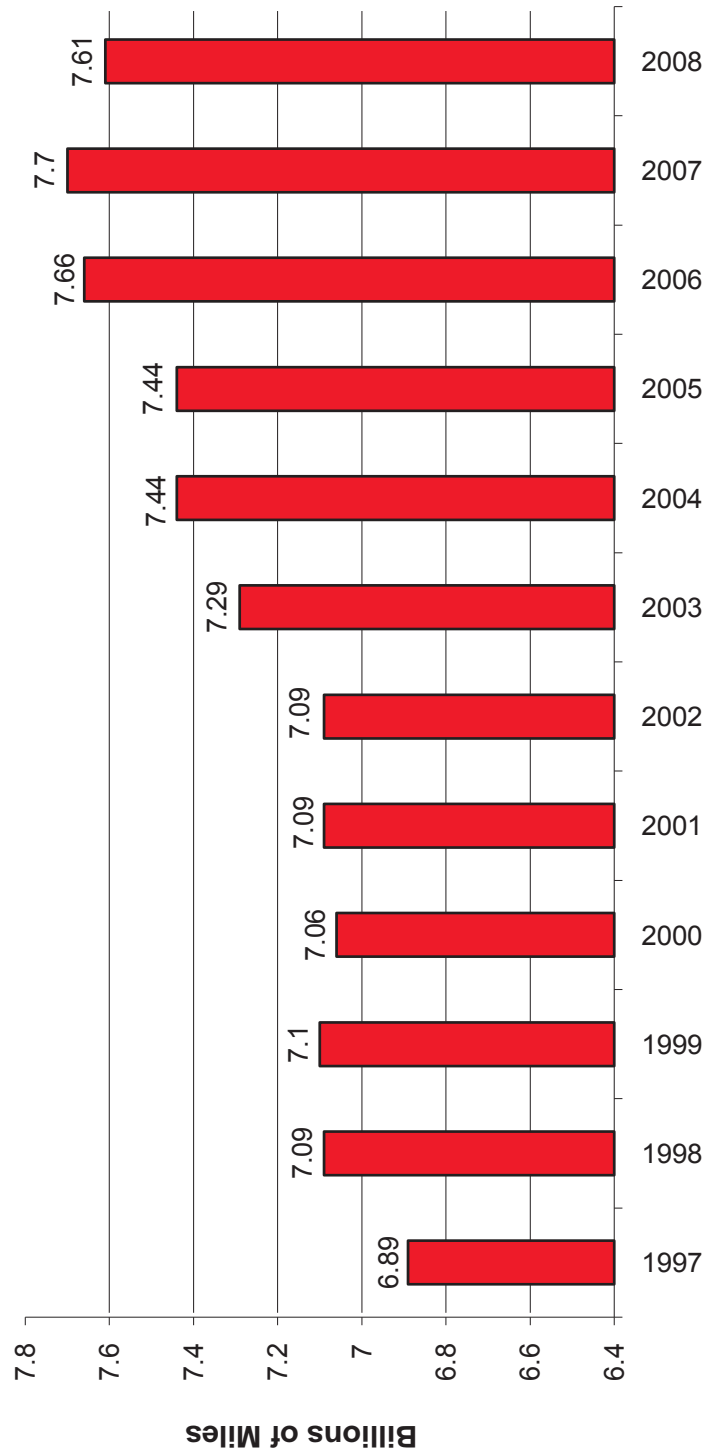
People, Drivers, and Vehicles 1998 - 2008

Year	Population	Licensed Drivers	Registered Vehicles
1998	638,244	454,933	688,561
1999	638,244	457,890	720,819
2000	641,193	458,944	715,279
2001	636,349	455,951	734,590
2002	633,649	456,271	728,403
2003	632,620	459,566	723,852
2004	635,848	462,485	732,052
2005	634,605	467,703	738,000
2006	635,867	470,107	784,727
2007	635,867	472,145	789,062
2008	635,867	475,129	774,346



- ▶ The number of licensed drivers increased by 2,984 between 2007 and 2008, while the number of registered vehicles decreased by nearly 15,000.
- ▶ The number of licensed drivers increased by 4.4 percent since 1998, while the number of registered vehicles increased by 12.5 percent.

Vehicle Miles Traveled (VMT) 1997 - 2008

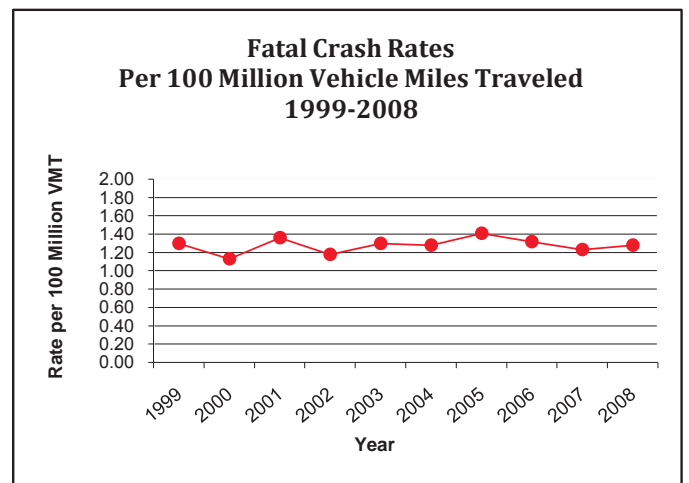
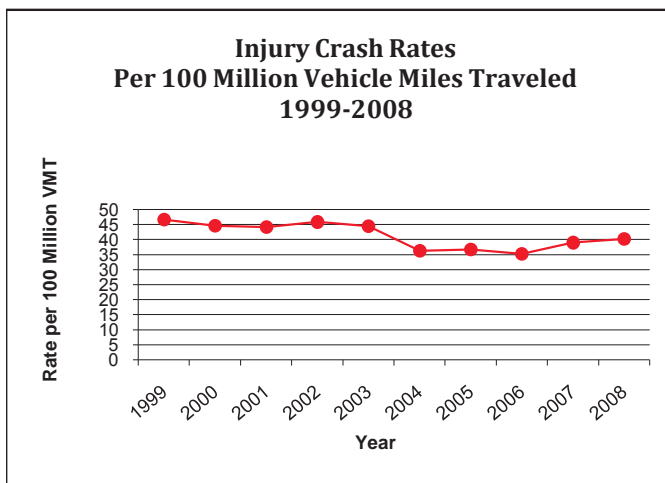


▲ This represents the vehicle miles traveled on North Dakota roadways.

▲ In 2008, there were 7.61 billion vehicle miles traveled in North Dakota.

Crashes 1999 - 2008

Year	Vehicle Miles Traveled (VMT)	Fatal		Injury		Property Damage Only (PDO)		Total	
		#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT
1999	7,101,000,000	92	1.30	3,312	46.64	11,027	155.29	14,431	203.22
2000	7,061,000,000	80	1.13	3,153	44.65	11,294	159.95	14,527	205.74
2001	7,084,000,000	96	1.36	3,129	44.17	11,534	162.82	14,759	208.34
2002	7,094,000,000	84	1.18	3,252	45.84	12,778	180.12	16,114	227.15
2003	7,290,000,000	95	1.30	3,244	44.50	13,213	181.25	16,552	227.05
2004	7,439,000,000	95	1.28	2,701	36.31	14,126	189.89	16,922	227.48
2005	7,442,000,000	105	1.41	2,735	36.75	12,948	173.99	15,788	212.15
2006	7,664,105,000	101	1.32	2,701	35.24	12,292	160.38	15,094	196.94
2007	7,700,682,000	95	1.23	3,001	38.97	13,133	170.54	16,229	210.75
2008	7,607,797,000	97	1.28	3,062	40.25	13,228	173.87	16,387	215.40
Total	73,483,584,000	940	1.28	30,290	41.22	125,573	170.89	156,803	213.39

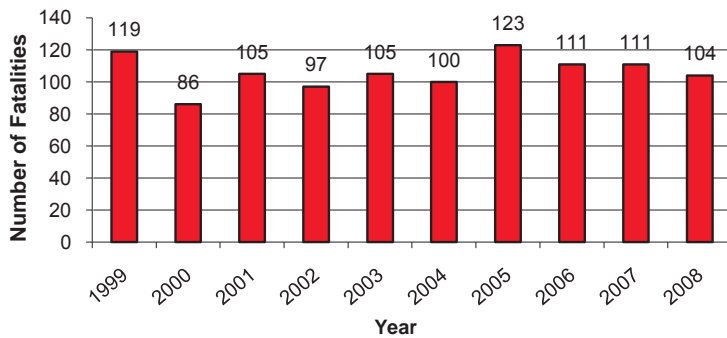


- ▶ There were 16,387 crashes in 2008, a rate of 215.4 per 100 million VMT.
- ▶ There were 97 fatal crashes in 2008, a rate of 1.28 per 100 million VMT. This number has fluctuated over the years.

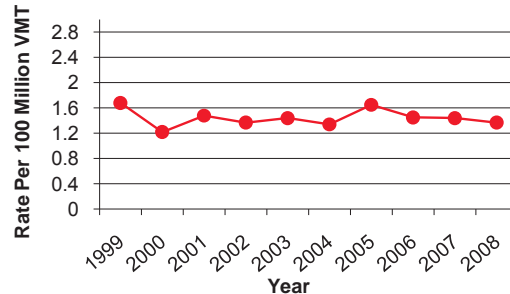
## Injured Persons and Fatalities 1999 - 2008

Year	Vehicle Miles Traveled (VMT)	Fatalities		Injured	
		#	Rate per 100 Million VMT	#	Rate per 100 Million VMT
1999	7,101,000,000	119	1.68	4,962	69.88
2000	7,061,000,000	86	1.22	4,619	65.42
2001	7,084,000,000	105	1.48	4,608	65.05
2002	7,094,000,000	97	1.37	4,886	68.88
2003	7,290,000,000	105	1.44	4,817	66.08
2004	7,439,000,000	100	1.34	4,611	61.98
2005	7,442,000,000	123	1.65	4,360	58.59
2006	7,664,105,000	111	1.45	4,141	54.03
2007	7,700,682,000	111	1.44	4,180	54.28
2008	7,607,797,000	104	1.37	4,247	55.82
Total	73,483,584,000	1,061	1.44	45,431	61.82

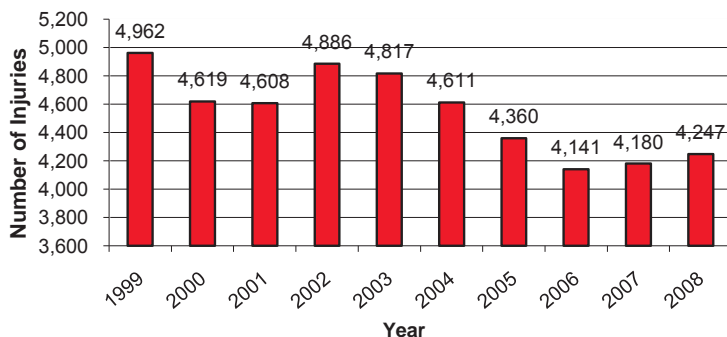
Fatalities 1999-2008



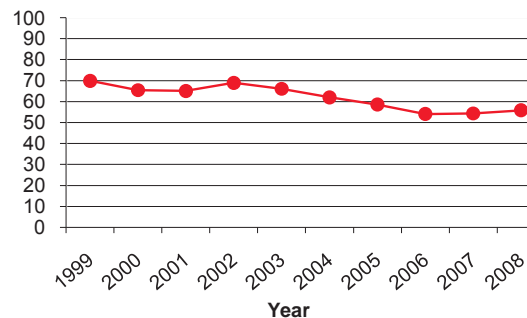
Fatality Rates Per 100 Million Vehicle Miles Traveled



Injuries 1999-2008



Injured Person Rates Per 100 Million Vehicle Miles Traveled



► In 2008, there was a decrease in the fatality rate per 100 million VMT to 1.37 and an increase in injuries to 55.82 per 100 million VMT.

2008 Crashes by Most Harmful Event						
Event	Fatal Crashes		Injury Crashes		All Crashes	
	Urban	Rural	Urban	Rural	Urban	Rural
MV in Transport	13	46	1,993	423	8,581	1,636
Overturn/Rollover	0	40	34	445	56	1,017
Parked MV	0	1	36	21	486	118
MV Trans in Other Rdwy	3	5	55	60	250	167
Tree	0	2	16	19	47	59
Highway Traffic Sign Post	0	0	4	3	39	66
Ran Off Roadway	0	0	8	21	26	107
Luminaire/Light Support	0	0	16	1	77	9
Deer	0	1	2	16	6	58
Guardrail	0	0	4	4	13	57
Ditch	0	1	1	28	8	88
Other Post	0	0	6	4	21	63
Bridge	0	0	8	13	32	63
Utility Post	0	0	7	4	28	20
Fence	0	0	2	4	10	51
Jackknife	0	0	0	2	0	64
Embankment	0	1	1	11	6	46
Fire/Explosion	0	1	0	1	2	20
Median Barrier	0	0	3	7	19	33
Culvert	0	1	1	10	2	22
Immersion	0	4	0	4	0	18
Mail Box	0	0	0	0	18	9
Pedalcycle	0	1	27	2	29	3
Curb	1	0	6	0	36	3
Pedestrian	1	2	21	4	22	6
Cargo Loss/Shift	0	0	0	0	2	13
Farm Animal	0	0	0	3	0	8
Separation of Units	0	0	1	1	2	4
Impact Attenuator	0	0	0	0	0	25
Overhead Sign Support	0	0	0	0	2	3
Train	0	1	0	4	0	10
Other Large Game	0	0	0	3	0	3
Small Animal	0	0	0	1	0	1
Other Non-Collision	1	0	14	8	23	29
Other Collision	1	1	16	17	90	126
<b>Total</b>	<b>20</b>	<b>108</b>	<b>2,282</b>	<b>1,144</b>	<b>9,933</b>	<b>4,025</b>

- The vast majority of crashes are attributed to a motor vehicle in transport. However, a great number of rural fatal crashes are also attributed to overturning or vehicle rollover.

## 2008 Crashes by First Harmful Event

Event	Fatal Crashes		Injury Crashes		All Crashes	
	Urban	Rural	Urban	Rural	Urban	Rural
MV in Transport	8	24	1,517	355	6,485	1,543
Deer	0	2	3	27	100	3,556
Parked Motor Vehicle	0	1	50	23	748	286
Overturn/Rollover	0	25	24	369	35	903
Ditch	0	3	0	61	5	186
Ran Off Roadway	1	17	18	115	73	364
Curb	0	0	28	3	132	21
MV Tran in Other Rdwy	0	2	21	20	80	75
Farm Animal	0	0	0	9	3	88
Tree	0	0	14	19	44	54
Guardrail	0	0	5	6	19	55
Bridge	0	0	10	15	34	67
Luminaire/Light Support	0	0	17	2	87	10
Highway Traffic Sign Post	0	0	3	11	44	88
Other Post	0	0	4	5	29	77
Small Animal	0	0	1	2	6	93
Pedalcycle	0	1	61	5	63	6
Pedestrian	2	4	53	10	57	15
Fence	0	1	1	11	11	67
Embankment	0	0	0	27	5	58
Utility Post	0	0	9	4	33	35
Jackknife	0	0	0	3	2	77
Fire/Explosion	0	0	0	0	2	27
Median Barrier	0	0	4	7	18	28
Other Large Game	0	0	0	4	2	19
Mail Box	0	0	0	3	19	23
Separation of Units	0	0	1	0	5	14
Culvert	0	1	1	13	3	29
Cargo Loss or Shift	0	0	0	1	1	12
Immersion	0	1	0	2	0	9
Train	0	1	0	5	0	13
Overhead Sign Support	0	0	0	0	4	4
Downhill Runaway	0	0	0	0	1	1
Impact Attenuator	0	0	0	0	0	4
Other Non-Collision	1	1	31	21	42	58
Other Collision	0	1	13	15	83	147
<b>Total</b>	<b>12</b>	<b>85</b>	<b>1,889</b>	<b>1,173</b>	<b>8,275</b>	<b>8,112</b>

- ▶ The majority of crashes by first harmful event are attributed to a motor vehicle in transport.
- ▶ While there are two percent more urban crashes than rural crashes, there are seven times more fatal crashes in rural areas.



**2008 Violations of All Drivers Involved in Traffic Crashes**

Violation / Circumstance	Citations in Fatal Crashes			Citations in Injury Crashes			Citations In All Crashes		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
DUI/APC	1	13	14	103	166	269	285	323	608
Care Required	1	1	2	267	257	524	1,206	901	2,107
Careless Driving	0	1	1	21	25	46	75	66	141
Failed to Yield	1	1	2	301	72	373	1,150	195	1,345
Failed to Stop	0	0	0	142	10	152	472	37	509
Follow to Close	0	0	0	155	18	173	574	99	673
Improper Turning	0	0	0	53	8	61	299	34	333
Improper Backing	0	0	0	3	1	4	181	36	217
Overtaking	0	0	0	2	10	12	19	33	52
Wrong Way	0	0	0	4	0	4	14	2	16
Speeding	0	0	0	4	0	4	11	2	13
Defective Equipment	0	0	0	1	5	6	7	7	14
Illegal Parking	0	0	0	1	1	2	3	6	9
Open Container	0	0	0	0	1	1	0	2	2
Driver License	0	1	1	23	19	42	72	45	117
Leaving the Scene	0	1	1	11	19	30	92	117	209
Other	0	6	6	251	90	341	992	267	1,259
None	18	91	109	2,144	824	2,968	8,721	3,674	12,395
Totals	21	115	136	3,486	1,526	5,012	14,173	5,846	20,019

- ▶ Officers cited 38.1 percent of drivers involved in a crash for a violation.
- ▶ For all crashes, the leading violation was “care required,” accounting for 27.6 percent of the citations given.
- ▶ Driving Under the Influence (DUI) had the greatest number of citations issued in fatal crashes.

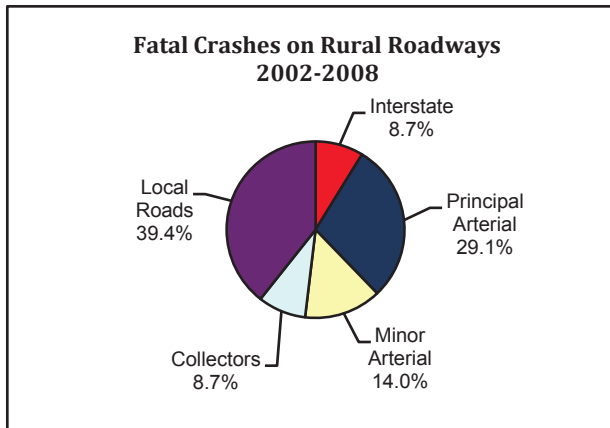
## 2008 Crashes by Reporting Agency and Severity

Reporting Agency	PDO	% of Total	Injury	% of Total	Fatal	% of Total
Highway Patrol	2,936	22.2%	657	21.5%	77	79.4%
County Sheriff	3,646	27.6%	471	15.4%	5	5.2%
City Police	6,526	49.3%	1,897	62.0%	11	11.3%
Campus Police	56	0.4%	11	0.4%	0	0.0%
Other	64	0.5%	26	0.8%	4	4.1%
<b>Total</b>	<b>13,228</b>	<b>100.0%</b>	<b>3,062</b>	<b>100.0%</b>	<b>97</b>	<b>100.0%</b>

- ▶ The North Dakota Highway Patrol reported the highest number of fatal crashes with 79.4 percent of the total.
- ▶ The greatest number of Property Damage Only (PDO) crashes is reported by city police.
- ▶ The 'other' category includes Bureau of Indian Affairs, campus police, military, and park rangers.

### Fatal Crashes on Rural Roadways 2002 - 2008

Roadway	2002	2003	2004	2005	2006	2007	2008	7 Years	Percent
Interstate	7	5	7	14	8	4	6	51	8.7%
Principal Arterial	25	18	31	21	26	28	21	170	29.1%
Minor Arterial	7	8	13	15	16	10	13	82	14.0%
Collectors	19	12	7	3	4	3	3	51	8.7%
Local Roads	15	36	25	39	43	36	36	230	39.4%
<b>Total Rural</b>	<b>73</b>	<b>79</b>	<b>83</b>	<b>92</b>	<b>97</b>	<b>81</b>	<b>79</b>	<b>584</b>	<b>100.0%</b>
Percent of Statewide	91.3%	83.2%	87.4%	87.6%	96.0%	85.3%	81.4%	87.4%	
Statewide	80	95	95	105	101	95	97	668	

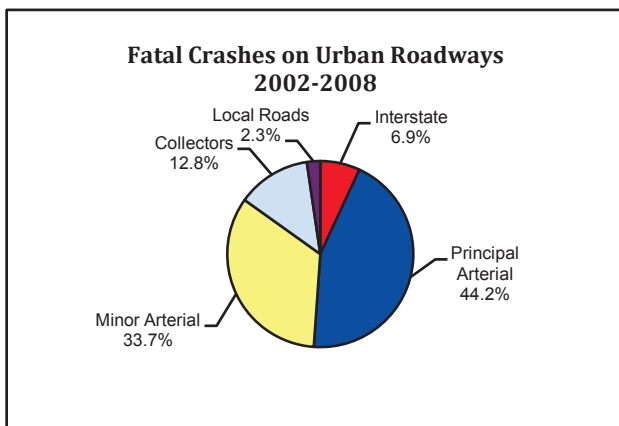


\* There are five fatal crashes with unknown roadways.

- ▶ The greatest number of fatal crashes on rural roadways occurred on local roads.

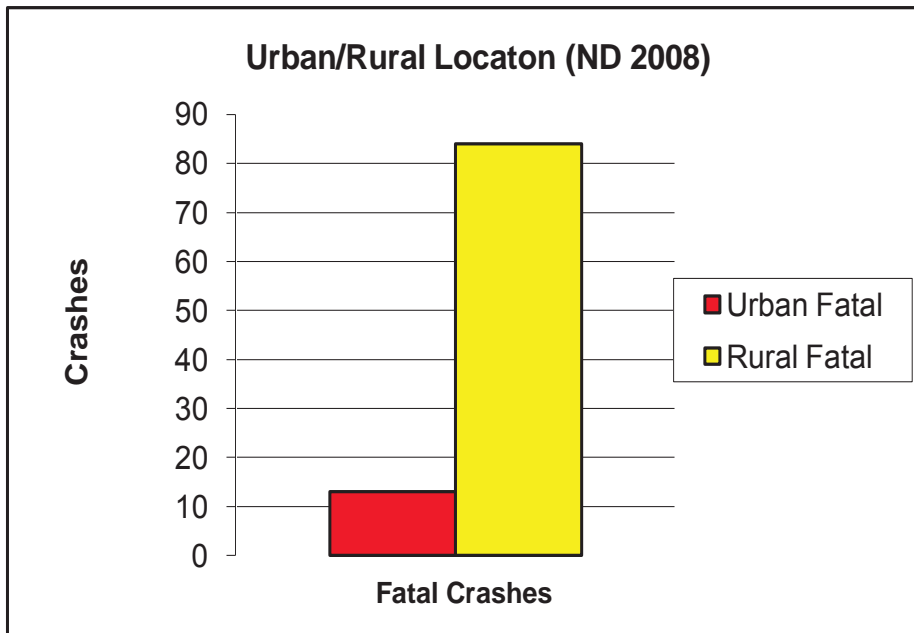
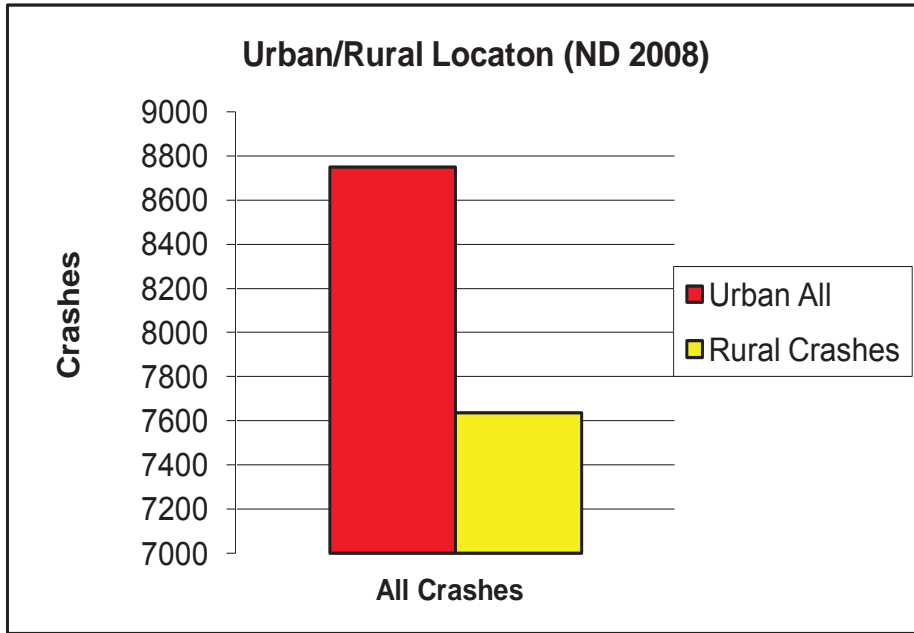
### Fatal Crashes on Urban Roadways 2002 - 2008

Roadway	2002	2003	2004	2005	2006	2007	2008	7 Years	Percent
Interstate	1	2	1	0	0	1	1	6	6.9%
Principal Arterial	7	5	8	4	1	6	7	38	44.2%
Minor Arterial	2	6	5	6	1	6	3	29	33.7%
Collectors	1	3	1	2	2	0	2	11	12.8%
Local Roads	0	0	0	1	0	1	0	2	2.3%
<b>Total Urban</b>	<b>11</b>	<b>16</b>	<b>15</b>	<b>13</b>	<b>4</b>	<b>14</b>	<b>13</b>	<b>86</b>	<b>100.0%</b>
Percent of Statewide	13.8%	16.8%	15.8%	12.4%	3.9%	14.7%	13.4%	12.9%	
Statewide	80	95	95	105	101	95	97	668	



- ▶ The greatest number of urban fatal crashes occurred on principal arterials.

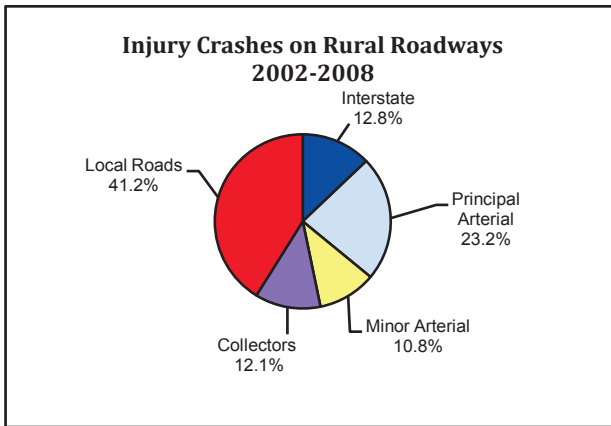
## Urban vs Rural



► The majority of fatal crashes occur on rural roads at 86.6 percent.

### Injury Crashes on Rural Roadways 2002 - 2008

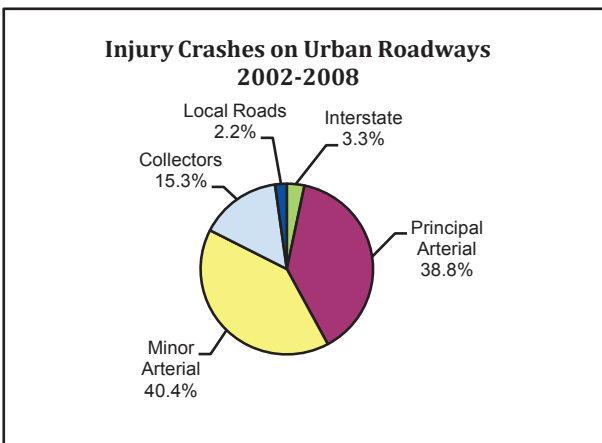
Roadway	2002	2003	2004	2005	2006	2007	2008	7 Years	Percent
Interstate	132	154	121	141	178	132	135	993	12.8%
Principal Arterial	253	321	257	221	203	265	274	1,794	23.2%
Minor Arterial	141	126	106	110	113	121	116	833	10.8%
Collectors	245	233	245	89	56	39	27	934	12.1%
Local Roads	429	452	383	454	519	517	432	3,186	41.2%
<b>Total Rural</b>	<b>1,200</b>	<b>1,286</b>	<b>1,112</b>	<b>1,015</b>	<b>1,069</b>	<b>1,074</b>	<b>984</b>	<b>7,740</b>	<b>100.0%</b>
Percent of Statewide	38.1%	39.5%	41.2%	37.1%	39.6%	35.8%	32.1%	39.1%	
Statewide	3,153	3,252	2,701	2,735	2,701	3,001	3,062	20,605	



- ▶ In 2008, 32.1 percent of the injury crashes occurred on rural roads.
- ▶ Most rural injury crashes occur on local roads which are those roads that feed higher-order systems providing direct access with little or no traffic.

### Injury Crashes on Urban Roadways 2002 - 2008

Roadway	2002	2003	2004	2005	2006	2007	2008	7 Years	Percent
Interstate	48	43	60	72	56	76	72	427	3.3%
Principal Arterial	924	934	769	637	456	613	698	5,031	38.8%
Minor Arterial	687	647	537	700	849	917	899	5,236	40.4%
Collectors	358	348	280	262	214	262	259	1,983	15.3%
Local Roads	35	39	54	44	20	59	33	284	2.2%
<b>Total Urban</b>	<b>2,052</b>	<b>2,011</b>	<b>1,700</b>	<b>1,715</b>	<b>1,595</b>	<b>1,927</b>	<b>1,961</b>	<b>12,961</b>	<b>100.0%</b>
Percent of Statewide	65.1%	61.8%	62.9%	62.7%	59.1%	64.2%	64.0%	62.3%	
Statewide	3,153	3,252	2,701	2,735	2,701	3,001	3,062	20,605	



- ▶ The majority of injury crashes in urban areas occur on minor arterials. A minor arterial is defined as a street or highway that links cities and larger towns in rural areas.

# SYNOPSIS

## 2008 Road Surface & Weather Conditions (All Crashes)

Weather Condition	Dry	Wet	Muddy	Snow	Slush	Ice/ Compacted Snow	Frost	UNK	Total
Clear/Cloudy	6,873	530	21	339	87	2,508	138	0	10,496
Rain	0	472	16	2	4	14	0	0	508
Snow	0	24	0	225	37	446	2	0	734
Blowing/Snow	17	4	0	107	14	567	5	0	714
Sleet/Hail	0	10	1	1	14	81	1	0	108
Fog/Smoke	28	6	0	0	0	10	8	0	52
Wind	24	4	0	0	1	30	0	0	59
Unknown	0	0	0	0	0	0	0	3,716	3,716
<b>Total</b>	<b>6,942</b>	<b>1,050</b>	<b>38</b>	<b>674</b>	<b>157</b>	<b>3,656</b>	<b>154</b>	<b>3,716</b>	<b>16,387</b>

## 2008 Road Surface & Weather Conditions (Injury Crashes)

Weather Condition	Dry	Wet	Muddy	Snow	Slush	Ice/ Compacted Snow	Frost	UNK	Total
Clear/Cloudy	1,972	143	8	49	23	418	35	0	2,648
Rain	0	129	2	0	1	0	0	0	132
Snow	0	6	0	29	2	60	0	0	97
Blowing/Snow	4	0	0	17	5	101	2	0	129
Sleet/Hail	0	1	0	0	4	14	0	0	19
Fog/Smoke	11	4	0	0	0	2	1	0	18
Wind	11	2	0	0	0	6	0	0	19
<b>Total</b>	<b>1,998</b>	<b>285</b>	<b>10</b>	<b>95</b>	<b>35</b>	<b>601</b>	<b>38</b>	<b>0</b>	<b>3,062</b>

## 2008 Road Surface & Weather Conditions (Fatal Crashes)

Weather Condition	Dry	Wet	Muddy	Snow	Slush	Ice/ Compacted Snow	Frost	UNK	Total
Clear/Cloudy	76	3	0	0	2	5	0	0	86
Rain	0	2	0	0	0	1	0	0	3
Snow	0	0	0	1	0	0	0	0	1
Blowing/Snow	1	0	0	0	0	1	0	0	2
Sleet/Hail	0	0	0	0	0	0	0	0	0
Fog/Smoke	3	0	0	0	0	0	1	0	4
Wind	1	0	0	0	0	0	0	0	1
<b>Total</b>	<b>81</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>97</b>

## Crashes by Light Conditions

Light Condition	Total Crashes	%	Injury Crashes	%	Fatal Crashes	%
Daylight	9,192	56.1%	2,138	69.8%	45	46.4%
Dawn	660	4.0%	80	2.6%	2	2.1%
Dusk	637	3.9%	97	3.2%	2	2.1%
Darkness (Road Lighted)	2,004	12.2%	358	11.7%	8	8.2%
Darkness (Road Unlighted)	3,894	23.8%	389	12.7%	40	41.2%
<b>Total</b>	<b>16,387</b>	<b>100.0%</b>	<b>3,062</b>	<b>100.0%</b>	<b>97</b>	<b>100.0%</b>

**2008 Crashes by Manner of Collision: Number of Persons Involved**

Manner of Collision	Fatalities	Incapacitating Injury	Evident Injury	Possible Injury	No Injury	Total
Angle	17	71	400	968	9,385	10,841
Rear End	5	30	196	854	7,176	8,261
Head On	11	23	61	97	688	880
Sideswipe (Same Direction)	4	5	29	58	1,986	2,082
Sideswipe (Opposite Direction)	3	10	21	28	518	580
Rear to Rear	0	0	0	1	86	87
Non-Collision w/MV	62	149	623	569	3,967	5,370
Animal w/MV	2	8	24	21	3,868	3,923
<b>Total</b>	<b>104</b>	<b>296</b>	<b>1,354</b>	<b>2,596</b>	<b>27,674</b>	<b>32,024</b>

- ▶ The majority of fatalities occur in a non-collision with the motor vehicle.
- ▶ Non-collision with a motor vehicle also contributes the greatest number of incapacitating injuries and evident injuries.

**2008 Crashes by Manner of Collision: Number of Crashes**

Manner of Collision	Total				Single Vehicle Crashes				Multiple Vehicle Crashes			
	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total	Fatal	Injury	PDO	Total
Angle	15	982	3,189	4,186	0	9	0	9	15	973	3,189	4,177
Rear End	5	747	2,281	3,033	0	0	0	0	5	747	2,281	3,033
Head On	9	111	213	333	0	4	0	4	9	107	213	329
Sideswipe (Same Dir.)	4	68	815	887	0	1	0	1	4	67	815	886
Sideswipe (Opposite Dir.)	3	40	202	245	0	2	0	2	3	38	202	243
Rear to Rear	0	1	37	38	0	0	0	0	0	1	37	38
Non-Collision w/MV	59	1,067	2,669	3,795	57	994	2,456	3,507	2	73	213	288
Animal w/MV	2	46	3,822	3,870	2	45	3,819	3,866	0	1	3	4
<b>Total</b>	<b>97</b>	<b>3,062</b>	<b>13,228</b>	<b>16,387</b>	<b>59</b>	<b>1,055</b>	<b>6,275</b>	<b>7,389</b>	<b>38</b>	<b>2,007</b>	<b>6,953</b>	<b>8,998</b>

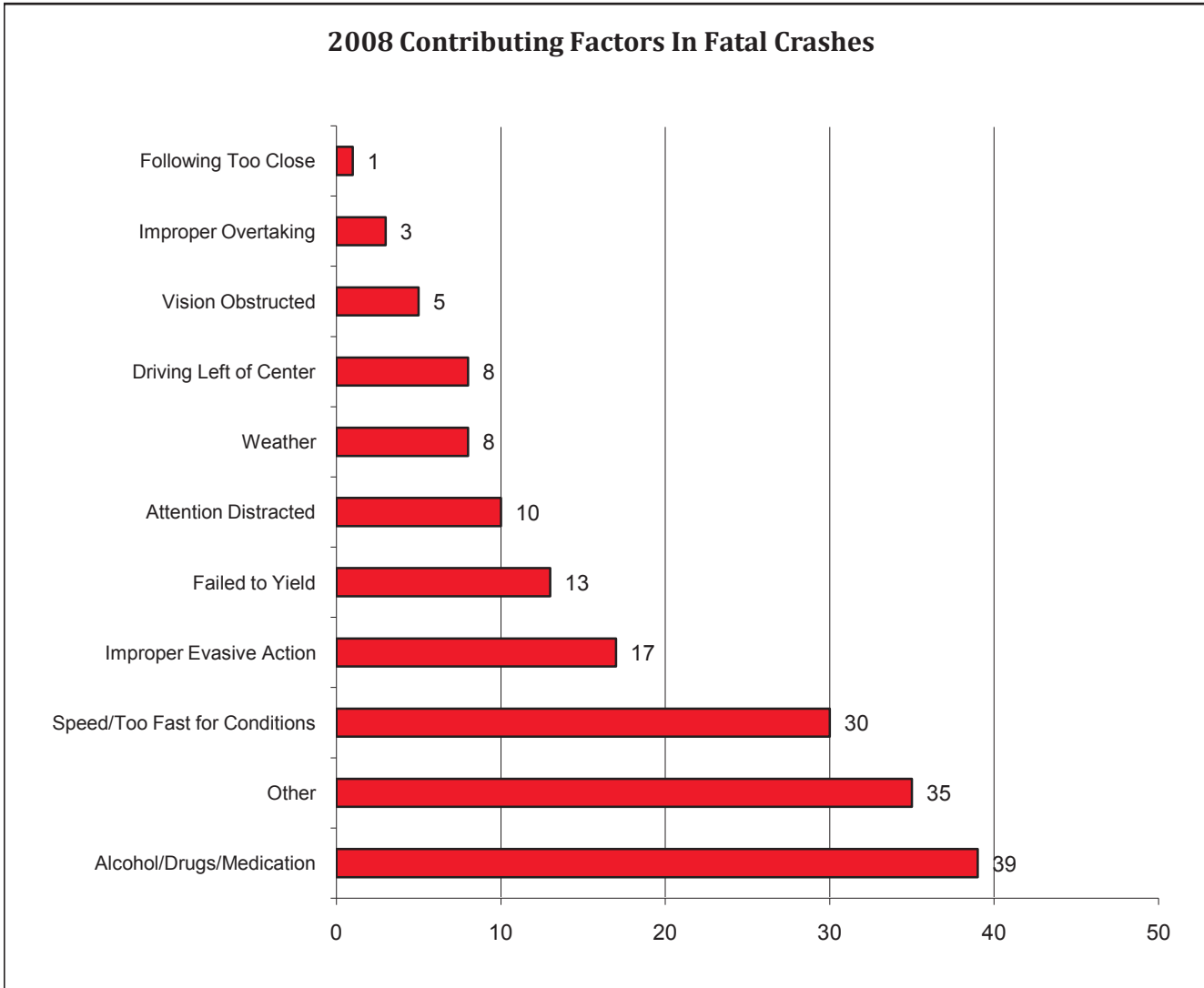
- ▶ The greatest number of crashes were angle collisions (25.5 percent) and collisions with animals (23.6 percent).
- ▶ The majority of fatal crashes are single vehicle crashes (60.8 percent).

## 2008 Contributing Factors In Fatal Crashes

Contributing Factor	Crashes
Alcohol/Drugs/Medication	39
Other	35
Speed/Too Fast for Conditions	30
Improper Evasive Action	17
Failed to Yield	13
Attention Distracted	10
Weather	8
Driving Left of Center	8
Vision Obstructed	5
Improper Overtaking	3
Following Too Close	1
Total	169

- ▶ Of the 97 fatal crashes in 2008, 39 of them involved alcohol/ drugs/ medication and 30 of them involved speed/ too fast for conditions.
- ▶ Contributing factors are recorded for each vehicle involved in the crash by the police officer at the scene of the crash. The officer may record up to two factors for each unit.

## 2008 Contributing Factors In Fatal Crashes





## Crash Severity by Vehicle Type 2003-2008

Fatal Crashes	2003		2004		2005		2006		2007		2008	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Passenger Cars	54	39.4%	51	38.3%	44	31.2%	52	38.5%	43	34.4%	44	31.7%
Pickup, Van, Utility	56	40.9%	49	36.8%	61	43.3%	58	43.0%	61	48.8%	58	41.7%
Trucks	5	3.6%	5	3.8%	4	2.8%	6	4.4%	5	4.0%	6	4.3%
Truck Tractor	10	7.3%	9	6.8%	7	5.0%	10	7.4%	6	4.8%	9	6.5%
Motorcycle	4	2.9%	9	6.8%	6	4.3%	4	3.0%	7	5.6%	16	11.5%
Other	8	5.8%	10	7.5%	19	13.5%	5	3.7%	3	2.4%	6	4.3%
<b>Total</b>	<b>137</b>	<b>100.0%</b>	<b>133</b>	<b>100.0%</b>	<b>141</b>	<b>100.0%</b>	<b>135</b>	<b>100.0%</b>	<b>125</b>	<b>100.0%</b>	<b>139</b>	<b>100.0%</b>

Injury Crashes	2003		2004		2005		2006		2007		2008	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Passenger Cars	3,087	56.2%	1,843	49.4%	1,832	48.3%	2,431	53.0%	2,752	52.7%	2,713	51.5%
Pickup, Van, Utility	1,787	32.5%	1,346	36.0%	1,362	35.9%	1,624	35.4%	1,870	35.8%	1,940	36.8%
Trucks	74	1.3%	53	1.4%	58	1.5%	61	1.3%	72	1.4%	54	1.0%
Truck Tractor	102	1.9%	72	1.9%	87	2.3%	76	1.7%	81	1.6%	92	1.7%
Motorcycle	141	2.6%	129	3.5%	177	4.7%	176	3.8%	200	3.8%	215	4.1%
Other	304	5.5%	291	7.8%	279	7.4%	217	4.7%	246	4.7%	257	4.9%
<b>Total</b>	<b>5,495</b>	<b>100.0%</b>	<b>3,734</b>	<b>100.0%</b>	<b>3,795</b>	<b>100.0%</b>	<b>4,585</b>	<b>100.0%</b>	<b>5,221</b>	<b>100.0%</b>	<b>5,271</b>	<b>100.0%</b>

PDO Crashes	2003		2004		2005		2006		2007		2008	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Passenger Cars	10,355	53.8%	9,304	50.8%	8,566	50.9%	9,989	53.1%	10,723	53.1%	10,748	52.1%
Pickup, Van, Utility	7,427	38.6%	7,401	40.4%	6,761	40.2%	7,483	39.8%	7,969	39.5%	8,439	40.9%
Trucks	201	1.0%	219	1.2%	217	1.3%	233	1.2%	220	1.1%	215	1.0%
Truck Tractor	368	1.9%	394	2.2%	364	2.2%	400	2.1%	404	2.0%	381	1.8%
Motorcycle	18	0.1%	37	0.2%	37	0.2%	41	0.2%	50	0.2%	49	0.2%
Other	869	4.5%	955	5.2%	870	5.2%	673	3.6%	825	4.1%	792	3.8%
<b>Total</b>	<b>19,238</b>	<b>100.0%</b>	<b>18,310</b>	<b>100.0%</b>	<b>16,815</b>	<b>100.0%</b>	<b>18,819</b>	<b>100.0%</b>	<b>20,191</b>	<b>100.0%</b>	<b>20,624</b>	<b>100.0%</b>

All Crashes	2003		2004		2005		2006		2007		2008	
	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent	Count	Percent
Passenger Cars	13,496	54.3%	11,197	50.6%	10,442	50.3%	12,472	53.0%	13,518	52.9%	13,505	51.9%
Pickup, Van, Utility	9,270	37.3%	8,796	39.7%	8,184	39.4%	9,165	38.9%	9,900	38.8%	10,437	40.1%
Trucks	280	1.1%	244	1.1%	279	1.3%	300	1.3%	297	1.2%	275	1.1%
Truck Tractor	480	1.9%	475	2.1%	458	2.2%	486	2.1%	491	1.9%	482	1.9%
Motorcycle	163	0.7%	175	0.8%	220	1.1%	221	0.9%	257	1.0%	280	1.1%
Other	1,181	4.7%	1,256	5.7%	1,168	5.6%	895	3.8%	1,074	4.2%	1,055	4.1%

- ▶ In 2008, pickups, vans, and utility vehicles represented 41.7 percent of the vehicles involved in fatal crashes and 36.8 percent of injury crashes.
- ▶ Motorcycles represented 11.5 percent of the vehicles involved in fatal crashes.
- ▶ For all crashes, cars were the vehicle involved 51.9 percent of the time.

## 2008 Vehicle Involvement by Type

	Fatal Crashes			Injury Crashes			All Crashes		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Passenger	35	9	44	625	2,088	2,713	4,485	9,020	13,505
Pickup/Van/Utility	51	7	58	647	1,293	1,940	4,492	5,945	10,437
Hit & Run	1	0	1	6	37	43	107	473	580
Truck Tractor	9	0	9	77	15	92	381	101	482
Motorcycle	12	4	16	86	129	215	114	166	280
3+ Axle	4	0	4	27	7	34	106	62	168
2-Axle	1	1	2	11	9	20	51	39	90
Pedalcycle	1	0	1	5	84	89	6	88	94
Bus	0	0	0	1	6	7	11	39	50
Construction Equipment	0	0	0	3	1	4	15	24	39
Farm Equipment	1	0	1	14	0	14	29	7	36
ATV/Off Highway	2	0	2	38	2	40	46	8	54
Roadway Maintenance	1	0	1	2	1	3	20	27	47
Single Unit Truck	0	0	0	0	0	0	8	9	17
Emergency Vehicle	0	0	0	2	7	9	12	15	27
School Bus	0	0	0	3	2	5	17	23	40
Motor Home/RV	0	0	0	3	1	4	9	15	24
Snowmobile	0	0	0	8	0	8	9	1	10
Other Public Vehicles	0	0	0	2	4	6	3	16	19
Unknown Heavy Truck	0	0	0	3	1	4	6	7	13
Moped	0	0	0	1	18	19	1	19	20
Modified Vehicle	0	0	0	2	0	2	2	0	2
<b>Totals</b>	<b>118</b>	<b>21</b>	<b>139</b>	<b>1,566</b>	<b>3,705</b>	<b>5,271</b>	<b>9,930</b>	<b>16,104</b>	<b>26,034</b>

- ▶ For all crashes, passenger vehicles represent 51.8 percent of the vehicles involved and pickups/van/utility represented 40 percent of the vehicles involved.
- ▶ There were 20 moped crashes in 2008.

2008 Crashes by County

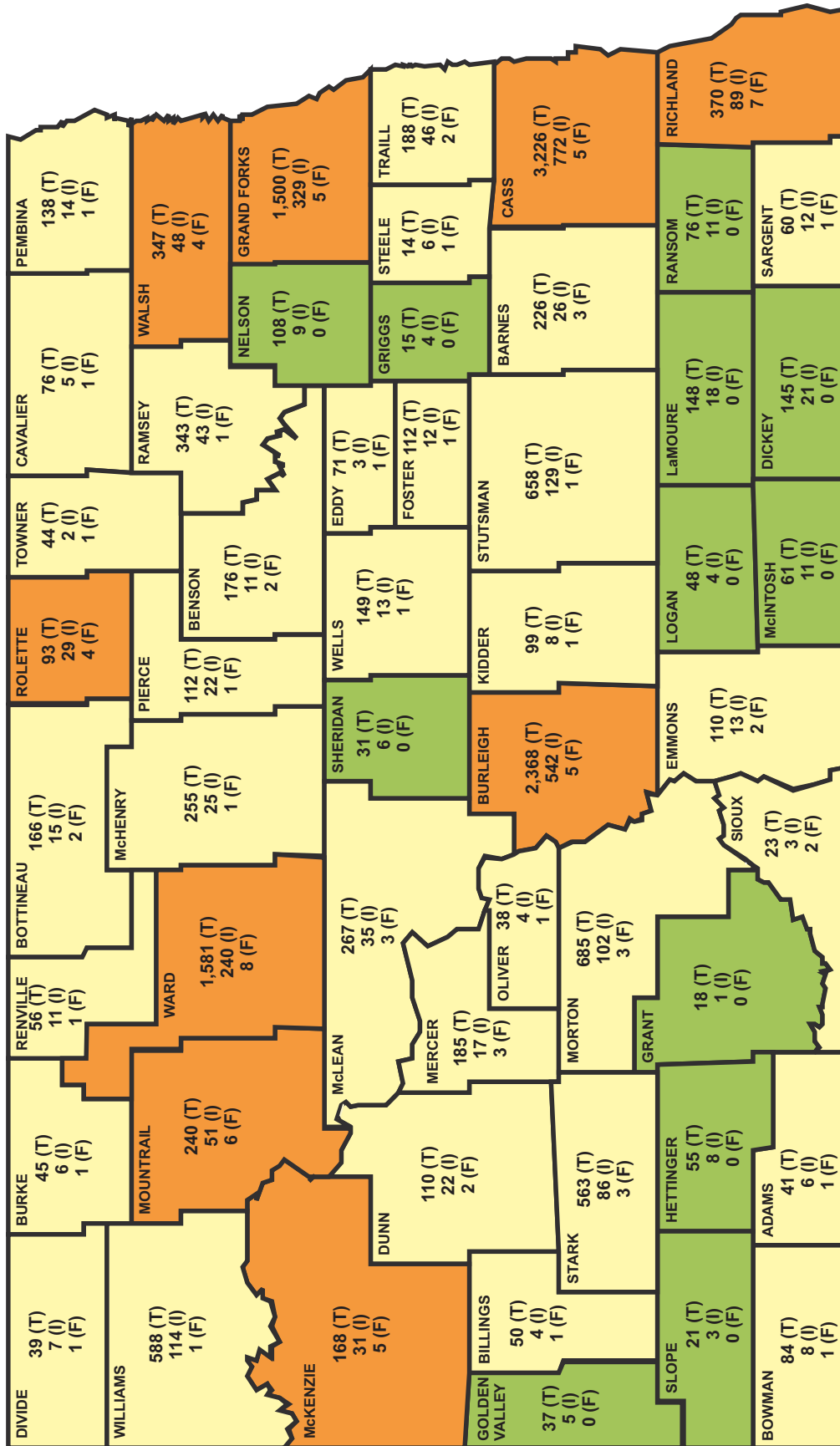
County	PDO Crashes	Injury Crashes	Total Injuries	Fatal Crashes	Total Fatalities	Total Crashes	Crash Rate per MVMT (2008)	VMT by County
Adams	34	6	7	1	1	41	1.30	31,564,249
Barnes	197	26	42	3	3	226	1.02	222,635,845
Benson	163	11	22	2	3	176	1.99	88,573,844
Billings	45	4	6	1	1	50	0.91	54,985,999
Bottineau	149	15	23	2	2	166	1.77	93,986,354
Bowman	75	8	11	1	1	84	1.89	44,372,694
Burke	38	6	8	1	1	45	0.95	47,449,027
Burleigh	1,821	542	769	5	5	2,368	4.28	552,987,117
Cass	2,449	772	1,058	5	5	3,226	2.45	1,319,390,420
Cavalier	70	5	9	1	1	76	1.30	58,426,016
Dickey	124	21	28	0	0	145	2.46	58,938,418
Divide	26	7	10	1	1	34	0.89	38,129,004
Dunn	86	22	29	2	3	110	2.07	53,077,886
Eddy	67	3	4	1	1	71	2.47	28,790,575
Emmons	95	13	18	2	2	110	2.09	52,699,034
Foster	99	12	20	1	1	112	2.44	45,828,099
Golden Valley	32	5	9	0	0	37	0.93	39,651,054
Grand Forks	1,166	329	440	5	5	1,500	2.46	610,154,168
Grant	17	1	1	0	0	18	0.57	31,847,511
Griggs	11	4	7	0	0	15	0.50	29,951,563
Hettinger	47	8	10	0	0	55	1.47	37,441,149
Kidder	90	8	10	1	1	99	0.90	110,578,834
LaMoure	130	18	21	0	0	148	2.68	55,252,354
Logan	44	4	7	0	0	48	2.11	22,763,932
McHenry	199	25	31	1	1	225	1.99	112,949,465
McIntosh	50	11	13	0	0	61	1.78	34,289,584
McKenzie	132	31	57	5	7	168	1.32	127,079,010
McLean	229	35	54	3	3	267	1.57	169,660,563
Mercer	165	17	22	3	3	185	2.49	74,257,559
Morton	580	102	144	3	3	685	1.97	347,428,673
Mountrail	183	51	68	6	6	240	1.69	142,045,182
Nelson	99	9	14	0	0	108	1.50	72,113,445
Oliver	33	4	10	1	2	38	1.24	30,693,451
Pembina	123	14	22	1	1	138	1.08	127,647,194
Pierce	89	22	32	1	1	112	2.13	52,655,746
Ramsey	299	43	61	1	1	343	2.59	132,441,277
Ransom	65	11	15	0	0	76	1.44	52,745,215
Renville	44	11	15	1	1	56	1.49	37,631,505
Richland	274	89	131	7	7	370	1.36	271,317,632
Rolette	60	29	49	4	4	93	1.00	92,970,624
Sargent	47	12	21	1	1	60	1.01	59,573,516
Sheridan	25	6	8	0	0	31	1.14	27,081,366
Sioux	18	3	3	2	2	23	0.63	36,464,337
Slope	18	3	3	0	0	21	0.79	26,540,580
Stark	474	86	106	3	4	563	2.23	252,119,337
Steele	7	6	9	1	2	14	0.40	35,039,257
Stutsman	528	129	167	1	1	658	2.20	298,572,526
Towner	41	2	2	1	1	44	1.22	36,030,706
Traill	140	46	56	2	2	188	0.92	204,411,256
Walsh	295	48	61	4	4	347	2.02	171,916,975
Ward	1,333	240	327	8	8	1,581	3.01	524,951,132
Wells	135	13	17	1	1	149	1.98	75,270,907
Williams	473	114	160	1	1	588	2.33	252,423,986
Statewide	13,233	3,062	4,247	97	104	16,392	2.15	7,607,797,000

Burleigh County had the highest crash rate per million vehicle miles traveled at 4.28.

Steele County had the lowest crash rate per million vehicle miles traveled at 0.4.

Ward County had the greatest number of fatal crashes and fatalities with eight fatal crashes and eight fatalities.

# 2008 North Dakota Crashes by County



■ Green - 0 Fatal Crashes  
■ Yellow - 1-3 Fatal Crashes  
■ Orange - 4+ Fatal Crashes

Total Number of Crashes (T)  
 Injury Crashes (I)  
 Fatal Crashes (F)



## Reportable Crashes by City for the 13 Major Cities 2007 and 2008

City	Population	2008 per 1,000 Population	Number of Persons		Number of Crashes			2007 Total	2008 Total	Change	Percent of Change
			Fatalities	Injured	Fatal	Injury	Property Damage Only				
Fargo	90,599	24.4	3	802	3	591	1,620	2,324	2,214	-110	-4.73%
Bismarck	55,532	34.0	3	647	3	465	1,421	1,572	1,889	317	20.17%
Grand Forks	49,321	22.1	0	338	0	255	836	1,128	1,091	-37	-3.28%
Minot	36,567	26.7	5	210	5	160	810	1,002	975	-27	-2.69%
Mandan	16,718	16.2	0	78	0	60	211	274	271	-3	-1.09%
Dickinson	16,010	20.7	1	76	1	60	271	288	332	44	15.28%
Jamestown	15,527	22.9	0	112	0	85	271	323	356	33	10.22%
West Fargo	14,940	19.3	0	90	0	62	227	306	289	-17	-5.56%
Williston	12,512	23.7	0	65	0	49	247	252	296	44	17.46%
Wahpeton	8,586	10.7	0	32	0	25	67	90	92	2	2.22%
Devils Lake	7,222	18.0	0	28	0	21	109	145	130	-15	-10.34%
Valley City	6,826	13.3	0	16	0	12	79	65	91	26	40.00%
Grafton	4,516	16.8	0	13	0	10	66	76	76	0	0.00%
<b>Total</b>	<b>334,876</b>	<b>24.2</b>	<b>12</b>	<b>2,507</b>	<b>12</b>	<b>1,855</b>	<b>6,235</b>	<b>7,845</b>	<b>8,102</b>	<b>257</b>	<b>3.28%</b>

- ▶ Bismarck had the highest crash rate per 1,000 population in 2008.
- ▶ Valley City had the greatest percent change with an increase of crashes by 40 percent from 2007.
- ▶ Wahpeton has the lowest rate of crashes per 1,000 population with 10.7 percent.
- ▶ Devils Lake had the greatest percent decrease in crashes of 10.34 percent since 2007.

## Crashes by Urban Population

Urban Population*	Number of Crashes				Number of Persons	
	Fatal	Injury	PDO	Total	Killed	Injured
5000 - 9999	0	58	255	313	0	76
10000 - 24999	1	316	1,227	1,544	1	421
25000 - 49999	5	415	1,646	2,066	5	548
50000 - 99999	6	1,056	3,041	4,103	6	1,449
<b>Total</b>	<b>12</b>	<b>1,845</b>	<b>6,169</b>	<b>8,026</b>	<b>12</b>	<b>2,494</b>

\* Does not include interstate urban crashes.

**National Safety Council Estimated Traffic Crash Costs  
1999-2008**

Year	Per Fatality Cost	Per Injury Cost	Per Property Damage Cost
1999*	\$980,000	\$35,600	\$6,400
2000*	\$1,000,000	\$35,300	\$6,500
2001*	\$1,040,000	\$36,500	\$6,500
2002*	\$1,040,000	\$36,500	\$6,500
2003*	\$1,120,000	\$45,500	\$8,200
2004*	\$1,130,000	\$49,700	\$7,400
2005*	\$1,140,000	\$50,400	\$7,900
2006*	\$1,150,000	\$52,900	\$7,500
2007*	\$1,210,000	\$55,000	\$8,200
2008*	\$1,130,000	\$61,600	\$7,500

\* Estimated figures published by National Safety Council.

**Estimated Economic Cost of North Dakota Traffic Crashes 1999 - 2008**

Year	Fatalities		Injuries		Property Damage		Total Est. \$ Loss
	Number	Est. \$ Loss	Number	Est. \$ Loss	Number	Est. \$ Loss	
1999	119	\$116,620,000	4,962	\$176,647,200	11,027	\$70,572,800	\$363,840,000
2000	86	\$86,000,000	4,619	\$163,050,700	11,294	\$73,411,000	\$322,461,700
2001	105	\$105,000,000	4,608	\$162,662,400	11,534	\$74,971,000	\$342,633,400
2002	97	\$100,880,000	4,886	\$178,339,000	12,778	\$83,057,000	\$362,276,000
2003	105	\$117,600,000	4,817	\$219,173,500	13,213	\$108,346,600	\$445,120,100
2004	100	\$113,000,000	4,611	\$229,166,700	14,126	\$104,532,400	\$446,699,100
2005	123	\$140,220,000	4,360	\$219,744,000	12,976	\$102,510,400	\$462,474,400
2006	111	\$127,650,000	4,141	\$219,058,900	12,292	\$52,237,500	\$398,946,400
2007	111	\$134,310,000	4,180	\$229,900,000	13,133	\$107,690,600	\$471,900,600
2008	104	\$117,520,000	4,247	\$261,615,200	13,228	\$99,210,000	\$478,345,200

Economic costs estimate the economic impact of motor vehicle crashes based on five cost components:

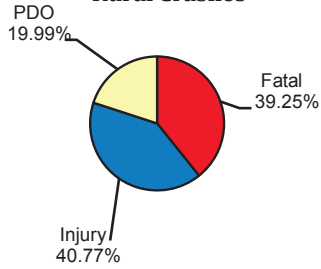
1. Wage and productivity losses, including wages, fringe benefits, household production, and travel delay,
2. Medical expenses including emergency service costs,
3. Administrative expenses, which include the administrative cost of private and public insurance, and legal costs,
4. Motor vehicle damage, including the value of damage to property, and
5. Employer costs for injuries to workers.

- ▶ While the number of fatalities decreased in 2008, the number of injury crashes and property damage crashes increased.
- ▶ The total estimated dollar loss increased by \$6,444,600.

## 2008 Economic Cost by Crash Severity and Urban/Rural Location

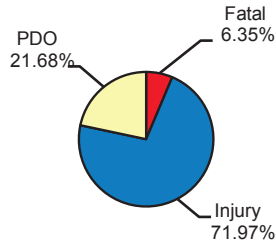
Type of Crash	Fatal Cost	Rate	Injury Cost	Rate	PDO Cost	Rate	Total Cost
Rural	103,960,000	39.25%	107,984,800	40.77%	52,942,500	19.99%	264,887,300
Urban	13,560,000	6.35%	153,630,400	71.97%	46,267,500	21.68%	213,457,900
Total	117,520,000	24.57%	261,615,200	54.69%	99,210,000	20.74%	478,345,200

**2008 Economic Loss in Rural Crashes**



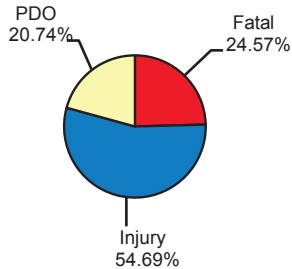
► In rural areas, the economic loss due to fatalities and injuries were almost equal to each other at 39 and 40 percent in 2008.

**2008 Economic Loss in Urban Crashes**



► Fatality rates are significantly lower for urban crashes, and is reflected with lower economic costs.

**2008 Economic Loss in Total Crashes**



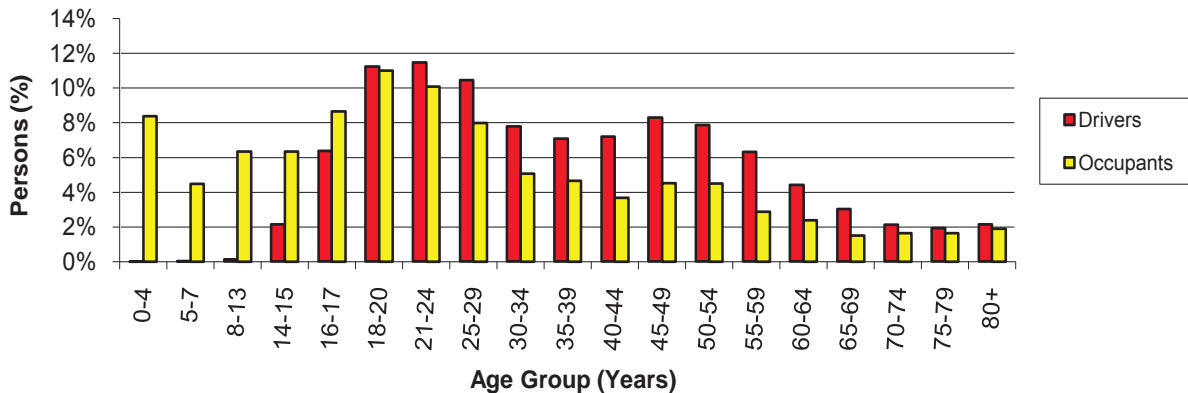


2008 Estimated Economic Cost of Traffic Crashes by County

County	Fatalities	Est \$ Loss	Injuries	Est \$ Loss	PDO	Est \$ Loss	Total Est \$ Loss
Adams	1	\$1,130,000	7	\$431,200	34	\$255,000	\$1,816,200
Barnes	3	\$3,390,000	42	\$2,587,200	197	\$1,477,500	\$7,454,700
Benson	3	\$3,390,000	22	\$1,355,200	163	\$1,222,500	\$5,967,700
Billings	1	\$1,130,000	6	\$369,600	45	\$337,500	\$1,837,100
Bottineau	2	\$2,260,000	23	\$1,416,800	149	\$1,117,500	\$4,794,300
Bowman	1	\$1,130,000	11	\$677,600	75	\$562,500	\$2,370,100
Burke	1	\$1,130,000	8	\$492,800	38	\$285,000	\$1,907,800
Burleigh	5	\$5,650,000	769	\$47,370,400	1,821	\$13,657,500	\$66,677,900
Cass	5	\$5,650,000	1,058	\$65,172,800	2,448	\$18,360,000	\$89,182,800
Cavalier	1	\$1,130,000	9	\$554,400	70	\$525,000	\$2,209,400
Dickey	0	\$0	28	\$1,724,800	124	\$930,000	\$2,654,800
Divide	1	\$1,130,000	10	\$616,000	26	\$195,000	\$1,941,000
Dunn	3	\$3,390,000	29	\$1,786,400	86	\$645,000	\$5,821,400
Eddy	1	\$1,130,000	4	\$246,400	67	\$502,500	\$1,878,900
Emmons	2	\$2,260,000	18	\$1,108,800	95	\$712,500	\$4,081,300
Foster	1	\$1,130,000	20	\$1,232,000	99	\$742,500	\$3,104,500
Golden Valley	0	\$0	9	\$554,400	32	\$240,000	\$794,400
Grand Forks	5	\$5,650,000	440	\$27,104,000	1,165	\$8,737,500	\$41,491,500
Grant	0	\$0	1	\$61,600	17	\$127,500	\$189,100
Griggs	0	\$0	7	\$431,200	11	\$82,500	\$513,700
Hettinger	0	\$0	10	\$616,000	47	\$352,500	\$968,500
Kidder	1	\$1,130,000	10	\$616,000	90	\$675,000	\$2,421,000
LaMoure	0	\$0	21	\$1,293,600	130	\$975,000	\$2,268,600
Logan	0	\$0	7	\$431,200	44	\$330,000	\$761,200
McHenry	1	\$1,130,000	31	\$1,909,600	199	\$1,492,500	\$4,532,100
McIntosh	0	\$0	13	\$800,800	50	\$375,000	\$1,175,800
McKenzie	7	\$7,910,000	57	\$3,511,200	132	\$990,000	\$12,411,200
McLean	3	\$3,390,000	54	\$3,326,400	229	\$1,717,500	\$8,433,900
Mercer	3	\$3,390,000	22	\$1,355,200	165	\$1,237,500	\$5,982,700
Morton	3	\$3,390,000	144	\$8,870,400	580	\$4,350,000	\$16,610,400
Mountrail	6	\$6,780,000	68	\$4,188,800	183	\$1,372,500	\$12,341,300
Nelson	0	\$0	14	\$862,400	99	\$742,500	\$1,604,900
Oliver	2	\$2,260,000	10	\$616,000	33	\$247,500	\$3,123,500
Pembina	1	\$1,130,000	22	\$1,355,200	123	\$922,500	\$3,407,700
Pierce	1	\$1,130,000	32	\$1,971,200	89	\$667,500	\$3,768,700
Ramsey	1	\$1,130,000	61	\$3,757,600	297	\$2,227,500	\$7,115,100
Ransom	0	\$0	15	\$924,000	65	\$487,500	\$1,411,500
Renville	1	\$1,130,000	15	\$924,000	44	\$330,000	\$2,384,000
Richland	7	\$7,910,000	131	\$8,069,600	274	\$2,055,000	\$18,034,600
Rolette	4	\$4,520,000	49	\$3,018,400	60	\$450,000	\$7,988,400
Sargent	1	\$1,130,000	21	\$1,293,600	47	\$352,500	\$2,776,100
Sheridan	0	\$0	8	\$492,800	25	\$187,500	\$680,300
Sioux	2	\$2,260,000	3	\$184,800	18	\$135,000	\$2,579,800
Slope	0	\$0	3	\$184,800	18	\$135,000	\$319,800
Stark	4	\$4,520,000	106	\$6,529,600	474	\$3,555,000	\$14,604,600
Steele	2	\$2,260,000	9	\$554,400	7	\$52,500	\$2,866,900
Stutsman	1	\$1,130,000	167	\$10,287,200	528	\$3,960,000	\$15,377,200
Towner	1	\$1,130,000	2	\$123,200	41	\$307,500	\$1,560,700
Traill	2	\$2,260,000	56	\$3,449,600	140	\$1,050,000	\$6,759,600
Walsh	4	\$4,520,000	61	\$3,757,600	295	\$2,212,500	\$10,490,100
Ward	8	\$9,040,000	327	\$20,143,200	1,332	\$9,990,000	\$39,173,200
Wells	1	\$1,130,000	17	\$1,047,200	135	\$1,012,500	\$3,189,700
Williams	1	\$1,130,000	160	\$9,856,000	473	\$3,547,500	\$14,533,500
Statewide	104	\$117,520,000	4,247	\$261,615,200	13,228	\$99,210,000	\$478,345,200

- ▶ Cass County had the highest estimated economic cost of traffic crashes at slightly over \$89 million.
- ▶ Grant County had the lowest estimated economic cost of traffic crashes at \$189,000. Grant County decreased the total number of crashes from 33 crashes in 2007 to 18 crashes in 2008.

## 2008 Age of Drivers and Occupants Involved in Crashes



- ▶ The highest number of drivers involved in crashes was 21-24 year olds, followed by 18-20 year olds. Eleven percent of 21-24 year old drivers were involved in crashes; they represent eight percent of licensed drivers in North Dakota. Eleven percent of 18-20 year old drivers were involved in crashes; they represent 5.2 percent of licensed drivers.
- ▶ Nine percent of all crashes are attributed to drivers 65 and older; they represent 17 percent of the licensed drivers in the state.

## 2008 Individual Crash Involvement by Age

Age	2000 Census	Percent	Fatalities	Percent	Injuries	Percent
0 - 4	39,094	6.1%	1	1.0%	58	1.4%
5 - 9	43,223	6.7%	2	1.9%	70	1.7%
10 - 13	37,484	5.8%	1	1.0%	87	2.1%
14 - 17	41,098	6.4%	7	6.7%	466	11.1%
18 - 20	33,356	5.2%	6	5.8%	491	11.7%
21 - 24	39,360	6.1%	13	12.5%	492	11.7%
25 - 34	76,616	11.9%	19	18.3%	688	16.3%
35 - 44	98,641	15.4%	17	16.3%	538	12.8%
45 - 54	85,464	13.3%	17	16.3%	592	14.1%
55 - 64	53,267	8.3%	7	6.7%	391	9.3%
65 - 74	46,001	7.2%	4	3.8%	171	4.1%
75 & Older	48,596	7.6%	10	9.6%	169	4.0%
Total	642,200	100.0%	104	100.0%	4,213	100.0%

\* Total injuries = 4,247, 34 are missing age.

- ▶ This chart represents all victims of traffic crashes to include drivers, passengers, and non-motorists who have been injured or killed.
- ▶ The following age groups are over-represented in crash involvement: 25-34 year olds, 21-24 year olds, 18-20 year olds, and 14-17 year olds.

2008 Licensed Drivers and Crash Involvement by Age						
Age	Licensed		Involved in All Crashes		Involved in Injury Crashes	
	Drivers	Percent	Drivers	Percent	Drivers	Percent
13 & Under	0	0.0%	13	0.1%	5	0.1%
14 - 17	15,968	3.4%	2,037	8.6%	446	8.9%
18 - 20	24,800	5.2%	2,700	11.4%	622	12.4%
21 - 24	37,925	8.0%	2,789	11.8%	615	12.3%
25 - 34	80,705	17.0%	4,333	18.3%	889	17.8%
35 - 44	71,028	14.9%	3,348	14.1%	716	14.3%
45 - 54	91,665	19.3%	3,805	16.1%	757	15.1%
55 - 64	72,600	15.3%	2,507	10.6%	504	10.1%
65 - 74	42,600	9.0%	1,205	5.1%	242	4.8%
75 & Older	37,838	8.0%	951	4.0%	211	4.2%
Total	475,129	100.0%	23,688	100.0%	5,007	100.0%

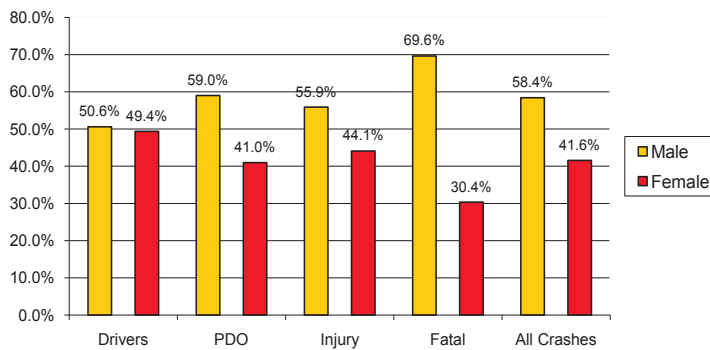
\* Does not include drivers where age was unknown.

- ▶ The highest percentage of crashes occurred in the 25-34 year old age demographic.
- ▶ The lowest percentage of crashes occurred in the 75+ age demographic.
- ▶ Drivers 18-24 years old and 45-64 year olds are under-represented in crashes when comparing crash numbers to the percentage of licensed drivers.

## 2008 Licensed Drivers and Fatal Crash Involvement by Age and Sex

Age	Licensed		Licensed		Involved in Fatal Crashes		Involved in Fatal Crashes	
	Male Drivers	Percent	Female Drivers	Percent	Male Drivers	Percent	Female Drivers	Percent
13 & Under	0	0.0%	0	0.0%	2	2.0%	0	0.0%
14 - 17	8,301	3.5%	7,667	3.3%	4	4.1%	6	15.8%
18 - 20	12,649	5.3%	12,151	5.2%	5	5.1%	5	13.2%
21 - 24	19,650	8.2%	18,275	7.8%	10	10.2%	4	10.5%
25 - 34	42,007	17.5%	38,698	16.5%	19	19.4%	6	15.8%
35 - 44	36,164	15.0%	34,864	14.9%	22	22.4%	4	10.5%
45 - 54	46,132	19.2%	45,533	19.4%	18	18.4%	3	7.9%
55 - 64	37,467	15.6%	35,133	15.0%	10	10.2%	5	13.2%
65 - 74	20,928	8.7%	21,672	9.2%	1	1.0%	2	5.3%
75 & Older	17,132	7.1%	20,706	8.8%	7	7.1%	3	7.9%
<b>Total</b>	<b>240,430</b>	<b>100.0%</b>	<b>234,699</b>	<b>100.0%</b>	<b>98</b>	<b>100.0%</b>	<b>38</b>	<b>100.0%</b>

2008 Driver Involvement by Sex

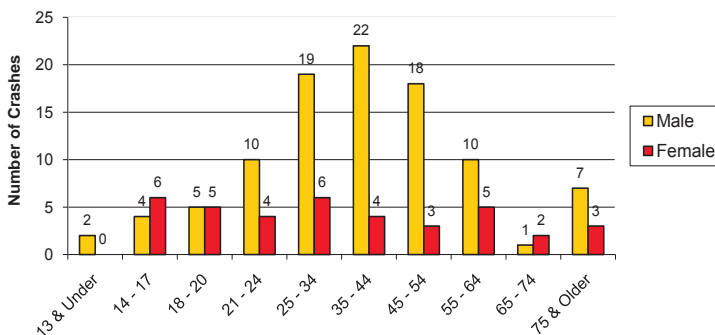


► Of the 136 drivers involved in fatal crashes where the driver's age was known, males were involved in 72 percent of the crashes. Males account for 50.6 percent of licensed drivers.

► Male drivers, 35-44, are over-represented in fatal crashes. This age group represents 15 percent of male licensed drivers, yet contributed to 22.4 percent of fatal crashes.

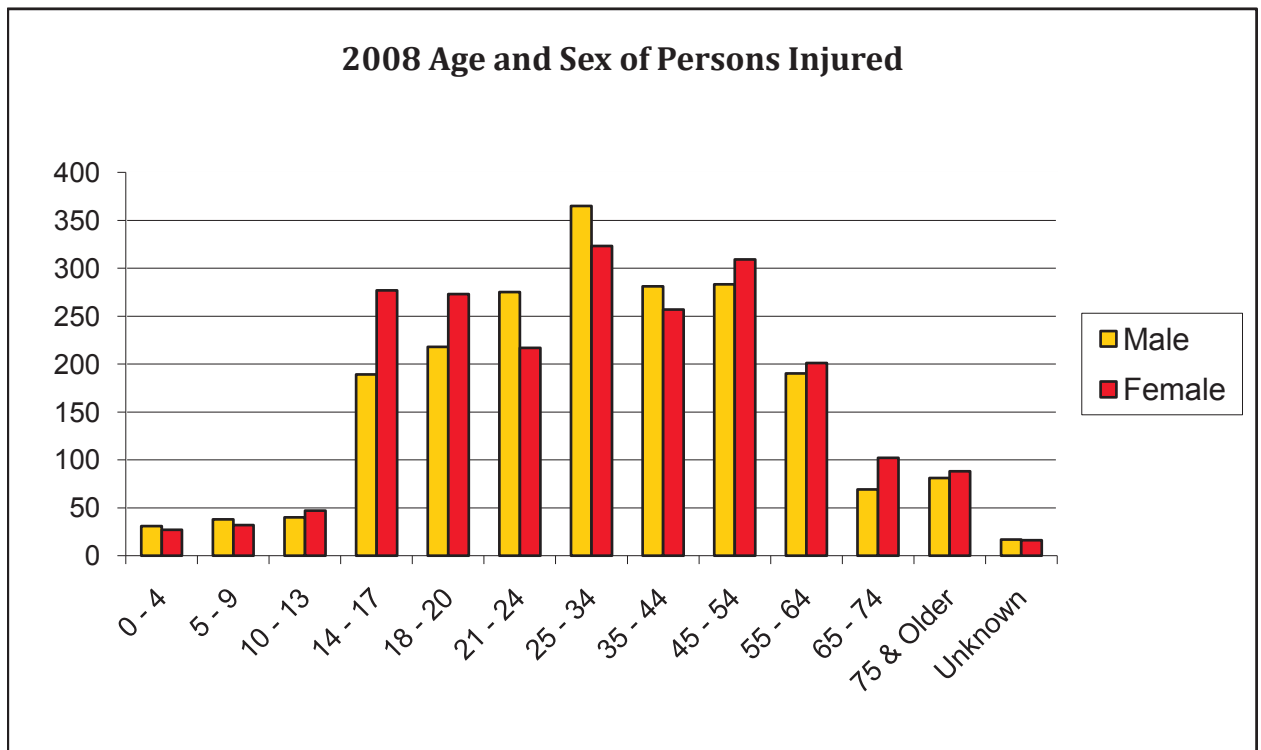
► Female drivers, 14-20, are over-represented in fatal crashes. They are 8.5 percent of licensed drivers, yet contributed to 29 percent of fatal crashes.

2008 Fatal Crash Involvement by Age & Sex



► For both male and female drivers, 14-24 year olds are over-represented in fatal crashes. While 14-17 year olds constitute 3.36 percent of licensed drivers, they contributed to 7.35 percent of fatal crashes. Drivers 18-20 years old account for 5.43 percent of the licensed drivers yet contributed to 7.35 percent of fatal crashes. Drivers 21-24 years old represent 7.98 percent of licensed drivers, yet were involved in 10.29 percent of fatal crashes.

2008 Age and Sex of Persons Injured						
Age	Total Crash Injuries		Pedestrian Injuries		Pedalcyclist Injuries	
	Male	Female	Male	Female	Male	Female
0 - 4	31	27	0	0	0	0
5 - 9	38	32	2	3	4	4
10 - 13	40	47	1	2	8	5
14 - 17	189	277	4	2	17	3
18 - 20	218	273	3	5	3	2
21 - 24	275	217	7	1	5	3
25 - 34	365	323	8	6	8	3
35 - 44	281	257	13	3	6	1
45 - 54	283	309	9	4	6	3
55 - 64	190	201	1	4	7	1
65 - 74	69	102	0	2	0	1
75 & Older	81	88	1	2	0	0
Unknown	17	16	0	0	0	0
Totals	2,077	2,169	49	34	64	26

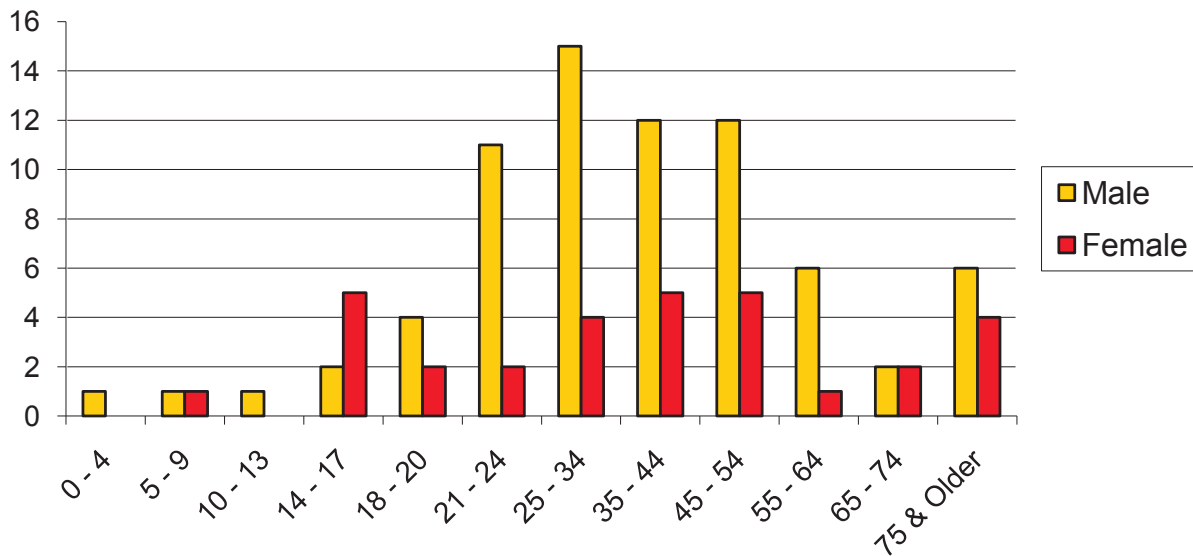


- ▶ The highest number of crash injuries occurred in males and females, aged 25-34 years old.
- ▶ The highest number of pedestrian injuries occurred in males, 35-44 years old, followed by males 45-54 years old.
- ▶ The greatest number of pedalcycle injuries occurred in males, 14-17 years old, comprising 26.7 percent of all male pedalcycle injuries.

## 2008 Age and Sex of Fatalities

Age	Total Crash Fatalities		Pedestrian Fatalities		Pedalcycle Fatalities	
	Male	Female	Male	Female	Male	Female
0 - 4	1	0	0	0	0	0
5 - 9	1	1	0	0	0	0
10 - 13	1	0	0	0	0	0
14 - 17	2	5	0	0	0	0
18 - 20	4	2	1	0	1	0
21 - 24	11	2	0	0	0	0
25 - 34	15	4	1	0	0	0
35 - 44	12	5	1	0	0	0
45 - 54	12	5	2	0	0	0
55 - 64	6	1	0	0	0	0
65 - 74	2	2	1	0	0	0
75 & Older	6	4	1	0	0	0
Totals	73	31	7	0	1	0

## 2008 Age and Sex of Fatalities



- ▶ The greatest number of crash fatalities for drivers and occupants was 25-34 year old males, contributing to 14.4 percent of total crash fatalities.
- ▶ The highest number of pedestrian fatalities was for males, 45-54 years old. There were seven pedestrian fatalities in 2008.
- ▶ There was one pedalcycle fatality in 2008.

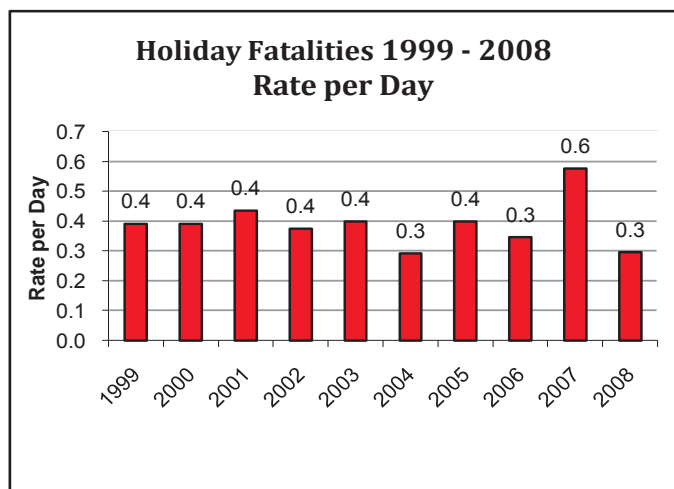
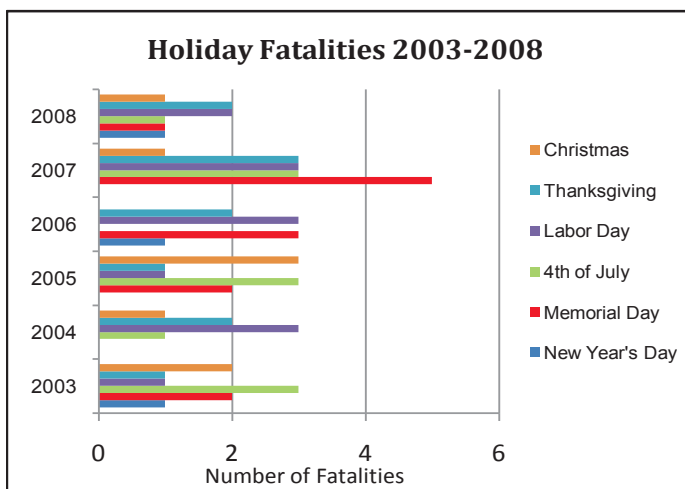
### 2008 North Dakota / Out-of-State Driver Involvement

License	Fatal Crashes		Injury Crashes		All Crashes	
	Number	Percent	Number	Percent	Number	Percent
North Dakota	119	87.5%	4,347	86.7%	20,757	87.5%
Out-of-State	17	12.5%	663	13.3%	2,941	12.4%
Unknown	0	0.0%	2	0.0%	37	0.2%
<b>Total</b>	<b>136</b>	<b>100.0%</b>	<b>5,012</b>	<b>100.0%</b>	<b>23,735</b>	<b>100.0%</b>

- ▶ Out-of-State drivers contributed to 12.5 percent of fatal crashes, 13.2 percent of injury crashes, and 12.4 percent of all crashes in North Dakota.

## Holiday Fatalities 1999 - 2008

Year	New Years			Memorial			Independence			Labor			Thanksgiving			Christmas			Total		
	#	Days	Rate per Day	#	Days	Rate per Day	#	Days	Rate per Day	#	Days	Rate per Day	#	Days	Rate per Day	#	Days	Rate per Day	#	Days	Rate per Day
1999	1	4	0.3	1	4	0.3	1	3	0.3	3	4	0.8	1	5	0.2	2	3	0.7	9	23	0.4
2000	1	3	0.3	2	4	0.5	1	3	0.3	1	4	0.3	1	5	0.2	3	4	0.8	9	23	0.4
2001	1	4	0.3	2	4	0.5	2	3	0.7	5	4	1.3	0	5	0.0	0	3	0.0	10	23	0.4
2002	0	3	0.0	2	4	0.5	5	5	1.0	0	4	0.0	1	5	0.2	1	3	0.3	9	24	0.4
2003	1	3	0.3	2	4	0.5	3	4	0.8	1	4	0.3	1	5	0.2	2	5	0.4	10	25	0.4
2004	0	5	0.0	0	4	0.0	1	3	0.3	3	4	0.8	2	5	0.4	1	3	0.3	7	24	0.3
2005	0	4	0.0	2	4	0.5	3	4	0.8	1	4	0.3	1	5	0.2	3	4	0.8	10	25	0.4
2006	1	4	0.3	3	4	0.8	0	5	0.0	3	4	0.8	2	5	0.4	0	4	0.0	9	26	0.3
2007	0	5	0.0	5	4	1.3	3	3	1.0	3	4	0.8	3	5	0.6	1	5	0.2	15	26	0.6
2008	1	5	0.2	1	4	0.3	1	4	0.3	2	4	0.5	2	5	0.4	1	5	0.2	8	27	0.3
<b>Total</b>	<b>6</b>	<b>40</b>	<b>0.2</b>	<b>20</b>	<b>40</b>	<b>0.5</b>	<b>20</b>	<b>37</b>	<b>0.5</b>	<b>22</b>	<b>40</b>	<b>0.6</b>	<b>14</b>	<b>50</b>	<b>0.3</b>	<b>14</b>	<b>39</b>	<b>0.4</b>	<b>88</b>	<b>246</b>	<b>0.4</b>

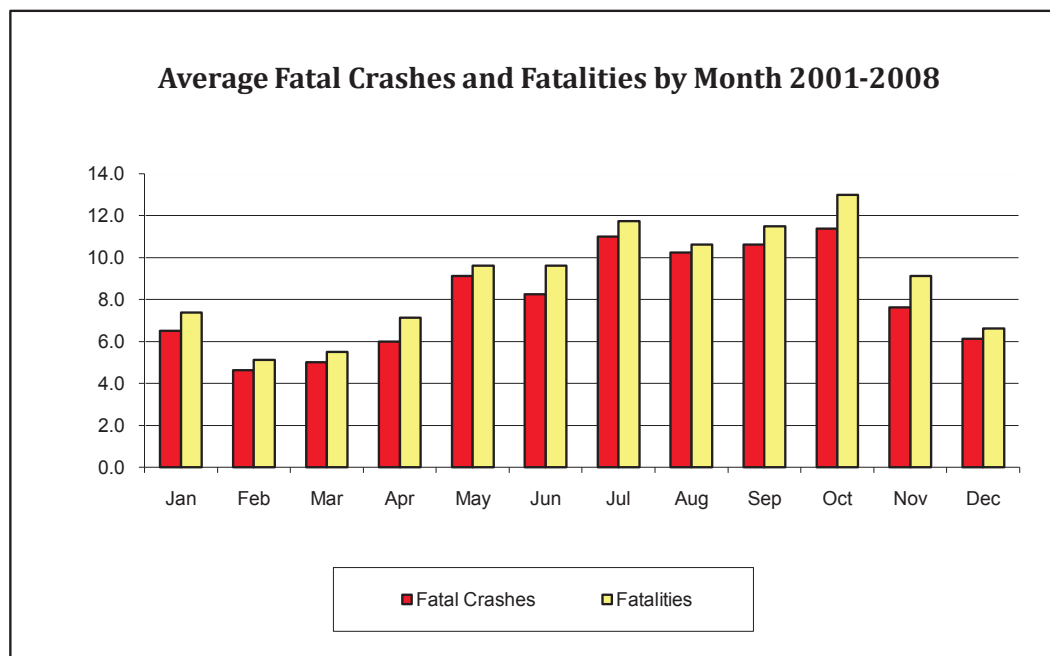


- There were eight fatalities over the designated holiday travel periods in 2008.
- The rate per day for holiday fatalities in 2008 was 0.3 per day. The average rate per day for the past 11 years is 0.4 per day.

The Holiday Fatalities table shows the number of fatalities that occurred in holidays for the past 10 years. The number of days included vary by holiday. Because of the differing lengths, a rate per day is provided and should be used to compare holidays by years. Holidays represent an increase in traffic safety risk due to the increased motor vehicle traffic and potential risk factors (e.g., alcohol and other drug-impaired driving, fatigued driving). Labor Day was the holiday with the highest fatality rate at 0.6 over the past 10 years.



Fatal Crashes and Fatalities by Month 2001 - 2008																		
	2001		2002		2003		2004		2005		2006		2007		2008		Average	
	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities	Crashes	Fatalities
Jan	9	10	7	7	5	7	8	8	4	5	8	10	4	5	7	7	6.5	7.4
Feb	2	2	6	7	1	1	8	10	7	7	6	6	3	4	4	4	4.6	5.1
Mar	6	6	3	4	3	3	5	5	9	9	2	2	6	8	6	7	5.0	5.5
Apr	7	7	5	7	5	6	3	3	7	7	8	10	5	9	8	8	6.0	7.1
May	9	10	7	8	11	11	7	8	6	6	15	15	12	13	6	6	9.1	9.6
Jun	3	3	5	7	4	4	10	10	20	25	5	7	9	11	10	10	8.3	9.6
Jul	14	16	9	11	10	10	12	12	14	14	10	10	6	7	13	14	11.0	11.8
Aug	10	10	9	10	11	12	9	9	6	5	11	11	13	15	13	13	10.3	10.6
Sep	16	18	16	17	13	13	8	8	8	9	8	9	8	9	8	9	10.6	11.5
Oct	13	15	4	4	13	14	9	9	13	16	13	16	15	16	11	14	11.4	13.0
Nov	5	6	8	9	10	13	10	12	5	9	8	8	9	9	6	7	7.6	9.1
Dec	2	2	5	6	9	11	6	6	10	11	7	7	5	5	5	5	6.1	6.6



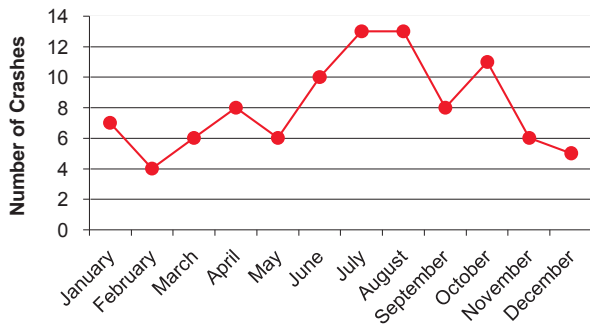
- ▶ Over the last eight years (2001-2008), the highest average number of fatal crashes and fatalities occurred in October.
- ▶ In 2008, the lowest number of fatal crashes and fatalities occurred in February.

# SYNOPSIS

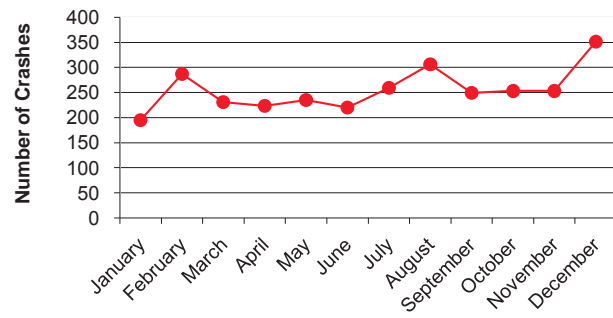
## 2008 Crashes by Month

Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		# Fatal Crashes	Rate per day	# Injury Crashes	Rate per day	# PDO Crashes	Rate per day	# All Crashes	Rate per day
January	31	7	0.23	195	6.29	1,075	34.68	1,277	41.19
February	28	4	0.14	287	10.25	1,251	44.68	1,542	55.07
March	31	6	0.19	231	7.45	894	28.84	1,131	36.48
April	30	8	0.27	223	7.43	805	26.83	1,036	34.53
May	31	6	0.19	235	7.58	754	24.32	995	32.10
June	30	10	0.33	220	7.33	952	31.73	1,182	39.40
July	31	13	0.42	259	8.35	857	27.65	1,129	36.42
August	31	13	0.42	306	9.87	791	25.52	1,110	35.81
September	30	8	0.27	249	8.30	907	30.23	1,164	38.80
October	31	11	0.35	253	8.16	1,174	37.87	1,438	46.39
November	30	6	0.20	253	8.43	1,678	55.93	1,937	64.57
December	31	5	0.16	351	11.32	2,090	67.42	2,446	78.90
<b>Total</b>	<b>365</b>	<b>97</b>	<b>0.27</b>	<b>3,062</b>	<b>8.39</b>	<b>13,228</b>	<b>36.24</b>	<b>16,387</b>	<b>44.90</b>

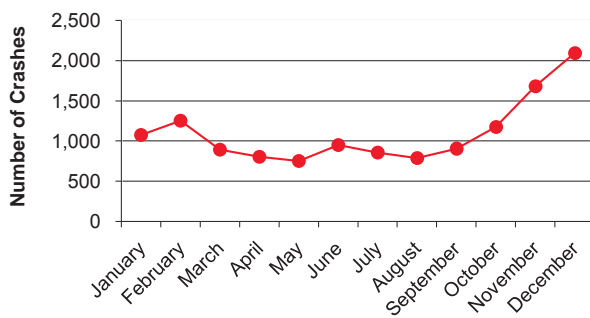
2008 Fatal Crashes by Month



2008 Injury Crashes by Month



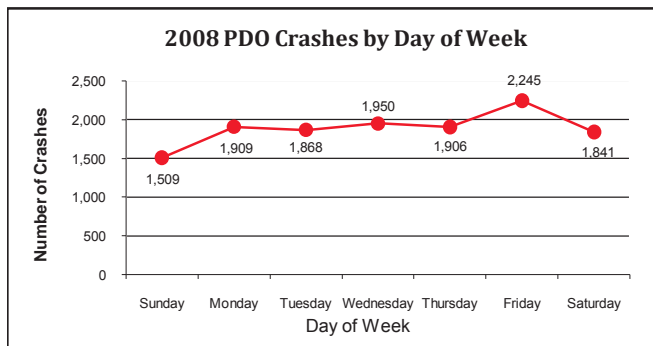
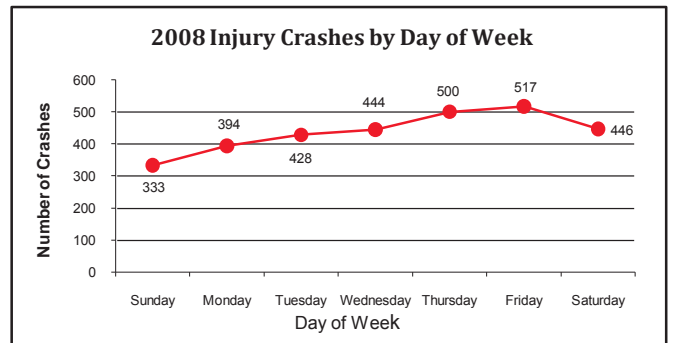
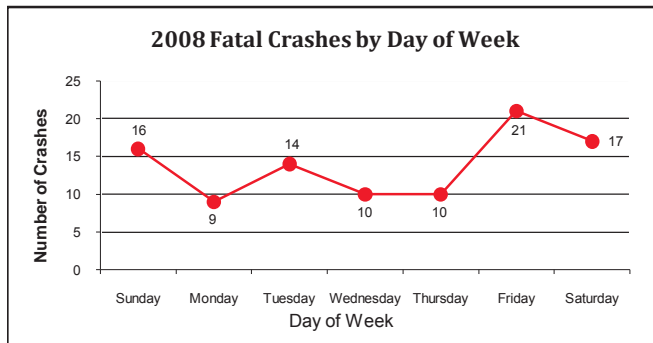
2008 PDO Crashes by Month



- ▶ The greatest number of fatal crashes per day occurred in July and August in 2008. The lowest rate occurred in February.
- ▶ The highest injury crash rates per day occurred in December and February.
- ▶ The highest rate per day for all crashes in 2008 occurred in December.

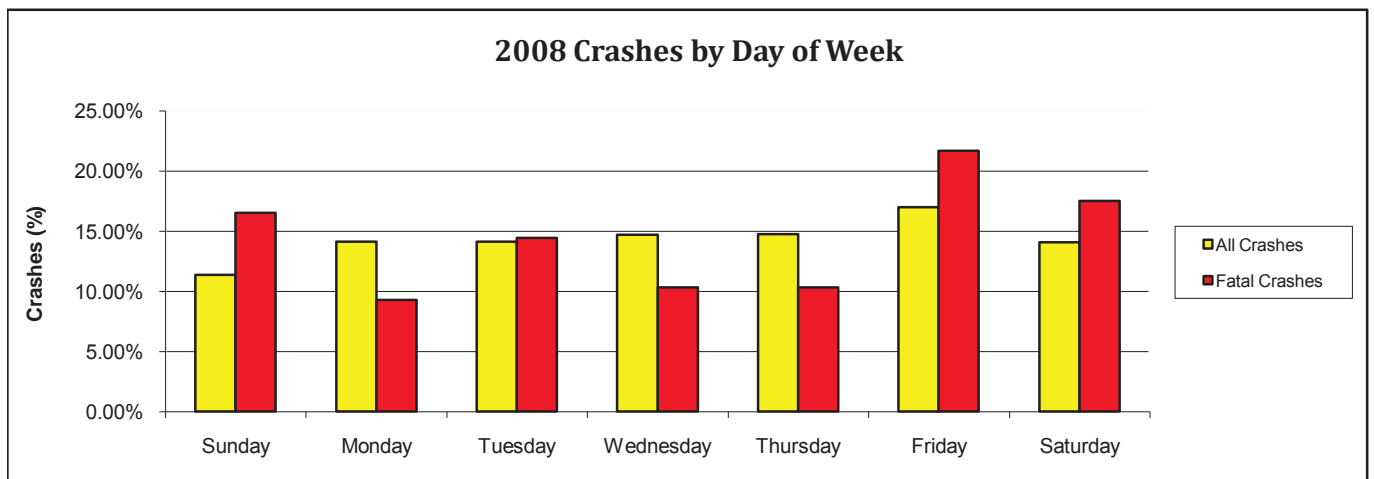
## 2008 Crashes by Day of Week

Month	Fatal		Injury		Property Damage Only (PDO)		Total	
	# Fatal Crashes	Percent	# Injury Crashes	Percent	# PDO Crashes	Percent	# All Crashes	Percent
Sunday	16	16.49%	333	10.88%	1,509	11.41%	1,858	11.34%
Monday	9	9.28%	394	12.87%	1,909	14.43%	2,312	14.11%
Tuesday	14	14.43%	428	13.98%	1,868	14.12%	2,310	14.10%
Wednesday	10	10.31%	444	14.50%	1,950	14.74%	2,404	14.67%
Thursday	10	10.31%	500	16.33%	1,906	14.41%	2,416	14.74%
Friday	21	21.65%	517	16.88%	2,245	16.97%	2,783	16.98%
Saturday	17	17.53%	446	14.57%	1,841	13.92%	2,304	14.06%
<b>Total</b>	<b>97</b>	<b>100.00%</b>	<b>3,062</b>	<b>100.00%</b>	<b>13,228</b>	<b>100.00%</b>	<b>16,387</b>	<b>100.00%</b>



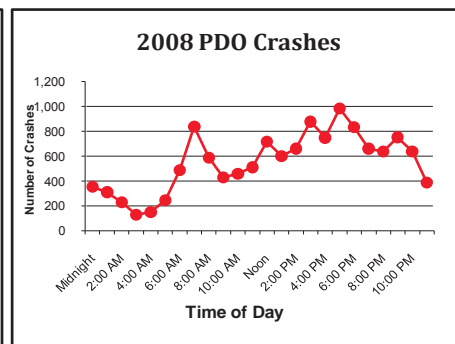
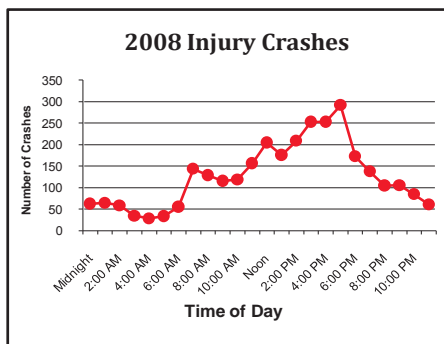
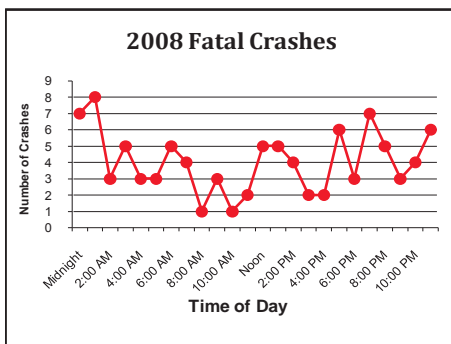
- ▶ There is little variation between days of the week when reviewing crash data. There are slightly more total crashes on Friday.
- ▶ The highest numbers of fatal crashes occur on Friday, Saturday, and Sunday.

◇



## 2008 Crashes by Time of Day

Time of Day	Fatal		Injury		Property Damage Only (PDO)		Total	
	# Fatal Crashes	Percent	# Injury Crashes	Percent	# PDO Crashes	Percent	# All Crashes	Percent
Midnight	7	7.22%	63	2.06%	354	2.68%	424	2.59%
1:00 AM	8	8.25%	65	2.12%	311	2.35%	384	2.34%
2:00 AM	3	3.09%	59	1.93%	228	1.72%	290	1.77%
3:00 AM	5	5.15%	35	1.14%	130	0.98%	170	1.04%
4:00 AM	3	3.09%	29	0.95%	151	1.14%	183	1.12%
5:00 AM	3	3.09%	34	1.11%	247	1.87%	284	1.73%
6:00 AM	5	5.15%	56	1.83%	488	3.69%	549	3.35%
7:00 AM	4	4.12%	144	4.70%	838	6.34%	986	6.02%
8:00 AM	1	1.03%	129	4.21%	589	4.45%	719	4.39%
9:00 AM	3	3.09%	116	3.79%	429	3.24%	548	3.34%
10:00 AM	1	1.03%	119	3.89%	458	3.46%	578	3.53%
11:00 AM	2	2.06%	157	5.13%	511	3.86%	670	4.09%
Noon	5	5.15%	205	6.69%	716	5.41%	926	5.65%
1:00 PM	5	5.15%	176	5.75%	601	4.54%	782	4.77%
2:00 PM	4	4.12%	209	6.83%	661	5.00%	874	5.33%
3:00 PM	2	2.06%	253	8.26%	878	6.64%	1,133	6.91%
4:00 PM	2	2.06%	253	8.26%	748	5.65%	1,003	6.12%
5:00 PM	6	6.19%	292	9.54%	983	7.43%	1,281	7.82%
6:00 PM	3	3.09%	173	5.65%	833	6.30%	1,009	6.16%
7:00 PM	7	7.22%	138	4.51%	660	4.99%	805	4.91%
8:00 PM	5	5.15%	105	3.43%	638	4.82%	748	4.56%
9:00 PM	3	3.09%	106	3.46%	752	5.68%	861	5.25%
10:00 PM	4	4.12%	85	2.78%	637	4.82%	726	4.43%
11:00 PM	6	6.19%	61	1.99%	387	2.93%	454	2.77%
<b>Total</b>	<b>97</b>	<b>100.00%</b>	<b>3,062</b>	<b>100.00%</b>	<b>13,228</b>	<b>100.00%</b>	<b>16,387</b>	<b>100.00%</b>



- When reviewing all crashes, the highest percentage were between the hours of 3:00 p.m. and 7:00 p.m.; 18.5 percent of fatal crashes occurred between midnight and 2:00 a.m.

**Work Zone Crashes 2001 - 2008**

Year	Fatal Crashes	Injury Crashes	PDO Crashes	Total Crashes	Total Fatalities	Total Injured
2001	3	56	148	3	3	86
2002	1	82	247	330	1	130
2003	2	78	216	296	2	113
2004	2	54	182	238	2	104
2005	2	36	152	190	2	57
2006	1	36	140	177	3	52
2007	1	38	158	197	1	49
2008	1	36	85	122	1	48
<b>Total</b>	<b>13</b>	<b>416</b>	<b>1,328</b>	<b>1,553</b>	<b>15</b>	<b>639</b>

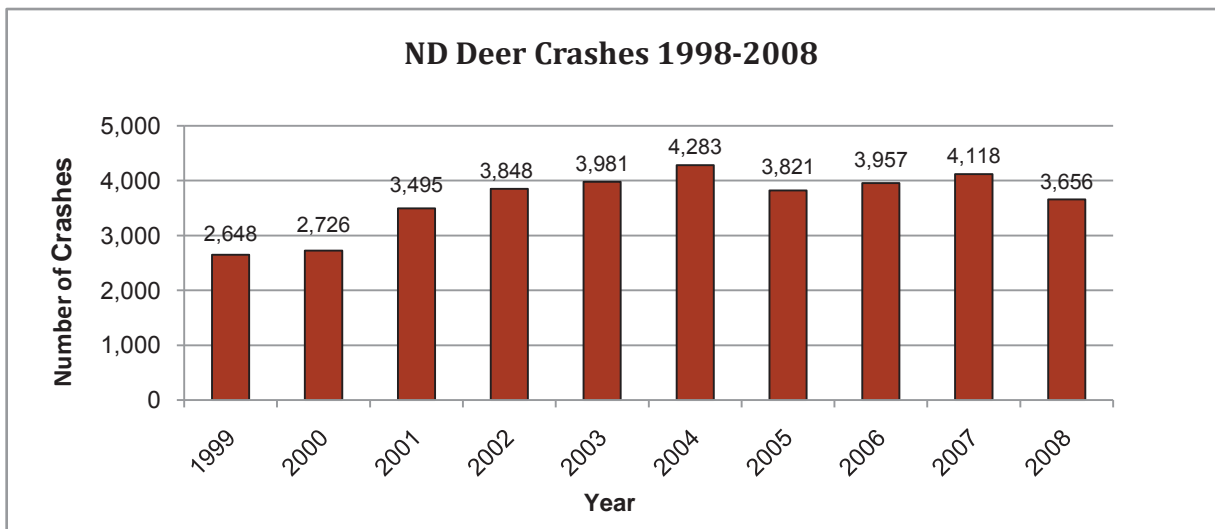
- ▶ There was a significant decrease in work zone crashes in 2008 with a total of 122 crashes. This is the lowest number of work zone crashes in the past eight years.

**Work Zone Crashes by Month 2001 - 2008**

Month	2001	2002	2003	2004	2005	2006	2007	2008	Average
January	2	5	6	8	8	5	2	2	4.75
February	5	2	4	6	1	6	5	1	3.75
March	5	5	5	16	6	4	4	1	5.75
April	7	21	11	10	7	13	13	2	10.50
May	26	40	42	26	16	12	30	17	26.13
June	34	36	43	30	29	20	30	17	29.88
July	36	69	43	36	30	26	32	13	35.63
August	38	54	55	33	37	32	40	18	38.38
September	25	44	37	35	30	26	26	25	31.00
October	16	36	29	27	19	21	11	14	21.63
November	9	10	16	9	4	7	3	7	8.13
December	4	8	5	2	3	5	1	5	4.13
<b>Total</b>	<b>207</b>	<b>330</b>	<b>296</b>	<b>238</b>	<b>190</b>	<b>177</b>	<b>197</b>	<b>122</b>	<b>219.63</b>

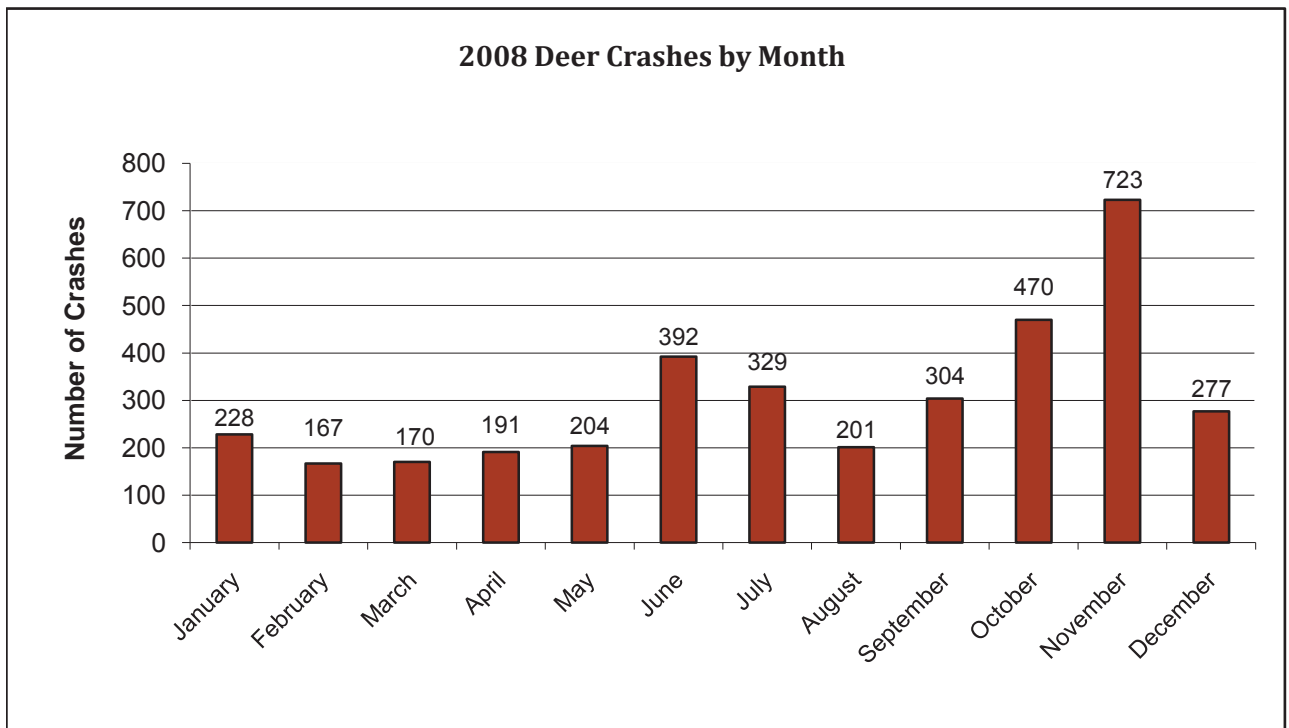
- ▶ The highest number of work zone crashes normally occurs in August, followed by July.
- ▶ In 2008, the highest number of work zone crashes occurred in September, followed by August.

Deer Crashes 1999 - 2008				
Year	Fatalities	Injured	Property Damage Only (PDO)	Total
1999	0	23	2,625	2,648
2000	1	18	2,707	2,726
2001	0	27	3,468	3,495
2002	1	40	3,807	3,848
2003	0	37	3,944	3,981
2004	2	34	4,247	4,283
2005	1	54	3,766	3,821
2006	1	36	3,920	3,957
2007	2	43	4,073	4,118
2008	2	30	3,624	3,656
Total	10	342	36,181	36,533



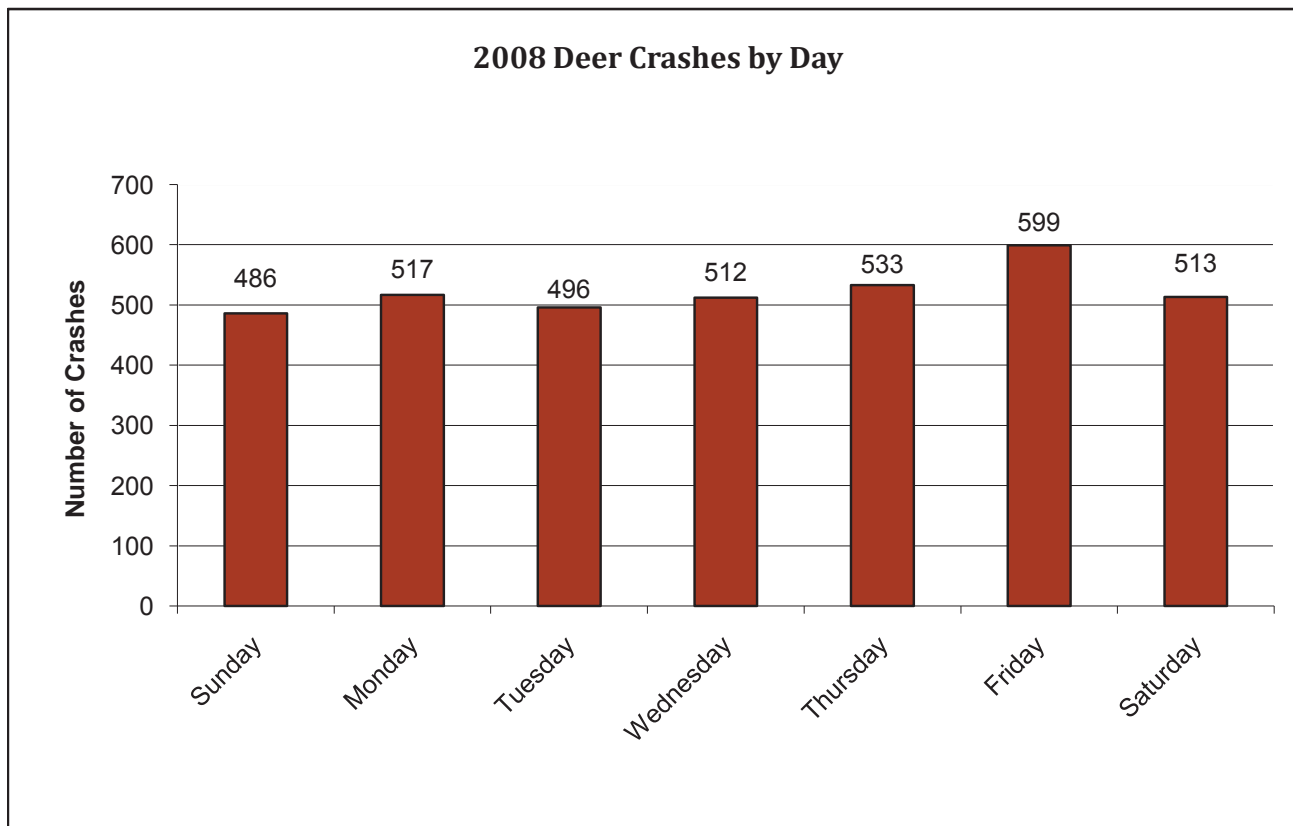
- The total number of deer crashes in 2008 was the lowest since 2001. The highest number of deer crashes in the past 10 years occurred in 2004.

2008 Deer Crashes by Month									
Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		#	Rate per day	#	Rate per day	#	Rate per day	#	Rate per day
January	31	0	0.00	0	0.00	228	7.35	228	7.35
February	28	0	0.00	0	0.00	167	5.96	167	5.96
March	31	0	0.00	1	0.03	169	5.45	170	5.48
April	30	0	0.00	1	0.03	190	6.33	191	6.37
May	31	0	0.00	3	0.10	201	6.48	204	6.58
June	30	2	0.07	1	0.03	389	12.97	392	13.07
July	31	0	0.00	7	0.23	322	10.39	329	10.61
August	31	0	0.00	6	0.19	195	6.29	201	6.48
September	30	0	0.00	1	0.03	303	10.10	304	10.13
October	31	0	0.00	3	0.10	467	15.06	470	15.16
November	30	0	0.00	7	0.23	716	23.87	723	24.10
December	31	0	0.00	0	0.00	277	8.94	277	8.94
<b>Total</b>	<b>365</b>	<b>2</b>	<b>0.01</b>	<b>30</b>	<b>0.08</b>	<b>3,624</b>	<b>9.93</b>	<b>3,656</b>	<b>10.02</b>



► Deer crashes occur in every month of the year. In 2008, the greatest number occurred in November, followed by October, and then June.

2008 Deer Crashes by Day of Week								
Day	Fatal		Injury		Property Damage only (PDO)		Total	
	#	Percent	#	Percent	#	Percent	#	Percent
Sunday	0	0.00%	2	6.67%	484	13.36%	486	13.29%
Monday	1	50.00%	3	10.00%	513	14.16%	517	14.14%
Tuesday	0	0.00%	7	23.33%	489	13.49%	496	13.57%
Wednesday	1	50.00%	6	20.00%	505	13.93%	512	14.00%
Thursday	0	0.00%	7	23.33%	526	14.51%	533	14.58%
Friday	0	0.00%	4	13.33%	595	16.42%	599	16.38%
Saturday	0	0.00%	1	3.33%	512	14.13%	513	14.03%
<b>Total</b>	<b>2</b>	<b>100.00%</b>	<b>30</b>	<b>100.00%</b>	<b>3,624</b>	<b>100.00%</b>	<b>3,656</b>	<b>100.00%</b>



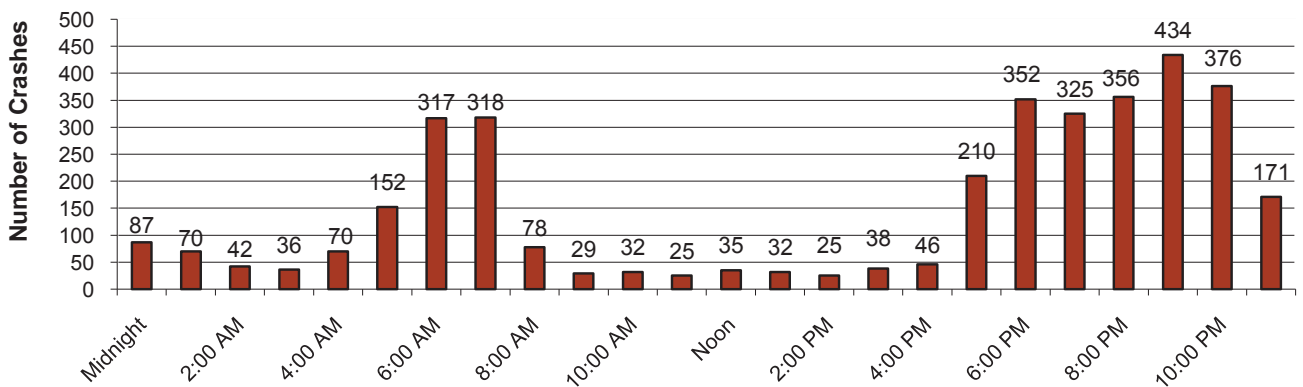
- The percentage of deer crashes occurring on Friday was slightly higher than the other days in the week. Deer crash rates by day of week were consistent in 2008.



### 2008 Deer Crashes by Time of Day

Time of Day	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	Percent	#	Percent	#	Percent	#	Percent
Midnight	0	0.00%	0	0.00%	87	2.40%	87	2.38%
1:00 AM	0	0.00%	0	0.00%	70	1.93%	70	1.91%
2:00 AM	0	0.00%	0	0.00%	42	1.16%	42	1.15%
3:00 AM	0	0.00%	0	0.00%	36	0.99%	36	0.98%
4:00 AM	1	50.00%	1	3.33%	68	1.88%	70	1.91%
5:00 AM	0	0.00%	3	10.00%	149	4.11%	152	4.16%
6:00 AM	0	0.00%	0	0.00%	317	8.75%	317	8.67%
7:00 AM	1	50.00%	4	13.33%	313	8.64%	318	8.70%
8:00 AM	0	0.00%	0	0.00%	78	2.15%	78	2.13%
9:00 AM	0	0.00%	0	0.00%	29	0.80%	29	0.79%
10:00 AM	0	0.00%	1	3.33%	31	0.86%	32	0.88%
11:00 AM	0	0.00%	1	3.33%	24	0.66%	25	0.68%
Noon	0	0.00%	1	3.33%	34	0.94%	35	0.96%
1:00 PM	0	0.00%	0	0.00%	32	0.88%	32	0.88%
2:00 PM	0	0.00%	1	3.33%	24	0.66%	25	0.68%
3:00 PM	0	0.00%	1	3.33%	37	1.02%	38	1.04%
4:00 PM	0	0.00%	1	3.33%	45	1.24%	46	1.26%
5:00 PM	0	0.00%	1	3.33%	209	5.77%	210	5.74%
6:00 PM	0	0.00%	2	6.67%	350	9.66%	352	9.63%
7:00 PM	0	0.00%	2	6.67%	323	8.91%	325	8.89%
8:00 PM	0	0.00%	3	10.00%	353	9.74%	356	9.74%
9:00 PM	0	0.00%	4	13.33%	430	11.87%	434	11.87%
10:00 PM	0	0.00%	3	10.00%	373	10.29%	376	10.28%
11:00 PM	0	0.00%	1	3.33%	170	4.69%	171	4.68%
<b>Total</b>	<b>2</b>	<b>100.00%</b>	<b>30</b>	<b>100.00%</b>	<b>3,624</b>	<b>100.00%</b>	<b>3,656</b>	<b>100.00%</b>

### 2008 Deer Crashes by Hour



- The greatest number of deer crashes occurred between 8:00 p.m. and 10:00 p.m., followed by 6:00 p.m. to 8:00 p.m., and then 6:00 a.m. to 7:00 a.m.

# SYNOPSIS

## Deer Crashes by County 2006-2008

County	2008				2007				2006			
	Fatal Crashes	Injury Crashes	PDO Crashes	Total	Fatal Crashes	Injury Crashes	PDO Crashes	Total	Fatal Crashes	Injury Crashes	PDO Crashes	Total
Adams	0	1	17	18	0	0	13	13	0	0	13	13
Barnes	0	0	74	74	0	0	122	122	0	0	108	108
Benson	0	0	137	137	0	1	132	133	0	0	119	119
Billings	0	0	22	22	0	1	27	28	0	0	13	13
Bottineau	0	0	76	76	0	0	93	93	0	0	107	107
Bowman	0	0	37	37	0	1	33	34	0	0	34	34
Burke	0	1	18	19	0	0	18	18	0	0	15	15
Burleigh	0	1	214	215	0	5	208	213	0	7	242	249
Cass	0	1	106	107	0	1	122	123	0	0	104	104
Cavalier	0	0	28	28	0	0	36	36	0	0	34	34
Dickey	0	1	71	72	0	2	75	77	0	0	84	84
Divide	0	0	13	13	0	0	18	18	0	0	14	14
Dunn	0	2	34	36	0	0	37	37	0	0	29	29
Eddy	0	0	28	28	0	0	56	56	0	1	31	32
Emmons	0	0	60	60	0	1	48	49	0	1	45	46
Foster	0	0	63	63	0	1	77	78	0	0	71	71
Golden Valley	0	0	14	14	0	0	15	15	0	1	18	19
Grand Forks	0	1	159	160	0	0	176	176	0	4	181	185
Grant	0	0	10	10	0	0	19	19	0	0	11	11
Griggs	0	0	8	8	0	1	13	14	0	0	8	8
Hettinger	0	0	31	31	0	0	38	38	1	0	30	31
Kidder	0	1	52	53	0	0	44	44	0	0	54	54
LaMoure	0	1	77	78	0	0	103	103	0	2	88	90
Logan	0	0	22	22	0	0	31	31	0	0	23	23
McHenry	0	3	123	126	0	0	135	135	0	4	145	149
McIntosh	0	1	22	23	0	0	27	27	0	0	19	19
McKenzie	0	1	67	68	0	1	69	70	0	1	63	64
McLean	0	2	164	166	0	1	123	124	0	0	156	156
Mercer	0	0	91	91	0	0	62	62	0	2	78	80
Morton	0	2	213	215	0	4	216	220	0	1	186	187
Mountrail	0	0	79	79	0	0	88	88	0	0	63	63
Nelson	0	0	72	72	0	2	98	100	0	2	115	117
Oliver	0	0	23	23	0	0	27	27	0	0	13	13
Pembina	0	0	56	56	0	0	65	65	0	1	85	86
Pierce	0	1	49	50	1	0	51	52	0	0	60	60
Ramsey	0	0	146	146	0	4	212	216	0	0	219	219
Ransom	0	0	26	26	0	0	18	18	0	0	37	37
Renville	0	0	26	26	0	0	26	26	0	0	27	27
Richland	1	1	73	75	0	1	73	74	0	2	74	76
Rolette	0	0	11	11	0	1	15	16	0	1	26	27
Sargent	0	0	20	20	0	0	27	27	0	1	15	16
Sheridan	0	1	17	18	0	0	24	24	0	0	19	19
Sioux	0	0	9	9	0	0	4	4	0	0	3	3
Slope	0	0	11	11	0	0	9	9	0	1	14	15
Stark	0	0	118	118	0	2	121	123	0	0	95	95
Steele	0	0	4	4	0	0	15	15	0	0	24	24
Stutsman	0	1	162	163	0	4	197	201	0	2	178	180
Towner	0	0	17	17	0	3	19	22	0	0	23	23
Trail	0	0	42	42	0	1	60	61	0	0	64	64
Walsh	0	1	128	129	0	1	152	153	0	0	135	135
Ward	1	4	332	337	1	1	351	353	0	2	318	320
Wells	0	2	79	81	0	0	126	126	0	0	97	97
Williams	0	0	73	73	0	3	109	112	0	0	94	94
Statewide	2	30	3,624	3,656	2	43	4,073	4,118	1	36	3,921	3,958

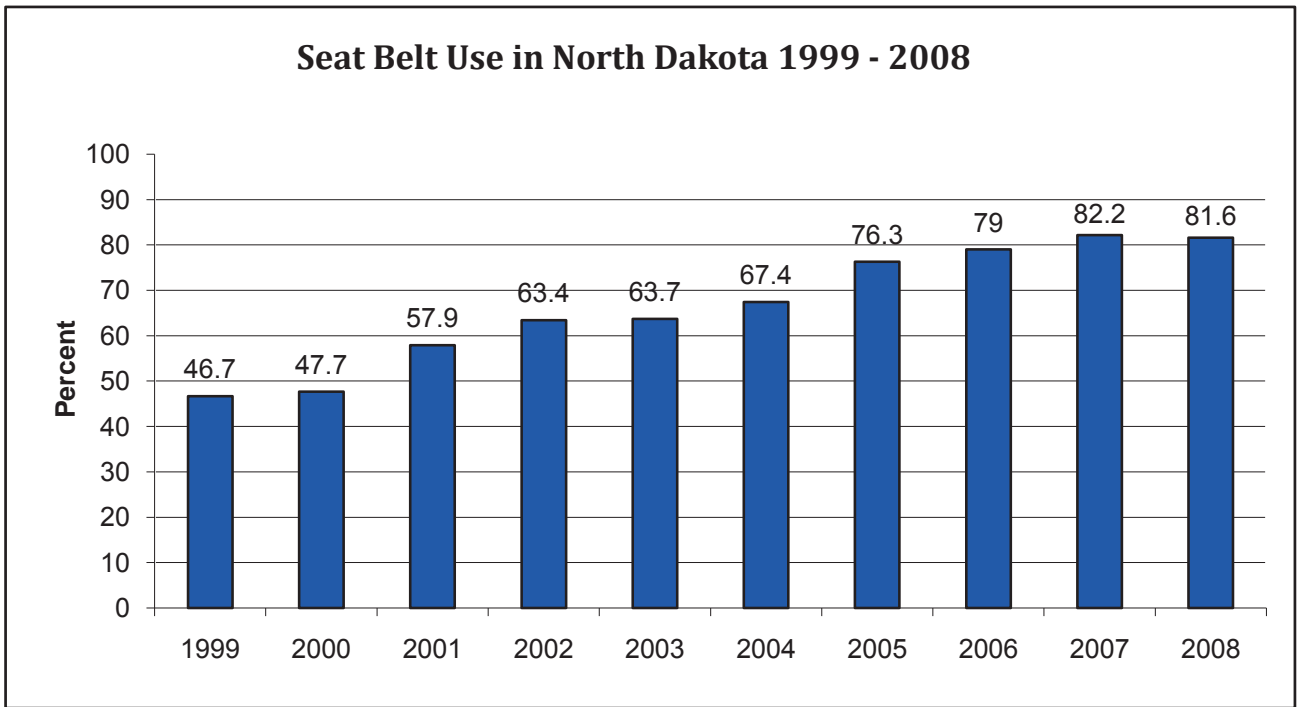
- ▶ The highest number of deer crashes occurred in Ward County in 2008, with 332.
- ▶ The lowest number of deer crashes occurred in Steele County with four.

## SECTION 2

# OCCUPANT PROTECTION



Seat Belt Use in North Dakota 1999 - 2008



► Seat belt use in North Dakota has steadily increased over the past 10 years.

# OCCUPANT PROTECTION

## 2008 Fatalities and Seat Belt Use by Vehicle Type

	1999			2000			2001		
	Non-Use	Lap & Shoulder Belt	Percent Restrained	Non-Use	Lap & Shoulder Belt	Percent Restrained	Non-Use	Lap & Shoulder Belt	Percent Restrained
Auto	36	23	39.0%	33	8	19.5%	31	18	36.7%
SUV	3	3	50.0%	4	0	0.0%	6	3	33.3%
Van	5	3	37.5%	3	1	0.3%	4	1	20.0%
Pickup	28	1	3.4%	18	1	5.3%	27	1	3.6%
All	72	30	29.4%	58	10	14.7%	68	23	25.3%

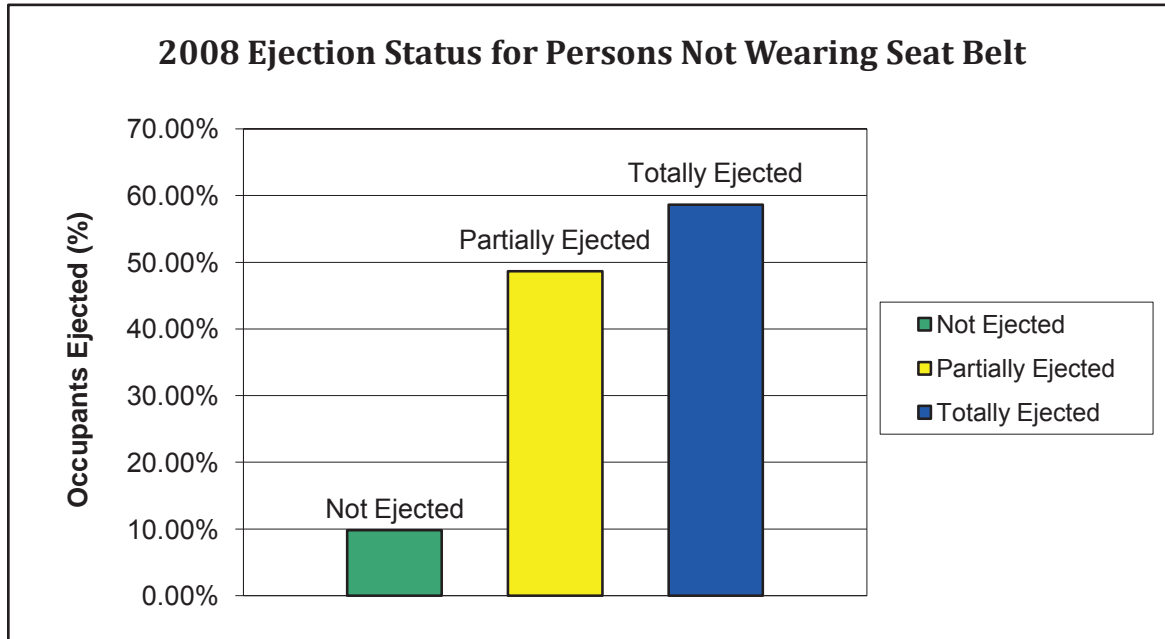
	2002			2003			2004		
	Non-Use	Lap & Shoulder Belt	Percent Restrained	Non-Use	Lap & Shoulder Belt	Percent Restrained	Non-Use	Lap & Shoulder Belt	Percent Restrained
Auto	27	13	32.5%	28	10	26.3%	20	14	41.2%
SUV	6	6	50.0%	5	2	28.6%	9	2	18.2%
Van	6	1	14.3%	3	2	40.0%	3	1	25.0%
Pickup	25	1	3.8%	26	1	3.7%	22	2	8.3%
All	64	21	24.7%	62	15	19.5%	54	19	26.0%

	2005			2006			2007		
	Non-Use	Lap & Shoulder Belt	Percent Restrained	Non-Use	Lap & Shoulder Belt	Percent Restrained	Non-Use	Lap & Shoulder Belt	Percent Restrained
Auto	24	14	36.8%	24	16	40.0%	14	15	51.7%
SUV	10	1	9.1%	12	6	33.3%	13	7	35.0%
Van	6	0	0.0%	8	2	20.0%	7	1	12.5%
Pickup	24	5	17.2%	16	3	15.8%	24	1	4.0%
All	64	20	23.8%	60	27	31.0%	58	24	29.3%

	2008			1999-2008		
	Non-Use	Lap & Shoulder Belt	Percent Restrained	Non-Use	Lap & Shoulder Belt	Percent Restrained
Auto	23	8	25.8%	260	139	34.8%
SUV	12	4	25.0%	80	34	29.8%
Van	4	0	0.0%	49	12	19.7%
Pickup	17	4	19.0%	227	20	8.1%
All	56	16	22.2%	616	205	25.0%

- ▶ This data demonstrates seat belt use in fatalities for autos, SUVs, vans, and pickups over the past 10 years. Not all vehicle types are included in this data.
- ▶ Over the past ten years, there is a higher percentage of pickup drivers not wearing their seat belts, than those in autos, SUVs, and vans.
- ▶ In 2008, only 25 percent of fatalities in autos and SUVs were restrained.

2008 Ejection Status as It Relates to Seat Belt Use				
	Number of Crashes With People Unbelted		Total Crashes	
	Count	Percentage	Count	Percentage
Total Ejection	173	17.71%	295	3.53%
Partially Ejected	18	1.84%	37	0.44%
Not Ejected	786	80.45%	8,022	96.03%
<b>Total</b>	<b>977</b>	<b>100.00%</b>	<b>8,354</b>	<b>100.00%</b>



- ▶ In 2008, there were 295 crashes with driver and/or occupant totally ejected. In 173 of these, or 58.6 percent, individuals were not belted.
- ▶ Of the 8,022 crashes where no one was ejected, driver and/or occupant were wearing seat belts 90 percent of the time.
- ▶ The graph indicates the number of crashes where individuals were not wearing a seat belt and whether they were totally, partially, or not ejected.

# OCCUPANT PROTECTION

## Restraint Device Usage In Passenger Cars and Pickups 2005 - 2008

### Seat Belt Usage

Safety Equipment	2008			2007			2006			2005		
	Fatalities	Injured	All	Fatalities	Injured	All	Fatalities	Injured	All	Fatalities	Injured	All
Not In Use/Installed	56	611	1,567	57	644	1,745	61	758	1,911	66	798	2,101
Lap Belt Only	0	32	208	1	34	258	0	46	271	0	47	302
Lap & Shoulder	15	2,543	22,564	24	2,486	22,356	29	2,368	20,266	21	2,509	21,669
Automatic Belts	0	6	62	0	5	90	0	9	54	0	14	82
Other	2	80	1,708	2	107	1,611	2	110	1,215	2	106	980
Restraint Use Unknown	4	393	3,605	7	353	3,252	1	336	3,211	5	378	3,448
<b>Total</b>	<b>77</b>	<b>3,665</b>	<b>29,714</b>	<b>91</b>	<b>3,629</b>	<b>29,312</b>	<b>93</b>	<b>3,627</b>	<b>26,928</b>	<b>94</b>	<b>3,852</b>	<b>28,582</b>

### Air Bag Deployment

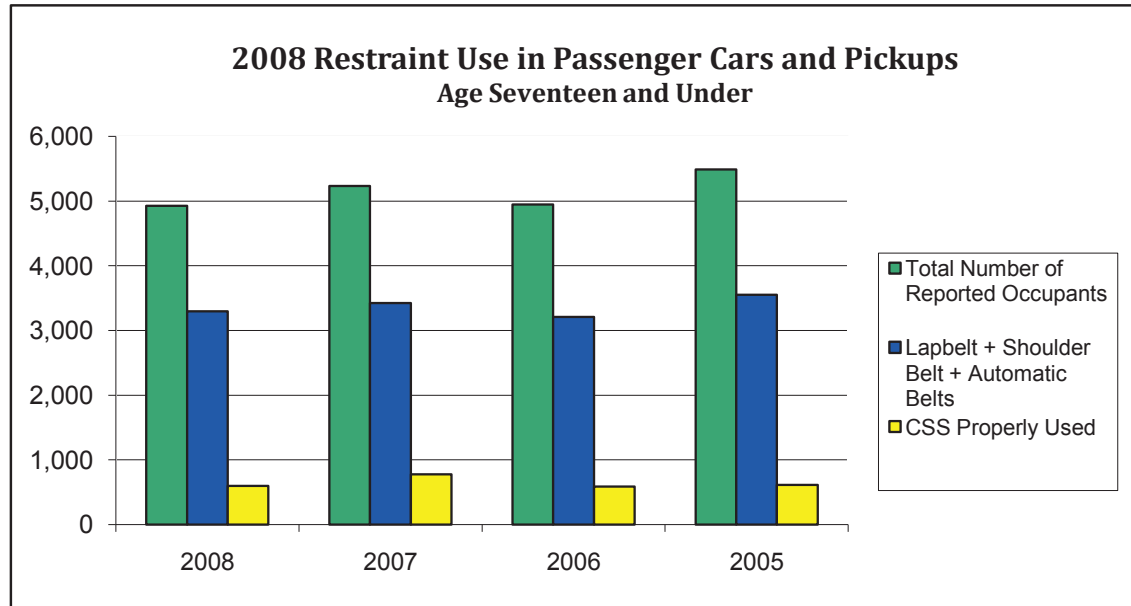
Air Bag Deployment	2008			2007			2006			2005		
	Fatalities	Injured	All	Fatalities	Injured	All	Fatalities	Injured	All	Fatalities	Injured	All
No Air Bag(s)	23	963	7,749	28	1,033	8,672	47	1,228	8,911	34	1,375	10,097
Air Bag Deployed	24	759	1,959	32	816	2,004	17	711	1,733	19	726	1,914
Air Bag Not Deployed	30	1,943	19,998	31	1,780	18,618	29	1,687	16,261	41	1,751	16,543
<b>Total</b>	<b>77</b>	<b>3,665</b>	<b>29,706</b>	<b>91</b>	<b>3,629</b>	<b>29,294</b>	<b>93</b>	<b>3,626</b>	<b>26,905</b>	<b>94</b>	<b>3,852</b>	<b>28,554</b>

- ▶ In 2008, there were no air bags or the air bags did not deploy in nearly 69 percent of the fatalities. Seat belts were not used in 72.7 percent of the fatalities.
- ▶ These numbers do not include all vehicle types. It reflects the total number of people involved in passenger cars and pickups crashes in 2008.

## 2008 Restraint Use in Passenger Cars and Pickups - 17 Years and Under

Safety Equipment	2008			2007			2006			2005		
	Fatalities	Injured	All	Fatalities	Injured	All	Fatalities	Injured	All	Fatalities	Injured	All
Not In Use/Installed	8	152	380	7	155	392	18	182	454	6	178	434
Lap Belt Only	0	13	82	0	7	110	1	28	123	0	15	124
Lap & Shoulder	1	351	3,199	4	334	3,302	4	369	3,081	1	387	3,418
Automatic Belts	0	1	13	0	1	14	0	3	7	0	2	11
CSS* Not Restrained	0	2	5	0	2	10	1	4	11	0	6	20
CSS* Used Properly	0	50	596	1	62	777	0	63	586	1	57	613
CSS* Used Improperly	1	4	19	0	5	23	0	6	18	0	7	29
Other	1	52	93	1	56	100	1	66	132	2	77	170
Restraint Use Unknown	0	56	540	0	47	504	0	52	537	5	70	671
<b>Total</b>	<b>11</b>	<b>681</b>	<b>4,927</b>	<b>13</b>	<b>669</b>	<b>5,232</b>	<b>25</b>	<b>773</b>	<b>4,949</b>	<b>15</b>	<b>799</b>	<b>5,490</b>

\* CSS is a Child Safety Seat.



- Of the 11 fatalities in people 17 and under, nine of them were not wearing seat belts or were not in a child safety seat.



# OCCUPANT PROTECTION

## 2008 Operator Seat Belt Use by Gender and Age

### Operator's Age 0-6

Operator's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	0	0.00%	0	0.00%	0	0.00%
Male	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	0	0.00%	0	0.00%	0	0.00%
TOTAL	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	0	0.00%	0	0.00%	0	0.00%
Grand Total		0	0.00%	0	0.00%	0	0.00%

### Operator's Age 7-9

Operator's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	1	100.00%	0	0.00%	1	100.00%
Male	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	1	100.00%	1	0.00%	2	100.00%
TOTAL	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	2	100.00%	1	0.00%	3	100.00%
Grand Total		2	100.00%	1	0.00%	3	100.00%

### Operator's Age 10-13

Operator's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	0	0.00%	0	0.00%	0	0.00%
Male	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	0	0.00%	0	0.00%	0	0.00%
TOTAL	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	0	0.00%	0	0.00%	0	0.00%
Grand Total		0	0.00%	0	0.00%	0	0.00%

### Operator's Age 14-17

Operator's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	165	80.10%	1	14.29%	166	77.93%
	Unbelted	41	19.90%	6	85.71%	47	22.07%
Male	Belted	97	69.29%	0	0.00%	97	68.31%
	Unbelted	43	30.71%	2	100.00%	45	31.69%
TOTAL	Belted	262	75.72%	1	11.11%	263	74.08%
	Unbelted	84	24.28%	8	88.89%	92	25.92%
Grand Total		346	100.00%	9	100.00%	355	100.00%

### Operator's Age 18+

Operator's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	1,257	88.33%	6	28.57%	1,263	87.47%
	Unbelted	166	11.67%	15	71.43%	181	12.53%
Male	Belted	1,235	73.03%	13	23.21%	1,248	71.44%
	Unbelted	456	26.97%	43	76.79%	499	28.56%
TOTAL	Belted	2,492	80.03%	19	24.68%	2,511	78.69%
	Unbelted	622	19.97%	58	75.32%	680	21.31%
Grand Total		3,114	100.00%	77	100.00%	3,191	100.00%

## 2008 Occupant Seat Belt Use by Gender and Age

Occupant's Age 0-6							
Occupant's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	60	93.75%	0	0.00%	60	93.75%
	Unbelted	4	6.25%	0	0.00%	4	6.25%
		64	100.00%	0	0.00%	64	100.00%
Male	Belted	72	97.30%	3	100.00%	75	97.40%
	Unbelted	2	2.70%	0	0.00%	2	2.60%
		74	100.00%	3	100.00%	77	100.00%
TOTAL	Belted	132	95.65%	3	100.00%	135	95.74%
	Unbelted	6	4.35%	0	0.00%	6	4.26%
Grand Total		138	100.00%	3	100.00%	141	100.00%
Occupant's Age 7-9							
Occupant's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	6	54.55%	0	0.00%	6	54.55%
	Unbelted	5	45.45%	0	0.00%	5	45.45%
		11	100.00%	0	0.00%	11	100.00%
Male	Belted	5	71.43%	0	0.00%	5	71.43%
	Unbelted	2	28.57%	0	0.00%	2	28.57%
		7	100.00%	0	0.00%	7	100.00%
TOTAL	Belted	11	61.11%	0	0.00%	11	61.11%
	Unbelted	7	38.89%	0	0.00%	7	38.89%
Grand Total		18	100.00%	0	0.00%	18	100.00%
Occupant's Age 10-13							
Occupant's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	53	84.13%	0	0.00%	53	84.13%
	Unbelted	10	15.87%	0	0.00%	10	15.87%
		63	100.00%	0	0.00%	63	100.00%
Male	Belted	43	84.31%	1	0.00%	44	84.62%
	Unbelted	8	15.69%	0	0.00%	8	15.38%
		51	100.00%	1	0.00%	52	100.00%
TOTAL	Belted	96	84.21%	1	100.00%	97	84.35%
	Unbelted	18	15.79%	0	0.00%	18	15.65%
Grand Total		114	100.00%	1	100.00%	115	100.00%
Occupant's Age 14-17							
Occupant's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	125	65.10%	0	0.00%	125	63.78%
	Unbelted	67	34.90%	4	100.00%	71	36.22%
		192	100.00%	4	100.00%	196	100.00%
Male	Belted	76	69.72%	0	0.00%	76	68.47%
	Unbelted	33	30.28%	2	100.00%	35	31.53%
		109	100.00%	2	100.00%	111	100.00%
TOTAL	Belted	201	66.78%	0	0.00%	201	65.47%
	Unbelted	100	33.22%	6	100.00%	106	34.53%
Grand Total		301	100.00%	6	100.00%	307	100.00%
Occupant's Age 18+							
Occupant's Gender	Seat Belt Status	Injuries		Fatalities		Total	
		Number	Percent	Number	Percent	Number	Percent
Female	Belted	553	78.77%	4	21.05%	557	77.25%
	Unbelted	149	21.23%	15	78.95%	164	22.75%
		702	100.00%	19	100.00%	721	100.00%
Male	Belted	294	65.04%	5	38.46%	299	64.30%
	Unbelted	158	34.96%	8	61.54%	166	35.70%
		452	100.00%	13	100.00%	465	100.00%
TOTAL	Belted	847	73.40%	9	28.13%	856	72.18%
	Unbelted	307	26.60%	23	71.88%	330	27.82%
Grand Total		1,154	100.00%	32	100.00%	1,186	100.00%

# OCCUPANT PROTECTION

## 2008 Seat Belt Use by Occupant Placement

Driver	Seat Belt Status	Injuries		Fatalities		Total Occupants	
		Number	Percent	Number	Percent	Number	Percent
Age 0-6	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	0	0.00%	0	0.00%	0	0.00%
		0	0.00%	0	0.00%	0	0.00%
Age 7-9	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	2	100.00%	1	0.00%	3	100.00%
		2	100.00%	1	0.00%	3	100.00%
Age 10-13	Belted	0	0.00%	0	0.00%	0	0.00%
	Unbelted	9	100.00%	0	0.00%	9	100.00%
		9	100.00%	0	0.00%	9	100.00%
Age 14-17	Belted	262	75.72%	1	11.11%	263	74.08%
	Unbelted	84	24.28%	8	88.89%	92	25.92%
		346	100.00%	9	100.00%	355	100.00%
Age 18+	Belted	2,492	80.05%	19	24.68%	2,511	78.71%
	Unbelted	621	19.95%	58	75.32%	679	21.29%
		3,113	100.00%	77	100.00%	3,190	100.00%
TOTAL	Belted	2,754	100.00%	20	22.99%	2,774	97.64%
	Unbelted	0	0.00%	67	77.01%	67	2.36%
Grand Total		2,754	100.00%	87	100.00%	2,841	100.00%
Front Seat Passenger	Seat Belt Status	Injuries		Fatalities		Total Occupants	
		Number	Percent	Number	Percent	Number	Percent
Age 0-6	Belted	5	71.43%	0	0.00%	5	71.43%
	Unbelted	2	28.57%	0	0.00%	2	28.57%
		7	100.00%	0	0.00%	7	100.00%
Age 7-9	Belted	13	100.00%	0	0.00%	13	100.00%
	Unbelted	0	0.00%	0	0.00%	0	0.00%
		13	100.00%	0	0.00%	13	100.00%
Age 10-13	Belted	47	82.46%	0	0.00%	47	82.46%
	Unbelted	10	17.54%	0	0.00%	10	17.54%
		57	100.00%	0	0.00%	57	100.00%
Age 14-17	Belted	146	71.92%	0	0.00%	146	69.86%
	Unbelted	57	28.08%	6	100.00%	63	30.14%
		203	100.00%	6	100.00%	209	100.00%
Age 18+	Belted	757	79.77%	7	31.82%	764	78.68%
	Unbelted	192	20.23%	15	68.18%	207	21.32%
		949	100.00%	22	100.00%	971	100.00%
TOTAL	Belted	968	78.76%	7	25.00%	975	77.57%
	Unbelted	261	21.24%	21	75.00%	282	22.43%
Grand Total		1,229	100.00%	28	100.00%	1,257	100.00%
Back Seat Passenger	Seat Belt Status	Injuries		Fatalities		Total Occupants	
		Number	Percent	Number	Percent	Number	Percent
Age 0-6	Belted	146	98.65%	3	100.00%	149	98.68%
	Unbelted	2	1.35%	0	0.00%	2	1.32%
		148	100.00%	3	100.00%	151	100.00%
Age 7-9	Belted	55	90.16%	2	0.00%	57	90.48%
	Unbelted	6	9.84%	0	0.00%	6	9.52%
		61	0.00%	2	0.00%	63	100.00%
Age 10-13	Belted	49	85.96%	1	0.00%	50	86.21%
	Unbelted	8	14.04%	0	0.00%	8	13.79%
		57	100.00%	1	0.00%	58	100.00%
Age 14-17	Belted	65	62.50%	0	#DIV/0!	65	62.50%
	Unbelted	39	37.50%	0	#DIV/0!	39	37.50%
		104	100.00%	0	#DIV/0!	104	100.00%
Age 18+	Belted	109	48.23%	2	20.00%	111	47.03%
	Unbelted	117	51.77%	8	80.00%	125	52.97%
		226	100.00%	10	100.00%	236	100.00%
TOTAL	Belted	424	71.14%	8	50.00%	432	70.59%
	Unbelted	172	28.86%	8	50.00%	180	29.41%
Grand Total		596	100.00%	16	100.00%	612	100.00%

## Operator Seat Belt Use by Gender and Age

- ▶ Of operators age 14-17 involved in crashes, 75 percent of them were wearing a seat belt. However, females have a higher percentage of seat belt use with 78 percent of them wearing seat belts, compared to 68 percent of males.
- ▶ Of operators age 18+ involved in crashes, nearly 79 percent of them were wearing a seat belt. The gender disparity continues into adulthood with 87.5 percent of females belted and 71.5 percent of males belted.
- ▶ In North Dakota, youth under the age of 18 can be pulled over and cited for not wearing their seat belt.

## Occupant Seat Belt Use by Gender and Age

- ▶ In 2008, there was a significant decrease in occupant seat belt use from youth between the ages of 0-6 and 7-9. While 96 percent of youth ages 0-6 involved in crashes were belted, only 61 percent of 7-9 year olds were belted.
- ▶ The percent of 10-13 year old occupants wearing seat belts was 84 percent, but decreases again for 14-17 year olds to 65 percent.
- ▶ For occupants ages 18 and over, 72 percent of those involved in crashes were wearing a seat belt.

## Seat Belt Use by Occupant Placement

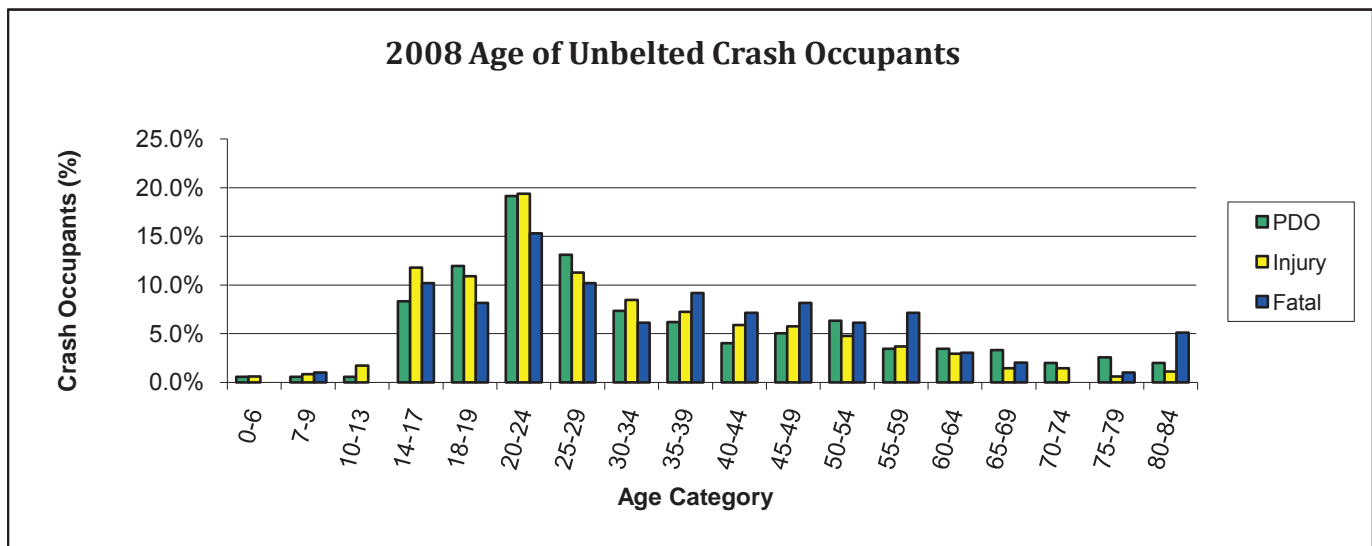
- ▶ In 2008, 77 percent of all fatalities were unbelted.
- ▶ Seventy-five percent of the fatalities of front seat passengers were not belted.
- ▶ Fifty percent of the fatalities of back seat passengers were not belted.

# OCCUPANT PROTECTION

## 2008 Age of Unbelted Crash Occupants

Age	Fatal Crashes		Injury Crashes		PDO Crashes		Total	
	#	%	#	%	#	%	#	%
0-6	0	0.0%	5	0.6%	4	0.6%	9	0.6%
7-9	1	1.0%	7	0.9%	4	0.6%	12	0.7%
10-13	0	0.0%	14	1.7%	4	0.6%	18	1.1%
14-17	10	10.2%	96	11.8%	58	8.3%	164	10.2%
18-19	8	8.2%	89	10.9%	83	11.9%	180	11.2%
20-24	15	15.3%	158	19.4%	133	19.1%	306	19.0%
25-29	10	10.2%	92	11.3%	91	13.1%	193	12.0%
30-34	6	6.1%	69	8.5%	51	7.3%	126	7.8%
35-39	9	9.2%	59	7.2%	43	6.2%	111	6.9%
40-44	7	7.1%	48	5.9%	28	4.0%	83	5.2%
45-49	8	8.2%	47	5.8%	35	5.0%	90	5.6%
50-54	6	6.1%	39	4.8%	44	6.3%	89	5.5%
55-59	7	7.1%	30	3.7%	24	3.5%	61	3.8%
60-64	3	3.1%	24	2.9%	24	3.5%	51	3.2%
65-69	2	2.0%	12	1.5%	23	3.3%	37	2.3%
70-74	0	0.0%	12	1.5%	14	2.0%	26	1.6%
75-79	1	1.0%	5	0.6%	18	2.6%	24	1.5%
80-84	5	5.1%	9	1.1%	14	2.0%	28	1.7%
Total	98	100.0%	815	100.0%	695	100.0%	1,608	100.0%

### 2008 Age of Unbelted Crash Occupants



- ▶ The greatest percentage of unbelted crash victims were 20-24 years old. This group comprised 15.3 percent of the total unbelted fatalities.
- ▶ There were 1,608 unbelted crash occupants in 2008. This is decreased from 1,758 unbelted crash occupants in 2007.

## SECTION 3

# ALCOHOL-RELATED CRASHES

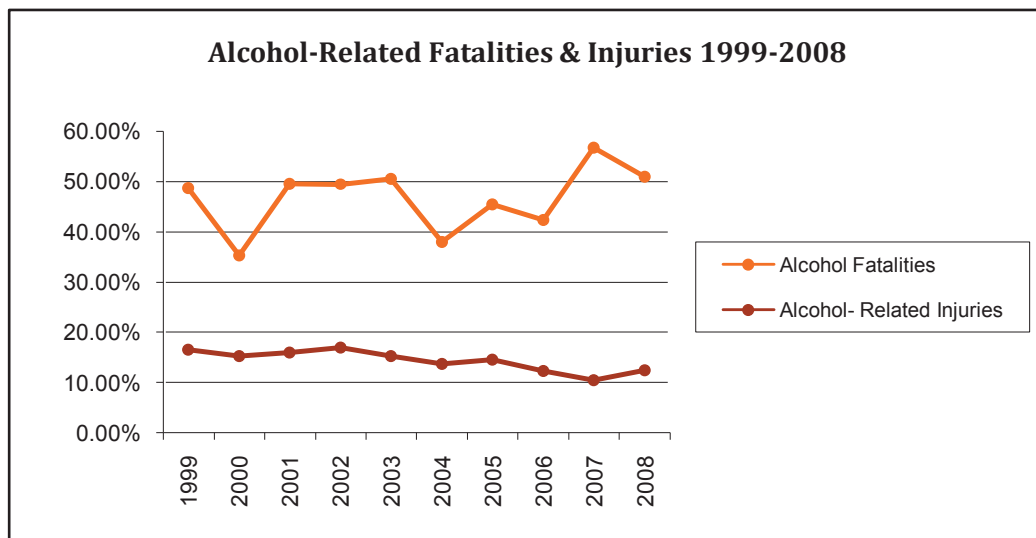
ALCOHOL-RELATED



# ALCOHOL-RELATED CRASHES

## Alcohol-Related Fatal Crashes 1999 - 2008

Year	Fatalities			Fatal Crashes		
	Alcohol-Related Fatalities	All Fatalities	% Alcohol-Related Fatalities	Alcohol-Related Fatal Crashes	All Fatal Crashes	% Alcohol-Related Crashes
1999	58	119	48.74%	45	92	48.91%
2000	42	119	35.29%	40	80	50.00%
2001	52	105	49.52%	48	96	50.00%
2002	48	97	49.48%	41	84	48.81%
2003	53	105	50.48%	48	95	50.53%
2004	38	100	38.00%	38	95	40.00%
2005	56	123	45.53%	49	105	46.67%
2006	47	111	42.34%	46	101	45.54%
2007	63	111	56.76%	53	95	55.79%
2008	53	104	50.96%	48	97	49.48%
Total	510	1,094	46.62%	456	940	48.51%

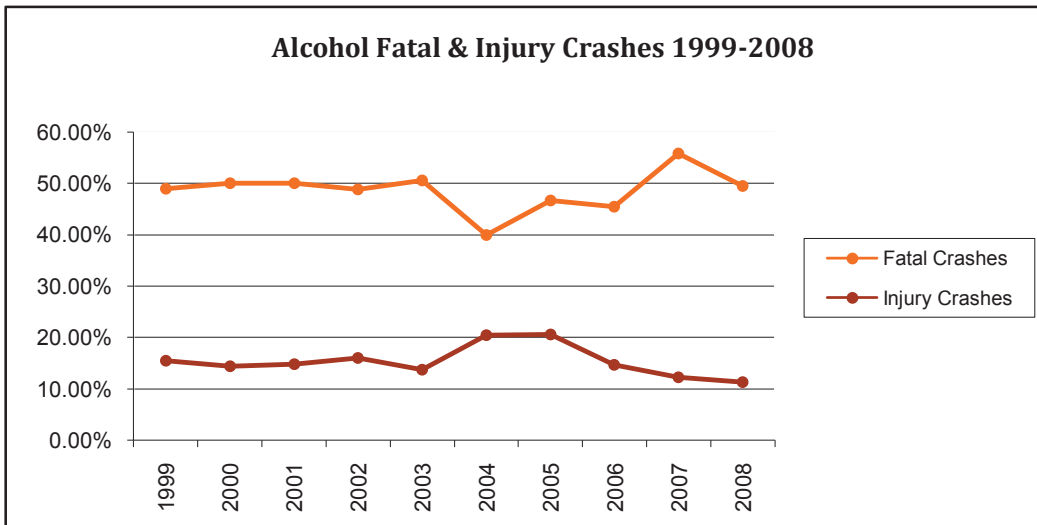


- ▶ Over the past 10 years, the percentage of alcohol-related fatal crashes fluctuated from a high of 55.79 percent in 2007 to a low of 40 percent in 2004.
- ▶ While the percentage of alcohol-related fatalities decreased by 10.2 percent from 2008 to 2007, it remains higher than the years between 1999 and 2006.

# ALCOHOL-RELATED CRASHES

## Alcohol-Related Injury Crashes 1999 - 2008

Year	Injuries			Injury Crashes		
	Alcohol-Related Injuries	All Injuries	% Alcohol Related Injuries	Alcohol-Related Injury Crashes	Total Injury Crashes	% Alcohol-Related Injury Crashes
1999	823	4,962	16.59%	515	3,312	15.55%
2000	704	4,619	15.24%	455	3,153	14.43%
2001	737	4,608	15.99%	466	3,129	14.89%
2002	830	4,886	16.99%	524	3,252	16.11%
2003	738	4,817	15.32%	446	3,244	13.75%
2004	637	4,611	13.81%	554	2,701	20.51%
2005	637	4,360	14.61%	568	2,752	20.64%
2006	513	4,141	12.39%	397	2,701	14.70%
2007	435	4,131	10.53%	370	3,001	12.33%
2008	531	4,247	12.50%	347	3,062	11.33%
Total	6,585	45,382	14.51%	4,642	24,244	19.15%



- ▶ The percent of alcohol-related injuries increased by 18.7 percent from 2007.
- ▶ However, over the past 10 years, the trend is for a decreasing percentage of alcohol-related injury crashes.



# ALCOHOL-RELATED CRASHES

## Alcohol Concentration (AC) Level of Fatalities 1999 - 2008

Year	AC .00 or Not Reported	AC .01-.07	AC .08-.09	AC .10+	Total Fatalities	% of Fatalities with a Positive AC	% of Fatalities with a AC of .08 or Greater
1999	63	6	5	45	119	47.1%	42.0%
2000	45	3	2	36	86	47.7%	44.2%
2001	56	9	2	38	105	46.7%	38.1%
2002	55	7	0	35	97	43.3%	36.1%
2003	56	6	2	41	105	46.7%	41.0%
2004	56	4	2	38	100	44.0%	40.0%
2005	72	8	2	41	123	41.5%	35.0%
2006	71	5	1	34	111	36.0%	31.5%
2007	58	5	2	46	111	47.5%	43.2%
2008	61	5	1	37	104	41.3%	36.5%
Total	593	58	19	391	1,061	44.2%	38.8%

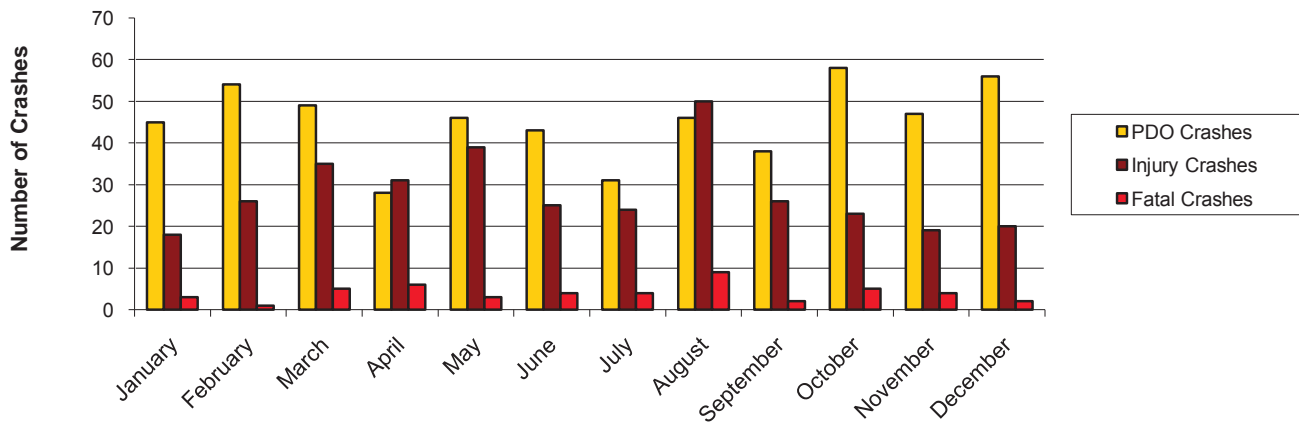
- ▶ When Alcohol Content (AC) is measured, the vast majority test with an AC of .10 or greater.
- ▶ Over the past 10 years, an average of 44 percent of fatalities had a positive AC.

# ALCOHOL-RELATED CRASHES

## 2008 Alcohol-Related Crashes by Month of Year

Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		# Alcohol-Related Fatal Crashes	Rate per day	# Alcohol-Related Injury Crashes	Rate per day	# Alcohol-Related PDO Crashes	Rate per day	# All Alcohol-Related Crashes	Rate per day
January	31	3	0.10	18	0.58	45	1.45	66	2.13
February	28	1	0.04	26	0.93	54	1.93	81	2.89
March	31	5	0.16	35	1.13	49	1.58	89	2.87
April	30	6	0.20	31	1.03	28	0.93	65	2.17
May	31	3	0.10	39	1.26	46	1.48	88	2.84
June	30	4	0.13	25	0.83	43	1.43	72	2.40
July	31	4	0.13	24	0.77	31	1.00	59	1.90
August	31	9	0.29	50	1.61	46	1.48	105	3.39
September	30	2	0.07	26	0.87	38	1.27	66	2.20
October	31	5	0.16	23	0.74	58	1.87	86	2.77
November	30	4	0.13	19	0.63	47	1.57	70	2.33
December	31	2	0.06	20	0.65	56	1.81	78	2.52
<b>Total</b>	<b>365</b>	<b>48</b>	<b>0.13</b>	<b>336</b>	<b>0.92</b>	<b>541</b>	<b>1.48</b>	<b>925</b>	<b>2.53</b>

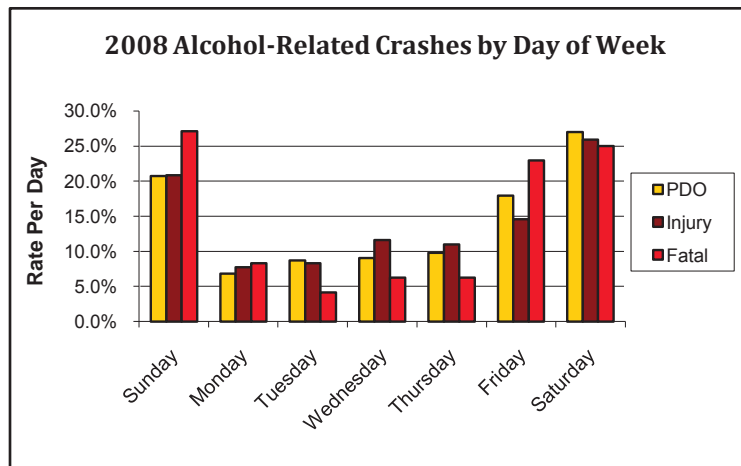
### 2008 Alcohol-Related Crashes by Month



► In 2008, the highest number of alcohol-related crashes occurred in August with 3.39 alcohol-related crashes per day, while the lowest rate per day was July (1.90).

## 2008 Alcohol-Related Crashes by Day of Week

Day of Week	Fatal		Injury		Property Damage Only (PDO)		Total	
	# Alcohol-Related Fatal Crashes	Percent	# Alcohol-Related Injury Crashes	Percent	# Alcohol-Related PDO Crashes	Percent	# All Alcohol-Related Crashes	Percent
Sunday	13	27.1%	70	20.8%	112	20.7%	195	21.1%
Monday	4	8.3%	26	7.7%	37	6.8%	67	7.2%
Tuesday	2	4.2%	28	8.3%	47	8.7%	77	8.3%
Wednesday	3	6.3%	39	11.6%	49	9.1%	91	9.8%
Thursday	3	6.3%	37	11.0%	53	9.8%	93	10.1%
Friday	11	22.9%	49	14.6%	97	17.9%	157	17.0%
Saturday	12	25.0%	87	25.9%	146	27.0%	245	26.49%
Total	48	100.0%	336	100.0%	541	100.0%	925	100.0%



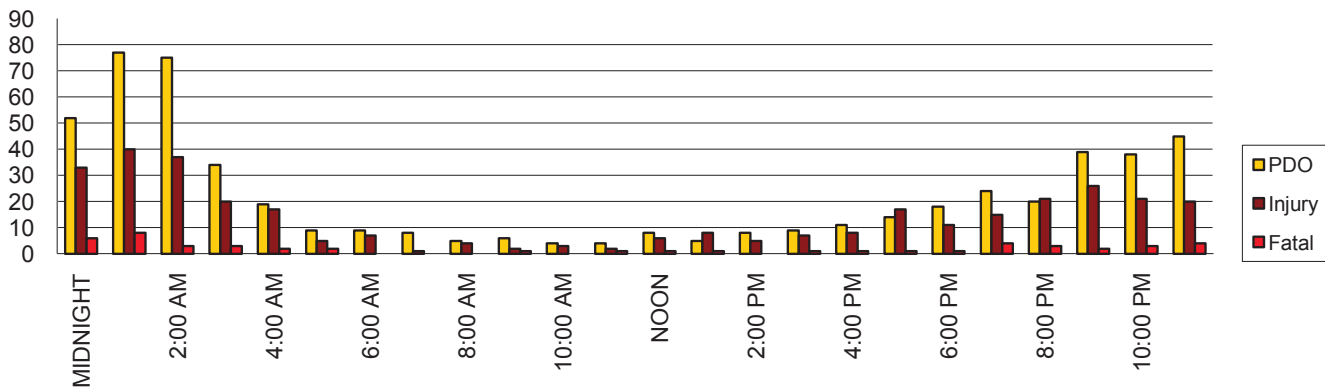
- ▶ The greatest percentage of alcohol-related crashes occurred on Saturday in 2008. This is consistent with 2007.
- ▶ The greatest percentage of alcohol-related fatal crashes occurred on Sunday, followed closely by Saturday and then Friday.
- ▶ Overall, 75 percent of fatal alcohol-related crashes occurred on the weekends (Friday, Saturday, and Sunday).

# ALCOHOL-RELATED CRASHES

## 2008 Alcohol-Related Crashes by Time of Day

Time of Day	Fatal		Injury		Property Damage Only (PDO)		Total	
	# Alcohol-Related Fatal Crashes	Percent	# Alcohol-Related Injury Crashes	Percent	# Alcohol-Related PDO Crashes	Percent	# All Alcohol-Related Crashes	Percent
MIDNIGHT	6	12.50%	33	9.82%	52	9.61%	91	9.84%
1:00 AM	8	16.67%	40	11.90%	77	14.23%	125	13.51%
2:00 AM	3	6.25%	37	11.01%	75	13.86%	115	12.43%
3:00 AM	3	6.25%	20	5.95%	34	6.28%	57	6.16%
4:00 AM	2	4.17%	17	5.06%	19	3.51%	38	4.11%
5:00 AM	2	4.17%	5	1.49%	9	1.66%	16	1.73%
6:00 AM	0	0.00%	7	2.08%	9	1.66%	16	1.73%
7:00 AM	0	0.00%	1	0.30%	8	1.48%	9	0.97%
8:00 AM	0	0.00%	4	1.19%	5	0.92%	9	0.97%
9:00 AM	1	2.08%	2	0.60%	6	1.11%	9	0.97%
10:00 AM	0	0.00%	3	0.89%	4	0.74%	7	0.76%
11:00 AM	1	2.08%	2	0.60%	4	0.74%	7	0.76%
NOON	1	2.08%	6	1.79%	8	1.48%	15	1.62%
1:00 PM	1	2.08%	8	2.38%	5	0.92%	14	1.51%
2:00 PM	0	0.00%	5	1.49%	8	1.48%	13	1.41%
3:00 PM	1	2.08%	7	2.08%	9	1.66%	17	1.84%
4:00 PM	1	2.08%	8	2.38%	11	2.03%	20	2.16%
5:00 PM	1	2.08%	17	5.06%	14	2.59%	32	3.46%
6:00 PM	1	2.08%	11	3.27%	18	3.33%	30	3.24%
7:00 PM	4	8.33%	15	4.46%	24	4.44%	43	4.65%
8:00 PM	3	6.25%	21	6.25%	20	3.70%	44	4.76%
9:00 PM	2	4.17%	26	7.74%	39	7.21%	67	7.24%
10:00 PM	3	6.25%	21	6.25%	38	7.02%	62	6.70%
11:00 PM	4	8.33%	20	5.95%	45	8.32%	69	7.46%
Total	48	100.00%	336	100.00%	541	100.00%	925	100.00%

## 2008 Alcohol-Related Crashes by Time of Day



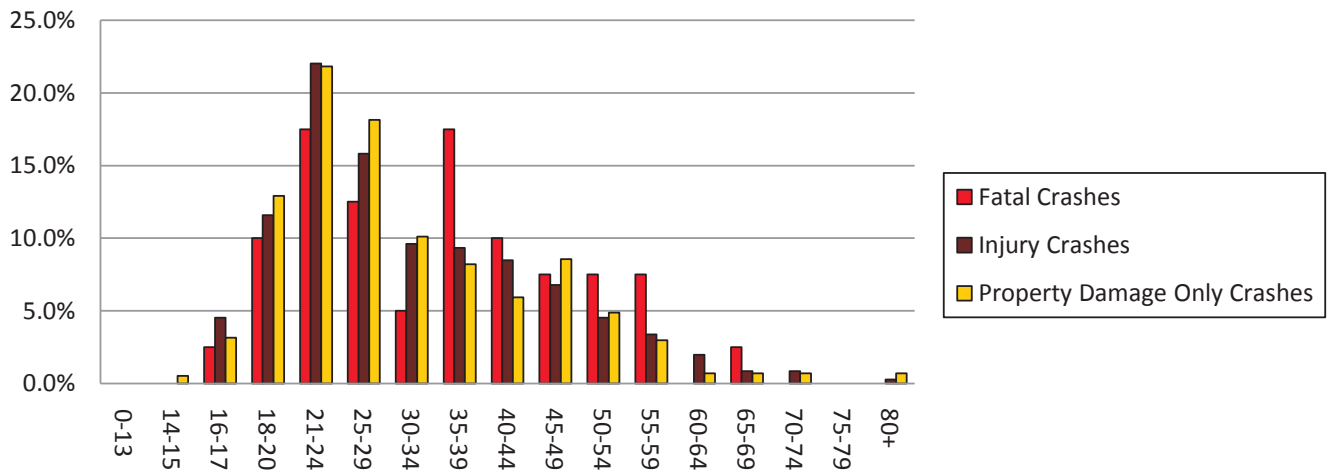
- ▶ Just over one-third of all alcohol-related crashes, 43.24 percent, occur between 11:00 p.m. and 2:00 a.m.
- ▶ 38.68 percent of alcohol-related injury crashes occurred between the hours of 11:00 p.m. and 2:00 a.m.

# ALCOHOL-RELATED CRASHES

## 2008 Age of Impaired Drivers Involved in Alcohol-Related Crashes

Age	Fatal Crashes	Percent	Injury Crashes	Percent	PDO Crashes	Percent	Total Crashes	Percent
0-13	0	0.0%	0	0.0%	0	0.0%	0	0.0%
14-15	0	0.0%	0	0.0%	3	0.5%	3	0.3%
16-17	1	2.5%	16	4.5%	18	3.1%	35	3.6%
18-20	4	10.0%	41	11.6%	74	12.9%	119	12.3%
21-24	7	17.5%	78	22.0%	125	21.8%	210	21.7%
25-29	5	12.5%	56	15.8%	104	18.2%	165	17.1%
30-34	2	5.0%	34	9.6%	58	10.1%	94	9.7%
35-39	7	17.5%	33	9.3%	47	8.2%	87	9.0%
40-44	4	10.0%	30	8.5%	34	5.9%	68	7.0%
45-49	3	7.5%	24	6.8%	49	8.6%	76	7.9%
50-54	3	7.5%	16	4.5%	28	4.9%	47	4.9%
55-59	3	7.5%	12	3.4%	17	3.0%	32	3.3%
60-64	0	0.0%	7	2.0%	4	0.7%	11	1.1%
65-69	1	2.5%	3	0.8%	4	0.7%	8	0.8%
70-74	0	0.0%	3	0.8%	4	0.7%	7	0.7%
75-79	0	0.0%	0	0.0%	0	0.0%	0	0.0%
80+	0	0.0%	1	0.3%	4	0.7%	5	0.5%
<b>Total</b>	<b>40</b>	<b>100.0%</b>	<b>354</b>	<b>100.0%</b>	<b>573</b>	<b>100.0%</b>	<b>967</b>	<b>100.0%</b>

## 2008 Age of Impaired Drivers Involved in Alcohol-Related Crashes



- ▶ Adults between the ages of 21-29 contribute to 38.8 percent of crashes involving alcohol.
- ▶ Adults 35-44 years of age showed a significant increase in alcohol-related fatal crashes in 2008. In 2008, this number increased to 27.5 percent from 17.3 percent the previous year, a 59 percent increase.

# ALCOHOL-RELATED CRASHES

## 2008 Alcohol-Related Crashes by County

County	Fatal	Fatality Rate per Million VMT	Fatality Rate per 1000 Population	Injury	Injury Rate per Million VMT	Injury Rate per 1000 Population	Property Damage Only (PDO)	PDO Rate per Million VMT	PDO Rate per 1,000 Population	Total	2007 Population	VMT By County
Adams	1	0.03	0.44	1	0.03	0.44	1	0.03	0.44	3	2,279	31,564,248
Barnes	0	0.00	0.00	1	0.00	0.09	6	0.03	0.56	7	10,783	222,635,844
Benson	2	0.02	0.29	3	0.03	0.43	0	0.00	0.00	5	6,971	88,573,843
Billings	0	0.00	0.00	0	0.00	0.00	3	0.05	3.76	3	798	54,985,999
Bottineau	1	0.01	0.16	4	0.04	0.62	11	0.12	1.72	16	6,409	93,986,353
Bowman	1	0.00	0.34	2	0.00	0.68	4	0.01	1.36	7	2,944	443,726,393
Burke	0	0.00	0.00	2	0.04	1.07	1	0.02	0.54	3	1,862	47,449,027
Burleigh	4	0.10	0.05	49	0.09	0.63	62	0.11	0.80	115	77,316	552,987,117
Cass	1	0.00	0.01	50	0.04	0.36	116	0.09	0.84	167	137,582	1,319,390,420
Cavalier	0	0.00	0.00	1	0.02	0.26	3	0.05	0.77	4	3,911	58,426,015
Dickey	0	0.00	0.00	4	0.07	0.75	3	0.05	0.56	7	5,356	58,938,417
Divide	0	0.00	0.00	0	0.00	0.00	0	0.00	0.00	0	2,004	38,129,003
Dunn	2	0.04	0.60	4	0.08	1.21	5	0.09	1.51	11	3,308	53,077,886
Eddy	0	0.00	0.00	0	0.00	0.00	1	0.03	0.41	1	2,430	28,790,574
Emmons	1	0.02	0.29	3	0.06	0.86	4	0.08	1.15	8	3,470	52,699,033
Foster	1	0.02	0.29	0	0.00	0.00	1	0.02	0.29	2	3,490	45,828,099
Golden Valley	0	0.00	0.00	1	0.03	0.60	1	0.03	0.60	2	1,670	39,651,054
Grand Forks	2	0.00	0.03	25	0.04	0.37	64	0.10	0.96	91	66,983	610,154,167
Grant	0	0.00	0.00	0	0.00	0.00	1	0.03	0.41	1	2,467	31,847,511
Griggs	0	0.00	0.00	0	0.07	0.00	0	0.00	0.00	0	2,397	29,951,563
Hettinger	0	0.00	0.00	2	0.05	0.82	0	0.00	0.00	2	2,427	37,441,148
Kidder	0	0.00	0.00	1	0.01	0.43	0	0.00	0.00	1	2,349	110,578,833
LaMoure	0	0.00	0.00	2	0.04	0.49	2	0.04	0.49	4	4,110	55,252,353
Logan	0	0.00	0.00	1	0.04	0.51	1	0.04	0.51	2	1,956	22,763,931
McHenry	1	0.01	0.19	6	0.05	1.15	2	0.02	0.38	9	5,224	112,949,464
McIntosh	0	0.00	0.00	2	0.06	0.73	0	0.00	0.00	2	2,752	34,289,583
McKenzie	4	0.03	0.71	3	0.02	0.53	3	0.02	0.53	10	5,617	127,079,010
McLean	1	0.00	0.04	3	0.02	0.36	5	0.03	0.60	9	8,349	169,660,563
Mercer	2	0.03	0.25	4	0.05	0.50	4	0.05	0.50	10	7,972	74,257,558
Morton	1	0.00	0.04	13	0.04	0.50	31	0.09	1.20	45	25,926	347,428,672
Mountrail	2	0.01	0.31	9	0.06	1.39	10	0.07	1.54	21	6,481	142,045,181
Nelson	0	0.00	0.00	1	0.01	0.31	1	0.01	0.31	2	3,217	72,113,444
Oliver	1	0.03	0.58	1	0.03	0.58	2	0.07	1.16	4	1,725	30,693,450
Pembina	1	0.01	0.13	5	0.04	0.66	2	0.02	0.27	8	7,531	127,647,193
Pierce	0	0.00	0.00	7	0.13	1.71	3	0.06	0.73	10	4,103	52,655,746
Ramsey	1	0.06	0.09	5	0.04	0.45	16	0.12	1.43	22	11,189	132,441,276
Ransom	0	0.00	0.00	5	0.09	0.88	2	0.04	0.35	7	5,682	52,745,215
Renville	1	0.03	0.43	1	0.03	0.43	1	0.03	0.43	3	2,314	37,631,504
Richland	2	0.01	0.12	13	0.05	0.79	14	0.05	0.85	29	16,497	271,317,632
Rolette	3	0.03	0.22	10	0.11	0.73	4	0.04	0.29	17	13,665	92,970,624
Sargent	1	0.02	0.24	3	0.08	0.73	4	0.07	0.97	8	4,110	59,573,515
Sheridan	0	0.00	0.00	1	0.04	0.76	0	0.00	0.00	1	1,320	27,081,366
Sioux	2	0.05	0.47	1	0.03	0.24	2	0.05	0.47	5	4,223	36,464,337
Slope	0	0.00	0.00	0	0.00	0.00	1	0.04	1.52	1	659	26,540,579
Stark	1	0.00	0.04	10	0.03	0.45	15	0.06	0.67	26	22,458	252,119,337
Steele	0	0.00	0.00	1	0.03	0.54	1	0.03	0.54	2	1,840	35,039,257
Stutsman	1	0.00	0.05	11	0.04	0.54	18	0.06	0.88	30	20,480	298,572,525
Towner	0	0.00	0.00	1	0.03	0.44	2	0.06	0.87	3	2,292	36,030,706
Traill	0	0.00	0.00	9	0.04	1.12	6	0.03	0.74	15	8,069	204,411,255
Walsh	3	0.02	0.27	13	0.08	1.18	10	0.06	0.91	26	11,011	171,916,975
Ward	3	0.01	0.05	16	0.03	0.29	59	0.11	1.05	78	55,927	524,951,132
Wells	0	0.00	0.00	1	0.05	0.23	3	0.04	0.70	4	4,269	75,270,906
Williams	1	0.00	0.05	25	0.10	1.28	30	0.12	1.54	56	19,540	252,423,986
<b>Total</b>	<b>48</b>	<b>0.01</b>	<b>0.08</b>	<b>336</b>	<b>0.04</b>	<b>0.53</b>	<b>541</b>	<b>0.07</b>	<b>0.85</b>	<b>925</b>	<b>639,714</b>	<b>7,654,195,000</b>

- ▶ The highest alcohol-related fatality rate per 1,000 population was in McKenzie County (.71).
- ▶ The highest alcohol-related fatality rate per million vehicle miles traveled (VMT) occurred in Burleigh County (.10).

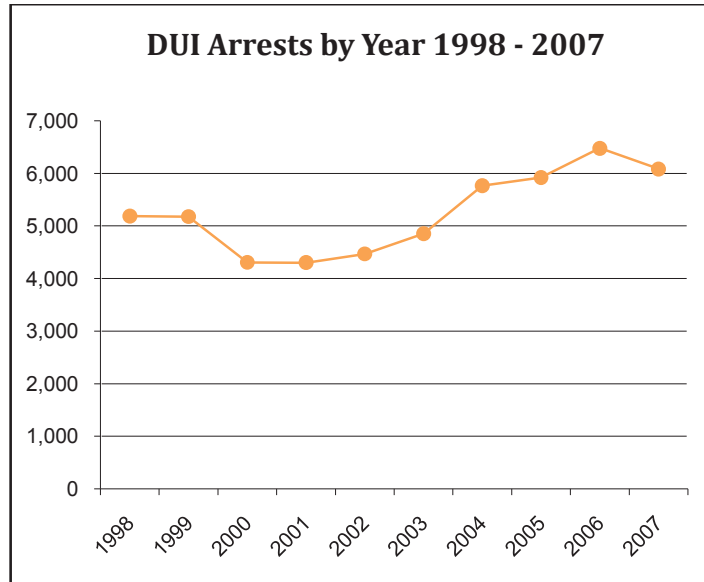
2008 Alcohol-Related Crashes by Type of Vehicle				
Type of Vehicle	Fatal	Injury	Property Damage Only (PDO)	Total
Passenger Car	13	180	314	507
Pickup-Van-Utility	24	135	252	411
Truck Tractor	0	0	0	0
Trucks*	0	1	1	2
Motorcycle	8	15	4	27
Pedalcycle	0	7	0	7
Bus	0	0	0	0
Farm Equipment	0	0	0	0
All Terrain Vehicle	1	9	1	11
Construction Equipment	0	0	1	1
Emergency Vehicle	0	0	0	0
Roadway Maintenance Vehicle	0	0	0	0
School Bus	0	0	0	0
Snowmobile	0	3	0	3
Motorhome/RV	0	1	0	1
Moped	0	1	0	1
Modified Vehicle	0	0	0	0
Hit & Run	0	0	1	1
Other	0	0	0	0
<b>Total</b>	<b>46</b>	<b>352</b>	<b>574</b>	<b>972</b>

- The majority of alcohol-related fatalities occur in a pick up, van, or utility vehicle. This is consistent with 2007 data.

# ALCOHOL-RELATED CRASHES

## DUI Arrests 1998 - 2007

Year	Arrests	Percent Change From Previous Year
1998	5,187	8.6
1999	5,179	-0.2
2000	4,304	-16.9
2001	4,301	-0.1
2002	4,467	3.9
2003	4,854	8.7
2004	5,766	18.8
2005	5,923	2.7
2006	6,480	9.4
2007	6,085	-6.2
Average	5,255	3

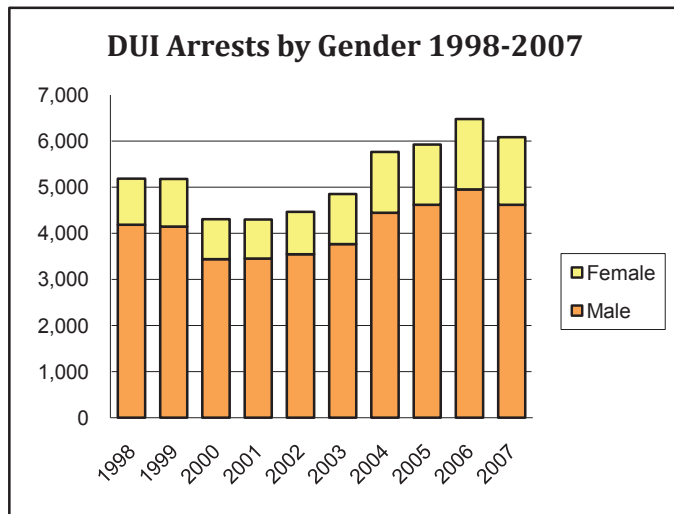


Source: North Dakota Office of the Attorney General

- ▶ DUI arrests decreased by 6.2 percent in 2007 after hitting a ten-year record in 2006 of 6,480 arrests.
- ▶ The average number of arrests per year is 5,255.

## DUI Arrests by Gender 1998 - 2007

Year	Male	% of Total	Female	% of Total	Total
1998	4,185	80.7%	1,002	19.3%	5,187
1999	4,149	80.1%	1,030	19.9%	5,179
2000	3,437	79.9%	867	20.1%	4,304
2001	3,450	80.2%	851	19.8%	4,301
2002	3,545	79.4%	922	20.6%	4,467
2003	3,763	77.5%	1,091	22.5%	4,854
2004	4,447	77.1%	1,319	22.9%	5,766
2005	4,619	78.0%	1,304	22.0%	5,923
2006	4,950	76.4%	1,530	23.6%	6,480
2007	4,620	75.9%	1,465	24.1%	6,085
Average	4,117	78.5%	1,138	21.49%	5,255



Source: North Dakota Office of the Attorney General

- ▶ During the ten-year period, males averaged 78.5 percent of DUI arrests.
- ▶ Females averaged 21.5 percent of the DUI arrests.
- ▶ These percentages have remained quite consistent during the ten-year period.



# ALCOHOL-RELATED CRASHES

## DUI Arrests by Age Category 1998 - 2007

Year	Juvenile	Percent of Total	Adult	Percent of Total	Age Not Reported	Percent of Total	Total
1998	114	2.2	5,051	97.4	22	0.4	5,187
1999	169	3.3	5,005	96.6	5	0.1	5,179
2000	81	1.9	4,214	97.9	9	0.2	4,304
2001	90	2.1	4,207	97.8	4	0.1	4,301
2002	74	1.6	4,390	98.3	3	0.1	4,467
2003	90	1.9	4,759	98.0	5	0.1	4,854
2004	92	1.6	5,668	98.3	6	0.1	5,766
2005	90	1.5	5,826	98.4	7	0.1	5,923
2006	99	1.5	6,377	98.4	4	0.1	6,480
2007	66	1.1	6,018	98.9	1	*	6,085

\* Less than 0.1 percent of total DUI arrests.

Source: North Dakota Office of the Attorney General

- There was a significant decrease in juvenile DUI arrests in 2007. Juvenile arrests from 2003-2006 were between 90 and 99 each year. There were 66 arrests in 2007.

## DUI Arrests by Age Group 1998 - 2007

Age Group	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Under 10										
10-12		2								
13-14	2	4	1	1	3	2	3	1	1	1
15	10	14	3	6	6	10	8	5	10	2
16	42	32	30	35	17	25	33	31	28	17
17	60	117	47	48	48	53	48	55	61	46
18	158	141	125	112	114	161	142	121	161	127
19	174	228	146	135	155	195	212	206	187	166
20	181	228	155	145	182	219	205	219	196	166
21	272	274	251	269	276	354	362	344	431	381
22	203	269	240	232	260	300	417	372	373	381
23	234	220	205	197	238	267	305	345	357	339
24	194	203	170	209	188	260	293	278	336	336
25-29	777	770	640	641	660	775	867	1,051	1,060	1,117
30-34	713	641	520	526	507	526	621	596	735	719
35-39	752	754	529	519	511	436	590	590	624	570
40-44	566	493	473	499	520	480	576	603	621	527
45-49	396	351	349	337	339	354	468	481	560	517
50-54	188	207	185	187	232	214	288	309	346	301
55-59	107	101	116	78	97	120	178	171	199	198
60-64	58	50	42	43	51	46	93	86	98	91
65+	78	75	68	78	60	52	68	75	100	82
No Age Data	22	5	9	4	3	5	6	7	4	1
Total	5,187	5,179	4,304	4,301	4,467	4,854	5,783	5,946	6,488	6,085

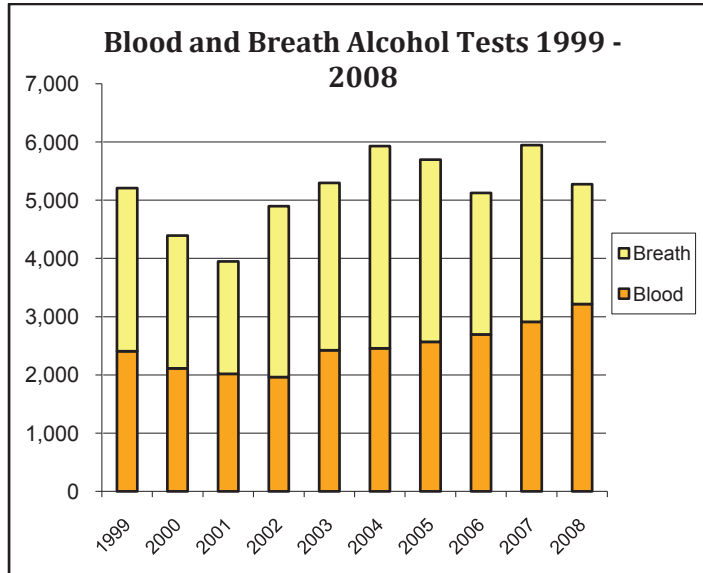
Source: North Dakota Office of the Attorney General

- There were 6,085 DUI arrests in 2007, a decrease of 403 arrests from 2006.

# ALCOHOL-RELATED CRASHES

## Blood and Breath Alcohol Tests 1999 - 2008

Year	Blood	Breath	Total
1999	2,407	2,804	5,211
2000	2,114	2,283	4,397
2001	2,019	1,932	3,951
2002	1,962	2,939	4,901
2003	2,424	2,875	5,299
2004	2,458	3,475	5,933
2005	2,567	3,130	5,697
2006	2,696	2,430	5,126
2007	2,915	3,032	5,947
2008	3,219	2,061	5,280
Average	2,478	2,696	5,174



Source: North Dakota Office of the Attorney General

- ▶ In 2008, there was an increase in blood tests and a decrease in breath tests administered to test for alcohol content.
- ▶ In 2008, there were 3,219 blood tests and 2,061 breath tests given.

## 2008 Blood and Breath Tests by AC Level

Alcohol Concentration (AC)	Blood		Breath	
	Tests	Percent	Tests	Percent
0.00 - 0.04	33	1.1%	141	6.8%
0.05 - 0.07	97	3.1%	55	2.7%
0.08 - 0.09	224	7.2%	144	7.0%
0.10 - 0.14	791	25.5%	623	30.2%
0.15 - 0.17	576	18.5%	460	22.3%
0.18 - 0.19	361	11.6%	233	11.3%
0.20 - 0.24	667	21.5%	318	15.4%
0.25 - 0.29	250	8.0%	67	3.3%
0.30 - 0.34	82	2.6%	16	0.8%
0.35 - 0.39	20	0.6%	4	0.2%
0.40 +	6	0.2%	0	0.0%
Total	3,107		2,061	
Average AC	0.163		0.133	

Source: North Dakota Office of the Attorney General

- ▶ The average AC is derived from original data providing AC of each test given.
- ▶ The total blood tests do not include those tests which had an insufficient sample drawn for testing.
- ▶ The most frequent category of alcohol concentration for both blood and breath was .10-.14.

2008 Blood and Breath Tests by Age				
Alcohol Concentration (AC)	Blood		Breath	
	Tests	Average AC	Tests	Average AC
13 Years & Under	0	0.000	0	0.000
14 - 15	6	0.120	3	0.065
16 - 17	64	0.123	30	0.112
18 - 20	297	0.148	193	0.128
21 - 24	698	0.167	487	0.154
25 - 34	932	0.168	592	0.153
35 - 44	563	0.181	368	0.157
45 - 54	407	0.187	247	0.155
55 - 64	153	0.171	75	0.149
65 - 74	40	0.204	17	0.135
75 & Older	12	0.153	37	0.144
Not Stated	47	0.174	12	0.114
Total	3,219	0.163	2,061	0.133
Average Age	33.1		33	

- ▶ This table includes all blood and breath alcohol content tests given in North Dakota, not only those that were crash-related.
- ▶ The highest number of tests are given to individuals in the 25-34 year age group.

Source: North Dakota Office of the Attorney General



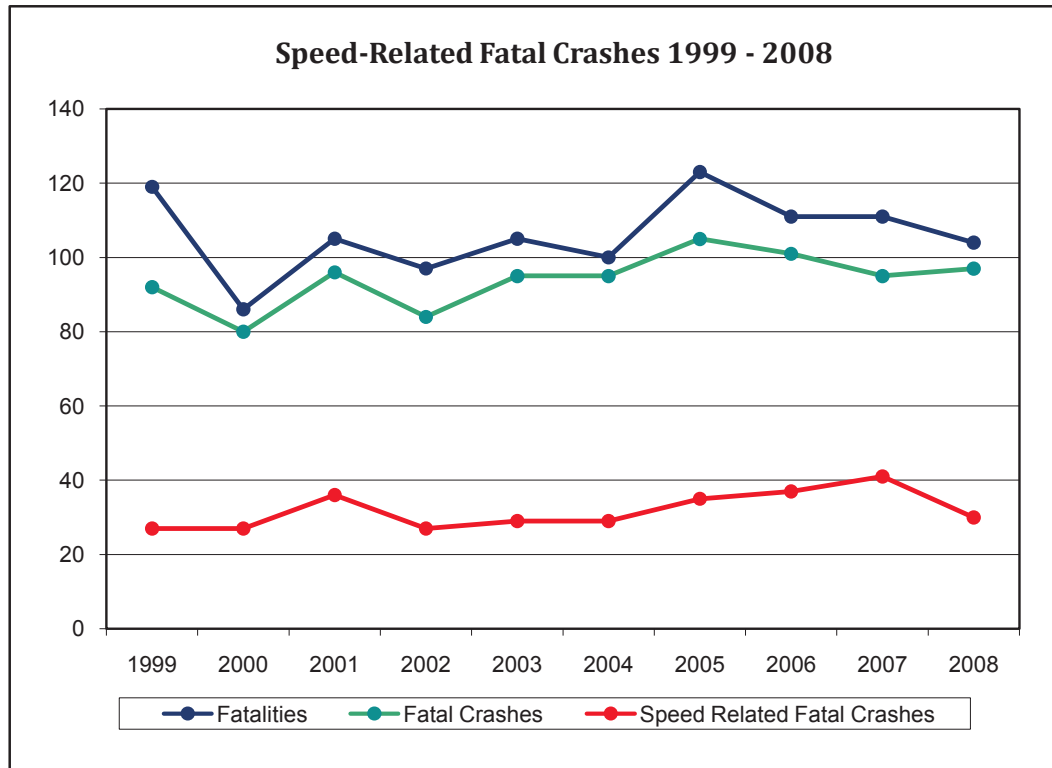
## SECTION 4

# SPEED-RELATED CRASHES



# SPEED-RELATED CRASHES

Speed-Related Fatal Crashes 1999 - 2008										
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Fatalities	119	86	105	97	105	100	123	111	111	104
Fatal Crashes	92	80	96	84	95	95	105	101	95	97
Speed-Related Crashes	27	27	36	27	29	29	35	37	41	30
Percent of Speed-Related Crashes	29.35%	33.75%	37.50%	32.14%	30.53%	30.53%	33.33%	36.63%	43.16%	30.93%

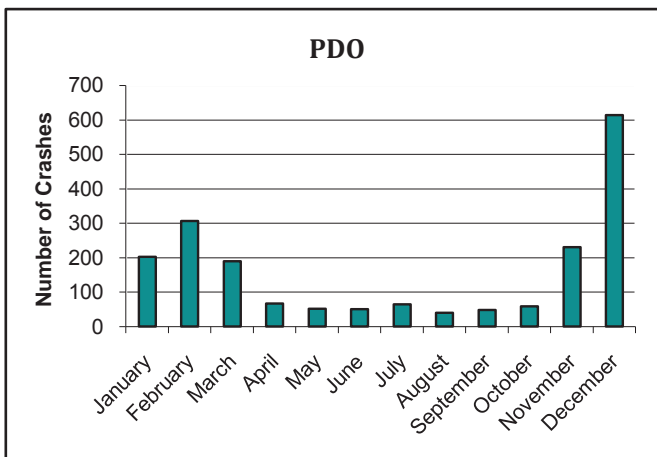
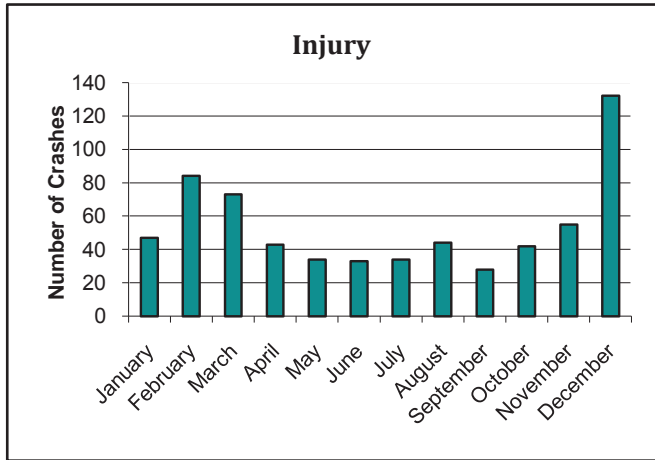
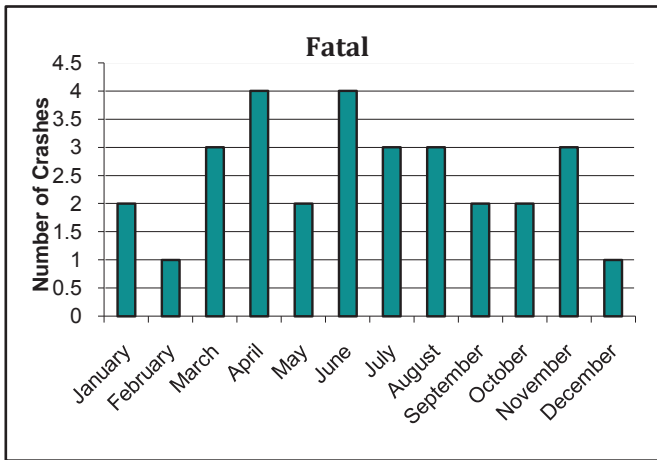


- ▶ The number of speed-related fatal crashes decreased in 2008 with 30 of them, compared to 41 in 2007.
- ▶ From 2007 to 2008, the fatal speed-related crashes decreased by 26.8 percent, the largest decrease in ten years.

# SPEED-RELATED CRASHES

## 2008 Speed-Related Crashes by Month of Year

Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		# Speed-Related Fatal Crashes	Rate per Day	# Speed-Related Injury Crashes	Rate per Day	# Speed-Related PDO Crashes	Rate per Day	# All Speed-Related Crashes	Rate per Day
January	31	2	0.06	47	1.52	202	6.52	251	8.10
February	28	1	0.04	84	3.00	306	10.93	391	13.96
March	31	3	0.10	73	2.35	189	6.10	265	8.55
April	30	4	0.13	43	1.43	67	2.23	114	3.80
May	31	2	0.06	34	1.10	51	1.65	87	2.81
June	30	4	0.13	33	1.10	50	1.67	87	2.90
July	31	3	0.10	34	1.10	64	2.06	101	3.26
August	31	3	0.10	44	1.42	40	1.29	87	2.81
September	30	2	0.07	28	0.93	48	1.60	78	2.60
October	31	2	0.06	42	1.35	58	1.87	102	3.29
November	30	3	0.10	55	1.83	230	7.67	288	9.60
December	31	1	0.03	132	4.26	613	19.77	746	24.06
Totals	365	30	0.08	649	1.78	1,918	5.25	2,597	7.12



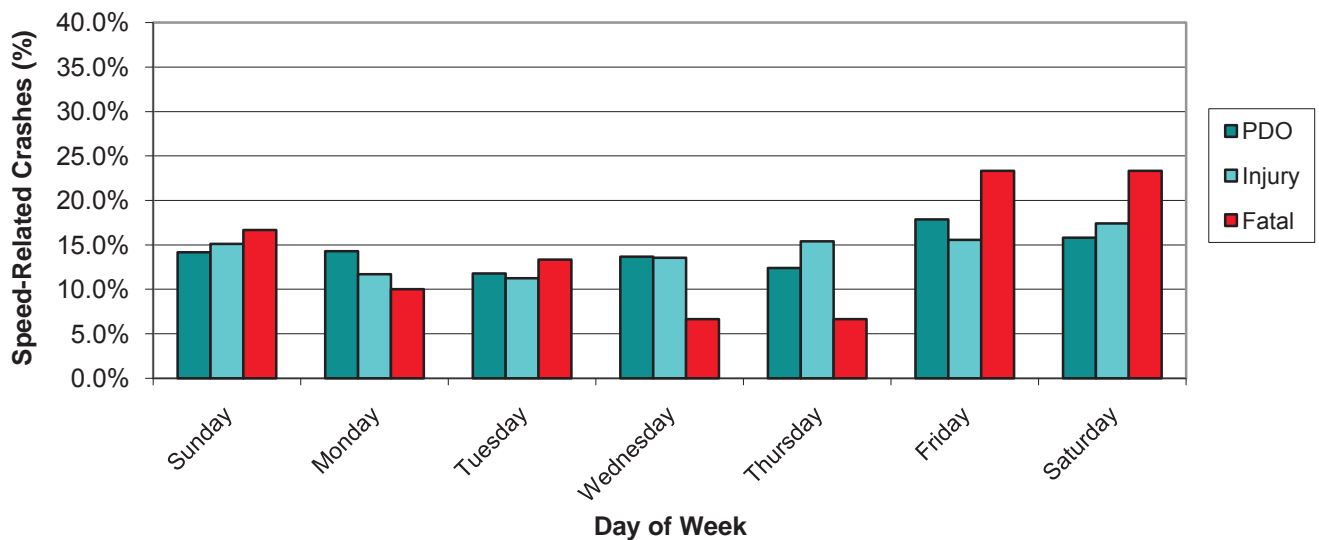
- ▶ In 2008, the greatest number of speed-related crashes occurred in December.
- ▶ April and June (0.13) had the highest rates for fatal speed-related crashes per day.

# SPEED-RELATED CRASHES

## 2008 Speed-Related Crashes by Day of Week

Day of Week	Fatal		Injury		Property Damage Only (PDO)		Total	
	# Speed-Related Fatal Crashes	Percent	# Speed-Related Injury Crashes	Percent	# Speed-Related PDO Crashes	Percent	# All Speed-Related Crashes	Percent
Sunday	5	16.7%	98	15.1%	272	14.2%	375	14.4%
Monday	3	10.0%	76	11.7%	274	14.3%	353	13.6%
Tuesday	4	13.3%	73	11.2%	226	11.8%	303	11.7%
Wednesday	2	6.7%	88	13.6%	262	13.7%	352	13.6%
Thursday	2	6.7%	100	15.4%	238	12.4%	340	13.1%
Friday	7	23.3%	101	15.6%	343	17.9%	451	17.4%
Saturday	7	23.3%	113	17.4%	303	15.8%	423	16.3%
Totals	30	100.0%	649	100.0%	1,918	100.0%	2,597	100.0%

## 2008 Speed-Related Crashes by Day of Week



- The greatest percentage of speed-related crashes occurred on Friday and Saturday in 2008. Speed-related crash rates by day of week are quite consistent Sunday through Thursday.

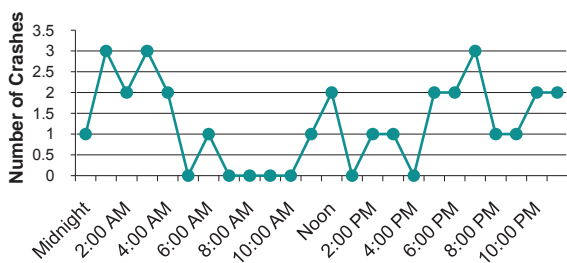


# SPEED-RELATED CRASHES

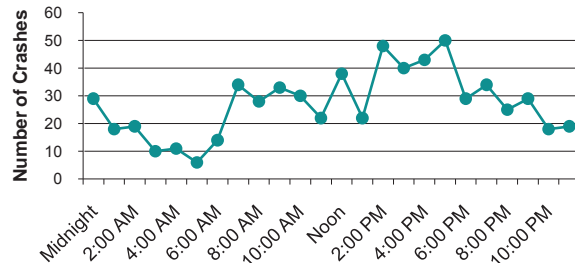
## 2008 Speed-Related Crashes by Time of Day

Time of Day	Fatal		Injury		Property Damage Only (PDO)		Total	
	# Speed-Related Fatal Crashes	Percent	# Speed-Related Injury Crashes	Percent	# Speed-Related PDO Crashes	Percent	# All Speed-Related Crashes	Percent
Midnight	1	3.3%	29	4.5%	67	3.5%	97	3.7%
1:00 AM	3	10.0%	18	2.8%	57	3.0%	78	3.0%
2:00 AM	2	6.7%	19	2.9%	58	3.0%	79	3.0%
3:00 AM	3	10.0%	10	1.5%	24	1.3%	37	1.4%
4:00 AM	2	6.7%	11	1.7%	24	1.3%	37	1.4%
5:00 AM	0	0.0%	6	0.9%	19	1.0%	25	1.0%
6:00 AM	1	3.3%	14	2.2%	34	1.8%	49	1.9%
7:00 AM	0	0.0%	34	5.2%	114	5.9%	148	5.7%
8:00 AM	0	0.0%	28	4.3%	112	5.8%	140	5.4%
9:00 AM	0	0.0%	33	5.1%	92	4.8%	125	4.8%
10:00 AM	0	0.0%	30	4.6%	87	4.5%	117	4.5%
11:00 AM	1	3.3%	22	3.4%	91	4.7%	114	4.4%
Noon	2	6.7%	38	5.9%	119	6.2%	159	6.1%
1:00 PM	0	0.0%	22	3.4%	92	4.8%	114	4.4%
2:00 PM	1	3.3%	48	7.4%	128	6.7%	177	6.8%
3:00 PM	1	3.3%	40	6.2%	163	8.5%	204	7.9%
4:00 PM	0	0.0%	43	6.6%	131	6.8%	174	6.7%
5:00 PM	2	6.7%	50	7.7%	119	6.2%	171	6.6%
6:00 PM	2	6.7%	29	4.5%	81	4.2%	112	4.3%
7:00 PM	3	10.0%	34	5.2%	71	3.7%	108	4.2%
8:00 PM	1	3.3%	25	3.9%	63	3.3%	89	3.4%
9:00 PM	1	3.3%	29	4.5%	66	3.4%	96	3.7%
10:00 PM	2	6.7%	18	2.8%	53	2.8%	73	2.8%
11:00 PM	2	6.7%	19	2.9%	53	2.8%	74	2.8%
Totals	30	100.0%	649	100.0%	1,918	100.0%	2,597	100.0%

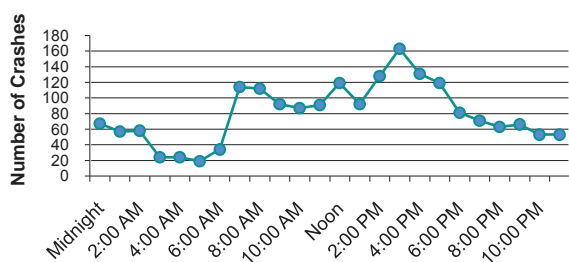
**Fatal Speed Related Crashes**



**Injury Speed Related Crashes**



**PDO Speed Related Crashes**



- ▶ The greatest number of speed-related crashes occurred between 2:00 p.m. and 5:00 p.m.
- ▶ Fatal speed-related crashes varied by hour but peaked at 1:00 a.m., 3:00 a.m., and 7:00 p.m.

# SPEED-RELATED CRASHES

## 2008 Age and Gender of Drivers Involved in Speed-Related Crashes

Age	Fatal				Injury				Property Damage Only (PDO)				Total			
	Female Drivers		Male Drivers		Female Drivers		Male Drivers		Female Drivers		Male Drivers		Female Drivers		Male Drivers	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
<13	0	0.0%	0	0.0%	1	0.4%	4	1.0%	1	0.1%	0	0.0%	2	0.2%	4	0.2%
14-15	0	0.0%	0	0.0%	9	3.9%	12	2.9%	26	3.8%	48	4.0%	35	3.7%	60	3.7%
16-17	2	25.0%	0	0.0%	26	11.2%	30	7.1%	69	10.0%	145	12.1%	97	10.4%	175	10.7%
18-20	1	12.5%	4	17.4%	48	20.6%	65	15.4%	118	17.0%	236	19.7%	167	17.9%	305	18.6%
21-24	1	12.5%	5	21.7%	32	13.7%	80	19.0%	107	15.4%	196	16.4%	140	15.0%	281	17.1%
25-29	0	0.0%	4	17.4%	27	11.6%	51	12.1%	99	14.3%	148	12.4%	126	13.5%	203	12.4%
30-34	0	0.0%	1	4.3%	17	7.3%	40	9.5%	38	5.5%	79	6.6%	55	5.9%	120	7.3%
35-39	2	25.0%	1	4.3%	7	3.0%	26	6.2%	52	7.5%	66	5.5%	61	6.5%	93	5.7%
40-44	0	0.0%	4	17.4%	16	6.9%	33	7.8%	38	5.5%	67	5.6%	54	5.8%	104	6.3%
45-49	0	0.0%	2	8.7%	12	5.2%	25	5.9%	39	5.6%	54	4.5%	51	5.5%	81	4.9%
50-54	1	12.5%	0	0.0%	14	6.0%	13	3.1%	41	5.9%	56	4.7%	56	6.0%	69	4.2%
55-59	0	0.0%	2	8.7%	11	4.7%	10	2.4%	24	3.5%	40	3.3%	35	3.7%	52	3.2%
60-64	0	0.0%	0	0.0%	6	2.6%	12	2.9%	19	2.7%	20	1.7%	25	2.7%	32	1.9%
65-69	1	12.5%	0	0.0%	1	0.4%	8	1.9%	7	1.0%	11	0.9%	9	1.0%	19	1.2%
70-74	0	0.0%	0	0.0%	1	0.4%	4	1.0%	6	0.9%	11	0.9%	7	0.7%	15	0.9%
75+	0	0.0%	0	0.0%	5	2.1%	8	1.9%	9	1.3%	21	1.8%	14	1.5%	29	1.8%
Total	8	100.0%	23	100.0%	233	100.0%	421	100.0%	693	100.0%	1198	100.0%	934	100.0%	1,642	100.0%

- ▶ The highest percentage of speed-related fatal crashes occurred in these groups in 2008:
  - For females, 16-17 years old and 35-39 year old demographics each contributed to 25 percent of female fatalities. There were eight total speed-related fatalities with female drivers.
  - For males, the drivers in the 21-24 year old demographic had 21.7 percent of the 23 speed-related fatalities.
- ▶ Males accounted for 63.7 percent of all speed-related crashes, and 74 percent of all speed-related fatal crashes.
- ▶ Overall, drivers age 16-29 accounted for 57.8 percent of speed-related crashes.

# SPEED-RELATED CRASHES

## 2008 County Speed-Related Crash Rates

County	# of Speed-Related Crashes	County Speed-Related Crash Rate	*VMT Per County	County	# of Speed-Related Crashes	County Speed-Related Crash Rate	*VMT Per County
Adams	6	0.19	31.56	McLean	24	0.14	169.66
Barnes	30	0.13	222.64	Mercer	12	0.16	74.26
Benson	10	0.11	88.57	Morton	100	0.29	347.43
Billings	9	0.16	54.99	Mountrail	40	0.28	142.05
Bottineau	24	0.26	93.99	Nelson	9	0.12	72.11
Bowman	7	0.16	44.37	Oliver	7	0.23	30.69
Burke	3	0.06	47.45	Pembina	23	0.18	127.65
Burleigh	374	0.68	552.99	Pierce	19	0.36	52.66
Cass	624	0.47	1,319.39	Ramsey	38	0.29	132.44
Cavalier	6	0.10	58.43	Ransom	10	0.19	52.75
Dickey	13	0.22	58.94	Renville	4	0.11	37.63
Divide	1	0.03	38.13	Richland	74	0.27	271.32
Dunn	14	0.26	53.08	Rolette	22	0.24	92.97
Eddy	4	0.14	28.79	Sargent	10	0.17	59.57
Emmons	10	0.19	52.70	Sheridan	1	0.04	27.08
Foster	11	0.24	45.83	Sioux	1	0.03	36.46
Golden Valley	3	0.08	39.65	Slope	1	0.04	26.54
Grand Forks	287	0.47	610.15	Stark	88	0.35	252.12
Grant	2	0.06	31.85	Steele	2	0.06	35.04
Griggs	0	0.00	29.95	Stutsman	102	0.34	298.57
Hettinger	3	0.08	37.44	Towner	9	0.25	36.03
Kidder	7	0.06	110.58	Traill	52	0.25	204.41
LaMoure	18	0.33	55.25	Walsh	56	0.33	171.92
Logan	1	0.04	22.76	Ward	244	0.46	524.95
McHenry	28	0.25	112.95	Wells	6	0.08	75.27
McIntosh	7	0.20	34.29	Williams	116	0.46	252.42
McKenzie	25	0.20	127.08	<b>Totals/Average</b>	<b>2,597</b>	<b>0.34</b>	<b>7,607.80</b>

\* VMT is per million vehicle miles traveled.

► Burleigh County had the highest speed-related crash rate among all counties while Griggs had the lowest.

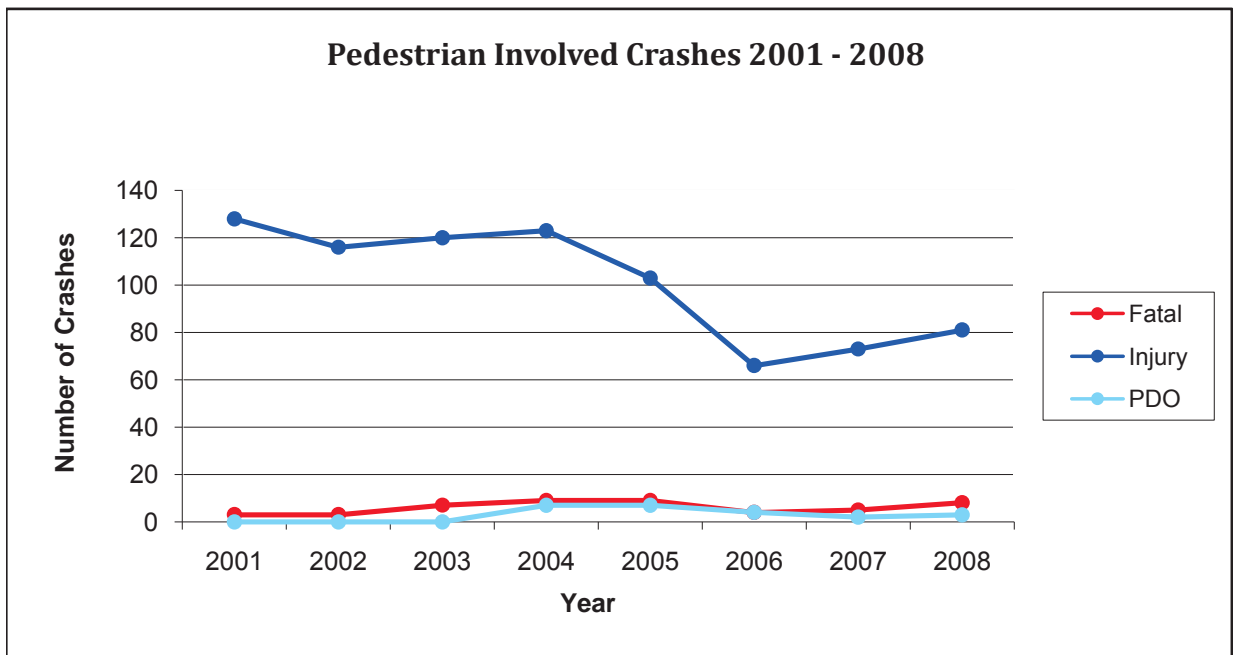
## SECTION 5

# PEDESTRIAN & PEDALCYCLE CRASHES



# PEDESTRIAN & PEDALCYCLE CRASHES

Pedestrian Involved Crashes 2001-2008								
Year	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
2001	3	6.3%	128	15.8%	0	0.0%	131	14.9%
2002	3	6.3%	116	14.3%	0	0.0%	119	13.5%
2003	7	14.6%	120	14.8%	0	0.0%	127	14.4%
2004	9	18.8%	123	15.2%	7	30.4%	139	15.8%
2005	9	18.8%	103	12.7%	7	30.4%	119	13.5%
2006	4	8.3%	66	8.1%	4	17.4%	74	8.4%
2007	5	10.4%	73	9.0%	2	8.7%	80	9.1%
2008	8	16.7%	81	10.0%	3	13.0%	92	10.4%
Total	48	100.0%	810	100.0%	23	100.0%	881	100.0%



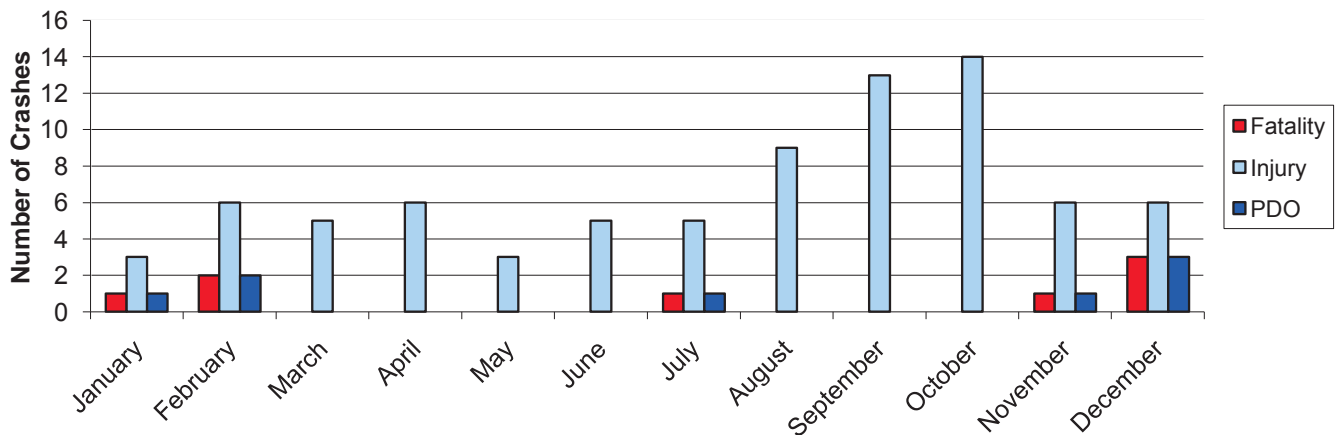
- ▶ In 2008, 8.2 percent of fatal crashes involved a pedestrian. There were 97 fatal crashes in 2008.
- ▶ The percent of crashes involving pedestrians reflects a total of the pedestrian crashes between 2001-2008.

# PEDESTRIAN & PEDALCYCLE CRASHES

## 2008 Pedestrian-Related Crashes by Month of Year

Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		# Pedestrian-Related Fatal Crashes	Rate per day	# Pedestrian-Related Injury Crashes	Rate per day	# Pedestrian-Related PDO Crashes	Rate per day	# All Pedestrian-Related Crashes	Rate per day
January	31	1	0.03	3	0.10	0	0.00	4	0.13
February	28	2	0.07	6	0.21	1	0.04	9	0.32
March	31	0	0.00	5	0.16	0	0.00	5	0.16
April	30	0	0.00	6	0.20	0	0.00	6	0.20
May	31	0	0.00	3	0.10	1	0.03	4	0.13
June	30	0	0.00	5	0.17	0	0.00	5	0.17
July	31	1	0.03	5	0.16	1	0.03	7	0.23
August	31	0	0.00	9	0.29	0	0.00	9	0.29
September	30	0	0.00	13	0.43	0	0.00	13	0.43
October	31	0	0.00	14	0.45	0	0.00	14	0.45
November	30	1	0.03	6	0.20	0	0.00	7	0.23
December	31	3	0.10	6	0.19	0	0.00	9	0.29
Total	365	8	0.02	81	0.22	3	0.01	92	0.25

### 2008 Pedestrian-Related Crashes by Month

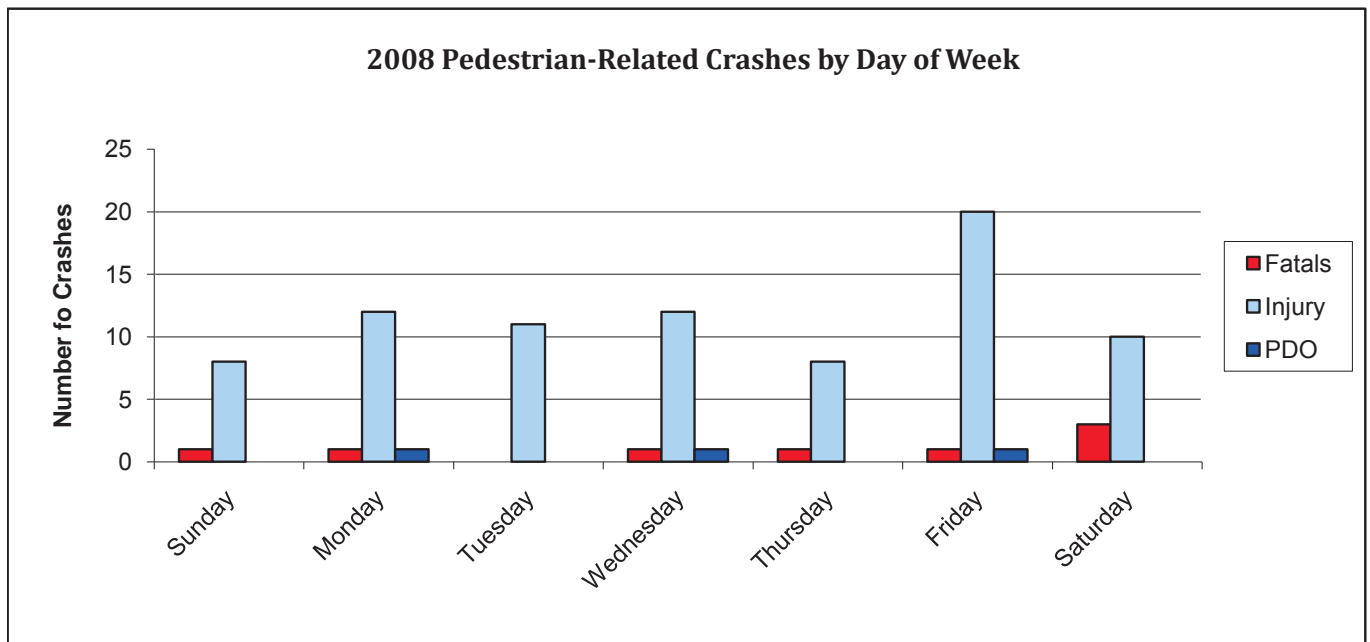


► The greatest number of pedestrian-related crashes occurred in September and October.

# PEDESTRIAN & PEDALCYCLE CRASHES

## Pedestrian-Related Crashes by Day of Week 2008

Day of Week	Fatal		Injury		Property Damage Only (PDO)		Total	
	# Pedestrian-Related Fatal Crashes	Percent	# Pedestrian-Related Injury Crashes	Percent	# Pedestrian-Related PDO Crashes	Percent	# All Pedestrian-Related Crashes	Percent
Sunday	1	12.5%	8	9.9%	0	0.0%	9	9.8%
Monday	1	12.5%	12	14.8%	1	33.3%	14	15.2%
Tuesday	0	0.0%	11	13.6%	0	0.0%	11	12.0%
Wednesday	1	12.5%	12	14.8%	1	33.3%	14	15.2%
Thursday	1	12.5%	8	9.9%	0	0.0%	9	9.8%
Friday	1	12.5%	20	24.7%	1	33.3%	22	23.9%
Saturday	3	37.5%	10	12.3%	0	0.0%	13	14.1%
<b>Total</b>	<b>8</b>	<b>100.0%</b>	<b>81</b>	<b>100.0%</b>	<b>3</b>	<b>100.0%</b>	<b>92</b>	<b>100.0%</b>



► In 2008, the greatest number of pedestrian-related crashes occurred on Friday.

# PEDESTRIAN & PEDALCYCLE CRASHES

2008 Pedestrian Crashes by Time of Day				
	Fatal	Injury	Property Damage Only (PDO)	Total
Time of Day	# Pedestrian-Related Fatal Crashes	# Pedestrian-Related Injury Crashes	# Pedestrian- Related PDO Crashes	# All Pedestrian-Related Crashes
Midnight	0	1	0	1
1:00 AM	0	0	0	0
2:00 AM	0	3	0	3
3:00 AM	0	0	0	0
4:00 AM	0	0	0	0
5:00 AM	1	2	0	3
6:00 AM	1	0	0	1
7:00 AM	0	5	0	5
8:00 AM	0	3	0	3
9:00 AM	0	4	0	4
10:00 AM	0	1	1	2
11:00 AM	0	8	0	8
Noon	0	2	0	2
1:00 PM	0	5	0	5
2:00 PM	2	4	0	6
3:00 PM	0	3	0	3
4:00 PM	0	8	0	8
5:00 PM	1	6	2	9
6:00 PM	0	4	0	4
7:00 PM	1	5	0	6
8:00 PM	2	4	0	6
9:00 PM	0	11	0	11
10:00 PM	0	1	0	1
11:00 PM	0	1	0	1
Total	8	81	3	92

► In 2008, the majority of pedestrian crashes occurred between 4:00 p.m. and 9:00 p.m. (47.8 percent).

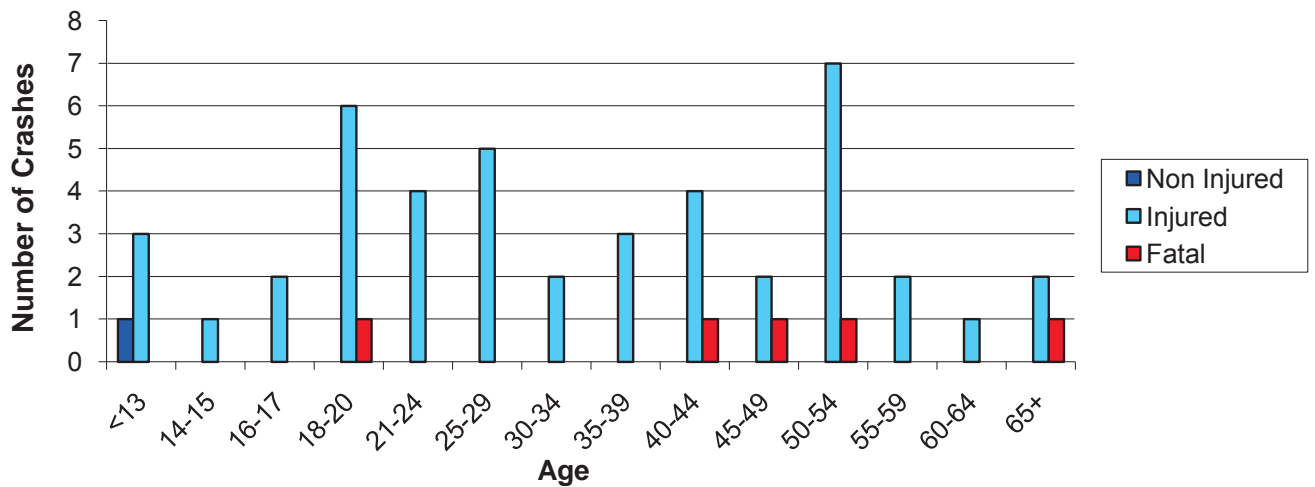


# PEDESTRIAN & PEDALCYCLE CRASHES

## 2008 Pedestrians Involved in Motor Vehicle Crashes by Age

Age	Fatalities		Injuries		Non-Injured Pedestrians		Total Pedestrians	
	#	%	#	%	#	%	#	%
<13	0	0.0%	3	6.8%	1	100.0%	4	8.0%
14-15	0	0.0%	1	2.3%	0	0.0%	1	2.0%
16-17	0	0.0%	2	4.5%	0	0.0%	2	4.0%
18-20	1	20.0%	6	13.6%	0	0.0%	7	14.0%
21-24	0	0.0%	4	9.1%	0	0.0%	4	8.0%
25-29	0	0.0%	5	11.4%	0	0.0%	5	10.0%
30-34	0	0.0%	2	4.5%	0	0.0%	2	4.0%
35-39	0	0.0%	3	6.8%	0	0.0%	3	6.0%
40-44	1	20.0%	4	9.1%	0	0.0%	5	10.0%
45-49	1	20.0%	2	4.5%	0	0.0%	3	6.0%
50-54	1	20.0%	7	15.9%	0	0.0%	8	16.0%
55-59	0	0.0%	2	4.5%	0	0.0%	2	4.0%
60-64	0	0.0%	1	2.3%	0	0.0%	1	2.0%
65+	1	20.0%	2	4.5%	0	0.0%	3	6.0%
Total	5	100.0%	44	100.0%	1	100.0%	50	100.0%

## 2008 Pedestrians Involved in MV Crashes by Age



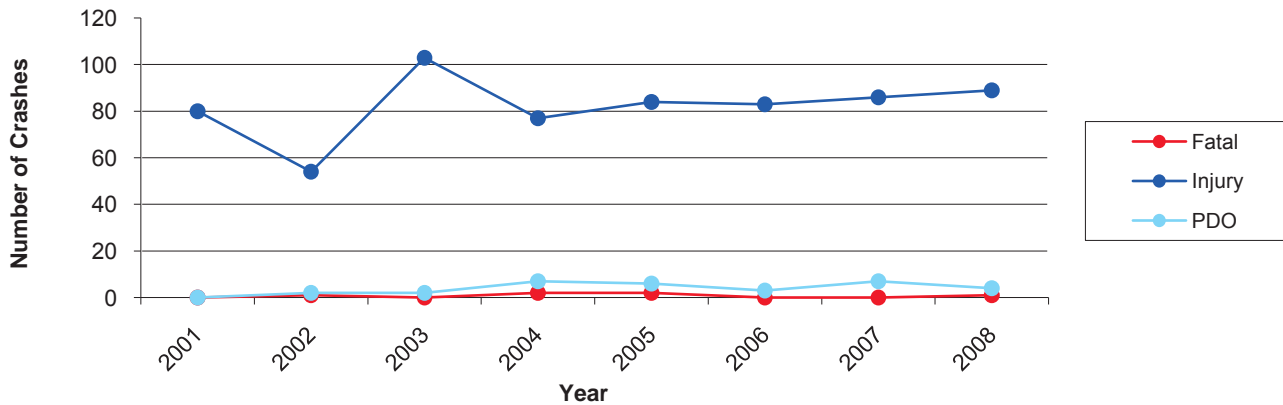
- ▶ In 2008, the greatest number of pedestrians involved in motor vehicle crashes fell in the 50-54 year old group, followed by 18-20 year olds.
- ▶ There was a significant decrease in pedestrians involved in motor vehicle crashes in 2008 from 2007. The number fell from 80 in 2007, to 50 in 2008.

# PEDESTRIAN & PEDALCYCLE CRASHES

## Pedalcycle Involved Crashes 2001 - 2008

Year	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
2001	0	0.0%	80	12.2%	0	0.0%	80	11.5%
2002	1	16.7%	54	8.2%	2	6.5%	57	8.2%
2003	0	0.0%	103	15.7%	2	6.5%	105	15.2%
2004	2	33.3%	77	11.7%	7	22.6%	86	12.4%
2005	2	33.3%	84	12.8%	6	19.4%	92	13.3%
2006	0	0.0%	83	12.7%	3	9.7%	86	12.4%
2007	0	0.0%	86	13.1%	7	22.6%	93	13.4%
2008	1	16.7%	89	13.6%	4	12.9%	94	13.6%
Total	6	100.0%	656	100.0%	31	100.0%	693	100.0%

### Pedalcycle Involved Crashes 2001 - 2008



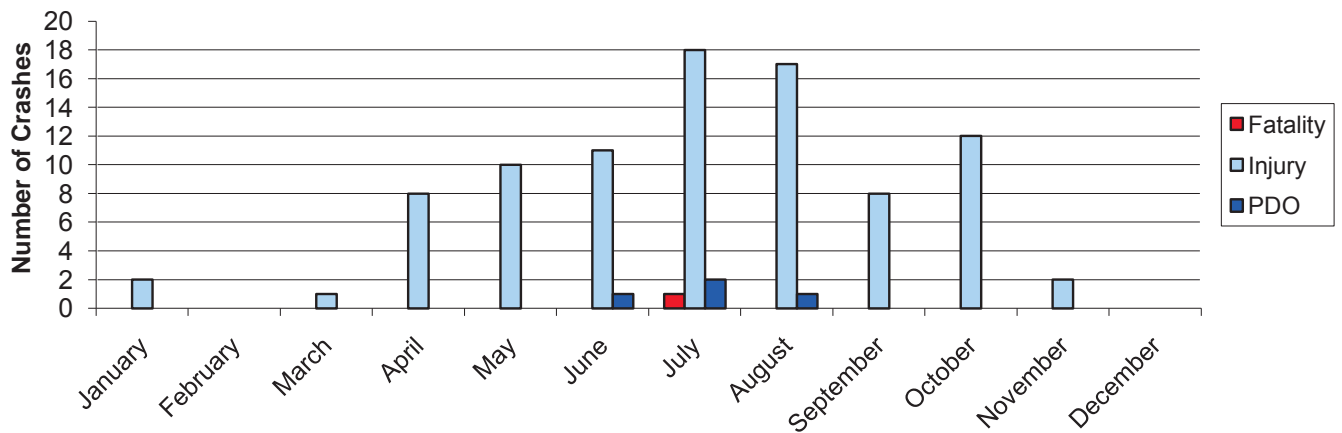
- The total number of pedalcycle crashes in 2008 was 94. During the past 8 years this number has ranged from a high of 105 in 2003 to a low of 57 in 2002.

# PEDESTRIAN & PEDALCYCLE CRASHES

## 2008 Pedalcycle-Related Crashes by Month of Year

Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		#	Rate per day	#	Rate per day	#	Rate per day	#	Rate per day
January	31	0	0.00	2	0.06	0	0.06	2	0.06
February	28	0	0.00	0	0.00	0	0.00	0	0.00
March	31	0	0.00	1	0.03	0	0.03	1	0.03
April	30	0	0.00	8	0.27	0	0.27	8	0.27
May	31	0	0.00	10	0.32	0	0.32	10	0.32
June	30	0	0.00	11	0.37	1	0.40	12	0.40
July	31	1	0.03	18	0.58	2	0.68	21	0.68
August	31	0	0.00	17	0.55	1	0.58	18	0.58
September	30	0	0.00	8	0.27	0	0.27	8	0.27
October	31	0	0.00	12	0.39	0	0.39	12	0.39
November	30	0	0.00	2	0.07	0	0.07	2	0.07
December	31	0	0.00	0	0.00	0	0.00	0	0.00
<b>Total</b>	<b>365</b>	<b>1</b>	<b>0.00</b>	<b>89</b>	<b>0.24</b>	<b>4</b>	<b>0.01</b>	<b>94</b>	<b>0.26</b>

### 2008 Pedalcycle-Related Crashes by Month



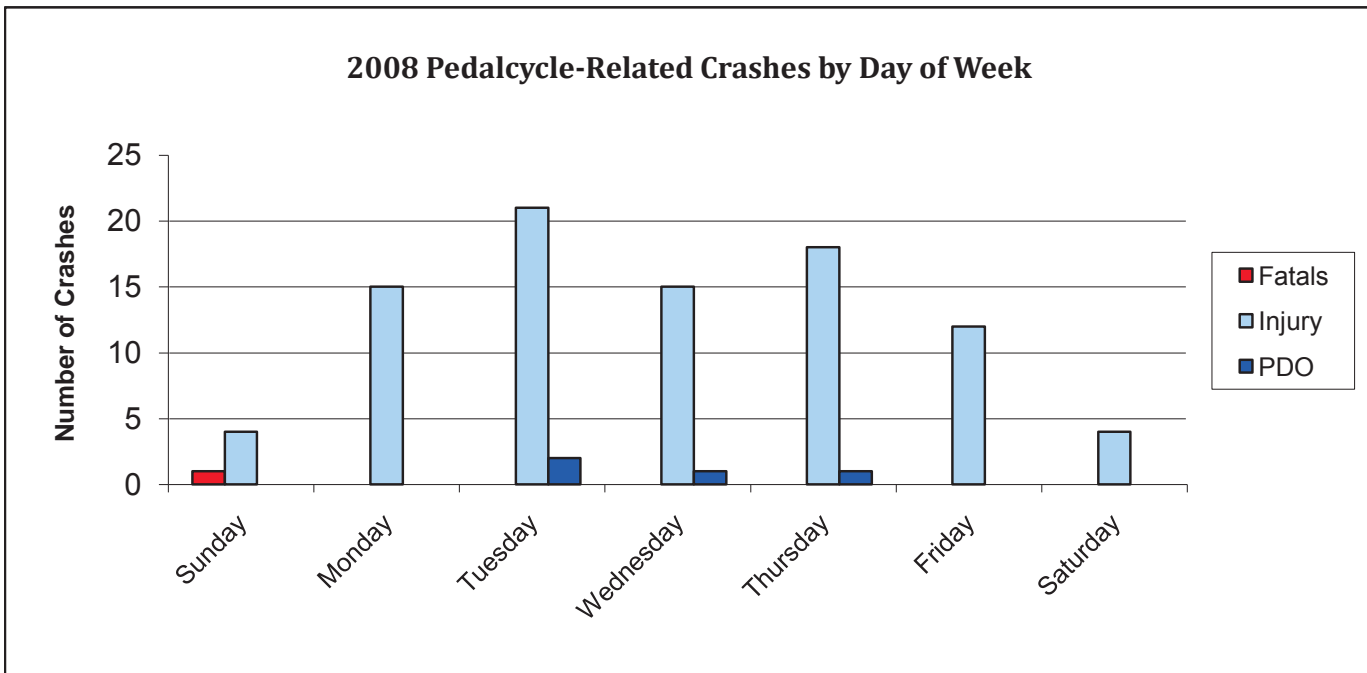
► In 2008, the highest number of pedalcycle crashes occurred in July and August.

# PEDESTRIAN & PEDALCYCLE CRASHES

## 2008 Pedalcycle-Related Crashes by Day of Week

Day of Week	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	Percent	#	Percent	#	Percent	#	Percent
Sunday	1	100.0%	4	4.5%	0	0.0%	5	5.3%
Monday	0	0.0%	15	16.9%	0	0.0%	15	16.0%
Tuesday	0	0.0%	21	23.6%	2	50.0%	23	24.5%
Wednesday	0	0.0%	15	16.9%	1	25.0%	16	17.0%
Thursday	0	0.0%	18	20.2%	1	25.0%	19	20.2%
Friday	0	0.0%	12	13.5%	0	0.0%	12	12.8%
Saturday	0	0.0%	4	4.5%	0	0.0%	4	4.3%
<b>Total</b>	<b>1</b>	<b>100.0%</b>	<b>89</b>	<b>100.0%</b>	<b>4</b>	<b>100.0%</b>	<b>94</b>	<b>100.0%</b>

## 2008 Pedalcycle-Related Crashes by Day of Week



► In 2008, the greatest number of pedalcycle crashes occurred on Tuesday.

# PEDESTRIAN & PEDALCYCLE CRASHES

## 2008 Pedalcycle-Related Crashes by Time of Day

Time of Day	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
Midnight	1	100.0%	0	0.0%	0	0.0%	1	1.1%
1:00 AM	0	0.0%	0	0.0%	0	0.0%	0	0.0%
2:00 AM	0	0.0%	0	0.0%	0	0.0%	0	0.0%
3:00 AM	0	0.0%	0	0.0%	0	0.0%	0	0.0%
4:00 AM	0	0.0%	0	0.0%	0	0.0%	0	0.0%
5:00 AM	0	0.0%	0	0.0%	0	0.0%	0	0.0%
6:00 AM	0	0.0%	4	4.5%	0	0.0%	4	4.3%
7:00 AM	0	0.0%	5	5.6%	1	25.0%	6	6.4%
8:00 AM	0	0.0%	2	2.2%	0	0.0%	2	2.1%
9:00 AM	0	0.0%	2	2.2%	0	0.0%	2	2.1%
10:00 AM	0	0.0%	2	2.2%	0	0.0%	2	2.1%
11:00 AM	0	0.0%	3	3.4%	0	0.0%	3	3.2%
Noon	0	0.0%	5	5.6%	0	0.0%	5	5.3%
1:00 PM	0	0.0%	6	6.7%	0	0.0%	6	6.4%
2:00 PM	0	0.0%	9	10.1%	0	0.0%	9	9.6%
3:00 PM	0	0.0%	6	6.7%	0	0.0%	6	6.4%
4:00 PM	0	0.0%	6	6.7%	1	25.0%	7	7.4%
5:00 PM	0	0.0%	13	14.6%	1	25.0%	14	14.9%
6:00 PM	0	0.0%	5	5.6%	0	0.0%	5	5.3%
7:00 PM	0	0.0%	7	7.9%	0	0.0%	7	7.4%
8:00 PM	0	0.0%	6	6.7%	0	0.0%	6	6.4%
9:00 PM	0	0.0%	6	6.7%	1	25.0%	7	7.4%
10:00 PM	0	0.0%	1	1.1%	0	0.0%	1	1.1%
11:00 PM	0	0.0%	1	1.1%	0	0.0%	1	1.1%
<b>Total</b>	<b>1</b>	<b>100.0%</b>	<b>89</b>	<b>100.0%</b>	<b>4</b>	<b>100.0%</b>	<b>94</b>	<b>100.0%</b>

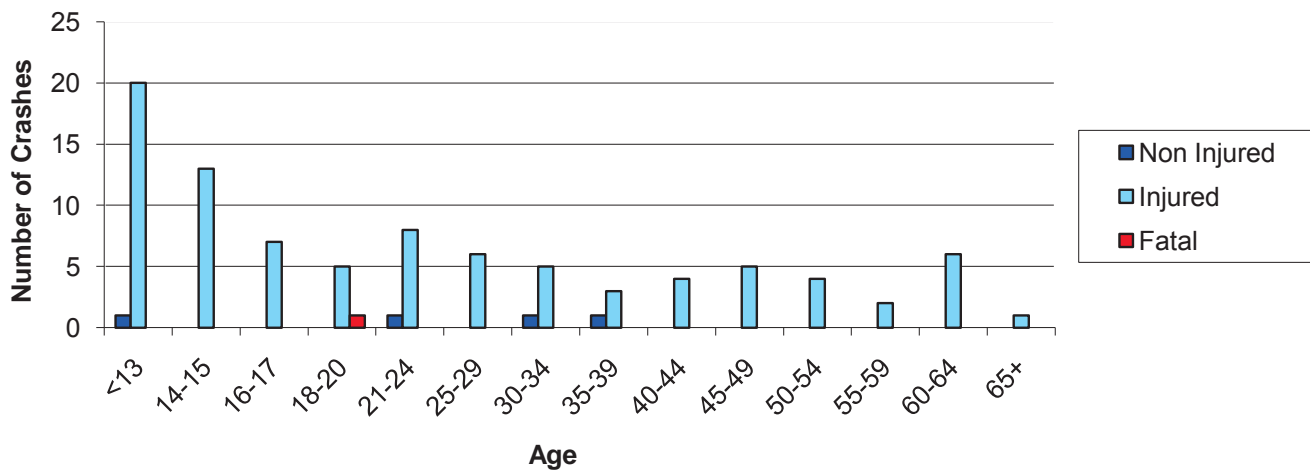
- ▶ The greatest number of pedalcycle crashes occurred between 5:00-6:00 p.m.
- ▶ The only pedalcycle fatality occurred between midnight and 1:00 a.m.

# PEDESTRIAN & PEDALCYCLE CRASHES

## 2008 Pedalcycle Involved in Motor Vehicle Crashes by Age

Age	Fatalities		Injuries		Non-Injured		Total	
	#	%	#	%	#	%	#	%
<13	0	0.0%	20	22.5%	1	25.0%	21	22.3%
14-15	0	0.0%	13	14.6%	0	0.0%	13	13.8%
16-17	0	0.0%	7	7.9%	0	0.0%	7	7.4%
18-20	1	100.0%	5	5.6%	0	0.0%	6	6.4%
21-24	0	0.0%	8	9.0%	1	25.0%	9	9.6%
25-29	0	0.0%	6	6.7%	0	0.0%	6	6.4%
30-34	0	0.0%	5	5.6%	1	25.0%	6	6.4%
35-39	0	0.0%	3	3.4%	1	25.0%	4	4.3%
40-44	0	0.0%	4	4.5%	0	0.0%	4	4.3%
45-49	0	0.0%	5	5.6%	0	0.0%	5	5.3%
50-54	0	0.0%	4	4.5%	0	0.0%	4	4.3%
55-59	0	0.0%	2	2.2%	0	0.0%	2	2.1%
60-64	0	0.0%	6	6.7%	0	0.0%	6	6.4%
65+	0	0.0%	1	1.1%	0	0.0%	1	1.1%
<b>Total</b>	<b>1</b>	<b>100.0%</b>	<b>89</b>	<b>100.0%</b>	<b>4</b>	<b>100.0%</b>	<b>94</b>	<b>100.0%</b>

### 2008 Pedalcycle Crashes by Age



\* There was one pedalcycle fatal crash, age unknown.

► In 2008, the greatest number of pedalcycle crashes occurred for those under the age of 15.

SECTION 6

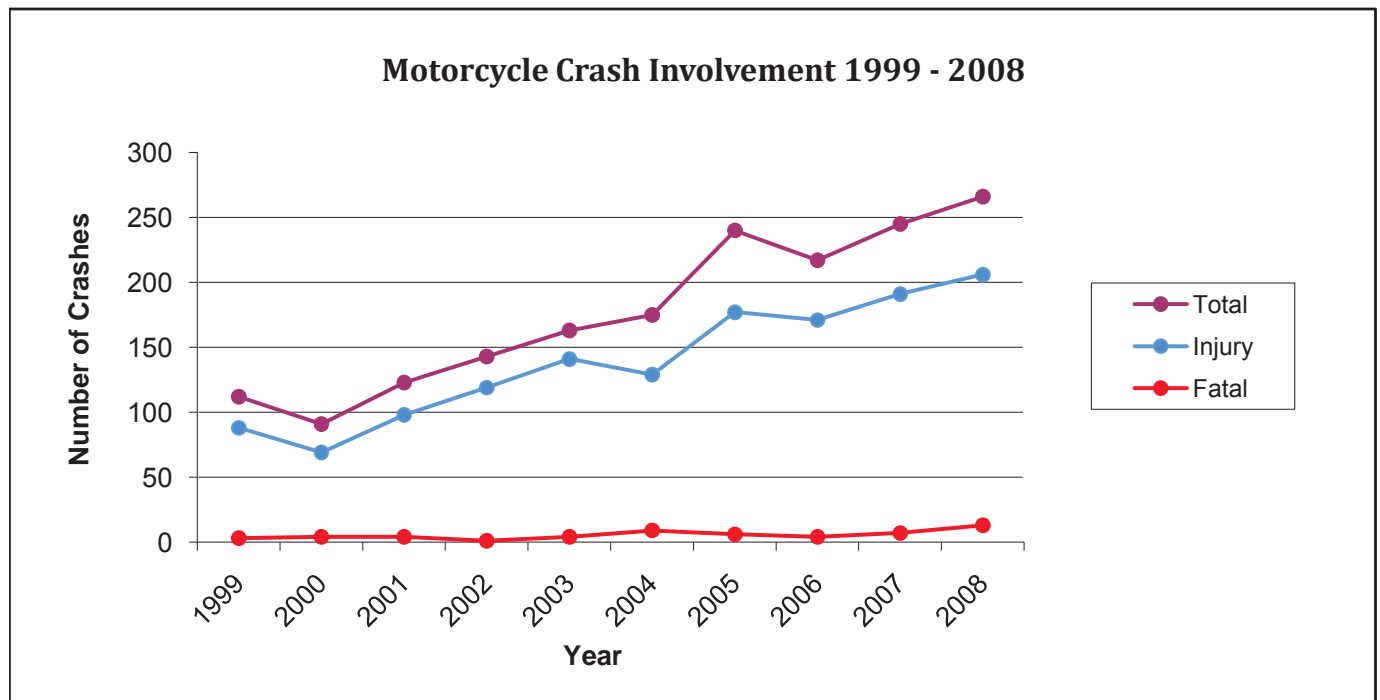
MOTORCYCLE  
&  
OHV  
CRASHES



## Motorcyclists Involved in Crashes 1999 - 2008

Year	Licenses	Registered Motorcycles	Fatal	Injury	Total
1999	39,666	16,383	3	88	112
2000	40,101	17,031	4	69	91
2001	40,486	18,024	4	98	123
2002	41,122	17,701	1	119	143
2003	42,680	18,991	4	141	163
2004	44,364	22,951	9	129	175
2005	46,173	24,741	6	177	240
2006	48,396	27,502	4	171	217
2007	50,565	29,202	7	191	245
2008	51,308	31,734	13	206	266

### Motorcycle Crash Involvement 1999 - 2008



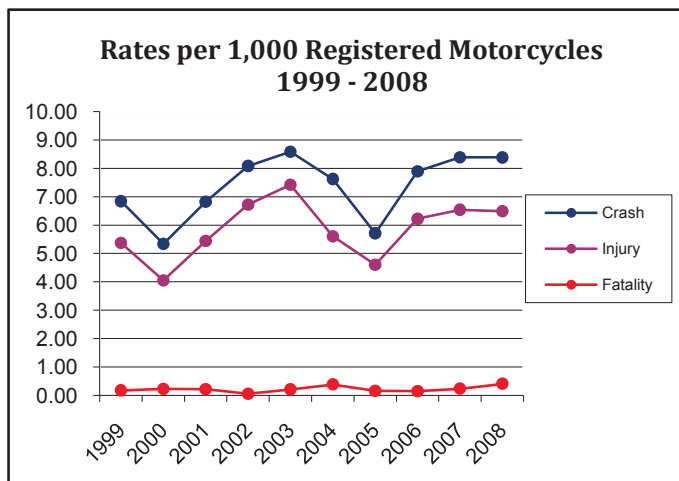
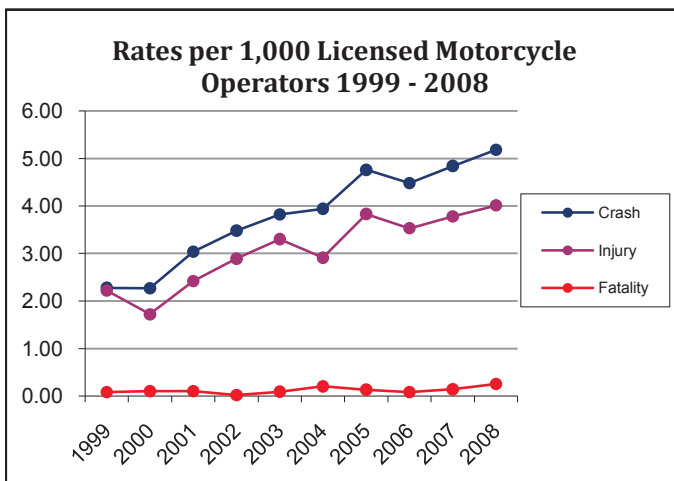
- ▶ Motorcycle licenses and registrations have continued to increase over the past ten years.
- ▶ The number of motorcycle fatalities has tripled in the past two years, from four in 2006 to 13 in 2008.
- ▶ The North Dakota Department of Transportation partners with ABATE to provide Motorcycle Rider Safety Courses throughout the state. Visit [www.ndmsp.com](http://www.ndmsp.com) for more information.



# MOTORCYCLE & OHV CRASHES

## Motorcycle Summary Rates 1999 - 2008

Year	Crash Rate Per 1,000 Licensed Motorcycle Operators	Injury Rate Per 1,000 Licensed Motorcycle Operators	Fatality Rate Per 1,000 Licensed Motorcycle Operators	Crash Rate per 1,000 Registered Motorcycles	Injury Rate per 1,000 Registered Motorcycles	Fatality Rate per 1,000 Registered Motorcycles
1999	2.28	2.22	0.08	6.84	5.37	0.18
2000	2.27	1.72	0.10	5.34	4.05	0.23
2001	3.04	2.42	0.10	6.82	5.44	0.22
2002	3.48	2.89	0.02	8.08	6.72	0.06
2003	3.82	3.30	0.09	8.58	7.42	0.21
2004	3.94	2.91	0.20	7.62	5.60	0.39
2005	4.76	3.83	0.13	5.71	4.60	0.16
2006	4.48	3.53	0.08	7.89	6.22	0.15
2007	4.84	3.78	0.14	8.39	6.54	0.24
2008	5.18	4.01	0.25	8.38	6.49	0.41



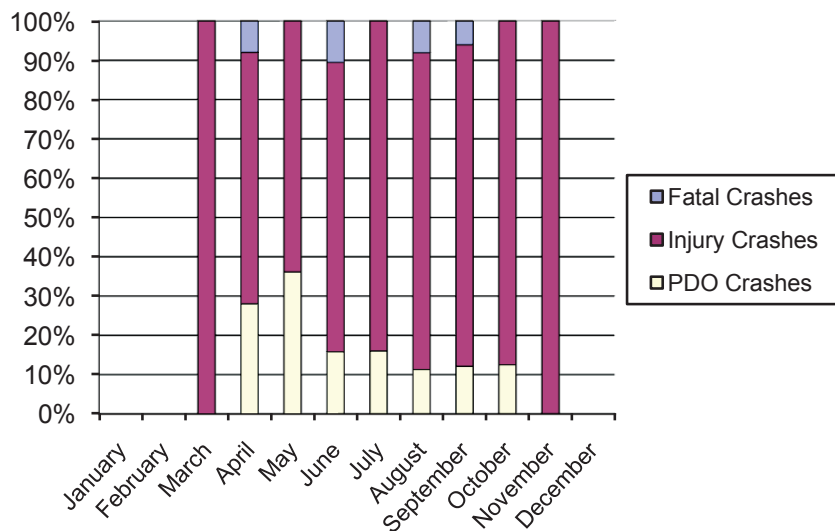
- The crash rate per 1,000 licensed motorcycle operators has steadily increased over the past 10 years, reaching a record rate in 2008 of 5.18 crashes per 1,000 licensed operators.

# MOTORCYCLE & OHV CRASHES

## 2008 Motorcycle Crashes by Month of Year

Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		#	Rate per Day	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	31	0	0.00	0	0.00	0	0.00	0	0.00
February	28	0	0.00	0	0.00	0	0.00	0	0.00
March	31	0	0.00	5	0.16	0	0.00	5	0.16
April	30	2	0.07	16	0.53	7	0.23	25	0.83
May	31	0	0.00	23	0.74	13	0.42	36	1.16
June	30	4	0.13	28	0.93	6	0.20	38	1.27
July	31	0	0.00	42	1.35	8	0.26	50	1.61
August	31	5	0.16	50	1.61	7	0.23	62	2.00
September	30	2	0.07	27	0.90	4	0.13	33	1.10
October	31	0	0.00	14	0.45	2	0.06	16	0.52
November	30	0	0.00	1	0.03	0	0.00	1	0.03
December	31	0	0.00	0	0.00	0	0.00	0	0.00
<b>Total</b>	<b>365</b>	<b>13</b>	<b>0.04</b>	<b>206</b>	<b>0.56</b>	<b>47</b>	<b>0.13</b>	<b>266</b>	<b>0.73</b>

2008 Motorcycle Crashes by Month of Year



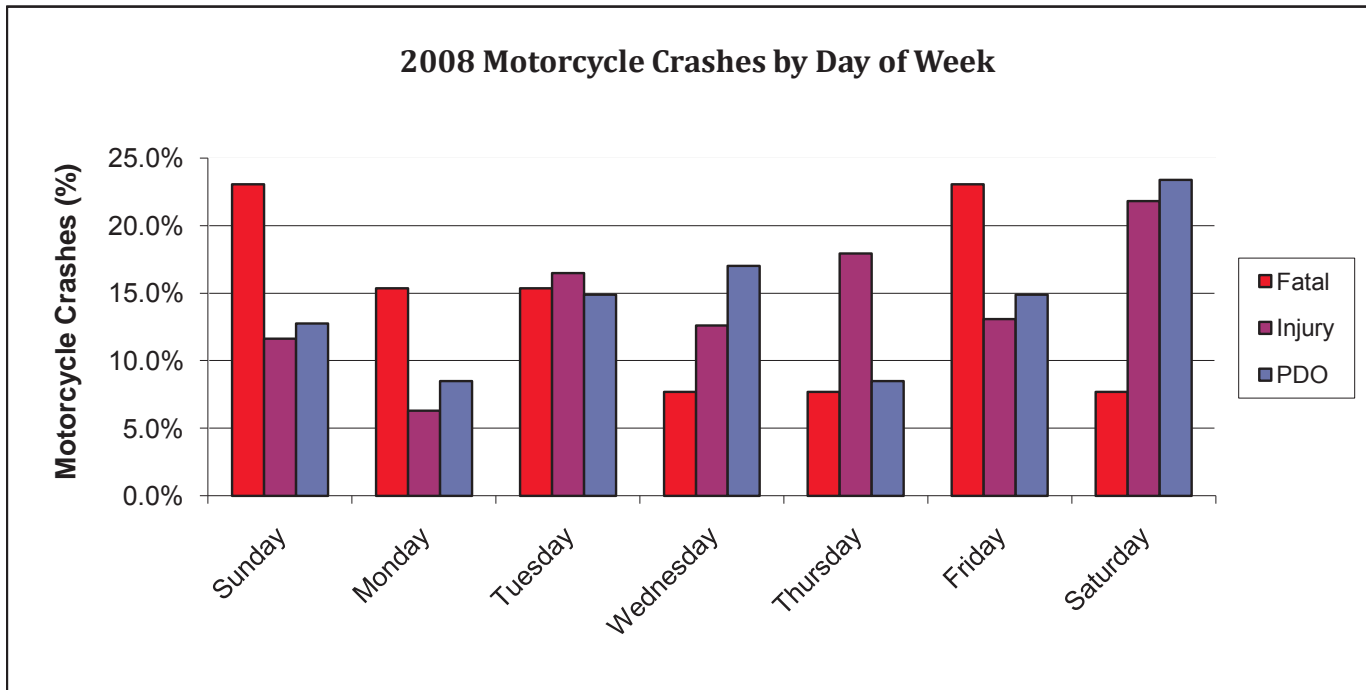
► In 2008, the greatest number of motorcycle crashes occurred in July and August (42.1 percent).

# MOTORCYCLE & OHV CRASHES

## 2008 Motorcycle Crashes by Day of Week

Day of Week	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
Sunday	3	23.1%	24	11.7%	6	12.8%	33	12.4%
Monday	2	15.4%	13	6.3%	4	8.5%	19	7.1%
Tuesday	2	15.4%	34	16.5%	7	14.9%	43	16.2%
Wednesday	1	7.7%	26	12.6%	8	17.0%	35	13.2%
Thursday	1	7.7%	37	18.0%	4	8.5%	42	15.8%
Friday	3	23.1%	27	13.1%	7	14.9%	37	13.9%
Saturday	1	7.7%	45	21.8%	11	23.4%	57	21.4%
<b>Total</b>	<b>13</b>	<b>100.0%</b>	<b>206</b>	<b>100.0%</b>	<b>47</b>	<b>100.0%</b>	<b>266</b>	<b>100.0%</b>

## 2008 Motorcycle Crashes by Day of Week



- ▶ The greatest percentage of motorcycle crashes occurred on Saturday in 2008. This is consistent with data collected in 2007.
- ▶ The greatest percentage of motorcycle fatalities occurred weekends (Friday through Sunday) with 53.9 percent.

# MOTORCYCLE & OHV CRASHES

## 2008 Motorcycle Crashes by Time of Day

Time of Day	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
Midnight	0	0.0%	1	0.5%	0	0.0%	1	0.4%
1:00 AM	1	7.7%	2	1.0%	0	0.0%	3	1.1%
2:00 AM	0	0.0%	3	1.5%	2	4.3%	5	1.9%
3:00 AM	1	7.7%	1	0.5%	0	0.0%	2	0.8%
4:00 AM	1	7.7%	1	0.5%	0	0.0%	2	0.8%
5:00 AM	0	0.0%	3	1.5%	0	0.0%	3	1.1%
6:00 AM	0	0.0%	2	1.0%	0	0.0%	2	0.8%
7:00 AM	1	7.7%	5	2.4%	0	0.0%	6	2.3%
8:00 AM	0	0.0%	0	0.0%	0	0.0%	0	0.0%
9:00 AM	0	0.0%	3	1.5%	0	0.0%	3	1.1%
10:00 AM	0	0.0%	3	1.5%	1	2.1%	4	1.5%
11:00 AM	0	0.0%	6	2.9%	2	4.3%	8	3.0%
Noon	0	0.0%	11	5.3%	2	4.3%	13	4.9%
1:00 PM	0	0.0%	8	3.9%	3	6.4%	11	4.1%
2:00 PM	0	0.0%	17	8.3%	4	8.5%	21	7.9%
3:00 PM	0	0.0%	24	11.7%	5	10.6%	29	10.9%
4:00 PM	1	7.7%	23	11.2%	3	6.4%	27	10.2%
5:00 PM	1	7.7%	15	7.3%	6	12.8%	22	8.3%
6:00 PM	1	7.7%	23	11.2%	2	4.3%	26	9.8%
7:00 PM	3	23.1%	21	10.2%	6	12.8%	30	11.3%
8:00 PM	1	7.7%	8	3.9%	5	10.6%	14	5.3%
9:00 PM	1	7.7%	8	3.9%	2	4.3%	11	4.1%
10:00 PM	0	0.0%	9	4.4%	3	6.4%	12	4.5%
11:00 PM	1	7.7%	9	4.4%	1	2.1%	11	4.1%
<b>Total</b>	<b>13</b>	<b>100.0%</b>	<b>206</b>	<b>100.0%</b>	<b>47</b>	<b>100.0%</b>	<b>266</b>	<b>100.0%</b>

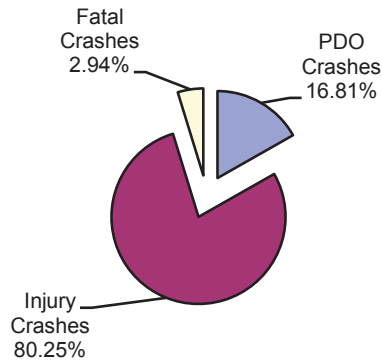
- ▶ The majority of motorcycle crashes occur between 2:00 p.m. and 8:00 p.m. (58.4 percent).
- ▶ The highest number of motorcycle fatalities occurred between 7:00 p.m. and 8:00 p.m.

# MOTORCYCLE & OHV CRASHES

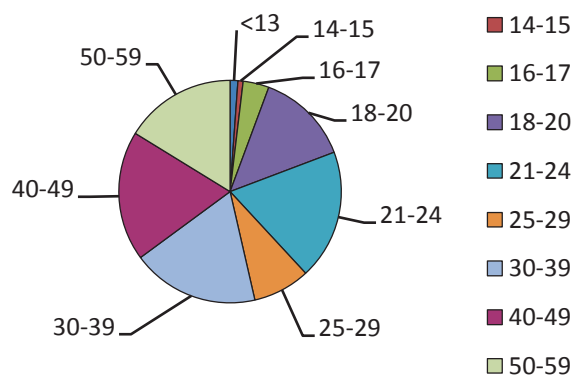
## 2008 Age of Motorcyclists Involved in Crashes

Age	Fatal Crashes		Injury Crashes		Property Damage Only		Total Crashes	
	#	%	#	%	#	%	#	%
<13	1	7.7%	2	0.9%	0	0.0%	3	1.1%
14-15	0	0.0%	1	0.5%	1	2.2%	2	0.7%
16-17	1	7.7%	8	3.7%	1	2.2%	10	3.6%
18-20	0	0.0%	29	13.5%	7	15.2%	36	13.1%
21-24	1	7.7%	41	19.1%	8	17.4%	50	18.2%
25-29	2	15.4%	15	7.0%	5	10.9%	22	8.0%
30-39	2	15.4%	35	16.3%	12	26.1%	49	17.9%
40-49	3	23.1%	41	19.1%	6	13.0%	50	18.2%
50-59	3	23.1%	35	16.3%	5	10.9%	43	15.7%
60+	0	0.0%	8	3.7%	1	2.2%	9	3.3%
<b>Total</b>	<b>13</b>	<b>100.0%</b>	<b>215</b>	<b>100.0%</b>	<b>46</b>	<b>100.0%</b>	<b>274</b>	<b>100.0%</b>

**2008 Motorcycle Crashes**



**2008 Motorcycle Crashes by Age**



- ▶ The highest number of motorcycle crashes occurs in the 21-24 and the 40-49 year old age group with 18.2 percent each.
- ▶ The greatest percentage of fatal crashes was in the 40-59 year old age group with 46.2 percent.

# MOTORCYCLE & OHV CRASHES

## 2008 Gender of Motorcyclists Involved in Crashes

Gender	Fatal		Injury		PDO		Total	
	#	%	#	%	#	%	#	%
Female	0	0.0%	21	10.2%	2	4.3%	23	8.6%
Male	13	100.0%	185	89.8%	43	91.5%	243	91.4%
Unknown	0	0.0%	0	0.0%	2	4.3%	0	0.0%
<b>Total</b>	<b>13</b>	<b>100%</b>	<b>206</b>	<b>100%</b>	<b>47</b>	<b>100%</b>	<b>266</b>	<b>100%</b>

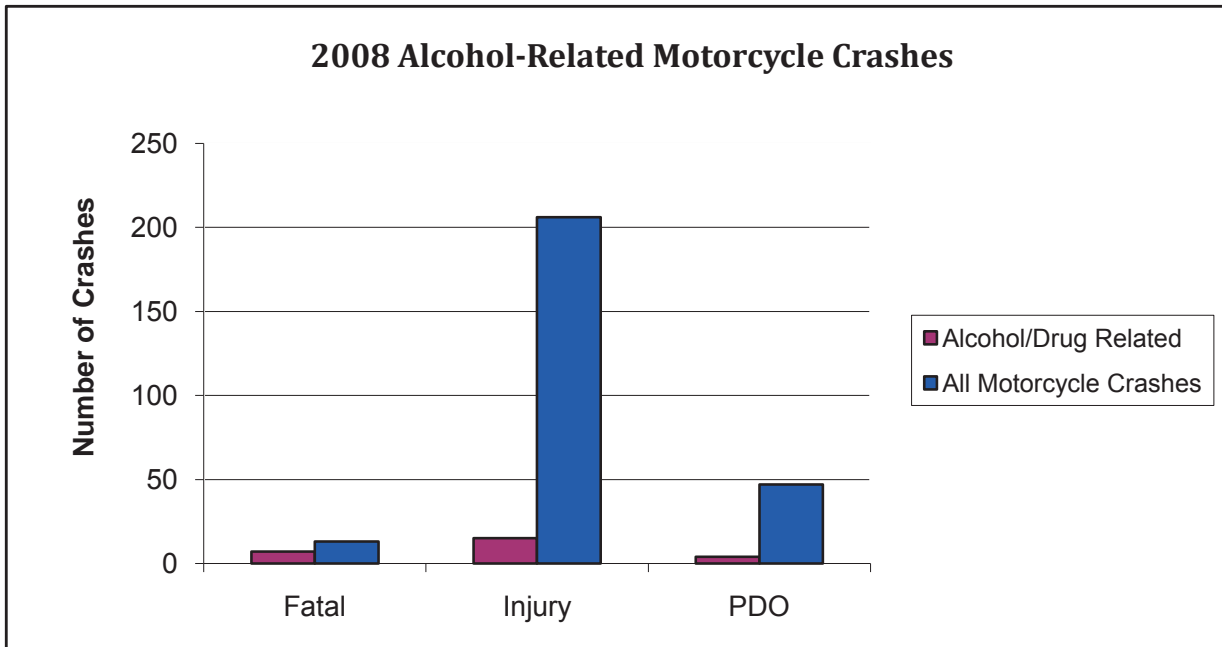
► Males comprised all of the motorcycle fatalities and 91.4 percent of the total crashes in 2008.

## 2008 Helmet Use of Motorcyclists Involved in Crashes

Helmet Use	Fatal		Injury		PDO		Total	
	#		#		#		#	
	Male	Female	Male	Female	Male	Female	Male	Female
Helmet Worn	3	0	60	12	12	0	75	12
Not in Use	10	0	81	5	13	2	104	7
Unknown	0	0	48	0	20	0	68	0
<b>Total</b>	<b>13</b>	<b>0</b>	<b>189</b>	<b>17</b>	<b>45</b>	<b>2</b>	<b>247</b>	<b>19</b>

► Ten of the 13 fatalities were not wearing a helmet.

2008 Alcohol-Related Motorcycle Crashes		
	Alcohol Crashes	All Crashes
Fatal	7	13
Injury	15	206
PDO	4	47
<b>Total</b>	<b>26</b>	<b>266</b>



► Alcohol was involved in 10 percent of all motorcycle crashes, and in 53.8 percent of fatal crashes.

# MOTORCYCLE & OHV CRASHES

## Motorcycle Registration & Safety Course Information by County 2008

Registration		Safety Course Attendance								
County	2008 Registrations	2008 Licensed Drivers	Safety Course Attendance	Age Group 14-16	Age Group 17-18	Age Group 19-24	Age Group 25-34	Age Group 35-49	Age Group 50+	Age UNK
Adams	117	191								
Barnes	639	940								
Benson	94	213								
Billings	18	36								
Bottineau	315	543								
<b>Bowman</b>	215	294	24	2	1	5	5	5	6	0
Burke	108	161								
<b>Burleigh</b>	4,266	7,548	807	53	54	137	194	236	133	0
<b>Cass</b>	6,250	9,822	596	20	17	99	191	185	84	0
Cavalier	174	296								
Dickey	220	371								
Divide	119	173								
Dunn	146	209								
Eddy	81	163								
Emmons	186	300								
Foster	120	257								
Golden Valley	99	140								
<b>Grand Forks</b>	2,790	4,310	326	18	16	68	87	82	55	0
Grant	100	198								
Griggs	109	218								
Hettinger	165	244								
Kidder	68	168								
LaMoure	218	378								
Logan	96	137								
McHenry	275	469								
McIntosh	123	201								
McKenzie	210	328								
McLean	514	873								
<b>Mercer</b>	731	1,131	57	2	8	5	10	21	11	0
Morton	1,635	2,823								
<b>Mountrail</b>	226	338								
Nelson	174	264								
Oliver	87	145								
Pembina	362	658								
Pierce	174	299								
<b>Ramsey</b>	488	815	52	1	3	11	9	18	10	0
Ransom	315	484								
Renville	127	183								
<b>Richland</b>	886	1,341								
<b>Rolette</b>	191	343								
Sargent	197	348								
Sheridan	62	120								
Sioux	20	56								
Slope	20	37								
<b>Stark</b>	1,458	2,306	65	10	2	4	14	25	10	0
Steele	98	135								
<b>Stutsman</b>	1,210	2,028	62	2	4	11	10	23	12	0
Towner	97	189								
Traill	364	628								
Walsh	466	765								
<b>Ward</b>	3,182	4,647	511	25	15	158	111	142	60	0
Wells	235	414								
<b>Williams</b>	1,094	1,630	75	3	5	19	13	23	12	0
<b>Totals</b>	<b>31,734</b>	<b>51,308</b>	<b>2,575</b>	<b>136</b>	<b>125</b>	<b>517</b>	<b>644</b>	<b>760</b>	<b>393</b>	<b>0</b>

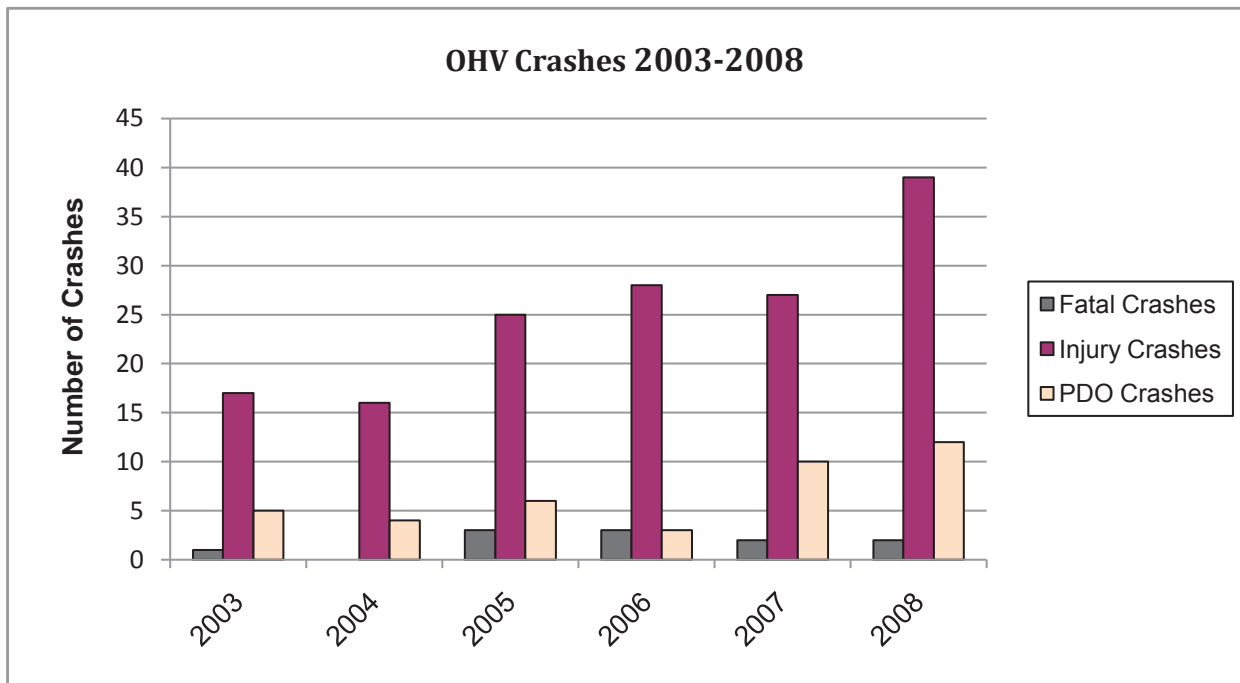
► Safety course attendance records the county in which the course was held, and does not reflect the home county of the individual taking the course. The highlighted lines indicate the counties in which the safety course was held.

► Motorcycle safety course attendance increased by 382 individuals (17.4 percent) in 2008.



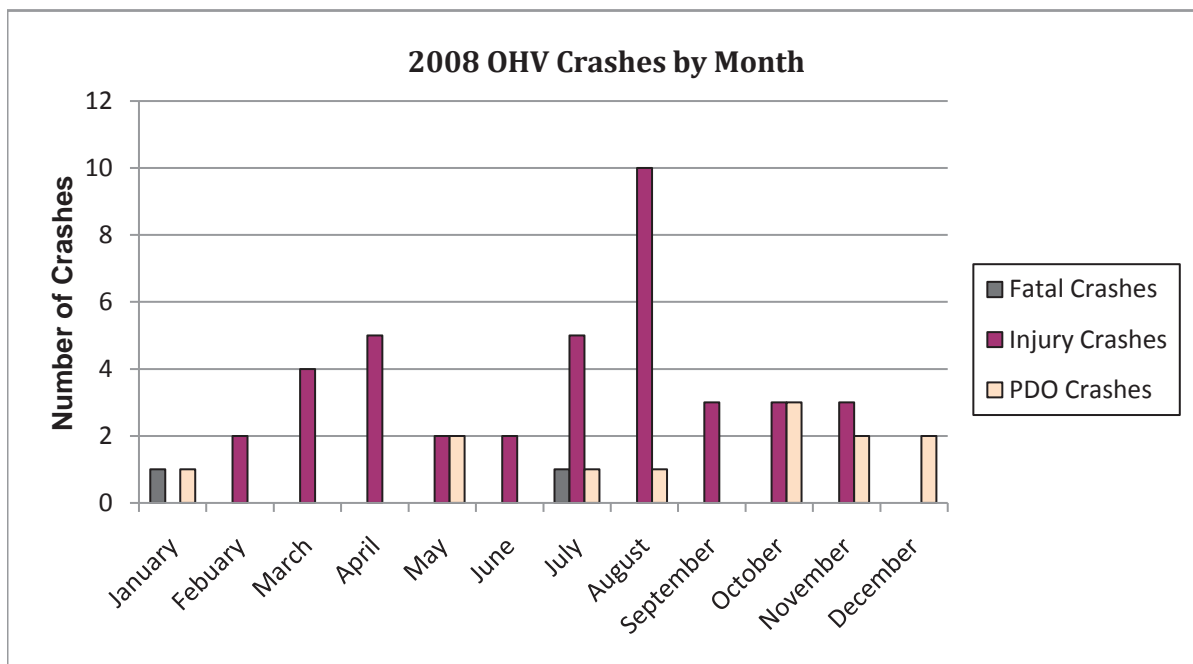
## Off Highway Vehicle (OHV) Crashes 2003 - 2008

Year	Fatal Crashes	Injury Crashes	PDO Crashes	Total
2003	1	17	5	23
2004	0	16	4	20
2005	3	25	6	34
2006	3	28	3	34
2007	2	27	10	39
2008	2	39	12	53
Total	11	152	40	203



- ▶ There was a significant increase of nearly 36 percent of OHV crashes in 2008.
- ▶ The number of OHV crashes has increased by 35.9 percent from 2007 to 2008.

2008 OHV Crashes by Month				
Month	Fatal Crashes	Injury Crashes	PDO Crashes	Total
January	1	0	1	2
February	0	2	0	2
March	0	4	0	4
April	0	5	0	5
May	0	2	2	4
June	0	2	0	2
July	1	5	1	7
August	0	10	1	11
September	0	3	0	3
October	0	3	3	6
November	0	3	2	5
December	0	0	2	2
<b>Total</b>	<b>2</b>	<b>39</b>	<b>12</b>	<b>53</b>

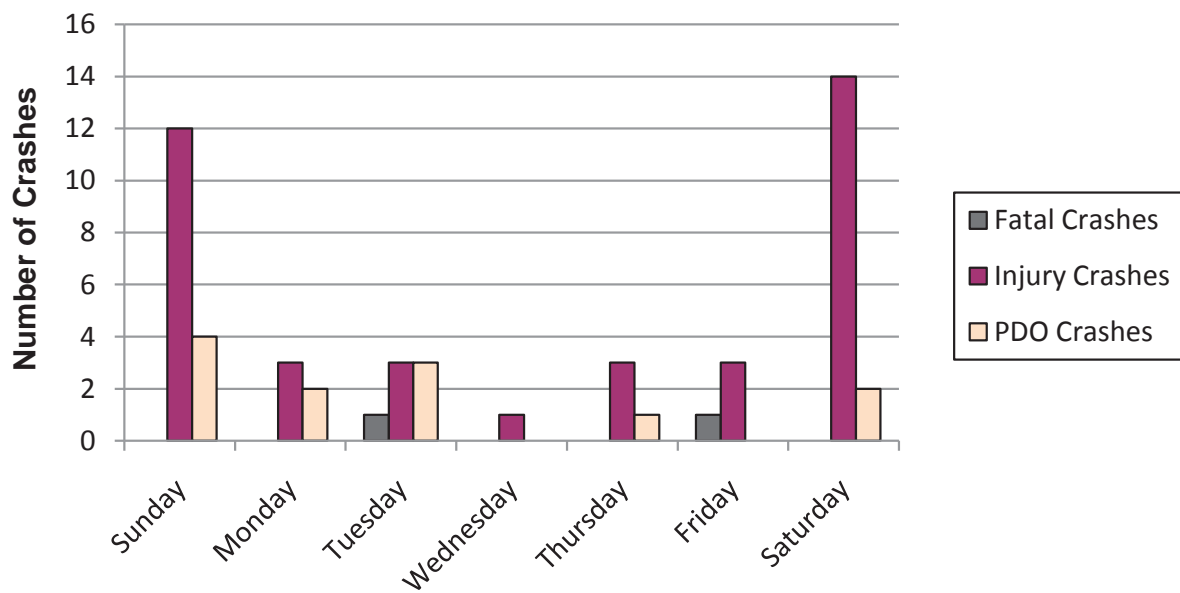


- ▶ In 2008, the highest number of OHV crashes occurred in August.
- ▶ OHV crashes occurred in every month of the year in 2008

## 2008 OHV Crashes by Day of Week

Day of Week	Fatal Crashes	Injury Crashes	PDO Crashes	Total
Sunday	0	12	4	16
Monday	0	3	2	5
Tuesday	1	3	3	7
Wednesday	0	1	0	1
Thursday	0	3	1	4
Friday	1	3	0	4
Saturday	0	14	2	16
<b>Total</b>	<b>2</b>	<b>39</b>	<b>12</b>	<b>53</b>

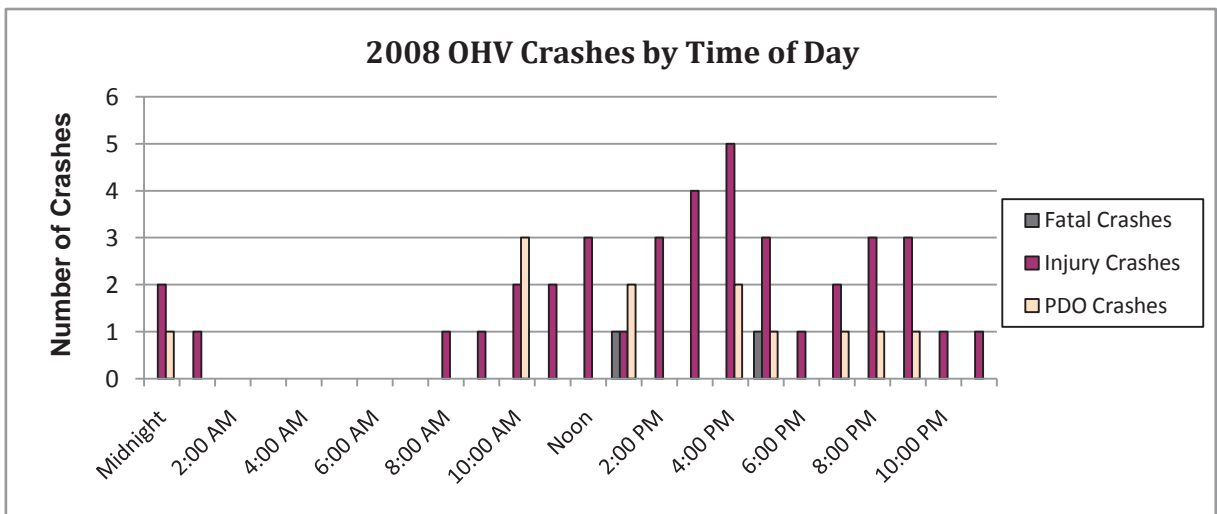
### 2008 OHV Crashes by Day of Week



► Sixty percent of OHV crashes occurred on Saturday and Sunday in 2008.

# MOTORCYCLE & OHV CRASHES

2008 OHV Crashes by Time of Day				
Time	Fatal Crashes	Injury Crashes	PDO Crashes	Total
Midnight	0	2	1	3
1:00 AM	0	1	0	1
2:00 AM	0	0	0	0
3:00 AM	0	0	0	0
4:00 AM	0	0	0	0
5:00 AM	0	0	0	0
6:00 AM	0	0	0	0
7:00 AM	0	0	0	0
8:00 AM	0	1	0	1
9:00 AM	0	1	0	1
10:00 AM	0	2	3	5
11:00 AM	0	2	0	2
Noon	0	3	0	3
1:00 PM	1	1	2	4
2:00 PM	0	3	0	3
3:00 PM	0	4	0	4
4:00 PM	0	5	2	7
5:00 PM	1	3	1	5
6:00 PM	0	1	0	1
7:00 PM	0	2	1	3
8:00 PM	0	3	1	4
9:00 PM	0	3	1	4
10:00 PM	0	1	0	1
11:00 PM	0	1	0	1
<b>Total</b>	<b>2</b>	<b>39</b>	<b>12</b>	<b>53</b>

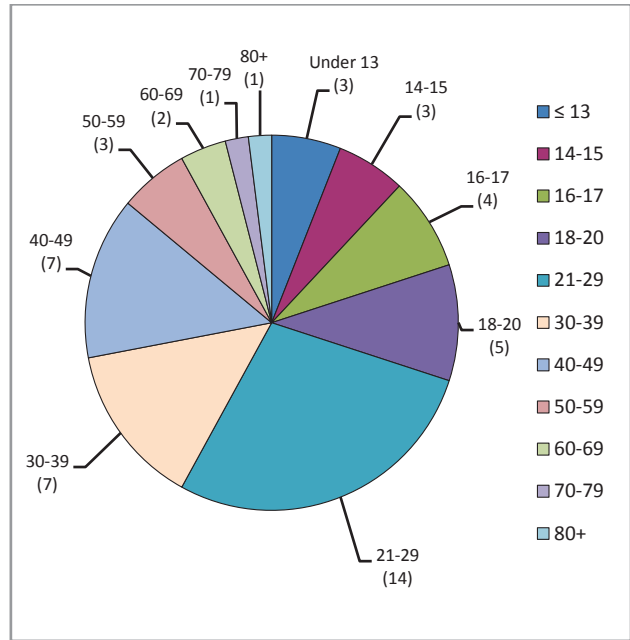


► The greatest number of crashes occurred between 4:00 p.m. and 10:00 p.m. (45.3 percent).

# MOTORCYCLE & OHV CRASHES

## 2008 Age of OHV Operators in Crashes

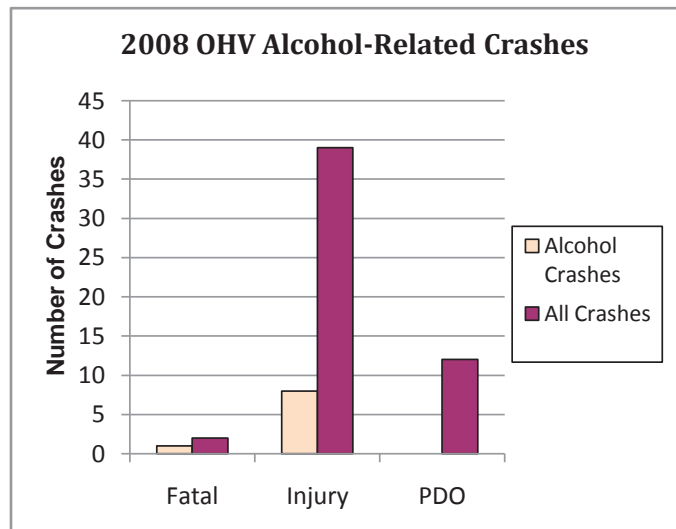
Age	Fatal Crashes	Injury Crashes	PDO Crashes	Total
≤ 13	1	2	0	3
14-15	0	3	0	3
16-17	0	3	1	4
18-20	0	4	1	5
21-29	0	10	4	14
30-39	0	6	1	7
40-49	0	6	1	7
50-59	1	2	0	3
60-69	0	1	1	2
70-79	0	1	0	1
80+	0	1	0	1
<b>Total</b>	<b>2</b>	<b>39</b>	<b>9</b>	<b>50</b>



► Twenty-eight percent of the OHV crashes occurred in the 21-29 year old age group.

## 2008 OHV Alcohol-Related Crashes

	Alcohol Crashes	All Crashes
Fatal	1	2
Injury	8	39
PDO	0	12
<b>Total</b>	<b>9</b>	<b>53</b>



► Alcohol was involved in 17 percent of the OHV crashes in 2008.

SECTION 7

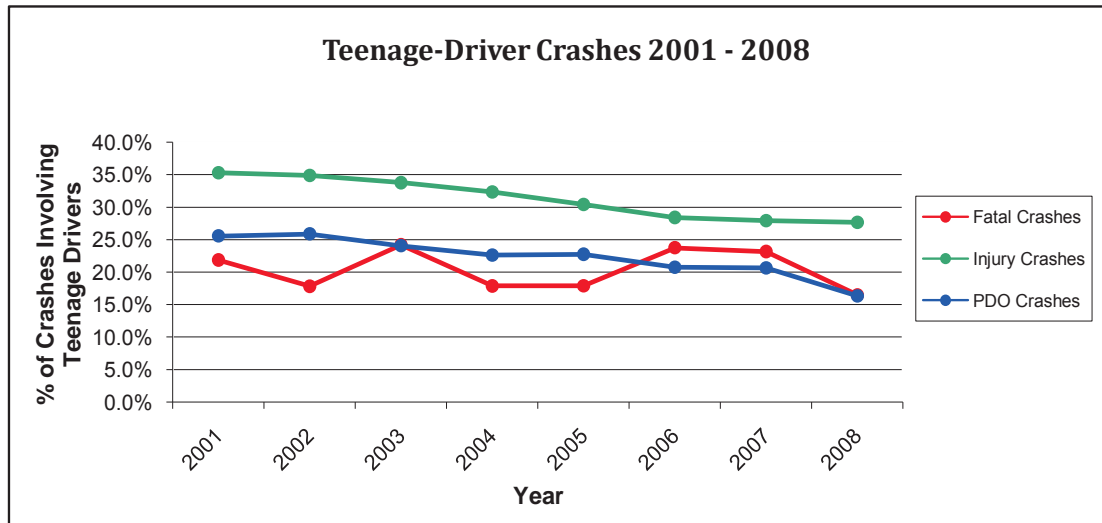
TEENAGE-  
DRIVER  
CRASHES



# TEENAGE-DRIVER CRASHES

## Teenage-Driver Crashes 2001 - 2008

Year	Fatal			Injury			Property Damage Only (PDO)			Total		
	# All Crashes	# Teenage Driver	Percent Involving Teenage Drivers	# All Crashes	# Teenage Driver	Percent Involving Teenage Drivers	# All Crashes	# Teenage Driver	Percent Involving Teenage Drivers	# All Crashes	# All Teenage Driver	Percent Involving Teenage Drivers
2001	96	21	21.9%	3,131	1,105	35.3%	11,544	2,952	25.6%	14,771	4,078	27.6%
2002	84	15	17.9%	3,253	1,135	34.9%	12,790	3,310	25.9%	16,127	4,460	27.7%
2003	95	23	24.2%	3,248	1,097	33.8%	13,226	3,184	24.1%	16,569	4,304	26.0%
2004	95	17	17.9%	2,705	875	32.3%	14,130	3,197	22.6%	16,930	4,089	24.2%
2005	106	19	17.9%	2,751	837	30.4%	12,987	2,955	22.8%	15,844	3,811	24.1%
2006	101	24	23.8%	2,701	767	28.4%	12,292	2,551	20.8%	15,094	3,342	22.1%
2007	95	22	23.2%	3,001	838	27.9%	13,133	2,713	20.7%	16,229	3,573	22.0%
2008	97	16	16.5%	3,062	847	27.7%	16,387	2,678	16.3%	19,546	3,541	18.1%
Total	769	157	20.4%	23,852	7,501	31.3%	106,489	23,540	22.3%	80,241	31,198	24.0%

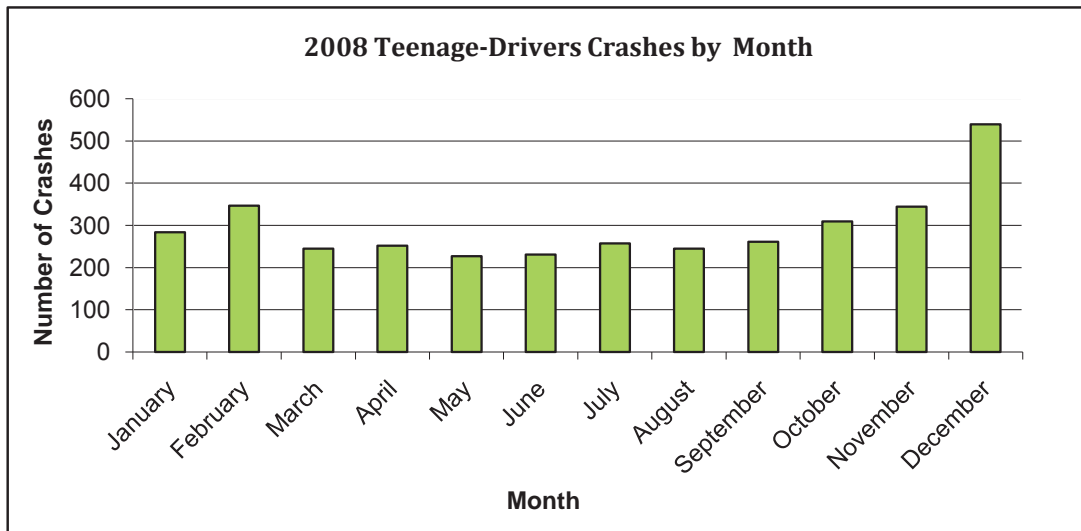


- ▶ According to 2000 U.S. Census Data, teens make up 11.4 percent of the population in North Dakota. They accounted for 18.1 percent of the crashes in 2008.

# TEENAGE-DRIVER CRASHES

## 2008 Teenage-Driver Crashes by Month

Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		#	Rate per Day	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	31	1	0.03	53	1.7	230	7.4	284	9.2
February	28	2	0.07	78	2.8	267	9.5	347	12.4
March	31	0	0.00	58	1.9	187	6.0	245	7.9
April	30	2	0.07	72	2.4	178	5.9	252	8.4
May	31	0	0.00	67	2.2	160	5.2	227	7.3
June	30	2	0.07	57	1.9	172	5.7	231	7.7
July	31	1	0.03	77	2.5	179	5.8	257	8.3
August	31	0	0.00	81	2.6	164	5.3	245	7.9
September	30	2	0.07	67	2.2	192	6.4	261	8.7
October	31	4	0.13	86	2.8	219	7.1	309	10.0
November	30	0	0.00	64	2.1	280	9.3	344	11.5
December	31	2	0.06	87	2.8	450	14.5	539	17.4
<b>Total</b>	<b>365</b>	<b>16</b>	<b>0.04</b>	<b>847</b>	<b>2.3</b>	<b>2,678</b>	<b>7.3</b>	<b>3,541</b>	<b>9.7</b>



- ▶ The highest number of teen driver crashes occurred in December.
- ▶ December 2008 had 17.4 crashes per day compared to 12.4 crashes per day in 2007.

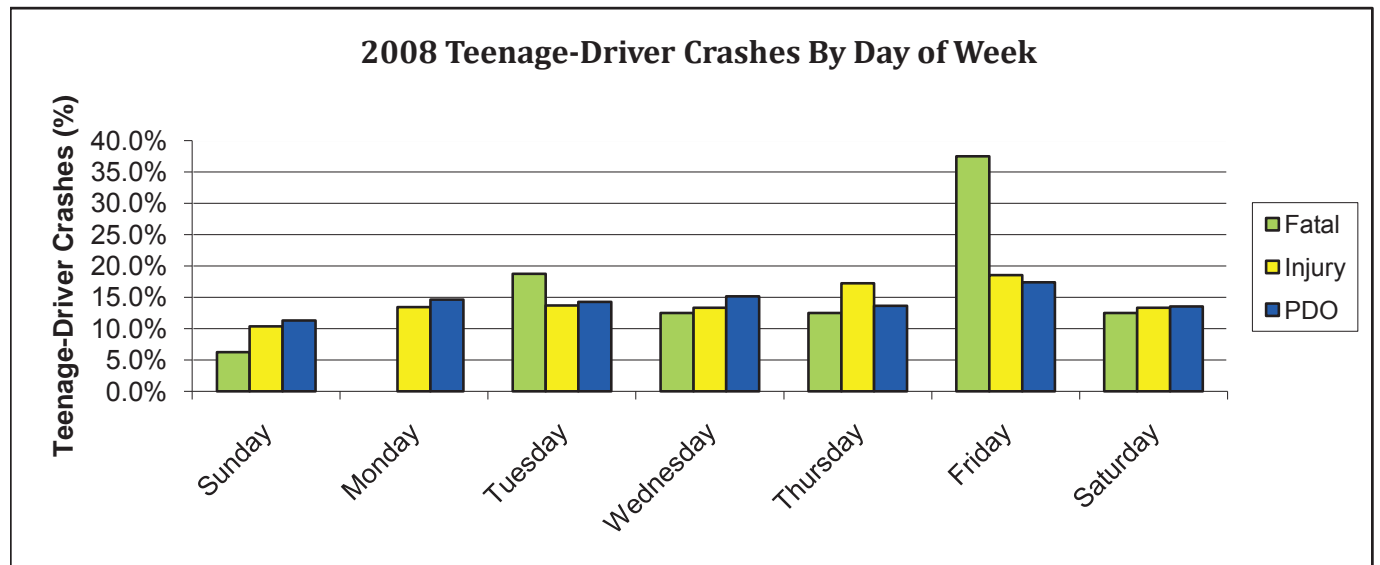


# TEENAGE-DRIVER CRASHES

## 2008 Teenage-Driver Crashes by Day of Week

Day	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
Sunday	1	6.3%	88	10.4%	303	11.3%	392	11.1%
Monday	0	0.0%	114	13.5%	392	14.6%	506	14.3%
Tuesday	3	18.8%	116	13.7%	382	14.3%	501	14.1%
Wednesday	2	12.5%	113	13.3%	406	15.2%	521	14.7%
Thursday	2	12.5%	146	17.2%	366	13.7%	514	14.5%
Friday	6	37.5%	157	18.5%	466	17.4%	629	17.8%
Saturday	2	12.5%	113	13.3%	363	13.6%	478	13.5%
<b>Total</b>	<b>16</b>	<b>100.0%</b>	<b>847</b>	<b>100.0%</b>	<b>2,678</b>	<b>100.0%</b>	<b>3,541</b>	<b>100.0%</b>

## 2008 Teenage-Driver Crashes By Day of Week



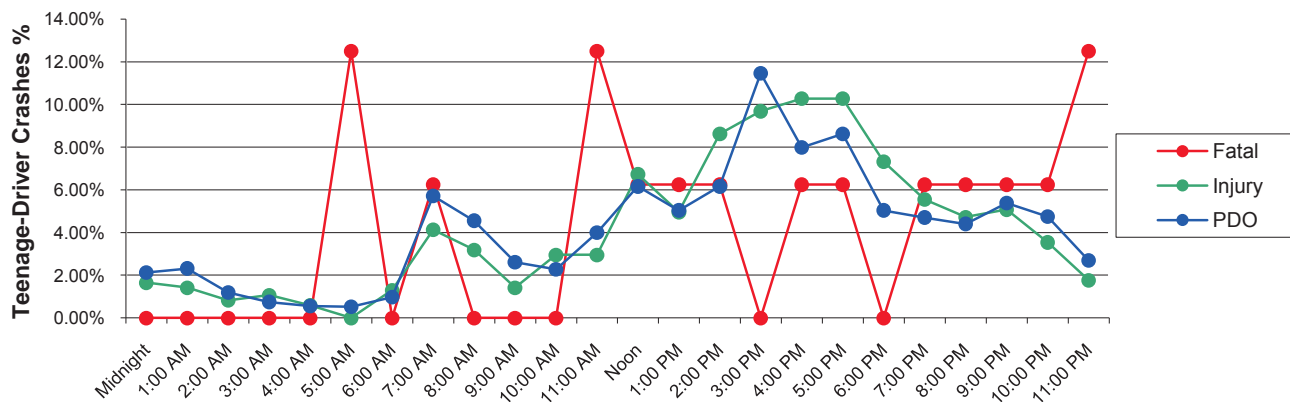
- ▶ The greatest number of crashes involving teen age drivers occurred on Friday. This is consistent with data collected in 2007.
- ▶ 37.5 percent of teen driver fatalities occurred on a Friday.
- ▶ The lowest number of crashes per day involving teen age drivers occurred on Sunday.

# TEENAGE-DRIVER CRASHES

## 2008 Teenage-Driver Crashes by Time of Day

Hour	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
Midnight	0	0.00%	14	1.65%	57	2.13%	71	2.01%
1:00 AM	0	0.00%	12	1.42%	62	2.32%	74	2.09%
2:00 AM	0	0.00%	7	0.83%	32	1.19%	39	1.10%
3:00 AM	0	0.00%	9	1.06%	20	0.75%	29	0.82%
4:00 AM	0	0.00%	5	0.59%	15	0.56%	20	0.56%
5:00 AM	2	12.50%	0	0.00%	14	0.52%	16	0.45%
6:00 AM	0	0.00%	11	1.30%	26	0.97%	37	1.04%
7:00 AM	1	6.25%	35	4.13%	153	5.71%	189	5.34%
8:00 AM	0	0.00%	27	3.19%	122	4.56%	149	4.21%
9:00 AM	0	0.00%	12	1.42%	70	2.61%	82	2.32%
10:00 AM	0	0.00%	25	2.95%	61	2.28%	86	2.43%
11:00 AM	2	12.50%	25	2.95%	107	4.00%	134	3.78%
Noon	1	6.25%	57	6.73%	165	6.16%	223	6.30%
1:00 PM	1	6.25%	42	4.96%	135	5.04%	178	5.03%
2:00 PM	1	6.25%	73	8.62%	165	6.16%	239	6.75%
3:00 PM	0	0.00%	82	9.68%	307	11.46%	389	10.99%
4:00 PM	1	6.25%	87	10.27%	214	7.99%	302	8.53%
5:00 PM	1	6.25%	87	10.27%	231	8.63%	319	9.01%
6:00 PM	0	0.00%	62	7.32%	135	5.04%	197	5.56%
7:00 PM	1	6.25%	47	5.55%	126	4.71%	174	4.91%
8:00 PM	1	6.25%	40	4.72%	118	4.41%	159	4.49%
9:00 PM	1	6.25%	43	5.08%	144	5.38%	188	5.31%
10:00 PM	1	6.25%	30	3.54%	127	4.74%	158	4.46%
11:00 PM	2	12.50%	15	1.77%	72	2.69%	89	2.51%
Total	16	100.00%	847	100.00%	2,678	100.00%	3,541	100.00%

## 2008 Teenage-Driver Crashes by Time of Day



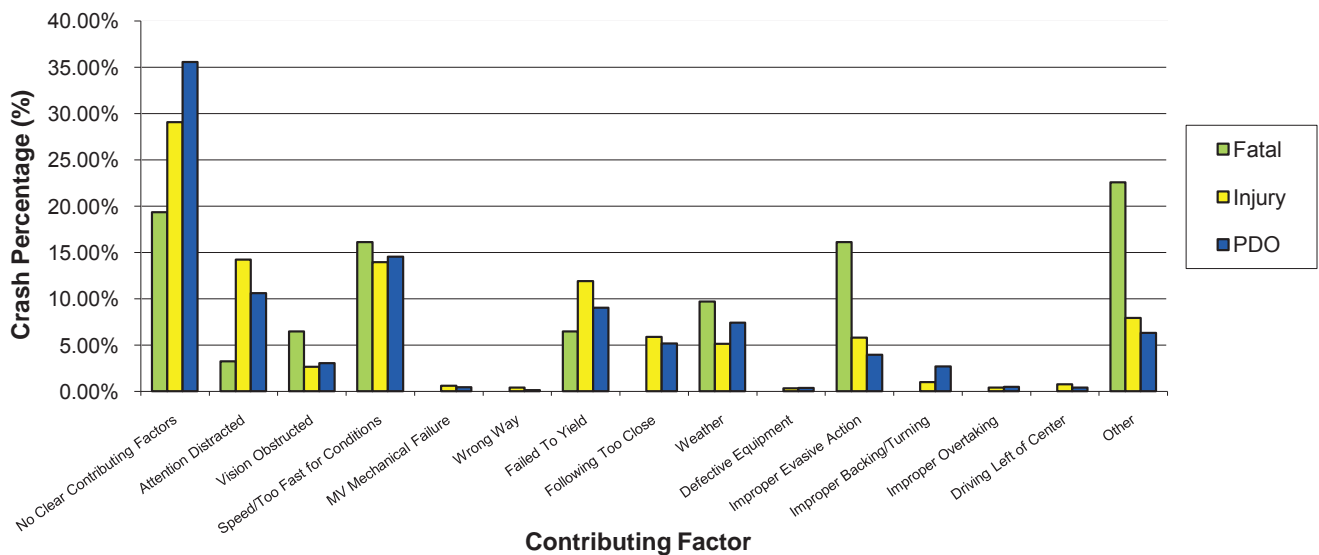
► Over 40 percent of total crashes and injury crashes involving teens occurs in the hours between 2:00 p.m. and 7:00 p.m. (after school hours).

# TEENAGE-DRIVER CRASHES

## 2008 Contributing Factors of Teenage-Driver Crashes

Contributing Factors	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
No Clear Contributing Factors	6	19.35%	352	29.09%	1,311	35.59%	1,669	33.89%
Attention Distracted	1	3.23%	172	14.21%	390	10.59%	563	11.43%
Vision Obstructed	2	6.45%	32	2.64%	112	3.04%	146	2.96%
Speed/Too Fast for Conditions	5	16.13%	169	13.97%	536	14.55%	710	14.42%
MV Mechanical Failure	0	0.00%	7	0.58%	16	0.43%	23	0.47%
Wrong Way	0	0.00%	5	0.41%	4	0.11%	9	0.18%
Failed To Yield	2	6.45%	144	11.90%	332	9.01%	478	9.71%
Following Too Close	0	0.00%	71	5.87%	190	5.16%	261	5.30%
Weather	3	9.68%	62	5.12%	273	7.41%	338	6.86%
Defective Equipment	0	0.00%	4	0.33%	13	0.35%	17	0.35%
Improper Evasive Action	5	16.13%	70	5.79%	145	3.94%	220	4.47%
Improper Backing/Turning	0	0.00%	12	0.99%	98	2.66%	110	2.23%
Improper Overtaking	0	0.00%	5	0.41%	18	0.49%	23	0.47%
Driving Left of Center	0	0.00%	9	0.74%	14	0.38%	23	0.47%
Other	7	22.58%	96	7.93%	232	6.30%	335	6.80%
<b>Total</b>	<b>31</b>	<b>100.00%</b>	<b>1,210</b>	<b>100.00%</b>	<b>3,684</b>	<b>100.00%</b>	<b>4,925</b>	<b>100.00%</b>

2008 Teenage-Driver Contributing Factors



- ▶ When a contributing factor is reported by law enforcement, “Speed/Too Fast for Conditions” and “Attention Distracted” are the top two reasons cited for teen crashes.
- ▶ More than one contributing factor may be reported.

# TEENAGE-DRIVER CRASHES

SECTION 8

OLDER-  
DRIVER  
CRASHES

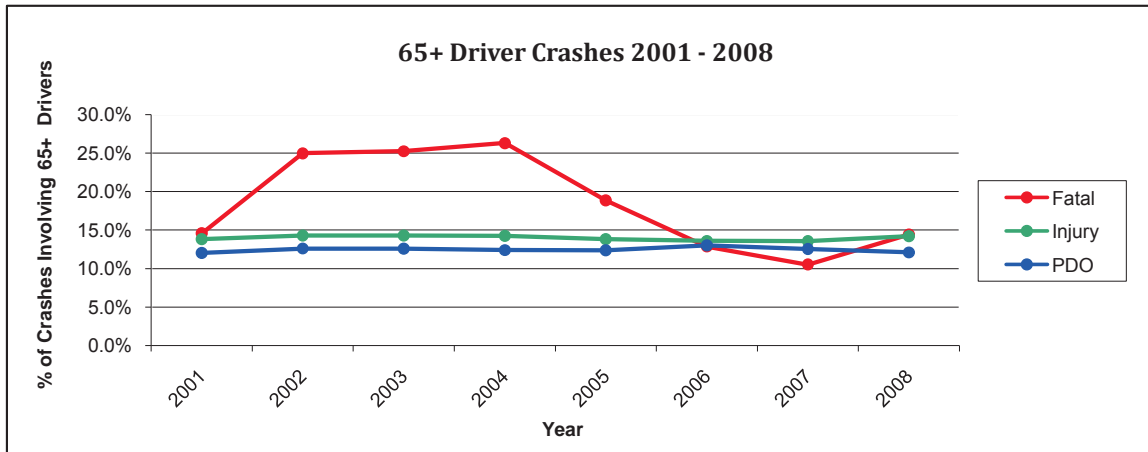
OLDER DRIVER



# OLDER-DRIVER CRASHES

## Age 65+ Driver Crashes 2001 - 2008

Year	Fatal			Injury			Property Damage Only (PDO)			Total		
	# All Fatal Crashes	# 65+ Driver	Percent Involving 65+ Drivers	# All Injury Crashes	# 65+ Driver	Percent Involving 65+ Drivers	# All Crashes	# 65+ Driver	Percent Involving 65+ Drivers	# All Crashes	# All 65+ Driver Crashes	Percent Involving 65+ Drivers
2001	96	14	14.6%	3,131	433	13.8%	11,544	1,391	12.0%	14,771	1,838	12.4%
2002	84	21	25.0%	3,253	465	14.3%	12,790	1,615	12.6%	16,127	2,101	13.0%
2003	95	24	25.3%	3,248	464	14.3%	13,226	1,669	12.6%	16,569	2,157	13.0%
2004	95	25	26.3%	2,705	385	14.2%	14,130	1,755	12.4%	16,930	2,165	12.8%
2005	106	20	18.9%	2,751	380	13.8%	12,987	1,611	12.4%	15,844	2,011	12.7%
2006	101	13	12.9%	2,701	367	13.6%	12,292	1,603	13.0%	15,094	1,983	13.1%
2007	95	10	10.5%	3,001	407	13.6%	13,133	1,650	12.6%	16,229	2,067	12.7%
2008	97	14	14.4%	3,062	435	14.2%	13,228	1,603	12.1%	16,387	2,052	12.5%
Total	769	141	18.5%	23,852	3,336	14.0%	103,330	12,897	12.4%	80,241	10,272	12.8%

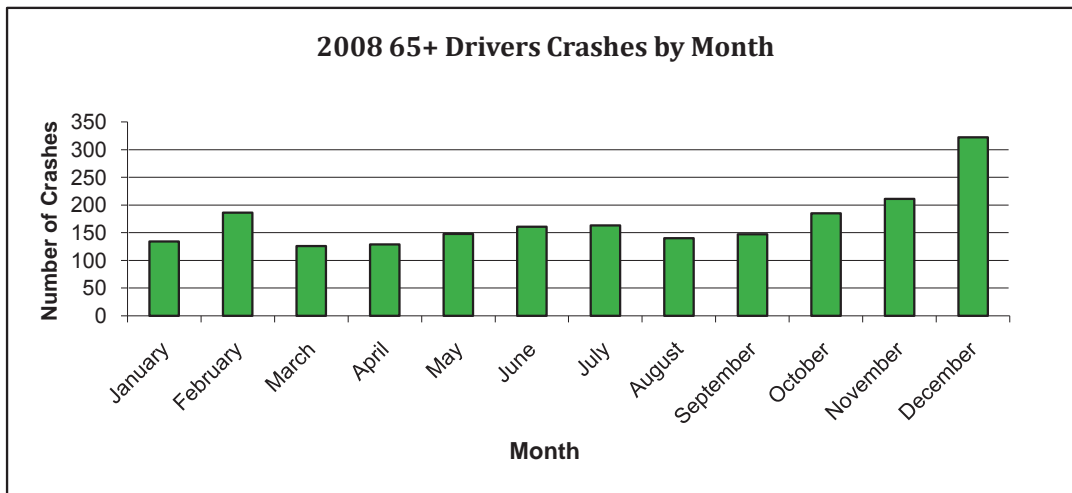


- ▶ The percent of total crashes involving drivers age 65+ has remained stable over the past eight years.
- ▶ There were 80,438 drivers 65+ licensed in North Dakota in 2008. This is nearly 17 percent of the drivers in the state.
- ▶ While they constitute 17 percent of the drivers in North Dakota, in 2008, drivers age 65+ were only involved in 12.5 percent of the crashes.

# OLDER-DRIVER CRASHES

## 2008 Age 65+ Driver Crashes by Month

Month	Days in Month	Fatal		Injury		Property Damage Only (PDO)		Total	
		#	Rate per Day	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	31	0	0.00	28	0.9	106	3.4	134	4.3
February	28	1	0.04	39	1.4	146	5.2	186	6.6
March	31	1	0.03	32	1.0	93	3.0	126	4.1
April	30	0	0.00	28	0.9	101	3.4	129	4.3
May	31	3	0.10	33	1.1	112	3.6	148	4.8
June	30	2	0.07	35	1.2	124	4.1	161	5.4
July	31	2	0.06	37	1.2	124	4.0	163	5.3
August	31	0	0.00	38	1.2	102	3.3	140	4.5
September	30	1	0.03	41	1.4	105	3.5	147	4.9
October	31	2	0.06	32	1.0	151	4.9	185	6.0
November	30	0	0.00	38	1.3	173	5.8	211	7.0
December	31	2	0.06	54	1.7	266	8.6	322	10.4
<b>Total</b>	<b>365</b>	<b>14</b>	<b>0.04</b>	<b>435</b>	<b>1.2</b>	<b>1,603</b>	<b>4.4</b>	<b>2,052</b>	<b>5.6</b>



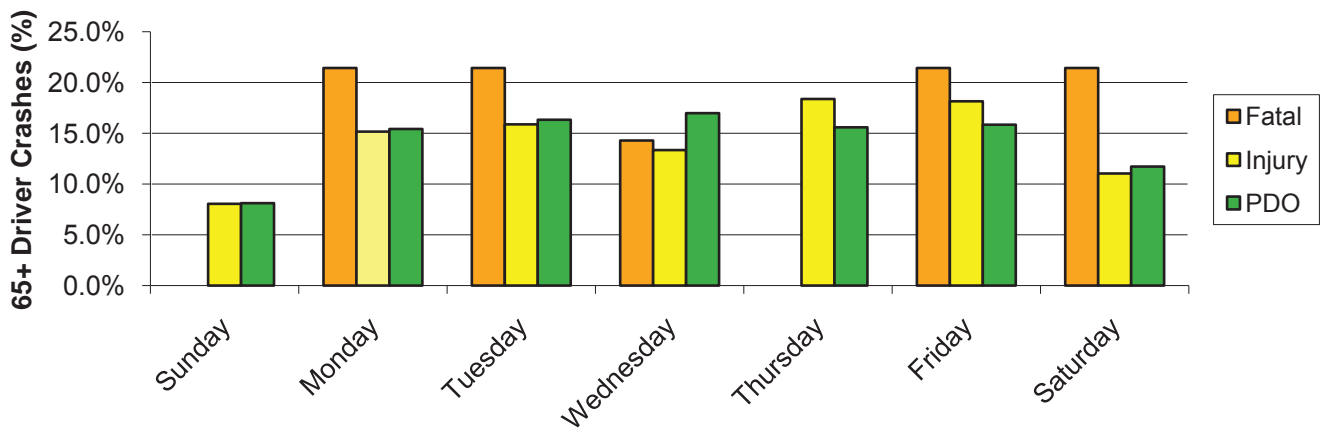
► The highest rate of crashes for those 65+ occurred in December with a rate of 10.4 per day. This is an average increase of nearly four per day from December 2007.

# OLDER-DRIVER CRASHES

## 2008 Age 65+ Driver Crashes by Day of Week

Day	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
Sunday	0	0.0%	35	8.0%	130	8.1%	165	8.0%
Monday	3	21.4%	66	15.2%	247	15.4%	316	15.4%
Tuesday	3	21.4%	69	15.9%	262	16.3%	334	16.3%
Wednesday	2	14.3%	58	13.3%	272	17.0%	332	16.2%
Thursday	0	0.0%	80	18.4%	250	15.6%	330	16.1%
Friday	3	21.4%	79	18.2%	254	15.8%	336	16.4%
Saturday	3	21.4%	48	11.0%	188	11.7%	239	11.6%
<b>Total</b>	<b>14</b>	<b>100.0%</b>	<b>1,603</b>	<b>100.0%</b>	<b>435</b>	<b>100.0%</b>	<b>2,052</b>	<b>100.0%</b>

### 65+ Driver Crashes By Day of Week



- The day of the week has little impact on the number of crashes for drivers 65+. Saturday and Sunday have the lowest number of crashes.

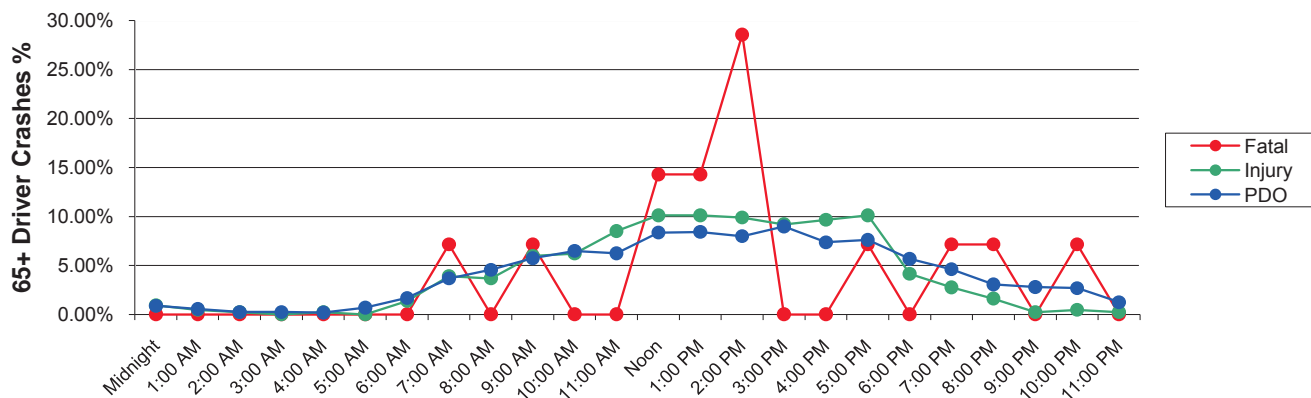


# OLDER-DRIVER CRASHES

## 2008 Age 65+ Driver Crashes by Time of Day

Hour	Fatal		Injury		Property Damage Only (PDO)		Total	
	#	%	#	%	#	%	#	%
Midnight	0	0.00%	4	0.92%	14	0.87%	18	0.88%
1:00 AM	0	0.00%	2	0.46%	9	0.56%	11	0.54%
2:00 AM	0	0.00%	1	0.23%	4	0.25%	5	0.24%
3:00 AM	0	0.00%	0	0.00%	4	0.25%	4	0.19%
4:00 AM	0	0.00%	1	0.23%	3	0.19%	4	0.19%
5:00 AM	0	0.00%	0	0.00%	11	0.69%	11	0.54%
6:00 AM	0	0.00%	6	1.38%	27	1.68%	33	1.61%
7:00 AM	1	7.14%	17	3.91%	59	3.68%	77	3.75%
8:00 AM	0	0.00%	16	3.68%	73	4.55%	89	4.34%
9:00 AM	1	7.14%	26	5.98%	92	5.74%	119	5.80%
10:00 AM	0	0.00%	27	6.21%	104	6.49%	131	6.38%
11:00 AM	0	0.00%	37	8.51%	100	6.24%	137	6.68%
Noon	2	14.29%	44	10.11%	134	8.36%	180	8.77%
1:00 PM	2	14.29%	44	10.11%	135	8.42%	181	8.82%
2:00 PM	4	28.57%	43	9.89%	128	7.99%	175	8.53%
3:00 PM	0	0.00%	40	9.20%	144	8.98%	184	8.97%
4:00 PM	0	0.00%	42	9.66%	118	7.36%	160	7.80%
5:00 PM	1	7.14%	44	10.11%	122	7.61%	167	8.14%
6:00 PM	0	0.00%	18	4.14%	91	5.68%	109	5.31%
7:00 PM	1	7.14%	12	2.76%	74	4.62%	87	4.24%
8:00 PM	1	7.14%	7	1.61%	49	3.06%	57	2.78%
9:00 PM	0	0.00%	1	0.23%	45	2.81%	46	2.24%
10:00 PM	1	7.14%	2	0.46%	43	2.68%	46	2.24%
11:00 PM	0	0.00%	1	0.23%	20	1.25%	21	1.02%
Total	14	100.00%	435	100.00%	1,603	100.00%	2,052	100.00%

### 2008 65+ Driver Crashes by Time of Day



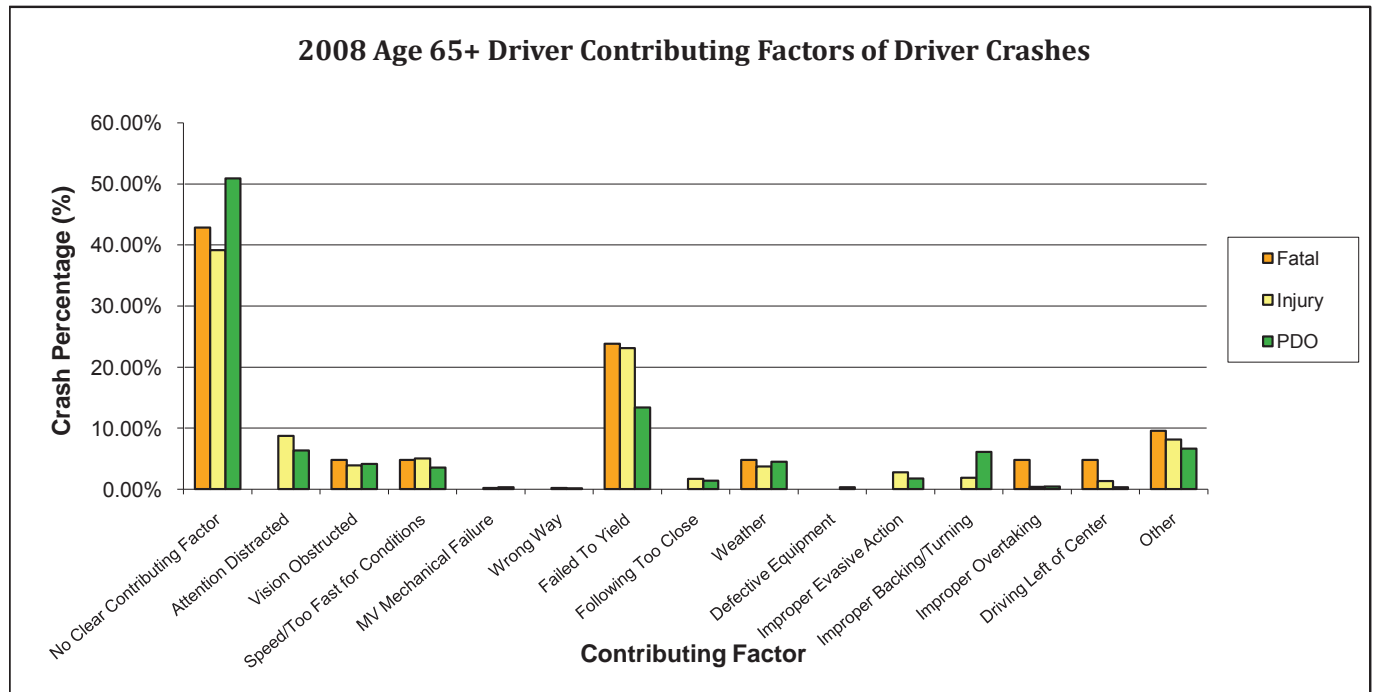
► The greatest percentage of crashes for drivers 65+ occurs in the afternoon, from 12:00 noon – 6:00 p.m. (51.03 percent).

# OLDER-DRIVER CRASHES

## 2008 Age 65+ Contributing Factors of Driver Crashes

Contributing Factors	Fatal		Injury		Property Damage Only (PDO)		Totals	
	#	%	#	%	#	%	#	%
No Clear Contributing Factor	9	42.86%	212	39.19%	932	50.93%	1,153	48.20%
Attention Distracted	0	0.00%	47	8.69%	116	6.34%	163	6.81%
Vision Obstructed	1	4.76%	21	3.88%	75	4.10%	97	4.06%
Speed/Too Fast for Conditions	1	4.76%	27	4.99%	65	3.55%	93	3.89%
MV Mechanical Failure	0	0.00%	1	0.18%	5	0.27%	6	0.25%
Wrong Way	0	0.00%	1	0.18%	2	0.11%	3	0.13%
Failed To Yield	5	23.81%	125	23.11%	245	13.39%	375	15.68%
Following Too Close	0	0.00%	9	1.66%	25	1.37%	34	1.42%
Weather	1	4.76%	20	3.70%	82	4.48%	103	4.31%
Defective Equipment	0	0.00%	0	0.00%	6	0.33%	6	0.25%
Improper Evasive Action	0	0.00%	15	2.77%	32	1.75%	47	1.96%
Improper Backing/Turning	0	0.00%	10	1.85%	111	6.07%	121	5.06%
Improper Overtaking	1	4.76%	2	0.37%	8	0.44%	11	0.46%
Driving Left of Center	1	4.76%	7	1.29%	5	0.27%	13	0.54%
Other	2	9.52%	44	8.13%	121	6.61%	167	6.98%
<b>Total</b>	<b>21</b>	<b>100.00%</b>	<b>541</b>	<b>100.00%</b>	<b>1,830</b>	<b>100.00%</b>	<b>2,392</b>	<b>100.00%</b>

### 2008 Age 65+ Driver Contributing Factors of Driver Crashes



► When a contributing factor is reported by law enforcement, “Failure to Yield” is the top reason cited.



## SECTION 9

# EMS



## Emergency Medical Service

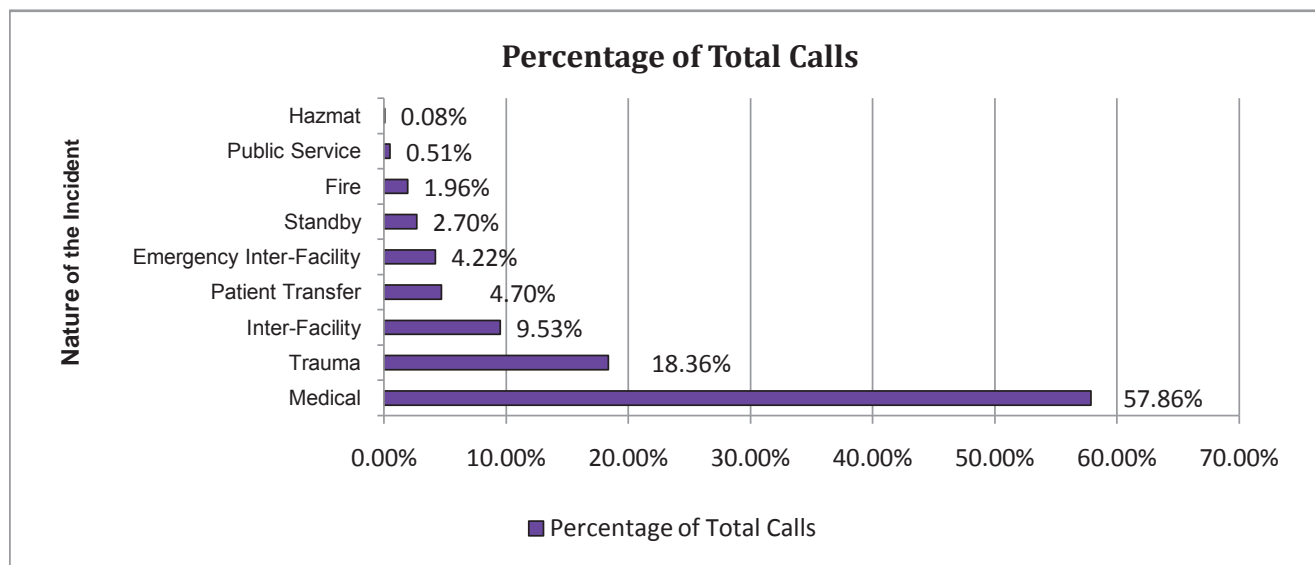
Rural crashes are a significant challenge in North Dakota in terms of assuring timely access to Emergency Medical Services (EMS). In the minutes following a crash that results in traumatic injury, it is vital that the victim(s) receive timely and expert care to increase survivability of the crash.

This EMS data reflects EMS response to all emergencies in the state, not just motor vehicle crashes. This data is for the period from October 1, 2007 to September 30, 2008.

EMS Incident Nature Summary	
Incident Nature	Percent of Incidents
Medical	57.86%
Trauma	18.36%
Inter-Facility	9.53%
Patient Transfer	4.70%
Emergency Inter-Facility	4.22%
Standby	2.70%
Fire	1.96%
Public Service	0.51%
Hazmat	0.08%
Total	99.92%

► The majority of EMS calls are a result of a medical condition.

FFY 2007-2008



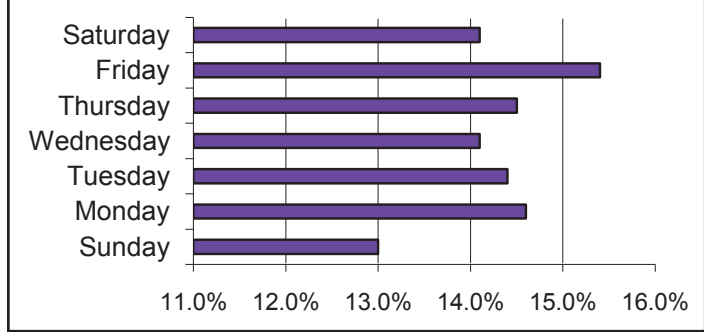
FFY 2007-2008

## Percentage of Calls by Day of Week

Day	Percentage
Sunday	13.0%
Monday	14.6%
Tuesday	14.4%
Wednesday	14.1%
Thursday	14.5%
Friday	15.4%
Saturday	14.1%

FFY 2007-2008

## Percentage of Calls by Day of Week



FFY 2007-2008

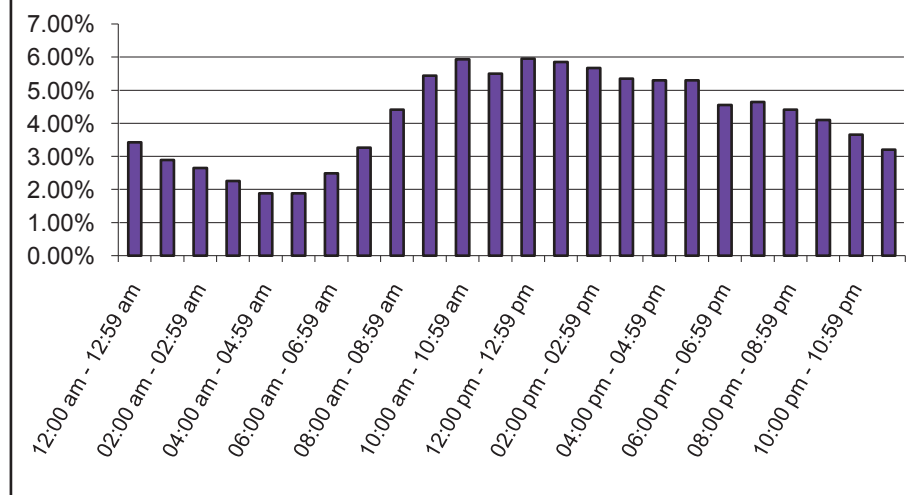
- ▶ EMS calls are fairly similar when compared by day of week, with the number of calls slightly higher on Fridays.
- ▶ There is little change in percentages from 2006 and 2007.

## Percentage of Calls by Hour of Day

Hour	% of Calls
12:00 am - 12:59 am	3.42%
01:00 am - 01:59 am	2.89%
02:00 am - 02:59 am	2.65%
03:00 am - 03:59 am	2.26%
04:00 am - 04:59 am	1.88%
05:00 am - 05:59 am	1.88%
06:00 am - 06:59 am	2.49%
07:00 am - 07:59 am	3.26%
08:00 am - 08:59 am	4.41%
09:00 am - 09:59 am	5.44%
10:00 am - 10:59 am	5.93%
11:00 am - 11:59 am	5.50%
12:00 pm - 12:59 pm	5.95%
01:00 pm - 01:59 pm	5.85%
02:00 pm - 02:59 pm	5.67%
03:00 pm - 03:59 pm	5.35%
04:00 pm - 04:59 pm	5.30%
05:00 pm - 05:59 pm	5.30%
06:00 pm - 06:59 pm	4.55%
07:00 pm - 07:59 pm	4.64%
08:00 pm - 08:59 pm	4.41%
09:00 pm - 09:59 pm	4.10%
10:00 pm - 10:59 pm	3.66%
11:00 pm - 11:59 pm	3.20%
Total	100.00%

FFY 2007-2008

## Percentage of Calls by Hour of Day

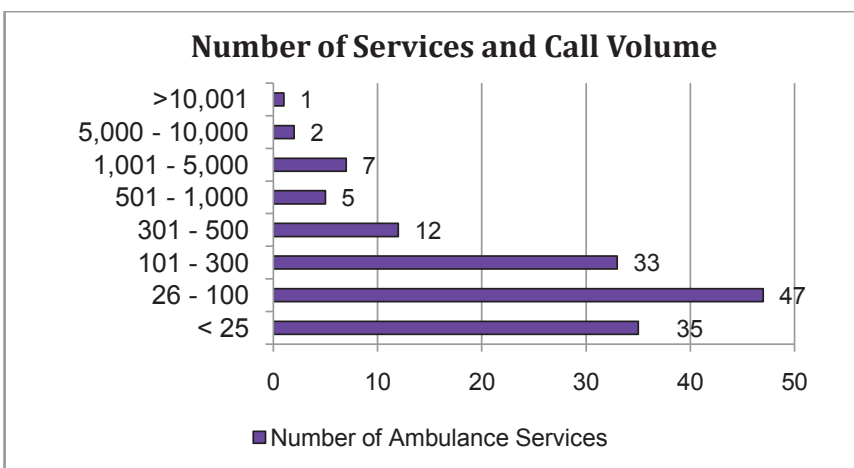


FFY 2007-2008

- ▶ The fewest calls occur between 3:00 a.m. and 6:00 a.m.

Number of Services and Call Volume	
No. of Calls	No. of Services
< 25	35
26 - 100	47
101 - 300	33
301 - 500	12
501 - 1,000	5
1,001 - 5,000	7
5,000 - 10,000	2
>10,001	1

FFY 2007-2008



FFY 2007-2008

- ▶ There were 35 ambulance services that answered less than 25 calls in this time period.
- ▶ The greatest number of ambulances services received between 26-100 calls in this time period.

Average Response Time	
	Minutes
Frontier	11.48
Rural	10.52
Urban	7.91

FFY 2007-2008

- ▶ This table depicts the average response time for EMS calls when comparing the amount of time between EMS dispatch time and arrival time.
- ▶ Urban counties include Ward, Burleigh, Grand Forks, and Cass.
- ▶ Rural counties include Williams, Stark, Mercer, Morton, Rolette, Ramsey, Walsh, Pembina, Traill, Stutsman, Barnes, Ransom, and Richland.
- ▶ Frontier counties are those with a population of fewer than six people per square mile. The balance of North Dakota counties are considered frontier.

- ▶ Traffic crashes accounted for 5.56 percent of the dispatch complaints.

Dispatch Complaints	
Top 5 Dispatch Complaints	Percentage
Other	30.88%
Fall Victim	7.69%
Traffic Crash	5.56%
Unconscious, Fainting, Syncope	3.27%
Abdominal Pain	2.78%

FFY 2007-2008

## Ambulance Calls by Age

Age	% Calls	ND Census Data
Under 5	2.27%	6.10%
5 - 9	0.76%	6.70%
10 - 14	1.42%	7.40%
15 - 19	4.41%	8.30%
20 - 24	5.30%	7.90%
25 - 34	8.03%	12.00%
35 - 44	8.57%	15.30%
45 - 54	11.29%	13.30%
55 - 59	5.47%	4.50%
60 - 64	5.45%	3.80%
65 - 74	11.11%	7.10%
75 - 84	14.99%	5.30%
85+	12.65%	2.30%
Unknown	8.30%	

FFY 2007-2008

## Top 10 Call Volumes by Location

Incident Location	Frequency
Residence	39.20%
Acute Care Facility	24.00%
Traffic Ways	8.31%
Public Place	6.74%
Extended Care Facility	6.62%
Clinic/Dr's Office	2.64%
Office/Business	2.59%
Not Provided	1.97%
Health Care Facility	1.48%

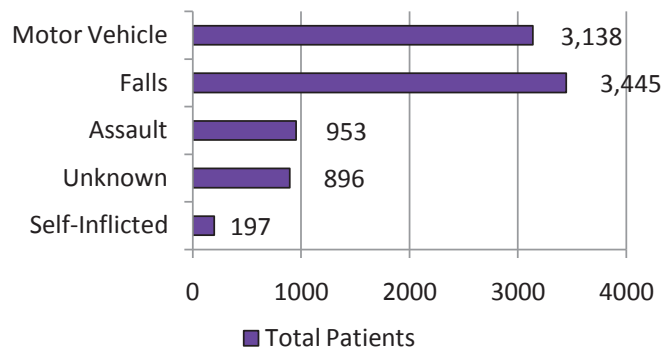
FFY 2007-2008

## Top 5 Mechanisms of Injury for Trauma Calls

	Total Calls
Self-Inflicted	197
Unknown	896
Assault	953
Falls	3,445
Motor Vehicle	3,138

FFY 2007-2008

## Top 5 Mechanisms for Trauma Calls



FFY 2007-2008

- Motor vehicle calls were the second highest mechanism for trauma calls.



# GLOSSARY



**Alcohol and Other Drug-related Crash:** A crash in which the investigating officer coded Alcohol/Other Drug Involvement (ADI) as “Alcohol Present,” or “Other Drug Present” or “Alcohol and Other Drug Present” or coded Driver Condition as “Had Been Drinking” or “Illegal Drug Use.”

**Alcohol and Other Drug-related Fatal Crash:** A crash resulting in one or more deaths and in which the drug/alcohol test was positive (blood or breath) for any driver, pedestrian, or pedalcyclist involved in the crash. Alcohol and other drug-related fatal crash information is obtained from the Fatal Analysis Reporting System (FARS) database.

**BAC:** Blood alcohol content.

**Crash Occupant:** A person who is involved in a crash, including motor vehicle occupants, motorcyclists, pedestrians and pedalcyclists.

**Collectors:** In rural areas, routes serving intra-county rather than statewide travel. In urban areas, streets providing access to neighborhoods and direct access to arterial.

**Contributing Factor:** The circumstances reported by the investigating officer surrounding a crash that contributed to the crash or the crash severity. Examples are “Attention Distracted,” “Speed,” and “Failed to Yield.” A contributing factor is coded for each vehicle involved in the crash. The officer may record no contributing factor or up to two different contributing factors.

**CSS:** Child safety seat.

**Evident Injury:** Any injury, other than a fatal injury, that is easily seen or is obvious.

**Fatal Crash:** A motor vehicle crash on public roadways resulting in one or more deaths. The death must occur within 30 days of the crash.

**Incapacitating Injury:** Any injury, other than a fatal injury, which prevents the injured person from walking,

driving, or normally continuing the activities the person was capable of performing before the injury occurred. Often defined as “needing help from the scene.”

**Injury Crash:** A crash in which one or more persons sustained a possible injury, probable injury or an incapacitating injury as recorded by the investigating officer.

**Interstates:** Limited-access, divided facilities of at least four lanes, designated by the FHWA as part of the Interstate System.

**Local Streets and Roads:** Streets, whose primary purpose is feeding higher-order systems providing direct access with little or no through traffic.

**Minor Arterial:** Streets and highways linking cities and larger towns in rural area in distributing trips to small geographic areas in urban areas (not penetrating identifiable neighborhoods).

**Motorcycle Crash:** A crash involving one or more motorcycles.

**Out-of-State Driver:** A driver licensed from a state other than North Dakota who is involved in a crash.

**Pedalcycle:** A vehicle operated solely by pedals and propelled by human power. This includes bicycle, tricycle, unicycle, sidecar or trailer attached to any of the above listed devices.

**PDO:** Property Damage Only crash.