Overview of Montana's Impaired Driving Problem

Updated August 2011

In 2009, with an alcohol-impaired fatality rate of 0.74 per 100 million vehicle miles traveled, Montana had the second highest alcohol-impaired fatality rate in the nation (South Carolina was higher with a rate of 0.77). This is double the national rate of 0.37[1]. Preliminary 2010 results show that the alcohol-related fatality rate is 0.82 per 100 million vehicle miles traveled, compared to 0.84 in 2008[2].

It is important to note the difference between the terms alcohol-*impaired* and alcohol-*related*. Alcohol-*impaired* crashes or fatalities are defined as crashes or fatalities that involve at least one driver or motorcycle operator with a blood alcohol content (BAC) of 0.08 grams per deciliter (g/dL) or higher. A crash, fatality or injury is alcohol-*related* if at least one driver or non-occupant (such as a pedestrian or pedalcyclist) involved in the crash is determined to have a BAC of 0.01 g/dL or higher OR if police indicate on the accident report that there is evidence of alcohol present. This does not necessarily mean that a driver or non-occupant was tested for alcohol, nor does it indicate that a crash, fatality or injury was caused by the presence of alcohol.

Results of a study conducted by the University of Montana's Bureau of Business and Economic Research, released in 2009[3], show that alcohol abuse costs the state's economy more than half a billion dollars per year in lost wages and productivity, alcohol treatment costs, medical costs, and other public and private spending. Of that number, $49.1 million was spent on "extra police, judges and prison cells needed to protect citizens and enforce the laws that are broken because of the impairing impacts of alcohol." A subsequent study, released in January 2010[4], noted that the addition of alcohol related crashes with injuries represent an additional $131 million, bringing the total economic cost of alcohol abuse to $642 million.

The Montana Supreme Court provided the following misdemeanor and felony case filing data for 2010:

STATUTE	DESCRIPTION	2010 CHARGES FILED
45-5-624(1) [1]	Possessing Intoxicating Substances While Under The Age Of 21 (Under Age 18) - 1st Offense	2149
45-5-624(1) [2]	Possessing Intoxicating Substances While Under The Age Of 21 (Under Age 18) - 2nd Offense	220
45-5-624(1) [3]	Possessing Intoxicating Substances While Under The Age Of 21 (Under Age 18) - 3rd Offense	143
45-5-624(1) [4]	Possessing Intoxicating Substances While Under The Age Of 21 (Over Age 18) - 1st Offense	2795
45-5-624(1) [5]	Possessing Intoxicating Substances While Under The Age Of 21 (Over Age 18) - 2nd Offense	401
45-5-624(1) [6]	Possessing Intoxicating Substances While Under Age Of 21 (Over Age 18) - 3rd Or Subsequent Offense	355
45-5-624(4)	Attempting To Purchase An Intoxicating Substance Under The Age Of 21	14
61-8-401(1)(a) [1st]	Driving Under The Influence Of Alcohol - 1st Offense	5904
61-8-401(1)(a) [2nd]	Driving Under The Influence Of Alcohol - 2nd Offense	1241
61-8-401(1)(a) [3rd]	Driving Under The Influence Of Alcohol - 3rd Offense	306
61-8-401(1)(a) [4th+]	Driving Under The Influence Of Alcohol - 4th Or Subsequent Offense	1150
61-8-401(1)(b) [1st]	Driving Under The Influence Of Any Drug (Narcotic, Etc.) - 1st Offense	133
61-8-401(1)(b) [2nd]	Driving Under The Influence Of Any Drug (Narcotic, Etc.) - 2nd Offense	17
61-8-401(1)(b) [3rd]	Driving Under The Influence Of Any Drug (Narcotic, Etc.) - 3rd Offense	3

[1] NHTSA's *State Traffic Safety Information for 2009*: http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/USA%20WEB%20REPORT.HTM.

[2] *Montana Traffic Safety Problem Identification*. Montana Department of Transportation, State Highway Traffic Safety Office, 2011.

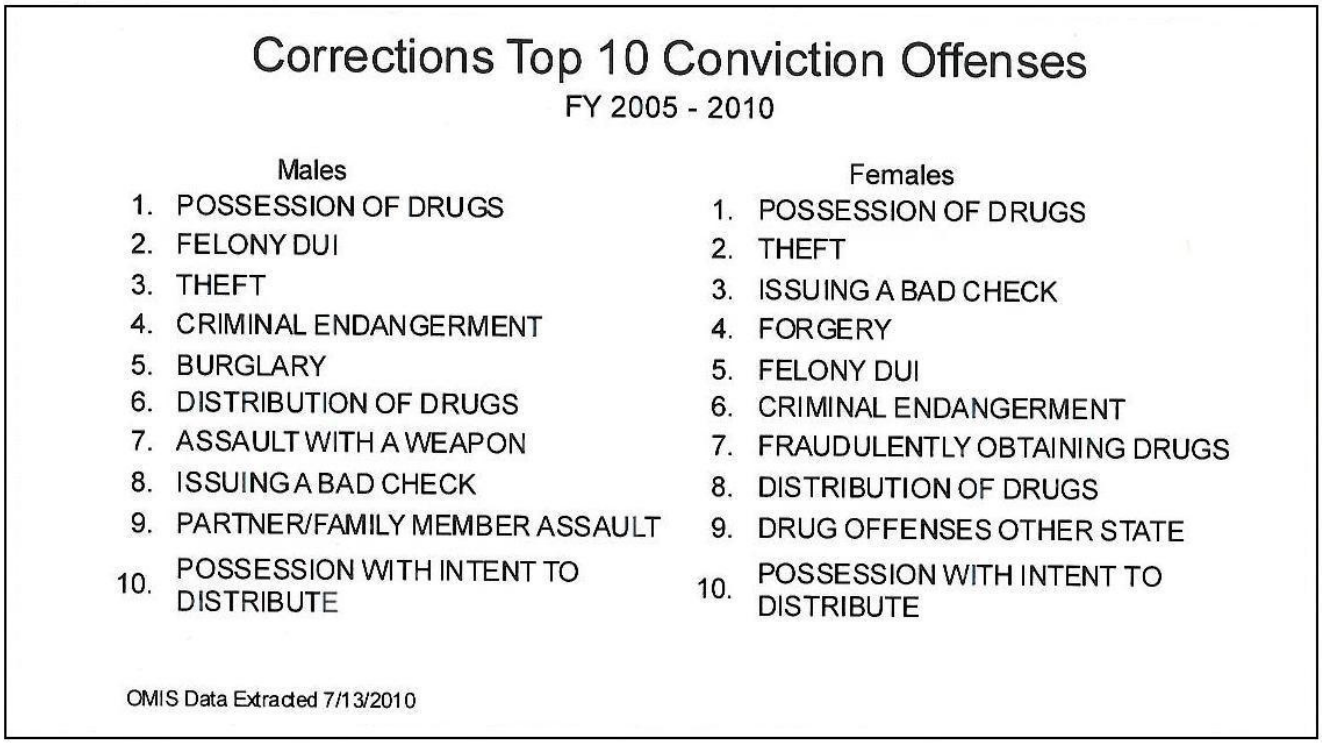
[3] *Economic Impact of Alcohol Abuse*, March 2009, by Dr. Patrick Barkey, Director, Bureau of Business and Economic Research, University of Montana – Missoula. Online at http://www.bber.umt.edu/health/papers.asp

[4] *Economic Costs of Alcohol-Related Vehicle Crashes in Montana*, January 2010, by Steve Seninger, Ph.D. Senior Research Professor, Bureau of Business and Economic Research, University of Montana – Missoula. Online at http://www.bber.umt.edu/pubs/health/CostAlcoholCrashes2010.pdf.

61-8-401(1)(b) [4th+]	Driving Under the Influence of Any Drug (Narcotic, Etc.) - 4th or Subsequent Offense	8
61-8-401(1)(c) [1st]	Driving Under The Influence Of Non-Narcotic Drugs - 1st Offense	17
61-8-401(1)(c) [2nd]	Driving Under The Influence Of Non-Narcotic Drugs - 2nd Offense	3
61-8-401(1)(c) [3rd]	Driving Under The Influence Of Non-Narcotic Drugs - 3rd Offense	0
61-8-401(1)(c) [4th+]	Driving Under the Influence of Non-Narcotic Drugs - 4th Offense	1
61-8-401(1)(d) [1st]	Driving Under The Influence Of Alcohol And Drugs - 1st Offense	58
61-8-401(1)(d) [2nd]	Driving Under The Influence Of Alcohol And Drugs - 2nd Offense	13
61-8-401(1)(d) [3rd]	Driving Under The Influence Of Alcohol And Drugs - 3rd Offense	2
61-8-401(1)(d) [4th+]	Driving Under The Influence Of Alcohol And Drugs - 4th Or Subsequent Offense	19
61-8-406(1)(a) [1st]	Operating With Alcohol Concentration Of 0.08% BAC Or Greater - 1st Offense	1430
61-8-406(1)(a) [2nd]	Operating With Alcohol Concentration Of 0.08% BAC Or Greater - 2nd Offense	142
61-8-406(1)(a) [3rd]	Operating With Alcohol Concentration Of 0.08% BAC Or Greater - 3rd Offense	28
61-8-406(1)(a) [4th]	Operating With Alcohol Concentration Of 0.08% BAC Or Greater - 4th Offense	84
61-8-406(1)(b) [1st]	Operating With Alcohol Concentration Of 0.04% BAC Commercial - 1st Offense	15
61-8-406(1)(b) [2nd]	Operating With Alcohol Concentration Of 0.04% BAC Commercial - 2nd Offense	3
61-8-406(1)(b) [3rd]	Operating With Alcohol Concentration Of 0.04% BAC Commercial - 3rd Offense	1
61-8-410(1) [1st]	Operating With Alcohol Concentration Of 0.02% BAC Under 21 Years Of Age - 1st Offense	263
61-8-410(1) [2nd]	Operating With Alcohol Concentration Of 0.02% BAC Under 21 Years Of Age - 2nd Offense	7
61-8-410(1) [3rd+]	Operating With Alcohol Concentration Of 0.02% BAC Under 21 Years Of Age - 3rd+	2
	Total	**16,927**

The total number of impaired driving charges filed, including those given to drivers under age 21 and commercial drivers, totals 10,850. There were 6,063 Minor in Possession (MIP) charges filed. The Office of the Court Administrator notes that Minor in Possession (MIP) counts may be underreported in the table above because Youth Court has concurrent jurisdiction with the Courts of Limited Jurisdiction on MIPs where the defendant is less than 18 years of age.

According to the Department of Corrections, driving under the influence (DUI) is also one of the top ten felony conviction offenses in Montana, as evidenced by the table below.



Source: http://cor.mt.gov/content/Resources/Reports/2011BiennialReport.pdf

Impaired driving prevention goals

The Montana Department of Transportation (MDT) State Highway Traffic Safety Office (SHTSO) has taken a proactive approach to reducing the incidence of impaired driving in an effort to reduce the alcohol-related fatality rate. MDT has established four goals addressing alcohol that it aims to meet by 2013:

Goal: Reduce Alcohol-Impaired Fatalities

Reduce the three-year average number of fatalities in crashes involving an alcohol-impaired driver or motorcycle operator (BAC 0.08+) from 105 in 2007 to 99 by 2013.

2007	2008	2009	2010	2011	2012	2013
105 *(baseline)*	100	93	80			99 *(goal)*

Note: 2010 data is preliminary until numbers are officially published by NHTSA.

Goal: Reduce the Alcohol-Impaired Fatality Rate

Reduce the three-year average alcohol-impaired (involving a driver or motorcycle operator with BAC 0.08+) fatality rate per 100 million vehicle miles traveled from 0.93 in 2007 to 0.88 by 2013.

2007	2008	2009	2010	2011	2012	2013
0.93 *(baseline)*	0.84	0.84	0.73			0.88 *(goal)*

Note: 2010 data is preliminary until numbers are officially published by NHTSA.

Goal: Reduce Alcohol-Related Fatalities, Total

Reduce the three-year average number of fatalities in crashes involving a driver or motorcycle operator with BAC 0.01+ from 125 in 2007 to 110 by 2013.

2007	2008	2009	2010	2011	2012	2013
125 *(baseline)*	118	111	96			110 *(goal)*

Note: 2010 data is preliminary until numbers are officially published by NHTSA.

Goal: Reduce Alcohol-Related Fatalities, Percent

Reduce the three-year average number of fatalities in crashes involving a driver or motorcycle operator with BAC 0.01+ as a percent of all fatalities from 47.4% in 2007 to 42% by 2013.

2007	2008	2009	2010	2011	2012	2013
47.4% *(baseline)*	45.9%	45.7%	45.1%			42.0% *(goal)*

Note: 2010 data is preliminary until numbers are officially published by NHTSA.

Montana appreciates the vital resources provided by Section 410 grant funds to help meet these impaired driving related goals.

GENERAL TRAFFIC SAFETY DATA

In 2010, there were over 11 billion vehicle miles travelled (VMT) in Montana. VMT is the estimated number of total miles driven by all vehicles on Montana public roads. During the year, 189 fatalities occurred on public roads.

Due to the size and population density of Montana, very few of Montana's vehicle miles travelled occur in an urban environment. A large percentage of traffic is at high speeds and trips tend to involve more time spent on mostly rural roads. Compared to more urban states, a high percentage of miles travelled in Montana are at rural speeds, thus increasing the likelihood of fatal crashes. In 2008 (the most current NHSTA data available), the national urban fatality rate was less than half of the rural fatality rate (0.81 compared to 2.11, respectively). When broken down by fatality location, Montana's 2008 urban and rural fatality rates (0.69 and 2.57) are closer to the national urban and rural fatality rates than the total fatality rate. Since Montana has the highest percentage of rural vehicle miles travelled in the nation, it should be no surprise that Montana has the highest fatality rate in the nation.

The Insurance Institute for Highway Safety (IIHS) released a study during March 2006, "Use and Misuse of Motor Vehicle Crash Death Rates in Assessing Highway Safety Performance", in which they normalized various factors including rural versus urban fatality rates. *They found that Montana moved from #50 to #27 in fatality rate when normalized on urban vs. rural.* So even though NHTSA considered Montana the worst state in 2007 due to our fatality rate, the states are not playing on a level playing field. The IIHS paper notes, "For example, 100 million vehicle miles travelled in the U.S. state of New Jersey, which is relatively urban, do not indicate the same exposure to risk of crash deaths as the same number of miles travelled in Montana, a very rural state."

According to the IIHS, fatality rates are also affected by demographics such as median incomes, school spending per pupil and percentage of population with college degrees. Because median incomes are low and school spending is low, fatality rates would be higher than average in Montana. Seventy percent of the variability in state fatality rates results from rural versus urban and other demographic factors.

EXPOSURE STATISTICS

There are several exposure statistics in the area of traffic safety. These include number and type of vehicles, number of licensed drivers by age and gender, physical road miles, population, and the number of vehicle miles travelled (VMT), which is the estimated number of total miles driven by all vehicles on Montana public roads. Table 1 displays three of the main factors that are used to measure exposure and develop rates for showing crash or injury trends.

Table 1
Crash Exposure By Factors

Year	VMT (100 Million Miles) Calendar Year	Licensed Drivers State Fiscal Year	Registered Motor Vehicles (plus trailers) State Fiscal Year
2001	100.11	683,351	1,135,491
2002	104.86	694,743	1,108,236
2003	108.97	704,509	1,327,909
2004	111.77	712,880	1,351,804
2005	111.27	715,512	1,985,139
2006	112.65	723,976	1,550,713
2007	113.06	735,753	1,560,464
2008	107.82	738,982	1,620,064
2009	110.10	737,964	1,603,332
2010	111.85	743,611	1,576,824
Chg 1 Yr	+1.6%	+0.8%	-1.7%
Chg 5 Yr Ave	+0.8%	+1.8%	-5.2%

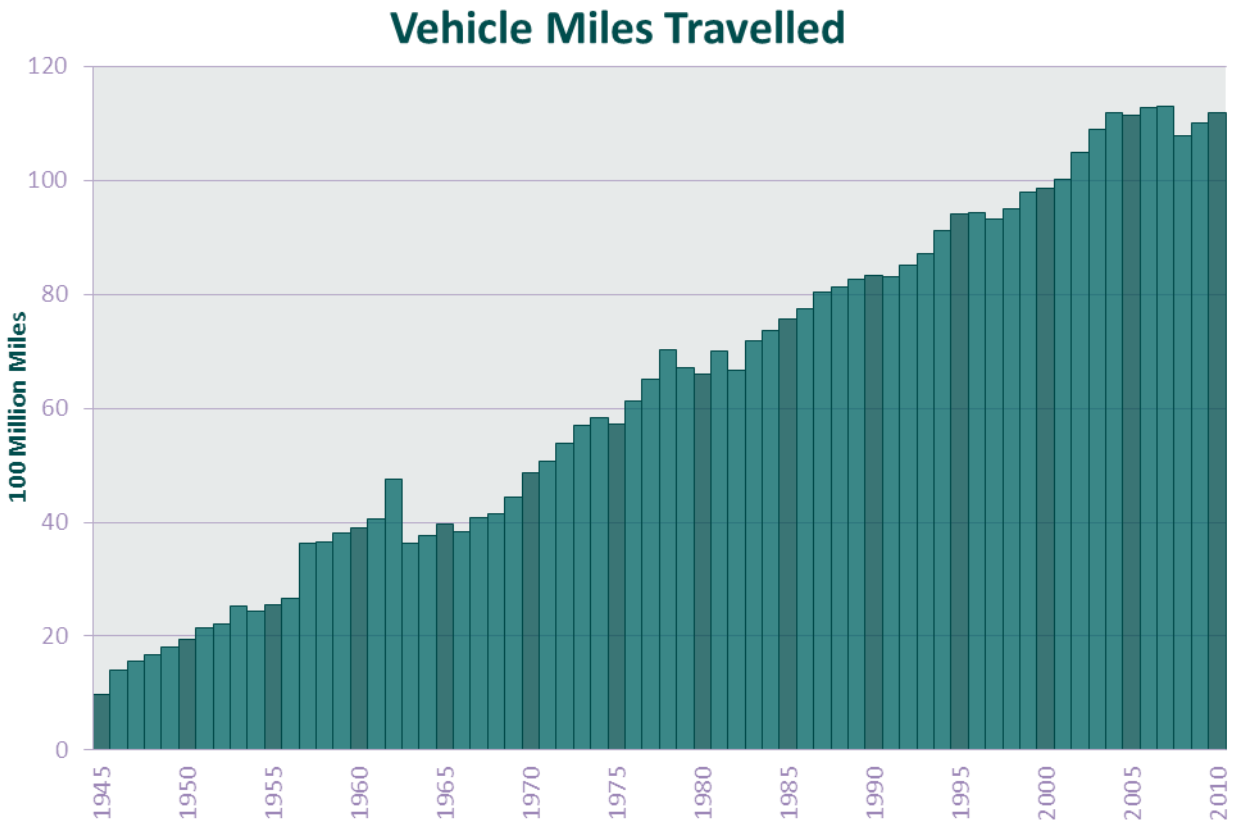
Source: VMT - Montana Department of Transportation - Traffic Data Collection;
Licensed Drivers & Registered Motor Vehicles - Montana Department of Justice - Motor Vehicle Division

Note: The historical (2002-2009) number of registered motor vehicles has been updated to reflect the total number of active vehicle registrations as provided to MDT by DOJ MVD as part of federal reporting.

While the number of registered motor vehicles is included in this table, this information is no longer particularly useful since there are several vehicle types that require only a one time registration. Subsequently, vehicles that are no longer used could appear in the counts.

VMT is the exposure number that appears to have the greatest influence on the amount of traffic crashes that occur in Montana. The annual vehicle miles travelled are shown in Figure 1. These numbers increase almost every year, though there was a decline in 2008. During 1972, the VMT for Montana was 5.4 billion and 395 fatalities occurred. Now in 2010, the VMT has more than doubled to 11.2 billion miles travelled while fatalities have decreased to 189. Even when crash numbers, injuries and fatalities are held stable, gains in rates are made because of increases in exposure.

Figure 1



Source: Montana Department of Transportation - Traffic Data Collection; Fatality Analysis Reporting System

In order to envision the challenges before Montana's citizens in the traffic safety area, the population by age estimate for 2009 is presented on the following page. During 2009, the baby boom population in Montana spans the ages of 44-62. There is a second boom in Montana from age 14-27. The variation in population for some ages is noteworthy. It is interesting to note that there are more than 15,000 Montana citizens for each of the ages nineteen, twenty-one to twenty-four, forty-nine and fifty-one to fifty-five; but there aren't even 10,000 thirty-three year olds. Also, there are over 20,000 people aged eighty-five and above in Montana.

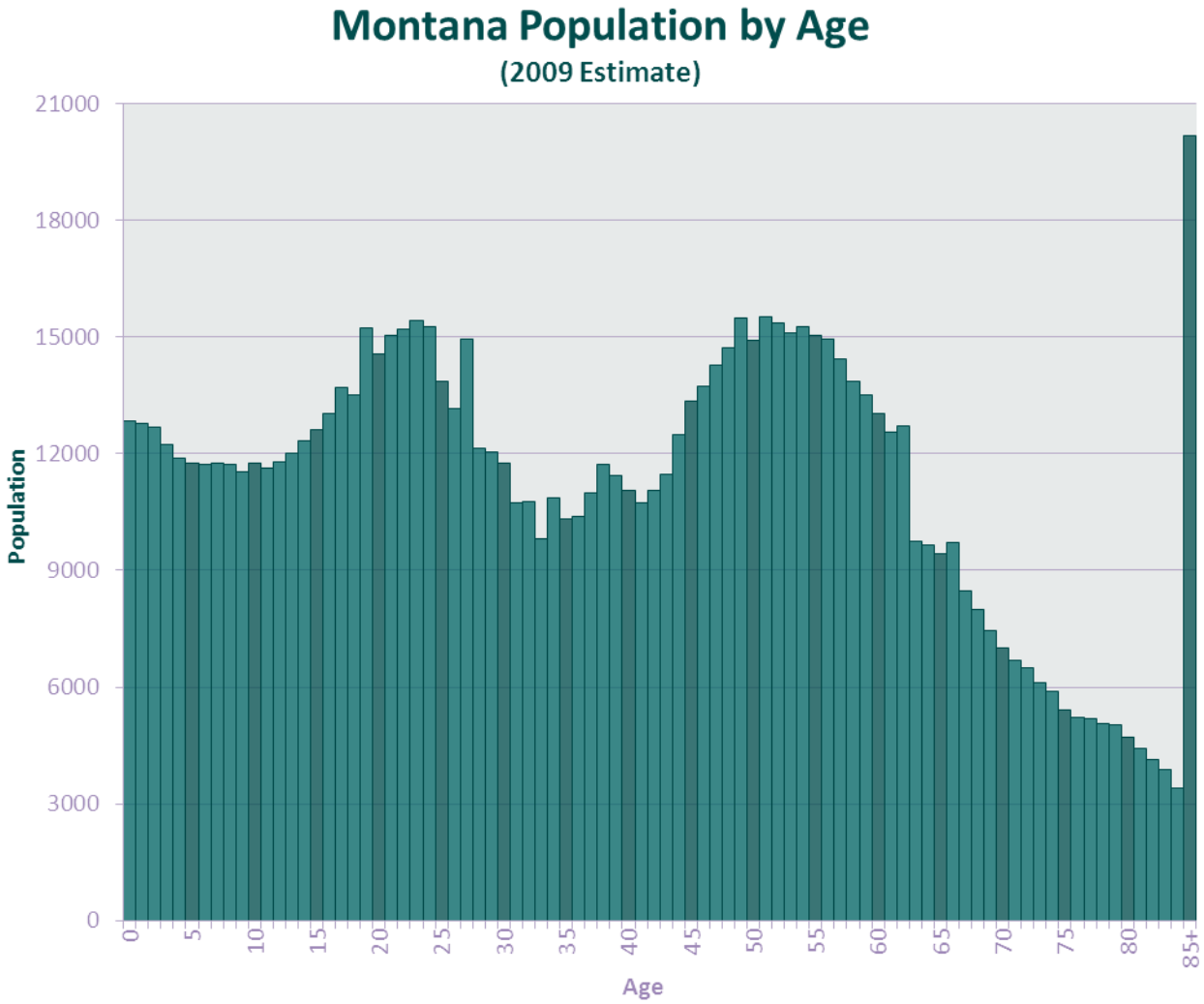
What does this mean to traffic safety? The number of teens in Montana is decreasing, so the number of new drivers may also decrease. Currently, and over the next few years, Montana will have an above average number of young adult drivers. This is one of the highest risk groups in traffic safety. Also, the number of elderly drivers is increasing. While older drivers tend to be safer drivers than new or young drivers, their frailty can lead to a higher severity of injury when they are involved in a crash.

Some of the gains and challenges seen in traffic safety during recent years were related to demographics. Drivers most likely to be in fatal crashes are between ages fifteen and thirty-five. Over the last decade, the number of people age fifteen to thirty-five have been increasing, so there have been minimal gains over the last ten years. Five to ten years from now, Montana may realize greater improvement as this age group begins moving into their thirties.

These population figures are being noted because of the special challenges that they present to traffic safety. It will be doubly difficult in the near future to show improvement in traffic safety while the

number of drivers in the high-risk age groups increases. Some rate improvements may be realized in traffic safety, but it will be much more difficult to decrease the number of incidents relating to these age groups. Population by age, using 2009 estimates, is shown in Figure 2.

Figure 2

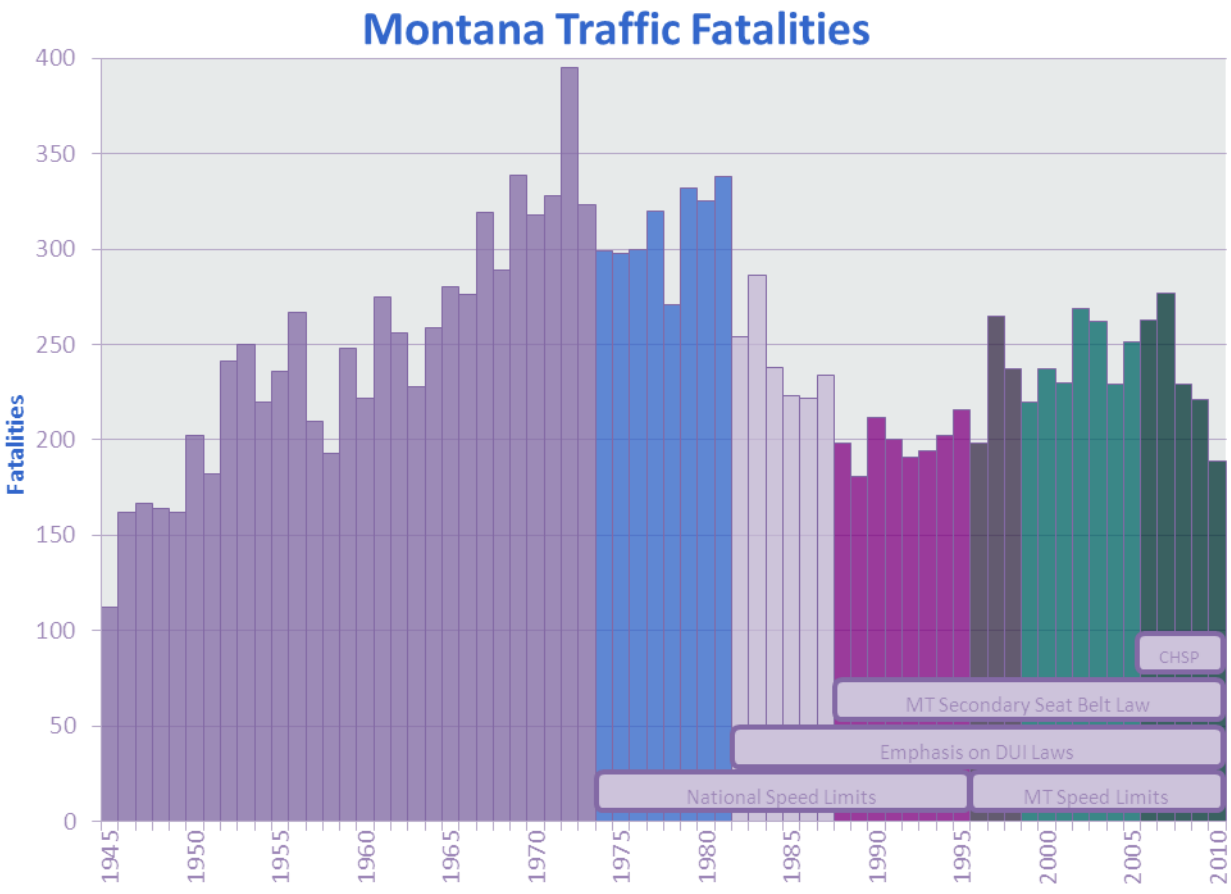


Source: U.S. Census Bureau – Population Division, Released June 10, 2010

FATALITIES

A Montana history of fatality numbers on public roads is presented in Figure 3, as well as some of the historical milestones that have impacted the numbers. Fatalities reached an all-time high of 395 during 1972. The lowest number of fatalities since 1950 was 181, which occurred during 1989, the second year of Montana's seat belt law. Once again 2010 saw a decrease in the number of fatalities from previous years with 189 fatalities being the lowest number of fatalities since the national speed limit was lifted in 1996.

Figure 3



Source: Fatality Analysis Reporting System

There are a number of events that show a clear impact on Montana fatalities:

1945-1974 – general increase that somewhat corresponds to the increase in VMT.

1974-1987 – Emergency Highway Energy Conservation Act (January 2, 1974): 55mph national speed limit in effect.

1982-1987 – Tougher DUI laws and the changes in perception brought on by MADD and other prevention advocates (beginning in 1982/1983).

1988-1995 – MCA 61-13-103 (January 1, 1988): MT secondary seat belt law.
Surface Transportation & Uniform Relocation Assistance Act (April 2, 1987): national speed limit increased to 65mph on rural interstate highways.

1996-1998 – National Highway Designation Act (November 28, 1995): end of the national speed limit; beginning of MT daytime "reasonable & prudent" on interstate highways, night 65mph.

1999-2005 – MCA 61-8-303: end of "reasonable & prudent", increased MT statutory speed limit, MT interstate highways 75mph.

2006-Present – Comprehensive Highway Safety Plan (CHSP) began, traffic safety stakeholders brought together to begin actively collaborating toward a common goal.

CRASHES & INJURIES

The number of injuries in Montana crashes continues to decline and is lower than any time during the last fifteen years. Ten years of reportable crash and injury data appear in Table 2. Injury crashes, especially severe injury crash counts, tend to be more accurate indicators of safety trends in Montana than do crashes and fatalities. Severe injury crashes are defined as those crashes involving a fatality or an incapacitating injury. These injury crashes can represent change without as much of the variation caused by the small number associated with fatalities. Total crashes tend to have variation that is strongly associated with weather conditions throughout the year (especially the amount of icy roads).

Table 2
Crashes by Severity

Year	All Crashes	Fatal Crashes	Injury Crashes	Property Damage Crashes	Fatalities	Injuries
2001	21,846	201	6,220	15,420	230	8,982
2002	23,527	232	6,479	16,816	269	10,086
2003	23,160	239	6,229	16,681	262	9,632
2004	21,783	209	6,000	15,570	229	9,263
2005	22,376	224	6,066	16,086	251	9,211
2006	22,186	226	6,245	15,712	263	9,470
2007	21,829	249	5,990	15,582	277	9,067
2008	21,971	208	5,793	15,926	229	8,465
2009	20,967	198	5,227	15,538	221	7,351
2010	20,146	161	4,972	15,013	189	7,032
Chg 1 Yr	-3.9%	-18.7%	-4.9%	-3.4%	-14.5%	-4.3%
Chg 5 Yr Ave	-7.9%	-27.1%	-15.2%	-4.8%	-23.9%	-19.3%

Source: Montana Department of Transportation - Safety Management System

INJURY SEVERITY

Table 3 displays the distribution of injury severity to persons involved in motor vehicle crashes for the last ten years. Analyzing injury severity may aid in determining whether advances in traffic safety are saving lives and reducing the level of injury severity. Traffic safety is influenced by many factors including increased restraint use, better road engineering and safer vehicles.

Also displayed are severe injuries (fatalities plus incapacitating injuries), which may be the best true overall indicator for traffic crash trends in Montana.

Table 3
Injury Severity

Year	Fatalities	Incapacitating Injury	Non Incapacitating Injury	Possible & Other Injury	Severe Injuries (Fatalities plus Incapacitating Injuries)
2001	230	1,433	2,645	4,904	1,663
2002	269	1,738	2,876	5,472	2,007
2003	262	1,634	2,812	5,186	1,896
2004	229	1,557	2,692	5,013	1,786
2005	251	1,541	2,509	5,161	1,792
2006	263	1,607	2,859	5,004	1,870
2007	277	1,427	2,593	5,047	1,704
2008	229	1,336	2,414	4,715	1,565
2009	221	1,110	2,714	3,527	1,331
2010	189	996	2,965	3,071	1,185
Chg 1 Yr	-14.5%	-10.3%	+9.2%	-12.9%	-11.0%
Chg 5 Yr Ave	-23.9%	-29.1%	+13.3%	-34.5%	-28.3%

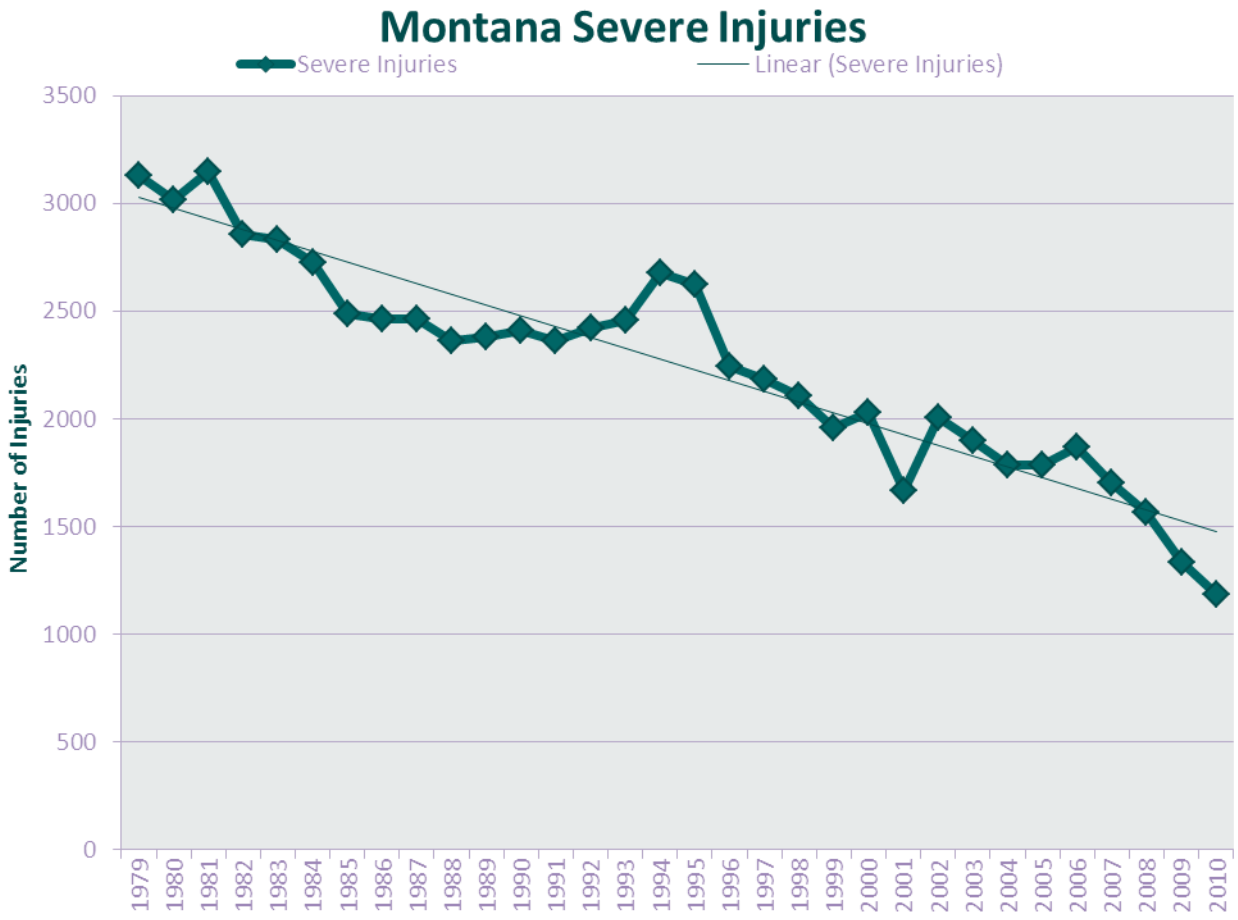
Source: Montana Department of Transportation - Safety Management System

Severe injuries have decreased over fifty-five percent since 1994, which was the high point in recent years with 2,676 severe injuries. The downward change in the number of severe injuries would appear to be the most significant change in crash data within Montana during the last few years. Incapacitating injuries were lower during 2010 than in any year since 1960 and have decreased by almost 60% since the 2,474 seen in 1994.

It would seem that occupant restraints, airbags and child restraints have accounted for at least part of this decrease, as well as other improvements in vehicle safety. The change in severity is also the result of more forgiving trafficways with engineering improvements and quicker emergency medical service response times due to cell phones.

Figure 4 clearly shows this history of injuries over time with severe injuries trending downward.

Figure 4



Source: Montana Department of Transportation – Safety Management System

CRASH RATES

The fatality rate for Montana was 7.64 fatalities per hundred million miles travelled during 1969. This rate has been generally decreasing since then. It had decreased to 4.92 by 1980 and to 2.54 by 1990. Since that time, the fatality rate has remained fairly stagnant with rates between 2.0 and 3.0. Currently there appears to be a third year of decreases with initial estimates for 2010 showing a fatality rate of 1.69. This is the lowest recorded fatality rate in Montana history and is down thirty-four percent from a ten year high of 2.57 in 2002.

Early estimates show the crash and injury rates decreased in 2010 to 1.80 and 0.63 per one million miles travelled, respectively. These are the lowest recorded crash and injury rates in Montana history.

The rates per vehicle miles travelled for 2009 and 2010, listed in Table 4, have not been officially released by NHTSA, therefore these numbers are still preliminary.

Table 4
Statewide Crash Rates

Year	Fatality Rate (per 100 Million VMT)	Injury Rate (per 1 Million VMT)	Crash Rate (per 1 Million VMT)
2001	2.30	0.90	2.18
2002	2.57	0.96	2.24
2003	2.40	0.88	2.13
2004	2.05	0.83	1.95
2005	2.26	0.83	2.01
2006	2.33	0.84	1.97
2007	2.45	0.80	1.93
2008	2.12	0.79	2.04
2009*	2.01	0.67	1.90
2010*	1.69	0.63	1.80
Chg 1 Yr	-15.8%	-5.8%	-5.4%
Chg 5 Yr Ave	-24.4%	-19.9%	-8.6%

Source: Montana Department of Transportation - Safety Management System & Traffic Data Collection

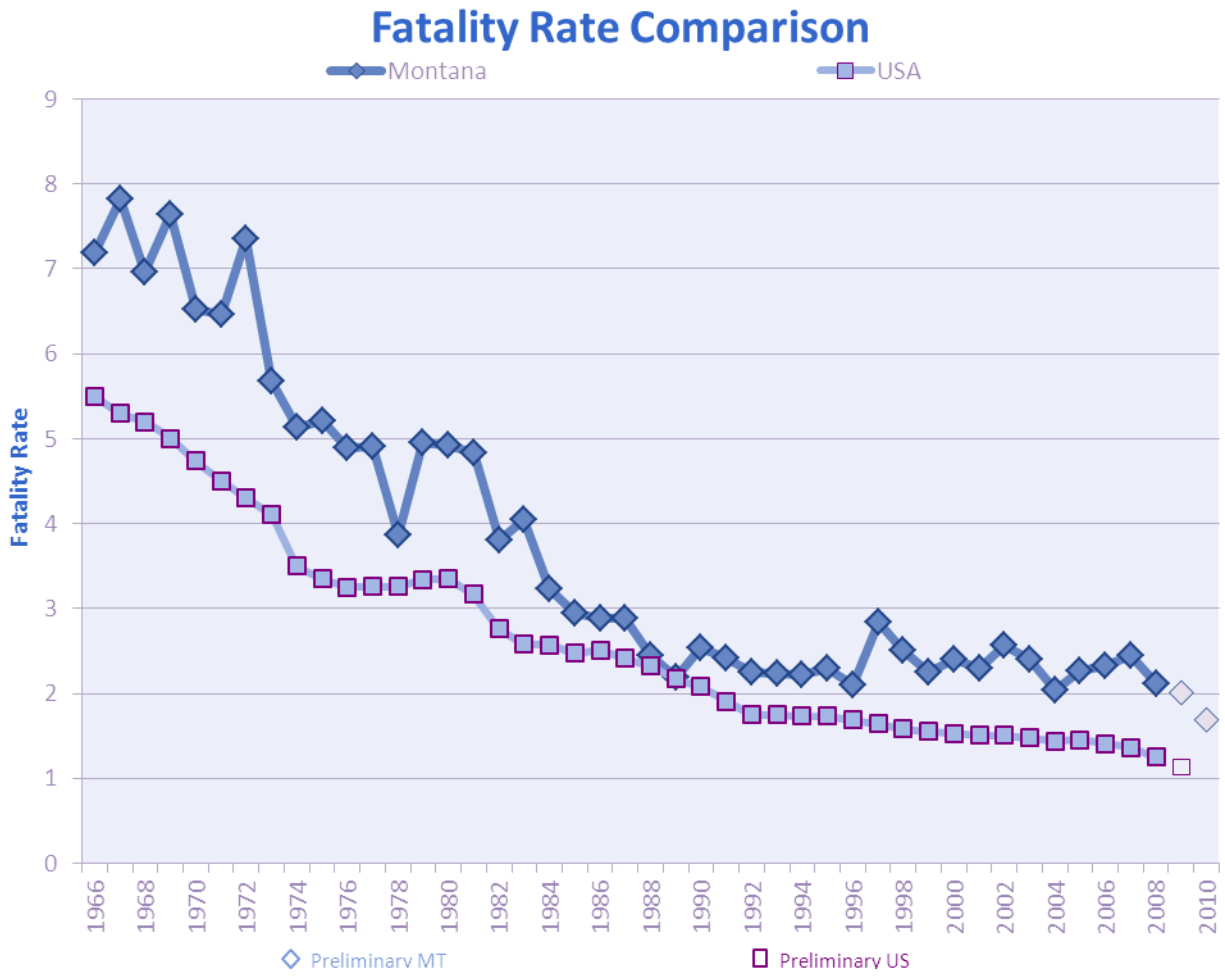
* The 2009 and 2010 rates have not been officially released by NHTSA, these numbers are still preliminary.

FATALITY RATES

Historically, western rural states have tended to have rates above the national average. One of the reasons is the greater percentage of rural miles travelled which translates to higher average speeds. During 2008 (the most current data published by NHTSA), the United States rural fatality rate was 2.11 while the urban fatality rate was 0.81. For the nation, rural fatalities accounted for 56% of the traffic fatalities, while in Montana, 92% of the fatalities in 2008 occurred in rural settings. From this information, it stands to reason that the expected Montana rate would be much closer to 2.11 than the overall national rate of 1.25.

Figure 5 compares the national fatality rate to the Montana rate. Official 2009 and 2010 values are not available yet, thus are notated differently in the chart.

Figure 5



Source: Fatality Analysis Reporting System

MONTANA-SPECIFIC AREAS OF INTEREST

Native American fatalities as a percentage of all fatalities tend to be high. While Native Americans account for just over six percent of the Montana population, in the last 15 years, 13 to 20 percent of traffic deaths were from the state's Native American population. During 2010, with 30 Native American fatalities, this percentage was 15.9%. These fatalities also tend to have higher rates of alcohol involvement. From 2006 to 2010, over 22 percent of the alcohol-related fatalities in Montana were Native American.

In Montana, over 67 percent of all fatal crashes are single vehicle crashes (2006-2010 data). Montana has a higher rate than the national rate, where in 2009, single vehicle fatal crashes accounted for 61 percent of all fatal crashes (most recent data available).

Table 5 examines fatal crashes in rural Montana. Fatal crashes occur mostly on rural roads within the state where there are higher speeds than in urban crashes. During 2010, 177 fatalities occurred on rural roads from 149 different crashes. The other 12 fatalities occurred on urban roads from 12 crashes. Similarly, there were 775 incapacitating injuries on rural roads compared to 221 in an urban setting.

Table 5
Rural Fatal Crashes

Year	Fatal Crashes	Rural Fatal Crashes	Percent Rural
2001	201	187	93.0%
2002	232	209	90.1%
2003	239	214	89.5%
2004	209	184	88.0%
2005	224	194	86.6%
2006	226	209	92.5%
2007	249	230	92.4%
2008	208	175	84.1%
2009	198	180	90.9%
2010	161	149	92.5%
Chg 1 Yr	-18.7%	-17.2%	+1.8%
Chg 5 Yr Ave	-27.1%	-24.6%	+3.6%

Source: Montana Department of Transportation - Safety Management System

ALCOHOL-RELATED DATA

Alcohol/drug-related crashes accounted for 9.6% of all reported traffic crashes during 2010. This is the second year of decreases and is the lowest total number of alcohol/drug-related crashes in at least twenty years. It is below the 22.3% of alcohol-related crashes reported during 1983.

Alcohol/drug-related crashes tend to result in more severe injuries than do crashes with no impairment. During the early 1980s, injuries related to alcohol accounted for as much as 36% of the total. Last year, alcohol/drug-related injuries were at 18.8% of all injuries, making the percentage approximately half that seen historically, but still an increase from the previous year. Table 20 presents the alcohol/drug-related crash and injury counts.

Table 20
Alcohol- and/or Drug-Related Crashes & Injuries

Year	Crashes			Injuries		
	Alcohol/Drug-Related	All	Percent of All	Alcohol/Drug-Related	All	Percent of All
2001	2,035	21,846	9.3%	1,652	8,982	18.4%
2002	2,288	23,527	9.7%	1,745	10,086	17.3%
2003	2,173	23,160	9.4%	1,638	9,632	17.0%
2004	2,113	21,783	9.7%	1,767	9,263	19.1%
2005	2,182	22,373	9.8%	1,623	9,211	17.6%
2006	2,243	22,186	10.1%	1,816	9,470	19.2%
2007	2,273	21,829	10.4%	1,771	9,067	19.5%
2008	2,313	21,971	10.5%	1,645	8,465	19.4%
2009	2,138	20,967	10.2%	1,319	7,351	17.9%
2010	1,935	20,146	9.6%	1,320	7,032	18.8%
Chg 1 Yr	-9.5%	-3.9%	-5.8%	+0.1%	-4.3%	+4.6%
Chg 5 Yr Ave	-13.2%	-7.9%	-5.8%	-19.3%	-19.3%	+0.2%

Source: Montana Department of Transportation - Safety Management System

In the past, the National Highway Traffic Safety Administration (NHTSA) has used both the percentage of fatalities that are alcohol-related and the alcohol-related fatality rate (number of alcohol-related fatalities divided by the number of vehicle miles travelled) as performance measures for the states. This data can be compiled by NHTSA through the use of the Fatal Analysis Reporting System (FARS) database and state vehicle miles travelled estimates.

Currently, NHTSA is requiring states to report the number of fatalities involving a driver with a BAC of 0.08 and above. Every state now has a law that describes impaired drivers as having a BAC of 0.08 and above (driving with an illegal *per se* BAC level). The FARS database records the results of BAC tests from the Montana Forensics Lab. If no test is performed or received, the alcohol code is

generated by NHTSA using a number of other crash factors through a mathematical procedure. The FARS data is considered the most accurate alcohol data available; however, timeliness is a problem with the FARS data since results from NHTSA are usually not available for over 9 months after the end of a calendar year.

The data in Table 21 is based upon FARS data and shows both alcohol-related fatality information (driver BAC = 0.01+) and alcohol-impaired fatality information (driver BAC = 0.08+).

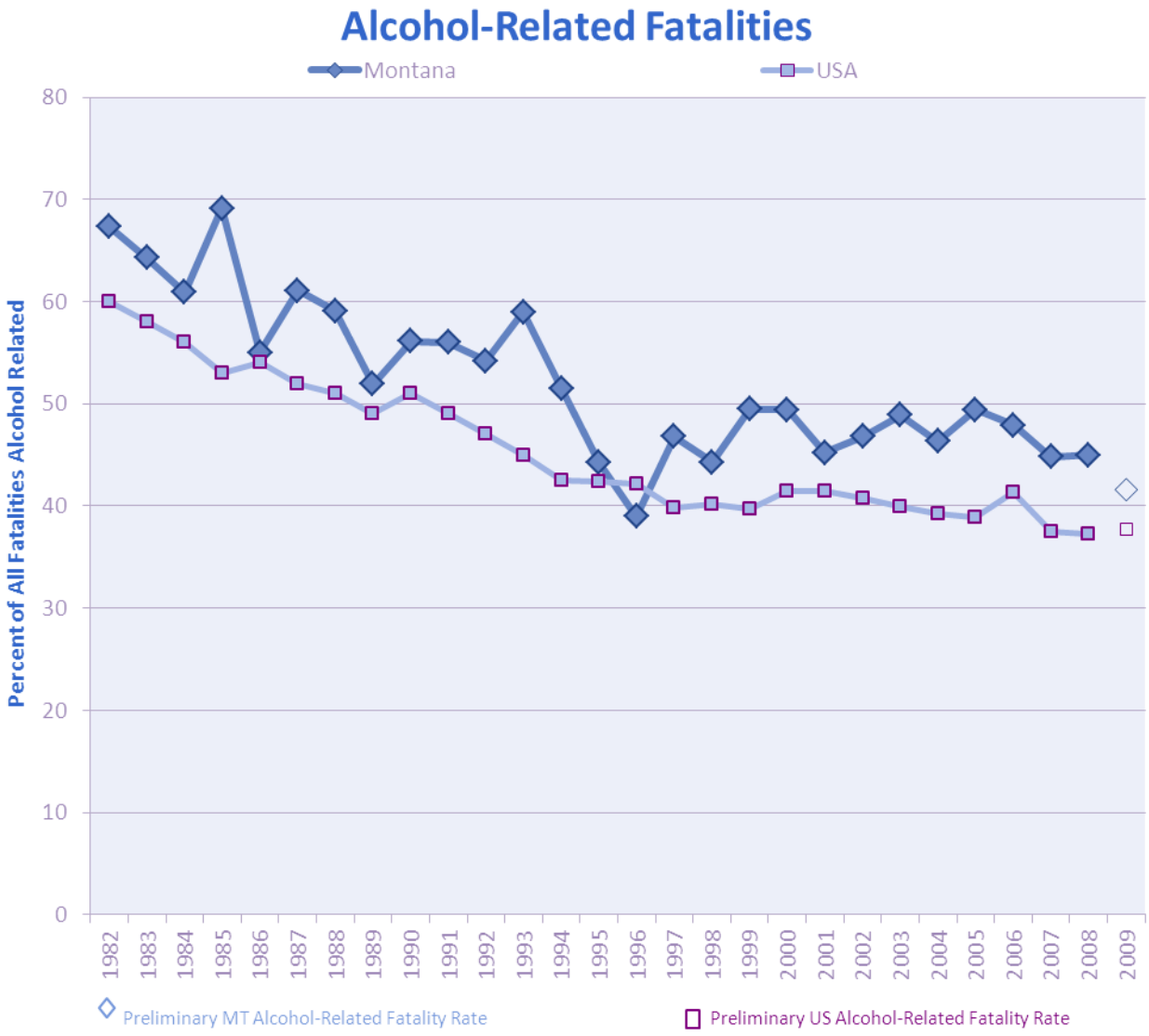
Table 21
Alcohol Fatalities & Fatality Rates

Year	Alcohol-Related Fatalities BAC = 0.01+			Alcohol-Impaired Fatalities BAC = 0.08+		
	Total Alc-Related Fatalities	Percent of All Fatalities	Alc-Related Fatality Rate	Total Impaired Fatalities	Percent of All Fatalities	Impaired Fatality Rate
2001	104	45.2%	1.04	96	41.7%	0.96
2002	126	46.8%	1.20	106	39.4%	1.01
2003	128	48.9%	1.17	102	38.9%	0.94
2004	106	46.3%	0.95	97	42.4%	0.87
2005	124	49.4%	1.11	108	43.0%	0.97
2006	126	47.9%	1.12	104	39.5%	0.92
2007	124	44.8%	1.10	105	37.9%	0.93
2008	103	45.0%	0.96	90	39.3%	0.83
2009 *	92	41.6%	0.84	81	36.7%	0.74
2010 **	92	48.7%	0.82	70	37.0%	0.63
Chg 1 Yr	-	+16.9%	-1.6%	-13.6%	+1.1%	-14.9%
Chg 5 Yr Ave	-19.2%	+6.4%	-19.7%	-28.3%	-5.7%	-28.8%

Source: Fatality Analysis Reporting System
*NHTSA Traffic Safety Facts Annual Element, Early Edition. Final edition has not been released, these numbers are still preliminary.
** The 2010 numbers have not been officially released by NHTSA; therefore these numbers are still preliminary.

Figure 14 compares the Montana percentage of alcohol-related crashes with the national percentage. The number of alcohol-related fatalities for 2009 and 2010 have not been released by NHTSA, thus are notated differently.

Figure 14

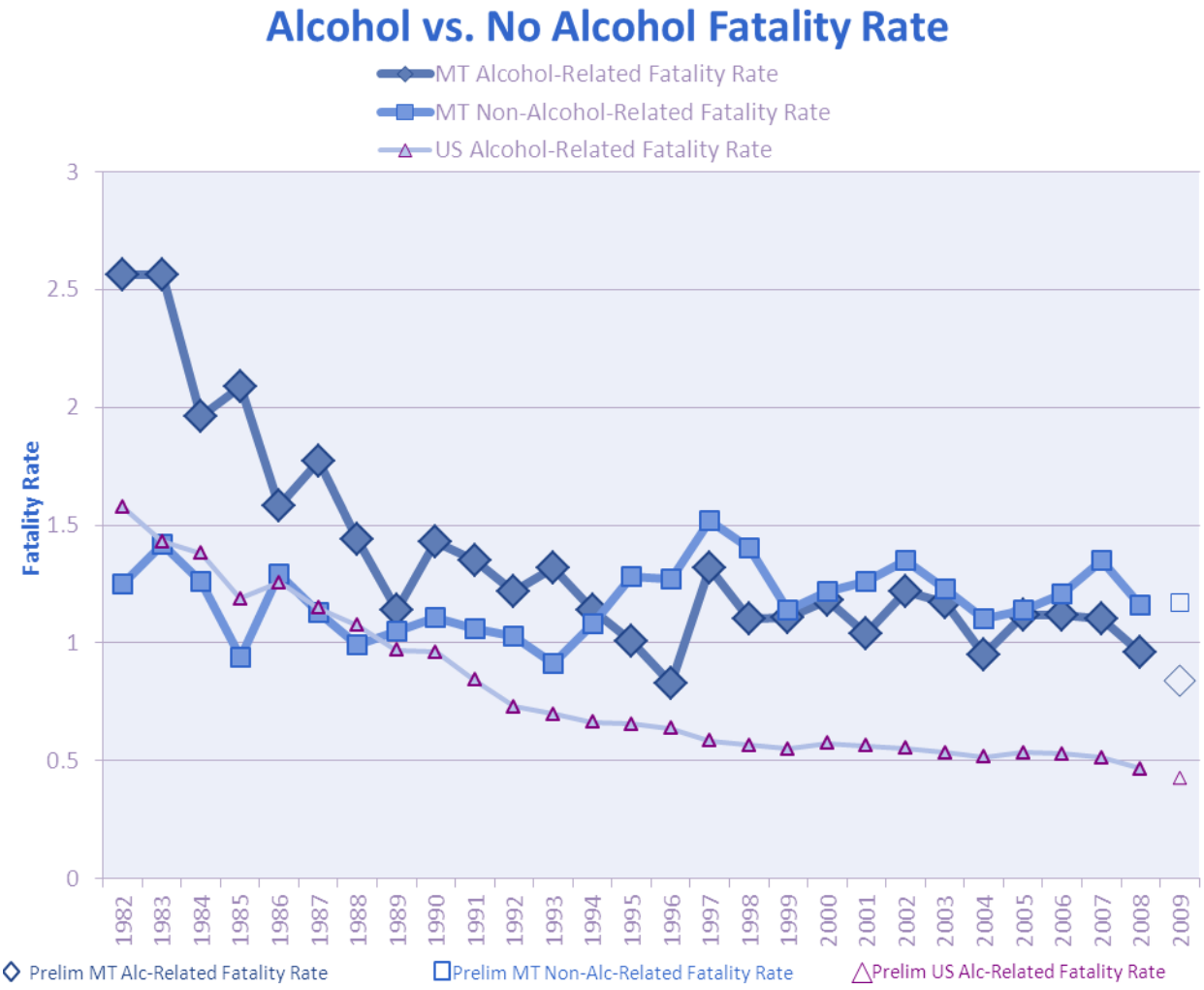


Source: Fatality Analysis Reporting System

The Montana *fatality rate* during 1983 was 3.98 and the *alcohol-related fatality rate* that year was 2.56. During the past twenty-seven years, the alcohol rate has decreased more than 67%. The lowest official rate was reached in 1996 (0.83) and during the last ten years the rate has been nearly level. The alcohol-related fatality rate for 2009, the most currently available data (yet still considered preliminary), is 0.43 for the nation and 0.84 for Montana.

The graph in Figure 15 displays alcohol and non-alcohol fatality rates in Montana since 1982, with the preliminary 2009 data notated differently. It is interesting to note that in 1995, the non-alcohol fatality rate surpassed the alcohol-related fatality rate for the first time. Although often being very close to each other, the alcohol-related fatality rate has continued to be less than the non-alcohol fatality rate since that time.

Figure 15



Source: Fatality Analysis Reporting System

The rest of the alcohol data in this section is derived from the Montana Highway Patrol (MHP) crash records database and references alcohol-*related* information. The MHP data is based upon evidence and an officer's perceptions at the scene. There is no recorded BAC in the MHP database, thus limiting further analysis on alcohol-impaired crashes.

Next, we examine alcohol related crashes by county. The final column of Table 22 displays the percentage of crashes with alcohol and/or drug involvement in the county. There is a tendency for the larger urban counties to have a lower percentage of alcohol involvement in crashes. It is not known whether this implies counties with higher populations truly have less alcohol involvement because of alcohol education and related activities, or whether the large number of "fender benders" at intersections makes the percentage of alcohol involvement lower. It is suspected that these lower percentages result from a combination of these and possibly other factors. In addition, there are some enforcement agencies that are not as precise in determining alcohol related involvement, which may cause some counties to show low percentages.

Table 22
Alcohol- and/or Drug-Related Crash Information by County
(2010 Data)

County	Total Crashes	Fatal Crashes*	Fatalities*	Injuries	Percent Alcohol/Drug Crashes
Beaverhead	13	2	2	11	9.0%
Big Horn	34	7	10	44	21.7%
Blaine	10	0	0	13	15.9%
Broadwater	19	1	1	19	14.3%
Carbon	33	2	2	21	15.3%
Carter	0	0	0	0	0.0%
Cascade	171	2	2	83	7.3%
Chouteau	8	2	2	7	11.4%
Custer	17	2	2	5	7.8%
Daniels	7	0	0	1	20.0%
Dawson	11	1	1	7	5.5%
Deer Lodge	8	0	0	4	9.6%
Fallon	1	0	0	1	3.7%
Fergus	26	3	3	26	11.5%
Flathead	150	3	4	91	10.6%
Gallatin	161	4	4	101	10.3%
Garfield	2	0	0	4	14.3%
Glacier	23	3	3	30	14.9%
Golden Valley	2	0	0	0	11.8%
Granite	9	0	0	9	8.7%
Hill	38	2	2	31	9.2%
Jefferson	25	3	3	20	7.3%
Judith Basin	8	1	1	4	16.3%
Lake	75	3	4	73	15.9%
Lewis & Clark	106	4	8	53	6.5%
Liberty	1	0	0	0	11.1%
Lincoln	29	1	1	24	11.3%

Table 22
Alcohol- and/or Drug-Related Crash Information by County
(2010 Data)

County	Total Crashes	Fatal Crashes*	Fatalities*	Injuries	Percent Alcohol/Drug Crashes
Madison	19	0	0	11	12.8%
McCone	2	0	0	0	9.1%
Meagher	4	0	0	3	20.0%
Mineral	19	0	0	16	7.9%
Missoula	237	7	7	141	10.2%
Musselshell	6	0	0	4	10.0%
Park	42	1	1	19	11.1%
Petroleum	3	0	0	4	42.9%
Phillips	6	0	0	9	7.3%
Pondera	3	0	0	1	4.2%
Powder River	1	0	0	2	3.4%
Powell	9	1	1	3	5.0%
Prairie	5	0	0	3	11.6%
Ravalli	59	1	1	42	9.2%
Richland	26	1	2	17	8.9%
Roosevelt	28	1	1	46	25.2%
Rosebud	14	0	0	9	9.5%
Sanders	29	5	8	19	19.3%
Sheridan	8	1	1	2	13.3%
Silver Bow	36	0	0	18	6.2%
Stillwater	13	0	0	12	6.1%
Sweet Grass	6	0	0	5	5.9%
Teton	12	2	2	5	10.4%
Toole	9	0	0	3	8.3%
Treasure	0	0	0	0	0.0%
Valley	13	0	0	14	13.8%
Wheatland	8	0	0	7	17.0%
Wibaux	3	0	0	1	10.0%
Yellowstone	328	9	9	222	9.4%
Total	**1,935**	**75**	**88**	**1,320**	**9.6%**

Source: Montana Department of Transportation - Safety Management System; Fatality Analysis Reporting System
* 2010 alcohol-related fatality data has not been released by NHTSA, this data is preliminary.

Average Blood Alcohol Concentration

Over an 18-month time period from October 2007 – March 2009, the average BAC of those arrested for DUI in Montana was **0.154** (of those who provided a sample; many refused). This average is based on BAC information recorded on the 100+ Intoxilyzer 8000 units located around the state. This average is lower than in years past, when the average BAC hovered around 0.18, however it is still twice the legal limit. *Please note: this information is the most recent data available; the Montana Crime Lab is no longer collecting this data because of legal technicalities.*

Montana has been working diligently to increase the rate of testing for drivers involved in fatal crashes. Testing blood for the presence of alcohol and/or other drugs yields valuable information about what may have contributed to the crash. With the decreasing number of fatal crashes and Montanans' ability to refuse to provide the breath or blood necessary for testing, the increases are admirable. Unfortunately, the average BAC for drivers, pedestrians, bicyclists, etc. involved in fatal crashes continues to be over twice the legal limit.

The following table provides the percent of drivers, pedestrians, bicyclists, etc. involved in fatal crashes tested for BAC, the percent of the tested drivers that test positive for alcohol and the average BAC resulting from those positive tests. This information is based on the tested results of drivers of a motor vehicle in transport, pedestrians, bicyclists, other cyclists and people on personal conveyances. Vehicle passengers are excluded. The people included were assumed to be "in control of" a vehicle or themselves at the time of the crash.

Table 26
BAC Statistics

Year	% Drivers/ Pedestrians/Bicyclists Tested	% Tested Involving Alcohol (BAC > 0.00)	Average BAC
2005	70.8%	39.9%	0.160
2006	73.7%	44.9%	0.176
2007	76.7%	41.3%	0.188
2008	76.9%	38.8%	0.174
2009	79.0%	34.8%	0.185
2010 *	79.7%	37.6%	0.172
Chg 1 Yr	+0.9%	+8.0%	-7.0%
Chg 5 Yr Ave	+5.7%	-5.9%	-2.6%

Source: Fatality Analysis Reporting System
* 2010 FARS cases are not closed, so this information is preliminary.

In short, the preliminary results for 2010 show 79.7% of all drivers / pedestrians / bicyclists / etc. were tested for alcohol (181of 227 people). Of those 181 people tested, 37.6% were noted as having a BAC greater than 0.00 (68 people) and the average BAC of those 68 people was 0.172.

DUI CONVICTIONS

Complete DUI arrest data is not summarized by any agency in Montana. Not all arrests result in a conviction for DUI, since some are dismissed, pled down to a non-DUI charge, or found not guilty. In lieu of arrest data for Montana, we now present conviction data reported by the courts to the Department of Justice for appropriate action against each individual's driver's license and placement in their driving record. This data includes out-of-state convictions for Montana licensed drivers.

Table 1
DUI Convictions and Rates
(Reported to the Records & Driver Control Bureau)

Year	DUI Convictions	Convictions Per 1,000 Population	Convictions Per 1 Million VMT
2001	5,972	6.61	0.60
2002	5,295	5.84	0.50
2003	5,462	6.00	0.50
2004	5,745	6.26	0.51
2005	5,962	6.43	0.54
2006	6,491	6.94	0.58
2007	6,703	7.08	0.59
2008	6,809	7.11	0.63
2009	6,698	6.92	0.61
2010	6,372	6.54	0.57
Chg 1 Yr	-4.9%	-5.6%	-6.4%
Chg 5 Yr Ave	-2.5%	-5.2%	-3.3%

Source: Convictions – Montana Department of Justice - Motor Vehicle Division;
Population - U.S. Census Bureau – Population Division, Released June 10, 2010;
VMT - Montana Department of Transportation - Traffic Data Collection

Note: The table above does not include conviction data for DUIs for drivers under 21 that are convicted of driving with a BAC over .02. The table below shows that the number of first offense underage DUI convictions reported to DOJ have generally decreased over the past seven years. The numbers of second offenses are too small to draw any specific conclusions.

Table 23
Alcohol-Related Convictions
(Reported to Records & Driver Control Bureau, Montana Department of Justice)

Conviction	2006	2007	2008	2009	2010
DUI 1st Offense	3,250	3,051	3,043	2,891	2,634
DUI 2nd or Subsequent Offense	1,055	1,129	1,135	1,161	1,227
BAC 1st Offense	1,722	2,066	2,202	2,165	1,983
BAC 2nd or Subsequent Offense	247	244	235	264	209
0.02% BAC (Under 21) 1st Offense	415	302	343	246	274
0.02% BAC (Under 21) 2nd or Subsequent Offense	25	22	13	10	18
Felony DUI	217	213	194	217	319
Total Convictions	**6,931**	**7,027**	**7,165**	**6,954**	**6,664**

Refusals to provide blood/breath evidence of impairment*

Refusal	2006	2007	2008	2009	2009
Implied Consent	1,083	1,236	1,382	1,379	1,378
P.A.S.T. (Preliminary Alcohol Screening Test)	1,330	1,533	1,445	1,519	1,464
Total Refusals	**2,413**	**2,769**	**2,827**	**2,898**	**2,842**

Source: Montana Department of Justice - Motor Vehicle Division

* A driver suspected of DUI may have more than one opportunity to provide or refuse to provide evidence of impairment. The P.A.S.T. is provided at the location of the initial stop. The implied consent test may be breath or blood and is done at a fixed base location by law enforcement (breath test) or medical personnel (blood draw).

DUI versus **BAC** offenses:

Under Montana law, there are two types of impaired driving offenses: driving under the influence (i.e., a DUI offense); and driving with excessive blood alcohol concentration (i.e., a BAC offense).

- Under section **61-8-401**, Montana Code Annotated (MCA), it is unlawful for a person to be in actual physical control of a vehicle while under the influence of alcohol or a drug. The statutory definition of "under the influence" is “that as a result of taking into the body alcohol, drugs, or any combination of alcohol and drugs, a person's ability to safely operate a vehicle has been diminished".

A driver may be charged with DUI if there is sufficient evidence of diminished ability to safely operate a motor vehicle (e.g. weaving over centerline, driver smelled of alcohol, had bloodshot eyes, and slurred speech). A person's BAC may be below 0.08 and still be charged with and convicted of DUI based on the evidence above (see note below).

- Under section **61-8-406**, MCA, it is unlawful for a person to drive a noncommercial vehicle if the person's BAC is 0.08 or more. For a commercial vehicle, the limit is a 0.04 BAC. Does not require proof of impairment, only BAC > 0.08. This law is often called the *per se* statute because "under the influence" may be presumed.

  Note: The American Medical Association recommends the "per se" limit be set at 0.04 BAC because that is the level at which judgement and reasoning is affected, affecting the safe operation of a motor vehicle. At 0.06 BAC, fine motor skills are affected. 0.08 BAC was the compromise because that is the level at which gross motor skills are affected.

- A separate statute provides that the BAC limit for a person under 21 years of age is 0.02 (MCA **61-8-410**), sometimes called a "mini DUI" or "baby DUI". The level is set at 0.02 because that is the level at which alcohol can be detected, and it is not legal for minors to drink. While a conviction under this section stays on the driver's record for life, it does not count as a prior conviction under 61-8-401 or 61-8-406 (i.e. isn't counted as a prior DUI if the individual re-offends).
  However, minors can be charged under 61-8-401 (DUI) or 61-8-406 (BAC) which would count towards a felony DUI.

A 2009 report by Dr. Tim Conley[5] revealed that felony offenders, on average, conservatively estimate that they have driven 369 times per conviction.

[5] *ASSESSING MONTANA'S MULTIPLE OFFENDER DRUNK DRIVERS FOR PREVENTION STRATEGY IDEAS, a Preliminary Report for the Law and Justice Interim Committee* January 29, 2010, by Dr. Tim Conley, Associate Professor of Social Work, University of Montana – Missoula. Online at http://leg.mt.gov/content/Committees/Interim/2009_2010/Law_and_Justice/Meeting_Documents/Feb2010/Assessing%20Montana%27s%20Multiple%20Offender%20Drunk%20Drivers%20for%20Prevention%20Strategy%20Ideas.pdf

ALCOHOL-RELATED CRASHES BY AGE OF DRIVER

Table 24 examines the age of the drivers that are involved in alcohol-related traffic crashes. Crash rates per licensed driver are calculated. This information can help those in the traffic safety community make decisions on targeting specific age groups concerning the drinking and driving problem. It should be noted that not all drivers involved in these alcohol crashes were drinking. While most alcohol crashes are single car crashes, when there are multiple vehicles involved, some of the drivers may not have been drinking.

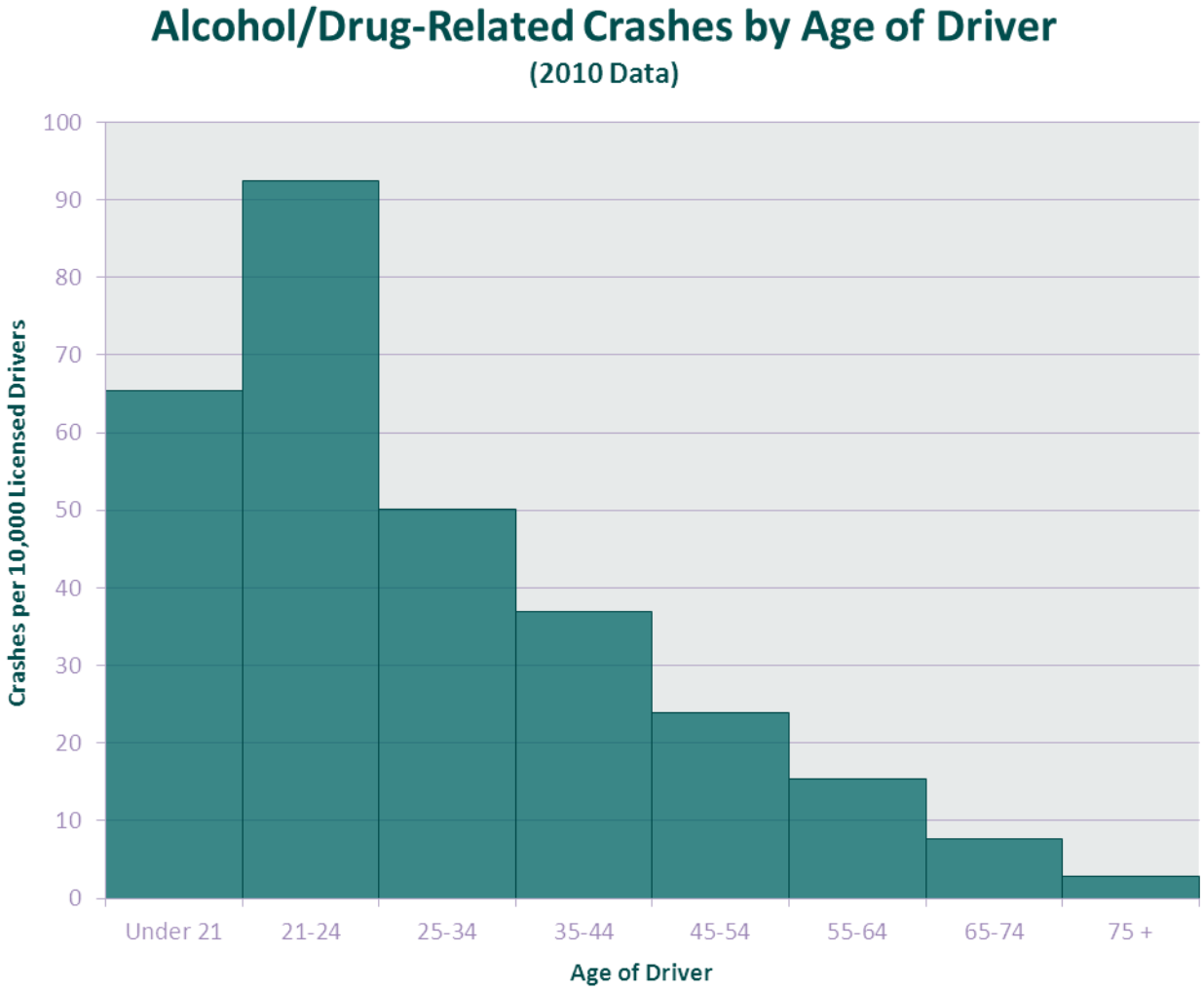
Table 24
Alcohol-Related Crashes by Age of Driver
(2010 Crash Data)

Age	Licensed Drivers (State Fiscal Year 2009)	Drivers in Alcohol Crashes	Alcohol Crashes (per 10,000 Licenses)	Drivers in Fatal Alcohol Crashes	Fatal Alcohol Crashes (per 10,000 Licenses)
Under 18	17,073	69	40	1	0.6
18-20	33,267	260	78	11	3.3
Under 21	50,340	329	65	12	2.4
21-24	47,812	442	92	15	3.1
25-34	125,386	628	50	27	2.2
35-44	110,338	408	37	18	1.6
45-54	142,484	340	24	12	0.8
55-64	138,831	214	15	6	0.4
65-74	80,334	62	8	7	0.9
75 +	48,086	14	3	0	0.0

Source: Licensed Drivers - Montana Department of Justice - Motor Vehicle Division;
Drivers in Crashes - Montana Department of Transportation - Safety Management System

Figure 16 shows the alcohol-related crash rates by age.

Figure 16



Source: Montana Department of Transportation – Safety Management System;
Montana Department of Justice – Motor Vehicle Division

Table 25 examines drivers under age 21 involved in crashes. Those drivers involved in all crashes and in alcohol/drug related crashes are compared. It should be emphasized that the counts are for drivers of age 20 and under (not crashes). Although most alcohol/drug-related crashes involve only one vehicle, there could be a few instances where the young driver had not been drinking, while another older driver involved in the crash had been drinking.

Underage drivers are involved in fewer alcohol/drug-related crashes (6.4%) compared to the entire population of drivers (9.6%). However, this reflects an underage population that is drinking illegally, which, combined with driving inexperience, results in a deadly combination.

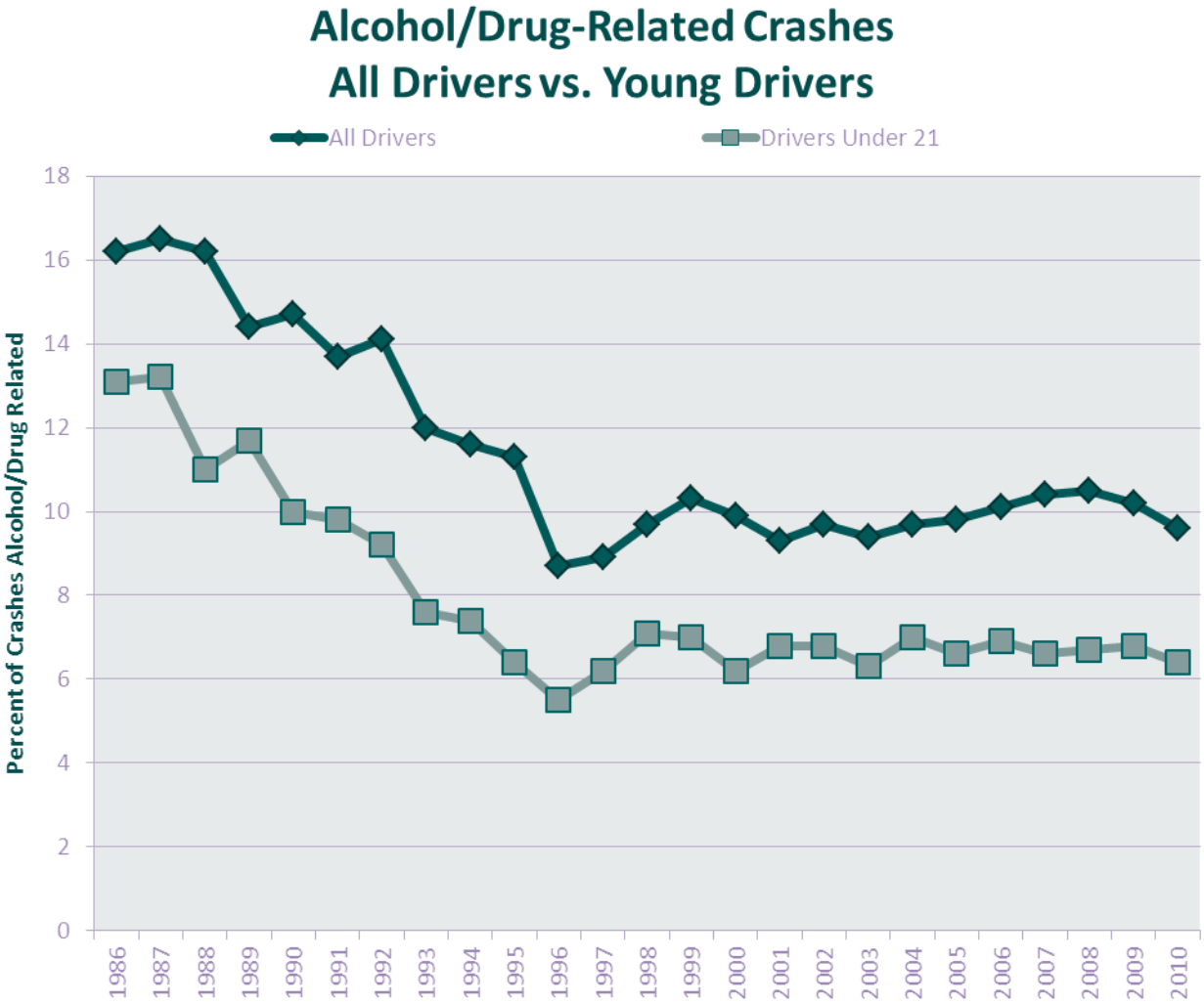
Table 25
Alcohol- and/or Drug-Related Crashes
Drivers Under 21

Year	Young Drivers in All Crashes			Young Drivers in Fatal Crashes		
	Alcohol Related	All	Percent of All	Alcohol Related	All	Percent of All
2001	531	7,781	6.8%	13	40	32.5%
2002	558	8,224	6.8%	16	47	34.0%
2003	473	7,551	6.3%	18	57	31.6%
2004	499	7,090	7.0%	17	39	43.6%
2005	468	7,096	6.6%	11	37	29.7%
2006	491	7,080	6.9%	19	37	51.4%
2007	431	6,534	6.6%	14	32	43.8%
2008	412	6,120	6.7%	14	33	42.4%
2009	387	5,721	6.8%	16	40	40.0%
2010	329	5,146	6.4%	12	30	40.0%
Chg 1 Yr	-15.0%	-10.1%	-5.5%	-25.0%	-25.0%	-
Chg 5 Yr Ave	-24.9%	-21.0%	-4.9%	-18.9%	-16.2%	-3.5%

Source: Montana Department of Transportation - Safety Management System

Figure 17 examines alcohol/drug-related crashes by driver age trends over time.

Figure 17



Source: Montana Department of Transportation – Safety Management System

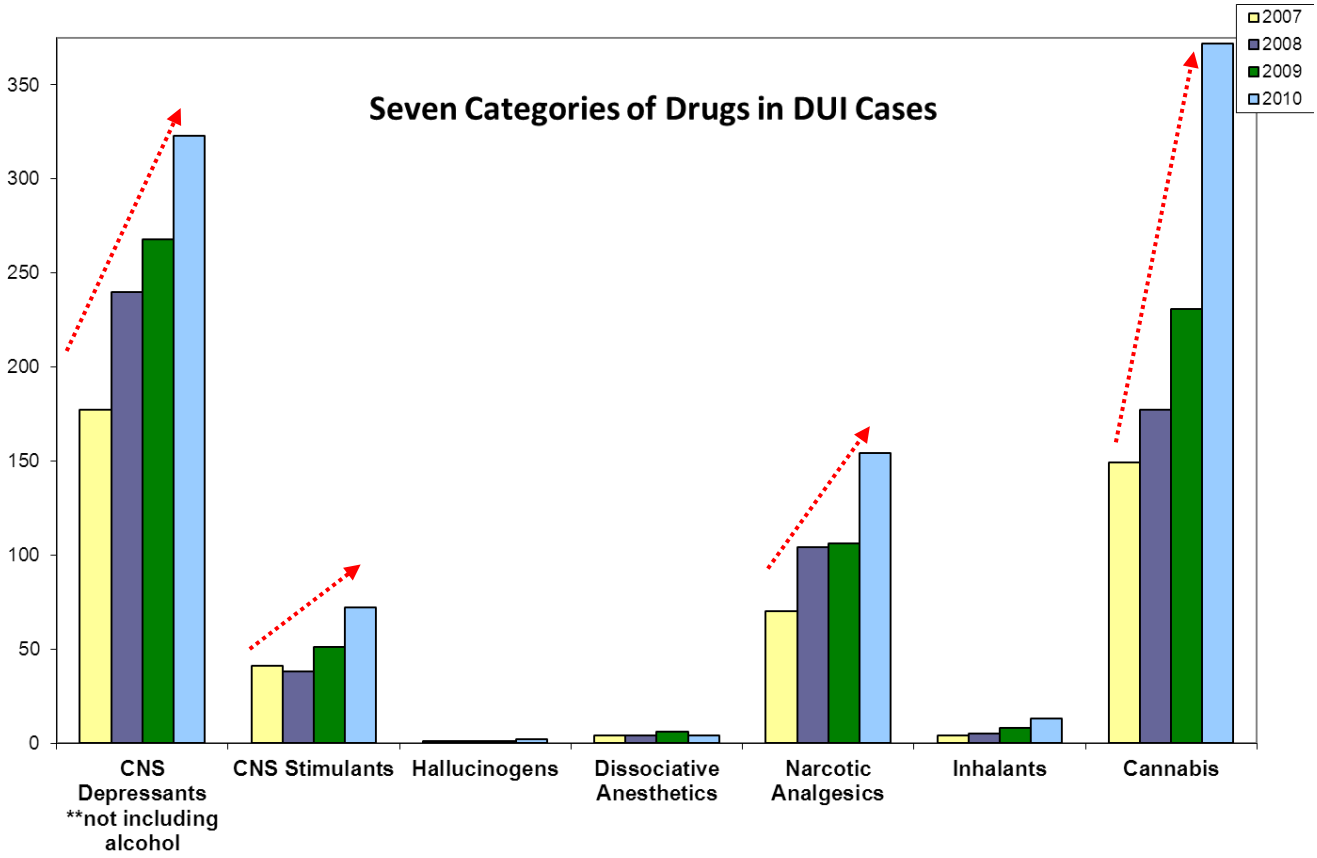
DRUGS INVOLVED IN DUI

The Montana Forensic Science Division compared the classifications of drugs found in the blood of drivers apprehended for driving under the influence (DUI) from 2007 to 2010. As shown in the following graphs, there has been an increase in drug-impaired driving from 2007 to 2010, especially in the number of cases involving central nervous system (CNS) depressants other than alcohol), stimulants, narcotic analgesics, and cannabis.

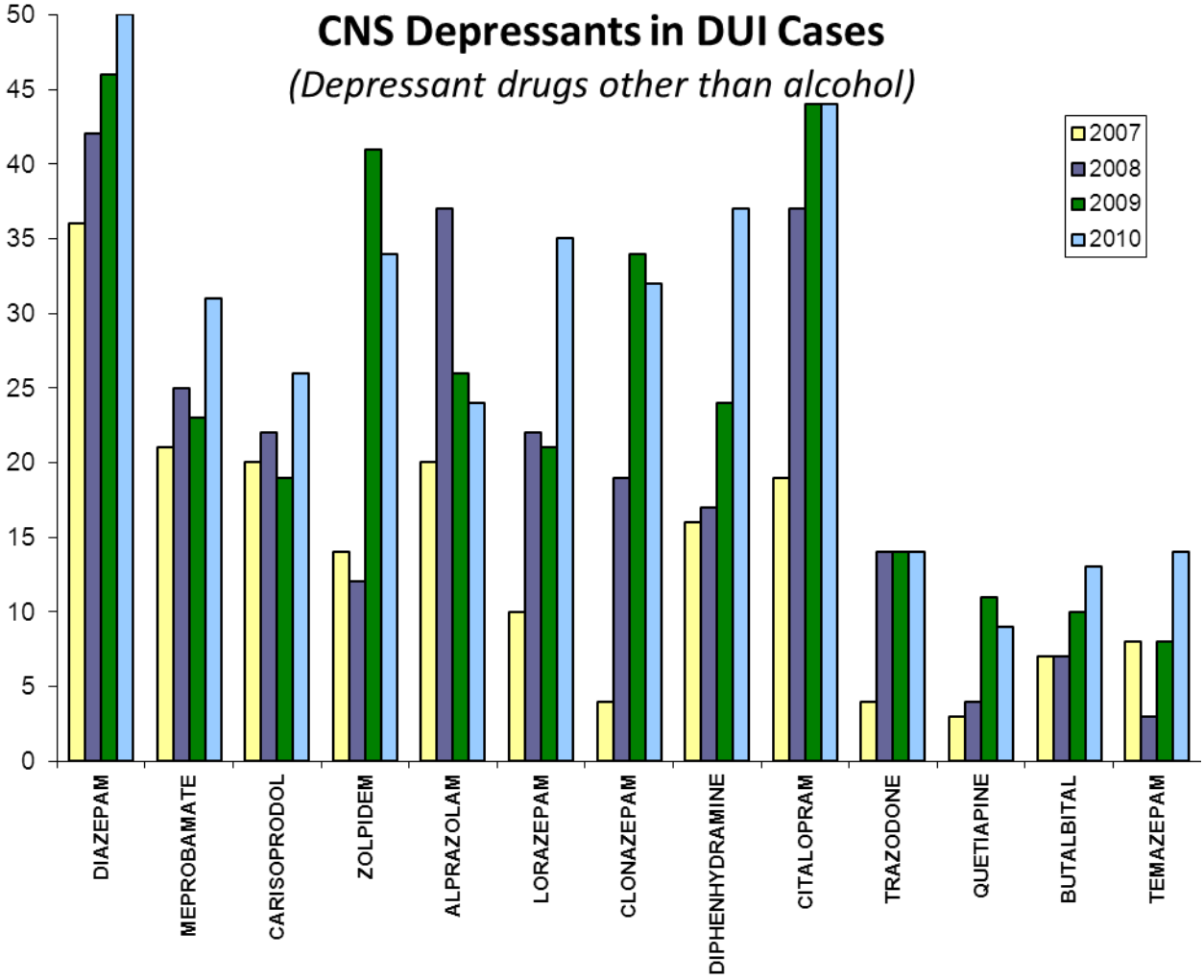
Types of drugs found in whole blood samples include tranquilizers, sleeping pills, muscle relaxants, inhalants, cough medicine, antidepressants, antihistamines, and numerous others.

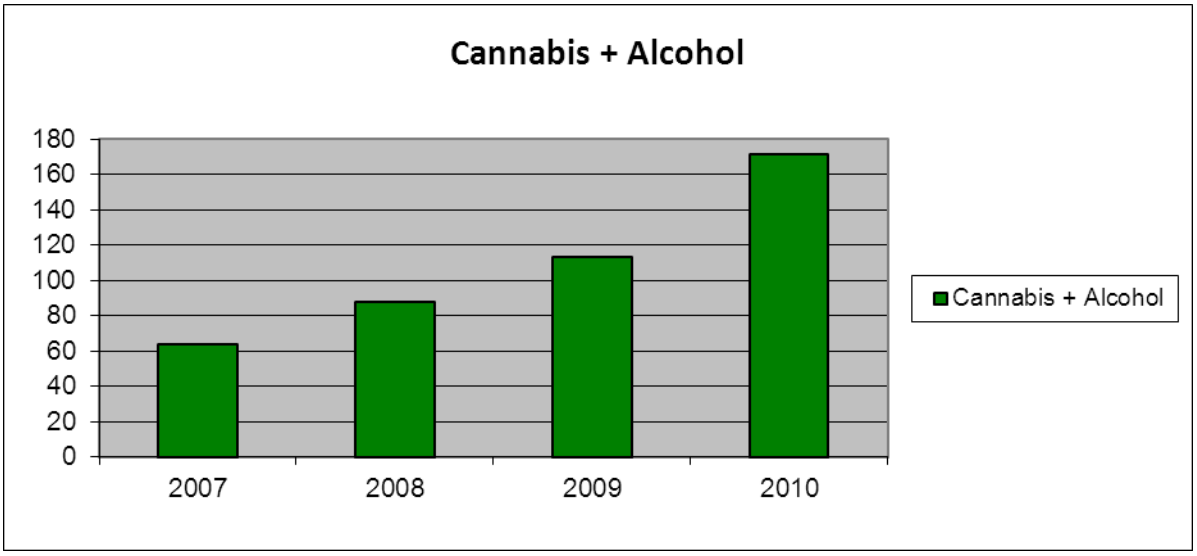
An analysis of the fatal vehicle crashes in 2010 revealed that:

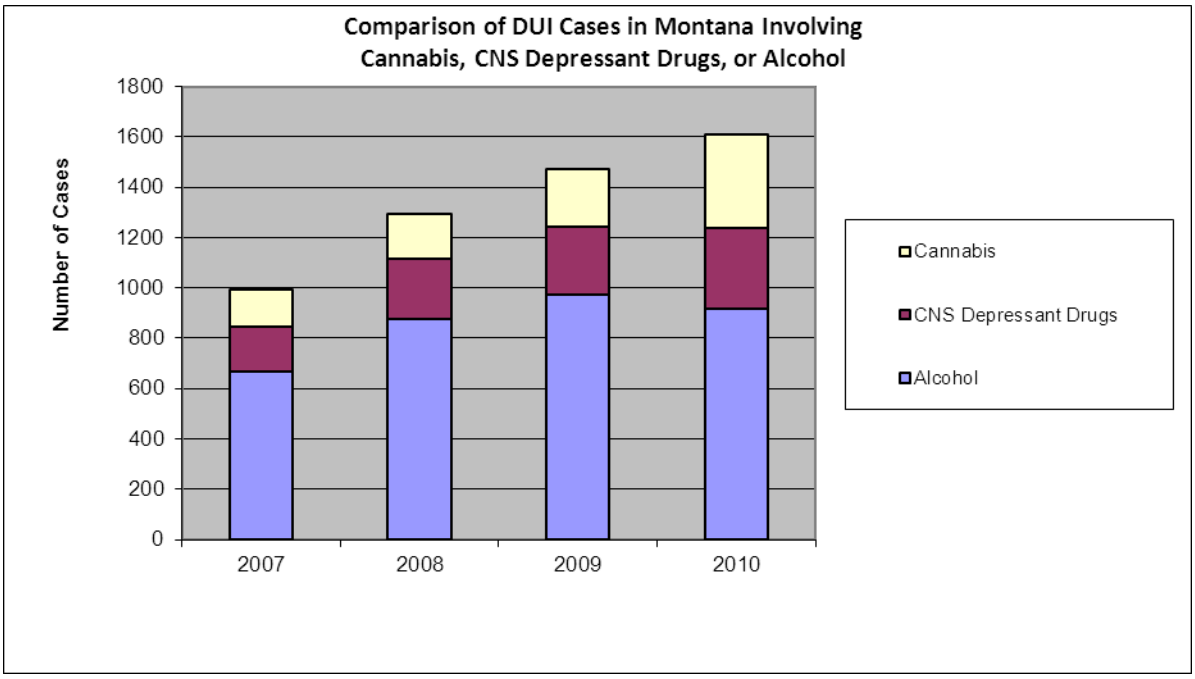
- 38% had drugs involved (up from 32% in 2009)
- 33% had alcohol involved (down from 36% in 2009)
- 14% had a mixture of drugs and alcohol involved (same as 2009)



The next graph shows the amount of CNS Depressants other than alcohol being found in whole blood samples. This shows that prescription drug use and abuse is becoming more common in DUI cases.


CNS Depressants in DUI Cases
(Depressant drugs other than alcohol)
2007
2008
2009
2010
50
45
40
35
30
25
20
15
10
5
0
DIAZEPAM
MEPROBAMATE
CARISOPRODOL
ZOLPIDEM
ALPRAZOLAM
LORAZEPAM
CLONAZEPAM
DIPHENHYDRAMINE
CITALOPRAM
TRAZODONE
QUETIAPINE
BUTALBITAL
TEMAZEPAM


Cannabis + Alcohol
180
160
140
120
100
80
60
40
20
0
2007
2008
2009
2010
Cannabis + Alcohol



Although showing some improvement, the data still shows that Montana has a substantial and costly problem in the area of impaired driving. With 23 U.S.C. Section 410 funds, the MDT State Highway Traffic Safety Office will be able to continue implementing programs and projects to reduce impaired driving.