2009 Michigan Traffic Crash Facts

Michigan Department of State Police

MICHIGAN OHSP
Office of Highway Safety Planning

This material was developed through a project funded by the Michigan Office of Highway Safety Planning and the U.S. Department of Transportation. OHSP is committed to saving lives and reducing injuries on Michigan roads through leadership, innovation, facilitation, and program support in partnership with other public and private organizations.

2009
Michigan Traffic
Crash Facts

A summary of traffic crashes on Michigan roadways in calendar year 2009

www.michigantrafficcrashfacts.org

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Acknowledgements

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Criminal Justice Information Center Staff

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Michigan Department of State Police

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In addition, we wish to acknowledge the people working in law enforcement and public safety agencies who are responsible for gathering crash data in the field. We rely on their accurate completion of crash reports--without their attention to detail we would be unable to create, maintain, and distribute meaningful crash information.

FOREWORD

The number of total, injury and fatal crashes in Michigan has steadily declined since 2000 and in 2009 the state recorded 806 fatal traffic crashes, the fewest ever.

This is, in part, due to the many traffic records improvement projects that have been ongoing since 2002 that strive to streamline the process of data collection and processing and thus improve the quality, timeliness and accuracy of data outputs.

New technologies, including electronic data collection, additional error checking, quality assurance, and improved crash location data, are continually emerging and improving. By utilizing these technologies as they become available, traffic records quality will continue to improve.

Please visit ***www.michigantrafficcrashfacts.org*** for easy access to crash data from 1992-2009.

EXECUTIVE SUMMARY

In keeping with recent trends, traffic fatalities in 2009 were down to 871, a 11.1 percent decrease from last year. The total number of persons injured also declined 4.9 percent to 70,931 and total crashes dropped 7.9 percent to 290,978. Most notably, the death rate per 100 million miles traveled was the lowest ever recorded, at 0.91.

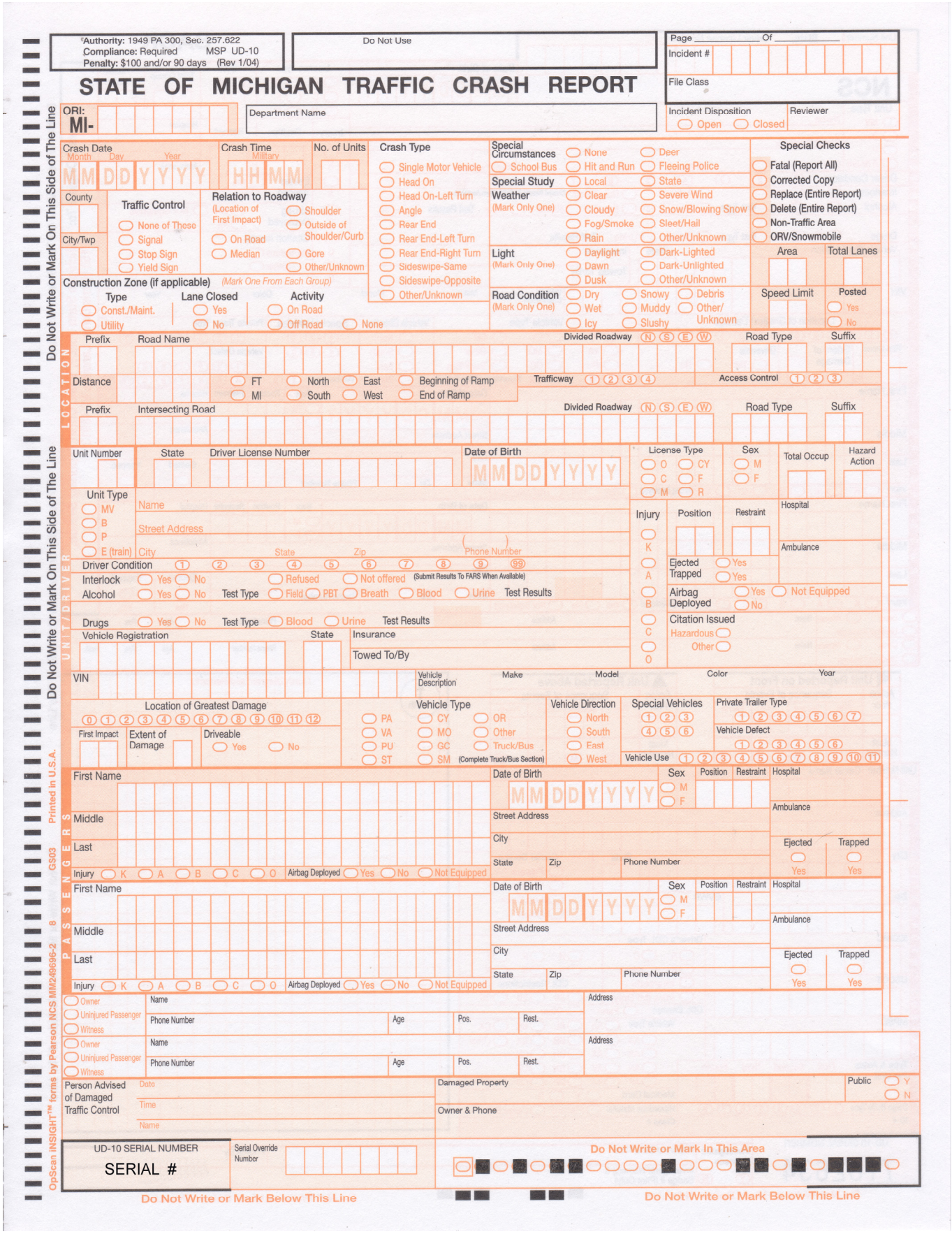
The lower death rate may have been caused by a decline in total miles traveled, down 5.0 percent; number of vehicle registrations, down 0.5 percent; and number of licensed drivers, down 0.2 percent.

While Michigan saw another year of record seat belt use, alcohol-involved crashes continued to present a problem and contributed to 34.4 percent of all fatal crashes. Crashes involving alcohol made up 3.7 percent of all crashes, and while 18.2 percent of all crashes resulted in injury or death, 41.6 percent of alcohol-related crashes resulted in injury or death.

The information compiled in this report was gathered from the Michigan Traffic Crash Report Forms (UD-10) submitted by local police departments, sheriff's offices, and the Department of State Police. Other related information was obtained from the Departments of Transportation, State, and Community Health.

The University of Michigan Transportation Research Institute produced this publication with data on file at the Michigan Department of State Police Criminal Justice Information Center as of March 15, 2010. We acknowledge, with appreciation, all involved agencies for their assistance.

UD-10 (FRONT)


Authority: 1949 PA 300, Sec. 257.622
Compliance: Required MSP UD-10
Penalty: $100 and/or 90 days (Rev 1/04)
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Incident #
File Class
STATE OF MICHIGAN TRAFFIC CRASH REPORT
ORI: MI-
Department Name
Incident Disposition Open Closed
Reviewer
Crash Date Month Day Year
Crash Time Military
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Weather (Mark Only One)
Light (Mark Only One)
Road Condition (Mark Only One)
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Traffic Control
Relation to Roadway (Location of First Impact)
Construction Zone (if applicable) (Mark One From Each Group)
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Access Control
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Driver License Number
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Drugs
Injury
Position
Restraint
Hospital
Ambulance
Ejected
Trapped
Airbag Deployed
Citation Issued
Vehicle Registration
Insurance
Towed To/By
VIN
Vehicle Description
Make
Model
Color
Year
Location of Greatest Damage
First Impact
Extent of Damage
Driveable
Vehicle Type
Vehicle Direction
Special Vehicles
Private Trailer Type
Vehicle Defect
Vehicle Use
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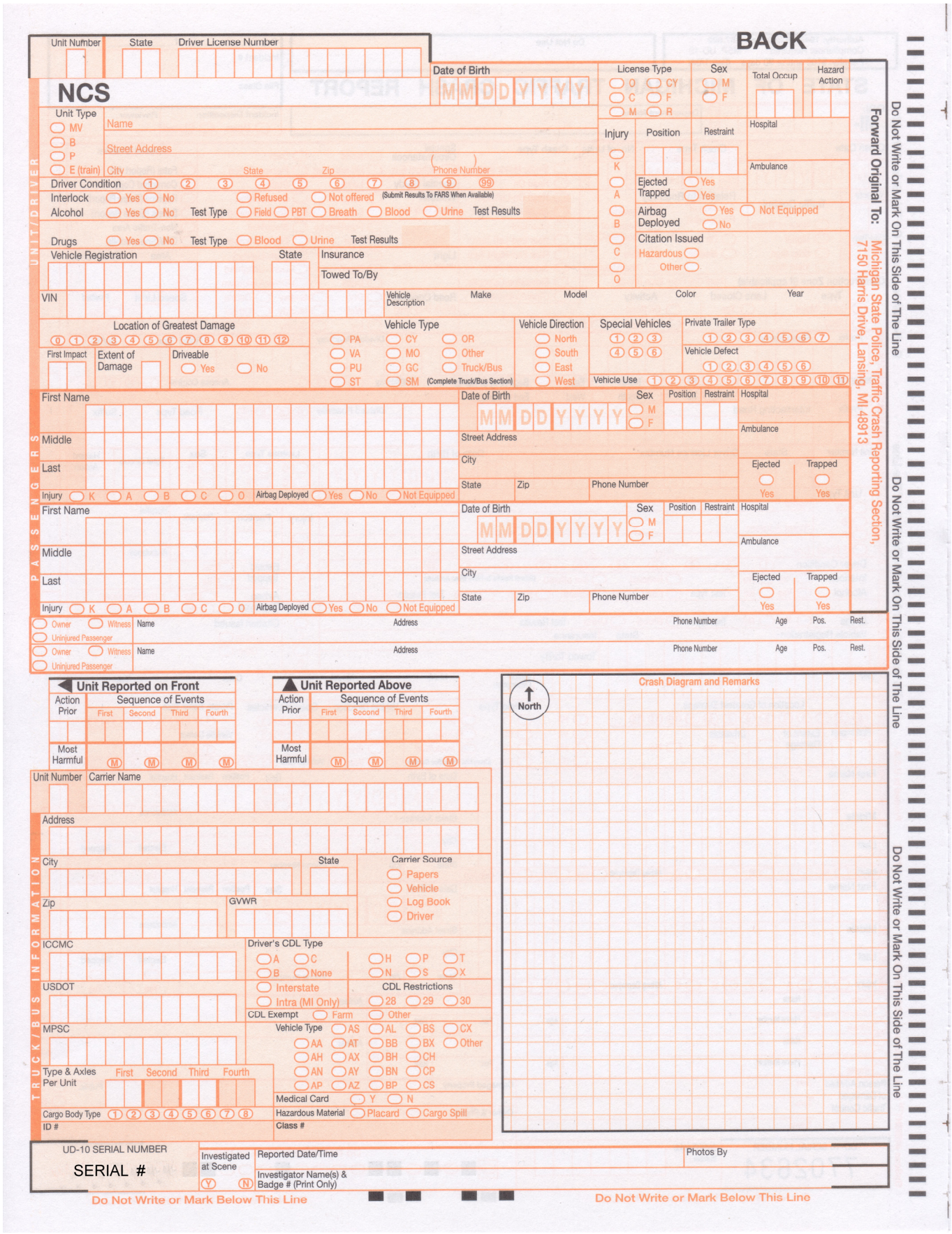
UD-10 (BACK)



MICHIGAN OHSP Office of Highway Safety Planning

MICHIGAN VEHICLE CODE
Public Act 300 of 1949

Edited by the Office of Highway Safety Planning for discussion purposes.
Editorial remarks by OHSP appear in italic print.

MCL 257.622, Amended 2003 - The driver of a motor vehicle involved in an accident that injures or kills any person, or that damages property to an apparent extent totaling $1,000.00 or more, shall immediately report that accident at the nearest or most convenient police station, or to the nearest or most convenient police officer. The officer receiving the report, or his or her commanding officer, shall immediately forward each report to the director of the Department of State Police on forms prescribed by the director of the Department of State Police *(State of Michigan Traffic Crash Report, also known as the UD-10)*. The forms shall be completed in full by the investigating officer. The director of the Department of State Police shall analyze each report relative to the cause of the reported accident and shall prepare information compiled from reports filed under this section for public use. A copy of the report under this section . . . shall be retained for at least three years at the local police department, sheriff's department, or local state police post making the report. *(As the repository of the UD-10's submitted by all Michigan law enforcement agencies, the Department of State Police processes all UD-10's received at the Criminal Justice Information Center (CJIC). The CJIC retains an electronic copy of UD-10's for ten years plus the current processing year. Electronic databases containing information from UD-10's prior to this time period are purged.)*

MCL 257.624, Amended 1980 - (1) A report required by this chapter shall not be available for use in a court action, but a report shall be for the purpose of furnishing statistical information regarding the number and cause of accidents.

(2) The Office of Highway Safety Planning (OHSP) may authorize scientific studies and research for the reduction of death, injury, and property losses. All information, records of interviews, written reports, statements, notes, memoranda, or other data collected pursuant to the scientific studies and research conducted by the state, or by other persons, agencies, or organizations authorized by OHSP shall be used solely for the purpose of medical or scientific research and shall not disclose the name or identity of a person unless the person authorizes, in writing, the use of his or her name or identity. If a subject of the research study is deceased, the executor or heir of the deceased person may authorize, in writing, the disclosure of the deceased's name or identity. The furnishing of information to OHSP or to a representative of an authorized study or research project shall not subject a person, hospital, sanitarium, rest home, nursing home, or other person or agency furnishing the information to any action for damages or other relief. The information, records, reports, statements, notes, memoranda, or other data shall not be admissible as evidence in a court or before any other tribunal, board, agency, or person. A person participating in an authorized study or research project shall not disclose, directly or indirectly, the information so obtained except in strict conformity with the research project.

ABBREVIATIONS & ACRONYMS

- **ATV** **All-Terrain Vehicle**
- **BAC** **Bodily Alcohol Content**. (Formerly referred to as Blood Alcohol Content or Blood Alcohol Concentration.) Determination of percent by weight of ethyl alcohol in blood. Usually measured in grams per liter or grams per milliliter depending on the test used.
- **CDL** **Commercial Driver's License.** A CDL is required in the United States to operate any type of vehicle with a gross weight of 26,001 lb or over.
- **CJDC** **Criminal Justice Data Center**. A division of the Michigan Department of State Police that administers data on the mainframe computer.
- **CJIC** **Criminal Justice Information Center**. A division of the Michigan Department of State Police formerly known as the Central Records Division.
- **CRD** **Child Restraint Device**. Also called child safety seat.
- **DOB** **Date of Birth**
- **FHWA** **Federal Highway Administration**. A part of the United States Department of Transportation.
- **GDL** **Graduated Driver Licensing.** A system used to identify different tiers of drivers. See Michigan Public Act 387 effective April 1, 1997, phasing in teenage driving privileges.
- **HBD** **Had Been Drinking**
- **HNBD** **Had Not Been Drinking**
- **KABC** Injury severity scale for traffic crash-related injuries:
  - **K** - Fatal
  - **A** - Incapacitating
  - **B** - Nonincapacitating
  - **C** - Possible

  See Glossary for definitions.
- **MALI** **Michigan Accident Location Index**
- **MCLS** **Michigan Crash Location System**
- **MDCH** **Michigan Department of Community Health** (formerly Michigan Department of Public Health.)
- **MDOS** **Michigan Department of State**
- **MDOT** **Michigan Department of Transportation**
- **NHTSA** **National Highway Traffic Safety Administration**. A part of the United States Department of Transportation.
- **OHSP** **Office of Highway Safety Planning**. A division of the Michigan Department of State Police.
- **ORV** **Off-Road Vehicle**
- **OWI** **Operating While Intoxicated**. Refers to a person who is driving a vehicle while either under the influence of alcohol, a controlled substance, or both; OR has a BAC of .08 or greater.
- **PDO** **Property Damage Only**. Refers to a traffic crash lacking personal injuries.
- **UD-10** Form number ascribed to the **Michigan Traffic Crash Report** form; the official document used to report traffic crashes in Michigan.
- **UMTRI** **University of Michigan Transportation Research Institute**
- **USDOT** **United States Department of Transportation**
- **VMT** **Vehicle Miles Traveled**. The estimated total number of miles traveled annually by motor vehicles on Michigan trafficways.

GLOSSARY

- **Access Control** - Indicates the degree that access to an adjoining roadway is controlled by public authority. If there is, No access control (unlimited access); Full access control (ramp entry & exit only); or Other (partial access control). NOTE: Access is controlled by roadway configuration, not traffic control devices such as, No Left Turn signs, etc.

- **Bicycle** - A device propelled by human power upon which a person may ride, having either two or three wheels in a tandem or tricycle arrangement, all of which are over 14 inches in diameter.

- **Bicyclist** - An operator or passenger riding a bicycle.

- **Bus (Also see School Bus)** - Any passenger-carrying vehicle designed to transport 18 or more passengers, including the driver.

- **Crash Date** - The date the crash occurred. If the date is unknown, and cannot be reasonably estimated, use the date the crash was discovered by the complainant or the date reported. A valid date is necessary to update records of each involved driver.

- **Crash Rate** - The number of crashes per 100 million vehicle miles traveled.

- **Crash Type** - A crash is typed by the first injury or damage-producing event, which may or may not be the most serious or significant event.

- **Death Rate** - Deaths per 100 million vehicle miles.

- **Driver/Operator** - The person who is in actual physical control of a vehicle in transit.

- **Driver Condition** - Apparent condition of the driver which may have contributed to the crash. Appeared normal; had been drinking; illegal drug use; sick; fatigue; asleep; medication (prescription and over the counter medication); distracted (inside or outside of the unit); using cellular phone; unknown.

- **Drug-Involved Crash** - Drug use prior to the crash by a driver, pedestrian, or cyclist as reported by the police, the coroner, or other accepted authorities.

- **Engineer** - Engineer (railroad train)

- **Fatal Crash** - A fatality is counted when a person dies due to injuries from a traffic crash. Prior to 1979, deaths were counted if they occurred up to one year after the crash; in 1979 this time period was reduced to 90 days. In 1988 this was further reduced to 30 days.

- **Graduated Driver Licensing** - Michigan Public Act 387 effective April 1, 1997, phasing in teenage driving privileges.

- **Had Been Drinking (HBD) Crash** - Drinking prior to the crash by a driver, pedestrian, or cyclist as reported by the police, the coroner, or other accepted authorities. Beginning with year 2000 data, the information provided for alcohol contains data for alcohol-related crashes only. This figure DOES NOT include the combined number for alcohol and drug related crashes as has been reported in prior years.

- **Harmful Event** - A harmful event is an occurrence of injury or damage.

GLOSSARY (continued)

- **Holiday** - Refers to the length of the Holiday weekend period, including the hours of 6:00 PM to midnight of the day preceding the Holiday. Please refer to the table below for the time period connected to Holidays falling on a given day of the week.

Holiday Day	Time Period From		To	Number of Days
Sunday	6:00 PM FRI	-	23:59 PM MON	3 1/4
Monday	6:00 PM FRI	-	23:59 PM MON	3 1/4
Tuesday	6:00 PM FRI	-	23:59 PM TUE	4 1/4
Wednesday	6:00 PM TUE	-	23:59 PM WED	1 1/4
Thursday	6:00 PM WED	-	23:59 PM SUN	4 1/4
Friday	6:00 PM THU	-	23:59 PM SUN	3 1/4
Saturday	6:00 PM THU	-	23:59 PM SUN	3 1/4

- **Ignition Interlock** - An alcohol concentration measuring device that prevents a motor vehicle from being started at any time without first determining through a deep lung sample the operator's breath alcohol level. Michigan Vehicle Code, Sec. 257.625L (6).

- **Injury Codes**

  K (Fatal) - Any injury that results in death.

  A (Incapacitating Injury) - Any injury, other than a fatal injury, that prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.

  B (Non-Incapacitating Injury) - Any injury not incapacitating but evident to observers at the scene of the crash in which the injury occurred.

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

  O (No injury) - Person reported as not receiving bodily harm from the motor vehicle crash.

  Note: Uninjured passengers are not required to be recorded by the police with the exception of a fatality occurring within the crash at which point all involved parties must be listed.

- **Injury Crash** - Any crash involving an injury other than a fatal injury.

- **In Transport** - Denotes the state or condition of a vehicle that is in motion or within the portion of a way ordinarily used by similar vehicles. When applied to motor vehicles, "in transport" means in motion or on a roadway.

  Inclusions: Motor vehicle in traffic on a highway; driverless motor vehicle in motion; motionless motor vehicle abandoned on a roadway; disabled motor vehicle on a roadway; and others.

  A parked motor vehicle in roadway lanes used to travel during rush hours and parking during off-peak periods is in transport during periods when parking is forbidden.

- **Licensed Drivers** - All valid Michigan drivers on file, including suspended, revoked, and denied drivers (as long as their license has not expired).

GLOSSARY (continued)

- **Location (Crash Location)** - Location of a crash is defined by:
  - The road name on which the crash occurred including prefix, road name, type, and suffix
  - The distance and direction of the point of impact from a cross road (located within the county of the crash)
  - The name of the cross road including prefix, road name, type, and suffix

- **Mileage Death Rate** - The number of deaths per 100 million vehicle miles traveled.

- **Most Severe Outcome in Crash** - The most severe injury sustained by any person involved in the crash, or property damage only.

- **Most Severe Outcome in Vehicle** - The most severe injury sustained by any person in the vehicle, or property damage only.

- **Motorcyclist** - An operator or passenger riding a motored cycle.

- **Motor Vehicle** - "Motor vehicle" means every vehicle which is self-propelled and every vehicle which is propelled by electric power obtained from overhead trolley wires, but not operated upon rails.
  - **Standard motor vehicles** - Cars, pickups, vans, buses, trucks, motorcycles, etc.
  - **Emergency vehicles** - Police, fire, ambulance.
  - **Farm equipment** - Farm tractors, combines, etc.
  - **Off Road Vehicles (ORV)** - Snowmobiles, mopeds, all-terrain vehicles (ATV), dirt bikes, motorbikes, go-carts, garden tractors, motorized wheelchairs, Cushman scooters.
  - **Road maintenance equipment** - dump trucks, snowplows, road graders
  - **Construction equipment** - Rollers, front-end loaders, scrapers, mobile cranes, etc.

- **Motor Vehicle Crash** - A crash that involves a motor vehicle in transport on a public trafficway (in Michigan) and results in injury, death, or at least $1,000 in property damage.

- **Noncollision** - A crash that does not involve a collision with another motor vehicle. Types of noncollision crashes include explosion or fire in vehicle, rollover, immersion, etc.

- **Occupant** - Any injured or killed person in or on a motor vehicle, *including* all drivers.

- **Passenger** - Any person in or on a motor vehicle, *excluding* the driver.
  Note: Uninjured passengers are not required to be recorded by the police with the exception of a fatality occurring within the crash at which point all involved parties must be listed.

- **Pedestrian** - Any person on foot; person on skis, skates or roller blades; rider of horse; horse and buggy (each occupant including the driver will be listed as a separate pedestrian unit); nonmotorized wheelchair.

- **Property Damage Only (PDO) Crash** - A crash that results in no fatalities or injuries, with a value of $1,000 as a reporting threshold.

GLOSSARY (continued)

- **School Bus** - Every motor vehicle, except station wagons, with a manufacturers' rated seating capacity of 18 or more passengers, including the driver, owned by a public, private, or governmental agency and operated for the transportation of children to or from school, or privately owned and operated for compensation for the transportation of children to or from school. School bus does not include buses operated by a municipally owned transportation system or by a common passenger carrier certificated by the state transportation department.

- **Traffic Unit** - Anything in transit on a public trafficway (i.e., motor vehicle, motorcycle, bicycle, pedestrian, snowmobile, farm equipment).

- **Trafficway** - Indicates whether or not a trafficway is not physically divided, or is divided with a median strip, with or without a traffic barrier, and whether it serves one-way or two-way traffic.

- **Transition Area** - Increase or decrease in the number of travel lanes.

- **Valid Drivers** - Excludes non-valid categories such as no license, out-of-state drivers with Michigan violations, deceased, and licenses expired three months prior to Department of State run date.

- **"Zero Tolerance"** - Law that began November 1, 1994, making it illegal for any person in Michigan under the age of 21 to consume alcohol in the presence of a law enforcement officer, or to have a BAC of 0.02 percent or more.

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Quick Facts & Figures

2009 QUICK FACTS

★ Some exposure factor comparisons between 2009 and 2008 show motor vehicle registrations decreased **0.5** percent, the number of licensed drivers on Michigan roads decreased **0.2** percent, and vehicle mileage decreased **5.0** percent.

★ The 2009 death rate of **0.91** deaths per 100 million miles of travel decreased **6.2** percent from 2008, remaining below the ten-year average of **1.16** (2000-2009).

★ There were **871** persons killed and **70,931** persons injured in **290,978** reported motor vehicle traffic crashes in Michigan during 2009. Compared with the 2008 experience, the number of: deaths decreased **11.1** percent, persons injured decreased **4.9** percent, and total reported crashes decreased **7.9** percent.

★ There were **290,978** reported crashes, of which **806** were fatal, **52,283** were personal injury, and **237,889** were property damage only crashes.

★ Of all fatal crashes, **27.9** percent occurred at intersections.

★ Of all fatal crashes, **34.4** percent involved at least one drinking operator, bicyclist, or pedestrian, **26.7** percent involved drinking but no drugs, **6.3** percent involved drugs but no drinking, and **7.7** percent involved both drinking and drugs.

★ Excessive speed was indicated as the hazardous action by **13.2** percent of the drivers involved in fatal crashes.

★ Of the **290,978** total crashes in 2009, **118,018 (40.6%)** involved one vehicle only. This is an decrease of **7.4** percent from last year's count of **127,449** single-vehicle crashes.

★ Of the **806** fatal crashes, **409 (50.7%)** involved one vehicle.

★ Of the **277** alcohol-related fatal crashes, **184 (66.4%)** involved one vehicle. This is a **10.2** percent decrease from last year's figure of **205** single vehicle, alcohol-related fatal crashes.

★ Of the **1,270** drivers involved in fatal crashes, **151 (11.9%)** were under 21 years of age and **243 (19.1%)** of all drivers involved in fatal crashes were under 25 years of age.

★ Of the **9,969,727** persons living in Michigan [1] one out of every **11,446** was killed in a traffic crash; one out of every **141** persons was injured.

★ For each person killed, **81.4** persons were injured.

★ According to figures provided by the Michigan Department of Community Health [2], accidental death for children in motor vehicle crashes routinely outpaces the next two most frequent causes: fire and drowning.

★ According to the Michigan Department of Community Health, three out of five accidental deaths for teenagers and young adults (ages 15-24) are due to motor vehicle crashes.

★ The pedestrian death toll for Michigan stands at **121** persons, a increase of **7** deaths from 2008.

★ For each pedestrian killed, there were **15.1** pedestrians injured.

★ Of the pedestrians killed, **30.6** percent were killed while crossing streets not at intersections.

★ Of all pedestrians killed, **13.2** percent were under the age of 21 and **23.1** percent were 75 and older.

★ Children under the age of 16 accounted for **15.8** percent of the bicycle deaths.

★ Of the **490,543** drivers and injured passengers involved in crashes, **424,677** or **86.6** percent were *reported* to have been using occupant restraints. Restraint usage among fatal victims, where usage was known, was reported to be **59.1** percent in 2009.

★ Motor vehicle occupants age 65 to 110 had the highest reported restraint usage **(95.5%)** among all age groups. Children age 11 to 15 had the lowest reported restraint usage **(80.5%)**.

★ The economic loss in Michigan traffic crashes amounted to **$7,890,385,400**. If costs were spread across the state's population this would translate into a loss of $791.43 per state resident.

Note: Information on the cost of crashes was provided by the National Safety Council on January 26, 2011.

Michigan's Crash Watch 2009

Every
1 minute
48 seconds
a traffic crash
occurs

One person
is killed in a
crash every
10 hours
3 minutes

One person
is injured in
a crash every
7 minutes
25 seconds

One person
is killed in an
alcohol-related
crash every
29 hours
18 minutes

One driver
under age 21
is in a fatal
crash every
58 hours
1 minutes

One
motorcyclist
is injured every
3 hours
13 minutes

One
pedestrian
is injured every
4 hours
48 minutes

One bicyclist
is injured every
5 hours
19 minutes

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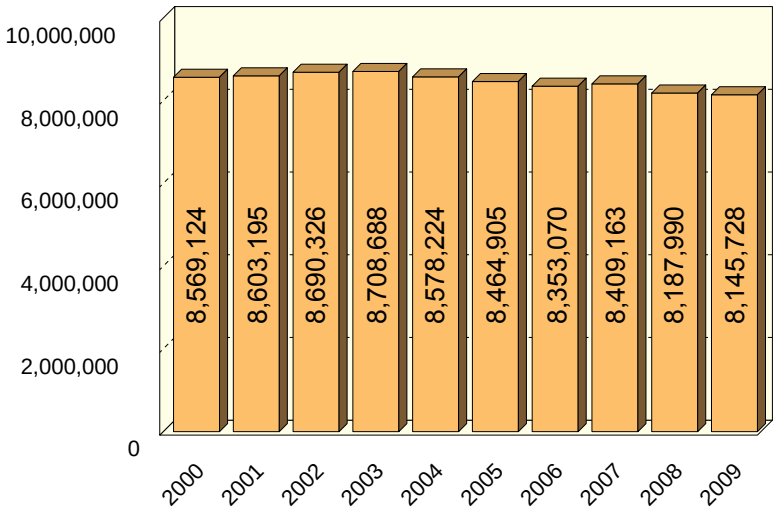
Historical Information

10-, 5-, and 1-year

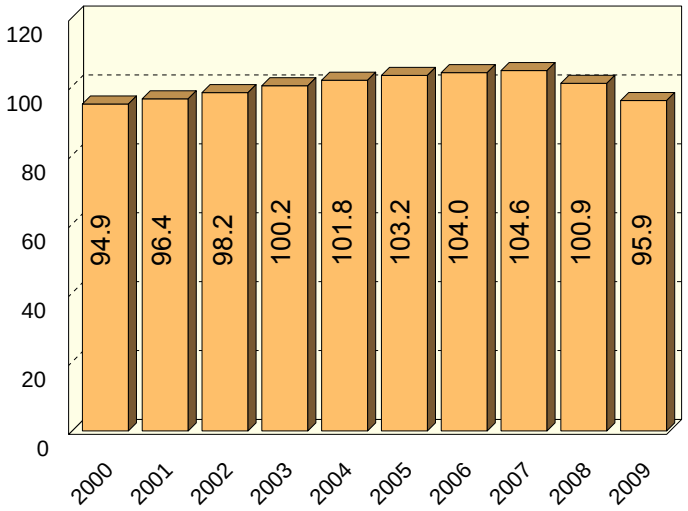
10 YEAR

VEHICLE REGISTRATIONS



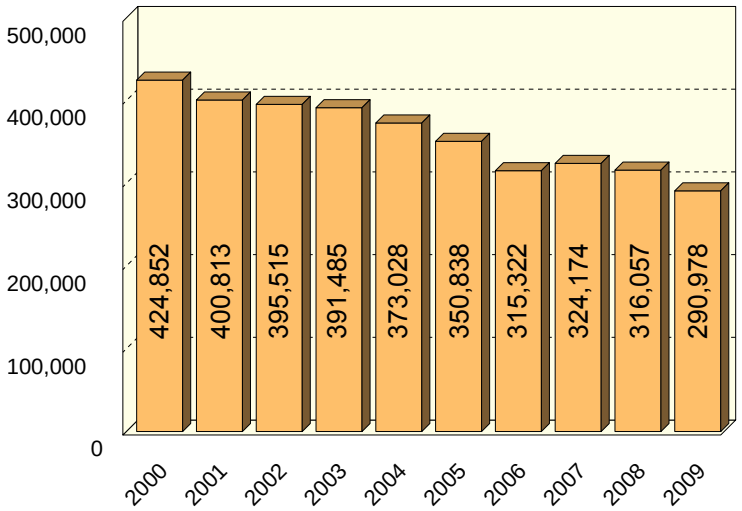
Vehicle registrations remained fairly consistent over the ten-year period, reaching a high in 2003.

VEHICLE MILES TRAVELED



Vehicle miles traveled have been decreasing from a high of 104.6 billion miles in 2007.

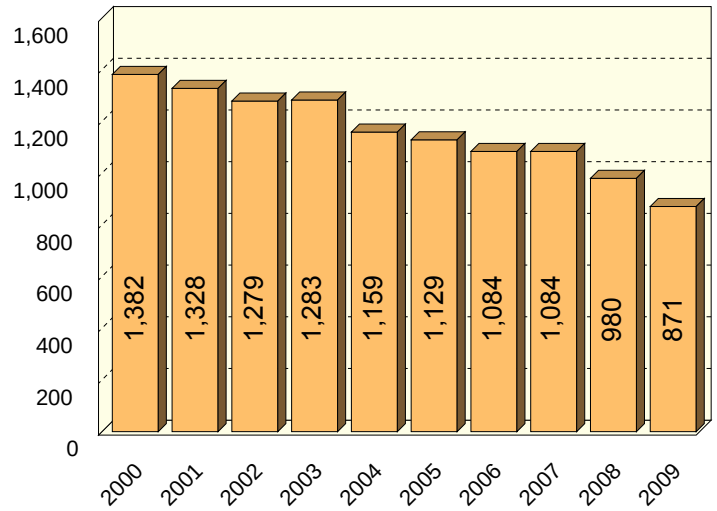
CRASHES



There were 290,978 total crashes statewide in 2009, a 31.5 percent decrease from 2000.

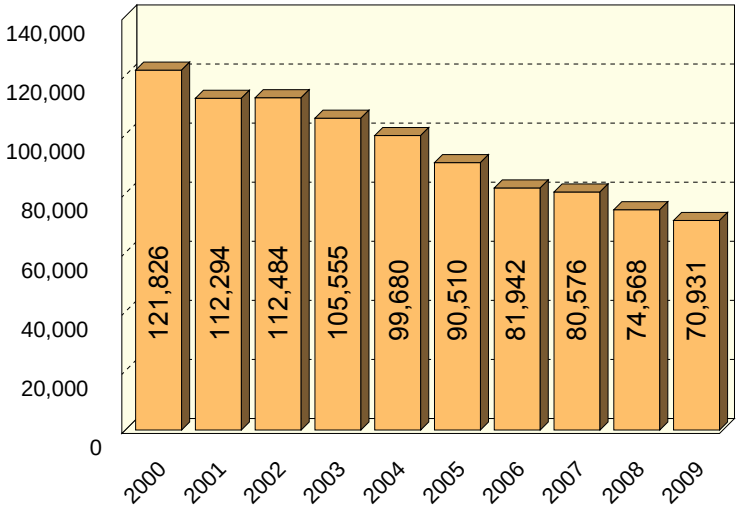
10 YEAR TRENDS (continued)

DEATHS



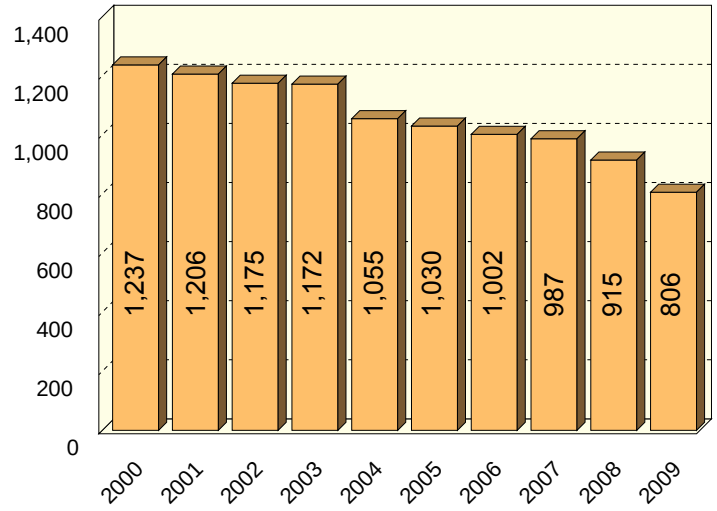
In 2009, 871 people died in motor vehicle crashes, a decrease of 37.0 percent from 2000.

INJURIES



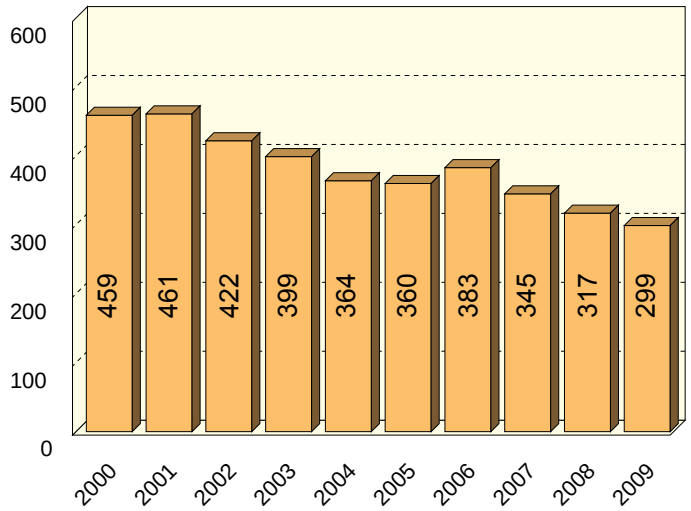
In 2009, 70,931 people received nonfatal injuries in motor vehicle crashes, down 41.8 percent from 121,826 in 2000.

FATAL CRASHES



In 2009, there were 806 fatal crashes, down 34.8 percent from 1,237 in 2000.

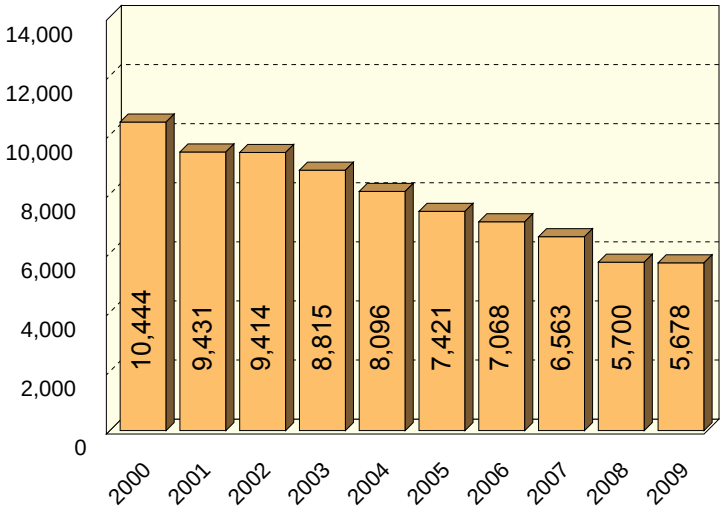
HAD-BEEN-DRINKING FATALITIES



10 YEAR

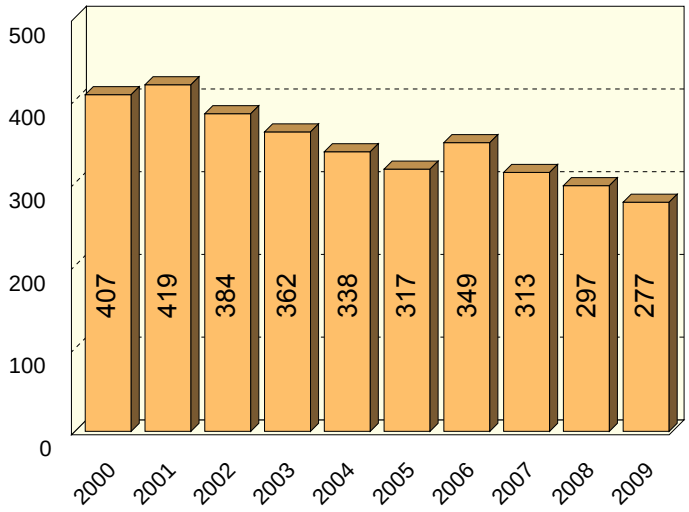
Deaths in alcohol-related crashes decreased 34.9 percent over the ten-year period.

HAD-BEEN-DRINKING INJURIES



Mirroring the trend in deaths, had-been-drinking injuries have decreased over the last ten years. In 2009, there were 5,678 injuries in crashes where the operator had been drinking, down 45.6 percent from 2000.

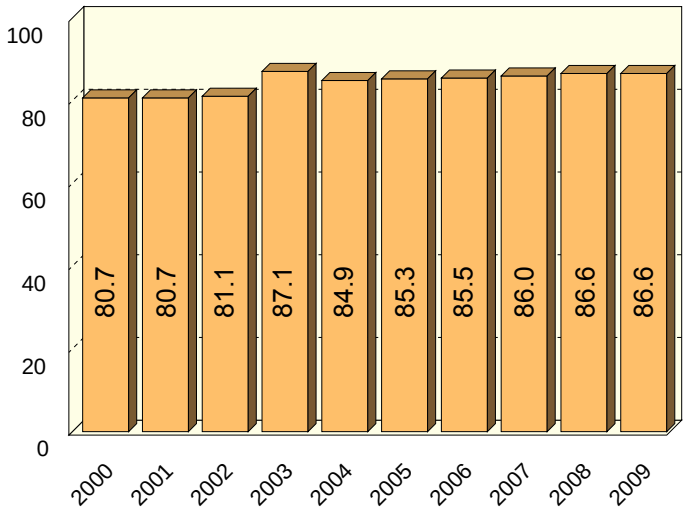
HAD-BEEN-DRINKING FATAL CRASHES



Alcohol involvement in fatal crashes has also decreased over the ten-year period. In 2009, there were 277 fatal crashes where the operator had been drinking, down 31.9 percent from 2000.

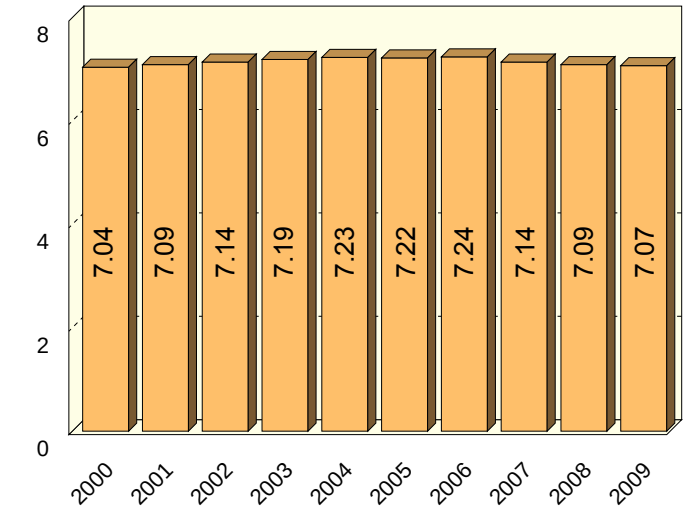
10 YEAR TRENDS (continued)

RESTRAINT USAGE



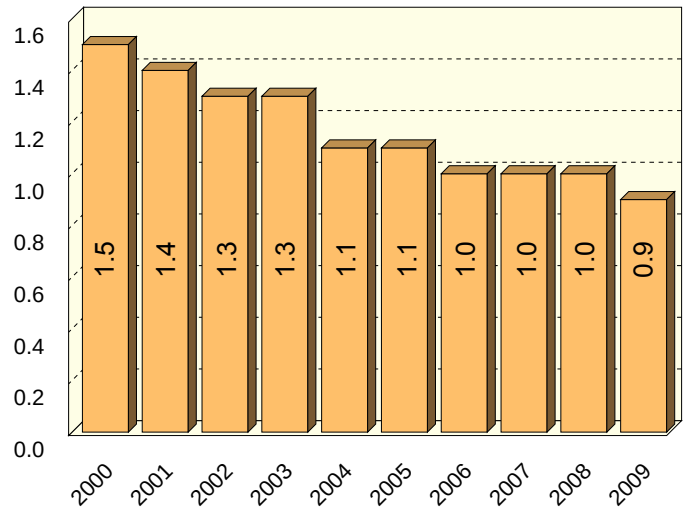
The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes has increased 7.3 percent over the last ten years.

DRIVERS IN MICHIGAN



There were 7,073,619 licensed drivers on Michigan roadways in 2009, an increase of 0.4 percent from 2000.

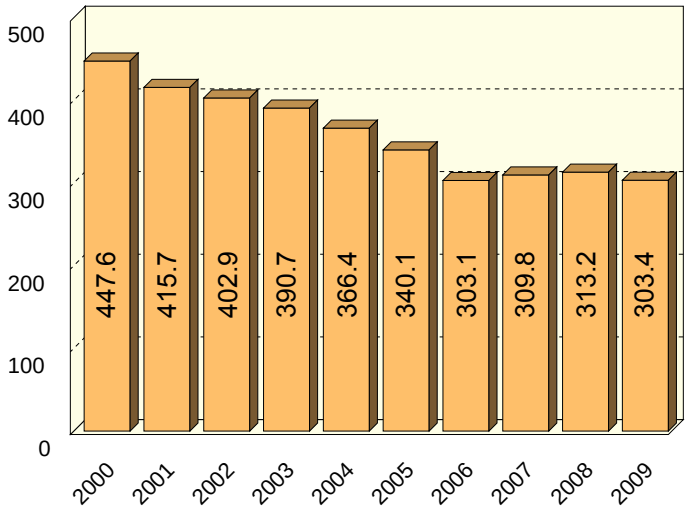
MILEAGE DEATH RATE



The 0.9 death rate in 2009 is a 39.3 percent decrease from the ten-year high of 1.5 in 2000.

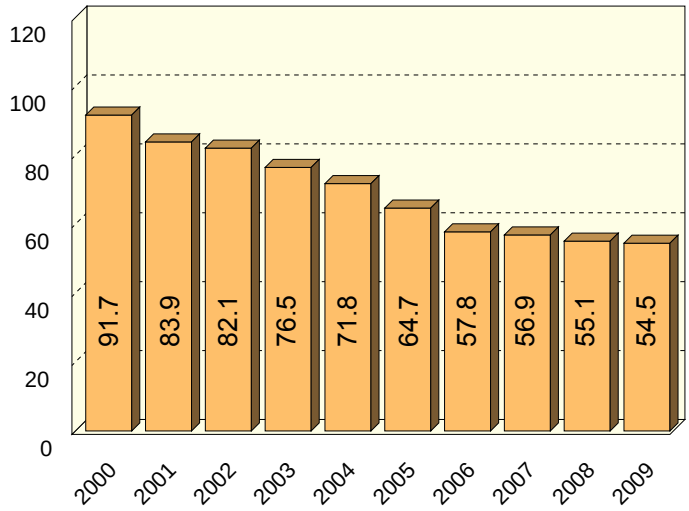
TOTAL CRASH RATE

10 YEAR



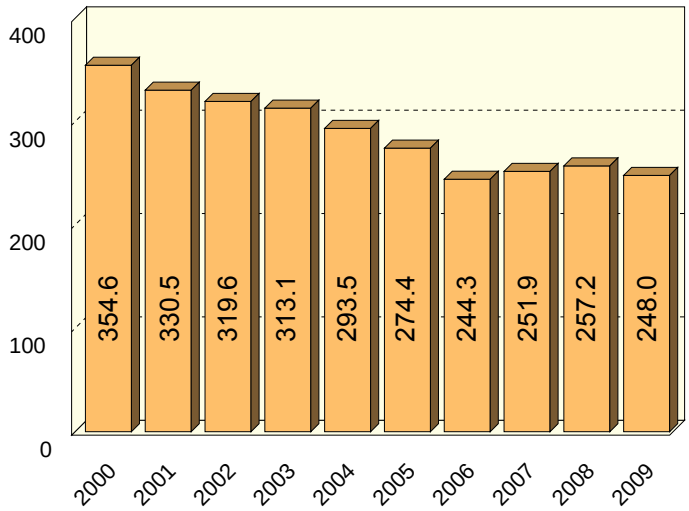
The ten-year total crash rate peaked in 2000 at 447.6 then decreased by 32.2 percent to 303.4 in 2009.

PERSONAL INJURY CRASH RATE



The personal injury crash rate has been steadily decreasing since 2000. The 54.5 personal injury crash rate in 2009 is a 40.6 percent decrease from 2000.

PROPERTY DAMAGE CRASH RATE

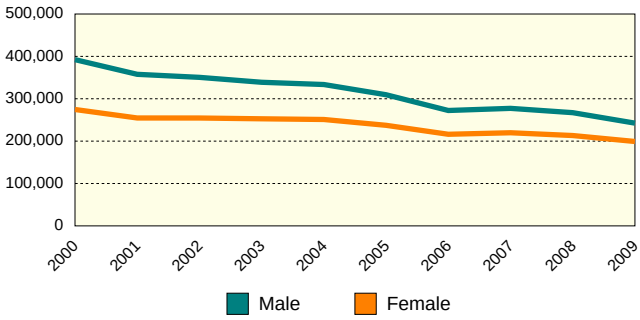


The 248.0 property damage crash rate in 2009 is a 30.1 percent decrease from 2000.

10 YEAR TRENDS (continued)

DRIVERS IN ALL CRASHES		
	Male	Female
2000	392,347	274,675
2001	357,684	254,636
2002	350,528	254,561
2003	338,913	252,716
2004	333,606	251,077
2005	309,487	237,343
2006	272,328	216,196
2007	277,353	219,781
2008	267,186	213,223
2009	242,490	199,166

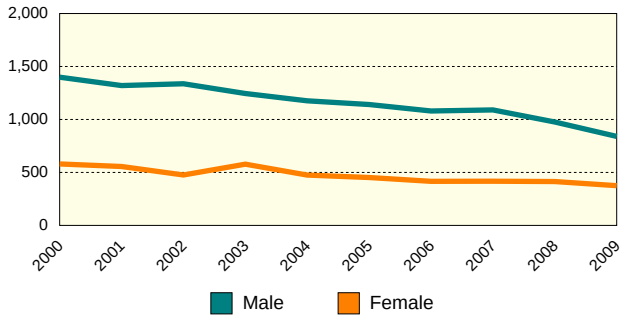
DRIVERS IN ALL CRASHES



Male drivers accounted for 50.9 percent of all drivers in crashes during 2009, down from 53.3 percent in 2000.

DRIVERS IN FATAL CRASHES		
	Male	Female
2000	1,399	580
2001	1,320	556
2002	1,337	476
2003	1,245	578
2004	1,176	475
2005	1,141	452
2006	1,080	416
2007	1,090	417
2008	976	414
2009	840	375

DRIVERS IN FATAL CRASHES

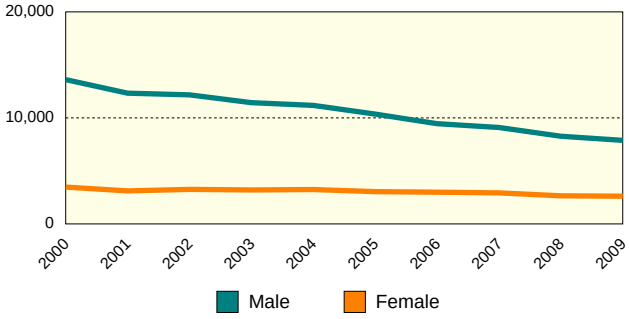


Male drivers made up 66.1 percent of all drivers in fatal crashes in 2009. The 840 male driver count is down 40.0 percent from 2000.

DRINKING DRIVERS IN ALL CRASHES		
	Male	Female
2000	13,609	3,474
2001	12,331	3,112
2002	12,173	3,257
2003	11,436	3,203
2004	11,179	3,242
2005	10,359	3,045
2006	9,454	2,991
2007	9,095	2,928
2008	8,270	2,650
2009	7,881	2,613

Note: 7.4 percent of all drivers (35,145), 4.3 percent of drivers (55) in fatal crashes, and 0.5 percent of all drinking drivers (48), were coded as unknown gender in 2009.

DRINKING DRIVERS IN ALL CRASHES



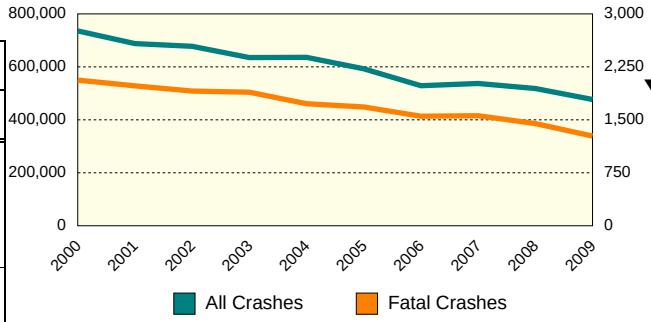
Male drivers have always accounted for the majority of drinking drivers in all crashes. In 2009, males represented 74.8 percent of all drinking drivers. The 7,881 male driver count is down 42.1 percent from 2000.

MICHIGAN OHSP Office of Highway Safety Planning

10 YEAR

ALL DRIVERS		
	All Crashes	Fatal Crashes
2000	735,664	2,062
2001	687,836	1,981
2002	677,527	1,907
2003	635,096	1,891
2004	635,913	1,728
2005	592,671	1,682
2006	528,763	1,551
2007	537,228	1,558
2008	518,240	1,447
2009	476,801	1,270

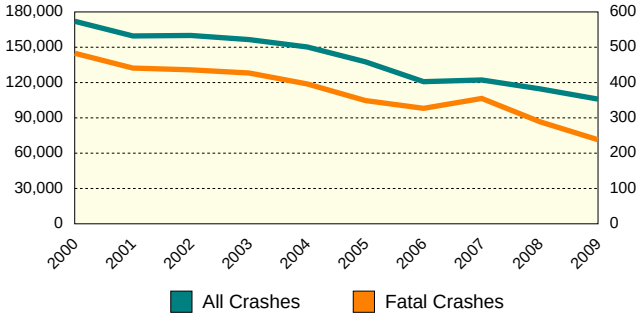
ALL DRIVERS



The number of drivers involved in all crashes decreased 35.2 percent over the ten-year period. The number of drivers involved in fatal crashes decreased 38.4 percent over the ten-year period.

TEEN/YOUNG ADULT DRIVERS		
	All Crashes	Fatal Crashes
2000	172,059	483
2001	159,597	441
2002	160,003	436
2003	156,496	427
2004	150,220	396
2005	137,613	349
2006	120,760	327
2007	122,187	355
2008	114,659	289
2009	105,919	238

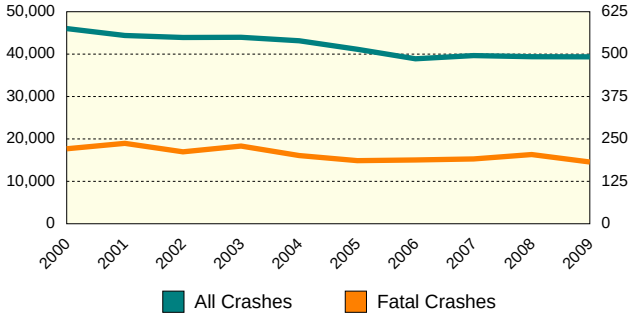
TEEN/YOUNG ADULT DRIVERS



Teen/young adult drivers (age 16-24) represented 14.1 percent of the licensed drivers in 2009. The number of teen/young adult drivers in all crashes has decreased by 38.4 percent since 2000. Their involvement in fatal crashes decreased 50.7 percent during the same time period.

ELDERLY DRIVERS		
	All Crashes	Fatal Crashes
2000	46,023	221
2001	44,393	237
2002	43,923	212
2003	43,967	229
2004	43,146	201
2005	41,140	186
2006	38,899	188
2007	39,656	191
2008	39,388	204
2009	39,357	182

ELDERLY DRIVERS

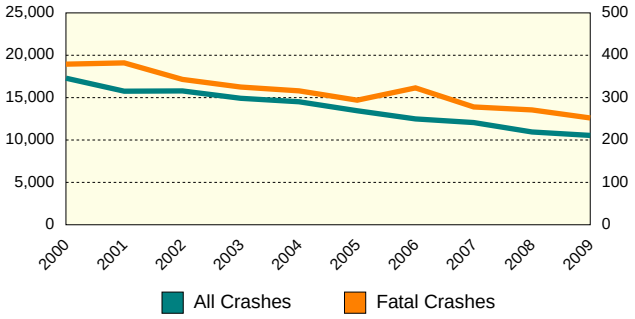


Elderly drivers (age 65-110) represent 16.5 percent of the licensed drivers in 2009. The number of drivers age 65 and older in all crashes has decreased 14.5 percent since 2000. Their involvement in fatal crashes decreased 17.6 percent during the same time period.

10 YEAR TRENDS (continued)

DRINKING DRIVERS		
	All Crashes	Fatal Crashes
2000	17,295	379
2001	15,760	382
2002	15,791	343
2003	14,922	325
2004	14,513	316
2005	13,452	294
2006	12,489	323
2007	12,059	278
2008	10,948	271
2009	10,542	252

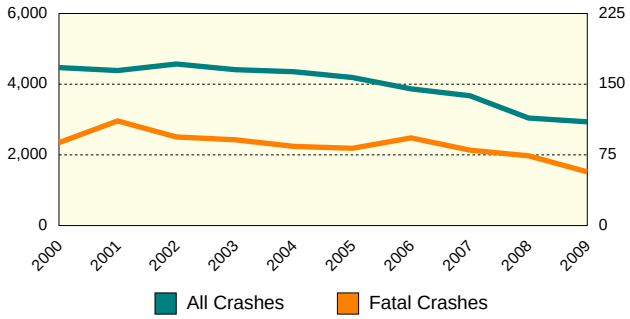
DRINKING DRIVERS



Drinking driver involvement in all crashes decreased by 39.0 percent from 2000. Drinking driver involvement in fatal crashes decreased by 33.5 percent from 2000.

TEEN/YOUNG ADULT DRINKING DRIVERS		
	All Crashes	Fatal Crashes
2000	4,470	88
2001	4,386	111
2002	4,571	94
2003	4,411	91
2004	4,353	84
2005	4,189	82
2006	3,867	93
2007	3,673	80
2008	3,042	74
2009	2,935	57

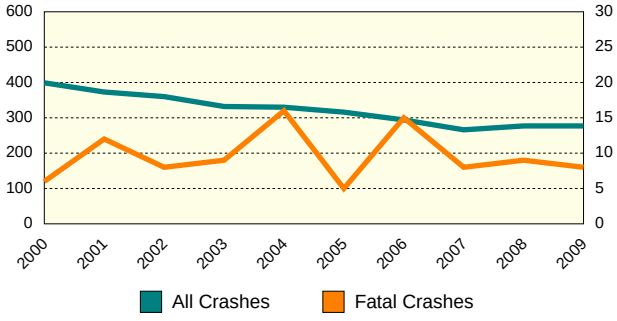
TEEN/YOUNG ADULT DRINKING DRIVERS



Following the trend for all drinking drivers, the number of teen/young adult drinking drivers (age 16-24) in all crashes decreased by 34.3 percent, and their involvement in fatal crashes decreased by 35.2 percent from 2000.

ELDERLY DRINKING DRIVERS		
	All Crashes	Fatal Crashes
2000	399	6
2001	373	12
2002	360	8
2003	332	9
2004	330	16
2005	316	5
2006	294	15
2007	266	8
2008	277	9
2009	277	8

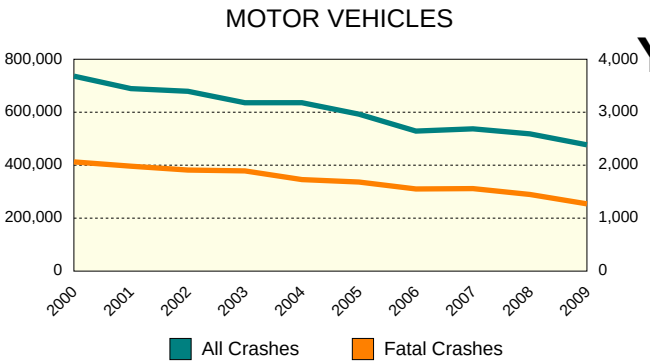
ELDERLY DRINKING DRIVERS



The number of elderly drinking drivers (age 65-110) in all crashes has decreased by 30.6 percent from 2000.

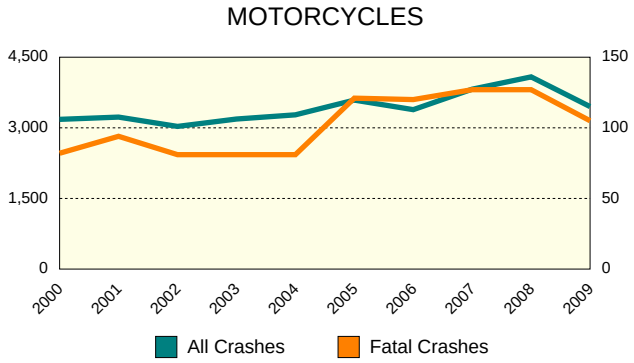
10 YEAR

MOTOR VEHICLES		
	All Crashes	Fatal Crashes
2000	736,219	2,062
2001	689,122	1,981
2002	678,990	1,908
2003	635,767	1,892
2004	635,913	1,728
2005	592,671	1,682
2006	528,763	1,551
2007	537,228	1,558
2008	518,240	1,447
2009	476,801	1,270



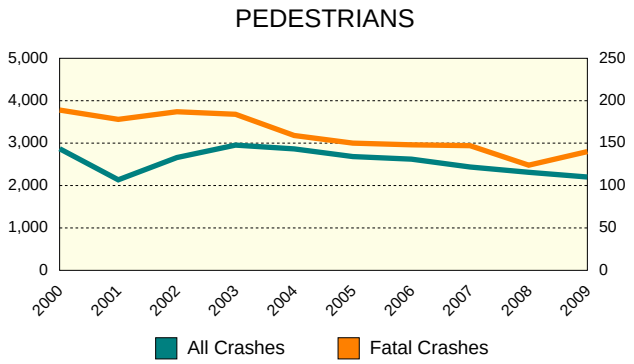
There were 1,270 motor vehicles involved in fatal crashes in 2009, down 38.4 percent from 2000.

MOTORCYCLES		
	All Crashes	Fatal Crashes
2000	3,180	82
2001	3,228	94
2002	3,030	81
2003	3,187	81
2004	3,276	81
2005	3,589	121
2006	3,386	120
2007	3,821	127
2008	4,082	127
2009	3,451	105



The number of motorcycles involved in fatal crashes has increased 28.0 percent in the ten-year period.

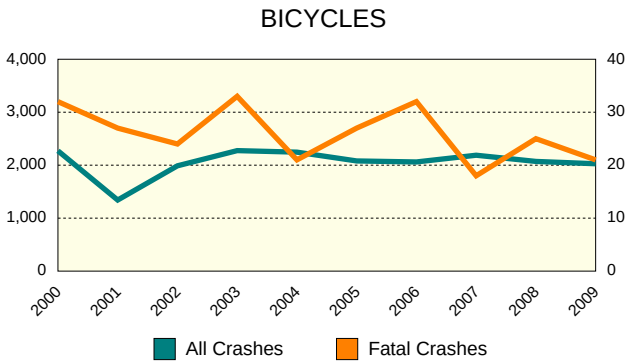
PEDESTRIANS		
	All Crashes	Fatal Crashes
2000	2,868	189
2001	2,135	178
2002	2,660	187
2003	2,953	184
2004	2,864	159
2005	2,683	150
2006	2,622	148
2007	2,437	147
2008	2,312	124
2009	2,201	140



There were 140 pedestrians involved in fatal crashes in 2009, down 25.9 percent from 2000.

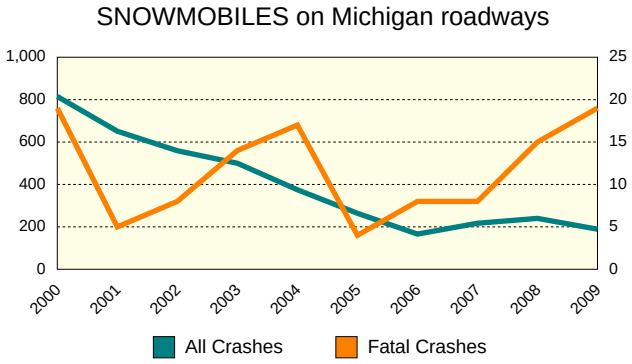
10 YEAR TRENDS (continued)

BICYCLES		
	All Crashes	Fatal Crashes
2000	2,271	32
2001	1,342	27
2002	1,988	24
2003	2,275	33
2004	2,246	21
2005	2,080	27
2006	2,061	32
2007	2,188	18
2008	2,071	25
2009	2,027	21



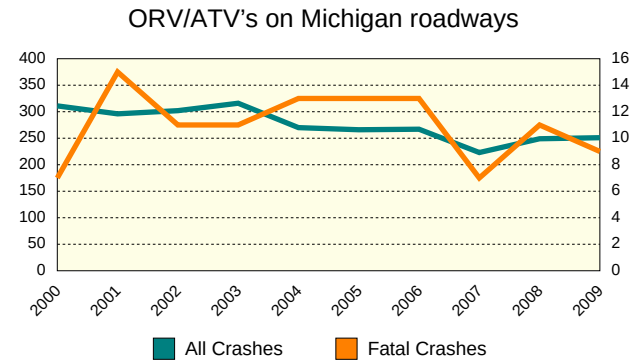
There were 21 bicycles involved in fatal crashes in 2009, down 34.4 percent from 2000.

SNOWMOBILES on Michigan roadways		
	All Crashes	Fatal Crashes
2000	815	19
2001	651	5
2002	559	8
2003	500	14
2004	375	17
2005	264	4
2006	166	8
2007	217	8
2008	240	15
2009	189	19



The 189 snowmobile crash count is down 76.8 percent from 2000. A ten-year low of four snowmobiles involved in fatal crashes on Michigan public roadways was reported in 2005.

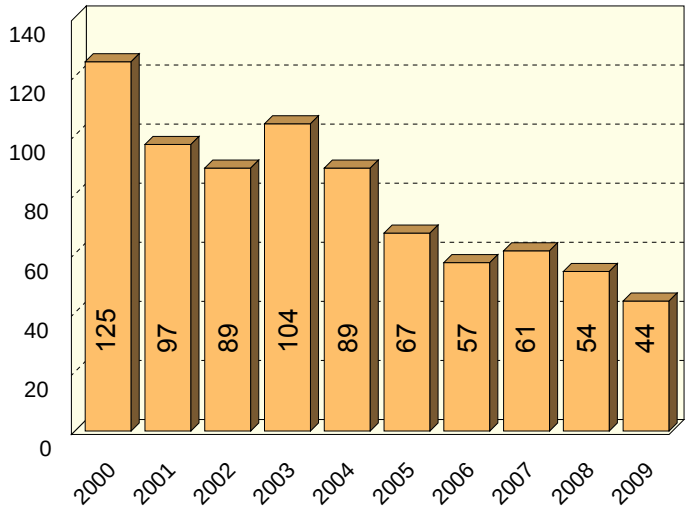
ORV/ATV's on Michigan roadways		
	All Crashes	Fatal Crashes
2000	311	7
2001	296	15
2002	302	11
2003	316	11
2004	270	13
2005	266	13
2006	267	13
2007	223	7
2008	249	11
2009	251	9



The number of ORV/ATV's involved in fatal crashes on Michigan public roadways has ranged between seven and fifteen over the ten-year period. The number of ORV/ATV's involved in all crashes has decreased 19.3% over the ten-year period.

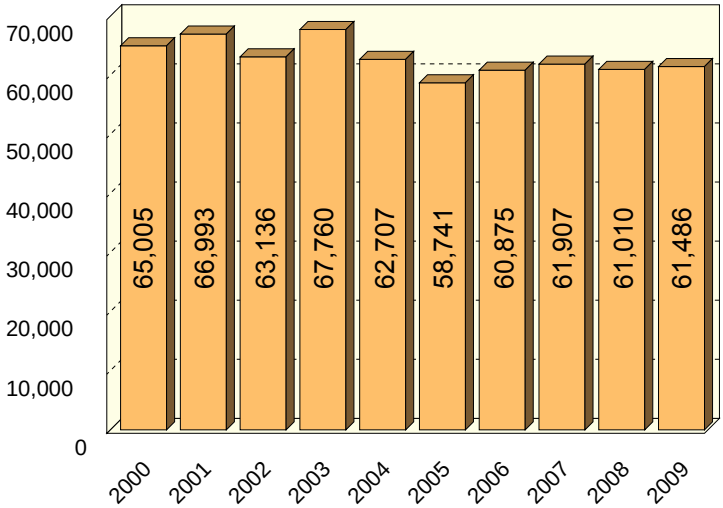
10 YEAR

VEHICLE-TRAIN CRASHES



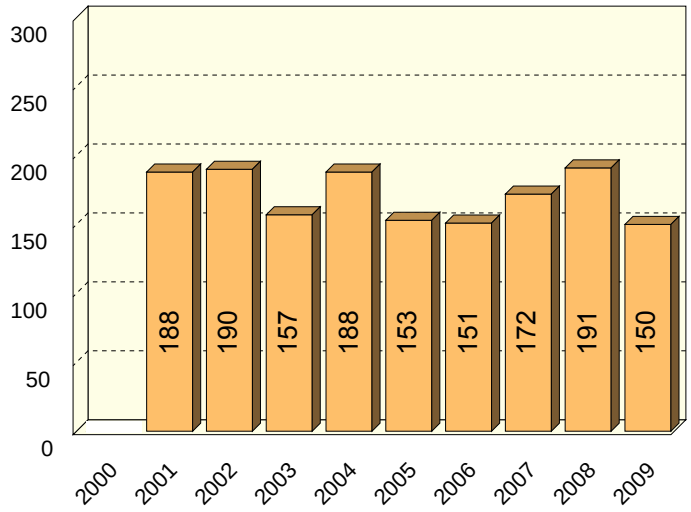
Forty-four vehicle-train crashes occurred in 2009, a decrease of 64.8 percent in the ten-year period.

VEHICLE-DEER CRASHES



The number of vehicle-deer crashes has decreased 5.4 percent in the ten-year period.

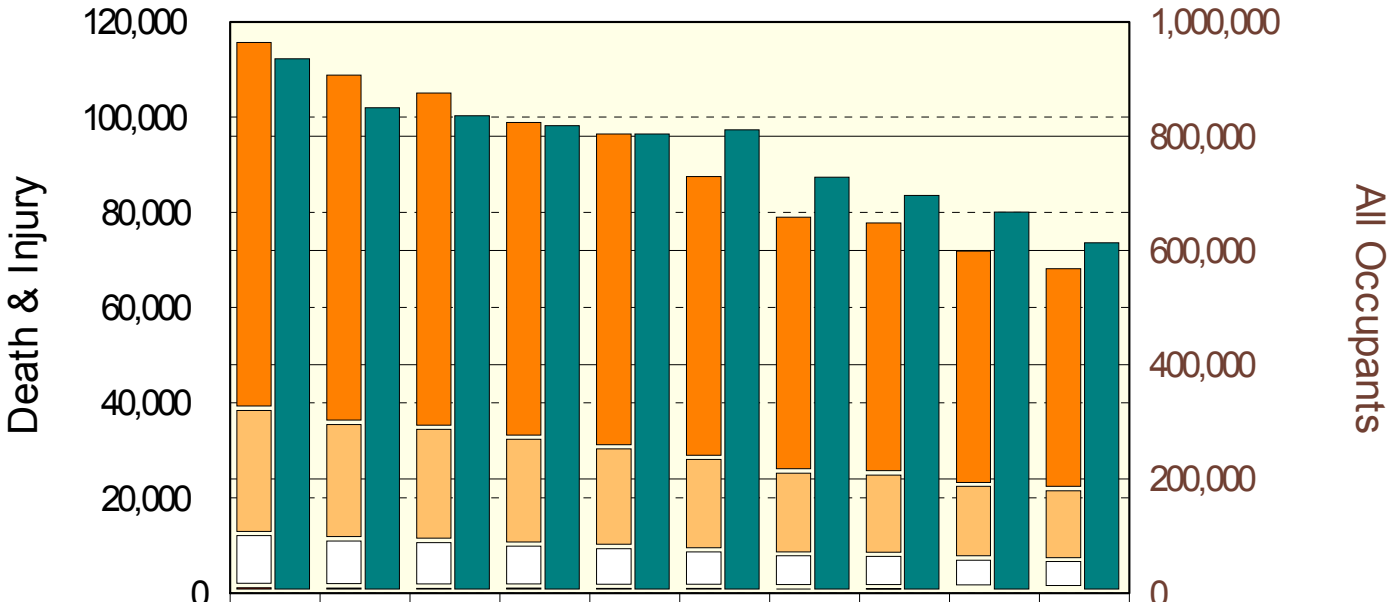
FARM EQUIPMENT CRASHES



The 150 farm equipment crashes in 2009 is the lowest number recorded in the ten-year period.

Data not available for calendar year 2000 farm equipment crashes.

DEATH AND INJURY FOR CRASH-INVOLVED OCCUPANTS

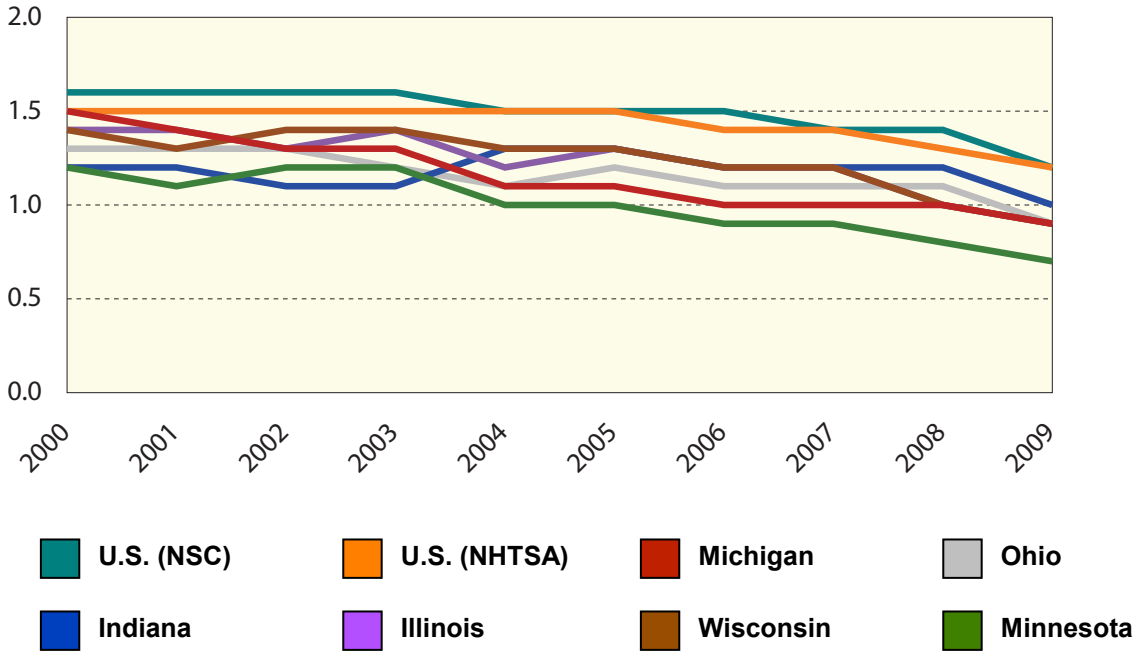


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
All Occupants	935,411	849,316	835,576	818,272	803,839	811,174	728,444	695,926	666,897	613,161
C - Injured	77,258	73,396	70,687	66,570	66,155	59,434	53,752	52,888	49,427	46,680
B - Injured	26,335	24,442	23,744	22,449	20,915	19,414	17,423	17,105	15,495	14,911
A - Injured	10,918	9,852	9,579	8,798	8,411	7,714	6,904	6,821	6,091	5,879
K - Killed	1,174	1,136	1,073	1,077	998	966	919	933	841	731

The proportion of death and injury to crash-involved occupants has decreased over the last ten years. The all-occupant figure is the number of occupants recorded by the police officers on the UD-10.

10 YEAR

MILEAGE DEATH RATES 2000 - 2009

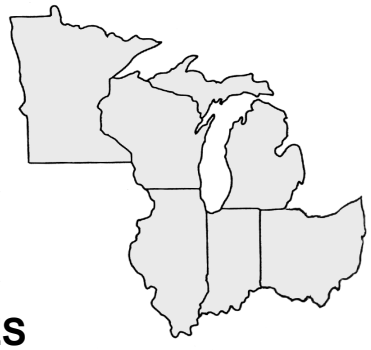


	U.S. (NSC*)	U.S. (NHTSA*)	Michigan	Ohio	Indiana	Illinois	Wisconsin	Minnesota
2000	1.6	1.5	1.5	1.3	1.2	1.4	1.4	1.2
2001	1.6	1.5	1.4	1.3	1.2	1.4	1.3	1.1
2002	1.6	1.5	1.3	1.3	1.1	1.3	1.4	1.2
2003	1.6	1.5	1.3	1.2	1.1	1.4	1.4	1.2
2004	1.5	1.5	1.1	1.1	1.3	1.2	1.3	1.0
2005	1.5	1.5	1.1	1.2	1.3	1.3	1.3	1.0
2006	1.5	1.4	1.0	1.1	1.2	1.2	1.2	0.9
2007	1.4	1.4	1.0	1.1	1.2	1.2	1.2	0.9
2008	1.4	1.3	1.0	1.1	1.2	1.0	1.0	0.8
2009	1.2	1.2	0.9	0.9	1.0	0.9	0.9	0.7

* National Safety Council (NSC) reports traffic and nontraffic deaths within a year of the accident. National Highway Traffic Safety Administration (NHTSA) reports only traffic deaths that occur within 30 days of the accident.

U.S. data for this table and tables on the following page were provided by the National Safety Council [3], the National Highway Traffic Safety Administration [4], and the Federal Highway Administration [5]. State data for this table and tables on the following page were provided by Ohio [6], Indiana [7], Illinois [8], Wisconsin [9], and Minnesota [10].

10
YEAR



MICHIGAN AND SURROUNDING STATES
COMPARISON OF FATALITIES AND VMT

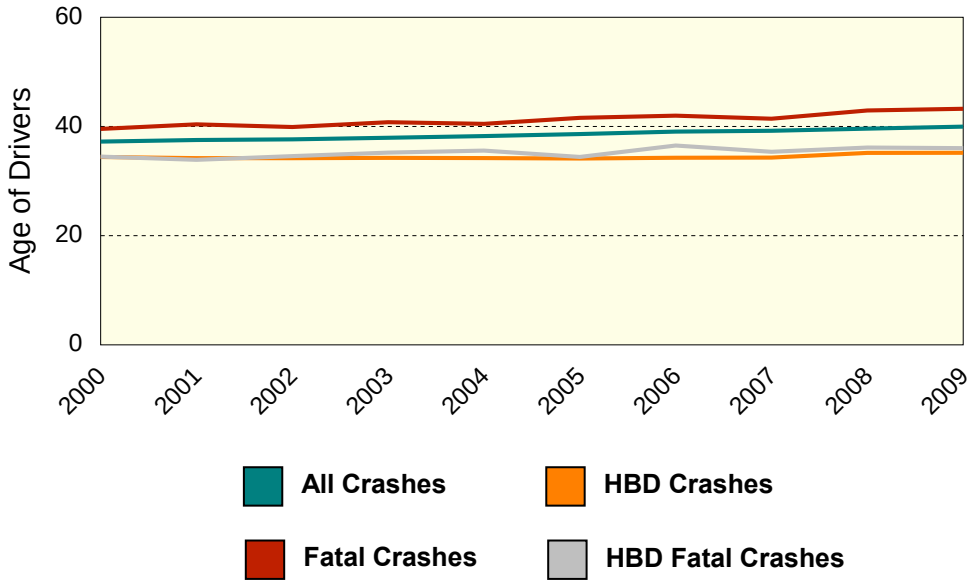
Year	U.S. (NSC) Persons Killed	U.S. (NHTSA) Persons Killed	Michigan Persons Killed	Ohio Persons Killed	Indiana Persons Killed	Illinois Persons Killed	Wisconsin Persons Killed	Minnesota Persons Killed
2000	43,354	41,945	1,382	1,361	875	1,418	801	625
2001	43,788	42,196	1,328	1,379	895	1,414	764	568
2002	45,380	43,005	1,279	1,417	792	1,420	805	657
2003	44,757	42,884	1,283	1,278	833	1,454	836	655
2004	44,933	42,836	1,159	1,285	947	1,355	784	567
2005	45,500	43,443	1,129	1,326	938	1,360	801	559
2006	44,700	42,642	1,084	1,239	899	1,254	712	494
2007	43,100	41,059	1,084	1,257	899	1,248	737	510
2008	39,800	37,261	980	1,191	815	1,043	587	455
2009	35,900	33,963	871	1,028	692	911	542	421

Year	U.S. (FHWA) VMT	Michigan VMT	Ohio VMT	Indiana VMT	Illinois VMT	Wisconsin VMT	Minnesota VMT
2000	2,747	94.9	106.5	72.3	102.9	57.3	52.4
2001	2,796	96.4	107.0	74.1	103.1	57.3	53.2
2002	2,856	98.2	107.9	74.6	106.2	58.7	54.4
2003	2,890	100.2	109.9	74.4	106.5	59.6	55.4
2004	2,962	101.8	112.4	74.5	108.9	60.5	56.5
2005	2,990	103.2	111.5	74.3	107.9	60.0	56.5
2006	2,995	104.0	112.1	74.2	106.8	59.4	56.6
2007	2,996	104.6	111.1	74.1	107.4	59.5	57.4
2008	2,929	100.9	108.3	68.0	105.6	57.5	57.3
2009	2,935	95.9	110.8	68.8	105.7	58.2	56.9

VMT described in billions of miles

10 YEAR

AVERAGE AGE OF DRIVERS IN CRASHES 2000 - 2009

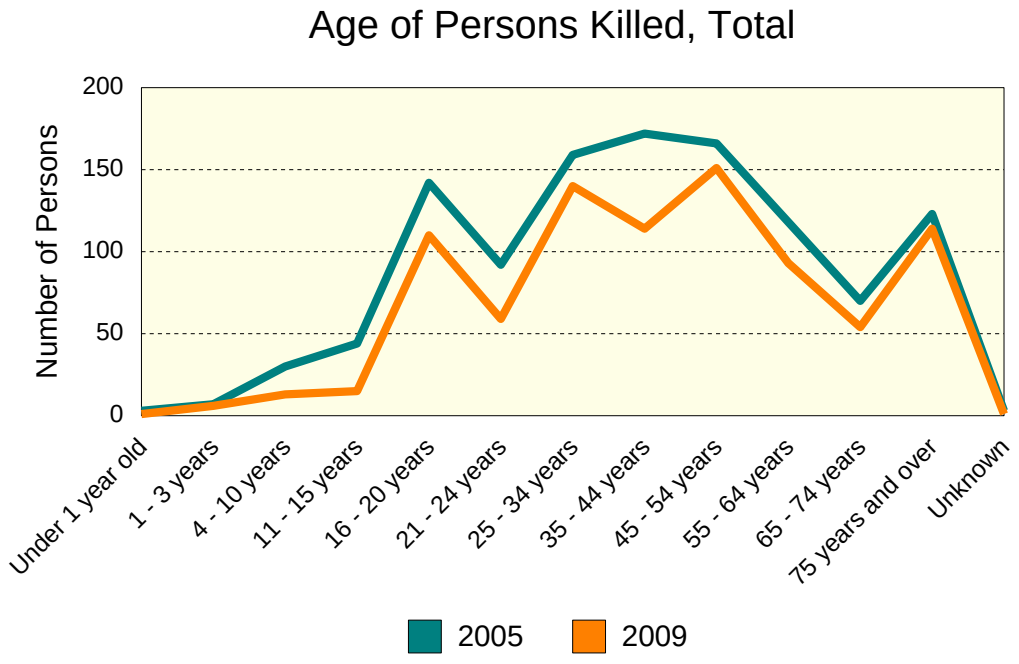


Reflecting the demographic trend of increasing age in the general population, the average age of drivers involved in all crashes and fatal crashes has increased over the ten-year period. The average age of drivers in HBD crashes has remained flat.

5 YEAR

TREND DATA FOR FATALITIES

TREND DATA FOR FATALITIES	2005	2006	2007	2008	2009
Age of Persons Killed, Total					
Under 1 year old	3	2	3	1	1
1 - 3 years	7	6	5	7	6
4 - 10 years	30	15	14	15	13
11 - 15 years	44	31	35	20	15
16 - 20 years	142	115	154	116	110
21 - 24 years	92	122	97	80	59
25 - 34 years	159	167	148	133	140
35 - 44 years	172	161	146	137	114
45 - 54 years	166	170	154	158	151
55 - 64 years	118	118	127	125	93
65 - 74 years	70	67	73	75	54
75 years and over	123	110	128	113	114
Unknown	3	0	0	0	1
Totals	1,129	1,084	1,084	980	871



5
YEAR

TREND DATA FOR FATALITIES	2005	2006	2007	2008	2009
Age of Drivers Involved in Fatal Crashes					
13 years and under	5	4	2	1	0
14 years	2	1	1	0	1
15 years	6	7	7	3	4
16 years	25	16	28	19	15
17 years	37	35	34	28	26
18 years	51	39	52	45	33
19 years	45	39	39	38	43
20 years	38	43	46	33	29
21 - 24 years	153	155	156	126	92
25 - 34 years	269	270	273	236	223
35 - 44 years	292	257	263	246	203
45 - 54 years	307	264	220	245	223
55 - 64 years	169	176	192	162	138
65 - 69 years	39	38	38	45	54
70 - 74 years	38	43	42	48	20
75 - 79 years	35	42	50	46	45
80 - 84 years	43	39	37	36	39
85 - 89 years	22	17	17	19	18
90 years and over	9	9	7	10	6
Unknown	97	57	54	61	58
Totals	1,682	1,551	1,558	1,447	1,270
Age of Drivers Involved in Single Vehicle Fatal Crashes					
13 years and under	1	2	2	0	0
14 years	1	1	0	0	0
15 years	2	4	4	1	1
16 years	10	6	11	5	10
17 years	12	13	10	8	7
18 years	13	12	16	17	15
19 years	13	13	14	14	11
20 years	16	17	19	11	10
21 - 24 years	60	67	64	52	40
25 - 34 years	94	102	83	76	82
35 - 44 years	77	69	81	75	57
45 - 54 years	70	83	70	73	78
55 - 64 years	44	62	55	66	33
65 - 69 years	13	12	10	14	14
70 - 74 years	9	16	12	13	6
75 - 79 years	5	11	14	9	12
80 - 84 years	15	8	7	12	12
85 - 89 years	3	3	1	4	5
90 years and over	0	2	1	1	1
Unknown	25	19	16	20	15
Totals	483	522	490	471	409

5 YEAR

TREND DATA FOR FATALITIES	2005	2006	2007	2008	2009
Age of Bicyclists Killed					
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	0
4 - 10 years	5	2	0	0	0
11 - 15 years	2	2	4	2	3
16 - 20 years	3	2	0	2	2
21 - 24 years	0	1	1	2	1
25 - 34 years	1	0	2	5	1
35 - 44 years	9	4	1	1	2
45 - 54 years	1	8	7	7	3
55 - 64 years	1	4	1	5	1
65 - 74 years	3	4	1	1	4
75 years and over	0	1	0	0	2
Unknown	0	0	0	0	0
Totals	25	28	17	25	19
Age of Pedestrians Killed					
Under 1 year old	1	0	0	0	0
1 - 3 years	2	0	4	3	3
4 - 10 years	8	3	5	2	2
11 - 15 years	6	6	6	5	0
16 - 20 years	9	8	7	8	11
21 - 24 years	6	11	7	6	5
25 - 34 years	18	15	12	14	15
35 - 44 years	26	32	27	16	25
45 - 54 years	24	24	24	25	31
55 - 64 years	16	18	18	13	14
65 - 74 years	12	8	11	11	6
75 years and over	9	12	13	11	8
Unknown	1	0	0	0	1
Totals	138	137	134	114	121

5 YEAR

FATAL CRASHES AND PERSONS KILLED FOR SELECT HOLIDAY PERIODS IN MICHIGAN

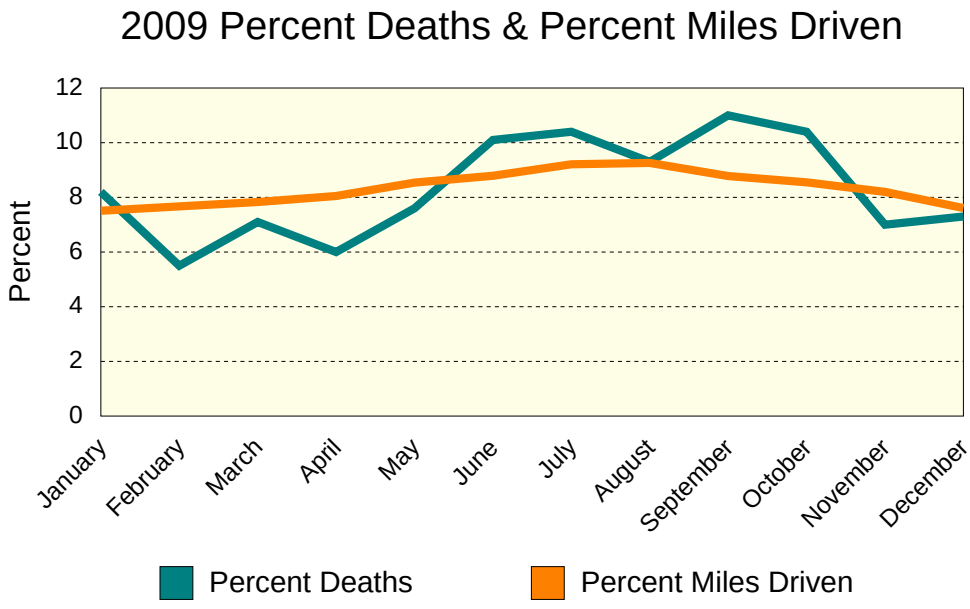
HOLIDAY PERIOD	Fatal Crashes	Persons Killed	SUMMARY 2009
Memorial Day			This table shows traffic death tolls in Michigan for the past five years for the major holiday periods as defined by the National Safety Council. Based on the *total* **2009** experience, deaths averaged **2.39** per day. Alcohol-related deaths averaged **0.82** per day. Based on the **2009** *holiday period* experience, deaths averaged **2.63** per day. Alcohol-related deaths averaged **1.05** per day.
2009 (3) MON	10 [6]	11 [7]	
2008 (3) MON	11 [2]	11 [2]	
2007 (3) MON	11 [4]	13 [4]	
2006 (3) MON	16 [3]	19 [4]	
2005 (3) MON	10 [7]	14 [9]	
Fourth of July			
2009 (3) SAT	1 [1]	1 [1]	
2008 (3) FRI	14 [5]	14 [5]	
2007 (1) WED	4 [2]	4 [2]	
2006 (4) TUE	14 [7]	15 [7]	
2005 (3) MON	16 [7]	20 [11]	
Labor Day			
2009 (3) MON	15 [5]	16 [5]	
2008 (3) MON	12 [4]	12 [4]	
2007 (3) MON	15 [8]	16 [8]	
2006 (3) MON	7 [3]	7 [3]	
2005 (3) MON	15 [7]	15 [7]	
Thanksgiving			
2009 (4) THU	10 [0]	11 [0]	
2008 (4) THU	9 [7]	13 [10]	
2007 (4) THU	11 [1]	11 [1]	
2006 (4) THU	20 [11]	23 [14]	
2005 (4) THU	17 [7]	18 [8]	
Christmas			
2009 (3) FRI	3 [3]	3 [3]	
2008 (4) THU	11 [2]	14 [2]	
2007 (4) TUE	11 [4]	11 [4]	
2006 (3) MON	2 [0]	2 [0]	
2005 (3) SUN	7 [3]	7 [3]	
New Years			
2009 (3) FRI	7 [4]	8 [4]	
2008 (4) THU	15 [6]	15 [6]	
2007 (4) TUE	9 [4]	9 [4]	
2006 (3) MON	5 [4]	5 [4]	
2005 (3) SUN	10 [6]	11 [7]	

Figures in parentheses in the 1st column show number of full days in each holiday period.
Fatal crashes and deaths are for these days plus six hours of the preceding day.
Figures in brackets in the 2nd and 3rd columns show the number of alcohol-related fatal crashes and deaths.
Please view the glossary for an explanation of holiday periods

5 YEAR

MOTOR VEHICLE DEATHS AND MILEAGE BY MONTH

Month	TRAFFIC DEATHS					2009 PERCENTAGES	
	2005	2006	2007	2008	2009	Percent Deaths	Percent Miles Driven
January	73	79	69	73	71	8.2	7.51
February	77	67	70	57	48	5.5	7.67
March	68	72	81	63	62	7.1	7.83
April	77	82	67	66	52	6.0	8.05
May	105	82	92	88	66	7.6	8.54
June	95	101	96	85	88	10.1	8.79
July	130	82	104	101	91	10.4	9.21
August	96	115	117	100	81	9.3	9.26
September	102	90	111	92	96	11.0	8.78
October	112	128	88	84	91	10.4	8.55
November	110	105	98	106	61	7.0	8.20
December	84	81	91	65	64	7.3	7.61
Totals	1,129	1,084	1,084	980	871	100.0	100.00



The chart above shows that the *percent deaths* were lower for the months of February through May, November, and December than for the other months when compared to the *percent miles driven*.

1 YEAR

2008 - 2009 SUMMARY TRENDS

Revised June 7, 2011

* Michigan experienced an **11.1** percent decrease in traffic fatalities, as well as a **4.9** percent decrease in injuries and a **7.9** percent decrease in crashes.
* Deaths among vehicle occupants (drivers and passengers only) decreased **13.0** percent.
* Persons sustaining "A" level injuries (the most serious) decreased **3.2** percent.

	2008	2009	% CHANGE
NUMBER OF CRASHES			
Fatal Crashes	915	806	-11.9
Personal Injury Crashes	55,568	52,283	-5.9
Property Damage Crashes	259,574	237,889	-8.4
Total	316,057	290,978	-7.9
ALCOHOL-INVOLVED CRASHES			
Fatal Crashes	297	277	-6.7
Personal Injury Crashes	4,172	4,163	-0.2
Property Damage Crashes	6,599	6,225	-5.7
Total	11,068	10,665	-3.6
FATAL CRASHES			
Had Been Drinking (HBD)	297 (32.5%)	277 (34.4%)	-6.7
Had Not Been Drinking / Not Known If Drinking	618 (67.5%)	529 (65.6%)	-14.4
PERSONS IN CRASHES			
Killed	980	871	-11.1
Injured	74,568	70,931	-4.9
Not Injured	458,504	427,758	-6.7
Unknown Injury	71,795	61,062	-14.9
Total	605,847	560,622	-7.5
PERSONS IN ALCOHOL-INVOLVED CRASHES			
Killed	317	299	-5.7
Injured	5,700	5,678	-0.4
Not Injured	12,315	11,821	-4.0
Unknown Injury	2,320	2,128	-8.3
Total	20,652	19,926	-3.5
PERSONS INJURED BY GENDER			
Male	34,120	32,072	-6.0
Female	39,420	37,967	-3.7
Unknown Gender	1,028	892	-13.2
Total	74,568	70,931	-4.9
PERSONS INJURED BY SEVERITY			
"A" Injury	6,725	6,511	-3.2
"B" Injury	16,837	16,149	-4.1
"C" Injury	51,006	48,271	-5.4
Total	74,568	70,931	-4.9

1

YEAR
2008 - 2009 SUMMARY TRENDS (continued)

	2008	2009	% CHANGE
PERSONS KILLED BY GENDER			
Male	666	593	-11.0
Female	314	278	-11.5
Unknown Gender	0	0	---
Total	980	871	-11.1
PERSONS KILLED			
Driver	488	425	-12.9
Passenger	199	173	-13.1
Pedestrian	114	121	6.1
Bicyclist	25	19	-24.0
Motorcyclist	125	103	-17.6
Farm Equipment	3	1	-66.7
Train Engineer	0	0	0.0
Snowmobile	12	14	16.7
ORV/ATV	11	9	-18.2
Other/Unknown	3	6	100.0
Total	980	871	-11.1
BELT RESTRAINT USE BY DRIVER			
“Reported Restrained” - Killed	254	229	-9.8
“Reported Not Restrained” - Killed	182	151	-17.0
“Reported Restrained” - Injured	46,190	43,223	-6.4
“Reported Not Restrained” - Injured	2,136	1,979	-7.4
BELT RESTRAINT USE BY INJURED PASSENGER			
“Reported Restrained” - Killed	95	75	-21.1
“Reported Not Restrained” - Killed	74	59	-20.3
“Reported Restrained” - Injured	13,862	14,060	1.4
“Reported Not Restrained” - Injured	1,722	1,686	-2.1
DRIVER AGE 16-19 INVOLVED			
Fatal Crashes	123	110	-10.6
Personal Injury Crashes	10,768	10,351	-3.9
Property Damage Crashes	39,810	36,627	-8.0
Total All Crashes	50,701	47,088	-7.1
Persons Killed	142	126	-11.3
Persons Injured	15,601	15,209	-2.5
DRIVER AGE 65 & OVER INVOLVED			
Fatal Crashes	196	166	-15.3
Personal Injury Crashes	7,887	7,992	1.3
Property Damage Crashes	29,428	29,316	-0.4
Total All Crashes	37,511	37,474	-0.1
Persons Killed	203	175	-13.8
Persons Injured	11,356	11,477	1.1

1 YEAR

MORE MICHIGAN CRASH FACTS

CRASH FACTS	2008	2009	% Change
Licensed Drivers	7,088,425	7,073,619	-0.2
Registered Vehicles in Michigan	8,187,990	8,145,728	-0.5
Michigan Population	10,003,422	9,969,727	-0.3
Drivers Involved in Crashes	518,240	476,801	-8.0
Vehicles Involved in Crashes	518,240	476,801	-8.0
Occupants Involved in Crashes	666,897	613,161	-8.1
Estimated MV Mileage Traveled (thousands)	100,916,732	95,910,140	-5.0
Death Rate Per 100 Million Vehicle Miles	1.0	0.9	-9.0
Fatal Crash Rate Per 100 Million Veh Miles	0.9	0.8	-11.1

2009 COST OF CRASHES IN MICHIGAN

Revised June 7, 2011

The cost estimate for Michigan crashes in 2009 is **$7,890,385,400**. This estimate is based on the National Safety Council's cost estimating procedures. Average comprehensive costs are based on the following figures:

Comprehensive Costs, 2009

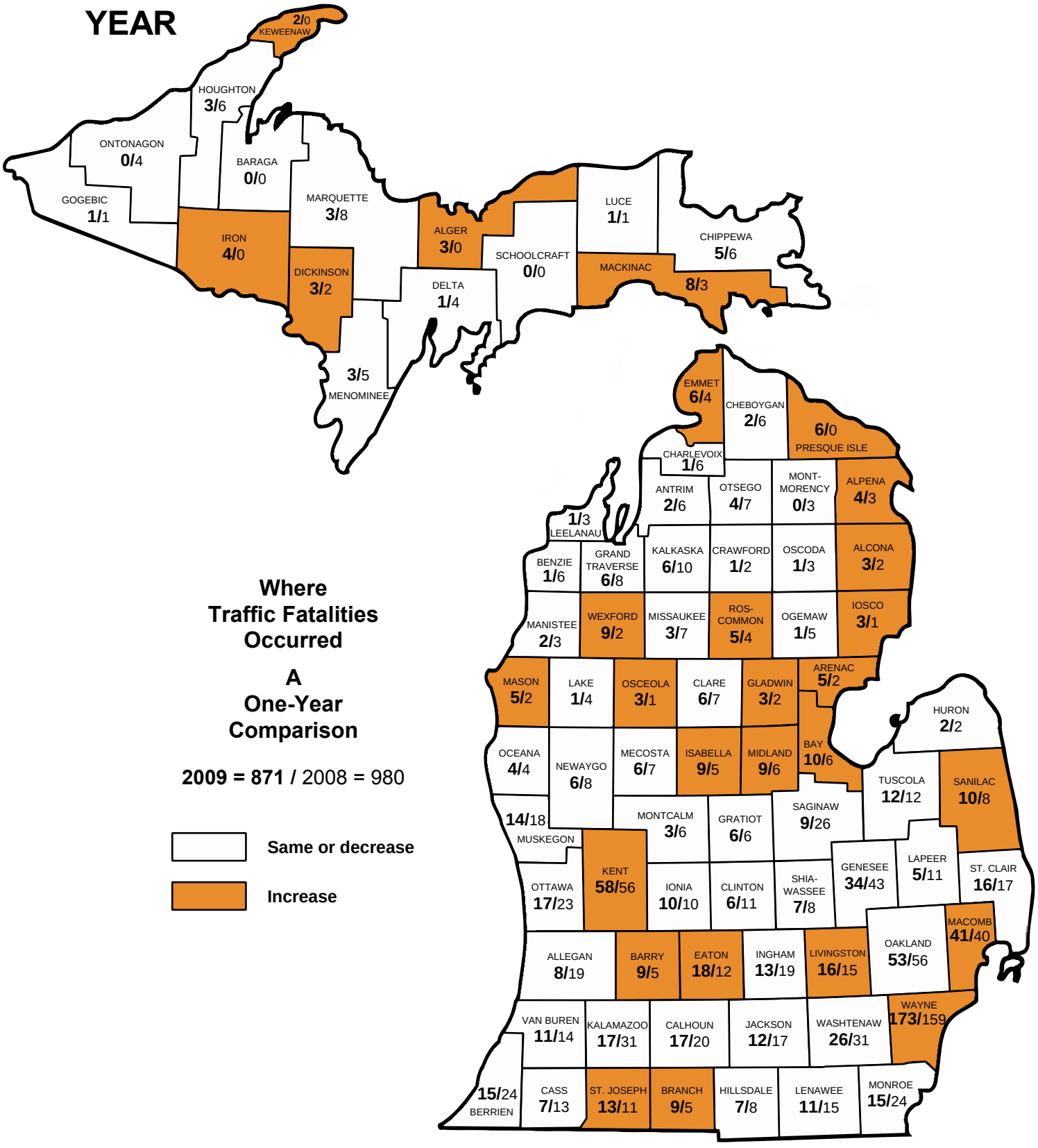
Death	$4,300,000
Incapacitating injury	$216,800
Nonincapacitating evident injury	$55,300
Possible injury	$26,300
No injury	$2,400

These cost estimates are not intended for comparisons to previous years. Deaths and injuries are calculated by number of persons. "No injury" is calculated per crash.

Note: Information on the cost of crashes was provided by the National Safety Council on January 26, 2011.

1 YEAR

WHERE TRAFFIC FATALITIES OCCURRED



Where Traffic Fatalities Occurred

A One-Year Comparison

2009 = 871 / 2008 = 980

Same or decrease

Increase

MICHIGAN OHSP Office of Highway Safety Planning

MOTOR VEHICLE TRAFFIC DEATHS IN MICHIGAN BY MONTH

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1958	94	90	95	89	92	112	120	134	132	113	165	146	1,382
1959	76	69	91	126	126	124	148	128	155	125	144	161	1,473
1960	139	76	102	105	107	133	159	154	137	186	152	154	1,604
1961	105	99	113	138	133	114	141	166	128	139	148	143	1,567
1962	94	70	115	110	123	147	166	175	170	172	118	114	1,574
1963	107	95	124	142	148	173	188	177	163	179	196	195	1,887
1964	170	159	158	144	164	167	217	197	177	199	177	193	2,122
1965	153	113	135	143	156	181	211	220	193	214	172	245	2,136
1966	147	156	179	151	207	204	212	206	203	220	205	208	2,298
1967	130	105	141	162	187	140	210	189	223	230	216	204	2,137
1968	130	147	164	150	240	214	208	233	209	248	283	166	2,392
1969	137	158	173	169	239	236	218	254	230	236	219	218	2,487
1970	167	143	160	141	214	205	197	204	213	217	178	138	2,177
1971	137	124	155	144	187	212	222	227	155	209	202	178	2,152
1972	156	161	155	150	204	209	225	210	225	219	174	170	2,258
1973	187	156	173	140	180	230	225	201	204	209	171	137	2,213
1974	111	112	107	116	144	197	189	178	200	195	201	125	1,875
1975	120	97	112	93	149	169	195	203	190	162	161	160	1,811
1976	118	102	134	150	163	169	196	227	189	171	174	162	1,955
1977	126	87	122	143	184	179	223	194	164	189	181	158	1,950
1978	98	104	128	177	178	203	206	229	214	199	183	157	2,076
1979	102	103	129	152	146	155	190	171	174	187	171	169	1,849
1980	117	131	109	116	153	170	142	183	192	152	133	176	1,774
1981	99	100	108	116	116	155	159	171	149	155	113	148	1,589
1982	98	79	93	91	114	121	154	153	128	144	131	111	1,417
1983	113	94	83	91	91	127	121	117	131	153	115	95	1,331
1984	93	84	104	94	125	143	175	174	135	153	134	142	1,556
1985	108	91	77	133	137	167	146	136	131	135	161	147	1,569
1986	86	77	103	127	131	175	186	176	131	144	159	137	1,632
1987	91	104	99	106	138	165	151	176	149	164	161	128	1,632
1988	129	107	103	104	145	152	175	158	178	159	127	167	1,704
1989	138	102	94	96	123	156	156	177	155	146	123	164	1,630
1990	99	84	122	94	135	151	165	170	141	147	130	125	1,563
1991	103	79	115	106	129	145	130	141	125	129	104	119	1,425
1992	83	81	83	86	100	122	134	119	123	129	120	120	1,300
1993	123	91	89	72	127	103	149	140	131	146	134	109	1,414
1994	106	86	82	116	111	123	126	143	132	133	123	138	1,419
1995	122	90	109	111	118	141	127	159	157	134	136	133	1,537
1996	131	98	103	98	128	135	146	121	138	135	136	136	1,505
1997	102	106	85	80	128	140	166	130	128	134	125	122	1,446
1998	116	71	97	91	113	120	133	116	123	126	117	144	1,367
1999	76	84	92	98	125	116	128	160	128	129	130	120	1,386
2000	121	83	70	107	114	136	135	133	135	124	118	106	1,382
2001	79	99	102	83	106	113	143	131	143	120	109	100	1,328
2002	105	101	81	93	112	115	137	110	96	117	102	110	1,279
2003	97	80	88	100	84	96	132	127	111	122	130	116	1,283
2004	81	68	63	81	97	106	117	123	116	81	122	104	1,159
2005	73	77	68	77	105	95	130	96	102	112	110	84	1,129
2006	79	67	72	82	82	101	82	115	90	128	105	81	1,084
2007	69	70	81	67	92	96	104	117	111	88	98	91	1,084
2008	73	57	63	66	88	85	101	100	92	84	106	65	980
2009	71	48	62	52	66	88	91	81	96	91	61	64	871

MOTOR VEHICLE TRAFFIC CRASH AND RELATED DATA

Year	Deaths	Injuries	Crashes	Estimated Mileage (Millions)	Motor Vehicle Registrations*	Death Rate Per 100 million miles of travel
1958	1,382	57,767	177,934	29,411.3	3,157,441	4.7
1959	1,473	64,873	198,771	30,679.0	3,252,492	4.8
1960	1,604	91,026	209,724	31,842.4	3,352,234	5.0
1961	1,567	93,350	199,973	32,101.5	3,395,736	4.9
1962	1,574	108,143	233,078	34,498.0	3,498,758	4.6
1963	1,887	126,896	261,794	36,452.2	3,646,080	5.2
1964	2,122	144,623	284,444	38,617.6	3,860,791	5.5
1965	2,136	155,258	310,598	40,857.4	4,066,826	5.2
1966	2,298	156,694	302,880	43,940.1	4,133,199	5.2
1967	2,137	151,297	299,004	45,053.6	4,161,573	4.7
1968	2,392	160,413	305,495	48,047.4	4,327,885	5.0
1969	2,487	175,400	331,223	50,904.9	4,560,097	4.9
1970	2,177	161,719	313,715	53,148.1	4,683,919	4.1
1971	2,152	157,664	314,015	55,539.7	4,835,146	3.9
1972	2,258	178,929	359,745	57,817.1	5,160,985	3.9
1973	2,213	169,485	350,864	58,478.4	5,442,233	3.8
1974	1,875	141,132	324,763	55,748.7	5,652,406	3.4
1975	1,811	147,299	333,560	56,260.5	5,744,441	3.2
1976	1,955	162,894	365,600	61,638.0	5,861,908	3.2
1977	1,950	166,389	374,751	64,853.0	6,138,732	3.0
1978	2,076	169,202	389,193	67,380.0	6,436,365	3.1
1979	1,849	162,571	366,435	64,882.3	6,536,246	2.8
1980	1,774	144,972	314,594	61,190.1	6,570,735	2.9
1981	1,589	136,455	302,831	62,000.0	6,140,286	2.6
1982	1,417	130,061	294,971	61,321.0	6,400,942	2.3
1983	1,331	135,811	300,797	63,560.1	6,443,499	2.1
1984	1,556	150,740	335,193	65,727.0	6,509,192	2.4
1985	1,569	157,417	386,904	68,413.0	6,857,364	2.3
1986	1,632	158,032	400,694	70,622.0	6,952,263	2.3
1987	1,632	156,318	397,224	75,715.0	7,061,339	2.2
1988	1,704	155,713	410,437	77,700.0	7,196,609	2.2
1989	1,630	154,537	417,252	79,900.0	7,233,823	2.0
1990	1,563	145,179	387,180	81,200.0	7,300,853	1.9
1991	1,425	135,830	364,847	81,900.0	7,329,789	1.7
1992	1,300	118,727	344,942	84,000.0	7,411,192	1.5
1993	1,414	134,548	363,636	85,700.0	7,495,904	1.6
1994	1,419	142,200	398,050	85,600.0	7,669,022	1.7
1995	1,537	146,303	421,073	85,699.6	7,751,336	1.8
1996	1,505	142,553	435,477	87,700.0	8,106,972	1.7
1997	1,446	137,548	425,793	89,232.0	8,115,921	1.6
1998	1,367	131,578	403,766	91,616.0	8,227,016	1.5
1999	1,386	124,601	415,675	93,060.3	8,407,868	1.5
2000	1,382	121,826	424,852	94,915.1	8,569,124	1.5
2001	1,328	112,294	400,813	96,428.1	8,603,195	1.4
2002	1,279	112,484	395,515	98,173.2	8,690,326	1.3
2003	1,283	105,555	391,485	100,192.0	8,708,688	1.3
2004	1,159	99,680	373,028	101,820.2	8,578,224	1.1
2005	1,129	90,510	350,838	103,158.6	8,464,905	1.1
2006	1,084	81,942	315,322	104,041.7	8,353,070	1.0
2007	1,084	80,576	324,174	104,643.8	8,409,163	1.0
2008	980	74,568	316,057	100,916.7	8,187,990	1.0
2009	871	70,931	290,978	95,910.1	8,145,728	0.9

* Excludes trailers and trailer coaches, and includes mopeds

2009
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2009
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Age

AGE and INJURY SEVERITY by PERSON TYPE

Age	Driver			Passenger			Motorcyclist			Bicyclist			Pedestrian		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
0	19	0	0	167	1	166	0	0	0	88	0	60	42	0	30
1	7	0	0	155	2	153	0	0	0	0	0	0	6	0	3
2	2	0	0	172	1	171	0	0	0	0	0	0	15	3	10
3	5	0	1	199	0	199	0	0	0	2	0	2	16	0	15
4	3	0	1	193	0	193	0	0	0	10	0	10	18	0	17
5	3	0	0	222	2	220	0	0	0	9	0	9	15	0	13
6	2	0	1	210	0	210	0	0	0	23	0	16	23	1	21
7	2	0	1	240	1	239	1	0	1	14	0	12	22	0	19
8	8	0	1	284	3	281	2	0	2	22	0	19	25	0	21
9	7	0	4	252	3	249	1	0	1	29	0	26	21	1	19
10	12	0	5	281	2	279	4	0	4	29	0	24	23	0	20
11	12	0	5	259	2	257	3	0	3	47	0	40	34	0	33
12	26	0	17	249	1	248	6	0	4	63	1	45	48	0	41
13	42	0	19	290	1	289	7	0	5	82	2	62	54	0	46
14	143	0	35	393	2	391	8	0	6	102	0	84	61	0	52
15	617	3	90	574	3	571	8	0	8	107	0	89	52	0	49
16	8,749	8	932	740	10	730	12	0	11	78	0	73	68	2	56
17	12,390	7	1,375	758	9	749	15	0	12	68	0	57	67	2	60
18	14,938	12	1,755	789	8	781	47	1	35	74	1	53	63	3	57
19	14,281	16	1,697	604	11	592	78	3	56	59	1	54	68	3	56
20	12,711	13	1,393	453	3	450	82	2	59	67	0	48	53	1	45
21	11,909	14	1,471	440	3	437	91	3	69	47	0	41	60	1	55
22	10,940	13	1,296	409	4	405	90	4	68	43	1	34	54	2	46
23	10,363	9	1,270	340	3	337	73	0	59	30	0	26	41	1	37
24	9,638	5	1,151	298	2	296	90	0	61	30	0	28	32	1	26
25	8,931	13	1,020	285	3	282	74	1	50	32	1	24	34	3	26
26	8,825	15	1,033	241	2	239	70	2	48	14	0	13	33	3	29
27	8,614	12	993	220	3	217	78	3	58	26	0	23	22	1	14
28	8,327	9	975	206	2	204	57	0	45	24	0	18	33	1	27
29	8,146	13	940	227	0	227	64	3	43	21	0	21	22	0	19
30	7,683	10	804	188	2	186	65	1	49	17	0	10	26	1	24
31	7,690	10	897	180	3	177	59	2	40	15	0	12	32	4	26
32	7,547	7	871	158	4	154	63	4	45	13	0	12	26	1	25

Note: Driver age is calculated from birth date.
Data entry errors result in age "0" drivers.

AGE and INJURY SEVERITY by PERSON TYPE (continued)

Age	Driver			Passenger			Motorcyclist			Bicyclist			Pedestrian		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
33	7,174	8	731	172	2	170	59	2	46	13	0	13	27	0	24
34	7,135	6	762	120	0	120	41	1	34	9	0	8	23	1	19
35	7,125	6	751	169	1	168	57	1	46	19	0	17	23	2	18
36	7,334	8	816	138	3	135	64	2	48	11	0	11	14	0	13
37	7,811	10	825	163	1	162	60	2	45	16	0	12	20	1	14
38	8,368	10	840	161	1	160	77	5	53	21	0	19	19	2	15
39	8,352	4	925	148	1	147	69	1	53	22	1	17	25	3	18
40	7,899	5	832	151	1	150	71	1	56	16	0	16	33	4	22
41	7,714	9	852	156	1	155	87	1	66	18	1	12	27	3	22
42	7,769	5	846	158	2	156	77	2	51	19	0	18	30	2	24
43	7,823	10	818	181	1	180	68	4	54	14	0	12	26	6	17
44	8,130	7	951	171	1	170	77	2	62	26	0	20	30	2	27
45	8,202	2	942	175	0	175	77	0	59	36	1	32	32	3	25
46	8,322	11	940	162	3	159	97	2	67	25	0	23	30	3	24
47	8,109	10	926	187	1	186	85	4	55	30	1	26	37	3	27
48	7,968	9	879	153	3	150	106	4	77	24	0	22	24	3	19
49	7,924	15	902	182	3	179	103	2	77	42	0	39	32	3	24
50	7,970	8	950	181	1	180	101	3	75	27	0	26	30	5	23
51	7,836	13	952	168	1	167	102	4	70	24	0	20	31	1	28
52	7,315	10	858	171	3	168	105	3	79	22	0	22	29	5	19
53	7,145	15	780	159	1	158	96	6	72	10	1	9	32	2	26
54	6,953	7	802	161	1	160	92	2	71	27	0	22	25	3	21
55	6,750	5	782	150	3	147	86	0	74	21	1	18	30	3	24
56	6,341	5	700	143	3	140	68	1	49	22	0	18	26	3	19
57	6,045	7	698	144	3	141	76	3	55	17	0	15	18	0	17
58	5,861	9	705	126	0	126	66	1	50	13	0	12	14	2	12
59	5,401	5	637	138	1	137	70	2	52	6	0	5	22	0	20
60	5,187	3	600	124	0	124	64	1	42	7	0	5	29	2	24
61	4,955	13	622	148	1	147	61	3	41	13	0	11	11	2	9
62	4,689	6	569	121	1	120	49	2	36	12	0	12	21	1	19
63	3,717	3	464	102	4	98	44	1	33	6	0	6	13	0	10
64	3,331	5	413	109	1	108	28	1	22	6	0	4	9	1	6
65	3,379	5	380	115	0	115	29	1	20	8	1	6	4	0	4

AGE and INJURY SEVERITY by PERSON TYPE (continued)

Age	Driver			Passenger			Motorcyclist			Bicyclist			Pedestrian		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
66	3,411	4	410	88	1	87	17	0	11	2	0	2	10	1	9
67	2,967	4	343	82	4	78	15	2	12	5	0	4	9	3	5
68	2,514	7	303	93	1	92	15	0	10	3	1	2	9	0	9
69	2,253	5	259	70	0	70	16	0	12	7	0	6	11	0	10
70	2,191	1	248	65	0	65	6	0	6	2	0	2	3	0	2
71	2,056	5	246	74	0	74	7	0	7	4	2	2	6	0	5
72	1,766	1	196	63	0	63	6	0	4	2	0	2	5	0	5
73	1,779	4	203	46	0	46	6	0	6	3	0	3	2	1	1
74	1,708	2	217	64	0	64	4	0	2	1	0	1	2	1	1
75	1,552	6	185	51	0	51	4	1	1	0	0	0	9	2	6
76	1,433	9	187	44	0	44	7	1	5	2	1	1	5	0	5
77	1,442	4	188	60	0	60	2	0	2	3	0	3	4	0	4
78	1,292	6	177	70	4	66	2	0	2	0	0	0	5	0	5
79	1,317	6	160	47	0	47	2	0	2	1	0	1	4	0	4
80	1,228	6	163	72	3	69	1	0	1	1	0	1	7	2	5
81	1,142	3	141	37	0	37	0	0	0	3	0	3	3	0	3
82	1,019	1	145	64	3	61	0	0	0	2	0	1	4	1	3
83	944	11	114	44	3	41	0	0	0	1	1	0	6	1	5
84	833	5	95	46	2	44	0	0	0	0	0	0	5	0	5
85	674	1	97	41	2	39	1	0	1	0	0	0	1	0	0
86	540	3	75	41	5	36	1	0	1	0	0	0	3	1	2
87	536	4	82	26	1	25	1	0	0	0	0	0	2	1	1
88	404	0	66	25	1	24	0	0	0	0	0	0	4	0	4
89	313	4	41	17	1	16	0	0	0	0	0	0	1	0	1
90	203	2	30	13	1	12	0	0	0	0	0	0	1	0	1
91	146	0	26	11	3	8	0	0	0	1	0	1	0	0	0
92	115	1	12	9	0	9	0	0	0	0	0	0	1	0	1
93	65	0	9	10	1	9	0	0	0	1	0	1	0	0	0
94	29	1	1	5	0	5	0	0	0	1	0	1	0	0	0
95	30	0	5	5	0	5	0	0	0	1	0	1	0	0	0
96	22	0	4	3	0	3	0	0	0	0	0	0	0	0	0
97	4	0	0	3	1	2	0	0	0	0	0	0	0	0	0
98	5	0	0	1	0	1	0	0	0	0	0	0	0	0	0

AGE and INJURY SEVERITY by PERSON TYPE (continued)

Age	Driver			Passenger			Motorcyclist			Bicyclist			Pedestrian		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
99	10	0	0	3	0	3	0	0	0	0	0	0	0	0	0
100	3	0	0	1	0	1	0	0	0	1	0	1	0	0	0
101	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
104	1	0	1	1	0	1	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	2	0	1	1	0	1	0	0	0	1	0	1	0	0	0
107	1	0	0	1	0	1	0	0	0	0	0	0	1	0	1
108	15	0	1	0	0	0	0	0	0	0	0	0	1	0	1
109	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	42,197	0	109	533	0	529	139	0	8	100	0	35	86	1	49
Totals	476,801*	549	50,043	17,614*	182	17,427	3,812*	103	2,725	2,035*	19	1,648	2,215*	121	1,823
	* Includes 40,826 drivers with unknown injury severity and 385,383 with no injury			* Includes 5 passengers with unknown injury severity and uninjured passengers not included in total			* Includes 114 motorcyclists with unknown injury severity and 870 with no injury			* Includes 74 bicyclists with unknown injury severity and 294 with no injury			* Includes 101 pedestrians with unknown injury severity and 170 with no injury		

DRIVER AGE 16-24

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Going straight ahead	59,762	56.4	192	80.7	13,423	59.0
Turning left	8,294	7.8	17	7.1	2,116	9.3
Turning right	2,949	2.8	1	0.4	445	2.0
Stopped on roadway	8,105	7.7	2	0.8	1,717	7.6
In prior crash	166	0.2	0	0.0	52	0.2
Changing lanes	2,885	2.7	4	1.7	368	1.6
Backing	2,155	2.0	0	0.0	85	0.4
Slowing/stopping on roadway	11,446	10.8	3	1.3	2,177	9.6
Slowing/stopping other	150	0.1	0	0.0	28	0.1
Starting up on roadway	2,390	2.3	0	0.0	598	2.6
Starting up other	49	0.0	1	0.4	5	0.0
Entering parking	90	0.1	0	0.0	7	0.0
Leaving parking	323	0.3	0	0.0	52	0.2
Entering roadway	1,809	1.7	2	0.8	392	1.7
Leaving roadway	208	0.2	2	0.8	74	0.3
Making U-turn	210	0.2	0	0.0	56	0.2
Overtaking or passing	929	0.9	7	2.9	212	0.9
Avoiding object	186	0.2	0	0.0	54	0.2
Avoiding animal	536	0.5	1	0.4	131	0.6
Avoiding pedestrian	38	0.0	0	0.0	12	0.1
Avoiding vehicle (front/back)	1,201	1.1	3	1.3	298	1.3
Avoiding vehicle (angle)	484	0.5	1	0.4	121	0.5
Driverless moving	23	0.0	0	0.0	2	0.0
Parked	288	0.3	0	0.0	36	0.2
Crossing at intersection	8	0.0	0	0.0	4	0.0
Crossing not at intersection	3	0.0	0	0.0	3	0.0
Getting on/off vehicle	2	0.0	0	0.0	0	0.0
In roadway with traffic	1	0.0	0	0.0	0	0.0
In roadway against traffic	2	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	8	0.0	0	0.0	1	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	1	0.0	0	0.0	0	0.0
Not in roadway	3	0.0	0	0.0	1	0.0
Other	57	0.1	1	0.4	10	0.0
Unknown	1,158	1.1	1	0.4	254	1.1
Total Drivers	105,919	100.0	238	100.0	22,734	100.0

DRIVER AGE 16-24 (continued)

MOST HARMFUL EVENT IN A NONCOLLISION	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Loss of control	579	0.5	0	0.0	156	0.7
Cross center/median	78	0.1	0	0.0	18	0.1
Ran off road left	179	0.2	0	0.0	36	0.2
Ran off road right	280	0.3	0	0.0	41	0.2
Re-enter road	8	0.0	0	0.0	3	0.0
Overturn	2,570	2.4	18	7.6	1,164	5.1
Separation of units	58	0.1	0	0.0	11	0.0
Fire/explosion	92	0.1	1	0.4	11	0.0
Immersion	19	0.0	1	0.4	4	0.0
Jackknife	38	0.0	0	0.0	3	0.0
Downhill runaway	32	0.0	0	0.0	10	0.0
Cargo loss/shift	70	0.1	0	0.0	12	0.1
Individual fell off	91	0.1	4	1.7	75	0.3
Other noncollision	228	0.2	0	0.0	47	0.2
NONCOLLISION Subtotal	4,322	4.1	24	10.1	1,591	7.0

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Pedestrian	307	0.3	19	8.0	253	1.1
Bicyclist (Pedalcycle)	299	0.3	7	2.9	239	1.1
Motor vehicle in transport	72,598	68.5	130	54.6	16,298	71.7
Parked motor vehicle	2,312	2.2	3	1.3	253	1.1
Railway train	19	0.0	1	0.4	3	0.0
Animal	8,943	8.4	0	0.0	180	0.8
Other nonfixed objects	709	0.7	0	0.0	77	0.3
COLLISION NONFIXED Subtotal	85,187	80.4	160	67.2	17,303	76.1

DRIVER AGE 16-24 (continued)

MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Bridge/pier/abutment	126	0.1	0	0.0	38	0.2
Bridge parapet end	33	0.0	0	0.0	7	0.0
Bridge rail	151	0.1	0	0.0	26	0.1
Guardrail face	1,101	1.0	2	0.8	197	0.9
Guardrail end	179	0.2	0	0.0	39	0.2
Median barrier	1,206	1.1	1	0.4	311	1.4
Highway traffic sign post	794	0.7	2	0.8	46	0.2
Highway signal post	85	0.1	0	0.0	5	0.0
Luminaire/light support	159	0.2	0	0.0	29	0.1
Utility pole	973	0.9	1	0.4	309	1.4
Other pole	277	0.3	1	0.4	38	0.2
Culvert	179	0.2	0	0.0	65	0.3
Curb	517	0.5	0	0.0	63	0.3
Ditch	2,313	2.2	4	1.7	535	2.4
Embankment	494	0.5	0	0.0	142	0.6
Fence	328	0.3	0	0.0	38	0.2
Mailbox	568	0.5	0	0.0	30	0.1
Tree	3,196	3.0	35	14.7	1,098	4.8
Rail crossing signal	8	0.0	0	0.0	2	0.0
Building	166	0.2	3	1.3	55	0.2
Traffic island	12	0.0	0	0.0	2	0.0
Fire hydrant	157	0.1	0	0.0	26	0.1
Impact attenuator	21	0.0	0	0.0	8	0.0
Other fixed object	863	0.8	4	1.7	175	0.8
COLLISION FIXED Subtotal	13,906	13.1	53	22.3	3,284	14.4

Teen and young adult drivers have the highest incidence of collision with ditches and trees in all crashes when compared to the other two age groups (25-64 and 65 & over).

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	2,504	2.4	1	0.4	556	2.4
TOTAL MOST HARMFUL EVENT	105,919	100.0	238	100.0	22,734	100.0

DRIVER AGE 16-24 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Single Vehicle	26,952	25.4	93	39.1	5,127	22.6
Head On	1,673	1.6	39	16.4	657	2.9
Head On - Left Turn	3,516	3.3	13	5.5	1,347	5.9
Angle	22,774	21.5	57	23.9	6,096	26.8
Rear End	33,100	31.3	17	7.1	7,095	31.2
Rear End - Left Turn	1,660	1.6	2	0.8	445	2.0
Rear End - Right Turn	1,135	1.1	0	0.0	147	0.6
Sideswipe - Same Direction	9,148	8.6	9	3.8	853	3.8
Sideswipe - Opposite Direct	2,254	2.1	1	0.4	351	1.5
Other/Unknown	3,707	3.5	7	2.9	616	2.7
Total Drivers	105,919	100.0	238	100.0	22,734	100.0

Teen and young adult drivers are involved in the largest proportion of single vehicle fatal crashes when compared to the other two age groups (25-64 and 65 & over).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT IN CRASH)	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
On Road	89,100	84.1	171	71.8	18,519	81.5
Median	887	0.8	6	2.5	218	1.0
Shoulder	4,261	4.0	12	5.0	954	4.2
Outside of Shoulder/Curb	8,714	8.2	42	17.6	2,399	10.6
Gore	273	0.3	0	0.0	81	0.4
Other/Unknown	2,684	2.5	7	2.9	563	2.5
Total Drivers	105,919	100.0	238	100.0	22,734	100.0

When compared to the other two age groups (25-64 and 65 & over) in all crashes, teen and young adult drivers have the highest incidence of crashes where the first impact is on the shoulder of the roadway or outside the shoulder/curb.

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Interstate Routes	11,685	11.0	21	8.8	2,647	11.6
U.S. & Michigan Roads	30,407	28.7	74	31.1	6,575	28.9
County & City Roads	63,827	60.3	143	60.1	13,512	59.4
Total Drivers	105,919	100.0	238	100.0	22,734	100.0

DRIVER AGE 16-24 (continued)

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Midnight - 02:59 AM	6,094	5.8	36	15.1	1,362	6.0
03:00 AM - 05:59 AM	2,958	2.8	21	8.8	675	3.0
06:00 AM - 08:59 AM	10,050	9.5	18	7.6	1,884	8.3
09:00 AM - 11:59 AM	11,556	10.9	15	6.3	2,488	10.9
Noon - 02:59 PM	19,633	18.5	29	12.2	4,480	19.7
03:00 PM - 05:59 PM	26,987	25.5	38	16.0	5,980	26.3
06:00 PM - 08:59 PM	16,487	15.6	44	18.5	3,419	15.0
09:00 PM - 11:59 PM	11,935	11.3	37	15.5	2,404	10.6
Unknown	219	0.2	0	0.0	42	0.2
Total Drivers	105,919	100.0	238	100.0	22,734	100.0

9:00 PM to 2:59 AM shows the highest involvement for teen and young adult drivers in all crashes compared to the other two age groups (25-64 and 65 & over).

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury	Number	% of Issued
None	40,600	38.3	65	27.3	7,265	32.0	179	0.5
Speed too fast	12,092	11.4	52	21.8	2,866	12.6	4,583	13.8
Speed too slow	166	0.2	0	0.0	40	0.2	72	0.2
Failed to yield	11,292	10.7	19	8.0	3,017	13.3	7,128	21.4
Disregard traffic control	2,664	2.5	16	6.7	1,056	4.6	1,801	5.4
Drove wrong way	75	0.1	0	0.0	21	0.1	27	0.1
Drove left of center	554	0.5	8	3.4	180	0.8	268	0.8
Improper passing	539	0.5	1	0.4	85	0.4	257	0.8
Improper lane use	1,983	1.9	1	0.4	218	1.0	1,021	3.1
Improper turn	1,047	1.0	0	0.0	168	0.7	546	1.6
Improper/no signal	124	0.1	1	0.4	22	0.1	42	0.1
Improper backing	1,540	1.5	0	0.0	42	0.2	591	1.8
Unable to stop in assured clear distance	20,748	19.6	4	1.7	4,306	18.9	12,162	36.6
Reckless driving	795	0.8	16	6.7	321	1.4	396	1.2
Careless/negligent driving	4,120	3.9	19	8.0	1,416	6.2	2,414	7.3
Other	4,137	3.9	15	6.3	959	4.2	1,470	4.4
Unknown	3,443	3.3	21	8.8	752	3.3	300	0.9
Total Drivers	105,919	100.0	238	100.0	22,734	100.0	33,257	100.0

Compared to the other two age groups (25-64 and 65 & over), teen and young adult drivers have the highest incidence of crash involvement when their speed is too fast. In all crashes they are "unable to stop in assured clear distance" more often than older drivers.

DRIVER AGE 16-24 (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Monday	14,075	13.3	36	15.1	2,990	13.2
Tuesday	14,705	13.9	23	9.7	3,097	13.6
Wednesday	15,995	15.1	26	10.9	3,345	14.7
Thursday	16,091	15.2	26	10.9	3,358	14.8
Friday	18,089	17.1	41	17.2	3,997	17.6
Saturday	15,585	14.7	50	21.0	3,311	14.6
Sunday	11,379	10.7	36	15.1	2,636	11.6
Total Drivers	105,919	100.0	238	100.0	22,734	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	56,151	53.0	163	68.5	11,789	51.9
Female	49,733	47.0	75	31.5	10,938	48.1
Unknown	35	0.0	0	0.0	7	0.0
Total Drivers	105,919	100.0	238	100.0	22,734	100.0

OCCUPANTS IN MOTOR VEHICLE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
1 occupant	74,650	70.5	118	49.6	14,506	63.8
2 occupants	21,307	20.1	73	30.7	5,319	23.4
3 occupants	6,007	5.7	29	12.2	1,757	7.7
4 occupants	2,269	2.1	14	5.9	695	3.1
5 occupants	669	0.6	3	1.3	244	1.1
6 + occupants	236	0.2	1	0.4	84	0.4
0 occupants	206	0.2	0	0.0	18	0.1
Unknown	575	0.5	0	0.0	111	0.5
Total Drivers	105,919	100.0	238	100.0	22,734	100.0

DRIVER AGE 16-24 (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Passenger Car and Station Wagon	88,439	83.5	177	74.4	18,612	81.9
Van and Motorhome	2,894	2.7	8	3.4	674	3.0
Pickup	10,796	10.2	32	13.4	2,188	9.6
Small Truck (under 10,000 lbs.)	2,466	2.3	3	1.3	565	2.5
Motorcycle	530	0.5	12	5.0	395	1.7
Moped	87	0.1	0	0.0	72	0.3
Go Cart	6	0.0	1	0.4	3	0.0
Snowmobile	25	0.0	2	0.8	18	0.1
Off Road Vehicle	75	0.1	1	0.4	66	0.3
Other	124	0.1	0	0.0	36	0.2
Unknown	127	0.1	0	0.0	23	0.1
CDL Truck/Bus (breakdown below)	350	0.3	2	0.8	82	0.4
Total Number of Drivers	105,919	100.0	238	100.0	22,734	100.0

CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Commercial Vehicle: Group A	127	36.3	0	0.0	29	35.4
Commercial Vehicle: Group B	90	25.7	1	50.0	21	25.6
Commercial Vehicle: Group C	19	5.4	1	50.0	3	3.7
Other Truck	71	20.3	0	0.0	21	25.6
Unknown Truck	43	12.3	0	0.0	8	9.8
Total Number of Drivers	350	100.0	2	100.0	82	100.0

Group “A” is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

Group “B” is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

Group “C” is any single vehicle with a GVWR of less than 26,001 lbs. or a combination of vehicles having a combined GVWR under 26,001 lbs. when the vehicle is required to display placards for hazardous material or designed to carry 16 passengers (including driver). Group “C” is also any vehicle carrying 15 or less people (including driver) transporting children to or from school and home on a regular basis for compensation.

DRIVER AGE 25-64

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Going straight ahead	163,434	56.7	624	79.3	31,024	54.0
Turning left	16,826	5.8	35	4.4	4,229	7.4
Turning right	7,416	2.6	5	0.6	1,160	2.0
Stopped on roadway	35,361	12.3	17	2.2	8,635	15.0
In prior crash	324	0.1	2	0.3	110	0.2
Changing lanes	5,878	2.0	10	1.3	778	1.4
Backing	6,908	2.4	2	0.3	327	0.6
Slowing/stopping on roadway	27,836	9.7	14	1.8	5,924	10.3
Slowing/stopping other	452	0.2	0	0.0	87	0.2
Starting up on roadway	6,225	2.2	14	1.8	1,403	2.4
Starting up other	138	0.0	0	0.0	38	0.1
Entering parking	311	0.1	0	0.0	22	0.0
Leaving parking	743	0.3	1	0.1	131	0.2
Entering roadway	3,465	1.2	4	0.5	739	1.3
Leaving roadway	433	0.2	3	0.4	135	0.2
Making U-turn	480	0.2	1	0.1	115	0.2
Overtaking or passing	1,906	0.7	17	2.2	376	0.7
Avoiding object	354	0.1	3	0.4	88	0.2
Avoiding animal	775	0.3	2	0.3	174	0.3
Avoiding pedestrian	89	0.0	6	0.8	27	0.0
Avoiding vehicle (front/back)	2,494	0.9	11	1.4	658	1.1
Avoiding vehicle (angle)	1,261	0.4	8	1.0	317	0.6
Driverless moving	52	0.0	0	0.0	5	0.0
Parked	1,543	0.5	2	0.3	152	0.3
Crossing at intersection	16	0.0	0	0.0	5	0.0
Crossing not at intersection	8	0.0	0	0.0	4	0.0
Getting on/off vehicle	7	0.0	0	0.0	2	0.0
In roadway with traffic	13	0.0	0	0.0	2	0.0
In roadway against traffic	12	0.0	0	0.0	2	0.0
Standing/lying in roadway	3	0.0	0	0.0	0	0.0
Pushing/working on vehicle	2	0.0	0	0.0	0	0.0
Other working in roadway	21	0.0	0	0.0	5	0.0
Playing in roadway	3	0.0	0	0.0	1	0.0
In roadway other reason	4	0.0	0	0.0	1	0.0
Not in roadway	11	0.0	0	0.0	3	0.0
Other	107	0.0	1	0.1	14	0.0
Unknown	3,507	1.2	5	0.6	707	1.2
Total Drivers	288,418	100.0	787	100.0	57,400	100.0

DRIVER AGE 25-64 (continued)

MOST HARMFUL EVENT IN A NONCOLLISION	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Loss of control	1,161	0.4	4	0.5	357	0.6
Cross center/median	178	0.1	0	0.0	49	0.1
Ran off road left	316	0.1	0	0.0	76	0.1
Ran off road right	574	0.2	1	0.1	110	0.2
Re-enter road	35	0.0	0	0.0	9	0.0
Overturn	4,149	1.4	67	8.5	1,959	3.4
Separation of units	177	0.1	0	0.0	34	0.1
Fire/explosion	294	0.1	1	0.1	40	0.1
Immersion	31	0.0	3	0.4	8	0.0
Jackknife	200	0.1	0	0.0	19	0.0
Downhill runaway	77	0.0	0	0.0	18	0.0
Cargo loss/shift	329	0.1	0	0.0	26	0.0
Individual fell off	266	0.1	6	0.8	230	0.4
Other noncollision	701	0.2	1	0.1	161	0.3
NONCOLLISION Subtotal	8,488	2.9	83	10.5	3,096	5.4

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Pedestrian	939	0.3	74	9.4	777	1.4
Pedalcycle (Bicyclist)	1,003	0.3	10	1.3	800	1.4
Motor vehicle in transport	189,981	65.9	474	60.2	43,747	76.2
Parked motor vehicle	5,393	1.9	5	0.6	502	0.9
Railway train	40	0.0	2	0.3	15	0.0
Animal	47,161	16.4	4	0.5	820	1.4
Other nonfixed objects	2,958	1.0	6	0.8	236	0.4
COLLISION NONFIXED Subtotal	247,475	85.8	575	73.1	46,897	81.7

DRIVER AGE 25-64 (continued)

MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Bridge/pier/abutment	314	0.1	1	0.1	72	0.1
Bridge parapet end	64	0.0	0	0.0	14	0.0
Bridge rail	322	0.1	1	0.1	65	0.1
Guardrail face	2,207	0.8	6	0.8	417	0.7
Guardrail end	309	0.1	1	0.1	65	0.1
Median barrier	2,500	0.9	2	0.3	661	1.2
Highway traffic sign post	1,344	0.5	3	0.4	86	0.1
Highway signal post	141	0.0	0	0.0	14	0.0
Luminaire/light support	334	0.1	3	0.4	67	0.1
Utility pole	1,670	0.6	16	2.0	509	0.9
Other pole	525	0.2	2	0.3	88	0.2
Culvert	292	0.1	2	0.3	99	0.2
Curb	864	0.3	2	0.3	153	0.3
Ditch	3,655	1.3	6	0.8	861	1.5
Embankment	946	0.3	5	0.6	250	0.4
Fence	572	0.2	2	0.3	68	0.1
Mailbox	901	0.3	0	0.0	62	0.1
Tree	4,951	1.7	63	8.0	1,615	2.8
Rail crossing signal	44	0.0	1	0.1	5	0.0
Building	288	0.1	4	0.5	108	0.2
Traffic island	36	0.0	0	0.0	7	0.0
Fire hydrant	227	0.1	0	0.0	25	0.0
Impact attenuator	22	0.0	0	0.0	6	0.0
Other fixed object	1,767	0.6	8	1.0	414	0.7
COLLISION FIXED Subtotal	24,295	8.4	128	16.3	5,731	10.0

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	8,160	2.8	1	0.1	1,676	2.9
TOTAL MOST HARMFUL EVENT	288,418	100.0	787	100.0	57,400	100.0

DRIVER AGE 25-64 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Single Vehicle	80,172	27.8	250	31.8	10,104	17.6
Head On	4,234	1.5	150	19.1	1,812	3.2
Head On - Left Turn	7,803	2.7	44	5.6	3,087	5.4
Angle	55,072	19.1	188	23.9	14,729	25.7
Rear End	86,588	30.0	64	8.1	20,459	35.6
Rear End - Left Turn	3,720	1.3	3	0.4	1,064	1.9
Rear End - Right Turn	3,788	1.3	1	0.1	592	1.0
Sideswipe - Same Direction	27,948	9.7	25	3.2	2,692	4.7
Sideswipe - Opposite Direct	6,640	2.3	19	2.4	956	1.7
Other/Unknown	12,453	4.3	43	5.5	1,905	3.3
Total Drivers	288,418	100.0	787	100.0	57,400	100.0

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT IN CRASH)	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
On Road	256,974	89.1	603	76.6	49,719	86.6
Median	1,878	0.7	7	0.9	480	0.8
Shoulder	7,986	2.8	42	5.3	1,782	3.1
Outside of Shoulder/Curb	14,196	4.9	123	15.6	3,838	6.7
Gore	476	0.2	5	0.6	128	0.2
Other/Unknown	6,908	2.4	7	0.9	1,453	2.5
Total Drivers	288,418	100.0	787	100.0	57,400	100.0

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Interstate Routes	35,738	12.4	79	10.0	7,623	13.3
U.S. & Michigan Roads	89,249	30.9	296	37.6	18,219	31.7
County & City Roads	163,431	56.7	412	52.4	31,558	55.0
Total Drivers	288,418	100.0	787	100.0	57,400	100.0

DRIVER AGE 25-64 (continued)

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Midnight - 02:59 AM	10,493	3.6	83	10.5	2,217	3.9
03:00 AM - 05:59 AM	10,115	3.5	42	5.3	1,370	2.4
06:00 AM - 08:59 AM	41,509	14.4	79	10.0	6,692	11.7
09:00 AM - 11:59 AM	38,861	13.5	90	11.4	8,145	14.2
Noon - 02:59 PM	52,267	18.1	110	14.0	11,836	20.6
03:00 PM - 05:59 PM	68,754	23.8	130	16.5	15,318	26.7
06:00 PM - 08:59 PM	42,553	14.8	145	18.4	7,656	13.3
09:00 PM - 11:59 PM	23,277	8.1	106	13.5	4,048	7.1
Unknown	589	0.2	2	0.3	118	0.2
Total Drivers	288,418	100.0	787	100.0	57,400	100.0

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury	Number	% of Issued
None	167,617	58.1	368	46.8	29,645	51.6	385	0.8
Speed too fast	19,012	6.6	105	13.3	4,535	7.9	5,751	11.3
Speed too slow	304	0.1	0	0.0	55	0.1	75	0.1
Failed to yield	19,806	6.9	37	4.7	5,194	9.0	11,466	22.5
Disregard traffic control	4,970	1.7	31	3.9	1,893	3.3	2,969	5.8
Drove wrong way	166	0.1	5	0.6	42	0.1	60	0.1
Drove left of center	1,265	0.4	22	2.8	422	0.7	493	1.0
Improper passing	1,219	0.4	6	0.8	158	0.3	428	0.8
Improper lane use	4,657	1.6	3	0.4	511	0.9	2,096	4.1
Improper turn	2,383	0.8	1	0.1	376	0.7	964	1.9
Improper/no signal	358	0.1	0	0.0	54	0.1	94	0.2
Improper backing	4,945	1.7	0	0.0	155	0.3	1,511	3.0
Unable to stop in assured clear distance	33,634	11.7	14	1.8	7,274	12.7	17,600	34.5
Reckless driving	1,175	0.4	19	2.4	512	0.9	560	1.1
Careless/negligent driving	5,945	2.1	57	7.2	1,986	3.5	3,116	6.1
Other	10,170	3.5	40	5.1	2,285	4.0	2,890	5.7
Unknown	10,792	3.7	79	10.0	2,303	4.0	513	1.0
Total Drivers	288,418	100.0	787	100.0	57,400	100.0	50,971	100.0

DRIVER AGE 25-64 (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Monday	41,283	14.3	107	13.6	8,148	14.2
Tuesday	42,640	14.8	81	10.3	8,327	14.5
Wednesday	45,372	15.7	99	12.6	8,724	15.2
Thursday	45,137	15.6	102	13.0	8,821	15.4
Friday	48,571	16.8	144	18.3	9,887	17.2
Saturday	38,842	13.5	129	16.4	7,929	13.8
Sunday	26,573	9.2	125	15.9	5,564	9.7
Total Drivers	288,418	100.0	787	100.0	57,400	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	158,077	54.8	550	69.9	30,315	52.8
Female	130,177	45.1	237	30.1	27,069	47.2
Unknown	164	0.1	0	0.0	16	0.0
Total Drivers	288,418	100.0	787	100.0	57,400	100.0

OCCUPANTS IN MOTOR VEHICLE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
1 occupant	219,259	76.0	541	68.7	40,273	70.2
2 occupants	44,937	15.6	160	20.3	10,962	19.1
3 occupants	12,756	4.4	45	5.7	3,398	5.9
4 occupants	5,737	2.0	26	3.3	1,519	2.6
5 occupants	1,795	0.6	8	1.0	535	0.9
6 + occupants	1,429	0.5	6	0.8	397	0.7
0 occupants	1,021	0.4	0	0.0	70	0.1
Unknown	1,484	0.5	1	0.1	246	0.4
Total Drivers	288,418	100.0	787	100.0	57,400	100.0

DRIVER AGE 25-64 (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Passenger Car and Station Wagon	203,095	70.4	431	54.8	40,116	69.9
Van and Motorhome	20,439	7.1	46	5.8	4,178	7.3
Pickup	41,711	14.5	115	14.6	7,105	12.4
Small Truck (under 10,000 lbs.)	9,634	3.3	14	1.8	1,878	3.3
Motorcycle	2,672	0.9	87	11.1	2,002	3.5
Moped	170	0.1	4	0.5	135	0.2
Go Cart	12	0.0	0	0.0	3	0.0
Snowmobile	132	0.0	15	1.9	81	0.1
Off Road Vehicle	115	0.0	7	0.9	96	0.2
Other	982	0.3	7	0.9	200	0.3
Unknown	458	0.2	0	0.0	80	0.1
CDL Truck/Bus (breakdown below)	8,998	3.1	61	7.8	1,526	2.7
Total Number of Drivers	288,418	100.0	787	100.0	57,400	100.0

Compared to the other two age groups (16-24 and 65 & over), a higher percentage of drivers age 25-64 were driving pickups and small trucks at the time of the crash.

CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Commercial Vehicle: Group A	4,698	52.2	35	57.4	810	53.1
Commercial Vehicle: Group B	2,325	25.8	19	31.1	414	27.1
Commercial Vehicle: Group C	339	3.8	0	0.0	62	4.1
Other Truck	584	6.5	7	11.5	106	6.9
Unknown Truck	1,052	11.7	0	0.0	134	8.8
Total Number of Drivers	8,998	100.0	61	100.0	1,526	100.0

Group “A” is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

Group “B” is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

Group “C” is any single vehicle with a GVWR of less than 26,001 lbs. or a combination of vehicles having a combined GVWR under 26,001 lbs. when the vehicle is required to display placards for hazardous material or designed to carry 16 passengers (including driver). Group “C” is also any vehicle carrying 15 or less people (including driver) transporting children to or from school and home on a regular basis for compensation.

DRIVER AGE 65 & OVER

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Going straight ahead	20,828	52.9	127	69.8	4,485	52.8
Turning left	3,897	9.9	21	11.5	1,086	12.8
Turning right	1,380	3.5	2	1.1	205	2.4
Stopped on roadway	3,890	9.9	7	3.8	1,017	12.0
In prior crash	32	0.1	0	0.0	17	0.2
Changing lanes	1,149	2.9	1	0.5	100	1.2
Backing	1,331	3.4	0	0.0	47	0.6
Slowing/stopping on roadway	2,997	7.6	3	1.6	696	8.2
Slowing/stopping other	51	0.1	0	0.0	12	0.1
Starting up on roadway	1,074	2.7	6	3.3	258	3.0
Starting up other	23	0.1	0	0.0	8	0.1
Entering parking	68	0.2	0	0.0	5	0.1
Leaving parking	175	0.4	0	0.0	24	0.3
Entering roadway	914	2.3	3	1.6	207	2.4
Leaving roadway	55	0.1	1	0.5	25	0.3
Making U-turn	116	0.3	3	1.6	25	0.3
Overtaking or passing	240	0.6	1	0.5	45	0.5
Avoiding object	34	0.1	0	0.0	7	0.1
Avoiding animal	42	0.1	0	0.0	11	0.1
Avoiding pedestrian	8	0.0	1	0.5	3	0.0
Avoiding vehicle (front/back)	223	0.6	2	1.1	60	0.7
Avoiding vehicle (angle)	111	0.3	2	1.1	29	0.3
Driverless moving	5	0.0	0	0.0	0	0.0
Parked	184	0.5	1	0.5	6	0.1
Crossing at intersection	7	0.0	0	0.0	3	0.0
Crossing not at intersection	2	0.0	0	0.0	2	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	2	0.0	0	0.0	0	0.0
In roadway against traffic	2	0.0	0	0.0	1	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	1	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	0	0.0	0	0.0	0	0.0
Not in roadway	2	0.0	0	0.0	0	0.0
Other	27	0.1	1	0.5	5	0.1
Unknown	487	1.2	0	0.0	109	1.3
Total Drivers	39,357	100.0	182	100.0	8,498	100.0

Compared to the other two age groups (16-24 and 25-64), elderly drivers are more likely to be involved in a fatal crash when making a left turn.

DRIVER AGE 65 & OVER (continued)

MOST HARMFUL EVENT IN A NONCOLLISION	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Loss of control	136	0.3	0	0.0	42	0.5
Cross center/median	38	0.1	0	0.0	8	0.1
Ran off road left	42	0.1	0	0.0	6	0.1
Ran off road right	70	0.2	0	0.0	23	0.3
Re-enter road	5	0.0	0	0.0	2	0.0
Overturn	305	0.8	8	4.4	142	1.7
Separation of units	20	0.1	0	0.0	5	0.1
Fire/explosion	27	0.1	3	1.6	2	0.0
Immersion	7	0.0	1	0.5	1	0.0
Jackknife	18	0.0	0	0.0	1	0.0
Downhill runaway	10	0.0	0	0.0	1	0.0
Cargo loss/shift	25	0.1	0	0.0	2	0.0
Individual fell off	28	0.1	2	1.1	21	0.2
Other noncollision	57	0.1	0	0.0	7	0.1
NONCOLLISION Subtotal	788	2.0	14	7.7	263	3.1

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Pedestrian	172	0.4	11	6.0	143	1.7
Pedalcycle (Bicyclist)	193	0.5	1	0.5	159	1.9
Motor vehicle in transport	28,154	71.5	127	69.8	6,795	80.0
Parked motor vehicle	973	2.5	1	0.5	92	1.1
Railway train	7	0.0	1	0.5	4	0.0
Animal	5,075	12.9	1	0.5	74	0.9
Other nonfixed objects	352	0.9	0	0.0	39	0.5
COLLISION NONFIXED Subtotal	34,926	88.7	142	78.0	7,306	86.0

Motor vehicle in transport was by far the most problematic event in collisions with a nonfixed object for all crash types and age groups; however, it was most problematic for drivers age 65 and over.

DRIVER AGE 65 & OVER (continued)

MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Bridge/pier/abutment	22	0.1	1	0.5	7	0.1
Bridge parapet end	8	0.0	0	0.0	1	0.0
Bridge rail	24	0.1	0	0.0	7	0.1
Guardrail face	179	0.5	1	0.5	40	0.5
Guardrail end	29	0.1	0	0.0	6	0.1
Median barrier	149	0.4	0	0.0	50	0.6
Highway traffic sign post	181	0.5	0	0.0	14	0.2
Highway signal post	24	0.1	0	0.0	6	0.1
Luminaire/light support	51	0.1	0	0.0	17	0.2
Utility pole	186	0.5	0	0.0	77	0.9
Other pole	58	0.1	0	0.0	8	0.1
Culvert	43	0.1	3	1.6	17	0.2
Curb	80	0.2	1	0.5	12	0.1
Ditch	388	1.0	4	2.2	98	1.2
Embankment	113	0.3	0	0.0	34	0.4
Fence	63	0.2	1	0.5	12	0.1
Mailbox	127	0.3	0	0.0	10	0.1
Tree	588	1.5	12	6.6	234	2.8
Rail crossing signal	9	0.0	0	0.0	0	0.0
Building	58	0.1	2	1.1	20	0.2
Traffic island	2	0.0	0	0.0	1	0.0
Fire hydrant	23	0.1	0	0.0	5	0.1
Impact attenuator	3	0.0	0	0.0	2	0.0
Other fixed object	175	0.4	1	0.5	36	0.4
COLLISION FIXED Subtotal	2,583	6.6	26	14.3	714	8.4

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	1,060	2.7	0	0.0	215	2.5
TOTAL MOST HARMFUL EVENT	39,357	100.0	182	100.0	8,498	100.0

DRIVER AGE 65 & OVER (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Single Vehicle	8,625	21.9	50	27.5	1,227	14.4
Head On	614	1.6	30	16.5	295	3.5
Head On - Left Turn	1,538	3.9	18	9.9	658	7.7
Angle	10,558	26.8	61	33.5	2,790	32.8
Rear End	9,919	25.2	12	6.6	2,578	30.3
Rear End - Left Turn	540	1.4	2	1.1	159	1.9
Rear End - Right Turn	389	1.0	0	0.0	70	0.8
Sideswipe - Same Direction	4,372	11.1	5	2.7	350	4.1
Sideswipe - Opposite Direct	1,010	2.6	1	0.5	133	1.6
Other/Unknown	1,792	4.6	3	1.6	238	2.8
Total Drivers	39,357	100.0	182	100.0	8,498	100.0

Elderly drivers have the highest incidence of angle type crashes when compared to the other two age groups (16-24 and 25-64) in all crashes, fatal crashes, and injury crashes.

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT IN CRASH)	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
On Road	35,672	90.6	139	76.4	7,539	88.7
Median	152	0.4	1	0.5	48	0.6
Shoulder	925	2.4	12	6.6	220	2.6
Outside of Shoulder/Curb	1,588	4.0	25	13.7	462	5.4
Gore	34	0.1	1	0.5	10	0.1
Other/Unknown	986	2.5	4	2.2	219	2.6
Total Drivers	39,357	100.0	182	100.0	8,498	100.0

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Interstate Routes	3,030	7.7	21	11.5	709	8.3
U.S. & Michigan Roads	13,126	33.4	70	38.5	2,853	33.6
County & City Roads	23,201	59.0	91	50.0	4,936	58.1
Total Drivers	39,357	100.0	182	100.0	8,498	100.0

DRIVER AGE 65 & OVER (continued)

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Midnight - 02:59 AM	447	1.1	3	1.6	60	0.7
03:00 AM - 05:59 AM	432	1.1	7	3.8	50	0.6
06:00 AM - 08:59 AM	3,058	7.8	13	7.1	576	6.8
09:00 AM - 11:59 AM	8,240	20.9	32	17.6	1,863	21.9
Noon - 02:59 PM	10,409	26.4	49	26.9	2,449	28.8
03:00 PM - 05:59 PM	9,613	24.4	47	25.8	2,284	26.9
06:00 PM - 08:59 PM	5,064	12.9	19	10.4	891	10.5
09:00 PM - 11:59 PM	2,003	5.1	12	6.6	311	3.7
Unknown	91	0.2	0	0.0	14	0.2
Total Drivers	39,357	100.0	182	100.0	8,498	100.0

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury	Number	% of Issued
None	19,764	50.2	60	33.0	3,745	44.1	42	0.5
Speed too fast	1,558	4.0	7	3.8	415	4.9	349	4.4
Speed too slow	43	0.1	1	0.5	8	0.1	13	0.2
Failed to yield	5,915	15.0	43	23.6	1,610	18.9	3,120	39.5
Disregard traffic control	1,108	2.8	10	5.5	414	4.9	610	7.7
Drove wrong way	33	0.1	4	2.2	11	0.1	13	0.2
Drove left of center	243	0.6	9	4.9	96	1.1	76	1.0
Improper passing	180	0.5	2	1.1	18	0.2	54	0.7
Improper lane use	1,044	2.7	4	2.2	84	1.0	456	5.8
Improper turn	583	1.5	1	0.5	91	1.1	253	3.2
Improper/no signal	60	0.2	0	0.0	9	0.1	13	0.2
Improper backing	953	2.4	0	0.0	15	0.2	209	2.6
Unable to stop in assured clear distance	4,017	10.2	7	3.8	1,067	12.6	1,917	24.3
Reckless driving	32	0.1	1	0.5	12	0.1	12	0.2
Careless/negligent driving	764	1.9	9	4.9	252	3.0	350	4.4
Other	1,529	3.9	10	5.5	349	4.1	340	4.3
Unknown	1,531	3.9	14	7.7	302	3.6	64	0.8
Total Drivers	39,357	100.0	182	100.0	8,498	100.0	7,891	100.0

Compared to the other two age groups (16-24 and 25-64), elderly drivers have the highest incidence of failed to yield, disregard of traffic control, improper lane use, improper turn, and improper backing as a hazardous action in all crashes. In fatal crashes, elderly drivers have a significantly higher incidence of failed to yield as a hazardous action.

DRIVER AGE 65 & OVER (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Monday	5,698	14.5	32	17.6	1,251	14.7
Tuesday	6,025	15.3	25	13.7	1,276	15.0
Wednesday	6,146	15.6	25	13.7	1,333	15.7
Thursday	6,086	15.5	22	12.1	1,341	15.8
Friday	6,593	16.8	27	14.8	1,377	16.2
Saturday	5,023	12.8	26	14.3	1,062	12.5
Sunday	3,786	9.6	25	13.7	858	10.1
Total Drivers	39,357	100.0	182	100.0	8,498	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	22,697	57.7	120	65.9	4,746	55.8
Female	16,642	42.3	62	34.1	3,749	44.1
Unknown	18	0.0	0	0.0	3	0.0
Total Drivers	39,357	100.0	182	100.0	8,498	100.0

OCCUPANTS IN MOTOR VEHICLE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
1 occupant	29,490	74.9	136	74.7	6,028	70.9
2 occupants	8,149	20.7	40	22.0	2,081	24.5
3 occupants	900	2.3	2	1.1	234	2.8
4 occupants	335	0.9	3	1.6	76	0.9
5 occupants	76	0.2	0	0.0	16	0.2
6 + occupants	74	0.2	1	0.5	12	0.1
0 occupants	127	0.3	0	0.0	8	0.1
Unknown	206	0.5	0	0.0	43	0.5
Total Drivers	39,357	100.0	182	100.0	8,498	100.0

DRIVER AGE 65 & OVER (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Passenger Car and Station Wagon	30,240	76.8	128	70.3	6,541	77.0
Van and Motorhome	2,835	7.2	9	4.9	659	7.8
Pickup	4,613	11.7	21	11.5	870	10.2
Small Truck (under 10,000 lbs.)	963	2.4	6	3.3	187	2.2
Motorcycle	134	0.3	5	2.7	111	1.3
Moped	21	0.1	1	0.5	15	0.2
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	4	0.0	0	0.0	4	0.0
Off Road Vehicle	10	0.0	1	0.5	7	0.1
Other	99	0.3	4	2.2	21	0.2
Unknown	60	0.2	0	0.0	15	0.2
CDL Truck/Bus (breakdown below)	378	1.0	7	3.8	68	0.8
Total Number of Drivers	39,357	100.0	182	100.0	8,498	100.0

CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Commercial Vehicle: Group A	190	50.3	5	71.4	33	48.5
Commercial Vehicle: Group B	104	27.5	1	14.3	21	30.9
Commercial Vehicle: Group C	24	6.3	1	14.3	6	8.8
Other Truck	23	6.1	0	0.0	5	7.4
Unknown Truck	37	9.8	0	0.0	3	4.4
Total Number of Drivers	378	100.0	7	100.0	68	100.0

Group “A” is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

Group “B” is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

Group “C” is any single vehicle with a GVWR of less than 26,001 lbs. or a combination of vehicles having a combined GVWR under 26,001 lbs. when the vehicle is required to display placards for hazardous material or designed to carry 16 passengers (including driver). Group “C” is also any vehicle carrying 15 or less people (including driver) transporting children to or from school and home on a regular basis for compensation.

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Alcohol/Drug

ROADWAY INJURY EXPERIENCE FOR PERSONS WHO HAD BEEN DRINKING AND/OR USING DRUGS

Alcohol and/or drug use affects the judgment and behavior of persons in addition to motor vehicle drivers. Consider the experience of impaired bicyclists, motorcyclists, ORV/ATV riders, pedestrians, and snowmobilers when looking at crash statistics.

BICYCLIST

	Total	Crashes Involving Drinking, not drugs		Crashes Involving Drugs, not drinking		Crashes Involving Drinking & Drugs		Total Crashes Involving Drinking and/or Drugs	
		Bicyclist in crash	Bicyclist drinking	Bicyclist in crash	Bicyclist drugged	Bicyclist in crash	Bicyclist drink & drug	Bicyclist in crash	Bicyclist drink &/or drug
Bicyclists In Crashes	2,035	78	55	8	3	5	2	91	60
Bicyclists Killed	19	3	2	2	2	0	0	5	4
Bicyclists Injured	1,648	70	48	6	1	4	2	80	51

DRIVER

	Total	Crashes Involving Drinking, not drugs		Crashes Involving Drugs, not drinking		Crashes Involving Drinking & Drugs		Total Crashes Involving Drinking and/or Drugs	
		Driver in crash	Driver drinking	Driver in crash	Driver drugged	Driver in crash	Driver drink & drug	Driver in crash	Driver drink &/or drug
Drivers In Crashes	476,801	14,523	9,863	1,561	909	1,062	679	17,146	11,451
Drivers Killed	549	153	135	30	27	45	38	228	200
Drivers Injured	50,043	3,727	2,894	443	298	331	254	4,501	3,446

MOTORCYCLIST

	Total	Crashes Involving Drinking, not drugs		Crashes Involving Drugs, not drinking		Crashes Involving Drinking & Drugs		Total Crashes Involving Drinking and/or Drugs	
		Motorcyclist in crash	Motorcyclist drinking	Motorcyclist in crash	Motorcyclist drugged	Motorcyclist in crash	Motorcyclist drink & drug	Motorcyclist in crash	Motorcyclist drink &/or drug
Motorcyclists In Crashes	3,812	312	274	10	6	18	14	340	294
Motorcyclists Killed	103	29	27	3	3	4	4	36	34
Motorcyclists Injured	2,725	243	217	5	3	12	10	260	230

ROADWAY INJURY EXPERIENCE FOR PERSONS WHO HAD BEEN DRINKING AND/OR USING DRUGS (continued)

ORV/ATV RIDER

	Total	Crashes Involving Drinking, not drugs		Crashes Involving Drugs, not drinking		Crashes Involving Drinking & Drugs		Total Crashes Involving Drinking and/or Drugs	
		ORV/ATV Rider in crash	ORV/ATV Rider drinking	ORV/ATV Rider in crash	ORV/ATV Rider drugged	ORV/ATV Rider in crash	ORV/ATV Rider drink & drug	ORV/ATV Rider in crash	ORV/ATV Rider drink &/or drug
ORV/ATV Riders In Crashes	309	45	42	0	0	3	3	48	45
ORV/ATV Riders Killed	9	5	5	0	0	1	1	6	6
ORV/ATV Riders Injured	236	32	31	0	0	2	2	34	33

PEDESTRIAN

	Total	Crashes Involving Drinking, not drugs		Crashes Involving Drugs, not drinking		Crashes Involving Drinking & Drugs		Total Crashes Involving Drinking and/or Drugs	
		Pedestrian in crash	Pedestrian drinking	Pedestrian in crash	Pedestrian drugged	Pedestrian in crash	Pedestrian drink & drug	Pedestrian in crash	Pedestrian drink &/or drug
Pedestrians In Crashes	2,215	233	153	21	9	20	9	274	171
Pedestrians Killed	121	39	30	9	8	12	8	60	46
Pedestrians Injured	1,823	181	115	10	1	8	1	199	117

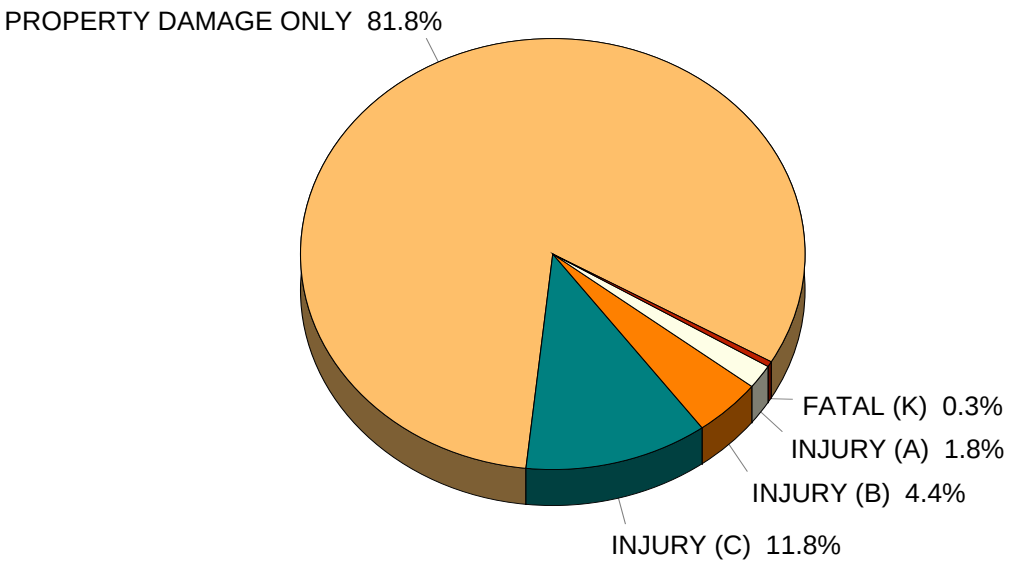
SNOWMOBILER

	Total	Crashes Involving Drinking, not drugs		Crashes Involving Drugs, not drinking		Crashes Involving Drinking & Drugs		Total Crashes Involving Drinking and/or Drugs	
		Snowmobiler in crash	Snowmobiler drinking	Snowmobiler in crash	Snowmobiler drugged	Snowmobiler in crash	Snowmobiler drink & drug	Snowmobiler in crash	Snowmobiler drink &/or drug
Snowmobilers In Crashes	204	39	36	0	0	2	2	41	38
Snowmobilers Killed	14	6	6	0	0	2	2	8	8
Snowmobilers Injured	118	20	19	0	0	0	0	20	19

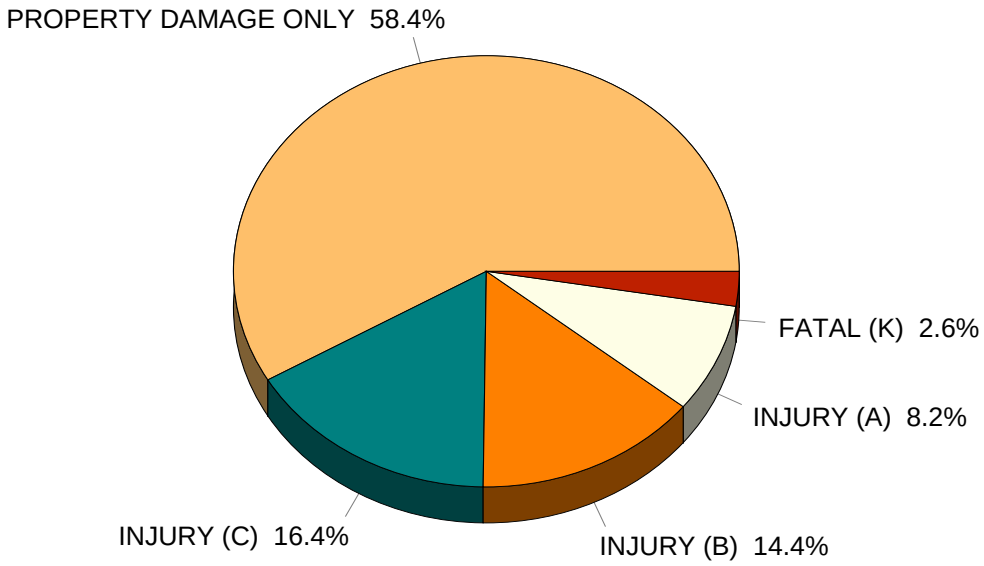
DRIVER DRINKING AND/OR USING DRUGS AND INJURY SEVERITY IN CRASH BY AGE

AGE OF DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH											
	All Crashes				Fatal				Injury			
	Drinking Only	Drug Only	Both	Total	Drinking Only	Drug Only	Both	Total	Drinking Only	Drug Only	Both	Total
13 years & under	3	0	0	3	0	0	0	0	1	0	0	1
14 years	2	0	0	2	0	0	0	0	1	0	0	1
15 years	4	1	1	6	0	0	0	0	2	0	1	3
16 years	39	11	2	52	0	1	0	1	17	7	2	26
17 years	118	19	14	151	1	4	2	7	42	10	3	55
18 years	216	27	20	263	4	1	3	8	91	12	9	112
19 years	288	35	20	343	4	3	2	9	122	16	11	149
20 years	319	28	22	369	4	3	2	9	125	12	9	146
21 - 24 years	1,790	100	87	1,977	29	3	6	38	638	40	35	713
25 - 34 years	2,626	233	176	3,035	58	8	18	84	978	94	75	1,147
35 - 44 years	1,872	176	131	2,179	39	3	8	50	729	77	60	866
45 - 54 years	1,566	192	125	1,883	44	15	10	69	605	66	58	729
55 - 64 years	683	63	52	798	9	2	1	12	278	27	23	328
65 - 69 years	129	7	8	144	4	0	0	4	60	1	2	63
70 - 74 years	61	1	8	70	0	0	1	1	26	0	2	28
75 - 79 years	40	4	0	44	1	0	0	1	15	2	0	17
80 - 84 years	14	0	3	17	1	0	0	1	5	0	0	5
85 - 89 years	11	0	2	13	1	0	0	1	6	0	0	6
90 years & over	1	0	0	1	0	0	0	0	0	0	0	0
Unknown	81	12	8	101	0	0	0	0	15	4	3	22
Total	9,863	909	679	11,451	199	43	53	295	3,756	368	293	4,417

ALL CRASHES BY INJURY SEVERITY



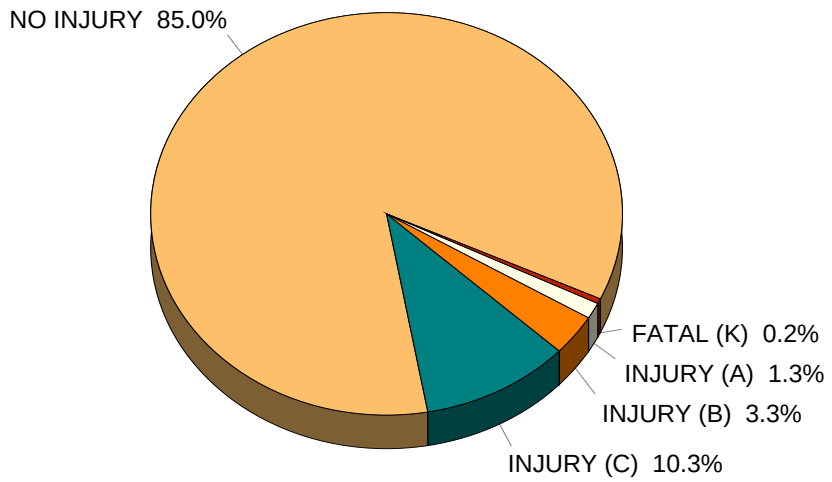
HBD CRASHES BY INJURY SEVERITY



The problem of the drinking driver, pedestrian, and/or cyclist is seen by comparing the two charts on this page. All injury levels are greater, and a fatality in the crash is eight and half times more likely when one of the crash-involved operators is reported as had been drinking.

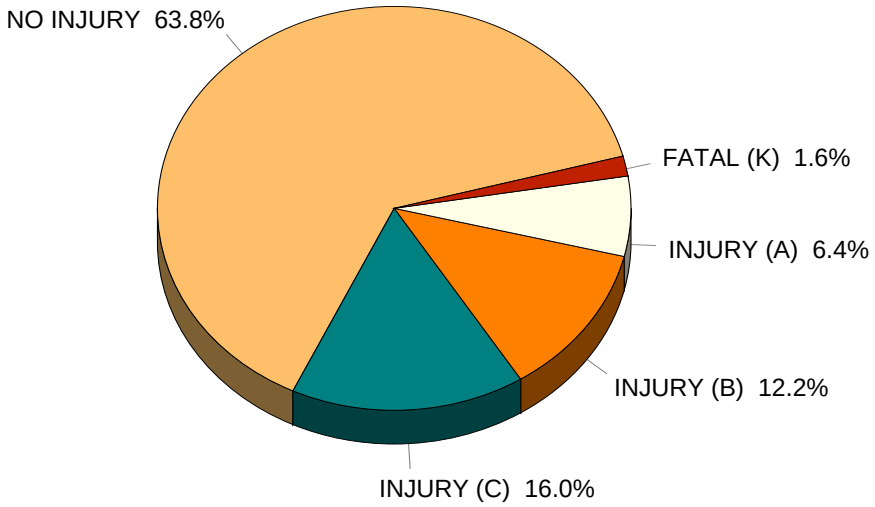
DEATH & INJURY FOR CRASH INVOLVED OCCUPANTS

Occupants in Crashes



The majority of occupants involved in crashes are not injured (85%). Two thirds of those who are injured receive only minor (C) injuries.

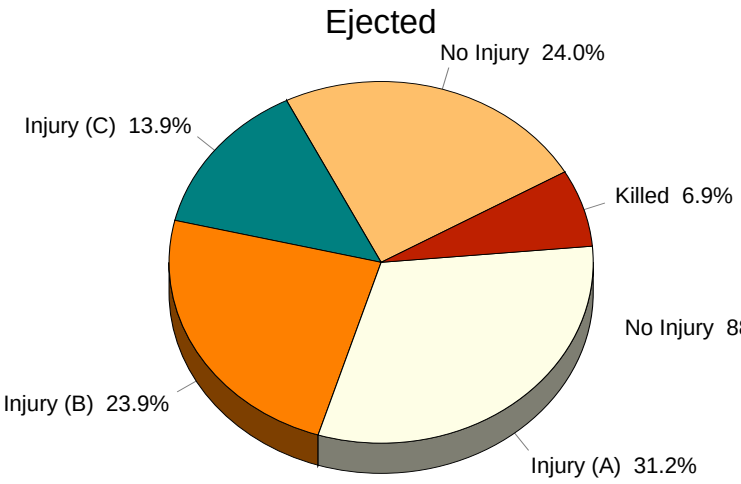
Occupants in HBD Crashes

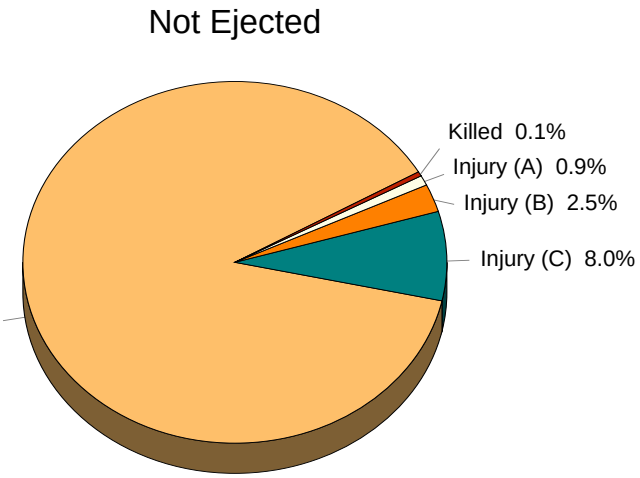


Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of occupant fatalities is eight times higher than in all crashes and the most serious injury level (A) is almost five times higher.

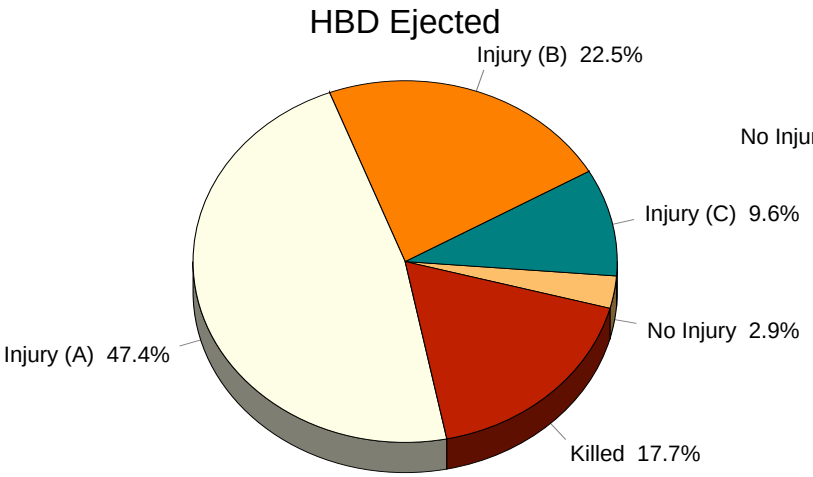
ALL DRIVERS and *HBD DRIVERS*
INJURY SEVERITY - EJECTED vs. NOT EJECTED

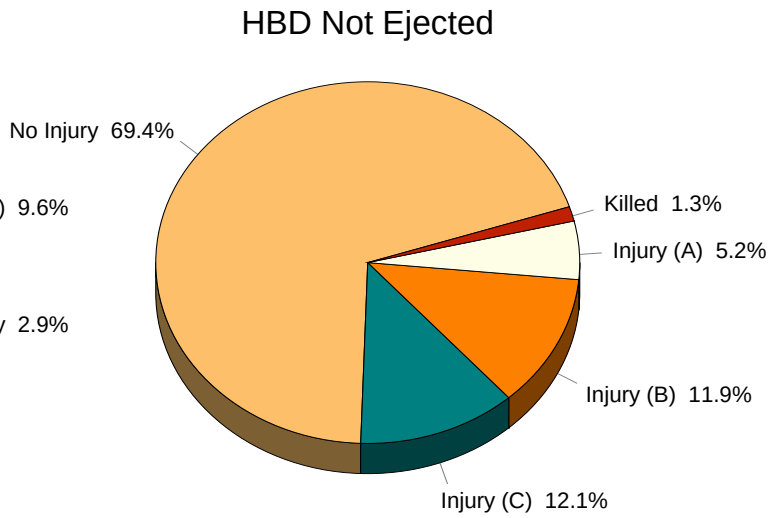
As can be seen in the two charts below, death and injury are much more likely when *drivers* are ejected from vehicles.





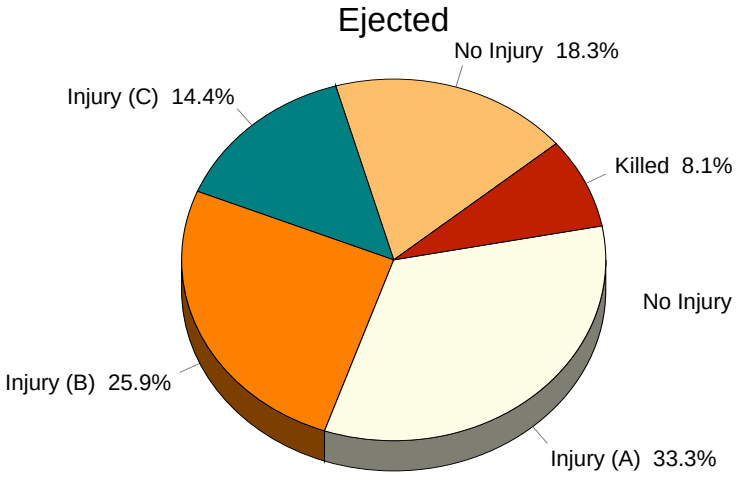
When compared to the charts above, the charts below demonstrate that the injury severity is much worse for drivers who had been drinking in both ejected and non-ejected events.

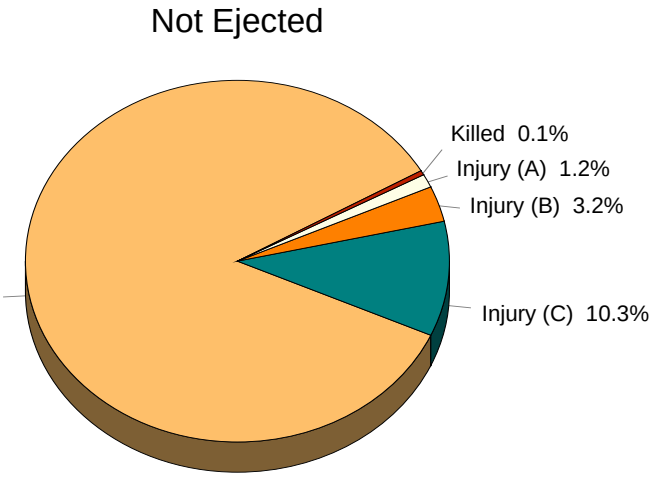




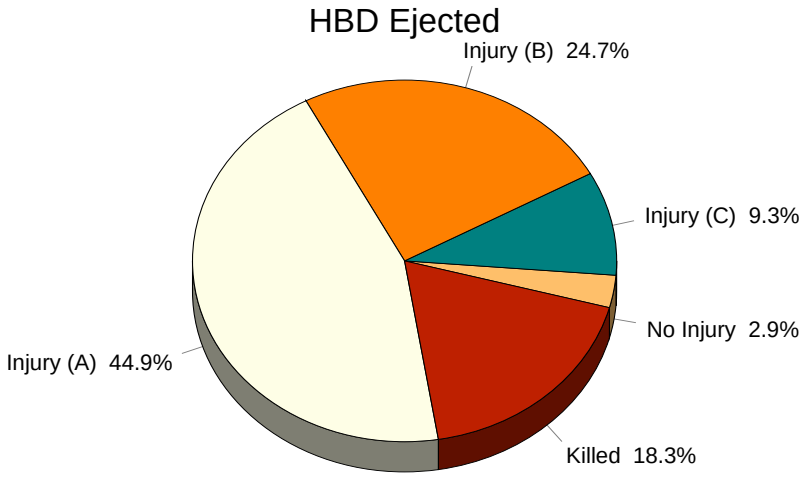
ALL OCCUPANTS and *OCCUPANTS of HBD CRASHES*
INJURY SEVERITY - EJECTED vs. NOT EJECTED

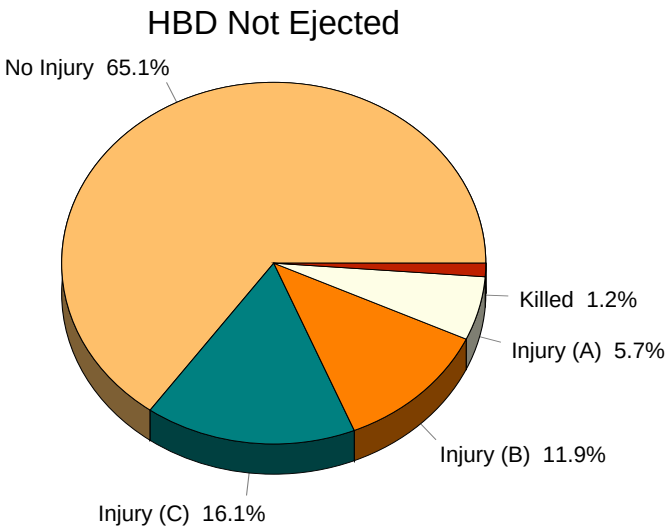
As can be seen in the two charts below, death and injury are much more likely when *occupants* are ejected from vehicles.





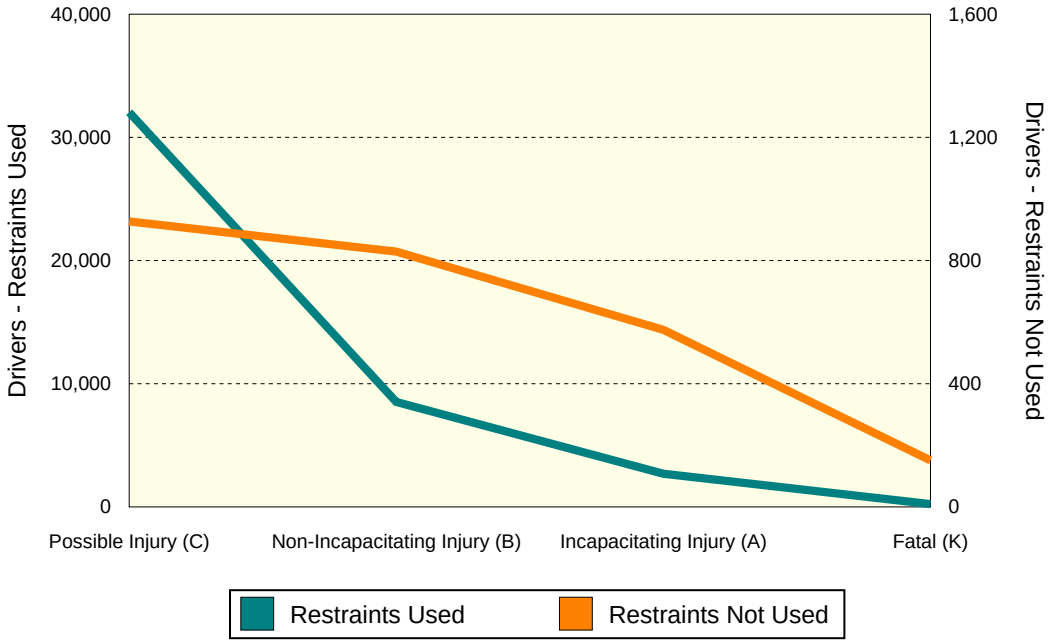
When compared to the charts above, the charts below demonstrate that the injury severity is much worse for occupants in a crash where drinking is reported in both ejected and non-ejected events.



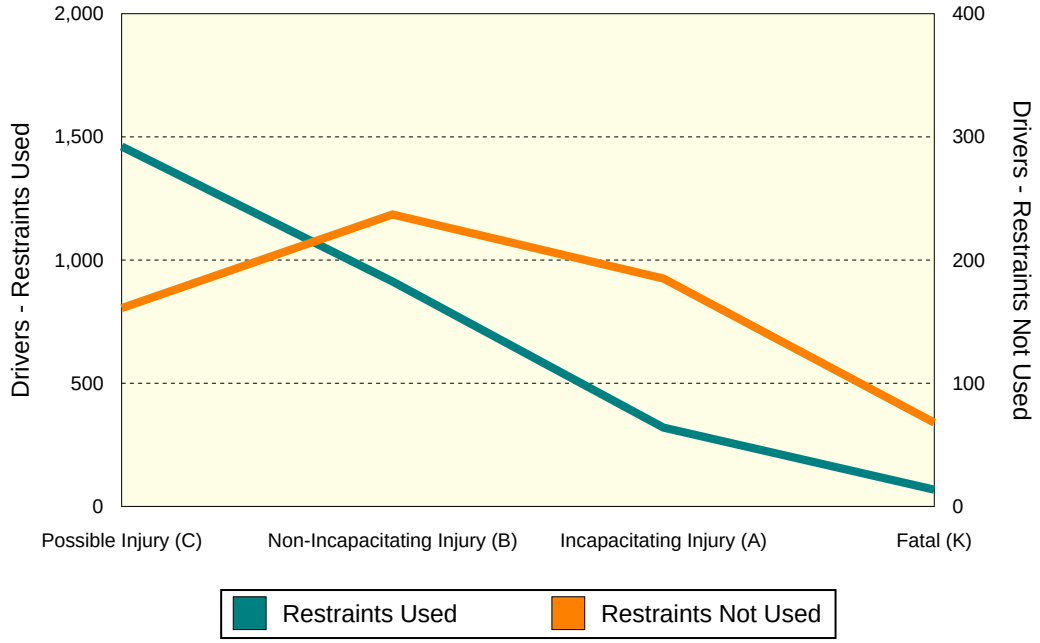


INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC *DRIVERS*

ALL CRASHES

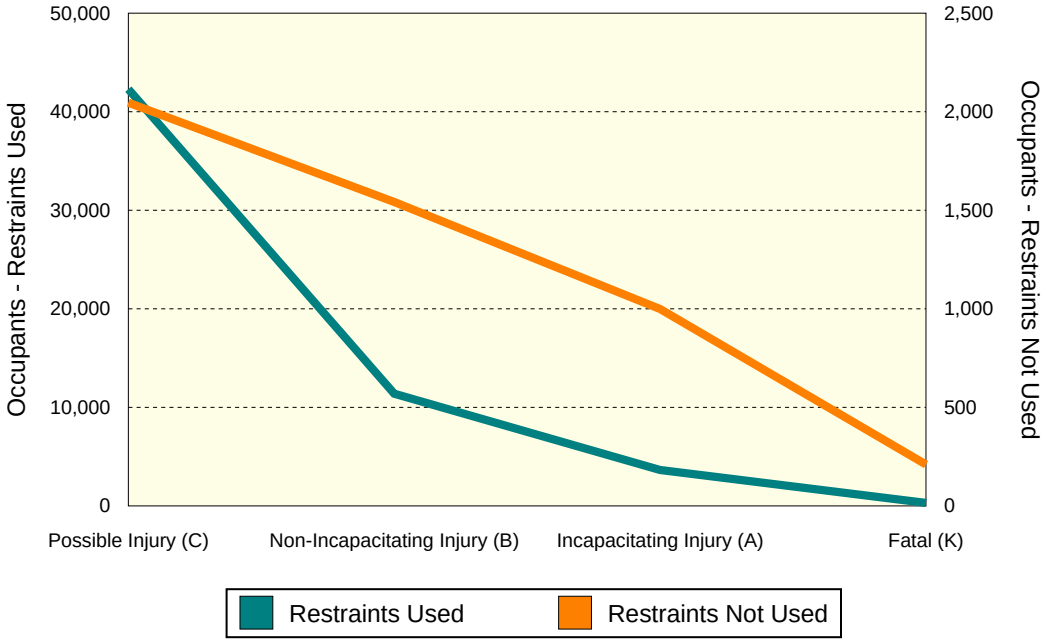


HBD CRASHES

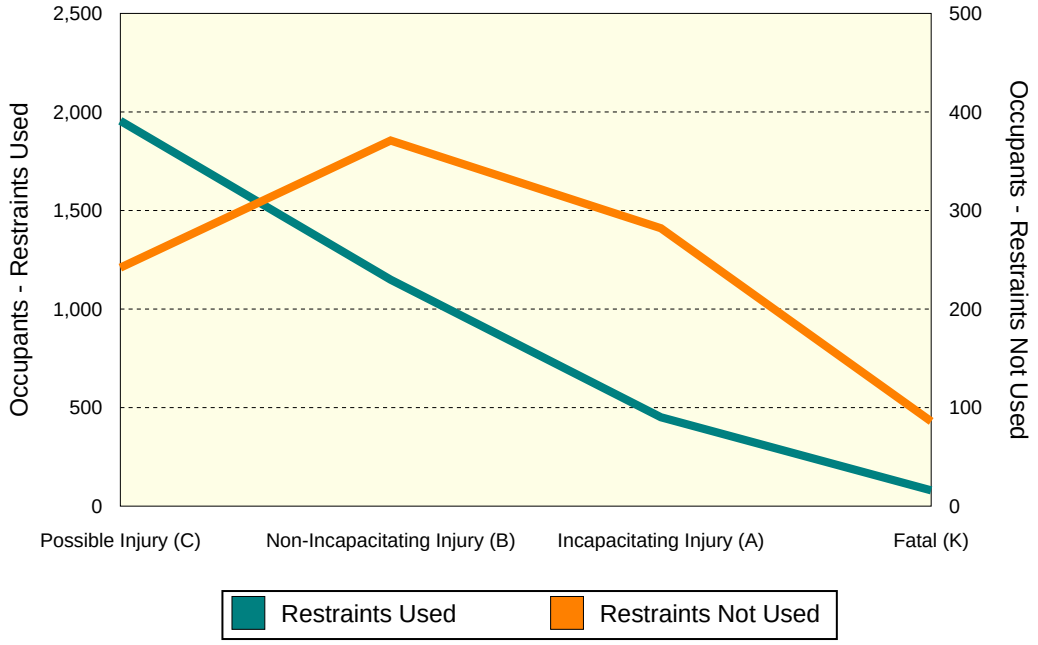


INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC *OCCUPANTS*

ALL CRASHES



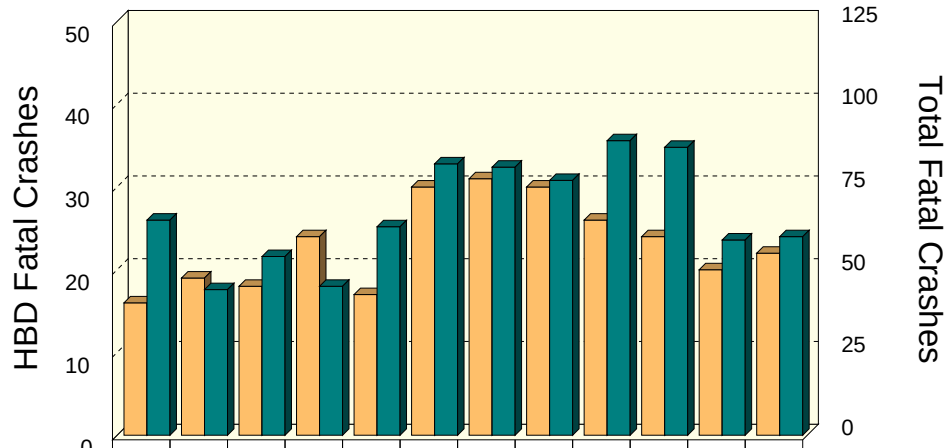
HBD CRASHES



ALCOHOL INVOLVEMENT IN FATAL CRASHES

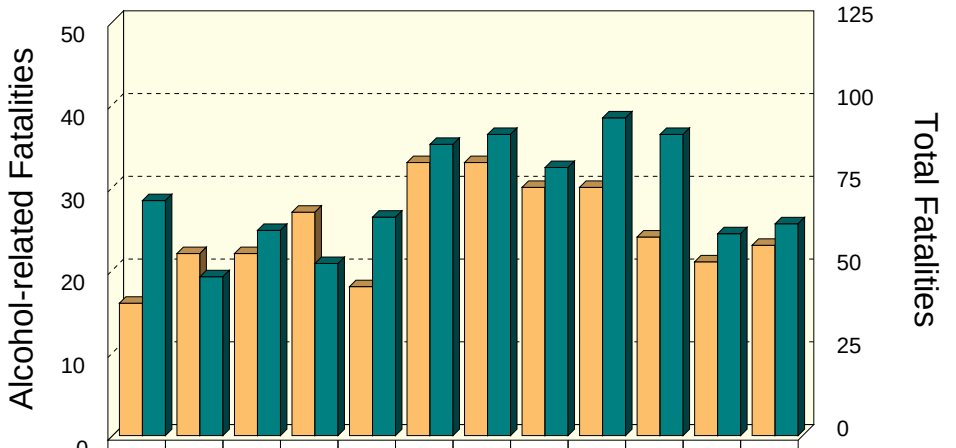
Fatal crashes (total of non-HBD and HBD fatal crashes) were lowest in number during February. HBD fatal crashes were highest in number during the summer months (June, July, August.) The number of total fatal crashes reached highest levels in September and October.

HBD Fatal Crashes by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
HBD Fatal Crashes	16	19	18	24	17	30	31	30	26	24	20	22	277
Total Fatal Crashes	65	44	54	45	63	82	81	77	89	87	59	60	806

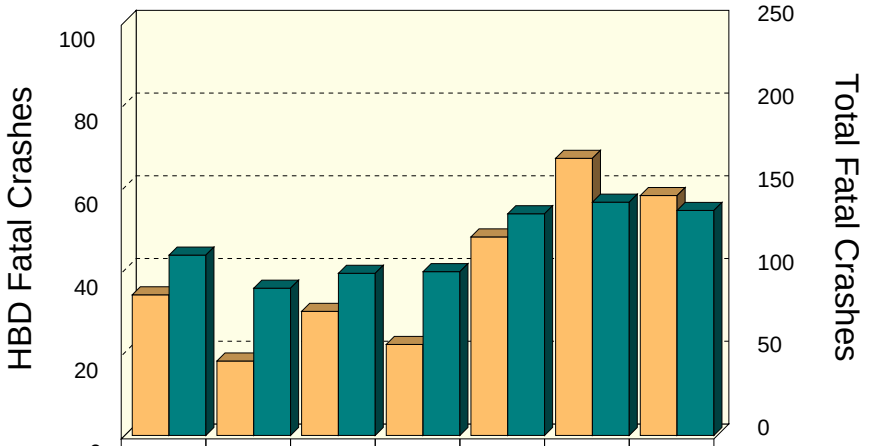
Alcohol-related Fatalities by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Alc-rel. Fatalities	16	22	22	27	18	33	33	30	30	24	21	23	299
Total Fatalities	71	48	62	52	66	88	91	81	96	91	61	64	871

NOTE: An alcohol-related fatality is any person killed in an HBD crash.

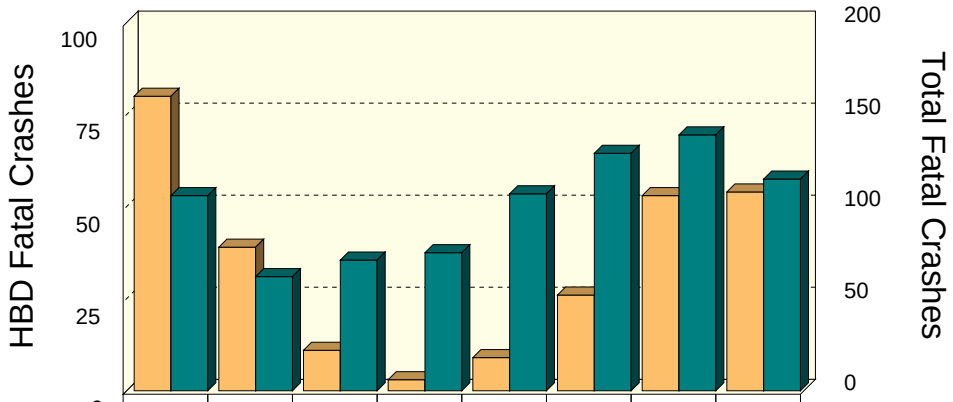
HBD Fatal Crashes by Day of Week



	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
HBD Fatal Crashes	34	18	30	22	48	67	58	277
Total Fatal Crashes	109	89	98	99	134	141	136	806

Saturday and Sunday had the most fatal crashes and the highest proportions of drinking-related fatal crashes in 2009. 47.5 percent of the fatal crashes on Saturday involved drinking, while only 20.2 percent of the fatal crashes on Tuesday involved drinking.

HBD Fatal Crashes by Time of Day



	12:00-2:59A	3:00-5:59A	6:00-8:59A	9:00-11:59A	12:00-2:59P	3:00-5:59P	6:00-8:59P	9:00-11:59P	Totals
HBD Fatal Crashes	80	39	11	3	9	26	53	54	275
Total Fatal Crashes	106	62	71	75	107	129	139	115	804

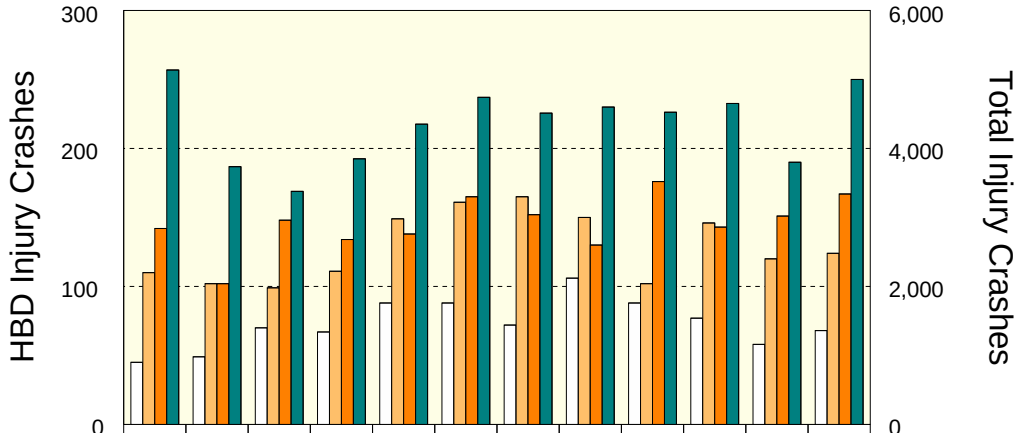
Not surprisingly, the midnight to 2:59 AM time period had the highest rate of drinking involvement (75.5%), while the late morning hours had the lowest (4.0%).

There were 2 HBD fatal crashes where the time of day was unknown, and those 2 HBD fatal crashes do not appear in this table.

ALCOHOL INVOLVEMENT IN INJURY CRASHES

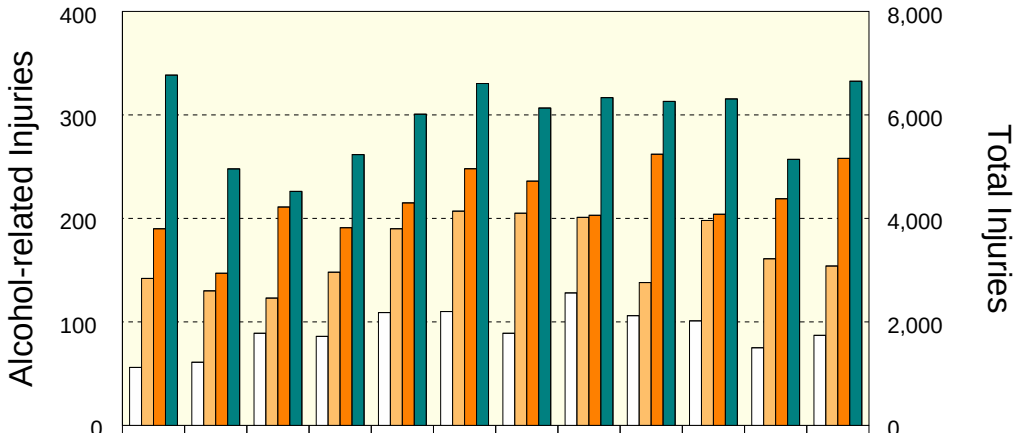
Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 2009, the highest number of HBD injury crashes occurred in June with 414. The highest proportion of HBD injury crashes occurred in March with 9.4 percent of the injury crashes in that month involving alcohol.

HBD Injury Crashes by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
A Injury - HBD	45	49	70	67	88	88	72	106	88	77	58	68	876
B Injury - HBD	110	102	99	111	149	161	165	150	102	146	120	124	1,539
C Injury - HBD	142	102	148	134	138	165	152	130	176	143	151	167	1,748
Total Injury Crashes	5,137	3,736	3,378	3,850	4,352	4,741	4,512	4,600	4,525	4,652	3,800	5,000	52,283

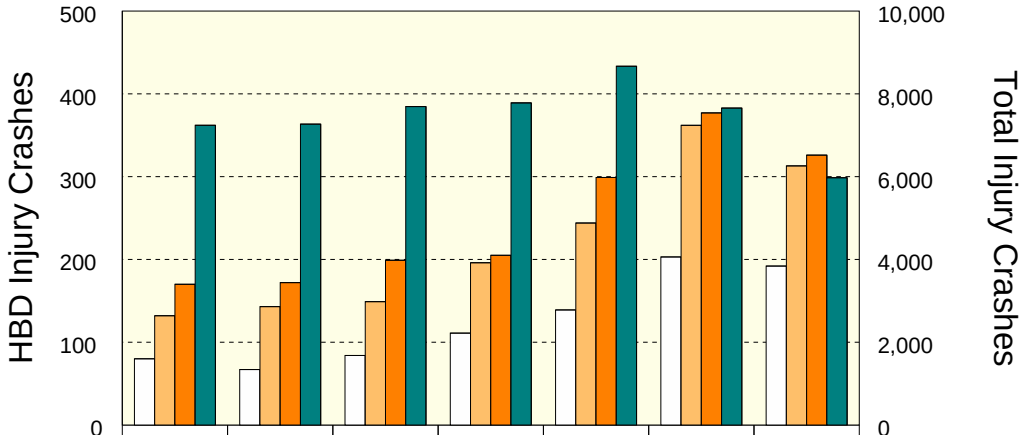
Alcohol-related Injuries by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
A Injury - Alc-rel.	56	61	89	86	109	110	89	128	106	101	75	87	1,097
B Injury - Alc-rel.	142	130	123	148	190	207	205	201	138	198	161	154	1,997
C Injury - Alc-rel.	190	147	211	191	215	248	236	203	262	204	219	258	2,584
Total Injuries	6,769	4,957	4,522	5,233	6,014	6,607	6,133	6,334	6,261	6,309	5,141	6,651	70,931

NOTE: An alcohol-related injury is any person injured in an HBD crash.

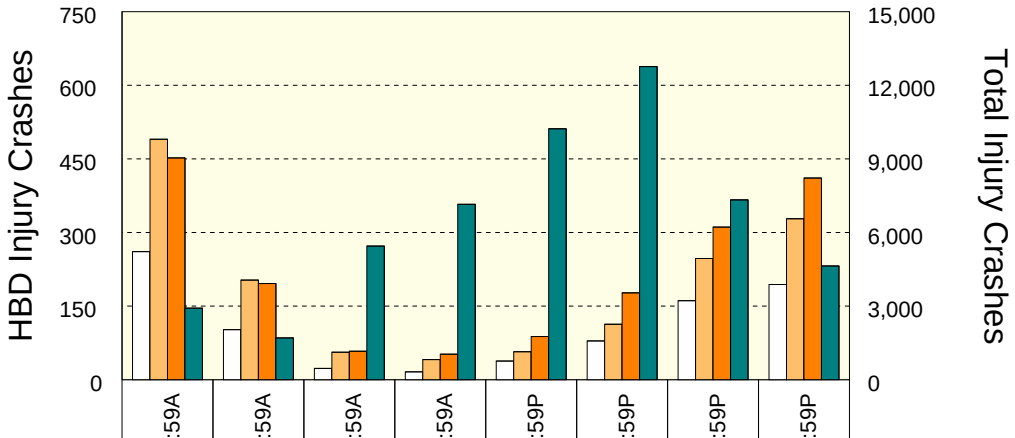
HBD Injury Crashes by Day of Week



	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
A Injury - HBD	80	67	84	111	139	203	192	876
B Injury - HBD	132	143	149	196	244	362	313	1,539
C Injury - HBD	170	172	199	205	299	377	326	1,748
Total Injury Crashes	7,241	7,269	7,693	7,782	8,667	7,657	5,974	52,283

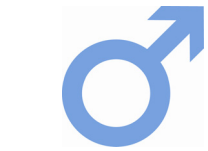
HBD injury crashes follow the same basic trends as total crashes through the work week, but the weekend sees a dramatic increase in the proportion of HBD injury crashes to total injury crashes.

HBD Injury Crashes by Time of Day



	12:00-2:59A	3:00-5:59A	6:00-8:59A	9:00-11:59A	12:00-2:59P	3:00-5:59P	6:00-8:59P	9:00-11:59P	Totals
A Injury - HBD	261	102	23	16	38	79	161	194	874
B Injury - HBD	490	203	56	41	57	113	247	328	1,535
C Injury - HBD	452	196	58	52	88	177	311	411	1,745
Total Injury Crashes	2,917	1,704	5,447	7,149	10,227	12,763	7,330	4,636	52,173

Total injury crash frequencies peak in the hours between 3:00 PM and 5:59 PM, while HBD injury crash frequencies peak between midnight and 2:59 AM (a particularly hazardous travel period). These frequencies exclude 110 injury crashes (including 9 HBD injury crashes) where time of day was unknown.



MALE DRIVERS BY AGE & INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							
	Male Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	101	0.0	0	0.0	14	18	16	53
14 years	91	0.0	0	0.0	6	18	9	58
15 years	346	0.1	4	0.5	10	38	56	238
16 years	4,603	1.9	10	1.2	100	262	610	3,621
17 years	6,570	2.7	12	1.4	121	387	895	5,155
18 years	8,145	3.4	21	2.5	170	466	1,131	6,357
19 years	7,616	3.1	33	3.9	150	469	1,025	5,939
20 years	6,645	2.7	22	2.6	128	350	887	5,258
21 - 24 years	22,572	9.3	65	7.7	494	1,226	2,918	17,869
25 - 34 years	42,660	17.6	162	19.3	854	2,101	5,308	34,235
35 - 44 years	42,261	17.4	143	17.0	870	1,817	5,256	34,175
45 - 54 years	43,071	17.8	154	18.3	955	1,821	5,425	34,716
55 - 64 years	30,085	12.4	91	10.8	626	1,331	3,951	24,086
65 - 69 years	8,584	3.5	38	4.5	172	390	1,142	6,842
70 - 74 years	5,510	2.3	12	1.4	115	263	747	4,373
75 - 79 years	3,939	1.6	26	3.1	90	216	522	3,085
80 - 84 years	2,868	1.2	29	3.5	63	170	420	2,186
85 - 89 years	1,392	0.6	10	1.2	43	80	216	1,043
90 years and over	404	0.2	5	0.6	11	22	64	302
Unknown	5,027	2.1	3	0.4	47	160	590	4,227
Total	242,490	100.0	840	100.0	5,039	11,605	31,188	193,818

NOTE: Gender tables exclude 35,145 drivers of unknown gender.

MALE DRINKING DRIVERS BY AGE & INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							
	Male Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	1	0.0	0	0.0	0	1	0	0
14 years	2	0.0	0	0.0	1	0	0	1
15 years	3	0.0	0	0.0	0	2	0	1
16 years	26	0.3	0	0.0	4	4	5	13
17 years	96	1.2	2	0.9	5	14	10	65
18 years	173	2.2	4	1.9	14	26	30	99
19 years	231	2.9	5	2.4	18	53	32	123
20 years	259	3.3	6	2.8	29	45	39	140
21 - 24 years	1,457	18.5	29	13.7	116	200	201	911
25 - 34 years	2,044	25.9	63	29.9	158	302	308	1,213
35 - 44 years	1,424	18.1	39	18.5	138	217	220	810
45 - 54 years	1,260	16.0	46	21.8	122	173	208	711
55 - 64 years	625	7.9	9	4.3	46	93	118	359
65 - 69 years	120	1.5	4	1.9	5	18	29	64
70 - 74 years	59	0.7	1	0.5	8	7	12	31
75 - 79 years	35	0.4	1	0.5	1	6	7	20
80 - 84 years	15	0.2	1	0.5	2	0	2	10
85 - 89 years	12	0.2	1	0.5	1	0	4	6
90 years and over	0	0.0	0	0.0	0	0	0	0
Unknown	39	0.5	0	0.0	1	1	7	30
Total	7,881	100.0	211	100.0	669	1,162	1,232	4,607

NOTE: Gender/alcohol tables exclude 48 unknown gender drinking drivers.

FEMALE DRIVERS BY AGE & INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							
	Female Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	47	0.0	0	0.0	3	11	6	27
14 years	52	0.0	1	0.3	4	6	8	33
15 years	269	0.1	0	0.0	2	11	44	212
16 years	4,146	2.1	5	1.3	82	216	628	3,215
17 years	5,818	2.9	14	3.7	103	293	909	4,499
18 years	6,791	3.4	12	3.2	123	367	1,106	5,183
19 years	6,659	3.3	10	2.7	110	351	994	5,194
20 years	6,063	3.0	7	1.9	93	281	906	4,776
21 - 24 years	20,256	10.2	27	7.2	308	917	3,151	15,853
25 - 34 years	37,352	18.8	61	16.3	567	1,468	5,970	29,286
35 - 44 years	36,021	18.1	60	16.0	527	1,354	5,466	28,614
45 - 54 years	34,636	17.4	69	18.4	548	1,289	5,292	27,438
55 - 64 years	22,168	11.1	47	12.5	359	878	3,351	17,533
65 - 69 years	5,938	3.0	16	4.3	99	276	915	4,632
70 - 74 years	3,985	2.0	8	2.1	79	166	659	3,073
75 - 79 years	3,095	1.6	19	5.1	54	167	471	2,384
80 - 84 years	2,297	1.2	10	2.7	56	112	379	1,740
85 - 89 years	1,073	0.5	8	2.1	28	62	169	806
90 years and over	254	0.1	1	0.3	8	13	36	196
Unknown	2,246	1.1	0	0.0	14	54	262	1,916
Total	199,166	100.0	375	100.0	3,167	8,292	30,722	156,610

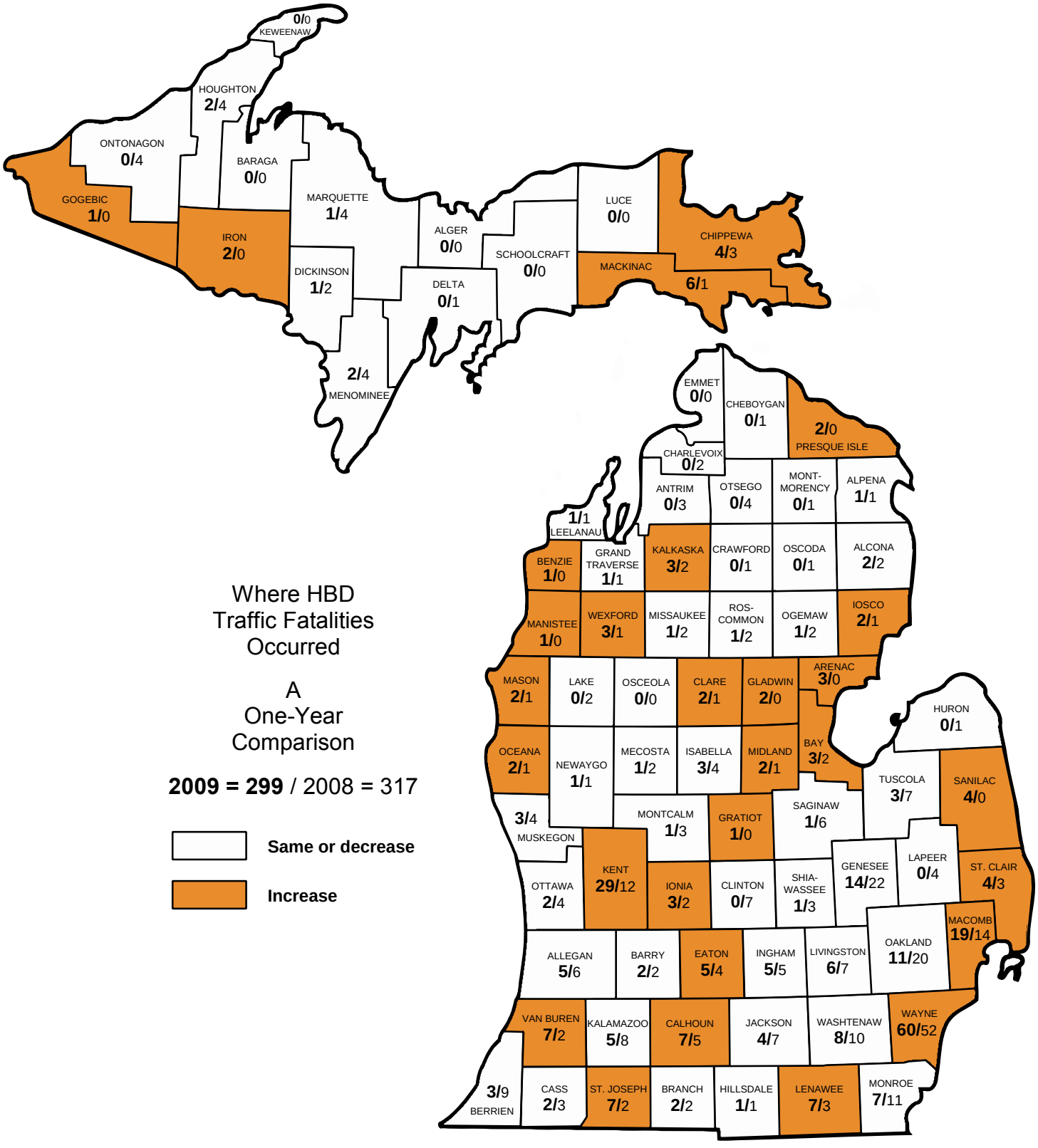
NOTE: Gender tables exclude 35,145 drivers of unknown gender.

FEMALE DRINKING DRIVERS BY AGE & INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							
	Female Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	1	0.0	0	0.0	0	0	0	1
14 years	0	0.0	0	0.0	0	0	0	0
15 years	2	0.1	0	0.0	0	0	1	1
16 years	15	0.6	0	0.0	1	3	2	9
17 years	36	1.4	1	2.4	3	6	7	19
18 years	63	2.4	3	7.3	5	14	11	30
19 years	76	2.9	1	2.4	5	12	12	46
20 years	82	3.1	0	0.0	1	10	10	61
21 - 24 years	418	16.0	6	14.6	24	54	78	256
25 - 34 years	757	29.0	13	31.7	53	94	138	459
35 - 44 years	579	22.2	8	19.5	34	74	106	357
45 - 54 years	431	16.5	8	19.5	36	48	76	263
55 - 64 years	110	4.2	1	2.4	11	12	21	65
65 - 69 years	17	0.7	0	0.0	1	2	7	7
70 - 74 years	10	0.4	0	0.0	0	1	0	9
75 - 79 years	5	0.2	0	0.0	0	1	0	4
80 - 84 years	2	0.1	0	0.0	0	0	1	1
85 - 89 years	1	0.0	0	0.0	1	0	0	0
90 years and over	0	0.0	0	0.0	0	0	0	0
Unknown	8	0.3	0	0.0	0	1	1	6
Total	2,613	100.0	41	100.0	175	332	471	1,594

NOTE: Gender/alcohol tables exclude 48 unknown gender drinking drivers.

TRAFFIC FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY



Where HBD Traffic Fatalities Occurred

A One-Year Comparison

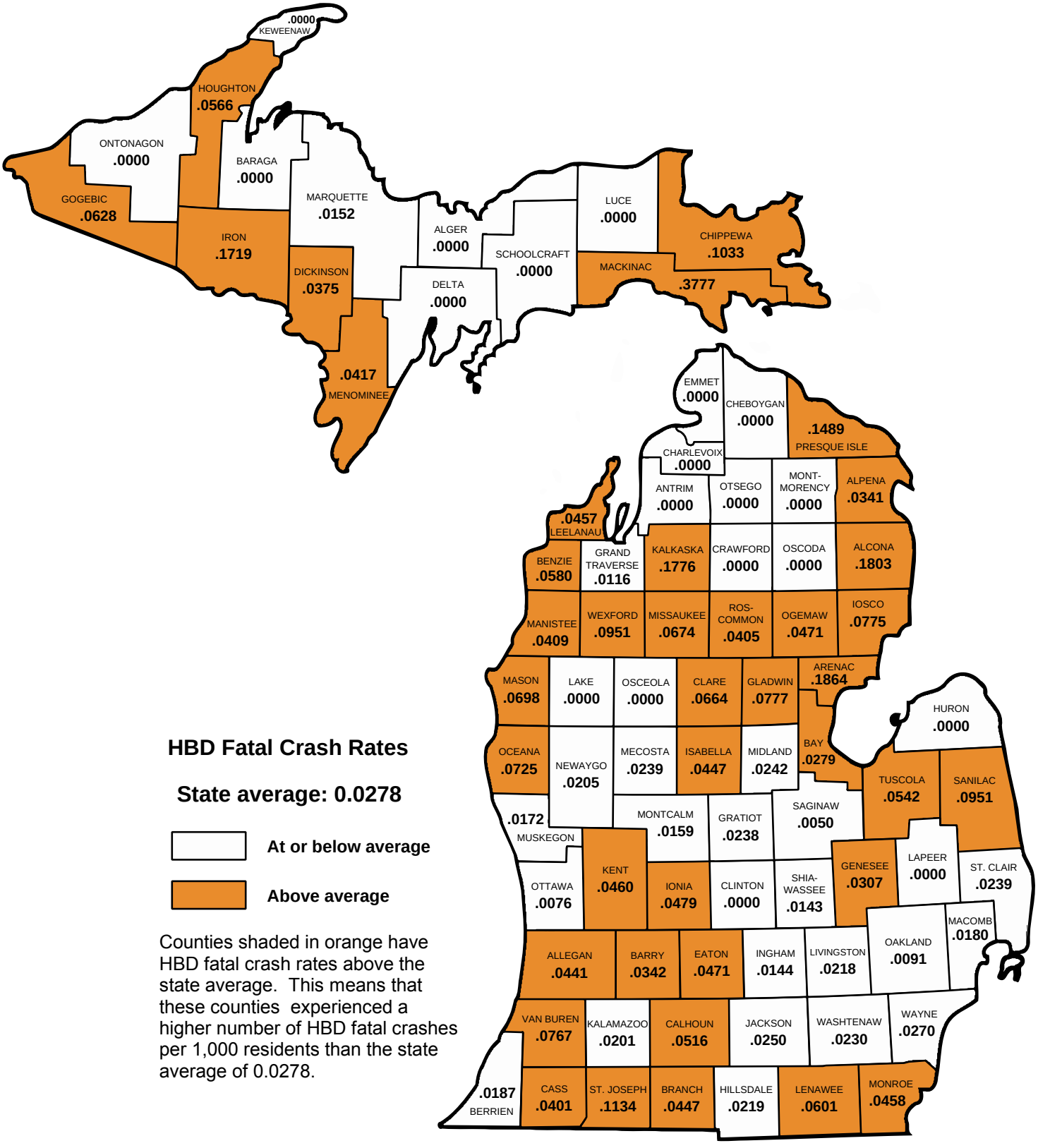
2009 = 299 / 2008 = 317

Same or decrease

Increase

MICHIGAN OHSP Office of Highway Safety Planning

COUNTY RANKING
BY HBD FATAL CRASH RATE



HBD Fatal Crash Rates

State average: 0.0278

At or below average

Above average

Counties shaded in orange have HBD fatal crash rates above the state average. This means that these counties experienced a higher number of HBD fatal crashes per 1,000 residents than the state average of 0.0278.

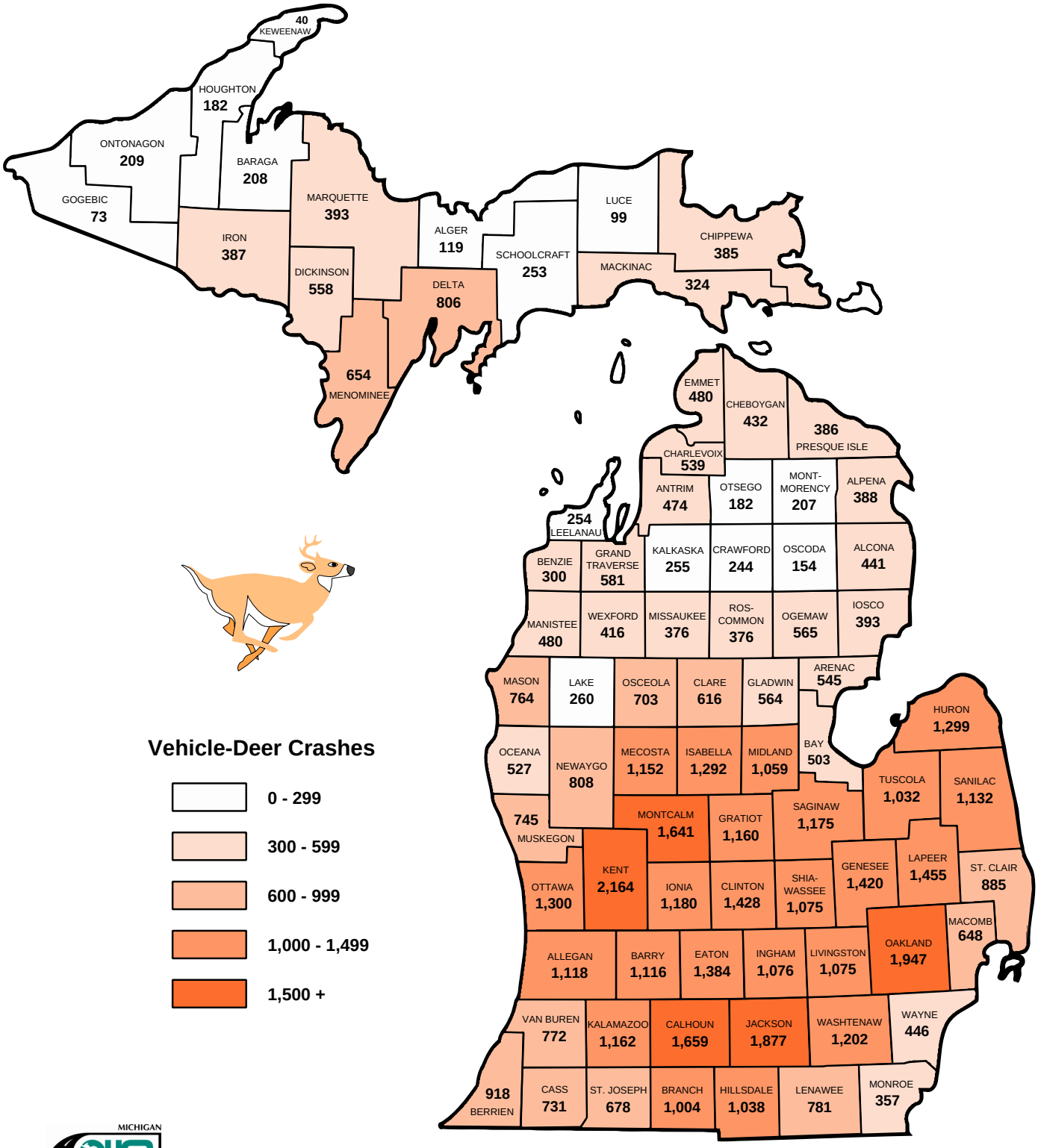
2009
2009
2009
2009
2009
2009
2009
2009
2009
2009
2009

Deer

MICHIGAN MOTOR VEHICLE-DEER INVOLVED CRASHES

Michigan had 61,486 reported motor vehicle-deer crashes during 2009. 1,571 people were injured and 10 people were killed as a result of those collisions. 8 of the 10 people killed were motorcycle drivers and the other 2 were motorcycle passengers. Of the 61,681 vehicles involved, 43,271 (70.2%) were passenger cars, 11,864 (19.2%) were pickups, and 3,666 (5.9%) were minivans, vans, and motorhomes. All other vehicle types (including motorcycle, snowmobile, ORV/ATV, large truck, moped) totaled 2,880 (4.7%).

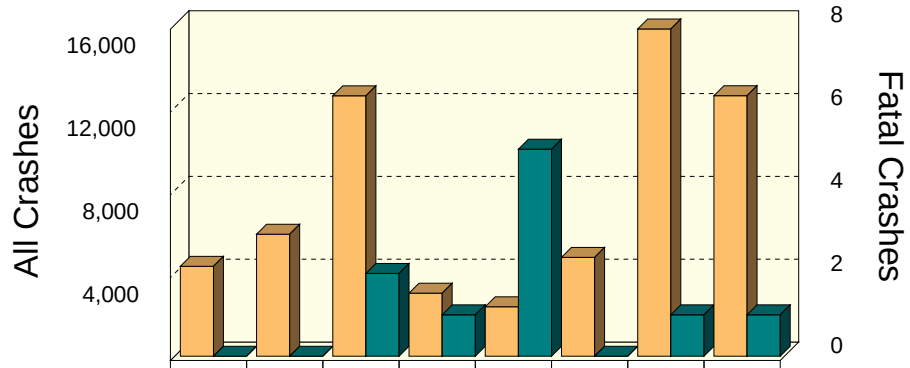
Motor vehicle-deer crashes occurred most often in Michigan's heavily populated southern counties; Kent County had the highest number with 2,164 such crashes in 2009.



LIGHT CONDITION AND TIME OF DAY IN MOTOR VEHICLE-DEER CRASHES

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	13,279	21.6	7	70.0	50	177	245	12,800
Dawn	5,267	8.6	0	0.0	3	34	62	5,168
Dusk	3,042	4.9	0	0.0	4	29	43	2,966
Dark – Lighted	2,166	3.5	0	0.0	3	13	28	2,122
Dark – Unlighted	37,152	60.4	3	30.0	55	208	455	36,431
Other/Unknown	580	0.9	0	0.0	0	2	5	573
Total	61,486	100.0	10	100.0	115	463	838	60,060

Time and Severity of Motor Vehicle - Deer Crashes

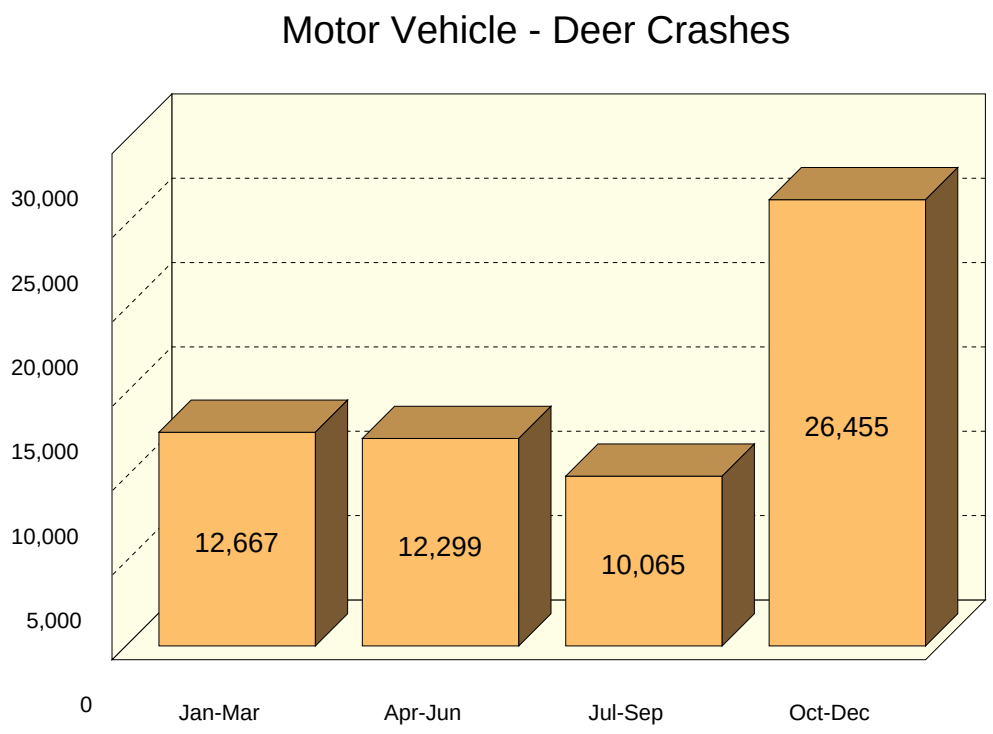


	Midnight - 2:59 AM	3:00 AM - 5:59 AM	6:00 AM - 8:59 AM	9:00 AM - 11:59 AM	Noon - 2:59 PM	3:00 PM - 5:59 PM	6:00 PM - 8:59 PM	9:00 PM - 11:59 PM	Totals
All Crashes	4,343	5,893	12,579	3,046	2,388	4,774	15,807	12,583	61,413
Fatal Crashes	0	0	2	1	5	0	1	1	10

NOTE: Time and Severity chart excludes 73 crashes where time of day is unknown.

MONTHLY AND SEASONAL RATES FOR MOTOR VEHICLE-DEER CRASHES

MONTH	All Crashes		Fatal Crashes		Injury Crashes			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	Crashes
January	5,002	8.1	0	0.0	0	8	36	4,958
February	3,451	5.6	0	0.0	0	7	33	3,411
March	4,214	6.9	0	0.0	3	22	43	4,146
April	3,267	5.3	0	0.0	7	23	44	3,193
May	4,573	7.4	0	0.0	18	58	80	4,417
June	4,459	7.3	1	10.0	25	72	74	4,287
July	3,642	5.9	3	30.0	21	66	66	3,486
August	2,626	4.3	2	20.0	9	49	66	2,500
September	3,797	6.2	1	10.0	11	20	69	3,696
October	8,339	13.6	1	10.0	7	53	113	8,165
November	11,985	19.5	2	20.0	12	67	161	11,743
December	6,131	10.0	0	0.0	2	18	53	6,058
Total	61,486	100.0	10	100.0	115	463	838	60,060

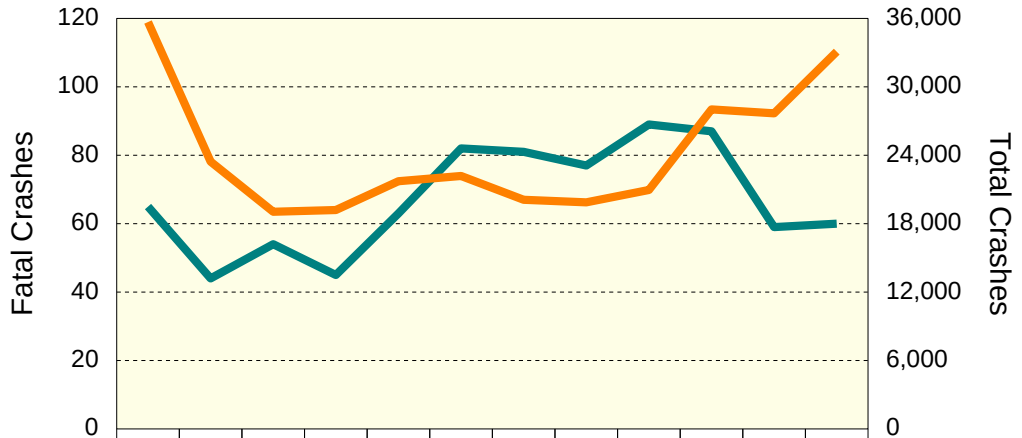


26,455 (43%) of reported motor vehicle-deer collisions occurred during the fourth quarter of the year.

Crash

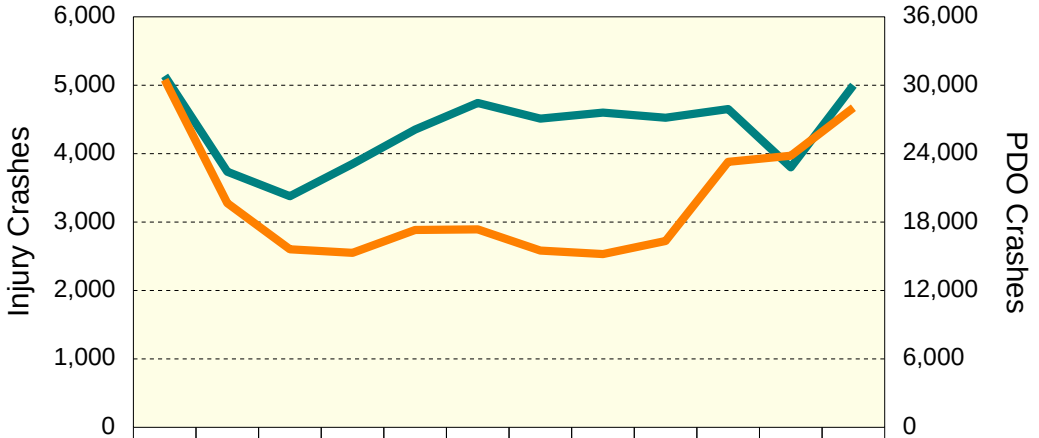
ALL CRASHES INJURY SEVERITY BY MONTH

Fatal and Total Crashes



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Fatal Crashes	65	44	54	45	63	82	81	77	89	87	59	60	806
Total Crashes	35,684	23,440	19,045	19,197	21,723	22,183	20,095	19,871	20,955	28,021	27,677	33,087	290,978

Injury and PDO Crashes

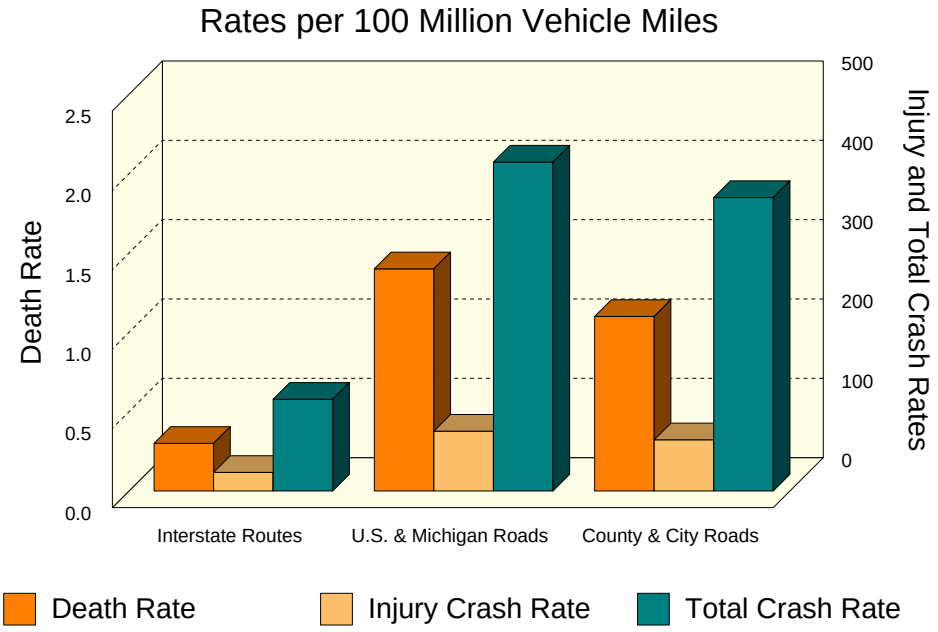


	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Injury Crashes	5,137	3,736	3,378	3,850	4,352	4,741	4,512	4,600	4,525	4,652	3,800	5,000	52,283
PDO Crashes	30,482	19,660	15,613	15,302	17,308	17,360	15,502	15,194	16,341	23,282	23,818	28,027	237,889

CRASH EXPERIENCE BY ROADWAY TYPE

The table below provides a breakdown of estimated vehicle mileage, crashes, death rates (deaths per 100 million vehicle miles), and crash rates (crashes per 100 million vehicle miles) for the major roadway types in Michigan. All rates are lowest on interstate routes. 2009 estimated mileage figures were provided by the Michigan Department of Transportation [11].

STATEWIDE	Estimated Mileage (Billions)	All Crashes	Injury Crashes	Deaths	Total Crash Rate	Injury Crash Rate	Death Rate
Interstate Routes	28.6	33,067	6,684	80	115.6	23.4	0.3
U.S. & Michigan Roads	20.1	83,337	15,153	282	414.6	75.4	1.4
County & City Roads	47.2	174,574	30,446	509	369.9	64.5	1.1
Total	95.9	290,978	52,283	871	303.4	54.5	0.91



CRASH TYPE

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	118,018	40.6	409	50.7	2,427	5,907	8,769	100,506
Head On	3,964	1.4	101	12.5	297	421	703	2,442
Head On - Left Turn	6,451	2.2	36	4.5	255	688	1,549	3,923
Angle	47,442	16.3	153	19.0	1,159	2,730	7,865	35,535
Rear End	64,784	22.3	43	5.3	578	1,791	11,513	50,859
Rear End - Left Turn	2,962	1.0	3	0.4	49	140	591	2,179
Rear End - Right Turn	2,736	0.9	1	0.1	21	41	348	2,325
Sideswipe - Same Direction	24,865	8.5	18	2.2	146	435	1,453	22,813
Sideswipe - Opposite Direct	6,299	2.2	9	1.1	86	180	473	5,551
Other/Unknown	13,457	4.6	33	4.1	215	444	1,009	11,756
Total	290,978	100.0	806	100.0	5,233	12,777	34,273	237,889

Single Vehicle, Head On, and Angle crash types produce the highest number of fatal crashes (82.2%). Single Vehicle crashes include rollovers, which are particularly deadly crash types. Rear End-Turning and Sideswipe crashes produce the lowest number of fatal crashes (3.8%).

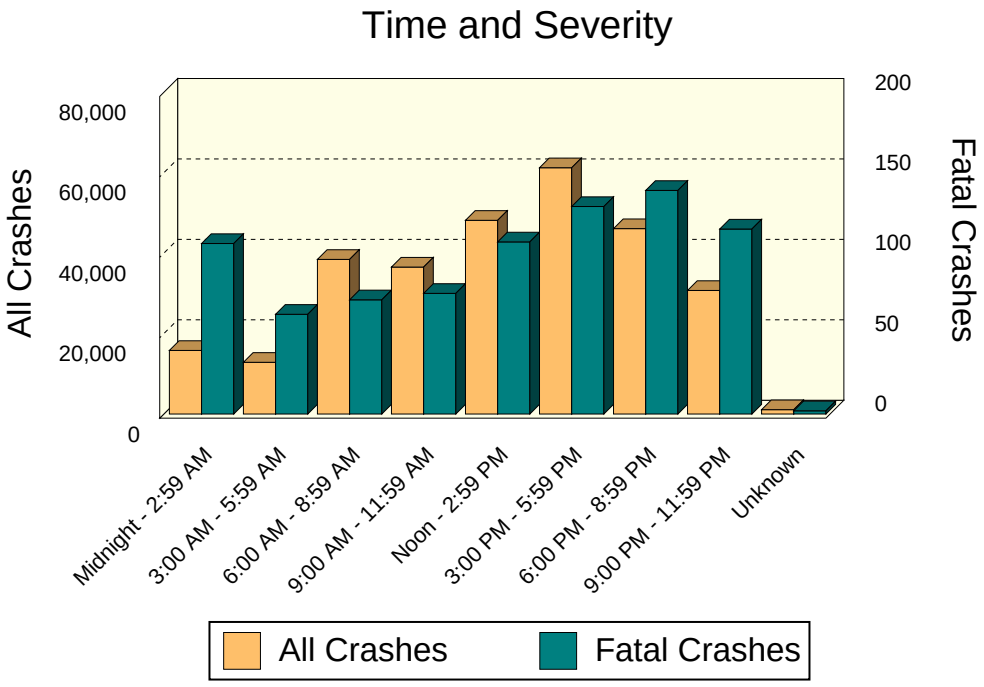
RELATIONSHIP TO ROADWAY

LOCATION OF FIRST IMPACT	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
On Road	240,676	82.7	532	66.0	3,602	8,846	27,788	199,908
Median	2,759	0.9	12	1.5	74	214	407	2,052
Shoulder	13,113	4.5	55	6.8	370	928	1,488	10,272
Outside of Shoulder/Curb	25,305	8.7	185	23.0	949	2,287	3,442	18,442
Gore	783	0.3	5	0.6	45	67	102	564
Other/Unknown	8,342	2.9	17	2.1	193	435	1,046	6,651
Total	290,978	100.0	806	100.0	5,233	12,777	34,273	237,889

Crashes that happen outside of the normal driving lanes are overrepresented in the fatal count. Only 8.7 percent of crashes occur outside the shoulder of the road, but these crashes account for 23.0 percent of the fatal crashes.

TIME AND SEVERITY

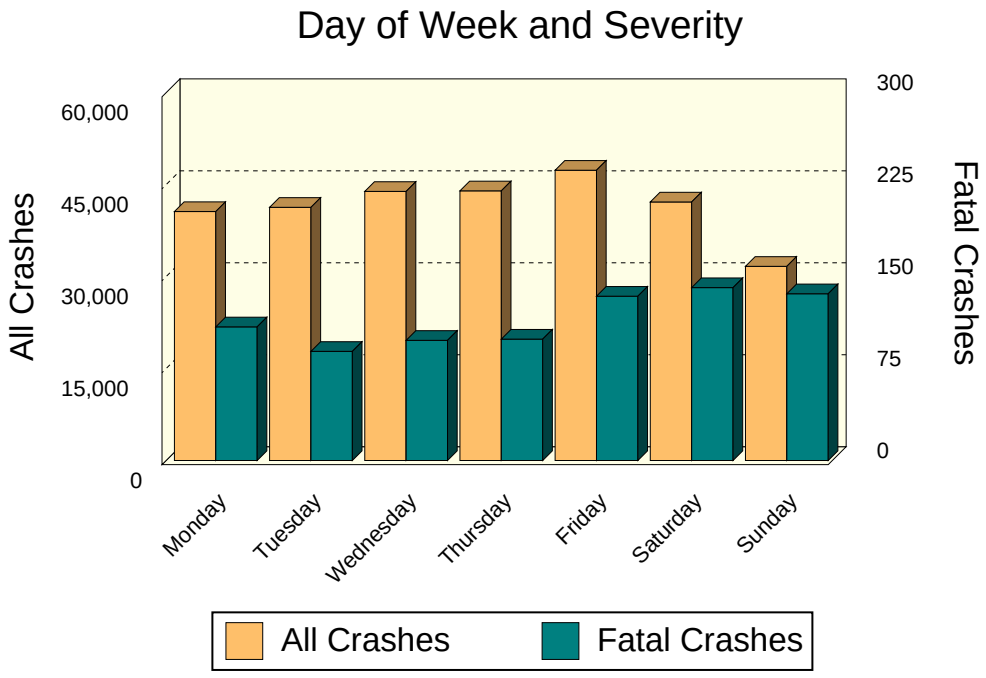
TIME OF DAY	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Midnight - 2:59 AM	15,813	5.4	106	13.2	489	1,007	1,421	12,790
3:00 AM - 5:59 AM	12,859	4.4	62	7.7	224	541	939	11,093
6:00 AM - 8:59 AM	38,449	13.2	71	8.8	454	1,278	3,715	32,931
9:00 AM - 11:59 AM	36,541	12.6	75	9.3	643	1,557	4,949	29,317
Noon - 2:59 PM	48,166	16.6	107	13.3	891	2,314	7,022	37,832
3:00 PM - 5:59 PM	61,241	21.0	129	16.0	1,118	2,803	8,842	48,349
6:00 PM - 8:59 PM	46,100	15.8	139	17.2	803	1,925	4,602	38,631
9:00 PM - 11:59 PM	30,727	10.6	115	14.3	600	1,326	2,710	25,976
Unknown	1,082	0.4	2	0.2	11	26	73	970
Total	290,978	100.0	806	100.0	5,233	12,777	34,273	237,889



Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. There are proportionally more fatal crashes during the midnight to 2:59 AM time period.

DAY OF WEEK

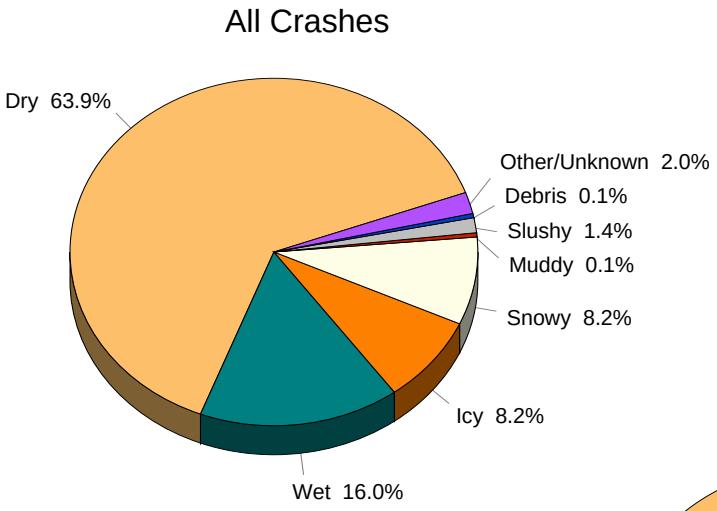
DAY OF WEEK	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Monday	40,609	14.0	109	13.5	648	1,687	4,906	33,259
Tuesday	41,298	14.2	89	11.0	640	1,600	5,029	33,940
Wednesday	43,893	15.1	98	12.2	734	1,725	5,234	36,102
Thursday	43,987	15.1	99	12.3	716	1,873	5,193	36,106
Friday	47,347	16.3	134	16.6	845	2,127	5,695	38,546
Saturday	42,173	14.5	141	17.5	871	2,050	4,736	34,375
Sunday	31,671	10.9	136	16.9	779	1,715	3,480	25,561
Total	290,978	100.0	806	100.0	5,233	12,777	34,273	237,889

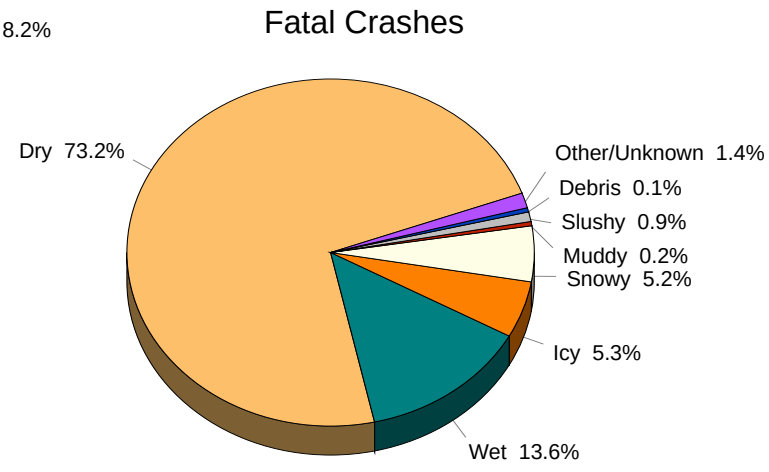


Crash frequencies were higher Monday through Friday than on the weekend. Saturday (17.5%) and Sunday (16.9%) had the highest number of fatal crashes.

ROAD CONDITION

ROAD SURFACE CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Dry	186,067	63.9	590	73.2	3,782	8,889	22,354	150,452
Wet	46,545	16.0	110	13.6	687	1,858	6,174	37,716
Icy	23,943	8.2	43	5.3	351	930	2,673	19,946
Snowy	23,905	8.2	42	5.2	242	666	2,086	20,869
Muddy	434	0.1	2	0.2	15	40	46	331
Slushy	4,152	1.4	7	0.9	66	196	513	3,370
Debris	176	0.1	1	0.1	10	27	35	103
Other/Unknown	5,756	2.0	11	1.4	80	171	392	5,102
Total	290,978	100.0	806	100.0	5,233	12,777	34,273	237,889

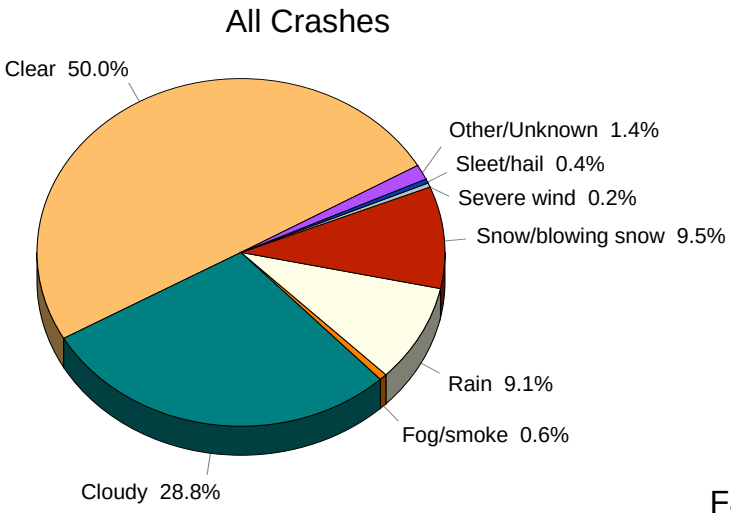


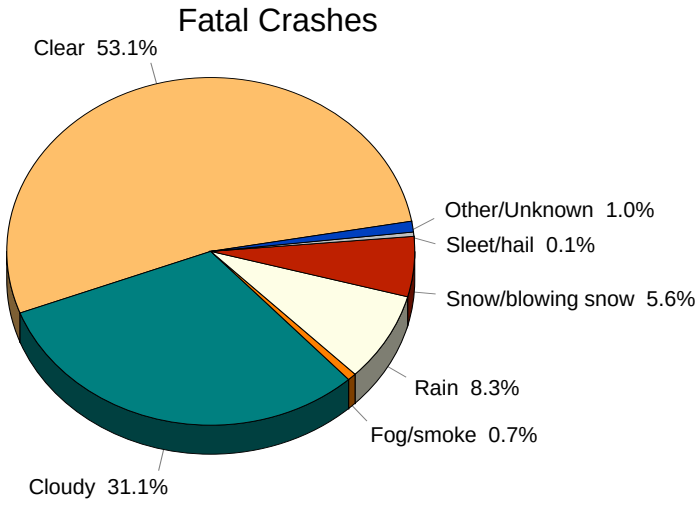


Most crashes (63.9%) and most fatal crashes (73.2%) occur on dry roads.

WEATHER CONDITION

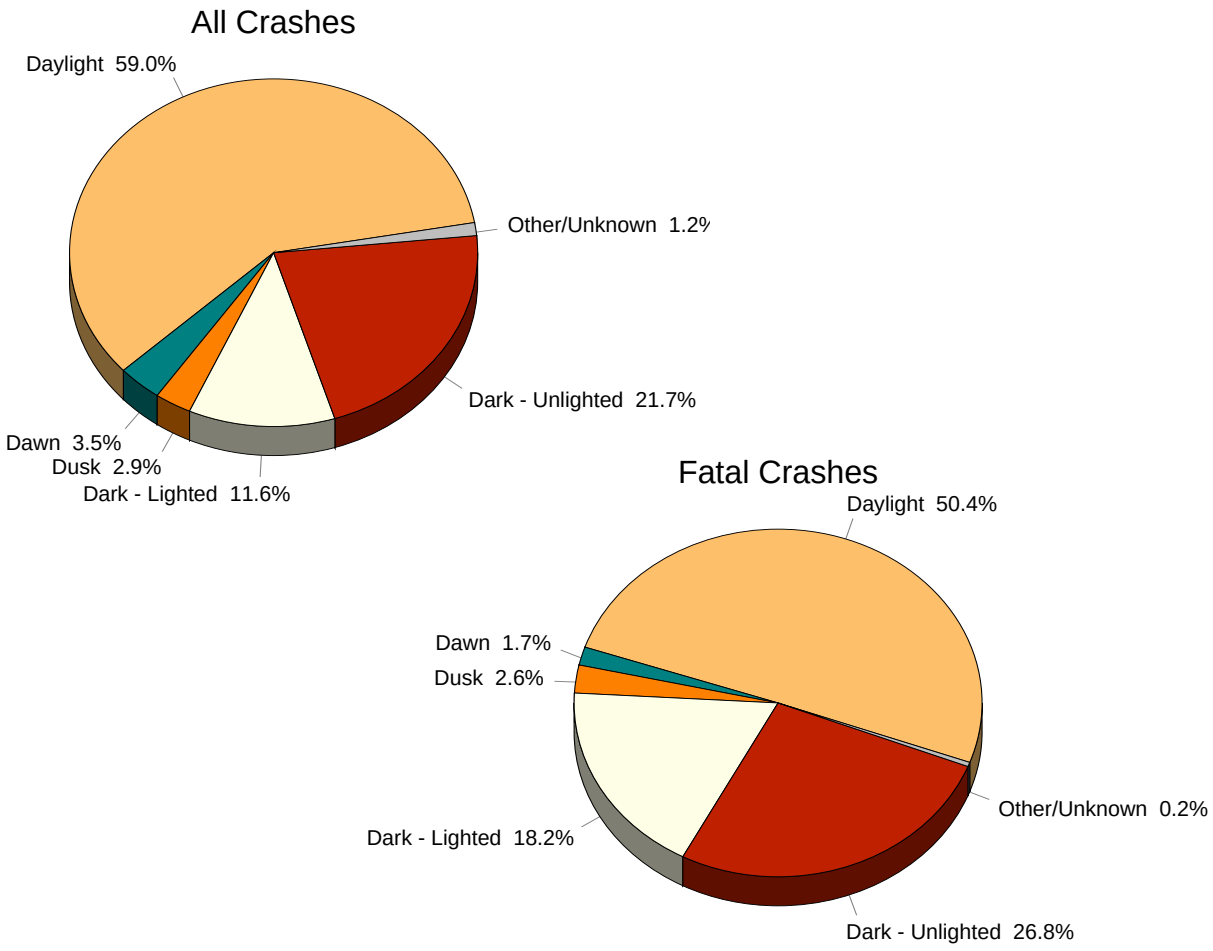
WEATHER CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	145,598	50.0	428	53.1	2,995	6,969	17,016	118,190
Cloudy	83,722	28.8	251	31.1	1,431	3,586	10,088	68,366
Fog/Smoke	1,708	0.6	6	0.7	26	75	108	1,493
Rain	26,520	9.1	67	8.3	402	1,099	3,804	21,148
Snow/Blowing Snow	27,591	9.5	45	5.6	324	902	2,866	23,454
Severe Wind	594	0.2	0	0.0	13	22	54	505
Sleet/Hail	1,055	0.4	1	0.1	15	46	138	855
Other/Unknown	4,190	1.4	8	1.0	27	78	199	3,878
Total	290,978	100.0	806	100.0	5,233	12,777	34,273	237,889





LIGHT CONDITION

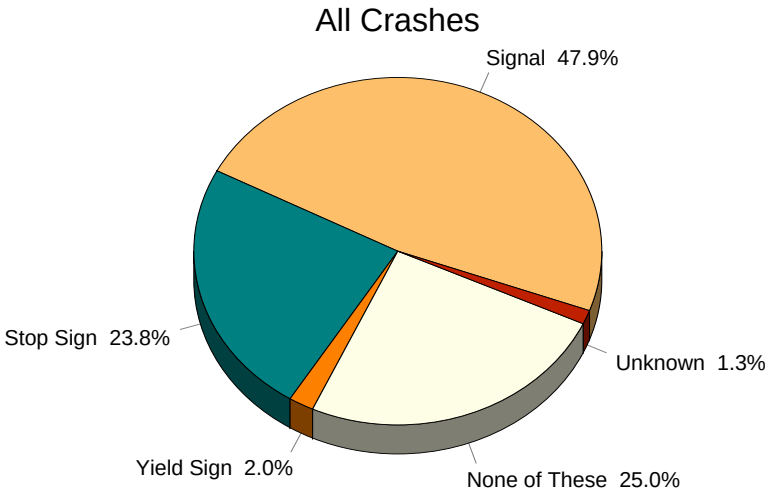
LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	171,659	59.0	406	50.4	3,199	8,315	24,321	135,418
Dawn	10,319	3.5	14	1.7	110	267	724	9,204
Dusk	8,481	2.9	21	2.6	148	332	805	7,175
Dark – Lighted	33,853	11.6	147	18.2	766	1,688	4,467	26,785
Dark – Unlighted	63,272	21.7	216	26.8	988	2,122	3,754	56,192
Other/Unknown	3,394	1.2	2	0.2	22	53	202	3,115
Totals	290,978	100.0	806	100.0	5,233	12,777	34,273	237,889

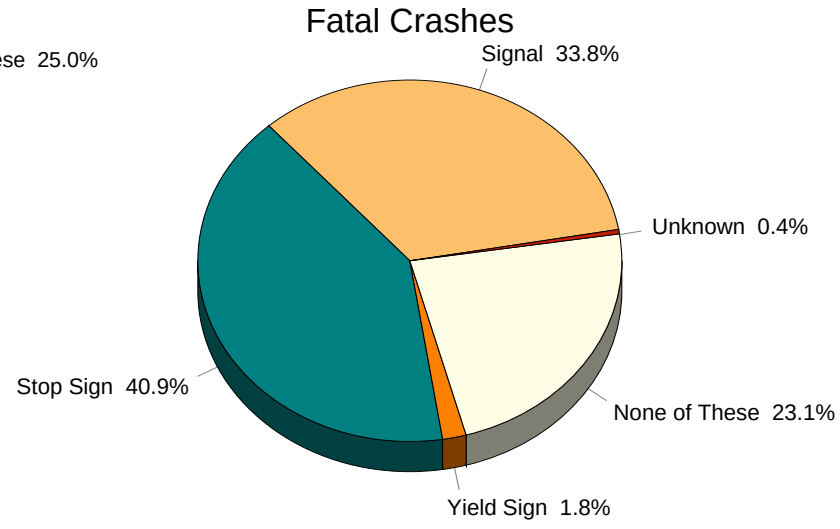


The majority (59.0%) of all crashes happen during daylight hours. Darkened conditions create the greatest hazard, as they are overrepresented in fatal crashes. Almost half again as many fatal crashes occur in areas without street lights, as in dark, but lighted areas.

INTERSECTION CRASHES
BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Signal	39,950	47.9	76	33.8	710	1,989	7,459	29,716
Stop Sign	19,874	23.8	92	40.9	542	1,276	3,329	14,635
Yield Sign	1,635	2.0	4	1.8	33	76	259	1,263
None of These	20,880	25.0	52	23.1	443	1,036	2,982	16,367
Unknown	1,091	1.3	1	0.4	15	44	183	848
Total	83,430	100.0	225	100.0	1,743	4,421	14,212	62,829





Intersections with stop signs are overrepresented in fatal crashes. Driver perception, awareness, and adherence to traffic control signing are all key factors in crashes at intersections.

CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Subtotal	Number	% of Subtotal	A	B	C	
Construction/Maintenance	Indicates roadway construction, maintenance or repair. The building, maintenance or repair of the road itself and roadway-related features (e.g., overhead signs, signals).							
Activity - On Road								
Lane Closed	1,969	43.2	3	17.6	22	73	312	1,559
Lane Open	701	15.4	5	29.4	9	32	76	579
Unknown Lane Closure	29	0.6	0	0.0	0	0	1	28
Activity - Off Road								
Lane Closed	183	4.0	0	0.0	4	4	27	148
Lane Open	295	6.5	2	11.8	5	15	38	235
Unknown Lane Closure	19	0.4	0	0.0	0	0	1	18
Activity - None								
Lane Closed	697	15.3	3	17.6	7	39	109	539
Lane Open	530	11.6	4	23.5	18	30	51	427
Unknown Lane Closure	15	0.3	0	0.0	1	0	3	11
Activity - Unknown								
Lane Closed	44	1.0	0	0.0	1	1	3	39
Lane Open	8	0.2	0	0.0	0	1	1	6
Unknown Lane Closure	63	1.4	0	0.0	2	2	6	53
Subtotal	4,553	100.0	17	100.0	69	197	628	3,642
Utility	Indicates work on facilities other than the roadway such as telephone, electrical, cable television, water, or sewer.							
Activity - On Road								
Lane Closed	47	7.6	0	0.0	0	2	17	28
Lane Open	254	41.1	0	0.0	2	25	19	208
Unknown Lane Closure	1	0.2	0	0.0	0	0	1	0
Activity - Off Road								
Lane Closed	20	3.2	0	0.0	0	2	3	15
Lane Open	33	5.3	0	0.0	0	3	6	24
Unknown Lane Closure	1	0.2	0	0.0	0	0	0	1
Activity - None								
Lane Closed	10	1.6	0	0.0	0	0	1	9
Lane Open	248	40.1	1	100.0	9	11	20	207
Unknown Lane Closure	1	0.2	0	0.0	0	0	0	1
Activity - Unknown								
Lane Closed	2	0.3	0	0.0	0	0	0	2
Lane Open	0	0.0	0	0.0	0	0	0	0
Unknown Lane Closure	1	0.2	0	0.0	0	0	0	1
Subtotal	618	100.0	1	100.0	11	43	67	496
Unknown Type / Unknown Lane Closure / Activity None								
Subtotal	19,631		3		413	874	2,328	16,013
Total	24,802		21		493	1,114	3,023	20,151

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Vehicle/ Driver

VEHICLE TYPE CRASH INVOLVEMENT

Vehicle Type	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH: Fatal Crash		Injury	PDO	MOST SEVERE OUTCOME IN VEHICLE: Fatality in Veh		Injury	No Injury
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Passenger Car and Station Wagon	346,743	72.7	771	60.7	67,867	278,105	413	61.2	43,119	303,211
Van and Motorhome	28,324	5.9	67	5.3	5,790	22,467	27	4.0	3,300	24,997
Pickup	61,361	12.9	174	13.7	10,637	50,550	81	12.0	5,565	55,715
Small Truck (under 10,000 lbs.)	14,072	3.0	26	2.0	2,776	11,270	13	1.9	1,578	12,481
Motorcycle	3,451	0.7	105	8.3	2,540	806	101	15.0	2,484	866
Moped	322	0.1	5	0.4	249	68	5	0.7	244	73
Go Cart	22	0.0	1	0.1	8	13	1	0.1	8	13
Snowmobile	189	0.0	19	1.5	117	53	14	2.1	114	61
Off-Road Vehicle	251	0.1	9	0.7	210	32	9	1.3	202	40
Other	1,464	0.3	13	1.0	296	1,155	8	1.2	139	1,317
Unknown	10,160	2.1	6	0.5	829	9,325	0	0.0	64	10,096
CDL Truck/Bus (breakdown below)	10,442	2.2	74	5.8	1,777	8,591	3	0.4	468	9,971
Total Number of Vehicles	476,801	100.0	1,270	100.0	93,096	382,435	675	100.0	57,285	418,841

Special Note: School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.

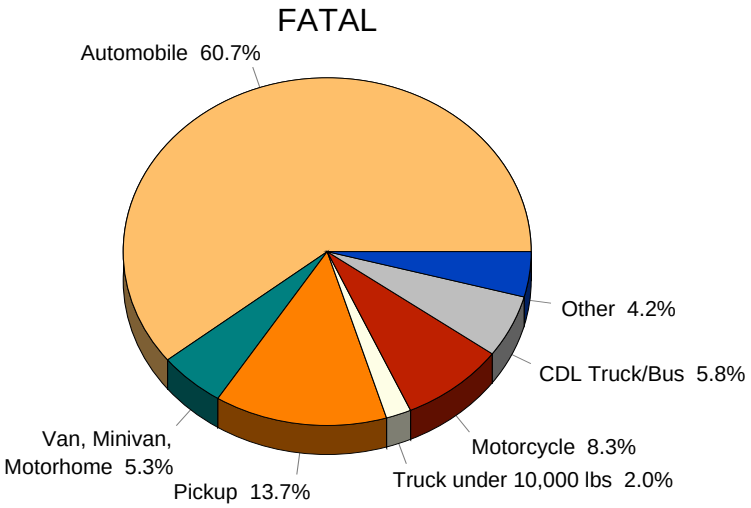
CDL Truck/Bus Sub-category Type	Motor Vehicles		Fatal Crash		Injury	PDO	Fatality in Veh		Injury	No Injury
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Commercial Vehicle: Group A	5,196	49.8	40	54.1	912	4,244	1	33.3	174	5,021
Commercial Vehicle: Group B	2,605	24.9	23	31.1	478	2,104	0	0.0	168	2,437
Commercial Vehicle: Group C	391	3.7	2	2.7	73	316	0	0.0	31	360
Other Truck	715	6.8	9	12.2	141	565	2	66.7	47	666
Unknown Truck	1,535	14.7	0	0.0	173	1,362	0	0.0	48	1,487
Total Number of Vehicles	10,442	100.0	74	100.0	1,777	8,591	3	100.0	468	9,971

Group “A” is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

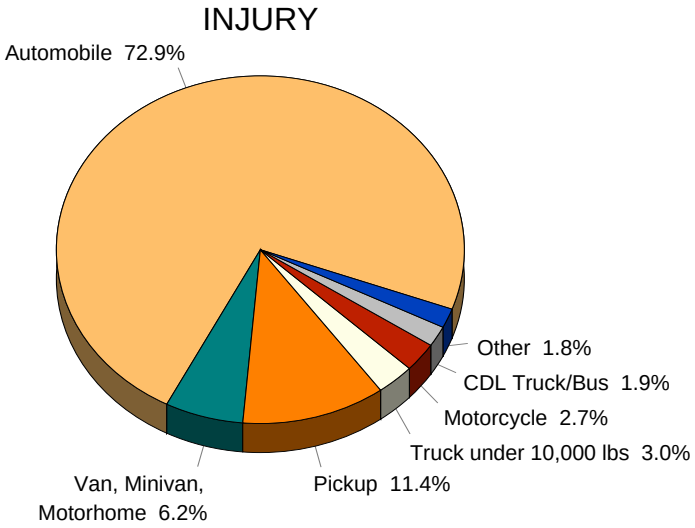
Group “B” is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

Group “C” is any single vehicle with a GVWR of less than 26,001 lbs. or a combination of vehicles having a combined GVWR under 26,001 lbs. when the vehicle is required to display placards for hazardous material or designed to carry 16 passengers (including driver). Group “C” is also any vehicle carrying 15 or less people (including driver) transporting children to or from school and home on a regular basis for compensation.

VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

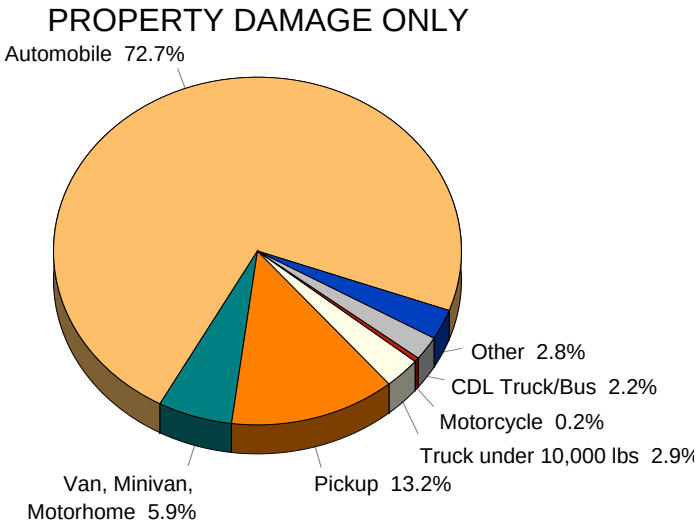


The top chart shows that almost 3 out of 4 vehicles involved in fatal crashes are automobiles or pickups. Van/minivan/motorhome has a fatal crash involvement of 5.3 percent.



Special Note:
"Other" consists of moped, go-cart, snowmobile, off-road vehicle, other, and unknown.

As with fatal crashes, injury and property damage only (PDO) crashes are represented primarily by cars and pickups.



ACTION PRIOR TO CRASH

DRIVER ACTION	Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Going straight ahead	256,469	53.8	976	5,523	12,549	32,656	204,765
Turning left	30,287	6.4	73	738	1,939	4,947	22,590
Turning right	12,599	2.6	8	147	479	1,305	10,660
Stopped on roadway	48,172	10.1	26	484	1,533	9,516	36,613
In prior crash	621	0.1	3	40	53	110	415
Changing lanes	11,032	2.3	15	114	299	955	9,649
Backing	11,864	2.5	2	34	100	373	11,355
Slowing/stopping on roadway	43,304	9.1	20	364	1,158	7,460	34,302
Slowing/stopping other	686	0.1	0	9	23	101	553
Starting up on roadway	9,919	2.1	21	153	459	1,691	7,595
Starting up other	232	0.0	1	5	17	34	175
Entering parking	529	0.1	0	7	9	20	493
Leaving parking	1,386	0.3	1	17	46	153	1,169
Entering roadway	6,602	1.4	9	122	308	964	5,199
Leaving roadway	788	0.2	6	45	78	117	542
Making U-turn	906	0.2	4	19	66	131	686
Overtaking or passing	3,480	0.7	25	105	180	381	2,789
Avoiding object	731	0.2	3	19	56	92	561
Avoiding animal	1,357	0.3	3	30	107	180	1,037
Avoiding pedestrian	142	0.0	7	9	17	20	89
Avoiding vehicle (front/back)	3,973	0.8	16	123	255	644	2,935
Avoiding vehicle (angle)	1,887	0.4	11	59	143	268	1,406
Driverless moving	217	0.0	1	1	14	6	195
Parked	18,139	3.8	27	149	416	783	16,764
Crossing at intersection	36	0.0	0	0	4	9	23
Crossing not at intersection	39	0.0	0	3	3	4	29
Getting on/off vehicle	19	0.0	0	0	0	2	17
In roadway with traffic	49	0.0	0	1	1	4	43
In roadway against traffic	33	0.0	0	0	3	3	27
Standing or lying in roadway	11	0.0	0	0	0	0	11
Pushing/working on vehicle	5	0.0	0	0	1	0	4
Other working in roadway	37	0.0	0	0	0	7	30
Playing in roadway	4	0.0	0	1	0	1	2
In roadway other reason	11	0.0	0	0	0	2	9
Not in roadway	26	0.0	0	0	0	5	21
Other	226	0.0	3	4	12	17	190
Unknown	10,983	2.3	9	184	333	965	9,492
Total	476,801	100.0	1,270	8,509	20,661	63,926	382,435

ACTION PRIOR TO CRASH (continued)

MOTORCYCLIST – INJURY SEVERITY

MOTORCYCLIST ACTION	Motorcycles		Motorcyclists*		Fatal	Injury			No Injury
	Number of Motorcycles	% of Total	Number of Motorcyclists	% of Total		A	B	C	
Going straight ahead	2,278	66.0	2,512	65.9	87	545	785	554	498
Turning left	142	4.1	160	4.2	0	27	53	43	35
Turning right	134	3.9	146	3.8	1	21	39	41	43
Stopped on roadway	153	4.4	177	4.6	0	7	19	51	94
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	50	1.4	54	1.4	3	10	17	12	9
Backing	3	0.1	3	0.1	0	0	1	1	1
Slowing/stopping on roadway	200	5.8	219	5.7	2	36	66	42	67
Slowing/stopping other	6	0.2	6	0.2	0	0	3	1	2
Starting up on roadway	60	1.7	67	1.8	2	6	18	20	19
Starting up other	8	0.2	9	0.2	0	2	1	2	3
Entering parking	1	0.0	1	0.0	0	0	0	0	0
Leaving parking	6	0.2	6	0.2	0	0	2	2	2
Entering roadway	28	0.8	30	0.8	1	8	6	3	12
Leaving roadway	12	0.3	17	0.4	1	3	3	5	5
Making U-turn	3	0.1	3	0.1	0	1	1	1	0
Overtaking or passing	65	1.9	71	1.9	4	17	25	8	15
Avoiding object	20	0.6	21	0.6	0	0	6	10	5
Avoiding animal	29	0.8	31	0.8	0	7	13	7	4
Avoiding pedestrian	4	0.1	4	0.1	0	0	2	0	2
Avoiding vehicle (front/back)	91	2.6	103	2.7	0	17	39	27	20
Avoiding vehicle (angle)	54	1.6	60	1.6	1	16	19	14	9
Driverless moving	1	0.0	1	0.0	0	0	0	1	0
Parked	45	1.3	45	1.2	0	0	0	0	5
Crossing at intersection	1	0.0	1	0.0	0	0	1	0	0
Crossing not at intersection	0	0.0	0	0.0	0	0	0	0	0
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	0	0.0	0	0.0	0	0	0	0	0
In roadway against traffic	1	0.0	1	0.0	0	0	0	0	0
Standing or lying in roadway	0	0.0	0	0.0	0	0	0	0	0
Pushing/working on vehicle	0	0.0	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0.0	0	0	0	0	0
Playing in roadway	0	0.0	0	0.0	0	0	0	0	0
In roadway other reason	0	0.0	0	0.0	0	0	0	0	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Other	3	0.1	3	0.1	0	1	0	1	1
Unknown	53	1.5	61	1.6	1	15	10	11	19
Total	3,451	100.0	3,812	100.0	103	739	1,129	857	870

* This table includes 114 motorcyclists (drivers and passengers) with unknown injury severity, and persons miscoded as motorcyclists.

ACTION PRIOR TO CRASH (continued)

BICYCLIST - INJURY SEVERITY

BICYCLIST ACTION	Bicycles		Bicyclists*		Fatal	Injury			No Injury
	Number of Bicycles	% of Total	Number of Bicyclists	% of Total		A	B	C	
Going straight ahead	1,136	56.0	1,141	56.1	13	111	358	450	175
Turning left	59	2.9	59	2.9	0	11	20	21	7
Turning right	14	0.7	14	0.7	0	1	5	6	1
Stopped on roadway	12	0.6	12	0.6	0	1	7	4	0
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	10	0.5	10	0.5	0	0	4	3	2
Backing	3	0.1	4	0.2	0	1	0	0	2
Slowing/stopping on roadway	5	0.2	5	0.2	0	1	1	2	0
Slowing/stopping other	5	0.2	5	0.2	0	0	2	2	1
Starting up on roadway	14	0.7	14	0.7	0	1	5	8	0
Starting up other	4	0.2	4	0.2	0	0	1	2	1
Entering parking	1	0.0	1	0.0	0	0	0	0	1
Leaving parking	1	0.0	1	0.0	0	0	0	0	1
Entering roadway	98	4.8	98	4.8	1	9	29	31	23
Leaving roadway	1	0.0	1	0.0	0	0	1	0	0
Making U-turn	7	0.3	7	0.3	0	0	2	4	1
Overtaking or passing	2	0.1	2	0.1	0	0	1	1	0
Avoiding object	0	0.0	0	0.0	0	0	0	0	0
Avoiding animal	0	0.0	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	7	0.3	7	0.3	0	1	2	3	1
Avoiding vehicle (angle)	8	0.4	8	0.4	0	0	4	3	1
Driverless moving	1	0.0	1	0.0	0	0	0	1	0
Parked	0	0.0	0	0.0	0	0	0	0	0
Crossing at intersection	344	17.0	345	17.0	0	24	114	153	43
Crossing not at intersection	103	5.1	103	5.1	1	23	31	39	8
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	31	1.5	31	1.5	2	5	9	12	2
In roadway against traffic	19	0.9	20	1.0	0	0	7	9	3
Standing or lying in roadway	3	0.1	3	0.1	0	0	1	1	1
Pushing/working on vehicle	0	0.0	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0.0	0	0	0	0	0
Playing in roadway	6	0.3	6	0.3	1	0	4	0	1
In roadway other reason	8	0.4	8	0.4	0	2	1	2	2
Not in roadway	25	1.2	25	1.2	0	2	8	13	2
Other	29	1.4	29	1.4	0	1	11	10	6
Unknown	71	3.5	71	3.5	1	8	20	18	9
Total	2,027	100.0	2,035	100.0	19	202	648	798	294

* Includes 74 bicyclists with unknown injury severity

ACTION PRIOR TO CRASH (continued)

PEDESTRIAN - INJURY SEVERITY

PEDESTRIAN ACTION	Pedestrians*		Fatal	Injury			No Injury
	Number of Pedestrians	% of Total		A	B	C	
Going straight ahead	103	4.7	1	16	14	45	17
Turning left	6	0.3	0	2	3	0	1
Turning right	0	0.0	0	0	0	0	0
Stopped on roadway	11	0.5	0	4	4	2	1
In prior crash	1	0.0	0	0	0	1	0
Changing lanes	0	0.0	0	0	0	0	0
Backing	2	0.1	0	0	0	1	1
Slowing/stopping on roadway	0	0.0	0	0	0	0	0
Slowing/stopping other	1	0.0	0	0	0	0	1
Starting up on roadway	0	0.0	0	0	0	0	0
Starting up other	0	0.0	0	0	0	0	0
Entering parking	0	0.0	0	0	0	0	0
Leaving parking	0	0.0	0	0	0	0	0
Entering roadway	18	0.8	0	0	11	7	0
Leaving roadway	1	0.0	0	0	1	0	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	1	0.0	0	1	0	0	0
Avoiding object	1	0.0	0	0	0	1	0
Avoiding animal	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	3	0.1	0	0	2	1	0
Avoiding vehicle (angle)	0	0.0	0	0	0	0	0
Driverless moving	1	0.0	0	0	1	0	0
Parked	3	0.1	0	0	0	3	0
Crossing at intersection	588	26.5	13	82	145	273	46
Crossing not at intersection	566	25.6	37	135	173	173	28
Getting on/off vehicle	39	1.8	0	5	18	12	0
In roadway with traffic	161	7.3	15	37	47	47	12
In roadway against traffic	43	1.9	4	8	8	18	4
Standing or lying in roadway	88	4.0	18	22	14	29	3
Pushing/working on vehicle	18	0.8	1	5	8	4	0
Other working in roadway	31	1.4	1	4	7	15	4
Playing in roadway	37	1.7	2	7	8	11	1
In roadway other reason	128	5.8	11	28	33	34	19
Not in roadway	125	5.6	8	31	37	44	2
Other	96	4.3	4	11	33	31	10
Unknown	143	6.5	6	33	31	42	20
Total	2,215	100.0	121	431	598	794	170

* Includes 101 pedestrians with unknown injury severity

MOST HARMFUL EVENT

NONCOLLISION	MOST SEVERE OUTCOME IN CRASH: Motor Vehicles		Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Loss of control	2,038	0.4	4	92	186	302	1,454
Cross center/median	347	0.1	0	12	20	52	263
Ran off road left	574	0.1	0	14	45	63	452
Ran off road right	979	0.2	2	14	68	102	793
Re-enter road	53	0.0	0	2	5	8	38
Overturn	7,139	1.5	93	520	1,279	1,498	3,749
Separation of units	282	0.1	0	4	7	42	229
Fire/explosion	433	0.1	5	3	20	32	373
Immersion	60	0.0	5	1	3	10	41
Jackknife	273	0.1	0	3	4	18	248
Downhill runaway	140	0.0	0	4	9	18	109
Cargo loss/shift	512	0.1	0	0	13	32	467
Individual fell off	410	0.1	12	105	154	85	54
Other noncollision	1,115	0.2	1	30	69	129	886
NONCOLLISION Subtotal	14,355	3.0	122	804	1,882	2,391	9,156

HAD A COLLISION WITH NONFIXED OBJECT	MOST SEVERE OUTCOME IN CRASH: Motor Vehicles		Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	1,818	0.4	131	357	480	650	200
Bicycle / Pedalcycle	1,792	0.4	19	183	569	688	333
Motor vehicle in transport	320,522	67.2	760	5,373	13,210	51,344	249,835
Parked motor vehicle	14,159	3.0	12	92	284	597	13,174
Railway train	76	0.0	4	3	5	14	50
Animal	61,264	12.8	5	75	355	649	60,180
Other nonfixed objects	4,169	0.9	6	37	111	218	3,797
COLLISION NONFIXED Subtotal	403,800	84.7	937	6,120	15,014	54,160	327,569

MOST HARMFUL EVENT (continued)

HAD A COLLISION WITH FIXED OBJECT	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Bridge/pier/abutment	471	0.1	2	14	35	69	351
Bridge parapet end	187	0.0	0	2	9	13	163
Bridge rail	500	0.1	1	9	24	65	401
Guardrail face	3,531	0.7	9	48	173	437	2,864
Guardrail end	527	0.1	1	13	46	52	415
Median barrier	3,890	0.8	3	43	247	736	2,861
Highway traffic sign post	2,426	0.5	5	14	36	97	2,274
Highway signal post	261	0.1	0	2	7	16	236
Luminaire/light support	595	0.1	3	10	35	69	478
Utility pole	3,066	0.6	17	118	308	488	2,135
Other pole	927	0.2	3	12	51	72	789
Culvert	530	0.1	5	37	62	83	343
Curb	1,516	0.3	3	48	71	113	1,281
Ditch	6,469	1.4	14	178	492	842	4,943
Embankment	1,582	0.3	5	55	137	239	1,146
Fence	1,095	0.2	3	18	35	66	973
Mailbox	1,826	0.4	0	9	37	59	1,721
Tree	8,975	1.9	111	523	1,040	1,423	5,878
Rail crossing signal	70	0.0	1	0	4	3	62
Building	625	0.1	9	31	67	93	425
Traffic island	51	0.0	0	0	3	7	41
Fire hydrant	455	0.1	0	4	21	31	399
Impact attenuator	49	0.0	0	1	3	13	32
Other fixed object	2,961	0.6	13	83	223	328	2,314
COLLISION FIXED Subtotal	42,585	8.9	208	1,272	3,166	5,414	32,525

	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	16,061	3.4	3	313	599	1,961	13,185
TOTAL MOST HARMFUL EVENT	476,801	100.0	1,270	8,509	20,661	63,926	382,435

VEHICLE DEFECTS IN CRASH INVOLVEMENT

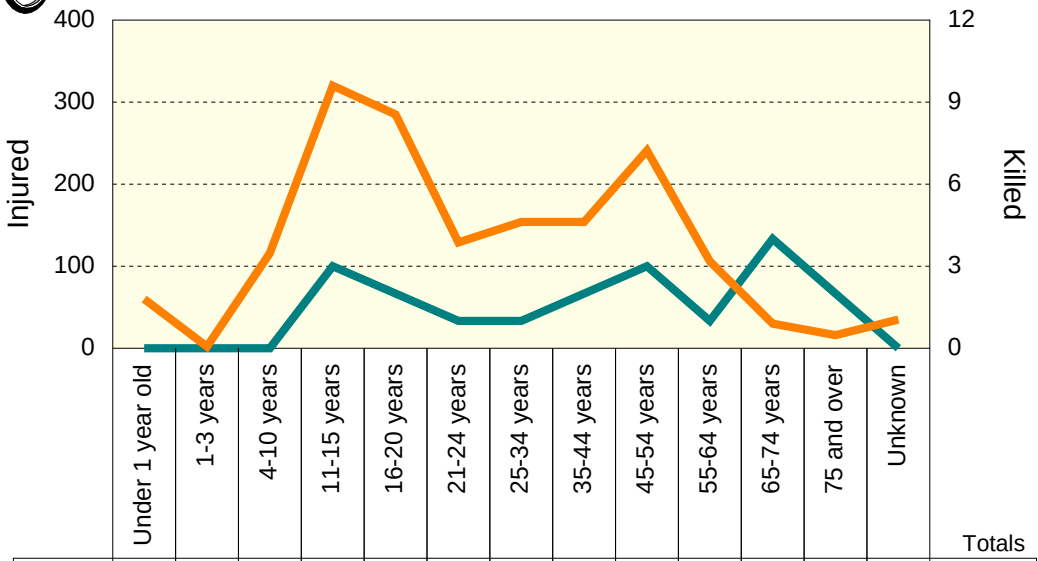
VEHICLE DEFECTS	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Brakes	960	0.2	3	24	49	159	725
Lights/reflectors	148	0.0	0	6	9	13	120
Steering	126	0.0	0	5	12	14	95
Tires/wheels	477	0.1	6	14	43	62	352
Windows	19	0.0	0	2	1	2	14
Other	652	0.1	3	8	33	86	522
None or Unknown	474,419	99.5	1,258	8,450	20,514	63,590	380,607
TOTAL	476,801	100.0	1,270	8,509	20,661	63,926	382,435

DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	All Drivers		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Drivers	% of Total		A	B	C	
None	242,276	50.8	511	3,572	8,644	29,639	199,910
Speed too fast	33,499	7.0	168	922	2,328	4,716	25,365
Speed too slow	539	0.1	1	12	28	65	433
Failed to yield	38,512	8.1	100	920	2,483	6,744	28,265
Disregard traffic control	9,563	2.0	59	376	892	2,279	5,957
Drove wrong way	312	0.1	9	15	20	48	220
Drove left of center	2,355	0.5	39	159	209	358	1,590
Improper passing	2,252	0.5	9	33	65	190	1,955
Improper lane use	8,807	1.8	8	50	212	618	7,919
Improper turn	4,357	0.9	2	52	161	459	3,683
Improper/no signal	566	0.1	1	9	28	51	477
Improper backing	8,190	1.7	0	7	41	180	7,962
Unable to stop in assured clear distance	61,040	12.8	27	511	1,681	10,917	47,904
Reckless driving	2,476	0.5	38	230	315	375	1,518
Careless/negligent driving	12,060	2.5	90	626	1,331	1,870	8,143
Other	17,171	3.6	68	479	1,091	2,175	13,358
Unknown	32,826	6.9	140	536	1,132	3,242	27,776
TOTAL	476,801	100.0	1,270	8,509	20,661	63,926	382,435

MICHIGAN BICYCLE CRASHES

2009 Bicycle Crash Information



	Under 1 year old	1-3 years	4-10 years	11-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 and over	Unknown	Totals
Killed	0	0	0	3	2	1	1	2	3	1	4	2	0	19
Injured	60	2	116	320	285	129	154	154	241	106	30	16	35	1,648
Total	60	2	116	323	287	130	155	156	244	107	34	18	35	1,667

In 2009, there were 2,027 bicycles involved in motor vehicles crashes, with 19 bicyclists killed and 1,648 injured.

Children under 16 years of age accounted for three (15.8%) of the bicycle deaths in 2009.

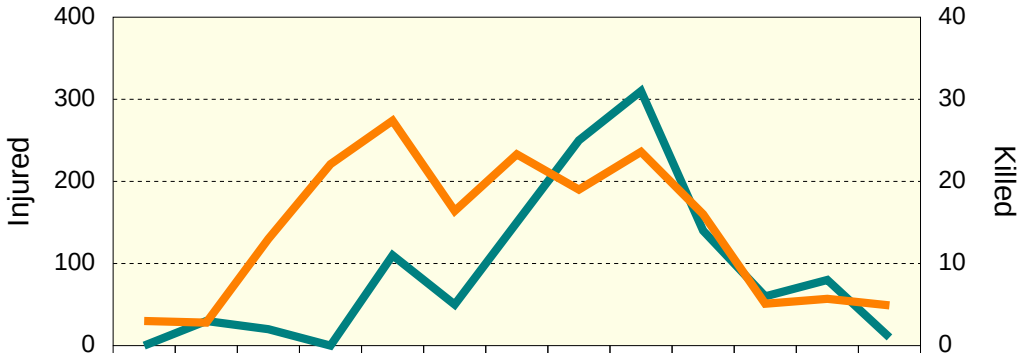
BICYCLE HELMET USE AND INJURY SEVERITY

HELMET USE	Fatality	Injury			No Injury
		A	B	C	
Worn	4	21	61	69	15
Not Worn	8	80	258	291	112
Unknown	7	101	329	438	167
Total	19	202	648	798	294

The National Center for Statistics and Analysis of the National Highway Traffic Safety Administration cites a study by the Centers for Disease Control [12]: “Bicycle helmets are 85 to 88 percent effective in mitigating head and brain injuries in all types of bicycle accidents, making the use of helmets the **single most effective countermeasure** available to reduce head injuries and fatalities resulting from bicycle crashes.”

MICHIGAN PEDESTRIAN CRASHES

2009 Pedestrian Crash Information

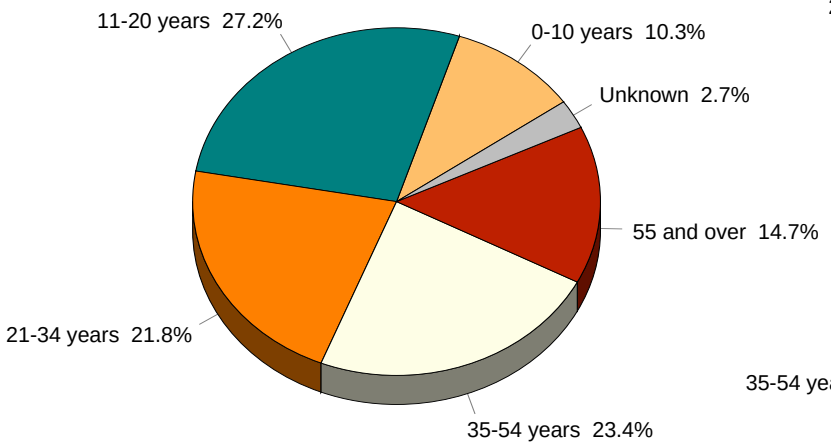


	Under 1 year old	1-3 years	4-10 years	11-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 and over	Unknown	Totals
Killed	0	3	2	0	11	5	15	25	31	14	6	8	1	121
Injured	30	28	130	221	274	164	233	190	236	160	51	57	49	1,823
Total	30	31	132	221	285	169	248	215	267	174	57	65	50	1,944

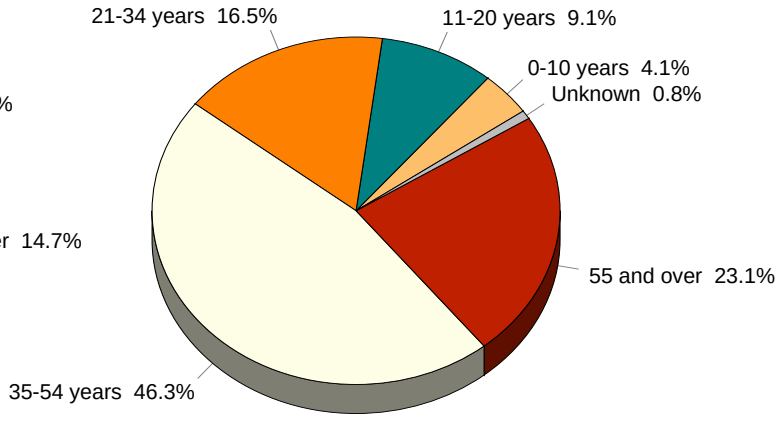
In 2009, there were 2,215 pedestrians involved in motor vehicles crashes, with 121 pedestrians killed and 1,823 injured.

Children under 16 years of age accounted for five (4.1%) of the pedestrian deaths in 2009.

Pedestrians Injured



Pedestrians Killed



MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

Most Harmful Event

NONCOLLISION	SNOWMOBILES		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
Loss of control	3	1.6	0	0	1	2	0
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	0	0.0	0	0	0	0	0
Ran off road right	0	0.0	0	0	0	0	0
Re-enter road	0	0.0	0	0	0	0	0
Overturn	22	11.6	1	5	9	6	1
Separation of units	0	0.0	0	0	0	0	0
Fire/explosion	1	0.5	0	0	0	0	1
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	20	10.6	5	3	3	8	1
Other noncollision	1	0.5	0	0	0	1	0
NONCOLLISION Subtotal	47	24.9	6	8	13	17	3

HAD A COLLISION WITH NONFIXED OBJECT	SNOWMOBILES		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	3	1.6	0	1	1	1	0
Bicycle / pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	76	40.2	6	9	17	9	35
Parked motor vehicle	5	2.6	0	1	1	0	3
Railway train	0	0.0	0	0	0	0	0
Animal	3	1.6	0	0	0	0	3
Other nonfixed objects	3	1.6	1	0	1	1	0
COLLISION NONFIXED Subtotal	90	47.6	7	11	20	11	41

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS (continued)

Most Harmful Event

HAD A COLLISION WITH FIXED OBJECT	SNOWMOBILES		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
Bridge/pier/abutment	0	0.0	0	0	0	0	0
Bridge parapet end	0	0.0	0	0	0	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	0	0.0	0	0	0	0	0
Guardrail end	1	0.5	0	0	0	1	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	2	1.1	1	0	1	0	0
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support	1	0.5	1	0	0	0	0
Utility pole	1	0.5	0	1	0	0	0
Other pole	0	0.0	0	0	0	0	0
Culvert	0	0.0	0	0	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	2	1.1	0	1	1	0	0
Embankment	7	3.7	0	3	1	2	1
Fence	4	2.1	0	1	1	0	2
Mailbox	0	0.0	0	0	0	0	0
Tree	27	14.3	4	11	4	5	3
Rail crossing signal	0	0.0	0	0	0	0	0
Building	1	0.5	0	0	0	0	1
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	0	0.0	0	0	0	0	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	4	2.1	0	0	2	2	0
COLLISION FIXED Subtotal	50	26.5	6	17	10	10	7
Unknown Event	2	1.1	0	0	0	0	2
TOTAL MOST HARMFUL EVENT	189	100.0	19	36	43	38	53

NOTE: These crashes involve a motor vehicle in transport on a public trafficway and result in injury, death, or at least $1,000 in property damage.

A total of 189 snowmobiles were reported in crashes on Michigan public roadways during 2009. Twenty of those snowmobiles were involved in 13 fatal crashes with 14 of their operators killed. Alcohol was involved in eight of the fatal crashes, and two of those fatal crashes also involved drugs.

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

Most Harmful Event

NONCOLLISION	ORV/ATV		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of ORV/ATVs	% of Total		A	B	C	
Loss of control	3	1.2	0	0	1	1	1
Cross center/median	1	0.4	0	0	1	0	0
Ran off road left	1	0.4	0	1	0	0	0
Ran off road right	3	1.2	0	1	2	0	0
Re-enter road	0	0.0	0	0	0	0	0
Overturn	56	22.3	5	22	17	11	1
Separation of units	0	0.0	0	0	0	0	0
Fire/explosion	0	0.0	0	0	0	0	0
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	45	17.9	1	14	21	9	0
Other noncollision	5	2.0	0	3	2	0	0
NONCOLLISION Subtotal	114	45.4	6	41	44	21	2

HAD A COLLISION WITH NONFIXED OBJECT	ORV/ATV		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of ORV/ATVs	% of Total		A	B	C	
Pedestrian	1	0.4	0	1	0	0	0
Bicycle / pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	70	27.9	0	16	19	12	23
Parked motor vehicle	4	1.6	0	0	2	0	2
Railway train	0	0.0	0	0	0	0	0
Animal	2	0.8	0	0	2	0	0
Other nonfixed objects	0	0.0	0	0	0	0	0
COLLISION NONFIXED Subtotal	77	30.7	0	17	23	12	25

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS (continued)

Most Harmful Event

HAD A COLLISION WITH FIXED OBJECT	ORV/ATV		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of ORV/ATVs	% of Total		A	B	C	
Bridge/pier/abutment	1	0.4	0	1	0	0	0
Bridge parapet end	0	0.0	0	0	0	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	0	0.0	0	0	0	0	0
Guardrail end	2	0.8	0	1	0	1	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	1	0.4	0	0	0	1	0
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support	0	0.0	0	0	0	0	0
Utility pole	1	0.4	0	1	0	0	0
Other pole	0	0.0	0	0	0	0	0
Culvert	1	0.4	0	1	0	0	0
Curb	2	0.8	0	1	0	0	1
Ditch	12	4.8	0	6	3	2	1
Embankment	5	2.0	0	3	1	1	0
Fence	1	0.4	0	1	0	0	0
Mailbox	2	0.8	0	0	1	0	1
Tree	23	9.2	3	7	7	5	1
Rail crossing signal	0	0.0	0	0	0	0	0
Building	0	0.0	0	0	0	0	0
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	0	0.0	0	0	0	0	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	6	2.4	0	3	2	1	0
COLLISION FIXED Subtotal	57	22.7	3	25	14	11	4
Unknown Event	3	1.2	0	1	1	0	1
TOTAL MOST HARMFUL EVENT	251	100.0	9	84	82	44	32

NOTE: These crashes involve a motor vehicle in transport on a public trafficway and result in injury, death, or at least $1,000 in property damage.

A total of 251 off-road/all-terrain vehicles were reported in crashes on Michigan public roadways during 2009. Thirteen of those ORV/ATVs were involved in 10 fatal crashes with seven ORV/ATV operators and three ORV/ATV passengers killed. Alcohol was involved in seven of the fatal crashes, and two of those fatal crashes also involved drugs.

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

Driver Hazardous Action	SNOWMOBILES		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
None	28	14.8	1	4	6	6	11
Speed too fast	57	30.2	8	13	11	16	9
Speed too slow	1	0.5	0	1	0	0	0
Failed to yield	30	15.9	2	3	6	3	16
Disregard traffic control	4	2.1	1	1	2	0	0
Drove wrong way	1	0.5	0	1	0	0	0
Drove left of center	1	0.5	0	0	1	0	0
Improper passing	1	0.5	0	0	0	0	1
Improper lane use	1	0.5	0	0	0	0	1
Improper turn	1	0.5	0	1	0	0	0
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	0	0.0	0	0	0	0	0
Unable to stop in assured clear distance	11	5.8	0	3	3	1	4
Reckless driving	7	3.7	2	2	2	0	1
Careless/negligent driving	11	5.8	2	2	1	3	3
Other	18	9.5	1	4	6	3	4
Unknown	17	9.0	2	1	5	6	3
TOTAL	189	100.0	19	36	43	38	53

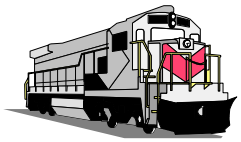
MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

Driver Hazardous Action	ORV/ATV		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of ORV/ATVs	% of Total		A	B	C	
None	31	12.4	0	13	13	4	1
Speed too fast	59	23.5	2	22	19	14	2
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	21	8.4	0	0	8	2	11
Disregard traffic control	2	0.8	0	0	1	1	0
Drove wrong way	1	0.4	0	0	0	0	1
Drove left of center	1	0.4	0	0	0	0	1
Improper passing	2	0.8	0	0	0	0	2
Improper lane use	3	1.2	0	0	1	2	0
Improper turn	0	0.0	0	0	0	0	0
Improper/no signal	2	0.8	0	0	2	0	0
Improper backing	2	0.8	0	0	1	0	1
Unable to stop in assured clear distance	9	3.6	0	4	1	3	1
Reckless driving	12	4.8	0	6	3	2	1
Careless/negligent driving	53	21.1	2	20	19	7	5
Other	36	14.3	2	15	9	6	4
Unknown	17	6.8	3	4	5	3	2
TOTAL	251	100.0	9	84	82	44	32

NOTE: These crashes involve a motor vehicle in transport on a public trafficway and result in injury, death, or at least $1,000 in property damage.

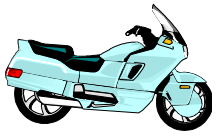
MICHIGAN FARM EQUIPMENT CRASHES

A total of 150 crashes involving farm equipment were reported on Michigan roadways during 2009. Of those crashes, three were fatal with one operator of the equipment killed.



MICHIGAN VEHICLE-TRAIN CRASHES

A total of 44 crashes involving trains were reported in Michigan during 2009. Of those crashes, four were fatal with 10 people killed, four drivers and six passengers.



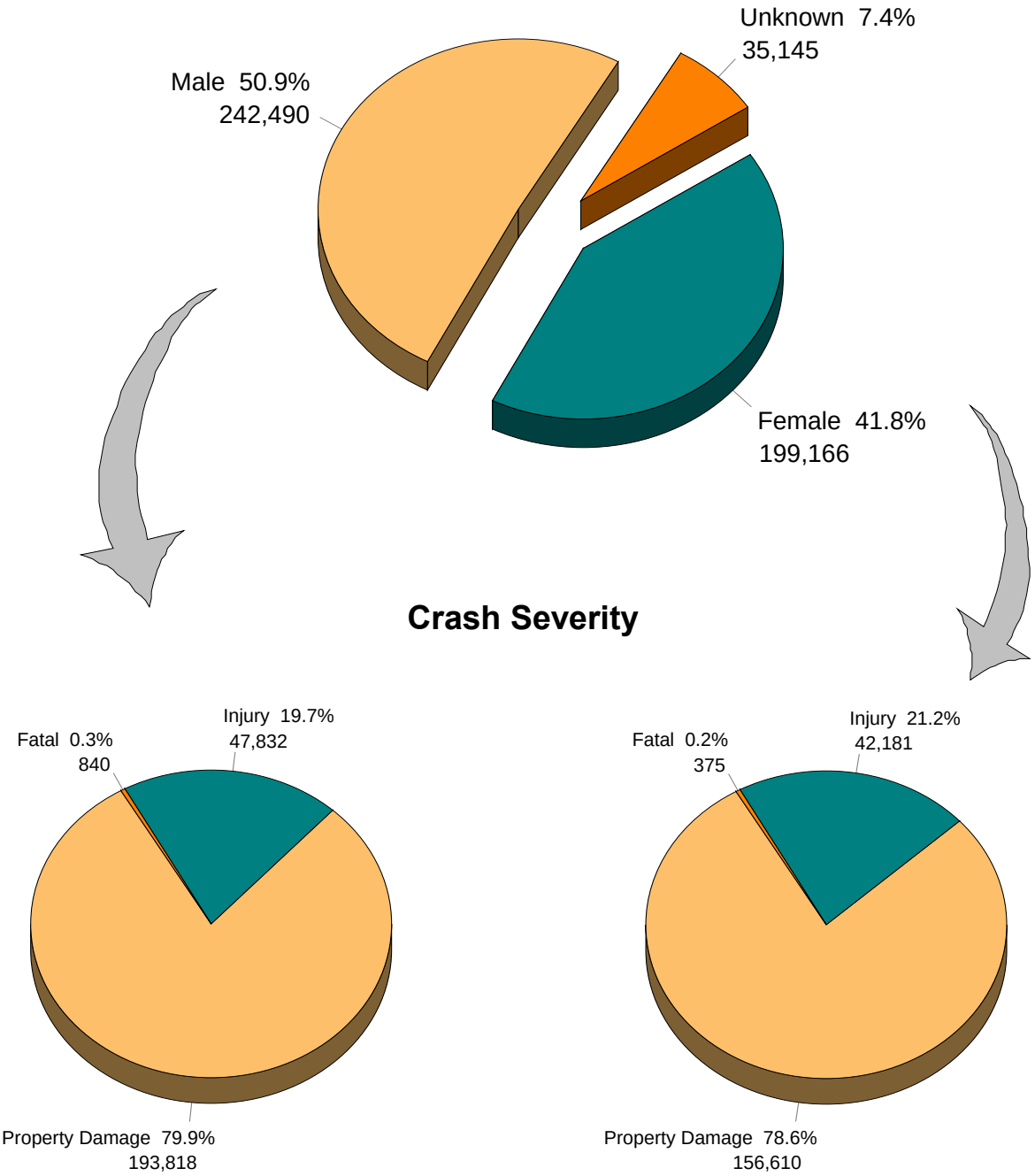
MICHIGAN MOTORCYCLE CRASHES

Updated July 12, 2010

MOTORCYCLE DATA	2008	2009	% Change
Motorcycle Registrations	270,569	266,713	-1.4
Motorcycles in Crashes	4,082	3,451	-15.5
Motorcyclist Deaths	125	103	-17.6
Motorcyclists Injured	3,314	2,725	-17.8
Death Rate based on 10,000 motorcycle registrations	4.61	3.86	-16.3
Estimated Mileage based on 3,000 miles per motorcycle	811,707,000	800,139,000	-1.4
Death Rate based on deaths per 100 million vehicle miles traveled	15.40	12.87	-16.4

Motorcycles were involved in 1.2 percent of all traffic crashes in Michigan in 2009. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles. The 2009 death rate for motorcyclists was 12.87 per 100 million vehicle miles traveled compared to the overall 0.91 mileage death rate per 100 million vehicle miles traveled.

DRIVER GENDER INFORMATION - ALL CRASHES



A higher proportion of crashes involved male drivers than female drivers. When examining the severity of crashes involving drivers of each gender, fatal crashes are more prevalent among male drivers than female drivers (0.3% vs. 0.2%).

PERSON AGE - DEMOGRAPHICS AND CRASH INVOLVEMENTS

Age	Licensed Drivers	Michigan Population	Drivers in All Crashes	Drivers in Fatal Crashes	Occupants Killed	Occupants Injured	Bicyclist All Crashes	Bicyclist Fatal Crashes	Pedestrian All Crashes	Pedestrian Fatal Crashes
0-15	46,785	2,058,911	910	5	27	4,296	627	3	475	6
16	83,183	143,468	8,749	15	18	1,662	78	0	68	3
17	99,589	147,513	12,390	26	16	2,124	68	0	67	5
18	99,910	149,488	14,938	33	20	2,536	74	1	63	4
19	117,538	152,530	14,281	43	27	2,289	59	2	68	4
20	124,495	143,399	12,711	29	16	1,843	67	0	53	1
21	112,630	144,494	11,909	29	17	1,908	47	0	60	1
22	117,431	137,724	10,940	23	17	1,701	43	1	54	2
23	119,086	134,726	10,363	22	12	1,607	30	0	41	1
24	122,334	132,869	9,638	18	7	1,447	30	0	32	1
25-29	552,534	623,078	42,843	125	72	6,130	117	1	144	10
30-34	541,210	579,660	37,229	98	52	4,872	67	0	134	11
35-39	579,755	645,111	38,990	94	45	4,929	89	1	101	8
40-44	622,718	689,031	39,335	109	42	5,110	93	1	146	17
45-49	692,642	771,048	40,525	115	57	5,438	157	2	155	16
50-54	706,457	766,591	37,219	108	60	5,175	110	1	147	18
55-59	634,552	667,132	30,398	74	41	4,213	79	1	110	9
60-64	530,771	543,182	21,879	64	37	3,265	44	0	83	7
65-69	391,126	407,132	14,524	54	31	2,137	25	3	43	4
70-74	281,093	305,319	9,500	20	13	1,422	12	2	18	2
75-79	216,409	245,707	7,036	45	35	1,165	6	1	27	2
80-84	164,674	198,610	5,166	39	37	910	7	1	25	5
85-100+	116,697	183,004	3,131	24	32	653	6	0	15	2
Unknown	---	---	42,197	58	0	638	100	0	86	1
Total	7,073,619	9,969,727	476,801	1,270	731	67,470	2,035	21	2,215	140

CRASH RATE PER LICENSED DRIVER BY AGE OF DRIVER IN ALL CRASHES

Age	Licensed Drivers	Drivers in all crashes*	Rate
0-15	46,785	910	0.019
16	83,183	8,749	0.105
17	99,589	12,390	0.124
18	99,910	14,938	0.150
19	117,538	14,281	0.122
20	124,495	12,711	0.102
21	112,630	11,909	0.106
22	117,431	10,940	0.093
23	119,086	10,363	0.087
24	122,334	9,638	0.079
25-29	552,534	42,843	0.078
30-34	541,210	37,229	0.069
35-39	579,755	38,990	0.067
40-44	622,718	39,335	0.063
45-49	692,642	40,525	0.059
50-54	706,457	37,219	0.053
55-59	634,552	30,398	0.048
60-64	530,771	21,879	0.041
65-69	391,126	14,524	0.037
70-74	281,093	9,500	0.034
75-79	216,409	7,036	0.033
80-84	164,674	5,166	0.031
85-89	87,812	2,467	0.028
90-94	25,390	558	0.022
95-99	3,331	71	0.021
100+	164	35	0.213
Total	7,073,619	434,604	

Note: Data entry errors resulted in an over-representation of age "100+" drivers.

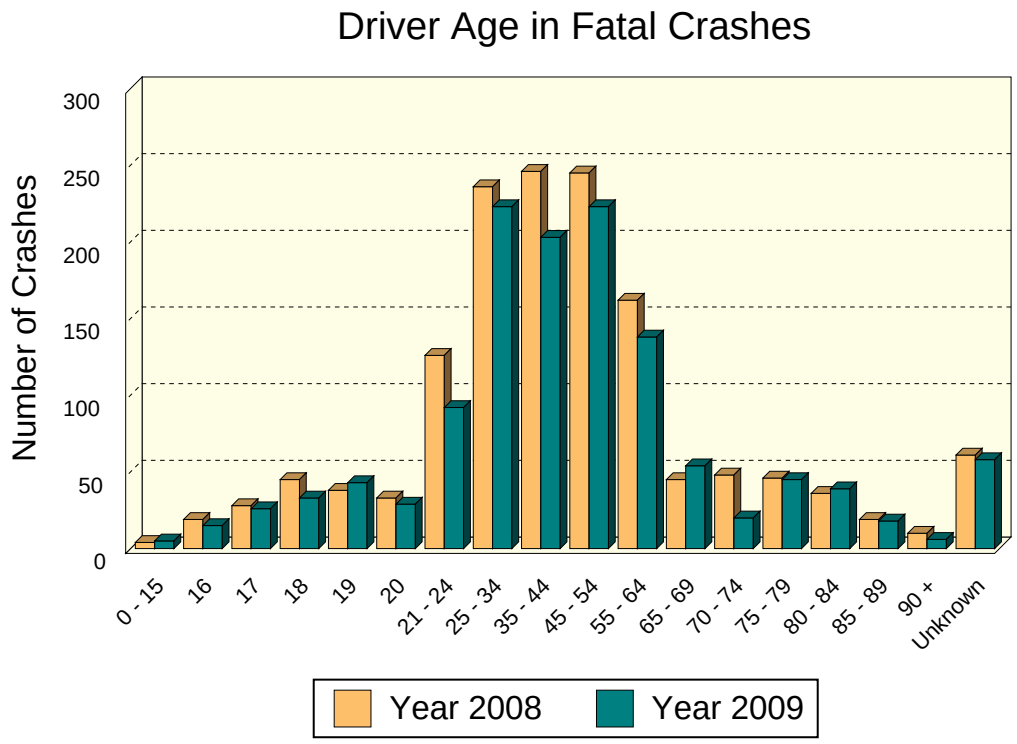
* Excludes 42,197 drivers with unknown age

Licensed drivers age 18 have the highest crash rate (total crashes in age group divided by total number of licensed drivers in age group). The lower crash rates of the older groups (per licensed driver) may reflect reduced driving and exposure to the risk of a crash.

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2008	2009	% Change	% 2009 Fatal Crash Involvement	Percent Active Driving Population*
15 years and under	4	5	25.0	0.4	0.7
16 years	19	15	-21.1	1.2	1.2
17 years	28	26	-7.1	2.0	1.4
18 years	45	33	-26.7	2.6	1.4
19 years	38	43	13.2	3.4	1.7
20 years	33	29	-12.1	2.3	1.8
21 - 24 years	126	92	-27.0	7.2	6.7
25 - 34 years	236	223	-5.5	17.6	15.5
35 - 44 years	246	203	-17.5	16.0	17.0
45 - 54 years	245	223	-9.0	17.6	19.8
55 - 64 years	162	138	-14.8	10.9	16.5
65 - 69 years	45	54	20.0	4.3	5.5
70 - 74 years	48	20	-58.3	1.6	4.0
75 - 79 years	46	45	-2.2	3.5	3.1
80 - 84 years	36	39	8.3	3.1	2.3
85 - 89 years	19	18	-5.3	1.4	1.2
90 years and over	10	6	-40.0	0.5	0.4
Unknown	61	58	-4.9	4.6	---
Total	1,447	1,270	-12.2	100.0	100.0

* Figures courtesy of the Michigan Department of State [13]



DRIVER CONDITION

POSSIBLE CONDITIONS OF DRIVER*	Conditions Coded by Police	MOST SEVERE OUTCOME IN CRASH: Fatal	Injury			PDO
		Number	A	B	C	
Appeared Normal	390,911	609	6,137	16,358	54,852	312,955
Had Been Drinking	10,261	145	815	1,474	1,679	6,148
Illegal Drug Use	719	8	46	98	133	434
Sick	1,030	10	99	127	295	499
Fatigue	759	5	33	97	161	463
Asleep	956	5	64	130	223	534
Medication	860	8	51	95	204	502
Driver Distracted	3,300	13	85	274	730	2,198
Using Cellular Phone	856	7	40	76	171	562
Unknown	27,822	385	751	966	2,690	23,030

* Drivers may have more than one condition including “Appeared Normal.”

These are driver conditions that, in the opinion of the investigating officer, were involved in the crash. While some conditions may be evident, others (such as distraction) will only be known if the driver admits to the condition, thus leading to possible underreporting.

DRIVER INJURY SEVERITY BY RESTRAINT, ALCOHOL, AND DRUG USE

	Drivers		Fatality		Injury			No Injury	Unknown
	Number	% of Total	Number	% of Total	A	B	C		
All Drivers									
Restraint Used	413,645	86.8	324	59.0	3,293	9,486	32,762	365,810	1,970
Restraint Not Used	5,904	1.2	167	30.4	592	821	773	3,348	203
Unknown	57,252	12.0	58	10.6	378	681	1,257	16,225	38,653
Total	476,801	100.0	549	100.0	4,263	10,988	34,792	385,383	40,826
Drinking Only Drivers									
Restraint Used	7,160	72.6	62	45.9	293	761	843	5,161	40
Restraint Not Used	854	8.7	56	41.5	170	204	129	289	6
Unknown	1,849	18.7	17	12.6	103	220	171	1,262	76
Total	9,863	100.0	135	100.0	566	1,185	1,143	6,712	122
Drugged Only Drivers									
Restraint Used	681	74.9	12	44.4	45	58	118	447	1
Restraint Not Used	81	8.9	13	48.1	14	11	13	29	1
Unknown	147	16.2	2	7.4	6	18	15	94	12
Total	909	100.0	27	100.0	65	87	146	570	14
Drinking and Drugged Drivers									
Restraint Used	444	65.4	18	47.4	31	43	73	276	3
Restraint Not Used	100	14.7	16	42.1	19	24	15	26	0
Unknown	135	19.9	4	10.5	14	14	21	78	4
Total	679	100.0	38	100.0	64	81	109	380	7

NOTE: ‘Restraint Used’ includes shoulder belt only, lap belt only, both lap and shoulder belts, restraint failed, and helmet worn.

RED-LIGHT-RUNNING CRASHES

INTERSECTION CRASH TYPE	Crashes	MOST SEVERE OUTCOME IN CRASH				
		Fatal	Injury			PDO
			A	B	C	
Related to intersection	83,430	225	1,743	4,421	14,212	62,829
In intersection	39,017	171	1,149	2,776	7,529	27,392
With traffic control signal	18,455	67	514	1,355	3,834	12,685
With hazardous action	**5,056**	27	217	518	1,325	2,969

"Related to intersection" captures crashes that were related to or within 150 feet of an intersection.

"In intersection" captures crashes within all types of intersections.

"With traffic control signal" captures crashes within the intersection and with a traffic control signal present.

"With hazardous action" captures crashes within the intersection, with a traffic control signal, and with a hazardous action cited as "disregard of traffic control." Information pertaining to red-light-running in the following tables is derived from this subset of **5,056** crashes.

RED-LIGHT-RUNNING
MOST SEVERE OUTCOME IN CRASH

SPEED LIMIT*	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
5 miles per hour	1	0	0	0	0	1
10 miles per hour	1	0	0	0	1	0
15 miles per hour	0	0	0	0	0	0
20 miles per hour	0	0	0	0	0	0
25 miles per hour	592	0	14	37	132	409
30 miles per hour	667	3	24	61	164	415
35 miles per hour	1,300	6	52	118	338	786
40 miles per hour	734	1	31	80	225	397
45 miles per hour	1,120	9	55	132	290	634
50 miles per hour	281	0	16	39	84	142
55 miles per hour	289	8	24	41	75	141
60 miles per hour	0	0	0	0	0	0
65 miles per hour	0	0	0	0	0	0
70 miles per hour	0	0	0	0	0	0
75 miles per hour	3	0	0	0	0	3
Unknown	68	0	1	10	16	41
Total	5,056	27	217	518	1,325	2,969

*Posted speed limit as entered by officer on the UD-10 form.

CRASH TYPE	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
Single Vehicle	92	3	16	28	24	21
Head on	41	0	4	6	17	14
Head on left turn	429	0	18	52	108	251
Angle	4,261	24	177	418	1,129	2,513
Rear end	30	0	0	2	5	23
Rear end left turn	7	0	0	0	0	7
Rear end right turn	2	0	1	0	0	1
Sideswipe same direction	67	0	0	1	10	56
Sideswipe opposite direction	28	0	0	2	3	23
Other/ Unknown	99	0	1	9	29	60
Total	5,056	27	217	518	1,325	2,969

RED-LIGHT-RUNNING
MOST SEVERE OUTCOME IN CRASH (continued)

SPECIAL CIRCUMSTANCES*	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
School Bus Involved/Associated	10	0	0	2	4	4
Drinking Involved	166	8	10	30	43	75
Drug Use Involved	23	2	3	3	7	8
Pedestrian Involved	30	2	5	7	11	5
Bicyclist Involved	67	1	11	23	20	12
Snowmobile Involved	1	0	0	1	0	0
Motorcycle Involved	31	1	9	8	4	9
Train Involved	1	0	0	0	1	0
Truck/Bus Involved	159	3	12	19	43	82
Emergency Vehicle Involved	40	0	2	6	11	21
Driver Hazardous Citation	3,244	6	132	349	931	1,826

*Crashes may involve more than one special circumstance.

POSSIBLE CONDITIONS OF PERSONS IN CRASH*	MOST SEVERE OUTCOME IN CRASH					
	Conditions Coded by Police	Fatal	Injury			PDO
			A	B	C	
Appeared Normal	4,204	8	160	425	1,158	2,453
Had Been Drinking	139	7	7	26	38	61
Illegal Drug Use	11	0	2	1	3	5
Sick	24	1	3	2	7	11
Fatigue	14	0	0	3	3	8
Asleep	9	0	2	0	3	4
Medication	12	0	0	3	4	5
Driver Distracted	105	0	7	9	33	56
Using Cellular Phone	61	0	7	7	11	36
Unknown	323	10	27	35	53	198

*Drivers, pedestrians, bicyclists, and train engineers may have more than one condition, including "Appeared Normal."

HEAVY TRUCK/BUS INVOLVED CRASHES

These crashes involve a heavy truck/bus - defined as having a Gross Vehicle Weight Rating (GVWR) over 10,000 lbs.

Heavy truck/bus crashes differ from other vehicle crashes in a number of ways, many reflecting the size and use of these vehicles. **When compared to the overall crash picture, heavy truck/bus crashes involve:**

- More turning, backing, and changing lanes as the Truck/Bus Driver Action Prior
- More collisions with bridge/pier/abutments, parked motor vehicles, jackknife, cargo loss/shift, and other non-collisions as the Most Harmful Event
- Fewer collisions with ditches, trees, and animals
- Fewer single-vehicle crashes but more sideswipes
- Fewer drivers indicated to be speeding, failing to yield, reckless driving, disregarding traffic control, and unable to stop in assured clear distance, but more drivers indicated to be making backing, lane use, and turning errors
- Fewer crashes outside of the shoulder/curb
- More crashes between the hours of 6:00 AM and 2:59 PM, fewer crashes between 3:00 PM and 5:59 AM (but more fatal crashes between 3:00 PM and 5:59 PM).
- More weekday crashes, and a significant drop in weekend crashes

HEAVY TRUCK/BUS INVOLVED CRASHES

HEAVY TRUCK/BUS DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Going straight ahead	5,012	48.0	53	71.6	950	53.5
Turning left	849	8.1	3	4.1	123	6.9
Turning right	773	7.4	2	2.7	68	3.8
Stopped on roadway	850	8.1	3	4.1	163	9.2
In prior crash	11	0.1	0	0.0	4	0.2
Changing lanes	374	3.6	1	1.4	50	2.8
Backing	588	5.6	1	1.4	21	1.2
Slowing/stopping on roadway	737	7.1	2	2.7	168	9.5
Slowing/stopping other	16	0.2	0	0.0	2	0.1
Starting up on roadway	225	2.2	2	2.7	42	2.4
Starting up other	6	0.1	0	0.0	1	0.1
Entering parking	27	0.3	0	0.0	2	0.1
Leaving parking	16	0.2	0	0.0	1	0.1
Entering roadway	96	0.9	2	2.7	12	0.7
Leaving roadway	12	0.1	0	0.0	3	0.2
Making U-turn	21	0.2	0	0.0	2	0.1
Overtaking or passing	63	0.6	0	0.0	10	0.6
Avoiding object	12	0.1	0	0.0	2	0.1
Avoiding animal	6	0.1	0	0.0	0	0.0
Avoiding pedestrian	2	0.0	0	0.0	2	0.1
Avoiding vehicle (front/back)	128	1.2	1	1.4	32	1.8
Avoiding vehicle (angle)	60	0.6	0	0.0	18	1.0
Driverless moving	8	0.1	1	1.4	0	0.0
Parked	216	2.1	3	4.1	50	2.8
Crossing at intersection	0	0.0	0	0.0	0	0.0
Crossing not at intersection	1	0.0	0	0.0	0	0.0
Getting on/off vehicle	2	0.0	0	0.0	1	0.1
In roadway with traffic	2	0.0	0	0.0	0	0.0
In roadway against traffic	0	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	1	0.0	0	0.0	1	0.1
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	0	0.0	0	0.0	0	0.0
Not in roadway	1	0.0	0	0.0	1	0.1
Other	8	0.1	0	0.0	2	0.1
Unknown	319	3.1	0	0.0	46	2.6
Total	10,442	100.0	74	100.0	1,777	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

MOST HARMFUL EVENT IN A NONCOLLISION	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Loss of control	34	0.3	0	0.0	5	0.3
Cross center/median	11	0.1	0	0.0	3	0.2
Ran off road left	14	0.1	0	0.0	1	0.1
Ran off road right	20	0.2	0	0.0	0	0.0
Re-enter road	0	0.0	0	0.0	0	0.0
Overturn	141	1.4	1	1.4	61	3.4
Separation of units	15	0.1	0	0.0	1	0.1
Fire/explosion	30	0.3	1	1.4	2	0.1
Immersion	2	0.0	0	0.0	0	0.0
Jackknife	90	0.9	0	0.0	5	0.3
Downhill runaway	3	0.0	0	0.0	2	0.1
Cargo loss/shift	80	0.8	0	0.0	4	0.2
Individual fell off	4	0.0	0	0.0	4	0.2
Other noncollision	90	0.9	0	0.0	4	0.2
NONCOLLISION Subtotal	534	5.1	2	2.7	92	5.2

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Pedestrian	41	0.4	11	14.9	27	1.5
Bicyclist	17	0.2	3	4.1	12	0.7
Motor vehicle in transport	7,438	71.2	54	73.0	1,452	81.7
Parked motor vehicle	460	4.4	1	1.4	20	1.1
Railway train	4	0.0	1	1.4	0	0.0
Animal	499	4.8	0	0.0	1	0.1
Other nonfixed objects	124	1.2	0	0.0	8	0.5
COLLISION NONFIXED Subtotal	8,583	82.2	70	94.6	1,520	85.5

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Bridge/pier/abutment	53	0.5	0	0.0	6	0.3
Bridge parapet end	5	0.0	0	0.0	0	0.0
Bridge rail	10	0.1	0	0.0	1	0.1
Guardrail face	49	0.5	0	0.0	8	0.5
Guardrail end	14	0.1	0	0.0	0	0.0
Median barrier	34	0.3	0	0.0	6	0.3
Highway traffic sign post	53	0.5	0	0.0	0	0.0
Highway signal post	10	0.1	0	0.0	0	0.0
Luminaire/light support	28	0.3	0	0.0	0	0.0
Utility pole	84	0.8	1	1.4	0	0.0
Other pole	13	0.1	0	0.0	0	0.0
Culvert	7	0.1	0	0.0	2	0.1
Curb	8	0.1	0	0.0	0	0.0
Ditch	88	0.8	1	1.4	21	1.2
Embankment	22	0.2	0	0.0	4	0.2
Fence	15	0.1	0	0.0	1	0.1
Mailbox	13	0.1	0	0.0	0	0.0
Tree	65	0.6	0	0.0	17	1.0
Rail crossing signal	13	0.1	0	0.0	0	0.0
Building	12	0.1	0	0.0	3	0.2
Traffic island	3	0.0	0	0.0	0	0.0
Fire hydrant	16	0.2	0	0.0	0	0.0
Impact attenuator	1	0.0	0	0.0	0	0.0
Other fixed object	138	1.3	0	0.0	3	0.2
COLLISION FIXED Subtotal	754	7.2	2	2.7	72	4.1

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Unknown Event	571	5.5	0	0.0	93	5.2
TOTAL MOST HARMFUL EVENT	10,442	100.0	74	100.0	1,777	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Single Vehicle	1,646	15.8	13	17.6	163	9.2
Head On	168	1.6	19	25.7	59	3.3
Head On - Left Turn	100	1.0	3	4.1	36	2.0
Angle	1,726	16.5	18	24.3	439	24.7
Rear End	2,332	22.3	13	17.6	582	32.8
Rear End - Left Turn	116	1.1	0	0.0	29	1.6
Rear End - Right Turn	110	1.1	0	0.0	16	0.9
Sideswipe - Same Direction	2,692	25.8	6	8.1	276	15.5
Sideswipe - Opposite Direct	525	5.0	2	2.7	54	3.0
Other/Unknown	1,027	9.8	0	0.0	123	6.9
Total	10,442	100.0	74	100.0	1,777	100.0

HAZARDOUS ACTION OF HEAVY TRUCK/BUS	Truck/Bus Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury	Number of Heavy Trucks	% of Issued
None	5,270	50.5	55	74.3	1,003	56.4	11	0.7
Speed too fast	359	3.4	1	1.4	76	4.3	137	9.0
Speed too slow	7	0.1	0	0.0	1	0.1	2	0.1
Failed to yield	517	5.0	3	4.1	108	6.1	232	15.3
Disregard traffic control	104	1.0	1	1.4	43	2.4	54	3.6
Drove wrong way	8	0.1	0	0.0	3	0.2	3	0.2
Drove left of center	50	0.5	0	0.0	5	0.3	8	0.5
Improper passing	65	0.6	0	0.0	5	0.3	19	1.3
Improper lane use	500	4.8	0	0.0	49	2.8	152	10.0
Improper turn	357	3.4	0	0.0	29	1.6	105	6.9
Improper/no signal	17	0.2	0	0.0	4	0.2	4	0.3
Improper backing	414	4.0	0	0.0	12	0.7	124	8.2
Unable to stop in assured clear distance	824	7.9	4	5.4	209	11.8	385	25.4
Reckless driving	7	0.1	1	1.4	0	0.0	1	0.1
Careless/negligent driving	273	2.6	0	0.0	59	3.3	133	8.8
Other	853	8.2	2	2.7	63	3.5	136	9.0
Unknown	817	7.8	7	9.5	108	6.1	10	0.7
Total	10,442	100.0	74	100.0	1,777	100.0	1,516	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT IN CRASH)	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
On Road	9,265	88.7	69	93.2	1,578	88.8
Median	83	0.8	0	0.0	17	1.0
Shoulder	377	3.6	3	4.1	64	3.6
Outside of Shoulder/Curb	408	3.9	1	1.4	67	3.8
Gore	21	0.2	0	0.0	6	0.3
Other/Unknown	288	2.8	1	1.4	45	2.5
Total	10,442	100.0	74	100.0	1,777	100.0

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Midnight - 02:59 AM	333	3.2	4	5.4	59	3.3
03:00 AM - 05:59 AM	400	3.8	4	5.4	66	3.7
06:00 AM - 08:59 AM	1,862	17.8	13	17.6	297	16.7
09:00 AM - 11:59 AM	2,314	22.2	11	14.9	414	23.3
Noon - 02:59 PM	2,340	22.4	8	10.8	411	23.1
03:00 PM - 05:59 PM	2,016	19.3	14	18.9	322	18.1
06:00 PM - 08:59 PM	715	6.8	14	18.9	132	7.4
09:00 PM - 11:59 PM	441	4.2	6	8.1	73	4.1
Unknown	21	0.2	0	0.0	3	0.2
Total	10,442	100.0	74	100.0	1,777	100.0

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Interstate Routes	2,554	24.5	11	14.9	519	29.2
U.S. & Michigan Roads	3,251	31.1	34	45.9	592	33.3
County & City Roads	4,637	44.4	29	39.2	666	37.5
Total	10,442	100.0	74	100.0	1,777	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Monday	1,832	17.5	8	10.8	298	16.8
Tuesday	1,898	18.2	17	23.0	302	17.0
Wednesday	1,939	18.6	14	18.9	352	19.8
Thursday	1,944	18.6	13	17.6	327	18.4
Friday	1,763	16.9	11	14.9	313	17.6
Saturday	698	6.7	8	10.8	125	7.0
Sunday	368	3.5	3	4.1	60	3.4
Total	10,442	100.0	74	100.0	1,777	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Male	8,626	82.6	67	90.5	1,480	83.3
Female	1,202	11.5	3	4.1	205	11.5
Unknown	614	5.9	4	5.4	92	5.2
Total	10,442	100.0	74	100.0	1,777	100.0

NUMBER OF OCCUPANTS in Heavy Truck/Bus	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
1 occupant	8,158	78.1	62	83.8	1,330	74.8
2 occupants	751	7.2	3	4.1	158	8.9
3 occupants	145	1.4	1	1.4	33	1.9
4 occupants	87	0.8	0	0.0	22	1.2
5 occupants	59	0.6	1	1.4	13	0.7
6 + occupants	607	5.8	2	2.7	130	7.3
0 occupants	175	1.7	3	4.1	37	2.1
Unknown	460	4.4	2	2.7	54	3.0
Total	10,442	100.0	74	100.0	1,777	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

VEHICLE TYPES Involved in Crash with Heavy Truck/Bus	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Vehicles	% of Subtotal	Number of Vehicles	% of Fatal	Number of Vehicles	% of Injury
Passenger Car and Station Wagon	6,806	76.3	50	61.0	1,408	74.6
Van and Motorhome	579	6.5	4	4.9	109	5.8
Pickup	1,075	12.0	7	8.5	233	12.3
Small Truck (under 10,000 lbs.)	205	2.3	1	1.2	46	2.4
Motorcycle	25	0.3	5	6.1	12	0.6
Moped	0	0.0	0	0.0	0	0.0
Go Cart	1	0.0	0	0.0	0	0.0
Snowmobile	0	0.0	0	0.0	0	0.0
Off Road Vehicle	1	0.0	0	0.0	1	0.1
Other	45	0.5	1	1.2	8	0.4
Unknown	186	2.1	14	17.1	71	3.8
Subtotal	8,923	100.0	82	100.0	1,888	100.0

HEAVY TRUCK/BUS VEHICLE TYPES	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Subtotal	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Commercial Vehicle: Group A	5,196	49.8	40	54.1	912	51.3
Commercial Vehicle: Group B	2,605	24.9	23	31.1	478	26.9
Commercial Vehicle: Group C	391	3.7	2	2.7	73	4.1
Other Truck	715	6.8	9	12.2	141	7.9
Unknown Truck	1,535	14.7	0	0.0	173	9.7
Subtotal	10,442	100.0	74	100.0	1,777	100.0
Total Vehicle Types in Heavy Truck/Bus Crashes	19,365		156		3,665	

Group “A” is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

Group “B” is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

Group “C” is any single vehicle with a GVWR of less than 26,001 lbs. or a combination of vehicles having a combined GVWR under 26,001 lbs. when the vehicle is required to display placards for hazardous material or designed to carry 16 passengers (including driver). Group “C” is also any vehicle carrying 15 or less people (including driver) transporting children to or from school and home on a regular basis for compensation.

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

Hazardous Citation Issued	Heavy Truck/Bus Involved Crash						Passenger Vehicle Only Involved Crash			
	Single Vehicle Crash		Multi-Vehicle Crash				Single Vehicle Crash		Multi-Vehicle Crash	
	Number of Trucks/Buses	% of citation	Number of Trucks/Buses	% of citation	Number of Passenger Vehicles	% of citation	Number of Passenger Vehicles	% of citation	Number of Passenger Vehicles	% of citation
None	1	0.4	10	0.8	17	1.0	79	0.6	506	0.7
Speed too fast	89	35.9	48	3.8	245	14.0	6,696	49.2	3,629	4.8
Speed too slow	0	0.0	2	0.2	2	0.1	50	0.4	106	0.1
Failed to yield	7	2.8	225	17.7	362	20.6	413	3.0	20,768	27.5
Disregard traffic control	4	1.6	50	3.9	116	6.6	140	1.0	5,081	6.7
Drove wrong way	0	0.0	3	0.2	1	0.1	7	0.1	89	0.1
Drove left of center	0	0.0	8	0.6	20	1.1	92	0.7	722	1.0
Improper passing	0	0.0	19	1.5	42	2.4	15	0.1	662	0.9
Improper lane use	4	1.6	148	11.7	141	8.0	125	0.9	3,167	4.2
Improper turn	11	4.4	94	7.4	39	2.2	55	0.4	1,577	2.1
Improper/no signal	1	0.4	3	0.2	3	0.2	13	0.1	131	0.2
Improper backing	4	1.6	120	9.5	18	1.0	44	0.3	2,136	2.8
Unable to stop in assured clear distance	6	2.4	379	29.9	490	27.9	485	3.6	30,350	40.2
Reckless driving	0	0.0	1	0.1	13	0.7	548	4.0	413	0.5
Careless/Negligent driving	75	30.2	58	4.6	138	7.9	3,049	22.4	2,591	3.4
Other	45	18.1	91	7.2	91	5.2	1,542	11.3	2,961	3.9
Unknown	1	0.4	9	0.7	16	0.9	247	1.8	614	0.8
Total Cited Vehicles	248	100.0	1,268	100.0	1,754	100.0	13,600	100.0	75,503	100.0
Percent of Total Vehicles		14.7		14.5		20.1		11.6		22.9
Vehicles with No Citation Issued	1,437	85.3	7,489	85.5	6,979	79.9	104,093	88.4	254,289	77.1
Total Vehicles Involved	1,685	100.0	8,757	100.0	8,733	100.0	117,693	100.0	329,792	100.0

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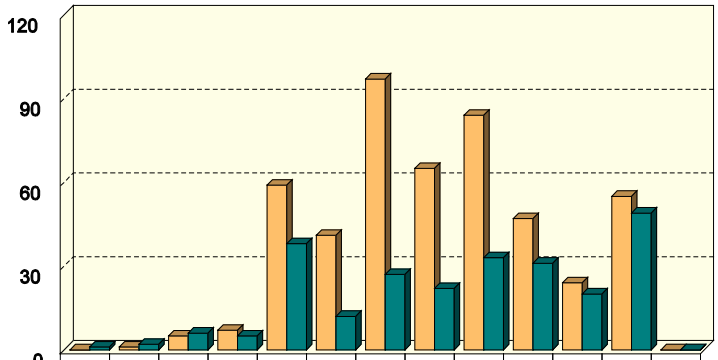
Occupant/ Person

AGE AND GENDER OF OCCUPANTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

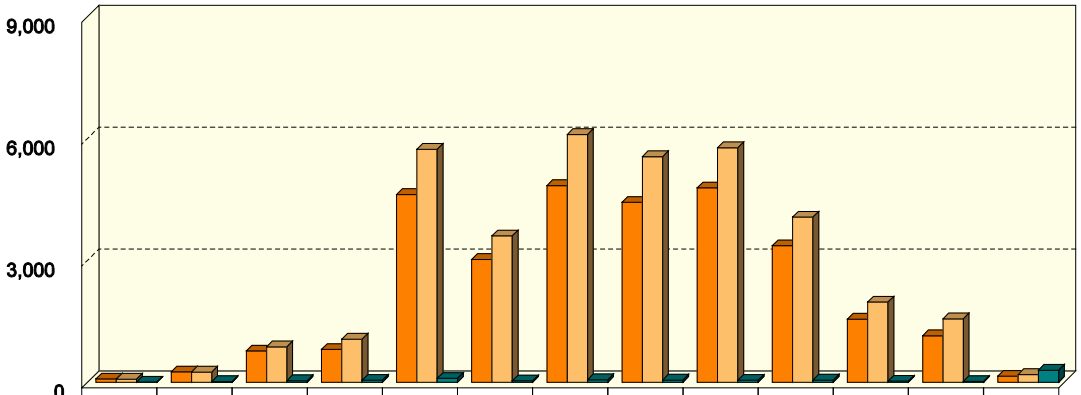
Occupants Killed



	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown	Totals
Males Killed	0	1	5	7	59	41	97	65	84	47	24	55	0	485
Females Killed	1	2	6	5	38	12	27	22	33	31	20	49	0	246
Total	1	3	11	12	97	53	124	87	117	78	44	104	0	731

There were 246 female occupants, and 485 male occupants killed in motor vehicle crashes in 2009. The majority (66.3%) of occupants killed in traffic crashes in 2009 were male.

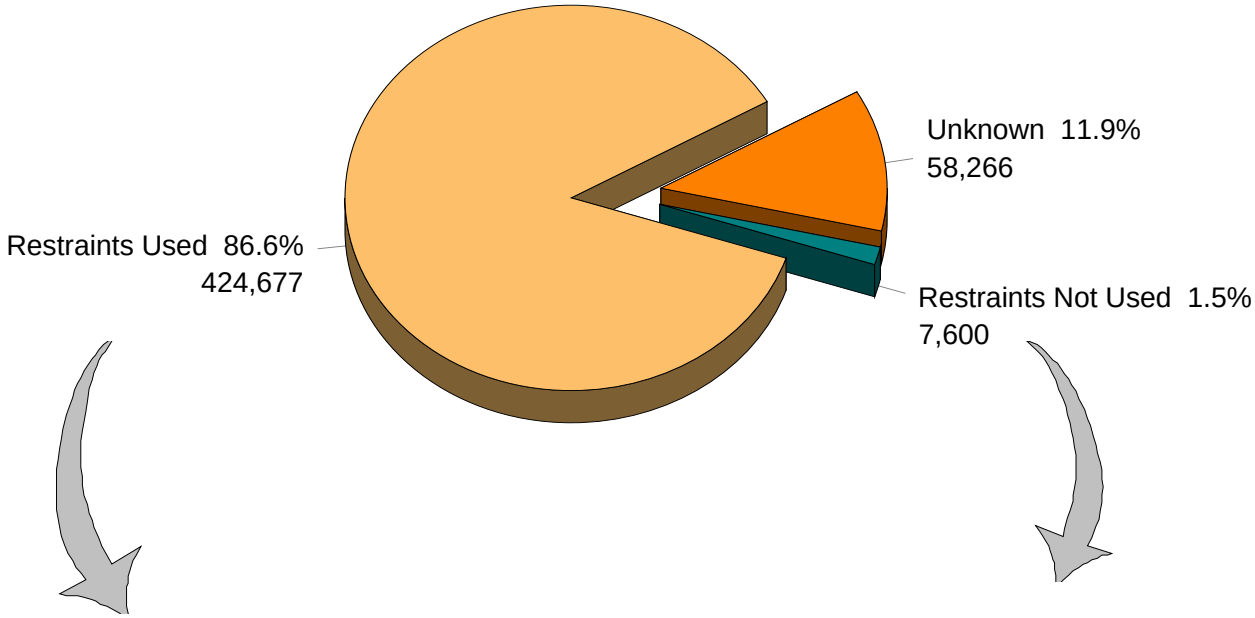
Occupants Injured



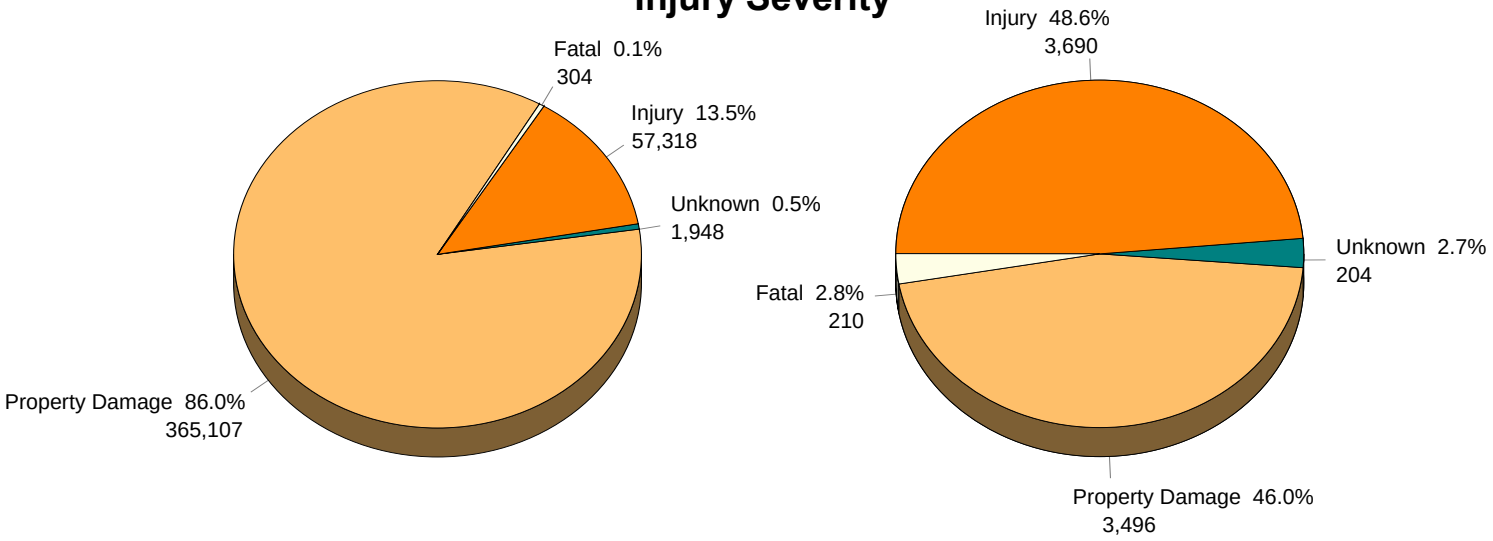
	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown	Totals
Males Injured	81	257	772	809	4,622	3,023	4,842	4,430	4,785	3,360	1,555	1,144	150	29,830
Females Injured	79	250	873	1,061	5,737	3,604	6,099	5,555	5,776	4,065	1,975	1,562	191	36,827
Unknown Gender Injured	6	17	39	52	95	36	61	54	52	53	29	22	297	813
Total	166	524	1,684	1,922	10,454	6,663	11,002	10,039	10,613	7,478	3,559	2,728	638	67,470

There were 36,827 female occupants, 29,830 male occupants, and 813 occupants of unknown gender injured in motor vehicle crashes in 2009. The majority (54.6%) of occupants injured in traffic crashes in 2009 were female.

REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS

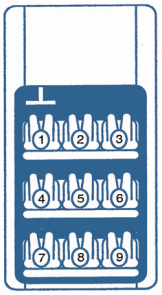


Injury Severity



Of the 490,543 drivers and injured passengers involved in crashes, 424,677 (86.6%) were REPORTED to be using occupant restraints.

Occupants in crashes were twenty-eight times more likely to be killed if they were not wearing their restraints.



MOTOR VEHICLE OCCUPANTS & INJURY SEVERITY BY SEATING POSITION AND KNOWN BELT USAGE

Seating Position	Belts Used*		Fatal	Injury			No Injury
	Number	% of Total		A	B	C	
Left Front	405,730	96.2	229	2,680	8,482	31,957	362,382
Center Front	522	0.1	2	18	54	202	246
Right Front	10,058	2.4	60	675	1,945	7,007	371
Left Rear	1,046	0.2	4	72	218	747	5
Center Rear	271	0.1	1	17	60	193	0
Right Rear	1,182	0.3	3	79	242	858	0
Left Rear Third Seat	198	0.0	0	13	42	143	0
Center Rear Third Seat	52	0.0	0	4	6	42	0
Right Rear Third Seat	240	0.1	1	10	48	181	0
Unknown	2,247	0.5	0	14	54	206	1,973
Total	421,546†	100.0	300	3,582	11,151	41,536	364,977

* A lap belt, shoulder belt or a combination of lap and shoulder belts used. Children who were coded as using or not using a child restraint device appear in separate tables on the next two pages.

† This total does not include 1,943 occupants with unknown injury severity.

Seating Position	Belts Not Used*		Fatal	Injury			No Injury
	Number	% of Total		A	B	C	
Left Front	5,060	71.2	151	519	727	711	2,952
Center Front	73	1.0	2	11	13	27	20
Right Front	584	8.2	26	144	185	198	31
Left Rear	292	4.1	13	60	98	121	0
Center Rear	124	1.7	3	26	44	51	0
Right Rear	306	4.3	7	67	96	136	0
Left Rear Third Seat	58	0.8	0	7	22	29	0
Center Rear Third Seat	32	0.5	0	13	4	15	0
Right Rear Third Seat	68	1.0	3	15	21	29	0
Unknown	505	7.1	4	26	39	121	315
Total	7,102†	100.0	209	888	1,249	1,438	3,318

* No belts available or no belts used. Children who were coded as using or not using a child restraint device appear in separate tables on the next two pages.

† This total does not include 193 occupants with unknown injury severity.

Michigan law requires that all persons must wear a safety belt when riding in the front seat of a motor vehicle.

REPORTED RESTRAINT USE - CHILDREN

On July 1, 2008, Michigan law was amended http://legislature.mi.gov/doc.aspx?mcl-257-710e

To:

*Any child **under four years of age** must be in an approved Child Safety Seat (CSS)/Child Restraint Device (CRD).*

and

*All children **less than 8 years of age AND who are less than 4'9" in height,** must be properly restrained in a child restraint system.*

and

*All children **ages 8 through 15** must wear a properly adjusted and fastened safety belt when riding in either the front or back seat of a vehicle.*

Note 1: These tables exclude drivers.

	Children Age 0		Fatal	Injury		
Restraint Usage	Number	% Total		A	B	C
Belts Used	25	15.0	0	0	4	21
No Belts Used	4	2.4	0	0	1	3
Child Restraint Used	120	71.9	1	3	24	92
Child Restraint Not Used	8	4.8	0	3	0	5
Restraint Failed	0	0.0	0	0	0	0
Unknown	10	6.0	0	0	1	9
Total	167	100.0	1	6	30	130

	Children Age 1		Fatal	Injury		
Restraint Usage	Number	% Total		A	B	C
Belts Used	12	7.8	0	1	0	11
No Belts Used	4	2.6	1	0	3	0
Child Restraint Used	122	79.2	0	6	26	90
Child Restraint Not Used	11	7.1	1	1	3	6
Restraint Failed	0	0.0	0	0	0	0
Unknown	5	3.2	0	0	0	5
Total	154	100.0	2	8	32	112

REPORTED RESTRAINT USE – CHILDREN (continued)

Restraint Usage	Children Age 2		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	21	12.3	0	0	4	17
No Belts Used	3	1.8	0	0	1	2
Child Restraint Used	130	76.0	1	8	23	98
Child Restraint Not Used	7	4.1	0	0	1	6
Restraint Failed	0	0.0	0	0	0	0
Unknown	10	5.8	0	1	4	5
Total	171	100.0	1	9	33	128

Restraint Usage	Children Age 3		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	30	15.1	0	1	7	22
No Belts Used	7	3.5	0	3	2	2
Child Restraint Used	147	73.9	0	11	30	106
Child Restraint Not Used	10	5.0	0	2	2	6
Restraint Failed	0	0.0	0	0	0	0
Unknown	5	2.5	0	1	1	3
Total	199	100.0	0	18	42	139

Restraint Usage	Children Age 4-7		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	357	41.5	1	16	81	259
No Belts Used	34	3.9	0	5	14	15
Child Restraint Used	395	45.9	1	19	96	279
Child Restraint Not Used	32	3.7	0	5	8	19
Restraint Failed	1	0.1	0	0	1	0
Unknown	42	4.9	0	1	13	28
Total	861	100.0	2	46	213	600

Restraint Usage	Children Age 8-15		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	2,130	83.3	9	123	483	1,515
No Belts Used	230	9.0	4	42	68	116
Child Restraint Used	56	2.2	1	3	10	42
Child Restraint Not Used	14	0.5	0	3	3	8
Restraint Failed	2	0.1	0	1	0	1
Unknown	125	4.9	3	16	39	67
Total	2,557	100.0	17	188	603	1,749

Note 2: Safety equipment usage is often self-reported and may not reflect actual usage.

Note 3: Information about uninjured passengers does not have to be reported by the officer on the crash report, thus these tables relate the experience of only those children with injuries in crashes

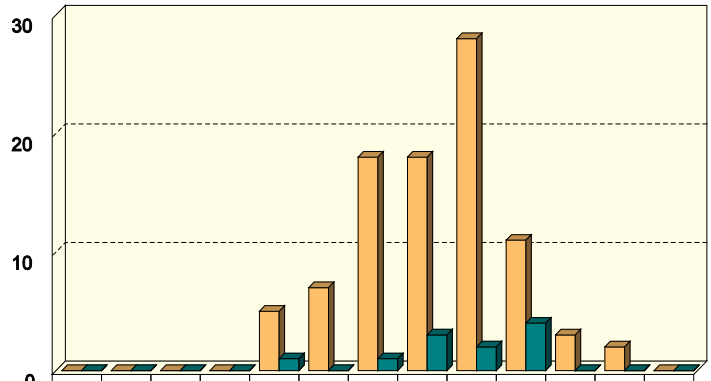
MOTOR VEHICLE OCCUPANT INJURY SEVERITY BY KNOWN AIRBAG DEPLOYMENT

Motor Vehicle Occupant Airbag Deployment	OCCUPANT – INJURY SEVERITY						
	Occupants*		Fatal	Injury			No Injury
	Number	% Total		A	B	C	
Deployed	40,630	8.2	273	2,193	5,477	11,358	20,688
Not deployed	374,870	75.8	178	1,773	5,594	27,422	330,571
Not equipped	34,920	7.1	262	1,540	2,899	5,191	19,886
Unknown	43,995	8.9	18	373	941	2,709	14,238
Total	494,415	100.0	731	5,879	14,911	46,680	385,383

* Includes 40,831 occupants (drivers and passengers) with unknown injury severity.

AGE AND GENDER OF MOTORCYCLISTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

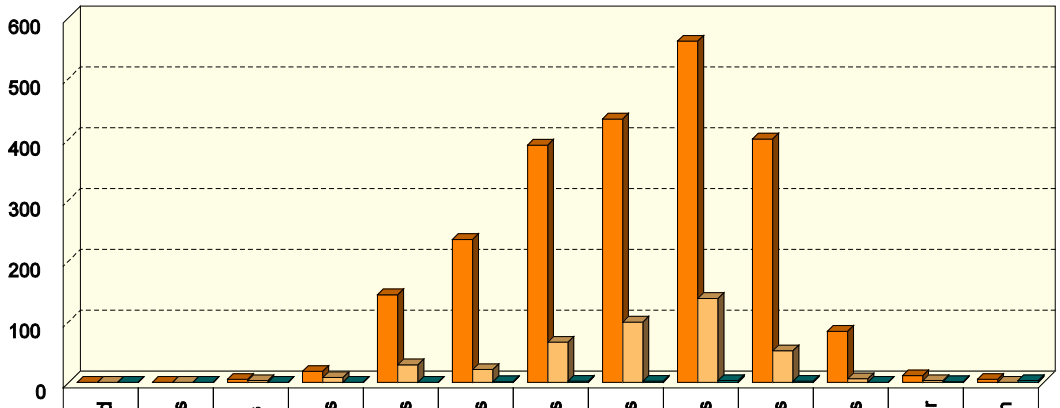
Motorcyclists Killed



	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown	Totals
Males Killed	0	0	0	0	5	7	18	18	28	11	3	2	0	92
Females Killed	0	0	0	0	1	0	1	3	2	4	0	0	0	11
Total	0	0	0	0	6	7	19	21	30	15	3	2	0	103

89.3 percent of the motorcyclists killed in traffic crashes in 2009 were male.
In comparison, 68.1 percent of all persons killed in crashes were male.

Motorcyclists Injured



	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown	Totals
Males Injured	0	0	5	18	144	235	390	433	561	400	84	11	5	2,286
Females Injured	0	0	3	8	29	21	66	99	138	52	6	3	0	425
Unknown Gender Injured	0	0	0	0	0	1	2	2	3	2	0	1	3	14
Total	0	0	8	26	173	257	458	534	702	454	90	15	8	2,725

83.9 percent of the motorcyclists injured in traffic crashes in 2009 were male.
In comparison, 45.2 percent of all persons injured in crashes were male.

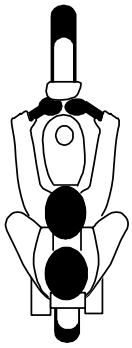
MOTORCYCLE HELMET USE AND INJURY SEVERITY

Helmet Worn Age of Motorcyclist	Fatality	Injury			No Injury
		A	B	C	
3 years and under	0	0	0	0	0
4 - 10 years	0	1	5	2	0
11 - 15 years	0	2	8	8	3
16 - 20 years	5	26	70	41	41
21 - 24 years	5	37	114	56	56
25 - 34 years	17	90	172	99	120
35 - 44 years	16	118	167	139	111
45 - 54 years	28	187	211	187	192
55 - 64 years	13	112	146	133	114
65 - 74 years	3	27	30	18	24
75 years and over	2	1	4	5	3
Unknown	0	0	2	0	5
Subtotal	89	601	929	688	669

Drivers killed 83

Passengers killed 6

Helmet Not Worn Age of Motorcyclist	Fatality	Injury			No Injury
		A	B	C	
3 years and under	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	0	1	1	0	2
16 - 20 years	0	1	2	2	2
21 - 24 years	1	4	2	1	3
25 - 34 years	1	8	7	6	1
35 - 44 years	2	9	7	4	0
45 - 54 years	1	4	2	1	0
55 - 64 years	1	3	0	0	1
65 - 74 years	0	1	1	0	0
75 years and over	0	0	1	0	0
Unknown	0	0	0	1	0
Subtotal	6	31	23	15	9



Drivers killed 6

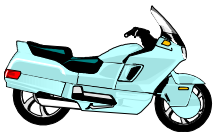
Passengers killed 0

Helmet Use Unknown Age of Motorcyclist	Fatality	Injury			No Injury
		A	B	C	
3 years and under	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	0	0	4	2	1
16 - 20 years	1	9	11	11	10
21 - 24 years	1	10	21	12	20
25 - 34 years	1	13	35	28	27
35 - 44 years	3	26	32	32	33
45 - 54 years	1	25	44	41	37
55 - 64 years	1	19	24	17	26
65 - 74 years	0	4	3	6	4
75 years and over	0	0	2	2	1
Unknown	0	1	1	3	33
Subtotal	8	107	177	154	192
Total	103	739	1,129	857	870

Michigan Vehicle Code Public Act 300 of 1949, Section 257.658 requires that all motorcycle riders wear a helmet. As a result, according to studies by UMTRI [14], approximately 99 percent of the motorcyclists in Michigan wear helmets when riding. The fact that most fatalities (where helmet use is known) are wearing their helmets does not indicate that helmets are not an effective safety device.

OCCUPANT INJURY OUTCOME BY VEHICLE TYPE



VEHICLE TYPE	Killed	A Injured	B Injured	C Injured	Total KABC	% of All Crash Involved KABC Occupants
Passenger Car and Station Wagon	458	3,756	10,466	36,579	51,259	75.2
Van (Minivan) and Motorhome	28	314	782	3,006	4,130	6.1
Pickup	88	655	1,690	4,127	6,560	9.6
Small Truck (under 10,000 lbs.)	14	169	409	1,354	1,946	2.9
Motorcycle	103	739	1,129	857	2,828	4.1
Moped	5	52	109	90	256	0.4
Go Cart	1	2	5	3	11	0.0
Snowmobile	14	35	43	40	132	0.2
Off Road Vehicle	9	90	91	55	245	0.4
Other	8	20	53	87	168	0.2
Unknown	0	5	27	50	82	0.1
CDL Truck/Bus (breakdown below)	3	42	107	432	584	0.9
Total Number of Occupants	731	5,879	14,911	46,680	68,201	100.0

CDL Truck/Bus Sub-category Type	Killed	A Injured	B Injured	C Injured	Total KABC	% of All Crash Involved KABC Occupants
Commercial Vehicle: Group A	1	21	45	121	188	32.2
Commercial Vehicle: Group B	0	11	38	187	236	40.4
Commercial Vehicle: Group C	0	3	2	39	44	7.5
Other Truck	2	4	17	36	59	10.1
Unknown Truck	0	3	5	49	57	9.8
Total Number of Occupants	3	42	107	432	584	100.0

Group “A” is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

Group “B” is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

Group “C” is any single vehicle with a GVWR of less than 26,001 lbs. or a combination of vehicles having a combined GVWR under 26,001 lbs. when the vehicle is required to display placards for hazardous material or designed to carry 16 passengers (including driver). Group “C” is also any vehicle carrying 15 or less people (including driver) transporting children to or from school and home on a regular basis for compensation.

NOTES:
1) School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.
2) These crashes involve a motor vehicle in transport on a public trafficway (in Michigan) and result in injury, death, or at least $1,000 in property damage.

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References

REFERENCES AND REPORTING AGENCIES

[1] Annual Estimates of the Population for Counties of Michigan: April 1, 2000 to July 1, 2009. Population Division, U.S. Census Bureau. Release Date: March 2010.

[2] Table 31DP Number of Deaths by Underlying Cause of Death Michigan Residents, 2008. Michigan Department of Community Health, Division for Vital Records and Health Statistics, PO Box 30691, Lansing, MI 48909-8191.

[3] Injury Facts. National Safety Council. 1121 Spring Lake Drive, Itasca, IL 60143.

[4] Traffic Safety Facts. National Highway Traffic Safety Administration, National Center for Statistics and Analysis, U.S. Department of Transportation, Washington, DC 20590.

[5] Annual Highway Statistics. Federal Highway Administration.

[6] The Ohio Department of Public Safety, Office of the Governor's Highway Safety Representative, 240 Parsons Avenue, Columbus, OH 43215.

[7] Indiana Department of Transportation, Program Development Division, 100 N. Senate Avenue, Indianapolis, IN 46204-2218.

[8] Illinois Department of Transportation, Division of Traffic Safety, 3215 Executive Park Drive, P.O. Box 19245, Springfield, IL 62794-9245.

[9] Wisconsin Bureau of Transportation Safety, P.O. Box 7913, Madison, WI 53707-7913.

[10] Minnesota Department of Public Safety, Office of Traffic Safety, 444 Cedar Street, Suite 100-B, Town Square, St. Paul, MN 55101-2156.

[11] Michigan Department of Transportation, Bureau of Transportation Planning, Lansing, MI 48909.

[12] Traffic Safety Facts Laws - Bicycle Helmet Laws - January 2008. National Center for Statistics & Analysis, Research & Development, 400 Seventh Street, S.W., Washington, D.C. 20590. (Source: Robert Thompson, *A Case Control Study of the Effectiveness of Bicycle Safety Helmets*. Centers for Disease Control.)

[13] Michigan Department of State, Office of Policy and Planning, Research Section, Lansing, MI 48918.

[14] Streff, Fredrick M., Eby, David W., Molnar, Lisa J., Joksch, Hans C., Wallace, Richard R. Direct Observation of Safety Belt Use and Motorcycle Helmet Use in Michigan: Fall 1993. UMTRI-93-44, University of Michigan Transportation Research Institute, Ann Arbor, MI 48109-2150, November 1993.

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