2011 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.

2011
Michigan Traffic
Crash Facts

A summary of traffic crashes on Michigan roadways in calendar year 2011

www.michigantrafficcrashfacts.org

Produced by:

Michigan Department of State Police
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Acknowledgements

The creation of this book could not have been made possible without the dedication, planning, guidance, and knowledge of the following organizations and departments:

Criminal Justice Information Center

Fatality Analysis Reporting System

Michigan Department of State Police

Michigan Department of State

Michigan Department of Transportation

Office of Highway Safety Planning

University of Michigan Transportation Research Institute

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.

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FOREWORD

The fatality rate in Michigan fell to 0.9 percent in 2011, which matches the lowest rate ever recorded in 2009.

Traffic records improvement projects 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 1992-2011.

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EXECUTIVE SUMMARY

The 2011 traffic fatality count was 889, down 5.1 percent from the 2010 figure of 937. Compared with 2010, injuries were up 1.6 percent and total crashes were up 0.7 percent. These figures translated into a fatality rate of 0.94 per 100 million miles of travel, down 2.1 percent from 2010, and below the ten-year average of 1.07 (2002-2011).

Exposure factors in 2011 showed decreases in vehicle miles traveled and licensed drivers, but an increase in vehicle registrations. Vehicle miles traveled were down 3.0 percent to 94.8 billion, the number of licensed drivers decreased 0.5 percent to 7.0 million, and motor vehicle registrations were up 0.4 percent to 8.13 million.

Seat belt use in Michigan was observed at 93.5 percent. Alcohol-involved crashes continued to present a problem and contributed to 30.3 percent of all fatal crashes. Crashes involving alcohol made up 3.5 percent of all crashes, and while 25.6 percent of all crashes resulted in injury or death, 57.4 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 Michigan 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 April 17, 2012. We acknowledge, with appreciation, all involved agencies for their assistance.

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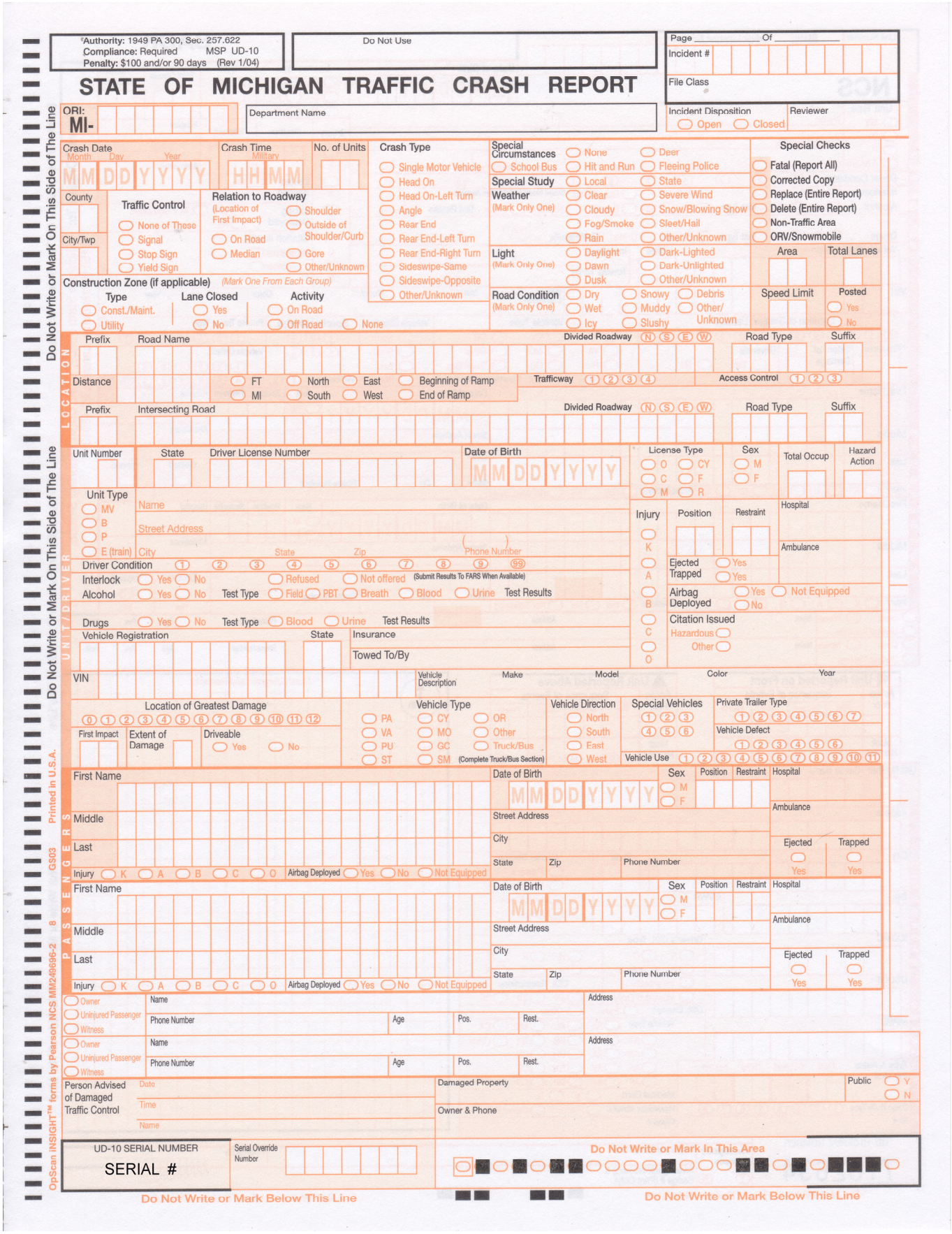
UD-10 (FRONT)


Authority: 1949 PA 300, Sec. 257.622
Compliance: Required MSP UD-10
Penalty: $100 and/or 90 days (Rev 1/04)
Do Not Use
Page Of
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
No. of Units
Crash Type
Special Circumstances
Special Study
Weather
Light
Road Condition
Special Checks
Fatal (Report All)
Corrected Copy
Replace (Entire Report)
Delete (Entire Report)
Non-Traffic Area
ORV/Snowmobile
County
City/Twp
Traffic Control
Relation to Roadway
Construction Zone (if applicable)
Area
Total Lanes
Speed Limit
Posted
LOCATION
Prefix
Road Name
Divided Roadway
Road Type
Suffix
Distance
Trafficway
Access Control
Intersecting Road
UNIT/DRIVER
Unit Number
State
Driver License Number
Date of Birth
License Type
Sex
Total Occup
Hazard Action
Unit Type
Name
Street Address
City State Zip Phone Number
Driver Condition
Interlock
Alcohol
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
PASSENGERS
First Name
Middle
Last
Date of Birth
Sex
Position
Restraint
Hospital
Ambulance
Street Address
City
State
Zip
Phone Number
Ejected
Trapped
Injury
Airbag Deployed
Owner
Uninjured Passenger
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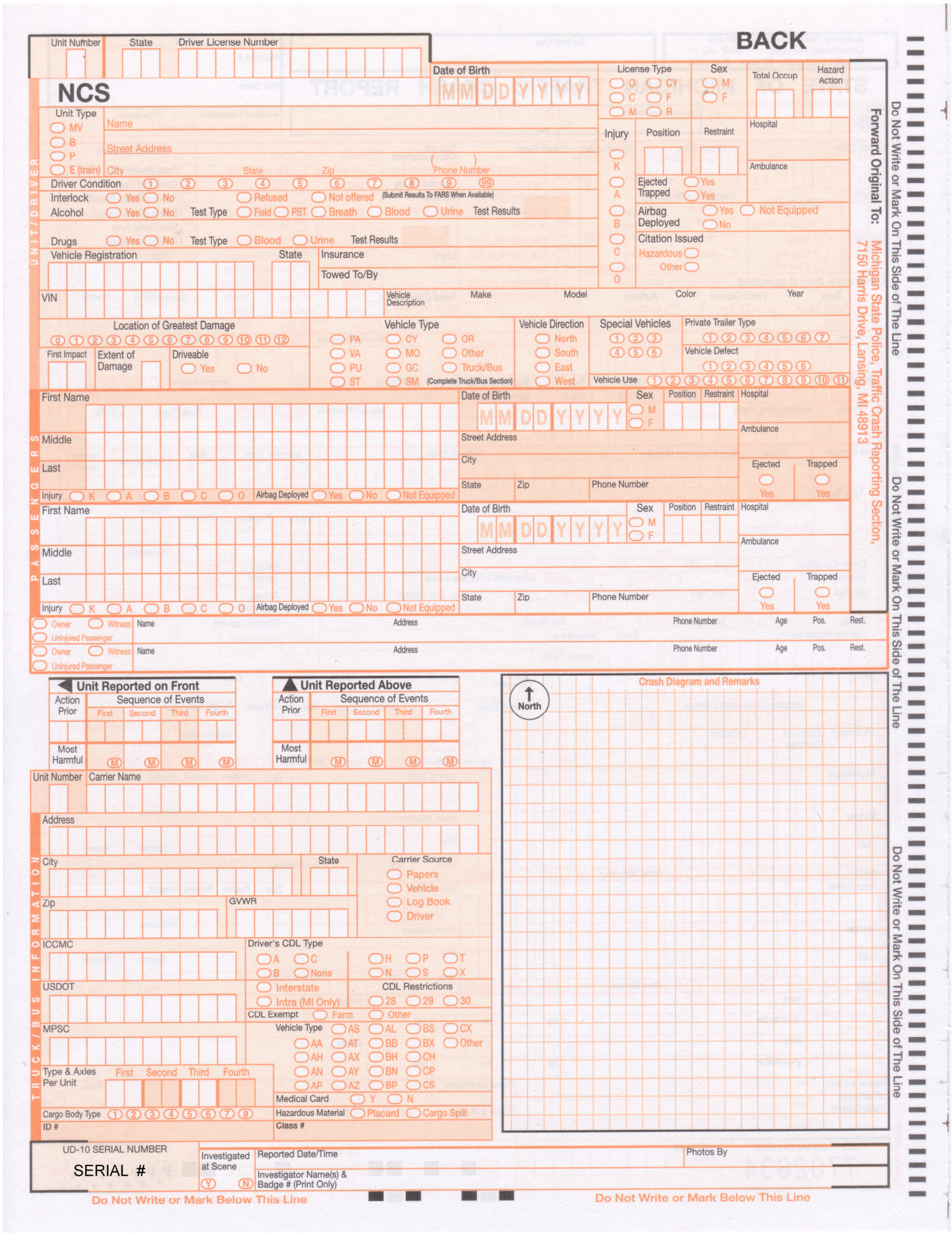
UD-10 (BACK)



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.

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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.
- **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 or child car 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** - Non-incapacitating
  - **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.

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GLOSSARY

- **Access Control** - Indicates the degree that access to an adjoining roadway is controlled by public authority.
    - No access control (unlimited access)
    - Full access control (ramp entry & exit only)
    - 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 traveled.

- **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.

GLOSSARY (continued)

- **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.

- **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.

	Time Period			
Holiday Day	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 fatal 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.

GLOSSARY (continued)

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

- **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

- **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.

- **Non-collision** - A crash that does not involve a collision with another motor vehicle. Types of non-collision 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.

- **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); non-motorized 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

2011 QUICK FACTS

★ Some exposure factor comparisons between 2011 and 2010 show motor vehicle registrations increased **0.4** percent, the number of licensed drivers on Michigan roads decreased **0.5** percent, and vehicle mileage decreased **3.0** percent.

★ The 2011 fatality rate of **0.94** deaths per 100 million miles of travel decreased **2.1** percent from 2010, remaining below the ten-year average of **1.07** (2002-2011).

★ There were **889** persons killed and **71,796** persons injured in **284,049** reported motor vehicle traffic crashes in Michigan during 2011. Compared with the 2010 experience, the number of: deaths decreased **5.1** percent, persons injured increased **1.8** percent, and total reported crashes increased **0.7** percent.

★ There were **284,049** reported crashes, of which **834** were fatal, **52,487** were personal injury, and **230,728** were property damage only crashes.

★ Of all fatal crashes, **22.9** percent occurred at intersections.

★ Of all fatal crashes, **30.3** percent involved at least one drinking operator, bicyclist, or pedestrian, **21.3** percent involved drinking but no drugs, **5.3** percent involved drugs but no drinking, and **9.0** percent involved both drinking and drugs.

★ Excessive speed was indicated as the hazardous action by **14.5** percent of the drivers involved in fatal crashes.

★ Of the **284,049** total crashes in 2011, **107,373 (37.8%)** involved one vehicle only. This is a decrease of **0.3** percent from last year's count of **107,682** single-vehicle crashes.

★ Of the **834** fatal crashes, **458 (54.9%)** involved one vehicle.

★ Of the **253** alcohol-related fatal crashes, **182 (71.9%)** involved one vehicle. This is an **0.6** percent increase from last year's figure of **181** single vehicle, alcohol-related fatal crashes.

★ Of the **1,267** drivers involved in fatal crashes, **154 (12.2%)** were under 21 years of age and **293 (23.1%)** were under 25 years of age.

★ Of the **9,876,187** persons living in Michigan [1] one out of every **11,109** was killed in a traffic crash and one out of every **138** was injured.

★ For each person killed, **81** 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, approximately 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 **140** persons, an increase of 9 deaths from 2010.

★ For each pedestrian killed, there were **14** pedestrians injured.

★ Of the pedestrians killed, **27.9** percent were killed while crossing streets not at intersections.

★ Of all pedestrians killed, **15.7** percent were under the age of 21 and **9.3** percent were 75 and older.

★ Children under the age of 16 accounted for **8.3** percent of the bicycle deaths.

★ Of the **487,298** drivers and injured passengers involved in crashes, **425,398** or **87.3** percent were *reported* to have been using occupant restraints. Restraint usage among fatal victims, where usage was known, was reported to be **61.6** percent in 2011.

★ Motor vehicle occupants age 75 to 110 had the highest reported restraint usage **(95.8%)** among all age groups. Children age 11 to 15 had the lowest reported restraint usage **(82.0%)**.

★ The economic loss in Michigan traffic crashes amounted to **$8,111,001,800**. If costs were spread across the state's population this would translate into a loss of $821.27 per state resident.

Note: Information on the cost of crashes was provided by the National Safety Council.

Michigan's Crash Watch 2011

Every
1 minute
51 seconds
a traffic crash
occurs

One person
is killed in a
crash every
9 hours
51 minutes

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

One person
is killed in an
alcohol-related
crash every
31 hours
58 minutes

One driver
under age 21
is in a fatal
crash every
56 hours
53 minutes

One
motorcyclist
is injured every
3 hours
26 minutes

One
pedestrian
is injured every
4 hours
26 minutes

One bicyclist
is injured every
5 hours
55 minutes

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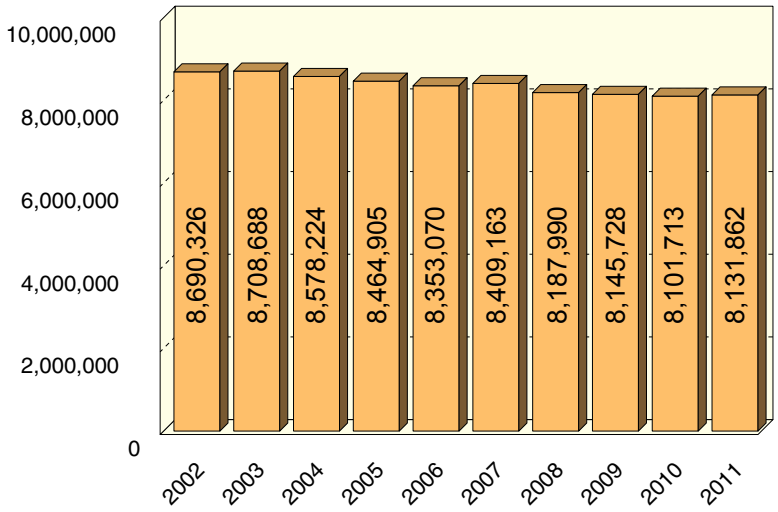
Historical Information

10-, 5-, and 1-year

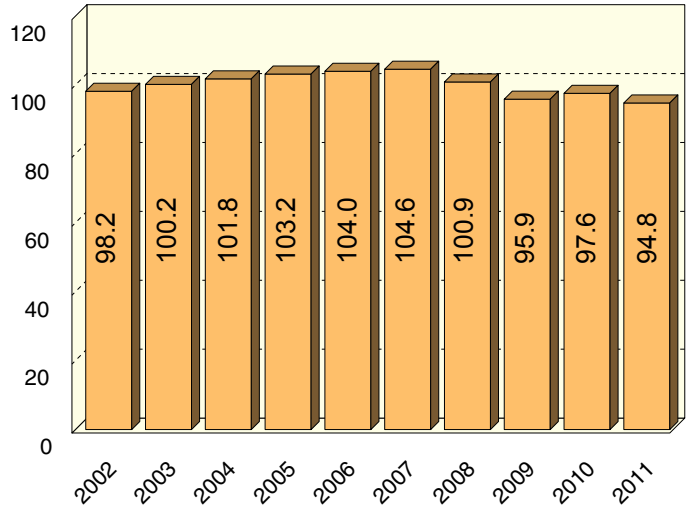
10 YEAR TRENDS

VEHICLE REGISTRATIONS



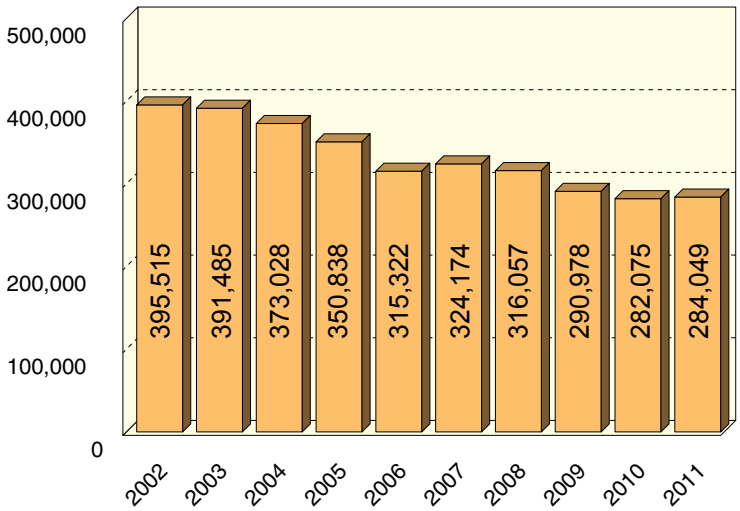
Vehicle registrations remained fairly consistent over the ten-year period, reaching a high in 2003.

VEHICLE MILES TRAVELED



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

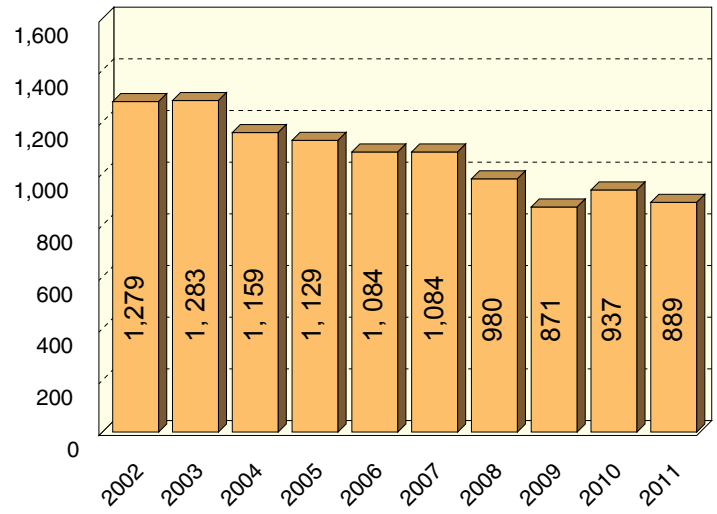
CRASHES



There were 284,049 total crashes statewide in 2011, a 28.2 percent decrease from 2002.

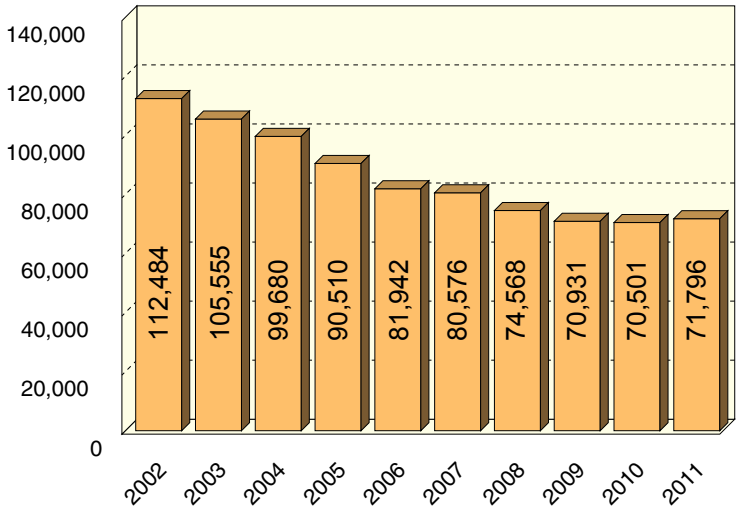
10 YEAR TRENDS (continued)

DEATHS



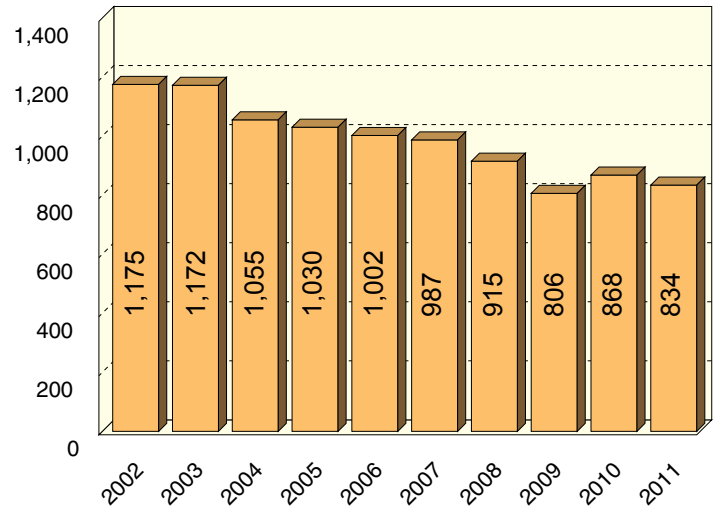
In 2011, 889 people died in motor vehicle crashes, a decrease of 30.5 percent from 2002.

INJURIES



In 2011, 71,796 people received nonfatal injuries in motor vehicle crashes, down 36.2 percent from 112,484 in 2002.

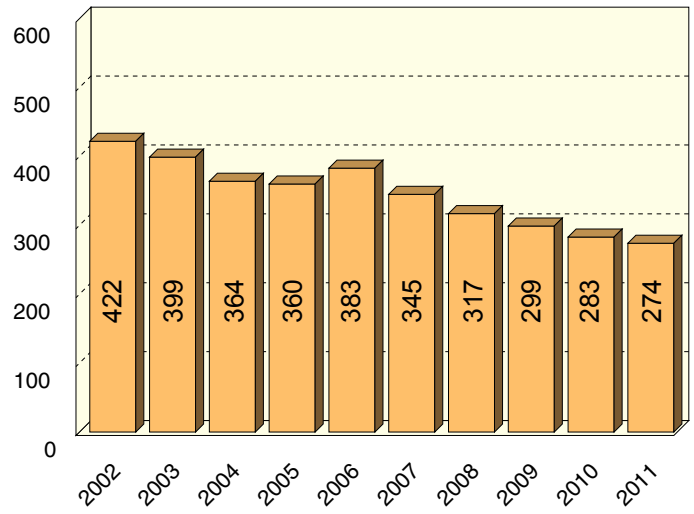
FATAL CRASHES



In 2011, there were 834 fatal crashes, down 29.0 percent from 1,175 in 2002.

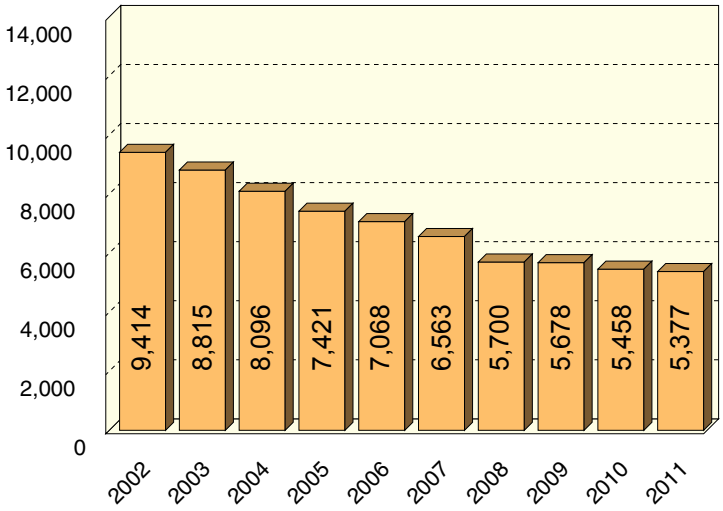
10 YEAR TRENDS

HAD-BEEN-DRINKING FATALITIES



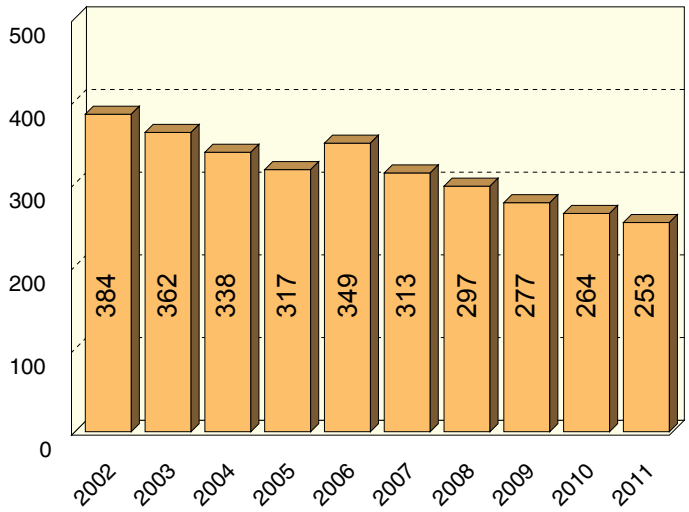
Deaths in alcohol-related crashes decreased 35.1 percent over the ten-year period.

HAD-BEEN-DRINKING INJURIES



Mirroring the trend in deaths, had-been-drinking injuries have decreased over the last ten years. In 2011, there were 5,377 injuries in crashes where the operator had been drinking, down 42.9 percent from 2002.

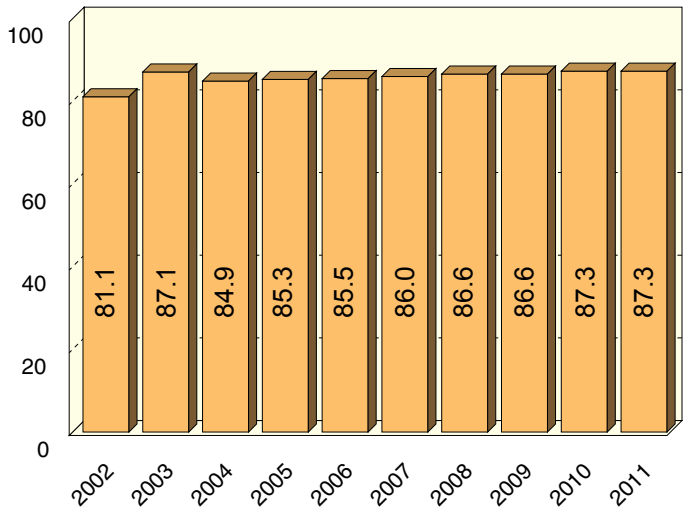
HAD-BEEN-DRINKING FATAL CRASHES



Alcohol involvement in fatal crashes has also decreased over the ten-year period. In 2011, there were 253 fatal crashes where the operator had been drinking, down 34.1 percent from 2002.

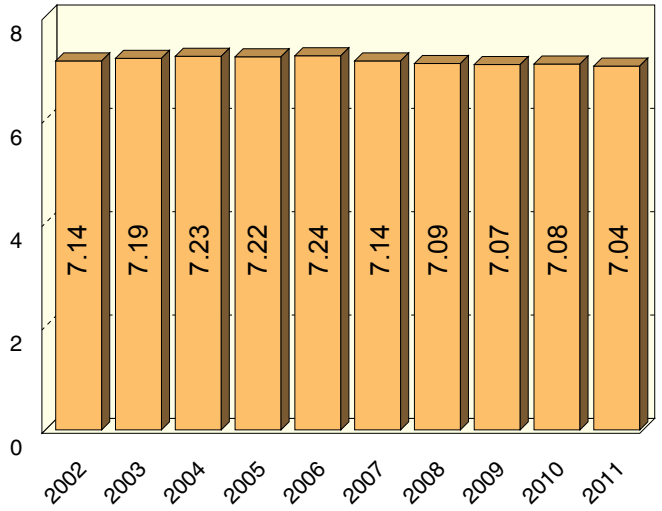
10 YEAR TRENDS (continued)

RESTRAINT USAGE



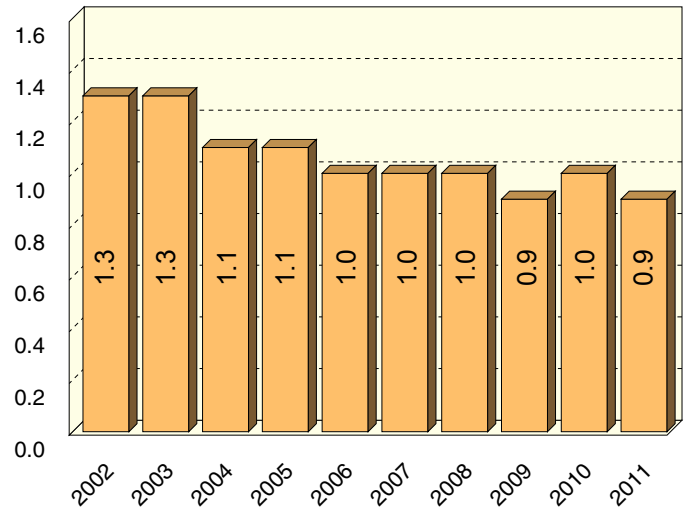
The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes has increased 7.6 percent over the last ten years.

DRIVERS IN MICHIGAN



There were 7,037,876 licensed drivers on Michigan roadways in 2011, a decrease of 1.5 percent from 2002.

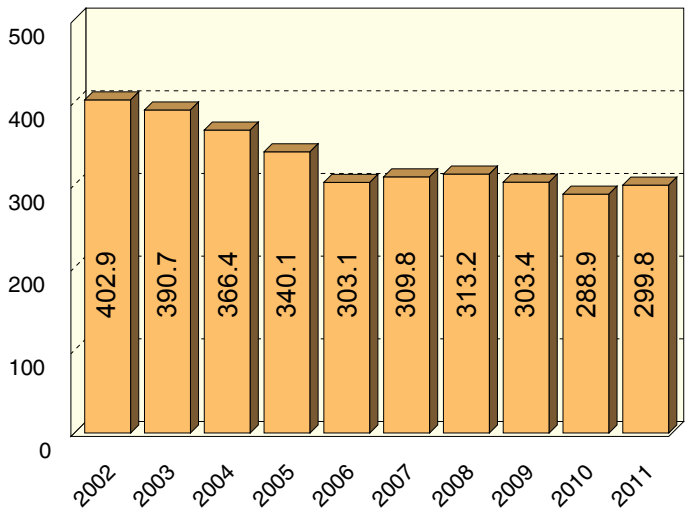
MILEAGE DEATH RATE



The 0.9 death rate in 2011 is a 30.8 percent decrease from the ten-year high of 1.3 in 2002.

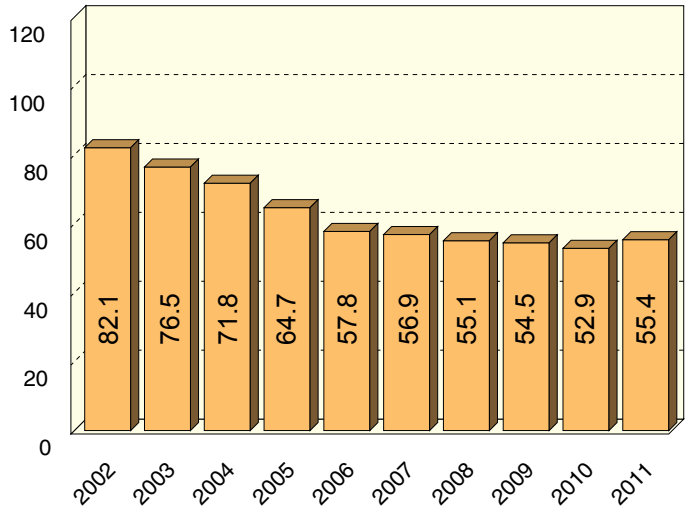
10 YEAR TRENDS

TOTAL CRASH RATE



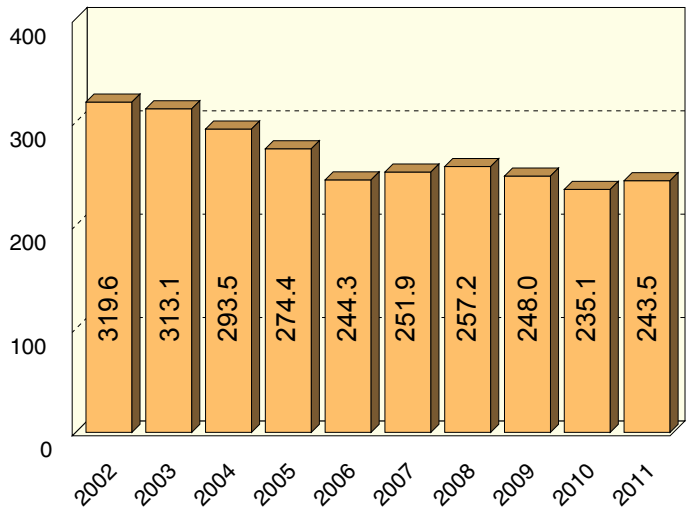
The ten-year total crash rate peaked in 2002 at 402.9 then decreased by 25.6 percent to 299.8 in 2011.

PERSONAL INJURY CRASH RATE



The 55.4 personal injury crash rate in 2011 is a 32.5 percent decrease from 2002.

PROPERTY DAMAGE CRASH RATE

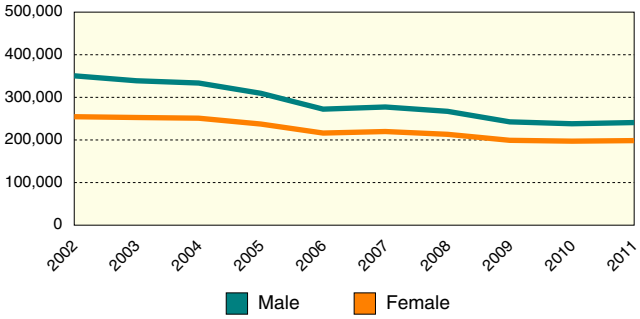


The 243.5 property damage crash rate in 2011 is a 23.8 percent decrease from 2002.

10 YEAR TRENDS (continued)

DRIVERS IN ALL CRASHES		
	Male	Female
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
2010	238,048	197,183
2011	240,850	198,488

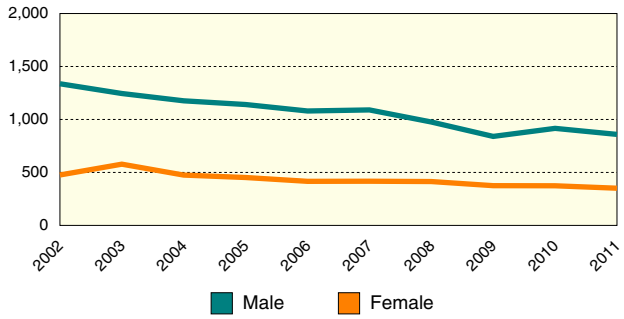
DRIVERS IN ALL CRASHES



Male drivers accounted for 50.9 percent of all drivers in crashes during 2011, down from 51.7 percent in 2002.

DRIVERS IN FATAL CRASHES		
	Male	Female
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
2010	916	374
2011	859	351

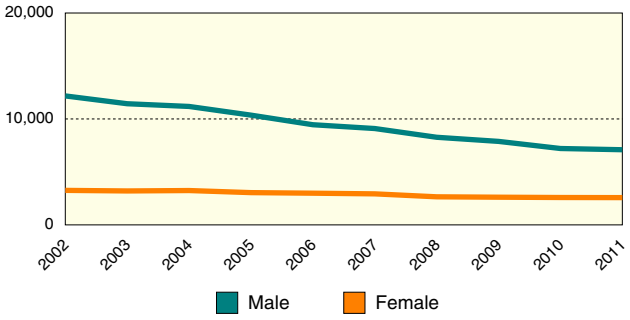
DRIVERS IN FATAL CRASHES



Male drivers made up 67.8 percent of all drivers in fatal crashes in 2011. The 859 male driver count is down 35.8 percent from 2002.

DRINKING DRIVERS IN ALL CRASHES		
	Male	Female
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
2010	7,209	2,584
2011	7,094	2,574

DRINKING DRIVERS IN ALL CRASHES



Male drivers have always accounted for the majority of drinking drivers in all crashes. In 2011, males represented 73.1 percent of all drinking drivers. The 7,094 male driver count is down 41.7 percent from 2002.

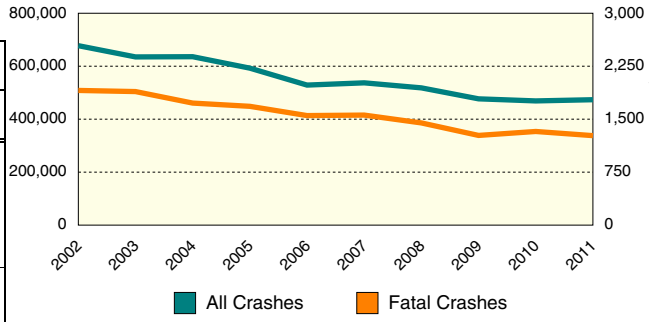
Note: 7.2 percent of all drivers (34,163), 4.5 percent of drivers (57) in fatal crashes, and 0.3 percent of all drinking drivers (33), were coded as unknown gender in 2011, and they are not counted in these tables.

MICHIGAN OHSP Office of Highway Safety Planning

10 YEAR TRENDS

ALL DRIVERS		
	All Crashes	Fatal Crashes
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
2010	468,968	1,326
2011	473,501	1,267

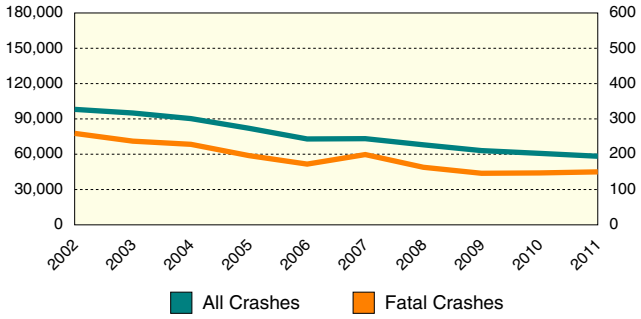
ALL DRIVERS



The number of drivers involved in all crashes decreased 30.1 percent over the ten-year period. The number of drivers involved in fatal crashes decreased 33.6 percent over the ten-year period.

TEEN/YOUNG ADULT DRIVERS		
	All Crashes	Fatal Crashes
2002	98,095	259
2003	95,011	237
2004	90,247	228
2005	82,017	196
2006	72,957	172
2007	73,210	199
2008	67,982	163
2009	63,069	146
2010	60,721	147
2011	58,279	150

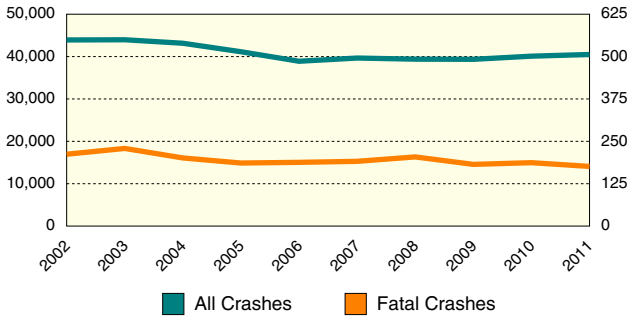
TEEN/YOUNG ADULT DRIVERS



Teen/young adult drivers (age 16-20) represented 7.2 percent of the licensed drivers in 2011. The number of teen/young adult drivers in all crashes has decreased by 40.6 percent since 2002. Their involvement in fatal crashes decreased 42.1 percent during the same time period.

ELDERLY DRIVERS		
	All Crashes	Fatal Crashes
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
2010	40,096	187
2011	40,495	176

ELDERLY DRIVERS

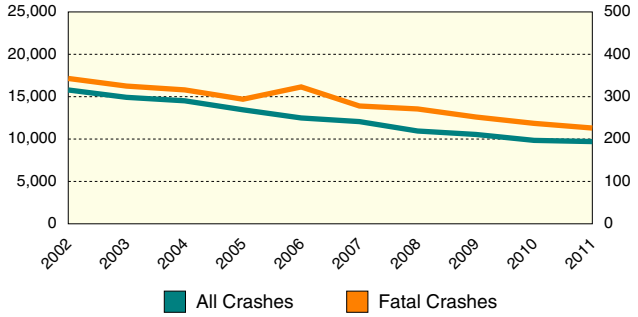


Elderly drivers (age 65-110) represent 17.2 percent of the licensed drivers in 2011. The number of drivers age 65 and older in all crashes has decreased 7.8 percent since 2002. Their involvement in fatal crashes decreased 17.0 percent during the same time period.

10 YEAR TRENDS (continued)

DRINKING DRIVERS		
	All Crashes	Fatal Crashes
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
2010	9,843	237
2011	9,701	226

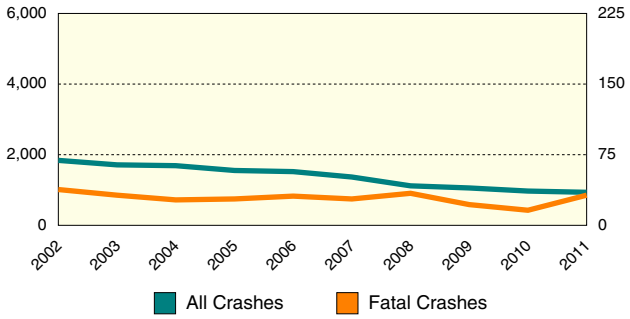
DRINKING DRIVERS



Drinking driver involvement in all crashes decreased by 38.6 percent from 2002. Drinking driver involvement in fatal crashes decreased by 34.1 percent from 2002.

TEEN/YOUNG ADULT DRINKING DRIVERS		
	All Crashes	Fatal Crashes
2002	1,839	38
2003	1,712	32
2004	1,689	27
2005	1,553	28
2006	1,521	31
2007	1,368	28
2008	1,118	34
2009	1,058	22
2010	970	16
2011	935	32

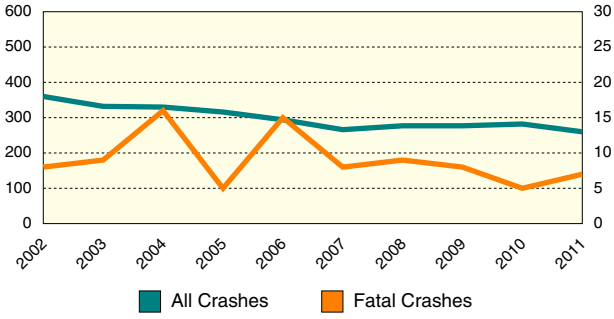
TEEN/YOUNG ADULT DRINKING DRIVERS



Following the trend for all drinking drivers, the number of teen/young adult drinking drivers (age 16-20) in all crashes decreased by 49.2 percent, and their involvement in fatal crashes decreased by 15.8 percent from 2002.

ELDERLY DRINKING DRIVERS		
	All Crashes	Fatal Crashes
2002	360	8
2003	332	9
2004	330	16
2005	316	5
2006	294	15
2007	266	8
2008	277	9
2009	277	8
2010	282	5
2011	269	7

ELDERLY DRINKING DRIVERS

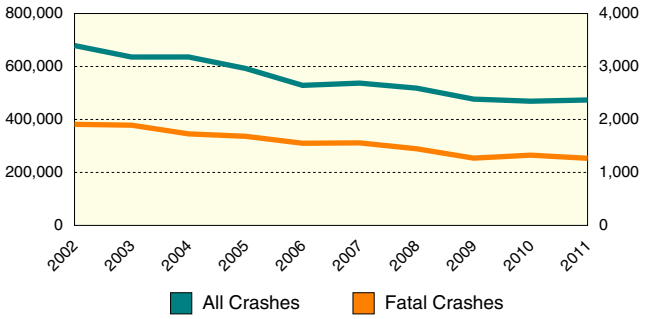


The number of elderly drinking drivers (age 65-110) in all crashes decreased by 25.3 percent from 2002.

10 YEAR TRENDS

MOTOR VEHICLES		
	All Crashes	Fatal Crashes
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
2010	468,968	1,326
2011	473,501	1,267

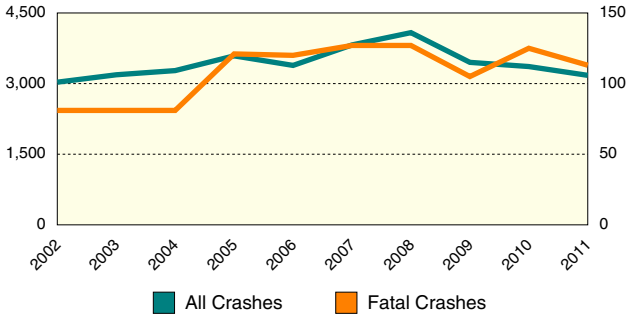
MOTOR VEHICLES



There were 1,267 motor vehicles involved in fatal crashes in 2011, down 33.6 percent from 2002. There has been a 30.3 percent decrease in all crashes.

MOTORCYCLES		
	All Crashes	Fatal Crashes
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
2010	3,362	125
2011	3,175	113

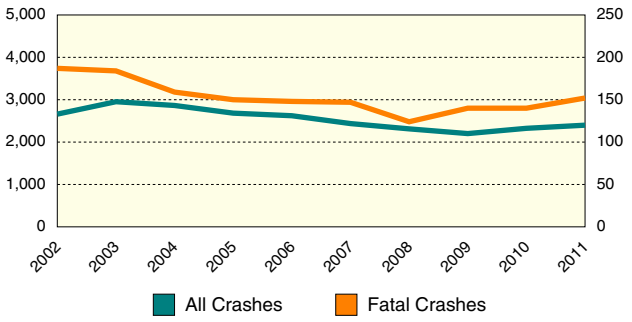
MOTORCYCLES



The number of motorcycles involved in fatal crashes has increased 39.5 percent in the ten-year period. There has been a 4.8 percent increase in all crashes.

PEDESTRIANS		
	All Crashes	Fatal Crashes
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
2010	2,325	140
2011	2,399	152

PEDESTRIANS

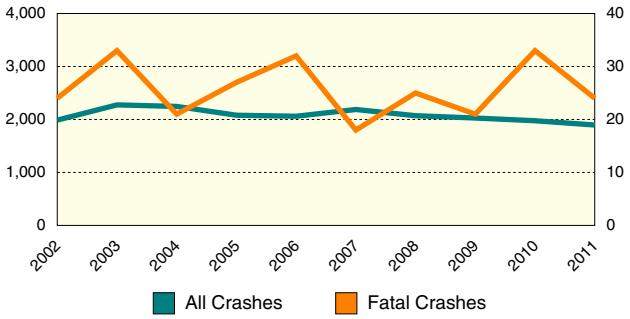


There were 152 pedestrians involved in fatal crashes in 2011, down 18.7 percent from 2002. There has been a 9.8 percent decrease in pedestrians involved in all crashes.

10 YEAR TRENDS (continued)

BICYCLES		
	All Crashes	Fatal Crashes
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
2010	1,976	33
2011	1,895	24

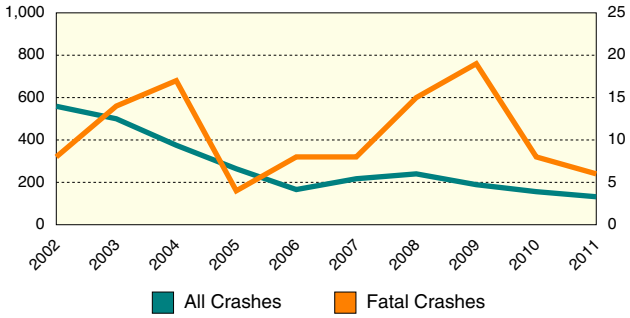
BICYCLES



There were 24 bicycles involved in fatal crashes in 2011, the same number that was recorded in 2002. However, there was a 4.7 percent decrease in bicycle crashes in the ten-year period.

SNOWMOBILES ON MICHIGAN ROADWAYS		
	All Crashes	Fatal Crashes
2002	559	8
2003	500	14
2004	375	17
2005	264	4
2006	166	8
2007	217	8
2008	240	15
2009	189	19
2010	156	8
2011	132	6

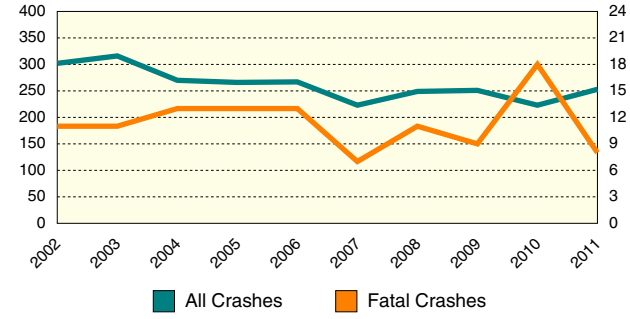
SNOWMOBILES ON MICHIGAN ROADWAYS



The 132 snowmobile crash count (in all crashes) is down 76.4 percent from 2002. The six snowmobiles in fatal crashes nears the ten-year low of four snowmobiles involved in fatal crashes on Michigan public roadways in 2005.

ORV/ATV's ON MICHIGAN ROADWAYS		
	All Crashes	Fatal Crashes
2002	302	11
2003	316	11
2004	270	13
2005	266	13
2006	267	13
2007	223	7
2008	249	11
2009	251	9
2010	223	18
2011	253	8

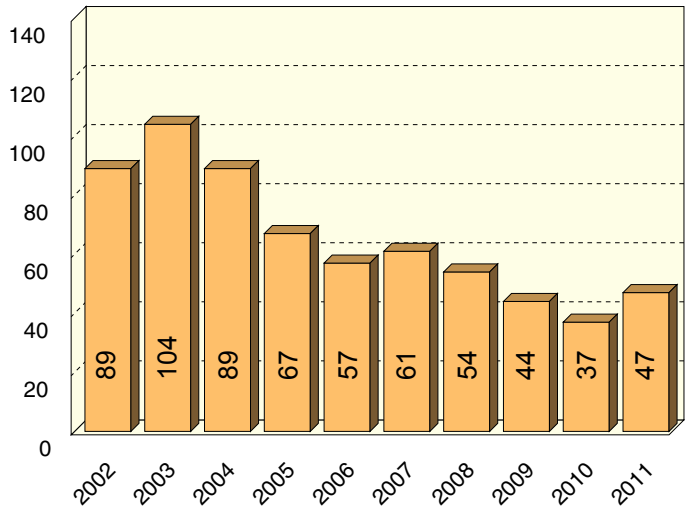
ORV/ATV's ON MICHIGAN ROADWAYS



The number of ORV/ATV's involved in fatal crashes on Michigan public roadways has ranged between seven and 18 over the ten-year period. The number of ORV/ATV's involved in all crashes has decreased 16.2 percent over the ten-year period.

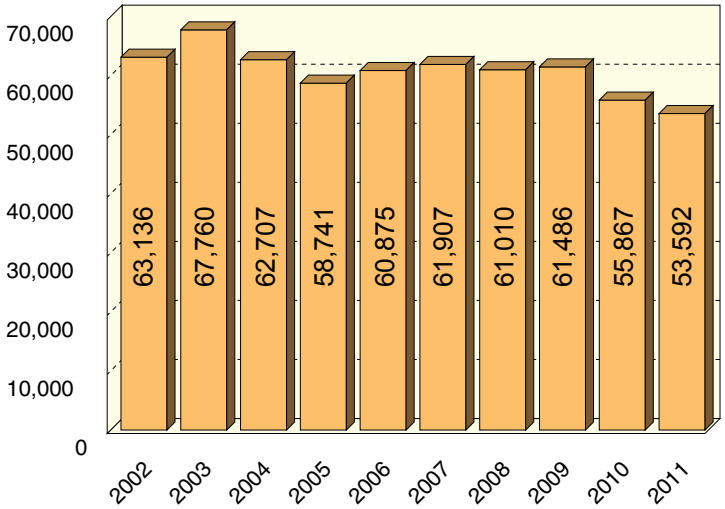
10 YEAR TRENDS

VEHICLE-TRAIN CRASHES



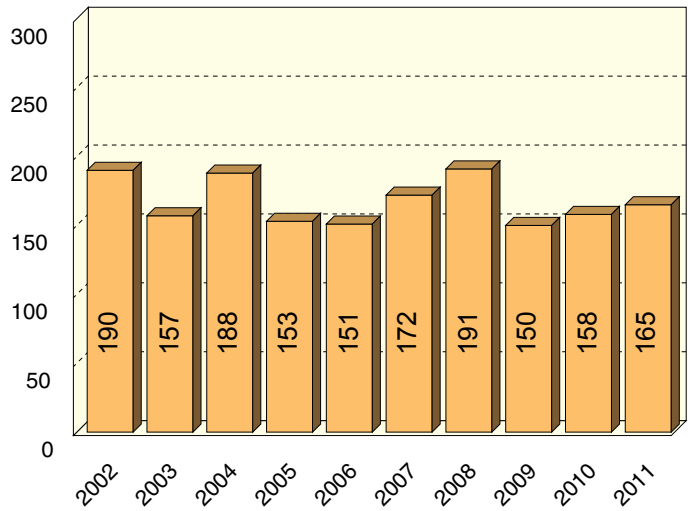
Forty-seven vehicle-train crashes occurred in 2011, a decrease of 47.2 percent in the ten-year period.

VEHICLE-DEER CRASHES



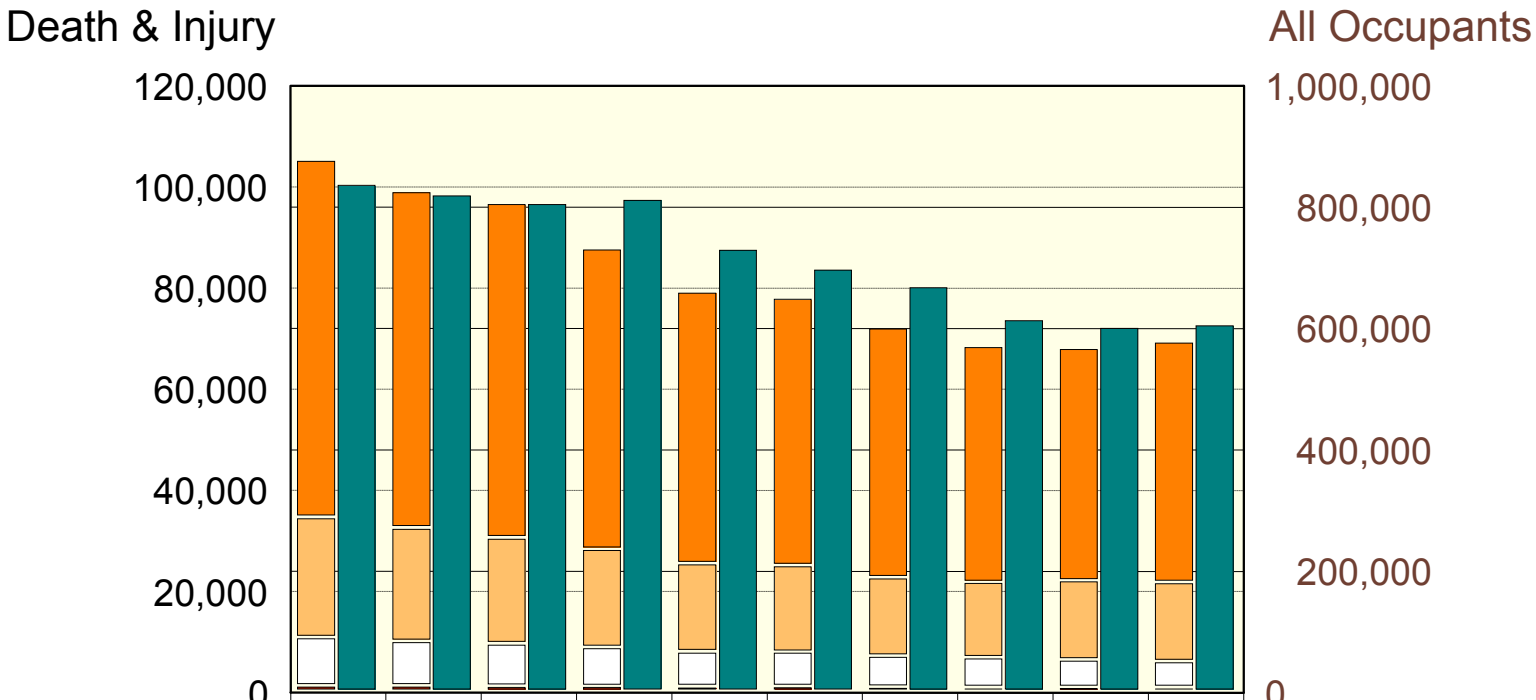
The number of vehicle-deer crashes has decreased 15.1 percent in the ten-year period.

FARM EQUIPMENT CRASHES



The 165 farm equipment crashes that occurred in 2011, is a decrease of 13.2 percent from 2002.

DEATH AND INJURY FOR CRASH-INVOLVED OCCUPANTS

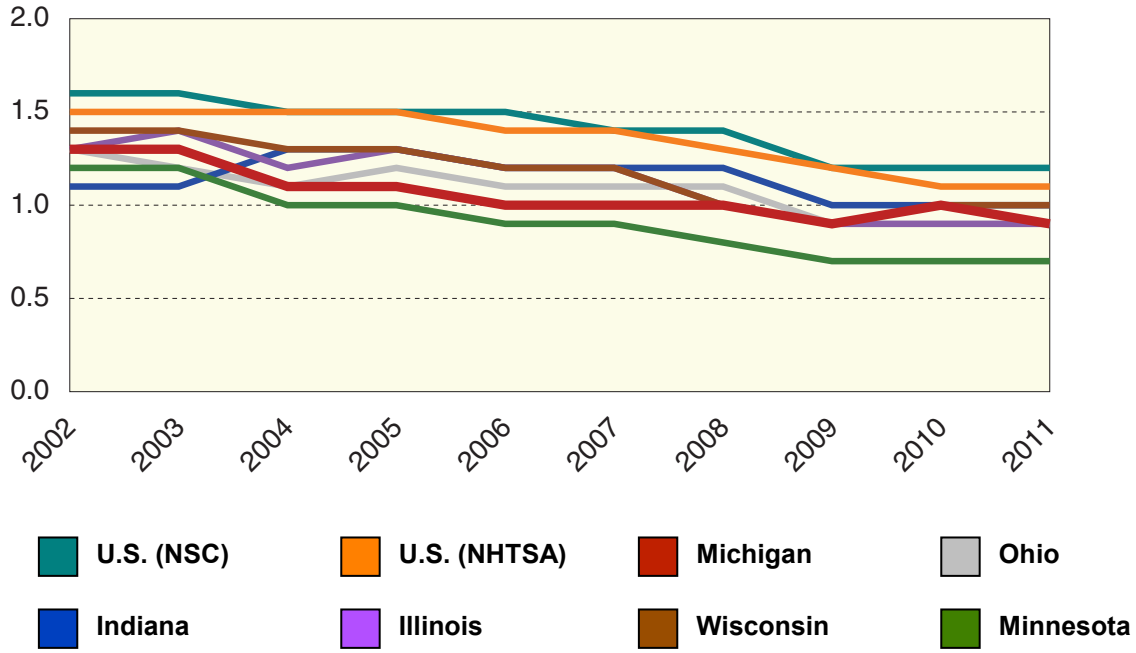


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
All Occupants	835,576	818,272	803,839	811,174	728,444	695,926	666,897	613,161	599,825	604,142
C - Injured	70,687	66,570	66,155	59,434	53,752	52,888	49,427	46,680	45,972	47,567
B - Injured	23,744	22,449	20,915	19,414	17,423	17,105	15,495	14,911	15,659	15,635
A - Injured	9,579	8,798	8,411	7,714	6,904	6,821	6,091	5,879	5,414	5,142
K - Killed	1,073	1,077	998	966	919	933	841	731	777	725

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 TRENDS

MILEAGE DEATH RATES 2002 - 2011

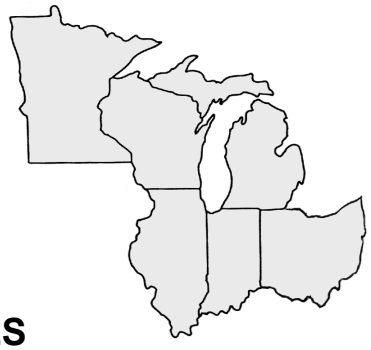


	U.S. (NSC*)	U.S. (NHTSA*)	Michigan	Ohio	Indiana	Illinois	Wisconsin	Minnesota
2002	1.6	1.5	1.3	1.3	1.1	1.3	1.4	1.2
2003	1.6	1.5	1.3	1.2	1.1	1.4	1.4	1.2
2004	1.5	1.5	1.1	1.1	1.3	1.2	1.3	1.0
2005	1.5	1.5	1.1	1.2	1.3	1.3	1.3	1.0
2006	1.5	1.4	1.0	1.1	1.2	1.2	1.2	0.9
2007	1.4	1.4	1.0	1.1	1.2	1.2	1.2	0.9
2008	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
2010	1.2	1.1	1.0	1.0	1.0	0.9	1.0	0.7
2011	1.2	1.1	0.9	0.9	1.0	0.9	1.0	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 TRENDS



MICHIGAN AND SURROUNDING STATES COMPARISON OF FATALITIES AND VMT

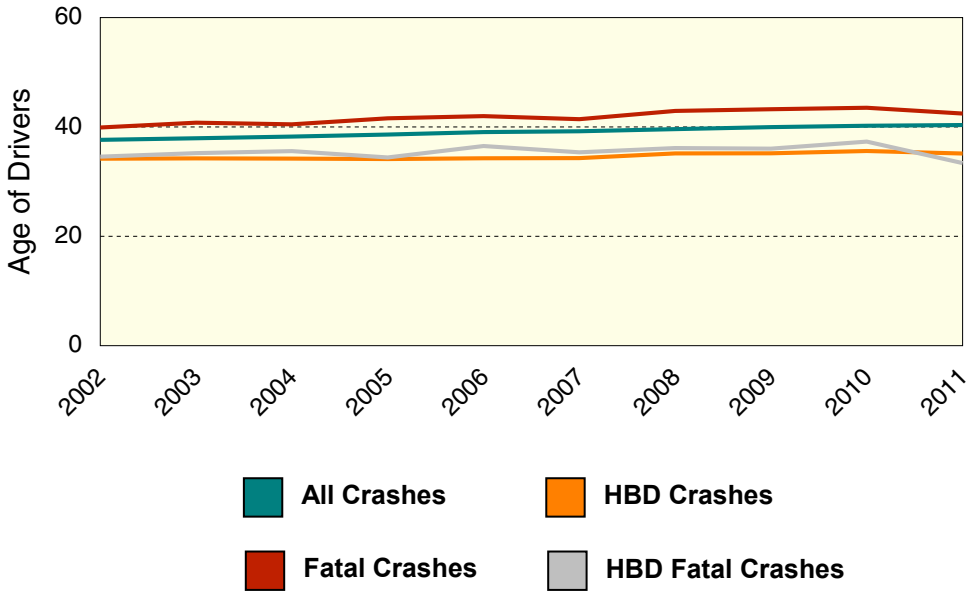
Year	U.S. (NSC) Persons Killed	U.S. (NHTSA) Persons Killed	Michigan Persons Killed	Ohio Persons Killed	Indiana Persons Killed	Illinois Persons Killed	Wisconsin Persons Killed	Minnesota Persons Killed
2002	45,380	43,005	1,279	1,417	792	1,420	805	657
2003	44,757	42,884	1,283	1,278	833	1,454	836	655
2004	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
2010	34,700	32,885	937	1,081	754	927	562	411
2011	34,600	32,367	889	1,015	749	918	565	368

Year	U.S. (FHWA) VMT	Michigan VMT	Ohio VMT	Indiana VMT	Illinois VMT	Wisconsin VMT	Minnesota VMT
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
2010	3,000	97.6	113.5	72.9	105.7	59.4	56.8
2011	2,946	94.8	111.7	77.5	103.4	58.6	56.7

VMT described in billions of miles

10 YEAR TRENDS

AVERAGE AGE OF DRIVERS IN CRASHES 2002 - 2011



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, and the average age of drivers in fatal crashes has lowered.

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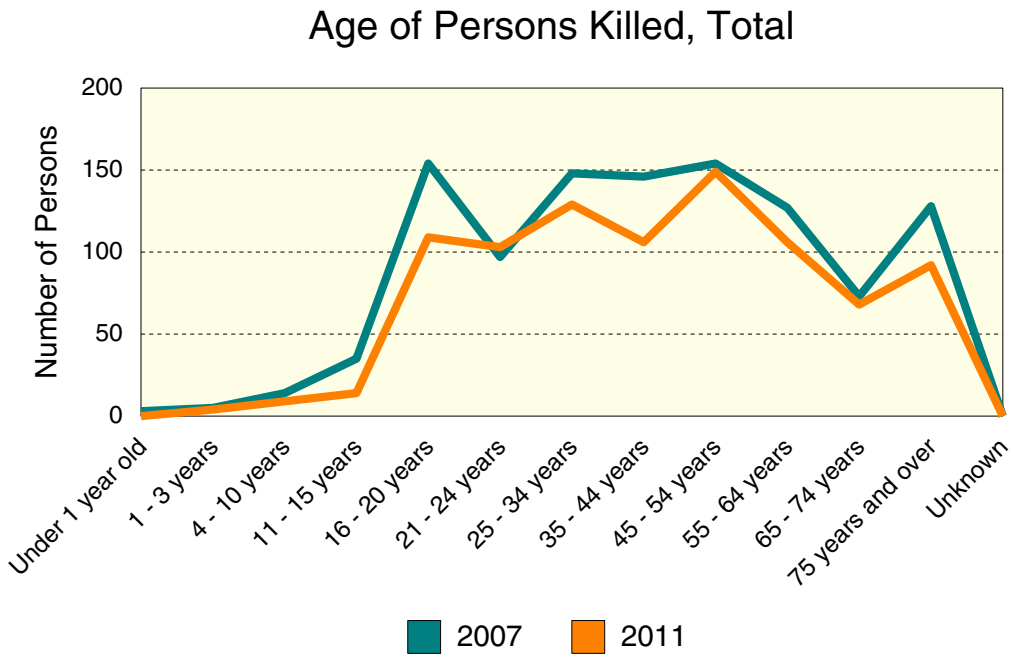
5 YEAR TRENDS

STATEWIDE TREND DATA FOR FATALITIES

TREND DATA FOR FATALITIES	2007	2008	2009	2010	2011
Age of Persons Killed, Total					
Under 1 year old	3	1	1	3	0
1 - 3 years	5	7	6	5	4
4 - 10 years	14	15	13	11	9
11 - 15 years	35	20	15	20	14
16 - 20 years	154	116	110	100	109
21 - 24 years	97	80	59	83	103
25 - 34 years	148	133	140	140	129
35 - 44 years	146	137	114	116	106
45 - 54 years	154	158	151	168	149
55 - 64 years	127	125	93	114	106
65 - 74 years	73	75	54	65	68
75 years and over	128	113	114	112	92
Unknown	0	0	1	0	0
Totals	1,084	980	871	937	889



STATEWIDE TREND DATA FOR FATALITIES (continued)

TREND DATA FOR FATALITIES	2007	2008	2009	2010	2011
Age of Drivers Involved in Fatal Crashes					
13 years and under	2	1	0	3	0
14 years	1	0	1	2	0
15 years	7	3	4	4	4
16 years	28	19	15	15	21
17 years	34	28	26	27	19
18 years	52	45	33	38	32
19 years	39	38	43	35	39
20 years	46	33	29	32	39
21 - 24 years	156	126	92	109	139
25 - 34 years	273	236	223	216	211
35 - 44 years	263	246	203	213	182
45 - 54 years	220	245	223	232	199
55 - 64 years	192	162	138	175	146
65 - 69 years	38	45	54	54	49
70 - 74 years	42	48	20	37	39
75 - 79 years	50	46	45	27	29
80 - 84 years	37	36	39	32	29
85 - 89 years	17	19	18	28	19
90 years and over	7	10	6	9	11
Unknown	54	61	58	38	60
Totals	1,558	1,447	1,270	1,326	1,267
Age of Drivers Involved in Single Vehicle Fatal Crashes					
13 years and under	2	0	0	2	0
14 years	0	0	0	1	0
15 years	4	1	1	2	2
16 years	11	5	10	4	9
17 years	10	8	7	13	7
18 years	16	17	15	14	14
19 years	14	14	11	15	16
20 years	19	11	10	13	15
21 - 24 years	64	52	40	45	73
25 - 34 years	83	76	82	80	77
35 - 44 years	81	75	57	69	56
45 - 54 years	70	73	78	75	67
55 - 64 years	55	66	33	55	49
65 - 69 years	10	14	14	24	14
70 - 74 years	12	13	6	10	16
75 - 79 years	14	9	12	10	8
80 - 84 years	7	12	12	6	9
85 - 89 years	1	4	5	8	7
90 years and over	1	1	1	3	1
Unknown	16	20	15	15	18
Totals	490	471	409	464	458

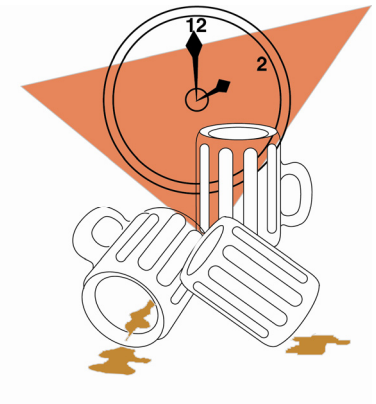
STATEWIDE TREND DATA FOR FATALITIES (continued)

TREND DATA FOR FATALITIES	2007	2008	2009	2010	2011
Age of Bicyclists Killed					
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	0
4 - 10 years	0	0	0	3	0
11 - 15 years	4	2	3	3	2
16 - 20 years	0	2	2	2	1
21 - 24 years	1	2	1	1	2
25 - 34 years	2	5	1	2	1
35 - 44 years	1	1	2	3	2
45 - 54 years	7	7	3	9	11
55 - 64 years	1	5	1	2	3
65 - 74 years	1	1	4	3	1
75 years and over	0	0	2	1	1
Unknown	0	0	0	0	0
Totals	17	25	19	29	24
Age of Pedestrians Killed					
Under 1 year old	0	0	0	0	0
1 - 3 years	4	3	3	1	2
4 - 10 years	5	2	2	1	2
11 - 15 years	6	5	0	3	1
16 - 20 years	7	8	11	9	17
21 - 24 years	7	6	5	8	9
25 - 34 years	12	14	15	20	16
35 - 44 years	27	16	25	16	17
45 - 54 years	24	25	31	30	32
55 - 64 years	18	13	14	17	24
65 - 74 years	11	11	6	10	7
75 years and over	13	11	8	16	13
Unknown	0	0	1	0	0
Totals	134	114	121	131	140

5 YEAR TRENDS

FATAL CRASHES AND PERSONS KILLED FOR SELECT HOLIDAY PERIODS IN MICHIGAN

HOLIDAY PERIOD	Fatal Crashes	Persons Killed	SUMMARY 2011
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* **2011** experience, deaths averaged **2.44** per day. Alcohol-related deaths averaged **0.75** per day. Based on the **2011** *holiday period* experience, deaths averaged **3.05** per day. Alcohol-related deaths averaged **1.16** per day.
2011 (3) MON	7 [3]	9 [5]	
2010 (3) MON	14 [4]	15 [4]	
2009 (3) MON	10 [6]	11 [7]	
2008 (3) MON	11 [2]	11 [2]	
2007 (3) MON	11 [4]	13 [4]	
Fourth of July			
2011 (3) MON	8 [4]	8 [4]	
2010 (3) SUN	8 [2]	8 [2]	
2009 (3) SAT	1 [1]	1 [1]	
2008 (3) FRI	14 [5]	14 [5]	
2007 (1) WED	4 [2]	4 [2]	
Labor Day			
2011 (3) MON	11 [4]	12 [4]	
2010 (3) MON	17 [8]	21 [12]	
2009 (3) MON	15 [5]	16 [5]	
2008 (3) MON	12 [4]	12 [4]	
2007 (3) MON	15 [8]	16 [8]	
Thanksgiving			
2011 (4) THU	7 [0]	7 [0]	
2010 (4) THU	9 [3]	10 [4]	
2009 (4) THU	10 [0]	11 [0]	
2008 (4) THU	9 [7]	13 [10]	
2007 (4) THU	11 [1]	11 [1]	
Christmas			
2011 (3) SUN	8 [4]	8 [4]	
2010 (3) SAT	6 [4]	6 [4]	
2009 (3) FRI	3 [3]	3 [3]	
2008 (4) THU	11 [2]	14 [2]	
2007 (4) TUE	11 [4]	11 [4]	
New Years			
2011 (3) SUN	13 [5]	14 [5]	
2010 (3) SAT	5 [1]	5 [1]	
2009 (3) FRI	7 [4]	8 [4]	
2008 (4) THU	15 [6]	15 [6]	
2007 (4) TUE	9 [4]	9 [4]	

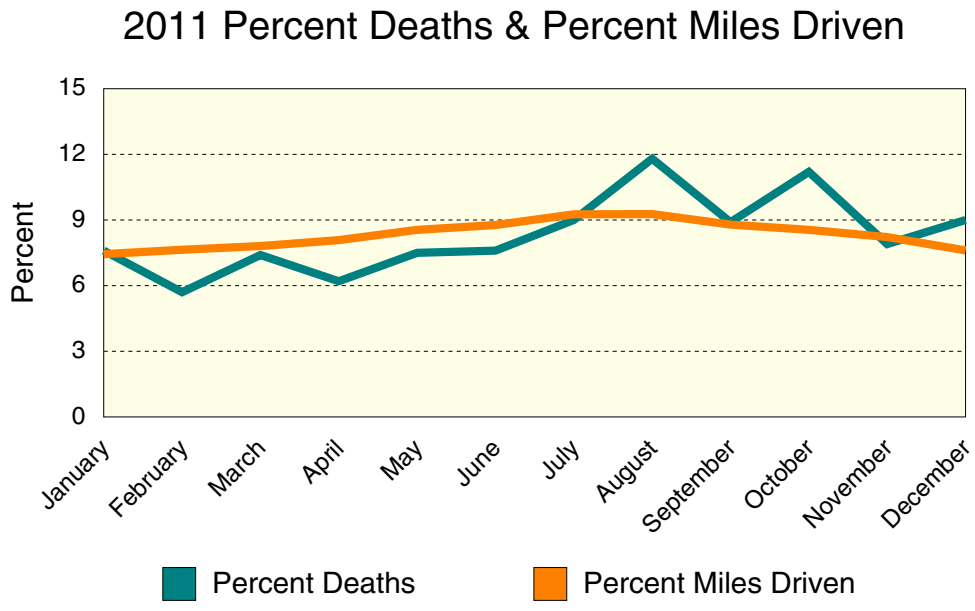


Figures in parentheses in the 1st column show number of full days in each holiday period.
Fatal crashes and deaths are for these days plus six hours of the preceding day.
Figures in brackets in the 2nd and 3rd columns show the number of alcohol-related fatal crashes and deaths.
Please view the glossary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

5 YEAR TRENDS

MOTOR VEHICLE DEATHS AND MILEAGE BY MONTH

Month	TRAFFIC DEATHS					2011 PERCENTAGES	
	2007	2008	2009	2010	2011	Percent Deaths	Percent Miles Driven
January	69	73	71	64	68	7.6	7.35
February	70	57	48	55	51	5.7	7.58
March	81	63	62	59	66	7.4	7.74
April	67	66	52	63	55	6.2	8.01
May	92	88	66	82	67	7.5	8.52
June	96	85	88	81	68	7.6	8.83
July	104	101	91	101	80	9.0	9.35
August	117	100	81	98	105	11.8	9.31
September	111	92	96	84	79	8.9	8.87
October	88	84	91	99	100	11.2	8.55
November	98	106	61	79	70	7.9	8.22
December	91	65	64	72	80	9.0	7.67
Totals	1,084	980	871	937	889	100.0	100.00



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

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1 YEAR TRENDS

STATEWIDE
2010 - 2011 SUMMARY TRENDS

* Michigan experienced a **5.1** percent decrease in traffic fatalities, a **1.8** percent increase in injuries and a **0.7** percent increase in crashes.
* Deaths among vehicle occupants (drivers and passengers only) decreased **3.3** percent.
* Persons sustaining "A" level injuries (the most serious) decreased **4.6** percent.

	2010	2011	% CHANGE
NUMBER OF CRASHES			
Fatal Crashes	868	834	-3.9
Personal Injury Crashes	51,672	52,487	1.6
Property Damage Crashes	229,535	230,728	0.5
Total	282,075	284,049	0.7
ALCOHOL-INVOLVED CRASHES			
Fatal Crashes	264	253	-4.2
Personal Injury Crashes	4,007	3,829	-4.4
Property Damage Crashes	5,715	5,763	0.8
Total	9,986	9,845	-1.4
FATAL CRASHES			
Had Been Drinking (HBD)	264 (30.4%)	253 (30.3%)	-4.2
Had Not Been Drinking / Not Known If Drinking	604 (69.6%)	581 (69.7%)	-3.8
PERSONS IN CRASHES			
Killed	937	889	-5.1
Injured	70,501	71,796	1.8
Not Injured	428,000	435,087	1.7
Unknown Injury	48,329	43,625	-9.7
Total	547,767	551,397	0.7
PERSONS IN ALCOHOL-INVOLVED CRASHES			
Killed	283	274	-3.2
Injured	5,458	5,377	-1.5
Not Injured	11,139	11,296	1.4
Unknown Injury	1,615	1,393	-13.7
Total	18,495	18,340	-0.8
PERSONS INJURED BY GENDER			
Male	32,132	32,951	2.5
Female	37,792	38,509	1.9
Unknown Gender	577	336	-41.8
Total	70,501	71,796	1.8
PERSONS INJURED BY SEVERITY			
"A" Injury	5,980	5,706	-4.6
"B" Injury	17,027	16,925	-0.6
"C" Injury	47,494	49,165	3.5
Total	70,501	71,796	1.8

1 YEAR TRENDS

STATEWIDE 2010 - 2011 SUMMARY TRENDS (continued)

	2010	2011	% CHANGE
PERSONS KILLED BY GENDER			
Male	637	627	-1.6
Female	300	262	-12.7
Total	937	889	-5.1
PERSONS KILLED			
Driver	444	435	-2.0
Passenger	168	157	-6.5
Pedestrian	131	140	6.9
Bicyclist	29	24	-17.2
Motorcyclist	125	109	-12.8
Farm Equipment	1	1	0.0
Train Engineer	0	0	0.0
Snowmobile	9	6	-33.3
ORV/ATV	18	8	-55.6
Other/Unknown	12	9	-25.0
Total	937	889	-5.1
BELT RESTRAINT USE BY DRIVER			
“Reported Restrained” - Killed	249	246	-1.2
“Reported Not Restrained” - Killed	145	145	0.0
“Reported Restrained” - Injured	43,340	44,436	2.5
“Reported Not Restrained” - Injured	1,794	1,760	-1.9
BELT RESTRAINT USE BY INJURED PASSENGER			
“Reported Restrained” - Killed	72	76	5.6
“Reported Not Restrained” - Killed	75	56	-25.3
“Reported Restrained” - Injured	13,795	14,430	4.6
“Reported Not Restrained” - Injured	1,856	1,734	-6.6
DRIVER AGE 16-20 INVOLVED			
Fatal Crashes	141	142	0.7
Personal Injury Crashes	12,342	11,867	-3.8
Property Damage Crashes	43,883	42,260	-3.7
Total All Crashes	56,366	54,269	-3.7
Persons Killed	159	157	-1.3
Persons Injured	17,883	17,446	-2.4
DRIVER AGE 65 & OVER INVOLVED			
Fatal Crashes	178	167	-6.2
Personal Injury Crashes	8,133	8,326	2.4
Property Damage Crashes	29,649	29,982	1.1
Total All Crashes	37,960	38,475	1.4
Persons Killed	191	177	-7.3
Persons Injured	11,760	11,873	1.0

MORE MICHIGAN CRASH FACTS

CRASH FACTS	2010	2011	% Change
Licensed Drivers	7,076,344	7,037,876	-0.5
Registered Vehicles in Michigan	8,101,713	8,131,862	0.4
Michigan Population	9,883,640	9,876,187	-0.1
Drivers Involved in Crashes	468,968	473,501	1.0
Vehicles Involved in Crashes	468,968	473,501	1.0
Occupants Involved in Crashes	599,825	604,142	0.7
Estimated MV Mileage Traveled (thousands)	97,638,657	94,754,135	-3.0
Death Rate Per 100 Million Vehicle Miles	1.0	0.9	-10.0
Fatal Crash Rate Per 100 Million Veh Miles	0.9	0.9	0.0

2011 COST OF CRASHES IN MICHIGAN

The cost estimate for Michigan crashes in 2011 is **$ 8,111,001,800**. This estimate is based on the National Safety Council's cost estimating procedures. Average comprehensive costs are based on the following figures:

Comprehensive Costs, 2011

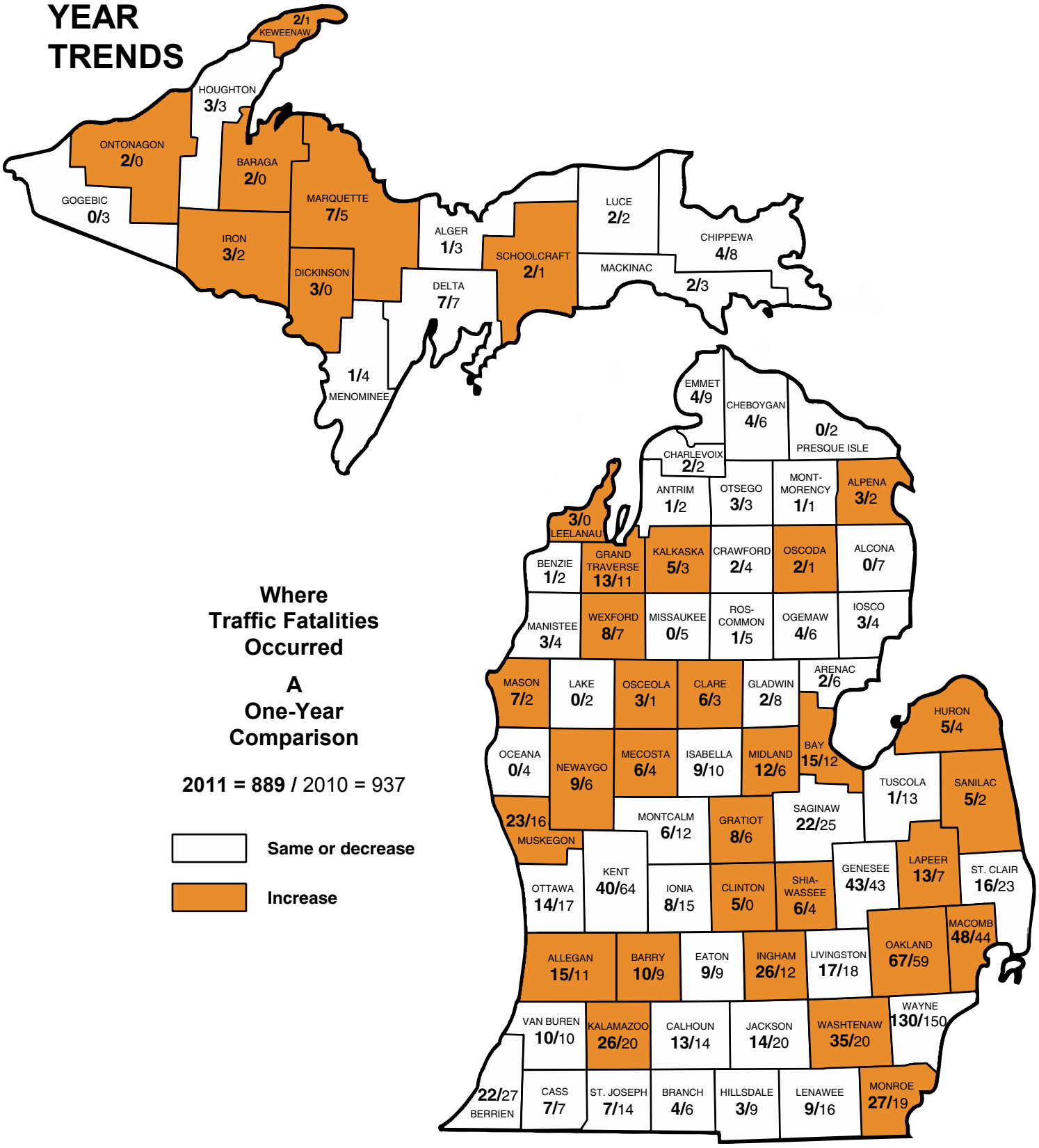
Death	$4,459,000
Incapacitating injury	$225,100
Nonincapacitating evident injury	$57,400
Possible injury	$27,200
No injury	$2,400

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.

1 YEAR TRENDS

WHERE TRAFFIC FATALITIES OCCURRED



Where Traffic Fatalities Occurred A One-Year Comparison

2011 = 889 / 2010 = 937

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
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
2010	64	55	59	63	82	81	101	98	84	99	79	72	937
2011	68	51	66	55	67	68	80	105	79	100	70	80	889

MOTOR VEHICLE TRAFFIC CRASH AND RELATED DATA

Year	Deaths	Number of Persons Injured	Crashes	Estimated Mileage (Millions)	Motor Vehicle Registrations*	Death Rate Per 100 million miles of travel
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	095,910.1	8,145,728	0.9
2010	937	70,501	282,075	97,638.7	8,101,713	1.0
2011	889	71,796	284,049	94,754.1	8,131,862	0.9

* Excludes trailers and trailer coaches, and includes mopeds

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Age

AGE and INJURY SEVERITY by PERSON TYPE

Age	Driver			Injured Passenger			Motorcyclist			Bicyclist			Pedestrian		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
0*	60	0	3	181	0	181	1	0	0	129	0	88	127	0	101
1	8	0	1	163	1	162	0	0	0	1	0	0	7	0	6
2	3	0	0	181	1	180	0	0	0	1	0	0	10	2	6
3	1	0	0	223	0	223	0	0	0	0	0	0	10	0	9
4	3	0	1	239	2	237	0	0	0	6	0	4	15	0	14
5	0	0	0	218	2	216	2	0	2	11	0	10	18	0	14
6	1	0	0	243	1	242	2	0	2	6	0	6	17	0	15
7	4	0	2	264	0	264	1	0	1	19	0	15	27	1	21
8	2	0	1	278	1	277	2	0	2	12	0	10	21	0	17
9	2	0	2	284	0	284	2	0	1	22	0	18	32	0	27
10	16	0	9	277	1	276	5	0	4	26	0	23	26	1	21
11	15	0	4	297	1	296	2	0	2	38	0	31	36	0	33
12	21	0	9	312	0	312	4	0	4	48	0	44	32	0	29
13	31	0	19	342	3	339	8	0	8	49	0	41	43	1	34
14	108	0	33	405	2	402	4	0	4	64	2	57	57	0	52
15	575	2	76	519	3	514	4	1	2	73	0	59	69	0	64
16	7,571	8	771	618	4	610	8	0	7	64	0	56	59	3	52
17	10,586	6	1,124	689	6	681	15	0	15	71	0	57	52	4	41
18	13,210	11	1,581	752	7	745	32	0	22	58	0	43	83	4	69
19	13,582	17	1,587	655	10	643	45	1	36	55	1	39	70	5	60
20	13,330	19	1,603	585	3	581	76	3	58	62	0	51	59	1	54
21	12,871	15	1,536	535	8	526	93	5	73	66	0	59	64	2	59
22	11,772	19	1,446	411	7	403	82	2	65	50	1	40	53	3	45
23	10,816	19	1,248	361	5	356	72	3	50	51	1	37	58	2	46
24	9,788	14	1,164	322	5	317	95	3	74	23	0	23	40	2	33
25	9,360	10	1,143	273	4	268	80	1	57	27	1	25	38	2	33
26	9,027	12	1,056	265	9	253	60	3	43	15	0	14	41	0	38
27	8,427	4	1,012	239	5	234	59	1	47	19	0	16	36	3	30
28	8,266	7	967	243	3	238	52	1	44	34	0	33	22	0	19
29	8,026	11	945	200	1	199	65	4	47	26	0	24	29	1	24
30	7,964	9	969	217	2	214	49	2	34	22	0	16	35	2	28
31	7,935	9	912	166	1	164	66	4	46	16	0	9	25	2	21
32	7,562	6	885	174	3	171	44	1	38	14	0	12	36	1	34

* Driver age is calculated from birth date, and invalid date of birth entry errors result in age "0" drivers.

AGE and INJURY SEVERITY by PERSON TYPE (continued)

Age	Driver			Injured Passenger			Motorcyclist			Bicyclist			Pedestrian		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
33	7,257	9	860	163	2	161	51	1	35	10	0	9	27	4	21
34	7,272	5	861	152	0	150	43	2	29	12	0	10	23	1	21
35	6,899	4	795	163	2	161	55	3	42	11	0	9	14	2	9
36	7,096	6	842	141	0	141	68	3	42	12	0	10	25	1	20
37	6,904	8	774	150	0	149	54	1	41	7	0	5	29	0	28
38	7,249	9	809	149	0	149	47	1	32	8	1	4	28	1	23
39	7,708	5	857	173	1	171	74	0	51	16	1	14	26	1	24
40	8,180	4	938	173	2	171	65	0	50	13	0	10	28	3	22
41	8,070	14	866	157	2	155	61	2	51	19	0	16	34	2	29
42	7,755	6	876	145	0	144	51	1	43	10	0	10	25	1	21
43	7,492	15	799	160	1	159	59	4	47	12	0	10	37	5	31
44	7,629	8	859	169	0	169	79	4	51	25	0	22	23	1	20
45	7,656	12	827	161	0	159	78	5	50	15	1	11	24	3	17
46	7,764	10	842	155	0	155	76	3	51	25	0	21	33	1	29
47	8,049	7	910	156	0	156	59	2	46	23	0	19	34	7	24
48	8,026	11	917	177	1	176	108	3	73	23	1	17	30	1	25
49	7,821	10	855	169	2	167	73	4	43	34	0	29	34	2	27
50	7,791	8	867	164	1	163	94	3	59	22	3	16	27	4	21
51	7,628	7	895	176	1	175	85	2	64	24	1	20	21	1	18
52	7,376	11	923	188	1	187	84	1	70	26	1	22	31	6	22
53	7,453	13	888	149	0	149	89	3	67	26	2	17	40	4	32
54	7,005	9	834	175	2	172	81	4	67	20	2	14	30	3	25
55	6,876	2	841	169	2	167	105	2	84	28	0	21	29	2	23
56	6,808	4	809	149	1	148	80	1	60	20	0	14	19	1	18
57	6,180	8	763	140	1	138	68	3	49	20	2	15	30	1	25
58	6,070	11	700	131	0	131	79	3	66	21	1	16	21	6	14
59	5,594	6	674	145	1	143	69	3	53	20	0	16	25	2	17
60	5,424	7	611	138	0	138	66	3	53	20	0	20	27	1	25
61	4,916	10	573	124	1	123	55	1	41	10	0	7	14	3	10
62	4,640	10	548	121	2	119	44	0	33	13	0	9	11	1	8
63	4,648	3	545	127	3	124	50	1	42	8	0	6	16	2	11
64	4,477	6	524	132	1	131	50	1	33	10	0	7	17	5	11
65	3,402	9	418	106	1	105	31	2	24	7	0	7	7	1	4

AGE and INJURY SEVERITY by PERSON TYPE (continued)

Age	Driver			Injured Passenger			Motorcyclist			Bicyclist			Pedestrian		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
66	3,043	3	397	99	0	99	30	0	24	6	0	6	9	0	8
67	3,010	6	354	85	0	85	26	0	20	5	0	4	11	0	11
68	3,169	6	373	87	0	87	21	0	19	6	0	5	16	2	11
69	2,712	1	315	70	3	67	15	0	9	1	1	0	5	0	5
70	2,294	4	319	87	3	84	14	0	10	4	0	4	6	2	4
71	2,068	9	267	72	3	69	10	1	8	4	0	4	7	0	7
72	1,962	2	236	68	1	67	15	0	11	1	0	1	16	2	12
73	1,930	3	228	71	1	70	4	0	2	3	0	3	2	0	2
74	1,749	4	201	68	1	66	2	0	1	4	0	2	4	0	3
75	1,540	2	210	60	2	58	1	0	1	2	0	2	5	1	4
76	1,431	4	155	50	0	50	5	1	3	3	0	3	10	2	7
77	1,356	4	181	56	0	56	2	0	2	2	0	2	5	1	4
78	1,263	3	168	49	3	46	2	0	2	2	0	2	3	0	3
79	1,240	4	145	59	0	59	2	0	2	1	1	0	6	1	5
80	1,228	3	158	56	0	56	0	0	0	0	0	0	8	0	7
81	1,073	2	149	51	1	50	1	0	1	0	0	0	6	2	4
82	977	4	140	38	4	34	0	0	0	1	0	1	2	1	1
83	945	7	117	40	1	39	0	0	0	0	0	0	6	1	5
84	814	5	114	53	3	50	0	0	0	0	0	0	3	1	2
85	678	1	109	44	1	43	1	0	1	0	0	0	6	0	6
86	628	3	86	24	0	24	0	0	0	3	0	3	2	0	2
87	501	3	63	31	0	31	0	0	0	0	0	0	3	1	1
88	401	2	54	20	0	20	0	0	0	0	0	0	2	0	2
89	344	3	45	15	1	14	0	0	0	0	0	0	3	1	2
90	236	5	36	20	1	19	0	0	0	0	0	0	0	0	0
91	172	0	24	13	0	13	0	0	0	0	0	0	0	0	0
92	110	1	16	11	2	9	0	0	0	0	0	0	0	0	0
93	71	1	11	11	0	11	0	0	0	0	0	0	2	1	1
94	48	0	4	2	0	2	0	0	0	0	0	0	0	0	0
95	31	1	4	0	0	0	0	0	0	0	0	0	0	0	0
96	17	0	1	3	1	2	0	0	0	0	0	0	0	0	0
97	7	0	1	2	0	2	0	0	0	0	0	0	0	0	0
98	7	0	0	1	0	1	0	0	0	0	0	0	0	0	0

AGE and INJURY SEVERITY by PERSON TYPE (continued)

Age	Driver			Injured Passenger			Motorcyclist			Bicyclist			Pedestrian		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
99	30	0	3	3	0	3	0	0	0	0	0	0	0	0	0
100	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1
102	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
103	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
107	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	40,350	0	79	189	0	167	97	0	10	99	0	24	63	0	28
2011 Totals	473,501*	561	50,772	17,791*	164	17,572	3,509*	109	2,556	1,895*	24	1,479	2,399*	140	1,973
	* Includes 37,848 drivers with unknown injury severity and 384,320 with no injury			* Includes 55 passengers with unknown injury severity			* Includes 82 motorcyclists with unknown injury severity and 762 with no injury			* Includes 68 bicyclists with unknown injury severity and 324 with no injury			* Includes 99 pedestrians with unknown injury severity and 187 with no injury		

DRIVER AGE 16-20

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	32,825	56.3	118	78.7	7,615	59.9
Turning left	5,345	9.2	9	6.0	1,441	11.3
Turning right	1,709	2.9	2	1.3	266	2.1
Stopped on roadway	3,910	6.7	2	1.3	793	6.2
In prior crash	81	0.1	1	0.7	12	0.1
Changing lanes	1,894	3.2	4	2.7	242	1.9
Backing	1,175	2.0	0	0.0	58	0.5
Slowing/stopping on roadway	6,257	10.7	2	1.3	1,111	8.7
Slowing/stopping other	78	0.1	0	0.0	12	0.1
Starting up on roadway	1,409	2.4	1	0.7	323	2.5
Starting up other	15	0.0	0	0.0	6	0.0
Entering parking	33	0.1	0	0.0	2	0.0
Leaving parking	178	0.3	0	0.0	26	0.2
Entering roadway	1,031	1.8	1	0.7	232	1.8
Leaving roadway	117	0.2	0	0.0	32	0.3
Making U-turn	97	0.2	0	0.0	16	0.1
Overtaking or passing	486	0.8	6	4.0	104	0.8
Avoiding object	117	0.2	1	0.7	35	0.3
Avoiding animal	218	0.4	1	0.7	77	0.6
Avoiding pedestrian	12	0.0	0	0.0	4	0.0
Avoiding vehicle (front/back)	573	1.0	0	0.0	159	1.3
Avoiding vehicle (angle)	228	0.4	1	0.7	48	0.4
Driverless moving	7	0.0	0	0.0	0	0.0
Parked	100	0.2	0	0.0	11	0.1
Crossing at intersection	3	0.0	0	0.0	1	0.0
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	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	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	1	0.0
Not in roadway	1	0.0	0	0.0	0	0.0
Other	49	0.1	0	0.0	13	0.1
Unknown	327	0.6	1	0.7	68	0.5
Total Drivers	58,279	100.0	150	100.0	12,710	100.0

DRIVER AGE 16-20 (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	362	0.6	1	0.7	92	0.7
Cross center/median	47	0.1	0	0.0	9	0.1
Ran off road left	125	0.2	0	0.0	26	0.2
Ran off road right	191	0.3	0	0.0	42	0.3
Re-enter road	9	0.0	0	0.0	1	0.0
Overturn	1,500	2.6	13	8.7	679	5.3
Separation of units	21	0.0	0	0.0	2	0.0
Fire/explosion	45	0.1	0	0.0	10	0.1
Immersion	9	0.0	0	0.0	2	0.0
Jackknife	13	0.0	0	0.0	2	0.0
Downhill runaway	2	0.0	0	0.0	0	0.0
Cargo loss/shift	21	0.0	0	0.0	2	0.0
Individual fell off	43	0.1	1	0.7	38	0.3
Other noncollision	98	0.2	1	0.7	14	0.1
NONCOLLISION Subtotal	2,486	4.3	16	10.7	919	7.2

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	169	0.3	8	5.3	148	1.2
Bicyclist (Pedalcycle)	152	0.3	4	2.7	122	1.0
Motor vehicle in transport	42,174	72.4	81	54.0	9,333	73.4
Parked motor vehicle	1,275	2.2	0	0.0	136	1.1
Railway train	10	0.0	2	1.3	6	0.0
Animal	3,504	6.0	1	0.7	73	0.6
Other nonfixed objects	292	0.5	1	0.7	28	0.2
COLLISION NONFIXED Subtotal	47,576	81.6	97	64.7	9,846	77.5

DRIVER AGE 16-20 (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	63	0.1	0	0.0	17	0.1
Bridge parapet end	9	0.0	0	0.0	2	0.0
Bridge rail	68	0.1	0	0.0	9	0.1
Guardrail face	508	0.9	0	0.0	89	0.7
Guardrail end	88	0.2	0	0.0	19	0.1
Median barrier	768	1.3	1	0.7	204	1.6
Highway traffic sign post	466	0.8	0	0.0	21	0.2
Highway signal post	40	0.1	0	0.0	5	0.0
Luminaire/light support	109	0.2	0	0.0	21	0.2
Utility pole	582	1.0	4	2.7	184	1.4
Other pole	135	0.2	0	0.0	18	0.1
Culvert	118	0.2	0	0.0	41	0.3
Curb	281	0.5	0	0.0	17	0.1
Ditch	1,276	2.2	3	2.0	295	2.3
Embankment	240	0.4	0	0.0	65	0.5
Fence	170	0.3	0	0.0	15	0.1
Mailbox	353	0.6	0	0.0	25	0.2
Tree	2,048	3.5	26	17.3	680	5.4
Rail crossing signal	7	0.0	0	0.0	4	0.0
Building	95	0.2	0	0.0	36	0.3
Traffic island	12	0.0	0	0.0	3	0.0
Fire hydrant	92	0.2	0	0.0	12	0.1
Impact attenuator	9	0.0	0	0.0	2	0.0
Other fixed object	426	0.7	3	2.0	91	0.7
COLLISION FIXED Subtotal	7,963	13.7	37	24.7	1,875	14.8

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 (21-64 and 65 & over).

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	254	0.4	0	0.0	70	0.6
TOTAL MOST HARMFUL EVENT	58,279	100.0	150	100.0	12,710	100.0

DRIVER AGE 16-20 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Single Vehicle	13,581	23.3	61	40.7	2,852	22.4
Head On	841	1.4	27	18.0	385	3.0
Head On - Left Turn	1,954	3.4	6	4.0	759	6.0
Angle	12,278	21.1	31	20.7	3,385	26.6
Rear End	19,058	32.7	7	4.7	3,773	29.7
Rear End - Left Turn	975	1.7	0	0.0	263	2.1
Rear End - Right Turn	643	1.1	0	0.0	98	0.8
Sideswipe - Same Direction	5,379	9.2	10	6.7	520	4.1
Sideswipe - Opposite Direct	1,122	1.9	4	2.7	192	1.5
Other/Unknown	2,448	4.2	4	2.7	483	3.8
Total Drivers	58,279	100.0	150	100.0	12,710	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 (21-64 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	49,178	84.4	106	70.7	10,385	81.7
Median	418	0.7	3	2.0	108	0.8
Shoulder	2,406	4.1	4	2.7	571	4.5
Outside of Shoulder/Curb	5,148	8.8	35	23.3	1,382	10.9
Gore	221	0.4	0	0.0	54	0.4
Other/Unknown	908	1.6	2	1.3	210	1.7
Total Drivers	58,279	100.0	150	100.0	12,710	100.0

When compared to the other two age groups (21-64 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	5,792	9.9	19	12.7	1,271	10.0
U.S. & Michigan Roads	15,809	27.1	37	24.7	3,433	27.0
County & City Roads	36,678	62.9	94	62.7	8,006	63.0
Total Drivers	58,279	100.0	150	100.0	12,710	100.0

DRIVER AGE 16-20 (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	2,545	4.4	19	12.7	612	4.8
03:00 AM - 05:59 AM	1,216	2.1	11	7.3	316	2.5
06:00 AM - 08:59 AM	6,215	10.7	18	12.0	1,144	9.0
09:00 AM - 11:59 AM	5,855	10.0	10	6.7	1,282	10.1
Noon - 02:59 PM	10,827	18.6	16	10.7	2,455	19.3
03:00 PM - 05:59 PM	16,103	27.6	25	16.7	3,574	28.1
06:00 PM - 08:59 PM	9,270	15.9	28	18.7	1,982	15.6
09:00 PM - 11:59 PM	6,194	10.6	23	15.3	1,330	10.5
Unknown	54	0.1	0	0.0	15	0.1
Total Drivers	58,279	100.0	150	100.0	12,710	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	19,602	33.6	41	27.3	3,659	28.8	83	0.4
Speed too fast	7,098	12.2	33	22.0	1,617	12.7	2,698	13.2
Speed too slow	60	0.1	1	0.7	8	0.1	19	0.1
Failed to yield	7,394	12.7	8	5.3	2,012	15.8	4,743	23.2
Disregard traffic control	1,510	2.6	9	6.0	582	4.6	990	4.8
Drove wrong way	41	0.1	1	0.7	9	0.1	22	0.1
Drove left of center	334	0.6	7	4.7	107	0.8	163	0.8
Improper passing	367	0.6	0	0.0	56	0.4	176	0.9
Improper lane use	1,236	2.1	1	0.7	124	1.0	670	3.3
Improper turn	651	1.1	0	0.0	100	0.8	327	1.6
Improper/no signal	90	0.2	0	0.0	20	0.2	28	0.1
Improper backing	888	1.5	0	0.0	23	0.2	319	1.6
Unable to stop in assured clear distance	12,723	21.8	4	2.7	2,527	19.9	7,714	37.7
Reckless driving	364	0.6	15	10.0	149	1.2	178	0.9
Careless/negligent driving	2,385	4.1	11	7.3	829	6.5	1,440	7.0
Other	2,267	3.9	11	7.3	543	4.3	815	4.0
Unknown	1,269	2.2	8	5.3	345	2.7	58	0.3
Total Drivers	58,279	100.0	150	100.0	12,710	100.0	20,443	100.0

Compared to the other two age groups (21-64 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 16-20 (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Monday	8,082	13.9	18	12.0	1,815	14.3
Tuesday	8,575	14.7	21	14.0	1,826	14.4
Wednesday	8,515	14.6	23	15.3	1,859	14.6
Thursday	8,854	15.2	19	12.7	1,873	14.7
Friday	10,219	17.5	21	14.0	2,050	16.1
Saturday	8,087	13.9	29	19.3	1,904	15.0
Sunday	5,947	10.2	19	12.7	1,383	10.9
Total Drivers	58,279	100.0	150	100.0	12,710	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	30,962	53.1	97	64.7	6,521	51.3
Female	27,307	46.9	53	35.3	6,188	48.7
Unknown	10	0.0	0	0.0	1	0.0
Total Drivers	58,279	100.0	150	100.0	12,710	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	40,491	69.5	80	53.3	7,964	62.7
2 occupants	12,340	21.2	41	27.3	3,090	24.3
3 occupants	3,404	5.8	20	13.3	1,002	7.9
4 occupants	1,293	2.2	3	2.0	440	3.5
5 occupants	396	0.7	4	2.7	129	1.0
6 + occupants	116	0.2	2	1.3	48	0.4
0 occupants	67	0.1	0	0.0	6	0.0
Unknown	172	0.3	0	0.0	31	0.2
Total Drivers	58,279	100.0	150	100.0	12,710	100.0

DRIVER AGE 16-20 (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	50,300	86.3	120	80.0	10,775	84.8
Van and Motorhome	1,285	2.2	1	0.7	313	2.5
Pickup	5,397	9.3	20	13.3	1,169	9.2
Small Truck (under 10,000 lbs.)	832	1.4	2	1.3	184	1.4
Motorcycle	156	0.3	4	2.7	123	1.0
Moped	52	0.1	1	0.7	45	0.4
Go Cart	1	0.0	0	0.0	0	0.0
Snowmobile	16	0.0	0	0.0	15	0.1
Off Road Vehicle	39	0.1	0	0.0	34	0.3
Other	71	0.1	0	0.0	26	0.2
Unknown	62	0.1	1	0.7	10	0.1
CDL Truck/Bus (breakdown below)	68	0.1	1	0.7	16	0.1
Total Number of Drivers	58,279	100.0	150	100.0	12,710	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	23	33.8	0	0.0	6	37.5
Commercial Vehicle: Group B	9	13.2	1	100.0	1	6.3
Commercial Vehicle: Group C	5	7.4	0	0.0	1	6.3
Other Truck	26	38.2	0	0.0	5	31.3
Unknown Truck	5	7.4	0	0.0	3	18.8
Total Number of Drivers	68	100.0	1	100.0	16	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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DRIVER AGE 21-64

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	188,925	56.6	708	80.7	38,168	55.7
Turning left	20,721	6.2	27	3.1	5,303	7.7
Turning right	8,774	2.6	8	0.9	1,371	2.0
Stopped on roadway	41,499	12.4	22	2.5	9,822	14.3
In prior crash	358	0.1	2	0.2	96	0.1
Changing lanes	7,885	2.4	19	2.2	1,083	1.6
Backing	7,296	2.2	1	0.1	288	0.4
Slowing/stopping on roadway	32,868	9.9	16	1.8	6,795	9.9
Slowing/stopping other	459	0.1	1	0.1	114	0.2
Starting up on roadway	6,897	2.1	9	1.0	1,526	2.2
Starting up other	136	0.0	0	0.0	30	0.0
Entering parking	277	0.1	0	0.0	31	0.0
Leaving parking	759	0.2	0	0.0	154	0.2
Entering roadway	3,642	1.1	7	0.8	835	1.2
Leaving roadway	510	0.2	4	0.5	172	0.3
Making U-turn	532	0.2	3	0.3	146	0.2
Overtaking or passing	2,031	0.6	6	0.7	401	0.6
Avoiding object	488	0.1	1	0.1	118	0.2
Avoiding animal	819	0.2	1	0.1	201	0.3
Avoiding pedestrian	67	0.0	3	0.3	25	0.0
Avoiding vehicle (front/back)	2,937	0.9	19	2.2	752	1.1
Avoiding vehicle (angle)	1,297	0.4	8	0.9	333	0.5
Driverless moving	45	0.0	0	0.0	7	0.0
Parked	1,760	0.5	6	0.7	193	0.3
Crossing at intersection	7	0.0	0	0.0	2	0.0
Crossing not at intersection	11	0.0	0	0.0	3	0.0
Getting on/off vehicle	1	0.0	0	0.0	0	0.0
In roadway with traffic	7	0.0	0	0.0	1	0.0
In roadway against traffic	4	0.0	0	0.0	3	0.0
Standing/lying in roadway	2	0.0	0	0.0	0	0.0
Pushing/working on vehicle	1	0.0	0	0.0	0	0.0
Other working in roadway	8	0.0	0	0.0	2	0.0
Playing in roadway	1	0.0	0	0.0	1	0.0
In roadway other reason	7	0.0	0	0.0	2	0.0
Not in roadway	19	0.0	0	0.0	8	0.0
Other	332	0.1	1	0.1	72	0.1
Unknown	2,145	0.6	5	0.6	462	0.7
Total Drivers	333,527	100.0	877	100.0	68,520	100.0

DRIVER AGE 21-64 (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	1,471	0.4	2	0.2	439	0.6
Cross center/median	249	0.1	1	0.1	64	0.1
Ran off road left	448	0.1	2	0.2	93	0.1
Ran off road right	866	0.3	1	0.1	183	0.3
Re-enter road	51	0.0	0	0.0	17	0.0
Overturn	4,778	1.4	59	6.7	2,375	3.5
Separation of units	163	0.0	0	0.0	23	0.0
Fire/explosion	317	0.1	4	0.5	45	0.1
Immersion	47	0.0	1	0.1	7	0.0
Jackknife	165	0.0	0	0.0	18	0.0
Downhill runaway	29	0.0	0	0.0	8	0.0
Cargo loss/shift	309	0.1	0	0.0	27	0.0
Individual fell off	297	0.1	4	0.5	267	0.4
Other noncollision	890	0.3	1	0.1	210	0.3
NONCOLLISION Subtotal	10,080	3.0	75	8.6	3,776	5.5

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	1,160	0.3	98	11.2	938	1.4
Pedalcycle (Bicyclist)	1,068	0.3	19	2.2	835	1.2
Motor vehicle in transport	235,022	70.5	500	57.0	54,079	78.9
Parked motor vehicle	6,507	2.0	10	1.1	612	0.9
Railway train	50	0.0	4	0.5	16	0.0
Animal	45,711	13.7	2	0.2	820	1.2
Other nonfixed objects	3,166	0.9	5	0.6	259	0.4
COLLISION NONFIXED Subtotal	292,684	87.8	638	72.7	57,559	84.0

DRIVER AGE 21-64 (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	414	0.1	1	0.1	100	0.1
Bridge parapet end	46	0.0	0	0.0	3	0.0
Bridge rail	394	0.1	0	0.0	96	0.1
Guardrail face	2,569	0.8	4	0.5	444	0.6
Guardrail end	371	0.1	2	0.2	90	0.1
Median barrier	3,557	1.1	5	0.6	944	1.4
Highway traffic sign post	1,717	0.5	3	0.3	107	0.2
Highway signal post	166	0.0	0	0.0	17	0.0
Luminaire/light support	399	0.1	5	0.6	82	0.1
Utility pole	1,897	0.6	14	1.6	588	0.9
Other pole	584	0.2	0	0.0	73	0.1
Culvert	351	0.1	5	0.6	113	0.2
Curb	1,112	0.3	5	0.6	186	0.3
Ditch	4,102	1.2	11	1.3	915	1.3
Embankment	957	0.3	8	0.9	253	0.4
Fence	593	0.2	1	0.1	73	0.1
Mailbox	983	0.3	1	0.1	50	0.1
Tree	6,175	1.9	82	9.4	1,947	2.8
Rail crossing signal	68	0.0	0	0.0	11	0.0
Building	391	0.1	8	0.9	159	0.2
Traffic island	34	0.0	0	0.0	8	0.0
Fire hydrant	306	0.1	2	0.2	60	0.1
Impact attenuator	41	0.0	0	0.0	14	0.0
Other fixed object	1,918	0.6	6	0.7	444	0.6
COLLISION FIXED Subtotal	29,145	8.7	163	18.6	6,777	9.9

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	1,618	0.5	1	0.1	408	0.6
TOTAL MOST HARMFUL EVENT	333,527	100.0	877	100.0	68,520	100.0

DRIVER AGE 21-64 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Single Vehicle	83,440	25.0	322	36.7	11,324	16.5
Head On	4,742	1.4	166	18.9	2,244	3.3
Head On - Left Turn	8,845	2.7	34	3.9	3,656	5.3
Angle	61,292	18.4	160	18.2	17,278	25.2
Rear End	105,884	31.7	81	9.2	24,205	35.3
Rear End - Left Turn	4,331	1.3	11	1.3	1,179	1.7
Rear End - Right Turn	4,385	1.3	4	0.5	695	1.0
Sideswipe - Same Direction	36,230	10.9	28	3.2	3,605	5.3
Sideswipe - Opposite Direct	6,916	2.1	19	2.2	1,140	1.7
Other/Unknown	17,462	5.2	52	5.9	3,194	4.7
Total Drivers	333,527	100.0	877	100.0	68,520	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	299,849	89.9	669	76.3	60,120	87.7
Median	2,185	0.7	8	0.9	552	0.8
Shoulder	9,475	2.8	41	4.7	2,132	3.1
Outside of Shoulder/Curb	16,584	5.0	142	16.2	4,445	6.5
Gore	835	0.3	4	0.5	209	0.3
Other/Unknown	4,599	1.4	13	1.5	1,062	1.5
Total Drivers	333,527	100.0	877	100.0	68,520	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	44,865	13.5	126	14.4	9,610	14.0
U.S. & Michigan Roads	101,672	30.5	315	35.9	21,206	30.9
County & City Roads	186,990	56.1	436	49.7	37,704	55.0
Total Drivers	333,527	100.0	877	100.0	68,520	100.0

DRIVER AGE 21-64 (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	12,802	3.8	111	12.7	2,858	4.2
03:00 AM - 05:59 AM	12,255	3.7	63	7.2	2,080	3.0
06:00 AM - 08:59 AM	49,378	14.8	93	10.6	8,410	12.3
09:00 AM - 11:59 AM	41,019	12.3	74	8.4	8,865	12.9
Noon - 02:59 PM	58,392	17.5	117	13.3	13,465	19.7
03:00 PM - 05:59 PM	84,112	25.2	153	17.4	18,498	27.0
06:00 PM - 08:59 PM	49,407	14.8	136	15.5	9,472	13.8
09:00 PM - 11:59 PM	25,865	7.8	130	14.8	4,807	7.0
Unknown	297	0.1	0	0.0	65	0.1
Total Drivers	333,527	100.0	877	100.0	68,520	100.0

For drivers age 21-64, the 3:00 PM - 5:59 PM time period has the highest number of crashes for all crash types.

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	188,033	56.4	372	42.4	34,884	50.9	531	0.8
Speed too fast	22,314	6.7	135	15.4	5,271	7.7	6,826	10.5
Speed too slow	287	0.1	1	0.1	65	0.1	57	0.1
Failed to yield	25,027	7.5	42	4.8	6,650	9.7	14,633	22.5
Disregard traffic control	6,164	1.8	28	3.2	2,456	3.6	3,751	5.8
Drove wrong way	252	0.1	2	0.2	75	0.1	89	0.1
Drove left of center	1,548	0.5	31	3.5	565	0.8	658	1.0
Improper passing	1,488	0.4	3	0.3	211	0.3	557	0.9
Improper lane use	5,812	1.7	5	0.6	614	0.9	2,743	4.2
Improper turn	2,804	0.8	4	0.5	420	0.6	1,224	1.9
Improper/no signal	510	0.2	1	0.1	82	0.1	131	0.2
Improper backing	5,342	1.6	0	0.0	149	0.2	1,730	2.7
Unable to stop in assured clear distance	43,342	13.0	29	3.3	9,187	13.4	23,471	36.1
Reckless driving	1,458	0.4	32	3.6	572	0.8	647	1.0
Careless/negligent driving	7,843	2.4	56	6.4	2,545	3.7	4,143	6.4
Other	11,949	3.6	62	7.1	2,755	4.0	3,518	5.4
Unknown	9,354	2.8	74	8.4	2,019	2.9	225	0.3
Total Drivers	333,527	100.0	877	100.0	68,520	100.0	64,934	100.0

DRIVER AGE 21-64 (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Monday	48,143	14.4	91	10.4	9,911	14.5
Tuesday	51,443	15.4	117	13.3	10,419	15.2
Wednesday	51,995	15.6	108	12.3	10,506	15.3
Thursday	51,994	15.6	129	14.7	10,234	14.9
Friday	57,077	17.1	114	13.0	11,534	16.8
Saturday	42,489	12.7	181	20.6	9,257	13.5
Sunday	30,386	9.1	137	15.6	6,659	9.7
Total Drivers	333,527	100.0	877	100.0	68,520	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	181,659	54.5	651	74.2	36,000	52.5
Female	151,759	45.5	226	25.8	32,505	47.4
Unknown	109	0.0	0	0.0	15	0.0
Total Drivers	333,527	100.0	877	100.0	68,520	100.0

Male drivers age 21-64, are over-represented in fatal crashes.

OCCUPANTS IN MOTOR VEHICLE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
1 occupant	257,446	77.2	632	72.1	48,521	70.8
2 occupants	50,225	15.1	145	16.5	12,986	19.0
3 occupants	14,230	4.3	46	5.2	4,004	5.8
4 occupants	6,115	1.8	34	3.9	1,761	2.6
5 occupants	1,962	0.6	10	1.1	581	0.8
6 + occupants	1,494	0.4	9	1.0	444	0.6
0 occupants	1,093	0.3	1	0.1	69	0.1
Unknown	962	0.3	0	0.0	154	0.2
Total Drivers	333,527	100.0	877	100.0	68,520	100.0

DRIVER AGE 21-64 (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	252,485	75.7	506	57.7	51,311	74.9
Van and Motorhome	18,233	5.5	38	4.3	3,913	5.7
Pickup	41,209	12.4	131	14.9	7,363	10.7
Small Truck (under 10,000 lbs.)	6,961	2.1	8	0.9	1,454	2.1
Motorcycle	2,750	0.8	104	11.9	2,067	3.0
Moped	245	0.1	4	0.5	202	0.3
Go Cart	16	0.0	0	0.0	8	0.0
Snowmobile	97	0.0	6	0.7	61	0.1
Off Road Vehicle	143	0.0	6	0.7	113	0.2
Other	1,294	0.4	6	0.7	252	0.4
Unknown	341	0.1	0	0.0	50	0.1
CDL Truck/Bus (breakdown below)	9,753	2.9	68	7.8	1,726	2.5
Total Number of Drivers	333,527	100.0	877	100.0	68,520	100.0

Compared to the other two age groups (16-20 and 65 & over), a higher percentage of drivers age 21-64 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	5,737	58.8	47	69.1	1,007	58.3
Commercial Vehicle: Group B	2,321	23.8	16	23.5	429	24.9
Commercial Vehicle: Group C	357	3.7	2	2.9	56	3.2
Other Truck	805	8.3	2	2.9	142	8.2
Unknown Truck	533	5.5	1	1.5	92	5.3
Total Number of Drivers	9,753	100.0	68	100.0	1,726	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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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	21,178	52.3	119	67.6	4,680	52.8
Turning left	4,230	10.4	22	12.5	1,218	13.7
Turning right	1,471	3.6	4	2.3	212	2.4
Stopped on roadway	4,361	10.8	4	2.3	1,094	12.3
In prior crash	34	0.1	0	0.0	13	0.1
Changing lanes	1,304	3.2	3	1.7	113	1.3
Backing	1,322	3.3	0	0.0	56	0.6
Slowing/stopping on roadway	3,099	7.7	3	1.7	710	8.0
Slowing/stopping other	61	0.2	0	0.0	17	0.2
Starting up on roadway	1,042	2.6	4	2.3	245	2.8
Starting up other	18	0.0	0	0.0	4	0.0
Entering parking	74	0.2	0	0.0	4	0.0
Leaving parking	205	0.5	1	0.6	35	0.4
Entering roadway	845	2.1	6	3.4	183	2.1
Leaving roadway	61	0.2	1	0.6	19	0.2
Making U-turn	126	0.3	1	0.6	38	0.4
Overtaking or passing	203	0.5	3	1.7	44	0.5
Avoiding object	45	0.1	0	0.0	11	0.1
Avoiding animal	44	0.1	0	0.0	9	0.1
Avoiding pedestrian	6	0.0	1	0.6	4	0.0
Avoiding vehicle (front/back)	197	0.5	2	1.1	55	0.6
Avoiding vehicle (angle)	91	0.2	1	0.6	20	0.2
Driverless moving	6	0.0	1	0.6	2	0.0
Parked	193	0.5	0	0.0	16	0.2
Crossing at intersection	5	0.0	0	0.0	2	0.0
Crossing not at intersection	1	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	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	1	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	2	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	3	0.0	0	0.0	1	0.0
Other	40	0.1	0	0.0	9	0.1
Unknown	226	0.6	0	0.0	49	0.6
Total Drivers	40,495	100.0	176	100.0	8,864	100.0

Compared to the other two age groups (16-20 and 21-64), 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	97	0.2	1	0.6	22	0.2
Cross center/median	33	0.1	1	0.6	9	0.1
Ran off road left	36	0.1	0	0.0	8	0.1
Ran off road right	90	0.2	0	0.0	24	0.3
Re-enter road	7	0.0	0	0.0	0	0.0
Overturn	335	0.8	8	4.5	186	2.1
Separation of units	15	0.0	0	0.0	1	0.0
Fire/explosion	24	0.1	1	0.6	3	0.0
Immersion	3	0.0	0	0.0	0	0.0
Jackknife	19	0.0	0	0.0	1	0.0
Downhill runaway	7	0.0	0	0.0	4	0.0
Cargo loss/shift	17	0.0	0	0.0	1	0.0
Individual fell off	22	0.1	1	0.6	20	0.2
Other noncollision	98	0.2	1	0.6	22	0.2
NONCOLLISION Subtotal	803	2.0	13	7.4	301	3.4

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	209	0.5	14	8.0	178	2.0
Pedalcycle (Bicyclist)	176	0.4	1	0.6	136	1.5
Motor vehicle in transport	30,264	74.7	112	63.6	7,279	82.1
Parked motor vehicle	989	2.4	1	0.6	67	0.8
Railway train	4	0.0	0	0.0	4	0.0
Animal	4,916	12.1	2	1.1	97	1.1
Other nonfixed objects	342	0.8	1	0.6	17	0.2
COLLISION NONFIXED Subtotal	36,900	91.1	131	74.4	7,778	87.7

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	24	0.1	0	0.0	4	0.0
Bridge parapet end	10	0.0	0	0.0	2	0.0
Bridge rail	28	0.1	0	0.0	8	0.1
Guardrail face	172	0.4	0	0.0	41	0.5
Guardrail end	39	0.1	0	0.0	7	0.1
Median barrier	158	0.4	1	0.6	59	0.7
Highway traffic sign post	167	0.4	0	0.0	13	0.1
Highway signal post	26	0.1	0	0.0	3	0.0
Luminaire/light support	30	0.1	1	0.6	7	0.1
Utility pole	179	0.4	3	1.7	75	0.8
Other pole	70	0.2	0	0.0	10	0.1
Culvert	51	0.1	0	0.0	23	0.3
Curb	83	0.2	2	1.1	20	0.2
Ditch	389	1.0	2	1.1	102	1.2
Embankment	87	0.2	2	1.1	29	0.3
Fence	72	0.2	0	0.0	16	0.2
Mailbox	117	0.3	0	0.0	15	0.2
Tree	603	1.5	20	11.4	225	2.5
Rail crossing signal	7	0.0	0	0.0	2	0.0
Building	55	0.1	0	0.0	23	0.3
Traffic island	3	0.0	0	0.0	0	0.0
Fire hydrant	28	0.1	0	0.0	7	0.1
Impact attenuator	4	0.0	0	0.0	2	0.0
Other fixed object	200	0.5	1	0.6	47	0.5
COLLISION FIXED Subtotal	2,602	6.4	32	18.2	740	8.3

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	190	0.5	0	0.0	45	0.5
TOTAL MOST HARMFUL EVENT	40,495	100.0	176	100.0	8,864	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	8,340	20.6	55	31.3	1,228	13.9
Head On	526	1.3	21	11.9	246	2.8
Head On - Left Turn	1,536	3.8	7	4.0	666	7.5
Angle	10,530	26.0	59	33.5	2,934	33.1
Rear End	10,362	25.6	10	5.7	2,590	29.2
Rear End - Left Turn	564	1.4	0	0.0	169	1.9
Rear End - Right Turn	479	1.2	2	1.1	81	0.9
Sideswipe - Same Direction	4,974	12.3	6	3.4	400	4.5
Sideswipe - Opposite Direct	904	2.2	4	2.3	156	1.8
Other/Unknown	2,280	5.6	12	6.8	394	4.4
Total Drivers	40,495	100.0	176	100.0	8,864	100.0

Elderly drivers have the highest incidence of angle type crashes when compared to the other two age groups (16-20 and 21-64) 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	37,248	92.0	142	80.7	7,963	89.8
Median	158	0.4	0	0.0	49	0.6
Shoulder	869	2.1	6	3.4	198	2.2
Outside of Shoulder/Curb	1,584	3.9	26	14.8	494	5.6
Gore	78	0.2	1	0.6	22	0.2
Other/Unknown	558	1.4	1	0.6	138	1.6
Total Drivers	40,495	100.0	176	100.0	8,864	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	3,404	8.4	16	9.1	764	8.6
U.S. & Michigan Roads	13,192	32.6	74	42.0	2,905	32.8
County & City Roads	23,899	59.0	86	48.9	5,195	58.6
Total Drivers	40,495	100.0	176	100.0	8,864	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	491	1.2	6	3.4	89	1.0
03:00 AM - 05:59 AM	409	1.0	0	0.0	58	0.7
06:00 AM - 08:59 AM	3,422	8.5	14	8.0	675	7.6
09:00 AM - 11:59 AM	7,868	19.4	32	18.2	1,792	20.2
Noon - 02:59 PM	10,689	26.4	47	26.7	2,544	28.7
03:00 PM - 05:59 PM	10,321	25.5	39	22.2	2,379	26.8
06:00 PM - 08:59 PM	5,165	12.8	27	15.3	999	11.3
09:00 PM - 11:59 PM	2,092	5.2	11	6.3	321	3.6
Unknown	38	0.1	0	0.0	7	0.1
Total Drivers	40,495	100.0	176	100.0	8,864	100.0

For drivers age 65 and over, noon - 02:59 PM has the highest number of crashes for all crash types.

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	20,829	51.4	63	35.8	4,055	45.7	57	0.7
Speed too fast	1,397	3.4	14	8.0	365	4.1	289	3.6
Speed too slow	31	0.1	0	0.0	9	0.1	3	0.0
Failed to yield	6,107	15.1	38	21.6	1,672	18.9	3,188	40.0
Disregard traffic control	1,160	2.9	9	5.1	472	5.3	666	8.4
Drove wrong way	50	0.1	1	0.6	17	0.2	25	0.3
Drove left of center	242	0.6	3	1.7	94	1.1	97	1.2
Improper passing	185	0.5	1	0.6	32	0.4	50	0.6
Improper lane use	1,148	2.8	1	0.6	99	1.1	467	5.9
Improper turn	614	1.5	0	0.0	96	1.1	249	3.1
Improper/no signal	78	0.2	0	0.0	14	0.2	11	0.1
Improper backing	961	2.4	0	0.0	21	0.2	192	2.4
Unable to stop in assured clear distance	4,010	9.9	6	3.4	1,023	11.5	1,968	24.7
Reckless driving	33	0.1	0	0.0	15	0.2	7	0.1
Careless/negligent driving	772	1.9	12	6.8	244	2.8	315	4.0
Other	1,568	3.9	11	6.3	356	4.0	358	4.5
Unknown	1,310	3.2	17	9.7	280	3.2	31	0.4
Total Drivers	40,495	100.0	176	100.0	8,864	100.0	7,973	100.0

Compared to the other two age groups (16-20 and 21-64), 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	6,091	15.0	28	15.9	1,363	15.4
Tuesday	6,338	15.7	26	14.8	1,347	15.2
Wednesday	6,358	15.7	24	13.6	1,445	16.3
Thursday	6,452	15.9	25	14.2	1,369	15.4
Friday	6,856	16.9	22	12.5	1,471	16.6
Saturday	4,850	12.0	34	19.3	1,046	11.8
Sunday	3,550	8.8	17	9.7	823	9.3
Total Drivers	40,495	100.0	176	100.0	8,864	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	23,439	57.9	105	59.7	4,937	55.7
Female	17,042	42.1	71	40.3	3,922	44.2
Unknown	14	0.0	0	0.0	5	0.1
Total Drivers	40,495	100.0	176	100.0	8,864	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	30,758	76.0	112	63.6	6,379	72.0
2 occupants	8,113	20.0	53	30.1	2,077	23.4
3 occupants	931	2.3	7	4.0	272	3.1
4 occupants	314	0.8	3	1.7	77	0.9
5 occupants	69	0.2	0	0.0	24	0.3
6 + occupants	84	0.2	1	0.6	22	0.2
0 occupants	136	0.3	0	0.0	8	0.1
Unknown	90	0.2	0	0.0	5	0.1
Total Drivers	40,495	100.0	176	100.0	8,864	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	32,154	79.4	129	73.3	7,062	79.7
Van and Motorhome	2,372	5.9	10	5.7	503	5.7
Pickup	4,546	11.2	25	14.2	908	10.2
Small Truck (under 10,000 lbs.)	638	1.6	0	0.0	124	1.4
Motorcycle	176	0.4	4	2.3	142	1.6
Moped	22	0.1	4	2.3	13	0.1
Go Cart	2	0.0	0	0.0	0	0.0
Snowmobile	4	0.0	0	0.0	1	0.0
Off Road Vehicle	8	0.0	0	0.0	5	0.1
Other	103	0.3	2	1.1	20	0.2
Unknown	33	0.1	0	0.0	3	0.0
CDL Truck/Bus (breakdown below)	437	1.1	2	1.1	83	0.9
Total Number of Drivers	40,495	100.0	176	100.0	8,864	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	239	54.7	1	50.0	53	63.9
Commercial Vehicle: Group B	113	25.9	1	50.0	15	18.1
Commercial Vehicle: Group C	35	8.0	0	0.0	6	7.2
Other Truck	29	6.6	0	0.0	7	8.4
Unknown Truck	21	4.8	0	0.0	2	2.4
Total Number of Drivers	437	100.0	2	100.0	83	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 people 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	1,895	81	70	8	3	7	6	96	79
Bicyclists Killed	24	8	7	2	0	5	4	15	11
Bicyclists Injured	1,479	63	53	6	3	1	1	70	57

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	473,501	12,984	8,790	1,628	980	1,435	892	16,047	10,662
Drivers Killed	561	127	114	26	22	48	33	201	169
Drivers Injured	50,772	3,355	2,536	521	375	454	331	4,330	3,242

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
Motorcylists In Crashes	3,509	244	206	19	14	26	17	289	237
Motorcylists Killed	109	24	20	6	6	11	6	41	32
Motorcylists Injured	2,556	184	159	11	8	12	10	207	177

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	305	43	41	0	0	6	6	49	47
ORV/ATV Riders Killed	8	2	2	0	0	2	2	4	4
ORV/ATV Riders Injured	212	36	36	0	0	4	4	40	40

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	2,399	225	154	19	9	24	19	268	182
Pedestrians Killed	140	25	21	10	4	6	4	41	29
Pedestrians Injured	1,973	176	121	9	5	15	12	200	138

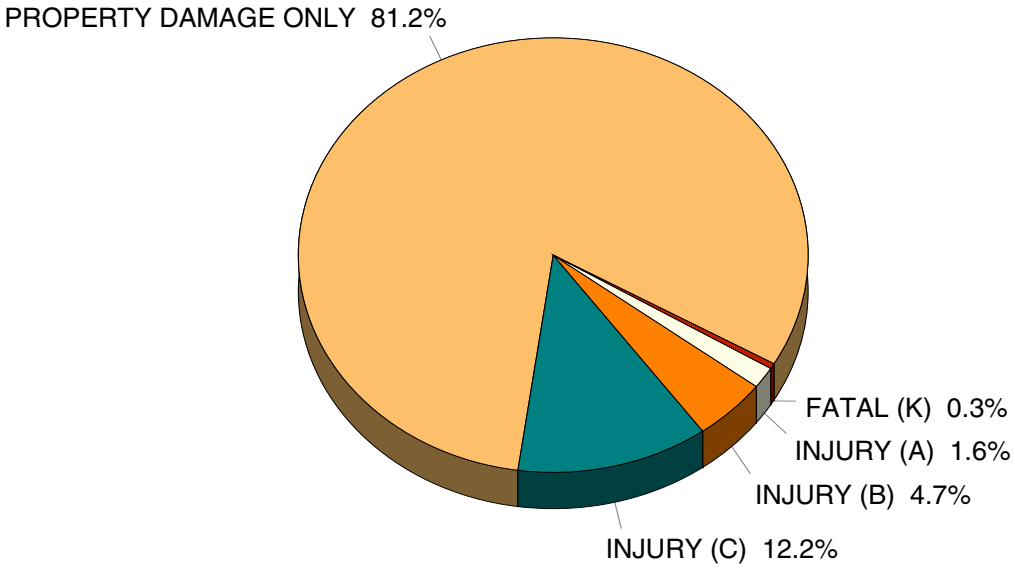
SNOWMOBILER

	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	147	30	27	1	1	1	1	32	29
Snowmobilers Killed	6	4	4	1	1	0	0	5	5
Snowmobilers Injured	89	16	16	0	0	0	0	16	16

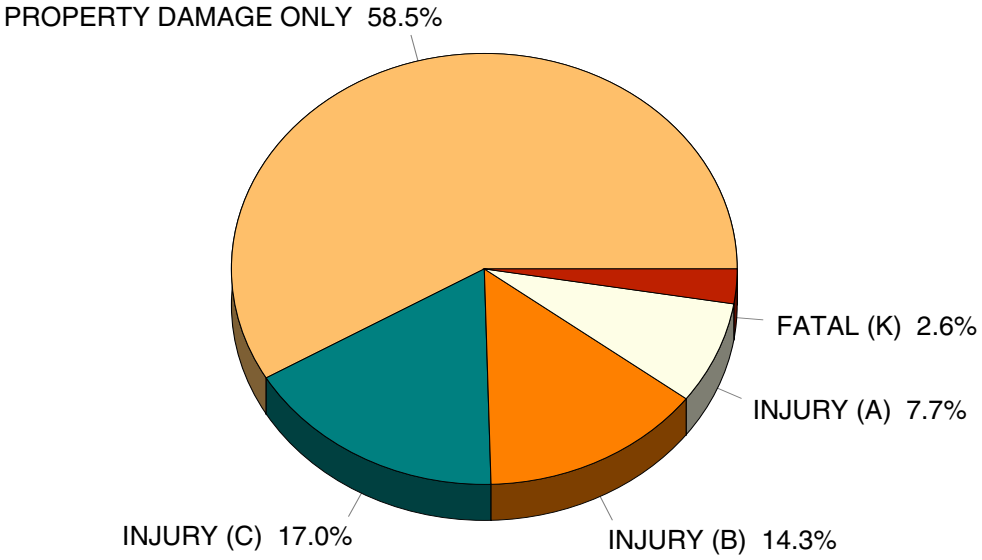
DRIVER DRINKING AND/OR USING DRUGS AND INJURY SEVERITY IN CRASH BY AGE

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	1	0	1	2	0	0	0	0	1	0	0	1
14 years	2	1	1	4	0	0	0	0	0	0	1	1
15 years	7	3	2	12	0	0	0	0	3	2	1	6
16 years	30	7	1	38	0	1	0	1	6	3	0	9
17 years	58	26	12	96	0	2	1	3	32	8	3	43
18 years	167	27	27	221	5	0	5	10	69	12	9	90
19 years	258	20	31	309	5	3	5	13	97	11	15	123
20 years	316	34	35	385	7	2	4	13	125	10	13	148
21 - 24 years	1,745	134	143	2,022	43	5	11	59	657	56	64	777
25 - 34 years	2,293	288	237	2,818	41	16	15	72	862	152	100	1,114
35 - 44 years	1,565	196	177	1,938	25	8	10	43	614	76	86	776
45 - 54 years	1,395	159	140	1,694	25	8	5	38	487	68	60	615
55 - 64 years	658	77	55	790	12	4	0	16	253	27	18	298
65 - 69 years	130	10	11	151	4	1	2	7	47	3	2	52
70 - 74 years	65	6	8	79	0	0	0	0	31	4	4	39
75 - 79 years	30	0	2	32	1	0	0	1	13	0	0	13
80 - 84 years	16	2	1	19	0	0	0	0	9	1	0	10
85 - 89 years	4	0	0	4	0	0	0	0	2	0	0	2
90 years & over	1	0	1	2	0	0	0	0	1	0	0	1
Unknown	68	2	7	77	0	0	0	0	10	0	1	11
Total	8,809	992	892	10,693	168	50	58	276	3,319	433	377	4,129

ALL CRASHES BY INJURY SEVERITY



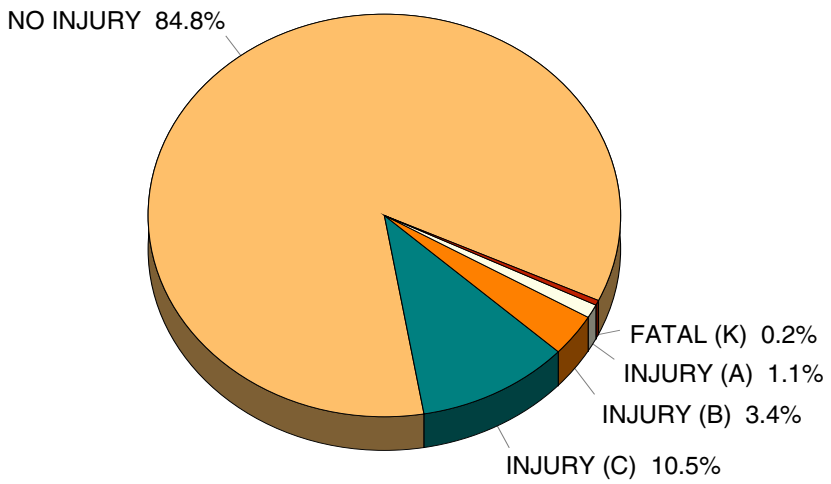
HBD CRASHES BY INJURY SEVERITY



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.

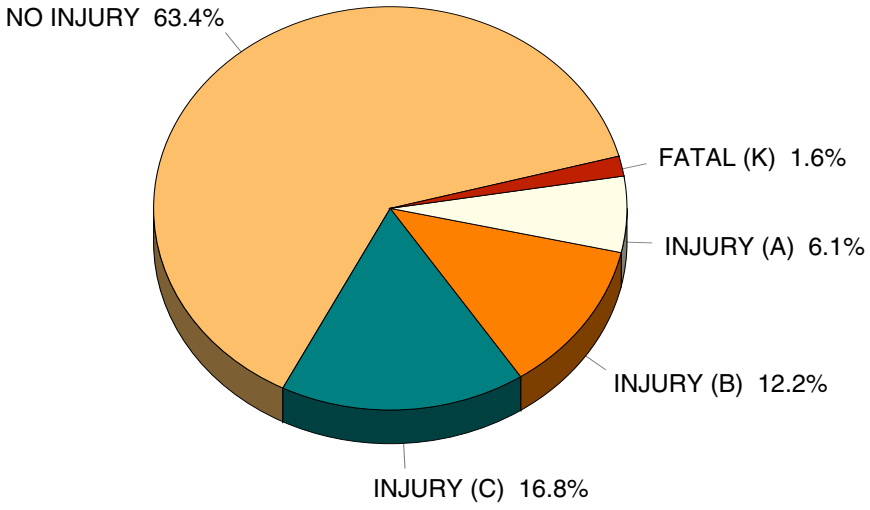
DEATH & INJURY FOR CRASH INVOLVED OCCUPANTS

Occupants in Crashes



The majority of occupants involved in crashes are not injured (84.8%). Two thirds of those who are injured receive only minor (C) injuries.

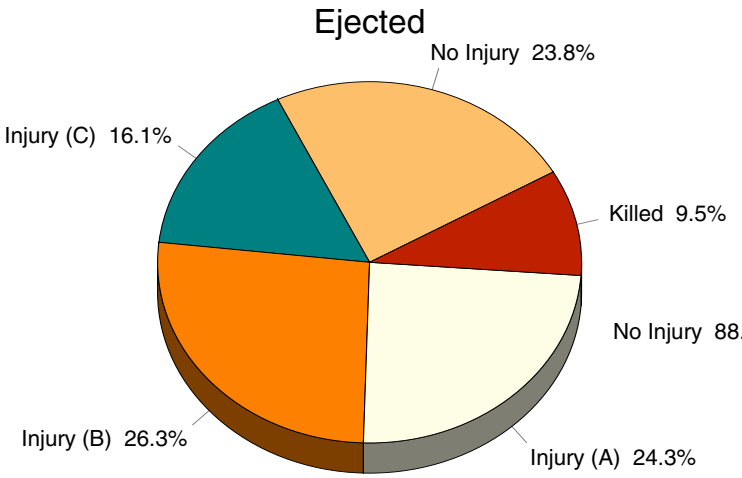
Occupants in HBD Crashes

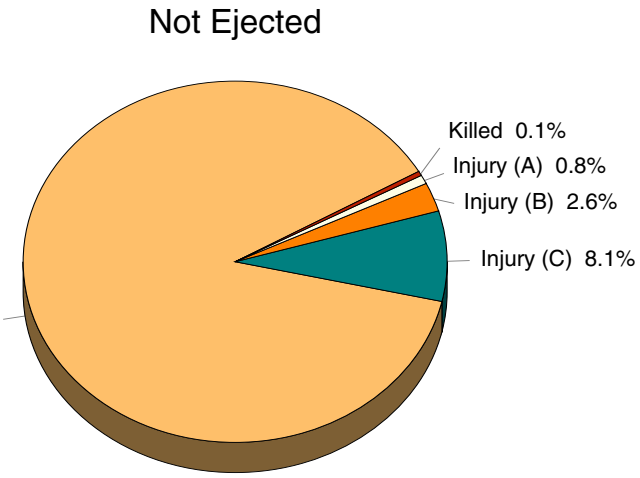


Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of occupant fatalities is eight times higher than in all crashes and the most serious injury level (A) is five and a half times higher.

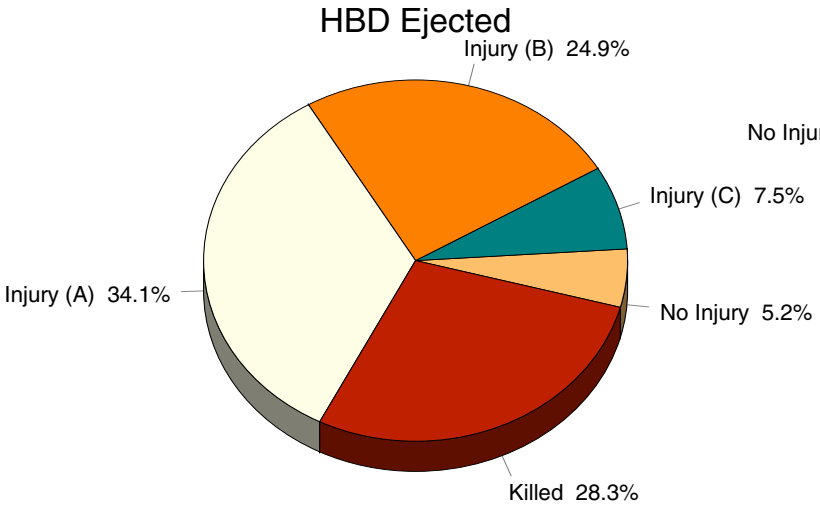
ALL DRIVERS and *HBD DRIVERS*
INJURY SEVERITY - EJECTED vs. NOT EJECTED

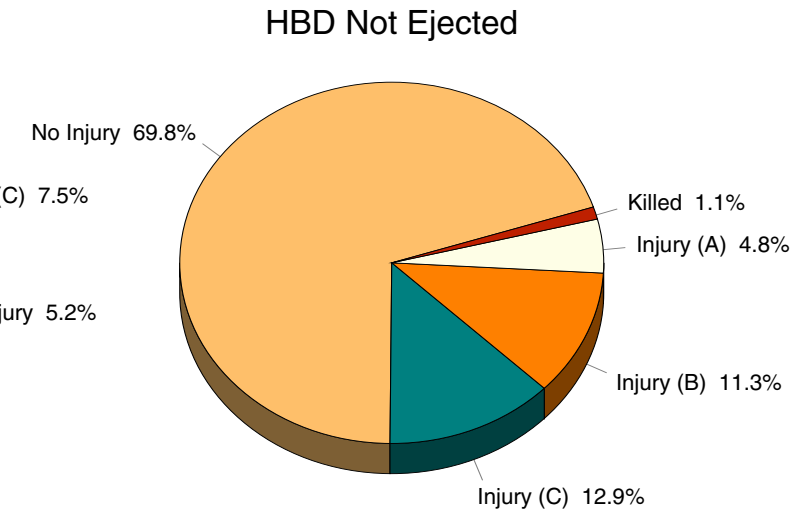
As can be seen in the two charts below, death and injury are much more likely when *drivers* are ejected from vehicles.





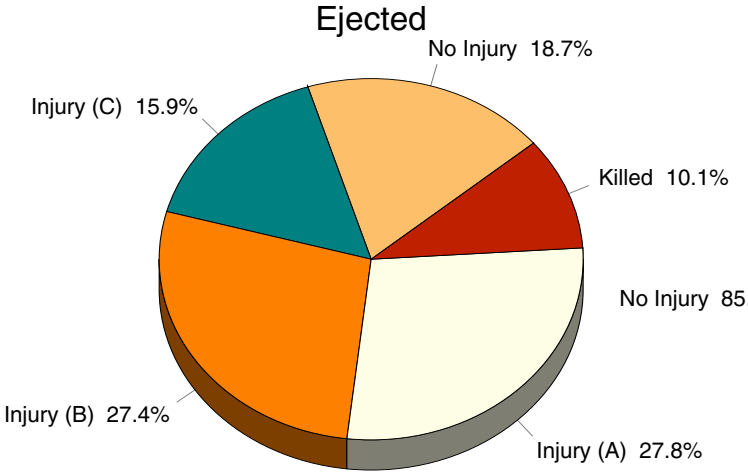
When compared to the charts above, the charts below demonstrate that the injury severity is much worse for drivers who had been drinking in both ejected and non-ejected events.

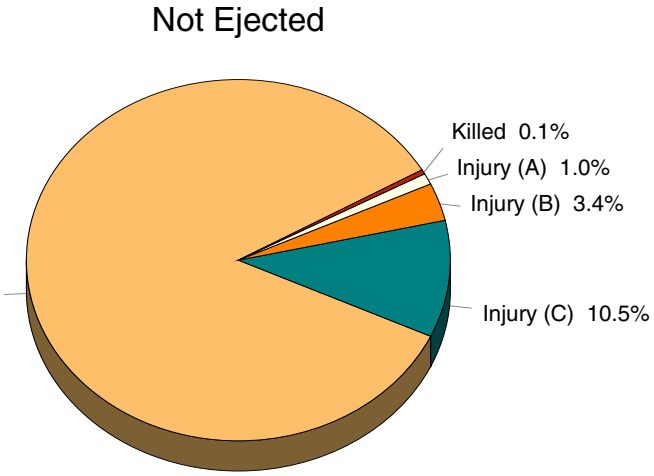




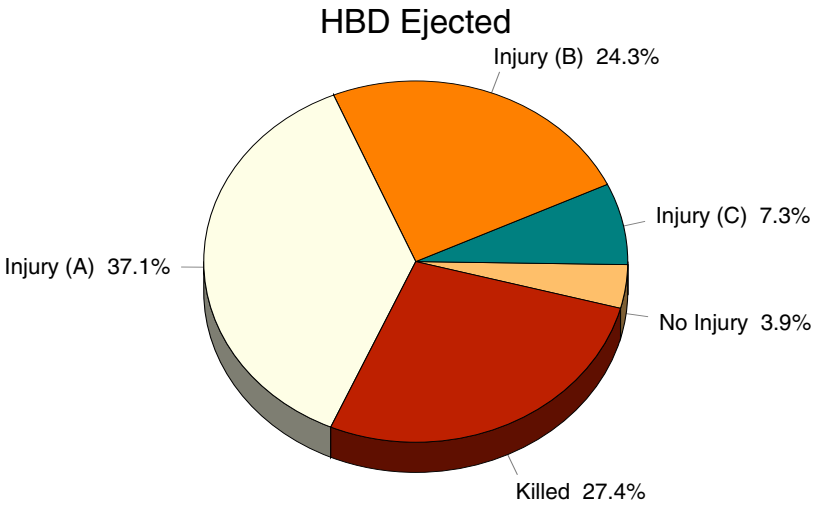
ALL OCCUPANTS and *OCCUPANTS of HBD CRASHES*
INJURY SEVERITY - EJECTED vs. NOT EJECTED

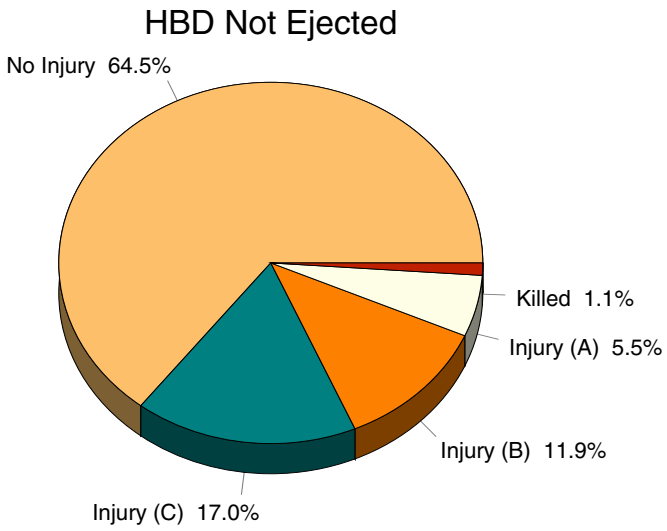
As can be seen in the two charts below, death and injury are much more likely when *occupants* are ejected from vehicles.





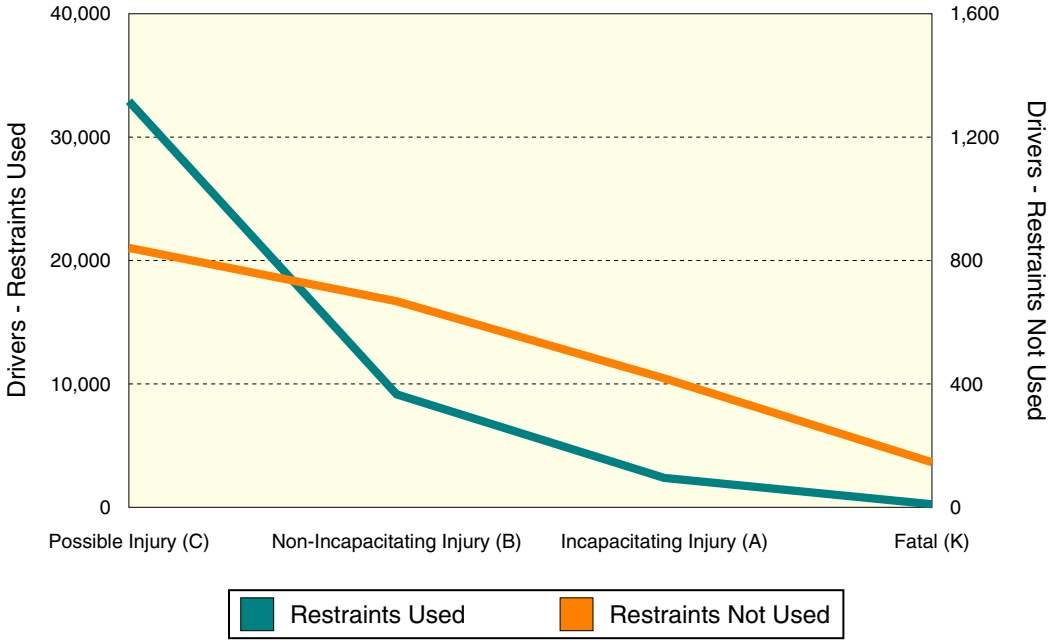
When compared to the charts above, the charts below demonstrate that the injury severity is much worse for occupants in a crash where drinking is reported in both ejected and non-ejected events.



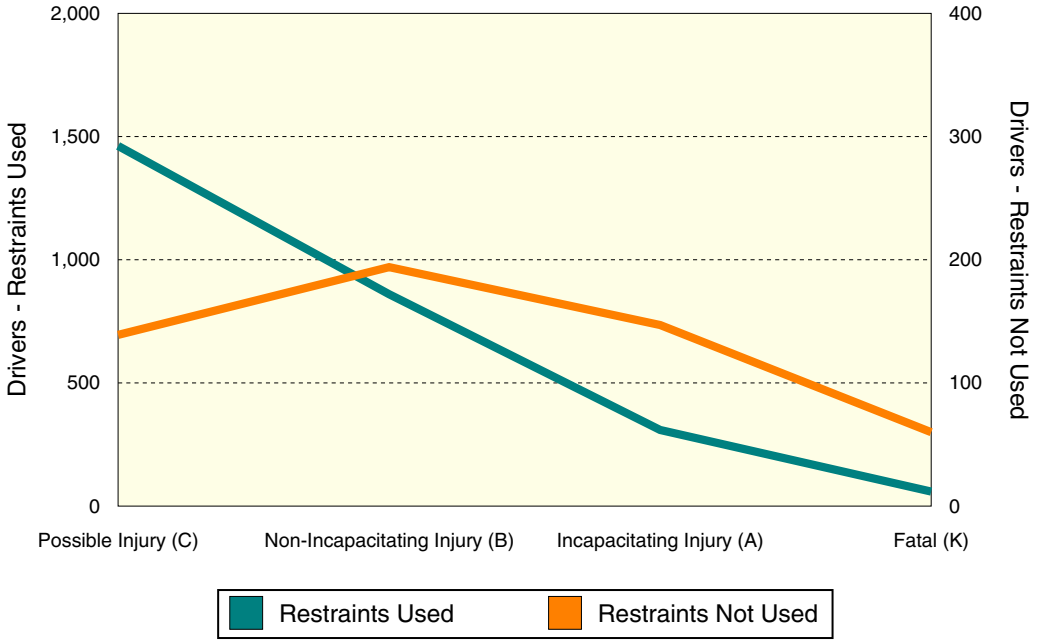


INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC *DRIVERS*

ALL CRASHES

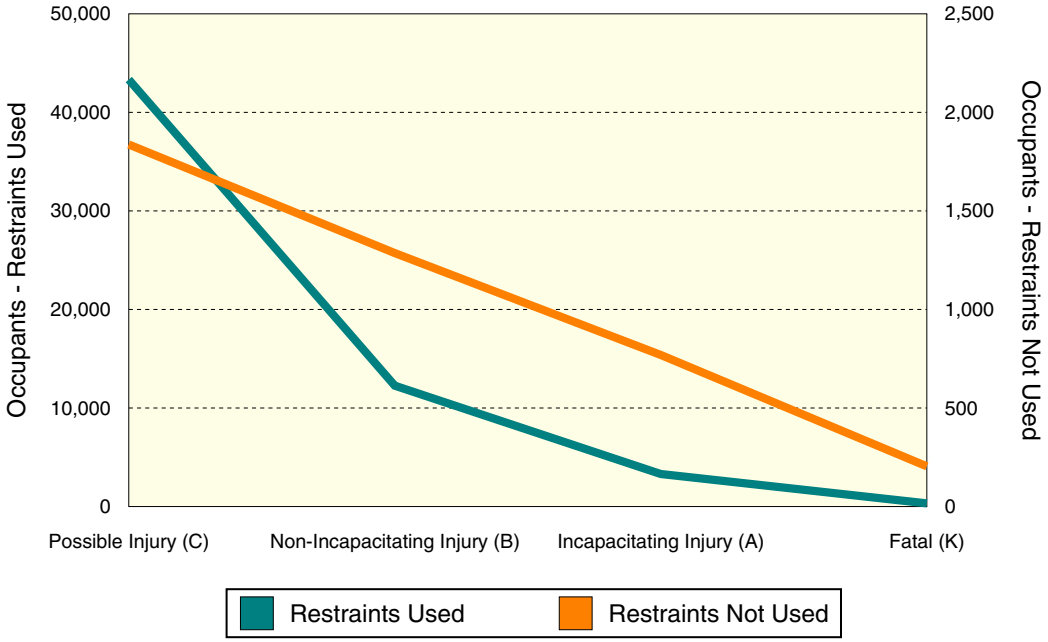


HBD CRASHES

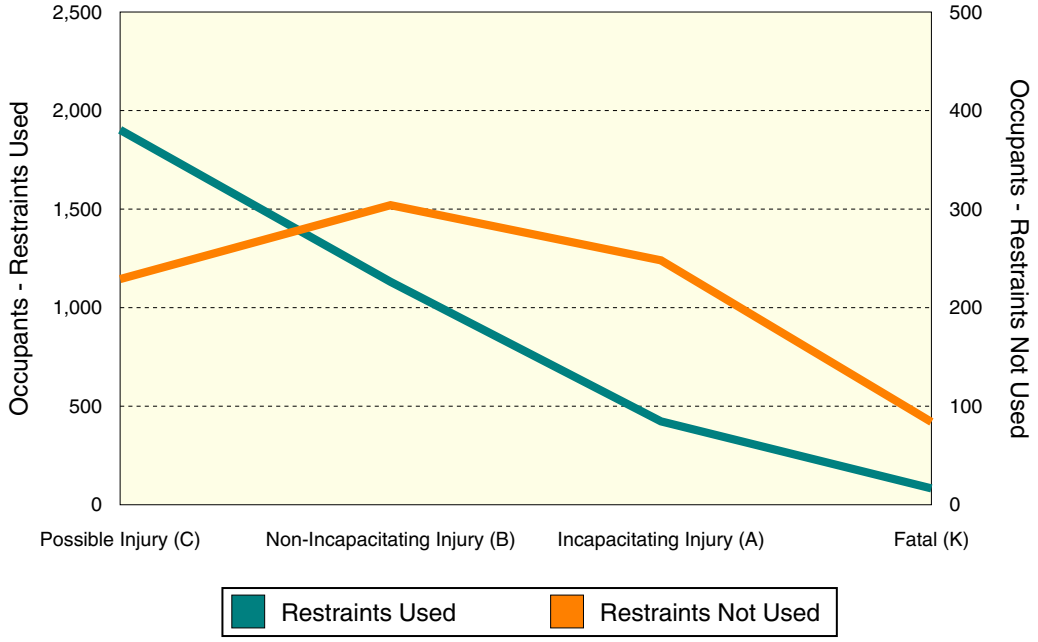


INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC *OCCUPANTS*

ALL CRASHES



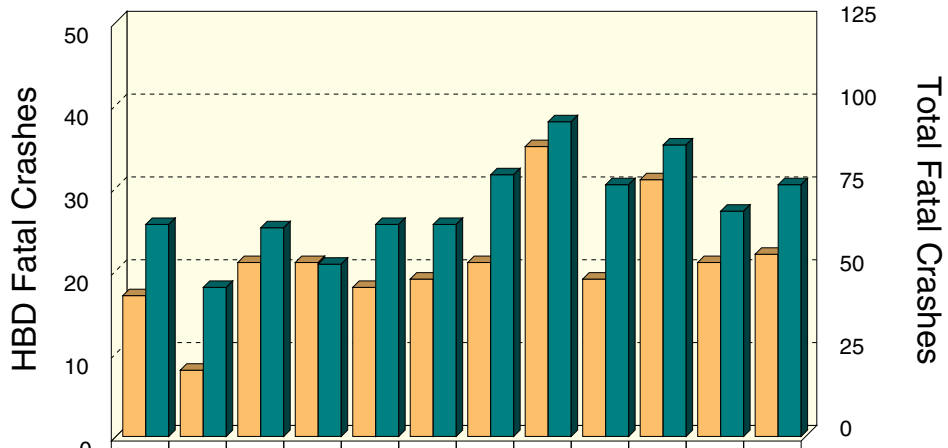
HBD CRASHES



ALCOHOL INVOLVEMENT IN FATAL CRASHES

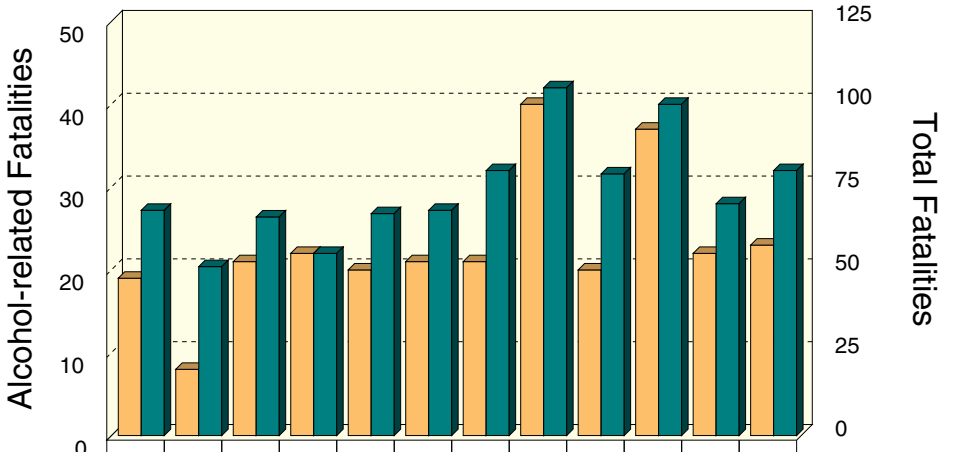
Fatal crashes (total of non-HBD and HBD fatal crashes) were lowest in February. HBD fatal crashes and total crashes were highest in number during the months of August and October.

HBD Fatal Crashes by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
HBD Fatal Crashes	17	8	21	21	18	19	21	35	19	31	21	22	253
Total Fatal Crashes	64	45	63	52	64	64	79	95	76	88	68	76	834

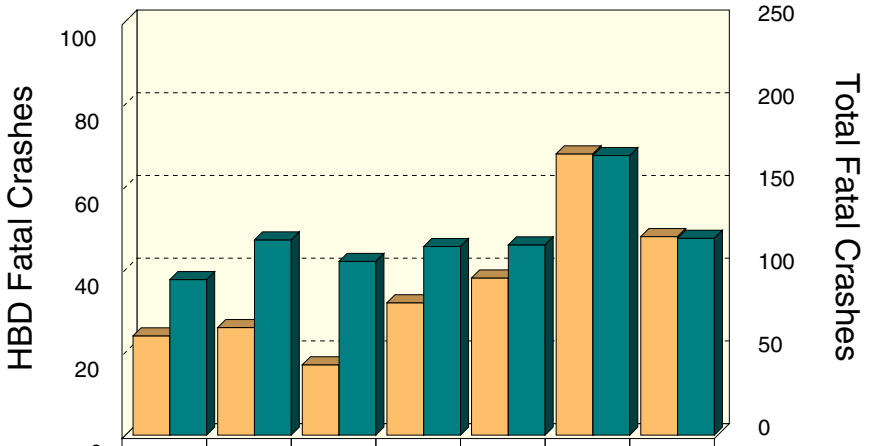
Alcohol-related Fatalities by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Alc-rel. Fatalities	19	8	21	22	20	21	21	40	20	37	22	23	274
Total Fatalities	68	51	66	55	67	68	80	105	79	100	70	80	889

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

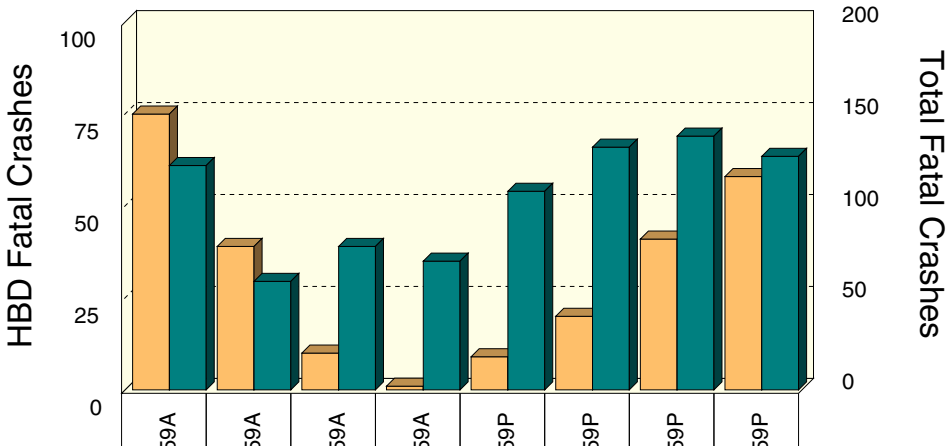
HBD Fatal Crashes by Day of Week



	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
HBD Fatal Crashes	24	26	17	32	38	68	48	253
Total Fatal Crashes	94	118	105	114	115	169	119	834

Saturday and Sunday had the most fatal crashes and the highest proportions of drinking-related fatal crashes in 2011. 40.3 percent of the fatal crashes on Sunday involved drinking, while only 16.2 percent of the fatal crashes on Wednesday involved drinking.

HBD Fatal Crashes by Time of Day



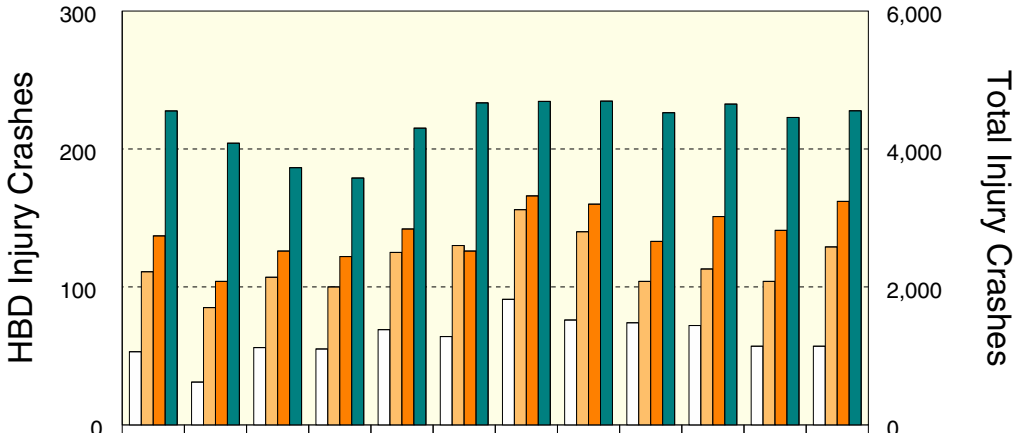
	12:00-2:59A	3:00-5:59A	6:00-8:59A	9:00-11:59A	12:00-2:59P	3:00-5:59P	6:00-8:59P	9:00-11:59P	Totals
HBD Fatal Crashes	75	39	10	1	9	20	41	58	253
Total Fatal Crashes	122	59	78	70	108	132	138	127	834

Not surprisingly, the 3:00 AM to 5:59 AM time period had the highest rate of drinking involvement (66.1%), while the 9:00 AM to 11:59 AM time period had the lowest (1.4%).

ALCOHOL INVOLVEMENT IN INJURY CRASHES

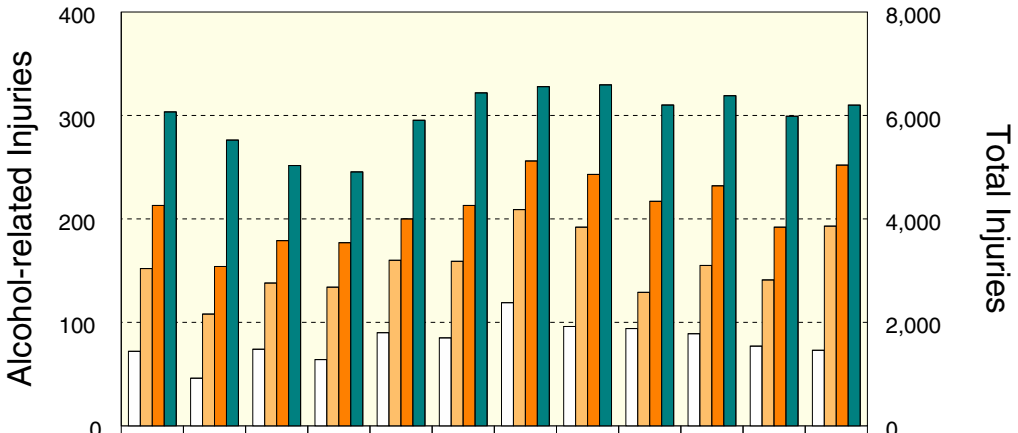
Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 2011, the highest number of HBD injury crashes occurred in July with 413. The highest proportion of HBD injury crashes also occurred in July with 8.8 percent of the injury crashes in that month involving alcohol.

HBD Injury Crashes by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
A Injury - HBD	53	31	56	55	69	64	91	76	74	72	57	57	755
B Injury - HBD	111	85	107	100	125	130	156	140	104	113	104	129	1,404
C Injury - HBD	137	104	126	122	142	126	166	160	133	151	141	162	1,670
Total Injury Crashes	4,552	4,084	3,729	3,579	4,302	4,669	4,690	4,694	4,526	4,651	4,457	4,554	52,487

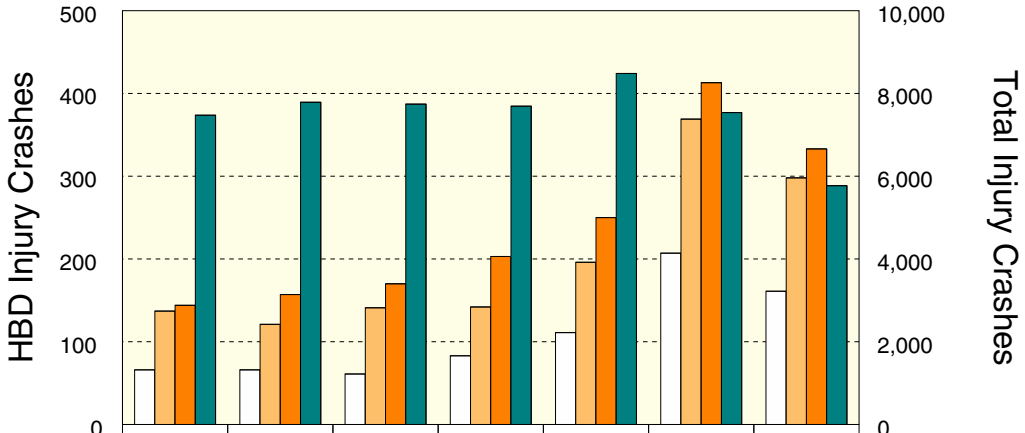
Alcohol-related Injuries by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
A Injury - Alc-rel.	72	46	74	64	90	85	119	96	94	89	77	73	979
B Injury - Alc-rel.	152	108	138	134	160	159	209	192	129	155	141	193	1,870
C Injury - Alc-rel.	213	154	179	177	200	213	256	243	217	232	192	252	2,528
Total Injuries	6,069	5,524	5,032	4,909	5,907	6,437	6,557	6,592	6,202	6,382	5,985	6,200	71,796

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

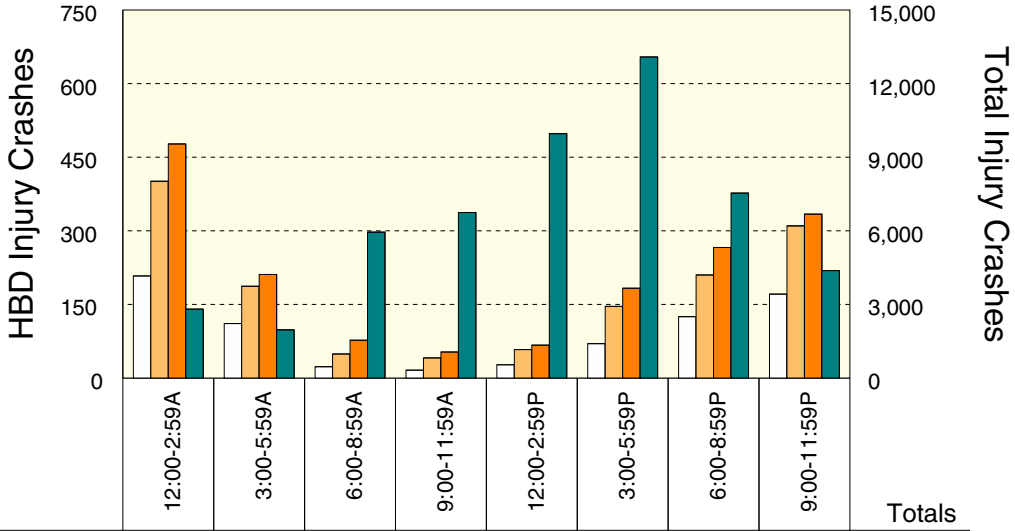
HBD Injury Crashes by Day of Week



	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
A Injury - HBD	66	66	61	83	111	207	161	755
B Injury - HBD	137	121	141	142	196	369	298	1,404
C Injury - HBD	144	157	170	203	250	413	333	1,670
Total Injury Crashes	7,474	7,787	7,742	7,692	8,483	7,538	5,771	52,487

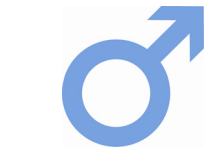
HBD injury crashes follow the same basic trends as total crashes during the work week, but the weekend sees a dramatic increase in the proportion of HBD injury crashes to total injury crashes.

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	208	111	23	16	27	70	125	171	751
B Injury - HBD	401	187	49	41	58	146	210	310	1,402
C Injury - HBD	477	211	77	53	67	183	266	334	1,668
Total Injury Crashes	2,809	1,964	5,947	6,746	9,961	13,086	7,538	4,379	52,430

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 57 injury crashes (including eight 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	108	0.0	0	0.0	10	17	14	67
14 years	66	0.0	0	0.0	2	12	13	39
15 years	298	0.1	3	0.3	10	33	43	209
16 years	4,005	1.7	16	1.9	58	199	548	3,184
17 years	5,567	2.3	9	1.0	98	299	724	4,437
18 years	7,187	3.0	18	2.1	134	443	1,003	5,589
19 years	7,195	3.0	24	2.8	128	415	1,019	5,609
20 years	7,008	2.9	30	3.5	127	385	941	5,525
21 - 24 years	23,880	9.9	106	12.3	493	1,367	3,254	18,660
25 - 34 years	42,904	17.8	156	18.2	822	2,213	5,603	34,110
35 - 44 years	40,292	16.7	124	14.4	702	1,872	5,092	32,502
45 - 54 years	42,733	17.7	147	17.1	772	2,027	5,487	34,300
55 - 64 years	31,850	13.2	118	13.7	596	1,577	4,123	25,436
65 - 69 years	9,008	3.7	30	3.5	164	430	1,211	7,173
70 - 74 years	5,833	2.4	24	2.8	122	315	794	4,578
75 - 79 years	3,900	1.6	15	1.7	68	223	517	3,077
80 - 84 years	2,838	1.2	18	2.1	56	192	402	2,170
85 - 89 years	1,404	0.6	11	1.3	18	102	221	1,052
90 years and over	456	0.2	7	0.8	9	31	62	347
Unknown	4,318	1.8	3	0.3	22	119	547	3,627
Total	240,850	100.0	859	100.0	4,411	12,271	31,618	191,691

NOTE: This table excludes 34,163 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	2	0.0	0	0.0	0	1	0	1
14 years	3	0.0	0	0.0	1	0	0	2
15 years	9	0.1	0	0.0	2	1	1	5
16 years	22	0.3	0	0.0	1	1	1	19
17 years	48	0.7	1	0.5	6	11	5	25
18 years	143	2.0	5	2.6	10	25	25	78
19 years	202	2.8	7	3.6	17	31	22	125
20 years	273	3.8	10	5.2	18	39	45	161
21 - 24 years	1,431	20.2	50	26.0	104	217	218	842
25 - 34 years	1,861	26.2	48	25.0	148	260	308	1,097
35 - 44 years	1,214	17.1	27	14.1	110	181	208	688
45 - 54 years	1,063	15.0	27	14.1	79	143	168	646
55 - 64 years	571	8.0	11	5.7	28	102	91	339
65 - 69 years	113	1.6	5	2.6	7	17	15	69
70 - 74 years	62	0.9	0	0.0	3	11	17	31
75 - 79 years	27	0.4	1	0.5	3	5	4	14
80 - 84 years	13	0.2	0	0.0	1	3	2	7
85 - 89 years	3	0.0	0	0.0	0	0	1	2
90 years and over	1	0.0	0	0.0	0	0	0	1
Unknown	33	0.5	0	0.0	0	2	5	26
Total	7,094	100.0	192	100.0	538	1,050	1,136	4,178

NOTE: This table excludes 33 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	51	0.0	0	0.0	5	7	7	32
14 years	42	0.0	0	0.0	3	5	10	24
15 years	276	0.1	1	0.3	4	20	40	211
16 years	3,564	1.8	5	1.4	61	197	538	2,763
17 years	5,017	2.5	10	2.8	92	300	769	3,846
18 years	6,022	3.0	14	4.0	114	354	914	4,626
19 years	6,382	3.2	15	4.3	124	321	987	4,935
20 years	6,322	3.2	9	2.6	114	316	987	4,896
21 - 24 years	21,353	10.8	33	9.4	291	1,006	3,244	16,779
25 - 34 years	38,165	19.2	55	15.7	521	1,783	6,103	29,703
35 - 44 years	34,664	17.5	58	16.5	454	1,495	5,480	27,177
45 - 54 years	33,812	17.0	52	14.8	478	1,446	5,137	26,699
55 - 64 years	23,765	12.0	28	8.0	310	1,061	3,696	18,670
65 - 69 years	6,320	3.2	19	5.4	65	303	1,013	4,920
70 - 74 years	4,169	2.1	15	4.3	70	213	673	3,198
75 - 79 years	2,928	1.5	14	4.0	70	171	457	2,216
80 - 84 years	2,197	1.1	11	3.1	42	132	357	1,655
85 - 89 years	1,148	0.6	8	2.3	17	73	202	848
90 years and over	280	0.1	4	1.1	1	21	42	212
Unknown	2,011	1.0	0	0.0	12	55	228	1,716
Total	198,488	100.0	351	100.0	2,848	9,279	30,884	155,126

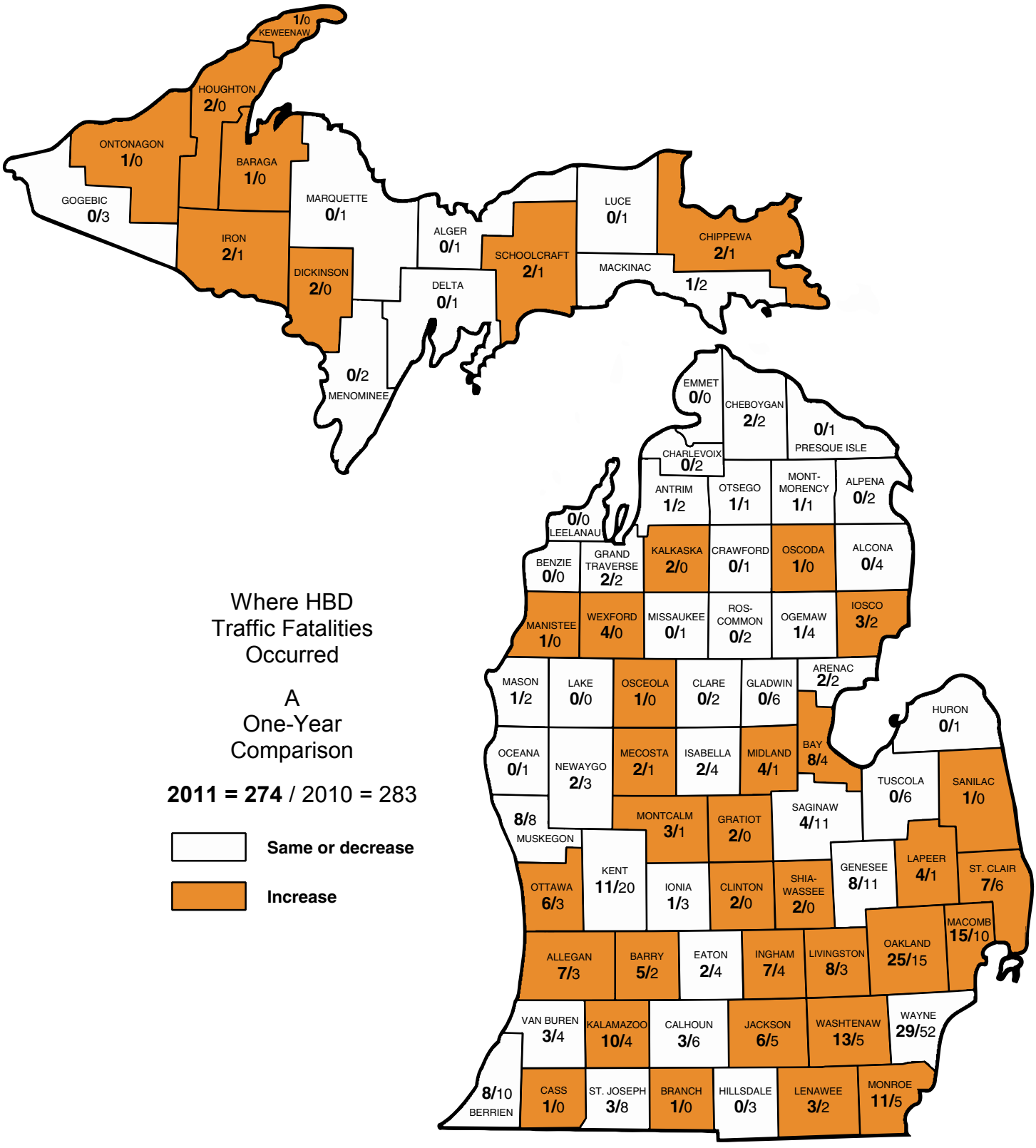
NOTE: This table excludes 34,163 drivers of unknown gender.

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	0	0.0	0	0.0	0	0	0	0
14 years	0	0.0	0	0.0	0	0	0	0
15 years	0	0.0	0	0.0	0	0	0	0
16 years	9	0.3	0	0.0	0	1	2	6
17 years	22	0.9	0	0.0	1	4	8	9
18 years	51	2.0	5	14.7	3	6	9	28
19 years	87	3.4	3	8.8	9	14	19	42
20 years	78	3.0	1	2.9	11	13	12	41
21 - 24 years	457	17.8	4	11.8	34	61	87	271
25 - 34 years	669	26.0	8	23.5	42	76	128	415
35 - 44 years	528	20.5	8	23.5	34	60	107	319
45 - 54 years	472	18.3	3	8.8	25	46	86	312
55 - 64 years	142	5.5	1	2.9	8	12	30	91
65 - 69 years	28	1.1	1	2.9	1	2	7	17
70 - 74 years	11	0.4	0	0.0	0	2	2	7
75 - 79 years	5	0.2	0	0.0	0	0	1	4
80 - 84 years	4	0.2	0	0.0	0	0	3	1
85 - 89 years	1	0.0	0	0.0	0	1	0	0
90 years and over	1	0.0	0	0.0	0	1	0	0
Unknown	9	0.3	0	0.0	0	0	0	9
Total	2,574	100.0	34	100.0	168	299	501	1,572

NOTE: This table excludes 33 unknown gender drinking drivers.

TRAFFIC FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY



Where HBD Traffic Fatalities Occurred

A One-Year Comparison

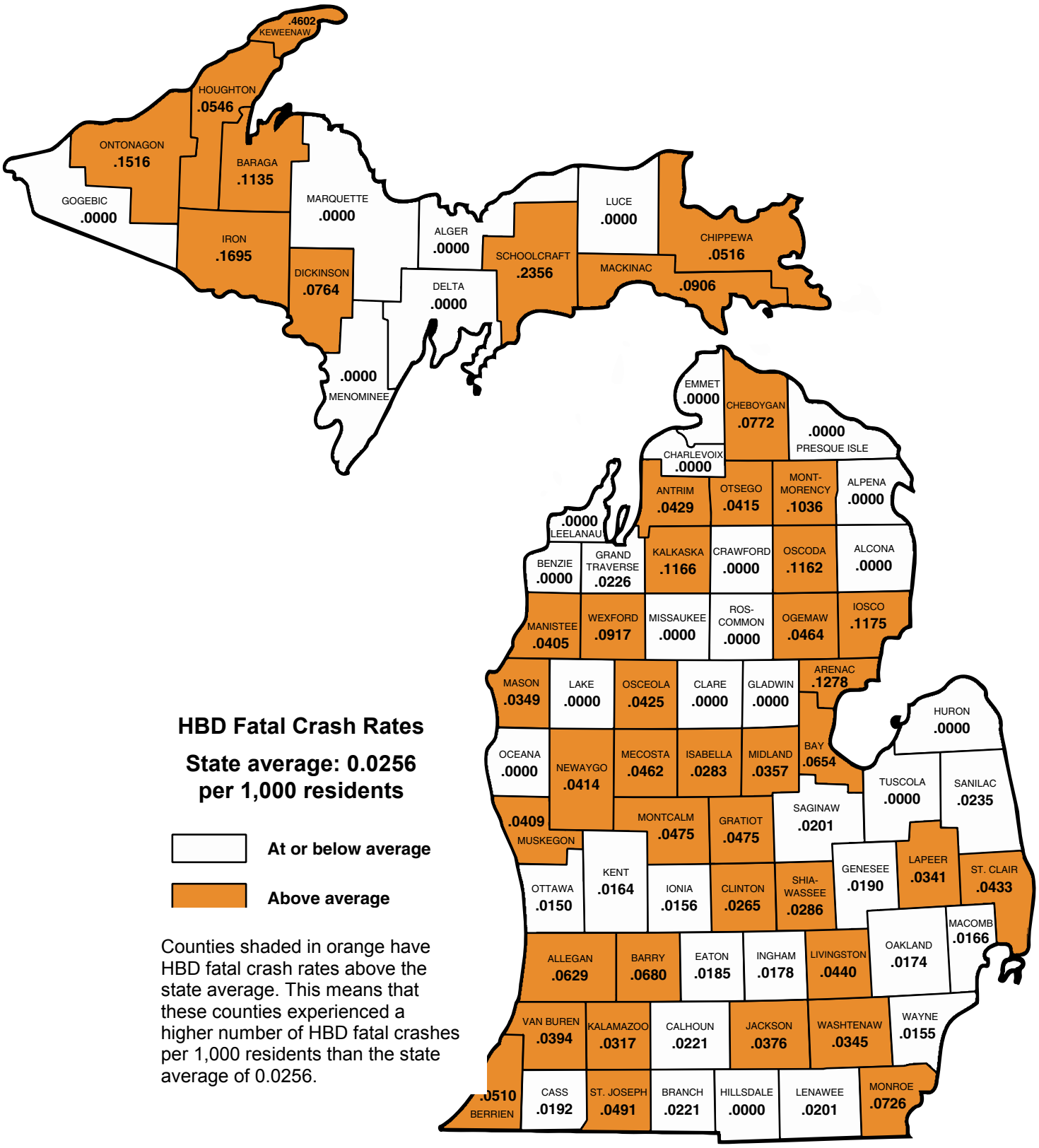
2011 = 274 / 2010 = 283

Same or decrease

Increase

MICHIGAN OHSP Office of Highway Safety Planning

COUNTY RANKING
BY HBD FATAL CRASH RATE



HBD Fatal Crash Rates

State average: 0.0256 per 1,000 residents

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 0.0256.

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2011
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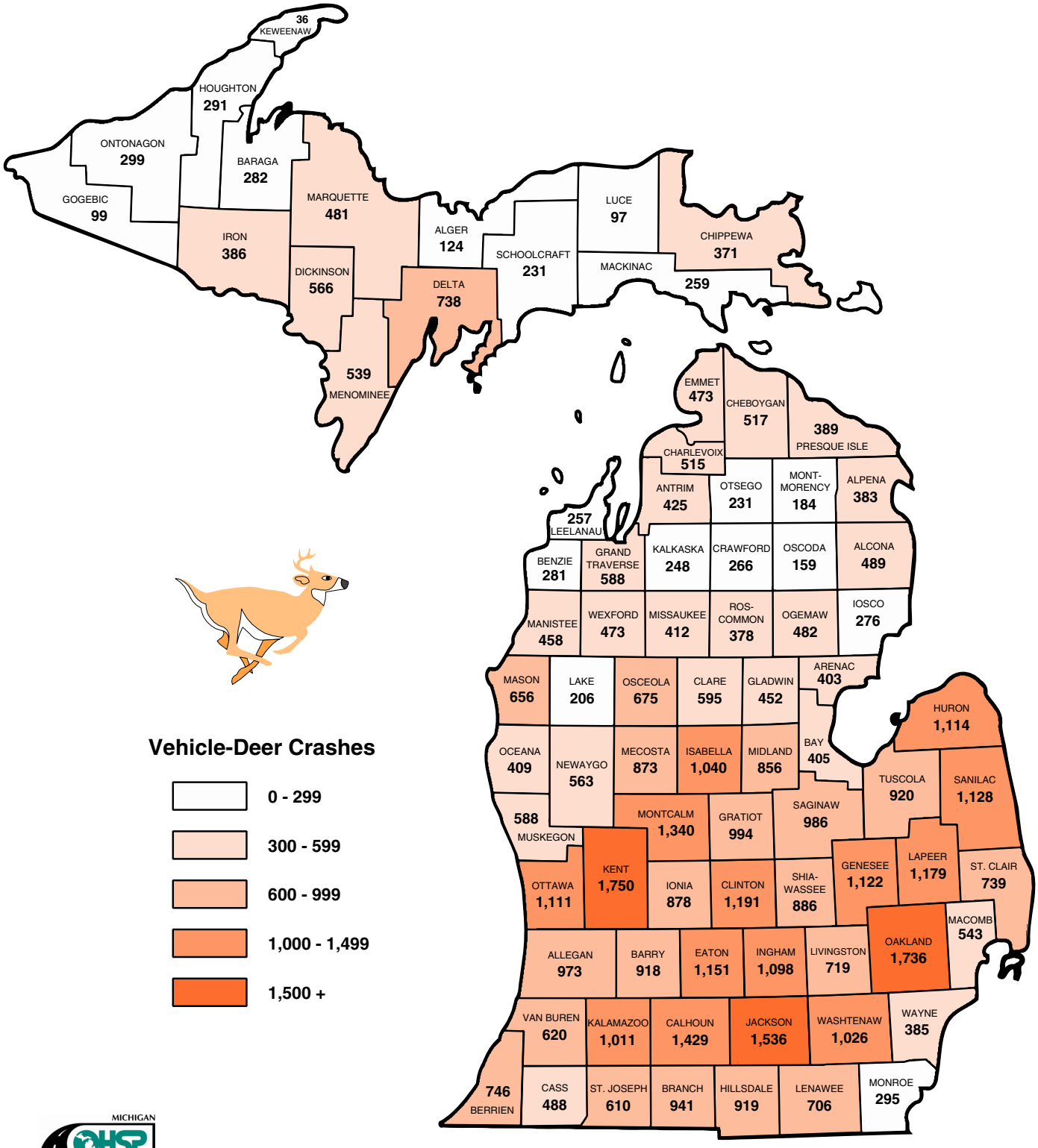
Deer

MICHIGAN MOTOR VEHICLE-DEER INVOLVED CRASHES

Michigan motorists reported 53,592 vehicle-deer crashes in 2011. As a result of those collisions, 1,464 people were injured and eight people were killed. Three of the eight people killed were motorcycle riders, one was a passenger car driver, three were passengers, and one was a pedestrian. Of the 53,827 vehicles involved, 39,563 (73.5%) were passenger cars, 9,500 (17.6%) were pickups, and 2,702 (5%) were minivans, vans, or motorhomes. All other vehicle types (including motorcycle, snowmobile, ORV/ATV, large truck, moped) totaled 2,062 (3.8%).

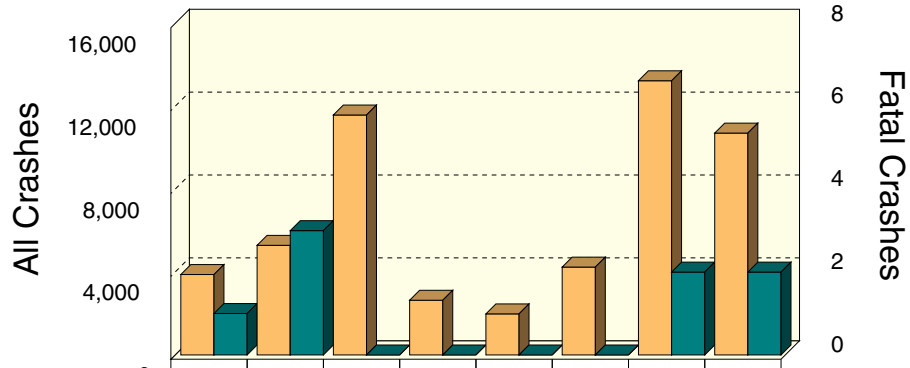
Motor vehicle-deer crashes occurred most often in Michigan's heavily populated southern counties; Kent County had the highest number with 1,750 such crashes in 2011.



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	11,728	21.9	1	12.5	40	166	227	11,294
Dawn	4,780	8.9	0	0.0	3	30	69	4,678
Dusk	2,732	5.1	2	25.0	7	23	37	2,663
Dark – Lighted	2,132	4.0	0	0.0	2	13	35	2,082
Dark – Unlighted	31,611	59.0	5	62.5	51	174	415	30,966
Other/Unknown	609	1.1	0	0.0	0	2	1	606
Total	53,592	100.0	8	100.0	103	408	784	52,289

Time and Severity of Motor Vehicle - Deer Crashes

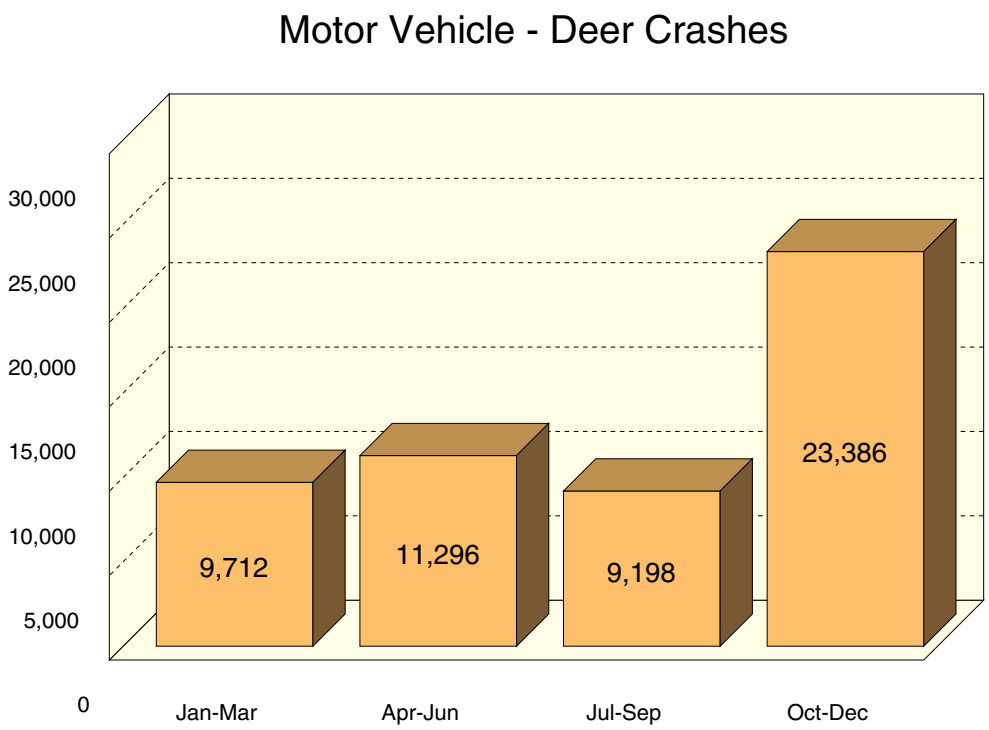


	Midnight - 2:59 AM	3:00 AM - 5:59 AM	6:00 AM - 8:59 AM	9:00 AM - 11:59 AM	Noon - 2:59 PM	3:00 PM - 5:59 PM	6:00 PM - 8:59 PM	9:00 PM - 11:59 PM	Totals
All Crashes	3,882	5,291	11,582	2,641	1,982	4,241	13,235	10,709	53,563
Fatal Crashes	1	3	0	0	0	0	2	2	8

NOTE: Time and Severity chart excludes 29 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	4,275	8.0	0	0.0	3	14	42	4,216
February	2,329	4.3	0	0.0	2	6	16	2,305
March	3,108	5.8	0	0.0	1	8	29	3,070
April	2,852	5.3	0	0.0	5	17	35	2,795
May	3,693	6.9	1	12.5	9	34	74	3,575
June	4,751	8.9	2	25.0	13	74	94	4,568
July	3,059	5.7	1	12.5	19	59	71	2,909
August	2,272	4.2	1	12.5	8	43	52	2,168
September	3,867	7.2	0	0.0	18	29	69	3,751
October	7,444	13.9	3	37.5	10	46	110	7,275
November	10,358	19.3	0	0.0	10	54	134	10,160
December	5,584	10.4	0	0.0	5	24	58	5,497
Total	53,592	100.0	8	100.0	103	408	784	52,289



23,386 (43.6%) of reported vehicle-deer collisions occurred during the fourth quarter of the year.

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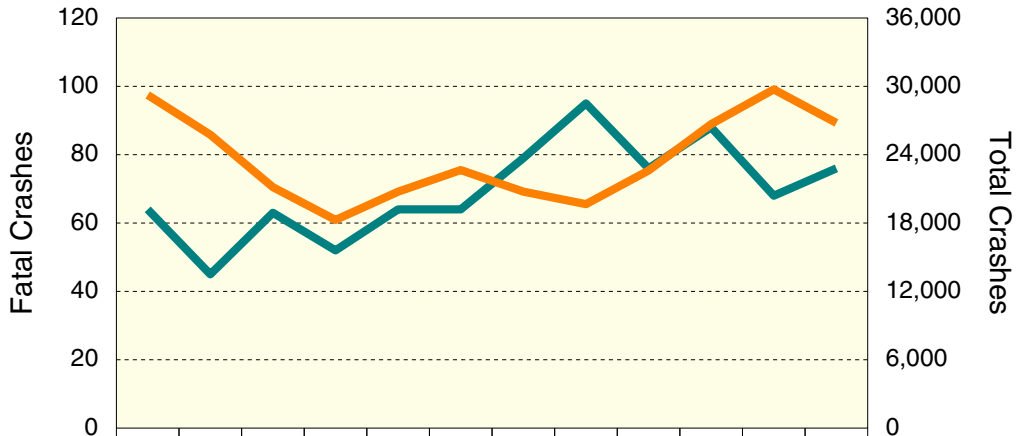
Crash

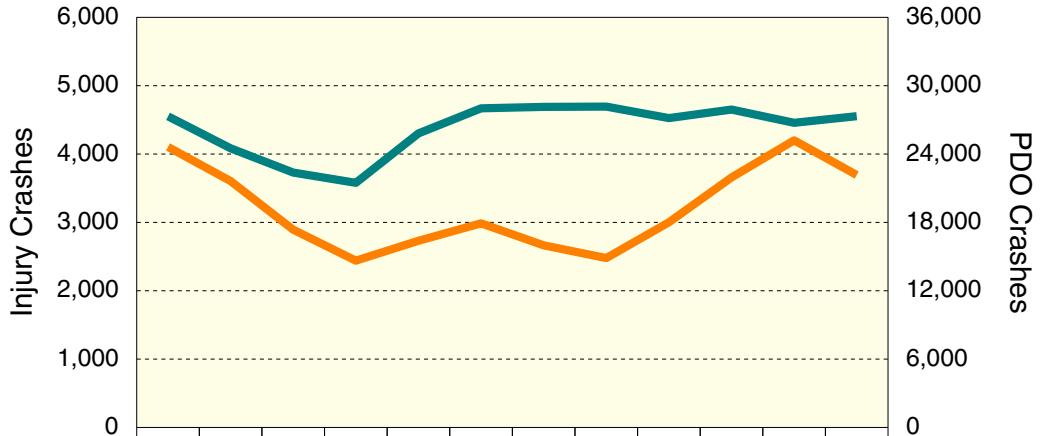
ALL CRASHES INJURY SEVERITY BY MONTH

Fatal and Total Crashes



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Fatal Crashes	64	45	63	52	64	64	79	95	76	88	68	76	834
Total Crashes	29,240	25,755	21,149	18,273	20,753	22,651	20,757	19,658	22,610	26,685	29,729	26,789	284,049

Injury and PDO Crashes

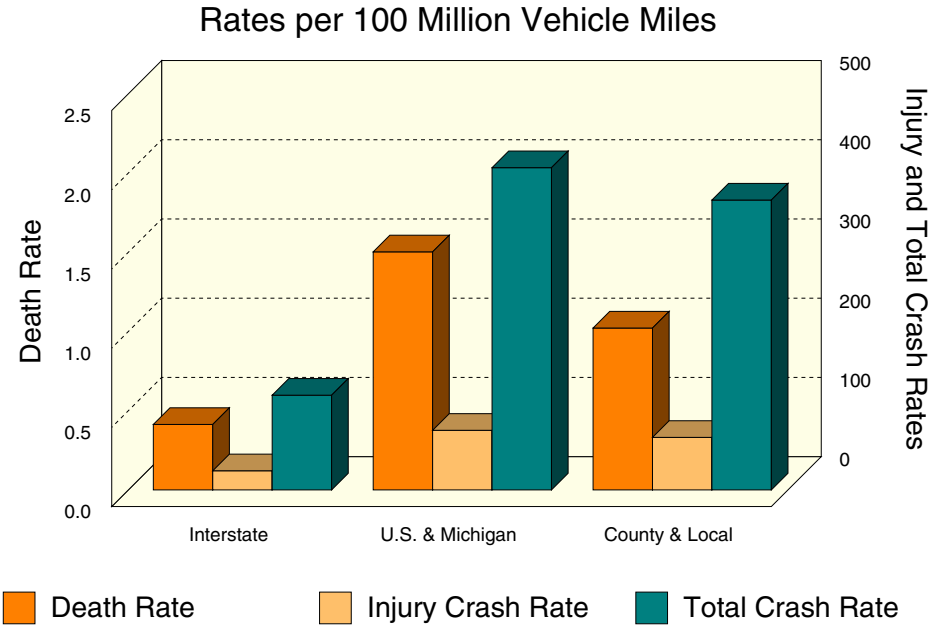


	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Injury Crashes	4,552	4,084	3,729	3,579	4,302	4,669	4,690	4,694	4,526	4,651	4,457	4,554	52,487
PDO Crashes	24,624	21,626	17,357	14,642	16,387	17,918	15,988	14,869	18,008	21,946	25,204	22,159	230,728

CRASH EXPERIENCE BY ROADWAY TYPE

The table below provides a breakdown of estimated vehicle mileage, crashes, deaths, 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 highest on U.S. & Michigan roads, and lowest on interstate routes. 2011 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	28.8	34,431	6,956	119	119.6	24.2	0.4
U.S. & Michigan Roads	19.9	80,942	14,972	299	406.7	75.2	1.5
County & City Roads	46.1	168,676	30,559	471	365.9	66.3	1.0
Total	94.8	284,049	52,487	889	299.6	55.4	0.94



CRASH TYPE

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	107,373	37.8	458	54.9	2,027	5,300	8,606	90,982
Head On	3,561	1.3	102	12.2	299	458	696	2,006
Head On - Left Turn	6,178	2.2	23	2.8	219	743	1,520	3,673
Angle	44,895	15.8	123	14.7	982	2,948	7,783	33,059
Rear End	67,126	23.6	48	5.8	526	2,081	11,346	53,125
Rear End - Left Turn	2,930	1.0	5	0.6	44	177	542	2,162
Rear End - Right Turn	2,832	1.0	3	0.4	11	61	362	2,395
Sideswipe - Same Direction	27,444	9.7	21	2.5	145	474	1,738	25,066
Sideswipe - Opposite Direct	5,523	1.9	12	1.4	74	213	464	4,760
Other/Unknown	16,187	5.7	39	4.7	279	826	1,543	13,500
Total	284,049	100.0	834	100.0	4,606	13,281	34,600	230,728

Single Vehicle, Head On, and Angle crash types produce the highest number of fatal crashes (81.8%). Single Vehicle crashes include rollovers, which are a particularly deadly crash type. Rear End-Turning crashes produce the lowest number of fatal crashes (1.0%).

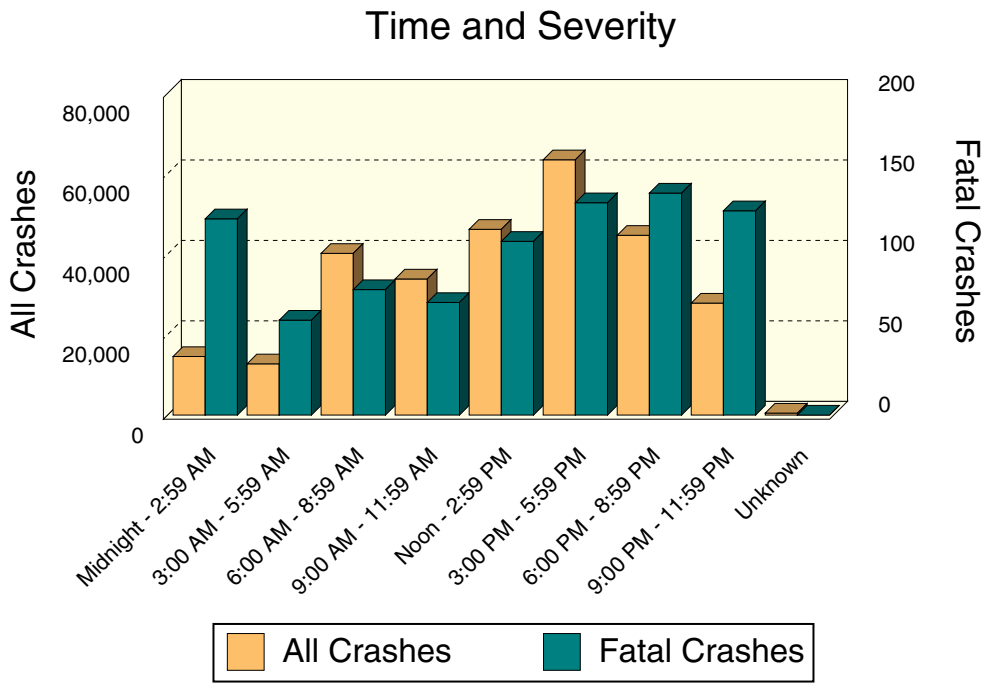
RELATIONSHIP TO ROADWAY

LOCATION OF FIRST IMPACT	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
On Road	238,638	84.0	553	66.3	3,239	9,799	28,368	196,679
Median	2,532	0.9	9	1.1	52	176	409	1,886
Shoulder	12,599	4.4	49	5.9	327	845	1,569	9,809
Outside of Shoulder/Curb	23,896	8.4	203	24.3	820	2,027	3,423	17,423
Gore	1,073	0.4	4	0.5	28	97	140	804
Other/Unknown	5,311	1.9	16	1.9	140	337	691	4,127
Total	284,049	100.0	834	100.0	4,606	13,281	34,600	230,728

Crashes that happen outside of the normal driving lanes are overrepresented in the fatal count. Only 8.4 percent of crashes occur outside the shoulder of the road, but these crashes account for 24.3 percent of the fatal crashes.

TIME AND SEVERITY

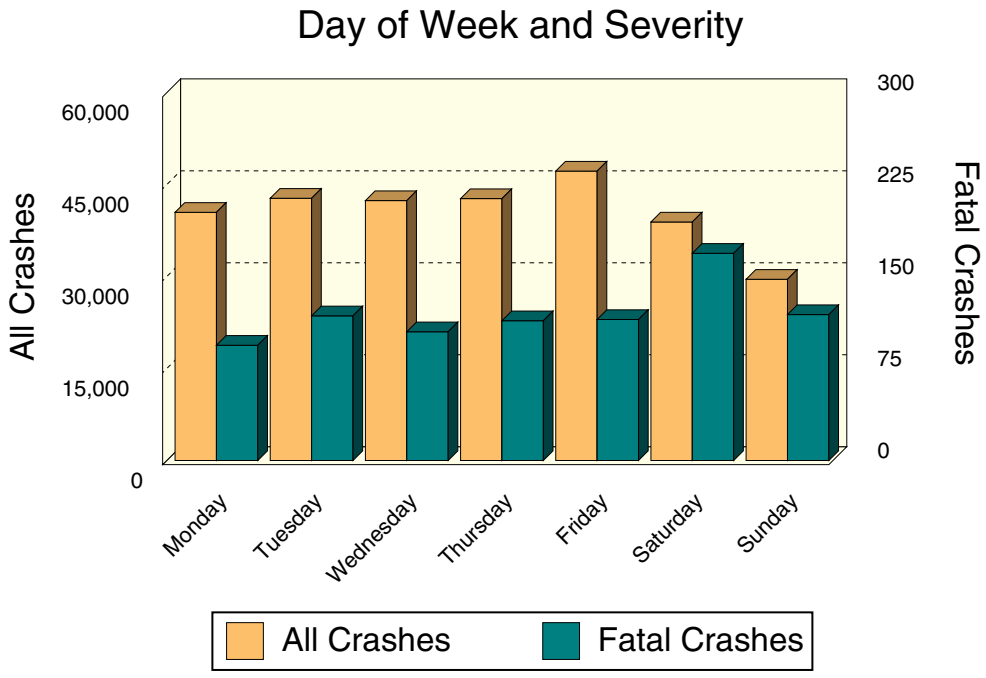
TIME OF DAY	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Midnight - 2:59 AM	14,563	5.1	122	14.6	388	901	1,520	11,632
3:00 AM - 5:59 AM	12,741	4.5	59	7.1	251	602	1,111	10,718
6:00 AM - 8:59 AM	40,207	14.2	78	9.4	466	1,379	4,102	34,182
9:00 AM - 11:59 AM	33,841	11.9	70	8.4	472	1,657	4,617	27,025
Noon - 2:59 PM	46,191	16.3	108	12.9	740	2,367	6,854	36,122
3:00 PM - 5:59 PM	63,478	22.3	132	15.8	1,012	3,083	8,991	50,260
6:00 PM - 8:59 PM	44,696	15.7	138	16.5	728	2,008	4,802	37,020
9:00 PM - 11:59 PM	27,842	9.8	127	15.2	539	1,273	2,567	23,336
Unknown	490	0.2	0	0.0	10	11	36	433
Total	284,049	100.0	834	100.0	4,606	13,281	34,600	230,728



Crash frequencies peak in the late afternoon, then drop off steadily until 5:59 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

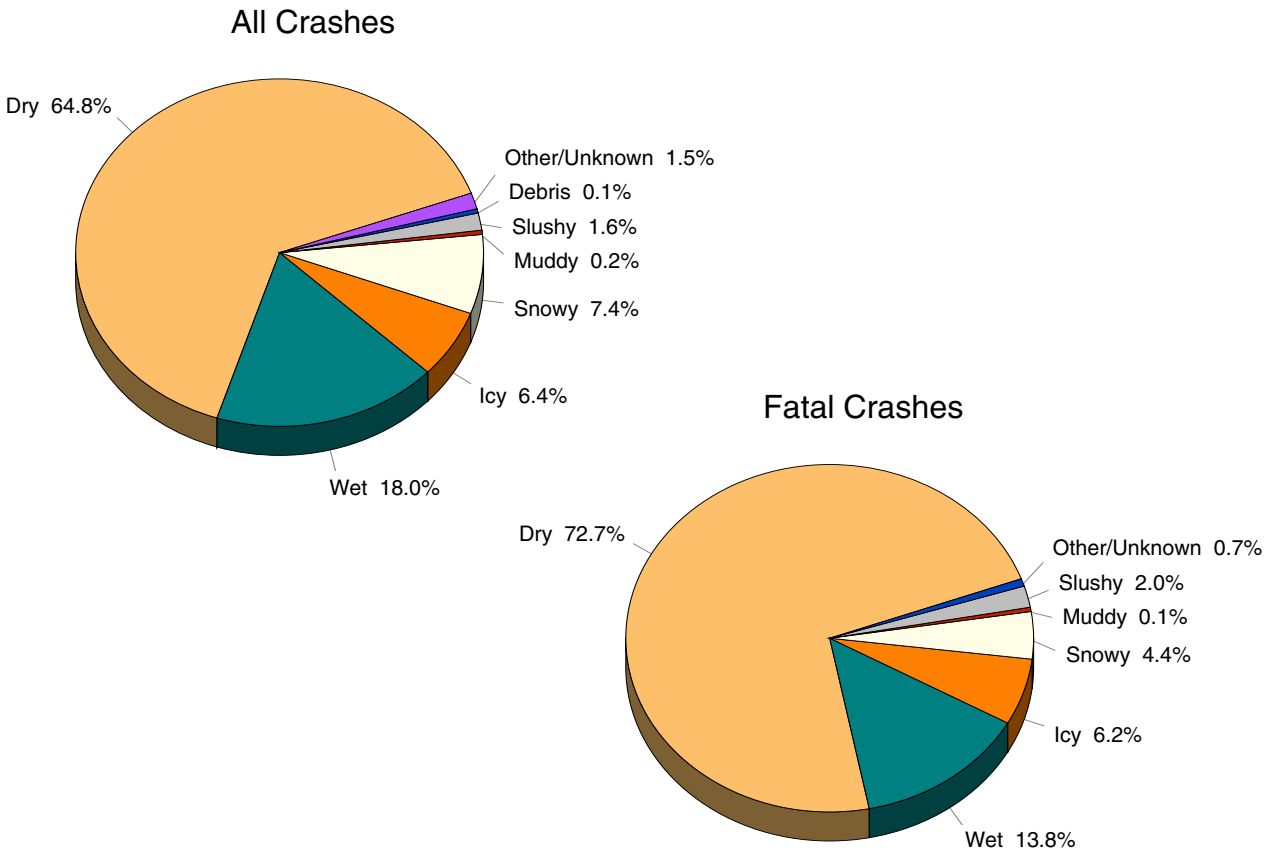
DAY OF WEEK	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Monday	40,480	14.3	94	11.3	604	1,849	5,021	32,912
Tuesday	42,776	15.1	118	14.1	631	1,900	5,256	34,871
Wednesday	42,395	14.9	105	12.6	558	1,788	5,396	34,548
Thursday	42,721	15.0	114	13.7	592	1,760	5,340	34,915
Friday	47,210	16.6	115	13.8	723	2,094	5,666	38,612
Saturday	38,907	13.7	169	20.3	836	2,166	4,536	31,200
Sunday	29,560	10.4	119	14.3	662	1,724	3,385	23,670
Total	284,049	100.0	834	100.0	4,606	13,281	34,600	230,728



Crash frequencies were higher Monday through Friday than on the weekend. Saturday (20.3%) and Sunday (14.3%) had the highest number of fatal crashes.

ROAD CONDITION

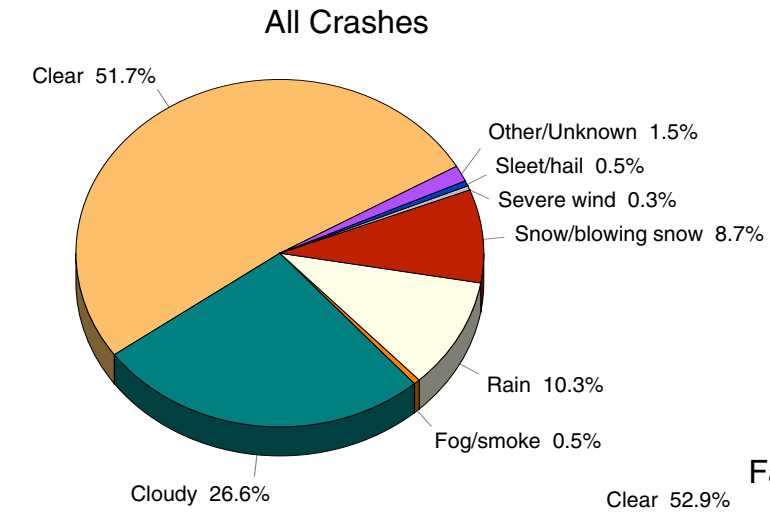
ROAD SURFACE CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Dry	184,049	64.8	606	72.7	3,321	9,321	22,682	148,119
Wet	50,991	18.0	115	13.8	648	2,182	7,059	40,987
Icy	18,252	6.4	52	6.2	240	757	2,088	15,115
Snowy	21,105	7.4	37	4.4	257	637	1,884	18,290
Muddy	497	0.2	1	0.1	16	39	54	387
Slushy	4,623	1.6	17	2.0	77	214	563	3,752
Debris	231	0.1	0	0.0	10	24	21	176
Other/Unknown	4,301	1.5	6	0.7	37	107	249	3,902
Total	284,049	100.0	834	100.0	4,606	13,281	34,600	230,728

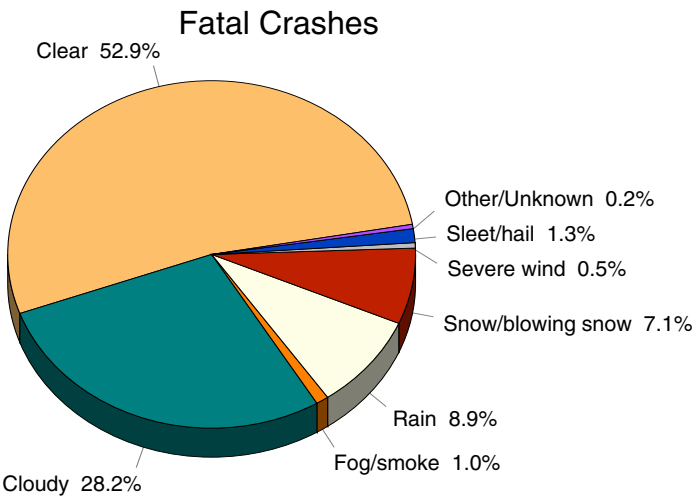


Most crashes (64.8%) and most fatal crashes (72.7%) occur on dry roads.

WEATHER CONDITION

WEATHER CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	146,733	51.7	441	52.9	2,669	7,534	17,729	118,360
Cloudy	75,465	26.6	235	28.2	1,131	3,340	9,449	61,310
Fog/Smoke	1,429	0.5	8	1.0	33	65	129	1,194
Rain	29,214	10.3	74	8.9	376	1,306	4,223	23,235
Snow/Blowing Snow	24,756	8.7	59	7.1	324	866	2,635	20,872
Severe Wind	806	0.3	4	0.5	12	31	57	702
Sleet/Hail	1,510	0.5	11	1.3	33	62	188	1,216
Other/Unknown	4,136	1.5	2	0.2	28	77	190	3,839
Total	284,049	100.0	834	100.0	4,606	13,281	34,600	230,728

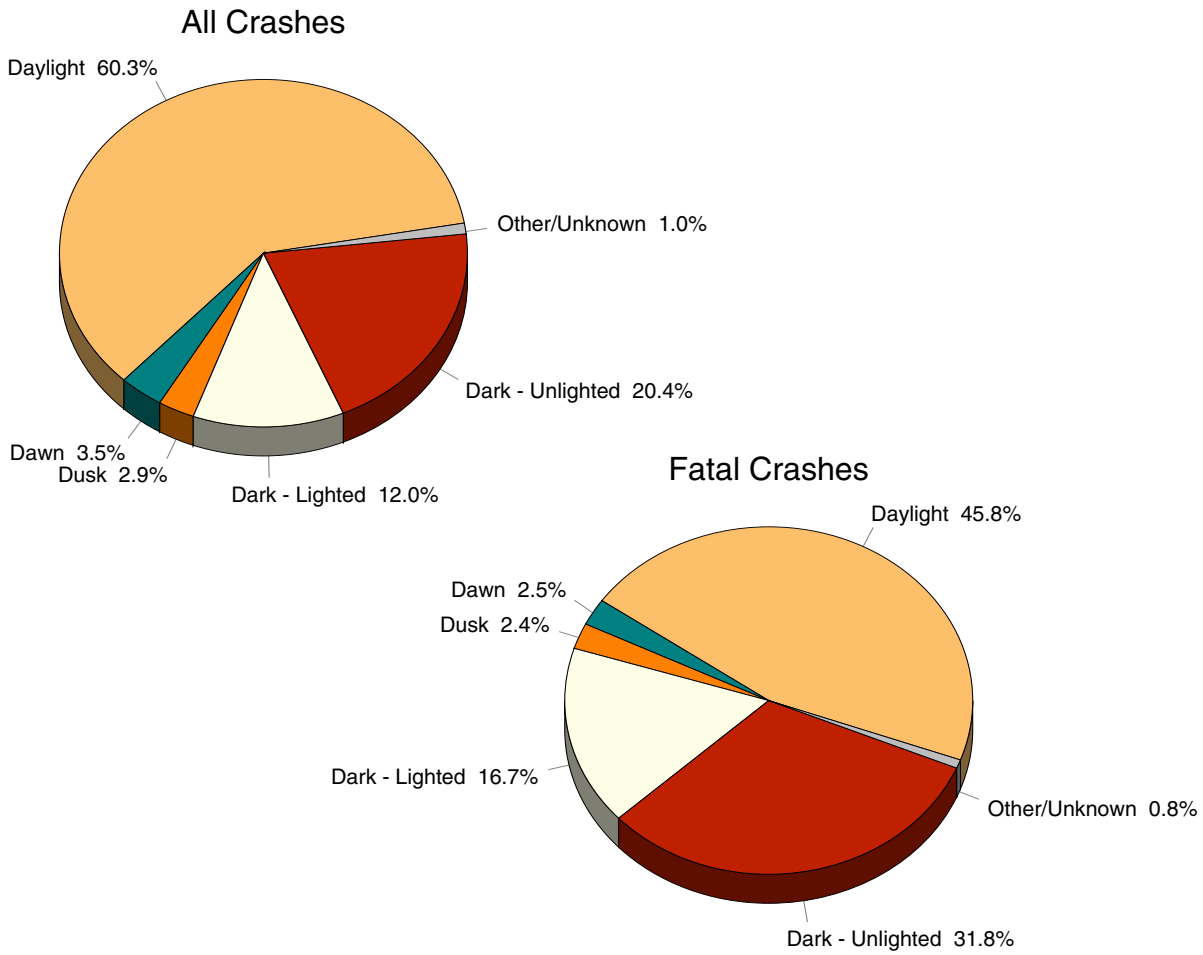




Most crashes occur in clear weather conditions.

LIGHT CONDITION

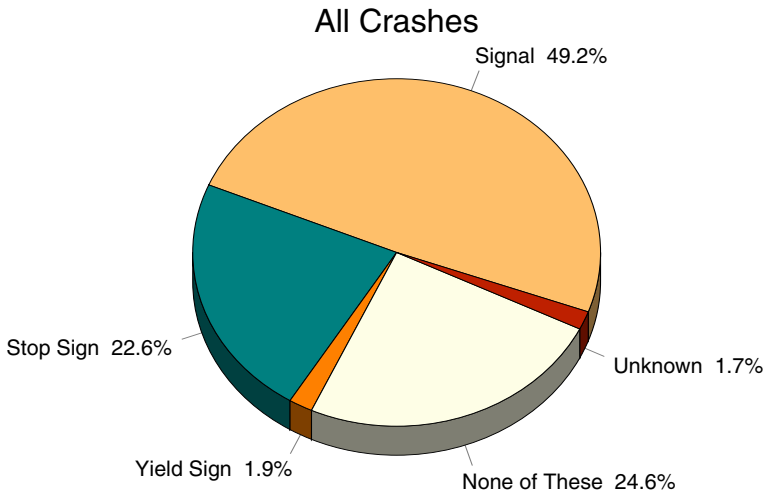
LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	171,168	60.3	382	45.8	2,806	8,793	24,336	134,851
Dawn	10,021	3.5	21	2.5	113	263	764	8,860
Dusk	8,142	2.9	20	2.4	105	293	812	6,912
Dark – Lighted	34,024	12.0	139	16.7	662	1,891	4,810	26,522
Dark – Unlighted	57,835	20.4	265	31.8	898	1,997	3,760	50,915
Other/Unknown	2,859	1.0	7	0.8	22	44	118	2,668
Totals	284,049	100.0	834	100.0	4,606	13,281	34,600	230,728

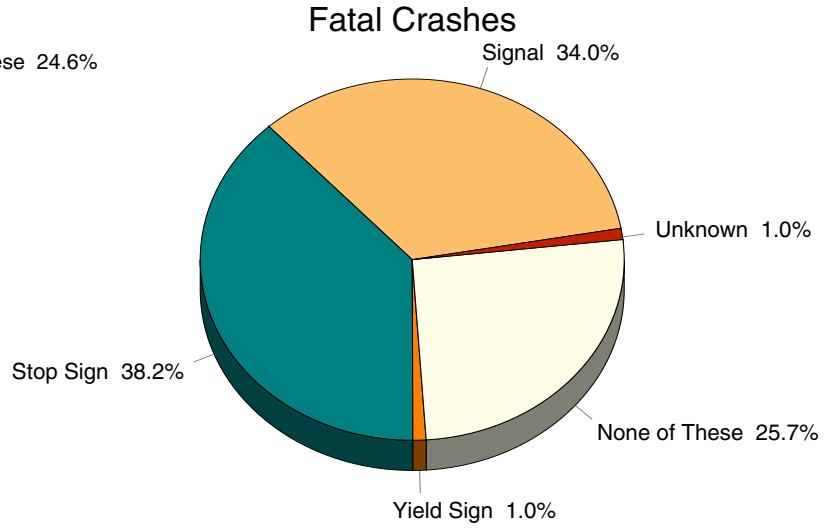


The majority (60.3%) of all crashes happen during daylight hours. Darkened conditions create the greatest hazard, as they are overrepresented in fatal crashes.

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	40,764	49.2	65	34.0	676	2,337	7,395	30,291
Stop Sign	18,762	22.6	73	38.2	468	1,305	3,209	13,707
Yield Sign	1,550	1.9	2	1.0	20	86	235	1,207
None of These	20,349	24.6	49	25.7	355	1,142	2,961	15,842
Unknown	1,436	1.7	2	1.0	20	61	230	1,123
Total	82,861	100.0	191	100.0	1,539	4,931	14,030	62,170





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	2,017	50.6	5	31.3	29	105	306	1,572
Lane Open	649	16.3	2	12.5	6	28	69	544
Unknown Lane Closure	6	0.2	0	0.0	0	1	0	5
Activity - Off Road								
Lane Closed	198	5.0	1	6.3	3	7	23	164
Lane Open	201	5.0	2	12.5	4	16	25	154
Unknown Lane Closure	2	0.1	0	0.0	1	0	0	1
Activity - None								
Lane Closed	505	12.7	5	31.3	14	26	71	389
Lane Open	370	9.3	1	6.3	5	31	48	285
Unknown Lane Closure	4	0.1	0	0.0	0	0	0	4
Activity - Unknown								
Lane Closed	10	0.3	0	0.0	1	0	0	9
Lane Open	5	0.1	0	0.0	1	0	0	4
Unknown Lane Closure	21	0.5	0	0.0	1	0	4	16
Subtotal	3,988	100.0	16	100.0	65	214	546	3,147
Utility	Indicates work on facilities other than the roadway such as telephone, electrical, cable television, water, or sewer.							
Activity - On Road								
Lane Closed	58	8.8	0	0.0	0	3	8	47
Lane Open	281	42.5	0	0.0	5	9	25	242
Unknown Lane Closure	0	0.0	0	0.0	0	0	0	0
Activity - Off Road								
Lane Closed	23	3.5	0	0.0	1	1	3	18
Lane Open	47	7.1	1	50.0	6	4	11	25
Unknown Lane Closure	0	0.0	0	0.0	0	0	0	0
Activity - None								
Lane Closed	12	1.8	0	0.0	0	1	5	6
Lane Open	239	36.2	1	50.0	8	6	32	192
Unknown Lane Closure	0	0.0	0	0.0	0	0	0	0
Activity - Unknown								
Lane Closed	0	0.0	0	0.0	0	0	0	0
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	661	100.0	2	100.0	20	24	84	531
Unknown Type / Unknown Lane Closure / Activity None								
Subtotal	6,108		6		144	277	771	4,910
Total	10,757		24		229	515	1,401	8,588

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Vehicle/ Driver

VEHICLE TYPE CRASH INVOLVEMENT

Vehicle Type	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH: Fatal Crash		Injury Crash	PDO Crash	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	360,881	76.2	791	62.4	71,815	288,275	434	63.4	45,365	315,082
Van and Motorhome	23,639	5.0	51	4.0	4,963	18,625	20	2.9	2,822	20,797
Pickup	55,115	11.6	184	14.5	9,870	45,061	81	11.8	5,011	50,023
Small Truck (under 10,000 lbs.)	9,148	1.9	11	0.9	1,849	7,288	6	0.9	1,085	8,057
Motorcycle	3,175	0.7	113	8.9	2,353	709	109	15.9	2,318	748
Moped	349	0.1	9	0.7	279	61	9	1.3	276	64
Go Cart	22	0.0	0	0.0	11	11	0	0.0	9	13
Snowmobile	132	0.0	6	0.5	88	38	6	0.9	78	48
Off-Road Vehicle	253	0.1	8	0.6	199	46	8	1.2	189	56
Other	1,913	0.4	10	0.8	343	1,560	2	0.3	159	1,752
Unknown	7,989	1.7	11	0.9	705	7,273	0	0.0	41	7,948
CDL Truck/Bus (breakdown below)	10,885	2.3	73	5.8	1,903	8,909	10	1.5	531	10,344
Total Number of Vehicles	473,501	100.0	1,267	100.0	94,378	377,856	685	100.0	57,884	414,932

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

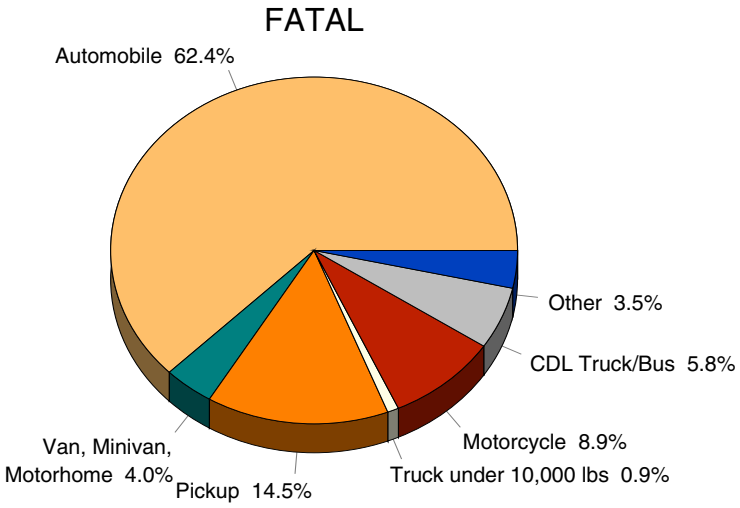
CDL Truck/Bus Sub-category Type	Motor Vehicles		Fatal Crash		Injury Crash	PDO Crash	Fatality in Veh		Injury	No Injury
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Commercial Vehicle: Group A	6,126	56.3	49	67.1	1,087	4,990	5	50.0	265	5,856
Commercial Vehicle: Group B	2,501	23.0	19	26.0	460	2,022	3	30.0	170	2,328
Commercial Vehicle: Group C	398	3.7	2	2.7	63	333	2	20.0	27	369
Other Truck	905	8.3	2	2.7	161	742	0	0.0	37	868
Unknown Truck	955	8.8	1	1.4	132	822	0	0.0	32	923
Total Number of Vehicles	10,885	100.0	73	100.0	1,903	8,909	10	100.0	531	10,344

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

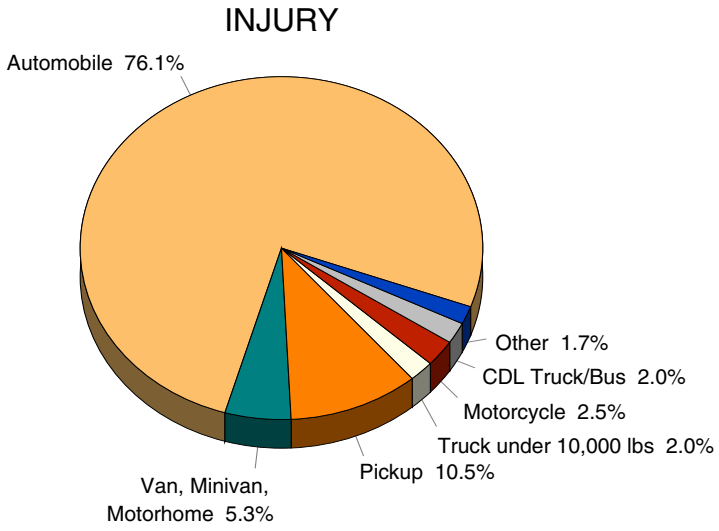
Group “B” is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

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

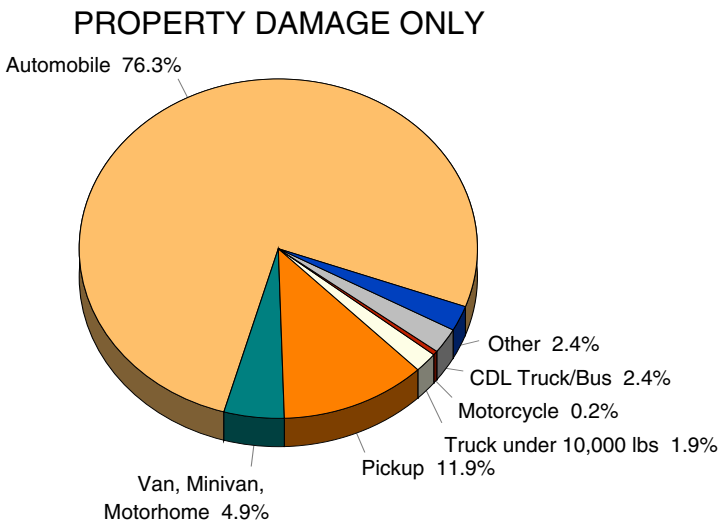


The top chart shows that 62.4 percent of vehicles involved in fatal crashes are automobiles or pickups. Van/minivan/motorhome has a fatal crash involvement of 4 percent. Motorcycles have a fatal crash involvement of 8.9 percent.



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				
	Number of Vehicles	% of Total	Fatal Crash	Injury Crash A	Injury Crash B	Injury Crash C	PDO Crash
Going straight ahead	253,887	53.6	966	4,977	13,510	33,705	200,729
Turning left	31,483	6.6	60	666	2,222	5,253	23,282
Turning right	12,673	2.7	14	128	462	1,358	10,711
Stopped on roadway	50,495	10.7	29	456	1,962	9,447	38,601
In prior crash	540	0.1	4	15	32	92	397
Changing lanes	12,333	2.6	27	98	344	1,123	10,741
Backing	10,912	2.3	1	26	79	327	10,479
Slowing/stopping on roadway	43,083	9.1	21	338	1,289	7,115	34,320
Slowing/stopping other	632	0.1	1	7	34	106	484
Starting up on roadway	9,546	2.0	14	127	372	1,626	7,407
Starting up other	175	0.0	0	4	13	24	134
Entering parking	413	0.1	0	0	8	29	376
Leaving parking	1,255	0.3	1	12	51	160	1,031
Entering roadway	5,805	1.2	14	97	337	856	4,501
Leaving roadway	744	0.2	5	35	71	124	509
Making U-turn	844	0.2	4	22	55	136	627
Overtaking or passing	3,094	0.7	17	85	199	301	2,492
Avoiding object	707	0.1	2	17	53	103	532
Avoiding animal	1,086	0.2	2	26	97	164	797
Avoiding pedestrian	92	0.0	6	9	13	14	50
Avoiding vehicle (front/back)	3,766	0.8	21	97	242	637	2,769
Avoiding vehicle (angle)	1,631	0.3	10	24	120	257	1,220
Driverless moving	179	0.0	2	4	10	10	153
Parked	16,644	3.5	32	124	376	730	15,382
Crossing at intersection	17	0.0	0	0	2	3	12
Crossing not at intersection	18	0.0	0	0	1	2	15
Getting on/off vehicle	3	0.0	0	0	0	0	3
In roadway with traffic	12	0.0	0	0	1	1	10
In roadway against traffic	11	0.0	0	1	2	5	3
Standing or lying in roadway	2	0.0	0	0	0	0	2
Pushing/working on vehicle	2	0.0	0	0	0	0	2
Other working in roadway	11	0.0	0	0	1	2	8
Playing in roadway	2	0.0	0	0	0	1	1
In roadway other reason	11	0.0	0	0	0	3	8
Not in roadway	24	0.0	0	0	1	8	15
Other	489	0.1	1	13	27	60	388
Unknown	10,880	2.3	13	104	342	756	9,665
Total	473,501	100.0	1,267	7,512	22,328	64,538	377,856

ACTION PRIOR TO CRASH (continued)

MOTORCYCLIST – INJURY SEVERITY

MOTORCYCLIST ACTION	Motorcycles		Motorcyclists*		Fatality	Injury			No Injury
	Number of Motorcycles	% of Total	Number of Motorcyclists	% of Total		A	B	C	
Going straight ahead	2,163	68.1	2,391	68.1	85	444	838	530	474
Turning left	135	4.3	149	4.2	3	16	42	43	44
Turning right	112	3.5	134	3.8	1	17	39	39	35
Stopped on roadway	122	3.8	132	3.8	1	2	24	24	79
In prior crash	3	0.1	3	0.1	0	0	1	1	0
Changing lanes	58	1.8	66	1.9	4	11	28	15	8
Backing	1	0.0	1	0.0	0	0	0	0	1
Slowing/stopping on roadway	179	5.6	200	5.7	1	19	69	64	47
Slowing/stopping other	5	0.2	5	0.1	0	1	1	0	3
Starting up on roadway	45	1.4	46	1.3	1	9	11	12	12
Starting up other	2	0.1	2	0.1	0	0	0	1	1
Entering parking	0	0.0	0	0.0	0	0	0	0	0
Leaving parking	1	0.0	1	0.0	0	0	1	0	0
Entering roadway	20	0.6	21	0.6	2	6	5	3	3
Leaving roadway	14	0.4	17	0.5	0	4	9	1	3
Making U-turn	5	0.2	5	0.1	0	0	0	3	2
Overtaking or passing	53	1.7	57	1.6	3	14	25	5	7
Avoiding object	18	0.6	18	0.5	0	4	7	3	4
Avoiding animal	20	0.6	21	0.6	0	4	8	7	2
Avoiding pedestrian	4	0.1	4	0.1	0	0	3	1	0
Avoiding vehicle (front/back)	82	2.6	91	2.6	2	13	34	26	15
Avoiding vehicle (angle)	41	1.3	47	1.3	1	3	24	10	9
Driverless moving	0	0.0	0	0.0	0	0	0	0	0
Parked	40	1.3	41	1.2	0	0	0	1	7
Crossing at intersection	0	0.0	0	0.0	0	0	0	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	0	0.0	0	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	5	0.2	7	0.2	1	1	4	1	0
Unknown	47	1.5	50	1.4	4	5	12	8	6
Total	3,175	100.0	3,509	100.0	109	573	1,185	798	762

* This table includes 82 motorcyclists (drivers and passengers) with unknown injury severity

ACTION PRIOR TO CRASH (continued)

BICYCLIST - INJURY SEVERITY

BICYCLIST ACTION	Bicycles		Bicyclists*		Fatality	Injury			No Injury
	Number of Bicycles	% of Total	Number of Bicyclists	% of Total		A	B	C	
Going straight ahead	1,120	59.1	1,120	59.1	18	71	362	440	191
Turning left	43	2.3	43	2.3	0	6	11	18	7
Turning right	16	0.8	16	0.8	0	1	4	6	4
Stopped on roadway	7	0.4	7	0.4	0	0	1	3	3
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	20	1.1	20	1.1	2	4	5	7	2
Backing	3	0.2	3	0.2	0	0	0	2	1
Slowing/stopping on roadway	9	0.5	9	0.5	0	0	3	2	3
Slowing/stopping other	0	0.0	0	0.0	0	0	0	0	0
Starting up on roadway	13	0.7	13	0.7	0	2	2	7	1
Starting up other	0	0.0	0	0.0	0	0	0	0	0
Entering parking	1	0.1	1	0.1	0	0	0	1	0
Leaving parking	1	0.1	1	0.1	0	0	1	0	0
Entering roadway	93	4.9	93	4.9	1	10	29	37	11
Leaving roadway	0	0.0	0	0.0	0	0	0	0	0
Making U-turn	4	0.2	4	0.2	0	1	1	1	1
Overtaking or passing	5	0.3	5	0.3	0	1	4	0	0
Avoiding object	2	0.1	2	0.1	0	0	0	1	1
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)	3	0.2	3	0.2	1	1	0	1	0
Avoiding vehicle (angle)	4	0.2	4	0.2	0	0	2	2	0
Driverless moving	0	0.0	0	0.0	0	0	0	0	0
Parked	1	0.1	1	0.1	0	0	0	0	1
Crossing at intersection	347	18.3	347	18.3	2	28	108	140	61
Crossing not at intersection	68	3.6	68	3.6	0	12	29	15	11
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	33	1.7	33	1.7	0	3	7	16	5
In roadway against traffic	24	1.3	24	1.3	0	3	9	7	4
Standing or lying in roadway	1	0.1	1	0.1	0	0	1	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	7	0.4	7	0.4	0	0	3	2	2
In roadway other reason	4	0.2	4	0.2	0	1	1	2	0
Not in roadway	16	0.8	16	0.8	0	0	7	6	3
Other	22	1.2	22	1.2	0	3	6	6	6
Unknown	28	1.5	28	1.5	0	3	5	6	6
Total	1,895	100.0	1,895	100.0	24	150	601	728	324

* Includes 68 bicyclists with unknown injury severity

ACTION PRIOR TO CRASH (continued)

PEDESTRIAN - INJURY SEVERITY

PEDESTRIAN ACTION	Pedestrians*		Fatality	Injury			No Injury
	Number of Pedestrians	% of Total		A	B	C	
Going straight ahead	90	3.8	2	9	29	36	10
Turning left	1	0.0	0	0	0	0	1
Turning right	0	0.0	0	0	0	0	0
Stopped on roadway	11	0.5	1	1	2	4	2
In prior crash	1	0.0	0	0	0	0	0
Changing lanes	0	0.0	0	0	0	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	1	0.0	0	0	0	1	0
Slowing/stopping other	1	0.0	0	1	0	0	0
Starting up on roadway	2	0.1	0	0	1	1	0
Starting up other	0	0.0	0	0	0	0	0
Entering parking	0	0.0	0	0	0	0	0
Leaving parking	1	0.0	0	0	0	1	0
Entering roadway	28	1.2	1	3	12	7	3
Leaving roadway	3	0.1	0	0	2	0	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	1	0.0	0	0	1	0	0
Avoiding object	1	0.0	0	0	1	0	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)	1	0.0	0	0	0	0	1
Avoiding vehicle (angle)	3	0.1	0	0	1	2	0
Driverless moving	1	0.0	0	0	0	1	0
Parked	4	0.2	0	0	0	3	0
Crossing at intersection	732	30.5	20	91	205	315	73
Crossing not at intersection	529	22.1	39	123	172	149	27
Getting on/off vehicle	18	0.8	0	2	6	9	1
In roadway with traffic	214	8.9	27	47	45	73	16
In roadway against traffic	62	2.6	6	10	16	23	4
Standing or lying in roadway	109	4.5	13	20	22	41	10
Pushing/working on vehicle	32	1.3	4	9	12	7	0
Other working in roadway	34	1.4	1	6	9	15	2
Playing in roadway	33	1.4	0	7	12	10	4
In roadway other reason	158	6.6	12	23	47	57	12
Not in roadway	131	5.5	4	32	38	51	3
Other	101	4.2	1	15	31	39	12
Unknown	96	4.0	9	15	25	25	6
Total	2,399	100.0	140	414	689	870	187

* Includes 99 pedestrians with unknown injury severity

MOST HARMFUL EVENT

NONCOLLISION	MOST SEVERE OUTCOME IN CRASH: Motor Vehicles		Fatal Crash	Injury Crash			PDO Crash
	Number of Vehicles	% of Total		A	B	C	
Loss of control	2,149	0.5	4	72	188	319	1,566
Cross center/median	408	0.1	2	6	28	55	317
Ran off road left	657	0.1	2	16	44	74	521
Ran off road right	1,230	0.3	1	26	70	163	970
Re-enter road	75	0.0	0	2	5	13	55
Overturn	6,722	1.4	82	464	1,231	1,581	3,364
Separation of units	217	0.0	0	1	1	24	191
Fire/explosion	403	0.1	5	8	14	39	337
Immersion	62	0.0	1	0	4	5	52
Jackknife	210	0.0	0	4	1	16	189
Downhill runaway	55	0.0	0	1	1	11	42
Cargo loss/shift	450	0.1	0	3	4	26	417
Individual fell off	388	0.1	6	103	159	84	36
Other noncollision	1,230	0.3	3	32	92	146	957
NONCOLLISION Subtotal	14,256	3.0	106	738	1,842	2,556	9,014

HAD A COLLISION WITH NONFIXED OBJECT	MOST SEVERE OUTCOME IN CRASH: Motor Vehicles		Fatal Crash	Injury Crash			PDO Crash
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	2,014	0.4	142	350	576	723	223
Bicycle / Pedalcycle	1,655	0.3	26	135	527	640	327
Motor vehicle in transport	339,087	71.6	726	4,963	15,672	53,248	264,478
Parked motor vehicle	14,026	3.0	15	80	267	579	13,085
Railway train	83	0.0	6	7	6	13	51
Animal	54,191	11.4	5	73	316	601	53,196
Other nonfixed objects	3,927	0.8	7	37	74	203	3,606
COLLISION NONFIXED Subtotal	414,983	87.6	927	5,645	17,438	56,007	334,966

MOST HARMFUL EVENT (continued)

HAD A COLLISION WITH FIXED OBJECT	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH: Fatal Crash	Injury Crash			PDO Crash
	Number of Vehicles	% of Total		A	B	C	
Bridge/pier/abutment	510	0.1	1	8	27	86	388
Bridge parapet end	103	0.0	0	1	4	6	92
Bridge rail	493	0.1	0	5	29	79	380
Guardrail face	3,283	0.7	4	29	136	410	2,704
Guardrail end	513	0.1	2	16	31	72	392
Median barrier	4,522	1.0	7	49	291	871	3,304
Highway traffic sign post	2,454	0.5	3	10	31	101	2,309
Highway signal post	249	0.1	0	1	8	16	224
Luminaire/light support	594	0.1	6	10	32	69	477
Utility pole	2,866	0.6	21	93	264	503	1,985
Other pole	851	0.2	0	16	38	48	749
Culvert	530	0.1	5	32	58	89	346
Curb	1,514	0.3	7	28	71	125	1,283
Ditch	5,846	1.2	16	149	421	752	4,508
Embankment	1,307	0.3	10	35	123	191	948
Fence	936	0.2	1	11	30	66	828
Mailbox	1,709	0.4	1	8	27	57	1,616
Tree	9,045	1.9	129	445	948	1,493	6,030
Rail crossing signal	89	0.0	0	1	5	11	72
Building	597	0.1	8	30	67	127	365
Traffic island	51	0.0	0	0	4	8	39
Fire hydrant	469	0.1	2	6	25	49	387
Impact attenuator	58	0.0	0	1	9	9	39
Other fixed object	2,682	0.6	10	76	208	310	2,078
COLLISION FIXED Subtotal	41,271	8.7	233	1,060	2,887	5,548	31,543

	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH: Fatal Crash	Injury Crash			PDO Crash
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	2,991	0.6	1	69	161	427	2,333
TOTAL MOST HARMFUL EVENT	473,501	100.0	1,267	7,512	22,328	64,538	377,856

VEHICLE DEFECTS IN CRASH INVOLVEMENT

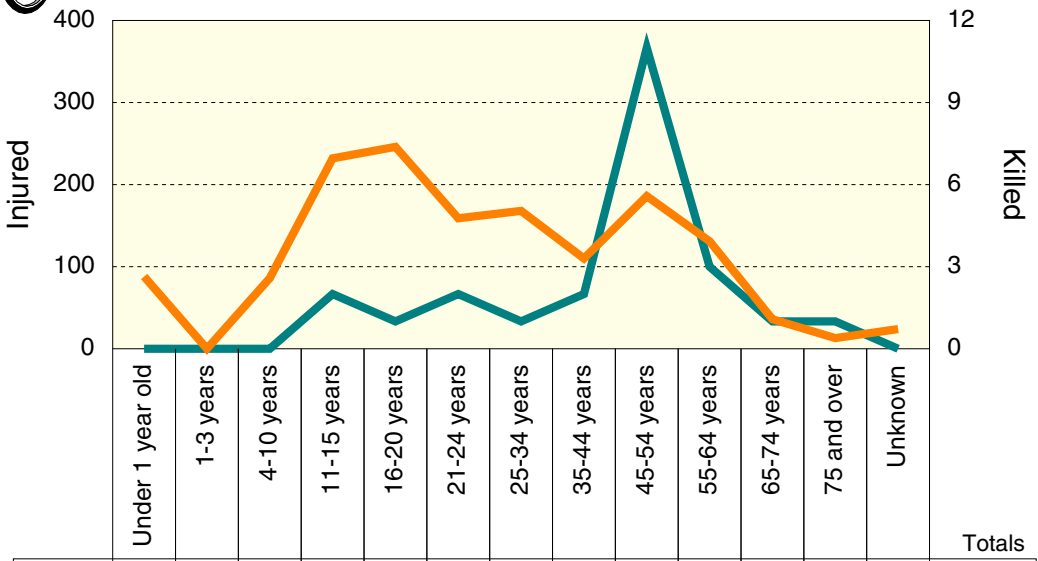
VEHICLE DEFECTS	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal Crash	Injury Crash			PDO Crash
	Number of Vehicles	% of Total		A	B	C	
Brakes	749	0.2	4	12	46	125	562
Lights/reflectors	97	0.0	0	7	10	10	70
Steering	152	0.0	1	4	9	22	116
Tires/wheels	519	0.1	3	14	36	60	406
Windows	18	0.0	0	1	0	2	15
Other	802	0.2	6	10	48	137	601
None or Unknown	471,164	99.5	1,253	7,464	22,179	64,182	376,086
TOTAL	473,501	100.0	1,267	7,512	22,328	64,538	377,856

DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	All Drivers		MOST SEVERE OUTCOME IN CRASH				
			Fatal Crash	Injury Crash			PDO Crash
	Number of Drivers	% of Total		A	B	C	
None	241,487	51.0	496	3,217	9,891	30,697	197,186
Speed too fast	31,617	6.7	184	776	2,103	4,508	24,046
Speed too slow	401	0.1	2	5	20	60	314
Failed to yield	39,901	8.4	90	816	2,790	6,995	29,210
Disregard traffic control	9,610	2.0	46	369	982	2,352	5,861
Drove wrong way	405	0.1	4	9	39	68	285
Drove left of center	2,356	0.5	41	160	259	368	1,528
Improper passing	2,343	0.5	4	30	81	199	2,029
Improper lane use	9,203	1.9	7	55	193	660	8,288
Improper turn	4,352	0.9	4	45	152	450	3,701
Improper/no signal	721	0.2	1	11	27	80	602
Improper backing	7,766	1.6	0	9	24	175	7,558
Unable to stop in assured clear distance	62,389	13.2	41	474	1,999	10,656	49,219
Reckless driving	2,248	0.5	49	184	296	331	1,388
Careless/negligent driving	12,052	2.5	83	500	1,293	1,992	8,184
Other	16,873	3.6	87	426	1,043	2,301	13,016
Unknown	29,777	6.3	128	426	1,136	2,646	25,441
TOTAL	473,501	100.0	1,267	7,512	22,328	64,538	377,856

MICHIGAN BICYCLE CRASHES

2011 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	2	1	2	1	2	11	3	1	1	0	24
Injured	88	0	86	232	246	159	168	110	186	131	36	13	24	1,479
Total	88	0	86	234	247	161	169	112	197	134	37	14	24	1,503

In 2011, there were 1,895 bicycles involved in motor vehicles crashes, with 24 bicyclists killed and 1,479 injured.

More bicyclists within the 45-54 years of age group died than any other age group, with 11 killed (45.8%).

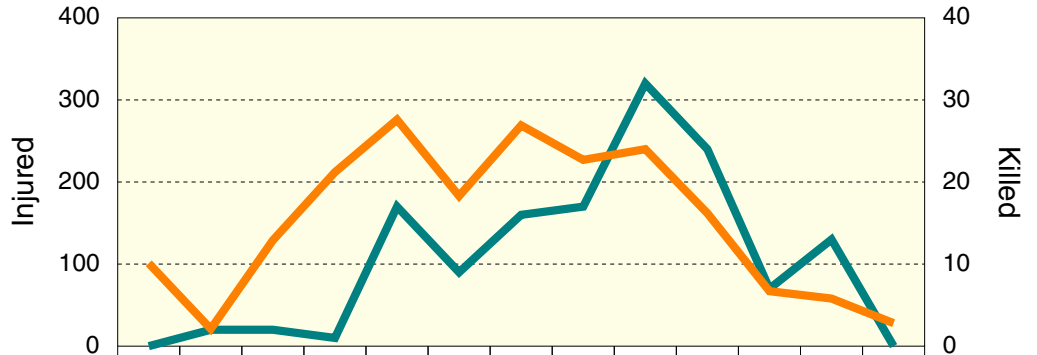
BICYCLE HELMET USE AND INJURY SEVERITY

HELMET USE	Fatality	Injury			No Injury
		A	B	C	
Worn	4	16	84	94	30
Not Worn	13	73	290	331	126
Unknown	7	61	227	303	168
Total	24	150	601	728	324

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

2011 Pedestrian Crash Information

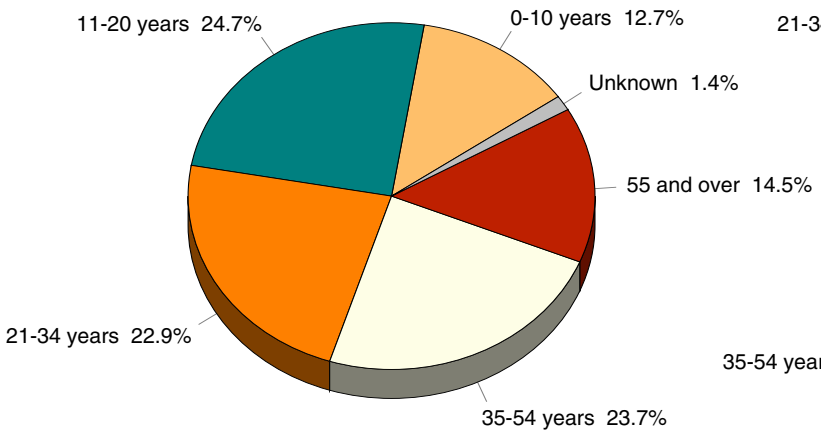


	Under 1 year old	1-3 years	4-10 years	11-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 and over	Unknown	Totals
Killed	0	2	2	1	17	9	16	17	32	24	7	13	0	140
Injured	101	21	129	212	276	183	269	227	240	162	67	58	28	1,973
Total	101	23	131	213	293	192	285	244	272	186	74	71	28	2,113

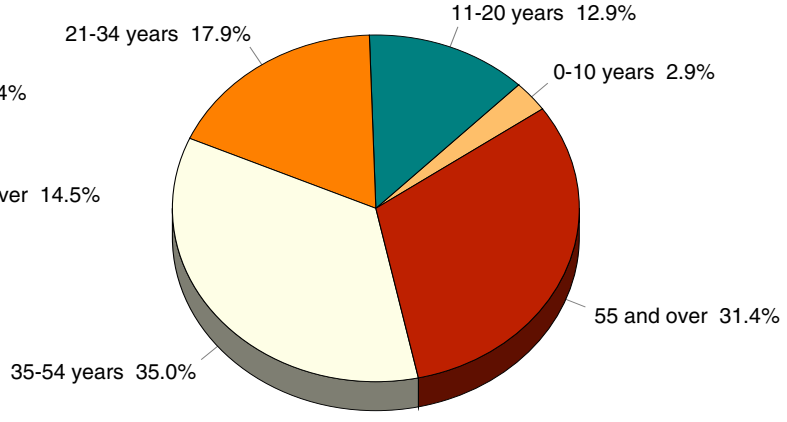
In 2011, there were 2,399 pedestrians involved in motor vehicles crashes, with 140 pedestrians killed and 1,973 injured.

More pedestrians within the 45-54 years of age group died than any other age group, with 32 killed (22.9%).

Pedestrians Injured



Pedestrians Killed



MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

Most Harmful Event

NONCOLLISION	SNOWMOBILES		MOST SEVERE OUTCOME IN CRASH				
			Fatal Crash	Injury Crash			PDO Crash
	Number of Snowmobiles	% of Total		A	B	C	
Loss of control	1	0.8	0	1	0	0	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	1	0.8	0	0	0	1	0
Overturn	18	13.6	0	3	5	6	4
Separation of units	0	0.0	0	0	0	0	0
Fire/explosion	3	2.3	0	0	0	0	3
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	9	6.8	0	3	1	5	0
Other noncollision	2	1.5	0	1	0	0	1
NONCOLLISION Subtotal	34	25.8	0	8	6	12	8

HAD A COLLISION WITH NONFIXED OBJECT	SNOWMOBILES		MOST SEVERE OUTCOME IN CRASH				
			Fatal Crash	Injury Crash			PDO Crash
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	2	1.5	0	1	1	0	0
Bicycle / pedalcycle	1	0.8	0	0	0	1	0
Motor vehicle in transport	51	38.6	1	15	5	10	20
Parked motor vehicle	1	0.8	1	0	0	0	0
Railway train	0	0.0	0	0	0	0	0
Animal	3	2.3	0	1	1	1	0
Other nonfixed objects	3	2.3	0	0	1	0	2
COLLISION NONFIXED Subtotal	61	46.2	2	17	8	12	22

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS (continued)

Most Harmful Event (continued)

HAD A COLLISION WITH FIXED OBJECT	SNOWMOBILES		MOST SEVERE OUTCOME IN CRASH				
			Fatal Crash	Injury Crash			PDO Crash
	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	0	0.0	0	0	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	0	0.0	0	0	0	0	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	0.8	0	0	0	0	1
Other pole	0	0.0	0	0	0	0	0
Culvert	2	1.5	0	0	1	0	1
Curb	0	0.0	0	0	0	0	0
Ditch	3	2.3	0	2	1	0	0
Embankment	1	0.8	0	0	1	0	0
Fence	1	0.8	0	1	0	0	0
Mailbox	1	0.8	0	0	0	0	1
Tree	18	13.6	3	5	4	4	2
Rail crossing signal	0	0.0	0	0	0	0	0
Building	0	0.0	0	0	0	0	0
Traffic island	1	0.8	0	0	0	0	1
Fire hydrant	0	0.0	0	0	0	0	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	3	2.3	0	1	0	1	1
COLLISION FIXED Subtotal	31	23.5	3	9	7	5	7
Unknown Event	6	4.5	1	3	1	0	1
TOTAL MOST HARMFUL EVENT	132	100.0	6	37	22	29	38

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 132 snowmobiles were reported in crashes on Michigan public roadways during 2011. Six of those snowmobiles were involved in six fatal crashes with all of their operators killed. Alcohol was involved in four of the fatal crashes.

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

Most Harmful Event

NONCOLLISION	ORV/ATV		MOST SEVERE OUTCOME IN CRASH				
	Number of ORV/ATVs	% of Total	Fatal Crash	Injury Crash A	Injury Crash B	Injury Crash C	PDO Crash
Loss of control	10	4.0	0	3	4	2	1
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	1	0.4	0	0	1	0	0
Ran off road right	1	0.4	0	0	0	0	1
Re-enter road	0	0.0	0	0	0	0	0
Overturn	56	22.1	3	18	19	15	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	1	0.4	0	0	0	1	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	36	14.2	0	11	16	9	0
Other noncollision	5	2.0	0	1	3	0	1
NONCOLLISION Subtotal	110	43.5	3	33	43	27	4

HAD A COLLISION WITH NONFIXED OBJECT	ORV/ATV		MOST SEVERE OUTCOME IN CRASH				
	Number of ORV/ATVs	% of Total	Fatal Crash	Injury Crash A	Injury Crash B	Injury Crash C	PDO Crash
Pedestrian	0	0.0	0	0	0	0	0
Bicycle / pedalcycle	1	0.4	0	0	1	0	0
Motor vehicle in transport	69	27.3	0	19	13	11	26
Parked motor vehicle	11	4.3	0	1	2	1	7
Railway train	0	0.0	0	0	0	0	0
Animal	6	2.4	0	1	2	0	3
Other nonfixed objects	4	1.6	0	3	0	0	1
COLLISION NONFIXED Subtotal	91	36.0	0	24	18	12	37

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS (continued)

Most Harmful Event (continued)

HAD A COLLISION WITH FIXED OBJECT	ORV/ATV		MOST SEVERE OUTCOME IN CRASH				
			Fatal Crash	Injury Crash			PDO Crash
	Number of ORV/ATVs	% 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	0	0.0	0	0	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	0	0.0	0	0	0	0	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	0	0.0	0	0	0	0	0
Other pole	0	0.0	0	0	0	0	0
Culvert	2	0.8	1	1	0	0	0
Curb	2	0.8	0	0	1	0	1
Ditch	7	2.8	1	1	4	1	0
Embankment	2	0.8	0	0	0	2	0
Fence	2	0.8	0	0	1	1	0
Mailbox	2	0.8	1	1	0	0	0
Tree	21	8.3	2	7	7	3	2
Rail crossing signal	0	0.0	0	0	0	0	0
Building	1	0.4	0	0	0	1	0
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	1	0.4	0	0	0	0	1
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	8	3.2	0	2	5	1	0
COLLISION FIXED Subtotal	48	19.0	5	12	18	9	4
Unknown Event	4	1.6	0	0	1	2	1
TOTAL MOST HARMFUL EVENT	253	100.0	8	69	80	50	46

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 253 off-road/all-terrain vehicles were reported in crashes on Michigan public roadways during 2011. Eight of those ORV/ATVs were involved in eight fatal crashes with seven ORV/ATV operators and one ORV/ATV passenger killed. Alcohol was involved in four of the fatal crashes, and two of those fatal crashes also involved drugs.

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

	SNOWMOBILES		MOST SEVERE OUTCOME IN CRASH				
			Fatal Crash	Injury Crash			PDO Crash
Driver Hazardous Action	Number of Snowmobiles	% of Total		A	B	C	
None	28	21.2	0	10	3	6	9
Speed too fast	35	26.5	2	12	11	8	2
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	12	9.1	0	2	0	3	7
Disregard traffic control	7	5.3	1	1	1	2	2
Drove wrong way	1	0.8	0	0	0	1	0
Drove left of center	0	0.0	0	0	0	0	0
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	4	3.0	0	2	0	1	1
Improper turn	1	0.8	0	0	0	0	1
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	8	6.1	0	3	2	0	3
Reckless driving	2	1.5	0	1	1	0	0
Careless/negligent driving	6	4.5	1	0	1	3	1
Other	19	14.4	2	5	1	2	9
Unknown	9	6.8	0	1	2	3	3
TOTAL	132	100.0	6	37	22	29	38

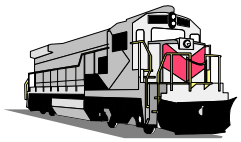
MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

	ORV/ATV		MOST SEVERE OUTCOME IN CRASH				
			Fatal Crash	Injury Crash			PDO Crash
Driver Hazardous Action	Number of ORV/ATVs	% of Total		A	B	C	
None	46	18.2	0	13	15	9	9
Speed too fast	71	28.1	4	17	21	25	4
Speed too slow	1	0.4	0	0	1	0	0
Failed to yield	24	9.5	1	4	3	3	13
Disregard traffic control	2	0.8	0	2	0	0	0
Drove wrong way	1	0.4	0	0	1	0	0
Drove left of center	1	0.4	0	1	0	0	0
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	0	0.0	0	0	0	0	0
Improper turn	2	0.8	0	0	0	0	2
Improper/no signal	3	1.2	0	1	0	1	1
Improper backing	1	0.4	0	0	0	0	1
Unable to stop in assured clear distance	12	4.7	0	3	6	1	2
Reckless driving	10	4.0	0	5	4	1	0
Careless/negligent driving	24	9.5	1	10	9	1	3
Other	36	14.2	2	11	11	7	5
Unknown	19	7.5	0	2	9	2	6
TOTAL	253	100.0	8	69	80	50	46

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.

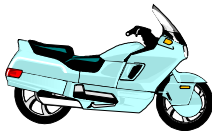
MICHIGAN FARM EQUIPMENT CRASHES

A total of 165 crashes involving farm equipment were reported on Michigan roadways during 2011. Of those crashes, five were fatal with one operator of the farm equipment killed.



MICHIGAN VEHICLE-TRAIN CRASHES

A total of 47 crashes involving trains were reported in Michigan during 2011. Of those crashes, six were fatal with six people killed, five drivers and one passenger.

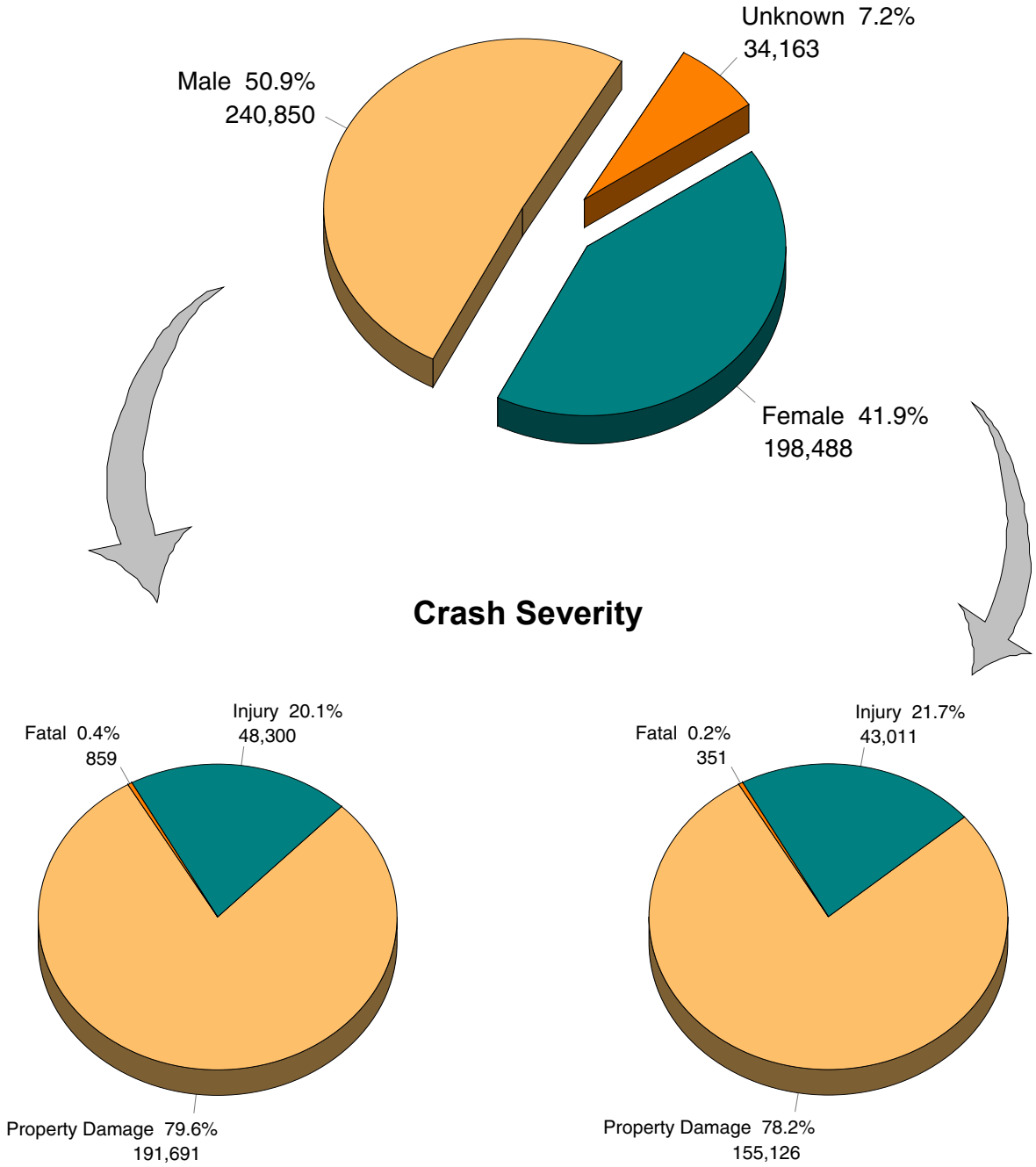


MICHIGAN MOTORCYCLE CRASHES

MOTORCYCLE DATA	2010	2011	% Change
Motorcycle Registrations	266,772	269,713	1.1
Motorcycles in Crashes	3,362	3,178	- 5.5
Motorcyclist Deaths	125	109	-12.8
Motorcyclists Injured	2,664	2,556	- 4.1
Death Rate based on 10,000 motorcycle registrations	4.69	4.04	-13.8
Estimated Mileage based on 3,000 miles per motorcycle	800,316,000	809,139,000	1.1
Death Rate based on deaths per 100 million vehicle miles traveled	15.62	13.47	-13.8

Motorcycles were involved in 1.1 percent of all traffic crashes in Michigan in 2011. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles. The 2011 death rate for motorcyclists was 13.47 per 100 million vehicle miles traveled compared to the overall 0.94 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 (0.4% 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	Bicyclists in All Crashes	Bicyclists in Fatal Crashes	Pedestrians in All Crashes	Pedestrians in Fatal Crashes
0-15	49,998	2,011,374	850	4	20	4,565	505	2	547	9
16	81,707	140,998	7,571	21	12	1,381	64	0	59	3
17	96,443	143,440	10,586	19	12	1,805	71	0	52	4
18	95,050	147,804	13,210	32	18	2,326	58	0	83	4
19	109,690	146,619	13,582	39	27	2,230	55	1	70	5
20	120,784	154,272	13,330	39	22	2,184	62	0	59	1
21-24	482,991	544,388	45,247	139	92	6,996	190	2	215	11
25-29	544,579	586,608	43,106	108	66	6,315	121	1	166	7
30-34	536,882	583,170	37,990	103	46	5,347	74	0	146	10
35-39	525,314	580,108	35,856	82	35	4,848	54	2	122	6
40-44	609,767	662,087	39,126	100	52	5,136	79	0	147	14
45-49	652,652	718,152	39,316	101	53	5,164	120	2	155	15
50-54	698,848	763,859	37,253	98	53	5,253	118	9	149	18
55-59	656,253	699,224	31,528	74	36	4,514	109	3	124	13
60-64	564,899	604,929	24,105	72	43	3,436	61	0	85	12
65-69	419,525	430,419	15,336	49	29	2,300	25	1	48	3
70-74	296,614	315,134	10,003	39	31	1,607	16	0	35	4
75-79	215,300	244,165	6,830	29	22	1,128	10	1	29	5
80-84	161,052	200,182	5,037	29	30	907	1	0	25	5
85-100+	119,528	199,255	3,289	30	26	656	3	0	20	3
Unknown	---	---	40,350	60	0	246	99	0	63	0
Total	7,037,876	9,876,187	473,501	1,267	725	68,344	1,895	24	2,399	152

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

Age	Licensed Drivers	Drivers in all crashes*	Rate
0-15	49,998	850	0.017
16	81,707	7,571	0.093
17	96,443	10,586	0.110
18	95,050	13,210	0.139
19	109,690	13,582	0.124
20	120,784	13,330	0.110
21-24	482,991	45,247	0.094
25-29	544,579	43,106	0.079
30-34	536,882	37,990	0.071
35-39	525,314	35,856	0.068
40-44	609,767	39,126	0.064
45-49	652,652	39,316	0.060
50-54	698,848	37,253	0.053
55-59	656,253	31,528	0.048
60-64	564,899	24,105	0.043
65-69	419,525	15,336	0.037
70-74	296,614	10,003	0.034
75-79	215,300	6,830	0.032
80-84	161,052	5,037	0.031
85-89	88,457	2,552	0.029
90-94	27,370	637	0.023
95-99	3,533	92	0.026
100+	168	8	0.048
Total	7,037,876	433,151	

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

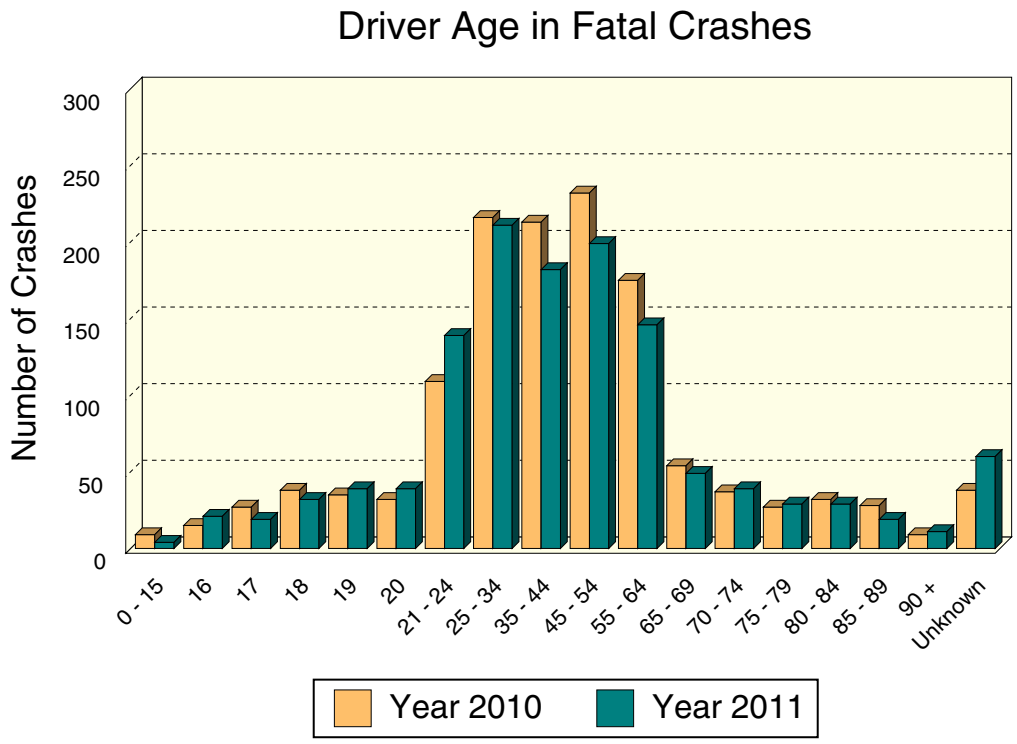
* Excludes 39,810 drivers with unknown age

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	2010	2011	% Change	% 2011 Fatal Crash Involvement	Percent Active Driving Population*
15 years and under	9	4	-55.6	0.3	0.7
16 years	15	21	40.0	1.7	1.2
17 years	27	19	-29.6	1.5	1.4
18 years	38	32	-15.8	2.5	1.4
19 years	35	39	11.4	3.1	1.6
20 years	32	39	21.9	3.1	1.7
21 - 24 years	109	139	27.5	11.0	6.9
25 - 34 years	216	211	-2.3	16.7	15.4
35 - 44 years	213	182	-14.6	14.4	16.1
45 - 54 years	232	199	-14.2	15.7	19.2
55 - 64 years	175	146	-16.6	11.5	17.4
65 - 69 years	54	49	-9.3	3.9	6.0
70 - 74 years	37	39	5.4	3.1	4.2
75 - 79 years	27	29	7.4	2.3	3.1
80 - 84 years	32	29	-9.4	2.3	2.3
85 - 89 years	28	19	-32.1	1.5	1.3
90 years and over	9	11	22.2	0.9	0.4
Unknown	38	60	57.9	4.7	---
Total	1,326	1,267	- 4.4	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 Crash	Injury Crash			PDO Crash
		Number	A	B	C	
Appeared Normal	390,562	625	5,517	18,147	55,646	310,627
Had Been Drinking	9,526	152	668	1,354	1,653	5,699
Illegal Drug Use	926	17	68	131	170	540
Sick	1,101	10	67	139	341	544
Fatigue	978	3	36	98	229	612
Asleep	1,054	3	60	154	205	632
Medication	960	6	46	119	237	552
Driver Distracted	3,980	10	104	339	861	2,666
Using Cellular Phone	821	6	29	81	173	532
Unknown	27,542	368	653	956	2,633	22,932

* 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	414,056	87.4	351	62.6	2,907	10,231	33,668	365,983	916
Restraint Not Used	6,244	1.3	158	28.2	479	742	791	3,938	136
Unknown	53,201	11.2	52	9.3	290	544	1,120	14,399	36,796
Total	473,501	100.0	561	100.0	3,676	11,517	35,579	384,320	37,848
Drinking Only Drivers									
Restraint Used	6,558	74.4	63	52.5	220	668	807	4,790	10
Restraint Not Used	708	8.0	49	40.8	146	186	116	208	3
Unknown	1,543	17.5	8	6.7	79	143	177	1,094	42
Total	8,809	100.0	120	100.0	445	997	1,100	6,092	55
Drugged Only Drivers									
Restraint Used	770	77.6	17	65.4	46	82	151	473	1
Restraint Not Used	74	7.5	9	34.6	15	18	11	21	0
Unknown	148	14.9	0	0.0	13	14	30	89	2
Total	992	100.0	26	100.0	74	114	192	583	3
Drinking and Drugged Drivers									
Restraint Used	583	65.4	11	33.3	34	72	96	370	0
Restraint Not Used	132	14.8	16	48.5	26	29	15	46	0
Unknown	177	19.8	6	18.2	12	19	28	110	2
Total	892	100.0	33	100.0	72	120	139	526	2

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	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal Crash	Injury Crash			PDO Crash
			A	B	C	
Related to intersection	82,861	191	1,539	4,931	14,030	62,170
In intersection	37,825	120	1,022	2,982	7,474	26,227
With traffic control signal	18,331	46	482	1,532	3,858	12,413
With hazardous action	**5,078**	12	198	603	1,366	2,899

"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 **5,078** crashes.

RED-LIGHT-RUNNING
MOST SEVERE OUTCOME IN CRASH

SPEED LIMIT*	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal Crashes	Injury Crashes			PDO Crashes
			A	B	C	
5 miles per hour	1	0	0	0	0	1
10 miles per hour	0	0	0	0	0	0
15 miles per hour	2	0	0	0	0	2
20 miles per hour	2	0	0	0	1	1
25 miles per hour	508	1	9	48	115	335
30 miles per hour	644	2	18	64	167	393
35 miles per hour	1,286	3	43	143	328	769
40 miles per hour	774	1	24	86	211	452
45 miles per hour	1,226	3	54	165	340	664
50 miles per hour	237	0	10	40	76	111
55 miles per hour	359	2	37	53	118	149
60 miles per hour	0	0	0	0	0	0
65 miles per hour	0	0	0	0	0	0
70 miles per hour	3	0	0	0	1	2
75 miles per hour	0	0	0	0	0	0
Unknown	36	0	3	4	9	20
Total	5,078	12	198	603	1,366	2,899

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

CRASH TYPE	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal Crashes	Injury Crashes			PDO Crashes
			A	B	C	
Single Vehicle	70	0	12	21	22	15
Head on	36	0	2	3	10	21
Head on left turn	389	2	18	66	114	189
Angle	4,288	10	156	483	1,159	2,480
Rear end	28	0	1	2	6	19
Rear end left turn	4	0	0	1	1	2
Rear end right turn	1	0	0	1	0	0
Sideswipe same direction	68	0	1	1	3	63
Sideswipe opposite direction	34	0	3	1	5	25
Other/ Unknown	160	0	5	24	46	85
Total	5,078	12	198	603	1,366	2,899

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

SPECIAL CIRCUMSTANCES*	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal Crashes	Injury Crashes			PDO Crashes
			A	B	C	
School Bus Involved/Associated	6	0	0	0	3	3
Drinking Involved	157	3	17	29	43	65
Drug Use Involved	35	3	9	11	6	6
Pedestrian Involved	33	0	7	7	18	1
Bicyclist Involved	51	0	7	20	18	6
Snowmobile Involved	1	0	0	0	0	1
Motorcycle Involved	23	1	4	7	6	5
Train Involved	0	0	0	0	0	0
Truck/Bus Involved	143	1	11	19	43	69
Emergency Vehicle Involved	32	0	0	4	10	18
Driver Hazardous Citation	3,193	2	123	412	916	1,740

*Crashes may involve more than one special circumstance.

POSSIBLE CONDITIONS OF PERSONS IN CRASH*	MOST SEVERE OUTCOME IN CRASH					
	Conditions Coded by Police	Fatal Crashes	Injury Crashes			PDO Crashes
			A	B	C	
Appeared Normal	4,251	4	153	491	1,155	2,448
Had Been Drinking	145	2	14	25	42	62
Illegal Drug Use	13	0	3	4	3	3
Sick	16	1	1	2	3	9
Fatigue	22	0	1	1	8	12
Asleep	5	0	0	0	3	2
Medication	17	0	3	5	5	4
Driver Distracted	134	0	6	22	46	60
Using Cellular Phone	39	0	4	10	11	14
Unknown	304	5	16	33	76	174

*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 fixed object = bridge/pier/abutments, nonfixed object = parked motor vehicles, jackknife, cargo loss/shift, and other non-collisions as the Most Harmful Event
- Fewer collisions with fixed objects = ditches, trees, and nonfixed object = 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, and fewer crashes between 3:00 PM and 5:59 AM
- 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	5,304	48.7	42	57.5	1,024	53.8
Turning left	902	8.3	1	1.4	118	6.2
Turning right	845	7.8	1	1.4	85	4.5
Stopped on roadway	859	7.9	6	8.2	173	9.1
In prior crash	10	0.1	0	0.0	3	0.2
Changing lanes	441	4.1	2	2.7	57	3.0
Backing	609	5.6	1	1.4	16	0.8
Slowing/stopping on roadway	738	6.8	5	6.8	191	10.0
Slowing/stopping other	12	0.1	0	0.0	6	0.3
Starting up on roadway	203	1.9	2	2.7	32	1.7
Starting up other	5	0.0	0	0.0	2	0.1
Entering parking	18	0.2	0	0.0	1	0.1
Leaving parking	15	0.1	0	0.0	1	0.1
Entering roadway	81	0.7	1	1.4	27	1.4
Leaving roadway	20	0.2	0	0.0	4	0.2
Making U-turn	17	0.2	1	1.4	2	0.1
Overtaking or passing	64	0.6	0	0.0	13	0.7
Avoiding object	10	0.1	0	0.0	0	0.0
Avoiding animal	7	0.1	0	0.0	0	0.0
Avoiding pedestrian	2	0.0	0	0.0	0	0.0
Avoiding vehicle (front/back)	122	1.1	4	5.5	32	1.7
Avoiding vehicle (angle)	47	0.4	3	4.1	8	0.4
Driverless moving	12	0.1	0	0.0	0	0.0
Parked	248	2.3	4	5.5	59	3.1
Crossing at intersection	0	0.0	0	0.0	0	0.0
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	0.0	0	0.0	0	0.0
In roadway against traffic	1	0.0	0	0.0	1	0.1
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	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	2	0.0	0	0.0	0	0.0
Not in roadway	0	0.0	0	0.0	0	0.0
Other	25	0.2	0	0.0	3	0.2
Unknown	266	2.4	0	0.0	45	2.4
Total	10,885	100.0	73	100.0	1,903	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	39	0.4	0	0.0	11	0.6
Cross center/median	12	0.1	0	0.0	0	0.0
Ran off road left	8	0.1	0	0.0	2	0.1
Ran off road right	27	0.2	0	0.0	4	0.2
Re-enter road	1	0.0	0	0.0	0	0.0
Overturn	143	1.3	1	1.4	62	3.3
Separation of units	20	0.2	0	0.0	3	0.2
Fire/explosion	30	0.3	1	1.4	3	0.2
Immersion	1	0.0	0	0.0	0	0.0
Jackknife	68	0.6	0	0.0	8	0.4
Downhill runaway	5	0.0	0	0.0	1	0.1
Cargo loss/shift	87	0.8	0	0.0	4	0.2
Individual fell off	1	0.0	1	1.4	0	0.0
Other noncollision	120	1.1	1	1.4	19	1.0
NONCOLLISION Subtotal	562	5.2	4	5.5	117	6.1

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	40	0.4	5	6.8	32	1.7
Bicyclist	14	0.1	1	1.4	11	0.6
Motor vehicle in transport	8,267	75.9	58	79.5	1,582	83.1
Parked motor vehicle	486	4.5	1	1.4	17	0.9
Railway train	4	0.0	0	0.0	1	0.1
Animal	440	4.0	0	0.0	3	0.2
Other nonfixed objects	114	1.0	0	0.0	6	0.3
COLLISION NONFIXED Subtotal	9,365	86.0	65	89.0	1,652	86.8

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	48	0.4	0	0.0	3	0.2
Bridge parapet end	4	0.0	0	0.0	0	0.0
Bridge rail	11	0.1	0	0.0	3	0.2
Guardrail face	41	0.4	1	1.4	6	0.3
Guardrail end	8	0.1	0	0.0	0	0.0
Median barrier	46	0.4	0	0.0	16	0.8
Highway traffic sign post	65	0.6	0	0.0	1	0.1
Highway signal post	18	0.2	0	0.0	0	0.0
Luminaire/light support	30	0.3	0	0.0	1	0.1
Utility pole	97	0.9	0	0.0	5	0.3
Other pole	17	0.2	0	0.0	1	0.1
Culvert	7	0.1	0	0.0	1	0.1
Curb	9	0.1	1	1.4	2	0.1
Ditch	71	0.7	0	0.0	12	0.6
Embankment	17	0.2	0	0.0	7	0.4
Fence	8	0.1	0	0.0	2	0.1
Mailbox	8	0.1	0	0.0	0	0.0
Tree	85	0.8	1	1.4	22	1.2
Rail crossing signal	22	0.2	0	0.0	0	0.0
Building	13	0.1	0	0.0	3	0.2
Traffic island	0	0.0	0	0.0	0	0.0
Fire hydrant	19	0.2	0	0.0	0	0.0
Impact attenuator	5	0.0	0	0.0	1	0.1
Other fixed object	155	1.4	1	1.4	9	0.5
COLLISION FIXED Subtotal	804	7.4	4	5.5	95	5.0

	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	154	1.4	0	0.0	39	2.0
TOTAL MOST HARMFUL EVENT	10,885	100.0	73	100.0	1,903	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	1,564	14.4	12	16.4	189	9.9
Head On	152	1.4	13	17.8	61	3.2
Head On - Left Turn	104	1.0	0	0.0	48	2.5
Angle	1,578	14.5	15	20.5	397	20.9
Rear End	2,397	22.0	20	27.4	631	33.2
Rear End - Left Turn	120	1.1	0	0.0	32	1.7
Rear End - Right Turn	86	0.8	1	1.4	9	0.5
Sideswipe - Same Direction	3,182	29.2	5	6.8	340	17.9
Sideswipe - Opposite Direct	472	4.3	3	4.1	59	3.1
Other/Unknown	1,230	11.3	4	5.5	137	7.2
Total	10,885	100.0	73	100.0	1,903	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	5,617	51.6	49	67.1	1,078	56.6	11	0.7
Speed too fast	314	2.9	3	4.1	74	3.9	104	6.6
Speed too slow	8	0.1	0	0.0	0	0.0	2	0.1
Failed to yield	551	5.1	2	2.7	118	6.2	231	14.7
Disregard traffic control	106	1.0	1	1.4	42	2.2	60	3.8
Drove wrong way	17	0.2	0	0.0	3	0.2	6	0.4
Drove left of center	46	0.4	0	0.0	8	0.4	12	0.8
Improper passing	62	0.6	0	0.0	7	0.4	13	0.8
Improper lane use	499	4.6	1	1.4	49	2.6	167	10.7
Improper turn	369	3.4	1	1.4	25	1.3	116	7.4
Improper/no signal	34	0.3	0	0.0	2	0.1	6	0.4
Improper backing	463	4.3	0	0.0	11	0.6	142	9.1
Unable to stop in assured clear distance	844	7.8	3	4.1	235	12.3	363	23.2
Reckless driving	12	0.1	0	0.0	3	0.2	4	0.3
Careless/negligent driving	260	2.4	3	4.1	55	2.9	128	8.2
Other	922	8.5	4	5.5	94	4.9	198	12.6
Unknown	761	7.0	6	8.2	99	5.2	5	0.3
Total	10,885	100.0	73	100.0	1,903	100.0	1,568	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	9,825	90.3	66	90.4	1,702	89.4
Median	78	0.7	0	0.0	14	0.7
Shoulder	382	3.5	6	8.2	86	4.5
Outside of Shoulder/Curb	385	3.5	1	1.4	71	3.7
Gore	35	0.3	0	0.0	7	0.4
Other/Unknown	180	1.7	0	0.0	23	1.2
Total	10,885	100.0	73	100.0	1,903	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	356	3.3	7	9.6	74	3.9
03:00 AM - 05:59 AM	451	4.1	2	2.7	89	4.7
06:00 AM - 08:59 AM	1,982	18.2	18	24.7	346	18.2
09:00 AM - 11:59 AM	2,308	21.2	12	16.4	392	20.6
Noon - 02:59 PM	2,316	21.3	11	15.1	384	20.2
03:00 PM - 05:59 PM	2,219	20.4	13	17.8	392	20.6
06:00 PM - 08:59 PM	808	7.4	5	6.8	145	7.6
09:00 PM - 11:59 PM	430	4.0	5	6.8	79	4.2
Unknown	15	0.1	0	0.0	2	0.1
Total	10,885	100.0	73	100.0	1,903	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	2,819	25.9	26	35.6	607	31.9
U.S. & Michigan Roads	3,234	29.7	26	35.6	585	30.7
County & City Roads	4,832	44.4	21	28.8	711	37.4
Total	10,885	100.0	73	100.0	1,903	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	1,947	17.9	7	9.6	338	17.8
Tuesday	1,916	17.6	17	23.3	353	18.5
Wednesday	1,995	18.3	16	21.9	333	17.5
Thursday	2,017	18.5	12	16.4	342	18.0
Friday	1,988	18.3	10	13.7	332	17.4
Saturday	660	6.1	7	9.6	131	6.9
Sunday	362	3.3	4	5.5	74	3.9
Total	10,885	100.0	73	100.0	1,903	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	9,170	84.2	63	86.3	1,620	85.1
Female	1,147	10.5	8	11.0	205	10.8
Unknown	568	5.2	2	2.7	78	4.1
Total	10,885	100.0	73	100.0	1,903	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	8,562	78.7	58	79.5	1,463	76.9
2 occupants	751	6.9	5	6.8	131	6.9
3 occupants	168	1.5	0	0.0	38	2.0
4 occupants	89	0.8	0	0.0	16	0.8
5 occupants	65	0.6	1	1.4	12	0.6
6 + occupants	656	6.0	6	8.2	165	8.7
0 occupants	221	2.0	3	4.1	40	2.1
Unknown	373	3.4	0	0.0	38	2.0
Total	10,885	100.0	73	100.0	1,903	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	7,303	78.2	43	64.2	1,544	77.8
Van and Motorhome	524	5.6	2	3.0	106	5.3
Pickup	1,046	11.2	8	11.9	193	9.7
Small Truck (under 10,000 lbs.)	197	2.1	1	1.5	44	2.2
Motorcycle	24	0.3	5	7.5	15	0.8
Moped	0	0.0	0	0.0	0	0.0
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	0	0.0	0	0.0	0	0.0
Off Road Vehicle	5	0.1	0	0.0	3	0.2
Other	57	0.6	0	0.0	7	0.4
Unknown	178	1.9	8	11.9	72	3.6
Subtotal	9,334	100.0	67	100.0	1,984	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	6,126	56.3	49	67.1	1,087	57.1
Commercial Vehicle: Group B	2,501	23.0	19	26.0	460	24.2
Commercial Vehicle: Group C	398	3.7	2	2.7	63	3.3
Other Truck	905	8.3	2	2.7	161	8.5
Unknown Truck	955	8.8	1	1.4	132	6.9
Subtotal	10,885	100.0	73	100.0	1,903	100.0
Total Vehicle Types in Heavy Truck/Bus Crashes	20,219		140		3,887	

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	2	0.8	9	0.7	16	0.8	110	0.9	550	0.7
Speed too fast	84	32.8	20	1.5	259	13.5	6,228	49.0	3,237	4.2
Speed too slow	0	0.0	2	0.2	3	0.2	34	0.3	40	0.1
Failed to yield	8	3.1	223	17.0	422	22.0	447	3.5	21,516	27.8
Disregard traffic control	4	1.6	56	4.3	114	6.0	136	1.1	5,106	6.6
Drove wrong way	0	0.0	6	0.5	2	0.1	15	0.1	114	0.1
Drove left of center	0	0.0	12	0.9	24	1.3	85	0.7	797	1.0
Improper passing	0	0.0	13	1.0	56	2.9	24	0.2	693	0.9
Improper lane use	4	1.6	163	12.4	150	7.8	142	1.1	3,430	4.4
Improper turn	15	5.9	101	7.7	41	2.1	61	0.5	1,585	2.0
Improper/no signal	1	0.4	5	0.4	7	0.4	17	0.1	140	0.2
Improper backing	3	1.2	139	10.6	27	1.4	41	0.3	2,032	2.6
Unable to stop in assured clear distance	6	2.3	357	27.2	510	26.6	446	3.5	31,860	41.2
Reckless driving	3	1.2	1	0.1	12	0.6	478	3.8	349	0.5
Careless/Negligent driving	65	25.4	63	4.8	162	8.5	2,923	23.0	2,717	3.5
Other	59	23.0	139	10.6	100	5.2	1,400	11.0	3,006	3.9
Unknown	2	0.8	3	0.2	9	0.5	130	1.0	183	0.2
Total Cited Vehicles	256	100.0	1,312	100.0	1,914	100.0	12,717	100.0	77,355	100.0
Percent of Total Vehicles		15.6		14.2		20.9		11.8		22.9
Vehicles with No Citation Issued	1,388	84.4	7,929	85.8	7,241	79.1	95,381	88.2	260,060	77.1
Total Vehicles Involved	1,644	100.0	9,241	100.0	9,155	100.0	108,098	100.0	337,415	100.0

2011
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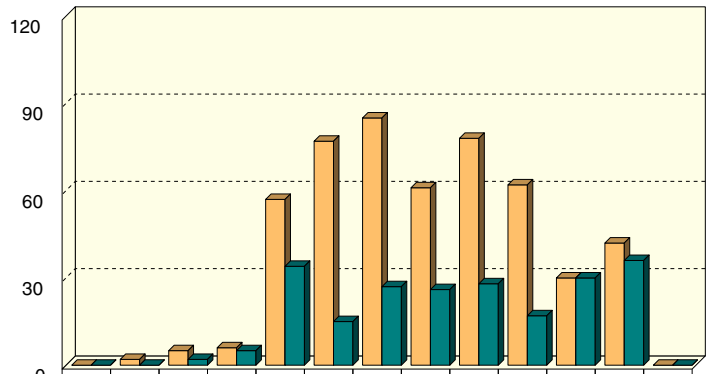
Occupant/ Person

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

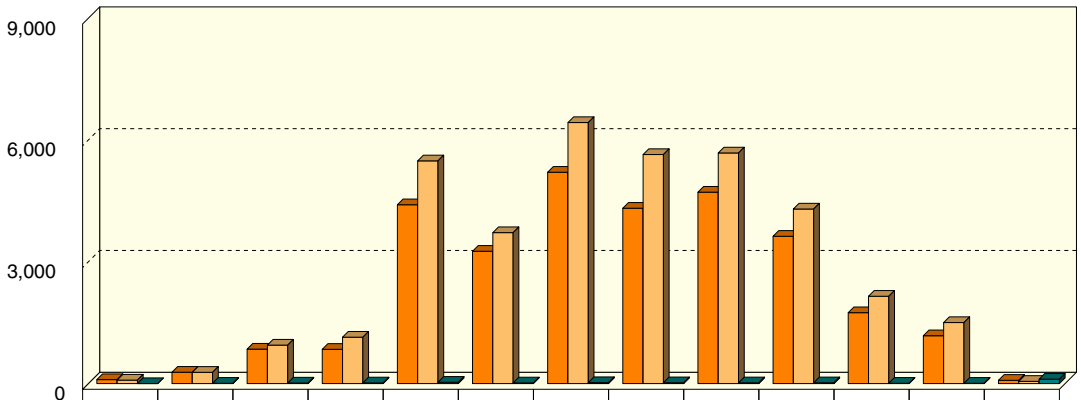
Occupants Killed



	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	2	5	6	57	77	85	61	78	62	30	42	0	505
Females Killed	0	0	2	5	34	15	27	26	28	17	30	36	0	220
Total	0	2	7	11	91	92	112	87	106	79	60	78	0	725

The majority (69.7%) of occupants killed in traffic crashes in 2011 were male.

Occupants Injured

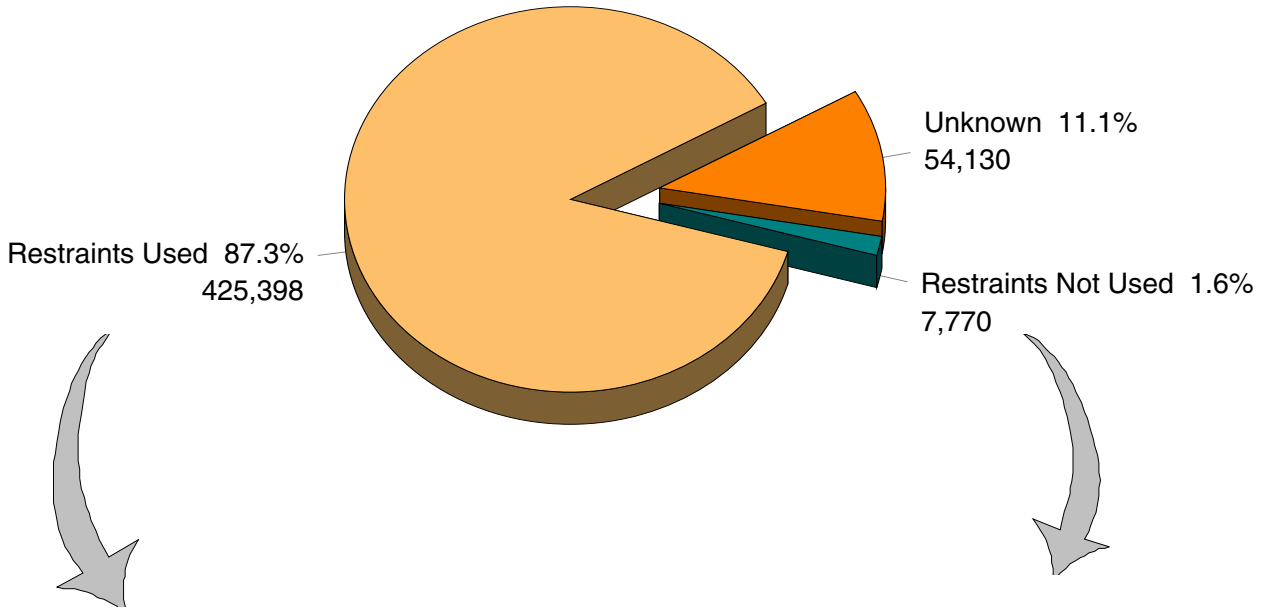


	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown	Totals
Males Injured	98	280	849	844	4,406	3,260	5,207	4,320	4,716	3,629	1,747	1,179	81	30,616
Females Injured	86	278	948	1,143	5,487	3,719	6,431	5,643	5,682	4,301	2,152	1,504	55	37,429
Unknown Gender Injured	0	8	14	17	33	17	24	21	19	20	8	8	110	299
Total	184	566	1,811	2,004	9,926	6,996	11,662	9,984	10,417	7,950	3,907	2,691	246	68,344

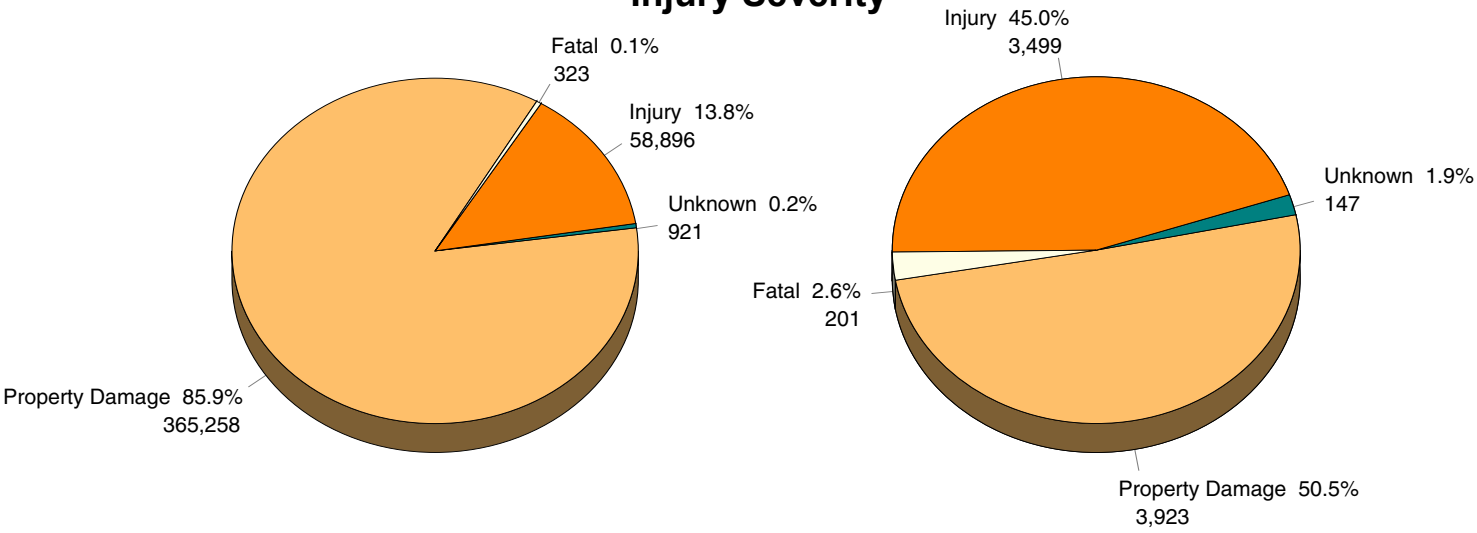
The majority (54.8%) of occupants injured in traffic crashes in 2011 were female.

Note: An occupant is any injured or killed person in or on a motor vehicle, *including* all drivers.

REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS

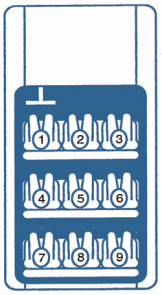


Injury Severity



Of the 487,298 drivers and injured passengers involved in crashes, 425,398 (87.3%) were REPORTED to be using occupant restraints.

Occupants in crashes were 26 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	408,694	96.6	248	2,385	9,154	32,928	363,979
Center Front	550	0.1	1	16	58	187	288
Right Front	10,310	2.4	61	685	2,076	6,998	490
Left Rear	893	0.2	6	47	206	633	1
Center Rear	245	0.1	1	17	62	165	0
Right Rear	1,092	0.3	1	69	220	802	0
Left Rear Third Seat	326	0.1	0	14	83	229	0
Center Rear Third Seat	101	0.0	0	5	24	72	0
Right Rear Third Seat	446	0.1	1	17	100	328	0
Unknown	497	0.1	0	6	23	70	398
Total	423,154 †	100.0	319	3,261	12,006	42,412	365,156

* 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 911 occupants with unknown injury severity.

Seating Position	Belts Not Used*		Fatal	Injury			No Injury
	Number	% of Total		A	B	C	
Left Front	5,339	71.3	145	399	614	730	3,451
Center Front	71	0.9	3	9	19	16	24
Right Front	574	7.7	22	120	194	210	28
Left Rear	274	3.7	7	63	83	121	0
Center Rear	103	1.4	6	23	29	45	0
Right Rear	288	3.8	9	45	87	147	0
Left Rear Third Seat	90	1.2	0	14	29	47	0
Center Rear Third Seat	47	0.6	0	6	21	20	0
Right Rear Third Seat	102	1.4	1	11	42	48	0
Unknown	605	8.1	7	26	38	156	378
Total	7,493 †	100.0	200	716	1,156	1,540	3,881

* 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 134 occupants with unknown injury severity.

Michigan law requires that all persons must wear a seat 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 riding in the rear seat.*

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 seat belt when riding in either the front or back seat of a vehicle.*

Restraint Usage	Children Age 0		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	33	18.2	0	2	8	23
No Belts Used	7	3.9	0	0	3	4
Child Restraint Used	129	71.3	0	3	16	110
Child Restraint Not Used	8	4.4	0	1	2	5
Restraint Failed	0	0.0	0	0	0	0
Unknown	4	2.2	0	1	0	3
Total	181	100.0	0	7	29	145

Restraint Usage	Children Age 1		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	11	6.7	0	1	1	9
No Belts Used	2	1.2	0	1	0	1
Child Restraint Used	143	87.7	1	5	33	104
Child Restraint Not Used	7	4.3	0	2	3	2
Restraint Failed	0	0.0	0	0	0	0
Unknown	0	0.0	0	0	0	0
Total	163	100.0	1	9	37	116

REPORTED RESTRAINT USE – CHILDREN (continued)

Restraint Usage	Children Age 2		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	12	6.7	0	0	1	11
No Belts Used	3	1.7	0	0	2	1
Child Restraint Used	147	81.7	1	4	35	107
Child Restraint Not Used	9	5.0	0	2	2	5
Restraint Failed	1	0.6	0	0	0	1
Unknown	8	4.4	0	2	1	5
Total	180	100.0	1	8	41	130

Restraint Usage	Children Age 3		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	23	10.3	0	1	7	15
No Belts Used	4	1.8	0	1	1	2
Child Restraint Used	177	79.4	0	6	48	123
Child Restraint Not Used	13	5.8	0	3	3	7
Restraint Failed	0	0.0	0	0	0	0
Unknown	6	2.7	0	0	0	6
Total	223	100.0	0	11	59	153

Restraint Usage	Children Age 4-7		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	339	35.6	0	16	74	249
No Belts Used	46	4.8	1	9	20	16
Child Restraint Used	501	52.6	1	15	102	383
Child Restraint Not Used	34	3.6	1	5	13	15
Restraint Failed	0	0.0	0	0	0	0
Unknown	32	3.4	1	3	5	23
Total	952	100.0	4	48	214	686

Restraint Usage	Children Age 8-15		Fatal	Injury		
	Number	% Total		A	B	C
Belts Used	2,221	83.0	5	105	483	1,628
No Belts Used	263	9.8	3	41	77	142
Child Restraint Used	68	2.5	0	4	11	53
Child Restraint Not Used	5	0.2	0	2	0	3
Restraint Failed	3	0.1	0	0	1	2
Unknown	117	4.4	3	14	25	75
Total	2,677	100.0	11	166	597	1,903

Note 1: Safety equipment usage is often self-reported and may not reflect actual usage.

Note 2: 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

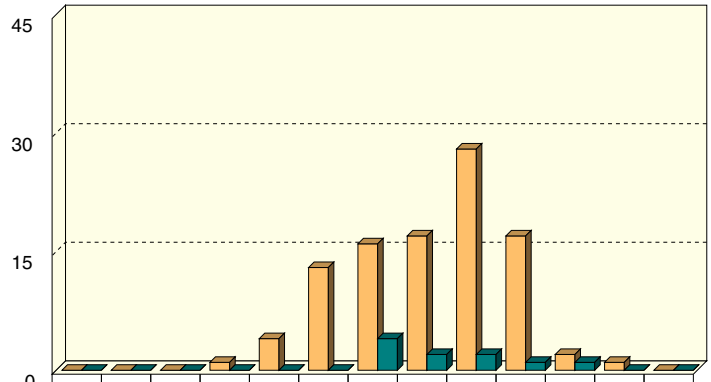
MOTOR VEHICLE OCCUPANT INJURY SEVERITY BY KNOWN AIRBAG DEPLOYMENT

Motor Vehicle Occupant Airbag Deployment	OCCUPANT – INJURY SEVERITY						
	Occupants*		Fatal	Injury			No Injury
	Number	% Total		A	B	C	
Deployed	43,810	8.9	313	1,998	5,817	12,141	23,111
Not deployed	379,432	77.2	170	1,634	5,856	27,514	339,418
Not equipped	42,580	8.7	232	1,343	3,604	6,818	15,905
Unknown	25,470	5.2	10	167	358	1,094	5,886
Total	491,292	100.0	725	5,142	15,635	47,567	384,320

* Includes 37,903 occupants (drivers and passengers) with unknown injury severity.

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

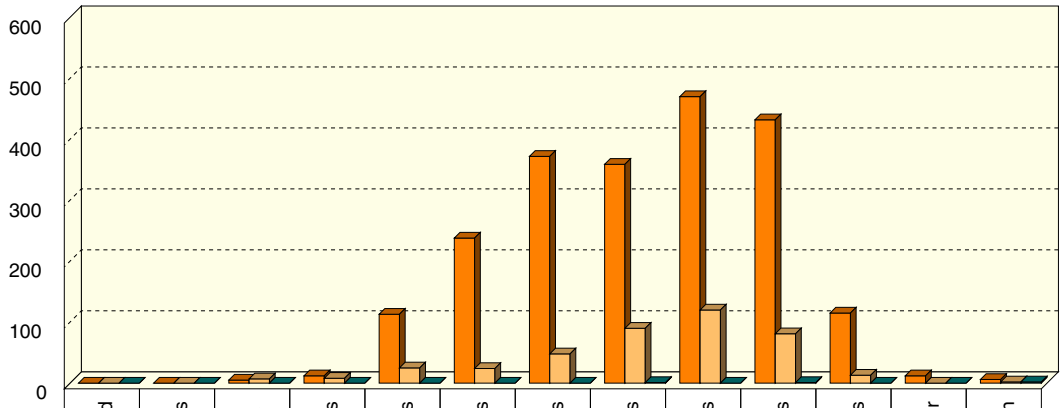
Motorcyclists Killed



	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	1	4	13	16	17	28	17	2	1	0	99
Females Killed	0	0	0	0	0	0	4	2	2	1	1	0	0	10
Total	0	0	0	1	4	13	20	19	30	18	3	1	0	109

90.8 percent of the motorcyclists killed in traffic crashes in 2011 were male. In comparison, 70.5 percent of all persons killed in crashes were male. Most motorcyclists killed were in the 45-54 year age group.

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	12	113	238	372	359	470	432	115	12	6	2,134
Females Injured	0	0	7	8	25	24	48	90	120	81	13	0	2	418
Unknown Gender Injured	0	0	0	0	0	0	0	1	0	1	0	0	2	4
Total	0	0	12	20	138	262	420	450	590	514	128	12	10	2,556

83.5 percent of the motorcyclists injured in traffic crashes in 2011 were male. In comparison, 45.9 percent of all persons injured in crashes were male. Most motorcyclists injured were in the 45-54 year age group.

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	3	5	3	2
11 - 15 years	1	3	9	4	1
16 - 20 years	3	24	62	34	31
21 - 24 years	13	37	125	72	65
25 - 34 years	17	85	172	123	109
35 - 44 years	14	90	173	150	129
45 - 54 years	28	128	263	155	187
55 - 64 years	18	115	216	150	119
65 - 74 years	3	33	55	31	31
75 years and over	1	1	5	5	1
Unknown	0	0	3	1	0
Subtotal	98	519	1,088	728	675

Helmet Worn

Drivers killed 93

Passengers killed 5

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	0	0	0
16 - 20 years	1	1	0	2	0
21 - 24 years	0	2	8	2	0
25 - 34 years	1	3	5	4	1
35 - 44 years	2	7	2	3	3
45 - 54 years	1	5	5	3	2
55 - 64 years	0	2	1	1	2
65 - 74 years	0	2	0	0	1
75 years and over	0	0	0	0	0
Unknown	0	0	0	0	0
Subtotal	5	23	21	15	9

Helmet Not Worn

Drivers killed 4

Passengers killed 1

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	1	0	0
11 - 15 years	0	1	2	0	0
16 - 20 years	0	3	7	5	3
21 - 24 years	0	3	10	3	2
25 - 34 years	2	7	8	13	15
35 - 44 years	3	6	10	9	10
45 - 54 years	1	6	14	11	15
55 - 64 years	0	4	16	9	13
65 - 74 years	0	1	4	2	5
75 years and over	0	0	1	0	0
Unknown	0	0	3	3	14
Subtotal	6	31	76	55	77

Helmet Use Unknown

Drivers killed 6

Passengers killed 0

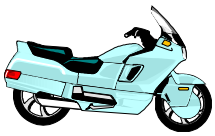
Total	109	573	1,179	794	747

2011 Michigan motor vehicle crash data represents the last full year of data that was collected during Michigan's universal helmet law, enacted in 1969: Michigan Vehicle Code Public Act 300 of 1949, Section 257.658, requiring all motorcycle riders to wear a helmet. On April 13, 2012, Michigan changed their helmet law from a universal to a partial helmet law. The partial law allows some certified Michigan riders, who are over 21 and carry additional insurance, to ride without a helmet.

MICHIGAN OHSP Office of Highway Safety Planning

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	465	3,513	11,521	38,620	54,119	78.4
Van (Minivan) and Motorhome	23	234	656	2,640	3,553	5.1
Pickup	83	513	1,560	3,737	5,893	8.5
Small Truck (under 10,000 lbs.)	9	89	241	936	1,275	1.8
Motorcycle	109	573	1,185	798	2,665	3.9
Moped	9	60	147	77	293	0.4
Go Cart	0	2	9	1	12	0.0
Snowmobile	6	33	21	35	95	0.1
Off Road Vehicle	8	63	89	60	220	0.3
Other	2	22	66	106	196	0.3
Unknown	0	5	13	27	45	0.1
CDL Truck/Bus (breakdown below)	11	35	127	530	703	1.0
Total Number of Occupants	725	5,142	15,635	47,567	69,069	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	5	16	64	203	288	41.0
Commercial Vehicle: Group B	4	15	43	225	287	40.8
Commercial Vehicle: Group C	2	1	4	31	38	5.4
Other Truck	0	3	8	30	41	5.8
Unknown Truck	0	0	8	41	49	7.0
Total Number of Occupants	11	35	127	530	703	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 Resident Population for Counties of Michigan: 2010-2011. Population Division, U.S. Census Bureau. Release Date: April 2012.

[2] Number of Deaths by Underlying Cause of Death Michigan Residents, 2010. Michigan Department of Community Health, Vital Records and Health Statistics Section, Lansing, MI.

[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, 1970 West Broad Street, Columbus, OH 43218-2081.

[7] Indiana University Public Policy Center, Center for Criminal Justice Research, 101 West Washington St., Suite 1170 E, Indianapolis, IN 46204-2038.

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

[9] Wisconsin State Patrol, Bureau of Transportation Safety, 4802 Sheboygan Ave., Madison, WI 53707-7936.

[10] Minnesota Department of Public Safety, Office of Traffic Safety, 444 Cedar Street, Suite 150, St. Paul, MN 55101-5150.

[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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