

MTCF

Michigan Traffic
Crash Facts

STATEWIDE

2020

MISSION STATEMENT

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.

A SUMMARY OF TRAFFIC CRASHES ON MICHIGAN ROADWAYS IN CALENDAR YEAR 2020

MichiganTrafficCrashFacts.org

PRODUCED BY:

Michigan Department of State Police
Criminal Justice Information Center-Traffic Crash Statistics
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Michigan.gov/cjic

Michigan Office of Highway Safety Planning
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Criminal Justice Information Center

Fatality Analysis Reporting System

Michigan Department of State Police

Michigan Department of State

Michigan Department of Transportation

Michigan 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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Traffic records improvement projects have been ongoing to streamline the process of data collection and processing. Current projects such as the Traffic Crash Reporting System (TCRS) Modernization and the Traffic Records Data Linkage strive to improve the quality, timeliness, and accuracy of data outputs, as well as integration of traffic records data systems. New technologies, including electronic data collection, increased error checking, quality assurance, and crash locating, are continually emerging and improving. By utilizing these technologies as they become available, the quality of Michigan's traffic records data will continue to improve.

Please visit MichiganTrafficCrashFacts.org for easy access to crash data from 1952-2020.

Special Note:

The Michigan Office of Highway Safety Planning and the University of Michigan Transportation Research Institute would like to acknowledge the differences in traffic and commuting patterns in 2020 due to the COVID-19 pandemic. Travel restrictions from the “Stay Home, Stay Safe” Executive Order (EO 2020-21) were initially in place starting on March 24, 2020. That order was then extended through additional executive orders. The stay-at-home order was officially lifted June 1, 2020.

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DATA ELEMENTS WITH CHANGES FOR 2016 DATA

CDL Restriction 28 (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.” “CDL Restriction” and “Non-truck, no data” will display counts of 0 when selected.

CDL Restriction 29 (2004-2015) – See **CDL Restriction 28 (2004-2015)**.

CDL Restriction 30 (2004-2015) – See **CDL Restriction 28 (2004-2015)**.

CDL Restriction 35 (2004-2015) – See **CDL Restriction 28 (2004-2015)**.

CDL Restriction 36 (2004-2015) – See **CDL Restriction 28 (2004-2015)**.

Commercial Motor Vehicle Configuration (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Complaint Status (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.” “Open” and “Closed” will display counts of 0 when selected.

Construction Activity (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Construction Crash Location (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Construction Lane Closed (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.” “Lane open” and “Lane closed” will display counts of 0 when selected.

Construction Workers Present (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Contributing Circumstances Road 1 (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Contributing Circumstances Road 2 (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

DATA ELEMENTS WITH CHANGES FOR 2016 DATA (CONTINUED)

Crash: Animal Type Involved/Associated (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Crash: Driver Distracted (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Drivable After Crash (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.” “Not drivable after crash” and “Drivable after crash” will display counts of 0 when selected.

Driver Airbag Deployed (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.” See **Driver Airbag Deployed** for driver airbag data for all years with less airbag deployment detail.

Driver Condition Emotional (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Driver Condition Fatigue (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.” “No, driver was not fatigued” and “Yes, driver was fatigued” will display counts of 0 when selected. See **Driver Condition Fatigued or Asleep (2016+)** for driver fatigue data starting in 2016.

Driver Condition Fatigued or Asleep (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.” See **Driver Condition Fatigue (2004-2015)** or **Driver Condition Asleep (2004-2014)** for driver fatigue or driver asleep data prior to 2016.

Driver Condition Other (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Driver Condition Physically Disabled (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Driver Contributing Factor – Alcohol Use (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Driver Contributing Factor – Drug Use (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

DATA ELEMENTS WITH CHANGES FOR 2016 DATA (CONTINUED)

Driver Distraction (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.” See **Driver Condition Distracted (2004-2014)** for driver distraction data prior to 2016.

Driver Restraint (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.” See **Driver Restraint** for driver restraint data for all years with less child restraint detail.

Field Sobriety Test – Drug (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Gross Vehicle Weight Rating Code – This variable is new starting with 2016 data. All counts for years prior to 2016 have also been added.

Inter/Intra State (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.” “Interstate only,” “Intrastate,” and “Nontruck, no data” will display counts of 0 when selected.

Person Airbag Deployed (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.” See **Person Airbag Deployed** for driver airbag data for all years with less airbag deployment detail.

Person Restraint (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.” See **Person Restraint** for driver restraint data for all years with less child restraint detail.

Refusal Information - Drug (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Source of Carrier Information (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.”

Test Offered – Drug (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Test Result Pending – Alcohol (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

DATA ELEMENTS WITH CHANGES FOR 2016 DATA (CONTINUED)

Test Result Pending – Drug (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Total Non-Motor Vehicles (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Weather Conditions (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.” See **Weather Conditions (2016+)** for weather condition data starting with 2016 data.

Weather Conditions (2016+) – This variable is new for 2016 data. All counts for years prior to 2016 have been coded to “Uncoded & errors.” See **Weather Conditions (2004-2015)** for weather condition data prior to 2016 data.

For questions regarding specific changes to the crash codes, please contact
Criminal Justice Information Center, Traffic Crash Reporting Unit
(CrashTCRS@michigan.gov, 517-241-1699).

EXECUTIVE SUMMARY

The 2020 traffic fatality count was 1,083, up 9.95 percent from the 2019 figure of 985. Compared with 2019, injuries were down 18.65 percent and total crashes were down 21.93 percent. These figures translated into a fatality rate of 1.25 per 100 million miles of travel, up 30.16 percent from 2019, and above the 10-year average of 1.01 (2011-2020).

Exposure factors in 2020 showed a decrease in vehicle miles traveled, licensed drivers, and vehicle registrations. Vehicle miles traveled decreased 15.53 percent to 86.31 billion, motor vehicle registrations were down 0.49 percent to 9.04 million, and the number of licensed drivers was down 1.86 percent to 7.12 million.

A seat belt use observational study was not conducted in Michigan during 2020 due to the COVID-19 pandemic. Alcohol-involved crashes continued to present a problem and contributed to 30.00 percent of all fatal crashes. Crashes involving alcohol made up 3.70 percent of all crashes, and while 18.51 percent of all crashes resulted in injury or death, 44.44 percent of alcohol-involved crashes resulted in injury or death.

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

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 May 26, 2021. We acknowledge, with appreciation, all involved agencies for their assistance.

UD-10 (FRONT)

MSP UD - 10 (Rev. 01/2016)
 Authority: 1949 PA 300, Sec. 257.622
 Compliance: Required
 Penalty: \$100 and/or 90 days

Revised September 16, 2015

State of Michigan Traffic Crash Report

ORI MI		Department Name		Investigator(s)		Badge #		Photos <input type="radio"/> Yes <input type="radio"/> No		Reviewer	
Crash Date MM/DD/YYYY		Crash Time (MIL.) HH:MM		No. of Units		Crash Type <input type="radio"/> Single Motor Vehicle <input type="radio"/> Head On <input type="radio"/> Head On-Left Turn <input type="radio"/> Angle <input type="radio"/> Backing <input type="radio"/> Rear End <input type="radio"/> Rear End-Left Turn <input type="radio"/> Rear End-Right Turn <input type="radio"/> Sideswipe-Same <input type="radio"/> Sideswipe-Opposite <input type="radio"/> Other <input type="radio"/> Unknown					
Special Circumstances <input type="radio"/> None <input type="radio"/> Hit and Run <input type="radio"/> School Bus <input type="radio"/> Fleeing Police <input type="radio"/> Unknown Animal		Special Checks <input type="radio"/> Fatal <input type="radio"/> Corrected Copy <input type="radio"/> Replace <input type="radio"/> Delete <input type="radio"/> Non-Traffic <input type="radio"/> ORV/Snowmobile		Weather		Light		Road Surface Condition		Total Lanes	
County	City/Twp	Area	Traffic Control	Relation to Roadway	Work Zone-Type <input type="radio"/> Const. / Maint. <input type="radio"/> Utility	Work Zone-Workers Present <input type="radio"/> Yes <input type="radio"/> No	Work Zone-Activity	Work Zone-Location	Contributing Circumstances 1st 2nd		
Location											
Prefix		Primary Road Name						Road Type	Suffix	Divided Roadway <input type="radio"/> N <input type="radio"/> S <input type="radio"/> E <input type="radio"/> W	
Distance Feet Miles		Direction <input type="radio"/> North <input type="radio"/> South <input type="radio"/> East <input type="radio"/> West <input type="radio"/> Beginning of Ramp <input type="radio"/> End of Ramp				Trafficway 1 2 3 4 5 6		Speed Limit		Posted <input type="radio"/> Yes <input type="radio"/> No	
Prefix		Intersecting Road Name						Road Type	Suffix	Divided Roadway <input type="radio"/> N <input type="radio"/> S <input type="radio"/> E <input type="radio"/> W	
Unit / Driver											
Unit Number		Driver's License State/ Number		Date of Birth MM/DD/YYYY		Unit Type <input type="radio"/> MV <input type="radio"/> B <input type="radio"/> P <input type="radio"/> E (Train)		Sex <input type="radio"/> M <input type="radio"/> F			
Name						<input type="radio"/> Driver is Owner		License Type <input type="radio"/> O <input type="radio"/> C <input type="radio"/> M		Endorsements <input type="radio"/> CY <input type="radio"/> F <input type="radio"/> R	
Street Address											
City		State		ZIP		Phone		Injury <input type="radio"/> K <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> O			
Position		Restraint		Airbag		Ejected <input type="radio"/> Yes <input type="radio"/> No		Condition at Time of Crash 1st 2nd		Driver Distracted By	
Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other		Hazardous Action		Action Prior		Sequence of Events (M = Most Harmful Event) 1st 2nd 3rd 4th					
Alcohol Suspected <input type="radio"/> Yes <input type="radio"/> No		Contributing Factor <input type="radio"/> Yes <input type="radio"/> No		Test Type <input type="radio"/> Breath <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> PBT <input type="radio"/> Refused <input type="radio"/> Not Offered		Test Results		Interlock Device <input type="radio"/> Yes <input type="radio"/> No		Results Pending	
Drug Suspected <input type="radio"/> Yes <input type="radio"/> No		Contributing Factor <input type="radio"/> Yes <input type="radio"/> No		Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input type="radio"/> Not Offered		Test Results		Results Pending			
Vehicle											
Vehicle Registration		State		Insurance Company		Policy Number		Towed To			
VIN		Year		Make		Model		Color		Special Vehicles Vehicle Use	
Vehicle Type		Location of Greatest Damage		1st Impact		Extent of Damage		Vehicle Direction		Private Trailer Type Vehicle Defect	
Passengers											
Name						Ejected <input type="radio"/> Yes <input type="radio"/> No		Trapped <input type="radio"/> Yes <input type="radio"/> No			
Street Address						Sex <input type="radio"/> M <input type="radio"/> F		Injury <input type="radio"/> K <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> O			
City		State		ZIP		Phone		Ambulance Code			
Date of Birth MM/DD/YYYY		Position		Restraint		Airbag		Hospital Code			
Name						Ejected <input type="radio"/> Yes <input type="radio"/> No		Trapped <input type="radio"/> Yes <input type="radio"/> No			
Street Address						Sex <input type="radio"/> M <input type="radio"/> F		Injury <input type="radio"/> K <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> O			
City		State		ZIP		Phone		Ambulance Code			
Date of Birth MM/DD/YYYY		Position		Restraint		Airbag		Hospital Code			
<input type="radio"/> Owner <input type="radio"/> Uninjured Passenger <input type="radio"/> Witness		Name		Phone		Age		Pos.		Rest.	
<input type="radio"/> Owner <input type="radio"/> Uninjured Passenger <input type="radio"/> Witness		Name		Phone		Age		Pos.		Rest.	
Reported Date		Reported Time		Damaged Property		Owner & Phone / Public <input type="radio"/> Yes <input type="radio"/> No					
UD-10 SERIAL NUMBER		Serial Override Number									

UD-10 (BACK)

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Public Act 300 of 1949

Edited by the Michigan Office of Highway Safety Planning (OHSP) 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 10s submitted by all Michigan law enforcement agencies, the Department of State Police processes all UD-10s received at the Criminal Justice Information Center (CJIC). CJIC retains an electronic copy of UD-10s for 10 years plus the current processing year. Electronic databases containing information from UD-10s 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 - Suspected Serious
 - B - Suspected Minor
 - C - Possible

See Glossary for definitions.

- **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**

ABBREVIATIONS & ACRONYMS (CONTINUED)

- **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

- **Access Control** - Indicates the degree 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.
- **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-involved crashes only. This figure DOES NOT include the combined number for alcohol and drug involved crashes as has been reported in prior years.
- **Harmful Event** - A harmful event is an occurrence of injury or damage.

GLOSSARY (CONTINUED)

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

TIME PERIOD			
Holiday day	From	To	Number of Days
Sunday	6:00 PM FRI	23:59 PM MON	3 ¼
Monday	6:00 PM FRI	23:59 PM MON	3 ¼
Tuesday	6:00 PM FRI	23:59 PM TUE	4 ¼
Wednesday	6:00 PM TUE	23:59 PM WED	1 ¼
Thursday	6:00 PM WED	23:59 PM SUN	3 ¼
Friday	6:00 PM THU	23:59 PM SUN	3 ¼
Saturday	6:00 PM THU	23:59 PM SUN	3 ¼

- **Ignition Interlock** - An alcohol concentration measuring device preventing 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 resulting in death.
 - **A (Suspected Serious Injury)** - Any injury, other than a fatal injury, preventing the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.
 - **B (Suspected Minor 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 (does not include expired licenses).
- **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, scooters.
 - **Road maintenance equipment** - dump trucks, snowplows, road graders
 - **Construction equipment** - Rollers, front-end loaders, scrapers, mobile cranes, etc.
- **Motor Vehicle Crash** - A crash involving a motor vehicle in transport on a public trafficway (in Michigan) resulting in injury, death, or at least \$1,000 in property damage.
- **Non-collision** - A crash not involving a collision with another motor vehicle. Types of noncollision crashes include explosion or fire in vehicle, rollover, immersion, etc.
- **Occupant** - Any injured or killed person in or on a motor vehicle, including all drivers.
- **Passenger** - Any person in or on a motor vehicle, excluding the driver.
- **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 resulting 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 AND FIGURES

2020 QUICK FACTS

- Some exposure factor comparisons between 2020 and 2019 show motor vehicle registrations decreased 0.5 percent, the number of licensed drivers on Michigan roads decreased 1.9 percent, and vehicle mileage decreased 15.5 percent.
- The 2020 fatality rate of 1.25 deaths per 100 million miles of travel is an increase from the 2019 fatality rate of 0.96 and is higher than the 10-year average of 1.01 (2011-2020).
- There were 1,083 people killed and 60,986 people injured in 245,432 reported motor vehicle traffic crashes in Michigan during 2020. Compared with the 2019 experience, the number of deaths increased 9.9 percent, people injured decreased 18.6 percent, and total reported crashes decreased 21.9 percent.
- There were 245,432 reported crashes, of which 1,010 were fatal, 44,417 were personal injury, and 200,005 were property damage only crashes.
- Of all fatal crashes, 31.2 percent occurred at intersections.
- Of all fatal crashes, 30.0 percent involved at least one drinking operator, bicyclist, or pedestrian, 17.0 percent involved drinking but no drugs, 11.8 percent involved drugs but no drinking, and 13.0 percent involved both drinking and drugs.
- Excessive speed was indicated as the hazardous action for 11.7 percent of the drivers involved in fatal crashes.
- Of the 245,432 total crashes in 2020, 96,821 (39.4%) involved one vehicle only. This is a decrease of 11.5 percent from last year's count of 109,398 single-vehicle crashes.
- Of the 1,010 fatal crashes, 515 (51.0%) involved one vehicle.
- Of the 303 alcohol-involved fatal crashes, 182 (60.1%) involved one vehicle. This is a 2.8 percent increase from last year's figure of 177 single vehicle, alcohol-involved fatal crashes.
- Of the 1,626 drivers involved in fatal crashes, 128 (7.9%) were under 21 years of age and 273 (16.8%) were under 25 years of age.
- Of the 9,966,555 people living in Michigan [1. References and Reporting Agencies] one out of every 9,203 was killed in a traffic crash and one out of every 163 was injured.
- For each person killed, 56 were injured.
- According to 2019 data provided by the Michigan Department of Health and Human Services [2. References and Reporting Agencies], motor vehicle crashes account for 19.7 percent of all accidental deaths in Michigan.
- The pedestrian death toll for Michigan stands at 175 people, an increase of 26 deaths from 2019.
- For each pedestrian killed, there were 8 pedestrians injured.
- Of all pedestrians killed, 6.3 percent were under the age of 21 and 11.4 percent were age 75 and over.
- The bicyclist death toll for Michigan stands at 38, an increase of 17 deaths from 2019.
- The youngest bicycle fatality was age 1. People under the age of 21 accounted for 7.9 percent of the bicycle deaths.
- Of the 351,207 drivers and injured passengers involved in crashes where restraint use was known, 344,780 or 98.2 percent were reported to have been using occupant restraints. Restraint usage among fatal victims, where usage was known, was reported to be 54.4 percent in 2020.
- The comprehensive costs in Michigan traffic crashes amounted to \$41,808,241,500. If costs were spread across the state's population this would translate into a loss of \$4,195 per state resident.



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HISTORICAL INFORMATION

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STATEWIDE 2019-2020 SUMMARY TRENDS: 1 YEAR TRENDS

	2019	2020	PERCENT OF CHANGE
NUMBER OF CRASHES			
Fatal Crashes	902	1,010	12.0
Personal Injury Crashes	54,539	44,417	-18.6
Property Damage Crashes	258,935	200,005	-22.8
TOTAL	314,376	245,432	-21.9
ALCOHOL-INVOLVED CRASHES			
Fatal Crashes	266	303	13.9
Personal Injury Crashes	3,911	3,731	-4.6
Property Damage Crashes	5,610	5,044	-10.1
TOTAL	9,787	9,078	-7.2
FATAL CRASHES			
Had Been Drinking	266 (29.5%)	303 (30.0%)	13.9
Had Not Been Drinking / Not Known If Drinking	636 (70.5%)	707 (70.0%)	11.2
PERSONS IN CRASHES			
Killed	985	1,083	9.9
Injured	74,963	60,986	-18.6
Not Injured	508,740	372,855	-26.7
Unknown Injury	49,934	45,476	-8.9
TOTAL	634,622	480,400	-24.3
PERSONS IN ALCOHOL-INVOLVED CRASHES			
Killed	295	326	10.5
Injured	5,364	5,138	-4.2
Not Injured	11,393	9,907	-13.0
Unknown Injury	1,389	1,352	-2.7
TOTAL	18,441	16,723	-9.3
PERSONS INJURED BY GENDER			
Male	34,828	30,500	-12.4
Female	40,110	30,466	-24.0
Unknown Gender	25	20	-20.0
TOTAL	74,963	60,986	-18.6
PERSONS INJURED BY SEVERITY			
A Injury	5,629	5,433	-3.5
B Injury	19,598	17,179	-12.3
C Injury	49,736	38,374	-22.8
TOTAL	74,963	60,986	-18.6

Michigan experienced a 21.9 percent decrease in crashes, a 9.9 percent increase in traffic fatalities, and a 18.6 percent decrease in injuries. Persons sustaining A level injuries (the most serious) decreased 3.5 percent.

STATEWIDE 2019-2020 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

	2019	2020	PERCENT OF CHANGE
PERSONS KILLED BY GENDER			
Male	687	769	11.9
Female	298	314	5.4
TOTAL	985	1,083	9.9
PERSONS KILLED			
Motor Vehicle Driver	631	692	9.7
Passenger	184	178	-3.3
Bicyclist	21	38	81.0
Pedestrian	149	175	17.4
Train Engineer	0	0	0.0
TOTAL	985	1,083	9.9
BELT RESTRAINT USE BY DRIVER			
Reported Restrained – Killed	262	227	-13.4
Reported Not Restrained – Killed	158	182	15.2
Reported Restrained – Injured	47,495	36,727	-22.7
Reported Not Restrained – Injured	1,292	1,478	14.4
BELT AND CHILD RESTRAINT USE BY INJURED PASSENGER			
Reported Restrained – Killed	86	71	-17.4
Reported Not Restrained – Killed	62	49	-21.0
Reported Restrained – Injured	14,726	11,198	-24.0
Reported Not Restrained – Injured	1,392	1,245	-10.6
DRIVER AGE 16-20 INVOLVED			
Fatal Crashes	115	122	6.1
Personal Injury Crashes	10,103	8,339	-17.5
Property Damage Crashes	40,313	30,491	-24.4
TOTAL ALL CRASHES	50,531	38,952	-22.9
Persons Killed	124	132	6.5
Persons Injured	14,620	12,348	-15.5
DRIVER AGE 65 & OVER INVOLVED			
Fatal Crashes	204	205	0.5
Personal Injury Crashes	10,611	7,888	-25.7
Property Damage Crashes	42,264	30,082	-28.8
TOTAL ALL CRASHES	53,079	38,175	-28.1
Persons Killed	227	219	-3.5
Persons Injured	15,418	11,288	-26.8

Deaths among vehicle occupants (drivers and passengers only) increased 6.7 percent.

STATEWIDE 2019-2020 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

	2019	2020	PERCENT OF CHANGE
CRASH FACTS			
Licensed Drivers	7,253,407	7,118,197	-1.9
Registered Vehicles	9,085,615	9,041,334	-0.5
Population	9,986,857	9,966,555	-0.2
Drivers Involved in Crashes	535,721	404,286	-24.5
Occupants* Involved in Crashes	630,665	477,346	-24.3
Estimated Vehicle Miles Traveled (thousands)	102,173,971	86,311,046	-15.5
Death Rate Per 100 Million Vehicle Miles	1.0	1.3	30.2
Fatal Crash Rate Per 100 Million Vehicle Miles	0.9	1.2	32.6

**Occupants include all drivers and passengers in or on a motor vehicle.*

STATEWIDE 2020 COST OF CRASHES IN MICHIGAN

The cost estimate for Michigan crashes in 2020 was **\$41,808,241,500**. This estimate is based on the National Safety Council's cost estimating procedures. Average comprehensive costs are based on the following national figures:

COMPREHENSIVE COSTS, 2020

Death	\$11,449,000
Suspected Serious Injury	\$1,252,000
Suspected Minor Injury	\$345,000
Possible Injury	\$160,000
No Injury	\$52,700

These cost estimates are not intended for comparisons to previous years. The National Safety Council made revisions to the cost model starting in 2014 that take advantage of data sources not previously available. Deaths and injuries are calculated by number of persons. "No injury" is calculated per crash.



MICHIGAN
OHSP
Office of Highway Safety Planning

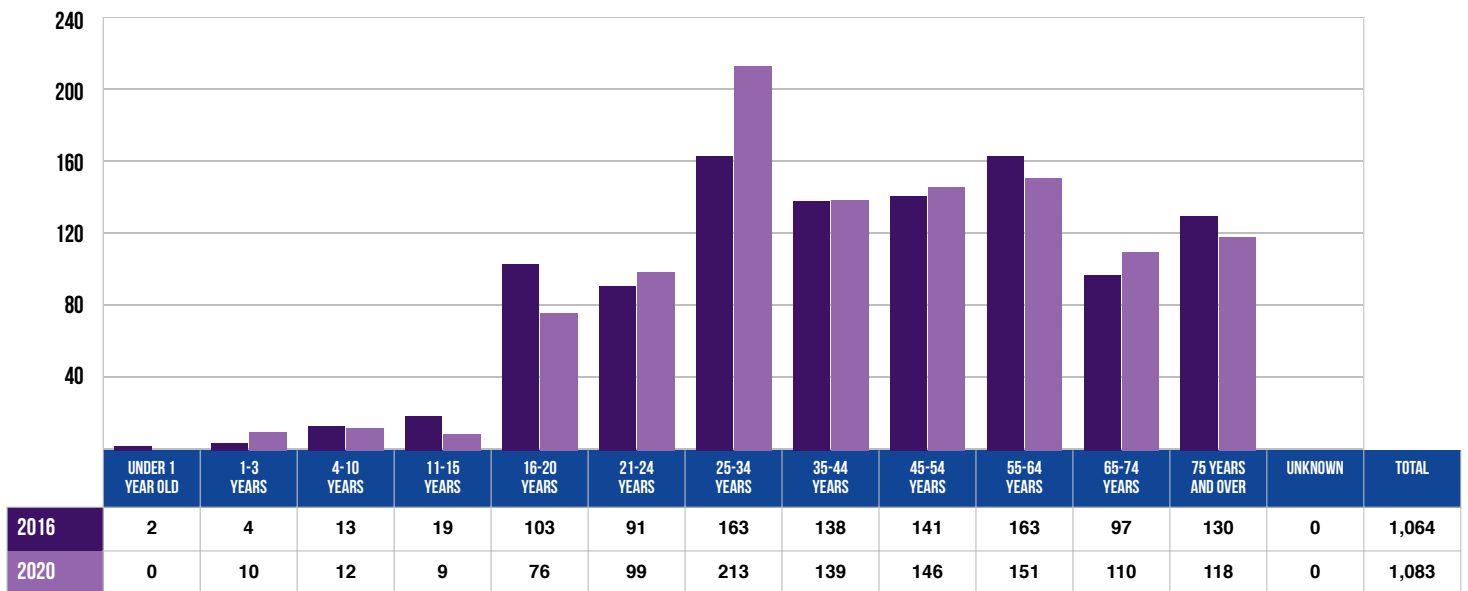


5 YEAR TRENDS - FATALITIES

FATALITIES BY AGE	2016	2017	2018	2019	2020
Under 1 year old	2	4	1	3	0*
1 - 3 years	4	5	7	7	10
4 - 10 years	13	13	11	21	12
11 - 15 years	19	17	15	19	9*
16 - 20 years	103	73	71	72	76
21 - 24 years	91	99	94	65	99
25 - 34 years	163	196	176	172	213
35 - 44 years	138	128	122	130	139
45 - 54 years	141	147	134	133	146
55 - 64 years	163	144	138	156	151
65 - 74 years	97	88	96	80	110
75 years and over	130	114	109	127	118
Unknown	0	0	0	0	0
TOTAL	1,064	1,028	974	985	1,083

*Indicates that the most recent year is the lowest number of fatalities in the 5-year period in that age group

FATALITIES BY AGE



5 YEAR TRENDS - DRIVERS IN FATAL CRASHES

DRIVER AGE	2016	2017	2018	2019	2020
AGE OF DRIVERS INVOLVED IN FATAL CRASHES					
13 years and under	0	0	2	3	1
14 years	2	0	2	0	1
15 years	0	2	1	5	1
16 years	14	16	9	6	9
17 years	23	14	12	12	22
18 years	34	24	22	31	22
19 years	39	28	28	31	37
20 years	29	37	27	39	35
21 - 24 years	155	174	132	122	145
25 - 34 years	295	326	323	280	371
35 - 44 years	232	193	225	233	252
45 - 54 years	225	231	222	193	210
55 - 64 years	226	199	208	210	196
65 - 69 years	64	73	74	58	68
70 - 74 years	47	58	52	43	46
75 - 79 years	40	29	35	55	50
80 - 84 years	31	32	34	34	25
85 - 89 years	35	25	30	21	23
90 years and over	6	13	11	10	10
Unknown	73	56	60	64	102
Totals	1,570	1,530	1,509	1,450	1,626
AGE OF DRIVERS INVOLVED IN SINGLE VEHICLE FATAL CRASHES					
13 years and under	0	0	1	0	0
14 years	0	0	1	0	1
15 years	0	1	0	2	1
16 years	7	5	4	2	5
17 years	6	1	8	3	9
18 years	12	5	6	14	7
19 years	14	8	10	8	14
20 years	11	14	15	8	11
21 - 24 years	61	61	48	49	61
25 - 34 years	99	114	90	82	123
35 - 44 years	60	53	65	72	73
45 - 54 years	75	71	58	64	65
55 - 64 years	70	51	48	64	54
65 - 69 years	20	16	9	22	25
70 - 74 years	14	12	14	15	12
75 - 79 years	9	8	10	13	15
80 - 84 years	5	6	10	6	6
85 - 89 years	5	6	5	5	7
90 years and over	0	2	4	2	3
Unknown	26	15	14	14	23
Totals	494	449	420	445	515

5 YEAR TRENDS - BICYCLIST AND PEDESTRIAN FATALITIES

FATALITIES BY AGE	2016	2017	2018	2019	2020
AGE OF BICYCLISTS KILLED					
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	1
4 - 10 years	0	0	2	1	0
11 - 15 years	0	0	2	2	1
16 - 20 years	4	2	4	3	1
21 - 24 years	0	1	0	1	0
25 - 34 years	1	1	3	2	5
35 - 44 years	5	2	4	0	6
45 - 54 years	9	4	3	2	4
55 - 64 years	11	5	0	6	8
65 - 74 years	7	3	1	0	9
75 years and over	1	3	2	4	3
Unknown	0	0	0	0	0
Totals	38	21	21	21	38
AGE OF PEDESTRIANS KILLED					
Under 1 year old	0	0	0	0	0
1 - 3 years	2	1	1	1	2
4 - 10 years	4	5	4	8	1
11 - 15 years	6	6	2	6	2
16 - 20 years	9	5	9	7	6
21 - 24 years	8	3	9	4	8
25 - 34 years	16	24	25	21	32
35 - 44 years	28	21	25	24	16
45 - 54 years	27	35	21	29	30
55 - 64 years	29	31	20	28	37
65 - 74 years	20	11	17	10	21
75 years and over	16	16	12	11	20
Unknown	0	0	0	0	0
Totals	165	158	145	149	175

5 YEAR TRENDS - FATAL CRASHES AND PERSONS KILLED FOR SELECT HOLIDAY PERIODS IN MICHIGAN

HOLIDAY PERIOD	FATAL CRASHES	PERSONS KILLED	SUMMARY 2020
MEMORIAL DAY			<p>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.</p> <p>Based on the total 2020 experience, deaths averaged 2.96 per day. Alcohol-related deaths averaged 0.89 per day.</p> <p>Based on the total 2020 holiday period experience, deaths averaged 4.00 per day. Alcohol-related deaths averaged 1.26 per day.</p>
2020 (3) MON	12 [4]	12 [4]	
2019 (3) MON	11 [7]	13 [9]	
2018 (3) MON	15 [8]	19 [9]	
2017 (3) MON	10 [3]	10 [3]	
2016 (3) MON	5 [1]	6 [2]	
FOURTH OF JULY			
2020 (3) SAT	17 [5]	17 [5]	
2019 (4) THU	18 [4]	19 [4]	
2018 (1) WED	6 [3]	7 [3]	
2017 (4) TUE	14 [6]	14 [6]	
2016 (3) MON	13 [4]	13 [4]	
LABOR DAY			
2020 (3) MON	15 [7]	15 [7]	
2019 (3) MON	9 [3]	10 [3]	
2018 (3) MON	12 [6]	12 [6]	
2017 (3) MON	10 [4]	15 [4]	
2016 (3) MON	10 [2]	10 [2]	
THANKSGIVING			
2020 (4) THU	16 [4]	17 [4]	
2019 (4) THU	6 [2]	7 [2]	
2018 (4) THU	10 [5]	11 [6]	
2017 (4) THU	11 [6]	11 [6]	
2016 (4) THU	10 [5]	10 [5]	
CHRISTMAS			
2020 (3) FRI	3 [1]	4 [1]	
2019 (1) WED	4 [1]	4 [1]	
2018 (4) TUE	11 [8]	13 [9]	
2017 (3) MON	11 [6]	11 [6]	
2016 (3) SUN	5 [3]	6 [4]	
NEW YEAR'S			
2020 (3) FRI	9 [2]	11 [3]	
2019 (1) WED	3 [0]	3 [0]	
2018 (4) TUE	9 [1]	9 [1]	
2017 (3) MON	9 [4]	12 [5]	
2016 (3) SUN	9 [4]	11 [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.

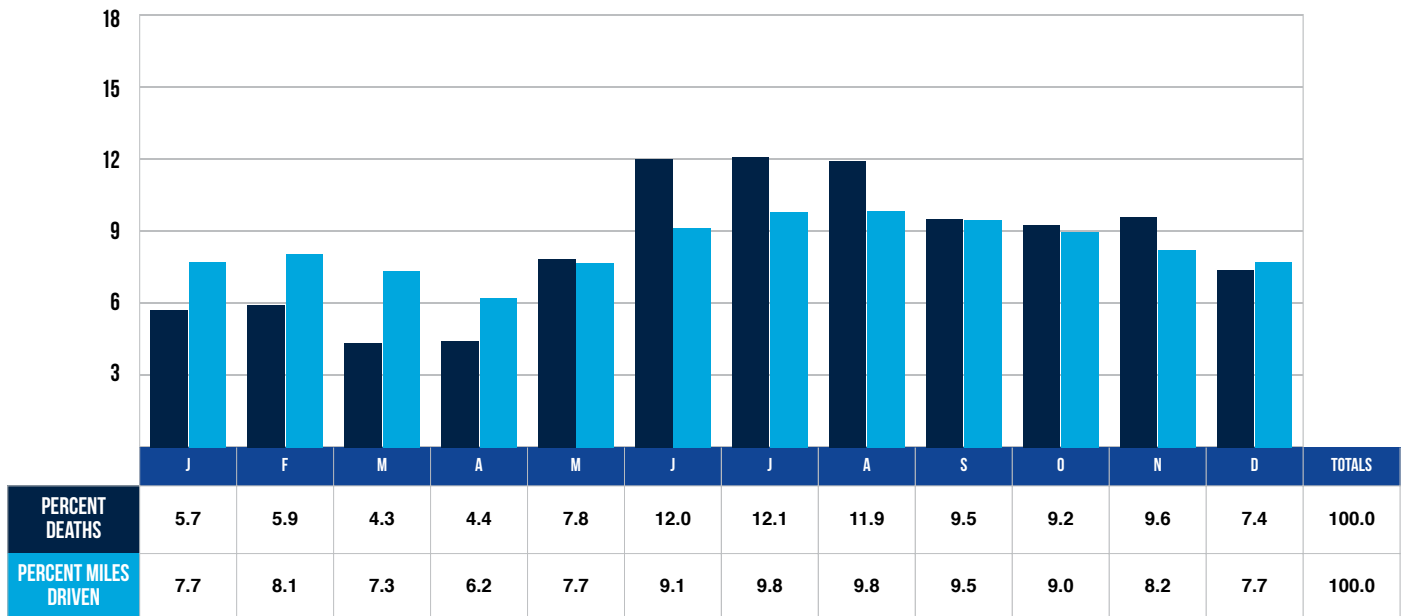
Figures in brackets in the 2nd and 3rd columns show the number of alcohol-related fatal crashes and deaths.

Please view the glossary for an explanation of holiday periods.

5 YEAR TRENDS - MOTOR VEHICLE CRASH DEATHS AND MILEAGE BY MONTH

MONTH	TRAFFIC DEATHS					2020 PERCENTAGES	
	2016	2017	2018	2019	2020	Percent Deaths	Percent Miles Driven
January	65	82	55	77	62	5.7	7.7
February	74	60	60	54	64	5.9	8.1
March	46	79	67	67	47	4.3	7.3
April	91	81	74	62	48	4.4	6.2
May	73	86	90	89	85	7.8	7.7
June	111	105	81	85	130	12.0	9.1
July	93	98	95	103	131	12.1	9.8
August	106	85	128	96	129	11.9	9.8
September	115	102	115	88	103	9.5	9.5
October	107	82	78	113	100	9.2	9.0
November	99	87	68	78	104	9.6	8.2
December	84	81	63	73	80	7.4	7.7
Totals	1,064	1,028	974	985	1,083	100.0	100.0

2020 PERCENT DEATHS AND PERCENT MILES DRIVEN



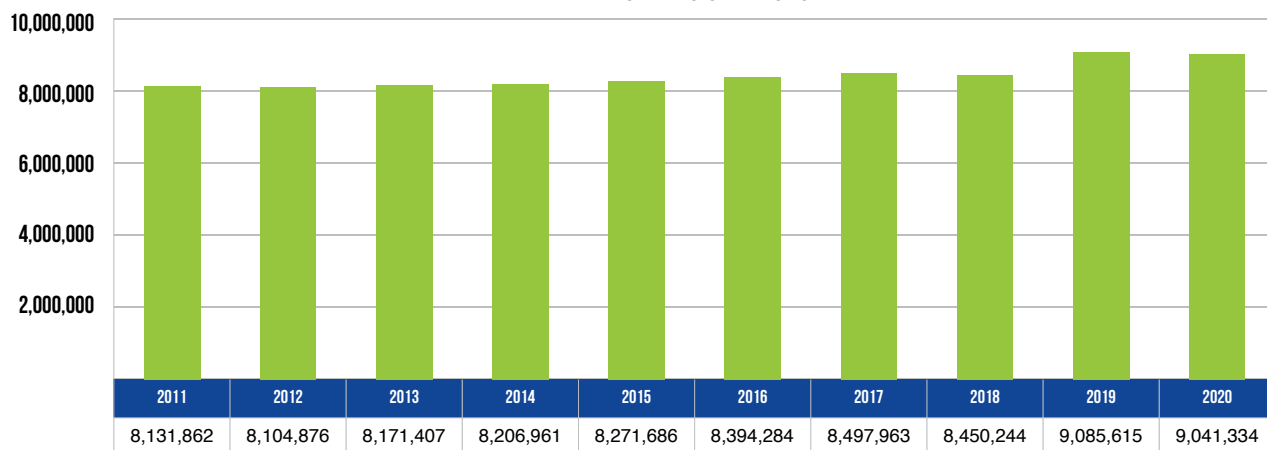
The chart above shows that the percent deaths were higher for the months of May, June, July, August, September, October and November than for the other months when compared to the percent miles driven.

Note: Percent deaths and percent miles driven only appear equal due to rounding.

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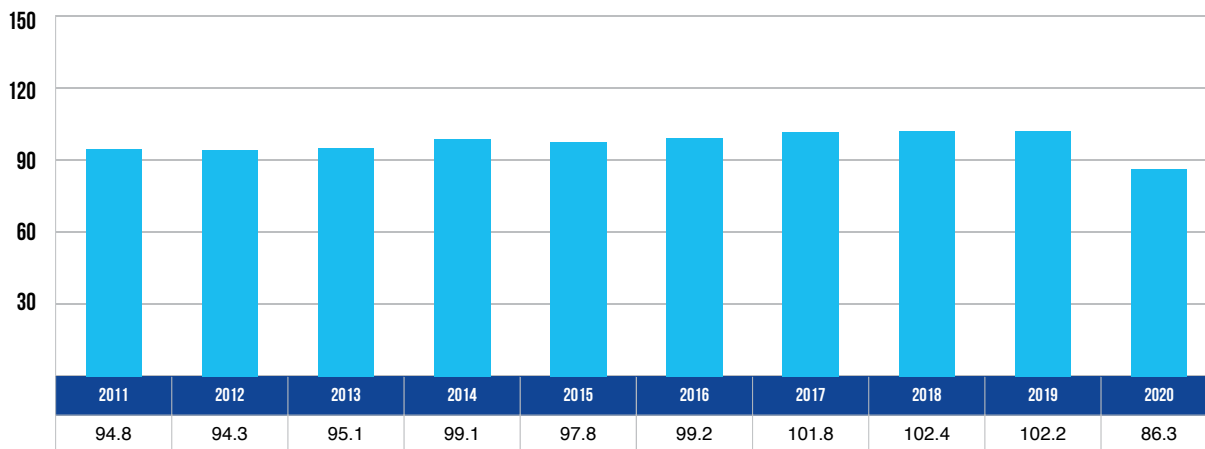
10 YEAR TRENDS-STATEWIDE

VEHICLE REGISTRATIONS



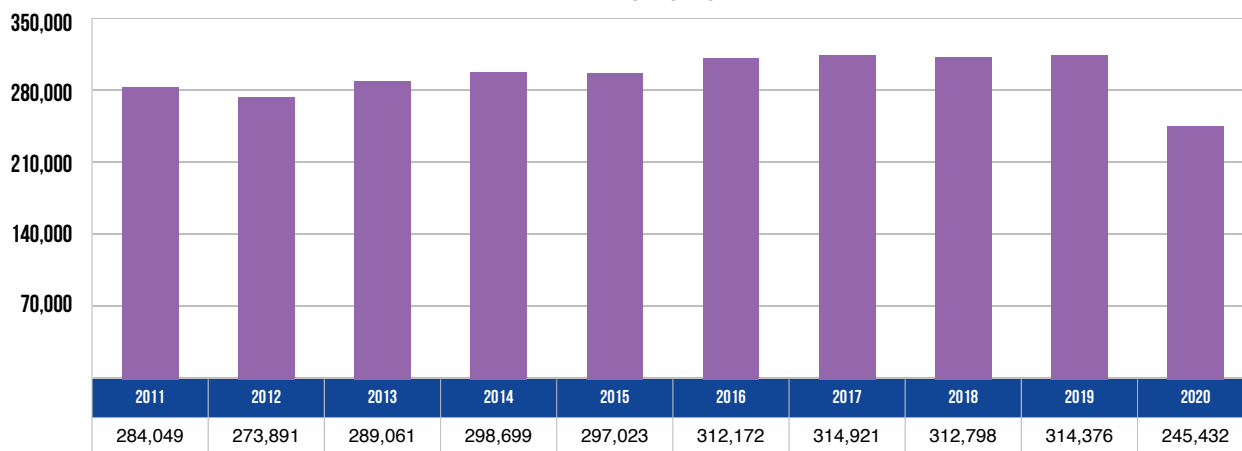
Vehicle registrations increased 11.2 percent over the 10-year period.

VEHICLE MILES TRAVELED (BILLIONS)



Vehicle miles traveled decreased 8.9 percent over the 10-year period.

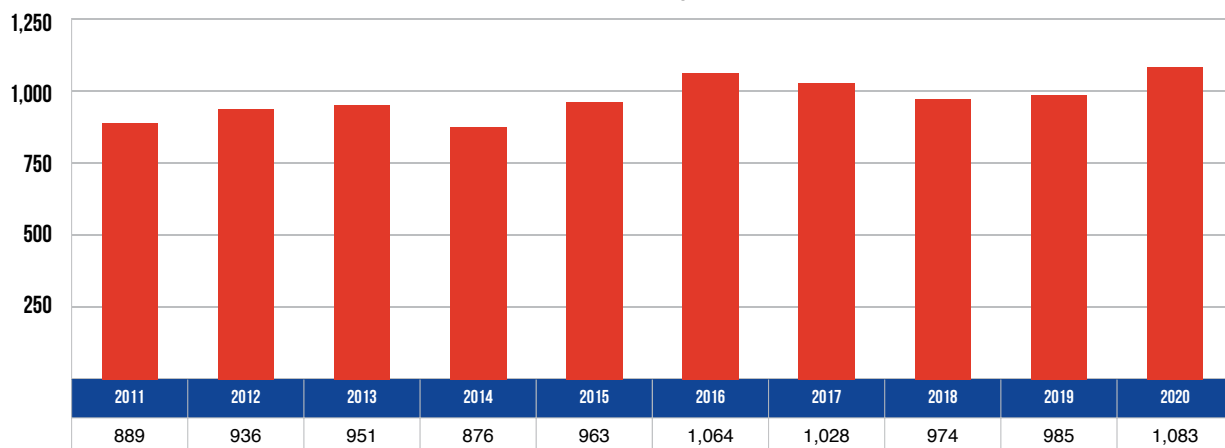
CRASHES



There were 245,432 total crashes statewide in 2020—a 13.6 percent decrease from 2011.

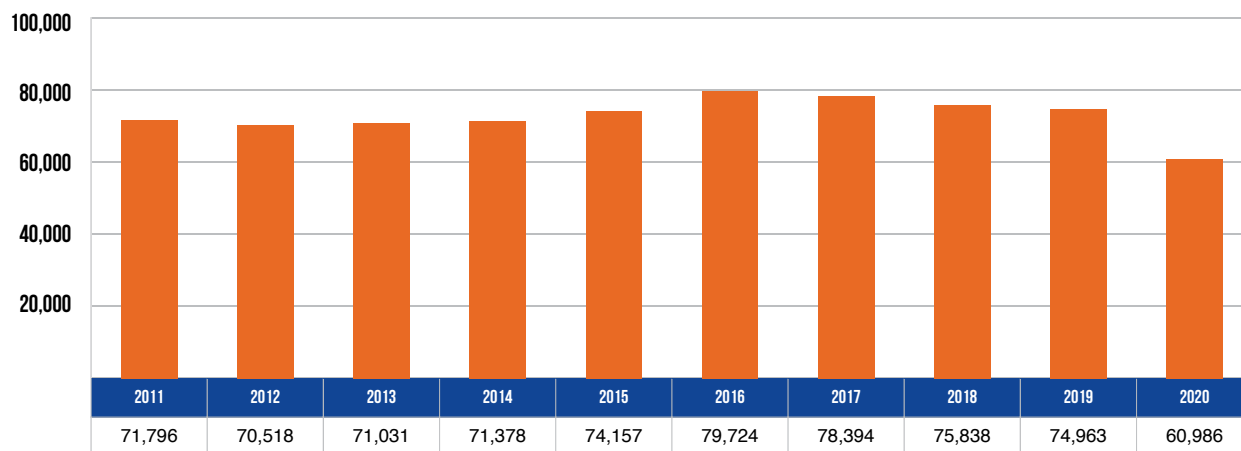
10 YEAR TRENDS-STATEWIDE (CONTINUED)

DEATHS



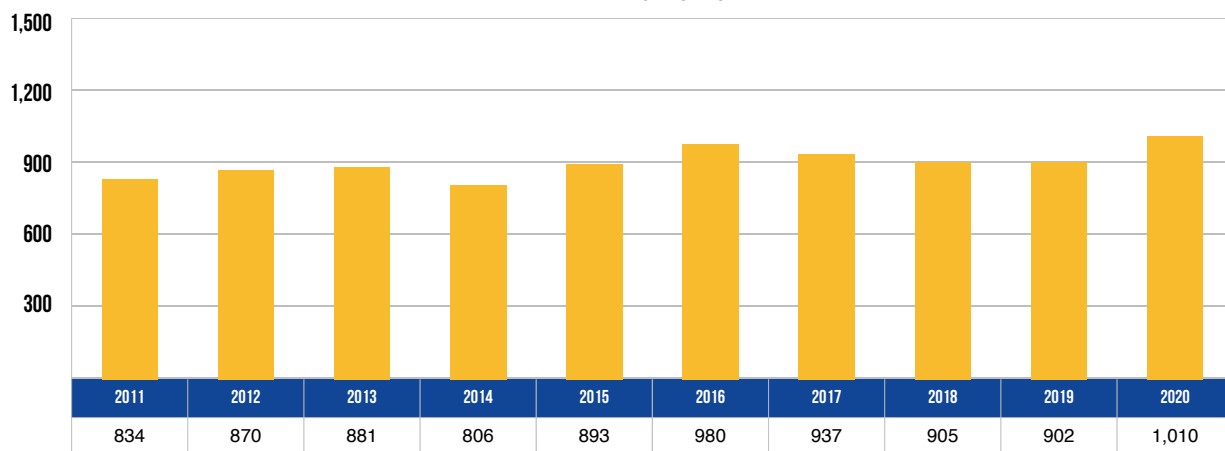
In 2020, 1,083 people died in motor vehicle crashes--an increase of 21.8 percent from 2011.

INJURIES



In 2020, 60,986 people received injuries in motor vehicle crashes--down 15.1 percent from 71,796 in 2011.

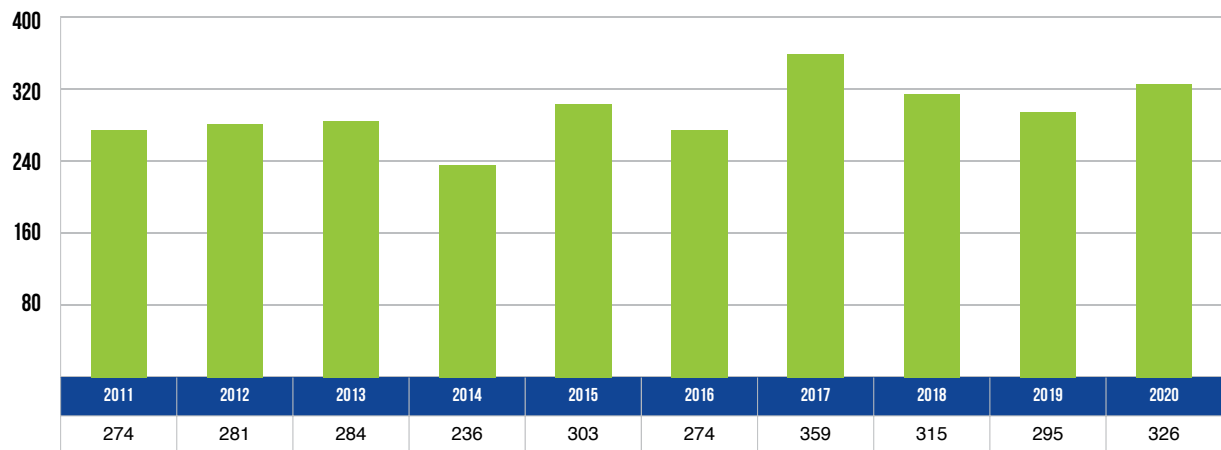
FATAL CRASHES



In 2020, there were 1,010 fatal crashes--up 21.1 percent from 834 in 2011.

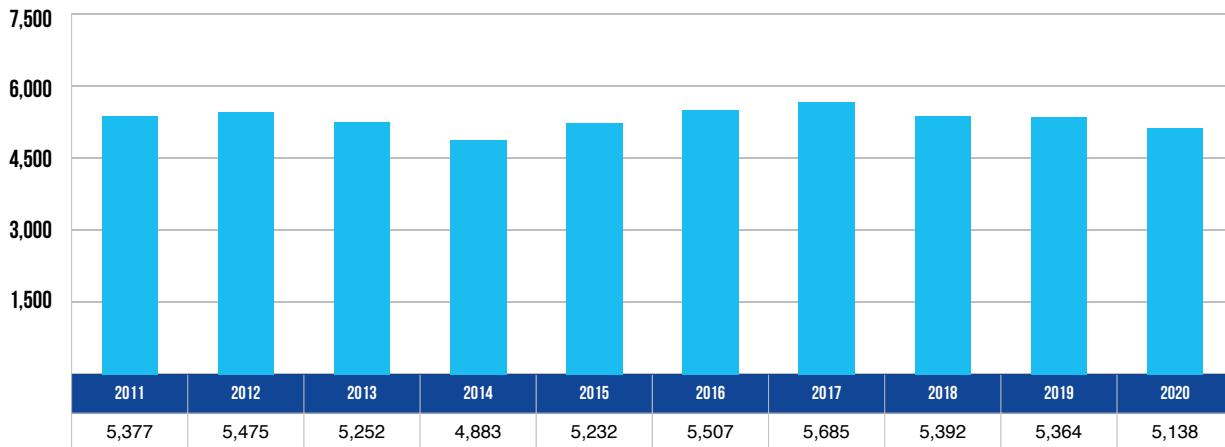
10 YEAR TRENDS-STATEWIDE (CONTINUED)

ALCOHOL-INVOLVED DEATHS



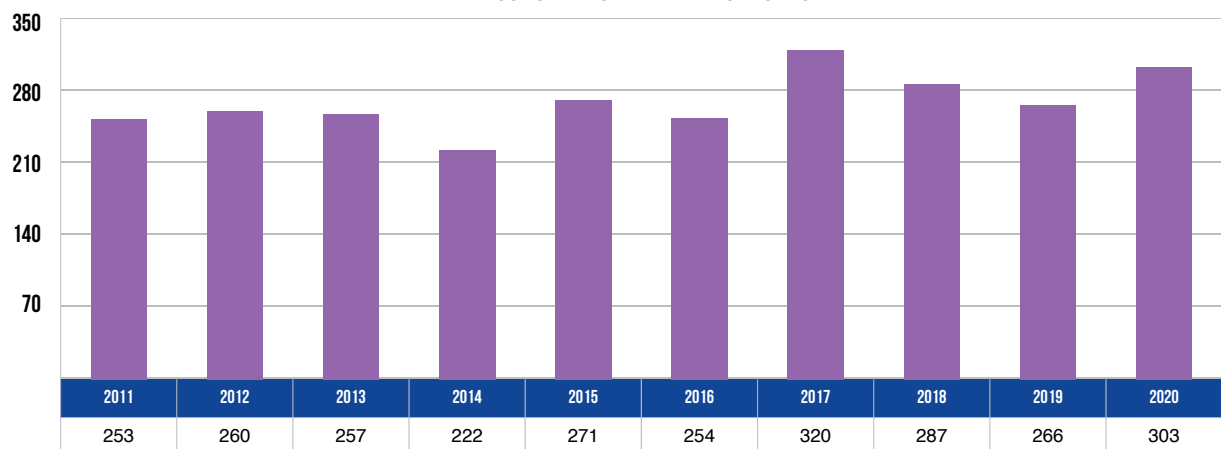
There were 326 deaths in alcohol-involved crashes in 2020--up 19.0 percent from 274 in 2011.

ALCOHOL-INVOLVED INJURIES



There were 5,138 injuries in alcohol-involved crashes in 2020--down 4.4 percent from 2011.

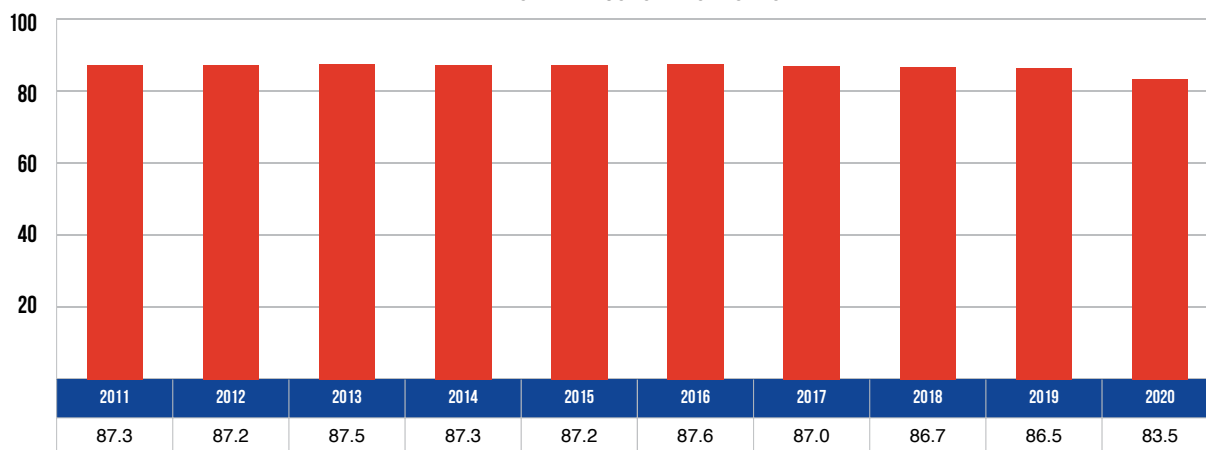
ALCOHOL-INVOLVED FATAL CRASHES



There were 303 alcohol-involved fatal crashes--up 19.8 percent from 253 in 2011.

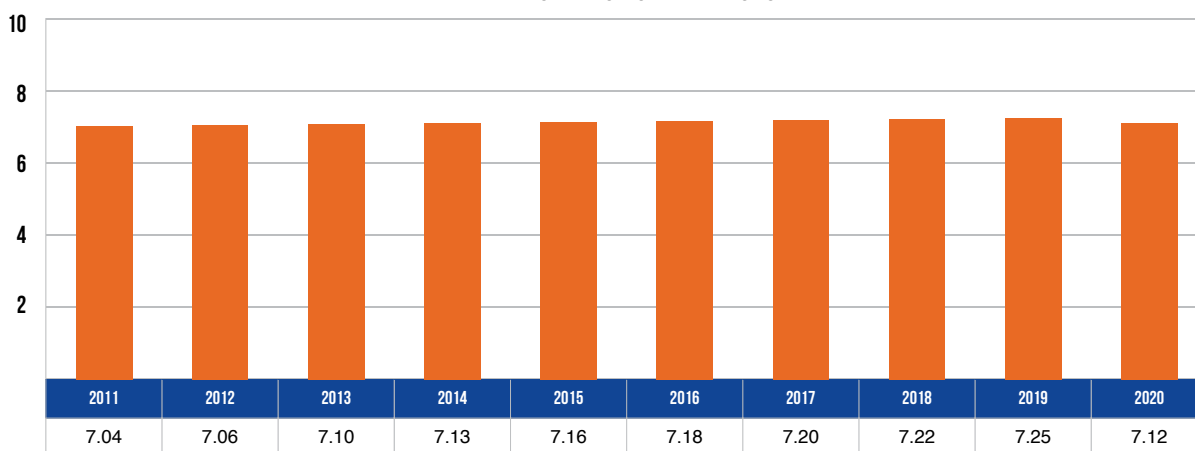
10 YEAR TRENDS-STATEWIDE (CONTINUED)

RESTRAINT USAGE IN CRASHES



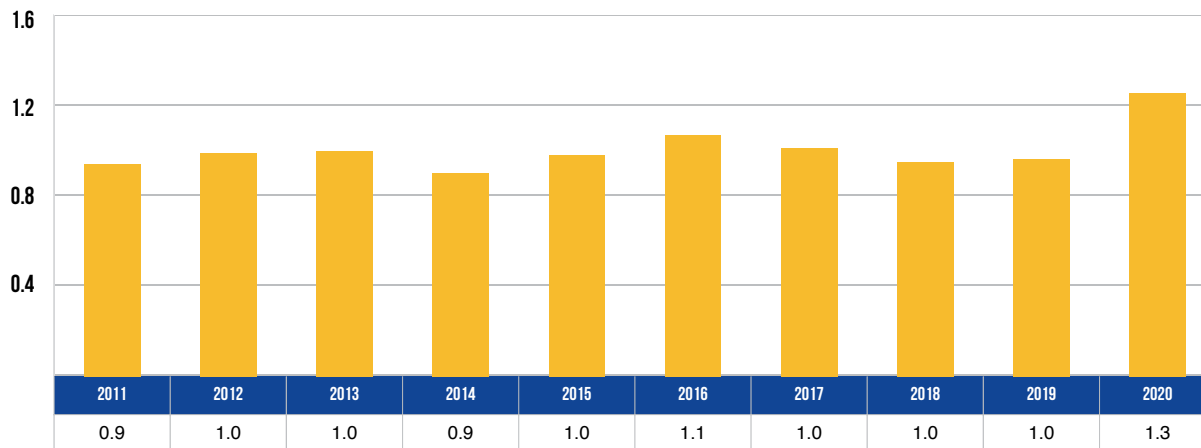
The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes was 83.5 percent in 2020, down 4.4 percent from 2011.

DRIVERS IN MICHIGAN (MILLIONS)



There were 7,118,197 licensed drivers on Michigan roadways in 2020--an increase of 1.1 percent from 2011.

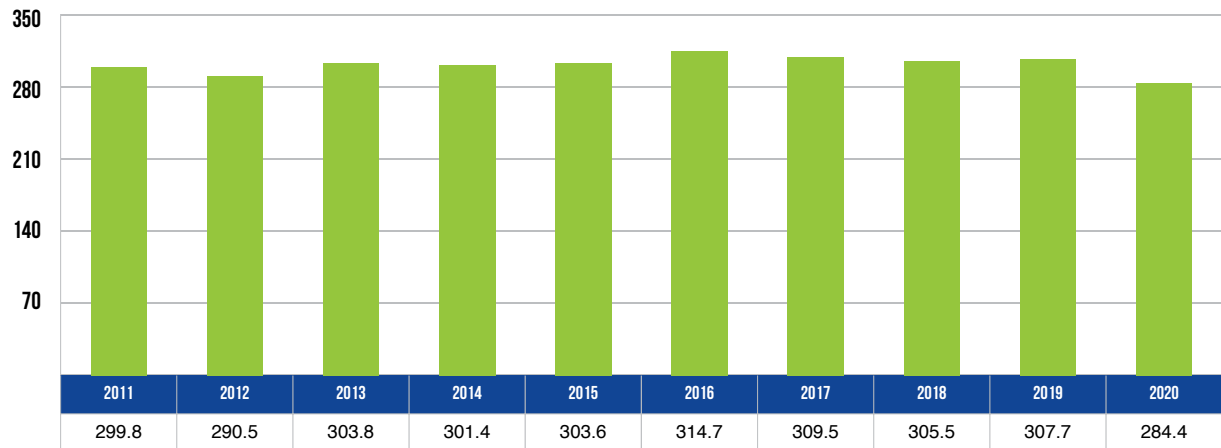
FATALITIES PER 100 MILLION VEHICLE MILES TRAVELED



The death rate of 1.255 fatalities per 100 million VMT in 2020 was an increase of 33.5% from the death rate of 0.940 in 2011.

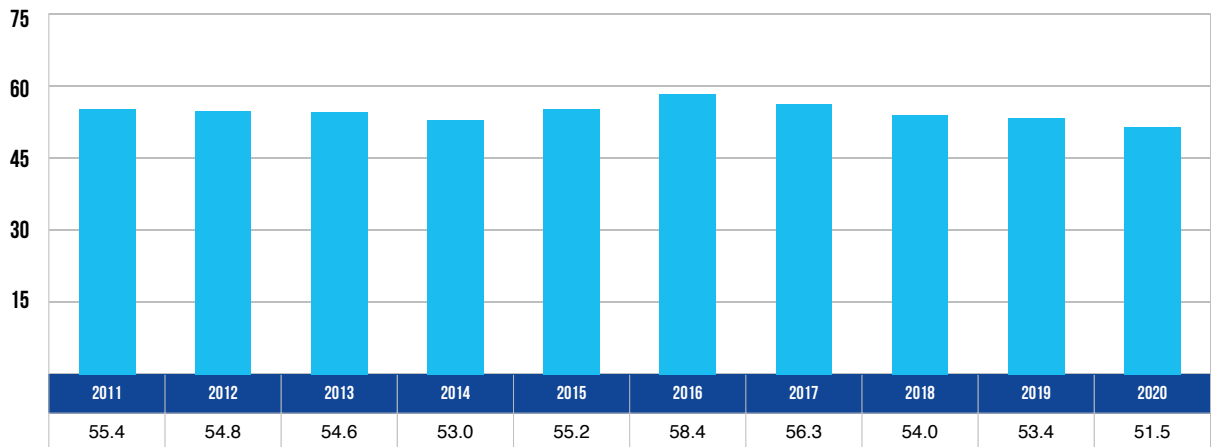
10 YEAR TRENDS-STATEWIDE (CONTINUED)

TOTAL CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



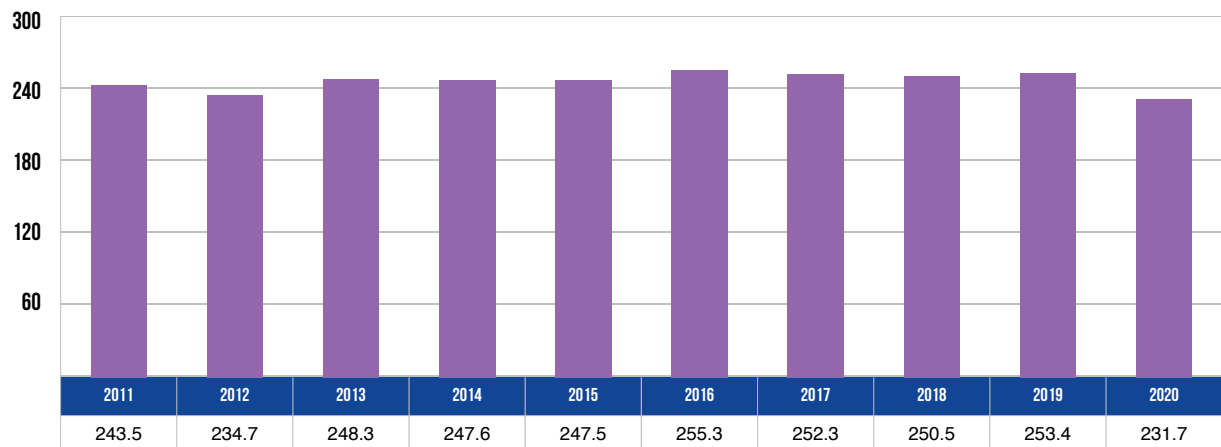
The total crash rate of 284.4 crashes in 2020 was a 5.2 percent decrease from 2011.

INJURY CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



The injury crash rate of 51.5 crashes in 2020 was a 7.1 percent decrease from 2011.

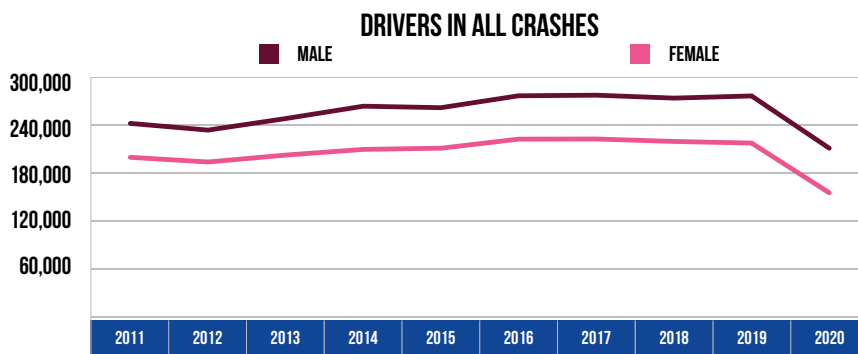
PROPERTY DAMAGE CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



The property damage crash rate of 231.7 crashes in 2020 was a 4.8 percent decrease from 2011.

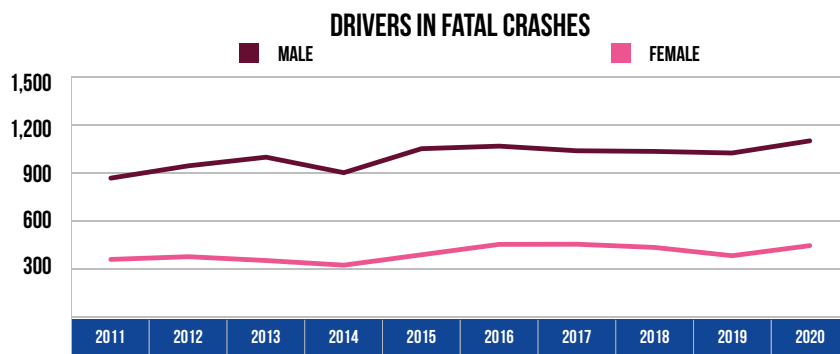
10 YEAR TRENDS-STATEWIDE (CONTINUED)

DRIVERS IN ALL CRASHES		
Year	Male	Female
2011	240,850	198,488
2012	232,475	192,605
2013	246,908	201,264
2014	262,359	208,359
2015	260,508	209,843
2016	275,382	221,200
2017	276,112	221,365
2018	272,480	218,294
2019	275,180	216,274
2020	209,816	154,100



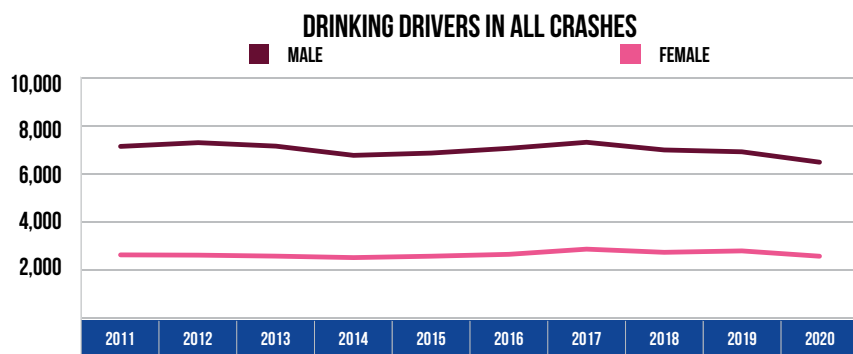
Male drivers accounted for 57.7 percent of all drivers in crashes during 2020, which was up slightly from 54.8 percent in 2011. Female drivers accounted for 42.3 percent of all drivers in crashes during 2020, which was down slightly from 45.2 percent in 2011.

DRIVERS IN FATAL CRASHES		
Year	Male	Female
2011	859	351
2012	936	368
2013	990	344
2014	893	315
2015	1,043	380
2016	1,059	445
2017	1,030	446
2018	1,026	426
2019	1,016	374
2020	1,092	437



Male drivers made up 71.4 percent of all drivers in fatal crashes in 2020, which was up from 71.0 percent in 2011. Female drivers made up 28.6 percent of all drivers in fatal crashes in 2020, which was down from 29.0 percent in 2011.

DRINKING DRIVERS IN ALL CRASHES		
Year	Male	Female
2011	7,094	2,574
2012	7,250	2,563
2013	7,105	2,522
2014	6,721	2,461
2015	6,816	2,519
2016	7,014	2,597
2017	7,266	2,813
2018	6,946	2,681
2019	6,869	2,740
2020	6,436	2,518



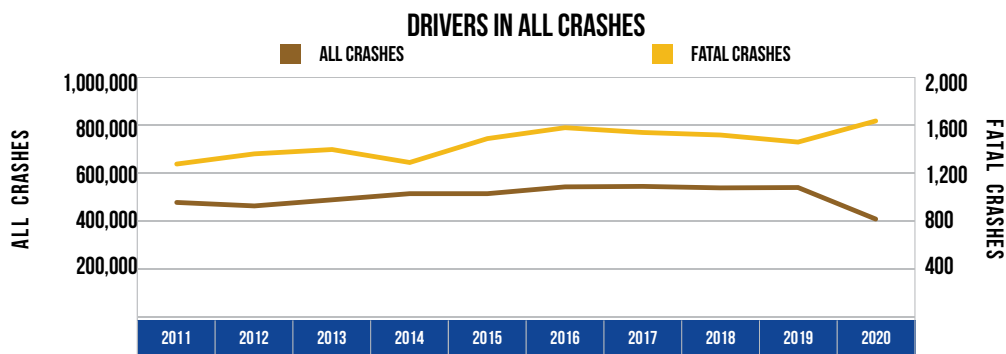
In 2020, males represented 71.9 percent of all drinking drivers, which was down from 73.4 percent in 2011. Females represented 28.1 percent of all drinking drivers in 2020, which was up from 26.6 percent in 2011.

Note: 40,370 drivers in all crashes, 97 drivers in fatal crashes, and two drinking drivers were coded as unknown gender in 2020 and are not included in the tables.

10 YEAR TRENDS-STATEWIDE (CONTINUED)

DRIVERS IN ALL CRASHES

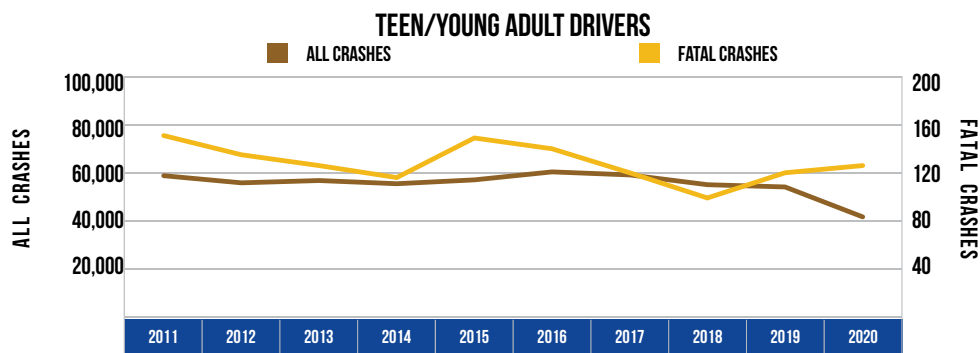
Year	All Crashes	Fatal Crashes
2011	473,501	1,267
2012	459,030	1,352
2013	484,446	1,388
2014	510,086	1,280
2015	510,074	1,479
2016	538,412	1,570
2017	540,387	1,530
2018	534,223	1,509
2019	535,721	1,450
2020	404,286	1,626



The number of drivers involved in all crashes decreased 14.6 percent over the 10-year period. The number of drivers involved in fatal crashes increased 28.3 percent over the 10-year period.

TEEN/YOUNG ADULT DRIVERS (AGE 16-20)

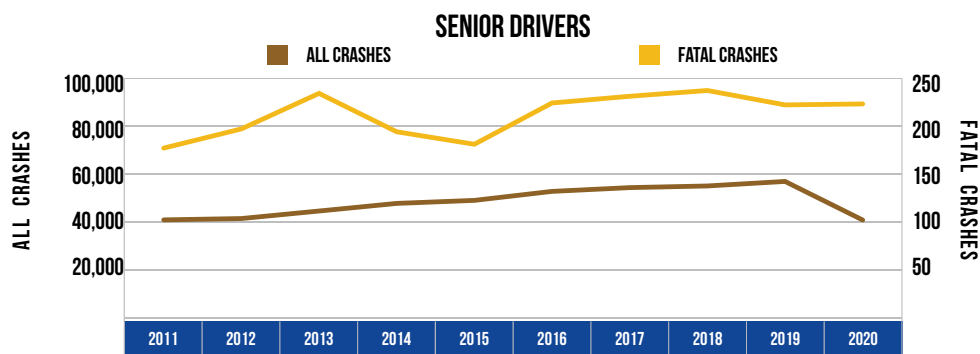
Year	All Crashes	Fatal Crashes
2011	58,279	150
2012	55,307	134
2013	56,264	125
2014	54,935	115
2015	56,544	148
2016	59,865	139
2017	58,607	119
2018	54,530	98
2019	53,586	119
2020	41,119	125



Teen/young adult drivers (age 16-20) represented 6.1 percent of the licensed drivers in 2020. The number of teen/young adult drivers in all crashes has decreased by 29.4 percent since 2011. Their involvement in fatal crashes has decreased 16.7 percent during the same time period.

SENIOR DRIVERS (AGE 65 & OVER)

Year	All Crashes	Fatal Crashes
2011	40,495	176
2012	41,047	196
2013	44,183	233
2014	47,356	193
2015	48,615	180
2016	52,362	223
2017	53,934	230
2018	54,621	236
2019	56,515	221
2020	40,432	222

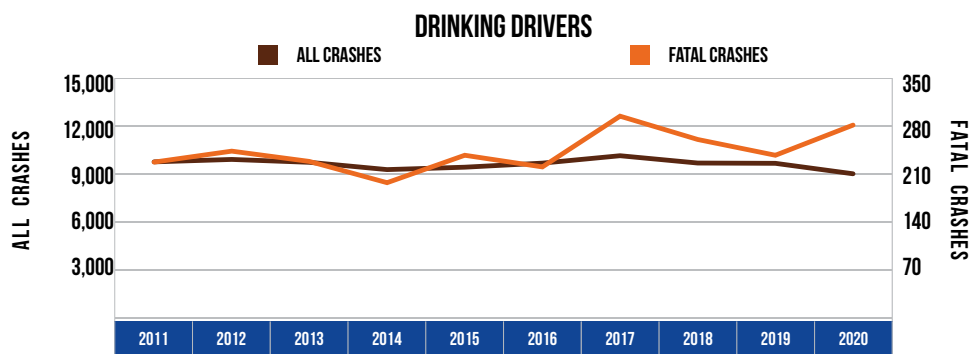


Senior drivers (age 65 and over) represented 22.5 percent of the licensed drivers in 2020. The number of drivers age 65 and over in all crashes has decreased 0.2 percent since 2011. Senior driver involvement in fatal crashes increased 26.1 percent during the same time period.

10 YEAR TRENDS-STATEWIDE (CONTINUED)

DRINKING DRIVERS

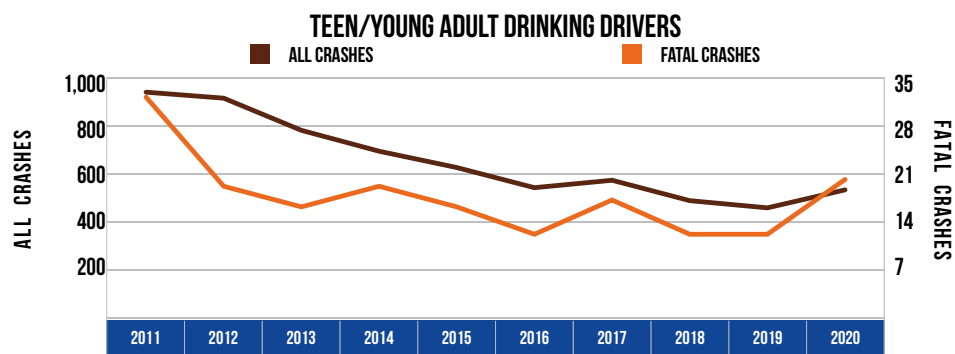
Year	All Crashes	Fatal Crashes
2011	9,701	226
2012	9,853	242
2013	9,673	227
2014	9,218	196
2015	9,368	236
2016	9,623	219
2017	10,085	293
2018	9,628	259
2019	9,610	236
2020	8,956	280



Drinking driver involvement in all crashes decreased by 7.7 percent from 2011. Drinking driver involvement in fatal crashes increased by 23.9 percent from 2011.

TEEN/YOUNG ADULT DRINKING DRIVERS (AGE 16-20)

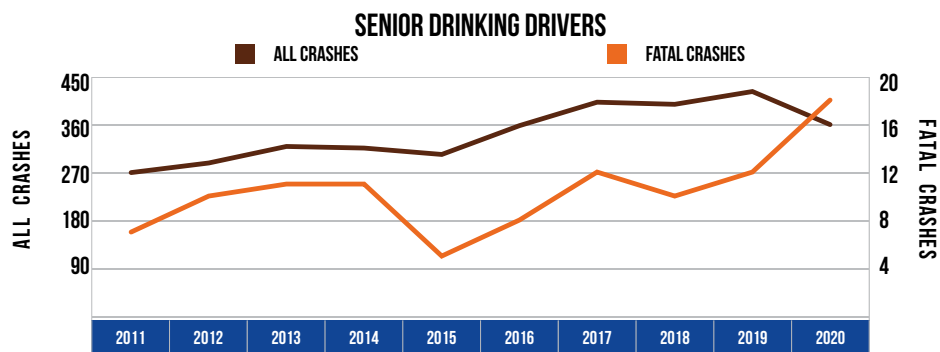
Year	All Crashes	Fatal Crashes
2011	935	32
2012	910	19
2013	776	16
2014	689	19
2015	621	16
2016	537	12
2017	568	17
2018	483	12
2019	453	12
2020	528	20



The number of teen/young adult drinking drivers (age 16-20) in all crashes decreased by 43.5 percent, and their involvement in fatal crashes decreased by 37.5 percent from 2011.

SENIOR DRINKING DRIVERS (AGE 65 & OVER)

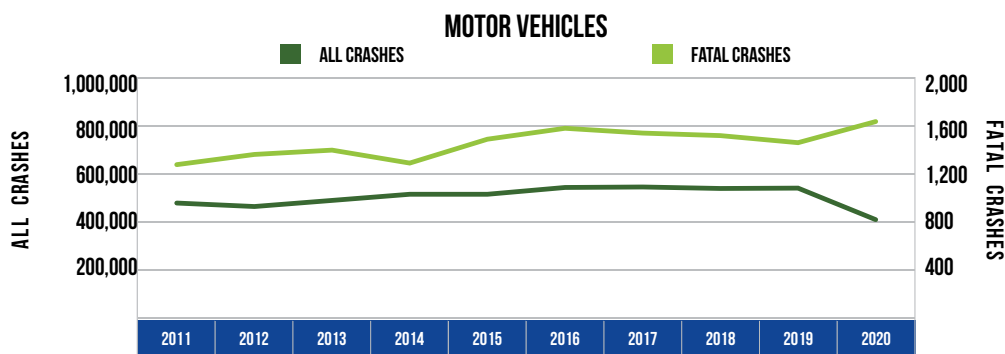
Year	All Crashes	Fatal Crashes
2011	269	7
2012	287	10
2013	318	11
2014	315	11
2015	303	5
2016	357	8
2017	401	12
2018	397	10
2019	421	12
2020	359	18



The number of senior drinking drivers (age 65 and over) in all crashes increased by 33.5 percent from 2011. Their involvement in fatal crashes increased by 157.1 percent from 2011.

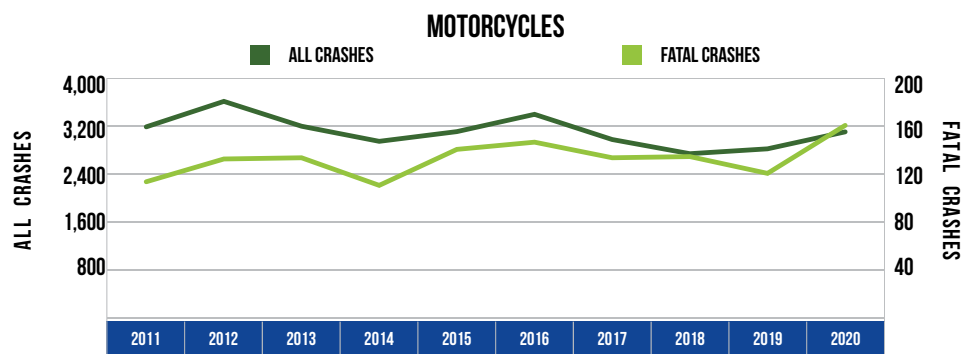
10 YEAR TRENDS-STATEWIDE (CONTINUED)

MOTOR VEHICLES		
Year	All Crashes	Fatal Crashes
2011	473,501	1,267
2012	459,030	1,352
2013	484,446	1,388
2014	510,086	1,280
2015	510,074	1,479
2016	538,412	1,570
2017	540,387	1,530
2018	534,223	1,509
2019	535,721	1,450
2020	404,286	1,626



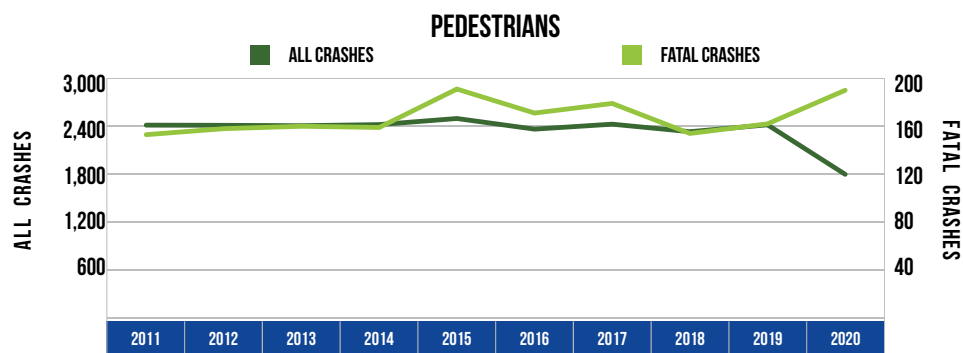
There were 404,286 motor vehicles involved in all crashes in 2020, down 14.6 percent from 2011. There were 1,626 motor vehicles involved in fatal crashes in 2020, up 28.3 percent from 2011.

MOTORCYCLES		
Year	All Crashes	Fatal Crashes
2011	3,175	113
2012	3,600	132
2013	3,186	133
2014	2,934	110
2015	3,096	140
2016	3,384	146
2017	2,964	133
2018	2,728	134
2019	2,809	120
2020	3,092	160



There were 3,092 motorcycles involved in crashes in 2020, a 2.6 percent decrease from 2011. There were 160 motorcycles involved in fatal crashes in 2020, up 41.6 percent from 2011.

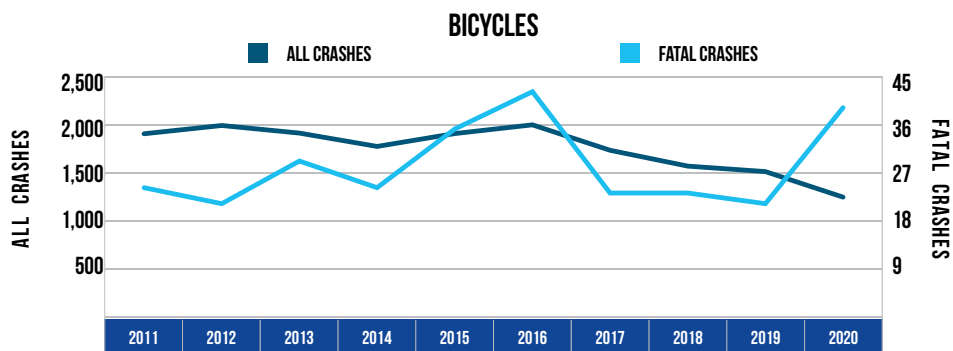
PEDESTRIANS		
Year	All Crashes	Fatal Crashes
2011	2,399	152
2012	2,397	157
2013	2,392	159
2014	2,406	158
2015	2,482	190
2016	2,349	170
2017	2,411	178
2018	2,317	153
2019	2,403	161
2020	1,784	189



There were 1,784 pedestrians involved in crashes in 2020, down 25.6 percent from 2011. There were 189 pedestrians involved in fatal crashes in 2020, up 24.3 percent from 2011.

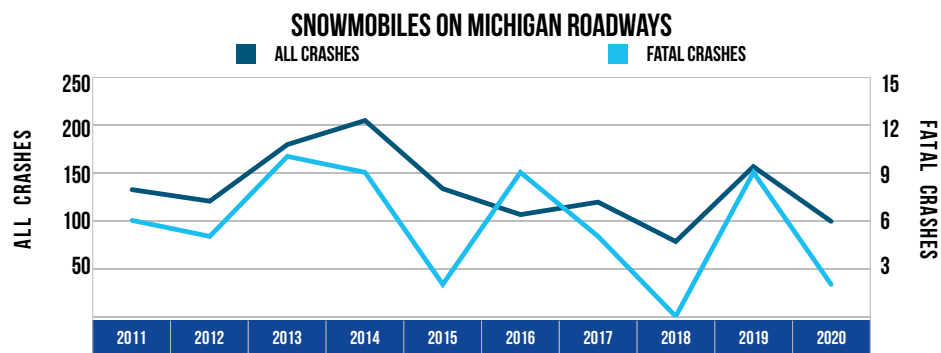
10 YEAR TRENDS-STATEWIDE (CONTINUED)

BICYCLES		
Year	All Crashes	Fatal Crashes
2011	1,895	24
2012	1,981	21
2013	1,902	29
2014	1,763	24
2015	1,897	35
2016	1,988	42
2017	1,723	23
2018	1,558	23
2019	1,501	21
2020	1,235	39



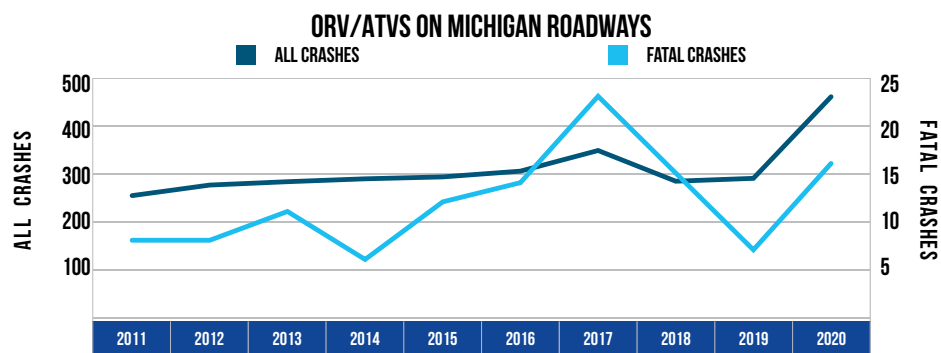
There were 1,235 bicycles involved in crashes in 2020, down 34.8 percent from 2011. There were 39 bicycles involved in fatal crashes in 2020, up 62.5 percent from 2011.

SNOWMOBILES ON MICHIGAN ROADWAYS		
Year	All Crashes	Fatal Crashes
2011	132	6
2012	120	5
2013	179	10
2014	204	9
2015	133	2
2016	106	9
2017	119	5
2018	78	0
2019	156	9
2020	99	2



There were 99 snowmobiles in crashes on roadways in 2020, down 25.0 percent from 2011. There were two snowmobiles in fatal crashes, down 66.7 percent from 2011.

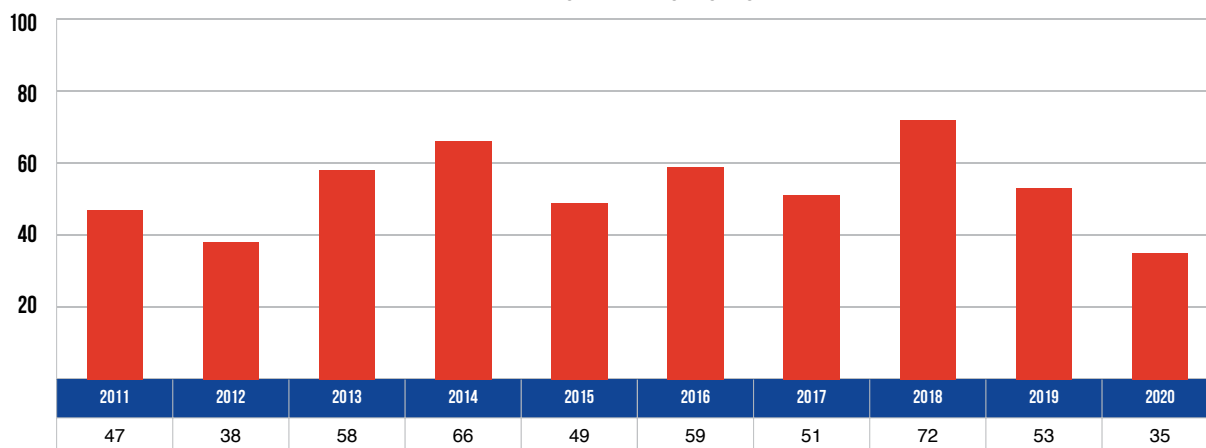
ORV/ATVS ON MICHIGAN ROADWAYS		
Year	All Crashes	Fatal Crashes
2011	253	8
2012	275	8
2013	282	11
2014	288	6
2015	292	12
2016	304	14
2017	347	23
2018	283	15
2019	289	7
2020	459	16



There were 459 ORV/ATVs in crashes on roadways in 2020, up 81.4 percent from 2011. There were 16 ORV/ATVs in fatal crashes, up 100.0 percent from 2011.

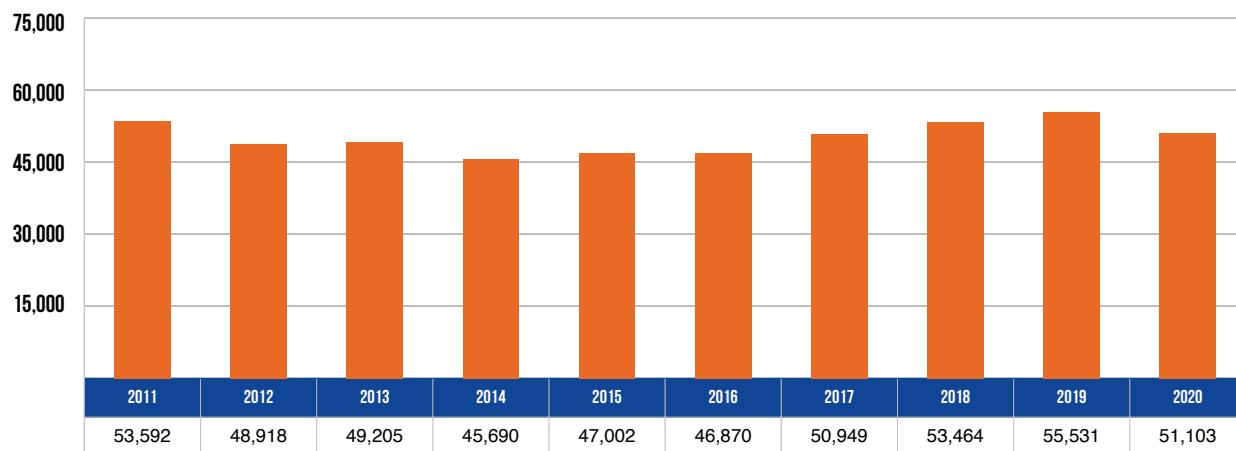
10 YEAR TRENDS-STATEWIDE (CONTINUED)

VEHICLE-TRAIN CRASHES



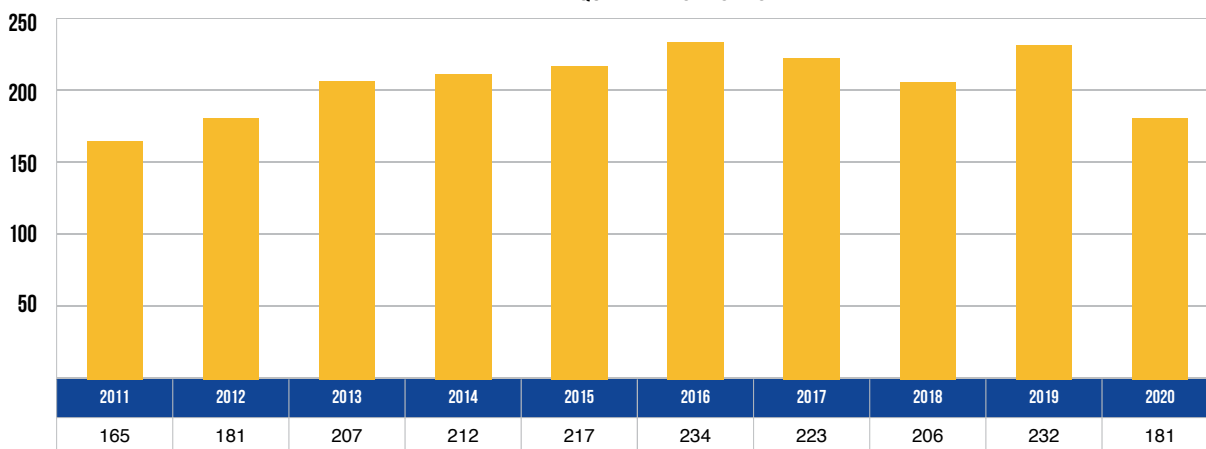
There were 35 vehicle-train crashes in 2020--a decrease of 25.5 percent in the 10-year period.

VEHICLE-DEER CRASHES



There were 51,103 vehicle-deer crashes in 2020--a decrease of 4.6 percent in the 10-year period.

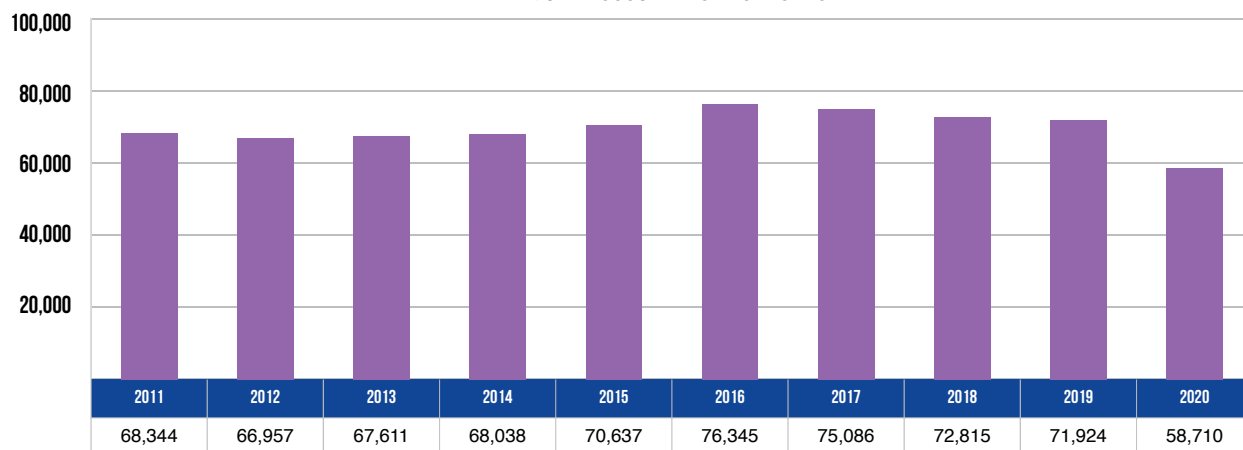
FARM EQUIPMENT CRASHES



There were 181 farm equipment crashes in 2020--an increase of 9.7 percent from 2011.

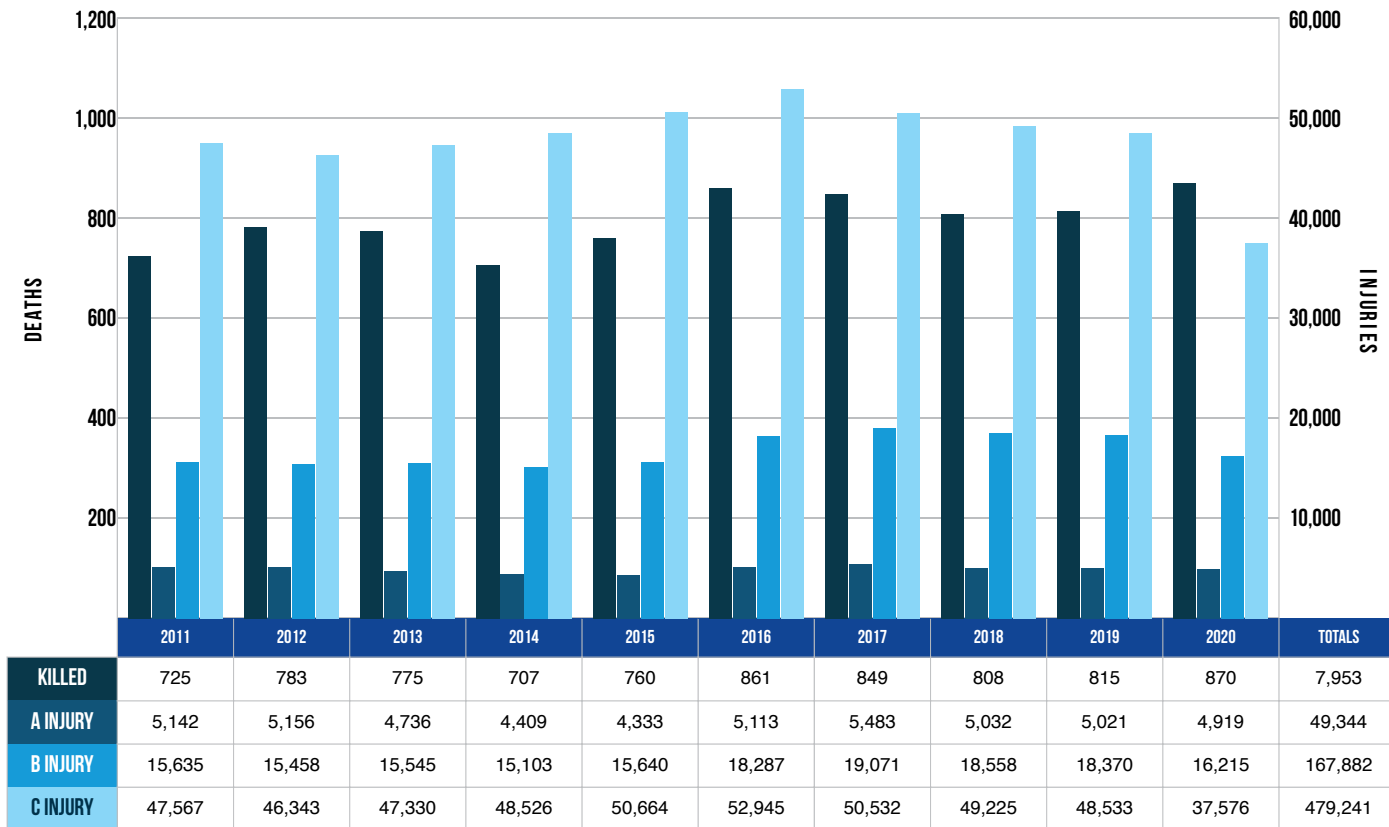
10 YEAR TRENDS-STATEWIDE (CONTINUED)

INJURED OCCUPANTS IN CRASHES



There were 58,710 occupants injured in crashes in 2020--a decrease of 14.1 percent from 2011.

DEATH AND INJURY FOR CRASH-INVOLVED OCCUPANTS



Over the period from 2011 to 2020, occupant deaths increased 20.0 percent, A injuries decreased 4.3 percent, B injuries increased 3.7 percent, and C injuries decreased 21.0 percent.

Note: These figures contain the number of occupants recorded as injured by the police officer on the UD-10.

10 YEAR TRENDS-STATEWIDE (CONTINUED)

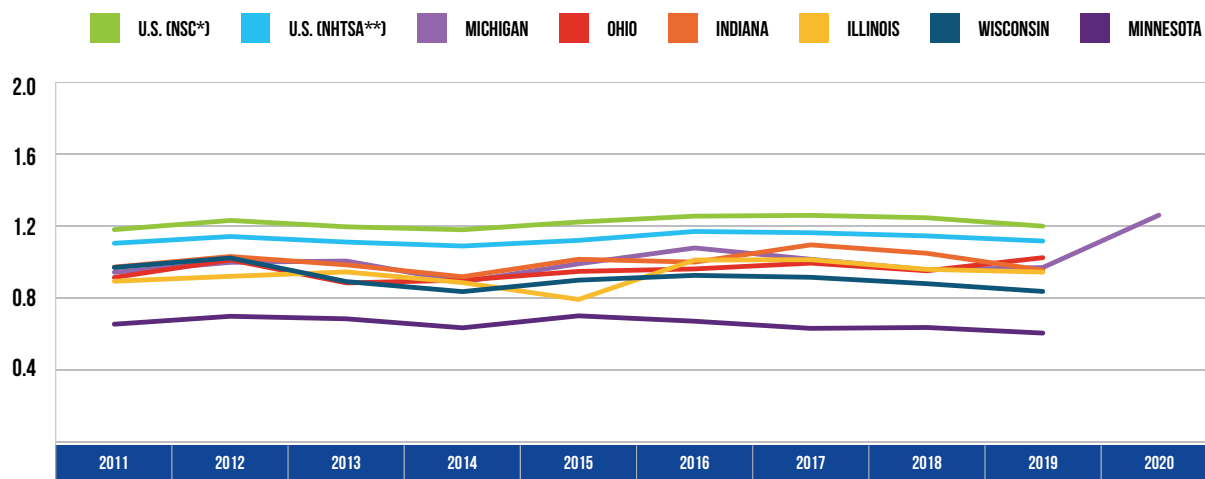
AVERAGE AGE OF DRIVERS IN CRASHES 2011 - 2020



Over the 10-year period, reflecting the demographic trend of increasing age in the general population, the average age of drivers involved in all crashes has increased 1.3 percent. The age of drivers involved in fatal crashes has increased 21.3 percent. The average age of drinking drivers in crashes has decreased 13.0 percent. The average age of drinking drivers in fatal crashes has increased 12.2 percent.

10 YEAR TRENDS-STATEWIDE (CONTINUED)

FATALITIES PER 100 MILLION VMT 2011 - 2020



* National Safety Council (NSC) reports traffic and nontraffic deaths within a year of the crash.

**National Highway Traffic Safety Administration (NHTSA) reports only traffic deaths that occur within 30 days of the crash.

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-STATEWIDE (CONTINUED)

YEAR	U.S. (NSC) FATALITIES	U.S. (NHTSA) FATALITIES	MICHIGAN FATALITIES	OHIO FATALITIES	INDIANA FATALITIES	ILLINOIS FATALITIES	WISCONSIN FATALITIES	MINNESOTA FATALITIES
2011	34,600	32,367	889	1,015	749	918	565	368
2012	36,200	33,561	936	1,122	779	956	601	395
2013	35,369	32,850	951	990	777	991	527	387
2014	35,400	32,675	876	1,008	743	924	498	361
2015	38,300	35,092	963	1,110	829	829	555	411
2016	40,200	37,461	1,064	1,133	821	1,078	588	392
2017	40,231	37,133	1,028	1,179	911	1,090	594	358
2018	40,000	36,750	974	1,068	873	1,031	576	381
2019	38,800	36,120	985	1,155	800	1,010	551	364
2020	-	-	1,083	-	-	-	-	-

YEAR	U.S. (FHWA) VMT	MICHIGAN VMT	OHIO VMT	INDIANA VMT	ILLINOIS VMT	WISCONSIN VMT	MINNESOTA VMT
2011	2,946	94.8	111.7	77.5	103.4	58.6	56.7
2012	2,954	94.3	111.5	76.0	104.5	59.1	57.0
2013	2,972	95.1	112.7	79.4	105.5	59.5	57.0
2014	3,016	99.1	112.8	81.4	105.0	60.0	57.4
2015	3,148	97.8	117.8	82.1	105.4	62.1	59.1
2016	3,218	99.2	118.5	82.6	107.2	63.9	58.9
2017	3,209	101.8	119.3	83.6	108.2	65.3	57.2
2018	3,225	102.4	112.9	83.7	108.1	65.9	60.4
2019	3,251	102.2	113.4	84.3	107.6	66.3	60.7
2020	-	86.3	-	-	94.0	-	-

VMT described in billions of miles

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MOTOR VEHICLE TRAFFIC DEATHS IN MICHIGAN BY MONTH

YEAR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
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

MOTOR VEHICLE TRAFFIC DEATHS IN MICHIGAN BY MONTH (CONTINUED)

YEAR	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	TOTAL
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
2012	54	67	81	62	75	100	95	90	86	87	68	71	936
2013	73	59	55	52	80	75	110	101	104	92	91	59	951
2014	47	63	47	75	76	92	96	85	88	70	68	69	876
2015	67	43	48	58	82	102	118	114	82	85	88	76	963
2016	65	74	46	91	73	111	93	106	115	107	99	84	1,064
2017	82	60	79	81	86	105	98	85	102	82	87	81	1,028
2018	55	60	67	74	90	81	95	128	115	78	68	63	974
2019	77	54	67	62	89	85	103	96	88	113	78	73	985
2020	62	64	47	48	85	130	131	129	103	100	104	80	1,083

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
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

MOTOR VEHICLE TRAFFIC CRASH AND RELATED DATA (CONTINUED)

YEAR	DEATHS	NUMBER OF PERSONS INJURED	CRASHES	ESTIMATED MILEAGE (MILLIONS)	MOTOR VEHICLE REGISTRATIONS*	DEATH RATE PER 100 MILLION MILES OF TRAVEL
2002	1,279	112,484	395,515	98,173.2	8,690,326	1.3
2003	1,283	105,555	391,485	100,192.0	8,708,688	1.3
2004	1,159	99,680	373,028	101,820.2	8,578,224	1.1
2005	1,129	90,510	350,838	103,158.6	8,464,905	1.1
2006	1,084	81,942	315,322	104,041.7	8,353,070	1.0
2007	1,084	80,576	324,174	104,643.8	8,409,163	1.0
2008	980	74,568	316,057	100,916.7	8,187,990	1.0
2009	871	70,931	290,978	95,910.1	8,145,728	0.9
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
2012	936	70,518	273,891	94,289.6	8,104,876	1.0
2013	951	71,031	289,061	95,135.8	8,171,407	1.0
2014	876	71,378	298,699	99,111.2	8,206,961	0.9
2015	963	74,157	297,023	97,843.2	8,271,686	1.0
2016	1,064	79,724	312,172	99,185.7	8,394,284	1.1
2017	1,028	78,394	314,921	101,757.1	8,497,963	1.0
2018	974	75,838	312,798	102,396.8	8,450,244	1.0
2019	985	74,963	314,376	102,174.0	9,085,615	1.0
2020	1,083	60,986	245,432	86,311.0	9,041,334	1.3

*Excludes trailers and trailer coaches, and includes mopeds

AGE

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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	0	0	0	165	0	165	2	0	1	0	0	0	2	0	2
1	1	0	0	129	1	128	0	0	0	1	1	0	7	1	4
2	0	0	0	160	4	156	0	0	0	0	0	0	11	1	8
3	1	0	0	159	2	157	0	0	0	1	0	1	5	0	5
4	0	0	0	181	1	180	0	0	0	3	0	3	5	0	3
5	2	0	1	198	2	196	1	0	1	4	0	4	12	0	10
6	2	0	1	199	2	197	1	0	1	6	0	5	9	0	8
7	3	0	2	195	1	194	2	0	1	11	0	9	14	0	10
8	4	1	2	199	1	198	3	0	3	6	0	6	16	1	13
9	1	0	1	194	2	192	2	0	2	11	0	5	12	0	11
10	10	0	7	219	1	218	3	0	2	25	0	21	12	0	9
11	9	0	5	190	1	189	4	0	3	15	1	12	5	0	4
12	16	0	10	178	1	177	3	0	2	28	0	20	19	0	16
13	47	0	23	217	0	217	4	0	3	24	0	18	24	1	20
14	103	0	40	250	2	248	10	1	7	36	0	28	26	0	21
15	566	1	106	337	1	336	12	0	11	43	0	30	23	1	20
16	5,041	4	523	436	5	431	8	0	7	38	1	27	29	0	23
17	7,119	8	771	517	9	508	16	0	13	33	0	31	24	1	16
18	9,069	8	1,147	583	6	577	29	1	23	26	0	21	26	0	23
19	10,117	7	1,274	488	4	484	46	1	36	32	0	26	32	1	25
20	9,773	13	1,251	465	5	460	59	2	45	25	0	20	39	4	31
21	9,780	13	1,202	435	4	431	83	0	64	24	0	19	33	3	25
22	9,519	21	1,243	362	5	357	87	4	70	19	0	15	27	0	23
23	9,227	18	1,166	322	4	318	89	3	71	19	0	11	27	3	21
24	8,921	20	1,197	329	6	323	100	3	73	17	0	13	29	2	22
25	8,658	10	1,110	307	1	306	80	7	56	25	1	19	37	4	28
26	8,702	15	1,143	259	1	258	85	3	58	12	0	10	45	1	38
27	8,502	24	1,105	269	5	264	85	5	64	18	1	16	27	3	23
28	8,564	17	1,074	270	1	269	76	3	61	20	0	15	35	5	27
29	8,537	11	1,083	244	4	240	106	5	78	21	1	16	30	3	24
30	8,224	20	1,132	241	5	236	83	1	62	21	0	14	24	2	19
31	7,507	12	1,009	231	1	230	72	3	53	18	1	13	29	2	22
32	7,199	15	901	208	0	208	66	1	46	19	0	15	37	5	29
33	6,790	20	822	177	1	176	63	4	50	17	0	15	33	6	23
34	6,597	12	824	173	1	172	58	2	46	13	1	9	25	1	18
35	6,427	13	789	186	1	185	61	2	50	20	2	15	20	0	19
36	6,178	5	761	149	1	148	57	1	48	12	0	11	24	2	21
37	6,106	10	717	127	2	125	41	5	25	17	3	12	26	0	24

*Driver age is calculated from birth date, and invalid date of birth can 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
38	6,043	8	736	178	4	174	58	2	46	15	0	12	25	2	20
39	6,042	12	726	149	2	147	60	3	44	13	0	13	18	1	16
40	5,908	15	688	133	1	132	59	2	45	12	0	11	29	4	20
41	5,642	9	696	138	5	133	47	2	34	10	0	8	26	1	18
42	5,562	6	625	149	0	149	60	3	50	10	0	9	25	4	16
43	5,313	9	638	129	2	127	58	4	45	10	1	7	18	0	16
44	5,190	9	612	108	3	105	63	4	49	17	0	14	18	2	16
45	5,141	5	562	127	2	125	59	1	42	9	0	7	27	2	22
46	5,131	14	551	134	2	132	47	7	28	8	0	6	26	2	20
47	5,409	8	653	126	1	125	62	3	53	18	1	12	24	4	16
48	5,607	12	637	120	1	119	69	4	43	15	0	12	23	5	15
49	5,875	14	683	135	0	135	75	4	57	12	1	7	29	4	19
50	5,702	9	686	130	2	128	69	2	54	12	0	9	33	4	25
51	5,381	13	560	102	1	101	58	5	36	11	0	8	20	1	13
52	5,219	4	645	118	1	117	56	4	42	10	0	8	27	3	22
53	5,195	10	570	124	2	122	57	2	45	11	1	7	26	2	22
54	5,228	9	628	121	2	119	55	3	36	17	1	12	26	3	19
55	5,281	9	633	119	1	118	46	2	33	15	0	11	22	3	15
56	5,334	14	605	124	1	123	70	5	49	20	1	17	30	3	22
57	5,340	7	618	103	3	100	48	0	41	30	0	27	28	4	20
58	5,165	13	567	116	0	116	36	4	26	19	3	12	26	2	22
59	5,123	4	586	125	4	121	58	0	50	22	1	15	30	2	25
60	4,919	12	564	126	2	124	46	2	34	16	0	14	33	6	21
61	4,786	10	554	105	2	103	50	3	36	17	0	13	19	4	15
62	4,593	6	529	110	2	108	53	2	29	20	2	16	18	4	11
63	4,229	6	508	110	2	108	38	1	29	19	0	18	26	2	22
64	4,094	7	508	99	1	98	43	2	35	17	1	13	20	7	12
65	3,718	8	462	97	0	97	38	4	23	11	0	9	11	2	6
66	3,345	6	388	85	1	84	29	2	21	11	1	9	21	0	20
67	3,078	7	391	83	2	81	28	1	22	10	0	6	16	3	12
68	2,855	5	369	61	1	60	23	1	15	10	1	9	14	2	11
69	2,806	10	349	73	3	70	23	1	15	10	2	6	18	2	10
70	2,556	5	331	76	1	75	23	0	18	9	2	7	13	1	12
71	2,419	10	304	76	1	75	23	3	15	7	0	6	13	3	6
72	2,278	6	305	76	3	73	17	0	13	8	3	4	12	3	8
73	2,236	6	264	69	0	69	10	1	7	2	0	2	17	4	12
74	1,755	3	216	54	2	52	10	2	7	2	0	2	8	1	7
75	1,592	10	197	48	1	47	8	1	5	7	1	5	4	0	4
76	1,507	6	219	52	0	52	8	0	6	2	0	2	12	2	10

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
77	1,563	7	204	58	2	56	3	1	2	10	1	8	12	6	4
78	1,268	6	158	37	0	37	3	0	3	4	0	4	5	1	4
79	1,171	5	140	39	2	37	3	1	1	1	0	1	5	1	3
80	946	5	144	39	1	38	6	0	5	3	0	3	4	1	2
81	894	4	131	31	0	31	1	1	0	0	0	0	2	1	1
82	820	4	118	35	0	35	1	0	1	1	1	0	3	1	2
83	649	1	105	19	0	19	3	0	3	1	0	1	4	0	2
84	505	2	78	24	2	22	0	0	0	1	0	1	4	2	2
85	454	4	66	29	2	27	0	0	0	2	0	2	4	1	3
86	420	3	72	18	2	16	0	0	0	1	0	1	1	0	1
87	344	3	51	18	1	17	0	0	0	0	0	0	3	0	3
88	292	4	54	20	1	19	1	0	0	1	0	1	3	2	1
89	265	2	47	21	3	18	0	0	0	0	0	0	2	0	2
90	213	2	32	11	2	9	0	0	0	0	0	0	1	0	1
91	146	1	17	7	1	6	0	0	0	0	0	0	2	0	1
92	118	3	22	7	1	6	0	0	0	0	0	0	2	1	1
93	80	0	7	3	0	3	0	0	0	0	0	0	1	1	0
94	54	2	9	2	0	2	0	0	0	0	0	0	0	0	0
95	29	0	6	1	0	1	0	0	0	0	0	0	0	0	0
96	18	0	4	3	0	3	0	0	0	0	0	0	0	0	0
97	12	0	1	1	0	1	0	0	0	0	0	0	0	0	0
98	5	0	2	1	0	1	0	0	0	0	0	0	0	0	0
99	19	0	3	0	0	0	0	0	0	0	0	0	0	0	0
100	0	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	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	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	0	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	44,080	0	25	7	0	7	117	0	0	36	0	1	35	0	4
TOTAL	404,286	692	44,301	14,587	178	14,409	3,375	152	2,429	1,235	38	933	1,784	175	1,343
	*Includes 45,275 drivers with unknown injury severity and 314,018 with no injury						*Includes 120 motorcyclists with unknown injury severity and 674 with no injury			*Includes 47 bicyclists with unknown injury severity and 217 with no injury			*Includes 69 pedestrians with unknown injury severity and 197 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 Drivers	% of Total	Number of Drivers	% of Total
Going straight ahead	24,655	60.0	95	76.0	5,610	63.5
Turning left	3,859	9.4	7	5.6	1,033	11.7
Turning right	1,367	3.3	0	0.0	174	2.0
Stopped on roadway	2,250	5.5	4	3.2	458	5.2
In prior crash	29	0.1	0	0.0	9	0.1
Changing lanes	1,360	3.3	1	0.8	161	1.8
Backing	694	1.7	0	0.0	16	0.2
Slowing/stopping on roadway	3,459	8.4	2	1.6	559	6.3
Slowing/stopping other	57	0.1	0	0.0	13	0.1
Starting up on roadway	763	1.9	1	0.8	185	2.1
Starting up other	5	0.0	0	0.0	3	0.0
Entering parking	21	0.1	0	0.0	1	0.0
Leaving parking	98	0.2	1	0.8	17	0.2
Entering roadway	531	1.3	1	0.8	130	1.5
Leaving roadway	61	0.1	1	0.8	16	0.2
Making U-turn	96	0.2	0	0.0	19	0.2
Overtaking or passing	282	0.7	4	3.2	56	0.6
Avoiding object	50	0.1	0	0.0	10	0.1
Avoiding pedestrian	5	0.0	1	0.8	1	0.0
Avoiding vehicle (front/back)	288	0.7	1	0.8	64	0.7
Avoiding vehicle (angle)	135	0.3	1	0.8	37	0.4
Driverless moving	10	0.0	0	0.0	0	0.0
Parked	167	0.4	0	0.0	25	0.3
Crossing at intersection	5	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	0	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	1	0.0	0	0.0	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	1	0.0	0	0.0	0	0.0
Other	53	0.1	0	0.0	16	0.2
Unknown	46	0.1	0	0.0	9	0.1
Avoiding animal	128	0.3	0	0.0	45	0.5
Negotiating a curve	641	1.6	5	4.0	161	1.8
Uncoded & Errors	2	0.0	0	0.0	0	0.0
TOTAL	41,119	100.0	125	100.0	8,829	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 Drivers	% of Total	Number of Drivers	% of Total
Loss of control	513	1.2	2	1.6	126	1.4
Ran off roadway left	165	0.4	2	1.6	34	0.4
Ran off roadway right	244	0.6	0	0.0	40	0.5
Re-enter roadway	17	0.0	0	0.0	2	0.0
Overturn	1,065	2.6	10	8.0	462	5.2
Separation of units	30	0.1	0	0.0	10	0.1
Fire/explosion	54	0.1	2	1.6	8	0.1
Immersion	14	0.0	0	0.0	2	0.0
Jackknife	7	0.0	0	0.0	2	0.0
Downhill runaway	2	0.0	0	0.0	0	0.0
Cargo loss/shift	8	0.0	0	0.0	0	0.0
Individual fell from vehicle	33	0.1	0	0.0	33	0.4
Other noncollision	64	0.2	0	0.0	13	0.1
Equipment failure (blown tire, brake failure, etc.)	51	0.1	0	0.0	7	0.1
Cross centerline	68	0.2	0	0.0	24	0.3
Cross median	7	0.0	0	0.0	3	0.0
SUBTOTAL	2,342	5.7	16	12.8	766	8.7

For drivers age 16-20, an overturn is the most common harmful event in a noncollision with the highest proportion of all crashes (2.6%), fatal crashes (8.0%), and injury crashes (5.2%).

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Pedestrian	99	0.2	14	11.2	71	0.8
Bicyclist	80	0.2	2	1.6	57	0.6
Motor vehicle in transport	28,649	69.7	71	56.8	6,581	74.5
Parked motor vehicle	893	2.2	1	0.8	130	1.5
Railroad train	5	0.0	0	0.0	1	0.0
Animal	3,573	8.7	0	0.0	63	0.7
Other nonfixed object	263	0.6	0	0.0	26	0.3
Work zone/maintenance equipment	7	0.0	0	0.0	0	0.0
Cargo falling/shifting/anything set in motion by a motor vehicle	23	0.1	0	0.0	0	0.0
SUBTOTAL	33,592	81.7	88	70.4	6,929	78.5

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 Drivers	% of Total	Number of Drivers	% of Total
Bridge pier/abutment/support	15	0.0	0	0.0	6	0.1
Bridge rail	37	0.1	0	0.0	10	0.1
Guardrail face	295	0.7	0	0.0	38	0.4
Guardrail end	75	0.2	0	0.0	13	0.1
Other post/pole/support	138	0.3	1	0.8	29	0.3
Culvert	66	0.2	1	0.8	19	0.2
Curb	227	0.6	0	0.0	24	0.3
Ditch	879	2.1	0	0.0	152	1.7
Embankment	111	0.3	2	1.6	27	0.3
Fence	101	0.2	0	0.0	18	0.2
Mailbox	144	0.4	0	0.0	10	0.1
Tree	1,247	3.0	11	8.8	432	4.9
Railroad crossing signal	7	0.0	0	0.0	1	0.0
Building	59	0.1	0	0.0	16	0.2
Traffic island	1	0.0	0	0.0	0	0.0
Fire hydrant	66	0.2	0	0.0	7	0.1
Impact attenuator	9	0.0	0	0.0	0	0.0
Other fixed object	198	0.5	0	0.0	32	0.4
Bridge overhead structure	2	0.0	0	0.0	1	0.0
Cable barrier	120	0.3	0	0.0	21	0.2
Concrete barrier	569	1.4	1	0.8	147	1.7
Traffic sign/post	353	0.9	0	0.0	22	0.2
Traffic signal equipment	15	0.0	0	0.0	1	0.0
Utility pole/light support	450	1.1	5	4.0	107	1.2
SUBTOTAL	5,184	12.6	21	16.8	1,133	12.8

For drivers age 16-20, a tree is the fixed object associated with the highest proportion of all crashes (3.0%), fatal crashes (8.8%), and injury crashes (4.9%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Unknown Event	1	0.0	0	0.0	1	0.0
MOST HARMFUL EVENT TOTAL	41,119	100.0	125	100.0	8,829	100.0

DRIVER AGE 16-20 (CONTINUED)

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Single Vehicle	10,639	25.9	46	36.8	1,823	20.6
Head On	542	1.3	17	13.6	275	3.1
Head On - Left Turn	1,505	3.7	4	3.2	599	6.8
Angle	8,816	21.4	36	28.8	2,872	32.5
Rear End	11,470	27.9	8	6.4	2,130	24.1
Rear End - Left Turn	527	1.3	1	0.8	130	1.5
Rear End - Right Turn	291	0.7	0	0.0	35	0.4
Sideswipe - Same Direction	4,454	10.8	5	4.0	469	5.3
Sideswipe - Opposite Directions	680	1.7	2	1.6	122	1.4
Backing	771	1.9	0	0.0	21	0.2
Other	1,340	3.3	6	4.8	323	3.7
Unknown	84	0.2	0	0.0	30	0.3
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	41,119	100.0	125	100.0	8,829	100.0

Rear-end crashes are the most common type of crash that drivers age 16-20 are involved in for all crashes (27.9%). For fatal crashes, the largest proportion of drivers age 16-20 are involved in single vehicle crashes (36.8%). For injury crashes, the largest proportion of drivers age 16-20 are involved in angle crashes (32.5%).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
On Road	36,694	89.2	100	80.0	7,807	88.4
Median	280	0.7	2	1.6	52	0.6
Shoulder	1,209	2.9	9	7.2	276	3.1
Outside of Shoulder/Curb	2,517	6.1	14	11.2	622	7.0
Gore	83	0.2	0	0.0	19	0.2
On-Street Parking	230	0.6	0	0.0	24	0.3
Off the Roadway	0	0.0	0	0.0	0	0.0
On the Sidewalk	34	0.1	0	0.0	11	0.1
In the Bicycle Lane	3	0.0	0	0.0	3	0.0
Other/Unknown	69	0.2	0	0.0	15	0.2
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	41,119	100.0	125	100.0	8,829	100.0

Other than on the road crashes, drivers age 16-20 are most commonly involved in crashes where the first impact is outside the shoulder/curb for all crashes (6.1%), fatal crashes (11.2%), and injury crashes (7.0%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Interstate Routes	3,698	9.0	5	4.0	782	8.9
U.S. & Michigan Roads	12,295	29.9	38	30.4	2,609	29.6
County & City Roads	25,066	61.0	82	65.6	5,423	61.4
Uncoded & Errors	60	0.1	0	0.0	15	0.2
TOTAL	41,119	100.0	125	100.0	8,829	100.0

DRIVER AGE 16-20 (CONTINUED)

TIME OF DAY	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
12:00 AM - 2:59 AM	1,816	4.4	17	13.6	456	5.2
3:00 AM - 5:59 AM	962	2.3	5	4.0	235	2.7
6:00 AM - 8:59 AM	3,492	8.5	9	7.2	618	7.0
9:00 AM - 11:59 AM	4,106	10.0	6	4.8	823	9.3
12:00 PM - 2:59 PM	7,812	19.0	18	14.4	1,707	19.3
3:00 PM - 5:59 PM	10,816	26.3	17	13.6	2,367	26.8
6:00 PM - 8:59 PM	7,586	18.4	25	20.0	1,619	18.3
9:00 PM - 11:59 PM	4,525	11.0	28	22.4	1,004	11.4
Unknown	4	0.0	0	0.0	0	0.0
TOTAL	41,119	100.0	125	100.0	8,829	100.0

For drivers age 16-20, the 3:00 - 5:59 PM time period has the highest proportion of all crashes (26.3%) and injury crashes (26.8%). For fatal crashes, drivers age 16-20 have the highest proportion during the 9:00 - 11:59 time period (22.4%).

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
None	15,832	38.5	41	32.8	2,861	32.4	97	0.8
Speed too fast	4,596	11.2	24	19.2	1,026	11.6	1,805	14.8
Speed too slow	17	0.0	0	0.0	6	0.1	6	0.0
Failed to yield	5,178	12.6	6	4.8	1,429	16.2	2,935	24.1
Disregard traffic control	1,323	3.2	9	7.2	604	6.8	812	6.7
Drove wrong way	37	0.1	0	0.0	14	0.2	16	0.1
Drove left of center	194	0.5	3	2.4	78	0.9	82	0.7
Improper passing	233	0.6	0	0.0	33	0.4	96	0.8
Improper lane use	1,004	2.4	1	0.8	134	1.5	483	4.0
Improper turn	514	1.3	1	0.8	80	0.9	219	1.8
Improper/no signal	30	0.1	0	0.0	1	0.0	11	0.1
Improper backing	501	1.2	0	0.0	9	0.1	140	1.1
Unable to stop in assured clear distance	7,340	17.9	2	1.6	1,307	14.8	4,029	33.1
Other	1,453	3.5	7	5.6	359	4.1	495	4.1
Unknown	1,125	2.7	9	7.2	306	3.5	41	0.3
Reckless driving	317	0.8	16	12.8	139	1.6	128	1.1
Careless/negligent driving	1,421	3.5	6	4.8	443	5.0	794	6.5
Uncoded & Errors	4	0.0	0	0.0	0	0.0	0	0.0
TOTAL	41,119	100.0	125	100.0	8,829	100.0	12,189	100.0

After no hazardous action, the second highest hazardous action category for drivers age 16-20 for all crashes (17.9%) occurs when the driver is unable to stop in an assured clear distance. For drivers in fatal crashes, the second highest category is speed too fast (19.2%). For drivers in injury crashes, the second highest category is failed to yield (16.2%).

DRIVER AGE 16-20 (CONTINUED)

DAY OF WEEK	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Monday	5,541	13.5	18	14.4	1,168	13.2
Tuesday	5,537	13.5	15	12.0	1,200	13.6
Wednesday	6,683	16.3	20	16.0	1,337	15.1
Thursday	6,364	15.5	14	11.2	1,314	14.9
Friday	6,782	16.5	19	15.2	1,458	16.5
Saturday	5,527	13.4	18	14.4	1,242	14.1
Sunday	4,685	11.4	21	16.8	1,110	12.6
TOTAL	41,119	100.0	125	100.0	8,829	100.0

DRIVER GENDER	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Male	22,640	55.1	77	61.6	4,773	54.1
Female	18,472	44.9	48	38.4	4,055	45.9
Uncoded & Errors	7	0.0	0	0.0	1	0.0
TOTAL	41,119	100.0	125	100.0	8,829	100.0

For drivers age 16-20 in fatal crashes, male drivers (61.6%) account for 1.6 times that of female drivers (38.4%).

NUMBER OF OCCUPANTS	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
1 occupant	30,027	73.0	69	55.2	5,693	64.5
2 occupants	8,013	19.5	29	23.2	2,139	24.2
3 occupants	2,017	4.9	15	12.0	656	7.4
4 occupants	694	1.7	8	6.4	223	2.5
5 occupants	175	0.4	2	1.6	84	1.0
6+ occupants	56	0.1	2	1.6	24	0.3
0 occupants	88	0.2	0	0.0	6	0.1
Uncoded & Errors	49	0.1	0	0.0	4	0.0
TOTAL	41,119	100.0	125	100.0	8,829	100.0

DRIVER AGE 16-20 (CONTINUED)

VEHICLE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Passenger car, SUV, van	36,803	89.5	104	83.2	7,760	87.9
Motor home	68	0.2	0	0.0	16	0.2
Pickup truck	3,633	8.8	11	8.8	762	8.6
Small Truck under 10,000 lbs. GVWR	108	0.3	1	0.8	13	0.1
Motorcycle	141	0.3	4	3.2	116	1.3
Moped/goped	65	0.2	1	0.8	54	0.6
Go-cart/golf cart	4	0.0	0	0.0	4	0.0
Snowmobile	8	0.0	0	0.0	5	0.1
Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV	62	0.2	3	2.4	46	0.5
Other	69	0.2	0	0.0	21	0.2
Uncoded & Errors	11	0.0	0	0.0	2	0.0
CDL Truck/Bus (breakdown below)	147	0.4	1	0.8	30	0.3
TOTAL	41,119	100.0	125	100.0	8,829	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
10,000 lbs. or less	0	0.0	0	0.0	0	0.0
10,001 - 26,000 lbs.	112	76.2	1	100.0	26	86.7
Greater than 26,000 lbs.	34	23.1	0	0.0	4	13.3
Uncoded & Errors	1	0.7	0	0.0	0	0.0
TOTAL	147	100.0	1	100.0	30	100.0

DRIVER AGE 21-64

DRIVER ACTION PRIOR TO CRASH	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Going straight ahead	170,548	61.4	888	75.6	35,598	62.1
Turning left	18,084	6.5	72	6.1	4,882	8.5
Turning right	7,828	2.8	14	1.2	1,203	2.1
Stopped on roadway	25,775	9.3	41	3.5	5,612	9.8
In prior crash	163	0.1	2	0.2	57	0.1
Changing lanes	6,863	2.5	8	0.7	910	1.6
Backing	5,304	1.9	2	0.2	232	0.4
Slowing/stopping on roadway	22,774	8.2	31	2.6	4,386	7.7
Slowing/stopping other	336	0.1	1	0.1	52	0.1
Starting up on roadway	4,454	1.6	8	0.7	944	1.6
Starting up other	57	0.0	0	0.0	19	0.0
Entering parking	162	0.1	0	0.0	22	0.0
Leaving parking	483	0.2	0	0.0	90	0.2
Entering roadway	2,509	0.9	5	0.4	561	1.0
Leaving roadway	366	0.1	6	0.5	115	0.2
Making U-turn	600	0.2	3	0.3	174	0.3
Overtaking or passing	1,638	0.6	14	1.2	363	0.6
Avoiding object	256	0.1	1	0.1	62	0.1
Avoiding pedestrian	64	0.0	7	0.6	21	0.0
Avoiding vehicle (front/back)	1,774	0.6	12	1.0	416	0.7
Avoiding vehicle (angle)	778	0.3	1	0.1	173	0.3
Driverless moving	48	0.0	0	0.0	5	0.0
Parked	2,741	1.0	3	0.3	346	0.6
Crossing at intersection	36	0.0	0	0.0	17	0.0
Crossing not at intersection	3	0.0	0	0.0	0	0.0
Getting on/off vehicle	4	0.0	0	0.0	2	0.0
In roadway with traffic	10	0.0	0	0.0	3	0.0
In roadway against traffic	12	0.0	1	0.1	4	0.0
Standing/lying in roadway	1	0.0	0	0.0	1	0.0
Pushing/working on vehicle	1	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	11	0.0	0	0.0	3	0.0
Not in roadway	15	0.0	0	0.0	6	0.0
Other	345	0.1	2	0.2	92	0.2
Unknown	566	0.2	11	0.9	125	0.2
Avoiding animal	576	0.2	1	0.1	109	0.2
Negotiating a curve	2,694	1.0	40	3.4	708	1.2
Uncoded & Errors	9	0.0	0	0.0	0	0.0
TOTAL	277,890	100.0	1,174	100.0	57,313	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 Drivers	% of Total	Number of Drivers	% of Total
Loss of control	2,337	0.8	6	0.5	819	1.4
Ran off roadway left	744	0.3	0	0.0	196	0.3
Ran off roadway right	1,232	0.4	1	0.1	293	0.5
Re-enter roadway	105	0.0	0	0.0	22	0.0
Overturn	3,747	1.3	84	7.2	1,867	3.3
Separation of units	263	0.1	1	0.1	60	0.1
Fire/explosion	343	0.1	8	0.7	37	0.1
Immersion	69	0.0	0	0.0	15	0.0
Jackknife	167	0.1	0	0.0	17	0.0
Downhill runaway	3	0.0	0	0.0	0	0.0
Cargo loss/shift	256	0.1	0	0.0	11	0.0
Individual fell from vehicle	302	0.1	13	1.1	273	0.5
Other noncollision	655	0.2	0	0.0	148	0.3
Equipment failure (blown tire, brake failure, etc.)	402	0.1	2	0.2	41	0.1
Cross centerline	415	0.1	0	0.0	114	0.2
Cross median	70	0.0	1	0.1	21	0.0
SUBTOTAL	11,110	4.0	116	9.9	3,934	6.9

For drivers age 21-64, an overturn is the most common harmful event in a noncollision with the highest proportion of all crashes (1.3%), fatal crashes (7.2%), and injury crashes (3.3%).

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Pedestrian	843	0.3	116	9.9	619	1.1
Bicyclist	685	0.2	28	2.4	522	0.9
Motor vehicle in transport	189,531	68.2	711	60.6	44,587	77.8
Parked motor vehicle	6,629	2.4	18	1.5	846	1.5
Railroad train	21	0.0	0	0.0	7	0.0
Animal	42,749	15.4	0	0.0	864	1.5
Other nonfixed object	2,544	0.9	8	0.7	219	0.4
Work zone/maintenance equipment	75	0.0	1	0.1	15	0.0
Cargo falling/shifting/anything set in motion by a motor vehicle	481	0.2	0	0.0	30	0.1
SUBTOTAL	243,558	87.6	882	75.1	47,709	83.2

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 Drivers	% of Total	Number of Drivers	% of Total
Bridge pier/abutment/support	118	0.0	2	0.2	29	0.1
Bridge rail	189	0.1	2	0.2	39	0.1
Guardrail face	1,439	0.5	1	0.1	255	0.4
Guardrail end	359	0.1	2	0.2	97	0.2
Other post/pole/support	648	0.2	6	0.5	101	0.2
Culvert	261	0.1	2	0.2	104	0.2
Curb	1,036	0.4	5	0.4	132	0.2
Ditch	3,444	1.2	4	0.3	792	1.4
Embankment	531	0.2	5	0.4	154	0.3
Fence	429	0.2	2	0.2	72	0.1
Mailbox	683	0.2	1	0.1	38	0.1
Tree	4,930	1.8	88	7.5	1,638	2.9
Railroad crossing signal	43	0.0	0	0.0	5	0.0
Building	360	0.1	11	0.9	145	0.3
Traffic island	29	0.0	0	0.0	3	0.0
Fire hydrant	268	0.1	0	0.0	52	0.1
Impact attenuator	107	0.0	0	0.0	29	0.1
Other fixed object	999	0.4	3	0.3	247	0.4
Bridge overhead structure	36	0.0	0	0.0	5	0.0
Cable barrier	558	0.2	0	0.0	79	0.1
Concrete barrier	2,920	1.1	14	1.2	864	1.5
Traffic sign/post	1,502	0.5	5	0.4	110	0.2
Traffic signal equipment	132	0.0	0	0.0	23	0.0
Utility pole/light support	2,200	0.8	23	2.0	657	1.1
SUBTOTAL	23,221	8.4	176	15.0	5,670	9.9

For drivers age 21-64, a tree is the fixed object associated with the highest proportion of all crashes (1.8%), fatal crashes (7.5%), and injury crashes (2.9%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Unknown Event	1	0.0	0	0.0	0	0.0
MOST HARMFUL EVENT TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

DRIVER AGE 21-64 (CONTINUED)

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Single Vehicle	74,283	26.7	376	32.0	9,594	16.7
Head On	4,036	1.5	177	15.1	1,978	3.5
Head On - Left Turn	7,934	2.9	65	5.5	3,356	5.9
Angle	50,980	18.3	292	24.9	16,451	28.7
Rear End	76,544	27.5	154	13.1	16,870	29.4
Rear End - Left Turn	2,760	1.0	5	0.4	718	1.3
Rear End - Right Turn	2,245	0.8	1	0.1	330	0.6
Sideswipe - Same Direction	35,351	12.7	35	3.0	3,769	6.6
Sideswipe - Opposite Directions	5,444	2.0	23	2.0	1,018	1.8
Backing	6,461	2.3	0	0.0	201	0.4
Other	11,051	4.0	44	3.7	2,858	5.0
Unknown	801	0.3	2	0.2	170	0.3
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

Rear-end crashes are the most common type of crash that drivers age 21-64 are involved in for all crashes (27.5%) and injury crashes (29.4%). For fatal crashes, the largest proportion of drivers age 21-64 are involved in single-vehicle crashes (32.0%).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
On Road	257,381	92.6	976	83.1	52,331	91.3
Median	1,493	0.5	20	1.7	331	0.6
Shoulder	5,750	2.1	41	3.5	1,338	2.3
Outside of Shoulder/Curb	10,274	3.7	126	10.7	2,887	5.0
Gore	315	0.1	4	0.3	83	0.1
On-Street Parking	1,796	0.6	2	0.2	135	0.2
Off the Roadway	0	0.0	0	0.0	0	0.0
On the Sidewalk	188	0.1	4	0.3	67	0.1
In the Bicycle Lane	31	0.0	1	0.1	14	0.0
Other/Unknown	662	0.2	0	0.0	127	0.2
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

Other than on the road crashes, drivers age 21-64 are most commonly involved in crashes where the first impact is outside the shoulder/curb for all crashes (3.7%), fatal crashes (10.7%), and injury crashes (5.0%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Interstate Routes	30,968	11.1	147	12.5	6,470	11.3
U.S. & Michigan Roads	86,945	31.3	389	33.1	18,065	31.5
County & City Roads	159,558	57.4	637	54.3	32,701	57.1
Uncoded & Errors	419	0.2	1	0.1	77	0.1
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

DRIVER AGE 21-64 (CONTINUED)

TIME OF DAY	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
12:00 AM - 2:59 AM	11,679	4.2	129	11.0	2,975	5.2
3:00 AM - 5:59 AM	11,666	4.2	93	7.9	1,956	3.4
6:00 AM - 8:59 AM	35,210	12.7	94	8.0	5,412	9.4
9:00 AM - 11:59 AM	32,569	11.7	104	8.9	6,669	11.6
12:00 PM - 2:59 PM	50,931	18.3	159	13.5	11,493	20.1
3:00 PM - 5:59 PM	67,665	24.3	205	17.5	14,646	25.6
6:00 PM - 8:59 PM	45,170	16.3	209	17.8	9,073	15.8
9:00 PM - 11:59 PM	22,937	8.3	181	15.4	5,076	8.9
Unknown	63	0.0	0	0.0	13	0.0
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

For drivers age 21-64, the 3:00 - 5:59 PM time period has the highest proportion of all crashes (24.3%) and injury crashes (25.6%). For fatal crashes, drivers age 21-64 have the highest proportion during the 6:00 - 8:59 time period (17.8%).

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
None	159,665	57.5	468	39.9	28,295	49.4	587	1.2
Speed too fast	15,764	5.7	144	12.3	3,989	7.0	5,868	11.7
Speed too slow	104	0.0	0	0.0	27	0.0	26	0.1
Failed to yield	21,517	7.7	68	5.8	5,864	10.2	11,248	22.4
Disregard traffic control	6,064	2.2	44	3.7	2,599	4.5	3,339	6.7
Drove wrong way	213	0.1	7	0.6	74	0.1	63	0.1
Drove left of center	1,420	0.5	41	3.5	497	0.9	521	1.0
Improper passing	1,402	0.5	5	0.4	206	0.4	498	1.0
Improper lane use	6,052	2.2	13	1.1	791	1.4	2,553	5.1
Improper turn	2,714	1.0	8	0.7	509	0.9	1,089	2.2
Improper/no signal	197	0.1	0	0.0	22	0.0	61	0.1
Improper backing	3,715	1.3	1	0.1	123	0.2	1,004	2.0
Unable to stop in assured clear distance	31,389	11.3	35	3.0	6,476	11.3	16,066	32.1
Other	9,650	3.5	58	4.9	2,285	4.0	2,843	5.7
Unknown	9,362	3.4	123	10.5	2,531	4.4	322	0.6
Reckless driving	1,643	0.6	89	7.6	693	1.2	551	1.1
Careless/negligent driving	6,953	2.5	70	6.0	2,327	4.1	3,470	6.9
Uncoded & Errors	66	0.0	0	0.0	5	0.0	1	0.0
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0	50,110	100.0

After no hazardous action, the second highest hazardous action category for drivers age 21-64 for all crashes (11.3%) and injury crashes (11.3%) occurs when the driver is unable to stop in an assured clear distance. For drivers in fatal crashes, the second highest category is speed too fast (12.3%).

DRIVER AGE 21-64 (CONTINUED)

DAY OF WEEK	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Monday	38,445	13.8	165	14.1	7,609	13.3
Tuesday	39,932	14.4	134	11.4	7,981	13.9
Wednesday	45,067	16.2	162	13.8	9,004	15.7
Thursday	44,254	15.9	148	12.6	8,849	15.4
Friday	46,096	16.6	187	15.9	9,403	16.4
Saturday	35,884	12.9	209	17.8	7,898	13.8
Sunday	28,212	10.2	169	14.4	6,569	11.5
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

DRIVER GENDER	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Male	160,290	57.7	841	71.6	32,513	56.7
Female	117,527	42.3	333	28.4	24,795	43.3
Uncoded & Errors	73	0.0	0	0.0	5	0.0
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

For drivers age 21-64 in fatal crashes, male drivers (71.6%) account for 2.5 times that of female drivers (28.4%).

NUMBER OF OCCUPANTS	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
1 occupant	222,273	80.0	829	70.6	41,704	72.8
2 occupants	38,467	13.8	218	18.6	10,680	18.6
3 occupants	9,486	3.4	74	6.3	2,898	5.1
4 occupants	3,724	1.3	33	2.8	1,203	2.1
5 occupants	1,239	0.4	15	1.3	448	0.8
6+ occupants	699	0.3	4	0.3	216	0.4
0 occupants	1,499	0.5	1	0.1	115	0.2
Uncoded & Errors	503	0.2	0	0.0	49	0.1
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

DRIVER AGE 21-64 (CONTINUED)

VEHICLE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Passenger car, SUV, van	224,050	80.6	784	66.8	46,345	80.9
Motor home	670	0.2	1	0.1	115	0.2
Pickup truck	36,964	13.3	150	12.8	6,161	10.7
Small Truck under 10,000 lbs. GVWR	1,281	0.5	7	0.6	228	0.4
Motorcycle	2,568	0.9	133	11.3	1,962	3.4
Moped/goped	309	0.1	13	1.1	248	0.4
Go-cart/golf cart	16	0.0	0	0.0	11	0.0
Snowmobile	74	0.0	1	0.1	49	0.1
Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV	278	0.1	9	0.8	205	0.4
Other	1,052	0.4	11	0.9	182	0.3
Uncoded & Errors	140	0.1	0	0.0	11	0.0
CDL Truck/Bus (breakdown below)	10,488	3.8	65	5.5	1,796	3.1
TOTAL	277,890	100.0	1,174	100.0	57,313	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
10,000 lbs. or less	89	0.8	0	0.0	5	0.3
10,001 - 26,000 lbs.	3,723	35.5	14	21.5	555	30.9
Greater than 26,000 lbs.	6,658	63.5	51	78.5	1,236	68.8
Uncoded & Errors	18	0.2	0	0.0	0	0.0
TOTAL	10,488	100.0	65	100.0	1,796	100.0

DRIVER AGE 65 AND OVER

DRIVER ACTION PRIOR TO CRASH	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Going straight ahead	22,295	55.1	156	70.3	4,748	56.1
Turning left	4,046	10.0	28	12.6	1,172	13.8
Turning right	1,685	4.2	6	2.7	245	2.9
Stopped on roadway	3,839	9.5	2	0.9	845	10.0
In prior crash	14	0.0	0	0.0	5	0.1
Changing lanes	1,360	3.4	1	0.5	125	1.5
Backing	1,084	2.7	0	0.0	40	0.5
Slowing/stopping on roadway	2,953	7.3	7	3.2	569	6.7
Slowing/stopping other	32	0.1	0	0.0	9	0.1
Starting up on roadway	852	2.1	2	0.9	226	2.7
Starting up other	8	0.0	0	0.0	1	0.0
Entering parking	53	0.1	0	0.0	7	0.1
Leaving parking	114	0.3	0	0.0	21	0.2
Entering roadway	705	1.7	6	2.7	169	2.0
Leaving roadway	53	0.1	2	0.9	14	0.2
Making U-turn	143	0.4	2	0.9	51	0.6
Overtaking or passing	223	0.6	1	0.5	32	0.4
Avoiding object	20	0.0	0	0.0	5	0.1
Avoiding pedestrian	8	0.0	0	0.0	2	0.0
Avoiding vehicle (front/back)	131	0.3	1	0.5	28	0.3
Avoiding vehicle (angle)	77	0.2	0	0.0	24	0.3
Driverless moving	15	0.0	0	0.0	2	0.0
Parked	299	0.7	1	0.5	23	0.3
Crossing at intersection	11	0.0	0	0.0	4	0.0
Crossing not at intersection	3	0.0	0	0.0	1	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	0	0.0	0	0.0	0	0.0
Standing/lying in roadway	1	0.0	0	0.0	1	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	0	0.0	0	0.0	0	0.0
Not in roadway	2	0.0	0	0.0	1	0.0
Other	39	0.1	1	0.5	15	0.2
Unknown	55	0.1	1	0.5	11	0.1
Avoiding animal	47	0.1	0	0.0	9	0.1
Negotiating a curve	263	0.7	5	2.3	66	0.8
Uncoded & Errors	2	0.0	0	0.0	0	0.0
TOTAL	40,432	100.0	222	100.0	8,471	100.0

DRIVER AGE 65 AND OVER (CONTINUED)

MOST HARMFUL EVENT IN A NONCOLLISION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Loss of control	153	0.4	1	0.5	53	0.6
Ran off roadway left	59	0.1	0	0.0	17	0.2
Ran off roadway right	119	0.3	0	0.0	39	0.5
Re-enter roadway	16	0.0	0	0.0	2	0.0
Overturn	261	0.6	13	5.9	142	1.7
Separation of units	21	0.1	1	0.5	4	0.0
Fire/explosion	32	0.1	2	0.9	3	0.0
Immersion	9	0.0	1	0.5	2	0.0
Jackknife	8	0.0	0	0.0	0	0.0
Downhill runaway	1	0.0	0	0.0	0	0.0
Cargo loss/shift	30	0.1	0	0.0	0	0.0
Individual fell from vehicle	37	0.1	2	0.9	31	0.4
Other noncollision	111	0.3	0	0.0	20	0.2
Equipment failure (blown tire, brake failure, etc.)	38	0.1	0	0.0	2	0.0
Cross centerline	62	0.2	0	0.0	16	0.2
Cross median	8	0.0	0	0.0	1	0.0
SUBTOTAL	965	2.4	20	9.0	332	3.9

For drivers age 65 and over, an overturn is the most common harmful event in a noncollision with the highest proportion of drivers in all crashes (0.6%), fatal crashes (5.9%), and injury crashes (1.7%).

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Pedestrian	177	0.4	10	4.5	144	1.7
Bicyclist	168	0.4	3	1.4	137	1.6
Motor vehicle in transport	29,734	73.5	144	64.9	6,978	82.4
Parked motor vehicle	1,033	2.6	1	0.5	103	1.2
Railroad train	2	0.0	0	0.0	1	0.0
Animal	5,625	13.9	0	0.0	101	1.2
Other nonfixed object	345	0.9	0	0.0	30	0.4
Work zone/maintenance equipment	12	0.0	0	0.0	1	0.0
Cargo falling/shifting/anything set in motion by a motor vehicle	51	0.1	0	0.0	4	0.0
SUBTOTAL	37,147	91.9	158	71.2	7,499	88.5

DRIVER AGE 65 AND 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 Drivers	% of Total	Number of Drivers	% of Total
Bridge pier/abutment/support	11	0.0	1	0.5	3	0.0
Bridge rail	11	0.0	0	0.0	4	0.0
Guardrail face	99	0.2	1	0.5	29	0.3
Guardrail end	34	0.1	0	0.0	9	0.1
Other post/pole/support	71	0.2	0	0.0	14	0.2
Culvert	32	0.1	1	0.5	9	0.1
Curb	113	0.3	1	0.5	17	0.2
Ditch	370	0.9	6	2.7	113	1.3
Embankment	41	0.1	0	0.0	13	0.2
Fence	33	0.1	0	0.0	6	0.1
Mailbox	94	0.2	0	0.0	7	0.1
Tree	557	1.4	25	11.3	209	2.5
Railroad crossing signal	9	0.0	0	0.0	0	0.0
Building	55	0.1	1	0.5	27	0.3
Traffic island	4	0.0	0	0.0	0	0.0
Fire hydrant	30	0.1	0	0.0	3	0.0
Impact attenuator	15	0.0	1	0.5	2	0.0
Other fixed object	117	0.3	0	0.0	24	0.3
Bridge overhead structure	3	0.0	0	0.0	1	0.0
Cable barrier	32	0.1	0	0.0	7	0.1
Concrete barrier	143	0.4	1	0.5	48	0.6
Traffic sign/post	202	0.5	0	0.0	15	0.2
Traffic signal equipment	18	0.0	0	0.0	3	0.0
Utility pole/light support	223	0.6	6	2.7	77	0.9
SUBTOTAL	2,317	5.7	44	19.8	640	7.6

For drivers age 65 and over, a tree is the fixed object associated with the highest proportion of drivers in all crashes (1.4%), fatal crashes (11.3%), and injury crashes (2.5%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Unknown Event	3	0.0	0	0.0	0	0.0
MOST HARMFUL EVENT TOTAL	40,432	100.0	222	100.0	8,471	100.0

DRIVER AGE 65 AND OVER (CONTINUED)

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Single Vehicle	8,768	21.7	68	30.6	1,113	13.1
Head On	492	1.2	37	16.7	259	3.1
Head On - Left Turn	1,533	3.8	19	8.6	690	8.1
Angle	9,514	23.5	64	28.8	2,987	35.3
Rear End	9,823	24.3	16	7.2	2,199	26.0
Rear End - Left Turn	409	1.0	1	0.5	91	1.1
Rear End - Right Turn	317	0.8	1	0.5	53	0.6
Sideswipe - Same Direction	5,763	14.3	0	0.0	472	5.6
Sideswipe - Opposite Directions	897	2.2	8	3.6	156	1.8
Backing	1,229	3.0	0	0.0	25	0.3
Other	1,599	4.0	6	2.7	417	4.9
Unknown	88	0.2	2	0.9	9	0.1
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	40,432	100.0	222	100.0	8,471	100.0

Rear-end crashes are the most common type of crash that drivers age 65 and over are involved in for all crashes (24.3%). For injury crashes the most common type are angle crashes (35.3%), and for fatal crashes the largest proportion of drivers age 65 and over are involved in single-vehicle crashes (30.6%).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
On Road	38,147	94.3	181	81.5	7,906	93.3
Median	155	0.4	1	0.5	48	0.6
Shoulder	572	1.4	7	3.2	127	1.5
Outside of Shoulder/Curb	1,071	2.6	31	14.0	328	3.9
Gore	46	0.1	2	0.9	18	0.2
On-Street Parking	318	0.8	0	0.0	16	0.2
Off the Roadway	0	0.0	0	0.0	0	0.0
On the Sidewalk	24	0.1	0	0.0	13	0.2
In the Bicycle Lane	3	0.0	0	0.0	3	0.0
Other/Unknown	96	0.2	0	0.0	12	0.1
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	40,432	100.0	222	100.0	8,471	100.0

Other than on the road crashes, drivers age 65 and over are most commonly involved in crashes where the first impact is outside the shoulder/curb for all crashes (2.6%), fatal crashes (14.0%), and injury crashes (3.9%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Interstate Routes	2,920	7.2	13	5.9	575	6.8
U.S. & Michigan Roads	13,555	33.5	80	36.0	2,893	34.2
County & City Roads	23,900	59.1	129	58.1	4,997	59.0
Uncoded & Errors	57	0.1	0	0.0	6	0.1
TOTAL	40,432	100.0	222	100.0	8,471	100.0

DRIVER AGE 65 AND OVER (CONTINUED)

TIME OF DAY	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
12:00 AM - 2:59 AM	480	1.2	4	1.8	75	0.9
3:00 AM - 5:59 AM	533	1.3	8	3.6	79	0.9
6:00 AM - 8:59 AM	3,205	7.9	8	3.6	534	6.3
9:00 AM - 11:59 AM	7,495	18.5	29	13.1	1,550	18.3
12:00 PM - 2:59 PM	10,974	27.1	75	33.8	2,567	30.3
3:00 PM - 5:59 PM	10,456	25.9	44	19.8	2,375	28.0
6:00 PM - 8:59 PM	5,482	13.6	43	19.4	984	11.6
9:00 PM - 11:59 PM	1,801	4.5	11	5.0	305	3.6
Unknown	6	0.0	0	0.0	2	0.0
TOTAL	40,432	100.0	222	100.0	8,471	100.0

For drivers age 65 and over, the 12:00 - 2:59 PM time period has the highest proportion of all crashes (27.1%), fatal crashes (33.8%), and injury crashes (30.3%).

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
None	22,402	55.4	86	38.7	4,028	47.6	67	0.9
Speed too fast	1,013	2.5	19	8.6	276	3.3	278	3.9
Speed too slow	12	0.0	0	0.0	6	0.1	2	0.0
Failed to yield	5,760	14.2	28	12.6	1,643	19.4	2,911	40.4
Disregard traffic control	1,081	2.7	13	5.9	458	5.4	593	8.2
Drove wrong way	39	0.1	3	1.4	20	0.2	21	0.3
Drove left of center	251	0.6	10	4.5	97	1.1	84	1.2
Improper passing	207	0.5	1	0.5	22	0.3	75	1.0
Improper lane use	1,235	3.1	2	0.9	137	1.6	485	6.7
Improper turn	669	1.7	3	1.4	113	1.3	267	3.7
Improper/no signal	40	0.1	0	0.0	5	0.1	11	0.2
Improper backing	783	1.9	0	0.0	21	0.2	181	2.5
Unable to stop in assured clear distance	3,569	8.8	7	3.2	780	9.2	1,571	21.8
Other	1,359	3.4	13	5.9	327	3.9	321	4.5
Unknown	1,247	3.1	20	9.0	291	3.4	20	0.3
Reckless driving	55	0.1	4	1.8	27	0.3	19	0.3
Careless/negligent driving	697	1.7	13	5.9	218	2.6	291	4.0
Uncoded & Errors	13	0.0	0	0.0	2	0.0	1	0.0
TOTAL	40,432	100.0	222	100.0	8,471	100.0	7,198	100.0

After no hazardous action, the second highest hazardous action category for drivers age 65 and over for all crashes (14.2%), fatal crashes (12.6%), and injury crashes (19.4%) occurs when the driver failed to yield.

DRIVER AGE 65 AND OVER (CONTINUED)

DAY OF WEEK	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Monday	5,874	14.5	30	13.5	1,280	15.1
Tuesday	6,189	15.3	29	13.1	1,253	14.8
Wednesday	6,714	16.6	37	16.7	1,368	16.1
Thursday	6,802	16.8	30	13.5	1,406	16.6
Friday	6,615	16.4	33	14.9	1,382	16.3
Saturday	4,785	11.8	37	16.7	1,009	11.9
Sunday	3,453	8.5	26	11.7	773	9.1
TOTAL	40,432	100.0	222	100.0	8,471	100.0

DRIVER GENDER	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Male	23,990	59.3	167	75.2	4,988	58.9
Female	16,425	40.6	55	24.8	3,480	41.1
Uncoded & Errors	17	0.0	0	0.0	3	0.0
TOTAL	40,432	100.0	222	100.0	8,471	100.0

For drivers age 65 and over, male drivers (75.2%) account for 3.0 times that of female drivers (24.8%) in fatal crashes.

NUMBER OF OCCUPANTS	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
1 occupant	32,680	80.8	153	68.9	6,405	75.6
2 occupants	6,677	16.5	55	24.8	1,798	21.2
3 occupants	592	1.5	11	5.0	177	2.1
4 occupants	169	0.4	1	0.5	56	0.7
5 occupants	45	0.1	0	0.0	16	0.2
6+ occupants	43	0.1	1	0.5	8	0.1
0 occupants	174	0.4	1	0.5	5	0.1
Uncoded & Errors	52	0.1	0	0.0	6	0.1
TOTAL	40,432	100.0	222	100.0	8,471	100.0

DRIVER AGE 65 AND OVER (CONTINUED)







VEHICLE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Passenger car, SUV, van	33,785	83.6	159	71.6	7,096	83.8
Motor home	128	0.3	0	0.0	20	0.2
Pickup truck	5,282	13.1	27	12.2	980	11.6
Small Truck under 10,000 lbs. GVWR	144	0.4	0	0.0	30	0.4
Motorcycle	246	0.6	22	9.9	176	2.1
Moped/goped	24	0.1	1	0.5	17	0.2
Go-cart/golf cart	7	0.0	0	0.0	4	0.0
Snowmobile	9	0.0	1	0.5	6	0.1
Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV	28	0.1	3	1.4	18	0.2
Other	96	0.2	2	0.9	18	0.2
Uncoded & Errors	17	0.0	1	0.5	4	0.0
CDL Truck/Bus (breakdown below)	666	1.6	6	2.7	102	1.2
TOTAL	40,432	100.0	222	100.0	8,471	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
10,000 lbs. or less	21	3.2	0	0.0	2	2.0
10,001 - 26,000 lbs.	219	32.9	0	0.0	25	24.5
Greater than 26,000 lbs.	425	63.8	6	100.0	75	73.5
Uncoded & Errors	1	0.2	0	0.0	0	0.0
TOTAL	666	100.0	6	100.0	102	100.0

ALCOHOL

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

VEHICLE	SEVERITY	TOTAL	CRASHES INVOLVING DRINKING, NOT DRUGS		CRASHES INVOLVING DRUGS, NOT DRINKING		CRASHES INVOLVING DRINKING AND DRUGS		TOTAL CRASHES INVOLVING DRINKING AND/OR DRUGS	
			Operator in Crash	Operator Drinking	Operator in Crash	Operator Drugs	Operator in Crash	Operator Drinking and Drugs	Operator in Crash	Operator Drinking and/or Drugs
 BICYCLISTS	Total*	1,235	39	30	6	2	5	2	50	34
	Killed	38	4	3	4	1	1	0	9	4**
	Injured	933	34	26	2	1	4	2	40	29
 DRIVERS	Total*	404,286	11,486	7,638	2,745	1,700	1,984	1,305	16,215	10,643
	Killed	692	116	86	88	58	94	72	298	216**
	Injured	44,301	3,139	2,455	867	650	708	551	4,714	3,656
 MOTORCYCLISTS	Total*	3,375	241	201	49	32	54	37	344	270
	Killed	152	26	17	23	15	21	14	70	46**
	Injured	2,429	178	157	23	14	28	18	229	189
 ORV/ATV RIDERS	Total*	620	109	107	2	2	7	7	118	116
	Killed	15	5	4	0	0	1	1	6	5**
	Injured	381	70	69	2	2	6	6	78	77
 PEDESTRIANS	Total*	1,784	160	117	30	9	46	23	236	149
	Killed	175	29	19	16	1	20	10	65	30**
	Injured	1,343	121	92	13	7	25	13	159	112
 SNOWMOBILERS	Total*	101	13	12	0	0	1	1	14	13
	Killed	2	2	2	0	0	0	0	2	2**
	Injured	56	9	9	0	0	1	1	10	10

*Total does include property damage only crashes

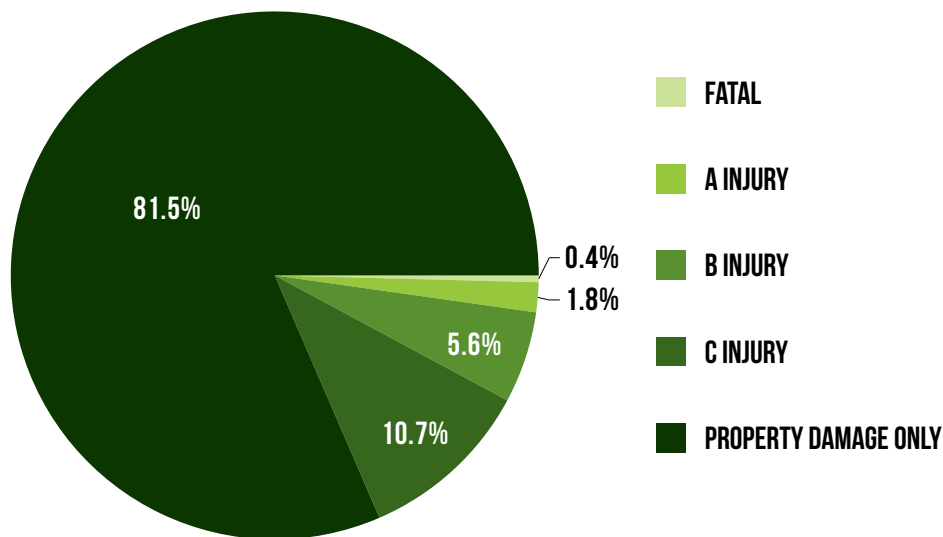
**There were four bicyclists, 216 drivers, 46 motorcyclists, five ORV/ATV riders, 30 pedestrians, and two snowmobilers who were killed and coded as drinking and/or using drugs by the police officer.

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

AGE OF DRIVER IN CRASH	ALL CRASHES				FATAL				INJURY			
	Drinking Only	Drugs Only	Both	Total	Drinking Only	Drugs Only	Both	Total	Drinking Only	Drugs Only	Both	Total
13 years and under	0	0	0	0	0	0	0	0	0	0	0	0
14 years	2	1	0	3	0	1	0	1	1	0	0	1
15 years	2	4	2	8	0	0	0	0	1	0	1	2
16 years	17	16	6	39	0	2	0	2	8	11	3	22
17 years	34	25	6	65	1	3	2	6	13	13	1	27
18 years	90	41	16	147	1	2	3	6	42	12	6	60
19 years	119	54	32	205	1	2	4	7	55	21	16	92
20 years	171	62	37	270	6	7	2	15	67	30	19	116
21 - 24 years	1,051	221	181	1,453	17	16	14	47	417	97	87	601
25 - 34 years	2,438	575	457	3,470	58	41	37	136	974	241	214	1,429
35 - 44 years	1,562	364	280	2,206	26	30	29	85	604	152	127	883
45 - 54 years	1,067	189	145	1,401	27	13	13	53	396	76	62	534
55 - 64 years	771	120	107	998	14	9	7	30	315	54	53	422
65 - 69 years	177	35	19	231	6	3	4	13	71	16	9	96
70 - 74 years	95	6	9	110	1	0	1	2	39	3	5	47
75 - 79 years	35	2	4	41	3	0	0	3	12	2	1	15
80 - 84 years	10	0	1	11	3	0	0	3	2	0	1	3
85 - 89 years	5	0	0	5	0	0	0	0	3	0	0	3
90 years and over	3	0	1	4	0	0	0	0	0	0	1	1
Unknown	2	0	2	4	0	0	0	0	0	0	0	0
Total	7,651	1,715	1,305	10,671	164	129	116	409	3,020	728	606	4,354

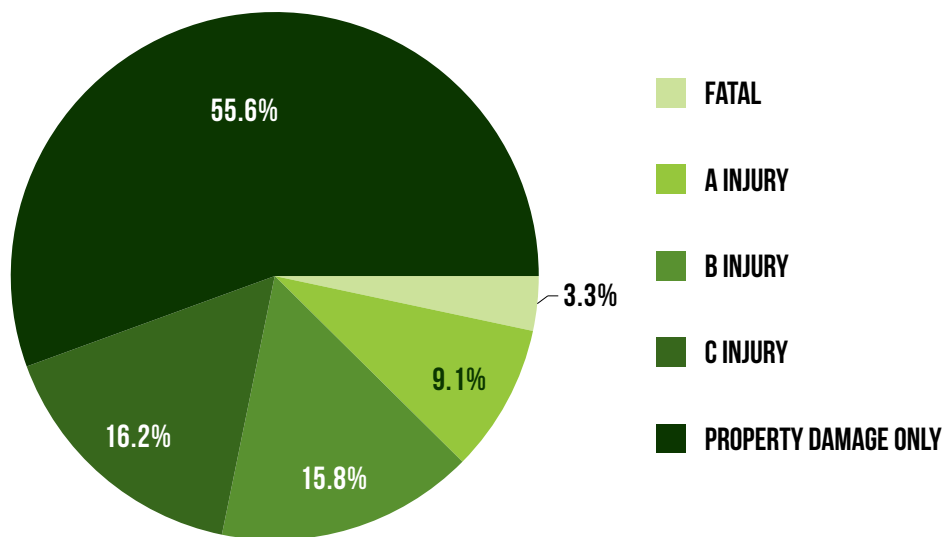
The driver age group 25 to 34 years represents the highest number of drinking and/or drug use in total crashes, injury crashes, and fatal crashes.

ALL CRASHES BY INJURY SEVERITY



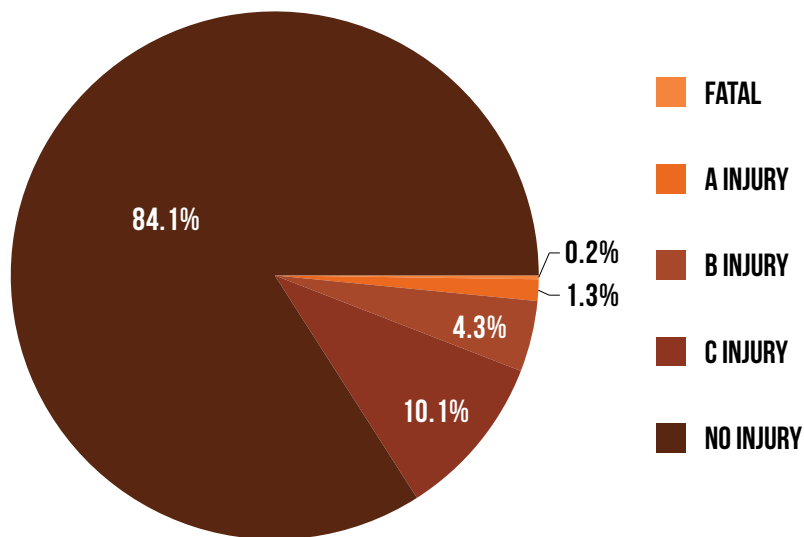
The majority of crashes do not involve injury (81.5%). Possible (C) injury crashes represent about 58% of those that do involve injury.

HAD-BEEN-DRINKING CRASHES BY INJURY SEVERITY



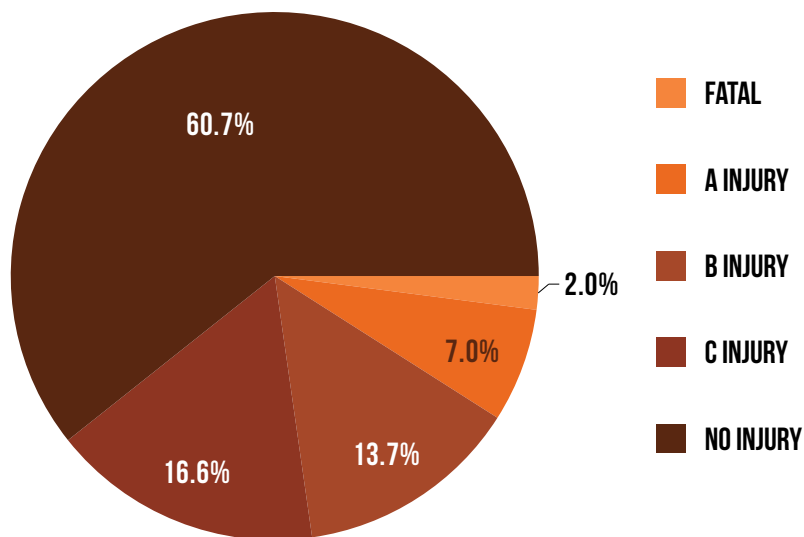
The problem of the drinking driver, pedestrian, and/or cyclist is seen by comparing the two charts on this page. For all had-been-drinking crashes, injury levels are greater, and a fatal crash is about eight times more likely when one of the crash-involved operators is reported as had-been-drinking (HBD).

DEATH & INJURY FOR CRASH INVOLVED OCCUPANTS



The majority of occupants involved in crashes are not injured (84.1%). About 63% percent of those who are injured receive only possible (C) injuries.

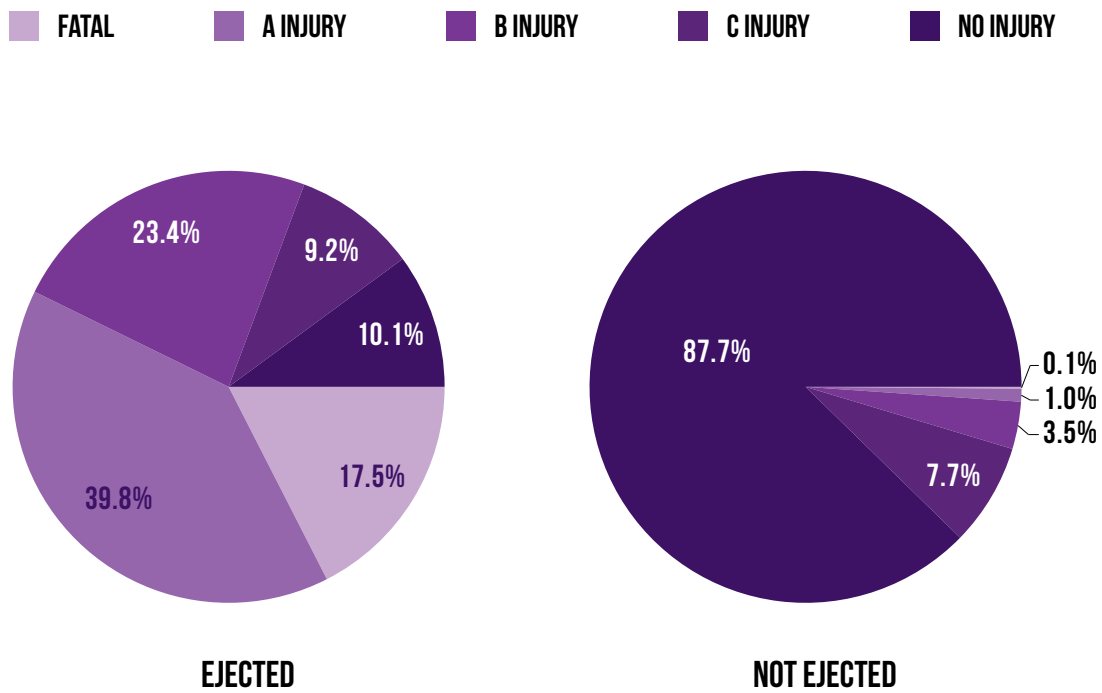
OCCUPANTS IN HAD-BEEN-DRINKING CRASHES



Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of occupant fatalities is about ten times higher than in all crashes and the suspected serious injury level (A) is about seven times higher.

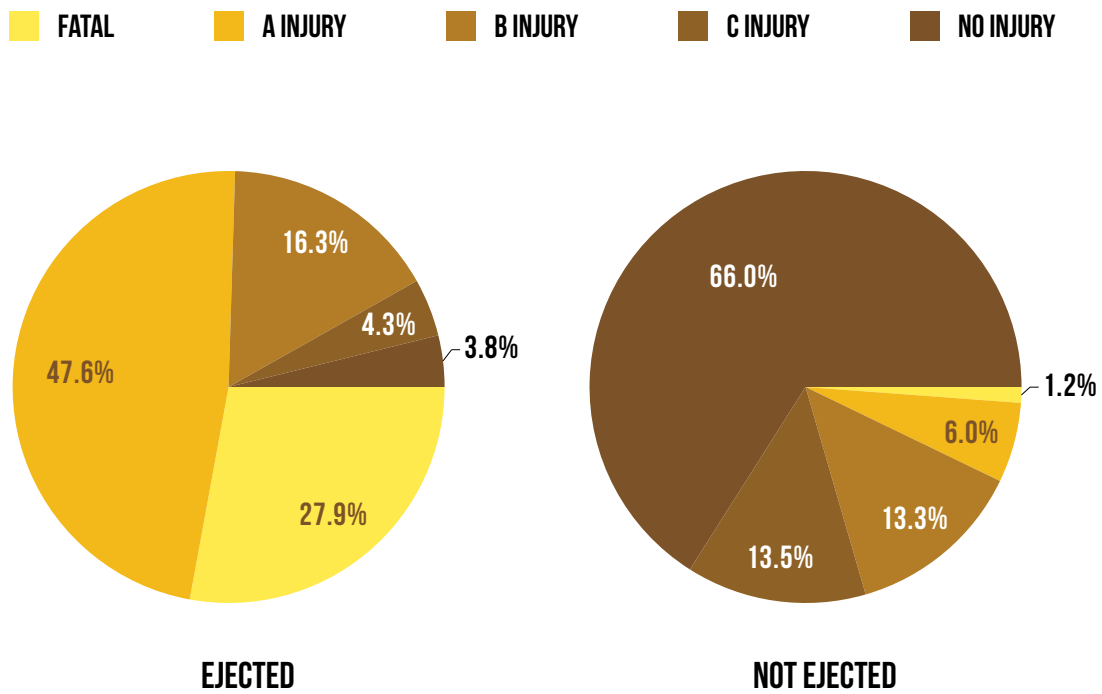
Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

ALL DRIVERS INJURY SEVERITY - EJECTED VS. NOT EJECTED



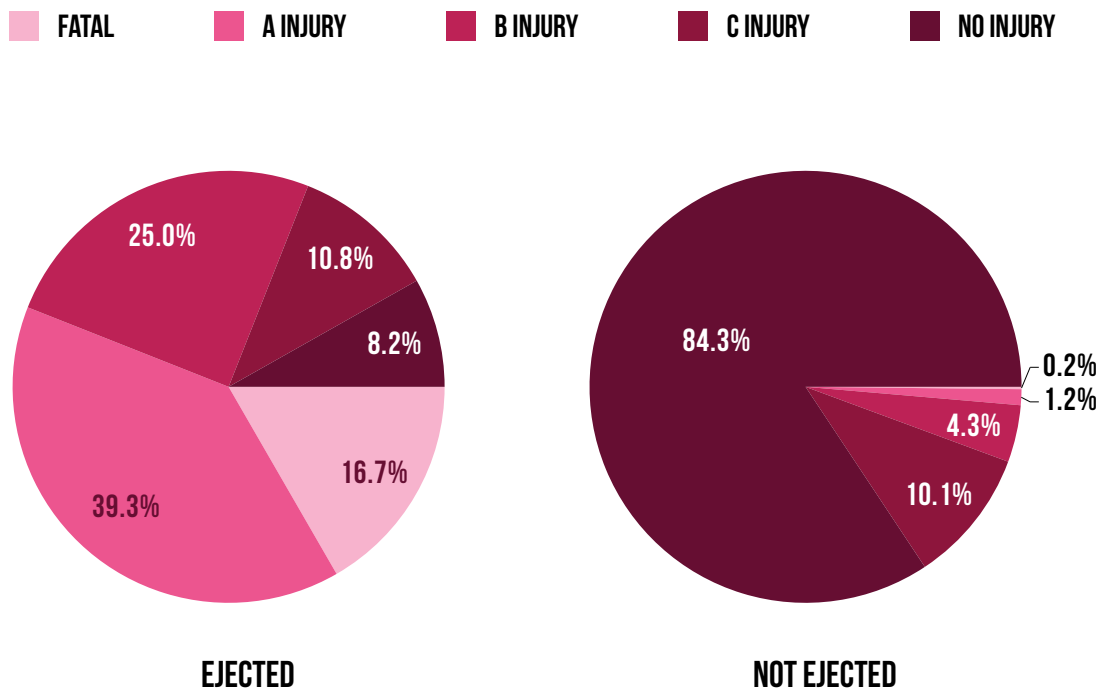
As shown by the two charts above, death and injury are much more likely when drivers are ejected from vehicles.

HAD-BEEN-DRINKING DRIVERS INJURY SEVERITY - EJECTED VS. NOT EJECTED



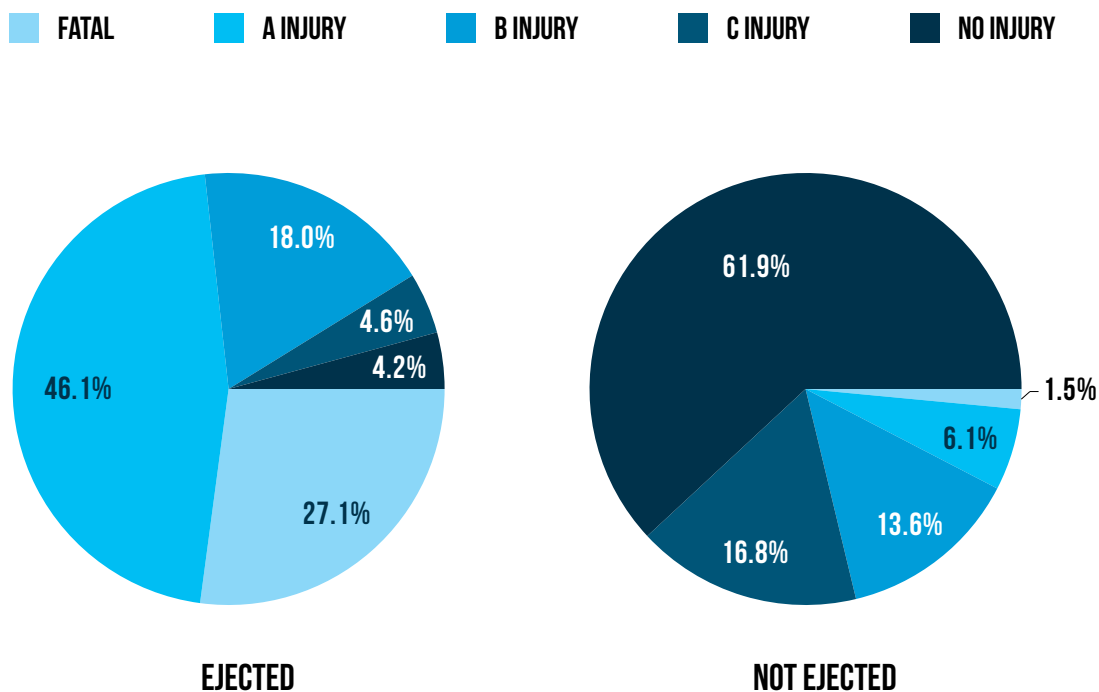
When compared to the charts above, the had-been-drinking charts demonstrate that injury severity is much worse for drivers reported to be drinking in both ejected and non-ejected events.

ALL OCCUPANTS OF CRASHES INJURY SEVERITY - EJECTED VS. NOT EJECTED.



As shown by the two charts above, death and injury are much more likely when occupants are ejected from vehicles.

OCCUPANTS OF HAD-BEEN-DRINKING CRASHES INJURY SEVERITY - EJECTED VS. NOT EJECTED

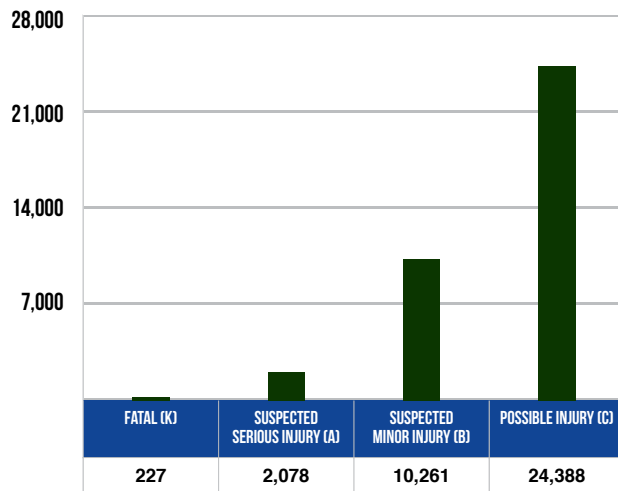


When compared to the charts above, the charts of occupants of had-been-drinking crashes demonstrate that injury severity is much worse for occupants in a crash where drinking is reported in both ejected and non-ejected events.

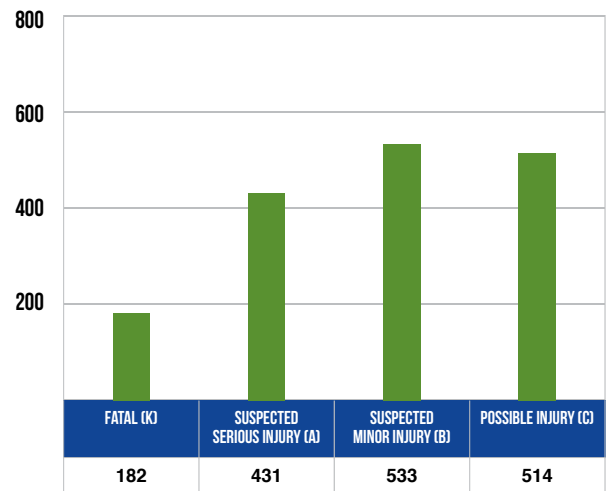
Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

INJURY SEVERITY & BELT USE BY DRIVER INJURY

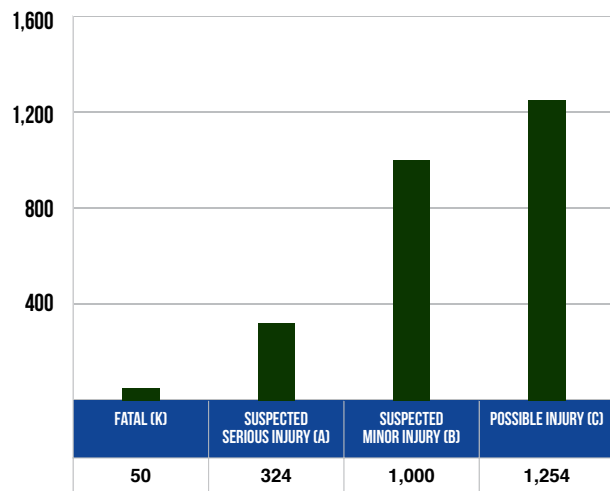
ALL CRASHES-BELTS USED



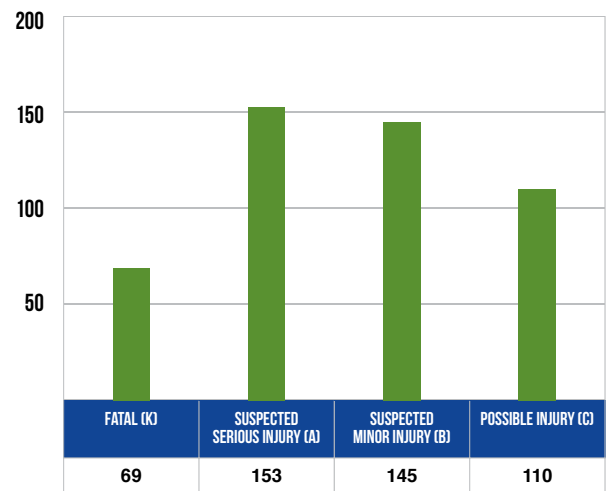
ALL CRASHES-BELTS NOT USED



HAD-BEEN DRINKING CRASHES-BELTS USED



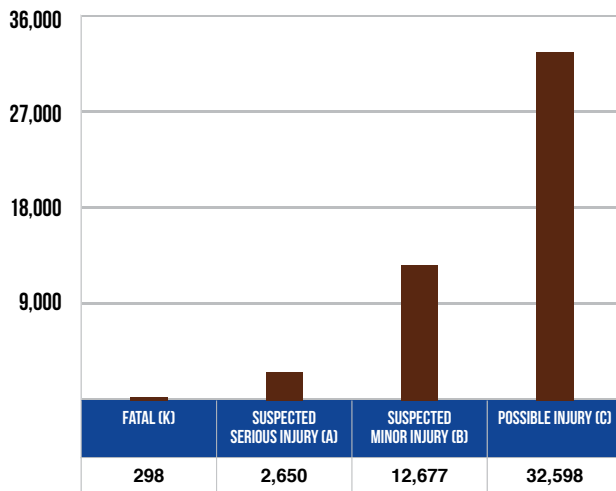
HAD-BEEN DRINKING CRASHES-BELTS NOT USED



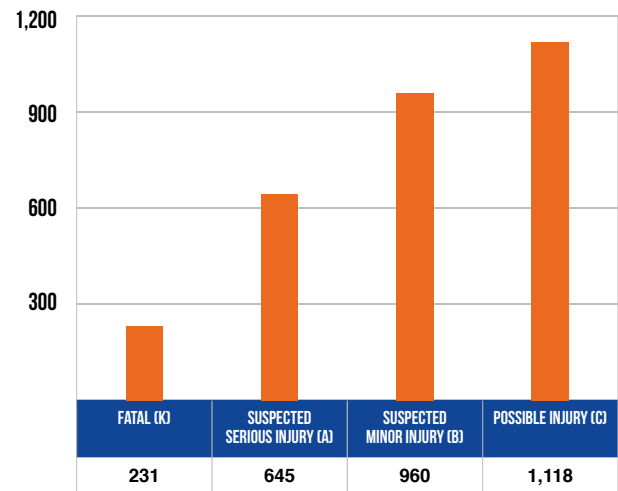
Note: "Belts Used" represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, and restraint failure. "Belts Not Used" represents no belts available and no belts used.

INJURY SEVERITY & RESTRAINT USE BY OCCUPANT INJURY

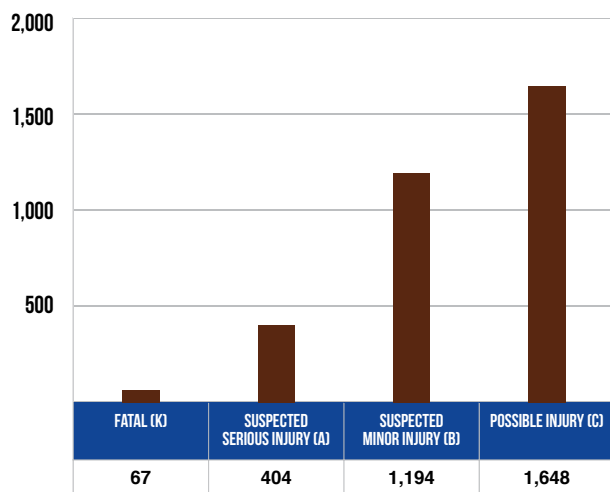
ALL CRASHES - RESTRAINTS USED



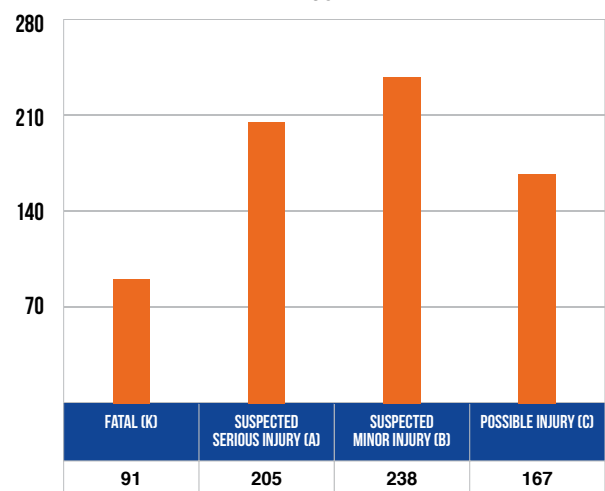
ALL CRASHES - RESTRAINTS NOT USED



HAD-BEEN-DRINKING CRASHES - RESTRAINTS USED



HAD-BEEN-DRINKING CRASHES - RESTRAINTS NOT USED

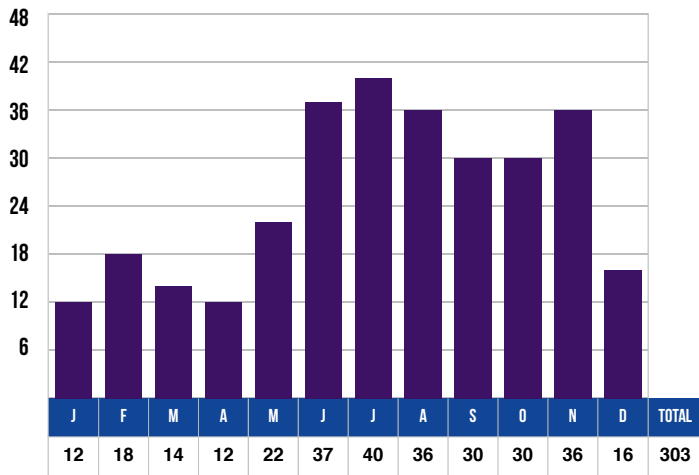


Note: "Restraints Used" represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, child restraints used, and restraint failure. "Restraints Not Used" represents no belts available; no belts used; and child restraint not used, unavailable, or improper use.

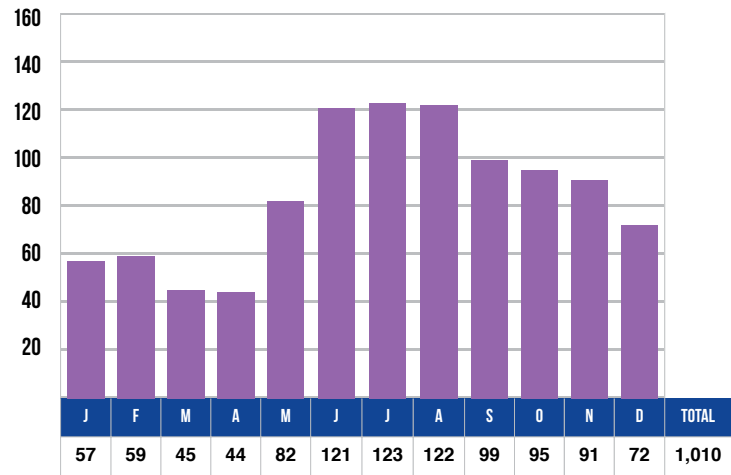
Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

ALCOHOL INVOLVMENT IN FATAL CRASHES

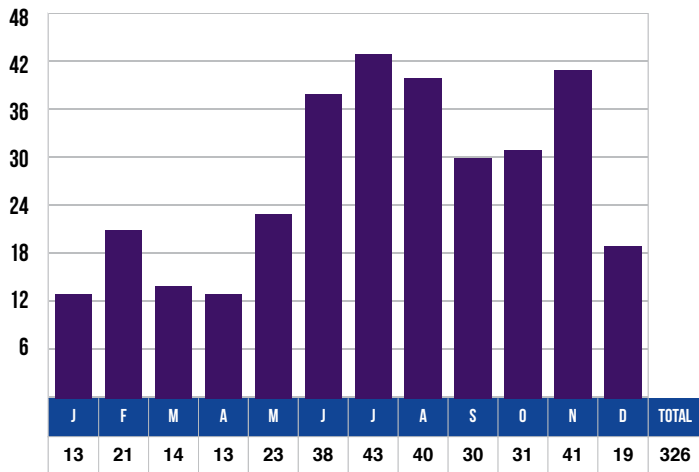
HAD-BEEN-DRINKING FATAL CRASHES BY MONTH



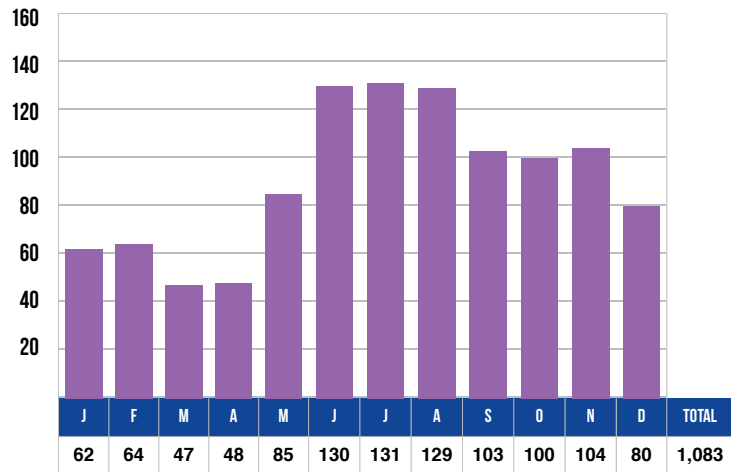
TOTAL FATAL CRASHES BY MONTH



ALCOHOL-INVOLVED FATALITIES BY MONTH



TOTAL FATALITIES BY MONTH

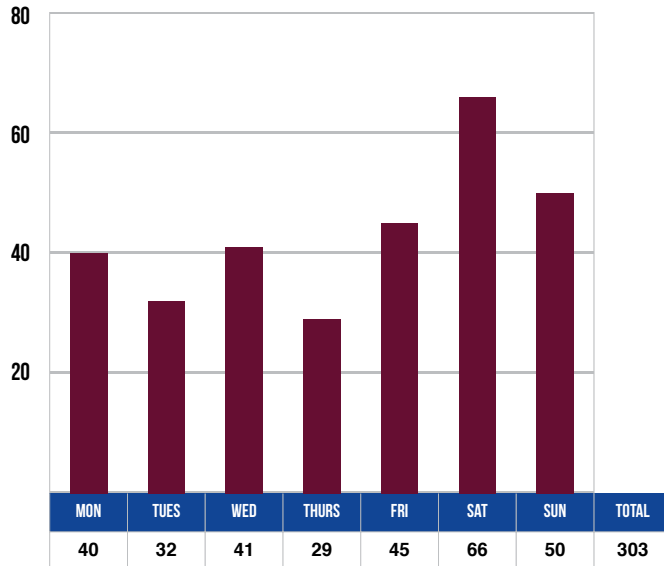


Had-been-drinking fatal crashes were highest in number during the month of July. The number of total fatal crashes (total of non-had-been-drinking and had-been-drinking fatal crashes) reached the highest level in July.

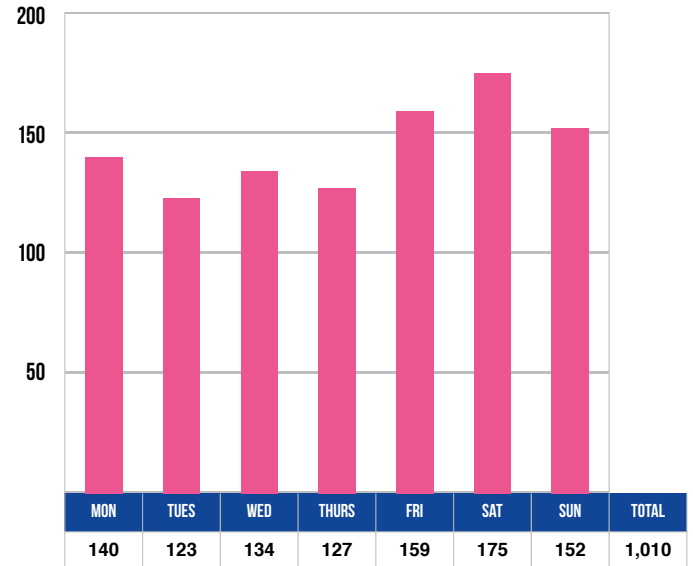
Note: An alcohol-involved fatality is any person killed in a had-been-drinking crash.

ALCOHOL INVOLVMENT IN FATAL CRASHES (CONTINUED)

**HAD-BEEN-DRINKING FATAL CRASHES
BY DAY OF THE WEEK**

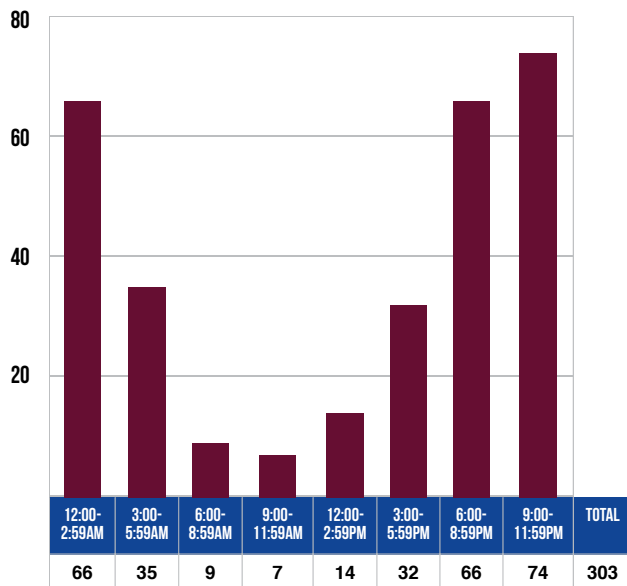


**TOTAL FATAL CRASHES
BY DAY OF THE WEEK**

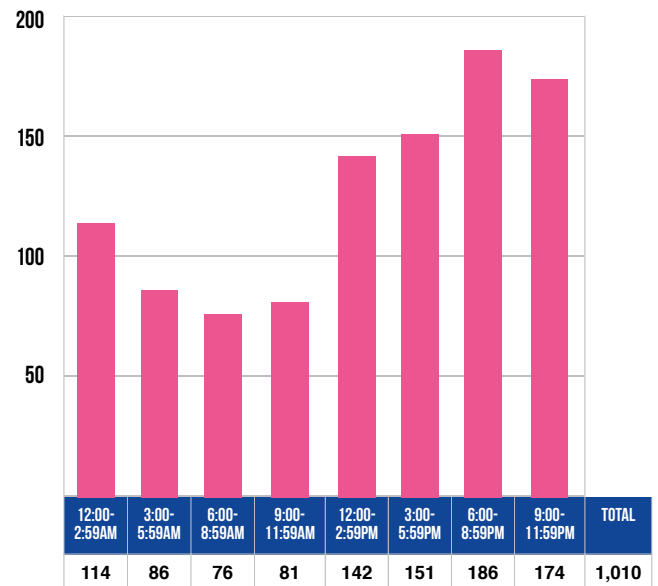


Saturday had the highest number of HBD fatal crashes (66) and also the highest proportion (37.7%) of drinking-related fatal crashes in 2020.

HAD-BEEN-DRINKING FATAL CRASHES BY TIME OF DAY



TOTAL FATAL CRASHES BY TIME OF DAY

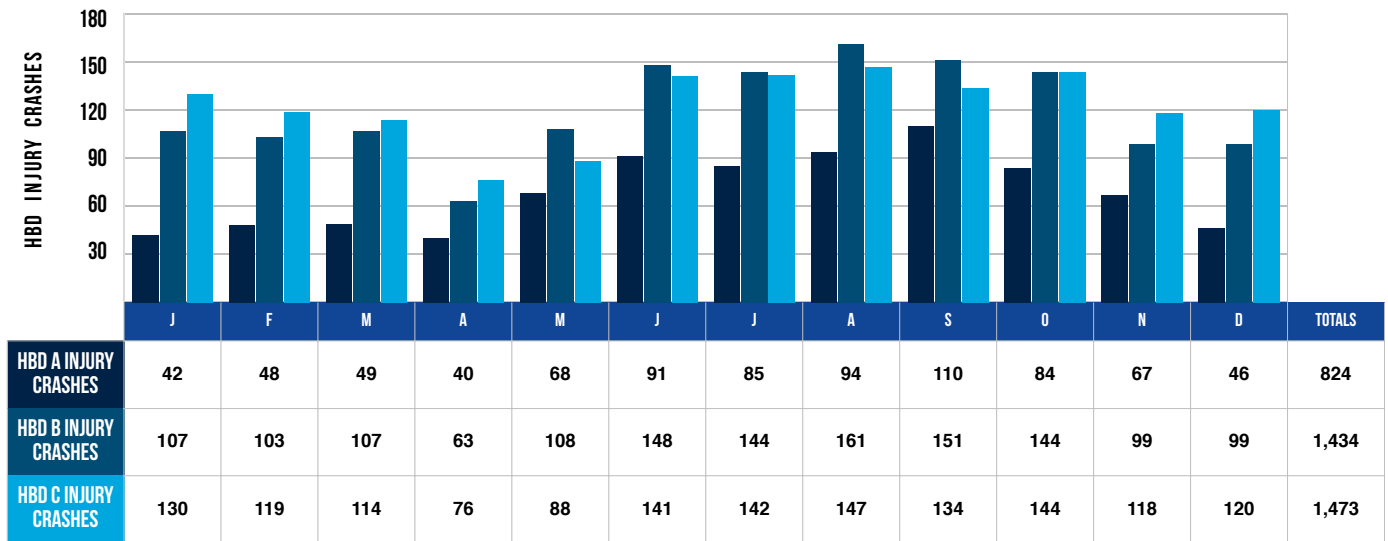


The 9:00 PM to midnight time period had the highest number of HBD fatal crashes (74), while the midnight to 3:00 AM time period had the greatest proportion (57.9%) of drinking-related fatal crashes in 2020.

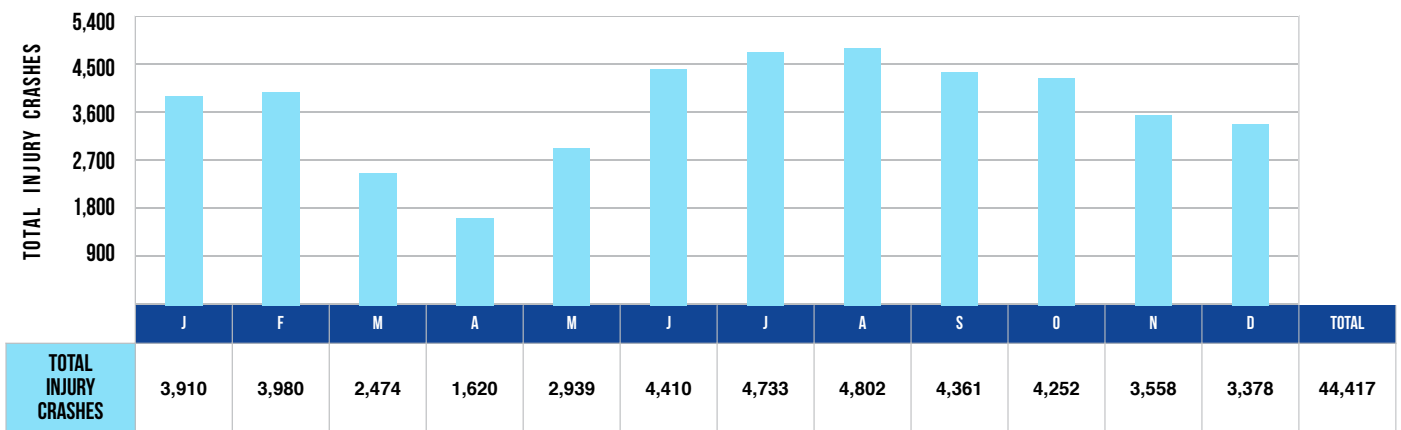
Note: These charts exclude crashes where time of day was unknown.

ALCOHOL INVOLVEMENT IN INJURY CRASHES

HAD-BEEN-DRINKING INJURY CRASHES BY MONTH



TOTAL INJURY CRASHES BY MONTH

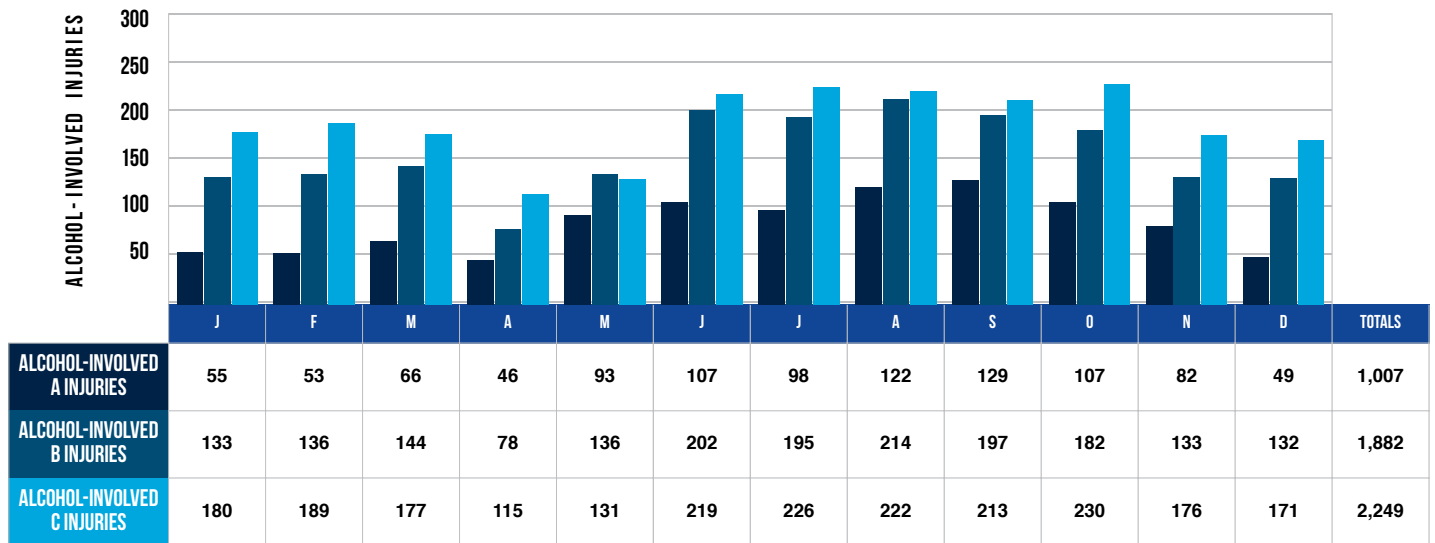


Alcohol involvement in injury crashes is an important indicator of the alcohol-impaired driving problem. In 2020, the highest number of had-been-drinking injury crashes occurred in August with 402. The highest proportion of had-been-drinking injury crashes occurred in April with 11.0 percent of the injury crashes involving alcohol.

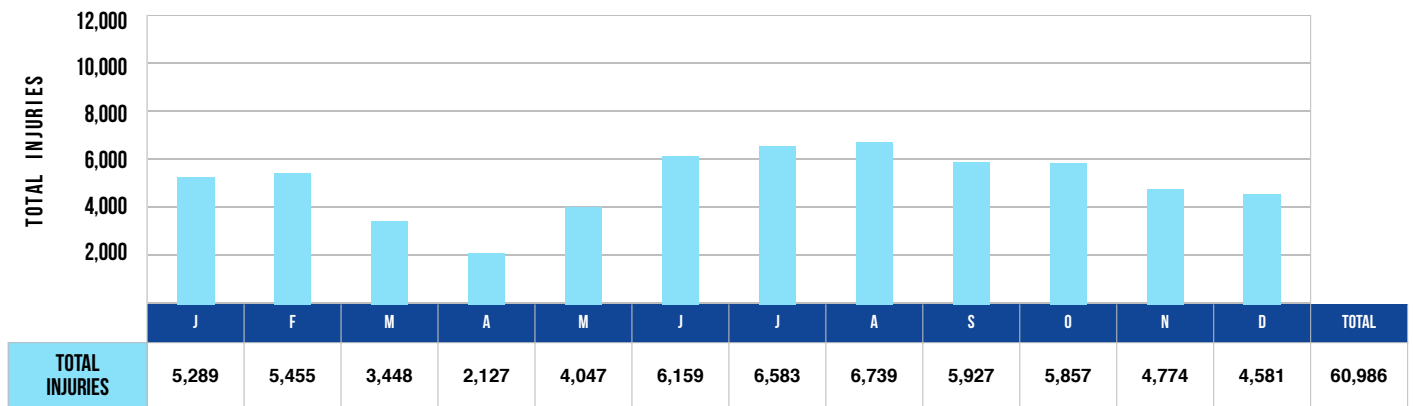
Note: An alcohol-involved injury is any person injured in a had-been-drinking crash.

ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

ALCOHOL-INVOLVED INJURIES BY MONTH



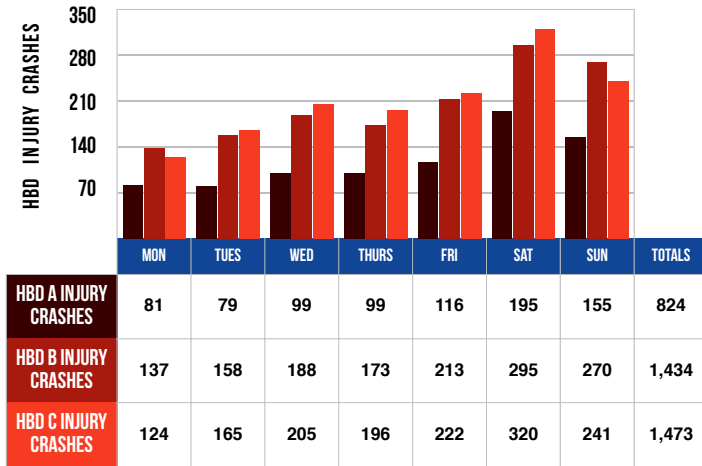
TOTAL INJURIES BY MONTH



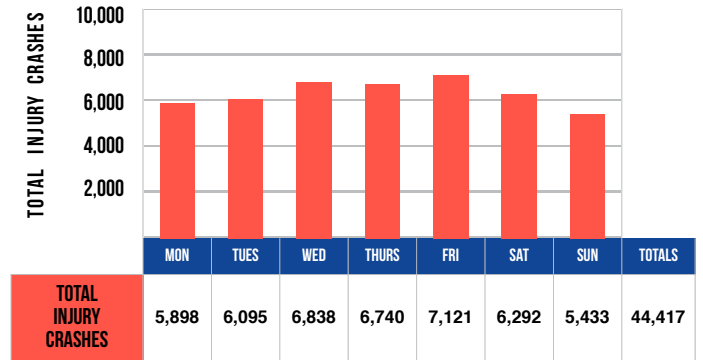
Note: An alcohol-involved injury is any person injured in a had-been-drinking crash.

ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

**HAD-BEEN-DRINKING INJURY CRASHES
BY DAY OF THE WEEK**

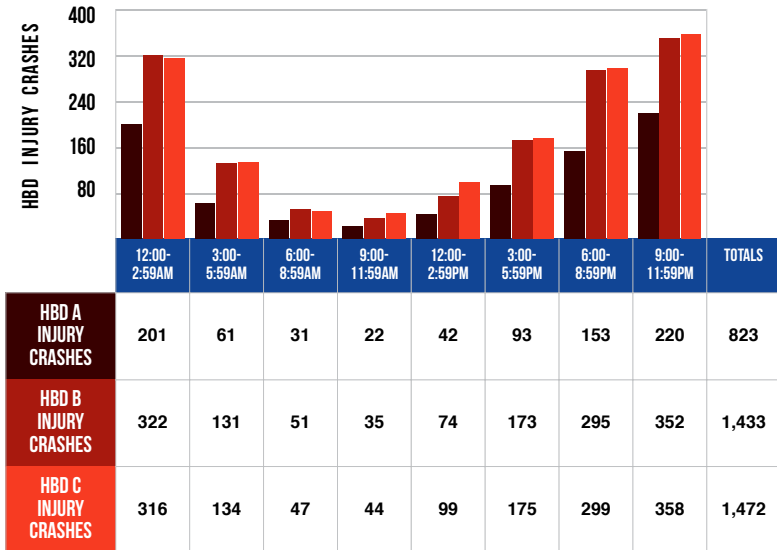


**TOTAL INJURY CRASHES
BY DAY OF THE WEEK**

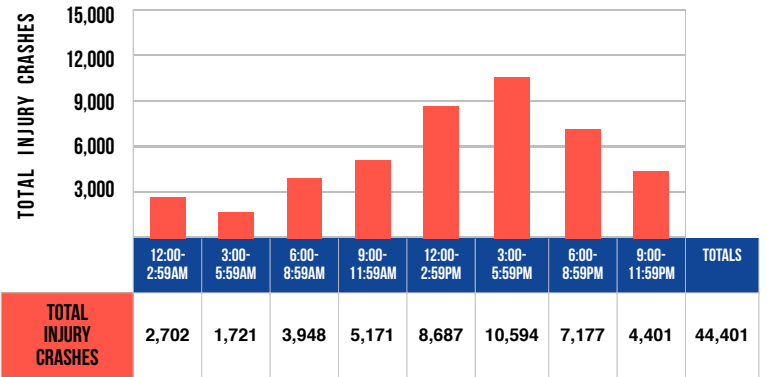


Had-been-drinking injury crashes follow the same basic trends as total crashes during the work week, but the weekend sees a dramatic increase in the proportion of had-been-drinking injury crashes to total injury crashes.

HAD-BEEN-DRINKING INJURY CRASHES BY TIME OF DAY



TOTAL INJURY CRASHES BY TIME OF DAY



Total injury crash frequencies peak in the hours between 3:00 PM and 5:59 PM, while had-been-drinking injury crash frequencies peak between 9:00 PM and 11:59 PM (a particularly hazardous travel period). These frequencies exclude 16 injury crashes (including three had-been-drinking injury crashes) where time of day was unknown.

MALE DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	MALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
13 years and under	68	0.0	1	0.1	12	23	16	16
14 years	68	0.0	1	0.1	9	20	7	31
15 years	307	0.1	0	0.0	20	43	33	211
16 years	2,618	1.2	5	0.5	56	199	258	2,100
17 years	3,900	1.9	12	1.1	73	252	486	3,077
18 years	5,086	2.4	15	1.4	113	373	595	3,990
19 years	5,656	2.7	19	1.7	118	376	681	4,462
20 years	5,380	2.6	26	2.4	128	373	692	4,161
21 - 24 years	20,722	9.9	104	9.5	464	1,430	2,556	16,168
25 - 34 years	45,062	21.5	258	23.6	1,105	3,048	5,384	35,267
35 - 44 years	33,467	16.0	171	15.7	763	2,074	4,006	26,453
45 - 54 years	31,775	15.1	159	14.6	641	1,873	3,541	25,561
55 - 64 years	29,264	13.9	149	13.6	593	1,700	3,335	23,487
65 - 69 years	9,396	4.5	55	5.0	179	571	1,089	7,502
70 - 74 years	6,754	3.2	37	3.4	145	440	824	5,308
75 - 79 years	4,198	2.0	38	3.5	83	308	505	3,264
80 - 84 years	2,161	1.0	17	1.6	55	156	270	1,663
85 - 89 years	1,034	0.5	12	1.1	33	93	140	756
90 years and over	447	0.2	8	0.7	6	31	60	342
Unknown	2,453	1.2	5	0.5	30	89	253	2,076
TOTAL	209,816**	100.0	1,092	100.0	4,626	13,472	24,731	165,895

The male driver age group 25 to 34 years experienced the highest number of fatal crashes as well as the highest number of injury crashes and property damage only crashes.

***Note: This table excludes 40,370 drivers of unknown gender.*

MALE DRINKING DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	MALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
13 years and under	0	0.0	0	0.0	0	0	0	0
14 years	2	0.0	0	0.0	0	0	1	1
15 years	4	0.1	0	0.0	0	2	0	2
16 years	17	0.3	0	0.0	2	3	2	10
17 years	28	0.4	3	1.4	1	2	7	15
18 years	82	1.3	3	1.4	5	18	15	41
19 years	98	1.5	2	0.9	16	18	12	50
20 years	143	2.2	6	2.7	16	30	13	78
21 - 24 years	830	12.9	19	8.6	67	136	137	471
25 - 34 years	2,066	32.1	73	33.2	201	333	310	1,149
35 - 44 years	1,292	20.1	46	20.9	130	190	206	720
45 - 54 years	891	13.8	32	14.5	73	152	120	514
55 - 64 years	683	10.6	19	8.6	77	99	113	375
65 - 69 years	166	2.6	9	4.1	13	28	31	85
70 - 74 years	85	1.3	2	0.9	8	19	11	45
75 - 79 years	30	0.5	3	1.4	1	3	7	16
80 - 84 years	10	0.2	3	1.4	0	1	1	5
85 - 89 years	3	0.0	0	0.0	0	1	1	1
90 years and over	4	0.1	0	0.0	0	0	1	3
Unknown	2	0.0	0	0.0	0	0	0	2
TOTAL	6,436**	100.0	220	100.0	610	1,035	988	3,583

The male drinking driver age group 25 to 34 years experienced the highest number of total, fatal, injury, and property damage only crashes.

***Note: This table excludes two unknown gender drinking drivers.*

FEMALE DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	FEMALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
13 years and under	28	0.0	0	0.0	1	3	6	18
14 years	34	0.0	0	0.0	6	6	8	14
15 years	259	0.2	1	0.2	7	29	32	190
16 years	2,423	1.6	4	0.9	32	158	293	1,936
17 years	3,218	2.1	10	2.3	35	212	441	2,520
18 years	3,982	2.6	7	1.6	47	278	593	3,057
19 years	4,459	2.9	18	4.1	70	300	649	3,422
20 years	4,390	2.8	9	2.1	57	278	612	3,434
21 - 24 years	16,711	10.8	41	9.4	265	1,028	2,402	12,975
25 - 34 years	34,202	22.2	113	25.9	533	2,123	4,913	26,520
35 - 44 years	24,931	16.2	81	18.5	357	1,528	3,318	19,647
45 - 54 years	22,095	14.3	51	11.7	313	1,159	2,946	17,626
55 - 64 years	19,588	12.7	47	10.8	264	1,035	2,611	15,631
65 - 69 years	6,398	4.2	13	3.0	86	356	872	5,071
70 - 74 years	4,486	2.9	9	2.1	65	256	598	3,558
75 - 79 years	2,899	1.9	12	2.7	52	199	367	2,269
80 - 84 years	1,652	1.1	8	1.8	40	137	219	1,248
85 - 89 years	741	0.5	11	2.5	15	65	95	555
90 years and over	249	0.2	2	0.5	7	25	26	189
Unknown	1,355	0.9	0	0.0	9	28	142	1,176
TOTAL	154,100**	100.0	437	100.0	2,261	9,203	21,143	121,056

The female driver age group 25 to 34 years experienced the highest number of fatal crashes as well as the highest number of injury crashes and property damage only crashes.

***Note: This table excludes 40,370 drivers of unknown gender.*

FEMALE DRINKING DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	FEMALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	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	6	0.2	0	0.0	1	1	2	2
17 years	12	0.5	0	0.0	0	1	3	8
18 years	24	1.0	1	1.7	1	3	6	13
19 years	53	2.1	3	5.0	5	8	12	25
20 years	65	2.6	2	3.3	5	11	11	36
21 - 24 years	402	16.0	12	20.0	32	67	65	226
25 - 34 years	829	32.9	22	36.7	59	133	152	463
35 - 44 years	550	21.8	9	15.0	40	62	103	336
45 - 54 years	321	12.7	8	13.3	23	38	52	200
55 - 64 years	195	7.7	2	3.3	7	32	40	114
65 - 69 years	30	1.2	1	1.7	0	3	5	21
70 - 74 years	19	0.8	0	0.0	2	2	2	13
75 - 79 years	9	0.4	0	0.0	0	1	1	7
80 - 84 years	1	0.0	0	0.0	0	0	1	0
85 - 89 years	2	0.1	0	0.0	0	1	0	1
90 years and over	0	0.0	0	0.0	0	0	0	0
Unknown	0	0.0	0	0.0	0	0	0	0
TOTAL	2,518**	100.0	60	100.0	175	363	455	1,465

The female drinking driver age group 25 to 34 years experienced the highest number of fatal crashes as well as the highest number of injury crashes and property damage only crashes.

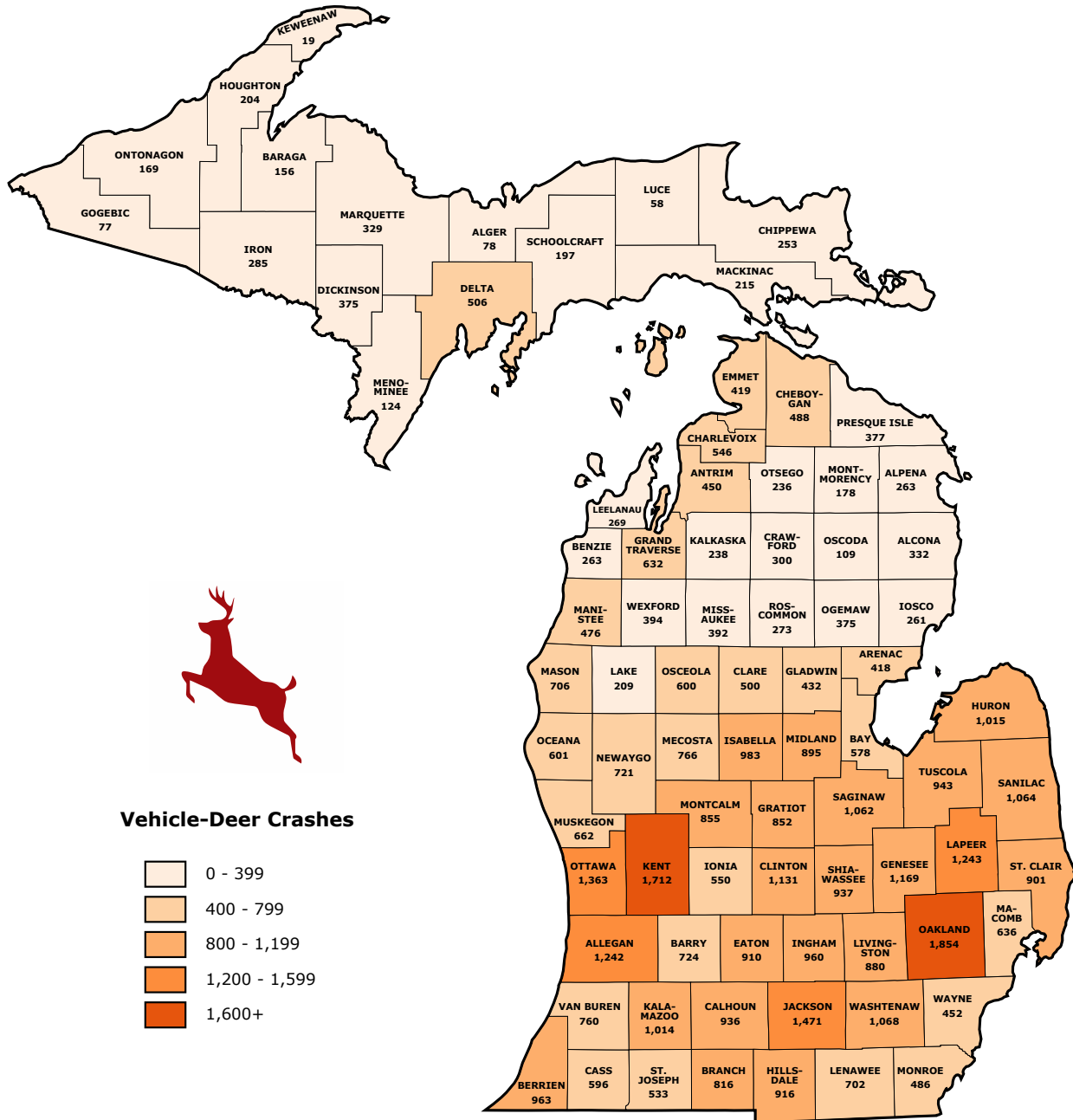
***Note: This table excludes two unknown gender drinking drivers.*

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DEER

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MICHIGAN MOTOR VEHICLE-DEER INVOLVED CRASHES

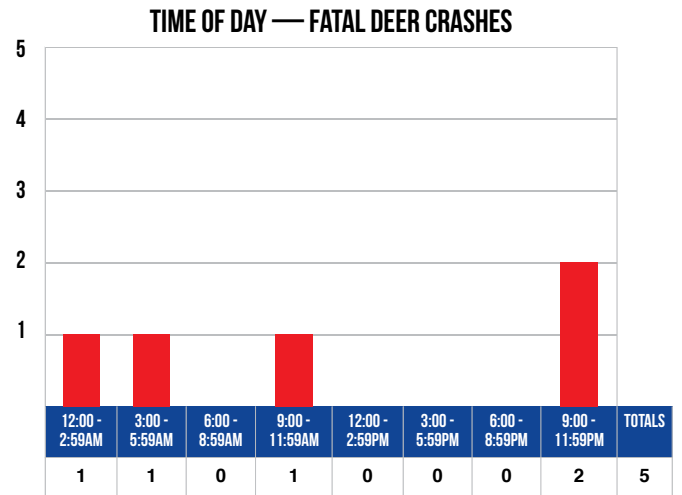
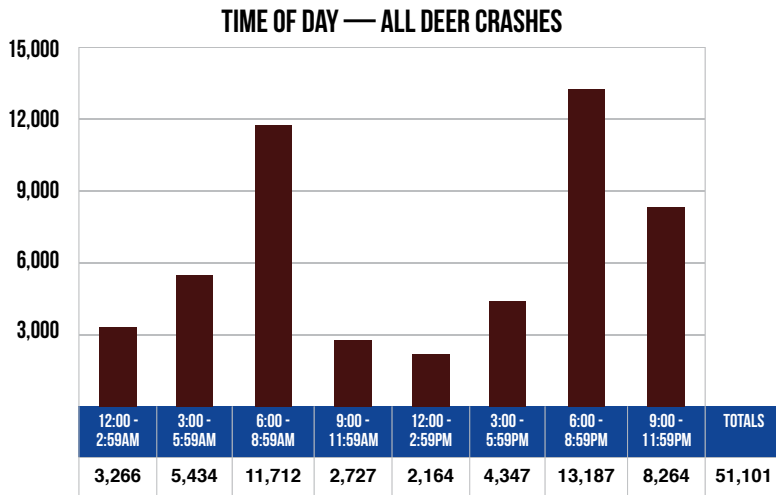


Michigan motorists reported 51,103 vehicle-deer crashes in 2020. As a result of those collisions, 1,400 people were injured and 5 people were killed. Two of the people killed were motorcycle riders. Of the 51,334 motor vehicles involved, 40,010 (77.9%) were passenger cars, SUVs, or vans; 10,096 (19.7%) were pickup trucks; 131 (0.3%) were motorhomes; and 281 (0.5%) were motorcycles. All other vehicle types (including uncoded and errors) totaled 816 (1.6%).

Motor vehicle-deer crashes occurred most often in Michigan's heavily populated southern counties; Oakland County had the highest number with 1,854 in 2020.

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

LIGHT CONDITION	ALL CRASHES		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Daylight	12,449	24.4	1	20.0	39	158	189	12,062
Dawn	4,551	8.9	0	0.0	6	22	63	4,460
Dusk	2,460	4.8	0	0.0	10	24	26	2,400
Dark - Lighted	2,431	4.8	0	0.0	7	19	28	2,377
Dark - Unlighted	28,797	56.4	4	80.0	35	196	429	28,133
Other	7	0.0	0	0.0	0	0	0	7
Unknown	408	0.8	0	0.0	0	0	0	408
Uncoded & Errors	0	0.0	0	0.0	0	0	0	0
Total	51,103	100.0	5	100.0	97	419	735	49,847

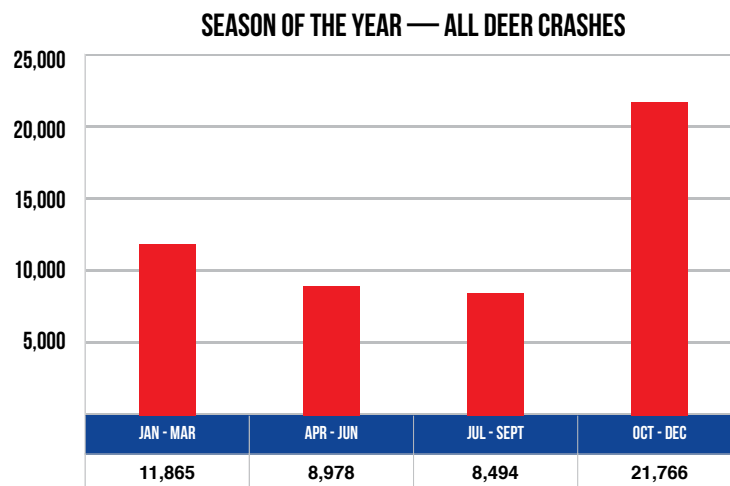


The highest number of reported vehicle-deer collisions occurred during the 6:00 PM to 8:59 PM time period, when 25.8 percent (13,187) of vehicle-deer crashes occurred. The 9:00 PM to 11:59 PM time period had the highest number of fatal vehicle-deer crashes, with 2.

Note: Chart for All Deer Crashes excludes two crashes where time of day is unknown.

MONTHLY AND SEASONAL RATES FOR MOTOR VEHICLE-DEER CRASHES

MONTH	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
January	5,070	9.9	0	0.0	1	15	51	5,003
February	3,830	7.5	1	20.0	1	11	36	3,781
March	2,965	5.8	0	0.0	3	16	26	2,920
April	1,812	3.5	0	0.0	6	12	18	1,776
May	2,947	5.8	0	0.0	7	34	54	2,852
June	4,219	8.3	3	60.0	21	60	75	4,060
July	2,708	5.3	1	20.0	16	49	51	2,591
August	2,241	4.4	0	0.0	11	37	41	2,152
September	3,545	6.9	0	0.0	9	43	52	3,441
October	7,961	15.6	0	0.0	9	65	128	7,759
November	9,001	17.6	0	0.0	12	50	148	8,791
December	4,804	9.4	0	0.0	1	27	55	4,721
Total	51,103	100.0	5	100.0	97	419	735	49,847



Of the total 51,103 reported vehicle-deer collisions, 42.6 percent (21,766) occurred during the fourth quarter of the year.

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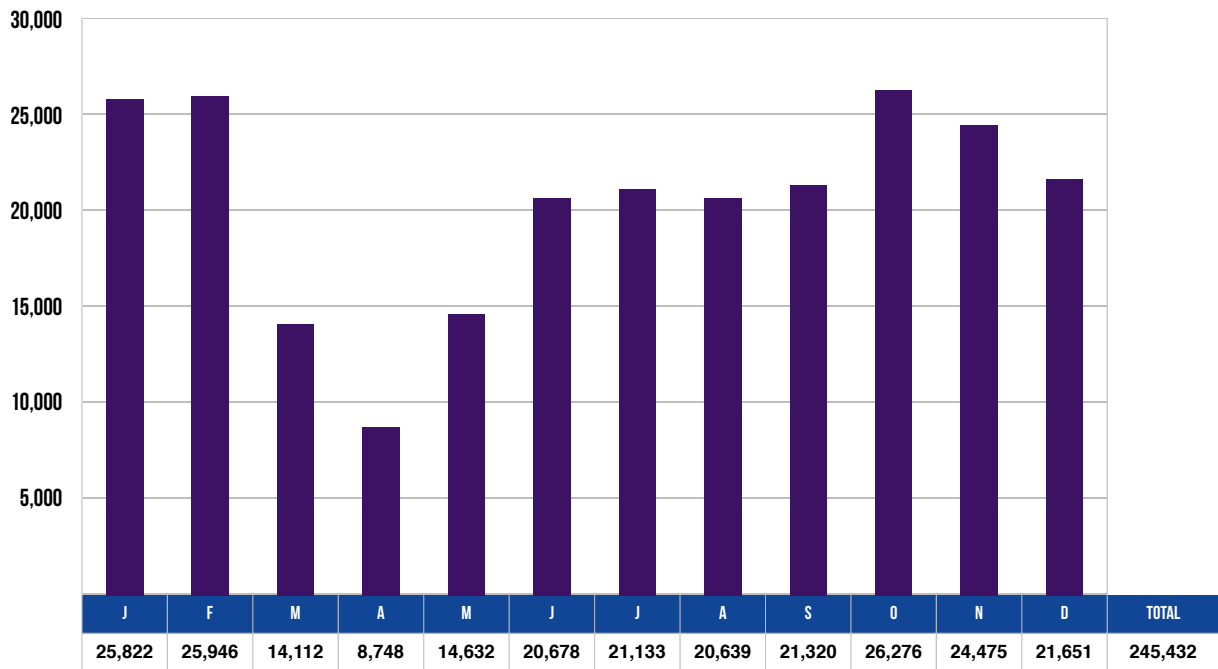
CRASH

(circumstances common to all traffic units in a crash)

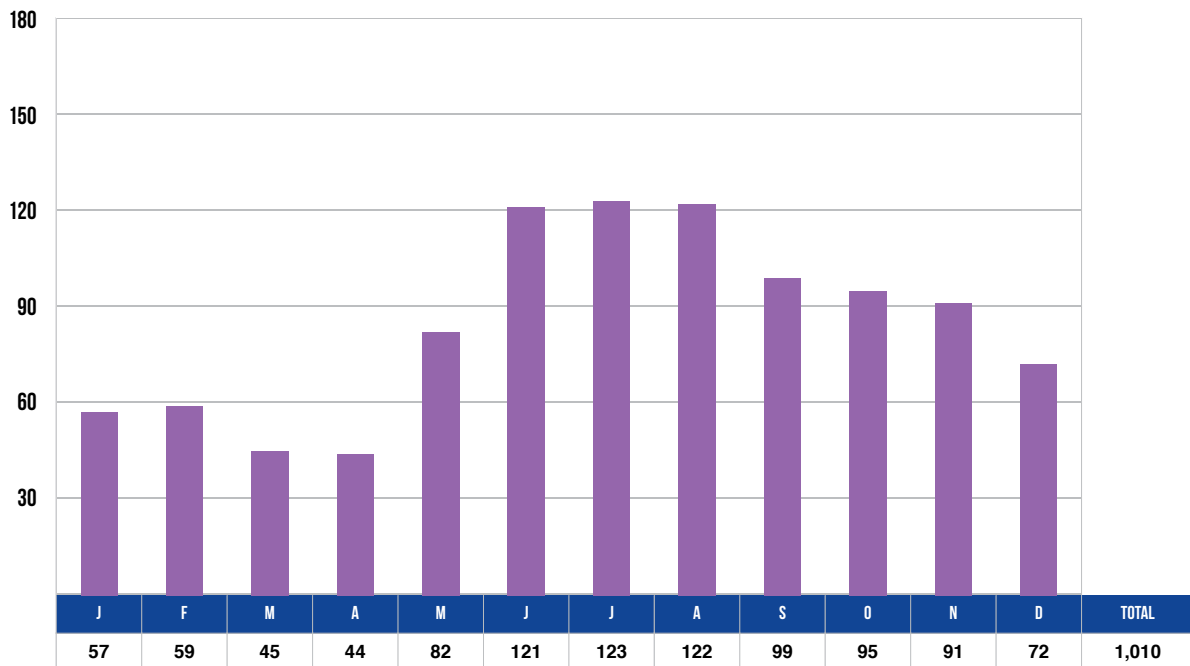
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ALL CRASHES INJURY SEVERITY BY MONTH

TOTAL CRASHES

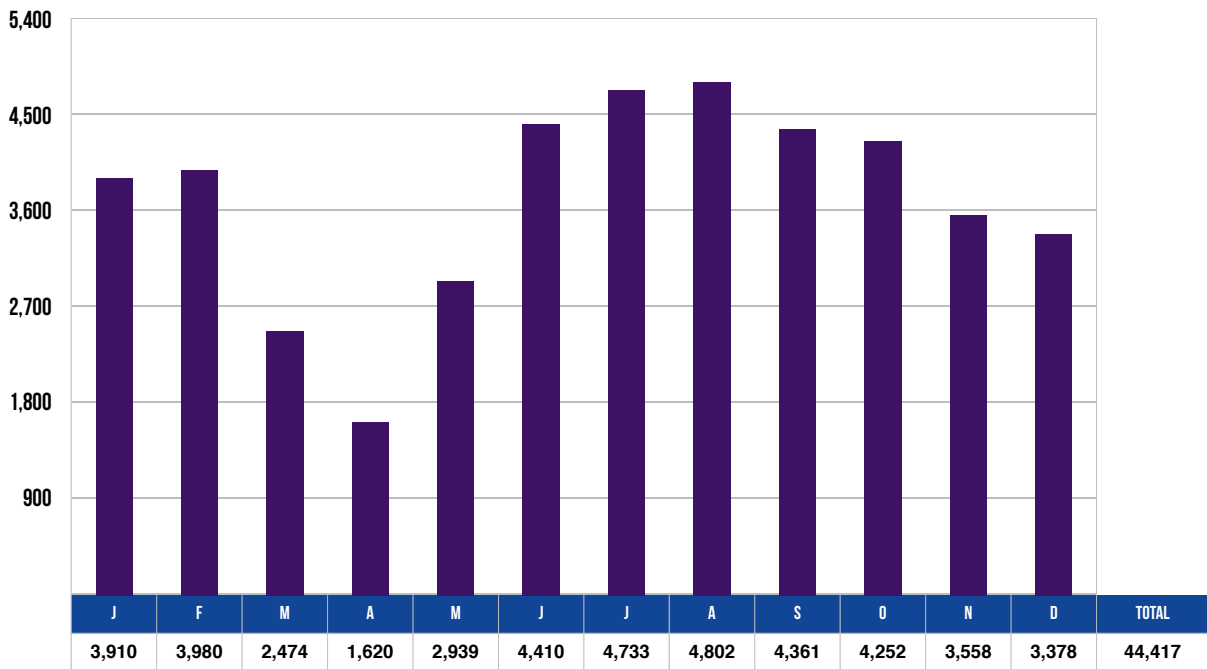


FATAL CRASHES

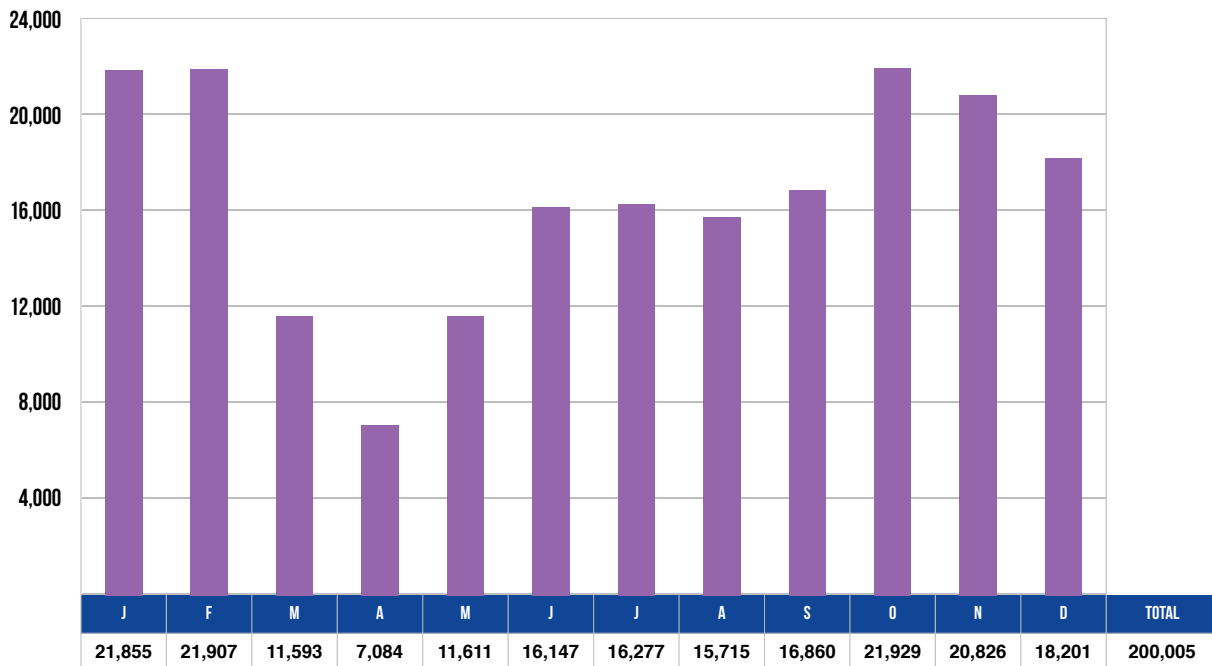


ALL CRASHES INJURY SEVERITY BY MONTH (CONTINUED)

INJURY CRASHES



PROPERTY DAMAGE ONLY CRASHES



HIGHWAY CLASS

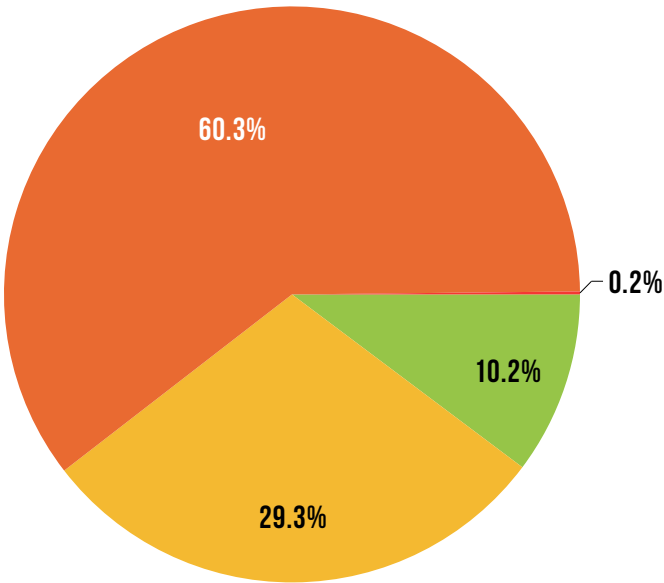
HIGHWAY CLASS	ALL CRASHES	FATAL CRASHES	INJURY CRASHES	PROPERTY DAMAGE ONLY
Interstate Routes	25,143	102	4,748	20,293
U.S. & Michigan Roads	71,860	309	13,023	58,528
County & City Roads	148,022	598	26,581	120,843
Uncoded & Errors	407	1	65	341

INTERSTATE ROUTES

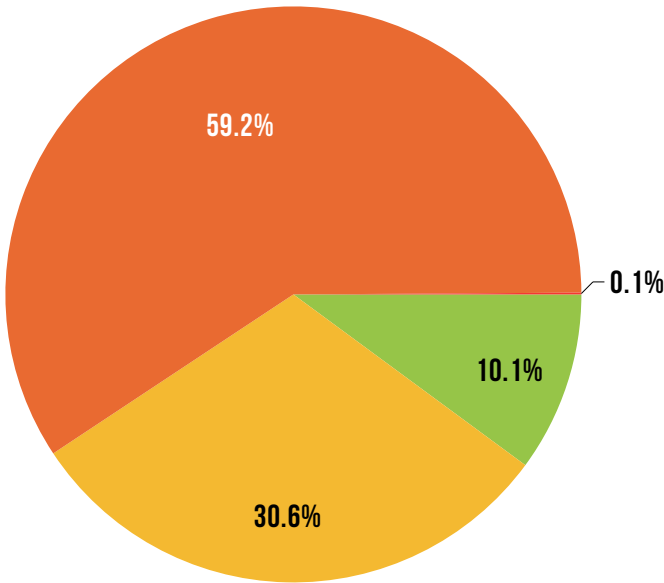
U.S. & MICHIGAN ROADS

COUNTY & CITY ROADS

UNCODED & ERRORS



ALL CRASHES



FATAL CRASHES

The highest percentage of all crashes (60.3%), fatal crashes (59.2%), injury crashes (59.8%), and property damage only crashes (60.4%) occur on county and city roads.

CRASH EXPERIENCE BY CRASH TYPE

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Single Vehicle	96,821	39.4	515	51.0	1,950	4,834	6,236	83,286
Head On	3,109	1.3	105	10.4	260	459	582	1,703
Head On – Left Turn	5,566	2.3	43	4.3	243	776	1,269	3,235
Angle	36,778	15.0	190	18.8	961	3,442	6,876	25,309
Rear End	50,776	20.7	74	7.3	475	2,324	7,388	40,515
Rear End – Left Turn	1,906	0.8	3	0.3	27	124	300	1,452
Rear End – Right Turn	1,492	0.6	1	0.1	4	41	171	1,275
Sideswipe – Same Direction	27,586	11.2	21	2.1	159	661	1,688	25,057
Sideswipe – Opposite Directions	4,542	1.9	16	1.6	54	237	400	3,835
Backing	5,857	2.4	0	0.0	9	24	109	5,715
Other	8,708	3.5	38	3.8	311	793	1,071	6,495
Unknown	2,291	0.9	4	0.4	31	47	81	2,128
Uncoded & Errors	0	0.0	0	0.0	0	0	0	0
TOTAL	245,432	100.0	1,010	100.0	4,484	13,762	26,171	200,005

RELATIONSHIP TO ROADWAY

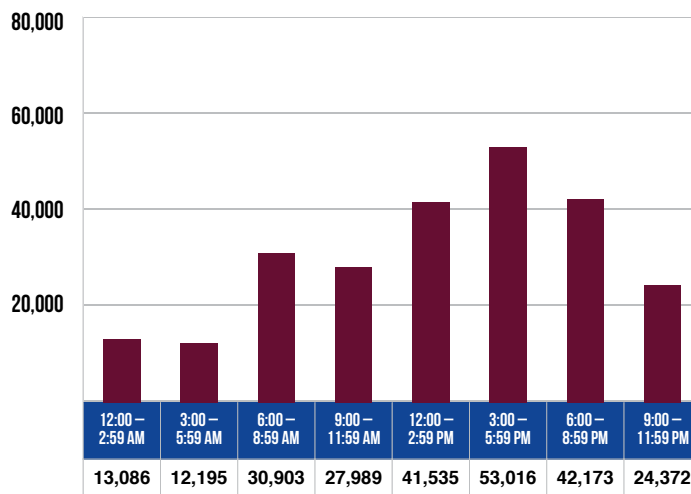
LOCATION OF FIRST IMPACT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
On Road	216,530	88.2	760	75.2	3,600	11,383	23,046	177,741
Median	1,778	0.7	15	1.5	46	123	217	1,377
Shoulder	7,563	3.1	53	5.2	214	623	816	5,857
Outside of Shoulder/Curb	14,714	6.0	171	16.9	572	1,439	1,817	10,715
Gore	438	0.2	5	0.5	7	49	54	323
On-Street Parking	3,319	1.4	1	0.1	9	61	87	3,161
Off the Roadway	0	0.0	0	0.0	0	0	0	0
On the Sidewalk	318	0.1	4	0.4	14	40	54	206
In the Bicycle Lane	37	0.0	1	0.1	3	8	13	12
Other/Unknown	735	0.3	0	0.0	19	36	67	613
TOTAL	245,432	100.0	1,010	100.0	4,484	13,762	26,171	200,005

Only 6.0 percent of crashes occur outside the shoulder of the road, but these crashes account for 16.9 percent of the fatal crashes.

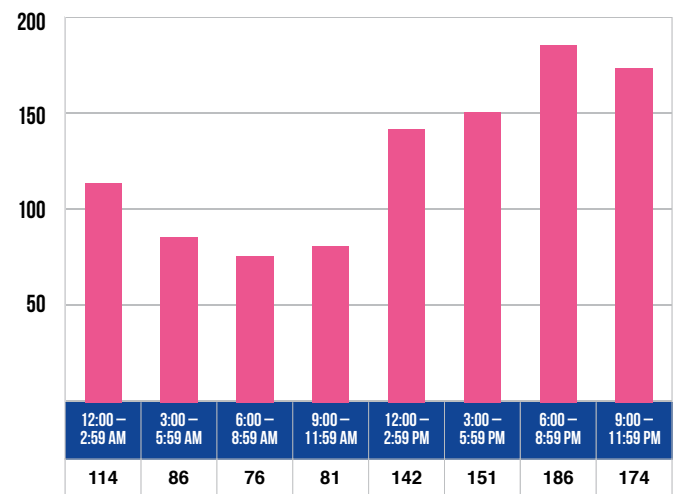
TIME AND SEVERITY

TIME OF DAY	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
12:00 AM – 2:59 AM	13,086	5.3	114	11.3	430	871	1,401	10,270
3:00 AM – 5:59 AM	12,195	5.0	86	8.5	205	580	936	10,388
6:00 AM – 8:59 AM	30,903	12.6	76	7.5	325	1,189	2,434	26,879
9:00 AM – 11:59 AM	27,989	11.4	81	8.0	411	1,600	3,160	22,737
12:00 PM – 2:59 PM	41,535	16.9	142	14.1	763	2,583	5,341	32,706
3:00 PM – 5:59 PM	53,016	21.6	151	15.0	935	3,219	6,440	42,271
6:00 PM – 8:59 PM	42,173	17.2	186	18.4	809	2,327	4,041	34,810
9:00 PM – 11:59 PM	24,372	9.9	174	17.2	602	1,388	2,411	19,797
Unknown	163	0.1	0	0.0	4	5	7	147
TOTAL	245,432	100.0	1,010	100.0	4,484	13,762	26,171	200,005

**ALL CRASHES
BY TIME OF DAY**



**FATAL CRASHES
BY TIME OF DAY**

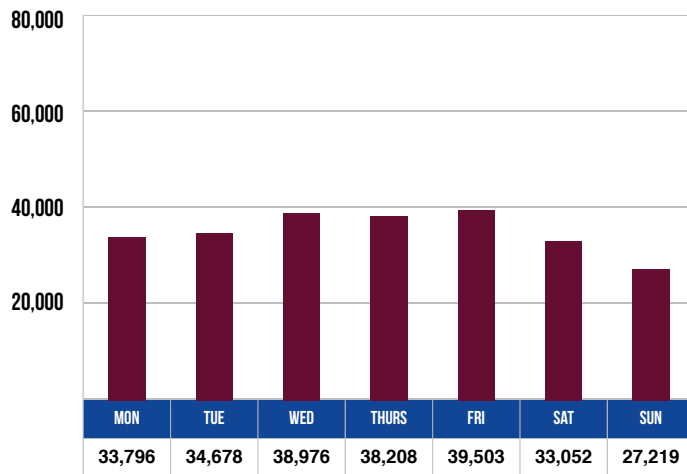


Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. In 2020, the highest percentage of fatal crashes occurred during the 6:00 PM to 8:59 PM time period (18.4%).

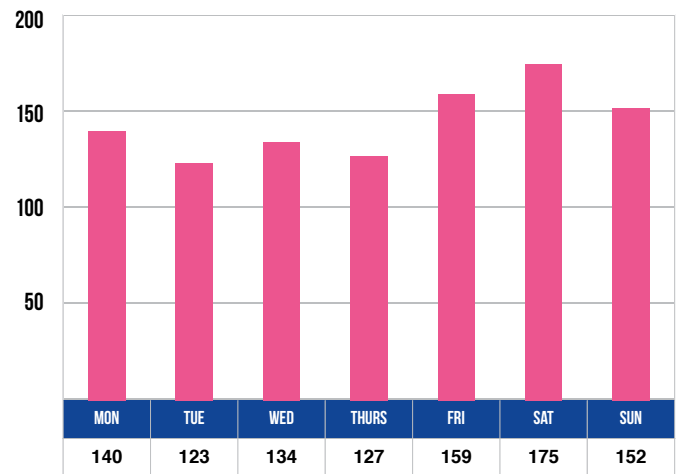
DAY OF WEEK

DAY OF WEEK	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Monday	33,796	13.8	140	13.9	565	1,777	3,556	27,758
Tuesday	34,678	14.1	123	12.2	558	1,892	3,645	28,460
Wednesday	38,976	15.9	134	13.3	631	2,033	4,174	32,004
Thursday	38,208	15.6	127	12.6	601	2,040	4,099	31,341
Friday	39,503	16.1	159	15.7	706	2,161	4,254	32,223
Saturday	33,052	13.5	175	17.3	737	2,063	3,492	26,585
Sunday	27,219	11.1	152	15.0	686	1,796	2,951	21,634
TOTAL	245,432	100.0	1,010	100.0	4,484	13,762	26,171	200,005

**ALL CRASHES
BY DAY OF WEEK**



**FATAL CRASHES
BY DAY OF WEEK**

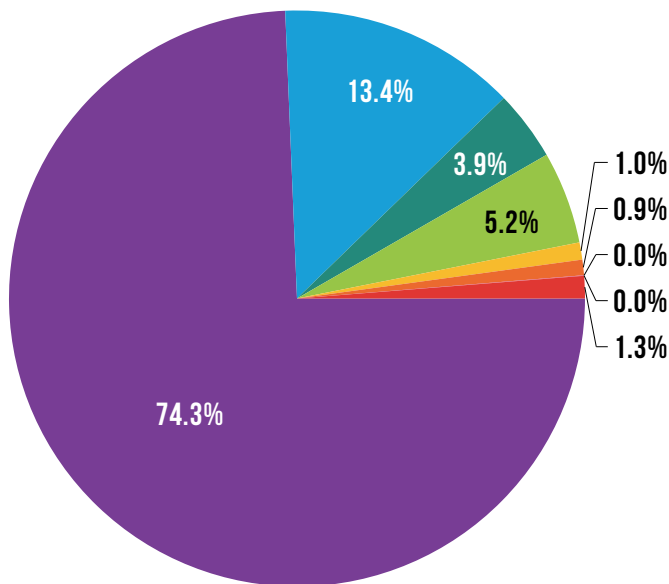


Crash frequencies are higher Monday through Friday than on the weekend. Saturday (175) has the highest number of fatal crashes.

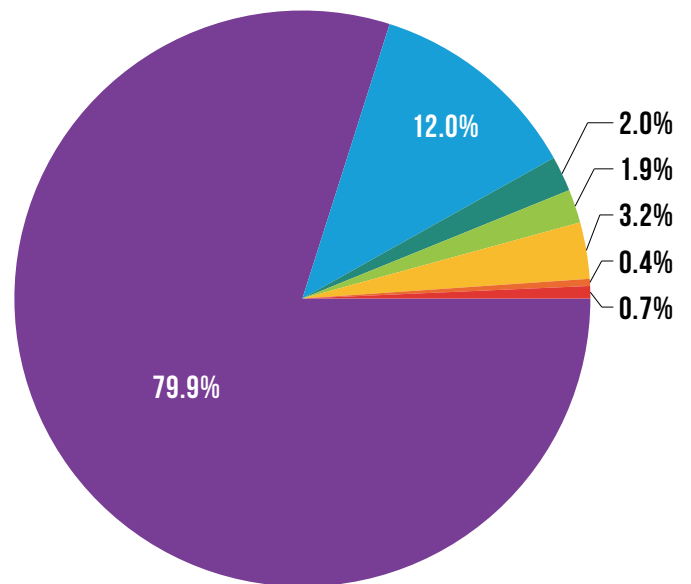
ROAD CONDITION

ROAD SURFACE CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Dry	182,472	74.3	807	79.9	3,597	10,796	19,670	147,602
Wet	32,691	13.3	120	11.9	472	1,691	3,865	26,543
Ice	9,662	3.9	20	2.0	109	414	950	8,169
Snow	12,745	5.2	19	1.9	110	438	1,106	11,072
Mud, Dirt, Gravel	2,324	0.9	32	3.2	131	263	215	1,683
Slush	2,133	0.9	4	0.4	33	93	226	1,777
Debris	45	0.0	0	0.0	5	4	1	35
Water (Standing/Flowing)	200	0.1	1	0.1	3	11	28	157
Sand	44	0.0	0	0.0	7	7	2	28
Oily	30	0.0	0	0.0	0	3	6	21
Other	78	0.0	2	0.2	3	11	12	50
Unknown	3,008	1.2	5	0.5	14	31	90	2,868
TOTAL	245,432	100.0	1,010	100.0	4,484	13,762	26,171	200,005

■ DRY
 ■ WET/WATER
 ■ ICE
 ■ SNOW
 ■ MUD/SAND
 ■ SLUSH
 ■ DEBRIS
 ■ OILY
 ■ OTHER/UNKNOWN



ALL CRASHES



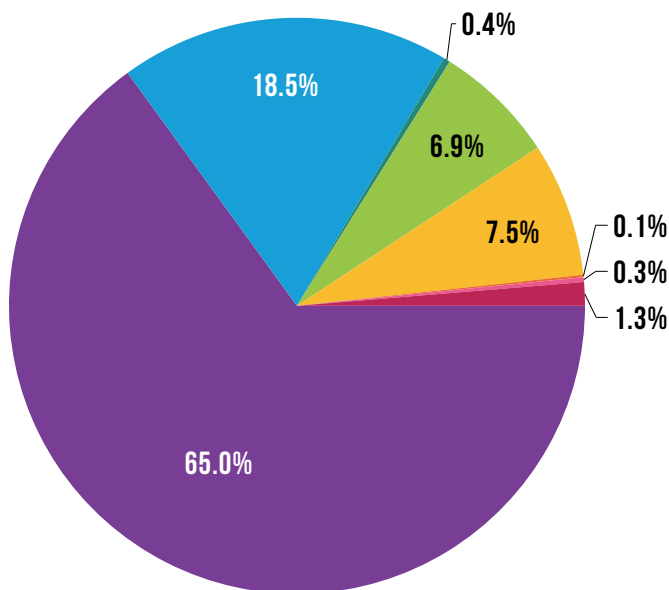
FATAL CRASHES

The highest percentage of all crashes (74.3%), fatal crashes (79.9%), injury crashes (76.7%), and property damage only crashes (73.8%) occur on dry roads.

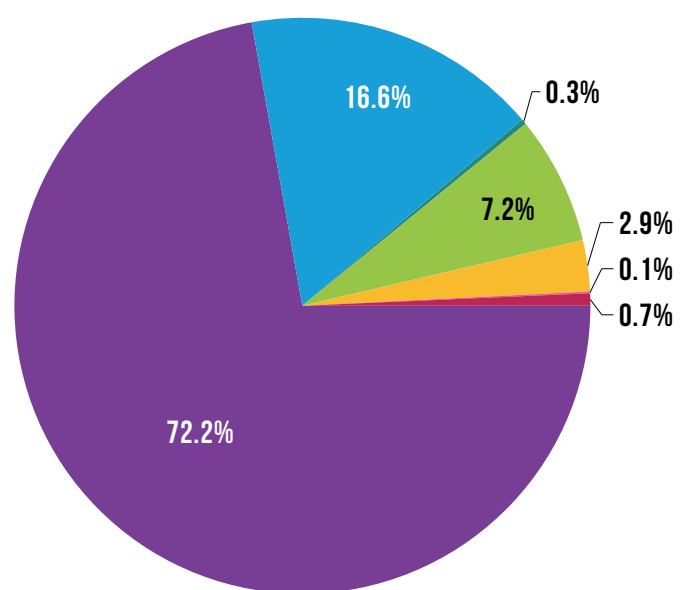
WEATHER CONDITION

WEATHER CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Clear	159,506	65.0	729	72.2	3,285	9,631	17,074	128,787
Cloudy	45,495	18.5	168	16.6	729	2,381	4,874	37,343
Fog	895	0.4	3	0.3	16	42	87	747
Rain	16,818	6.9	73	7.2	251	903	2,082	13,509
Snow	17,195	7.0	25	2.5	165	647	1,718	14,640
Severe Crosswinds	314	0.1	0	0.0	4	12	33	265
Sleet/Hail	652	0.3	1	0.1	10	39	79	523
Blowing Snow	1,294	0.5	4	0.4	13	68	124	1,085
Blowing Sand, Soil, Dirt	19	0.0	0	0.0	0	1	3	15
Smoke	13	0.0	0	0.0	1	0	3	9
Unknown	3,231	1.3	7	0.7	10	38	94	3,082
TOTAL	245,432	100.0	1,010	100.0	4,484	13,762	26,171	200,005

■ CLEAR
 ■ CLOUDY
 ■ FOG/SMOKE
 ■ RAIN
 ■ SNOW/BLOWING SNOW
 ■ SEVERE WIND/BLOWING SAND
 ■ SLEET/HAIL
 ■ UNKNOWN



ALL CRASHES

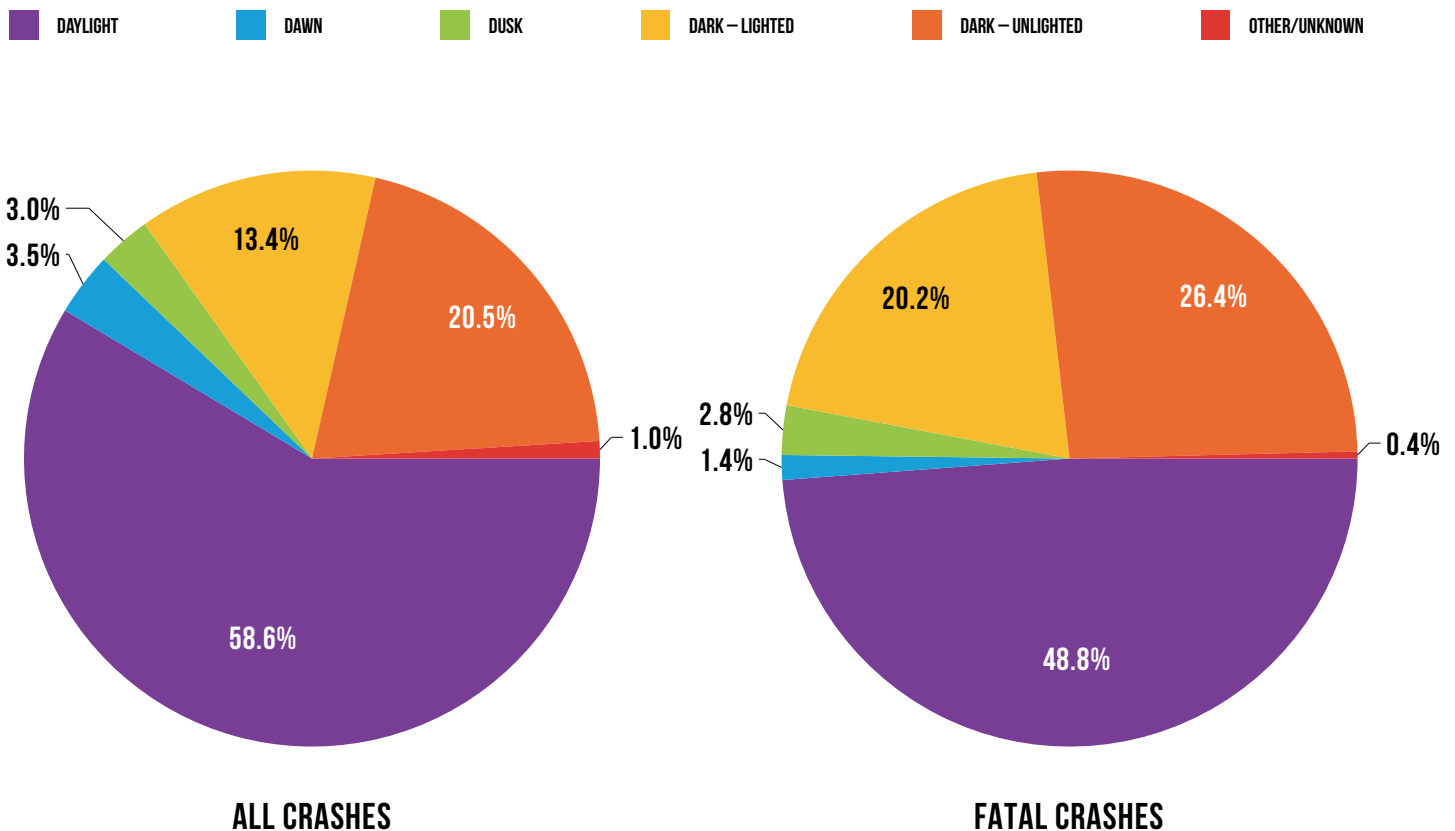


FATAL CRASHES

The highest percentage of all crashes (65.0%), fatal crashes (72.2%), injury crashes (67.5%), and property damage only crashes (64.4%) occur during clear weather conditions.

LIGHT CONDITION

LIGHT CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Daylight	143,816	58.6	493	48.8	2,672	9,069	17,503	114,079
Dawn	8,699	3.5	14	1.4	77	276	578	7,754
Dusk	7,365	3.0	28	2.8	132	390	698	6,117
Dark – Lighted	32,895	13.4	204	20.2	805	2,156	4,360	25,370
Dark – Unlighted	50,256	20.5	267	26.4	791	1,850	2,965	44,383
Other	69	0.0	1	0.1	0	1	7	60
Unknown	2,332	1.0	3	0.3	7	20	60	2,242
TOTAL	245,432	100.0	1,010	100.0	4,484	13,762	26,171	200,005

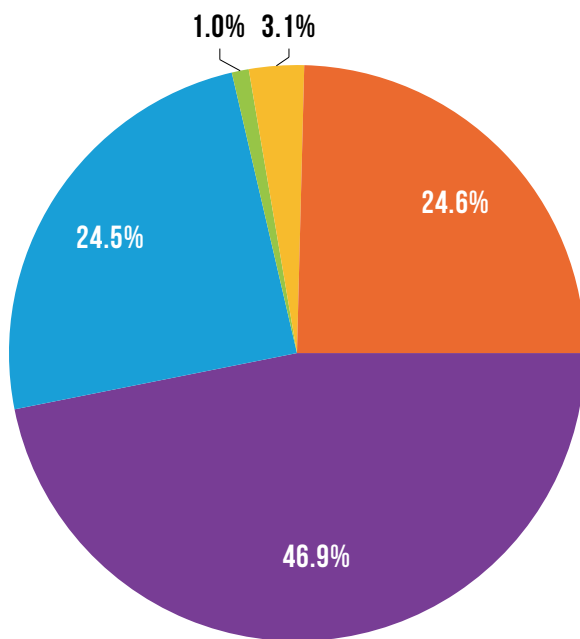


The highest percentage of all crashes (58.6%) , fatal crashes (48.8%), injury crashes (65.8%), and property damage only crashes (57.0%) occur during daylight hours.

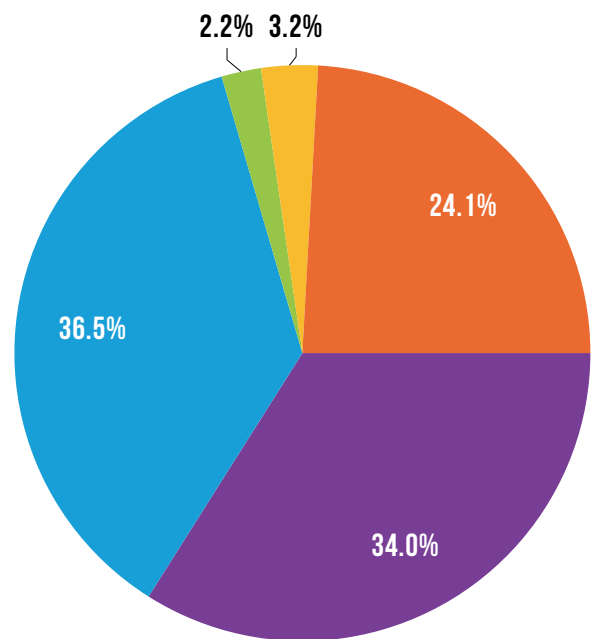
INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Signal	35,182	46.9	107	34.0	611	2,658	5,864	25,942
Stop Sign	18,385	24.5	115	36.5	543	1,562	2,930	13,235
Stop with Flashing Beacon	717	1.0	7	2.2	29	63	135	483
Yield Sign	2,316	3.1	10	3.2	38	107	344	1,817
None	18,464	24.6	76	24.1	386	1,240	2,363	14,399
Uncoded & Errors	0	0.0	0	0.0	0	0	0	0
TOTAL	75,064	100.0	315	100.0	1,607	5,630	11,636	55,876

■ SIGNAL
 ■ STOP SIGN
 ■ STOP WITH FLASHING BEACON
 ■ YIELD SIGN
 ■ NONE
 ■ UNCODED & ERRORS



ALL CRASHES



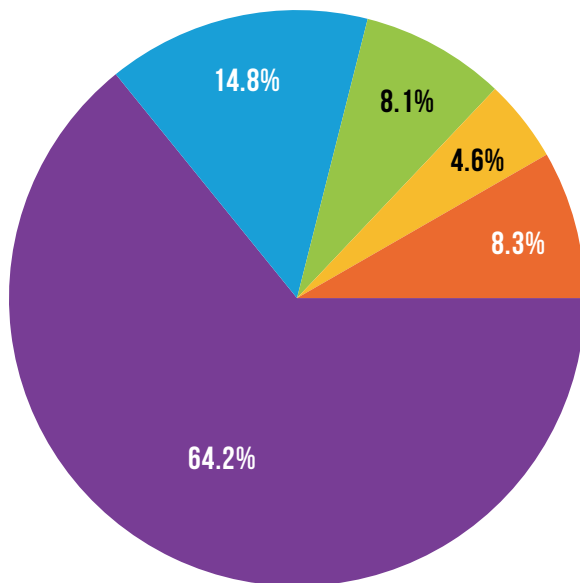
FATAL CRASHES

Compared to other intersection crashes, intersections with signals have the highest percentage of all crashes (46.9%), injury crashes (48.4%), and property damage only crashes (46.4%). Intersections with stop signs have the highest percentage of fatal crashes (36.5%).

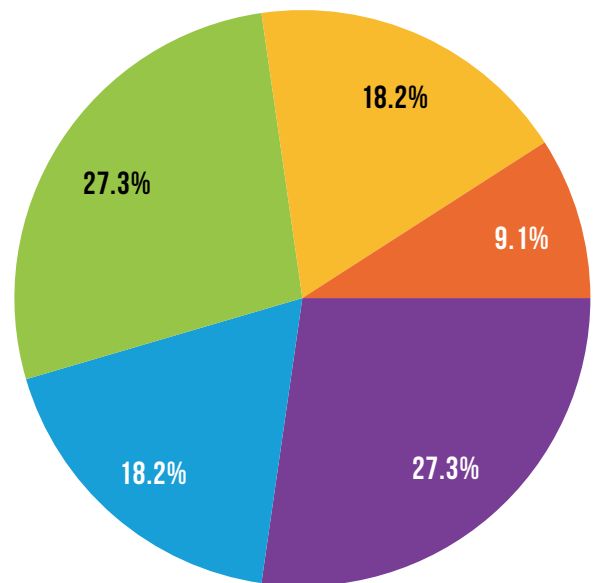
CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	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).							
Lane Closure	2,466	64.2	3	27.3	29	123	337	1,974
Lane Shift/Crossover	568	14.8	2	18.2	6	30	70	460
Work on Shoulder/Median	312	8.1	3	27.3	9	19	33	248
Intermittent/Moving Work	178	4.6	2	18.2	1	10	15	150
Other	319	8.3	1	9.1	11	21	30	256
Uncoded & Errors	0	0.0	0	0.0	0	0	0	0
TOTAL	3,843	100.0	11	100.0	56	203	485	3,088

LANE CLOSURE
 LANE SHIFT/CROSSOVER
 WORK ON SHOULDER/MEDIAN
 INTERMITTENT/MOVING WORK
 OTHER
 UNCODED & ERRORS



ALL CRASHES



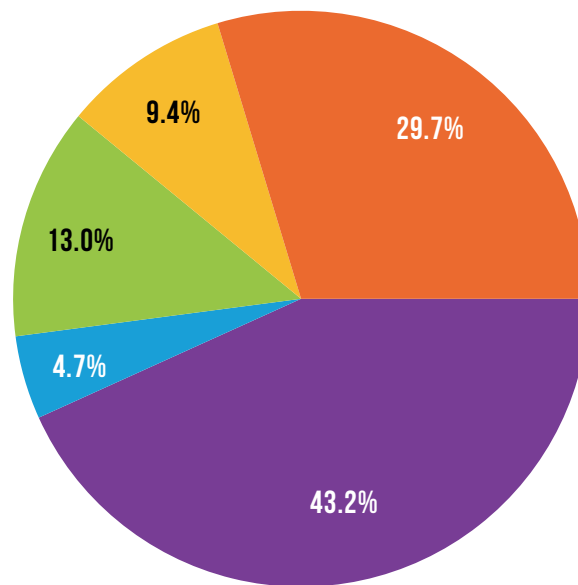
FATAL CRASHES

The highest percentage of all crashes (64.2%), fatal crashes (27.3%), injury crashes (65.7%), and property damage only crashes (63.9%) occur in closed lanes in construction/maintenance zones.

CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
UTILITY	Indicates work on facilities other than the roadway such as telephone, electrical, cable television, water, or sewer.							
Lane Closure	83	43.2	0	0.0	4	9	7	63
Lane Shift/Crossover	9	4.7	0	0.0	0	1	1	7
Work on Shoulder/Median	25	13.0	0	0.0	0	2	4	19
Intermittent/Moving Work	18	9.4	0	0.0	0	0	1	17
Other	57	29.7	0	0.0	3	3	9	42
Uncoded & Errors	0	0.0	0	0.0	0	0	0	0
TOTAL	192	100.0	0	0.0	7	15	22	148

LANE CLOSURE
 LANE SHIFT/CROSSOVER
 WORK ON SHOULDER/MEDIAN
 INTERMITTENT/MOVING WORK
 OTHER
 UNCODED & ERRORS



ALL CRASHES

The highest percentage of all crashes (43.2%), injury crashes (45.5%), and property damage crashes (42.6%) in utility construction zones occurred when the work zone activity was a lane closure.

VEHICLE/DRIVER

(characteristics specific to individual traffic units)

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VEHICLE TYPE AND CRASH INVOLVEMENT

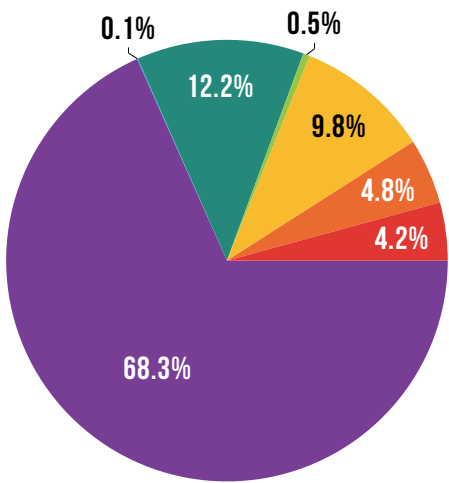
VEHICLE TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Passenger Car, SUV, Van	323,048	79.9	1,111	68.3	64,666	257,271	538	65.9	41,507	281,003
Motor Home	937	0.2	1	0.1	162	774	0	0.0	90	847
Pickup Truck	49,439	12.2	199	12.2	8,305	40,935	79	9.7	4,491	44,869
Small Truck under 10,000 lbs. GVWR	1,734	0.4	8	0.5	301	1,425	3	0.4	140	1,591
Motorcycle	3,092	0.8	160	9.8	2,285	647	148	18.1	2,243	701
Moped / Goped	461	0.1	17	1.0	360	84	16	2.0	354	91
Go-cart / Golf Cart	52	0.0	0	0.0	39	13	0	0.0	36	16
Snowmobile	99	0.0	2	0.1	63	34	2	0.2	55	42
Off-Road Vehicle - ORV / All-Terrain Vehicle - ATV	459	0.1	16	1.0	334	109	15	1.8	320	124
Other	1,521	0.4	13	0.8	268	1,240	8	1.0	138	1,375
Unknown	11,577	2.9	21	1.3	1,285	10,271	0	0.0	8	11,569
CDL Truck/Bus (breakdown below)	11,867	2.9	78	4.8	2,001	9,788	7	0.9	549	11,311
Total Number of Vehicles	404,286	100.0	1,626	100.0	80,069	322,591	816	100.0	49,931	353,539

Note: Buses cannot be broken out of CDL Truck/Bus

CDL TRUCK/BUS SUB-CATEGORY TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
10,000 lbs. or Less	114	1.0	0	0.0	7	107	0	0.0	3	111
10,001 - 26,000 lbs.	4,256	35.9	17	21.8	633	3,606	1	14.3	192	4,063
Greater than 26,000 lbs.	7,312	61.6	61	78.2	1,355	5,896	6	85.7	354	6,952
Unknown Truck	185	1.6	0	0.0	6	179	0	0.0	0	185
Total Number of Vehicles	11,867	100.0	78	100.0	2,001	9,788	7	100.0	549	11,311

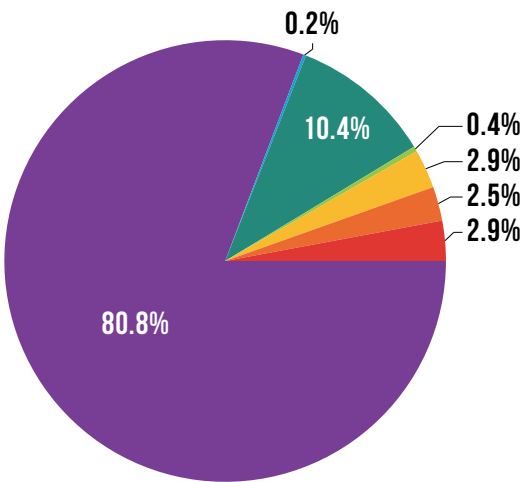
VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

PASSENGER CAR, SUV, VAN MOTOR HOME PICKUP TRUCK TRUCK UNDER 10,000 LBS. MOTORCYCLE CDL TRUCK/BUS OTHER

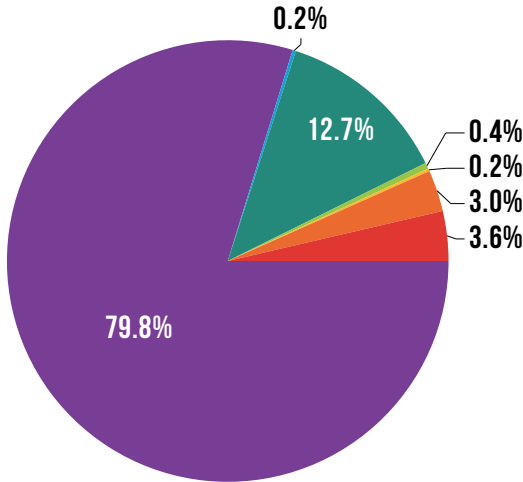


FATAL

The chart shows that 81.1 percent of vehicles involved in fatal crashes are passenger vehicles (passenger cars, SUVs, vans, motor homes, pickup trucks, or trucks under 10,000 lbs.). Motorcycles make up 9.8 percent of fatal crash involvements.



INJURY



PROPERTY DAMAGE ONLY

Passenger vehicles (passenger cars, SUVs, vans, motor homes, pickup trucks, or trucks under 10,000 lbs.) make up an even larger share of vehicles in injury crashes (91.8%) and property damage only (PDO) crashes (93.1%) than they do of fatal crashes.

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

ACTION PRIOR TO CRASH

DRIVER ACTION	VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number	% of Total		A	B	C	
Going straight ahead	234,577	58.0	1,175	4,989	14,975	28,548	184,890
Turning left	27,714	6.9	107	665	2,402	4,302	20,238
Turning right	11,949	3.0	20	108	553	1,101	10,167
Stopped on roadway	32,552	8.1	50	296	1,751	4,990	25,465
In prior crash	236	0.1	3	15	24	40	154
Changing lanes	11,577	2.9	10	86	413	889	10,179
Backing	8,217	2.0	2	30	76	216	7,893
Slowing/stopping on roadway	30,268	7.5	40	245	1,219	4,209	24,555
Slowing/stopping other	441	0.1	2	8	19	49	363
Starting up on roadway	6,231	1.5	11	100	354	924	4,842
Starting up other	73	0.0	0	1	4	18	50
Entering parking	264	0.1	0	3	8	21	232
Leaving parking	776	0.2	1	6	39	93	637
Entering roadway	4,099	1.0	12	75	255	578	3,179
Leaving roadway	567	0.1	9	25	60	66	407
Making U-turn	975	0.2	5	36	82	156	696
Overtaking or passing	2,630	0.7	19	88	170	237	2,116
Avoiding object	332	0.1	1	5	22	53	251
Avoiding animal	759	0.2	2	10	64	94	589
Avoiding pedestrian	79	0.0	8	7	7	11	46
Avoiding vehicle (front/back)	2,242	0.6	14	77	166	271	1,714
Avoiding vehicle (angle)	1,006	0.2	2	20	78	140	766
Driverless moving	194	0.0	4	0	5	10	175
Parked	17,342	4.3	53	190	636	1,034	15,429
Crossing at intersection	58	0.0	0	3	8	12	35
Crossing not at intersection	8	0.0	0	0	1	1	6
Getting on/off vehicle	4	0.0	0	0	2	0	2
In roadway with traffic	12	0.0	0	1	1	1	9
In roadway against traffic	15	0.0	1	1	2	1	10
Standing or lying in roadway	2	0.0	0	0	1	1	0
Pushing/working on vehicle	3	0.0	0	0	0	0	3
Other working in roadway	3	0.0	0	0	0	0	3
Playing in roadway	0	0.0	0	0	0	0	0
In roadway other reason	16	0.0	0	1	0	2	13
Not in roadway	29	0.0	0	1	4	5	19
Negotiating a curve	3,797	0.9	51	151	345	453	2,797
Other	561	0.1	3	18	50	63	427
Unknown	4,678	1.2	21	55	110	258	4,234
TOTAL	404,286	100.0	1,626	7,316	23,906	48,847	322,591

ACTION PRIOR TO CRASH (CONTINUED)

MOTORCYCLIST ACTION	MOTORCYCLES		MOTORCYCLISTS*		FATALITY	INJURY			NO INJURY
	Number of Motorcycles	% of Total	Number of Motorcyclists	% of Total		A	B	C	
Going straight ahead	2,152	69.6	2,356	69.8	124	592	742	404	437
Turning left	121	3.9	129	3.8	0	20	57	29	20
Turning right	74	2.4	79	2.3	4	14	26	16	17
Stopped on roadway	94	3.0	106	3.1	1	6	16	26	57
In prior crash	1	0.0	1	0.0	0	0	0	0	0
Changing lanes	50	1.6	54	1.6	1	13	26	5	8
Backing	0	0.0	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	148	4.8	163	4.8	6	28	54	27	40
Slowing/stopping other	6	0.2	6	0.2	0	2	1	0	3
Starting up on roadway	27	0.9	29	0.9	0	2	11	2	14
Starting up other	0	0.0	0	0.0	0	0	0	0	0
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	18	0.6	18	0.5	1	5	2	3	7
Leaving roadway	7	0.2	7	0.2	0	2	3	0	2
Making U-turn	11	0.4	16	0.5	0	1	4	3	8
Overtaking or passing	67	2.2	71	2.1	2	27	22	4	9
Avoiding object	3	0.1	3	0.1	0	0	0	1	2
Avoiding animal	9	0.3	9	0.3	0	2	3	3	1
Avoiding pedestrian	2	0.1	3	0.1	0	1	1	1	0
Avoiding vehicle (front/back)	56	1.8	63	1.9	0	12	27	11	13
Avoiding vehicle (angle)	26	0.8	28	0.8	0	8	10	5	5
Driverless moving	1	0.0	1	0.0	0	0	0	0	1
Parked	35	1.1	35	1.0	0	1	0	2	4
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	1	0.0	1	0.0	0	0	1	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	1	0.0	1	0.0	0	0	0	1	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Negotiating a curve	156	5.0	170	5.0	11	48	64	21	22
Other	6	0.2	6	0.2	0	2	2	0	0
Unknown	19	0.6	19	0.6	2	3	3	0	4
TOTAL	3,092	100.0	3,375	100.0	152	789	1,076	564	674

*This table includes 120 motorcyclists (drivers and passengers) with unknown injury severity

ACTION PRIOR TO CRASH (CONTINUED)

BICYCLIST ACTION	BICYCLISTS*		FATALITY	INJURY			NO INJURY
	Number of Bicyclists	% of Total		A	B	C	
Going straight ahead	750	60.7	22	85	250	224	144
Turning left	34	2.8	1	7	13	5	6
Turning right	6	0.5	0	2	2	2	0
Stopped on roadway	11	0.9	0	2	5	3	1
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	2	0.2	0	1	1	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	4	0.3	0	0	2	1	1
Slowing/stopping other	0	0.0	0	0	0	0	0
Starting up on roadway	13	1.1	0	2	7	2	2
Starting up other	2	0.2	0	1	1	0	0
Entering parking	0	0.0	0	0	0	0	0
Leaving parking	1	0.1	0	1	0	0	0
Entering roadway	54	4.4	2	7	28	12	5
Leaving roadway	0	0.0	0	0	0	0	0
Making U-turn	2	0.2	0	0	1	0	1
Overtaking or passing	5	0.4	0	0	2	0	1
Avoiding object	1	0.1	0	0	1	0	0
Avoiding animal	1	0.1	0	0	1	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	4	0.3	1	0	0	0	3
Avoiding vehicle (angle)	3	0.2	0	1	0	1	1
Driverless moving	1	0.1	0	0	1	0	0
Parked	0	0.0	0	0	0	0	0
Crossing at intersection	232	18.8	2	18	99	57	44
Crossing not at intersection	42	3.4	2	7	13	15	3
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	18	1.5	3	7	4	4	0
In roadway against traffic	9	0.7	2	0	4	3	0
Standing or lying in roadway	1	0.1	0	0	0	1	0
Pushing/working on vehicle	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0	0	0	0
Playing in roadway	3	0.2	0	0	3	0	0
In roadway other reason	9	0.7	0	3	3	3	0
Not in roadway	6	0.5	2	0	1	2	1
Negotiating a curve	1	0.1	0	0	1	0	0
Other	12	1.0	0	1	2	5	4
Unknown	8	0.6	1	2	0	1	0
TOTAL	1,235	100.0	38	147	445	341	217

*Includes 47 bicyclists with unknown injury severity

ACTION PRIOR TO CRASH (CONTINUED)

PEDESTRIAN ACTION	PEDESTRIANS*		FATALITY	INJURY			NO INJURY
	Number of Pedestrians	% of Total		A	B	C	
Going straight ahead	26	1.5	0	2	10	7	6
Turning left	1	0.1	0	0	1	0	0
Turning right	0	0.0	0	0	0	0	0
Stopped on roadway	3	0.2	0	0	0	3	0
In prior crash	0	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	0	0.0	0	0	0	0	0
Slowing/stopping other	1	0.1	0	0	1	0	0
Starting up on roadway	1	0.1	0	0	0	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	0	0.0	0	0	0	0	0
Entering roadway	2	0.1	0	1	0	0	1
Leaving roadway	0	0.0	0	0	0	0	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	0	0.0	0	0	0	0	0
Avoiding object	0	0.0	0	0	0	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	0.1	0	0	0	1	0
Avoiding vehicle (angle)	0	0.0	0	0	0	0	0
Driverless moving	0	0.0	0	0	0	0	0
Parked	0	0.0	0	0	0	0	0
Crossing at intersection	559	31.3	24	81	186	181	73
Crossing not at intersection	377	21.1	57	105	99	70	29
Getting on/off vehicle	18	1.0	0	6	4	6	1
In roadway with traffic	183	10.3	25	27	45	46	31
In roadway against traffic	26	1.5	3	3	10	5	4
Standing or lying in roadway	141	7.9	20	31	41	30	13
Pushing/working on vehicle	15	0.8	1	5	6	3	0
Other working in roadway	25	1.4	0	7	4	10	3
Playing in roadway	17	1.0	0	0	9	6	1
In roadway other reason	155	8.7	22	43	40	31	14
Not in roadway	86	4.8	15	21	22	24	2
Negotiating a curve	0	0.0	0	0	0	0	0
Other	99	5.5	6	16	30	29	12
Unknown	48	2.7	2	19	11	4	7
TOTAL	1,784	100.0	175	367	519	457	197

*Includes 69 pedestrians with unknown injury severity

MOST HARMFUL EVENT

NONCOLLISION	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Loss of control	3,545	0.9	10	149	367	557	2,462
Ran off roadway left	1,093	0.3	2	29	87	138	837
Ran off roadway right	1,796	0.4	1	50	128	214	1,403
Re-enter roadway	172	0.0	0	4	7	23	138
Overturn	5,249	1.3	109	405	1,034	1,086	2,615
Separation of Units	369	0.1	2	2	13	71	281
Fire/explosion	440	0.1	12	11	22	15	380
Immersion	105	0.0	1	3	1	15	85
Jackknife	187	0.0	0	1	3	16	167
Downhill runaway	17	0.0	0	0	1	0	16
Cargo loss/shift	371	0.1	0	1	6	6	358
Individual fell from vehicle	390	0.1	15	128	175	49	23
Other noncollision	1,006	0.2	0	31	60	110	805
Equipment failure (blown tire, brake failure, etc.)	510	0.1	2	2	20	29	457
Cross centerline	758	0.2	0	22	69	98	569
Cross median	110	0.0	1	7	6	15	81
SUBTOTAL	16,118	4.0	155	845	1,999	2,442	10,677

COLLISION WITH A NONFIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	1,466	0.4	164	308	438	361	195
Bicyclist	1,139	0.3	35	136	422	311	235
Motor vehicle in transport	281,235	69.6	989	4,760	17,447	40,097	217,942
Parked motor vehicle	15,302	3.8	31	147	515	899	13,710
Railroad train	30	0.0	0	4	4	1	21
Animal	52,011	12.9	0	69	327	634	50,981
Other nonfixed object	3,289	0.8	9	33	94	164	2,989
Work zone/maintenance equipment	111	0.0	1	2	4	12	92
Cargo falling/shifting/anything set in motion by a motor vehicle	631	0.2	0	2	21	21	587
SUBTOTAL	355,214	87.9	1,229	5,461	19,272	42,500	286,752

MOST HARMFUL EVENT (CONTINUED)

COLLISION WITH A FIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Bridge pier/abutment/support	149	0.0	3	9	14	16	107
Bridge rail	242	0.1	2	6	17	30	187
Guardrail face	1,888	0.5	2	30	88	208	1,560
Guardrail end	485	0.1	2	11	38	70	364
Other post/pole/support	952	0.2	7	20	49	78	798
Culvert	372	0.1	4	21	54	58	235
Curb	1,460	0.4	6	29	65	81	1,279
Ditch	4,848	1.2	10	132	399	536	3,771
Embankment	703	0.2	7	34	60	102	500
Fence	673	0.2	2	12	22	65	572
Mailbox	1,165	0.3	1	7	13	36	1,108
Tree	7,100	1.8	125	444	923	944	4,664
Rail crossing signal	67	0.0	0	1	0	5	61
Building	561	0.1	12	25	81	86	357
Traffic island	35	0.0	0	0	1	2	32
Fire hydrant	426	0.1	0	0	26	36	364
Impact attenuator	156	0.0	1	3	11	21	120
Other fixed object	1,440	0.4	3	51	113	147	1,126
Bridge overhead structure	41	0.0	0	2	1	4	34
Cable barrier	724	0.2	0	9	30	69	616
Concrete barrier	3,742	0.9	16	65	278	727	2,656
Traffic sign/post	2,242	0.6	5	15	41	94	2,087
Traffic signal equipment	195	0.0	0	5	8	16	166
Utility pole/light support	3,282	0.8	34	79	303	473	2,393
SUBTOTAL	32,948	8.1	242	1,010	2,635	3,904	25,157

	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	6	0.0	0	0	0	1	5
MOST HARMFUL EVENT TOTAL	404,286	100.0	1,626	7,316	23,906	48,847	322,591

VEHICLE DEFECTS IN CRASH INVOLVEMENT

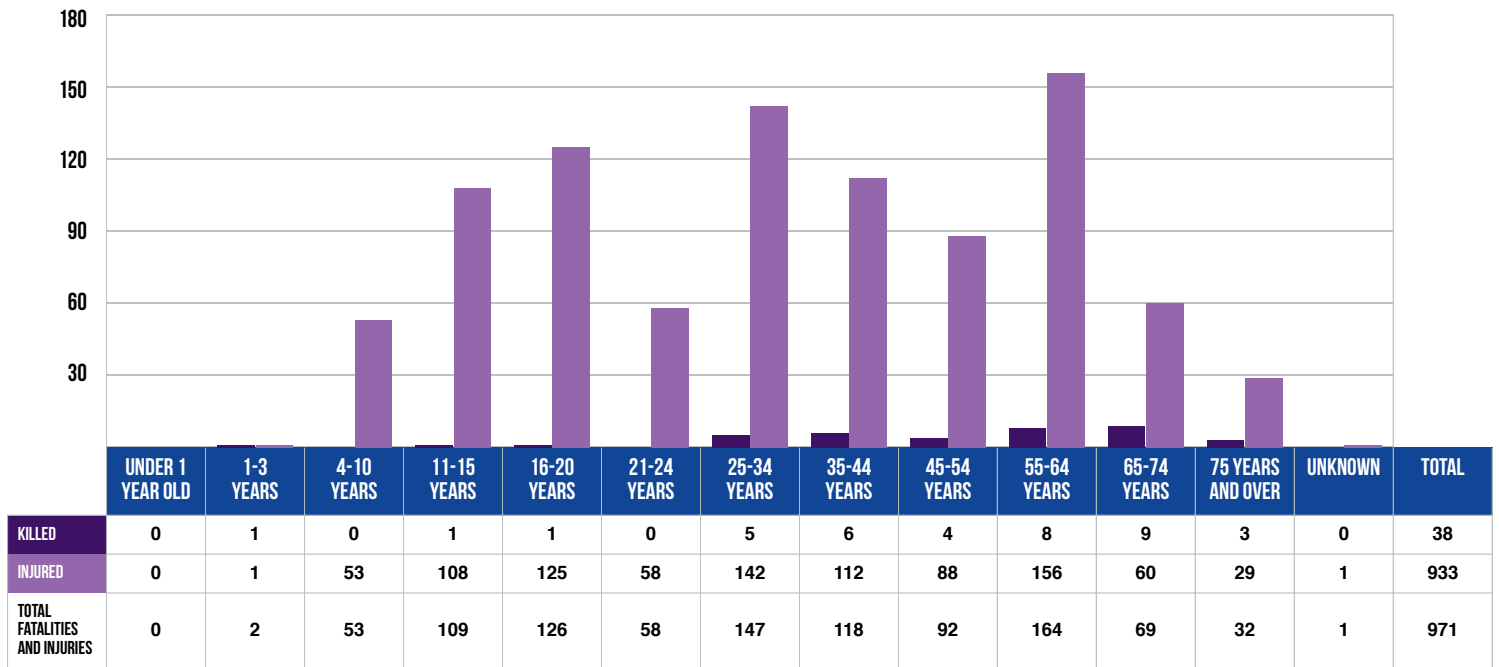
VEHICLE DEFECTS	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Brakes	663	0.2	4	17	58	103	481
Lights/reflectors	98	0.0	2	6	1	17	72
Steering	227	0.1	0	6	24	35	162
Tires/wheels	598	0.1	4	16	38	59	481
Windows	23	0.0	0	1	2	0	20
Coupling/hitch/chains	76	0.0	0	0	3	5	68
Other	945	0.2	2	19	53	115	756
None or Unknown	401,656	99.3	1,614	7,251	23,727	48,513	320,551
TOTAL	404,286	100.0	1,626	7,316	23,906	48,847	322,591

DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
None	206,962	51.2	634	2,960	10,595	22,670	170,103
Speed too fast	22,391	5.5	190	695	1,766	3,008	16,732
Speed too slow	140	0.0	0	3	9	28	100
Failed to yield	34,404	8.5	105	752	2,990	5,560	24,997
Disregard traffic control	9,700	2.4	67	401	1,306	2,264	5,662
Drove wrong way	371	0.1	10	12	44	63	242
Drove left of center	2,193	0.5	54	130	267	311	1,431
Improper passing	2,366	0.6	6	48	80	151	2,081
Improper lane use	10,054	2.5	17	94	343	772	8,828
Improper turn	4,344	1.1	12	52	204	496	3,580
Improper/no signal	292	0.1	0	3	4	21	264
Improper backing	5,536	1.4	1	11	37	121	5,366
Unable to stop in assured clear distance	45,227	11.2	45	351	2,087	6,549	36,195
Reckless driving	2,620	0.6	112	218	334	418	1,538
Careless/negligent driving	10,386	2.6	90	523	1,129	1,496	7,148
Other	13,432	3.3	80	395	1,142	1,563	10,252
Unknown	33,868	8.4	203	668	1,569	3,356	28,072
TOTAL	404,286	100.0	1,626	7,316	23,906	48,847	322,591

MICHIGAN BICYCLE CRASHES

2020 BICYCLIST FATALITIES AND INJURIES



In 2020, there were 1,235 bicyclists involved in motor vehicle crashes, with 38 bicyclists killed and 933 injured. The top age group for bicyclist fatalities was the 65-74 age group with nine fatalities (23.7%). The 55-64 age group had the greatest percentage of total fatalities and injuries (16.9%).

BICYCLE HELMET USE AND INJURY SEVERITY

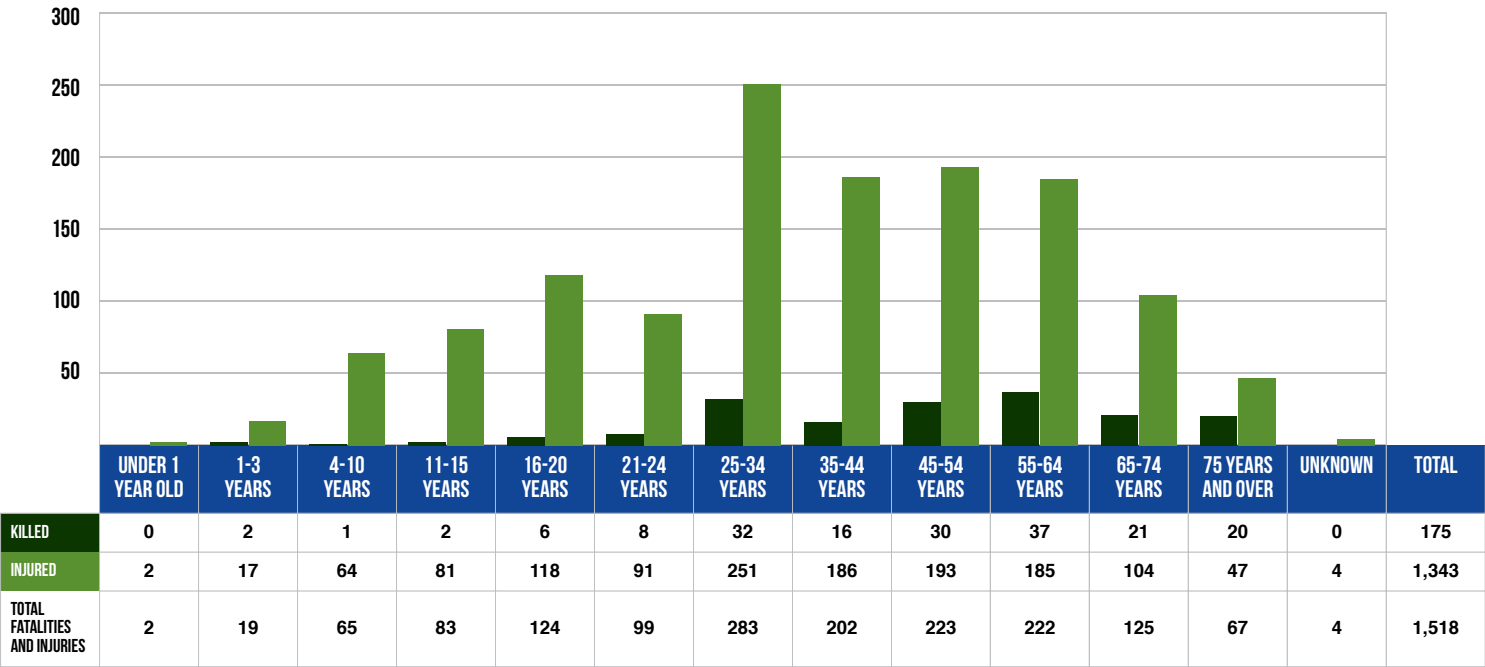
HELMET USE	FATALITY	INJURY			NO INJURY	UNKNOWN	TOTAL
		A	B	C			
Worn	8	32	85	58	30	3	216
Not Worn	14	67	196	138	90	12	517
Unknown	16	48	164	145	97	32	502
Total	38	147	445	341	217	47	1,235

Note: The data does not include helmet use for all bicyclists. There were 502 bicyclists with unknown helmet use.

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."

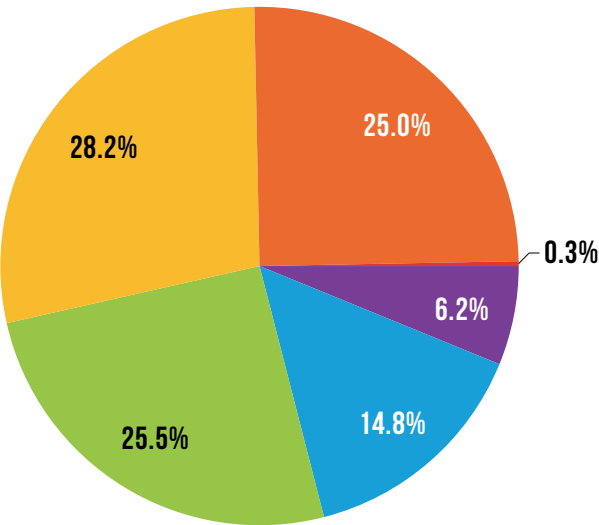
MICHIGAN PEDESTRIAN CRASHES

2020 PEDESTRIAN FATALITIES AND INJURIES

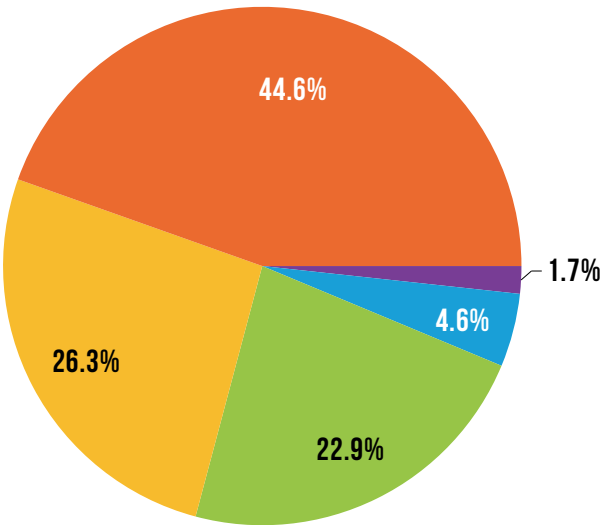


In 2020, there were 1,784 pedestrians involved in motor vehicle crashes, with 175 pedestrians killed and 1,343 injured. The top age group for pedestrian fatalities was the 55-64 age group with 37 fatalities (21.1%). The 25-34 age group had the greatest number of injuries (18.7%), and the greatest percentage of total fatalities and injuries (18.6%).

0-10 YEARS 11-20 YEARS 21-34 YEARS 35-54 YEARS 55 AND OVER UNKNOWN



PEDESTRIANS INJURED



PEDESTRIANS KILLED

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS - MOST HARMFUL EVENT

NONCOLLISION	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Loss of control	3	3.0	0	0	2	0	1
Ran off roadway left	0	0.0	0	0	0	0	0
Ran off roadway right	1	1.0	0	1	0	0	0
Re-enter roadway	0	0.0	0	0	0	0	0
Overturn	7	7.1	0	3	2	2	0
Separation of Units	0	0.0	0	0	0	0	0
Fire/explosion	2	2.0	0	0	0	0	2
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 from vehicle	14	14.1	0	5	8	1	0
Other noncollision	2	2.0	0	0	0	1	1
Equipment failure (blown tire, brake failure, etc.)	0	0.0	0	0	0	0	0
Cross centerline	0	0.0	0	0	0	0	0
Cross median	0	0.0	0	0	0	0	0
SUBTOTAL	29	29.3	0	9	12	4	4

COLLISION WITH A NONFIXED OBJECT	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	1	1.0	0	0	0	1	0
Bicyclist	0	0.0	0	0	0	0	0
Motor vehicle in transport	37	37.4	1	10	3	8	15
Parked motor vehicle	4	4.0	0	0	0	3	1
Railroad train	0	0.0	0	0	0	0	0
Animal	4	4.0	0	0	0	0	4
Other nonfixed object	2	2.0	0	1	1	0	0
Work zone/maintenance equipment	0	0.0	0	0	0	0	0
Cargo falling/shifting/anything set in motion by a motor vehicle	0	0.0	0	0	0	0	0
SUBTOTAL	48	48.5	1	11	4	12	20

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS - MOST HARMFUL EVENT (CONTINUED)

COLLISION WITH A FIXED OBJECT	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Bridge pier/abutment/support	0	0.0	0	0	0	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	1	1.0	0	0	0	1	0
Guardrail end	0	0.0	0	0	0	0	0
Other post/pole/support	0	0.0	0	0	0	0	0
Culvert	0	0.0	0	0	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	0	0.0	0	0	0	0	0
Embankment	1	1.0	0	1	0	0	0
Fence	0	0.0	0	0	0	0	0
Mailbox	0	0.0	0	0	0	0	0
Tree	14	14.1	1	2	2	2	7
Rail crossing signal	0	0.0	0	0	0	0	0
Building	2	2.0	0	0	1	0	1
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	0	0.0	0	0	0	0	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	3	3.0	0	2	0	0	1
Bridge overhead structure	0	0.0	0	0	0	0	0
Cable barrier	0	0.0	0	0	0	0	0
Concrete barrier	0	0.0	0	0	0	0	0
Traffic sign/post	0	0.0	0	0	0	0	0
Traffic signal equipment	0	0.0	0	0	0	0	0
Utility pole/light support	1	1.0	0	0	0	0	1
SUBTOTAL	22	22.2	1	5	3	3	10

	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Unknown Event	0	0.0	0	0	0	0	0
MOST HARMFUL EVENT TOTAL	99	100.0	2	25	19	19	34

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 99 snowmobiles were reported in crashes on Michigan public roadways during 2020, resulting in two fatal crashes. A total of 63 snowmobiles were involved in 55 injury crashes.

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS - MOST HARMFUL EVENT

NONCOLLISION	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Loss of control	39	8.5	1	11	15	2	10
Ran off roadway left	0	0.0	0	0	0	0	0
Ran off roadway right	9	2.0	0	1	4	2	2
Re-enter roadway	1	0.2	0	0	0	0	1
Overturn	100	21.8	6	33	40	13	8
Separation of Units	0	0.0	0	0	0	0	0
Fire/explosion	1	0.2	0	0	0	0	1
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	1	0.2	0	0	1	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell from vehicle	39	8.5	0	20	17	2	0
Other noncollision	2	0.4	0	1	1	0	0
Equipment failure (blown tire, brake failure, etc.)	2	0.4	0	1	1	0	0
Cross centerline	5	1.1	0	0	3	1	1
Cross median	0	0.0	0	0	0	0	0
SUBTOTAL	199	43.4	7	67	82	20	23

COLLISION WITH A NONFIXED OBJECT	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Pedestrian	2	0.4	0	0	2	0	0
Bicyclist	1	0.2	0	0	1	0	0
Motor vehicle in transport	156	34.0	5	29	37	25	60
Parked motor vehicle	18	3.9	0	3	5	0	10
Railroad train	0	0.0	0	0	0	0	0
Animal	11	2.4	0	2	0	2	7
Other nonfixed object	3	0.7	0	0	1	1	1
Work zone/maintenance equipment	0	0.0	0	0	0	0	0
Cargo falling/shifting/anything set in motion by a motor vehicle	1	0.2	0	0	0	1	0
SUBTOTAL	192	41.8	5	34	46	29	78

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS - MOST HARMFUL EVENT (CONTINUED)

COLLISION WITH A FIXED OBJECT	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ ATVs	% of Total		A	B	C	
Bridge pier/abutment/support	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
Other post/pole/support	3	0.7	1	1	0	0	1
Culvert	3	0.7	0	0	2	1	0
Curb	1	0.2	0	1	0	0	0
Ditch	11	2.4	0	7	3	1	0
Embankment	3	0.7	0	1	0	1	1
Fence	0	0.0	0	0	0	0	0
Mailbox	5	1.1	1	0	1	0	3
Tree	31	6.8	2	17	9	3	0
Rail crossing signal	1	0.2	0	1	0	0	0
Building	1	0.2	0	0	1	0	0
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	0	0.0	0	0	0	0	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	6	1.3	0	4	0	1	1
Bridge overhead structure	0	0.0	0	0	0	0	0
Cable barrier	0	0.0	0	0	0	0	0
Concrete barrier	0	0.0	0	0	0	0	0
Traffic sign/post	1	0.2	0	0	0	0	1
Traffic signal equipment	0	0.0	0	0	0	0	0
Utility pole/light support	2	0.4	0	0	1	0	1
SUBTOTAL	68	14.8	4	32	17	7	8

	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ ATVs	% of Total		A	B	C	
Unknown Event	0	0.0	0	0	0	0	0
MOST HARMFUL EVENT TOTAL	459	100.0	16	133	145	56	109

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 459 off-road/all-terrain vehicles were reported in crashes on Michigan public roadways during 2020, resulting in 15 fatal crashes. An additional 334 ORV/ATVs were involved in 322 injury crashes.

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

HAZARDOUS ACTION	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
None	31	31.3	0	4	5	8	14
Speed too fast	33	33.3	1	11	9	4	8
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	11	11.1	0	1	0	3	7
Disregard traffic control	1	1.0	0	0	1	0	0
Drove wrong way	0	0.0	0	0	0	0	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	0	0.0	0	0	0	0	0
Improper turn	0	0.0	0	0	0	0	0
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	0	0.0	0	0	0	0	0
Unable to stop in assured clear distance	1	1.0	0	1	0	0	0
Reckless driving	2	2.0	0	1	0	1	0
Careless/negligent driving	9	9.1	1	3	1	1	3
Other	4	4.0	0	1	1	1	1
Unknown	7	7.1	0	3	2	1	1
Total	99	100.0	2	25	19	19	34

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

HAZARDOUS ACTION	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
None	94	20.5	0	25	28	16	25
Speed too fast	109	23.7	6	42	36	12	13
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	33	7.2	1	4	8	7	13
Disregard traffic control	8	1.7	0	2	3	0	3
Drove wrong way	3	0.7	0	1	0	0	2
Drove left of center	1	0.2	0	0	0	0	1
Improper passing	2	0.4	0	0	1	0	1
Improper lane use	5	1.1	0	1	2	0	2
Improper turn	5	1.1	0	1	1	1	2
Improper/no signal	1	0.2	0	0	0	1	0
Improper backing	6	1.3	0	1	0	1	4
Unable to stop in assured clear distance	21	4.6	0	5	9	1	6
Reckless driving	17	3.7	2	9	3	0	3
Careless/negligent driving	66	14.4	3	18	29	3	13
Other	47	10.2	3	14	14	7	9
Unknown	41	8.9	1	10	11	7	12
Total	459	100.0	16	133	145	56	109

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

FARM EQUIPMENT CRASHES	2019	2020	% CHANGE
Crashes	232	181	-22.0%
Fatalities	6	5	-16.7%
Injuries	75	66	-12.0%

A total of 181 crashes involving farm equipment were reported on Michigan roadways during 2020. Of those crashes, five were fatal with five people killed.

MICHIGAN VEHICLE-TRAIN CRASHES

VEHICLE TRAIN CRASHES	2019	2020	% CHANGE
Crashes	53	35	-34.0%
Fatalities	7	0	-100.0%
Injuries	14	13	-7.1%

A total of 35 crashes involving trains were reported in Michigan during 2020. There were no fatal crashes involving trains in 2020.

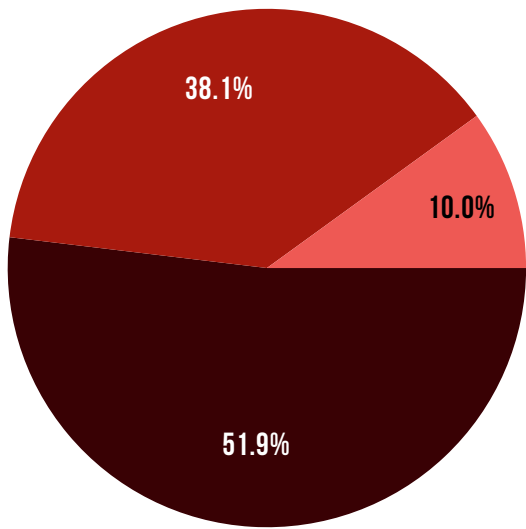
MICHIGAN MOTORCYCLE CRASHES

MOTORCYCLE DATA	2019	2020	% CHANGE
Motorcycle Registrations	251,048	237,481	-5.4%
Motorcycles in Crashes	2,809	3,092	10.1%
Motorcyclist Deaths	122	152	24.6%
Motorcyclists Injured	2,176	2,429	11.6%
Death Rate based on 10,000 motorcycle registrations	4.86	6.40	31.7%
Estimated Mileage based on 3,000 miles per motorcycle	753,144,000	712,443,000	-5.4%
Death Rate based on deaths per 100 million vehicle miles traveled	16.20	21.34	31.7%

Motorcycles were involved in 1.2 percent of all traffic crashes in Michigan in 2020. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles.

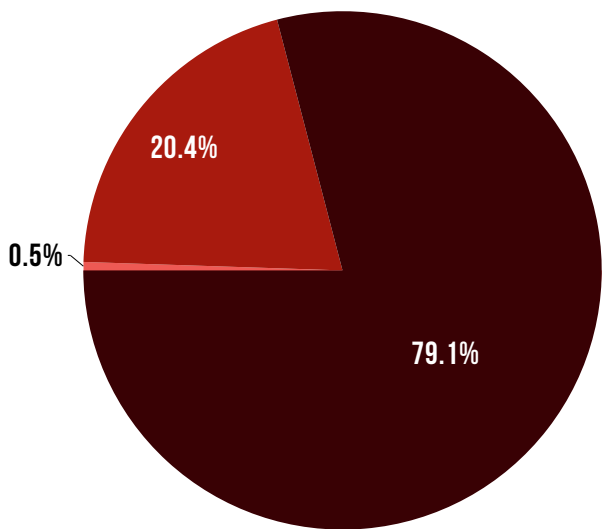
DRIVER GENDER INFORMATION

MALES FEMALES UNKNOWN

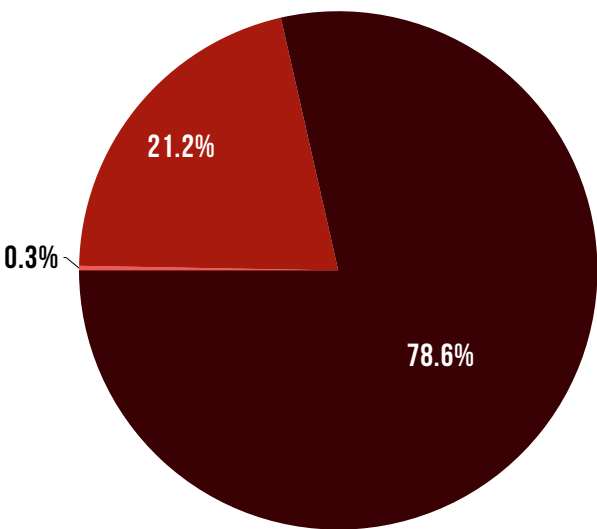


ALL DRIVERS

FATAL INJURY PROPERTY DAMAGE ONLY



MALE CRASH SEVERITY



FEMALE CRASH SEVERITY

A higher proportion of drivers in crashes are male than female. When examining the severity of crashes involving drivers of each gender, fatal crashes are more prevalent among male drivers than female drivers (0.5% vs. 0.3%).

PERSON AGE - DEMOGRAPHICS AND CRASH INVOLVEMENTS

AGE	LICENSED DRIVERS	POPULATION*	TOTAL DRIVERS IN CRASHES	DRIVERS IN FATAL CRASHES	OCCUPANTS KILLED	OCCUPANTS INJURED	TOTAL BICYCLISTS IN CRASHES	BICYCLISTS IN FATAL CRASHES	TOTAL PEDESTRIANS IN CRASHES	PEDESTRIANS IN FATAL CRASHES
0-15	38,483	1,889,940	765	3	24	3,346	214	2	202	5
16	70,077	126,571	5,041	9	9	954	38	1	29	0
17	85,646	127,422	7,119	22	17	1,279	33	0	24	1
18	80,924	132,978	9,069	22	14	1,724	26	0	26	0
19	94,092	130,779	10,117	37	11	1,758	32	0	32	2
20	104,221	133,397	9,773	35	18	1,711	25	0	39	4
21-24	428,832	548,369	37,447	145	91	6,237	79	0	116	8
25-29	571,359	697,811	42,963	194	89	6,852	96	3	174	19
30-34	583,030	613,803	36,317	177	87	5,710	88	2	148	18
35-39	546,327	599,328	30,796	141	58	4,508	77	6	113	6
40-44	525,630	566,844	27,615	111	59	3,905	59	1	116	14
45-49	528,392	612,531	27,163	115	59	3,722	62	2	129	18
50-54	586,454	642,148	26,725	95	53	3,676	61	2	132	13
55-59	631,115	708,151	26,243	110	56	3,587	106	5	136	16
60-64	639,225	691,384	22,621	86	50	3,204	89	3	116	23
65-69	558,618	584,379	15,802	68	43	2,351	52	4	80	9
70-74	446,050	453,201	11,244	46	37	1,764	28	5	63	13
75-79	289,544	313,609	7,101	50	39	1,147	24	2	38	10
80-84	174,370	201,076	3,814	25	19	721	6	1	17	5
85+	135,808	213,136	2,471	33	37	522	4	0	19	5
Unknown	---	---	44,080	102	0	32	36	0	35	0
TOTAL	7,118,197	9,986,857	404,286	1,626	870	58,710	1,235	39	1,784	189

*Population data for 2020 by age is not yet available. Data from 2019 is used.

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

AGE	LICENSED DRIVERS	TOTAL DRIVERS IN CRASHES*	CRASH RATE
0-15	38,483	765	0.020
16	70,077	5,041	0.072
17	85,646	7,119	0.083
18	80,924	9,069	0.112
19	94,092	10,117	0.108
20	104,221	9,773	0.094
21-24	428,832	37,447	0.087
25-29	571,359	42,963	0.075
30-34	583,030	36,317	0.062
35-39	546,327	30,796	0.056
40-44	525,630	27,615	0.053
45-49	528,392	27,163	0.051
50-54	586,454	26,725	0.046
55-59	631,115	26,243	0.042
60-64	639,225	22,621	0.035
65-69	558,618	15,802	0.028
70-74	446,050	11,244	0.025
75-79	289,544	7,101	0.025
80-84	174,370	3,814	0.022
85-89	92,359	1,775	0.019
90-94	36,544	611	0.017
95-99	6,521	83	0.013
100+	384	2	0.005
TOTAL	7,118,197	360,206	0.051

Data entry errors may result in an over-representation of age "100+" drivers

*Excludes 44,080 drivers with unknown age

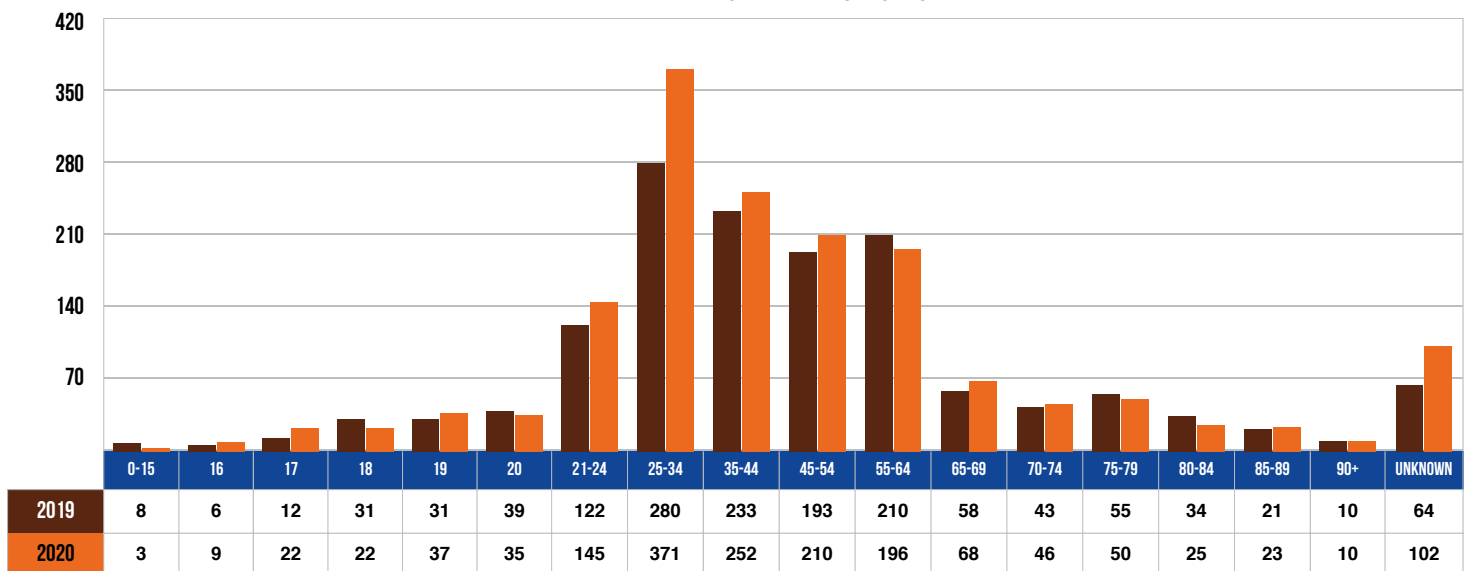
Licensed drivers age 18 have the highest crash rate at 0.112 (total crash involvements in age group divided by total number of licensed drivers in age group). The lower crash rates of the older groups (per licensed driver) may reflect reduced driving and exposure to the risk of a crash.

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2019	2020	PERCENT CHANGE	PERCENT 2020 FATAL CRASH INVOLVEMENT	PERCENT ACTIVE DRIVING POPULATION*
15 years and under	8	3	-62.5	0.2	0.5
16 years	6	9	50.0	0.6	1.0
17 years	12	22	83.3	1.4	1.2
18 years	31	22	-29.0	1.4	1.1
19 years	31	37	19.4	2.3	1.3
20 years	39	35	-10.3	2.2	1.5
21 - 24 years	122	145	18.9	8.9	6.0
25 - 34 years	280	371	32.5	22.8	16.2
35 - 44 years	233	252	8.2	15.5	15.1
45 - 54 years	193	210	8.8	12.9	15.7
55 - 64 years	210	196	-6.7	12.1	17.8
65 - 69 years	58	68	17.2	4.2	7.8
70 - 74 years	43	46	7.0	2.8	6.3
75 - 79 years	55	50	-9.1	3.1	4.1
80 - 84 years	34	25	-26.5	1.5	2.4
85 - 89 years	21	23	9.5	1.4	1.3
90 years and over	10	10	0.0	0.6	0.6
Unknown	64	102	59.4	6.3	---
Total	1,450	1,626	12.1	100.0	100.0

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

DRIVER AGE IN FATAL CRASHES



DRIVER CONDITION

POSSIBLE CONDITIONS OF DRIVER	CONDITIONS (CODED BY POLICE)	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Normal	308,485	635	4,274	17,962	37,874	247,740
Fatigued or Asleep	2,289	12	112	371	480	1,314
Sick	863	6	35	115	211	496
Medicated	442	3	17	63	107	252
Emotional	4,468	61	286	758	1,270	2,093
Physically Disabled	1,010	54	429	198	157	172
Unknown	34,376	537	1,039	1,687	3,692	27,421
Other	8,057	211	715	1,454	1,728	3,949

Note: Drivers may have more than one condition including "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 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

RESTRAINT USAGE	DRIVERS		FATALITY		INJURY			NO INJURY	UNKNOWN
	Number	% of Total	Number	% of Total	A	B	C		
ALL DRIVERS									
Restraint Used*	333,372	82.5	303	43.8	2,535	10,954	24,761	294,819	0
Restraint Not Used	4,979	1.2	266	38.4	854	1,049	751	2,058	1
Unknown	65,935	16.3	123	17.8	458	904	2,035	17,141	45,274
TOTAL	404,286	100.0	692	100.0	3,847	12,907	27,547	314,018	45,275
DRINKING DRIVERS ONLY									
Restraint Used*	5,516	72.1	25	28.1	215	683	694	3,899	0
Restraint Not Used	627	8.2	48	53.9	186	157	92	144	0
Unknown	1,508	19.7	16	18.0	85	155	194	1,058	0
TOTAL	7,651	100.0	89	100.0	486	995	980	5,101	0
DRUGGED DRIVERS ONLY									
Restraint Used*	1,261	73.5	25	41.0	82	156	214	784	0
Restraint Not Used	181	10.6	31	50.8	42	36	24	48	0
Unknown	273	15.9	5	8.2	22	33	44	169	0
TOTAL	1,715	100.0	61	100.0	146	225	282	1,001	0
DRINKING AND DRUGGED DRIVERS ONLY									
Restraint Used*	793	60.8	16	22.2	61	119	135	462	0
Restraint Not Used	180	13.8	41	56.9	47	37	25	30	0
Unknown	332	25.4	15	20.8	29	50	48	189	1
TOTAL	1,305	100.0	72	100.0	137	206	208	681	1

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	ALL CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
1. Related to intersection	75,064	315	1,607	5,630	11,636	55,876
2. In intersection	43,340	232	1,155	4,028	7,581	30,344
3. With traffic control signal	20,859	85	491	2,046	3,906	14,331
4. With hazardous action*	5,521	29	199	816	1,392	3,085

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

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

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

4. "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 5,521 crashes.

RED-LIGHT-RUNNING MOST SEVERE OUTCOME IN CRASH

SPEED LIMIT*	ALL CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
5 miles per hour	0	0	0	0	0	0
10 miles per hour	0	0	0	0	0	0
15 miles per hour	0	0	0	0	0	0
20 miles per hour	1	0	0	0	1	0
25 miles per hour	483	2	15	59	102	305
30 miles per hour	663	4	15	55	195	394
35 miles per hour	1,384	7	48	194	338	797
40 miles per hour	853	5	30	152	215	451
45 miles per hour	1,387	7	50	220	359	751
50 miles per hour	286	1	10	51	73	151
55 miles per hour	375	3	24	80	89	179
60 miles per hour	0	0	0	0	0	0
65 miles per hour	0	0	0	0	0	0
70 miles per hour	4	0	0	0	2	2
75 miles per hour	0	0	0	0	0	0
Unknown	85	0	7	5	18	55
TOTAL	5,521	29	199	816	1,392	3,085

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

CRASH TYPE	ALL CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Single Vehicle	62	3	14	21	11	13
Head On	23	0	1	2	8	12
Head On - Left Turn	345	2	10	73	90	170
Angle	4,694	24	156	676	1,211	2,627
Rear End	36	0	2	1	5	28
Rear End - Left Turn	9	0	0	1	0	8
Rear End - Right Turn	6	0	0	0	1	5
Sideswipe - Same Direction	80	0	1	2	7	70
Sideswipe - Opposite Directions	28	0	0	3	3	22
Backing	0	0	0	0	0	0
Other	232	0	15	36	55	126
Unknown	6	0	0	1	1	4
Uncoded & Errors	0	0	0	0	0	0
TOTAL	5,521	29	199	816	1,392	3,085

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

SPECIAL CIRCUMSTANCES*	ALL CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
School Bus Involved/Associated	9	0	0	0	4	5
Drinking Involved	143	4	31	44	23	41
Drug Use Involved	45	3	12	15	8	7
Pedestrian Involved	35	3	12	14	5	1
Bicyclist Involved	31	2	7	10	6	6
Snowmobile Involved	0	0	0	0	0	0
Motorcycle Involved	32	4	8	8	8	4
Train Involved	0	0	0	0	0	0
Truck/Bus Involved	214	1	12	31	48	122
Emergency Vehicle Involved	55	0	1	14	19	21
Driver Hazardous Citation	2,968	4	95	512	788	1,569

*Crashes may involve more than one special circumstance

POSSIBLE CONDITIONS OF PERSONS IN CRASH*	CONDITIONS (CODED BY POLICE)	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Normal	4,237	10	103	631	1,079	2,414
Fatigued or Asleep	28	0	2	4	10	12
Sick	21	0	3	4	8	6
Medicated	7	0	1	1	3	2
Emotional	150	3	12	39	55	41
Physically Disabled	26	1	7	8	5	5
Unknown	407	9	33	68	101	196
Other	145	3	25	37	41	39

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

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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 to crash.
- More collisions with bridge piers/abutments/supports and parked motor vehicles, as well as noncollision events such as jackknife, cargo loss/shift, and overturn as the most harmful event.
- Fewer collisions with ditches, trees, and animals.
- Fewer single-vehicle crashes but more sideswipes.
- Fewer drivers indicated to be speeding, failing to yield, reckless driving, disregarding traffic control, and unable to stop in assured clear distance, but more drivers indicated to be making backing, lane use, and turning errors.
- Fewer crashes outside of the shoulder/curb.
- More crashes between the hours of 7:00 AM and 3:59 PM, and fewer crashes between 4:00 PM and 6:59 AM.
- More crashes Monday through Friday and fewer crashes Saturday and Sunday.

HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

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	6,319	53.2	52	66.7	1,187	59.3
Turning Left	921	7.8	4	5.1	138	6.9
Turning Right	789	6.6	1	1.3	81	4.0
Stopped on Roadway	745	6.3	2	2.6	166	8.3
Involved in Prior Crash at Same Location	1	0.0	0	0.0	1	0.0
Changing Lanes	522	4.4	0	0.0	49	2.4
Backing	647	5.5	1	1.3	25	1.2
Slowing/Stopping on Roadway	715	6.0	3	3.8	141	7.0
Slowing/Stopping Other Area	16	0.1	0	0.0	1	0.0
Starting Up on Roadway	178	1.5	1	1.3	26	1.3
Starting Up in Other Area	0	0.0	0	0.0	0	0.0
Entering Parking	17	0.1	0	0.0	1	0.0
Leaving Parking	20	0.2	0	0.0	3	0.1
Entering Roadway	85	0.7	0	0.0	14	0.7
Leaving Roadway	9	0.1	0	0.0	3	0.1
Making U-Turn	33	0.3	0	0.0	6	0.3
Overtaking or Passing	67	0.6	0	0.0	9	0.4
Avoiding Object	10	0.1	1	1.3	1	0.0
Avoiding Animal	6	0.1	0	0.0	0	0.0
Avoiding Pedestrian	2	0.0	1	1.3	0	0.0
Avoiding Vehicle (front/back)	98	0.8	1	1.3	20	1.0
Avoiding Vehicle (angle)	39	0.3	0	0.0	7	0.3
Driverless Moving	7	0.1	1	1.3	0	0.0
Parked	371	3.1	5	6.4	76	3.8
Crossing at Intersection	0	0.0	0	0.0	0	0.0
Crossing Not at Intersection	1	0.0	0	0.0	0	0.0
Getting On/Off Vehicle	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	2	0.0	0	0.0	0	0.0
Standing/Lying in Roadway	0	0.0	0	0.0	0	0.0
Pushing/Working on Vehicle	1	0.0	0	0.0	0	0.0
Other Work 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	3	0.0	0	0.0	1	0.0
Not in Roadway	1	0.0	0	0.0	1	0.0
Negotiating a Curve	183	1.5	4	5.1	40	2.0
Other	17	0.1	0	0.0	2	0.1
Unknown	36	0.3	1	1.3	1	0.0
Uncoded & Errors	5	0.0	0	0.0	1	0.0
TOTAL	11,867	100.0	78	100.0	2,001	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	81	0.7	1	1.3	17	0.8
Ran Off Roadway Left	32	0.3	0	0.0	3	0.1
Ran Off Roadway Right	58	0.5	0	0.0	11	0.5
Re-Enter Roadway	4	0.0	0	0.0	0	0.0
Overturn	229	1.9	7	9.0	87	4.3
Separation of Units	29	0.2	0	0.0	7	0.3
Fire/Explosion	50	0.4	2	2.6	4	0.2
Immersion	1	0.0	0	0.0	0	0.0
Jackknife	97	0.8	0	0.0	10	0.5
Downhill Runaway	1	0.0	0	0.0	0	0.0
Cargo Loss/Shift	78	0.7	0	0.0	3	0.1
Individual Fell from Vehicle	0	0.0	0	0.0	0	0.0
Other Noncollision	70	0.6	0	0.0	6	0.3
Equipment Failure (blown tire, brake failure, etc.)	85	0.7	0	0.0	4	0.2
Cross Centerline	30	0.3	0	0.0	2	0.1
Cross Median	4	0.0	0	0.0	0	0.0
SUBTOTAL	849	7.2	10	12.8	154	7.7

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	0.3	9	11.5	27	1.3
Bicyclist	19	0.2	3	3.8	14	0.7
Motor Vehicle in Transport (in motion or on roadway)	8,742	73.7	55	70.5	1,639	81.9
Parked Motor Vehicle	537	4.5	1	1.3	36	1.8
Railroad Train	1	0.0	0	0.0	0	0.0
Animal	527	4.4	0	0.0	3	0.1
Other Nonfixed Object	144	1.2	0	0.0	8	0.4
Work Zone/Maintenance Equipment	9	0.1	0	0.0	2	0.1
Cargo Falling/Shifting/Anything Set in Motion by a Motor Vehicle	62	0.5	0	0.0	5	0.2
SUBTOTAL	10,081	84.9	68	87.2	1,734	86.7

The majority of heavy trucks/buses are involved in crashes with a motor vehicle in transport for all crashes (73.7%), fatal crashes (70.5%), and injury crashes (81.9%) for most harmful event in the crash.

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/Support	39	0.3	0	0.0	3	0.1
Bridge Rail	17	0.1	0	0.0	1	0.0
Guardrail Face	42	0.4	0	0.0	9	0.4
Guardrail End	18	0.2	0	0.0	2	0.1
Other Post/Pole/Support	38	0.3	0	0.0	1	0.0
Culvert	8	0.1	0	0.0	2	0.1
Curb	9	0.1	0	0.0	1	0.0
Ditch	105	0.9	0	0.0	27	1.3
Embankment	15	0.1	0	0.0	3	0.1
Fence	9	0.1	0	0.0	1	0.0
Mailbox	10	0.1	0	0.0	0	0.0
Tree	111	0.9	0	0.0	22	1.1
Railroad Crossing Signal	17	0.1	0	0.0	1	0.0
Building	7	0.1	0	0.0	2	0.1
Traffic Island	0	0.0	0	0.0	0	0.0
Fire Hydrant	12	0.1	0	0.0	0	0.0
Impact Attenuator (crash cushion)	4	0.0	0	0.0	1	0.0
Other Fixed Object	97	0.8	0	0.0	2	0.1
Bridge Overhead Structure	27	0.2	0	0.0	3	0.1
Cable Barrier	22	0.2	0	0.0	5	0.2
Concrete Barrier	92	0.8	0	0.0	20	1.0
Traffic Sign/Post	63	0.5	0	0.0	2	0.1
Traffic Signal Equipment	37	0.3	0	0.0	0	0.0
Utility Pole/Light Support	138	1.2	0	0.0	5	0.2
SUBTOTAL	937	7.9	0	0.0	113	5.6

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Uncoded & Errors	0	0.0	0	0.0	0	0.0
MOST HARMFUL EVENT TOTAL	11,867	100.0	78	100.0	2,001	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 Total	Number of Heavy Trucks	% of Total
Single Vehicle	1,977	16.7	16	20.5	225	11.2
Head On	140	1.2	15	19.2	69	3.4
Head On - Left Turn	119	1.0	0	0.0	42	2.1
Angle	1,554	13.1	19	24.4	450	22.5
Rear-end	2,291	19.3	14	17.9	623	31.1
Rear End - Left Turn	95	0.8	2	2.6	20	1.0
Rear End - Right Turn	79	0.7	0	0.0	11	0.5
Sideswipe - Same Direction	3,542	29.8	3	3.8	336	16.8
Sideswipe - Opposite Directions	467	3.9	3	3.8	73	3.6
Backing	616	5.2	0	0.0	13	0.6
Other	938	7.9	6	7.7	136	6.8
Unknown	49	0.4	0	0.0	3	0.1
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	11,867	100.0	78	100.0	2,001	100.0

The highest percentage of heavy trucks/buses are involved in same direction sideswipes for all crashes (29.8%), angle crashes for fatal crashes (24.4%), and rear-end crashes for injury crashes (31.1%).

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
None	6,307	53.1	54	69.2	1,209	60.4	16	0.9
Speed Too Fast	472	4.0	2	2.6	103	5.1	247	13.3
Speed Too Slow	6	0.1	0	0.0	0	0.0	1	0.1
Failed to Yield	695	5.9	4	5.1	138	6.9	301	16.2
Disregard Traffic Control	117	1.0	1	1.3	42	2.1	68	3.7
Drove Wrong Way	7	0.1	0	0.0	2	0.1	4	0.2
Drove Left of Center	61	0.5	0	0.0	7	0.3	14	0.8
Improper Passing	70	0.6	0	0.0	1	0.0	24	1.3
Improper Lane Use	608	5.1	3	3.8	49	2.4	224	12.0
Improper Turn	333	2.8	0	0.0	20	1.0	91	4.9
Improper/No Signal	21	0.2	0	0.0	3	0.1	8	0.4
Improper Backing	489	4.1	1	1.3	14	0.7	130	7.0
Unable to Stop in Assured Clear Distance	895	7.5	4	5.1	206	10.3	411	22.1
Reckless Driving	10	0.1	0	0.0	2	0.1	3	0.2
Careless/Negligent Driving	248	2.1	3	3.8	61	3.0	124	6.7
Other	829	7.0	4	5.1	67	3.3	189	10.2
Unknown	699	5.9	2	2.6	77	3.8	5	0.3
TOTAL	11,867	100.0	78	100.0	2,001	100.0	1,860	100.0

After no hazardous action, the most common hazardous action coded for drivers of heavy trucks/buses in all crashes (7.5%) and injury crashes (10.3%) is unable to stop in assured clear distance and for fatal crashes is failed to yield, unable to stop in assured clear distance, and other (5.1%).

HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
On Road	10,883	91.7	69	88.5	1,855	92.7
Median	84	0.7	1	1.3	12	0.6
Shoulder	365	3.1	3	3.8	59	2.9
Outside of Shoulder/Curb	345	2.9	4	5.1	63	3.1
Gore	18	0.2	1	1.3	5	0.2
On-Street Parking	136	1.1	0	0.0	1	0.0
Off the Roadway	0	0.0	0	0.0	0	0.0
On the Sidewalk	13	0.1	0	0.0	1	0.0
In the Bicycle Lane	1	0.0	0	0.0	0	0.0
Other/Unknown	22	0.2	0	0.0	5	0.2
TOTAL	11,867	100.0	78	100.0	2,001	100.0

TIME OF DAY	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
12:00 AM - 2:59 AM	351	3.0	6	7.7	80	4.0
3:00 AM - 5:59 AM	501	4.2	9	11.5	91	4.5
6:00 AM - 8:59 AM	1,935	16.3	7	9.0	316	15.8
9:00 AM - 11:59 AM	2,515	21.2	18	23.1	385	19.2
12:00 PM - 2:59 PM	2,955	24.9	17	21.8	493	24.6
3:00 PM - 5:59 PM	2,289	19.3	8	10.3	396	19.8
6:00 PM - 8:59 PM	880	7.4	10	12.8	156	7.8
9:00 PM - 11:59 PM	440	3.7	3	3.8	84	4.2
Unknown	1	0.0	0	0.0	0	0.0
TOTAL	11,867	100.0	78	100.0	2,001	100.0

Heavy truck/bus frequencies in crashes peak in the early afternoon, then drop off steadily until 3:00 AM. The time period between 12:00 PM and 2:59 PM is the most common time for trucks/buses to be involved in crashes overall (24.9%) and injury crashes (24.6%). The time period between 9:00 AM and 11:59 AM is the most common time for fatal crashes (23.1%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Interstate Routes	2,792	23.5	19	24.4	504	25.2
U.S. and Michigan Roads	3,576	30.1	34	43.6	691	34.5
County & City Roads	5,485	46.2	25	32.1	804	40.2
Uncoded & Errors	14	0.1	0	0.0	2	0.1
TOTAL	11,867	100.0	78	100.0	2,001	100.0

For all crashes (46.2%) and for injury crashes (40.2%), the highest percentage of heavy trucks/buses are involved in crashes on county and city roads. For fatal crashes, the highest percentage of heavy trucks/buses are involved in crashes on U.S. and Michigan roads (43.6%).

HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

DAY OF WEEK	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Monday	2,050	17.3	25	32.1	307	15.3
Tuesday	2,115	17.8	9	11.5	384	19.2
Wednesday	2,243	18.9	13	16.7	358	17.9
Thursday	2,239	18.9	10	12.8	375	18.7
Friday	2,003	16.9	8	10.3	345	17.2
Saturday	782	6.6	9	11.5	143	7.1
Sunday	435	3.7	4	5.1	89	4.4
TOTAL	11,867	100.0	78	100.0	2,001	100.0

The highest percentage of heavy trucks/buses are involved in crashes on Wednesday and Thursday for all crashes (18.9%), Monday for fatal crashes (32.1%), and Tuesday for injury crashes (19.2%).

DRIVER GENDER	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Male	10,479	88.3	70	89.7	1,793	89.6
Female	845	7.1	2	2.6	138	6.9
Unknown	543	4.6	6	7.7	70	3.5
TOTAL	11,867	100.0	78	100.0	2,001	100.0

The highest percentage of heavy truck/bus drivers are male in all crashes (88.3%), fatal crashes (89.7%), and injury crashes (89.6%).

NUMBER OF OCCUPANTS	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
1 occupant	9,955	83.9	63	80.8	1,625	81.2
2 occupants	913	7.7	6	7.7	203	10.1
3 occupants	148	1.2	2	2.6	28	1.4
4 occupants	62	0.5	0	0.0	20	1.0
5 occupants	41	0.3	2	2.6	13	0.6
6+ occupants	212	1.8	0	0.0	45	2.2
0 occupants	339	2.9	5	6.4	48	2.4
Unknown	197	1.7	0	0.0	19	0.9
TOTAL	11,867	100.0	78	100.0	2,001	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 Total	Number of Vehicles	% of Total	Number of Vehicles	% of Total
Passenger Car, SUV, Van	8,004	82.3	64	68.1	1,747	83.4
Motor Home	18	0.2	0	0.0	2	0.1
Pickup	1,256	12.9	12	12.8	259	12.4
Small Truck (under 10,000 lbs.)	50	0.5	0	0.0	6	0.3
Motorcycle	29	0.3	4	4.3	19	0.9
Moped	1	0.0	1	1.1	0	0.0
Go Cart	1	0.0	0	0.0	0	0.0
Snowmobile	1	0.0	0	0.0	0	0.0
Off Road Vehicle	1	0.0	0	0.0	1	0.0
Other	60	0.6	0	0.0	7	0.3
Uncoded & Errors	299	3.1	13	13.8	54	2.6
SUBTOTAL	9,720	100.0	94	100.0	2,095	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
10,000 lbs. or less	114	1.0	0	0.0	7	0.3
10,001 - 26,000 lbs	4,256	35.9	17	21.8	633	31.6
Greater than 26,000 lbs.	7,312	61.6	61	78.2	1,355	67.7
Uncoded & Errors	185	1.6	0	0.0	6	0.3
SUBTOTAL	11,867	100.0	78	100.0	2,001	100.0

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Vehicles	% of Total	Number of Vehicles	% of Total	Number of Vehicles	% of Total
Total Number of Vehicles in Heavy Truck/Bus Crashes	21,587	---	172	---	4,096	---

HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

DRIVER HAZARDOUS ACTION WHERE HAZARDOUS CITATION ISSUED	HEAVY TRUCK/BUS INVOLVED CRASH						NON-HEAVY TRUCK/BUS INVOLVED CRASH			
	Single Vehicle Crash		Multi-Vehicle Crash				Single Vehicle Crash		Multi-Vehicle Crash	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Non-Heavy Truck Vehicles	% of Total	Number of Vehicles	% of Total	Number of Vehicles	% of Total
None	3	0.8	13	0.9	13	0.7	134	1.2	594	1.1
Speed Too Fast	193	50.0	54	3.7	234	11.8	5,278	48.2	2,216	4.0
Speed Too Slow	0	0.0	1	0.1	2	0.1	16	0.1	15	0.0
Failed to Yield	5	1.3	296	20.1	469	23.7	356	3.2	16,019	29.2
Disregard Traffic Control	3	0.8	65	4.4	149	7.5	136	1.2	4,399	8.0
Drove Wrong Way	1	0.3	3	0.2	5	0.3	9	0.1	82	0.1
Drove Left of Center	1	0.3	13	0.9	29	1.5	118	1.1	527	1.0
Improper Passing	1	0.3	23	1.6	54	2.7	29	0.3	563	1.0
Improper Lane Use	18	4.7	206	14.0	214	10.8	257	2.3	2,829	5.2
Improper Turn	18	4.7	73	5.0	36	1.8	60	0.5	1,389	2.5
Improper/No Signal	0	0.0	8	0.5	3	0.2	1	0.0	72	0.1
Improper Backing	4	1.0	126	8.5	20	1.0	25	0.2	1,155	2.1
Unable to Stop in Assured Clear Distance	12	3.1	399	27.1	490	24.7	306	2.8	20,471	37.3
Reckless Driving	0	0.0	3	0.2	11	0.6	358	3.3	339	0.6
Careless/Negligent Driving	62	16.1	62	4.2	155	7.8	2,345	21.4	1,941	3.5
Other	61	15.8	128	8.7	89	4.5	1,336	12.2	2,062	3.8
Unknown	4	1.0	1	0.1	8	0.4	194	1.8	196	0.4
CITED VEHICLES SUBTOTAL	386	100.0	1,474	100.0	1,981	100.0	10,958	100.0	54,869	100.0

	HEAVY TRUCK/BUS INVOLVED CRASH						NON-HEAVY TRUCK/BUS INVOLVED CRASH			
	Single Vehicle Crash		Multi-Vehicle Crash				Single Vehicle Crash		Multi-Vehicle Crash	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Non-Heavy Truck Vehicles	% of Total	Number of Vehicles	% of Total	Number of Vehicles	% of Total
Cited Vehicles	386	18.9	1,474	15.0	1,981	21.0	10,958	11.4	54,869	19.9
Vehicles with No Citation Issued	1,661	81.1	8,344	85.0	7,434	78.9	85,060	88.6	220,375	80.0
Vehicles with Unknown Citation	0	0.0	2	0.0	5	0.1	9	0.0	184	0.1
TOTAL VEHICLES INVOLVED	2,047	100.0	9,820	100.0	9,420	100.0	96,027	100.0	275,428	100.0

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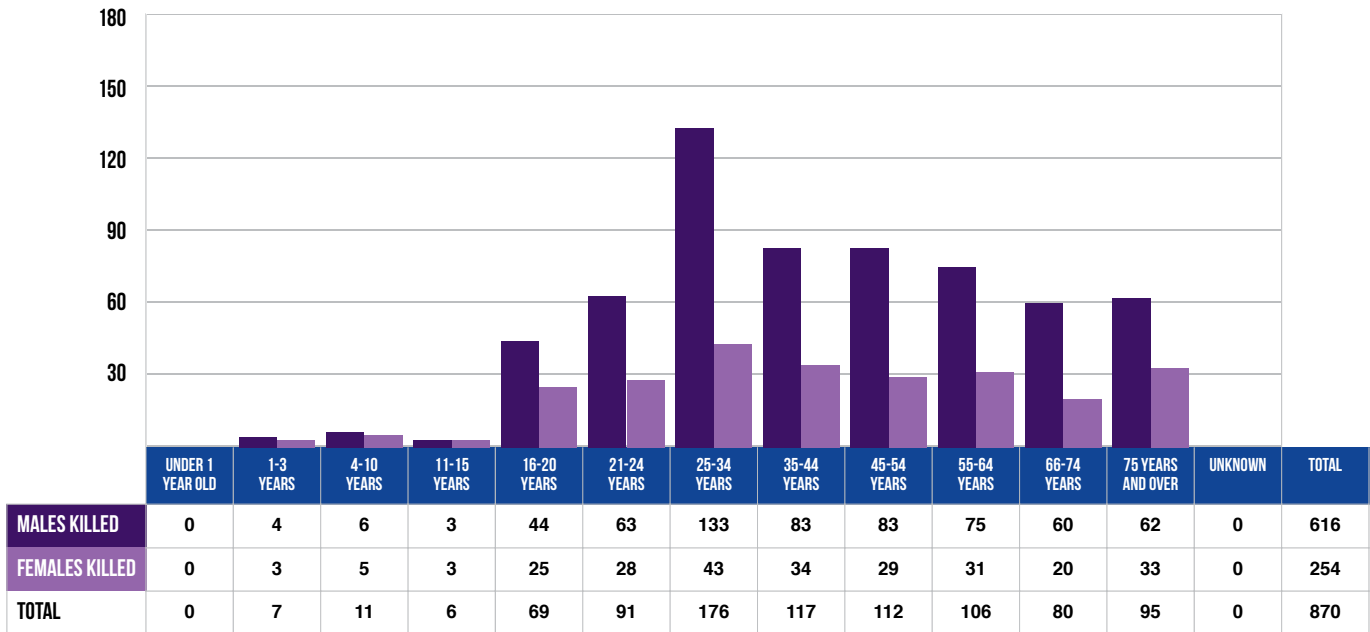
OCCUPANT/PERSON

(specific information on each driver and injured person in a crash)

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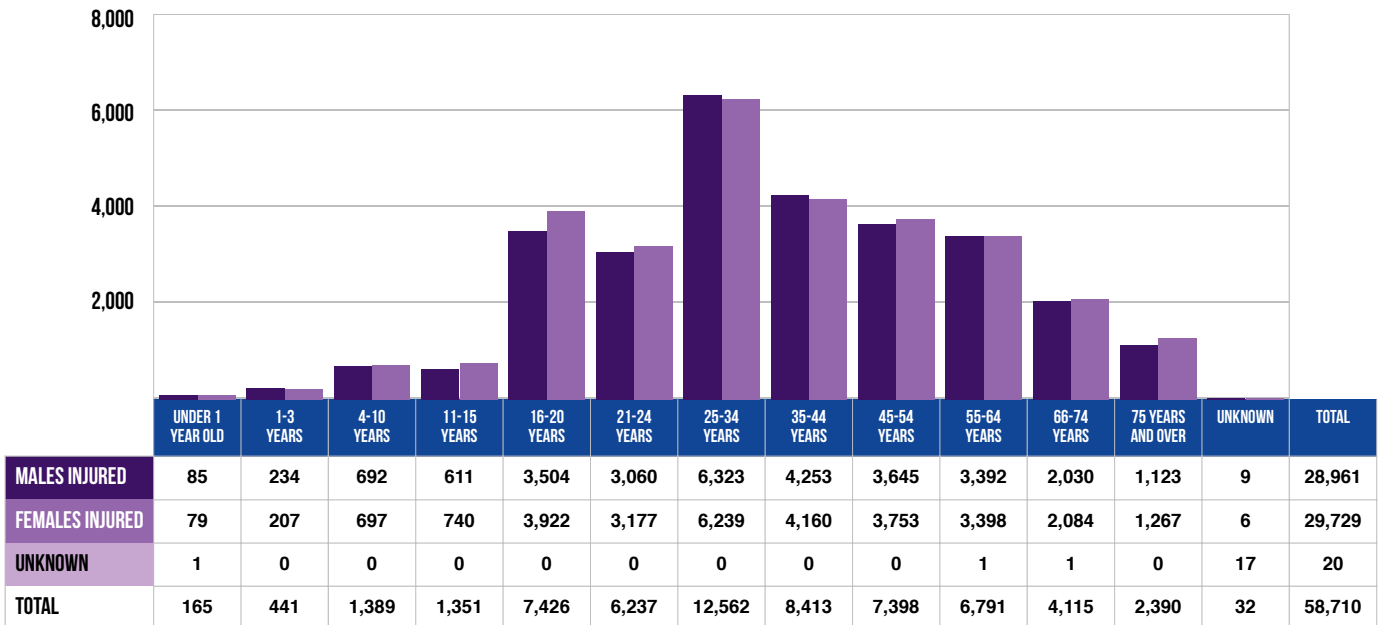
AGE AND GENDER OF OCCUPANTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

OCCUPANTS KILLED



The majority (70.8%) of occupants killed in traffic crashes in 2020 were male.

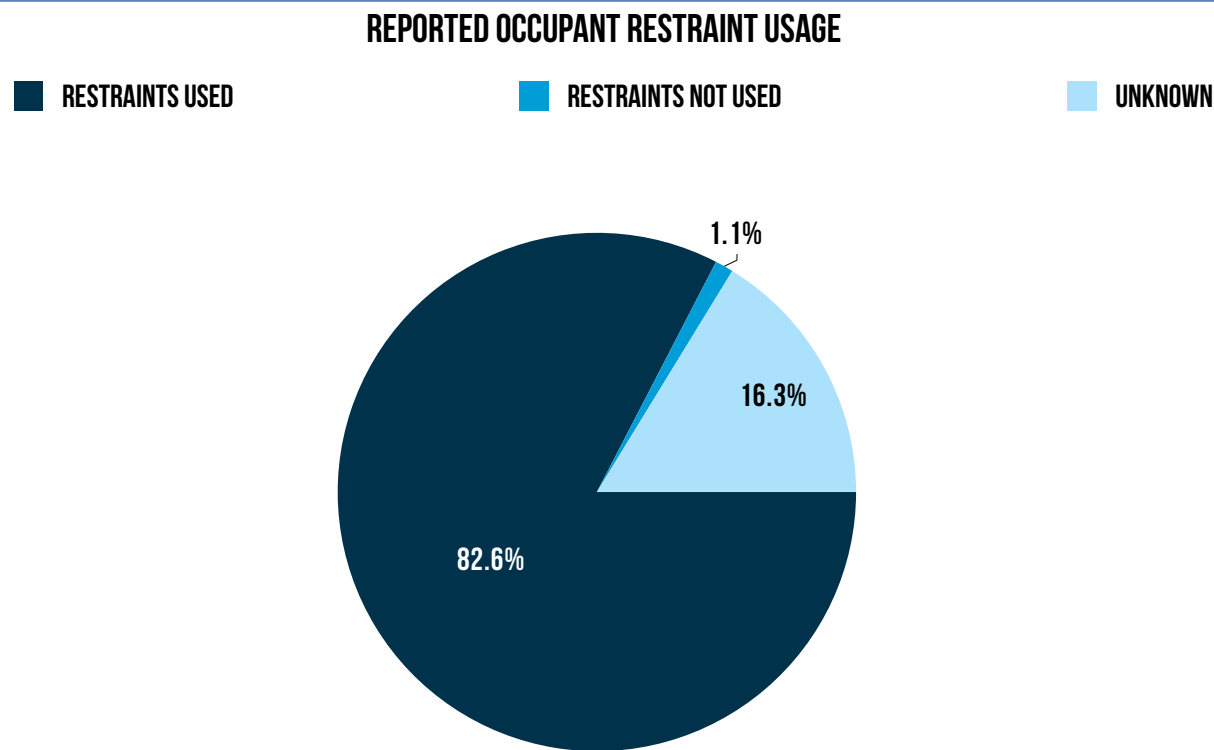
OCCUPANTS INJURED



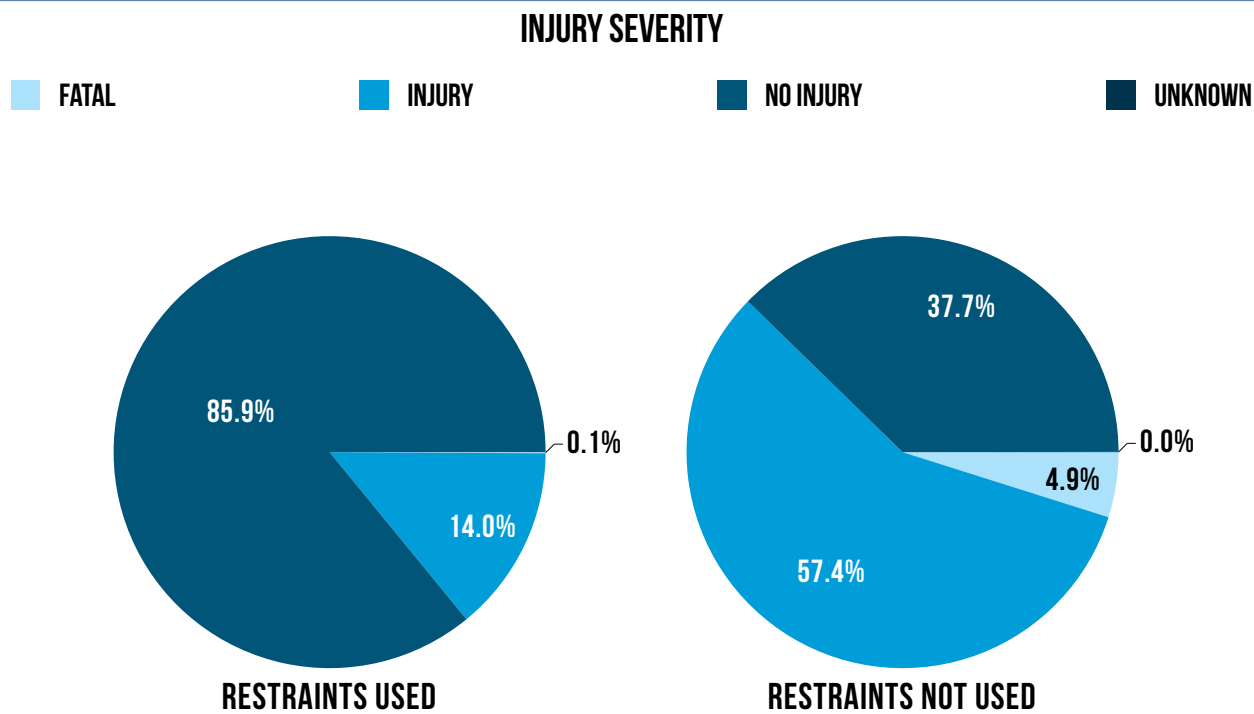
The majority (50.6%) of occupants injured in traffic crashes in 2020 were female.

Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS



Of the 414,740 drivers and injured passengers involved in crashes, 342,591 (82.6%) were REPORTED to be using occupant restraints.



Occupants in crashes were 56 times more likely to be killed if they were not wearing their restraints.

Note: These charts do not include helmet usage.

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	330,813	96.8	227	2,080	10,277	24,476	293,753
Center Front	469	0.1	1	22	66	224	156
Right Front	7,753	2.3	60	412	1,591	5,295	395
Left Rear Second Seat	1,088	0.3	3	38	240	807	0
Center Rear Second Seat	151	0.0	1	9	38	103	0
Right Rear Second Seat	1,014	0.3	2	45	216	751	0
Left Rear Third Seat	157	0.0	0	10	35	112	0
Center Rear Third Seat	22	0.0	0	1	6	15	0
Right Rear Third Seat	89	0.0	0	5	21	63	0
Left Rear Fourth Seat	9	0.0	0	0	5	4	0
Center Rear Fourth Seat	6	0.0	0	0	0	6	0
Right Rear Fourth Seat	11	0.0	0	0	2	9	0
Other Passenger Area	24	0.0	0	0	5	19	0
Unknown	86	0.0	0	1	4	17	64
Uncoded & Errors	0	0.0	0	0	0	0	0
TOTAL †	341,692	100.0	294	2,623	12,506	31,901	294,368

* Belts Used includes use of lap, shoulder, or both belts, or restraint failure. Children who were using or not using a child restraint are in separate tables on the next two pages.

SEATING POSITION	BELTS NOT USED *		FATAL	INJURY			NO INJURY
	Number	% of Total		A	B	C	
Left Front	3,182	68.1	179	432	529	512	1,530
Center Front	56	1.2	1	2	19	12	22
Right Front	466	10.0	28	93	176	149	20
Left Rear Second Seat	214	4.6	3	36	67	108	0
Center Rear Second Seat	62	1.3	3	6	20	33	0
Right Rear Second Seat	248	5.3	11	33	83	121	0
Left Rear Third Seat	32	0.7	1	4	3	24	0
Center Rear Third Seat	15	0.3	0	4	2	9	0
Right Rear Third Seat	28	0.6	0	7	8	13	0
Left Rear Fourth Seat	5	0.1	0	0	2	3	0
Center Rear Fourth Seat	2	0.0	0	1	0	1	0
Right Rear Fourth Seat	2	0.0	0	0	1	1	0
Other Passenger Area	104	2.2	0	12	21	71	0
Unknown	257	5.5	2	6	9	26	214
Uncoded & Errors	1	0.0	0	0	0	0	1
TOTAL †	4,674	100.0	228	636	940	1,083	1,787

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

† This total does not include one occupant with unknown injury severity.

Note: Michigan law requires that all persons must wear a seatbelt when riding in the front seat of a motor vehicle.

REPORTED RESTRAINT USAGE - CHILDREN

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

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. 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. 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		FATAL	INJURY		
	Number	% of Total		A	B	C
AGE 0						
Belts Used	15	9.1	0	0	5	10
No Belts Used	2	1.2	0	0	1	1
Child Restraint Used - Forward Facing	18	11.0	0	0	1	17
Child Restraint Used - Rear Facing	109	66.5	0	4	12	93
Child Restraint Used - Booster Seat	3	1.8	0	0	1	2
Child Restraint Not Used	8	4.9	0	2	1	5
Restraint Failed	0	0.0	0	0	0	0
Unknown	9	5.5	0	0	2	7
Total	164	100.0	0	6	23	135
AGE 1						
Belts Used	8	6.3	0	0	1	7
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used - Forward Facing	54	42.2	1	3	11	39
Child Restraint Used - Rear Facing	42	32.8	0	0	7	35
Child Restraint Used - Booster Seat	4	3.1	0	0	1	3
Child Restraint Not Used	6	4.7	0	1	2	3
Restraint Failed	1	0.8	0	0	0	1
Unknown	13	10.2	0	0	2	11
Total	128	100.0	1	4	24	99
AGE 2						
Belts Used	12	7.5	0	1	1	10
No Belts Used	6	3.8	1	0	3	2
Child Restraint Used - Forward Facing	90	56.6	0	4	17	69
Child Restraint Used - Rear Facing	19	11.9	0	0	7	12
Child Restraint Used - Booster Seat	8	5.0	0	0	2	6
Child Restraint Not Used	11	6.9	1	0	4	6
Restraint Failed	0	0.0	0	0	0	0
Unknown	13	8.2	2	1	2	8
Total	159	100.0	4	6	36	113

REPORTED RESTRAINT USE - CHILDREN (CONTINUED)

RESTRAINT USAGE	CHILDREN		FATAL	INJURY		
	Number	% of Total		A	B	C
AGE 3						
Belts Used	25	15.7	0	2	6	17
No Belts Used	3	1.9	0	0	1	2
Child Restraint Used - Forward Facing	81	50.9	0	5	12	64
Child Restraint Used - Rear Facing	6	3.8	0	0	1	5
Child Restraint Used - Booster Seat	17	10.7	0	0	4	13
Child Restraint Not Used	11	6.9	2	3	0	6
Restraint Failed	0	0.0	0	0	0	0
Unknown	16	10.1	0	1	4	11
Total	159	100.0	2	11	28	118
AGE 4-7						
Belts Used	267	34.9	0	18	64	185
No Belts Used	30	3.9	1	5	11	13
Child Restraint Used - Forward Facing	211	27.6	1	4	47	159
Child Restraint Used - Rear Facing	6	0.8	0	0	2	4
Child Restraint Used - Booster Seat	157	20.5	2	4	35	116
Child Restraint Not Used	26	3.4	0	3	11	12
Restraint Failed	0	0.0	0	0	0	0
Unknown	68	8.9	2	6	11	49
Total	765	100.0	6	40	181	538
AGE 8-15						
Belts Used	1,458	78.9	4	48	353	1,053
No Belts Used	154	8.3	3	25	59	67
Child Restraint Used - Forward Facing	20	1.1	0	0	4	16
Child Restraint Used - Rear Facing	0	0.0	0	0	0	0
Child Restraint Used - Booster Seat	46	2.5	0	1	6	39
Child Restraint Not Used	5	0.3	0	0	2	3
Restraint Failed	0	0.0	0	0	0	0
Unknown	165	8.9	1	13	28	123
Total	1,848	100.0	8	87	452	1,301

Information about uninjured passengers is not required to be reported by the officer on the crash report, thus these tables relate the experience of only those children with injuries in crashes.

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

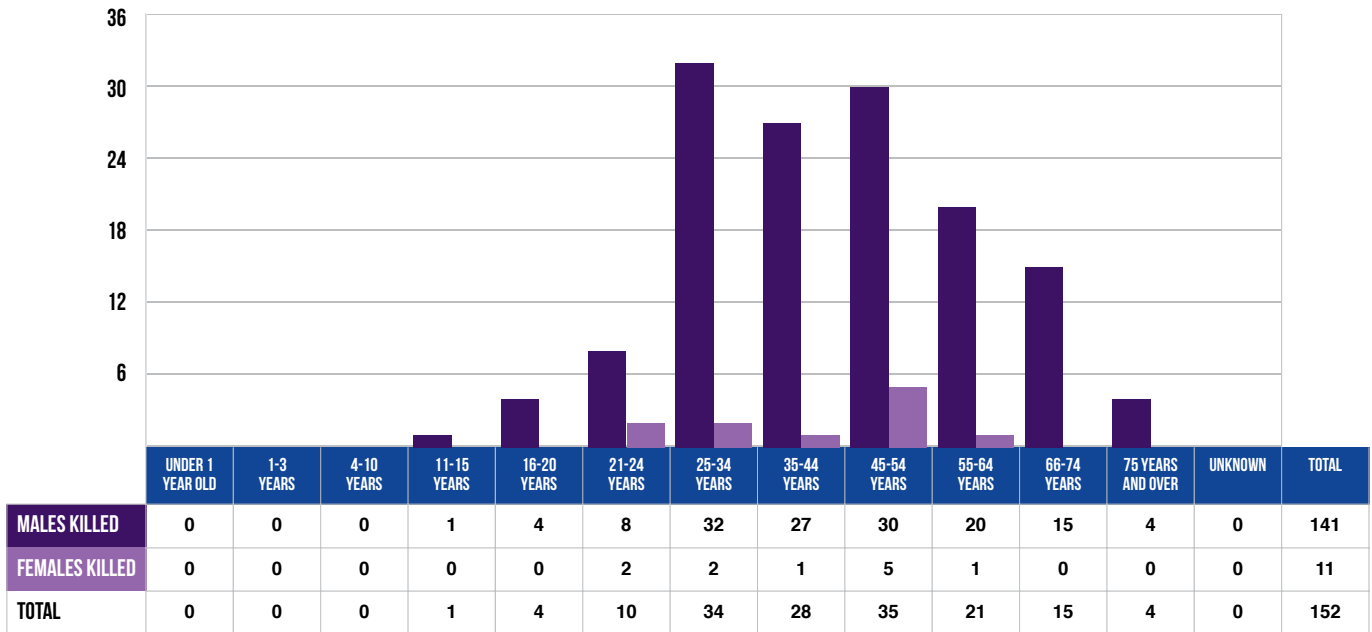
MOTOR VEHICLE OCCUPANT INJURY SEVERITY BY KNOWN AIRBAG DEPLOYMENT

MOTOR VEHICLE OCCUPANT AIRBAG DEPLOYMENT	OCCUPANTS*		FATAL	OCCUPANT INJURY SEVERITY			NO INJURY
	Number	% of Total		A	B	C	
Deployed - front	33,594	8.0	191	1,201	4,382	8,013	19,806
Deployed - side	4,295	1.0	9	87	428	1,020	2,751
Deployed - curtain	3,071	0.7	8	84	355	774	1,850
Deployed - combination	21,927	5.2	240	1,218	3,748	6,424	10,296
Deployed - other	323	0.1	3	9	42	71	198
Not deployed	294,322	70.3	158	1,144	5,400	19,148	268,459
Not equipped	10,871	2.6	187	1,023	1,594	1,367	5,151
Unknown	44,990	10.7	74	153	263	754	5,506
Uncoded & Errors	5,480	1.3	0	0	3	5	1
TOTAL	418,873	100.0	870	4,919	16,215	37,576	314,018

*Includes 45,275 occupants (drivers and passengers) with unknown injury severity.

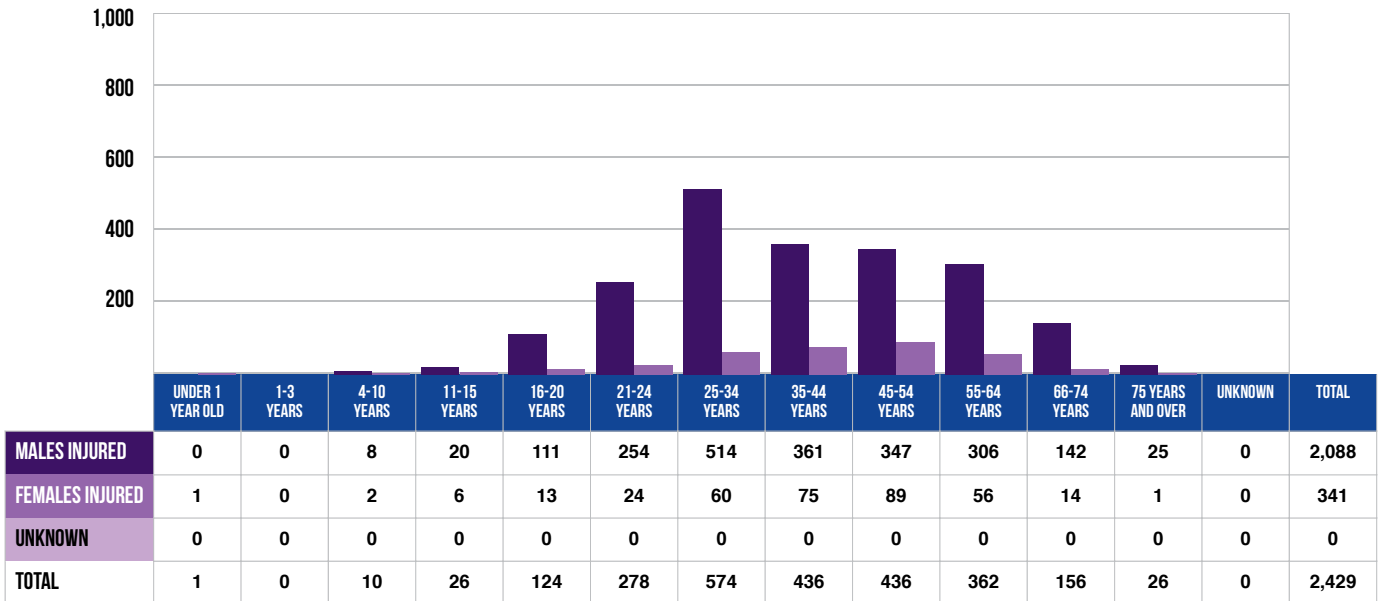
AGE AND GENDER OF MOTORCYCLISTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

MOTORCYCLISTS KILLED



Of the 152 motorcyclists killed in traffic crashes in 2020, 92.8 percent were male. In comparison, 70.8 percent of all occupants killed in crashes were male.

MOTORCYCLISTS INJURED



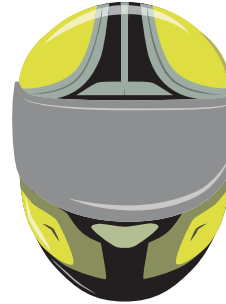
Of the 2,429 motorcyclists injured in traffic crashes in 2020, 86.0 percent were male. In comparison, 49.3 percent of all occupants injured in crashes were male.

MOTORCYCLE HELMET USAGE AND INJURY SEVERITY

AGE OF MOTORCYCLIST	FATALITIES	INJURY			NO INJURY
		A	B	C	
HELMET WORN					
3 years and under	0	1	0	0	0
4 - 10 years	0	0	4	3	2
11 - 15 years	0	4	7	3	3
16 - 20 years	1	18	48	21	17
21 - 24 years	7	58	104	39	43
25 - 34 years	15	85	139	77	98
35 - 44 years	8	64	85	54	41
45 - 54 years	20	73	98	60	82
55 - 64 years	10	65	103	61	71
65 - 74 years	10	33	54	30	38
75 years and over	1	8	7	3	5
Unknown	0	0	0	0	0
Subtotal	72	409	649	351	400
HELMET NOT WORN					
3 years and under	0	0	0	0	0
4 - 10 years	0	0	3	0	0
11 - 15 years	1	5	5	2	1
16 - 20 years	1	13	12	7	9
21 - 24 years	3	21	29	18	19
25 - 34 years	13	96	98	46	51
35 - 44 years	19	81	85	44	41
45 - 54 years	12	71	75	30	43
55 - 64 years	8	42	52	22	25
65 - 74 years	5	14	17	6	9
75 years and over	3	1	2	0	1
Unknown	0	0	0	0	0
Subtotal	65	344	378	175	199
HELMET USE UNKNOWN					
3 years and under	0	0	0	0	1
4 - 10 years	0	0	0	0	0
11 - 15 years	0	0	0	0	1
16 - 20 years	2	3	0	2	4
21 - 24 years	0	4	3	2	9
25 - 34 years	6	12	14	7	15
35 - 44 years	1	7	9	7	18
45 - 54 years	3	5	16	8	10
55 - 64 years	3	4	7	6	8
65 - 74 years	0	1	0	1	5
75 years and over	0	0	0	5	0
Unknown	0	0	0	0	1
Subtotal	15	36	49	38	72
TOTAL	152	789	1,076	564	671

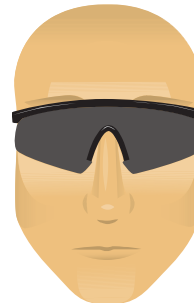
2011 Michigan motor vehicle crash data represents the last full year of data that was collected during Michigan's universal helmet law, enacted in 1969: Michigan Vehicle Code Public Act 300 of 1949, Section 257.658, requiring all motorcycle riders to wear a helmet. On April 13, 2012, Michigan changed 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.

HELMET WORN



DRIVERS KILLED: 68
PASSENGERS KILLED: 4

HELMET NOT WORN



DRIVERS KILLED: 63
PASSENGERS KILLED: 2

HELMET USE UNKNOWN



DRIVERS KILLED: 14
PASSENGERS KILLED: 1

OCCUPANT INJURY OUTCOME BY VEHICLE TYPE

VEHICLE	KILLED	INJURY			TOTAL KABC	% OF ALL CRASH INVOLVED KABC OCCUPANTS
		A	B	C		
Passenger car, SUV, van	586	3,268	12,819	33,021	49,694	83.4
Motor home	0	21	36	56	113	0.2
Pickup truck	81	485	1,635	3,060	5,261	8.8
Small Truck under 10,000 lbs. GVWR	3	20	41	107	171	0.3
Motorcycle	152	789	1,076	564	2,581	4.3
Moped/goped	16	88	183	97	384	0.6
Go-cart/golf cart	0	11	24	14	49	0.1
Snowmobile	2	22	18	16	58	0.1
Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV	15	146	156	79	396	0.7
Other	8	17	46	98	169	0.3
Uncoded & Errors	0	2	2	8	12	0.0
CDL Truck/Bus (breakdown below)	7	50	179	456	692	1.2
Total Number of Occupants	870	4,919	16,215	37,576	59,580	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	KILLED	INJURY			TOTAL KABC	% OF ALL CRASH INVOLVED KABC OCCUPANTS
		A	B	C		
10,000 lbs. or less	0	0	1	3	4	0.6
10,001 - 26,000 lbs.	1	15	68	171	255	36.8
Greater than 26,000 lbs.	6	35	110	282	433	62.6
Uncoded & Errors	0	0	0	0	0	0.0
Total Number of Occupants	7	50	179	456	692	100.0

Note:

- 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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Driver Age 21-64	55
Driver Age 65 & Over	62
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Driver Age 21-64	55
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Occupant Injury Outcome	153

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