

MTCF

Michigan Traffic
Crash Facts

STATEWIDE

2021

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 2021

MichiganTrafficCrashFacts.org

PRODUCED BY:

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

Michigan Office of Highway Safety Planning
Michigan.gov/ohsp

University of Michigan Transportation Research Institute
umtri.umich.edu

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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.

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 1952-2021.

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.

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).

Driver Aggressive – This filter has been newly generated for all years of crash data based on **Hazardous Action** codes. These codes include: “speed too fast,” “failed to yield,” “disregard traffic control,” “improper passing,” “improper lane use,” “unable to stop in assured clear distance,” “reckless driving,” and “careless/negligent driving.”

Automation System Present in Vehicle (2021+) – This filter is new for 2021 data and indicates whether any automation system is present. All counts for years prior to 2021 have been coded to “Uncoded & errors.” This filter is based on what is reported by the police officer at the time of the crash.

Automation System Level in Vehicle (2021+) – This filter is new for 2021 data and indicates the highest level of automation the vehicle is equipped with (0-5). All counts for years prior to 2021 have been coded to “Uncoded & errors.” This filter is based on what is reported by the police officer at the time of the crash.

Automation System Level Engaged at Time of Crash (2021+) – This filter is new for 2021 data and indicates the highest level of automation that was active or engaged by the vehicle at the time of the crash (0-5). All counts for years prior to 2021 have been coded to “Uncoded & errors.” This filter is based on what is reported by the police officer at the time of the crash.

Person Race (2021+) – This filter is new for 2021 data. All counts for years prior to 2021 have been coded to “Uncoded & errors.” This filter is based on what is reported by the police officer at the time of the crash and is not based on driver’s license data.

Rural/Urban (2016+) – This filter is new for 2016 data beginning with the 2021 data release and was generated using Census tract data. All counts for years prior to 2016 have been coded to “Uncoded & errors.”

Test Result – Cannabinoid (2021+) – This filter is new for 2021 data and indicates whether or not a positive cannabinoid test result was reported. All counts for years prior to 2021 have been coded to “Uncoded & errors.” This filter is derived from any cannabinoid test results from **Test Result – Drug**, **Test Result – Drug 2**, or **Test Result – Drug 3**.

Test Result – Drug 1 (2021+) – This filter is new for 2021 data and indicates the first drug test result reported. All counts for years prior to 2021 have been coded to “Uncoded & errors.”

Test Result – Drug 2 (2021+) – This filter is new for 2021 data and indicates the second drug test result reported if multiple drugs are present. All counts for years prior to 2021 have been coded to “Uncoded & errors.”

DATA ELEMENTS WITH CHANGES FOR 2021 DATA (CONTINUED)

Test Result – Drug 3 (2021+) – This filter is new for 2021 data and indicates the third drug test result reported if multiple drugs are present. All counts for years prior to 2021 have been coded to “Uncoded & errors.”

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

EXECUTIVE SUMMARY

The 2021 traffic fatality count was 1,131, up 4.43 percent from the 2020 figure of 1,083. Compared with 2020, injuries were up 16.82 percent and total crashes were up 15.16 percent. These figures translated into a fatality rate of 1.17 per 100 million miles of travel, down 6.83 percent from 2020, and above the 10-year average of 1.03 (2012-2021).

Exposure factors in 2021 showed an increase in vehicle miles traveled, licensed drivers, and vehicle registrations. Vehicle miles traveled increased 12.09 percent to 96.74 billion, motor vehicle registrations were up 5.96 percent to 9.58 million, and the number of licensed drivers was up 1.94 percent to 7.26 million.

Seat belt use in Michigan was observed at 92.6 percent. Alcohol-involved crashes continued to present a problem and contributed to 31.46 percent of all fatal crashes. Crashes involving alcohol made up 3.38 percent of all crashes, and while 18.66 percent of all crashes resulted in injury or death, 43.61 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 June 7, 2022. We acknowledge, with appreciation, all involved agencies for their assistance.

UD-10 (FRONT)

Authority: 1949 PA 300, Sec.257.622
Compliance: Required MSP UD-10E
Penalty: \$100 and/or 90 days (Rev 11/2020)

External # Crash ID

Pag e01 of 01
File Class

STATE OF MICHIGAN TRAFFIC CRASH REPORT

| | | | | | | | |
|-----------------------------------|---------------------------------------|-----------------|---------------------|---|--|--|---|
| ORI | | Department Name | | Incident # | | Reviewer | |
| Crash Date | Crash Time | No. of Units | Crash Type | Special Circumstances <input type="radio"/> None <input type="radio"/> Fleeing Police | <input type="radio"/> Hit and Run <input type="radio"/> Unknown | <input type="radio"/> School Bus <input type="radio"/> Animal | Special Checks <input type="radio"/> Fatal <input type="radio"/> Non-Traffic Area <input type="radio"/> ORV/Snowmobile |
| County | Traffic Control | | Relation to Roadway | | Weather | | Area |
| City/Twsp | Contributing Circumstances 1st 2nd | | Light | | Road Surface Condition | Total Lanes | Speed Limit Posted |
| Work Zone (if applicable) Type | Workers Present | Activity | Location | | | | |

| | | | | | |
|----------|---------------------------------|------------------------|-----------|--------|-----------------|
| LOCATION | Prefix | Primary Road Name | Road Type | Suffix | Divided Roadway |
| | Distance / Direction Trafficway | | | | |
| | Prefix | Intersecting Road Name | Road Type | Suffix | Divided Roadway |

| | | | | | | | | | | | |
|---------------|--|---------------------|--|-----------------------|----------------------|--|--|---|----------|-----------------|------------------|
| UNIT / DRIVER | Unit Number 00 | Unit Known | State | Driver License Number | Date of Birth (Age) | License Type <input type="radio"/> Operator <input type="radio"/> Chauffeur <input type="radio"/> Moped | eEndorsements <input type="radio"/> Cycle <input type="radio"/> Farm <input type="radio"/> Recreation | Sex | Race | Total Occupants | Hazardous Action |
| | Unit Type | Driver Information | | | | Driver is Owner | Injury | Position | | Restraint | |
| | Driver Condition at Time of Crash 1st 2nd | | | | Driver Distracted By | | | Ejected | Trapped | Airbag Deployed | |
| | Hospital | | | | | Ambulance | | | | | |
| | Alcohol Suspected | Contributing Factor | Alcohol 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 | | | Alcohol Test Results <input type="radio"/> Pending Test Results: | | Interlock Device | | | |
| | Drug Suspected | Contributing Factor | Drug Test Type <input type="radio"/> Blood <input type="radio"/> Urine <input type="radio"/> Field <input type="radio"/> Refused <input type="radio"/> Not Offered | | | Drug Test Results <input type="radio"/> Pending Test Results: | | Citation Issued <input type="radio"/> Hazardous <input type="radio"/> Other | | | |
| | Vehicle Registration | State | Vehicle Description | Year | Make | Model | | Color | | | |
| | VIN | Vehicle Type | Special Vehicles | | Private Trailer Type | | Vehicle Defect | | | | |
| | Automation System(s) in Vehicle | | Automation System Level in Vehicle | | | | Automation System Level Engaged at Time of Crash | | | | |
| | Insurance Company | | | Insurance Policy # | | | Towed By | | Towed To | | |
| | Location of Greatest Damage | First Impact | Extent of Damage (Power Unit and/or Trailers) | | Vehicle Direction | Vehicle Use | | Action Prior | | | |
| | Sequence of Events (● indicates MOST harmful event) | | First | | Second | | Third | | Fourth | | |

| | | | | | | | | | |
|------------|-----------------------|--|--|-----------|---------------------|---------|---------|-----------------|-----------|
| PASSENGERS | Passenger Information | | | | Date of Birth (Age) | Sex | Race | Position | Restraint |
| | | | | | Injury | Ejected | Trapped | Airbag Deployed | |
| | Hospital | | | | Ambulance | | | | |
| | Passenger Information | | | | Date of Birth (Age) | Sex | Race | Position | Restraint |
| | | | | | Injury | Ejected | Trapped | Airbag Deployed | |
| Hospital | | | | Ambulance | | | | | |

| | | | | | | | | |
|--|---------------------|--|--|-----------------------|---|--------------|--|--------------|
| TRUCK/BUS | Carrier Information | | | | USDOT | | MC | MPSC |
| | | | | | Driver's CDL Type | | Endorsements <input type="radio"/> H <input type="radio"/> P <input type="radio"/> T <input type="radio"/> N <input type="radio"/> S <input type="radio"/> X | |
| | | | | | CDL Exempt <input type="radio"/> Farm <input type="radio"/> Other | | | |
| GVWR/GCWR <input type="radio"/> 10,000 lbs. or Less <input type="radio"/> 10,001 - 26,000 lbs. <input type="radio"/> Greater than 26,000 lbs. | | | | Vehicle Configuration | Cargo Body Type | Medical Card | Hazardous Material <input type="radio"/> Placard <input type="radio"/> Cargo Spill | ID # Class # |

| | | | | |
|------------------|-------------------|--------|-------------------|--|
| OWNERS | Owner Information | | Owner Information | |
| | | | | |
| Damaged Property | | Public | Owner & Phone | |

UD-10 (BACK)

| | | | | | | | | | | | | |
|--|--|----------------------|---|-------------------------------|-----------------------|---|---|---|-----------------|---------------------------------|--|--|
| UNIT/DRIVER | Unit Number 00 | Unit Known | State | Driver License Number | Date of Birth (Age) | License Type ○ Operator ○ Chauffeur ○ Moped | Endorsements ○ Cycle ○ Farm ○ Recreation | Sex | Race | Total Occupants | Hazardous Action | |
| | Unit Type | Driver Information | | | | Driver is Owner | Injury | Position | | Restraint | | |
| | Driver Condition at Time of Crash 1st 2nd | | | | Driver Distracted By | | Ejected | Trapped | Airbag Deployed | | | |
| | Hospital | | | | | Ambulance | | | | | | |
| | Alcohol Suspected | Contributing Factor | Alcohol Test Type ○ Breath ○ Blood ○ Urine ○ Field ○ PBT ○ Refused ○ Not Offered | | | Alcohol Test Results ○ Pending Test Results: | | Interlock Device | | | | |
| | Drug Suspected | Contributing Factor | Drug Test Type ○ Blood ○ Urine ○ Field ○ Refused ○ Not Offered | | | Drug Test Results ○ Pending Test Results: | | Citation Issued ○ Hazardous ○ Other | | | | |
| | Vehicle Registration | | State | Vehicle Description | | Year | Make | Model | | Color | | |
| | VIN | | Vehicle Type | | Special Vehicles | | Private Trailer Type | | Vehicle Defect | | | |
| | Automation System(s) in Vehicle | | Automation System Level in Vehicle | | | | Automation System Level Engaged at Time of Crash | | | | | |
| | Insurance Company | | | Insurance Policy # | | | Towed By | | | Towed To | | |
| Location of Greatest Damage | | First Impact | Extent of Damage (Power Unit and/or Trailers) | | Vehicle Direction | Vehicle Use | | | Action Prior | | | |
| Sequence of Events (● indicates MOST harmful event) | | First | | Second | | Third | | | Fourth | | | |
| PASSENGERS | Passenger Information | | | | Date of Birth (Age) | Sex | Race | Position | | Restraint | | |
| | | | | | Injury | Ejected | Trapped | Airbag Deployed | | | | |
| | Hospital | | | | Ambulance | | | | | | | |
| PASSENGERS | Passenger Information | | | | Date of Birth (Age) | Sex | Race | Position | | Restraint | | |
| | | | | | Injury | Ejected | Trapped | Airbag Deployed | | | | |
| | Hospital | | | | Ambulance | | | | | | | |
| TRUCK/BUS OWNERS | Carrier Information | | | | | USDOT | | MC | | MPSC | | |
| | | | | | | Driver's CDL Type ○ H ○ P ○ T ○ N ○ S ○ X | | Endorsements ○ Farm ○ Other | | CDL Exempt ○ Farm ○ Other | | |
| | GVWR/GCWR ○ 10,000 lbs. or Less ○ 10,001 - 26,000 lbs. ○ Greater than 26,000 lbs. | | | | Vehicle Configuration | | Cargo Body Type | | Medical Card | | Hazardous Material ○ Placard ○ Cargo Spill | |
| WITNESS | Owner Information | | | | | Owner Information | | | | | | |
| | Witness Information | | | | | Witness Information | | | | | | |
| | Investigated at Scene | Reported Date (Time) | | 1st Investigator Name (Badge) | | | 2nd Investigator Name (Badge) | | | Photos | | |
| Narrative | | | | | Diagram | | | | | | | |

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.

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 |
| - | KABCO | Injury severity scale for traffic crash-related injuries: <ul style="list-style-type: none">• K - Fatal• A - Suspected Serious• B - Suspected Minor• C - Possible• O - No Injury 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. |

ABBREVIATIONS & ACRONYMS (CONTINUED)

- **ORV** **Off-Road Vehicle**
- **OWI** **Operating While Intoxicated**
Refers to a person who is driving a vehicle while either under the influence of alcohol, a controlled substance, or both; OR has a BAC of .08 or greater.
- **PDO** **Property Damage Only**
Refers to a traffic crash lacking personal injuries.
- **UD-10** Form number ascribed to the **Michigan Traffic Crash Report form**; the official document used to report traffic crashes in Michigan.
- **UMTRI** **University of Michigan Transportation Research Institute**
- **USDOT** **United States Department of Transportation**
- **VMT** **Vehicle Miles Traveled**
The estimated total number of miles traveled annually by motor vehicles on Michigan trafficways

- **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

2021 QUICK FACTS

- Some exposure factor comparisons between 2021 and 2020 show motor vehicle registrations increased 6.0 percent, the number of licensed drivers on Michigan roads increased 1.9 percent, and vehicle mileage increased 12.1 percent.
- The 2021 fatality rate of 1.17 deaths per 100 million miles of travel is a decrease from the 2020 fatality rate of 1.25 but is higher than the 10-year average of 1.03 (2012-2021).
- There were 1,131 people killed and 71,246 people injured in 282,640 reported motor vehicle traffic crashes in Michigan during 2021. Compared with the 2020 experience, the number of deaths increased 4.4 percent, people injured increased 16.8 percent, and total reported crashes increased 15.2 percent.
- There were 282,640 reported crashes, of which 1,068 were fatal, 51,666 were personal injury, and 229,906 were property damage only crashes.
- Of all fatal crashes, 31.3 percent occurred at intersections.
- Of all fatal crashes, 31.5 percent involved at least one drinking operator, bicyclist, or pedestrian, 20.2 percent involved drinking but no drugs, 13.0 percent involved drugs but no drinking, and 11.2 percent involved both drinking and drugs.
- Excessive speed was indicated as the hazardous action for 12.7 percent of the drivers involved in fatal crashes.
- Of the 282,640 total crashes in 2021, 102,735 (36.3%) involved one vehicle only. This is an increase of 6.1 percent from last year's count of 96,821 single-vehicle crashes.
- Of the 1,068 fatal crashes, 532 (49.8%) involved one vehicle.
- Of the 336 alcohol-involved fatal crashes, 214 (63.7%) involved one vehicle. This is a 17.6 percent increase from last year's figure of 182 single vehicle, alcohol-involved fatal crashes.
- Of the 1,688 drivers involved in fatal crashes, 163 (9.7%) were under 21 years of age and 309 (18.3%) were under 25 years of age.
- Of the 10,050,811 people living in Michigan [1. References and Reporting Agencies] one out of every 8,887 was killed in a traffic crash and one out of every 141 was injured.
- For each person killed, 63 were injured.
- According to 2020 data provided by the Michigan Department of Health and Human Services [2. References and Reporting Agencies], motor vehicle crashes account for 19.8 percent of all accidental deaths in Michigan.
- The pedestrian death toll for Michigan stands at 183 people, an increase of 8 deaths from 2020.
- For each pedestrian killed, there were 8 pedestrians injured.
- Of all pedestrians killed, 7.7 percent were under the age of 21 and 7.1 percent were age 75 and over.
- The bicyclist death toll for Michigan stands at 29, a decrease of nine deaths from 2020.
- The youngest bicycle fatality was age 5. People under the age of 21 accounted for 17.2 percent of the bicycle deaths.
- Of the 413,849 drivers and injured passengers involved in crashes where restraint use was known, 406,922 or 98.3 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 2021.
- The comprehensive costs in Michigan traffic crashes amounted to \$34,003,093,000. If costs were spread across the state's population this would translate into a loss of \$3,383 per state resident.



HISTORICAL INFORMATION

STATEWIDE 2020-2021 SUMMARY TRENDS: 1 YEAR TRENDS

| | 2020 | 2021 | PERCENT OF CHANGE |
|---|-------------|-------------|-------------------|
| NUMBER OF CRASHES | | | |
| Fatal Crashes | 1,010 | 1,068 | 5.7 |
| Personal Injury Crashes | 44,417 | 51,666 | 16.3 |
| Property Damage Crashes | 200,005 | 229,906 | 15.0 |
| TOTAL | 245,432 | 282,640 | 15.2 |
| ALCOHOL-INVOLVED CRASHES | | | |
| Fatal Crashes | 303 | 336 | 10.9 |
| Personal Injury Crashes | 3,731 | 3,832 | 2.7 |
| Property Damage Crashes | 5,044 | 5,389 | 6.8 |
| TOTAL | 9,078 | 9,557 | 5.3 |
| FATAL CRASHES | | | |
| Had Been Drinking | 303 (30.0%) | 336 (31.5%) | 10.9 |
| Had Not Been Drinking / Not Known If Drinking | 707 (70.0%) | 732 (68.5%) | 3.5 |
| PEOPLE IN CRASHES | | | |
| Killed | 1,083 | 1,131 | 4.4 |
| Injured | 60,986 | 71,246 | 16.8 |
| Not Injured | 372,855 | 440,858 | 18.2 |
| Unknown Injury | 45,476 | 51,295 | 12.8 |
| TOTAL | 480,400 | 564,530 | 17.5 |
| PEOPLE IN ALCOHOL-INVOLVED CRASHES | | | |
| Killed | 326 | 357 | 9.5 |
| Injured | 5,138 | 5,297 | 3.1 |
| Not Injured | 9,907 | 10,751 | 8.5 |
| Unknown Injury | 1,352 | 1,246 | -7.8 |
| TOTAL | 16,723 | 17,651 | 5.5 |
| PEOPLE INJURED BY GENDER | | | |
| Male | 30,500 | 34,809 | 14.1 |
| Female | 30,466 | 36,417 | 19.5 |
| Unknown Gender | 20 | 20 | 0.0 |
| TOTAL | 60,986 | 71,246 | 16.8 |
| PEOPLE INJURED BY SEVERITY | | | |
| A Injury | 5,433 | 5,979 | 10.0 |
| B Injury | 17,179 | 20,593 | 19.9 |
| C Injury | 38,374 | 44,674 | 16.4 |
| TOTAL | 60,986 | 71,246 | 16.8 |

Michigan experienced a 15.2 percent increase in crashes, a 4.4 percent increase in traffic fatalities, and a 16.8 percent increase in injuries. People sustaining A level injuries (the most serious) increased 10.0 percent.

STATEWIDE 2020-2021 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

| | 2020 | 2021 | PERCENT OF CHANGE |
|---|--------|--------|-------------------|
| PEOPLE KILLED BY GENDER | | | |
| Male | 769 | 813 | 5.7 |
| Female | 314 | 318 | 1.3 |
| TOTAL | 1,083 | 1,131 | 4.4 |
| PEOPLE KILLED | | | |
| Motor Vehicle Driver | 692 | 758 | 9.5 |
| Passenger | 178 | 161 | -9.6 |
| Bicyclist | 38 | 29 | -23.7 |
| Pedestrian | 175 | 183 | 4.6 |
| Train Engineer | 0 | 0 | 0.0 |
| TOTAL | 1,083 | 1,131 | 4.4 |
| BELT RESTRAINT USE BY DRIVER | | | |
| Reported Restrained – Killed | 227 | 261 | 15.0 |
| Reported Not Restrained – Killed | 182 | 205 | 12.6 |
| Reported Restrained – Injured | 36,727 | 44,044 | 19.9 |
| Reported Not Restrained – Injured | 1,478 | 1,711 | 15.8 |
| BELT AND CHILD RESTRAINT USE BY INJURED PASSENGER | | | |
| Reported Restrained – Killed | 71 | 68 | -4.2 |
| Reported Not Restrained – Killed | 49 | 51 | 4.1 |
| Reported Restrained – Injured | 11,198 | 13,071 | 16.7 |
| Reported Not Restrained – Injured | 1,245 | 1,215 | -2.4 |
| DRIVER AGE 16-20 INVOLVED | | | |
| Fatal Crashes | 122 | 157 | 28.7 |
| Personal Injury Crashes | 8,339 | 9,931 | 19.1 |
| Property Damage Crashes | 30,491 | 37,184 | 22.0 |
| TOTAL ALL CRASHES | 38,952 | 47,272 | 21.4 |
| People Killed | 132 | 168 | 27.3 |
| People Injured | 12,348 | 14,702 | 19.1 |
| DRIVER AGE 65 & OVER INVOLVED | | | |
| Fatal Crashes | 205 | 215 | 4.9 |
| Personal Injury Crashes | 7,888 | 9,989 | 26.6 |
| Property Damage Crashes | 30,082 | 37,078 | 23.3 |
| TOTAL ALL CRASHES | 38,175 | 47,282 | 23.9 |
| People Killed | 219 | 230 | 5.0 |
| People Injured | 11,288 | 14,292 | 26.6 |

Deaths among vehicle occupants (drivers and passengers only) increased 5.6 percent.

STATEWIDE 2020-2021 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

| | 2020 | 2021 | PERCENT OF CHANGE |
|--|------------|------------|-------------------|
| CRASH FACTS | | | |
| Licensed Drivers | 7,118,197 | 7,256,488 | 1.9 |
| Registered Vehicles | 9,041,334 | 9,580,351 | 6.0 |
| Population | 9,966,555 | 10,050,811 | 0.8 |
| Drivers Involved in Crashes | 404,286 | 476,129 | 17.8 |
| Occupants* Involved in Crashes | 477,346 | 561,323 | 17.6 |
| Estimated Vehicle Miles Traveled (thousands) | 86,311,046 | 96,744,489 | 12.1 |
| Death Rate Per 100 Million Vehicle Miles | 1.3 | 1.2 | -6.8 |
| Fatal Crash Rate Per 100 Million Vehicle Miles | 1.2 | 1.1 | -5.7 |

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

STATEWIDE 2021 COST OF CRASHES IN MICHIGAN

The cost estimate for Michigan crashes in 2021 was **\$34,003,093,000**. 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, 2021

| | |
|--------------------------|--------------|
| Death | \$12,474,000 |
| Suspected Serious Injury | \$1,016,000 |
| Suspected Minor Injury | \$221,000 |
| Possible Injury | \$120,000 |
| No Injury | \$17,000 |

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 people. "No injury" is calculated per crash.



MICHIGAN
OHSP
Office of Highway Safety Planning

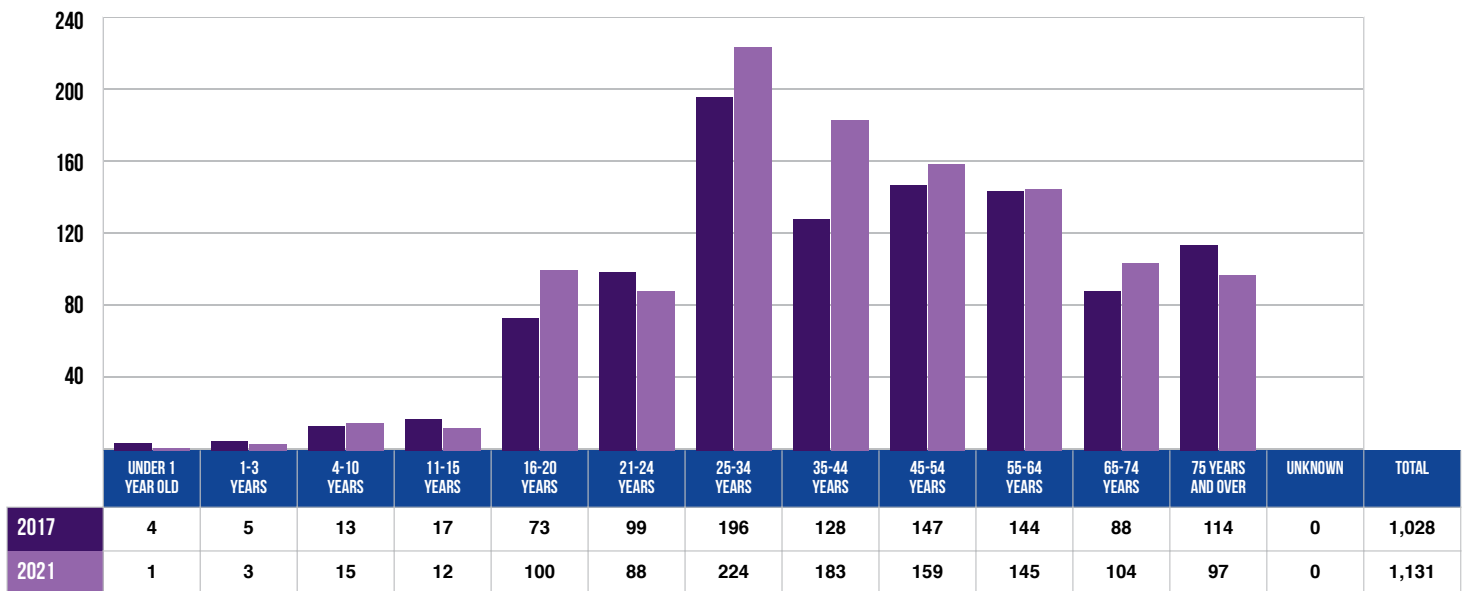


5 YEAR TRENDS - FATALITIES

| FATALITIES BY AGE | 2017 | 2018 | 2019 | 2020 | 2021 |
|-------------------|-------|------|------|-------|-------|
| Under 1 year old | 4 | 1 | 3 | 0 | 1 |
| 1 - 3 years | 5 | 7 | 7 | 10 | 3* |
| 4 - 10 years | 13 | 11 | 21 | 12 | 15 |
| 11 - 15 years | 17 | 15 | 19 | 9 | 12 |
| 16 - 20 years | 73 | 71 | 72 | 76 | 100 |
| 21 - 24 years | 99 | 94 | 65 | 99 | 88 |
| 25 - 34 years | 196 | 176 | 172 | 213 | 224 |
| 35 - 44 years | 128 | 122 | 130 | 139 | 183 |
| 45 - 54 years | 147 | 134 | 133 | 146 | 159 |
| 55 - 64 years | 144 | 138 | 156 | 151 | 145 |
| 65 - 74 years | 88 | 96 | 80 | 110 | 104 |
| 75 years and over | 114 | 109 | 127 | 118 | 97* |
| Unknown | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 1,028 | 974 | 985 | 1,083 | 1,131 |

*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 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|-------|-------|-------|-------|-------|
| AGE OF DRIVERS INVOLVED IN FATAL CRASHES | | | | | |
| 13 years and under | 0 | 2 | 3 | 1 | 1 |
| 14 years | 0 | 2 | 0 | 1 | 0 |
| 15 years | 2 | 1 | 5 | 1 | 2 |
| 16 years | 16 | 9 | 6 | 9 | 14 |
| 17 years | 14 | 12 | 12 | 22 | 27 |
| 18 years | 24 | 22 | 31 | 22 | 35 |
| 19 years | 28 | 28 | 31 | 37 | 43 |
| 20 years | 37 | 27 | 39 | 35 | 41 |
| 21 - 24 years | 174 | 132 | 122 | 145 | 146 |
| 25 - 34 years | 326 | 323 | 280 | 371 | 367 |
| 35 - 44 years | 193 | 225 | 233 | 252 | 283 |
| 45 - 54 years | 231 | 222 | 193 | 210 | 229 |
| 55 - 64 years | 199 | 208 | 210 | 196 | 195 |
| 65 - 69 years | 73 | 74 | 58 | 68 | 76 |
| 70 - 74 years | 58 | 52 | 43 | 46 | 54 |
| 75 - 79 years | 29 | 35 | 55 | 50 | 51 |
| 80 - 84 years | 32 | 34 | 34 | 25 | 28 |
| 85 - 89 years | 25 | 30 | 21 | 23 | 13 |
| 90 years and over | 13 | 11 | 10 | 10 | 6 |
| Unknown | 56 | 60 | 64 | 102 | 77 |
| TOTAL | 1,530 | 1,509 | 1,450 | 1,626 | 1,688 |
| AGE OF DRIVERS INVOLVED IN SINGLE VEHICLE FATAL CRASHES | | | | | |
| 13 years and under | 0 | 1 | 0 | 0 | 0 |
| 14 years | 0 | 1 | 0 | 1 | 0 |
| 15 years | 1 | 0 | 2 | 1 | 1 |
| 16 years | 5 | 4 | 2 | 5 | 5 |
| 17 years | 1 | 8 | 3 | 9 | 5 |
| 18 years | 5 | 6 | 14 | 7 | 17 |
| 19 years | 8 | 10 | 8 | 14 | 18 |
| 20 years | 14 | 15 | 8 | 11 | 13 |
| 21 - 24 years | 61 | 48 | 49 | 61 | 43 |
| 25 - 34 years | 114 | 90 | 82 | 123 | 124 |
| 35 - 44 years | 53 | 65 | 72 | 73 | 107 |
| 45 - 54 years | 71 | 58 | 64 | 65 | 69 |
| 55 - 64 years | 51 | 48 | 64 | 54 | 58 |
| 65 - 69 years | 16 | 9 | 22 | 25 | 17 |
| 70 - 74 years | 12 | 14 | 15 | 12 | 12 |
| 75 - 79 years | 8 | 10 | 13 | 15 | 15 |
| 80 - 84 years | 6 | 10 | 6 | 6 | 8 |
| 85 - 89 years | 6 | 5 | 5 | 7 | 1 |
| 90 years and over | 2 | 4 | 2 | 3 | 1 |
| Unknown | 15 | 14 | 14 | 23 | 18 |
| TOTAL | 449 | 420 | 445 | 515 | 532 |

5 YEAR TRENDS - BICYCLIST AND PEDESTRIAN FATALITIES

| FATALITIES BY AGE | 2017 | 2018 | 2019 | 2020 | 2021 |
|---------------------------|------|------|------|------|------|
| AGE OF BICYCLISTS KILLED | | | | | |
| Under 1 year old | 0 | 0 | 0 | 0 | 0 |
| 1 - 3 years | 0 | 0 | 0 | 1 | 0 |
| 4 - 10 years | 0 | 2 | 1 | 0 | 2 |
| 11 - 15 years | 0 | 2 | 2 | 1 | 2 |
| 16 - 20 years | 2 | 4 | 3 | 1 | 1 |
| 21 - 24 years | 1 | 0 | 1 | 0 | 0 |
| 25 - 34 years | 1 | 3 | 2 | 5 | 3 |
| 35 - 44 years | 2 | 4 | 0 | 6 | 3 |
| 45 - 54 years | 4 | 3 | 2 | 4 | 4 |
| 55 - 64 years | 5 | 0 | 6 | 8 | 8 |
| 65 - 74 years | 3 | 1 | 0 | 9 | 2 |
| 75 years and over | 3 | 2 | 4 | 3 | 4 |
| Unknown | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 21 | 21 | 21 | 38 | 29 |
| AGE OF PEDESTRIANS KILLED | | | | | |
| Under 1 year old | 0 | 0 | 0 | 0 | 0 |
| 1 - 3 years | 1 | 1 | 1 | 2 | 0 |
| 4 - 10 years | 5 | 4 | 8 | 1 | 3 |
| 11 - 15 years | 6 | 2 | 6 | 2 | 2 |
| 16 - 20 years | 5 | 9 | 7 | 6 | 9 |
| 21 - 24 years | 3 | 9 | 4 | 8 | 8 |
| 25 - 34 years | 24 | 25 | 21 | 32 | 23 |
| 35 - 44 years | 21 | 25 | 24 | 16 | 35 |
| 45 - 54 years | 35 | 21 | 29 | 30 | 35 |
| 55 - 64 years | 31 | 20 | 28 | 37 | 26 |
| 65 - 74 years | 11 | 17 | 10 | 21 | 29 |
| 75 years and over | 16 | 12 | 11 | 20 | 13 |
| Unknown | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 158 | 145 | 149 | 175 | 183 |

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

| HOLIDAY PERIOD | FATAL CRASHES | PEOPLE KILLED | SUMMARY 2021 |
|----------------|---------------|---------------|---|
| 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 2021 experience, deaths averaged 3.10 per day. Alcohol-related deaths averaged 0.98 per day.</p> <p>Based on the total 2021 holiday period experience, deaths averaged 4.05 per day. Alcohol-related deaths averaged 1.42 per day.</p> |
| 2021 (3) MON | 14 [6] | 14 [6] | |
| 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] | |
| FOURTH OF JULY | | | |
| 2021 (3) SUN | 25 [10] | 27 [11] | |
| 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] | |
| LABOR DAY | | | |
| 2021 (3) MON | 11 [5] | 11 [5] | |
| 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] | |
| THANKSGIVING | | | |
| 2021 (4) THU | 12 [3] | 14 [4] | |
| 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] | |
| CHRISTMAS | | | |
| 2021 (3) SAT | 4 [0] | 5 [0] | |
| 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] | |
| NEW YEAR'S | | | |
| 2021 (3) SAT | 6 [1] | 6 [1] | |
| 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] | |

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.

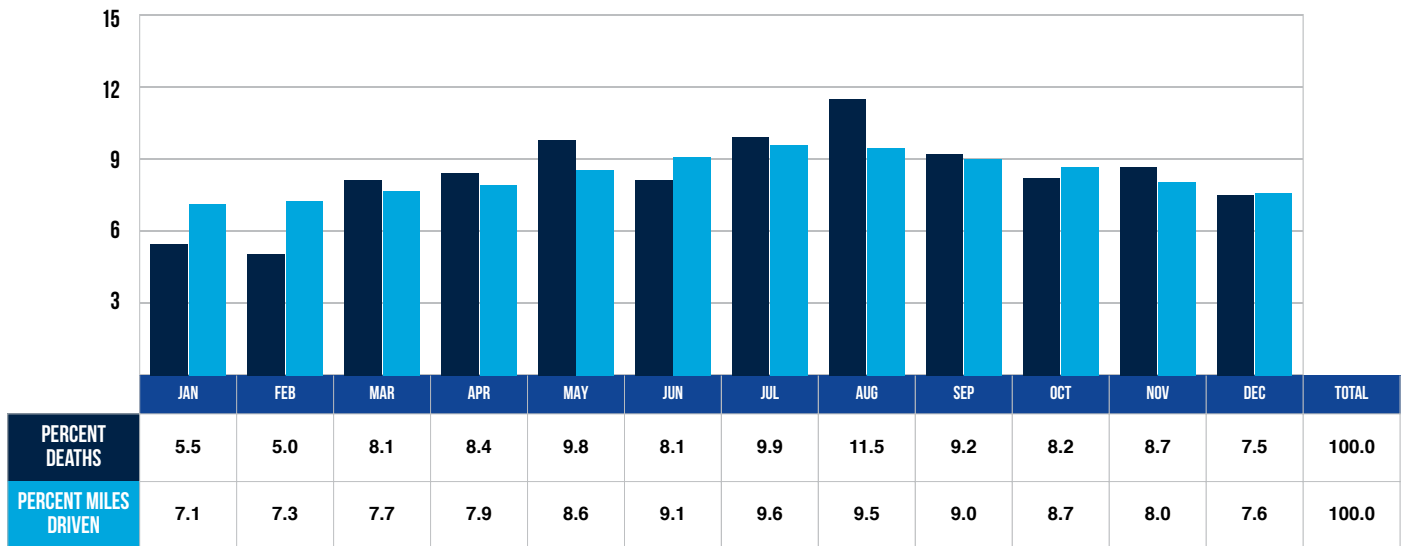
Figures in brackets in the 2nd and 3rd columns show the number of alcohol-related fatal crashes and deaths.

Please view the glossary for an explanation of holiday periods.

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

| MONTH | TRAFFIC DEATHS | | | | | 2021 PERCENTAGES | |
|-----------|----------------|------|------|-------|-------|------------------|----------------------|
| | 2017 | 2018 | 2019 | 2020 | 2021 | Percent Deaths | Percent Miles Driven |
| January | 82 | 55 | 77 | 62 | 62 | 5.5 | 7.1 |
| February | 60 | 60 | 54 | 64 | 57 | 5.0 | 7.3 |
| March | 79 | 67 | 67 | 47 | 92 | 8.1 | 7.7 |
| April | 81 | 74 | 62 | 48 | 95 | 8.4 | 7.9 |
| May | 86 | 90 | 89 | 85 | 111 | 9.8 | 8.6 |
| June | 105 | 81 | 85 | 130 | 92 | 8.1 | 9.1 |
| July | 98 | 95 | 103 | 131 | 112 | 9.9 | 9.6 |
| August | 85 | 128 | 96 | 129 | 130 | 11.5 | 9.5 |
| September | 102 | 115 | 88 | 103 | 104 | 9.2 | 9.0 |
| October | 82 | 78 | 113 | 100 | 93 | 8.2 | 8.7 |
| November | 87 | 68 | 78 | 104 | 98 | 8.7 | 8.0 |
| December | 81 | 63 | 73 | 80 | 85 | 7.5 | 7.6 |
| TOTAL | 1,028 | 974 | 985 | 1,083 | 1,131 | 100.0 | 100.0 |

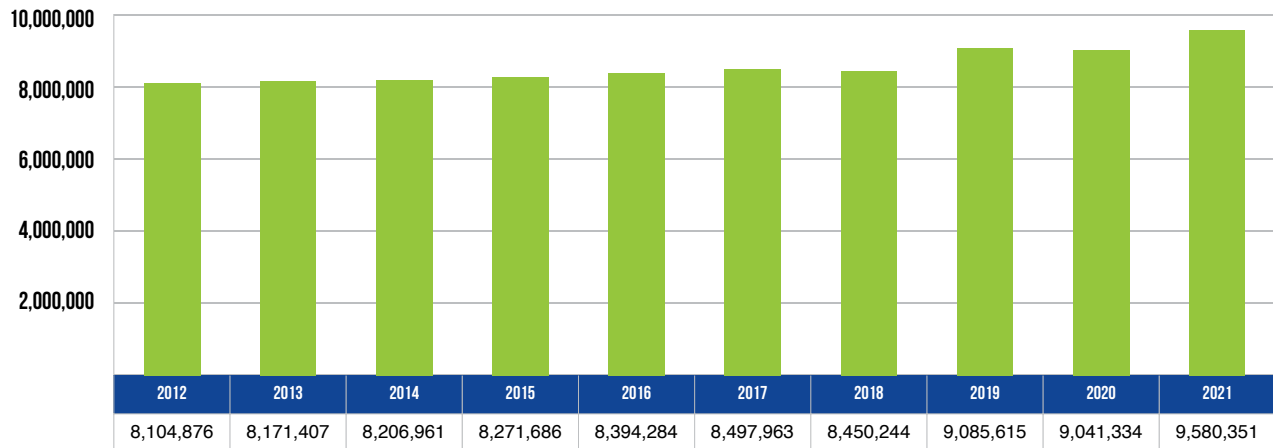
2021 PERCENT DEATHS AND PERCENT MILES DRIVEN



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

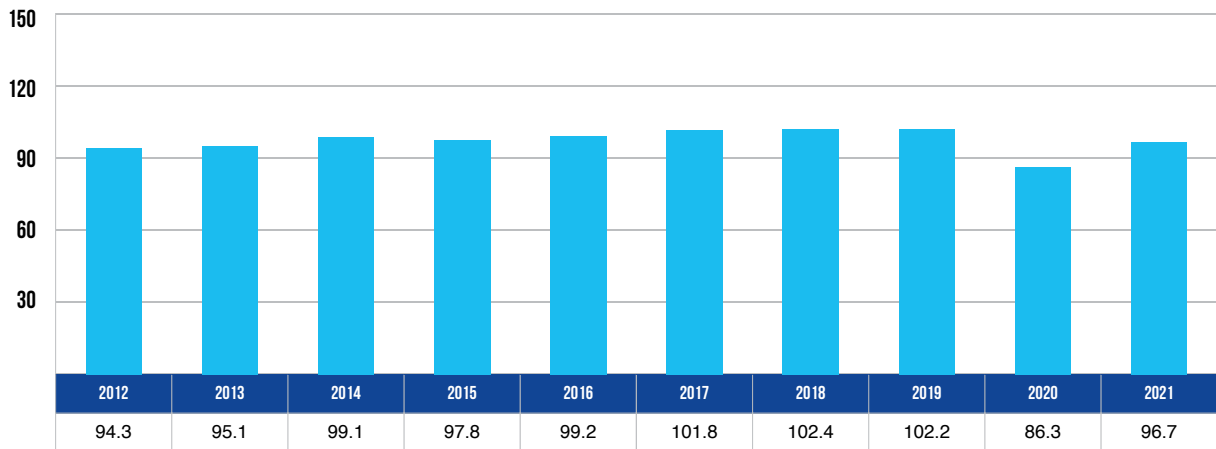
10 YEAR TRENDS-STATEWIDE

VEHICLE REGISTRATIONS



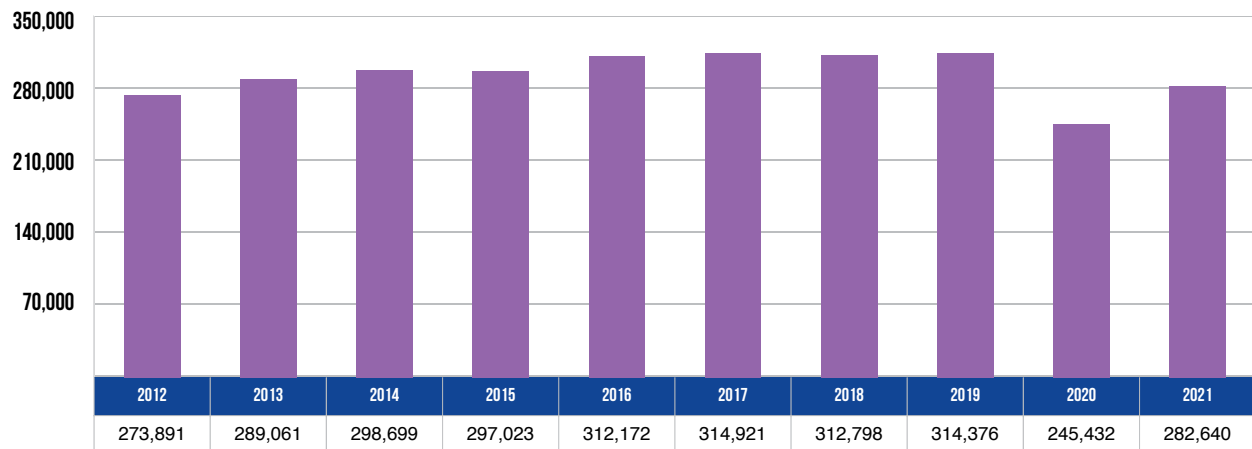
Vehicle registrations increased 18.2 percent over the 10-year period.

VEHICLE MILES TRAVELED (BILLIONS)



Vehicle miles traveled increased 2.6 percent over the 10-year period.

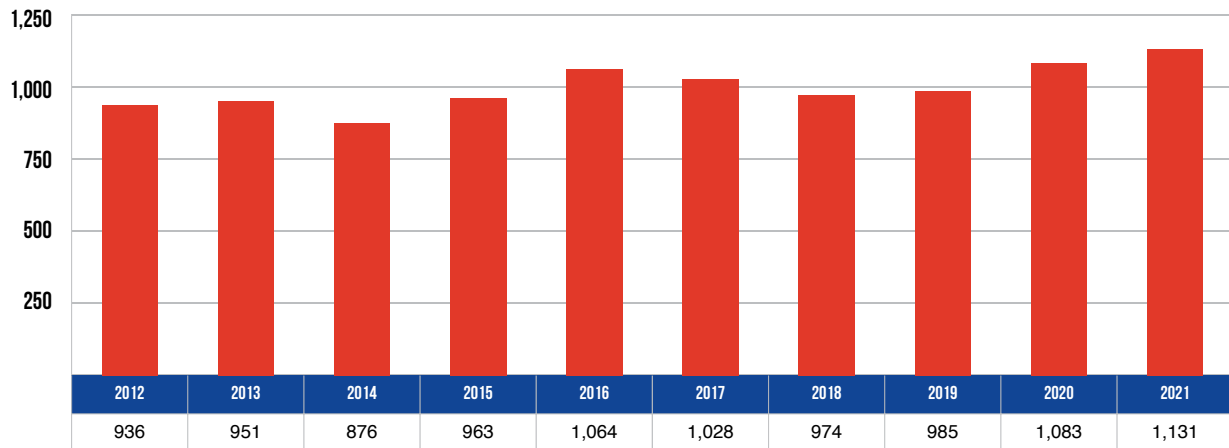
CRASHES



There were 282,640 total crashes statewide in 2021--a 3.2 percent increase from 2012.

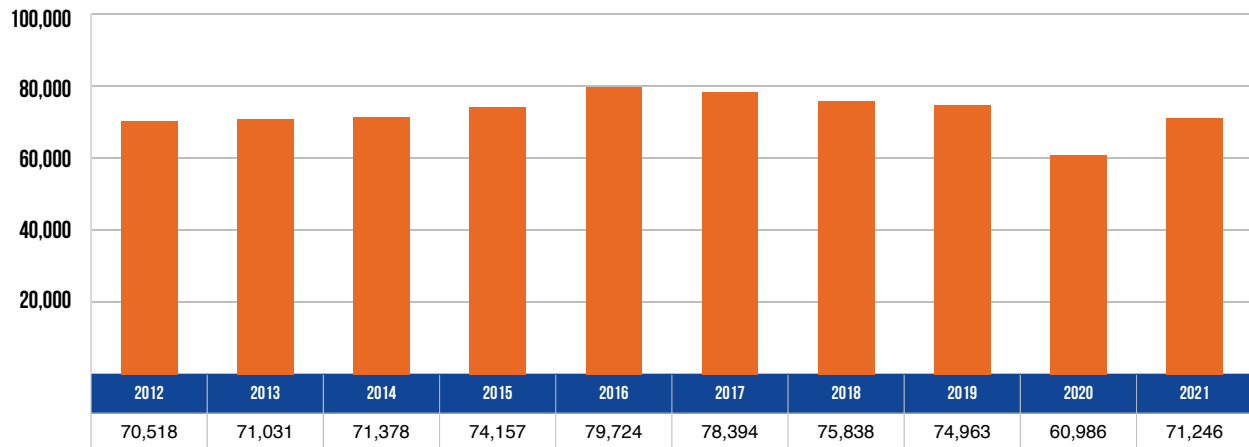
10 YEAR TRENDS-STATEWIDE (CONTINUED)

DEATHS



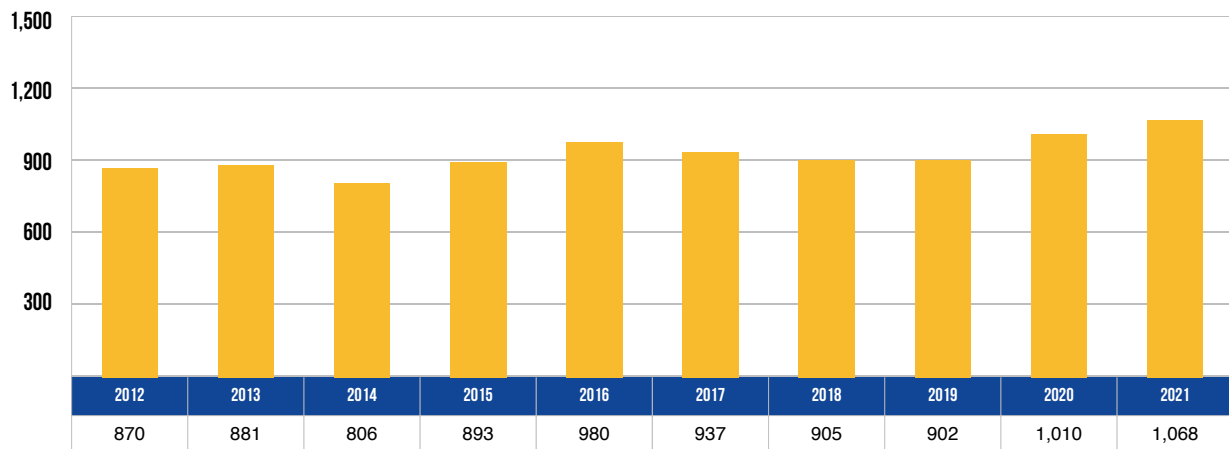
In 2021, 1,131 people died in motor vehicle crashes--an increase of 20.8 percent from 2012.

INJURIES



In 2021, 71,246 people received injuries in motor vehicle crashes--up 1.0 percent from 70,518 in 2012.

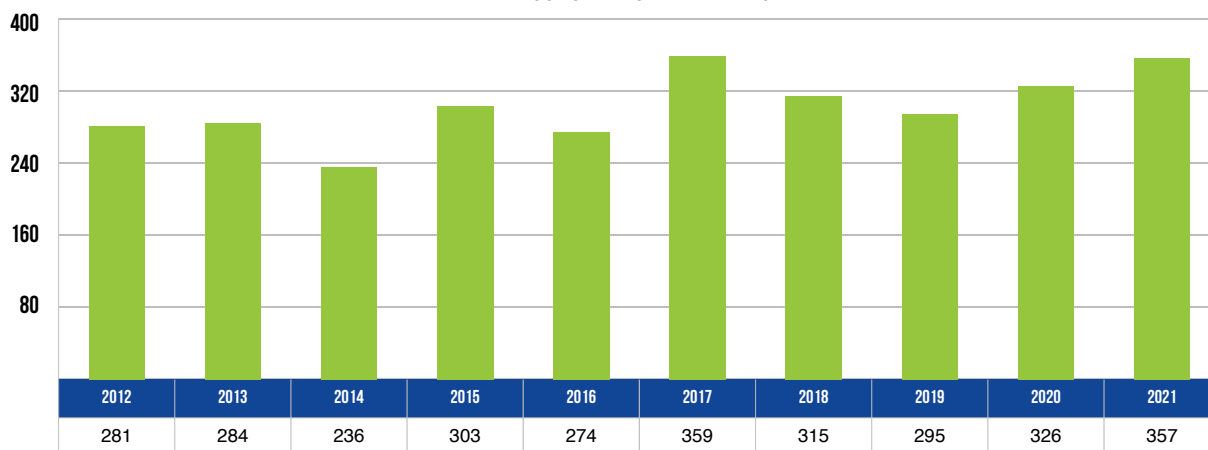
FATAL CRASHES



In 2021, there were 1,068 fatal crashes--up 22.8 percent from 870 in 2012.

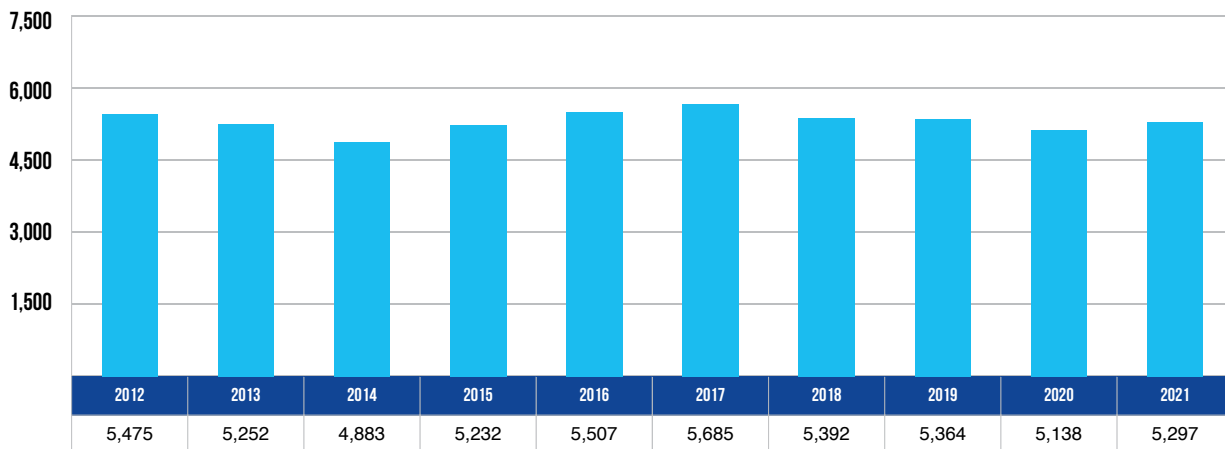
10 YEAR TRENDS-STATEWIDE (CONTINUED)

ALCOHOL-INVOLVED DEATHS



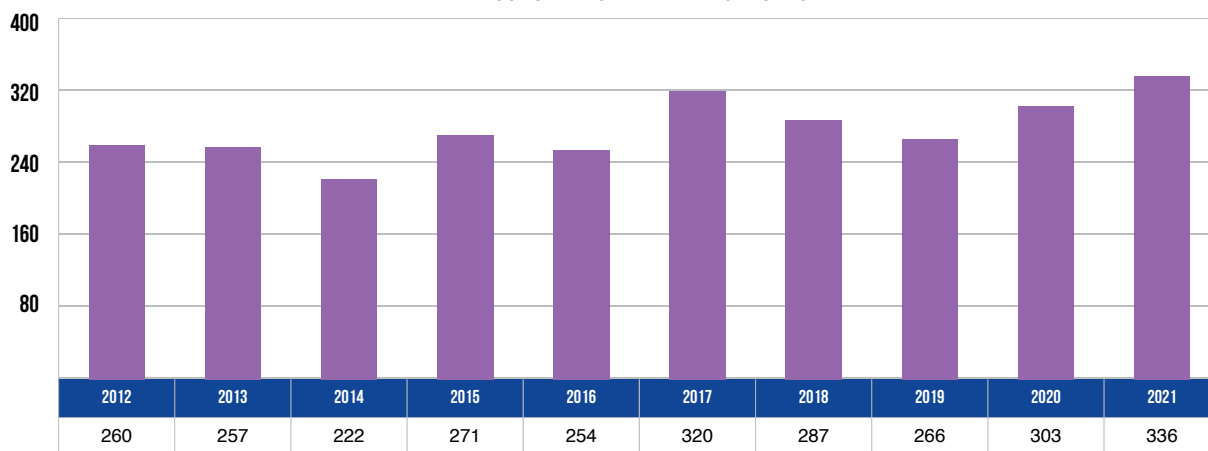
There were 357 deaths in alcohol-involved crashes in 2021--up 27.0 percent from 281 in 2012.

ALCOHOL-INVOLVED INJURIES



There were 5,297 injuries in alcohol-involved crashes in 2021--down 3.3 percent from 2012.

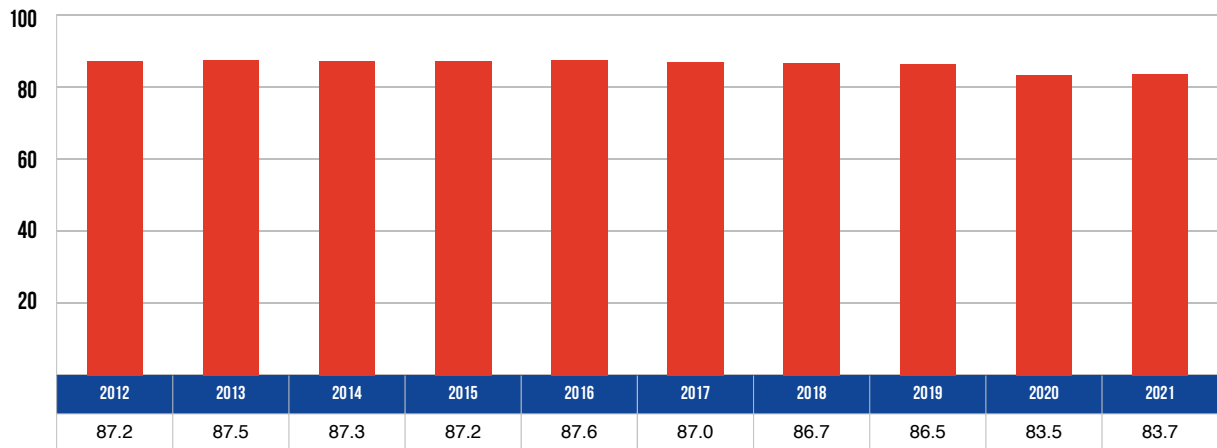
ALCOHOL-INVOLVED FATAL CRASHES



There were 336 alcohol-involved fatal crashes--up 29.2 percent from 260 in 2012.

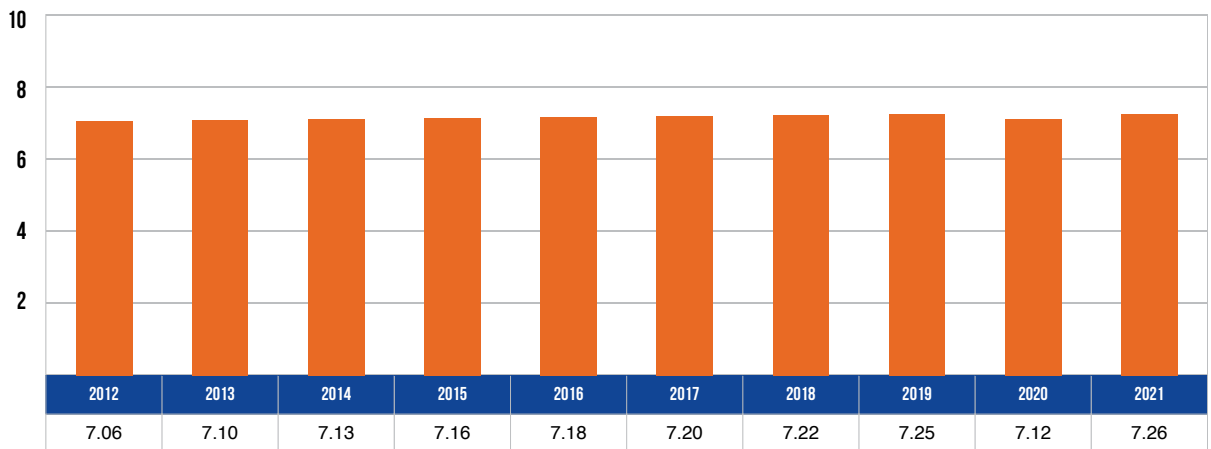
10 YEAR TRENDS-STATEWIDE (CONTINUED)

RESTRAINT USAGE IN CRASHES



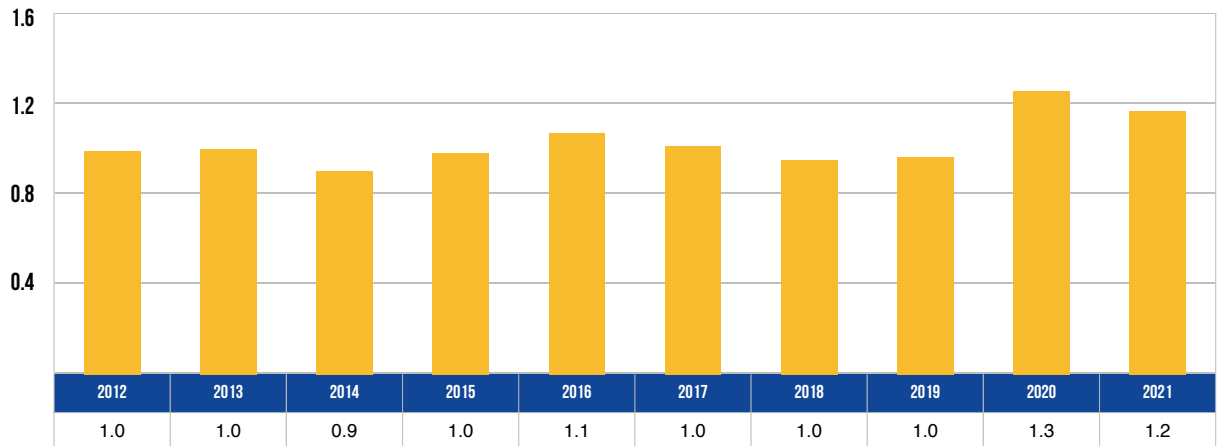
The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes was 83.7 percent in 2021, down 4.0 percent from 2012.

DRIVERS IN MICHIGAN (MILLIONS)



There were 7,256,488 licensed drivers on Michigan roadways in 2021--an increase of 2.8 percent from 2012.

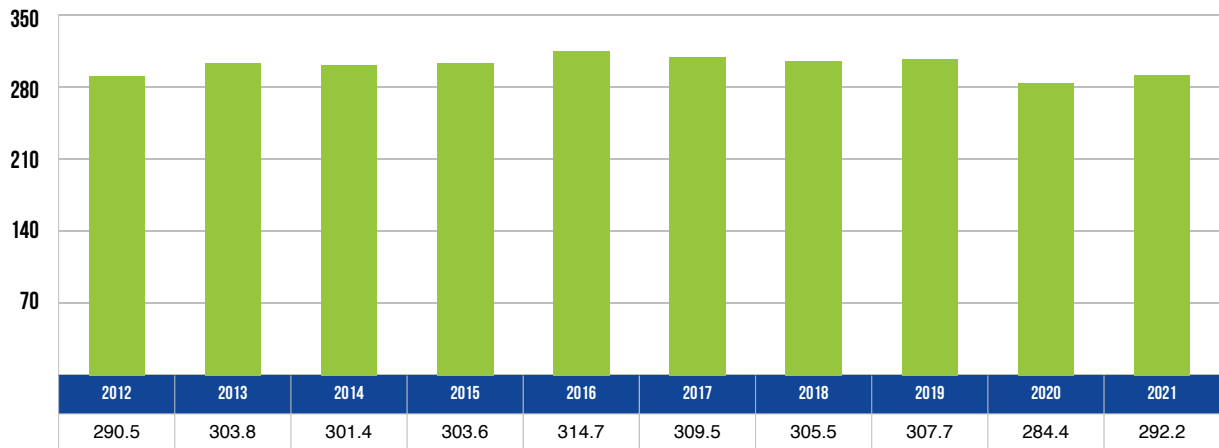
FATALITIES PER 100 MILLION VEHICLE MILES TRAVELED



The death rate of 1.169 fatalities per 100 million VMT in 2021 was an increase of 18.1% from the death rate of 0.990 in 2012.

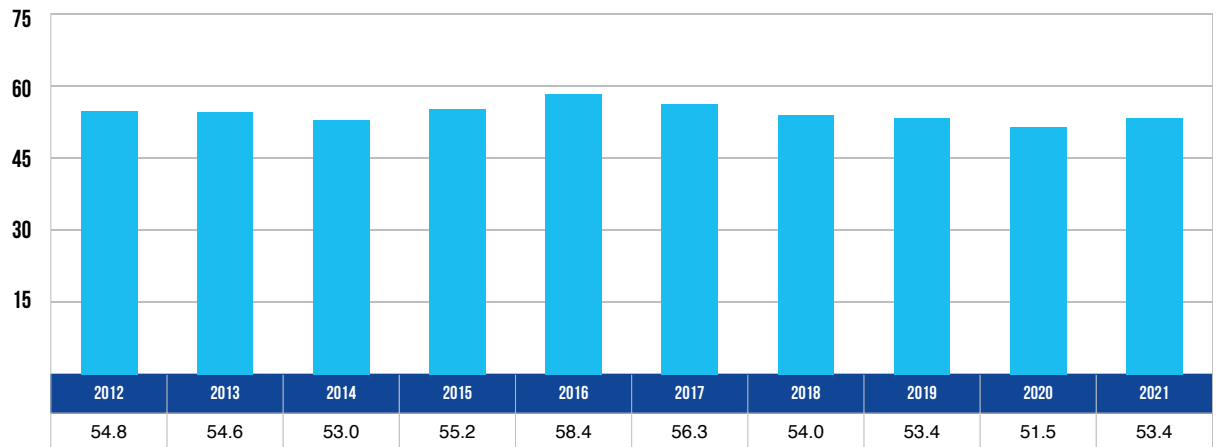
10 YEAR TRENDS-STATEWIDE (CONTINUED)

TOTAL CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



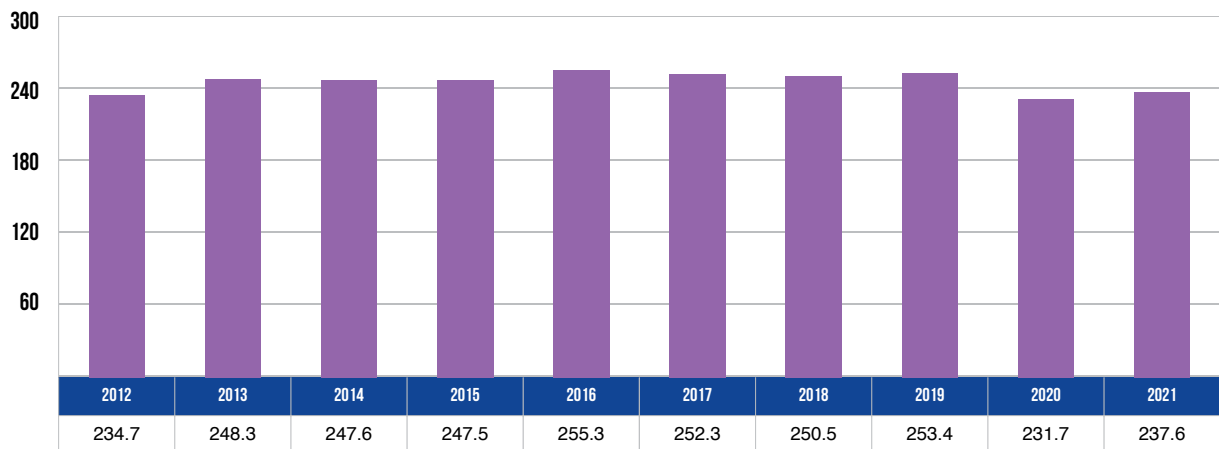
The total crash rate of 292.2 crashes in 2021 was a 0.6 percent increase from 2012.

INJURY CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



The injury crash rate of 53.4 crashes in 2021 was a 2.5 percent decrease from 2012.

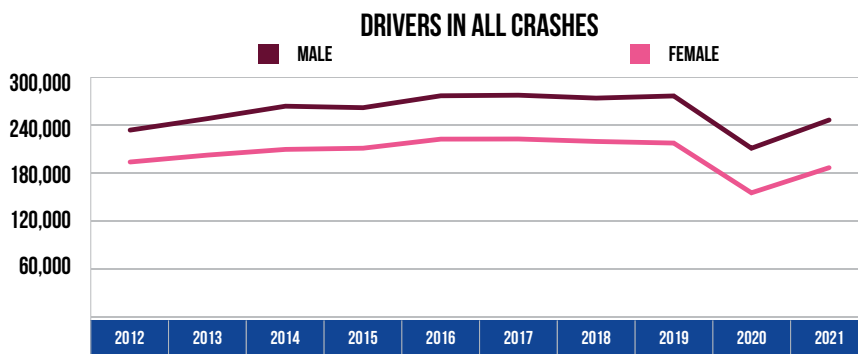
PROPERTY DAMAGE CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



The property damage crash rate of 237.6 crashes in 2021 was a 1.3 percent increase from 2012.

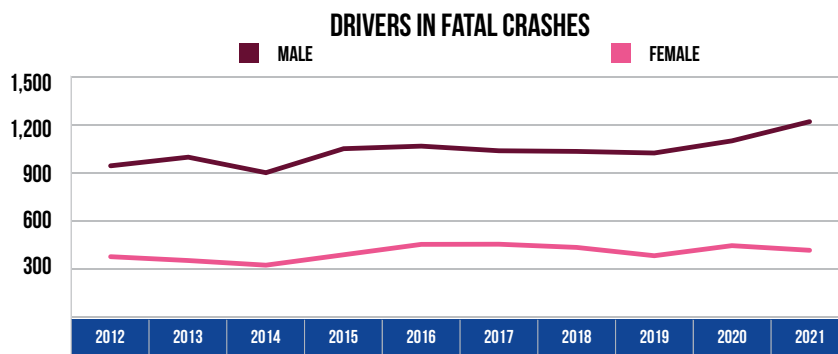
10 YEAR TRENDS-STATEWIDE (CONTINUED)

| DRIVERS IN ALL CRASHES | | |
|------------------------|---------|---------|
| Year | Male | Female |
| 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 |
| 2021 | 245,096 | 185,493 |



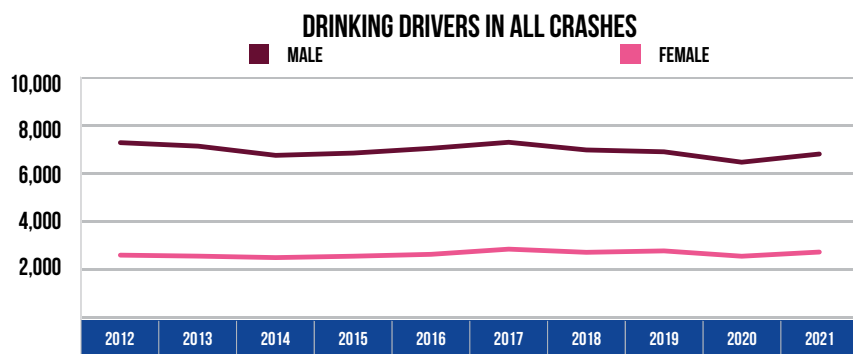
Male drivers accounted for 56.9 percent of all drivers in crashes during 2021, which was up slightly from 54.7 percent in 2012. Female drivers accounted for 43.1 percent of all drivers in crashes during 2021, which was down slightly from 45.3 percent in 2012.

| DRIVERS IN FATAL CRASHES | | |
|--------------------------|-------|--------|
| Year | Male | Female |
| 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 |
| 2021 | 1,212 | 408 |



Male drivers made up 74.8 percent of all drivers in fatal crashes in 2021, which was up from 71.8 percent in 2012. Female drivers made up 25.2 percent of all drivers in fatal crashes in 2021, which was down from 28.2 percent in 2012.

| DRINKING DRIVERS IN ALL CRASHES | | |
|---------------------------------|-------|--------|
| Year | Male | Female |
| 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 |
| 2021 | 6,777 | 2,692 |



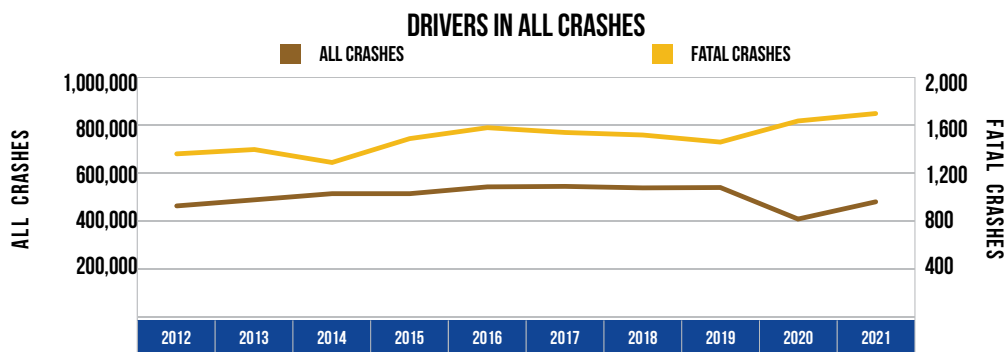
In 2021, males represented 71.6 percent of all drinking drivers, which was down from 73.9 percent in 2012. Females represented 28.4 percent of all drinking drivers in 2021, which was up from 26.1 percent in 2012.

Note: 45,540 drivers in all crashes, 68 drivers in fatal crashes, and 0 drinking drivers were coded as unknown gender in 2021 and are not included in the tables.

10 YEAR TRENDS-STATEWIDE (CONTINUED)

DRIVERS IN ALL CRASHES

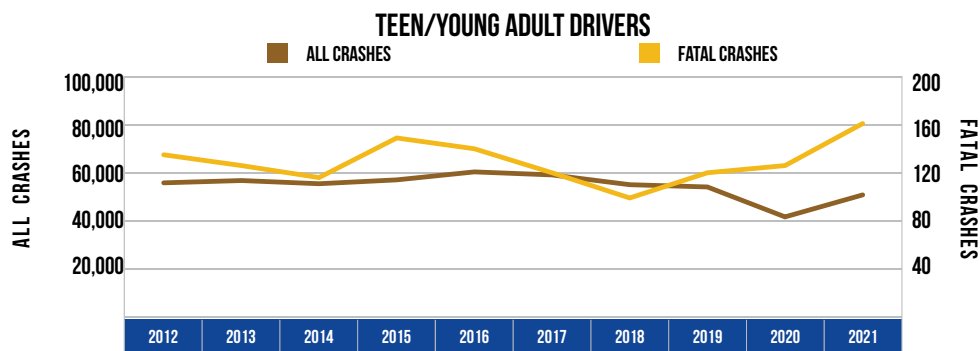
| Year | All Crashes | Fatal Crashes |
|------|-------------|---------------|
| 2012 | 459,030 | 1,352 |
| 2013 | 484,446 | 1,388 |
| 2014 | 510,086 | 1,280 |
| 2015 | 510,074 | 1,479 |
| 2016 | 538,412 | 1,570 |
| 2017 | 540,387 | 1,530 |
| 2018 | 534,223 | 1,509 |
| 2019 | 535,721 | 1,450 |
| 2020 | 404,286 | 1,626 |
| 2021 | 476,129 | 1,688 |



The number of drivers involved in all crashes increased 3.7 percent over the 10-year period. The number of drivers involved in fatal crashes increased 24.9 percent over the 10-year period.

TEEN/YOUNG ADULT DRIVERS (AGE 16-20)

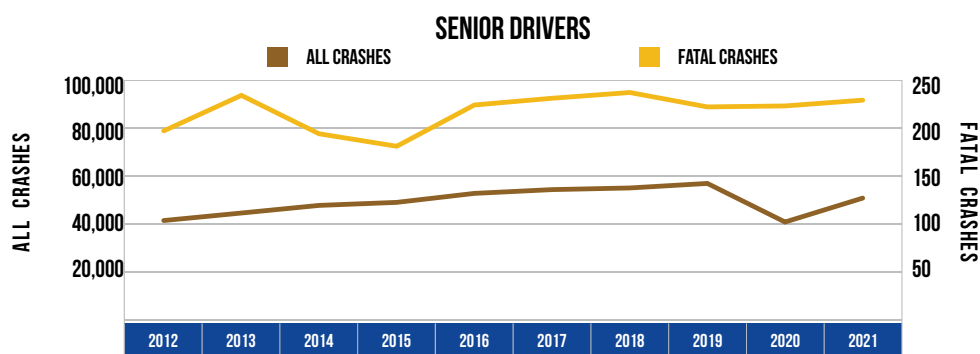
| Year | All Crashes | Fatal Crashes |
|------|-------------|---------------|
| 2012 | 55,307 | 134 |
| 2013 | 56,264 | 125 |
| 2014 | 54,935 | 115 |
| 2015 | 56,544 | 148 |
| 2016 | 59,865 | 139 |
| 2017 | 58,607 | 119 |
| 2018 | 54,530 | 98 |
| 2019 | 53,586 | 119 |
| 2020 | 41,119 | 125 |
| 2021 | 50,282 | 160 |



Teen/young adult drivers (age 16-20) represented 6.0 percent of the licensed drivers in 2021. The number of teen/young adult drivers in all crashes has decreased by 9.1 percent since 2012. Their involvement in fatal crashes has increased 19.4 percent during the same time period.

SENIOR DRIVERS (AGE 65 & OVER)

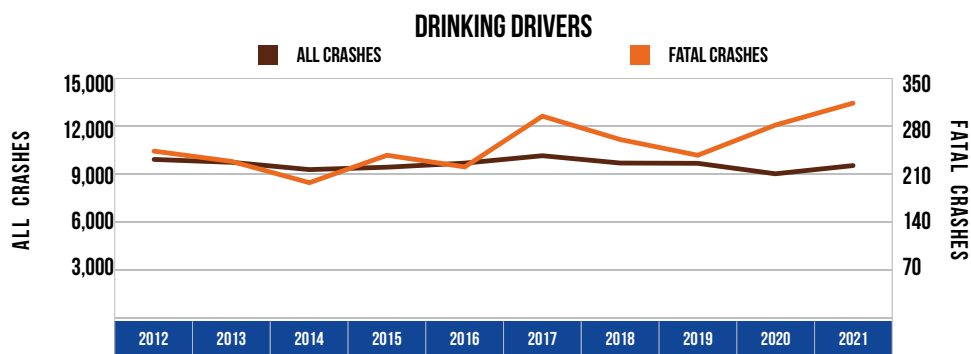
| Year | All Crashes | Fatal Crashes |
|------|-------------|---------------|
| 2012 | 41,047 | 196 |
| 2013 | 44,183 | 233 |
| 2014 | 47,356 | 193 |
| 2015 | 48,615 | 180 |
| 2016 | 52,362 | 223 |
| 2017 | 53,934 | 230 |
| 2018 | 54,621 | 236 |
| 2019 | 56,515 | 221 |
| 2020 | 40,432 | 222 |
| 2021 | 50,398 | 228 |



Senior drivers (age 65 and over) represented 23.4 percent of the licensed drivers in 2021. The number of drivers age 65 and over in all crashes has increased 22.8 percent since 2012. Senior driver involvement in fatal crashes increased 16.3 percent during the same time period.

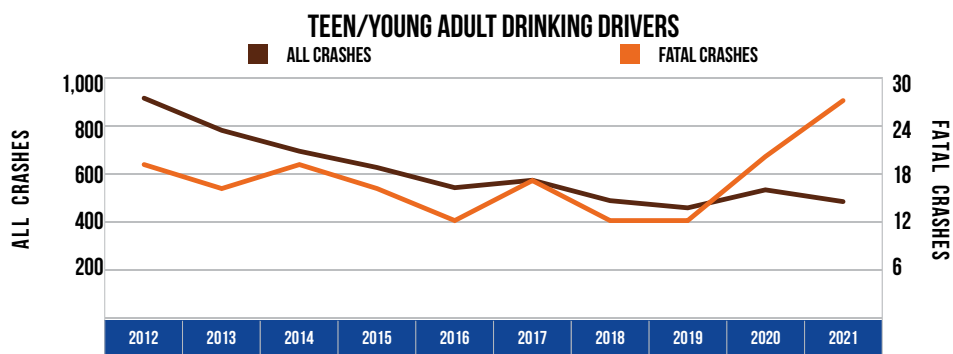
10 YEAR TRENDS-STATEWIDE (CONTINUED)

| DRINKING DRIVERS | | |
|------------------|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 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 |
| 2021 | 9,469 | 312 |



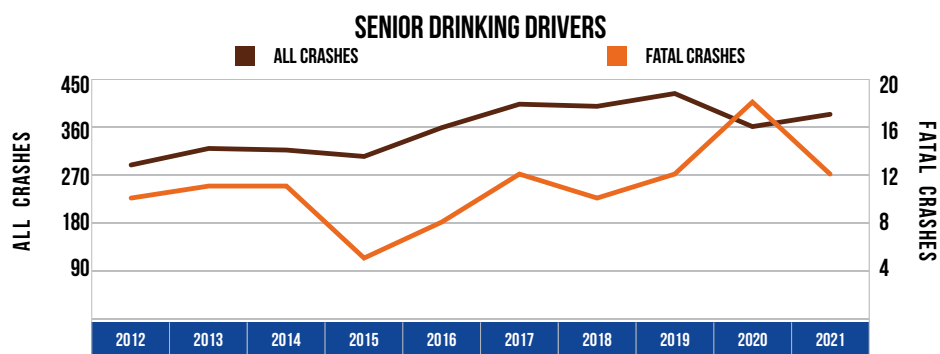
Drinking driver involvement in all crashes decreased by 3.9 percent from 2012. Drinking driver involvement in fatal crashes increased by 28.9 percent from 2012.

| TEEN/YOUNG ADULT DRINKING DRIVERS (AGE 16-20) | | |
|--|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 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 |
| 2021 | 479 | 27 |



The number of teen/young adult drinking drivers (age 16-20) in all crashes decreased by 47.4 percent, and their involvement in fatal crashes increased by 42.1 percent from 2012.

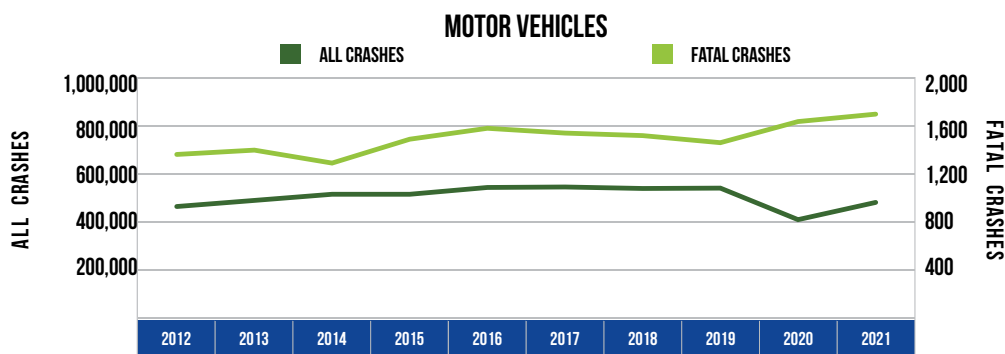
| SENIOR DRINKING DRIVERS (AGE 65 & OVER) | | |
|--|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 2012 | 287 | 10 |
| 2013 | 318 | 11 |
| 2014 | 315 | 11 |
| 2015 | 303 | 5 |
| 2016 | 357 | 8 |
| 2017 | 401 | 12 |
| 2018 | 397 | 10 |
| 2019 | 421 | 12 |
| 2020 | 359 | 18 |
| 2021 | 382 | 12 |



The number of senior drinking drivers (age 65 and over) in all crashes increased by 33.1 percent from 2012. Their involvement in fatal crashes increased by 20.0 percent from 2012.

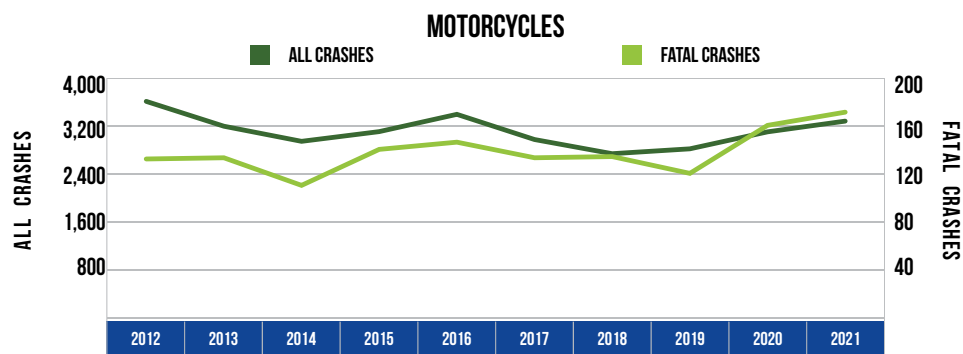
10 YEAR TRENDS-STATEWIDE (CONTINUED)

| MOTOR VEHICLES | | |
|----------------|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 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 |
| 2021 | 476,129 | 1,688 |



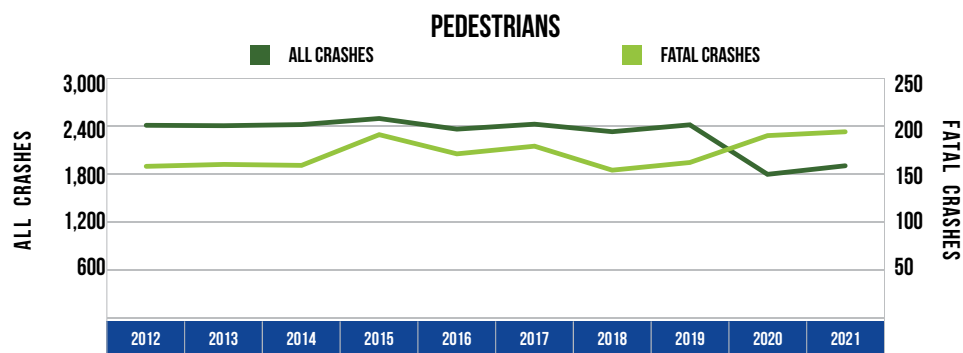
There were 476,129 motor vehicles involved in all crashes in 2021, up 3.7 percent from 2012. There were 1,688 motor vehicles involved in fatal crashes in 2021, up 24.9 percent from 2012.

| MOTORCYCLES | | |
|-------------|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 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 |
| 2021 | 3,271 | 171 |



There were 3,271 motorcycles involved in crashes in 2021, a 9.1 percent decrease from 2012. There were 171 motorcycles involved in fatal crashes in 2021, up 29.5 percent from 2012.

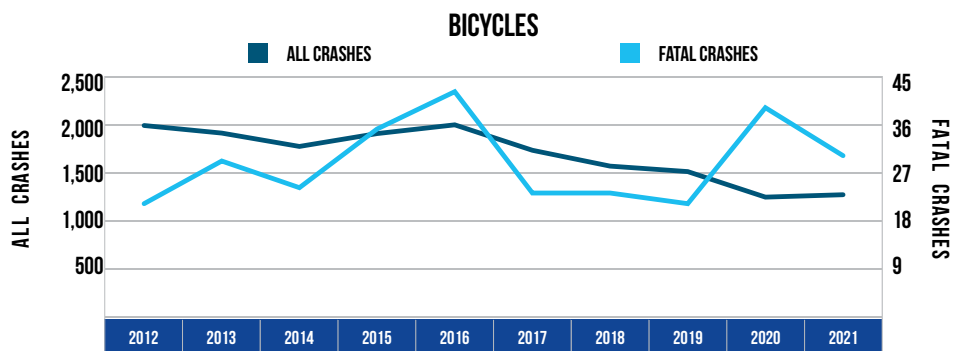
| PEDESTRIANS | | |
|-------------|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 2012 | 2,397 | 157 |
| 2013 | 2,392 | 159 |
| 2014 | 2,406 | 158 |
| 2015 | 2,482 | 190 |
| 2016 | 2,349 | 170 |
| 2017 | 2,411 | 178 |
| 2018 | 2,317 | 153 |
| 2019 | 2,403 | 161 |
| 2020 | 1,784 | 189 |
| 2021 | 1,891 | 193 |



There were 1,891 pedestrians involved in crashes in 2021, down 21.1 percent from 2012. There were 193 pedestrians involved in fatal crashes in 2021, up 22.9 percent from 2012.

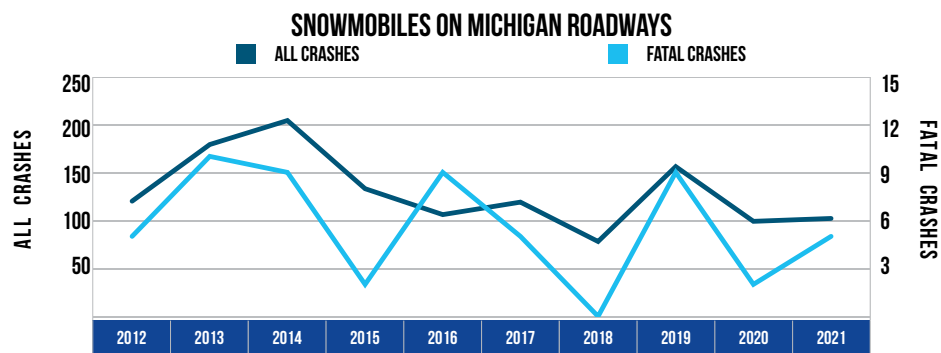
10 YEAR TRENDS-STATEWIDE (CONTINUED)

| BICYCLES | | |
|----------|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 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 |
| 2021 | 1,260 | 30 |



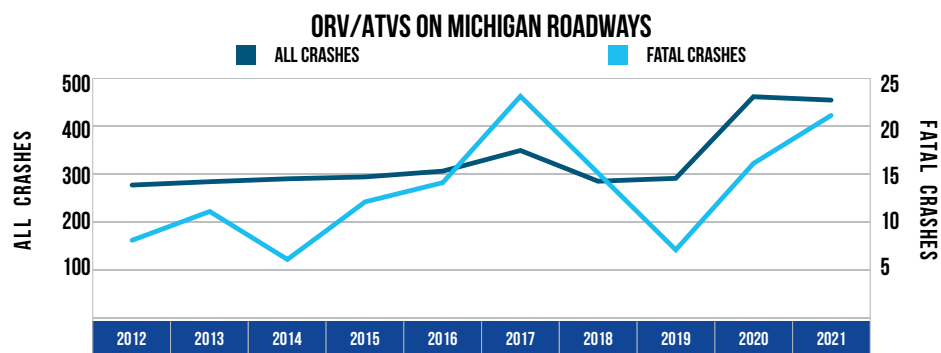
There were 1,260 bicycles involved in crashes in 2021, down 36.4 percent from 2012. There were 30 bicycles involved in fatal crashes in 2021, up 42.9 percent from 2012.

| SNOWMOBILES ON MICHIGAN ROADWAYS | | |
|----------------------------------|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 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 |
| 2021 | 102 | 5 |



There were 102 snowmobiles in crashes on roadways in 2021, down 15.0 percent from 2012. There were five snowmobiles in fatal crashes, a 0.0 percent change from 2012.

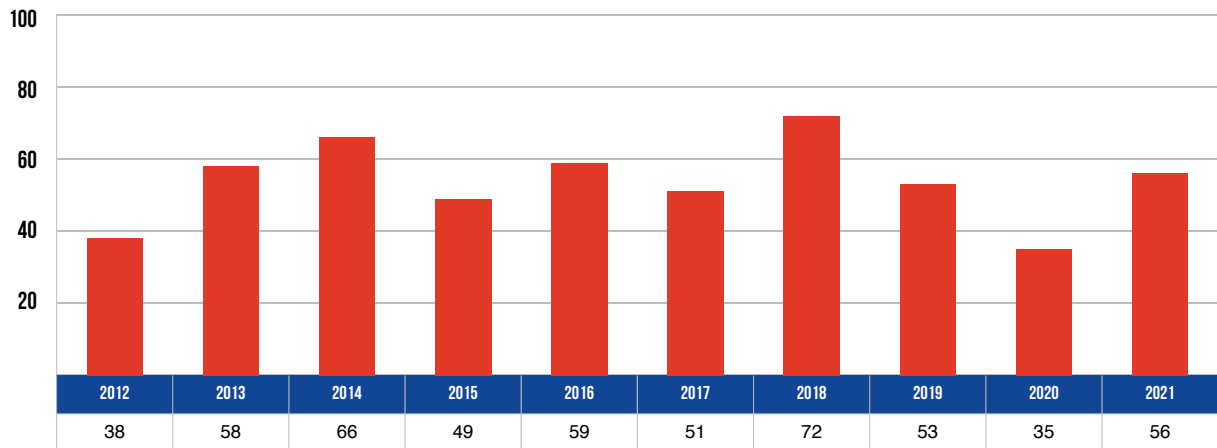
| ORV/ATVS ON MICHIGAN ROADWAYS | | |
|-------------------------------|-------------|---------------|
| Year | All Crashes | Fatal Crashes |
| 2012 | 275 | 8 |
| 2013 | 282 | 11 |
| 2014 | 288 | 6 |
| 2015 | 292 | 12 |
| 2016 | 304 | 14 |
| 2017 | 347 | 23 |
| 2018 | 283 | 15 |
| 2019 | 289 | 7 |
| 2020 | 459 | 16 |
| 2021 | 452 | 21 |



There were 452 ORV/ATVs in crashes on roadways in 2021, up 64.4 percent from 2012. There were 21 ORV/ATVs in fatal crashes, up 162.5 percent from 2012.

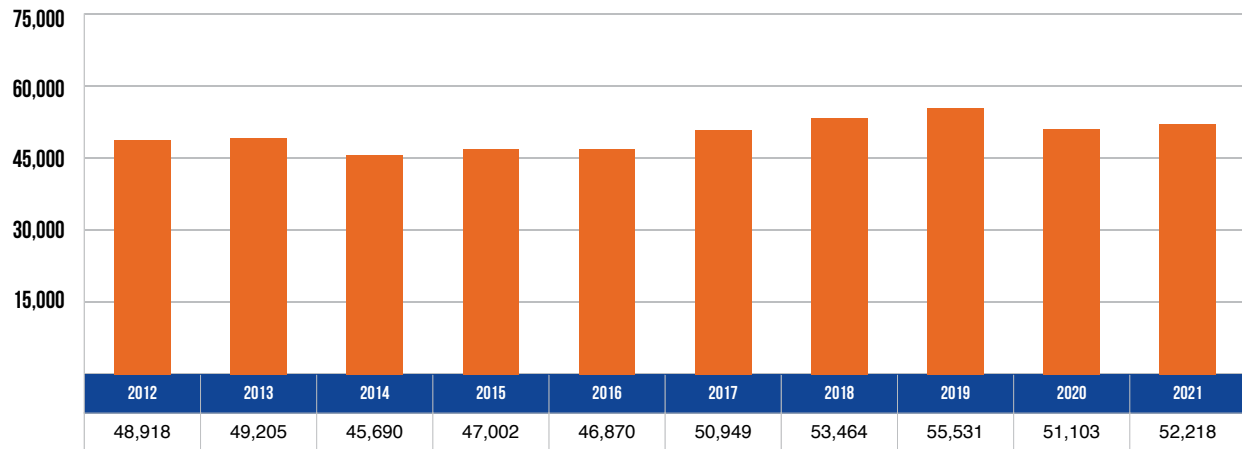
10 YEAR TRENDS-STATEWIDE (CONTINUED)

VEHICLE-TRAIN CRASHES



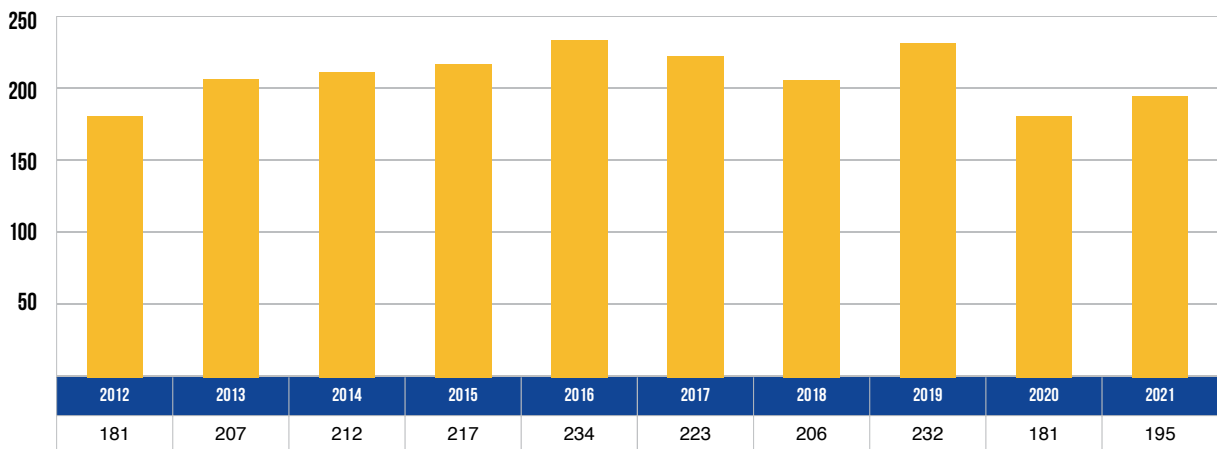
There were 56 vehicle-train crashes in 2021--an increase of 47.4 percent in the 10-year period.

VEHICLE-DEER CRASHES



There were 52,218 vehicle-deer crashes in 2021--an increase of 6.7 percent in the 10-year period.

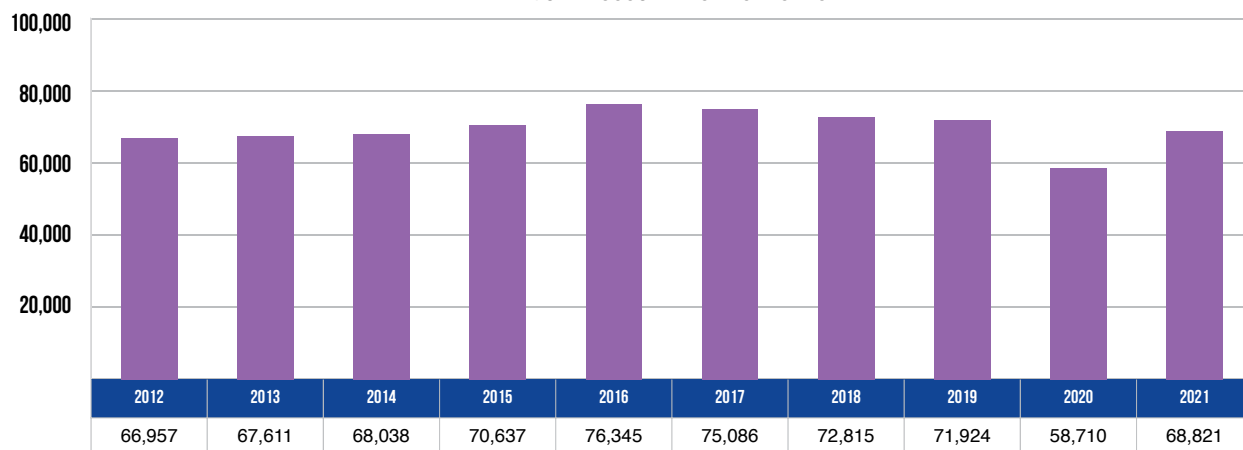
FARM EQUIPMENT CRASHES



There were 195 farm equipment crashes in 2021--an increase of 7.7 percent from 2012.

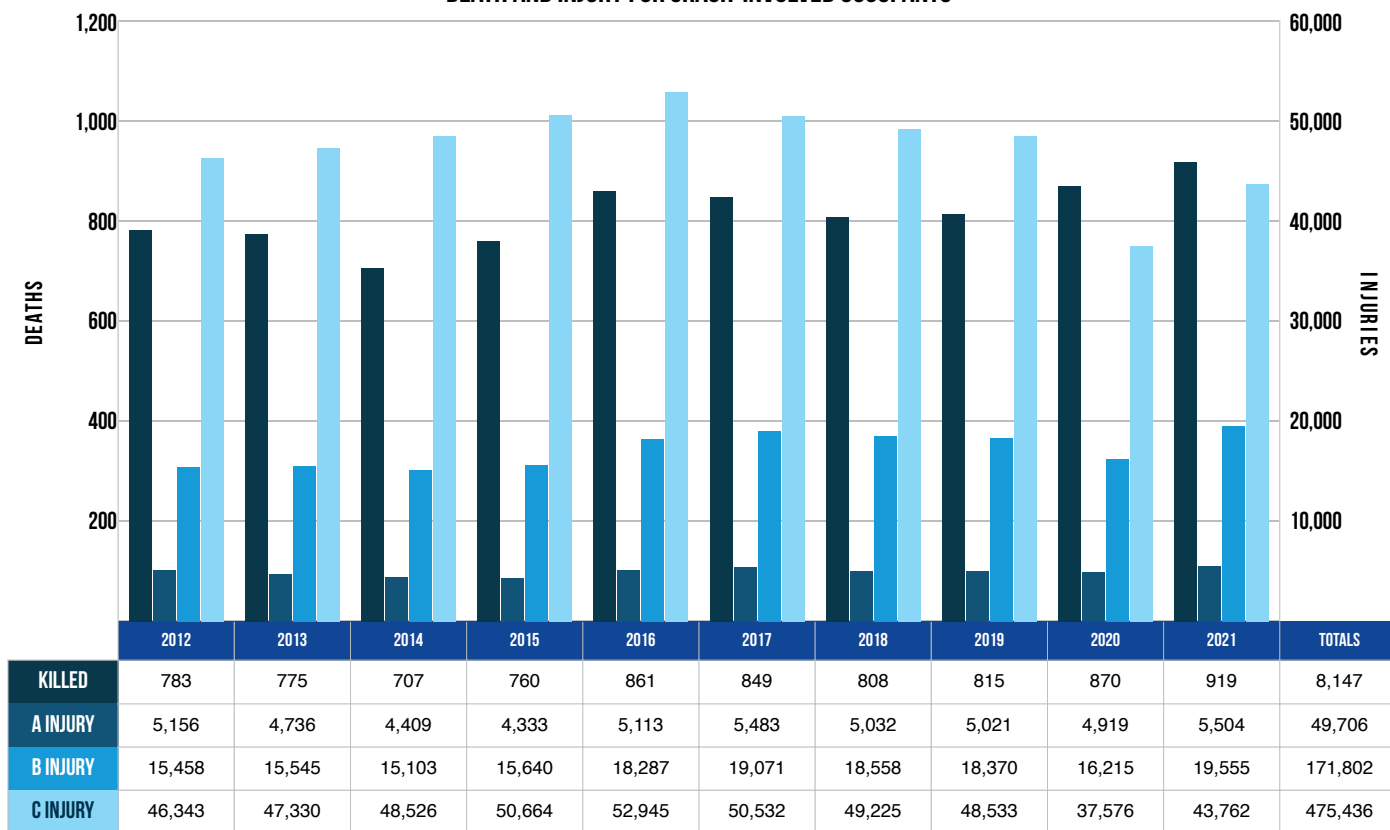
10 YEAR TRENDS-STATEWIDE (CONTINUED)

INJURED OCCUPANTS IN CRASHES



There were 68,821 occupants injured in crashes in 2021--an increase of 2.8 percent from 2012.

DEATH AND INJURY FOR CRASH-INVOLVED OCCUPANTS

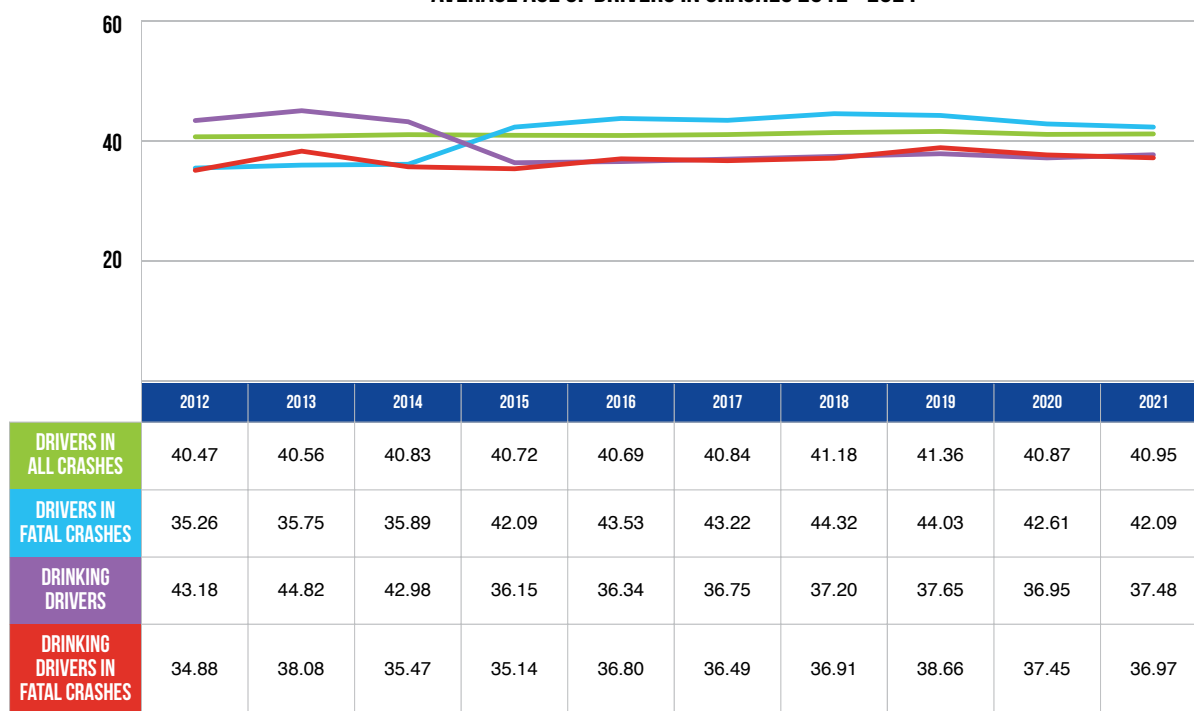


Over the period from 2012 to 2021, occupant deaths increased 17.4 percent, A injuries increased 6.7 percent, B injuries increased 26.5 percent, and C injuries decreased 5.6 percent.

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

10 YEAR TRENDS-STATEWIDE (CONTINUED)

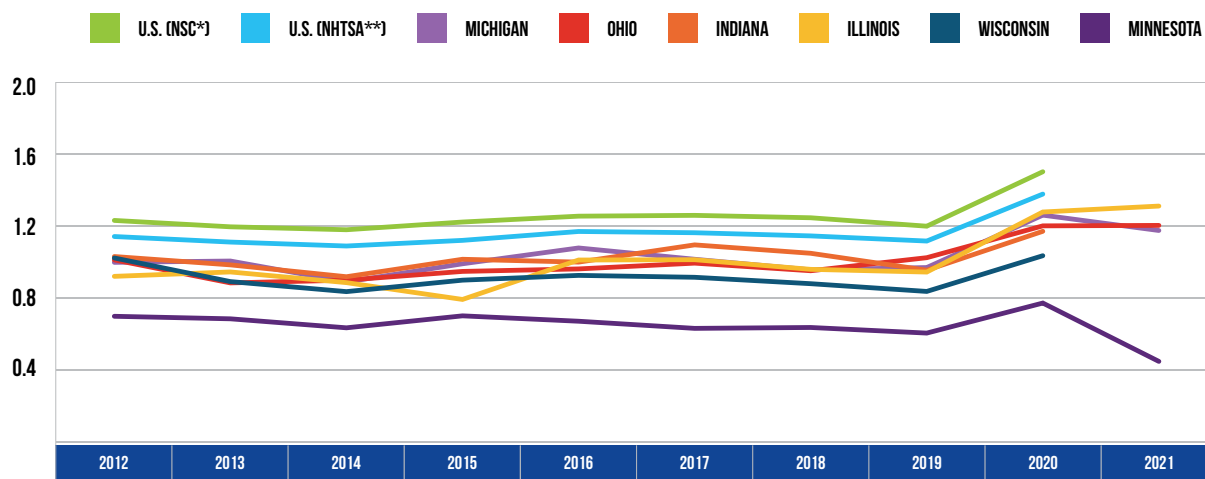
AVERAGE AGE OF DRIVERS IN CRASHES 2012 - 2021



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 1.0 percent. The age of drivers involved in fatal crashes has increased 20.8 percent. The average age of drinking drivers in crashes has decreased 13.2 percent. The average age of drinking drivers in fatal crashes has increased 6.0 percent.

10 YEAR TRENDS-STATEWIDE (CONTINUED)

FATALITIES PER 100 MILLION VMT 2012 - 2021



| YEAR | U.S. (NSC*) | U.S. (NHTSA**) | MICHIGAN | OHIO | INDIANA | ILLINOIS | WISCONSIN | MINNESOTA |
|------|-------------|----------------|----------|------|---------|----------|-----------|-----------|
| 2012 | 1.2 | 1.1 | 1.0 | 1.0 | 1.0 | 0.9 | 1.0 | 0.7 |
| 2013 | 1.2 | 1.1 | 1.0 | 0.9 | 1.0 | 0.9 | 0.9 | 0.7 |
| 2014 | 1.2 | 1.1 | 0.9 | 0.9 | 0.9 | 0.9 | 0.8 | 0.6 |
| 2015 | 1.2 | 1.1 | 1.0 | 0.9 | 1.0 | 0.8 | 0.9 | 0.7 |
| 2016 | 1.2 | 1.2 | 1.1 | 1.0 | 1.0 | 1.0 | 0.9 | 0.7 |
| 2017 | 1.3 | 1.2 | 1.0 | 1.0 | 1.1 | 1.0 | 0.9 | 0.6 |
| 2018 | 1.2 | 1.1 | 1.0 | 0.9 | 1.0 | 1.0 | 0.9 | 0.6 |
| 2019 | 1.2 | 1.1 | 1.0 | 1.0 | 0.9 | 0.9 | 0.8 | 0.6 |
| 2020 | 1.5 | 1.4 | 1.3 | 1.2 | 1.2 | 1.3 | 1.0 | 0.8 |
| 2021 | - | - | 1.2 | 1.2 | - | 1.3 | - | 0.4 |

* 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 |
|------|--------------------------|----------------------------|------------------------|--------------------|-----------------------|------------------------|-------------------------|-------------------------|
| 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 | 42,339 | 38,824 | 1,083 | 1,230 | 896 | 1,196 | 593 | 394 |
| 2021 | - | - | 1,131 | 1,356 | - | 1,334 | - | 253 |

| YEAR | U.S. (FHWA) VMT | MICHIGAN VMT | OHIO VMT | INDIANA VMT | ILLINOIS VMT | WISCONSIN VMT | MINNESOTA VMT |
|------|--------------------|-----------------|-------------|----------------|-----------------|------------------|------------------|
| 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 | 2,830 | 86.3 | 102.9 | 76.9 | 94.0 | 57.6 | 51.4 |
| 2021 | 3,229 | 96.7 | 113.2 | 84.1 | 102.2 | - | 57.2 |

VMT described in billions of miles

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 |
| 2021 | 62 | 57 | 92 | 95 | 111 | 92 | 112 | 130 | 104 | 93 | 98 | 85 | 1,131 |

MOTOR VEHICLE TRAFFIC CRASH AND RELATED DATA

| YEAR | DEATHS | NUMBER OF PEOPLE 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 PEOPLE 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 |
| 2021 | 1,131 | 71,246 | 282,640 | 96,744.5 | 9,580,351 | 1.2 |

*Excludes trailers and trailer coaches, and includes mopeds

AGE

AGE AND INJURY SEVERITY BY PERSON TYPE

| AGE | DRIVER | | | INJURED PASSENGER | | | MOTORCYCLIST | | | BICYCLIST | | | PEDESTRIAN | | |
|-----|--------|--------|---------|-------------------|--------|---------|--------------|--------|---------|-----------|--------|---------|------------|--------|---------|
| | Total | Killed | Injured | Total | Killed | Injured | Total | Killed | Injured | Total | Killed | Injured | Total | Killed | Injured |
| 0 | 31 | 0 | 0 | 185 | 1 | 184 | 0 | 0 | 0 | 2 | 0 | 1 | 4 | 0 | 2 |
| 1 | 22 | 0 | 1 | 163 | 0 | 163 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 2 | 3 | 0 | 0 | 172 | 0 | 172 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 5 |
| 3 | 2 | 0 | 0 | 220 | 3 | 217 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 6 |
| 4 | 1 | 0 | 0 | 227 | 4 | 223 | 0 | 0 | 0 | 3 | 0 | 3 | 5 | 0 | 4 |
| 5 | 2 | 0 | 0 | 257 | 2 | 255 | 0 | 0 | 0 | 2 | 1 | 1 | 6 | 0 | 6 |
| 6 | 2 | 0 | 2 | 259 | 1 | 258 | 0 | 0 | 0 | 3 | 0 | 3 | 13 | 1 | 7 |
| 7 | 4 | 0 | 2 | 262 | 1 | 261 | 1 | 0 | 1 | 7 | 0 | 5 | 11 | 2 | 6 |
| 8 | 5 | 0 | 2 | 270 | 0 | 270 | 2 | 0 | 2 | 7 | 0 | 7 | 8 | 0 | 6 |
| 9 | 2 | 1 | 1 | 267 | 0 | 267 | 2 | 0 | 1 | 10 | 1 | 9 | 12 | 0 | 9 |
| 10 | 8 | 0 | 6 | 288 | 1 | 287 | 0 | 0 | 0 | 14 | 0 | 10 | 18 | 0 | 13 |
| 11 | 6 | 0 | 4 | 235 | 0 | 235 | 4 | 0 | 4 | 17 | 1 | 10 | 24 | 1 | 20 |
| 12 | 23 | 0 | 11 | 258 | 1 | 257 | 2 | 0 | 2 | 38 | 0 | 29 | 20 | 0 | 17 |
| 13 | 46 | 0 | 22 | 282 | 3 | 279 | 3 | 0 | 3 | 38 | 1 | 31 | 26 | 0 | 21 |
| 14 | 140 | 0 | 43 | 280 | 2 | 278 | 11 | 0 | 10 | 45 | 0 | 36 | 24 | 0 | 23 |
| 15 | 587 | 1 | 119 | 402 | 1 | 401 | 13 | 0 | 13 | 57 | 0 | 49 | 27 | 1 | 24 |
| 16 | 6,492 | 2 | 646 | 510 | 4 | 506 | 12 | 1 | 8 | 43 | 1 | 31 | 36 | 0 | 32 |
| 17 | 9,239 | 9 | 897 | 506 | 7 | 499 | 11 | 0 | 9 | 35 | 0 | 29 | 34 | 2 | 26 |
| 18 | 11,314 | 12 | 1,332 | 594 | 7 | 587 | 29 | 2 | 22 | 33 | 0 | 24 | 35 | 2 | 28 |
| 19 | 11,614 | 20 | 1,453 | 516 | 4 | 512 | 45 | 1 | 36 | 43 | 0 | 33 | 34 | 4 | 26 |
| 20 | 11,623 | 21 | 1,473 | 458 | 4 | 454 | 62 | 3 | 53 | 20 | 0 | 17 | 32 | 1 | 26 |
| 21 | 11,549 | 15 | 1,496 | 419 | 3 | 416 | 65 | 1 | 52 | 25 | 0 | 21 | 43 | 3 | 32 |
| 22 | 11,101 | 19 | 1,420 | 381 | 6 | 375 | 78 | 5 | 61 | 21 | 0 | 15 | 30 | 1 | 24 |
| 23 | 10,794 | 20 | 1,399 | 392 | 3 | 389 | 90 | 4 | 64 | 18 | 0 | 16 | 33 | 1 | 27 |
| 24 | 10,288 | 11 | 1,370 | 329 | 3 | 326 | 97 | 2 | 68 | 23 | 0 | 19 | 27 | 3 | 17 |
| 25 | 10,056 | 19 | 1,237 | 322 | 6 | 316 | 81 | 4 | 58 | 21 | 1 | 15 | 39 | 1 | 35 |
| 26 | 9,857 | 24 | 1,188 | 308 | 3 | 305 | 75 | 8 | 51 | 21 | 1 | 13 | 35 | 4 | 26 |
| 27 | 9,778 | 13 | 1,208 | 285 | 4 | 281 | 99 | 8 | 67 | 17 | 0 | 12 | 29 | 4 | 20 |
| 28 | 9,701 | 18 | 1,254 | 252 | 2 | 250 | 101 | 4 | 74 | 14 | 0 | 10 | 32 | 2 | 23 |
| 29 | 9,434 | 12 | 1,268 | 260 | 3 | 257 | 115 | 3 | 82 | 12 | 0 | 9 | 36 | 1 | 27 |
| 30 | 9,614 | 18 | 1,271 | 271 | 3 | 268 | 83 | 6 | 57 | 18 | 0 | 16 | 35 | 2 | 28 |
| 31 | 9,332 | 21 | 1,198 | 254 | 5 | 249 | 89 | 5 | 67 | 16 | 0 | 16 | 32 | 2 | 24 |
| 32 | 8,757 | 13 | 1,112 | 213 | 1 | 212 | 74 | 2 | 61 | 12 | 1 | 9 | 33 | 2 | 25 |
| 33 | 8,361 | 14 | 1,015 | 189 | 0 | 189 | 78 | 4 | 57 | 18 | 0 | 13 | 27 | 4 | 22 |
| 34 | 7,821 | 17 | 1,005 | 185 | 2 | 183 | 74 | 3 | 58 | 19 | 0 | 16 | 23 | 1 | 20 |
| 35 | 7,771 | 15 | 951 | 165 | 1 | 164 | 67 | 5 | 50 | 13 | 0 | 10 | 25 | 4 | 20 |
| 36 | 7,721 | 11 | 900 | 177 | 4 | 173 | 69 | 0 | 59 | 14 | 1 | 11 | 25 | 1 | 18 |
| 37 | 7,356 | 8 | 908 | 170 | 3 | 167 | 82 | 1 | 58 | 7 | 0 | 5 | 26 | 5 | 17 |

*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 | 7,256 | 13 | 852 | 157 | 3 | 154 | 62 | 4 | 43 | 17 | 0 | 15 | 26 | 2 | 17 |
| 39 | 7,046 | 10 | 856 | 163 | 2 | 161 | 54 | 3 | 36 | 14 | 0 | 10 | 24 | 7 | 13 |
| 40 | 6,963 | 15 | 848 | 138 | 0 | 138 | 69 | 3 | 45 | 11 | 1 | 10 | 23 | 4 | 19 |
| 41 | 6,740 | 16 | 794 | 146 | 2 | 144 | 66 | 6 | 45 | 12 | 0 | 10 | 32 | 4 | 25 |
| 42 | 6,663 | 16 | 803 | 145 | 2 | 143 | 73 | 2 | 57 | 16 | 1 | 13 | 34 | 3 | 30 |
| 43 | 6,419 | 10 | 721 | 153 | 0 | 153 | 49 | 5 | 34 | 7 | 0 | 7 | 27 | 4 | 21 |
| 44 | 6,264 | 14 | 740 | 120 | 0 | 120 | 55 | 5 | 39 | 6 | 0 | 4 | 23 | 1 | 20 |
| 45 | 5,966 | 8 | 653 | 137 | 0 | 137 | 53 | 2 | 36 | 5 | 1 | 4 | 20 | 3 | 15 |
| 46 | 6,073 | 5 | 719 | 125 | 1 | 124 | 53 | 1 | 42 | 7 | 0 | 6 | 27 | 4 | 23 |
| 47 | 6,009 | 10 | 665 | 143 | 0 | 143 | 64 | 5 | 42 | 12 | 0 | 9 | 26 | 2 | 23 |
| 48 | 6,090 | 16 | 766 | 147 | 2 | 145 | 75 | 3 | 56 | 8 | 1 | 4 | 27 | 3 | 23 |
| 49 | 6,360 | 18 | 736 | 139 | 1 | 138 | 68 | 4 | 50 | 8 | 0 | 6 | 23 | 3 | 13 |
| 50 | 6,721 | 15 | 829 | 149 | 1 | 148 | 85 | 3 | 65 | 18 | 0 | 14 | 21 | 3 | 17 |
| 51 | 6,510 | 12 | 760 | 149 | 3 | 146 | 69 | 4 | 51 | 18 | 0 | 15 | 21 | 6 | 15 |
| 52 | 6,214 | 9 | 724 | 155 | 1 | 154 | 63 | 1 | 45 | 19 | 2 | 14 | 33 | 5 | 26 |
| 53 | 5,968 | 7 | 756 | 125 | 0 | 125 | 55 | 4 | 46 | 16 | 0 | 14 | 28 | 4 | 22 |
| 54 | 5,998 | 8 | 683 | 141 | 3 | 138 | 55 | 2 | 37 | 20 | 0 | 19 | 22 | 2 | 19 |
| 55 | 5,857 | 12 | 695 | 121 | 0 | 121 | 61 | 0 | 51 | 11 | 1 | 8 | 23 | 1 | 18 |
| 56 | 6,046 | 11 | 708 | 149 | 1 | 148 | 48 | 3 | 34 | 13 | 0 | 11 | 24 | 3 | 19 |
| 57 | 6,158 | 10 | 706 | 142 | 1 | 141 | 45 | 2 | 33 | 15 | 0 | 15 | 23 | 4 | 17 |
| 58 | 5,898 | 15 | 754 | 124 | 3 | 121 | 69 | 4 | 48 | 22 | 0 | 19 | 28 | 1 | 23 |
| 59 | 5,876 | 9 | 726 | 141 | 2 | 139 | 58 | 1 | 40 | 19 | 0 | 14 | 27 | 2 | 22 |
| 60 | 5,793 | 10 | 682 | 129 | 2 | 127 | 50 | 6 | 34 | 15 | 0 | 12 | 27 | 3 | 22 |
| 61 | 5,382 | 9 | 699 | 140 | 1 | 139 | 48 | 1 | 34 | 17 | 3 | 13 | 32 | 4 | 25 |
| 62 | 5,294 | 6 | 622 | 103 | 1 | 102 | 39 | 2 | 28 | 20 | 1 | 15 | 18 | 1 | 15 |
| 63 | 5,163 | 7 | 537 | 117 | 1 | 116 | 34 | 1 | 24 | 22 | 2 | 18 | 36 | 3 | 32 |
| 64 | 4,865 | 10 | 579 | 100 | 0 | 100 | 37 | 2 | 29 | 15 | 1 | 9 | 25 | 4 | 20 |
| 65 | 4,505 | 8 | 545 | 125 | 0 | 125 | 36 | 4 | 22 | 19 | 0 | 16 | 27 | 5 | 20 |
| 66 | 4,241 | 8 | 495 | 122 | 1 | 121 | 30 | 1 | 23 | 12 | 0 | 12 | 19 | 3 | 14 |
| 67 | 3,758 | 3 | 469 | 88 | 0 | 88 | 39 | 0 | 28 | 10 | 0 | 9 | 21 | 4 | 16 |
| 68 | 3,537 | 12 | 426 | 104 | 1 | 103 | 21 | 0 | 18 | 10 | 0 | 9 | 17 | 1 | 13 |
| 69 | 3,434 | 6 | 453 | 92 | 0 | 92 | 28 | 2 | 20 | 9 | 1 | 4 | 18 | 4 | 13 |
| 70 | 3,131 | 9 | 391 | 78 | 0 | 78 | 29 | 1 | 16 | 13 | 0 | 10 | 15 | 1 | 13 |
| 71 | 2,861 | 5 | 383 | 90 | 2 | 88 | 22 | 2 | 15 | 12 | 0 | 9 | 11 | 0 | 10 |
| 72 | 2,797 | 5 | 370 | 79 | 1 | 78 | 15 | 1 | 11 | 5 | 0 | 4 | 21 | 3 | 18 |
| 73 | 2,654 | 6 | 336 | 95 | 1 | 94 | 14 | 0 | 11 | 8 | 1 | 6 | 17 | 5 | 9 |
| 74 | 2,646 | 4 | 355 | 69 | 1 | 68 | 7 | 0 | 5 | 5 | 0 | 5 | 14 | 3 | 9 |
| 75 | 2,062 | 3 | 284 | 74 | 1 | 73 | 3 | 1 | 1 | 8 | 2 | 6 | 10 | 1 | 7 |
| 76 | 1,766 | 7 | 234 | 61 | 1 | 60 | 6 | 1 | 5 | 3 | 0 | 3 | 9 | 4 | 4 |

AGE AND INJURY SEVERITY BY PERSON TYPE (CONTINUED)

| AGE | DRIVER | | | INJURED PASSENGER | | | MOTORCYCLIST | | | BICYCLIST | | | PEDESTRIAN | | |
|---------|--|--------|---------|-------------------|--------|---------|---|--------|---------|---|--------|---------|--|--------|---------|
| | Total | Killed | Injured | Total | Killed | Injured | Total | Killed | Injured | Total | Killed | Injured | Total | Killed | Injured |
| 77 | 1,723 | 4 | 254 | 57 | 1 | 56 | 7 | 0 | 5 | 2 | 0 | 2 | 3 | 1 | 2 |
| 78 | 1,805 | 7 | 227 | 72 | 4 | 68 | 6 | 2 | 3 | 1 | 0 | 1 | 4 | 1 | 3 |
| 79 | 1,491 | 4 | 190 | 61 | 3 | 58 | 2 | 0 | 1 | 3 | 0 | 3 | 3 | 1 | 2 |
| 80 | 1,230 | 1 | 180 | 46 | 1 | 45 | 2 | 0 | 1 | 2 | 0 | 2 | 6 | 0 | 6 |
| 81 | 1,063 | 6 | 152 | 47 | 2 | 45 | 3 | 0 | 2 | 1 | 1 | 0 | 3 | 1 | 2 |
| 82 | 981 | 3 | 142 | 29 | 0 | 29 | 2 | 0 | 2 | 1 | 0 | 1 | 5 | 0 | 5 |
| 83 | 869 | 5 | 141 | 32 | 1 | 31 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 1 | 2 |
| 84 | 724 | 2 | 104 | 31 | 1 | 30 | 2 | 0 | 2 | 0 | 0 | 0 | 7 | 2 | 5 |
| 85 | 627 | 2 | 94 | 28 | 1 | 27 | 1 | 0 | 1 | 2 | 1 | 1 | 1 | 0 | 1 |
| 86 | 555 | 6 | 92 | 31 | 2 | 29 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 |
| 87 | 435 | 0 | 66 | 24 | 1 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 |
| 88 | 357 | 1 | 55 | 11 | 1 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 89 | 317 | 0 | 52 | 14 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 | 232 | 0 | 37 | 12 | 1 | 11 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 91 | 164 | 0 | 26 | 5 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 92 | 131 | 0 | 25 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 93 | 97 | 1 | 19 | 9 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 94 | 57 | 4 | 13 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 95 | 59 | 0 | 10 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 96 | 33 | 0 | 4 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 97 | 15 | 0 | 6 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 98 | 8 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 99 | 32 | 1 | 2 | 3 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 100 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 101 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 102 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 103 | 0 | 0 | 0 | 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 | 1 | 1 | 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 | 49,682 | 0 | 20 | 7 | 0 | 7 | 123 | 0 | 1 | 42 | 0 | 3 | 39 | 0 | 8 |
| TOTAL | 476,129 | 758 | 52,479 | 16,503 | 161 | 16,342 | 3,571 | 166 | 2,526 | 1,260 | 29 | 971 | 1,891 | 183 | 1,453 |
| | *Includes 51,076 drivers with unknown injury severity and 371,816 with no injury | | | | | | *Includes 128 motorcyclists with unknown injury severity and 751 with no injury | | | *Includes 52 bicyclists with unknown injury severity and 208 with no injury | | | *Includes 57 pedestrians with unknown injury severity and 198 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 | 29,440 | 58.5 | 132 | 82.5 | 6,613 | 62.6 |
| Turning Left | 4,732 | 9.4 | 9 | 5.6 | 1,337 | 12.7 |
| Turning Right | 1,752 | 3.5 | 2 | 1.3 | 249 | 2.4 |
| Stopped on Roadway | 2,842 | 5.7 | 2 | 1.3 | 510 | 4.8 |
| Involved in Prior Crash at Same Location | 27 | 0.1 | 0 | 0.0 | 7 | 0.1 |
| Changing Lanes | 1,851 | 3.7 | 1 | 0.6 | 199 | 1.9 |
| Backing | 812 | 1.6 | 0 | 0.0 | 20 | 0.2 |
| Slowing/Stopping on Roadway | 4,622 | 9.2 | 4 | 2.5 | 751 | 7.1 |
| Slowing/Stopping Other Area | 50 | 0.1 | 0 | 0.0 | 9 | 0.1 |
| Starting Up on Roadway | 997 | 2.0 | 1 | 0.6 | 206 | 2.0 |
| Starting Up in Other Area | 16 | 0.0 | 0 | 0.0 | 3 | 0.0 |
| Entering Parking | 22 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| Leaving Parking | 111 | 0.2 | 0 | 0.0 | 14 | 0.1 |
| Entering Roadway | 723 | 1.4 | 0 | 0.0 | 146 | 1.4 |
| Leaving Roadway | 65 | 0.1 | 0 | 0.0 | 20 | 0.2 |
| Making U-Turn | 93 | 0.2 | 0 | 0.0 | 20 | 0.2 |
| Overtaking or Passing | 357 | 0.7 | 4 | 2.5 | 79 | 0.7 |
| Avoiding Object | 55 | 0.1 | 0 | 0.0 | 15 | 0.1 |
| Avoiding Pedestrian | 7 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| Avoiding Vehicle (front/back) | 355 | 0.7 | 0 | 0.0 | 62 | 0.6 |
| Avoiding Vehicle (angle) | 146 | 0.3 | 0 | 0.0 | 34 | 0.3 |
| Driverless Moving | 4 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Parked | 176 | 0.4 | 0 | 0.0 | 26 | 0.2 |
| Crossing at Intersection | 8 | 0.0 | 0 | 0.0 | 5 | 0.0 |
| Crossing Not at Intersection | 2 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| Getting On/Off Vehicle | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| In Roadway With Traffic | 1 | 0.0 | 0 | 0.0 | 1 | 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 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 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Not in Roadway | 2 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Other | 66 | 0.1 | 0 | 0.0 | 16 | 0.2 |
| Unknown | 70 | 0.1 | 0 | 0.0 | 22 | 0.2 |
| Avoiding Animal | 115 | 0.2 | 0 | 0.0 | 27 | 0.3 |
| Negotiating a Curve | 762 | 1.5 | 5 | 3.1 | 163 | 1.5 |
| Uncoded & Errors | 1 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 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 | 515 | 1.0 | 0 | 0.0 | 138 | 1.3 |
| Cross Centerline | 72 | 0.1 | 0 | 0.0 | 12 | 0.1 |
| Cross Median | 18 | 0.0 | 0 | 0.0 | 6 | 0.1 |
| Ran Off Roadway Left | 182 | 0.4 | 0 | 0.0 | 35 | 0.3 |
| Ran Off Roadway Right | 315 | 0.6 | 0 | 0.0 | 65 | 0.6 |
| Re-Enter Roadway | 13 | 0.0 | 0 | 0.0 | 4 | 0.0 |
| Overturn | 1,082 | 2.2 | 15 | 9.4 | 461 | 4.4 |
| Separation of Units | 52 | 0.1 | 0 | 0.0 | 14 | 0.1 |
| Fire/Explosion | 52 | 0.1 | 2 | 1.3 | 8 | 0.1 |
| Immersion | 15 | 0.0 | 0 | 0.0 | 3 | 0.0 |
| Jackknife | 6 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Downhill Runaway | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Cargo Loss/Shift | 11 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Individual Fell from Vehicle | 33 | 0.1 | 0 | 0.0 | 28 | 0.3 |
| Equipment Failure (blown tire, brake failure, etc.) | 68 | 0.1 | 0 | 0.0 | 9 | 0.1 |
| Other Noncollision | 75 | 0.1 | 0 | 0.0 | 21 | 0.2 |
| SUBTOTAL | 2,510 | 5.0 | 17 | 10.6 | 805 | 7.6 |

For drivers age 16-20, an overturn is the most common harmful event in a noncollision with the highest proportion of all crashes (2.2%), fatal crashes (9.4%), and injury crashes (4.4%).

| 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 | 135 | 0.3 | 16 | 10.0 | 104 | 1.0 |
| Bicyclist | 100 | 0.2 | 4 | 2.5 | 72 | 0.7 |
| Motor Vehicle in Transport (in motion or on roadway) | 36,750 | 73.1 | 91 | 56.9 | 8,131 | 77.0 |
| Parked Motor Vehicle | 985 | 2.0 | 0 | 0.0 | 138 | 1.3 |
| Work Zone/Maintenance Equipment | 8 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Cargo Falling/Shifting/Anything Set in Motion by a Motor Vehicle | 30 | 0.1 | 0 | 0.0 | 6 | 0.1 |
| Railroad Train | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Animal | 3,668 | 7.3 | 0 | 0.0 | 63 | 0.6 |
| Other Nonfixed Object | 268 | 0.5 | 1 | 0.6 | 21 | 0.2 |
| SUBTOTAL | 41,945 | 83.4 | 112 | 70.0 | 8,536 | 80.8 |

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 | 19 | 0.0 | 0 | 0.0 | 10 | 0.1 |
| Bridge Rail | 44 | 0.1 | 0 | 0.0 | 11 | 0.1 |
| Bridge Overhead Structure | 4 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Guardrail Face | 389 | 0.8 | 2 | 1.3 | 74 | 0.7 |
| Guardrail End | 66 | 0.1 | 0 | 0.0 | 13 | 0.1 |
| Cable Barrier | 146 | 0.3 | 0 | 0.0 | 24 | 0.2 |
| Concrete Barrier | 631 | 1.3 | 1 | 0.6 | 161 | 1.5 |
| Traffic Sign/Post | 411 | 0.8 | 0 | 0.0 | 21 | 0.2 |
| Traffic Signal Equipment | 17 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| Utility Pole/Light Support | 478 | 1.0 | 7 | 4.4 | 128 | 1.2 |
| Other Post/Pole/Support | 168 | 0.3 | 0 | 0.0 | 24 | 0.2 |
| Culvert | 54 | 0.1 | 0 | 0.0 | 17 | 0.2 |
| Curb | 267 | 0.5 | 0 | 0.0 | 25 | 0.2 |
| Ditch | 952 | 1.9 | 1 | 0.6 | 162 | 1.5 |
| Embankment | 139 | 0.3 | 0 | 0.0 | 34 | 0.3 |
| Fence | 119 | 0.2 | 0 | 0.0 | 9 | 0.1 |
| Mailbox | 170 | 0.3 | 0 | 0.0 | 2 | 0.0 |
| Tree | 1,412 | 2.8 | 18 | 11.3 | 429 | 4.1 |
| Railroad Crossing Signal | 5 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Building | 63 | 0.1 | 1 | 0.6 | 18 | 0.2 |
| Traffic Island | 6 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Fire Hydrant | 74 | 0.1 | 0 | 0.0 | 9 | 0.1 |
| Impact Attenuator (crash cushion) | 15 | 0.0 | 0 | 0.0 | 5 | 0.0 |
| Other Fixed Object | 178 | 0.4 | 1 | 0.6 | 43 | 0.4 |
| SUBTOTAL | 5,827 | 11.6 | 31 | 19.4 | 1,222 | 11.6 |

For drivers age 16-20, a tree is the fixed object associated with the highest proportion of all crashes (2.8%), fatal crashes (11.3%), and injury crashes (4.1%).

| | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | |
|---------------------------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|
| | Number of Drivers | % of Total | Number of Drivers | % of Total | Number of Drivers | % of Total |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| No Event Coded as Most Harmful | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| MOST HARMFUL EVENT TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 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 Motor Vehicle | 11,429 | 22.7 | 58 | 36.3 | 1,890 | 17.9 |
| Head-On | 593 | 1.2 | 26 | 16.3 | 256 | 2.4 |
| Head-On - Left Turn | 1,981 | 3.9 | 9 | 5.6 | 866 | 8.2 |
| Angle | 10,815 | 21.5 | 36 | 22.5 | 3,331 | 31.5 |
| Rear-End | 15,090 | 30.0 | 14 | 8.8 | 2,841 | 26.9 |
| Rear-End - Left Turn | 564 | 1.1 | 2 | 1.3 | 130 | 1.2 |
| Rear-End - Right Turn | 388 | 0.8 | 0 | 0.0 | 63 | 0.6 |
| Sideswipe - Same Direction | 5,990 | 11.9 | 6 | 3.8 | 585 | 5.5 |
| Sideswipe - Opposite Directions | 791 | 1.6 | 2 | 1.3 | 134 | 1.3 |
| Backing | 925 | 1.8 | 0 | 0.0 | 14 | 0.1 |
| Other | 1,636 | 3.3 | 7 | 4.4 | 437 | 4.1 |
| Unknown | 80 | 0.2 | 0 | 0.0 | 16 | 0.2 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 100.0 |

Rear-end crashes are the most common type of crash that drivers age 16-20 are involved in for all crashes (30.0%). For fatal crashes, the largest proportion of drivers age 16-20 are involved in single vehicle crashes (36.3%). For injury crashes, the largest proportion of drivers age 16-20 are involved in angle crashes (31.5%).

| 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 the Road | 45,473 | 90.4 | 133 | 83.1 | 9,537 | 90.3 |
| In the Median | 312 | 0.6 | 1 | 0.6 | 65 | 0.6 |
| On the Shoulder | 1,324 | 2.6 | 3 | 1.9 | 280 | 2.7 |
| Outside of the Shoulder/Curb-Line | 2,695 | 5.4 | 22 | 13.8 | 610 | 5.8 |
| In the Gore (area between ramp and freeway convergence) | 77 | 0.2 | 0 | 0.0 | 19 | 0.2 |
| On-Street Parking | 262 | 0.5 | 0 | 0.0 | 16 | 0.2 |
| Off the Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| On the Sidewalk | 34 | 0.1 | 0 | 0.0 | 15 | 0.1 |
| In the Bicycle Lane | 2 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Other/Unknown | 103 | 0.2 | 1 | 0.6 | 21 | 0.2 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 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-line for all crashes (5.4%), fatal crashes (13.8%), and injury crashes (5.8%).

| 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 | 3,995 | 7.9 | 13 | 8.1 | 876 | 8.3 |
| U.S. & Michigan Roads | 14,962 | 29.8 | 53 | 33.1 | 3,157 | 29.9 |
| County & City Roads | 31,247 | 62.1 | 94 | 58.8 | 6,514 | 61.7 |
| Uncoded & Errors | 78 | 0.2 | 0 | 0.0 | 16 | 0.2 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 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 | 1,976 | 3.9 | 26 | 16.3 | 509 | 4.8 |
| 3:00 AM - 5:59 AM | 1,097 | 2.2 | 8 | 5.0 | 259 | 2.5 |
| 6:00 AM - 8:59 AM | 4,793 | 9.5 | 13 | 8.1 | 796 | 7.5 |
| 9:00 AM - 11:59 AM | 5,090 | 10.1 | 10 | 6.3 | 1,015 | 9.6 |
| 12:00 PM - 2:59 PM | 9,799 | 19.5 | 23 | 14.4 | 2,117 | 20.0 |
| 3:00 PM - 5:59 PM | 13,602 | 27.1 | 24 | 15.0 | 2,861 | 27.1 |
| 6:00 PM - 8:59 PM | 8,545 | 17.0 | 33 | 20.6 | 1,867 | 17.7 |
| 9:00 PM - 11:59 PM | 5,365 | 10.7 | 23 | 14.4 | 1,134 | 10.7 |
| Unknown | 15 | 0.0 | 0 | 0.0 | 5 | 0.0 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 100.0 |

For drivers age 16-20, the 3:00 PM - 5:59 PM time period has the highest proportion of all crashes (27.1%) and injury crashes (27.1%). For fatal crashes, drivers age 16-20 have the highest proportion during the 6:00 PM - 8:59 PM time period (20.6%).

| 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 | 19,399 | 38.6 | 47 | 29.4 | 3,453 | 32.7 | 117 | 0.8 |
| Speed Too Fast | 5,139 | 10.2 | 31 | 19.4 | 1,076 | 10.2 | 1,886 | 13.0 |
| Speed Too Slow | 24 | 0.0 | 0 | 0.0 | 10 | 0.1 | 5 | 0.0 |
| Failed to Yield | 6,718 | 13.4 | 7 | 4.4 | 1,800 | 17.0 | 3,739 | 25.8 |
| Disregard Traffic Control | 1,464 | 2.9 | 7 | 4.4 | 654 | 6.2 | 904 | 6.2 |
| Drove Wrong Way | 41 | 0.1 | 1 | 0.6 | 19 | 0.2 | 16 | 0.1 |
| Drove Left of Center | 257 | 0.5 | 4 | 2.5 | 77 | 0.7 | 95 | 0.7 |
| Improper Passing | 280 | 0.6 | 3 | 1.9 | 46 | 0.4 | 118 | 0.8 |
| Improper Lane Use | 1,398 | 2.8 | 4 | 2.5 | 172 | 1.6 | 640 | 4.4 |
| Improper Turn | 626 | 1.2 | 1 | 0.6 | 111 | 1.1 | 280 | 1.9 |
| Improper/No Signal | 46 | 0.1 | 0 | 0.0 | 6 | 0.1 | 21 | 0.1 |
| Improper Backing | 583 | 1.2 | 0 | 0.0 | 10 | 0.1 | 156 | 1.1 |
| Unable to Stop in Assured Clear Distance | 9,509 | 18.9 | 6 | 3.8 | 1,733 | 16.4 | 4,963 | 34.3 |
| Other | 1,711 | 3.4 | 8 | 5.0 | 416 | 3.9 | 566 | 3.9 |
| Unknown | 1,278 | 2.5 | 12 | 7.5 | 371 | 3.5 | 50 | 0.3 |
| Reckless Driving | 304 | 0.6 | 22 | 13.8 | 137 | 1.3 | 111 | 0.8 |
| Careless/Negligent Driving | 1,491 | 3.0 | 7 | 4.4 | 471 | 4.5 | 802 | 5.5 |
| Uncoded & Errors | 14 | 0.0 | 0 | 0.0 | 1 | 0.0 | 1 | 0.0 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 100.0 | 14,470 | 100.0 |

After no hazardous action, the second highest hazardous action category for drivers age 16-20 for all crashes (18.9%) occurs when the driver is unable to stop in an assured clear distance. For drivers age 16-20 in fatal crashes, the second highest category is speed too fast (19.4%). For drivers age 16-20 in injury crashes, the second highest category is failed to yield (17.0%).

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 | 7,209 | 14.3 | 18 | 11.3 | 1,488 | 14.1 |
| Tuesday | 7,458 | 14.8 | 13 | 8.1 | 1,481 | 14.0 |
| Wednesday | 7,162 | 14.2 | 20 | 12.5 | 1,494 | 14.1 |
| Thursday | 7,334 | 14.6 | 22 | 13.8 | 1,591 | 15.1 |
| Friday | 8,748 | 17.4 | 20 | 12.5 | 1,724 | 16.3 |
| Saturday | 6,772 | 13.5 | 35 | 21.9 | 1,500 | 14.2 |
| Sunday | 5,599 | 11.1 | 32 | 20.0 | 1,285 | 12.2 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 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 | 27,088 | 53.9 | 113 | 70.6 | 5,609 | 53.1 |
| Female | 23,175 | 46.1 | 47 | 29.4 | 4,949 | 46.9 |
| Uncoded & Errors | 19 | 0.0 | 0 | 0.0 | 5 | 0.0 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 100.0 |

For drivers age 16-20 in fatal crashes, male drivers (70.6%) account for 2.4 times that of female drivers (29.4%).

| 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 | 37,651 | 74.9 | 87 | 54.4 | 7,047 | 66.7 |
| 2 occupants | 9,309 | 18.5 | 47 | 29.4 | 2,488 | 23.6 |
| 3 occupants | 2,190 | 4.4 | 14 | 8.8 | 665 | 6.3 |
| 4 occupants | 740 | 1.5 | 6 | 3.8 | 253 | 2.4 |
| 5 occupants | 198 | 0.4 | 4 | 2.5 | 74 | 0.7 |
| 6+ occupants | 54 | 0.1 | 1 | 0.6 | 19 | 0.2 |
| 0 occupants | 83 | 0.2 | 0 | 0.0 | 9 | 0.1 |
| Uncoded & Errors | 57 | 0.1 | 1 | 0.6 | 8 | 0.1 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 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 | 45,320 | 90.1 | 126 | 78.8 | 9,412 | 89.1 |
| Motor Home | 61 | 0.1 | 0 | 0.0 | 8 | 0.1 |
| Pickup Truck | 4,168 | 8.3 | 20 | 12.5 | 825 | 7.8 |
| Small Truck Under 10,000 lbs. GVWR | 127 | 0.3 | 0 | 0.0 | 28 | 0.3 |
| Motorcycle | 138 | 0.3 | 7 | 4.4 | 111 | 1.1 |
| Moped/Goped | 73 | 0.1 | 1 | 0.6 | 59 | 0.6 |
| Go-Cart/Golf Cart | 8 | 0.0 | 0 | 0.0 | 8 | 0.1 |
| Snowmobile | 13 | 0.0 | 1 | 0.6 | 6 | 0.1 |
| Off-Road Vehicle (ORV)/All-Terrain Vehicle (ATV) | 64 | 0.1 | 1 | 0.6 | 46 | 0.4 |
| Other (non-registered farm equipment, construction equipment, snow plows, etc.) | 72 | 0.1 | 1 | 0.6 | 23 | 0.2 |
| Uncoded & Errors | 18 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Truck/Bus (over 10,000 lbs. GVWR/8+ occupants/hazmat placard) (breakdown below) | 220 | 0.4 | 3 | 1.9 | 36 | 0.3 |
| TOTAL | 50,282 | 100.0 | 160 | 100.0 | 10,563 | 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. | 161 | 73.2 | 1 | 33.3 | 24 | 66.7 |
| Greater Than 26,000 lbs. | 58 | 26.4 | 2 | 66.7 | 12 | 33.3 |
| Uncoded & Errors | 1 | 0.5 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 220 | 100.0 | 3 | 100.0 | 36 | 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 | 194,832 | 60.0 | 905 | 74.2 | 41,612 | 61.2 |
| Turning Left | 22,055 | 6.8 | 76 | 6.2 | 5,959 | 8.8 |
| Turning Right | 9,250 | 2.8 | 7 | 0.6 | 1,243 | 1.8 |
| Stopped on Roadway | 30,820 | 9.5 | 43 | 3.5 | 6,964 | 10.2 |
| Involved in Prior Crash at Same Location | 150 | 0.0 | 3 | 0.2 | 53 | 0.1 |
| Changing Lanes | 9,100 | 2.8 | 18 | 1.5 | 1,188 | 1.7 |
| Backing | 5,963 | 1.8 | 2 | 0.2 | 213 | 0.3 |
| Slowing/Stopping on Roadway | 28,466 | 8.8 | 30 | 2.5 | 5,644 | 8.3 |
| Slowing/Stopping Other Area | 371 | 0.1 | 0 | 0.0 | 90 | 0.1 |
| Starting Up on Roadway | 5,352 | 1.6 | 9 | 0.7 | 1,121 | 1.6 |
| Starting Up in Other Area | 59 | 0.0 | 1 | 0.1 | 16 | 0.0 |
| Entering Parking | 219 | 0.1 | 0 | 0.0 | 15 | 0.0 |
| Leaving Parking | 591 | 0.2 | 2 | 0.2 | 108 | 0.2 |
| Entering Roadway | 3,046 | 0.9 | 11 | 0.9 | 691 | 1.0 |
| Leaving Roadway | 408 | 0.1 | 5 | 0.4 | 133 | 0.2 |
| Making U-Turn | 693 | 0.2 | 1 | 0.1 | 178 | 0.3 |
| Overtaking or Passing | 1,878 | 0.6 | 23 | 1.9 | 358 | 0.5 |
| Avoiding Object | 300 | 0.1 | 1 | 0.1 | 53 | 0.1 |
| Avoiding Pedestrian | 48 | 0.0 | 2 | 0.2 | 18 | 0.0 |
| Avoiding Vehicle (front/back) | 2,169 | 0.7 | 9 | 0.7 | 574 | 0.8 |
| Avoiding Vehicle (angle) | 943 | 0.3 | 2 | 0.2 | 242 | 0.4 |
| Driverless Moving | 68 | 0.0 | 0 | 0.0 | 16 | 0.0 |
| Parked | 3,226 | 1.0 | 5 | 0.4 | 412 | 0.6 |
| Crossing at Intersection | 51 | 0.0 | 0 | 0.0 | 20 | 0.0 |
| Crossing Not at Intersection | 5 | 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 | 19 | 0.0 | 0 | 0.0 | 6 | 0.0 |
| In Roadway Against Traffic | 7 | 0.0 | 0 | 0.0 | 4 | 0.0 |
| Standing/Lying in Roadway | 3 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Pushing/Working on Vehicle | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Other Work in Roadway | 3 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Playing in Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| In Roadway Other Reason | 4 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Not in Roadway | 24 | 0.0 | 0 | 0.0 | 10 | 0.0 |
| Other | 357 | 0.1 | 3 | 0.2 | 91 | 0.1 |
| Unknown | 561 | 0.2 | 8 | 0.7 | 108 | 0.2 |
| Avoiding Animal | 696 | 0.2 | 0 | 0.0 | 125 | 0.2 |
| Negotiating a Curve | 3,133 | 1.0 | 54 | 4.4 | 762 | 1.1 |
| Uncoded & Errors | 12 | 0.0 | 0 | 0.0 | 3 | 0.0 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 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 | 2,510 | 0.8 | 7 | 0.6 | 864 | 1.3 |
| Cross Centerline | 508 | 0.2 | 2 | 0.2 | 170 | 0.2 |
| Cross Median | 82 | 0.0 | 0 | 0.0 | 22 | 0.0 |
| Ran Off Roadway Left | 931 | 0.3 | 4 | 0.3 | 238 | 0.3 |
| Ran Off Roadway Right | 1,463 | 0.5 | 2 | 0.2 | 330 | 0.5 |
| Re-Enter Roadway | 118 | 0.0 | 0 | 0.0 | 31 | 0.0 |
| Overturn | 3,905 | 1.2 | 82 | 6.7 | 1,975 | 2.9 |
| Separation of Units | 345 | 0.1 | 2 | 0.2 | 72 | 0.1 |
| Fire/Explosion | 356 | 0.1 | 11 | 0.9 | 48 | 0.1 |
| Immersion | 106 | 0.0 | 2 | 0.2 | 13 | 0.0 |
| Jackknife | 183 | 0.1 | 0 | 0.0 | 12 | 0.0 |
| Downhill Runaway | 7 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| Cargo Loss/Shift | 246 | 0.1 | 0 | 0.0 | 9 | 0.0 |
| Individual Fell from Vehicle | 259 | 0.1 | 12 | 1.0 | 233 | 0.3 |
| Equipment Failure (blown tire, brake failure, etc.) | 428 | 0.1 | 0 | 0.0 | 41 | 0.1 |
| Other Noncollision | 594 | 0.2 | 0 | 0.0 | 111 | 0.2 |
| SUBTOTAL | 12,041 | 3.7 | 124 | 10.2 | 4,171 | 6.1 |

For drivers age 21-64, an overturn is the most common harmful event in a noncollision with the highest proportion of all crashes (1.2%), fatal crashes (6.7%), and injury crashes (2.9%).

| 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 | 903 | 0.3 | 119 | 9.8 | 682 | 1.0 |
| Bicyclist | 733 | 0.2 | 22 | 1.8 | 571 | 0.8 |
| Motor Vehicle in Transport (in motion or on roadway) | 230,848 | 71.1 | 727 | 59.6 | 54,039 | 79.4 |
| Parked Motor Vehicle | 7,484 | 2.3 | 14 | 1.1 | 994 | 1.5 |
| Work Zone/Maintenance Equipment | 103 | 0.0 | 2 | 0.2 | 22 | 0.0 |
| Cargo Falling/Shifting/Anything Set in Motion by a Motor Vehicle | 467 | 0.1 | 0 | 0.0 | 33 | 0.0 |
| Railroad Train | 34 | 0.0 | 3 | 0.2 | 12 | 0.0 |
| Animal | 43,333 | 13.3 | 5 | 0.4 | 885 | 1.3 |
| Other Nonfixed Object | 2,795 | 0.9 | 5 | 0.4 | 225 | 0.3 |
| SUBTOTAL | 286,700 | 88.2 | 897 | 73.5 | 57,463 | 84.5 |

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 | 163 | 0.1 | 8 | 0.7 | 43 | 0.1 |
| Bridge Rail | 202 | 0.1 | 1 | 0.1 | 40 | 0.1 |
| Bridge Overhead Structure | 36 | 0.0 | 1 | 0.1 | 4 | 0.0 |
| Guardrail Face | 1,764 | 0.5 | 5 | 0.4 | 347 | 0.5 |
| Guardrail End | 361 | 0.1 | 2 | 0.2 | 108 | 0.2 |
| Cable Barrier | 710 | 0.2 | 0 | 0.0 | 92 | 0.1 |
| Concrete Barrier | 3,243 | 1.0 | 7 | 0.6 | 1,041 | 1.5 |
| Traffic Sign/Post | 1,698 | 0.5 | 3 | 0.2 | 145 | 0.2 |
| Traffic Signal Equipment | 157 | 0.0 | 0 | 0.0 | 38 | 0.1 |
| Utility Pole/Light Support | 2,418 | 0.7 | 16 | 1.3 | 701 | 1.0 |
| Other Post/Pole/Support | 737 | 0.2 | 4 | 0.3 | 147 | 0.2 |
| Culvert | 272 | 0.1 | 3 | 0.2 | 90 | 0.1 |
| Curb | 1,156 | 0.4 | 4 | 0.3 | 174 | 0.3 |
| Ditch | 3,900 | 1.2 | 11 | 0.9 | 895 | 1.3 |
| Embankment | 560 | 0.2 | 7 | 0.6 | 182 | 0.3 |
| Fence | 461 | 0.1 | 0 | 0.0 | 75 | 0.1 |
| Mailbox | 723 | 0.2 | 2 | 0.2 | 32 | 0.0 |
| Tree | 5,644 | 1.7 | 112 | 9.2 | 1,775 | 2.6 |
| Railroad Crossing Signal | 41 | 0.0 | 0 | 0.0 | 7 | 0.0 |
| Building | 369 | 0.1 | 7 | 0.6 | 158 | 0.2 |
| Traffic Island | 23 | 0.0 | 0 | 0.0 | 5 | 0.0 |
| Fire Hydrant | 275 | 0.1 | 1 | 0.1 | 40 | 0.1 |
| Impact Attenuator (crash cushion) | 133 | 0.0 | 0 | 0.0 | 41 | 0.1 |
| Other Fixed Object | 1,088 | 0.3 | 5 | 0.4 | 216 | 0.3 |
| SUBTOTAL | 26,134 | 8.0 | 199 | 16.3 | 6,396 | 9.4 |

For drivers age 21-64, a tree is the fixed object associated with the highest proportion of all crashes (1.7%), fatal crashes (9.2%), and injury crashes (2.6%).

| | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | |
|---------------------------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|
| | Number of Drivers | % of Total | Number of Drivers | % of Total | Number of Drivers | % of Total |
| Uncoded & Errors | 7 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| No Event Coded as Most Harmful | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| MOST HARMFUL EVENT TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 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 Motor Vehicle | 78,355 | 24.1 | 401 | 32.9 | 10,350 | 15.2 |
| Head-On | 4,363 | 1.3 | 202 | 16.6 | 2,146 | 3.2 |
| Head-On - Left Turn | 9,768 | 3.0 | 65 | 5.3 | 4,165 | 6.1 |
| Angle | 60,523 | 18.6 | 284 | 23.3 | 19,677 | 28.9 |
| Rear-End | 94,412 | 29.1 | 131 | 10.7 | 21,206 | 31.2 |
| Rear-End - Left Turn | 3,165 | 1.0 | 7 | 0.6 | 826 | 1.2 |
| Rear-End - Right Turn | 2,676 | 0.8 | 0 | 0.0 | 353 | 0.5 |
| Sideswipe - Same Direction | 44,397 | 13.7 | 38 | 3.1 | 4,557 | 6.7 |
| Sideswipe - Opposite Directions | 6,315 | 1.9 | 17 | 1.4 | 1,078 | 1.6 |
| Backing | 7,435 | 2.3 | 2 | 0.2 | 190 | 0.3 |
| Other | 12,621 | 3.9 | 71 | 5.8 | 3,352 | 4.9 |
| Unknown | 853 | 0.3 | 2 | 0.2 | 132 | 0.2 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 100.0 |

Rear-end crashes are the most common type of crash that drivers age 21-64 are involved in for all crashes (29.1%) and injury crashes (31.2%). For fatal crashes, the largest proportion of drivers age 21-64 are involved in single-vehicle crashes (32.9%).

| 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 the Road | 303,068 | 93.3 | 1,025 | 84.0 | 62,899 | 92.5 |
| In the Median | 1,624 | 0.5 | 9 | 0.7 | 371 | 0.5 |
| On the Shoulder | 6,250 | 1.9 | 45 | 3.7 | 1,469 | 2.2 |
| Outside of the Shoulder/Curb-Line | 10,506 | 3.2 | 128 | 10.5 | 2,781 | 4.1 |
| In the Gore (area between ramp and freeway convergence) | 363 | 0.1 | 4 | 0.3 | 98 | 0.1 |
| On-Street Parking | 2,052 | 0.6 | 1 | 0.1 | 155 | 0.2 |
| Off the Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| On the Sidewalk | 244 | 0.1 | 1 | 0.1 | 105 | 0.2 |
| In the Bicycle Lane | 33 | 0.0 | 0 | 0.0 | 22 | 0.0 |
| Other/Unknown | 741 | 0.2 | 7 | 0.6 | 132 | 0.2 |
| Uncoded & Errors | 2 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 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-line for all crashes (3.2%), fatal crashes (10.5%), and injury crashes (4.1%).

| 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 | 33,495 | 10.3 | 120 | 9.8 | 7,570 | 11.1 |
| U.S. & Michigan Roads | 99,937 | 30.8 | 408 | 33.4 | 21,347 | 31.4 |
| County & City Roads | 190,909 | 58.8 | 688 | 56.4 | 38,997 | 57.3 |
| Uncoded & Errors | 542 | 0.2 | 4 | 0.3 | 118 | 0.2 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 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 | 12,697 | 3.9 | 150 | 12.3 | 3,277 | 4.8 |
| 3:00 AM - 5:59 AM | 12,973 | 4.0 | 70 | 5.7 | 2,234 | 3.3 |
| 6:00 AM - 8:59 AM | 42,291 | 13.0 | 110 | 9.0 | 6,874 | 10.1 |
| 9:00 AM - 11:59 AM | 39,001 | 12.0 | 103 | 8.4 | 8,149 | 12.0 |
| 12:00 PM - 2:59 PM | 60,067 | 18.5 | 155 | 12.7 | 13,486 | 19.8 |
| 3:00 PM - 5:59 PM | 81,254 | 25.0 | 207 | 17.0 | 17,785 | 26.1 |
| 6:00 PM - 8:59 PM | 50,005 | 15.4 | 247 | 20.2 | 10,351 | 15.2 |
| 9:00 PM - 11:59 PM | 26,488 | 8.2 | 178 | 14.6 | 5,856 | 8.6 |
| Unknown | 107 | 0.0 | 0 | 0.0 | 20 | 0.0 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 100.0 |

For drivers age 21-64, the 3:00 PM - 5:59 PM time period has the highest proportion of all crashes (25.0%) and injury crashes (26.1%). For fatal crashes, drivers age 21-64 have the highest proportion during the 6:00 PM - 8:59 PM time period (20.2%).

| 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 | 185,666 | 57.1 | 476 | 39.0 | 34,392 | 50.6 | 640 | 1.1 |
| Speed Too Fast | 17,272 | 5.3 | 170 | 13.9 | 4,356 | 6.4 | 5,390 | 9.5 |
| Speed Too Slow | 98 | 0.0 | 0 | 0.0 | 28 | 0.0 | 35 | 0.1 |
| Failed to Yield | 26,559 | 8.2 | 74 | 6.1 | 7,136 | 10.5 | 13,530 | 24.0 |
| Disregard Traffic Control | 6,988 | 2.2 | 42 | 3.4 | 3,108 | 4.6 | 3,711 | 6.6 |
| Drove Wrong Way | 261 | 0.1 | 6 | 0.5 | 109 | 0.2 | 91 | 0.2 |
| Drove Left of Center | 1,519 | 0.5 | 34 | 2.8 | 579 | 0.9 | 529 | 0.9 |
| Improper Passing | 1,754 | 0.5 | 6 | 0.5 | 269 | 0.4 | 582 | 1.0 |
| Improper Lane Use | 7,902 | 2.4 | 14 | 1.1 | 1,093 | 1.6 | 3,175 | 5.6 |
| Improper Turn | 3,201 | 1.0 | 4 | 0.3 | 556 | 0.8 | 1,235 | 2.2 |
| Improper/No Signal | 260 | 0.1 | 1 | 0.1 | 29 | 0.0 | 78 | 0.1 |
| Improper Backing | 4,159 | 1.3 | 0 | 0.0 | 93 | 0.1 | 1,079 | 1.9 |
| Unable to Stop in Assured Clear Distance | 38,559 | 11.9 | 31 | 2.5 | 7,972 | 11.7 | 19,055 | 33.7 |
| Other | 10,948 | 3.4 | 63 | 5.2 | 2,627 | 3.9 | 2,992 | 5.3 |
| Unknown | 10,642 | 3.3 | 153 | 12.5 | 2,572 | 3.8 | 355 | 0.6 |
| Reckless Driving | 1,766 | 0.5 | 80 | 6.6 | 752 | 1.1 | 572 | 1.0 |
| Careless/Negligent Driving | 7,194 | 2.2 | 66 | 5.4 | 2,342 | 3.4 | 3,416 | 6.0 |
| Uncoded & Errors | 135 | 0.0 | 0 | 0.0 | 19 | 0.0 | 7 | 0.0 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 100.0 | 56,472 | 100.0 |

After no hazardous action, the second highest hazardous action category for drivers age 21-64 for all crashes (11.9%) and injury crashes (11.7%) occurs when the driver is unable to stop in an assured clear distance. For drivers age 21-64 in fatal crashes, the second highest category is speed too fast (13.9%).

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 | 46,537 | 14.3 | 171 | 14.0 | 9,412 | 13.8 |
| Tuesday | 49,686 | 15.3 | 167 | 13.7 | 9,787 | 14.4 |
| Wednesday | 48,922 | 15.1 | 130 | 10.7 | 9,986 | 14.7 |
| Thursday | 49,634 | 15.3 | 175 | 14.3 | 10,204 | 15.0 |
| Friday | 55,072 | 17.0 | 172 | 14.1 | 11,320 | 16.6 |
| Saturday | 42,081 | 13.0 | 200 | 16.4 | 9,602 | 14.1 |
| Sunday | 32,951 | 10.1 | 205 | 16.8 | 7,721 | 11.3 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 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 | 185,485 | 57.1 | 915 | 75.0 | 38,066 | 56.0 |
| Female | 139,298 | 42.9 | 305 | 25.0 | 29,956 | 44.0 |
| Uncoded & Errors | 100 | 0.0 | 0 | 0.0 | 10 | 0.0 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 100.0 |

For drivers age 21-64 in fatal crashes, male drivers (75.0%) account for 3.0 times that of female drivers (25.0%).

| 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 | 260,360 | 80.1 | 917 | 75.2 | 49,954 | 73.4 |
| 2 occupants | 44,493 | 13.7 | 206 | 16.9 | 12,323 | 18.1 |
| 3 occupants | 11,252 | 3.5 | 55 | 4.5 | 3,484 | 5.1 |
| 4 occupants | 4,385 | 1.3 | 23 | 1.9 | 1,380 | 2.0 |
| 5 occupants | 1,349 | 0.4 | 12 | 1.0 | 445 | 0.7 |
| 6+ occupants | 843 | 0.3 | 6 | 0.5 | 256 | 0.4 |
| 0 occupants | 1,657 | 0.5 | 0 | 0.0 | 127 | 0.2 |
| Uncoded & Errors | 544 | 0.2 | 1 | 0.1 | 63 | 0.1 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 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 | 262,518 | 80.8 | 774 | 63.4 | 55,139 | 81.0 |
| Motor Home | 727 | 0.2 | 1 | 0.1 | 120 | 0.2 |
| Pickup Truck | 42,392 | 13.0 | 166 | 13.6 | 7,441 | 10.9 |
| Small Truck Under 10,000 lbs. GVWR | 1,552 | 0.5 | 3 | 0.2 | 255 | 0.4 |
| Motorcycle | 2,728 | 0.8 | 147 | 12.0 | 2,040 | 3.0 |
| Moped/Goped | 303 | 0.1 | 6 | 0.5 | 261 | 0.4 |
| Go-Cart/Golf Cart | 14 | 0.0 | 0 | 0.0 | 8 | 0.0 |
| Snowmobile | 76 | 0.0 | 3 | 0.2 | 54 | 0.1 |
| Off-Road Vehicle (ORV)/All-Terrain Vehicle (ATV) | 260 | 0.1 | 16 | 1.3 | 173 | 0.3 |
| Other (non-registered farm equipment, construction equipment, snow plows, etc.) | 1,107 | 0.3 | 12 | 1.0 | 221 | 0.3 |
| Uncoded & Errors | 192 | 0.1 | 0 | 0.0 | 28 | 0.0 |
| Truck/Bus (over 10,000 lbs. GVWR/8+ occupants/hazmat placard) (breakdown below) | 13,014 | 4.0 | 92 | 7.5 | 2,292 | 3.4 |
| TOTAL | 324,883 | 100.0 | 1,220 | 100.0 | 68,032 | 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 | 71 | 0.5 | 1 | 1.1 | 3 | 0.1 |
| 10,001-26,000 lbs. | 4,861 | 37.4 | 21 | 22.8 | 730 | 31.8 |
| Greater Than 26,000 lbs. | 8,031 | 61.7 | 70 | 76.1 | 1,558 | 68.0 |
| Uncoded & Errors | 51 | 0.4 | 0 | 0.0 | 1 | 0.0 |
| TOTAL | 13,014 | 100.0 | 92 | 100.0 | 2,292 | 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 | 26,862 | 53.3 | 141 | 61.8 | 5,822 | 53.7 |
| Turning Left | 5,353 | 10.6 | 34 | 14.9 | 1,668 | 15.4 |
| Turning Right | 1,993 | 4.0 | 3 | 1.3 | 265 | 2.4 |
| Stopped on Roadway | 4,940 | 9.8 | 11 | 4.8 | 1,098 | 10.1 |
| Involved in Prior Crash at Same Location | 13 | 0.0 | 1 | 0.4 | 5 | 0.0 |
| Changing Lanes | 1,852 | 3.7 | 2 | 0.9 | 172 | 1.6 |
| Backing | 1,375 | 2.7 | 0 | 0.0 | 41 | 0.4 |
| Slowing/Stopping on Roadway | 3,903 | 7.7 | 4 | 1.8 | 860 | 7.9 |
| Slowing/Stopping Other Area | 62 | 0.1 | 0 | 0.0 | 14 | 0.1 |
| Starting Up on Roadway | 1,089 | 2.2 | 2 | 0.9 | 266 | 2.5 |
| Starting Up in Other Area | 18 | 0.0 | 0 | 0.0 | 6 | 0.1 |
| Entering Parking | 57 | 0.1 | 0 | 0.0 | 3 | 0.0 |
| Leaving Parking | 178 | 0.4 | 0 | 0.0 | 28 | 0.3 |
| Entering Roadway | 931 | 1.8 | 7 | 3.1 | 197 | 1.8 |
| Leaving Roadway | 67 | 0.1 | 2 | 0.9 | 25 | 0.2 |
| Making U-Turn | 170 | 0.3 | 2 | 0.9 | 43 | 0.4 |
| Overtaking or Passing | 249 | 0.5 | 2 | 0.9 | 54 | 0.5 |
| Avoiding Object | 23 | 0.0 | 0 | 0.0 | 4 | 0.0 |
| Avoiding Pedestrian | 4 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Avoiding Vehicle (front/back) | 204 | 0.4 | 1 | 0.4 | 55 | 0.5 |
| Avoiding Vehicle (angle) | 85 | 0.2 | 0 | 0.0 | 19 | 0.2 |
| Driverless Moving | 18 | 0.0 | 0 | 0.0 | 3 | 0.0 |
| Parked | 376 | 0.7 | 0 | 0.0 | 42 | 0.4 |
| Crossing at Intersection | 5 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Crossing Not at Intersection | 2 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| Getting On/Off Vehicle | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| In Roadway With Traffic | 2 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| In Roadway Against Traffic | 1 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Standing/Lying in Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Pushing/Working on Vehicle | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Other 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 | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Not in Roadway | 6 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Other | 56 | 0.1 | 2 | 0.9 | 18 | 0.2 |
| Unknown | 78 | 0.2 | 1 | 0.4 | 18 | 0.2 |
| Avoiding Animal | 65 | 0.1 | 0 | 0.0 | 14 | 0.1 |
| Negotiating a Curve | 360 | 0.7 | 13 | 5.7 | 93 | 0.9 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 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 | 214 | 0.4 | 0 | 0.0 | 75 | 0.7 |
| Cross Centerline | 90 | 0.2 | 1 | 0.4 | 24 | 0.2 |
| Cross Median | 7 | 0.0 | 0 | 0.0 | 4 | 0.0 |
| Ran Off Roadway Left | 95 | 0.2 | 0 | 0.0 | 29 | 0.3 |
| Ran Off Roadway Right | 134 | 0.3 | 1 | 0.4 | 38 | 0.4 |
| Re-Enter Roadway | 28 | 0.1 | 1 | 0.4 | 4 | 0.0 |
| Overturn | 296 | 0.6 | 9 | 3.9 | 181 | 1.7 |
| Separation of Units | 45 | 0.1 | 0 | 0.0 | 12 | 0.1 |
| Fire/Explosion | 29 | 0.1 | 1 | 0.4 | 3 | 0.0 |
| Immersion | 16 | 0.0 | 1 | 0.4 | 2 | 0.0 |
| Jackknife | 16 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Downhill Runaway | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Cargo Loss/Shift | 23 | 0.0 | 1 | 0.4 | 1 | 0.0 |
| Individual Fell from Vehicle | 26 | 0.1 | 1 | 0.4 | 25 | 0.2 |
| Equipment Failure (blown tire, brake failure, etc.) | 51 | 0.1 | 0 | 0.0 | 3 | 0.0 |
| Other Noncollision | 74 | 0.1 | 1 | 0.4 | 11 | 0.1 |
| SUBTOTAL | 1,145 | 2.3 | 17 | 7.5 | 413 | 3.8 |

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 (3.9%), 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 | 200 | 0.4 | 18 | 7.9 | 161 | 1.5 |
| Bicyclist | 173 | 0.3 | 2 | 0.9 | 135 | 1.2 |
| Motor Vehicle in Transport (in motion or on roadway) | 38,340 | 76.1 | 161 | 70.6 | 9,068 | 83.7 |
| Parked Motor Vehicle | 1,283 | 2.5 | 2 | 0.9 | 140 | 1.3 |
| Work Zone/Maintenance Equipment | 15 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| Cargo Falling/Shifting/Anything Set in Motion by a Motor Vehicle | 68 | 0.1 | 0 | 0.0 | 10 | 0.1 |
| Railroad Train | 11 | 0.0 | 0 | 0.0 | 5 | 0.0 |
| Animal | 6,020 | 11.9 | 0 | 0.0 | 121 | 1.1 |
| Other Nonfixed Object | 420 | 0.8 | 0 | 0.0 | 32 | 0.3 |
| SUBTOTAL | 46,530 | 92.3 | 183 | 80.3 | 9,674 | 89.3 |

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 | 13 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Bridge Rail | 23 | 0.0 | 0 | 0.0 | 7 | 0.1 |
| Bridge Overhead Structure | 4 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Guardrail Face | 139 | 0.3 | 1 | 0.4 | 34 | 0.3 |
| Guardrail End | 35 | 0.1 | 1 | 0.4 | 8 | 0.1 |
| Cable Barrier | 46 | 0.1 | 1 | 0.4 | 7 | 0.1 |
| Concrete Barrier | 179 | 0.4 | 1 | 0.4 | 62 | 0.6 |
| Traffic Sign/Post | 227 | 0.5 | 2 | 0.9 | 21 | 0.2 |
| Traffic Signal Equipment | 29 | 0.1 | 0 | 0.0 | 3 | 0.0 |
| Utility Pole/Light Support | 214 | 0.4 | 3 | 1.3 | 85 | 0.8 |
| Other Post/Pole/Support | 93 | 0.2 | 1 | 0.4 | 21 | 0.2 |
| Culvert | 29 | 0.1 | 0 | 0.0 | 14 | 0.1 |
| Curb | 119 | 0.2 | 0 | 0.0 | 16 | 0.1 |
| Ditch | 453 | 0.9 | 1 | 0.4 | 113 | 1.0 |
| Embankment | 52 | 0.1 | 0 | 0.0 | 17 | 0.2 |
| Fence | 45 | 0.1 | 0 | 0.0 | 14 | 0.1 |
| Mailbox | 132 | 0.3 | 0 | 0.0 | 17 | 0.2 |
| Tree | 642 | 1.3 | 16 | 7.0 | 231 | 2.1 |
| Railroad Crossing Signal | 10 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Building | 56 | 0.1 | 1 | 0.4 | 30 | 0.3 |
| Traffic Island | 2 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Fire Hydrant | 37 | 0.1 | 0 | 0.0 | 8 | 0.1 |
| Impact Attenuator (crash cushion) | 23 | 0.0 | 0 | 0.0 | 9 | 0.1 |
| Other Fixed Object | 119 | 0.2 | 0 | 0.0 | 32 | 0.3 |
| SUBTOTAL | 2,721 | 5.4 | 28 | 12.3 | 751 | 6.9 |

For drivers age 65 and over, a tree is the fixed object associated with the highest proportion of drivers in all crashes (1.3%), fatal crashes (7.0%), and injury crashes (2.1%).

| | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | |
|---------------------------------|----------------------|--------------|----------------------|--------------|----------------------|--------------|
| | Number of Drivers | % of Total | Number of Drivers | % of Total | Number of Drivers | % of Total |
| Uncoded & Errors | 2 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| No Event Coded as Most Harmful | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| MOST HARMFUL EVENT TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 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 Motor Vehicle | 9,753 | 19.4 | 54 | 23.7 | 1,268 | 11.7 |
| Head-On | 617 | 1.2 | 36 | 15.8 | 328 | 3.0 |
| Head-On - Left Turn | 1,987 | 3.9 | 22 | 9.6 | 924 | 8.5 |
| Angle | 11,931 | 23.7 | 74 | 32.5 | 3,676 | 33.9 |
| Rear-End | 12,780 | 25.4 | 24 | 10.5 | 3,018 | 27.8 |
| Rear-End - Left Turn | 499 | 1.0 | 1 | 0.4 | 133 | 1.2 |
| Rear-End - Right Turn | 403 | 0.8 | 0 | 0.0 | 54 | 0.5 |
| Sideswipe - Same Direction | 7,716 | 15.3 | 6 | 2.6 | 650 | 6.0 |
| Sideswipe - Opposite Directions | 1,070 | 2.1 | 3 | 1.3 | 201 | 1.9 |
| Backing | 1,554 | 3.1 | 0 | 0.0 | 21 | 0.2 |
| Other | 1,966 | 3.9 | 8 | 3.5 | 549 | 5.1 |
| Unknown | 122 | 0.2 | 0 | 0.0 | 17 | 0.2 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 100.0 |

Rear-end crashes are the most common type of crash that drivers age 65 and over are involved in for all crashes (25.4%). Angle crashes are the most common type of crash that drivers age 65 and over are involved in for fatal crashes (32.5%) and injury crashes (33.9%).

| 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 the Road | 47,801 | 94.8 | 196 | 86.0 | 10,168 | 93.8 |
| In the Median | 178 | 0.4 | 2 | 0.9 | 42 | 0.4 |
| On the Shoulder | 709 | 1.4 | 7 | 3.1 | 195 | 1.8 |
| Outside of the Shoulder/Curb-Line | 1,136 | 2.3 | 22 | 9.6 | 345 | 3.2 |
| In the Gore (area between ramp and freeway convergence) | 35 | 0.1 | 0 | 0.0 | 10 | 0.1 |
| On-Street Parking | 368 | 0.7 | 0 | 0.0 | 29 | 0.3 |
| Off the Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| On the Sidewalk | 33 | 0.1 | 0 | 0.0 | 20 | 0.2 |
| In the Bicycle Lane | 8 | 0.0 | 0 | 0.0 | 3 | 0.0 |
| Other/Unknown | 130 | 0.3 | 1 | 0.4 | 27 | 0.2 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 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-line for all crashes (2.3%), fatal crashes (9.6%), and injury crashes (3.2%).

| 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 | 3,359 | 6.7 | 12 | 5.3 | 749 | 6.9 |
| U.S. & Michigan Roads | 16,723 | 33.2 | 88 | 38.6 | 3,653 | 33.7 |
| County & City Roads | 30,244 | 60.0 | 127 | 55.7 | 6,424 | 59.3 |
| Uncoded & Errors | 72 | 0.1 | 1 | 0.4 | 13 | 0.1 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 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 | 554 | 1.1 | 1 | 0.4 | 106 | 1.0 |
| 3:00 AM - 5:59 AM | 712 | 1.4 | 6 | 2.6 | 122 | 1.1 |
| 6:00 AM - 8:59 AM | 4,060 | 8.1 | 21 | 9.2 | 696 | 6.4 |
| 9:00 AM - 11:59 AM | 9,216 | 18.3 | 36 | 15.8 | 2,012 | 18.6 |
| 12:00 PM - 2:59 PM | 13,841 | 27.5 | 58 | 25.4 | 3,124 | 28.8 |
| 3:00 PM - 5:59 PM | 13,246 | 26.3 | 60 | 26.3 | 3,125 | 28.8 |
| 6:00 PM - 8:59 PM | 6,470 | 12.8 | 39 | 17.1 | 1,255 | 11.6 |
| 9:00 PM - 11:59 PM | 2,288 | 4.5 | 7 | 3.1 | 398 | 3.7 |
| Unknown | 11 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 100.0 |

For drivers age 65 and over, the 12:00 PM - 2:59 PM time period has the highest proportion of all crashes (27.5%), the 3:00 PM - 5:59 PM time period has the highest proportion of fatal crashes (26.3%), and both the 12:00 PM - 2:59 PM and 3:00 PM - 5:59 PM time periods have the highest proportion of injury crashes (28.8% each).

| 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 | 27,670 | 54.9 | 89 | 39.0 | 5,308 | 49.0 | 71 | 0.8 |
| Speed Too Fast | 1,201 | 2.4 | 11 | 4.8 | 315 | 2.9 | 303 | 3.5 |
| Speed Too Slow | 16 | 0.0 | 1 | 0.4 | 4 | 0.0 | 4 | 0.0 |
| Failed to Yield | 7,522 | 14.9 | 34 | 14.9 | 2,105 | 19.4 | 3,532 | 41.2 |
| Disregard Traffic Control | 1,250 | 2.5 | 14 | 6.1 | 538 | 5.0 | 686 | 8.0 |
| Drove Wrong Way | 56 | 0.1 | 0 | 0.0 | 21 | 0.2 | 18 | 0.2 |
| Drove Left of Center | 309 | 0.6 | 15 | 6.6 | 113 | 1.0 | 112 | 1.3 |
| Improper Passing | 255 | 0.5 | 2 | 0.9 | 32 | 0.3 | 82 | 1.0 |
| Improper Lane Use | 1,743 | 3.5 | 1 | 0.4 | 184 | 1.7 | 635 | 7.4 |
| Improper Turn | 804 | 1.6 | 0 | 0.0 | 142 | 1.3 | 302 | 3.5 |
| Improper/No Signal | 51 | 0.1 | 0 | 0.0 | 6 | 0.1 | 19 | 0.2 |
| Improper Backing | 999 | 2.0 | 1 | 0.4 | 18 | 0.2 | 228 | 2.7 |
| Unable to Stop in Assured Clear Distance | 4,481 | 8.9 | 12 | 5.3 | 1,031 | 9.5 | 1,921 | 22.4 |
| Other | 1,608 | 3.2 | 12 | 5.3 | 400 | 3.7 | 333 | 3.9 |
| Unknown | 1,549 | 3.1 | 28 | 12.3 | 340 | 3.1 | 20 | 0.2 |
| Reckless Driving | 52 | 0.1 | 1 | 0.4 | 20 | 0.2 | 17 | 0.2 |
| Careless/Negligent Driving | 818 | 1.6 | 7 | 3.1 | 261 | 2.4 | 284 | 3.3 |
| Uncoded & Errors | 14 | 0.0 | 0 | 0.0 | 1 | 0.0 | 0 | 0.0 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 100.0 | 8,567 | 100.0 |

After no hazardous action, the second highest hazardous action category for drivers age 65 and over for all crashes (14.9%), fatal crashes (14.9%), 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 | 7,530 | 14.9 | 27 | 11.8 | 1,633 | 15.1 |
| Tuesday | 7,967 | 15.8 | 40 | 17.5 | 1,667 | 15.4 |
| Wednesday | 8,216 | 16.3 | 25 | 11.0 | 1,742 | 16.1 |
| Thursday | 8,024 | 15.9 | 35 | 15.4 | 1,737 | 16.0 |
| Friday | 8,442 | 16.8 | 49 | 21.5 | 1,806 | 16.7 |
| Saturday | 5,805 | 11.5 | 34 | 14.9 | 1,243 | 11.5 |
| Sunday | 4,414 | 8.8 | 18 | 7.9 | 1,011 | 9.3 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 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 | 29,278 | 58.1 | 176 | 77.2 | 6,247 | 57.6 |
| Female | 21,110 | 41.9 | 52 | 22.8 | 4,592 | 42.4 |
| Uncoded & Errors | 10 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 100.0 |

For drivers age 65 and over, male drivers (77.2%) account for 3.4 times that of female drivers (22.8%) 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 | 40,578 | 80.5 | 170 | 74.6 | 8,278 | 76.4 |
| 2 occupants | 8,433 | 16.7 | 56 | 24.6 | 2,209 | 20.4 |
| 3 occupants | 743 | 1.5 | 2 | 0.9 | 226 | 2.1 |
| 4 occupants | 239 | 0.5 | 0 | 0.0 | 71 | 0.7 |
| 5 occupants | 60 | 0.1 | 0 | 0.0 | 25 | 0.2 |
| 6+ occupants | 81 | 0.2 | 0 | 0.0 | 16 | 0.1 |
| 0 occupants | 209 | 0.4 | 0 | 0.0 | 11 | 0.1 |
| Uncoded & Errors | 55 | 0.1 | 0 | 0.0 | 3 | 0.0 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 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 | 42,125 | 83.6 | 156 | 68.4 | 9,137 | 84.3 |
| Motor Home | 177 | 0.4 | 0 | 0.0 | 34 | 0.3 |
| Pickup Truck | 6,553 | 13.0 | 48 | 21.1 | 1,200 | 11.1 |
| Small Truck Under 10,000 lbs. GVWR | 181 | 0.4 | 0 | 0.0 | 36 | 0.3 |
| Motorcycle | 260 | 0.5 | 16 | 7.0 | 191 | 1.8 |
| Moped/Goped | 31 | 0.1 | 0 | 0.0 | 30 | 0.3 |
| Go-Cart/Golf Cart | 4 | 0.0 | 0 | 0.0 | 3 | 0.0 |
| Snowmobile | 8 | 0.0 | 1 | 0.4 | 4 | 0.0 |
| Off-Road Vehicle (ORV)/All-Terrain Vehicle (ATV) | 29 | 0.1 | 3 | 1.3 | 14 | 0.1 |
| Other (non-registered farm equipment, construction equipment, snow plows, etc.) | 103 | 0.2 | 0 | 0.0 | 20 | 0.2 |
| Uncoded & Errors | 16 | 0.0 | 0 | 0.0 | 2 | 0.0 |
| Truck/Bus (over 10,000 lbs. GVWR/8+ occupants/hazmat placard) (breakdown below) | 911 | 1.8 | 4 | 1.8 | 168 | 1.5 |
| TOTAL | 50,398 | 100.0 | 228 | 100.0 | 10,839 | 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 | 23 | 2.5 | 0 | 0.0 | 2 | 1.2 |
| 10,001-26,000 lbs. | 277 | 30.4 | 1 | 25.0 | 35 | 20.8 |
| Greater Than 26,000 lbs. | 603 | 66.2 | 3 | 75.0 | 131 | 78.0 |
| Uncoded & Errors | 8 | 0.9 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 911 | 100.0 | 4 | 100.0 | 168 | 100.0 |

ALCOHOL

ROADWAY INJURY EXPERIENCE FOR PEOPLE 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* | 1,260 | 38 | 27 | 12 | 3 | 4 | 0 | 54 | 30 |
| | Killed | 29 | 4 | 3 | 5 | 2 | 1 | 0 | 10 | 5** |
| | Injured | 971 | 32 | 22 | 7 | 1 | 2 | 0 | 41 | 23 |
|  DRIVERS | Total* | 476,129 | 12,335 | 8,148 | 2,665 | 1,659 | 1,967 | 1,311 | 16,967 | 11,118 |
| | Killed | 758 | 155 | 127 | 103 | 82 | 89 | 75 | 347 | 284** |
| | Injured | 52,479 | 3,353 | 2,571 | 944 | 677 | 719 | 558 | 5,016 | 3,806 |
|  MOTORCYCLISTS | Total* | 3,571 | 264 | 219 | 44 | 31 | 55 | 44 | 363 | 294 |
| | Killed | 166 | 32 | 22 | 18 | 14 | 20 | 15 | 70 | 51** |
| | Injured | 2,526 | 197 | 170 | 21 | 15 | 31 | 27 | 249 | 212 |
|  ORV/ATV RIDERS | Total* | 578 | 96 | 92 | 2 | 1 | 6 | 5 | 104 | 98 |
| | Killed | 21 | 7 | 7 | 2 | 1 | 1 | 1 | 10 | 9** |
| | Injured | 336 | 65 | 65 | 0 | 0 | 3 | 3 | 68 | 68 |
|  PEDESTRIANS | Total* | 1,891 | 158 | 106 | 45 | 20 | 23 | 13 | 226 | 139 |
| | Killed | 183 | 34 | 25 | 18 | 4 | 9 | 5 | 61 | 34** |
| | Injured | 1,453 | 113 | 75 | 27 | 16 | 13 | 8 | 153 | 99 |
|  SNOWMOBILERS | Total* | 109 | 16 | 15 | 0 | 0 | 1 | 1 | 17 | 16 |
| | Killed | 5 | 1 | 1 | 0 | 0 | 1 | 1 | 2 | 2** |
| | Injured | 64 | 12 | 11 | 0 | 0 | 0 | 0 | 12 | 11 |

*Total does include property damage only crashes

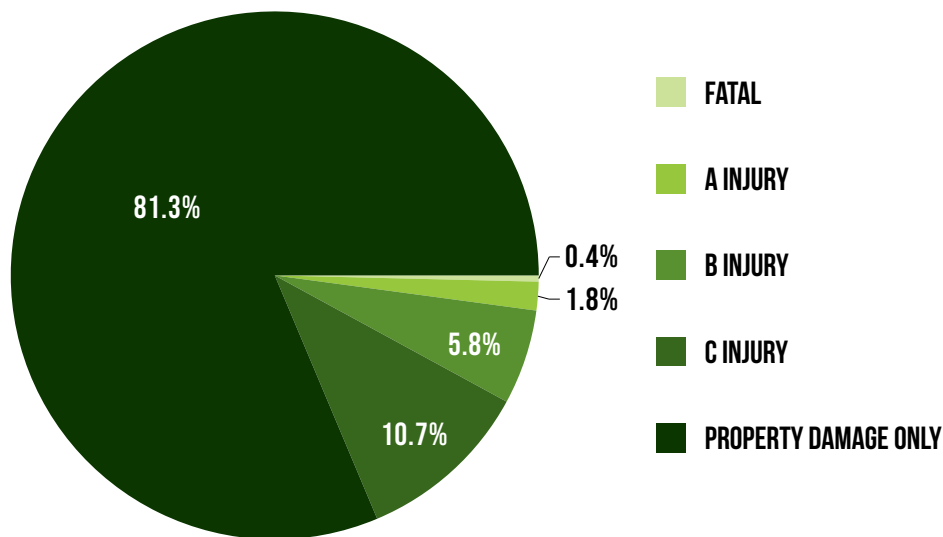
**There were five bicyclists, 284 drivers, 51 motorcyclists, nine ORV/ATV riders, 34 pedestrians, and two snowmobilers who were killed and coded as drinking and/or using drugs by the police officer.

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 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 15 years | 3 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| 16 years | 19 | 11 | 1 | 31 | 2 | 2 | 0 | 4 | 8 | 4 | 1 | 13 |
| 17 years | 31 | 18 | 12 | 61 | 2 | 1 | 1 | 4 | 14 | 11 | 5 | 30 |
| 18 years | 81 | 27 | 19 | 127 | 1 | 3 | 2 | 6 | 35 | 8 | 6 | 49 |
| 19 years | 105 | 42 | 21 | 168 | 4 | 6 | 5 | 15 | 46 | 18 | 10 | 74 |
| 20 years | 148 | 54 | 42 | 244 | 6 | 6 | 4 | 16 | 47 | 25 | 23 | 95 |
| 21 - 24 years | 1,034 | 216 | 186 | 1,436 | 17 | 20 | 12 | 49 | 408 | 116 | 89 | 613 |
| 25 - 34 years | 2,581 | 554 | 476 | 3,611 | 51 | 44 | 48 | 143 | 985 | 255 | 226 | 1,466 |
| 35 - 44 years | 1,727 | 394 | 302 | 2,423 | 53 | 33 | 23 | 109 | 634 | 167 | 153 | 954 |
| 45 - 54 years | 1,203 | 179 | 117 | 1,499 | 31 | 11 | 10 | 52 | 473 | 82 | 51 | 606 |
| 55 - 64 years | 877 | 128 | 99 | 1,104 | 23 | 14 | 5 | 42 | 362 | 57 | 51 | 470 |
| 65 - 69 years | 188 | 24 | 23 | 235 | 6 | 2 | 1 | 9 | 66 | 9 | 10 | 85 |
| 70 - 74 years | 104 | 12 | 10 | 126 | 3 | 1 | 0 | 4 | 38 | 5 | 3 | 46 |
| 75 - 79 years | 38 | 4 | 1 | 43 | 2 | 2 | 0 | 4 | 13 | 1 | 0 | 14 |
| 80 - 84 years | 15 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 5 |
| 85 - 89 years | 2 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 years and over | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| Unknown | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| Total | 8,158 | 1,665 | 1,311 | 11,134 | 201 | 145 | 111 | 457 | 3,138 | 759 | 629 | 4,526 |

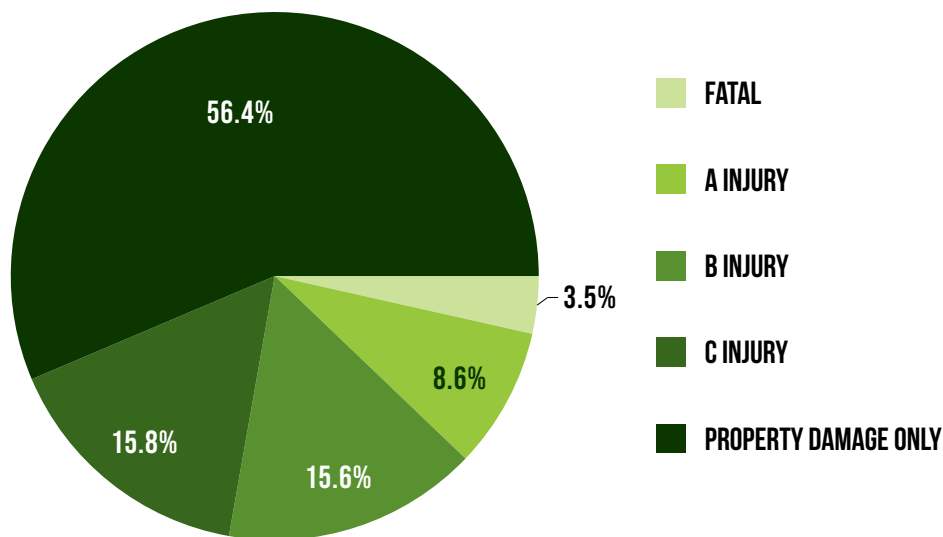
The driver age group 25 to 34 years represents the highest number of drinking and/or drug use in total crashes, injury crashes, and fatal crashes.

ALL CRASHES BY INJURY SEVERITY



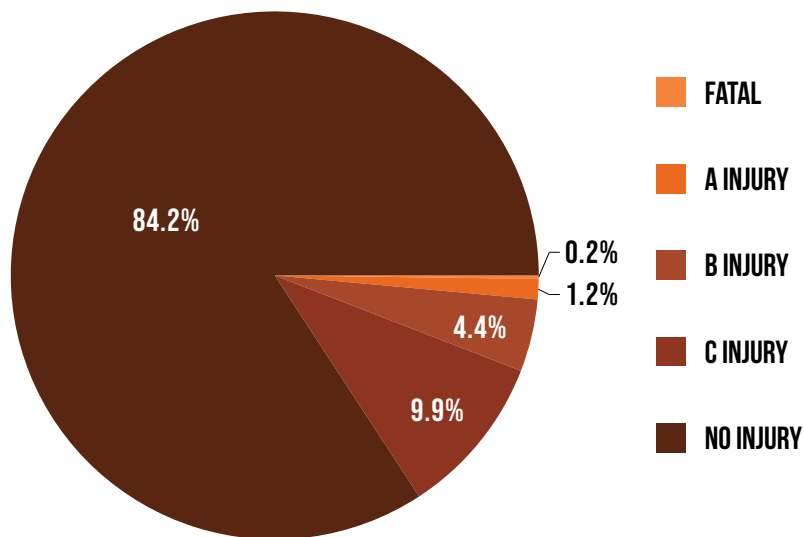
The majority of crashes do not involve injury (81.3%). Possible (C) injury crashes represent about 57% of those that do involve injury.

HAD-BEEN-DRINKING CRASHES BY INJURY SEVERITY



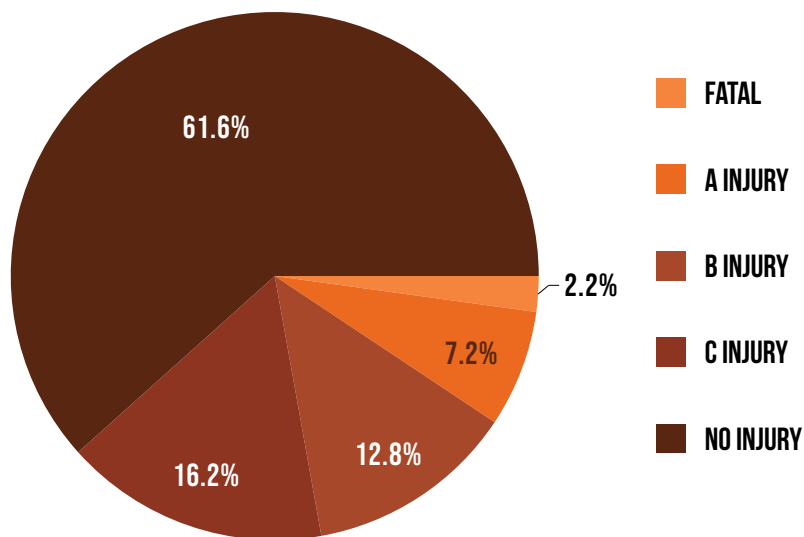
The problem of the drinking driver, pedestrian, and/or cyclist is seen by comparing the two charts on this page. For all had-been-drinking crashes, injury levels are greater, and a fatal crash is about nine times more likely when one of the crash-involved operators is reported as had-been-drinking (HBD).

DEATH & INJURY FOR CRASH INVOLVED OCCUPANTS



The majority of occupants involved in crashes are not injured (84.2%). About 63% percent of those who are injured receive only possible (C) injuries.

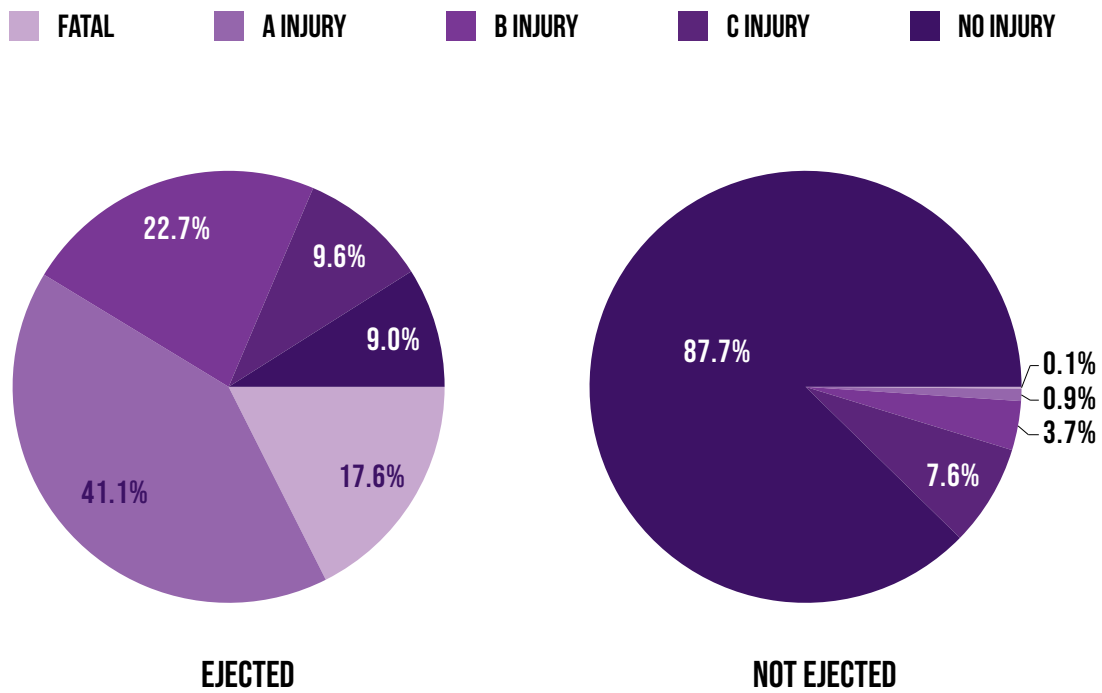
OCCUPANTS IN HAD-BEEN-DRINKING CRASHES



Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of occupant fatalities is about 11 times higher than in all crashes and the suspected serious injury level (A) is about six times higher.

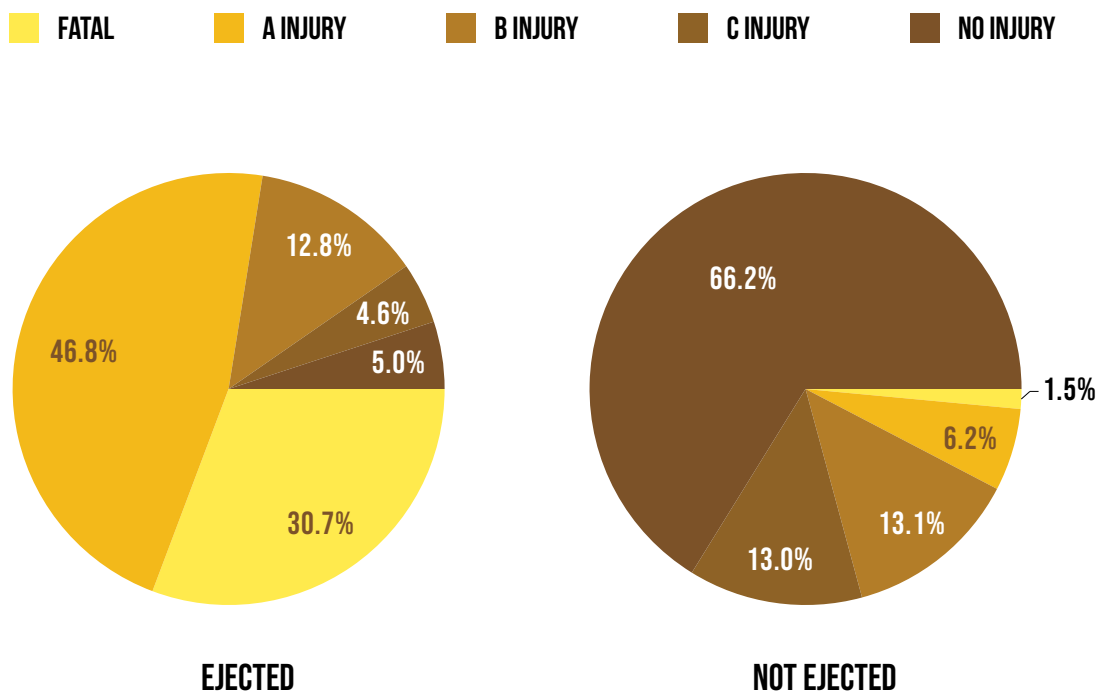
Note: Occupants include all drivers plus all injured or killed people in or on a motor vehicle.

ALL DRIVERS INJURY SEVERITY - EJECTED VS. NOT EJECTED



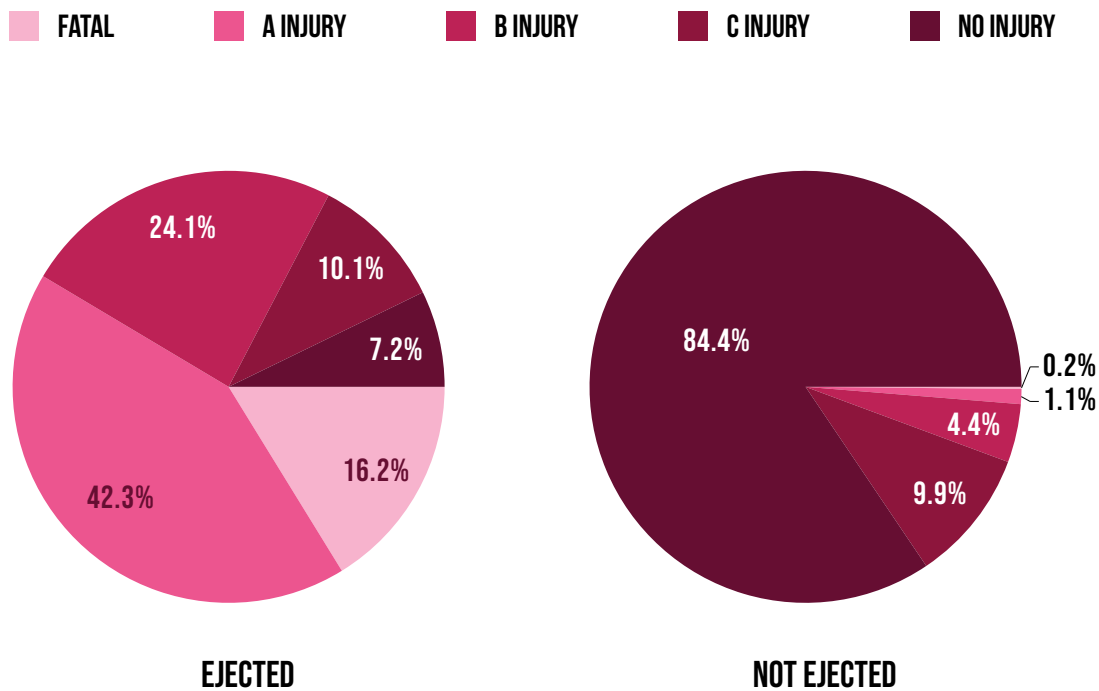
As shown by the two charts above, death and injury are much more likely when drivers are ejected from vehicles.

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



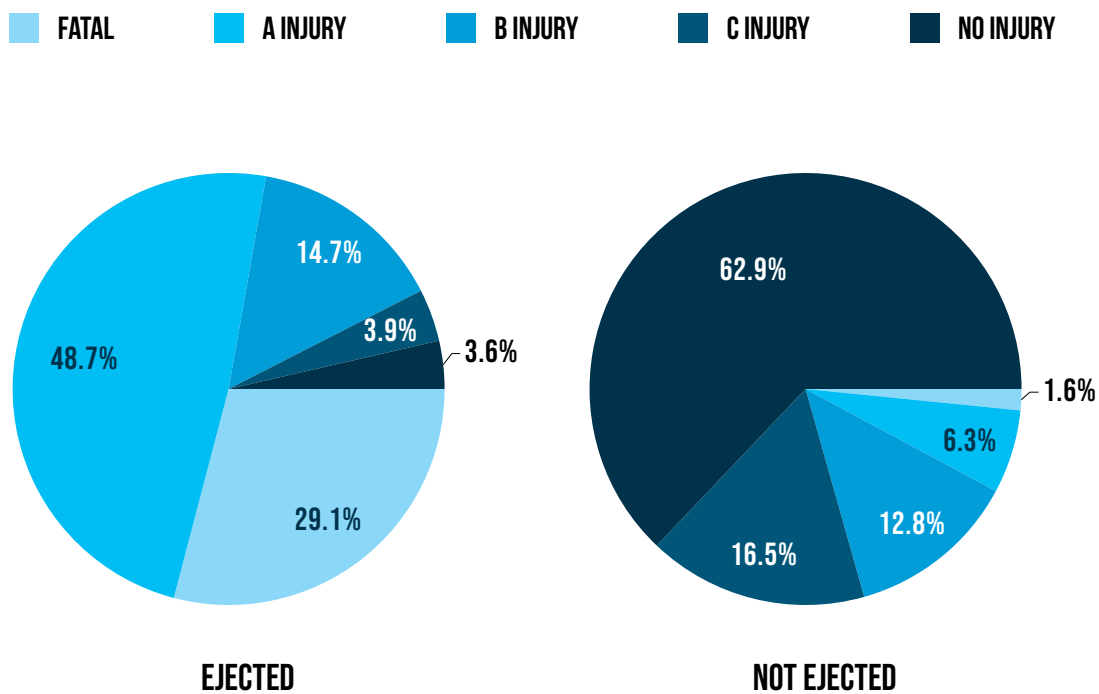
When compared to the charts above, the had-been-drinking charts demonstrate that injury severity is much worse for drivers reported to be drinking in both ejected and non-ejected events.

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

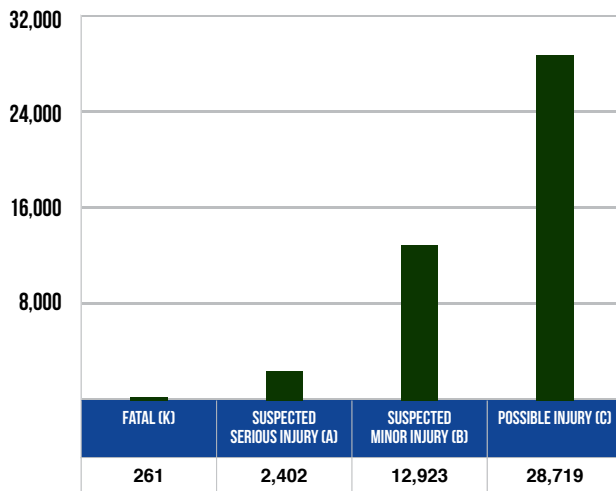


When compared to the charts above, the charts of occupants of had-been-drinking crashes demonstrate that injury severity is much worse for occupants in a crash where drinking is reported in both ejected and non-ejected events.

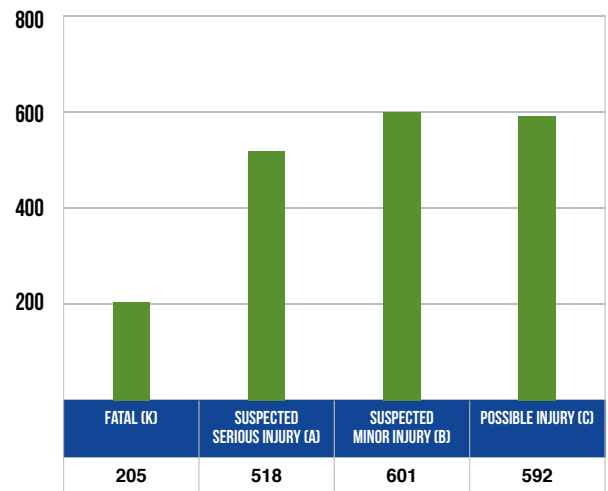
Note: Occupants include all drivers plus all injured or killed people in or on a motor vehicle.

INJURY SEVERITY & BELT USE BY DRIVER INJURY

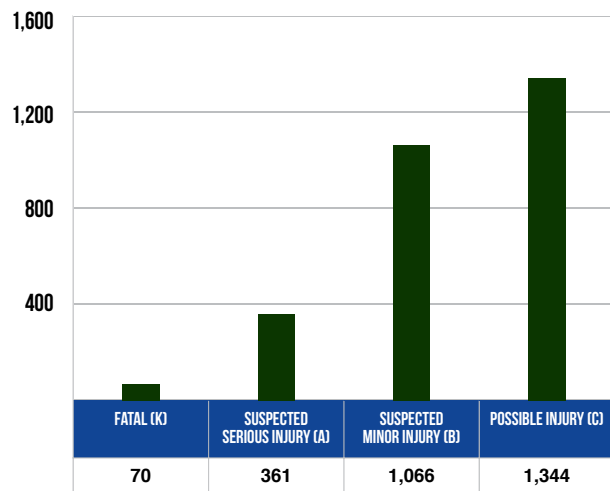
ALL CRASHES-BELTS USED



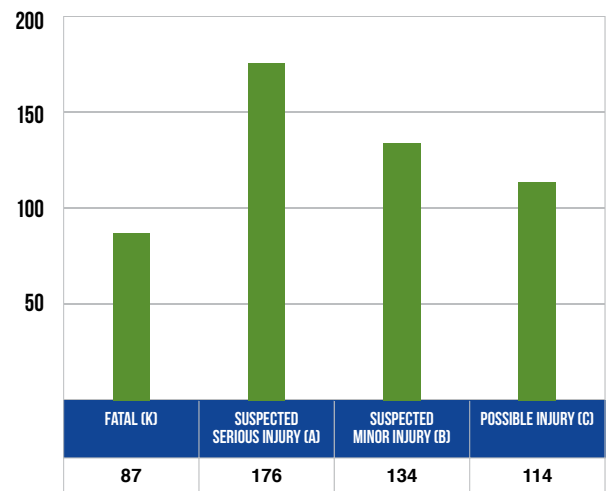
ALL CRASHES-BELTS NOT USED



HAD-BEEN DRINKING CRASHES-BELTS USED

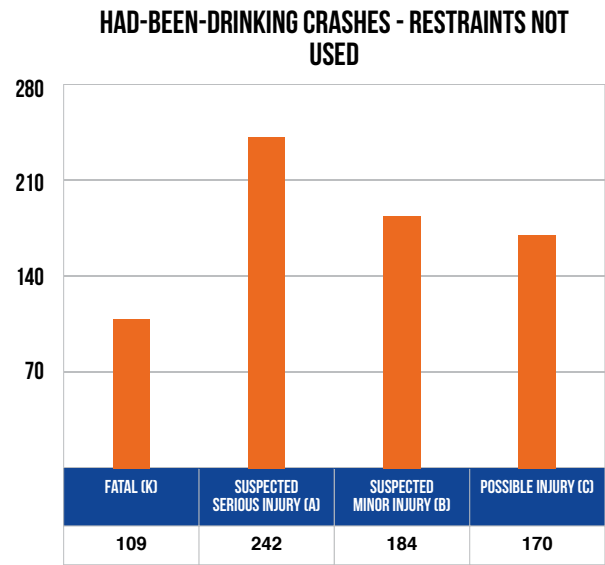
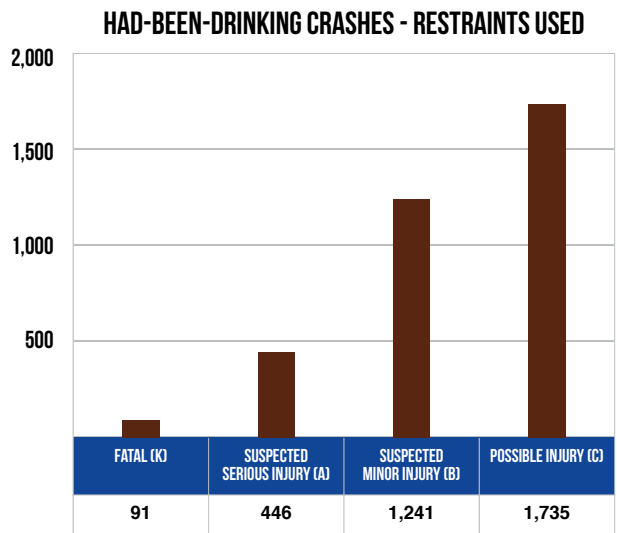
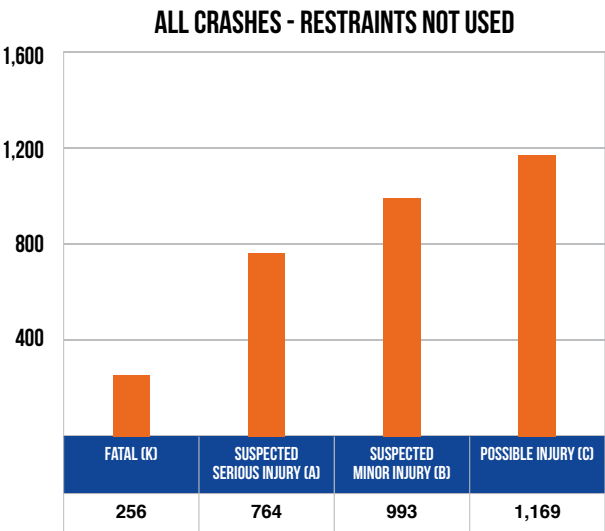
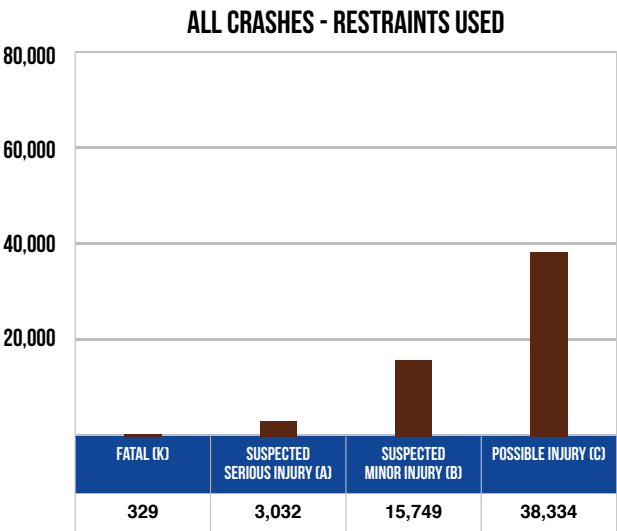


HAD-BEEN DRINKING CRASHES-BELTS NOT USED



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

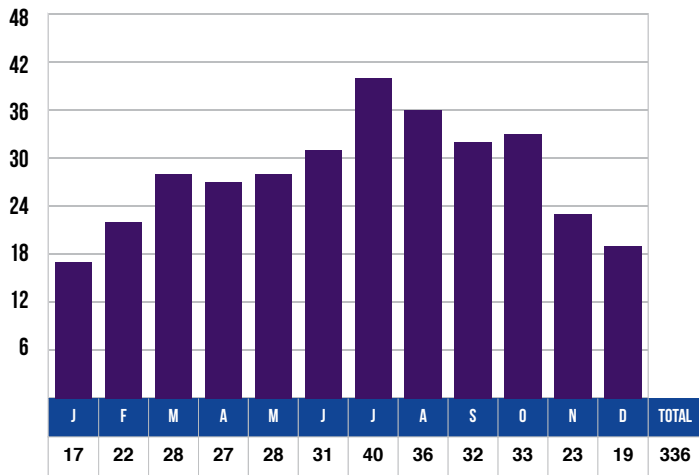


Note: “Restraints Used” represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, child restraints used, and restraint failure. “Restraints Not Used” represents no belts available; no belts used; and child restraint not used, unavailable, or improper use.

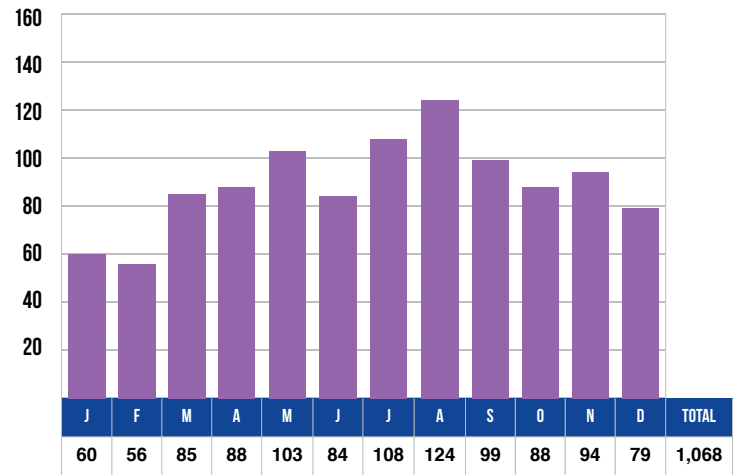
Note: Occupants include all drivers plus all injured or killed people in or on a motor vehicle.

ALCOHOL INVOLVMENT IN FATAL CRASHES

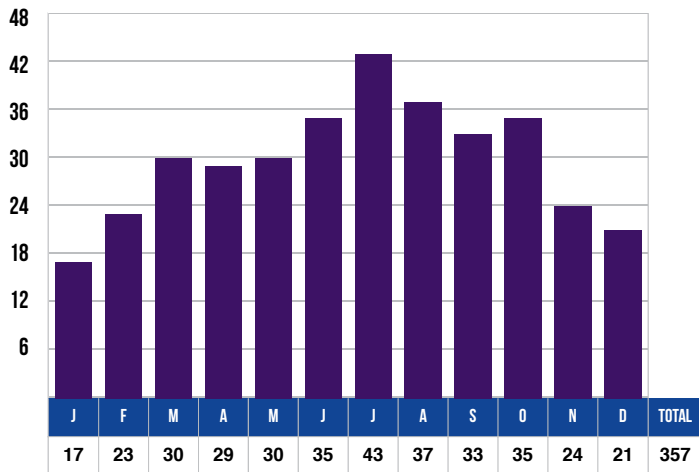
HAD-BEEN-DRINKING FATAL CRASHES BY MONTH



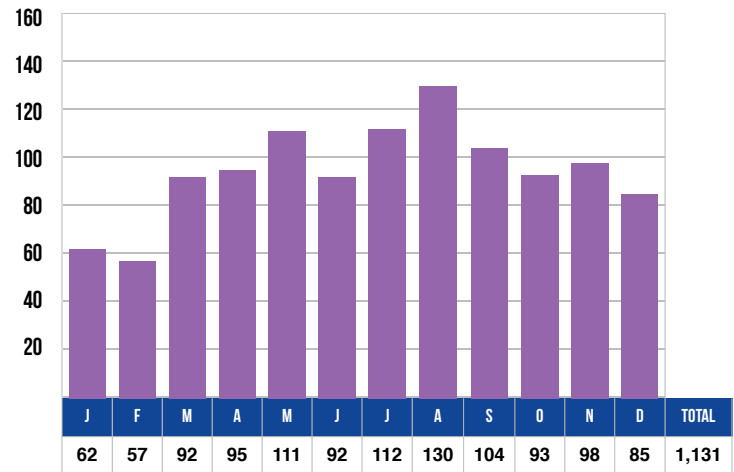
TOTAL FATAL CRASHES BY MONTH



ALCOHOL-INVOLVED FATALITIES BY MONTH



TOTAL FATALITIES BY MONTH

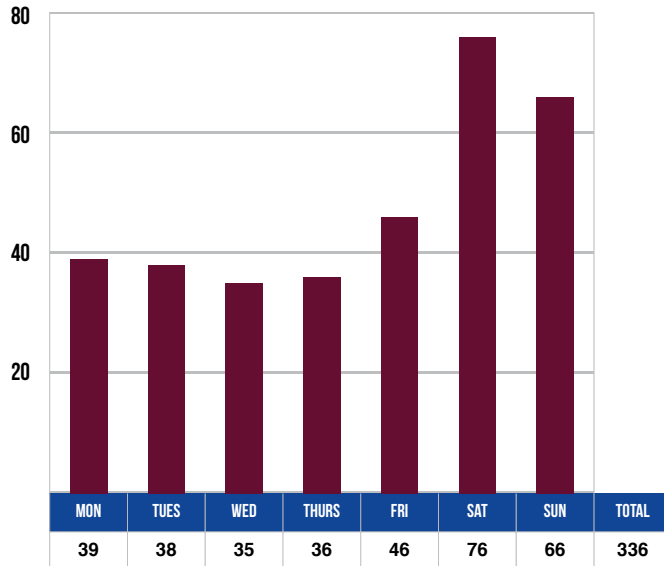


Had-been-drinking fatal crashes were highest in number during the month of July. The number of total fatal crashes (total of non-had-been-drinking and had-been-drinking fatal crashes) reached the highest level in August.

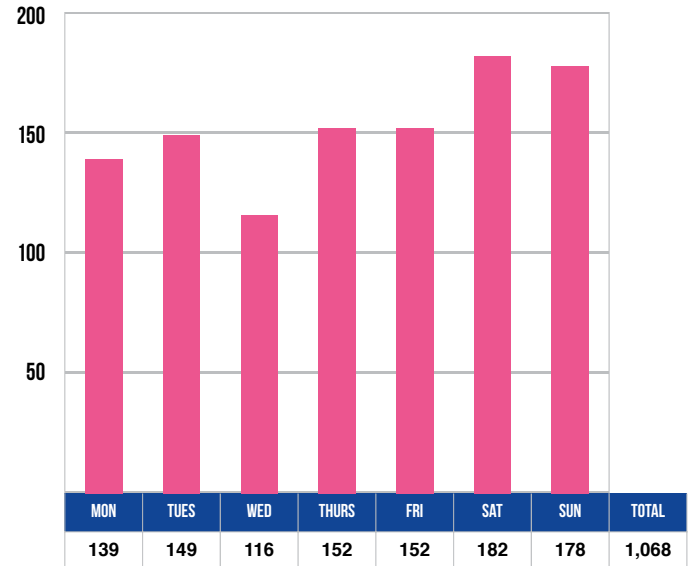
Note: An alcohol-involved fatality is any person killed in a had-been-drinking crash.

ALCOHOL INVOLVMENT IN FATAL CRASHES (CONTINUED)

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

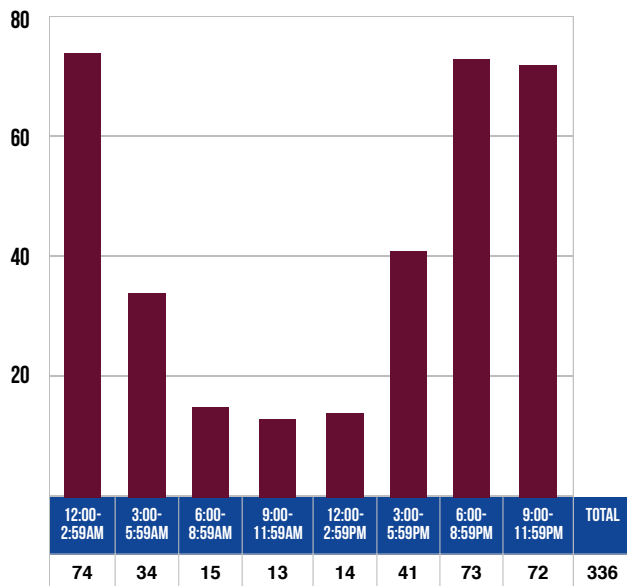


**TOTAL FATAL CRASHES
BY DAY OF THE WEEK**

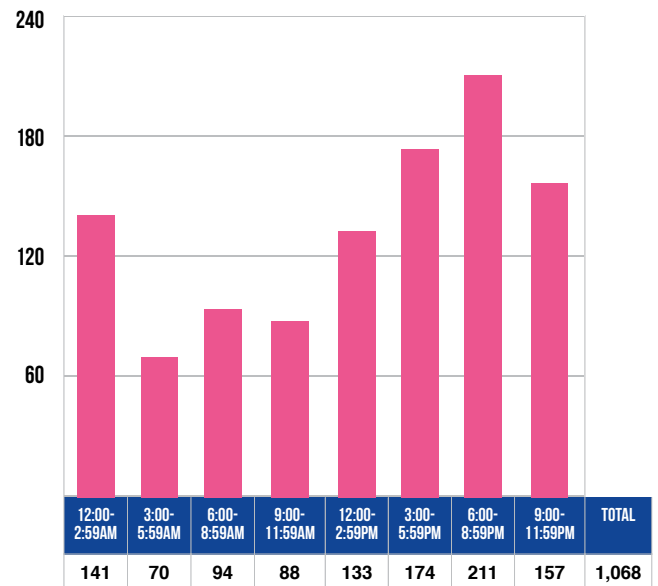


Saturday had the highest number of HBD fatal crashes (76) and also the highest proportion (41.8%) of drinking-related fatal crashes in 2021.

HAD-BEEN-DRINKING FATAL CRASHES BY TIME OF DAY



TOTAL FATAL CRASHES BY TIME OF DAY

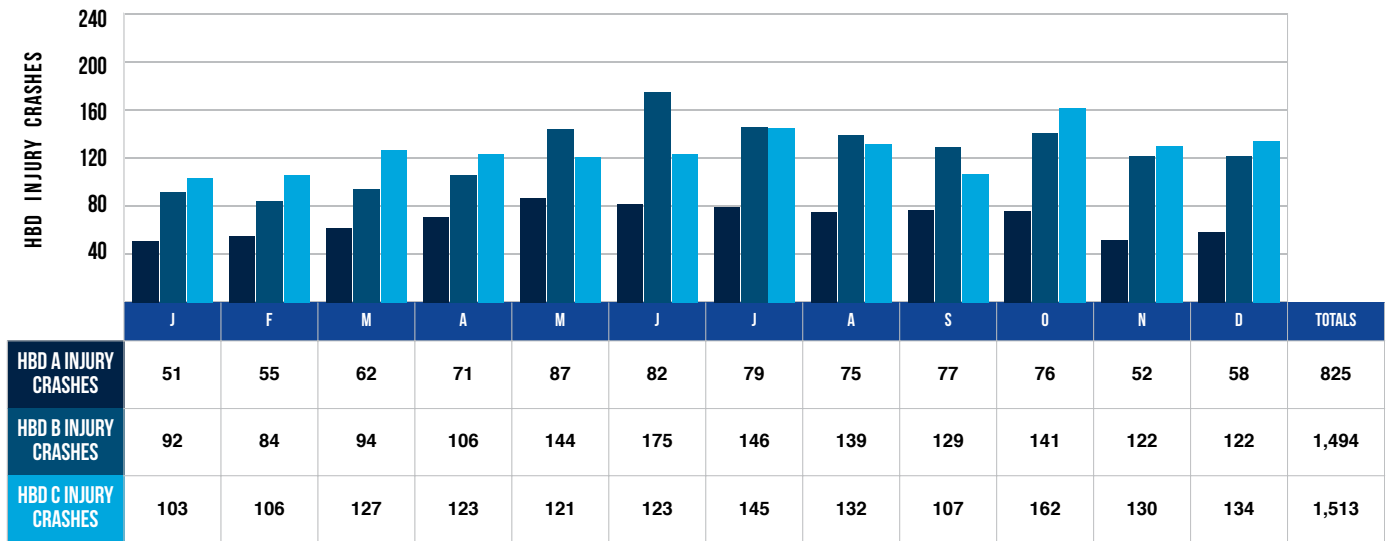


The 12:00 AM to 2:59 AM time period had the highest number of HBD fatal crashes (74) and the greatest proportion (52.5%) of drinking-related fatal crashes in 2021.

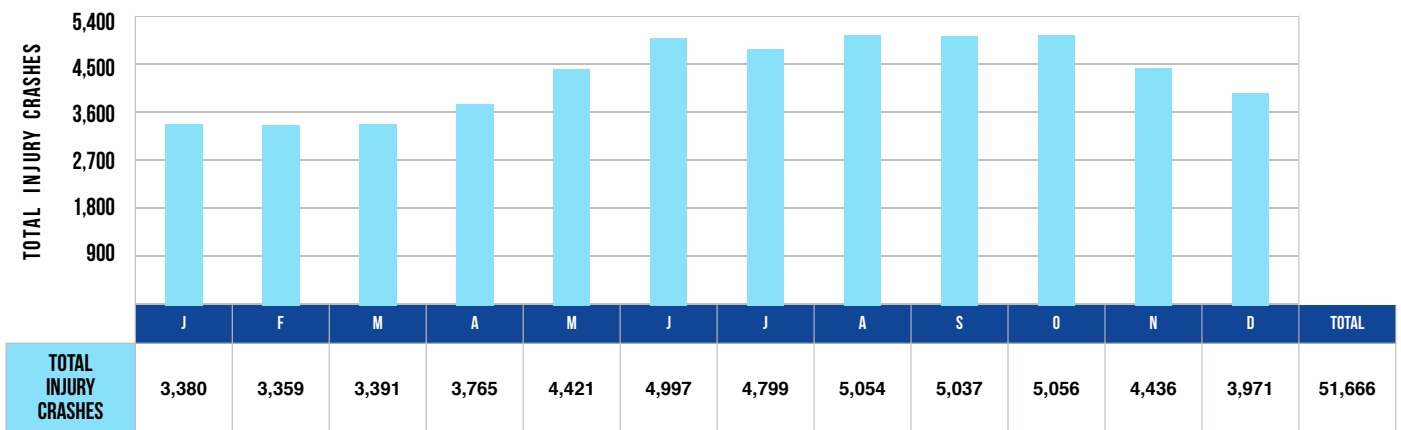
Note: These charts exclude crashes where time of day was unknown.

ALCOHOL INVOLVEMENT IN INJURY CRASHES

HAD-BEEN-DRINKING INJURY CRASHES BY MONTH



TOTAL INJURY CRASHES BY MONTH

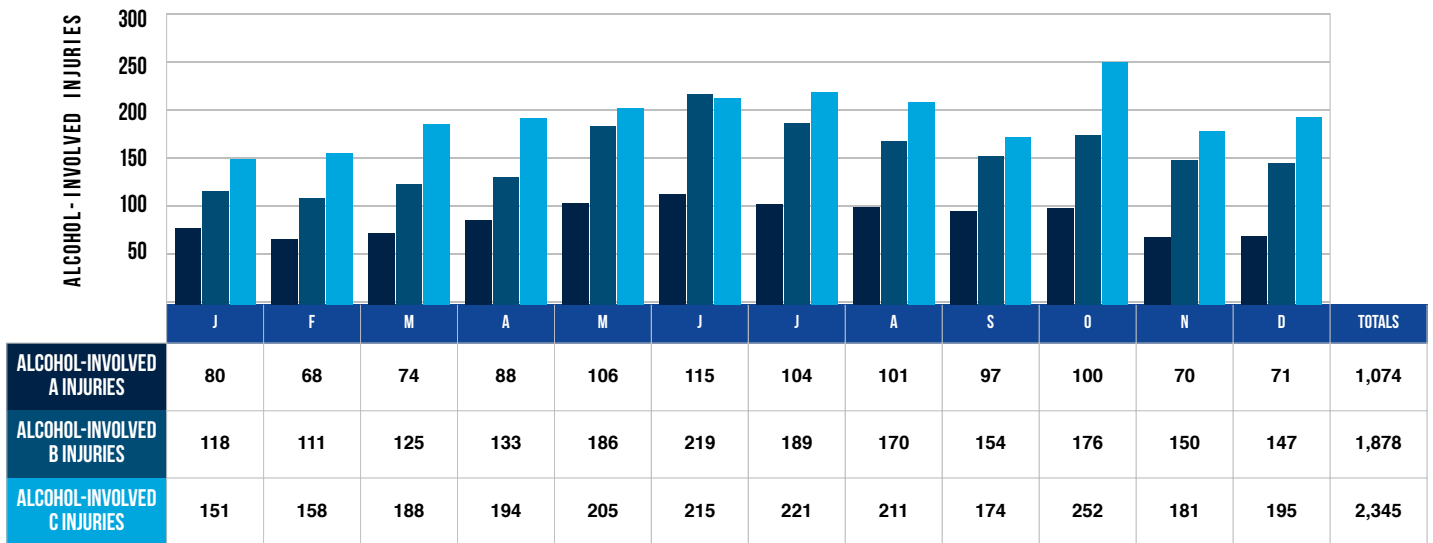


Alcohol involvement in injury crashes is an important indicator of the alcohol-impaired driving problem. In 2021, the highest number of had-been-drinking injury crashes occurred in June with 380. The highest proportion of had-been-drinking injury crashes occurred in March with 8.3 percent of the injury crashes involving alcohol.

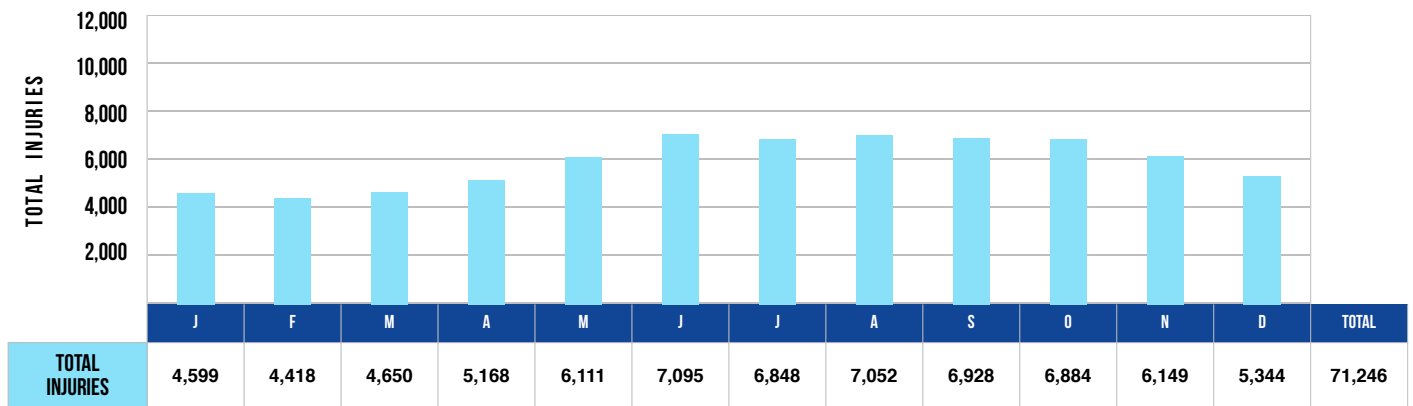
Note: An alcohol-involved injury is any person injured in a had-been-drinking crash.

ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

ALCOHOL-INVOLVED INJURIES BY MONTH



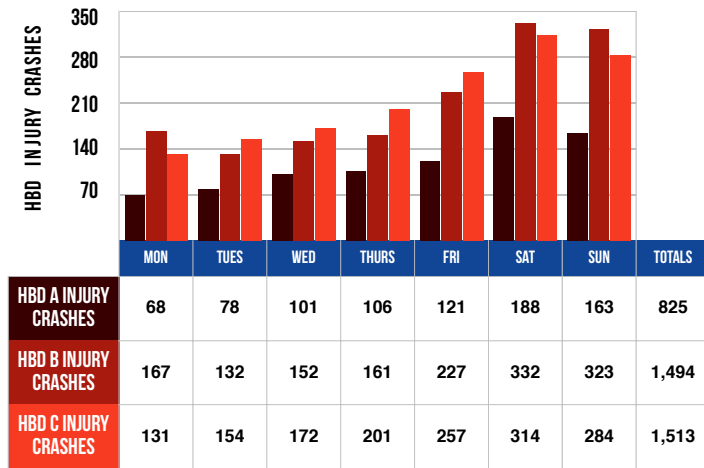
TOTAL INJURIES BY MONTH



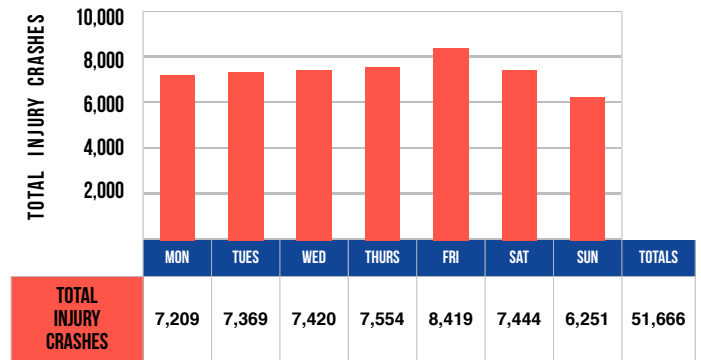
Note: An alcohol-involved injury is any person injured in a had-been-drinking crash.

ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

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

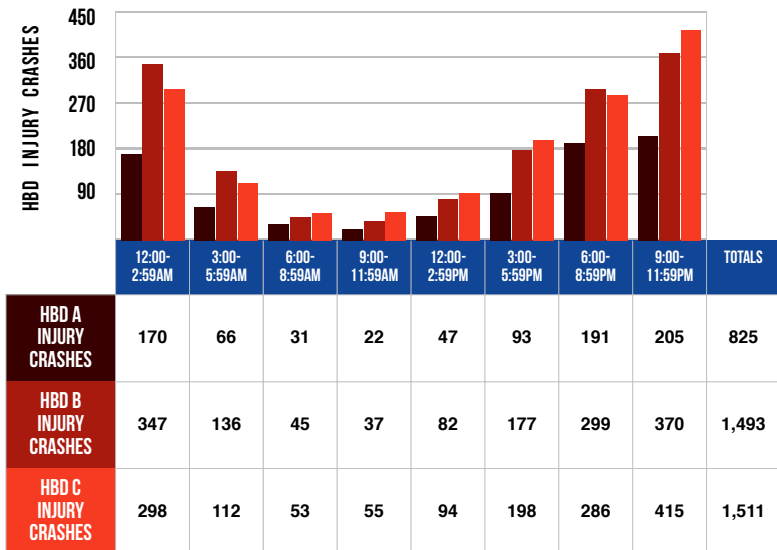


**TOTAL INJURY CRASHES
BY DAY OF THE WEEK**

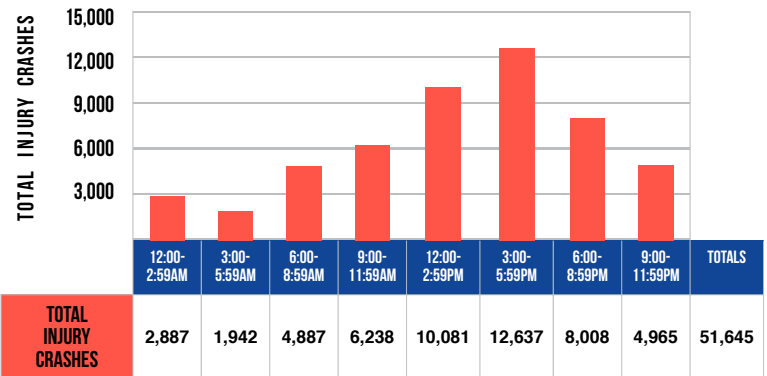


Had-been-drinking injury crashes follow the same basic trends as total crashes during the work week, but the weekend sees a dramatic increase in the proportion of had-been-drinking injury crashes to total injury crashes.

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 21 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 | 115 | 0.0 | 1 | 0.1 | 10 | 20 | 18 | 66 |
| 14 years | 86 | 0.0 | 0 | 0.0 | 10 | 15 | 13 | 48 |
| 15 years | 329 | 0.1 | 1 | 0.1 | 23 | 40 | 54 | 211 |
| 16 years | 3,281 | 1.3 | 13 | 1.1 | 64 | 219 | 370 | 2,615 |
| 17 years | 4,849 | 2.0 | 18 | 1.5 | 75 | 332 | 542 | 3,882 |
| 18 years | 6,239 | 2.5 | 22 | 1.8 | 117 | 425 | 762 | 4,913 |
| 19 years | 6,326 | 2.6 | 35 | 2.9 | 130 | 460 | 744 | 4,957 |
| 20 years | 6,393 | 2.6 | 25 | 2.1 | 126 | 443 | 800 | 4,999 |
| 21 - 24 years | 24,061 | 9.8 | 95 | 7.8 | 482 | 1,681 | 2,968 | 18,835 |
| 25 - 34 years | 52,060 | 21.2 | 281 | 23.2 | 1,182 | 3,483 | 6,299 | 40,815 |
| 35 - 44 years | 39,872 | 16.3 | 219 | 18.1 | 832 | 2,628 | 4,729 | 31,464 |
| 45 - 54 years | 36,067 | 14.7 | 169 | 13.9 | 764 | 2,247 | 4,177 | 28,710 |
| 55 - 64 years | 33,425 | 13.6 | 151 | 12.5 | 717 | 2,052 | 3,825 | 26,680 |
| 65 - 69 years | 11,332 | 4.6 | 62 | 5.1 | 213 | 733 | 1,377 | 8,947 |
| 70 - 74 years | 8,269 | 3.4 | 39 | 3.2 | 153 | 579 | 1,018 | 6,480 |
| 75 - 79 years | 5,100 | 2.1 | 36 | 3.0 | 109 | 369 | 590 | 3,996 |
| 80 - 84 years | 2,771 | 1.1 | 23 | 1.9 | 64 | 226 | 352 | 2,106 |
| 85 - 89 years | 1,310 | 0.5 | 12 | 1.0 | 31 | 133 | 171 | 963 |
| 90 years and over | 496 | 0.2 | 4 | 0.3 | 18 | 53 | 58 | 363 |
| Unknown | 2,715 | 1.1 | 6 | 0.5 | 24 | 88 | 283 | 2,314 |
| TOTAL | 245,096** | 100.0 | 1,212 | 100.0 | 5,144 | 16,226 | 29,150 | 193,364 |

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 45,540 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 | 1 | 0.0 | 0 | 0.0 | 0 | 1 | 0 | 0 |
| 15 years | 4 | 0.1 | 0 | 0.0 | 1 | 1 | 1 | 1 |
| 16 years | 17 | 0.3 | 2 | 0.8 | 4 | 1 | 3 | 7 |
| 17 years | 24 | 0.4 | 3 | 1.2 | 1 | 3 | 4 | 13 |
| 18 years | 69 | 1.0 | 2 | 0.8 | 7 | 10 | 15 | 35 |
| 19 years | 88 | 1.3 | 8 | 3.2 | 8 | 11 | 17 | 44 |
| 20 years | 134 | 2.0 | 7 | 2.8 | 15 | 21 | 17 | 74 |
| 21 - 24 years | 840 | 12.4 | 20 | 8.0 | 67 | 145 | 129 | 479 |
| 25 - 34 years | 2,113 | 31.2 | 77 | 30.8 | 198 | 345 | 290 | 1,203 |
| 35 - 44 years | 1,446 | 21.3 | 65 | 26.0 | 134 | 222 | 212 | 813 |
| 45 - 54 years | 989 | 14.6 | 30 | 12.0 | 104 | 151 | 164 | 540 |
| 55 - 64 years | 749 | 11.1 | 25 | 10.0 | 85 | 128 | 115 | 396 |
| 65 - 69 years | 160 | 2.4 | 7 | 2.8 | 13 | 23 | 26 | 91 |
| 70 - 74 years | 97 | 1.4 | 3 | 1.2 | 5 | 17 | 12 | 60 |
| 75 - 79 years | 30 | 0.4 | 1 | 0.4 | 4 | 4 | 4 | 17 |
| 80 - 84 years | 13 | 0.2 | 0 | 0.0 | 1 | 2 | 2 | 8 |
| 85 - 89 years | 1 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 1 |
| 90 years and over | 1 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 1 |
| Unknown | 1 | 0.0 | 0 | 0.0 | 1 | 0 | 0 | 0 |
| TOTAL | 6,777** | 100.0 | 250 | 100.0 | 648 | 1,085 | 1,011 | 3,783 |

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 no 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 | 35 | 0.0 | 0 | 0.0 | 3 | 6 | 4 | 22 |
| 14 years | 54 | 0.0 | 0 | 0.0 | 5 | 6 | 10 | 33 |
| 15 years | 258 | 0.1 | 1 | 0.2 | 12 | 25 | 38 | 182 |
| 16 years | 3,209 | 1.7 | 1 | 0.2 | 45 | 209 | 410 | 2,544 |
| 17 years | 4,387 | 2.4 | 9 | 2.2 | 56 | 259 | 550 | 3,513 |
| 18 years | 5,071 | 2.7 | 13 | 3.2 | 73 | 364 | 700 | 3,921 |
| 19 years | 5,284 | 2.8 | 8 | 2.0 | 73 | 338 | 716 | 4,149 |
| 20 years | 5,224 | 2.8 | 16 | 3.9 | 70 | 382 | 704 | 4,052 |
| 21 - 24 years | 19,651 | 10.6 | 51 | 12.5 | 255 | 1,346 | 2,813 | 15,186 |
| 25 - 34 years | 40,627 | 21.9 | 86 | 21.1 | 602 | 2,643 | 5,784 | 31,512 |
| 35 - 44 years | 30,301 | 16.3 | 64 | 15.7 | 467 | 1,799 | 4,170 | 23,801 |
| 45 - 54 years | 25,826 | 13.9 | 60 | 14.7 | 339 | 1,541 | 3,474 | 20,412 |
| 55 - 64 years | 22,893 | 12.3 | 44 | 10.8 | 370 | 1,359 | 2,994 | 18,126 |
| 65 - 69 years | 8,139 | 4.4 | 14 | 3.4 | 119 | 476 | 1,072 | 6,458 |
| 70 - 74 years | 5,818 | 3.1 | 15 | 3.7 | 89 | 383 | 795 | 4,536 |
| 75 - 79 years | 3,744 | 2.0 | 15 | 3.7 | 59 | 287 | 505 | 2,878 |
| 80 - 84 years | 2,095 | 1.1 | 5 | 1.2 | 46 | 171 | 293 | 1,580 |
| 85 - 89 years | 981 | 0.5 | 1 | 0.2 | 23 | 69 | 130 | 758 |
| 90 years and over | 333 | 0.2 | 2 | 0.5 | 10 | 29 | 36 | 256 |
| Unknown | 1,563 | 0.8 | 3 | 0.7 | 15 | 29 | 122 | 1,394 |
| TOTAL | 185,493** | 100.0 | 408 | 100.0 | 2,731 | 11,721 | 25,320 | 145,313 |

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 45,540 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 | 3 | 0.1 | 0 | 0.0 | 1 | 0 | 0 | 2 |
| 17 years | 19 | 0.7 | 0 | 0.0 | 4 | 4 | 3 | 8 |
| 18 years | 31 | 1.2 | 1 | 1.6 | 0 | 4 | 5 | 21 |
| 19 years | 38 | 1.4 | 1 | 1.6 | 3 | 10 | 7 | 17 |
| 20 years | 56 | 2.1 | 3 | 4.8 | 4 | 4 | 9 | 36 |
| 21 - 24 years | 380 | 14.1 | 9 | 14.5 | 19 | 58 | 79 | 215 |
| 25 - 34 years | 944 | 35.1 | 22 | 35.5 | 55 | 151 | 172 | 544 |
| 35 - 44 years | 583 | 21.7 | 11 | 17.7 | 45 | 78 | 96 | 353 |
| 45 - 54 years | 331 | 12.3 | 11 | 17.7 | 14 | 34 | 57 | 215 |
| 55 - 64 years | 227 | 8.4 | 3 | 4.8 | 12 | 33 | 40 | 139 |
| 65 - 69 years | 51 | 1.9 | 0 | 0.0 | 0 | 4 | 10 | 37 |
| 70 - 74 years | 17 | 0.6 | 0 | 0.0 | 0 | 1 | 6 | 10 |
| 75 - 79 years | 9 | 0.3 | 1 | 1.6 | 0 | 0 | 1 | 7 |
| 80 - 84 years | 2 | 0.1 | 0 | 0.0 | 0 | 0 | 0 | 2 |
| 85 - 89 years | 1 | 0.0 | 0 | 0.0 | 0 | 0 | 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 | 2,692** | 100.0 | 62 | 100.0 | 157 | 381 | 485 | 1,607 |

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.

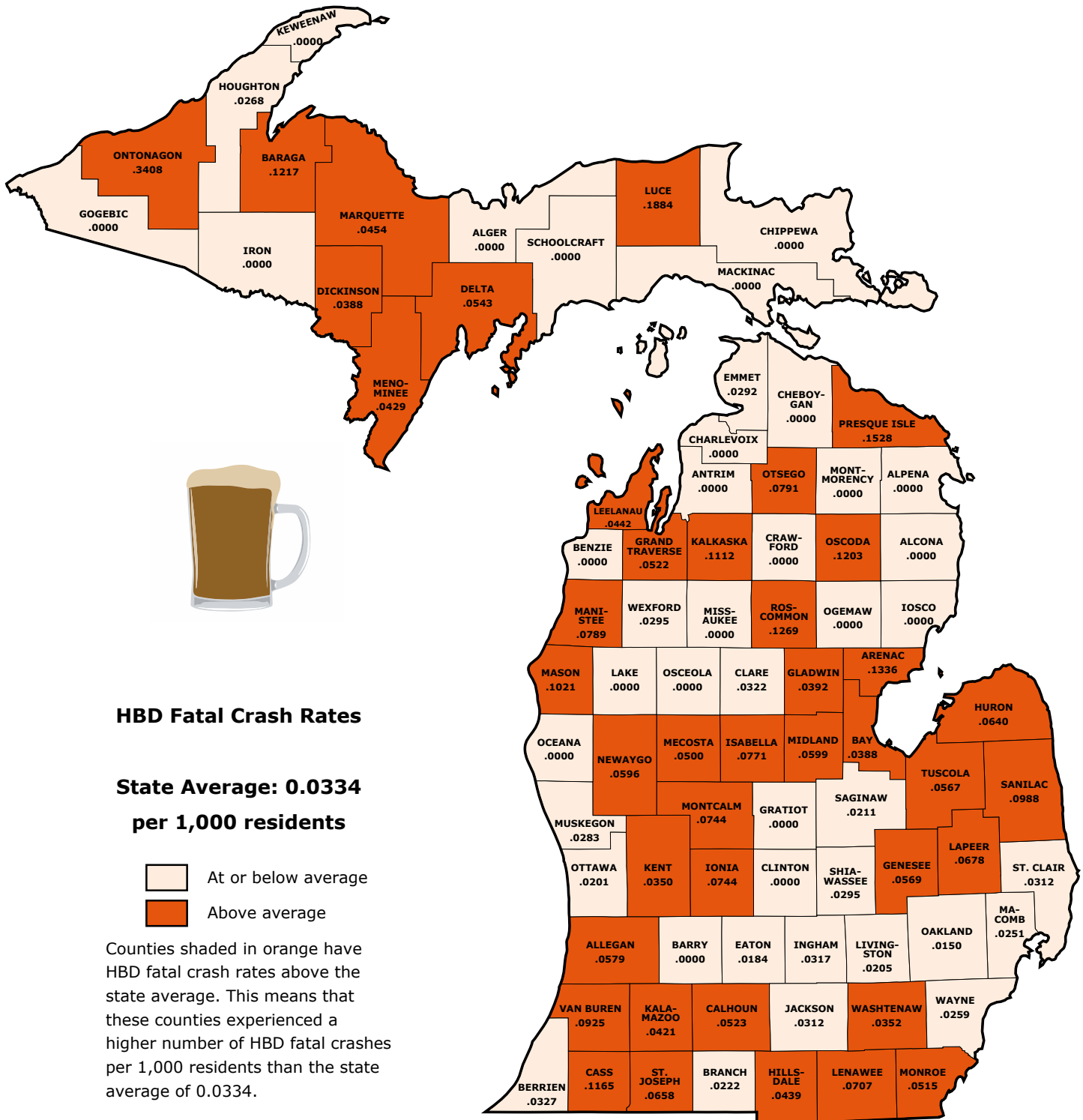
****Note:** This table excludes no unknown gender drinking drivers.



A One-Year Comparision
2021 = 357 / 2020 = 326

 Same or decrease
 Increase

COUNTY RANKING BY HBD FATAL CRASH RATE



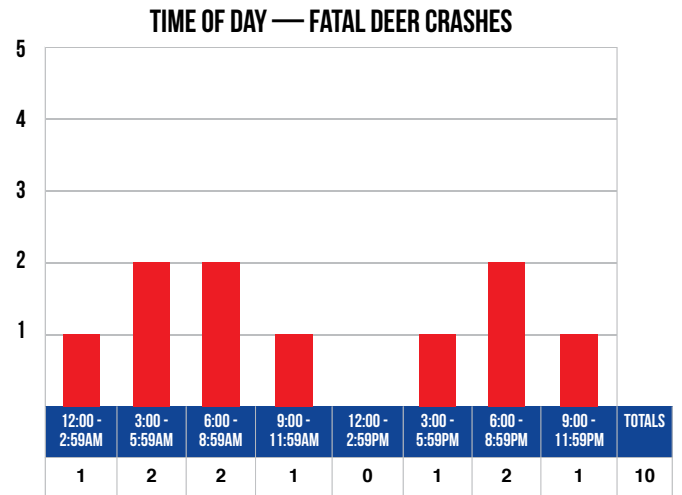
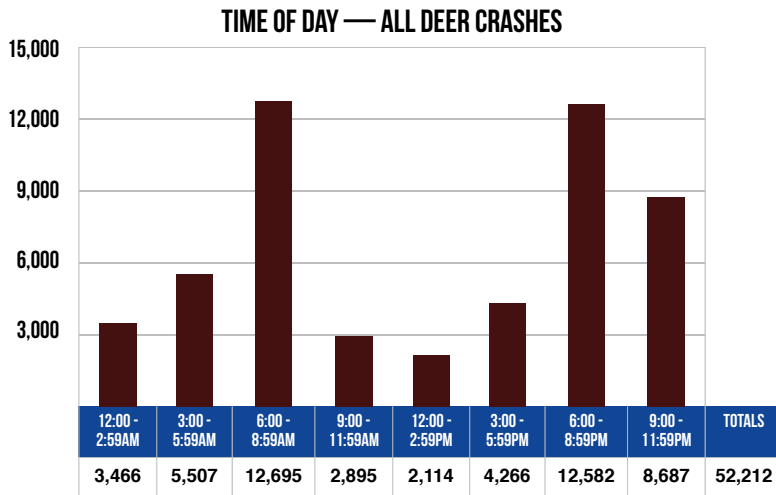
DEER



Motor vehicle-deer crashes occurred most often in Michigan's heavily populated southern counties; Oakland County had the highest number with 1,853 in 2021.

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 | 13,004 | 24.9 | 5 | 50.0 | 43 | 161 | 192 | 12,603 |
| Dawn | 4,877 | 9.3 | 1 | 10.0 | 3 | 28 | 50 | 4,795 |
| Dusk | 2,536 | 4.9 | 0 | 0.0 | 6 | 18 | 29 | 2,483 |
| Dark - Lighted | 2,661 | 5.1 | 0 | 0.0 | 3 | 15 | 44 | 2,599 |
| Dark - Unlighted | 28,425 | 54.4 | 4 | 40.0 | 51 | 205 | 435 | 27,730 |
| Other | 7 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 7 |
| Unknown | 708 | 1.4 | 0 | 0.0 | 0 | 0 | 1 | 707 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Total | 52,218 | 100.0 | 10 | 100.0 | 106 | 427 | 751 | 50,924 |

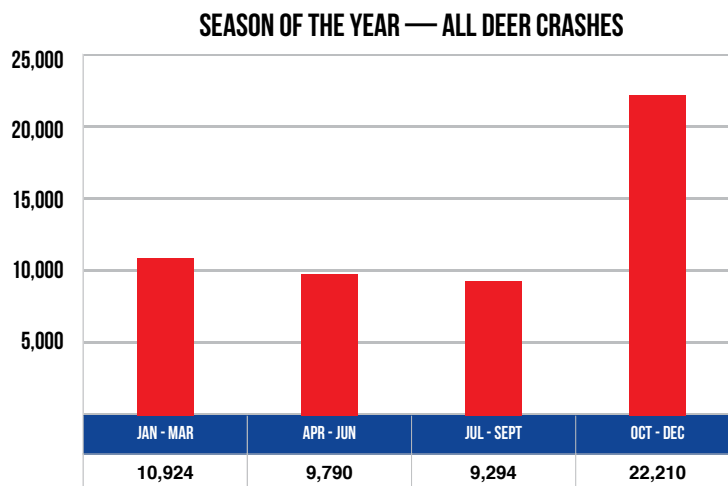


The highest number of reported vehicle-deer collisions occurred during the 6:00 PM to 8:59 PM time period, when 24.1 percent (12,582) of vehicle-deer crashes occurred. The 3:00 AM to 5:59 AM, 6:00 AM to 8:59 AM, and 6:00 PM to 8:59 PM time periods had the highest number of fatal vehicle-deer crashes, with 2 each.

Note: Chart for All Deer Crashes excludes six 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 | 4,579 | 8.8 | 0 | 0.0 | 4 | 21 | 45 | 4,509 |
| February | 2,973 | 5.7 | 0 | 0.0 | 0 | 10 | 17 | 2,946 |
| March | 3,372 | 6.5 | 0 | 0.0 | 3 | 16 | 37 | 3,316 |
| April | 2,604 | 5.0 | 0 | 0.0 | 3 | 23 | 32 | 2,546 |
| May | 3,441 | 6.6 | 1 | 10.0 | 11 | 46 | 53 | 3,330 |
| June | 3,745 | 7.2 | 2 | 20.0 | 15 | 51 | 74 | 3,603 |
| July | 3,179 | 6.1 | 0 | 0.0 | 18 | 47 | 53 | 3,061 |
| August | 2,280 | 4.4 | 0 | 0.0 | 14 | 35 | 31 | 2,200 |
| September | 3,835 | 7.3 | 2 | 20.0 | 14 | 46 | 66 | 3,707 |
| October | 8,014 | 15.3 | 2 | 20.0 | 13 | 55 | 152 | 7,792 |
| November | 9,093 | 17.4 | 3 | 30.0 | 8 | 49 | 137 | 8,896 |
| December | 5,103 | 9.8 | 0 | 0.0 | 3 | 28 | 54 | 5,018 |
| Total | 52,218 | 100.0 | 10 | 100.0 | 106 | 427 | 751 | 50,924 |



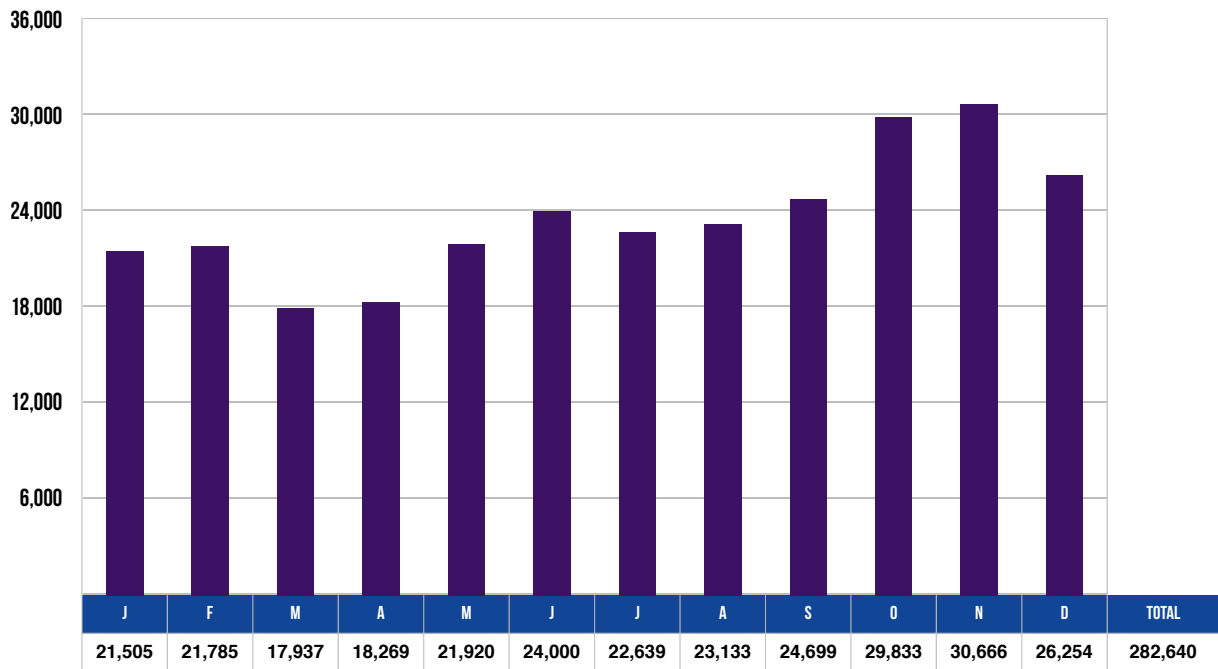
Of the total 51,103 reported vehicle-deer collisions, 42.5 percent (22,210) occurred during the fourth quarter of the year.

CRASH

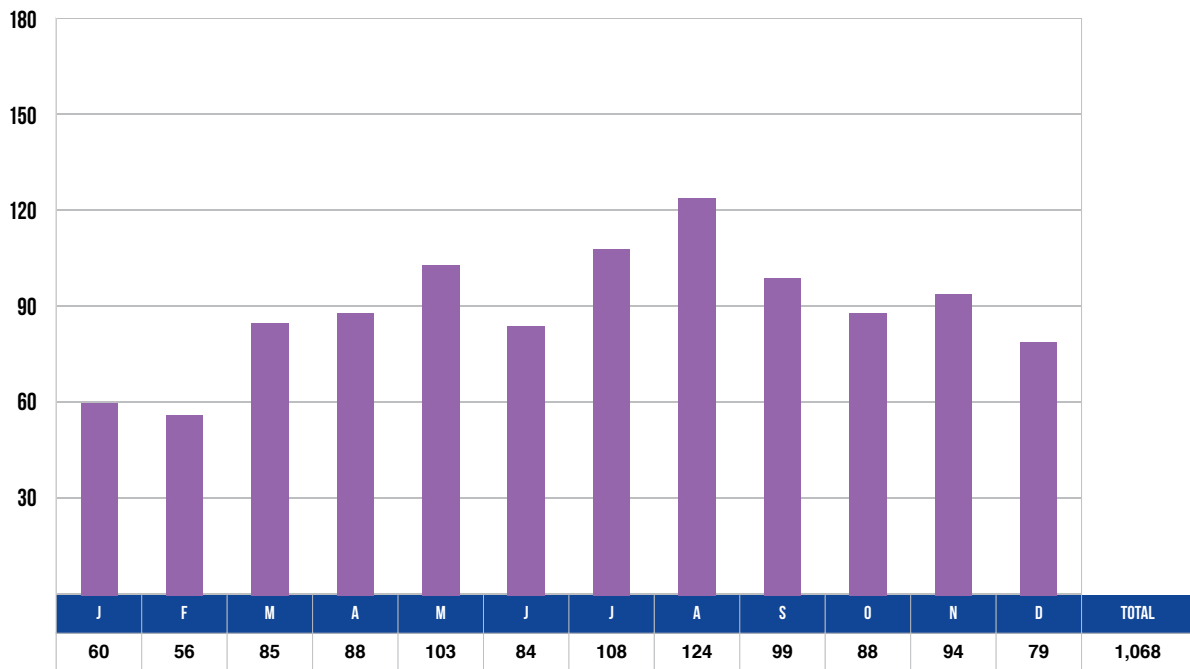
(circumstances common to all traffic units in a crash)

ALL CRASHES INJURY SEVERITY BY MONTH

TOTAL CRASHES

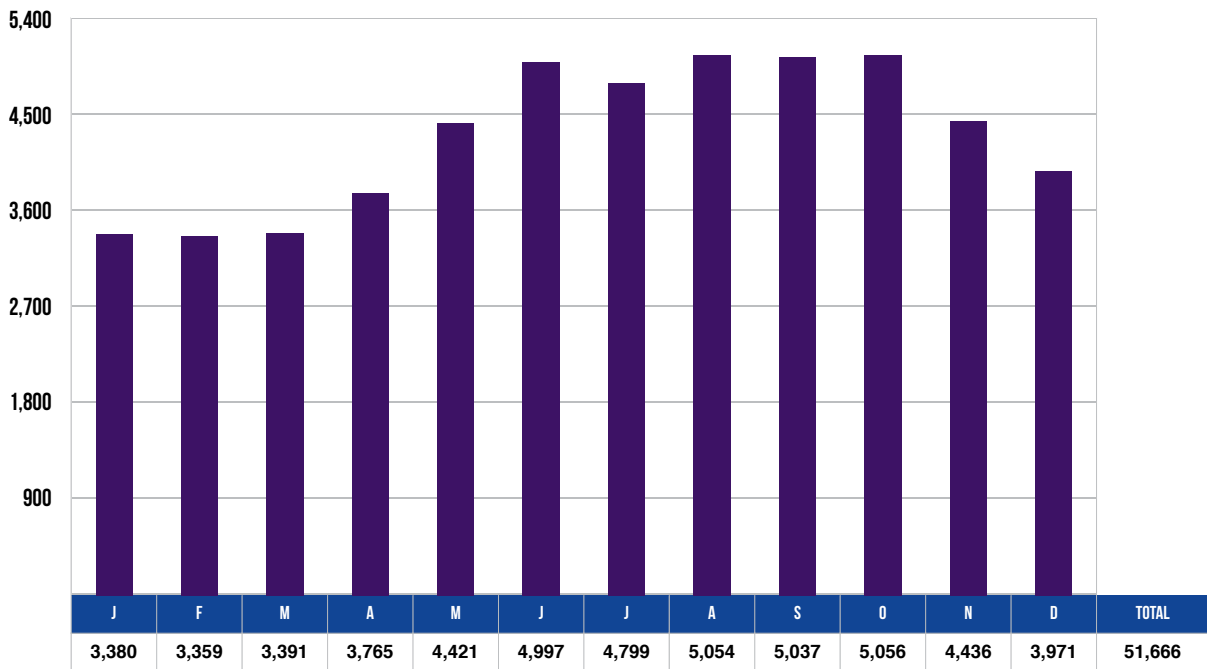


FATAL CRASHES

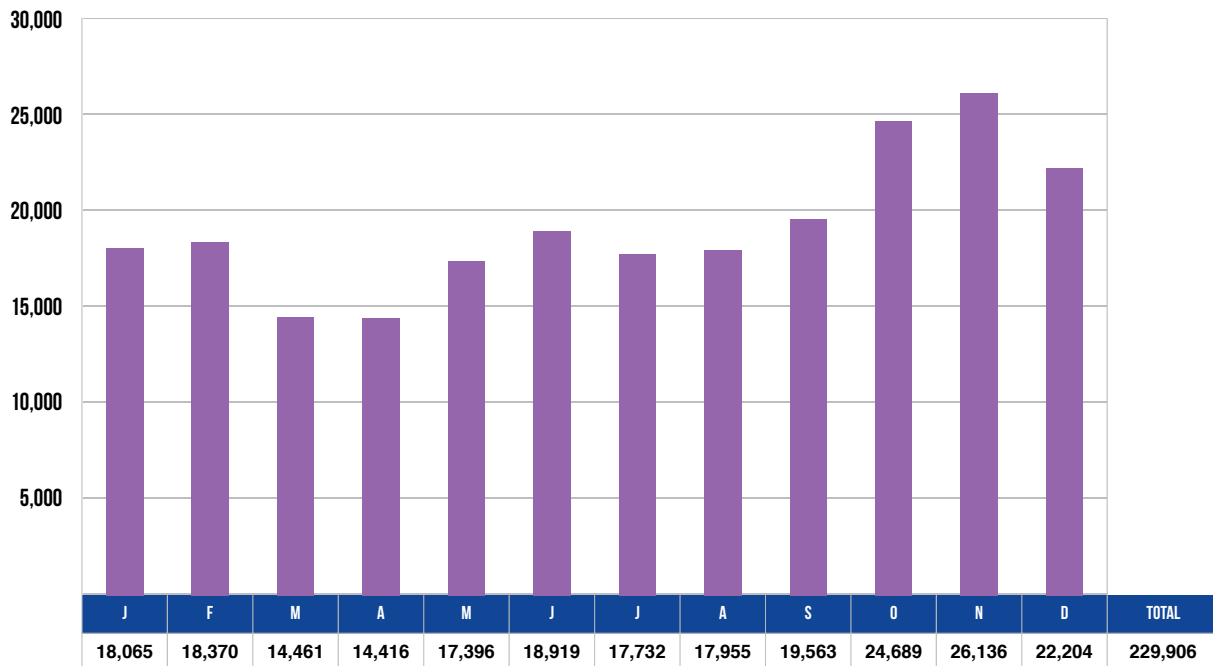


ALL CRASHES INJURY SEVERITY BY MONTH (CONTINUED)

INJURY CRASHES



PROPERTY DAMAGE ONLY CRASHES



HIGHWAY CLASS

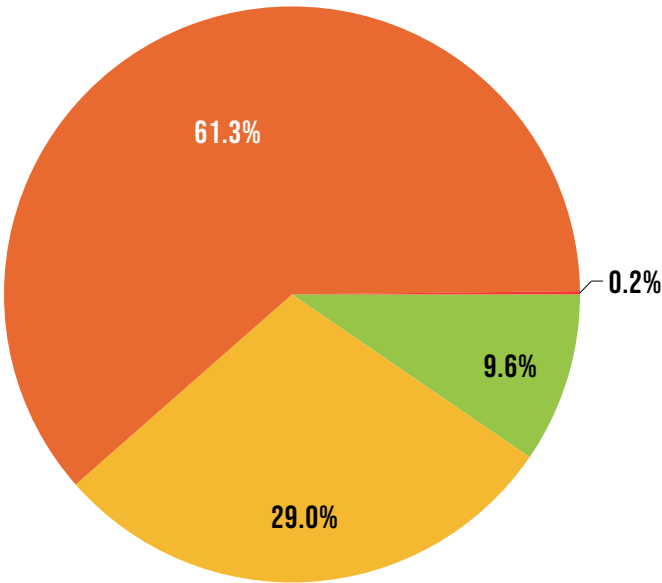
| HIGHWAY CLASS | ALL CRASHES | FATAL CRASHES | INJURY CRASHES | PROPERTY DAMAGE ONLY |
|-----------------------|-------------|---------------|----------------|----------------------|
| Interstate Routes | 27,016 | 98 | 5,388 | 21,530 |
| U.S. & Michigan Roads | 81,866 | 330 | 15,206 | 66,330 |
| County & City Roads | 173,240 | 636 | 30,977 | 141,627 |
| Uncoded & Errors | 518 | 4 | 95 | 419 |

INTERSTATE ROUTES

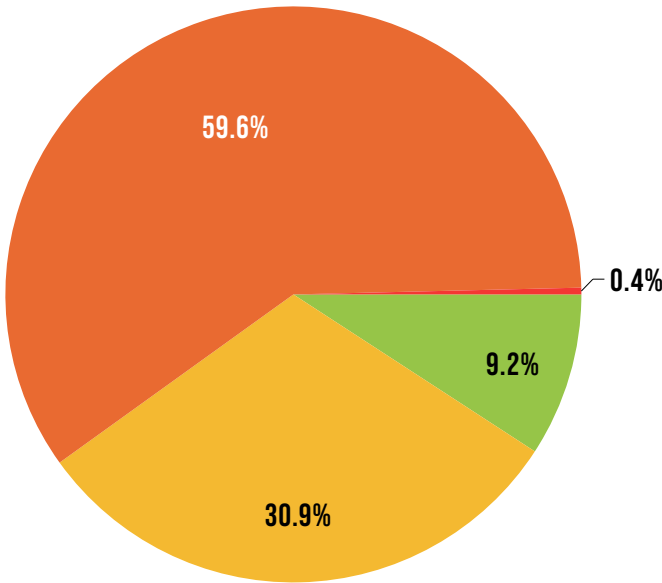
U.S. & MICHIGAN ROADS

COUNTY & CITY ROADS

UNCODED & ERRORS



ALL CRASHES

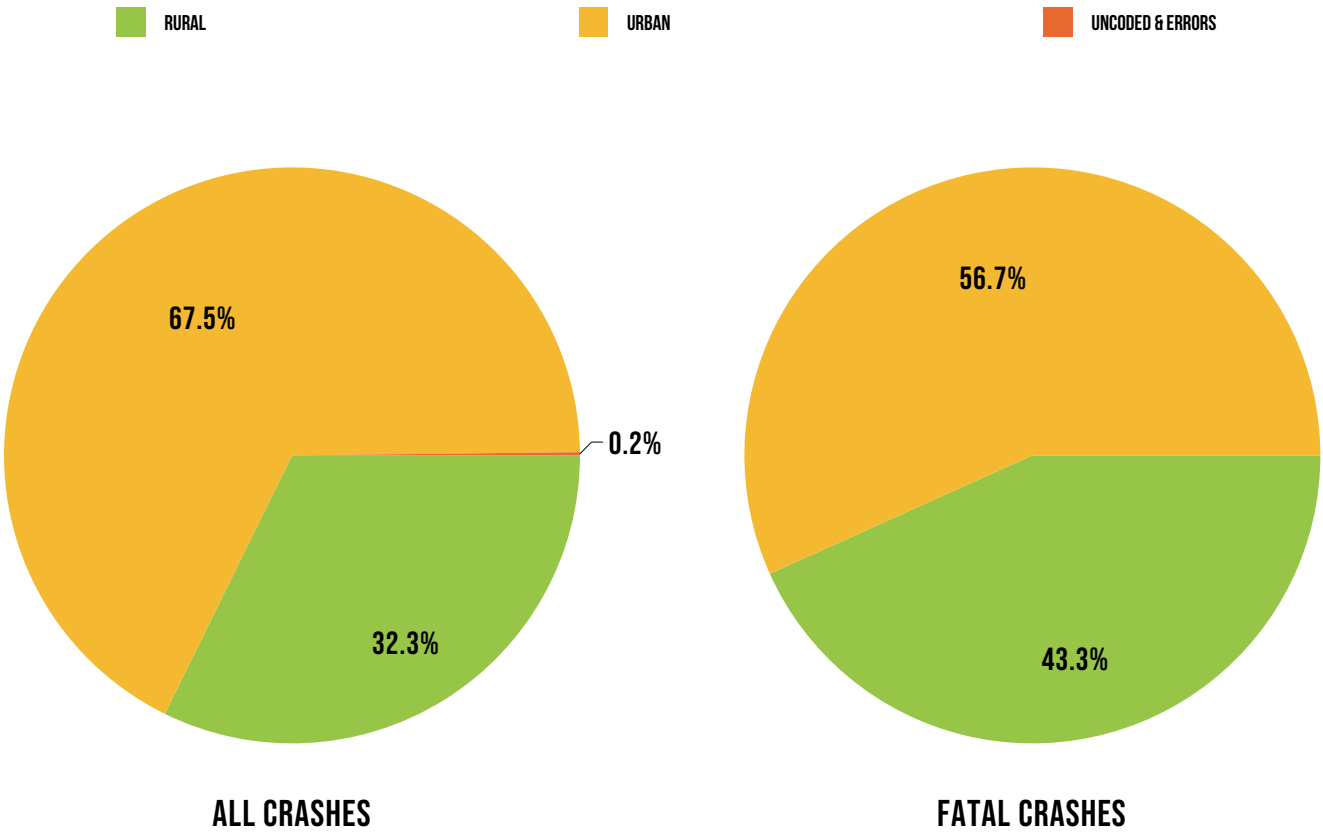


FATAL CRASHES

The highest percentage of all crashes (61.3%), fatal crashes (59.6%), injury crashes (60.0%), and property damage only crashes (61.6%) occur on county and city roads.

RURAL/URBAN AREA

| RURAL/URBAN | ALL CRASHES | FATAL CRASHES | INJURY CRASHES | PROPERTY DAMAGE ONLY |
|------------------|-------------|---------------|----------------|----------------------|
| Rural | 91,223 | 462 | 12,740 | 78,021 |
| Urban | 190,912 | 606 | 38,833 | 151,473 |
| Uncoded & Errors | 505 | 0 | 93 | 412 |



67.5%

32.3%

0.2%

ALL CRASHES

56.7%

43.3%

FATAL CRASHES

The highest percentage of all crashes (67.5%), fatal crashes (56.7%), injury crashes (75.2%), and property damage only crashes (65.9%) occur in urban areas.

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 | 102,735 | 36.3 | 532 | 49.8 | 2,055 | 5,314 | 6,610 | 88,224 |
| Head On | 3,361 | 1.2 | 122 | 11.4 | 286 | 503 | 607 | 1,843 |
| Head On – Left Turn | 6,943 | 2.5 | 46 | 4.3 | 290 | 1,080 | 1,541 | 3,986 |
| Angle | 43,856 | 15.5 | 192 | 18.0 | 1,106 | 4,314 | 7,986 | 30,258 |
| Rear End | 62,757 | 22.2 | 76 | 7.1 | 561 | 3,023 | 9,113 | 49,984 |
| Rear End – Left Turn | 2,188 | 0.8 | 5 | 0.5 | 35 | 162 | 334 | 1,652 |
| Rear End – Right Turn | 1,810 | 0.6 | 0 | 0.0 | 6 | 56 | 174 | 1,574 |
| Sideswipe – Same Direction | 34,831 | 12.3 | 26 | 2.4 | 181 | 795 | 2,115 | 31,714 |
| Sideswipe – Opposite Directions | 5,146 | 1.8 | 10 | 0.9 | 65 | 230 | 437 | 4,404 |
| Backing | 6,773 | 2.4 | 1 | 0.1 | 2 | 24 | 98 | 6,648 |
| Other | 9,799 | 3.5 | 54 | 5.1 | 344 | 864 | 1,222 | 7,315 |
| Unknown | 2,441 | 0.9 | 4 | 0.4 | 16 | 46 | 71 | 2,304 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| TOTAL | 282,640 | 100.0 | 1,068 | 100.0 | 4,947 | 16,411 | 30,308 | 229,906 |

RELATIONSHIP TO ROADWAY

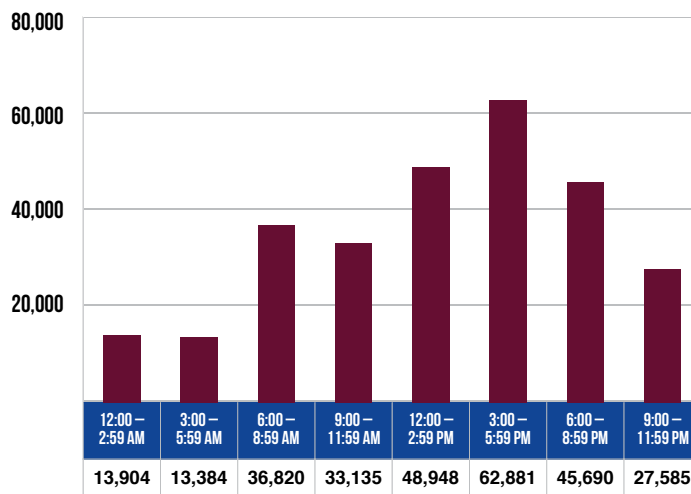
| LOCATION OF FIRST IMPACT | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|--------------------------|-------------|------------|---------------|------------|----------------|--------|--------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| On Road | 251,755 | 89.1 | 824 | 77.2 | 4,014 | 13,959 | 27,154 | 205,804 |
| Median | 2,010 | 0.7 | 13 | 1.2 | 36 | 145 | 237 | 1,579 |
| Shoulder | 8,281 | 2.9 | 47 | 4.4 | 250 | 651 | 902 | 6,431 |
| Outside of Shoulder/Curb | 15,119 | 5.3 | 171 | 16.0 | 571 | 1,439 | 1,707 | 11,231 |
| Gore | 476 | 0.2 | 4 | 0.4 | 20 | 37 | 65 | 350 |
| On-Street Parking | 3,758 | 1.3 | 1 | 0.1 | 17 | 66 | 93 | 3,581 |
| Off the Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| On the Sidewalk | 362 | 0.1 | 1 | 0.1 | 12 | 63 | 70 | 216 |
| In the Bicycle Lane | 45 | 0.0 | 0 | 0.0 | 6 | 12 | 11 | 16 |
| Other/Unknown | 834 | 0.3 | 7 | 0.7 | 21 | 39 | 69 | 698 |
| TOTAL | 282,640 | 100.0 | 1,068 | 100.0 | 4,947 | 16,411 | 30,308 | 229,906 |

Only 5.3 percent of crashes occur outside the shoulder of the road, but these crashes account for 16.0 percent of the fatal crashes.

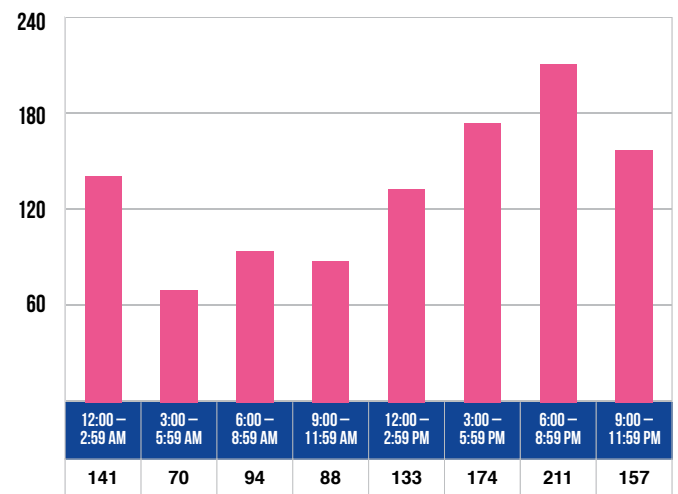
TIME AND SEVERITY

| 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 | 13,904 | 4.9 | 141 | 13.2 | 389 | 1,015 | 1,483 | 10,876 |
| 3:00 AM – 5:59 AM | 13,384 | 4.7 | 70 | 6.6 | 233 | 676 | 1,033 | 11,372 |
| 6:00 AM – 8:59 AM | 36,820 | 13.0 | 94 | 8.8 | 380 | 1,489 | 3,018 | 31,839 |
| 9:00 AM – 11:59 AM | 33,135 | 11.7 | 88 | 8.2 | 513 | 1,988 | 3,737 | 26,809 |
| 12:00 PM – 2:59 PM | 48,948 | 17.3 | 133 | 12.5 | 830 | 3,134 | 6,117 | 38,734 |
| 3:00 PM – 5:59 PM | 62,881 | 22.2 | 174 | 16.3 | 1,046 | 3,916 | 7,675 | 50,070 |
| 6:00 PM – 8:59 PM | 45,690 | 16.2 | 211 | 19.8 | 885 | 2,589 | 4,534 | 37,471 |
| 9:00 PM – 11:59 PM | 27,585 | 9.8 | 157 | 14.7 | 667 | 1,600 | 2,698 | 22,463 |
| Unknown | 293 | 0.1 | 0 | 0.0 | 4 | 4 | 13 | 272 |
| TOTAL | 282,640 | 100.0 | 1,068 | 100.0 | 4,947 | 16,411 | 30,308 | 229,906 |

**ALL CRASHES
BY TIME OF DAY**



**FATAL CRASHES
BY TIME OF DAY**

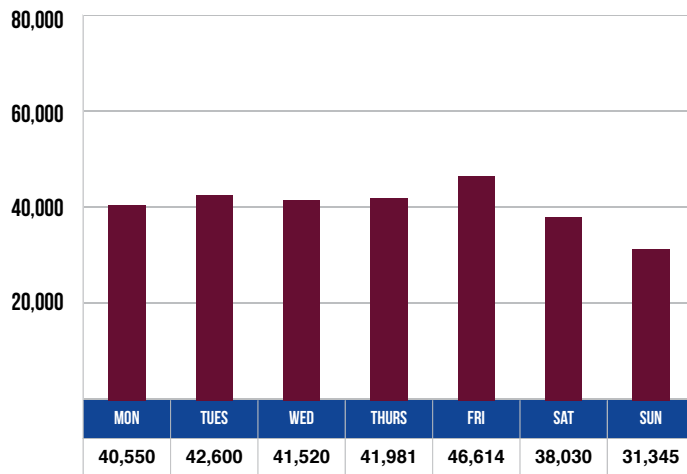


Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. In 2021, the highest percentage of fatal crashes occurred during the 6:00 PM to 8:59 PM time period (19.8%).

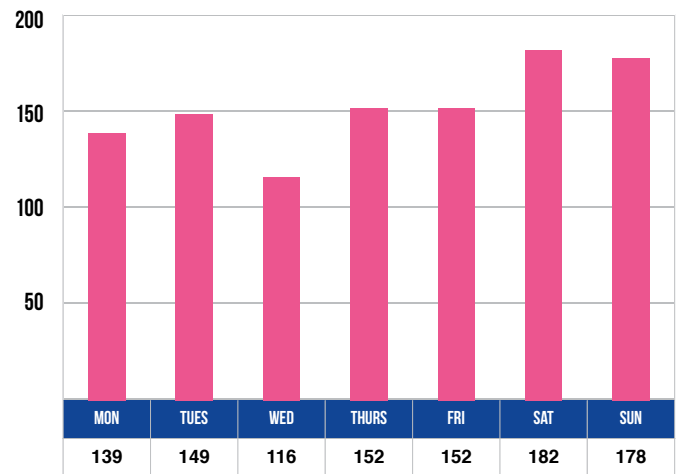
DAY OF WEEK

| DAY OF WEEK | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|-------------|-------------|------------|---------------|------------|----------------|--------|--------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Monday | 40,550 | 14.3 | 139 | 13.0 | 632 | 2,276 | 4,301 | 33,202 |
| Tuesday | 42,600 | 15.1 | 149 | 14.0 | 612 | 2,296 | 4,461 | 35,082 |
| Wednesday | 41,520 | 14.7 | 116 | 10.9 | 660 | 2,244 | 4,516 | 33,984 |
| Thursday | 41,981 | 14.9 | 152 | 14.2 | 674 | 2,344 | 4,536 | 34,275 |
| Friday | 46,614 | 16.5 | 152 | 14.2 | 783 | 2,652 | 4,984 | 38,043 |
| Saturday | 38,030 | 13.5 | 182 | 17.0 | 860 | 2,479 | 4,105 | 30,404 |
| Sunday | 31,345 | 11.1 | 178 | 16.7 | 726 | 2,120 | 3,405 | 24,916 |
| TOTAL | 282,640 | 100.0 | 1,068 | 100.0 | 4,947 | 16,411 | 30,308 | 229,906 |

**ALL CRASHES
BY DAY OF WEEK**



**FATAL CRASHES
BY DAY OF WEEK**

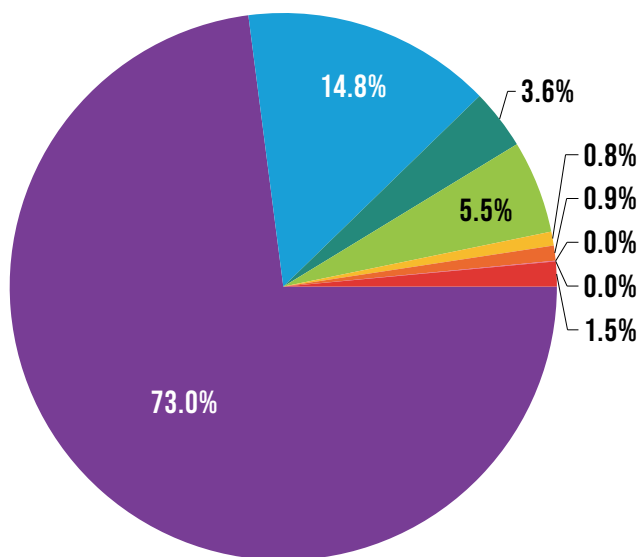


Crash frequencies are higher Monday through Friday than on the weekend. Saturday (182) has the highest number of fatal crashes.

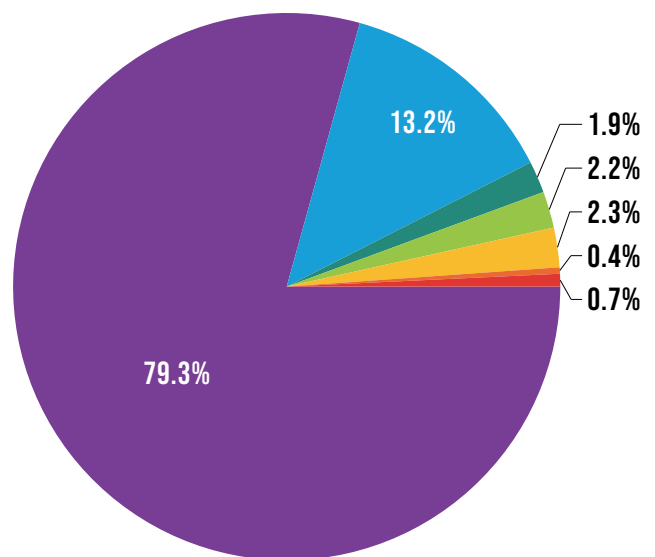
ROAD CONDITION

| ROAD SURFACE CONDITION | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|-------------------------|----------------|--------------|---------------|--------------|----------------|---------------|---------------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Dry | 206,216 | 73.0 | 847 | 79.3 | 3,868 | 12,721 | 22,516 | 166,264 |
| Wet | 41,433 | 14.7 | 138 | 12.9 | 601 | 2,248 | 4,909 | 33,537 |
| Ice | 10,050 | 3.6 | 20 | 1.9 | 137 | 485 | 985 | 8,423 |
| Snow | 15,518 | 5.5 | 23 | 2.2 | 152 | 521 | 1,225 | 13,597 |
| Mud, Dirt, Gravel | 2,289 | 0.8 | 25 | 2.3 | 125 | 230 | 217 | 1,692 |
| Slush | 2,509 | 0.9 | 4 | 0.4 | 34 | 117 | 286 | 2,068 |
| Debris | 86 | 0.0 | 0 | 0.0 | 2 | 5 | 6 | 73 |
| Water (standing/moving) | 316 | 0.1 | 3 | 0.3 | 4 | 16 | 42 | 251 |
| Sand | 34 | 0.0 | 0 | 0.0 | 5 | 1 | 4 | 24 |
| Oily | 38 | 0.0 | 0 | 0.0 | 1 | 8 | 6 | 23 |
| Other | 70 | 0.0 | 0 | 0.0 | 4 | 5 | 6 | 55 |
| Unknown | 4,080 | 1.4 | 8 | 0.7 | 14 | 54 | 106 | 3,898 |
| Uncoded & Errors | 1 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 1 |
| TOTAL | 282,640 | 100.0 | 1,068 | 100.0 | 4,947 | 16,411 | 30,308 | 229,906 |

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



ALL CRASHES



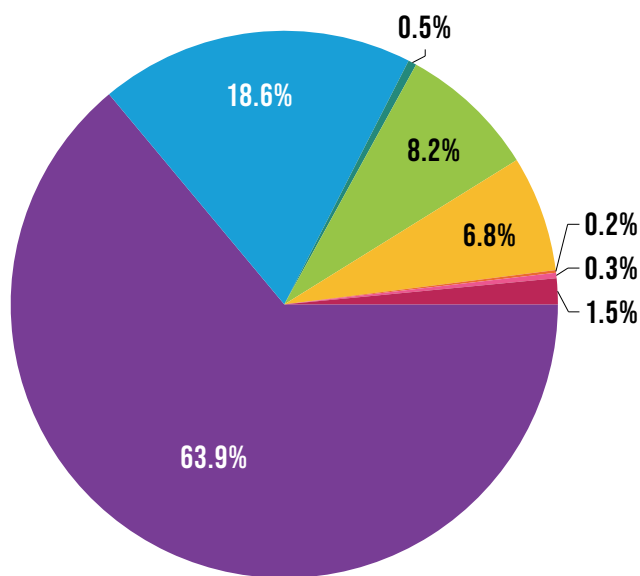
FATAL CRASHES

The highest percentage of all crashes (73.0%), fatal crashes (79.3%), injury crashes (75.7%), and property damage only crashes (72.3%) occur on dry roads.

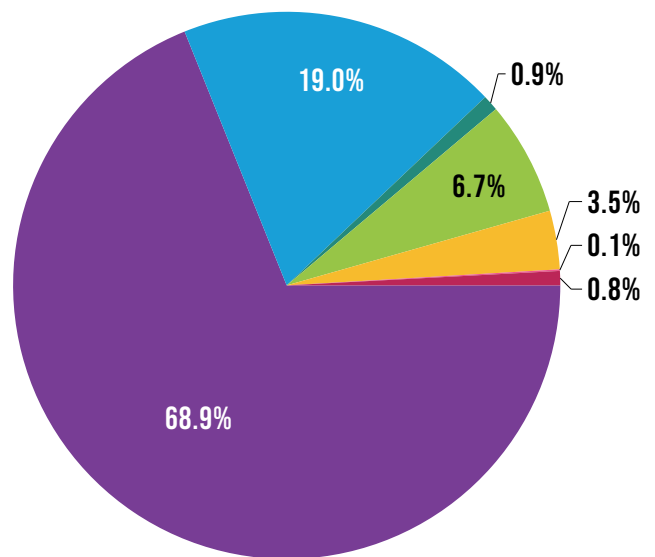
WEATHER CONDITION

| WEATHER CONDITION | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|--------------------------|-------------|------------|---------------|------------|----------------|--------|--------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Clear | 180,712 | 63.9 | 736 | 68.9 | 3,542 | 11,201 | 19,385 | 145,848 |
| Cloudy | 52,491 | 18.6 | 203 | 19.0 | 810 | 2,933 | 5,882 | 42,663 |
| Fog | 1,361 | 0.5 | 10 | 0.9 | 27 | 68 | 99 | 1,157 |
| Rain | 23,045 | 8.2 | 72 | 6.7 | 327 | 1,308 | 2,884 | 18,454 |
| Snow | 18,144 | 6.4 | 32 | 3.0 | 188 | 699 | 1,712 | 15,513 |
| Severe Crosswinds | 433 | 0.2 | 0 | 0.0 | 4 | 15 | 31 | 383 |
| Sleet/Hail | 901 | 0.3 | 1 | 0.1 | 12 | 61 | 108 | 719 |
| Blowing Snow | 1,191 | 0.4 | 5 | 0.5 | 11 | 59 | 99 | 1,017 |
| Blowing Sand, Soil, Dirt | 9 | 0.0 | 0 | 0.0 | 1 | 2 | 1 | 5 |
| Smoke | 36 | 0.0 | 0 | 0.0 | 0 | 3 | 2 | 31 |
| Unknown | 4,317 | 1.5 | 9 | 0.8 | 25 | 62 | 105 | 4,116 |
| TOTAL | 282,640 | 100.0 | 1,068 | 100.0 | 4,947 | 16,411 | 30,308 | 229,906 |

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



ALL CRASHES

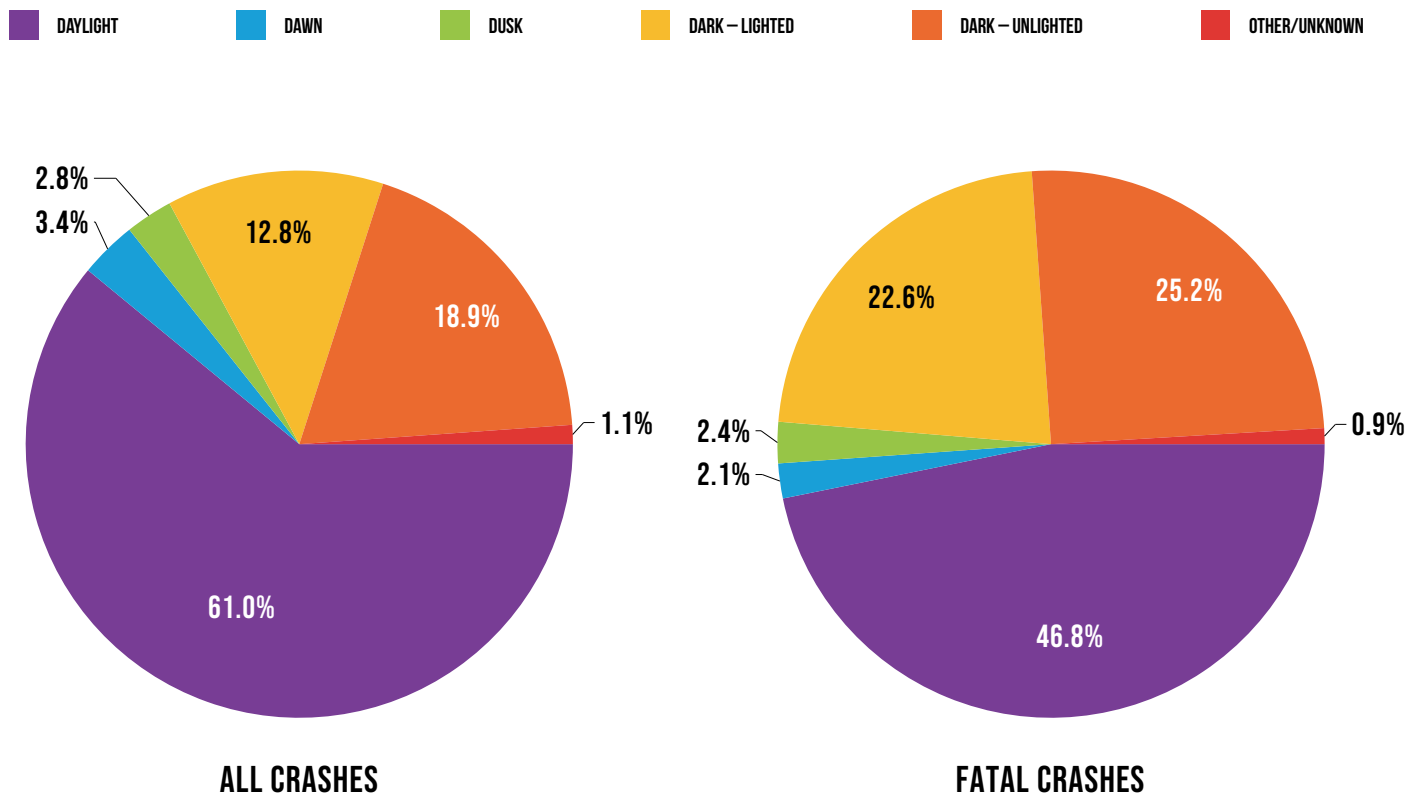


FATAL CRASHES

The highest percentage of all crashes (63.9%), fatal crashes (68.9%), injury crashes (66.1%), and property damage only crashes (63.4%) 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 | 172,300 | 61.0 | 500 | 46.8 | 2,991 | 11,080 | 20,769 | 136,960 |
| Dawn | 9,535 | 3.4 | 22 | 2.1 | 107 | 297 | 628 | 8,481 |
| Dusk | 7,899 | 2.8 | 26 | 2.4 | 167 | 369 | 745 | 6,592 |
| Dark – Lighted | 36,260 | 12.8 | 241 | 22.6 | 846 | 2,448 | 4,720 | 28,005 |
| Dark – Unlighted | 53,458 | 18.9 | 269 | 25.2 | 820 | 2,187 | 3,366 | 46,816 |
| Other | 92 | 0.0 | 0 | 0.0 | 5 | 2 | 11 | 74 |
| Unknown | 3,096 | 1.1 | 10 | 0.9 | 11 | 28 | 69 | 2,978 |
| TOTAL | 282,640 | 100.0 | 1,068 | 100.0 | 4,947 | 16,411 | 30,308 | 229,906 |

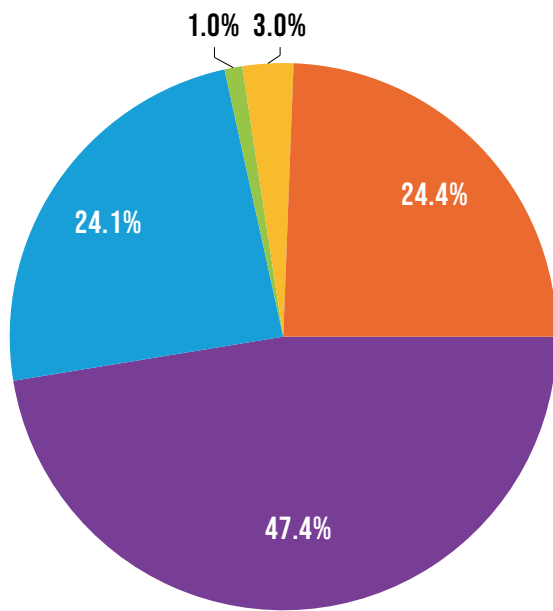


The highest percentage of all crashes (61.0%) , fatal crashes (46.8%), injury crashes (67.4%), and property damage only crashes (59.6%) occur during daylight hours.

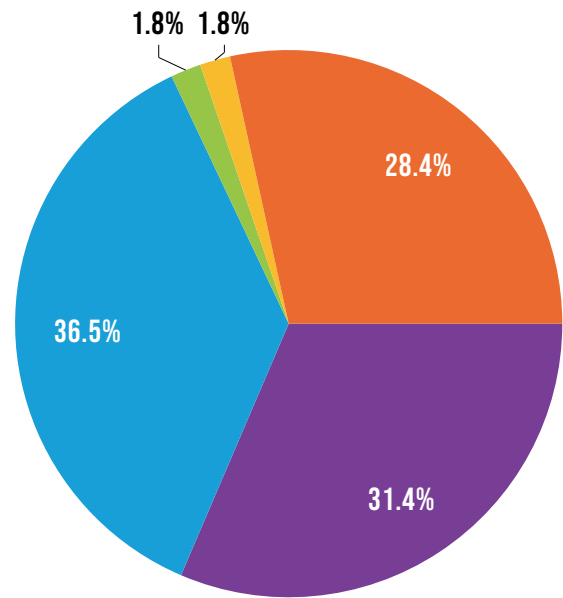
INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

| TRAFFIC CONTROL TYPE | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|---------------------------|-------------|------------|---------------|------------|----------------|-------|--------|----------------------|
| | Number | % of Total | Number | % of Total | A | B | C | |
| Signal | 41,311 | 47.4 | 105 | 31.4 | 730 | 3,128 | 6,720 | 30,628 |
| Stop Sign | 21,022 | 24.1 | 122 | 36.5 | 565 | 1,836 | 3,299 | 15,200 |
| Stop with Flashing Beacon | 914 | 1.0 | 6 | 1.8 | 27 | 96 | 162 | 623 |
| Yield Sign | 2,615 | 3.0 | 6 | 1.8 | 27 | 125 | 290 | 2,167 |
| None | 21,256 | 24.4 | 95 | 28.4 | 430 | 1,488 | 2,604 | 16,639 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| TOTAL | 87,118 | 100.0 | 334 | 100.0 | 1,779 | 6,673 | 13,075 | 65,257 |

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



ALL CRASHES



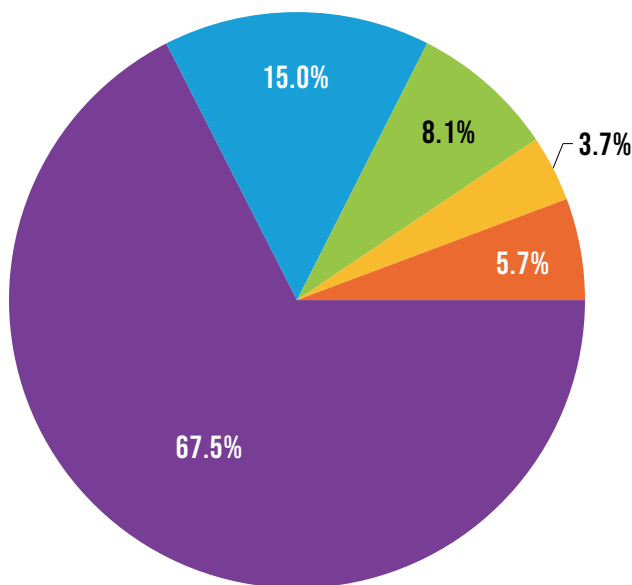
FATAL CRASHES

Compared to other intersection crashes, intersections with signals have the highest percentage of all crashes (47.4%), injury crashes (49.1%), and property damage only crashes (46.9%). Intersections with stop signs have the highest percentage of fatal crashes (36.5%).

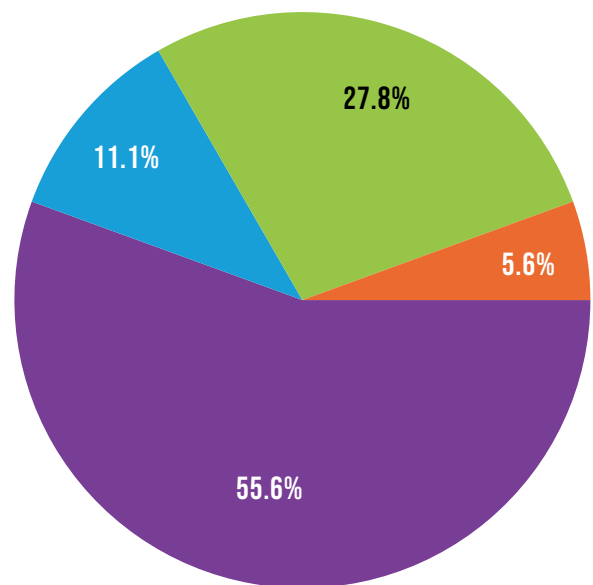
CONSTRUCTION ZONE CRASHES

| 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 | 3,762 | 67.5 | 10 | 55.6 | 43 | 193 | 486 | 3,030 |
| Lane Shift/Crossover | 834 | 15.0 | 2 | 11.1 | 5 | 35 | 101 | 691 |
| Work on Shoulder/Median | 452 | 8.1 | 5 | 27.8 | 3 | 26 | 59 | 359 |
| Intermittent/Moving Work | 207 | 3.7 | 0 | 0.0 | 4 | 9 | 22 | 172 |
| Other | 318 | 5.7 | 1 | 5.6 | 8 | 15 | 29 | 265 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| TOTAL | 5,573 | 100.0 | 18 | 100.0 | 63 | 278 | 697 | 4,517 |

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



ALL CRASHES



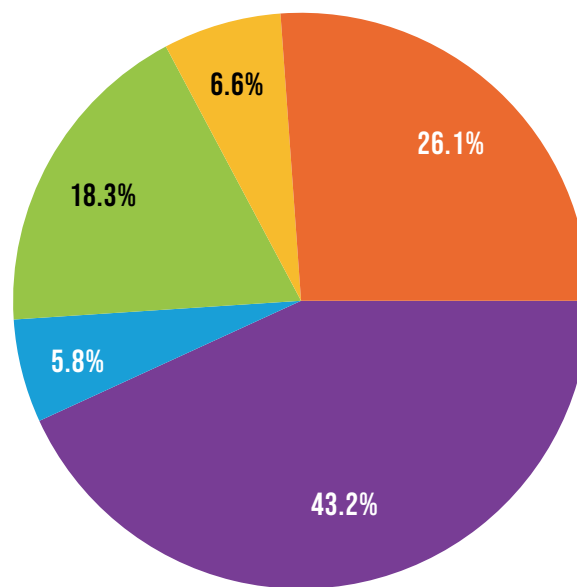
FATAL CRASHES

The highest percentage of all crashes (67.5%), fatal crashes (55.6%), injury crashes (69.6%), and property damage only crashes (67.1%) 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 | 104 | 43.2 | 1 | 100.0 | 3 | 5 | 8 | 87 |
| Lane Shift/Crossover | 14 | 5.8 | 0 | 0.0 | 1 | 1 | 1 | 11 |
| Work on Shoulder/Median | 44 | 18.3 | 0 | 0.0 | 0 | 5 | 8 | 31 |
| Intermittent/Moving Work | 16 | 6.6 | 0 | 0.0 | 0 | 0 | 0 | 16 |
| Other | 63 | 26.1 | 0 | 0.0 | 1 | 0 | 12 | 50 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 |
| TOTAL | 241 | 100.0 | 1 | 100.0 | 5 | 11 | 29 | 195 |

■ 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%), fatal crashes (100.0%), injury crashes (35.6%), and property damage crashes (44.6%) in utility construction zones occurred when the work zone activity was a lane closure.

VEHICLE/DRIVER

(characteristics specific to individual traffic units)

VEHICLE TYPE AND CRASH INVOLVEMENT

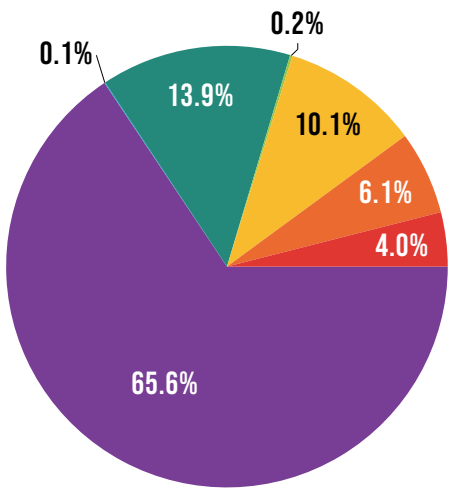
| VEHICLE TYPE | MOTOR VEHICLES | | FATAL CRASH | | INJURY CRASH | PROPERTY DAMAGE ONLY | FATALITY IN VEHICLE | | INJURY | NO INJURY |
|--|--------------------|------------|-------------|------------|--------------|----------------------|---------------------|------------|--------|-----------|
| | Number of Vehicles | % of Total | Number | % of Total | | | Number | % of Total | | |
| Passenger Car, SUV, Van | 381,041 | 80.0 | 1,108 | 65.6 | 77,319 | 302,614 | 545 | 62.4 | 49,437 | 331,059 |
| Motor Home | 1,044 | 0.2 | 1 | 0.1 | 174 | 869 | 0 | 0.0 | 106 | 938 |
| Pickup Truck | 57,120 | 12.0 | 235 | 13.9 | 9,897 | 46,988 | 105 | 12.0 | 5,152 | 51,863 |
| Small Truck Under 10,000 lbs. GVWR | 2,090 | 0.4 | 3 | 0.2 | 340 | 1,747 | 2 | 0.2 | 155 | 1,933 |
| Motorcycle | 3,271 | 0.7 | 171 | 10.1 | 2,376 | 724 | 164 | 18.8 | 2,331 | 776 |
| Moped/Goped | 482 | 0.1 | 7 | 0.4 | 395 | 80 | 7 | 0.8 | 387 | 88 |
| Go-Cart/Golf Cart | 41 | 0.0 | 0 | 0.0 | 29 | 12 | 0 | 0.0 | 27 | 14 |
| Snowmobile | 102 | 0.0 | 5 | 0.3 | 65 | 32 | 5 | 0.6 | 62 | 35 |
| Off-Road Vehicle (ORV)/ All-Terrain Vehicle (ATV) | 452 | 0.1 | 21 | 1.2 | 299 | 132 | 21 | 2.4 | 285 | 146 |
| Other (non-registered farm equipment, construction equipment, snow plows, etc.) | 1,594 | 0.3 | 14 | 0.8 | 306 | 1,274 | 8 | 0.9 | 158 | 1,428 |
| Uncoded & Errors | 13,920 | 2.9 | 20 | 1.2 | 1,511 | 12,389 | 0 | 0.0 | 11 | 13,909 |
| Truck/Bus (over 10,000 lbs. GVWR/8+ occupants/ hazmat placard) (breakdown below) | 14,972 | 3.1 | 103 | 6.1 | 2,586 | 12,283 | 17 | 1.9 | 725 | 14,230 |
| Total Number of Vehicles | 476,129 | 100.0 | 1,688 | 100.0 | 95,297 | 379,144 | 874 | 100.0 | 58,836 | 416,419 |

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

| HEAVY 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 | 95 | 0.6 | 1 | 1.0 | 5 | 89 | 1 | 5.9 | 1 | 93 |
| 10,001-26,000 lbs. | 5,672 | 37.9 | 23 | 22.3 | 830 | 4,819 | 7 | 41.2 | 264 | 5,401 |
| Greater Than 26,000 lbs. | 8,943 | 59.7 | 79 | 76.7 | 1,746 | 7,118 | 9 | 52.9 | 460 | 8,474 |
| Uncoded & Errors | 262 | 1.7 | 0 | 0.0 | 5 | 257 | 0 | 0.0 | 0 | 262 |
| Total Number of Vehicles | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 12,283 | 17 | 100.0 | 725 | 14,230 |

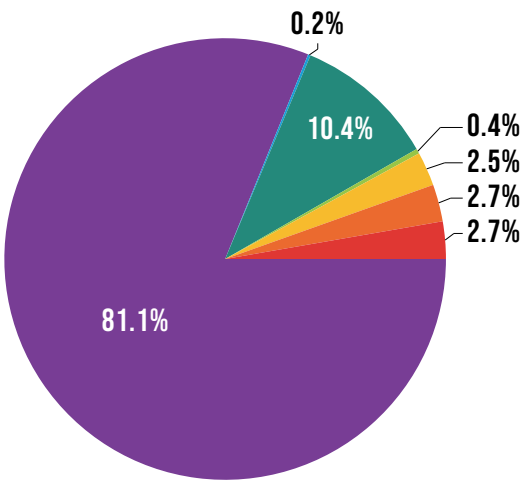
VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

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

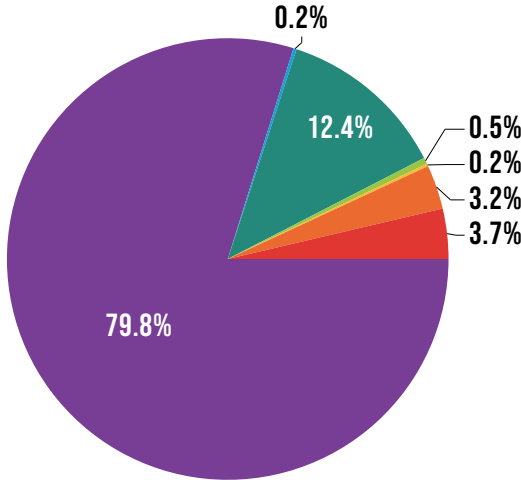


FATAL

The chart shows that 79.8 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 10.1 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 (92.1%) and property damage only (PDO) crashes (92.9%) 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 | 270,568 | 56.8 | 1,213 | 5,582 | 17,966 | 33,238 | 212,569 |
| Turning Left | 34,074 | 7.2 | 122 | 802 | 3,154 | 5,279 | 24,717 |
| Turning Right | 14,171 | 3.0 | 12 | 119 | 619 | 1,169 | 12,252 |
| Stopped on Roadway | 39,431 | 8.3 | 59 | 391 | 2,256 | 6,097 | 30,628 |
| Involved in Prior Crash at Same Location | 220 | 0.0 | 4 | 8 | 31 | 36 | 141 |
| Changing Lanes | 15,450 | 3.2 | 21 | 138 | 497 | 1,157 | 13,637 |
| Backing | 9,406 | 2.0 | 2 | 18 | 78 | 213 | 9,095 |
| Slowing/Stopping on Roadway | 38,356 | 8.1 | 38 | 281 | 1,751 | 5,437 | 30,849 |
| Slowing/Stopping Other Area | 505 | 0.1 | 0 | 7 | 34 | 76 | 388 |
| Starting Up on Roadway | 7,685 | 1.6 | 12 | 100 | 472 | 1,055 | 6,046 |
| Starting Up in Other Area | 104 | 0.0 | 1 | 3 | 10 | 14 | 76 |
| Entering Parking | 339 | 0.1 | 0 | 0 | 10 | 10 | 319 |
| Leaving Parking | 973 | 0.2 | 2 | 8 | 44 | 108 | 811 |
| Entering Roadway | 5,113 | 1.1 | 18 | 86 | 344 | 660 | 4,005 |
| Leaving Roadway | 637 | 0.1 | 7 | 28 | 71 | 85 | 446 |
| Making U-Turn | 1,097 | 0.2 | 3 | 27 | 73 | 158 | 836 |
| Overtaking or Passing | 3,052 | 0.6 | 31 | 78 | 184 | 270 | 2,489 |
| Avoiding Object | 388 | 0.1 | 1 | 9 | 26 | 38 | 314 |
| Avoiding Animal | 879 | 0.2 | 0 | 16 | 65 | 85 | 713 |
| Avoiding Pedestrian | 63 | 0.0 | 2 | 1 | 12 | 11 | 37 |
| Avoiding Vehicle (front/back) | 2,779 | 0.6 | 10 | 64 | 238 | 398 | 2,069 |
| Avoiding Vehicle (angle) | 1,195 | 0.3 | 2 | 30 | 101 | 165 | 897 |
| Driverless Moving | 229 | 0.0 | 1 | 6 | 13 | 16 | 193 |
| Parked | 18,921 | 4.0 | 36 | 213 | 658 | 1,085 | 16,929 |
| Crossing at Intersection | 71 | 0.0 | 0 | 2 | 14 | 11 | 44 |
| Crossing Not at Intersection | 10 | 0.0 | 0 | 2 | 0 | 2 | 6 |
| Getting On/Off Vehicle | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| In Roadway With Traffic | 25 | 0.0 | 0 | 2 | 1 | 4 | 18 |
| In Roadway Against Traffic | 10 | 0.0 | 0 | 1 | 1 | 4 | 4 |
| Standing/Lying in Roadway | 4 | 0.0 | 0 | 1 | 0 | 1 | 2 |
| Pushing/Working on Vehicle | 1 | 0.0 | 0 | 0 | 0 | 0 | 1 |
| Other Work in Roadway | 3 | 0.0 | 0 | 1 | 0 | 0 | 2 |
| Playing in Roadway | 4 | 0.0 | 0 | 0 | 0 | 0 | 4 |
| In Roadway Other Reason | 8 | 0.0 | 0 | 1 | 0 | 1 | 6 |
| Not in Roadway | 40 | 0.0 | 0 | 3 | 5 | 5 | 27 |
| Negotiating a Curve | 4,504 | 0.9 | 72 | 163 | 409 | 469 | 3,391 |
| Other | 616 | 0.1 | 5 | 23 | 47 | 76 | 465 |
| Unknown | 5,198 | 1.1 | 14 | 49 | 127 | 290 | 4,718 |
| TOTAL | 476,129 | 100.0 | 1,688 | 8,263 | 29,311 | 57,723 | 379,144 |

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 | 2,262 | 69.2 | 2,467 | 69.1 | 128 | 635 | 799 | 374 | 468 |
| Turning Left | 122 | 3.7 | 134 | 3.8 | 2 | 26 | 42 | 26 | 37 |
| Turning Right | 96 | 2.9 | 107 | 3.0 | 0 | 15 | 33 | 19 | 37 |
| Stopped on Roadway | 117 | 3.6 | 130 | 3.6 | 4 | 9 | 19 | 31 | 65 |
| Involved in Prior Crash at Same Location | 2 | 0.1 | 2 | 0.1 | 0 | 0 | 0 | 0 | 1 |
| Changing Lanes | 55 | 1.7 | 58 | 1.6 | 1 | 18 | 20 | 5 | 9 |
| Backing | 2 | 0.1 | 2 | 0.1 | 0 | 0 | 0 | 1 | 1 |
| Slowing/Stopping on Roadway | 140 | 4.3 | 153 | 4.3 | 3 | 20 | 61 | 22 | 46 |
| Slowing/Stopping Other Area | 1 | 0.0 | 1 | 0.0 | 0 | 0 | 0 | 0 | 1 |
| Starting Up on Roadway | 22 | 0.7 | 23 | 0.6 | 0 | 1 | 10 | 4 | 8 |
| Starting Up in Other Area | 2 | 0.1 | 3 | 0.1 | 0 | 1 | 1 | 1 | 0 |
| Entering Parking | 1 | 0.0 | 1 | 0.0 | 0 | 0 | 0 | 0 | 1 |
| Leaving Parking | 4 | 0.1 | 4 | 0.1 | 0 | 0 | 1 | 2 | 1 |
| Entering Roadway | 17 | 0.5 | 17 | 0.5 | 0 | 3 | 7 | 3 | 4 |
| Leaving Roadway | 4 | 0.1 | 6 | 0.2 | 0 | 0 | 1 | 3 | 2 |
| Making U-Turn | 8 | 0.2 | 9 | 0.3 | 0 | 3 | 3 | 0 | 3 |
| Overtaking or Passing | 70 | 2.1 | 75 | 2.1 | 9 | 17 | 29 | 5 | 11 |
| Avoiding Object | 11 | 0.3 | 12 | 0.3 | 1 | 3 | 7 | 0 | 1 |
| Avoiding Animal | 8 | 0.2 | 10 | 0.3 | 0 | 4 | 5 | 0 | 1 |
| Avoiding Pedestrian | 2 | 0.1 | 3 | 0.1 | 0 | 0 | 1 | 2 | 0 |
| Avoiding Vehicle (front/back) | 57 | 1.7 | 60 | 1.7 | 0 | 9 | 17 | 17 | 14 |
| Avoiding Vehicle (angle) | 32 | 1.0 | 36 | 1.0 | 0 | 5 | 13 | 7 | 11 |
| Driverless Moving | 1 | 0.0 | 1 | 0.0 | 0 | 0 | 1 | 0 | 0 |
| Parked | 37 | 1.1 | 37 | 1.0 | 0 | 3 | 1 | 1 | 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 | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| In Roadway With Traffic | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| In Roadway Against Traffic | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Standing/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 Work in Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Playing in Roadway | 1 | 0.0 | 1 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| In Roadway Other Reason | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Not in Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Negotiating a Curve | 168 | 5.1 | 189 | 5.3 | 15 | 60 | 60 | 26 | 23 |
| Other | 7 | 0.2 | 7 | 0.2 | 0 | 4 | 1 | 0 | 0 |
| Unknown | 22 | 0.7 | 23 | 0.6 | 3 | 2 | 3 | 4 | 2 |
| TOTAL | 3,271 | 100.0 | 3,571 | 100.0 | 166 | 838 | 1,135 | 553 | 751 |

*This table includes 128 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 | 760 | 60.3 | 9 | 78 | 276 | 231 | 135 |
| Turning Left | 34 | 2.7 | 1 | 7 | 7 | 11 | 6 |
| Turning Right | 14 | 1.1 | 0 | 2 | 6 | 6 | 0 |
| Stopped on Roadway | 8 | 0.6 | 0 | 1 | 3 | 1 | 2 |
| Involved in Prior Crash at Same Location | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Changing Lanes | 10 | 0.8 | 1 | 0 | 5 | 3 | 0 |
| Backing | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Slowing/Stopping on Roadway | 5 | 0.4 | 0 | 0 | 3 | 2 | 0 |
| Slowing/Stopping Other Area | 2 | 0.2 | 0 | 1 | 0 | 1 | 0 |
| Starting Up on Roadway | 4 | 0.3 | 0 | 0 | 2 | 2 | 0 |
| Starting Up in Other Area | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Entering Parking | 1 | 0.1 | 0 | 0 | 1 | 0 | 0 |
| Leaving Parking | 1 | 0.1 | 0 | 0 | 1 | 0 | 0 |
| Entering Roadway | 45 | 3.6 | 3 | 2 | 13 | 19 | 5 |
| Leaving Roadway | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Making U-Turn | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Overtaking or Passing | 4 | 0.3 | 0 | 0 | 2 | 2 | 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) | 3 | 0.2 | 1 | 0 | 1 | 0 | 1 |
| Avoiding Vehicle (angle) | 2 | 0.2 | 0 | 0 | 0 | 1 | 1 |
| Driverless Moving | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Parked | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Crossing at Intersection | 239 | 19.0 | 4 | 22 | 96 | 74 | 39 |
| Crossing Not at Intersection | 55 | 4.4 | 5 | 6 | 18 | 14 | 9 |
| Getting On/Off Vehicle | 1 | 0.1 | 0 | 0 | 0 | 1 | 0 |
| In Roadway With Traffic | 8 | 0.6 | 1 | 0 | 6 | 0 | 1 |
| In Roadway Against Traffic | 13 | 1.0 | 0 | 2 | 3 | 5 | 3 |
| Standing/Lying in Roadway | 1 | 0.1 | 0 | 0 | 0 | 0 | 1 |
| Pushing/Working on Vehicle | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Other Work in Roadway | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Playing in Roadway | 2 | 0.2 | 0 | 1 | 1 | 0 | 0 |
| In Roadway Other Reason | 8 | 0.6 | 0 | 1 | 1 | 2 | 2 |
| Not in Roadway | 10 | 0.8 | 1 | 2 | 3 | 3 | 1 |
| Negotiating a Curve | 1 | 0.1 | 0 | 0 | 0 | 1 | 0 |
| Other | 14 | 1.1 | 1 | 1 | 5 | 5 | 2 |
| Unknown | 15 | 1.2 | 2 | 2 | 1 | 5 | 0 |
| TOTAL | 1,260 | 100.0 | 29 | 128 | 454 | 389 | 208 |

*Includes 52 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 | 31 | 1.6 | 0 | 8 | 9 | 7 | 5 |
| Turning Left | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Turning Right | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Stopped on Roadway | 2 | 0.1 | 0 | 0 | 1 | 1 | 0 |
| Involved in Prior Crash at Same Location | 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 Area | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Starting Up on Roadway | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Starting Up in Other Area | 1 | 0.1 | 0 | 0 | 1 | 0 | 0 |
| Entering Parking | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Leaving Parking | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Entering Roadway | 9 | 0.5 | 0 | 2 | 7 | 0 | 0 |
| 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 | 1 | 0.1 | 0 | 0 | 0 | 1 | 0 |
| Avoiding Animal | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Avoiding Pedestrian | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Avoiding Vehicle (front/back) | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Avoiding Vehicle (angle) | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Driverless Moving | 9 | 0.5 | 0 | 2 | 6 | 0 | 1 |
| Parked | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Crossing at Intersection | 634 | 33.5 | 41 | 89 | 207 | 216 | 69 |
| Crossing Not at Intersection | 377 | 19.9 | 58 | 71 | 116 | 93 | 28 |
| Getting On/Off Vehicle | 18 | 1.0 | 1 | 8 | 2 | 5 | 1 |
| In Roadway With Traffic | 164 | 8.7 | 24 | 33 | 34 | 41 | 28 |
| In Roadway Against Traffic | 31 | 1.6 | 7 | 4 | 9 | 5 | 6 |
| Standing/Lying in Roadway | 145 | 7.7 | 21 | 32 | 47 | 31 | 8 |
| Pushing/Working on Vehicle | 9 | 0.5 | 1 | 1 | 3 | 3 | 1 |
| Other Work in Roadway | 24 | 1.3 | 2 | 5 | 8 | 7 | 2 |
| Playing in Roadway | 23 | 1.2 | 1 | 1 | 8 | 8 | 5 |
| In Roadway Other Reason | 193 | 10.2 | 13 | 49 | 61 | 35 | 25 |
| Not in Roadway | 104 | 5.5 | 6 | 23 | 31 | 33 | 7 |
| Negotiating a Curve | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Other | 82 | 4.3 | 3 | 13 | 22 | 30 | 11 |
| Unknown | 34 | 1.8 | 5 | 6 | 11 | 7 | 1 |
| TOTAL | 1,891 | 100.0 | 183 | 347 | 583 | 523 | 198 |

*Includes 57 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 | 3,804 | 0.8 | 7 | 177 | 407 | 566 | 2,647 |
| Ran Off Roadway Left | 1,325 | 0.3 | 4 | 43 | 116 | 153 | 1,009 |
| Ran Off Roadway Right | 2,143 | 0.5 | 4 | 42 | 179 | 236 | 1,682 |
| Re-Enter Roadway | 189 | 0.0 | 1 | 10 | 12 | 19 | 147 |
| Overturn | 5,433 | 1.1 | 106 | 404 | 1,119 | 1,128 | 2,676 |
| Separation of Units | 509 | 0.1 | 4 | 12 | 30 | 72 | 391 |
| Fire/Explosion | 450 | 0.1 | 14 | 18 | 19 | 23 | 376 |
| Immersion | 170 | 0.0 | 3 | 2 | 8 | 11 | 146 |
| Jackknife | 215 | 0.0 | 0 | 1 | 3 | 12 | 199 |
| Downhill Runaway | 13 | 0.0 | 0 | 0 | 1 | 1 | 11 |
| Cargo Loss/Shift | 386 | 0.1 | 1 | 1 | 5 | 6 | 373 |
| Individual Fell from Vehicle | 334 | 0.1 | 13 | 108 | 159 | 31 | 23 |
| Other Noncollision | 891 | 0.2 | 1 | 30 | 69 | 69 | 722 |
| Equipment Failure (blown tire, brake failure, etc.) | 571 | 0.1 | 0 | 6 | 20 | 29 | 516 |
| Cross Centerline | 918 | 0.2 | 3 | 41 | 78 | 111 | 685 |
| Cross Median | 132 | 0.0 | 0 | 3 | 11 | 23 | 95 |
| SUBTOTAL | 17,483 | 3.7 | 161 | 898 | 2,236 | 2,490 | 11,698 |

| COLLISION WITH A NONFIXED OBJECT | MOTOR VEHICLES | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|--|--------------------|-------------|--------------|--------------|---------------|---------------|----------------------|
| | Number of Vehicles | % of Total | | A | B | C | |
| Pedestrian | 1,602 | 0.3 | 178 | 312 | 502 | 427 | 183 |
| Bicyclist | 1,160 | 0.2 | 30 | 116 | 422 | 355 | 237 |
| Motor Vehicle in Transport (in motion or on roadway) | 344,198 | 72.3 | 1,025 | 5,463 | 22,105 | 48,290 | 267,315 |
| Parked Motor Vehicle | 17,141 | 3.6 | 17 | 191 | 541 | 1,013 | 15,379 |
| Railroad Train | 48 | 0.0 | 3 | 6 | 7 | 4 | 28 |
| Animal | 53,090 | 11.2 | 5 | 83 | 347 | 642 | 52,013 |
| Other Nonfixed Object | 3,600 | 0.8 | 7 | 34 | 111 | 144 | 3,304 |
| Work Zone/Maintenance Equipment | 148 | 0.0 | 2 | 2 | 6 | 18 | 120 |
| Cargo Falling/Shifting/Anything Set in Motion by a Motor Vehicle | 651 | 0.1 | 0 | 6 | 14 | 36 | 595 |
| SUBTOTAL | 421,638 | 88.6 | 1,267 | 6,213 | 24,055 | 50,929 | 339,174 |

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 | 202 | 0.0 | 8 | 8 | 22 | 24 | 140 |
| Bridge Rail | 278 | 0.1 | 1 | 8 | 19 | 33 | 217 |
| Guardrail Face | 2,348 | 0.5 | 8 | 36 | 139 | 284 | 1,881 |
| Guardrail End | 482 | 0.1 | 3 | 9 | 48 | 72 | 350 |
| Other Post/Pole/Support | 1,093 | 0.2 | 5 | 24 | 75 | 95 | 894 |
| Culvert | 376 | 0.1 | 3 | 18 | 51 | 53 | 251 |
| Curb | 1,627 | 0.3 | 4 | 27 | 89 | 102 | 1,405 |
| Ditch | 5,485 | 1.2 | 13 | 160 | 432 | 589 | 4,291 |
| Embankment | 779 | 0.2 | 7 | 32 | 78 | 124 | 538 |
| Fence | 743 | 0.2 | 1 | 10 | 37 | 55 | 640 |
| Mailbox | 1,282 | 0.3 | 2 | 6 | 18 | 28 | 1,228 |
| Tree | 8,068 | 1.7 | 147 | 459 | 933 | 1,069 | 5,460 |
| Railroad Crossing Signal | 65 | 0.0 | 0 | 2 | 4 | 1 | 58 |
| Building | 567 | 0.1 | 9 | 49 | 68 | 92 | 349 |
| Traffic Island | 34 | 0.0 | 0 | 1 | 2 | 3 | 28 |
| Fire Hydrant | 440 | 0.1 | 1 | 5 | 27 | 27 | 380 |
| Impact Attenuator (crash cushion) | 181 | 0.0 | 0 | 13 | 16 | 30 | 122 |
| Other Fixed Object | 1,534 | 0.3 | 6 | 49 | 120 | 128 | 1,231 |
| Bridge Overhead Structure | 44 | 0.0 | 1 | 2 | 1 | 2 | 38 |
| Cable Barrier | 923 | 0.2 | 1 | 5 | 32 | 86 | 799 |
| Concrete Barrier | 4,158 | 0.9 | 9 | 91 | 393 | 791 | 2,874 |
| Traffic Sign/Post | 2,540 | 0.5 | 5 | 23 | 58 | 111 | 2,343 |
| Traffic Signal Equipment | 237 | 0.0 | 0 | 2 | 16 | 27 | 192 |
| Utility Pole/Light Support | 3,503 | 0.7 | 26 | 113 | 341 | 476 | 2,547 |
| SUBTOTAL | 36,989 | 7.8 | 260 | 1,152 | 3,019 | 4,302 | 28,256 |

| | MOTOR VEHICLES | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|---------------------------------|-----------------------|--------------|--------------|--------------|---------------|---------------|----------------------------|
| | Number of Vehicles | % of Total | | A | B | C | |
| Uncoded & Errors | 10 | 0.0 | 0 | 0 | 1 | 2 | 7 |
| No Event Coded as Most Harmful | 9 | 0.0 | 0 | 0 | 0 | 0 | 9 |
| MOST HARMFUL EVENT TOTAL | 476,129 | 100.0 | 1,688 | 8,263 | 29,311 | 57,723 | 379,144 |

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 | 613 | 0.1 | 3 | 16 | 46 | 90 | 458 |
| Lights/Reflectors | 121 | 0.0 | 2 | 5 | 8 | 10 | 96 |
| Steering | 209 | 0.0 | 0 | 1 | 20 | 25 | 163 |
| Tires/Wheels/Rims | 643 | 0.1 | 5 | 14 | 46 | 68 | 510 |
| Windows/Windshield | 23 | 0.0 | 0 | 1 | 2 | 1 | 19 |
| Coupling/Hitch/Chains | 85 | 0.0 | 0 | 0 | 1 | 6 | 78 |
| Other | 983 | 0.2 | 7 | 26 | 46 | 105 | 799 |
| Uncoded & Errors | 473,452 | 99.4 | 1,671 | 8,200 | 29,142 | 57,418 | 377,021 |
| TOTAL | 476,129 | 100.0 | 1,688 | 8,263 | 29,311 | 57,723 | 379,144 |

DRIVER HAZARDOUS ACTION

| HAZARDOUS ACTION | MOTOR VEHICLES | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|--|--------------------|------------|-------------|--------------|--------|--------|----------------------|
| | Number of Vehicles | % of Total | | A | B | C | |
| None | 242,324 | 50.9 | 638 | 3,445 | 13,463 | 27,375 | 197,403 |
| Speed Too Fast | 24,721 | 5.2 | 215 | 772 | 1,915 | 3,238 | 18,581 |
| Speed Too Slow | 148 | 0.0 | 1 | 8 | 14 | 24 | 101 |
| Failed to Yield | 43,048 | 9.0 | 116 | 914 | 3,874 | 6,630 | 31,514 |
| Disregard Traffic Control | 11,081 | 2.3 | 63 | 429 | 1,549 | 2,666 | 6,374 |
| Drove Wrong Way | 421 | 0.1 | 7 | 26 | 52 | 77 | 259 |
| Drove Left of Center | 2,457 | 0.5 | 53 | 140 | 327 | 334 | 1,603 |
| Improper Passing | 2,988 | 0.6 | 12 | 45 | 122 | 239 | 2,570 |
| Improper Lane Use | 13,211 | 2.8 | 19 | 120 | 456 | 1,041 | 11,575 |
| Improper Turn | 5,125 | 1.1 | 5 | 46 | 256 | 557 | 4,261 |
| Improper/No Signal | 383 | 0.1 | 1 | 5 | 10 | 31 | 336 |
| Improper Backing | 6,309 | 1.3 | 1 | 7 | 24 | 108 | 6,169 |
| Unable to Stop in Assured Clear Distance | 56,146 | 11.8 | 50 | 408 | 2,656 | 8,214 | 44,818 |
| Reckless Driving | 2,692 | 0.6 | 103 | 251 | 346 | 411 | 1,581 |
| Careless/Negligent Driving | 10,977 | 2.3 | 83 | 519 | 1,226 | 1,502 | 7,647 |
| Other | 15,305 | 3.2 | 91 | 475 | 1,333 | 1,775 | 11,631 |
| Unknown | 38,793 | 8.1 | 230 | 653 | 1,688 | 3,501 | 32,721 |
| TOTAL | 476,129 | 100.0 | 1,688 | 8,263 | 29,311 | 57,723 | 379,144 |

MICHIGAN BICYCLE CRASHES

2021 BICYCLIST FATALITIES AND INJURIES



In 2021, there were 1,260 bicyclists involved in motor vehicle crashes, with 29 bicyclists killed and 971 injured. The top age group for bicyclist fatalities was the 55-64 age group with eight fatalities (27.6%). The 11-15 age group had the greatest percentage of injuries (16.0%) and the greatest percentage of total fatalities and injuries (15.7%).

BICYCLE HELMET USE AND INJURY SEVERITY

| HELMET USE | FATALITY | INJURY | | | NO INJURY | UNKNOWN | TOTAL |
|--------------|-----------|------------|------------|------------|------------|-----------|--------------|
| | | A | B | C | | | |
| Worn | 1 | 23 | 93 | 58 | 31 | 2 | 208 |
| Not Worn | 12 | 59 | 201 | 154 | 85 | 21 | 532 |
| Unknown | 16 | 46 | 160 | 177 | 92 | 29 | 520 |
| TOTAL | 29 | 128 | 454 | 389 | 208 | 52 | 1,260 |

Note: The data does not include helmet use for all bicyclists. There were 520 bicyclists with unknown helmet use.

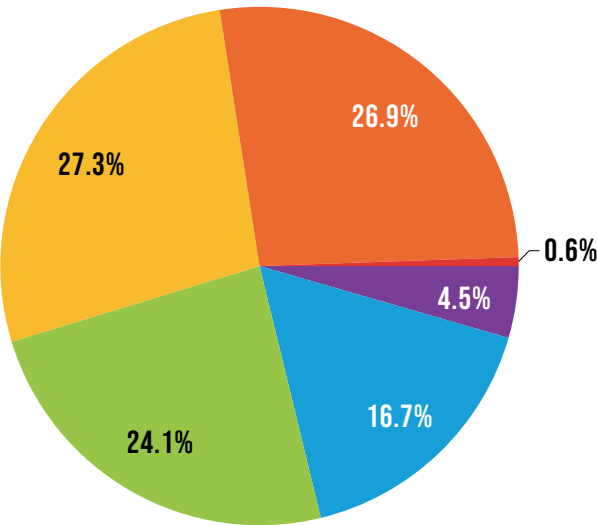
The National Center for Statistics and Analysis of the National Highway Traffic Safety Administration cites a study by the Centers for Disease Control [12]: "Bicycle helmets are 85 to 88 percent effective in mitigating head and brain injuries in all types of bicycle accidents, making the use of helmets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

MICHIGAN PEDESTRIAN CRASHES

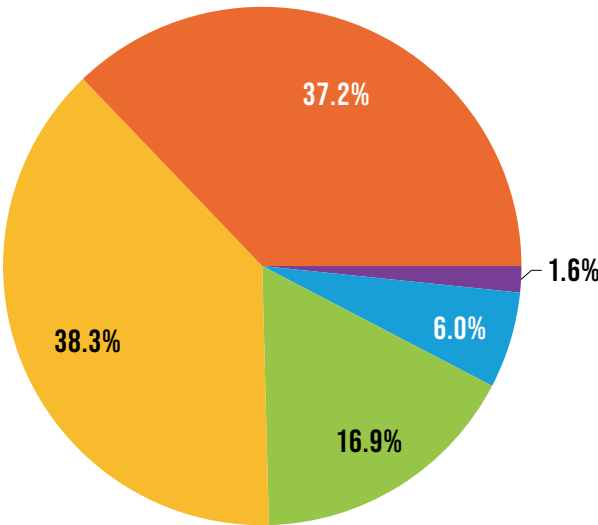


In 2021, there were 1,891 pedestrians involved in motor vehicle crashes, with 183 pedestrians killed and 1,453 injured. The top age groups for pedestrian fatalities were the 35-44 and 45-54 age groups with 35 fatalities each (19.1%). The 25-34 age group had the greatest percentage of injuries (17.2%) and the greatest percentage of total fatalities and injuries (16.7%).

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 | 10 | 9.8 | 0 | 3 | 5 | 0 | 2 |
| Ran Off Roadway Left | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Ran Off Roadway Right | 1 | 1.0 | 0 | 0 | 0 | 0 | 1 |
| Re-Enter Roadway | 2 | 2.0 | 0 | 1 | 0 | 0 | 1 |
| Overturn | 7 | 6.9 | 0 | 3 | 4 | 0 | 0 |
| Separation of Units | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Fire/Explosion | 6 | 5.9 | 0 | 0 | 0 | 0 | 6 |
| Immersion | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Jackknife | 1 | 1.0 | 0 | 0 | 0 | 0 | 1 |
| 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 | 11 | 10.8 | 0 | 5 | 3 | 1 | 2 |
| Other Noncollision | 1 | 1.0 | 0 | 1 | 0 | 0 | 0 |
| Equipment Failure (blown tire, brake failure, etc.) | 1 | 1.0 | 0 | 0 | 1 | 0 | 0 |
| Cross Centerline | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Cross Median | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| SUBTOTAL | 40 | 39.2 | 0 | 13 | 13 | 1 | 13 |

| COLLISION WITH A NONFIXED OBJECT | SNOWMOBILES | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|--|-----------------------|------------|-------------|--------------|---|---|----------------------|
| | Number of Snowmobiles | % of Total | | A | B | C | |
| Pedestrian | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Bicyclist | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Motor Vehicle in Transport (in motion or on roadway) | 28 | 27.5 | 1 | 8 | 6 | 3 | 10 |
| Parked Motor Vehicle | 1 | 1.0 | 0 | 0 | 0 | 0 | 1 |
| Railroad Train | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Animal | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Other Nonfixed Object | 1 | 1.0 | 0 | 0 | 0 | 0 | 1 |
| 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 | 30 | 29.4 | 1 | 8 | 6 | 3 | 12 |

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 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Guardrail End | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Other Post/Pole/Support | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Culvert | 2 | 2.0 | 0 | 0 | 0 | 2 | 0 |
| Curb | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Ditch | 4 | 3.9 | 0 | 3 | 1 | 0 | 0 |
| Embankment | 1 | 1.0 | 0 | 0 | 1 | 0 | 0 |
| Fence | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Mailbox | 1 | 1.0 | 0 | 0 | 0 | 0 | 1 |
| Tree | 18 | 17.6 | 3 | 8 | 1 | 2 | 4 |
| Railroad Crossing Signal | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Building | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Traffic Island | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Fire Hydrant | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Impact Attenuator (crash cushion) | 1 | 1.0 | 0 | 1 | 0 | 0 | 0 |
| Other Fixed Object | 3 | 2.9 | 0 | 0 | 0 | 2 | 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 | 2 | 2.0 | 1 | 0 | 0 | 0 | 1 |
| SUBTOTAL | 32 | 31.4 | 4 | 12 | 3 | 6 | 7 |

| | SNOWMOBILES | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|---------------------------------|--------------------------|--------------|-------------|--------------|-----------|-----------|----------------------------|
| | Number of Snowmobiles | % of Total | | A | B | C | |
| Uncoded & Errors | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| No Event Coded as Most Harmful | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| MOST HARMFUL EVENT TOTAL | 102 | 100.0 | 5 | 33 | 22 | 10 | 32 |

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

A total of 102 snowmobiles were reported in crashes on Michigan public roadways during 2021, resulting in five fatal crashes.

A total of 65 snowmobiles were involved in 61 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 | 28 | 6.2 | 0 | 9 | 11 | 5 | 3 |
| Ran Off Roadway Left | 5 | 1.1 | 0 | 0 | 3 | 1 | 1 |
| Ran Off Roadway Right | 6 | 1.3 | 0 | 1 | 2 | 2 | 1 |
| Re-Enter Roadway | 2 | 0.4 | 0 | 0 | 1 | 0 | 1 |
| Overturn | 77 | 17.0 | 4 | 30 | 24 | 10 | 9 |
| Separation of Units | 2 | 0.4 | 0 | 2 | 0 | 0 | 0 |
| Fire/Explosion | 2 | 0.4 | 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 | 37 | 8.2 | 2 | 18 | 12 | 5 | 0 |
| Other Noncollision | 3 | 0.7 | 0 | 1 | 1 | 0 | 1 |
| Equipment Failure (blown tire, brake failure, etc.) | 3 | 0.7 | 0 | 2 | 1 | 0 | 0 |
| Cross Centerline | 3 | 0.7 | 0 | 1 | 0 | 1 | 1 |
| Cross Median | 1 | 0.2 | 0 | 0 | 0 | 0 | 1 |
| SUBTOTAL | 169 | 37.4 | 6 | 64 | 55 | 24 | 20 |

| COLLISION WITH A NONFIXED OBJECT | ORV/ATV | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|--|--------------------|-------------|-------------|--------------|-----------|-----------|----------------------|
| | Number of ORV/ATVs | % of Total | | A | B | C | |
| Pedestrian | 6 | 1.3 | 0 | 3 | 2 | 1 | 0 |
| Bicyclist | 1 | 0.2 | 0 | 0 | 0 | 1 | 0 |
| Motor Vehicle in Transport (in motion or on roadway) | 181 | 40.0 | 9 | 31 | 32 | 27 | 82 |
| Parked Motor Vehicle | 22 | 4.9 | 2 | 2 | 3 | 0 | 15 |
| Railroad Train | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Animal | 11 | 2.4 | 0 | 1 | 2 | 3 | 5 |
| Other Nonfixed Object | 2 | 0.4 | 0 | 0 | 0 | 0 | 2 |
| 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 | 223 | 49.3 | 11 | 37 | 39 | 32 | 104 |

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 | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Culvert | 1 | 0.2 | 0 | 1 | 0 | 0 | 0 |
| Curb | 3 | 0.7 | 0 | 0 | 3 | 0 | 0 |
| Ditch | 13 | 2.9 | 0 | 6 | 6 | 1 | 0 |
| Embankment | 5 | 1.1 | 1 | 1 | 3 | 0 | 0 |
| Fence | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Mailbox | 2 | 0.4 | 0 | 0 | 0 | 0 | 2 |
| Tree | 25 | 5.5 | 2 | 12 | 3 | 6 | 2 |
| Railroad Crossing Signal | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Building | 1 | 0.2 | 0 | 1 | 0 | 0 | 0 |
| Traffic Island | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Fire Hydrant | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Impact Attenuator (crash cushion) | 1 | 0.2 | 0 | 0 | 0 | 1 | 0 |
| Other Fixed Object | 5 | 1.1 | 0 | 1 | 2 | 0 | 2 |
| Bridge Overhead Structure | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Cable Barrier | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Concrete Barrier | 1 | 0.2 | 1 | 0 | 0 | 0 | 0 |
| Traffic Sign/Post | 1 | 0.2 | 0 | 1 | 0 | 0 | 0 |
| Traffic Signal Equipment | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Utility Pole/Light Support | 2 | 0.4 | 0 | 0 | 0 | 0 | 2 |
| SUBTOTAL | 60 | 13.3 | 4 | 23 | 17 | 8 | 8 |

| | ORV/ATV | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|---------------------------------|------------------------|--------------|-------------|--------------|------------|-----------|----------------------------|
| | Number of ORV/ ATVs | % of Total | | A | B | C | |
| Uncoded & Errors | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| No Event Coded as Most Harmful | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| MOST HARMFUL EVENT TOTAL | 452 | 100.0 | 21 | 124 | 111 | 64 | 132 |

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 452 off-road/all-terrain vehicles were reported in crashes on Michigan public roadways during 2021, resulting in 21 fatal crashes. An additional 299 ORV/ATVs were involved in 287 injury crashes.

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS - HAZARDOUS ACTION

| HAZARDOUS ACTION | SNOWMOBILES | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|--|-----------------------|--------------|-------------|--------------|-----------|-----------|----------------------|
| | Number of Snowmobiles | % of Total | | A | B | C | |
| None | 29 | 28.4 | 0 | 6 | 8 | 2 | 13 |
| Speed Too Fast | 21 | 20.6 | 1 | 7 | 5 | 3 | 5 |
| Speed Too Slow | 2 | 2.0 | 0 | 2 | 0 | 0 | 0 |
| Failed to Yield | 11 | 10.8 | 1 | 4 | 3 | 1 | 2 |
| Disregard Traffic Control | 3 | 2.9 | 0 | 2 | 0 | 1 | 0 |
| Drove Wrong Way | 1 | 1.0 | 0 | 0 | 0 | 0 | 1 |
| Drove Left of Center | 1 | 1.0 | 0 | 0 | 0 | 0 | 1 |
| Improper Passing | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Improper Lane Use | 1 | 1.0 | 0 | 0 | 1 | 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 | 2 | 2.0 | 0 | 0 | 2 | 0 | 0 |
| Reckless Driving | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Careless/Negligent Driving | 8 | 7.8 | 0 | 4 | 1 | 1 | 2 |
| Other | 7 | 6.9 | 2 | 1 | 1 | 0 | 3 |
| Unknown | 16 | 15.7 | 1 | 7 | 1 | 2 | 5 |
| TOTAL | 102 | 100.0 | 5 | 33 | 22 | 10 | 32 |

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS - HAZARDOUS ACTION

| HAZARDOUS ACTION | ORV/ATV | | FATAL CRASH | INJURY CRASH | | | PROPERTY DAMAGE ONLY |
|--|--------------------|--------------|-------------|--------------|------------|-----------|----------------------|
| | Number of ORV/ATVs | % of Total | | A | B | C | |
| None | 91 | 20.1 | 1 | 18 | 18 | 15 | 39 |
| Speed Too Fast | 113 | 25.0 | 4 | 43 | 32 | 20 | 14 |
| Speed Too Slow | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Failed to Yield | 34 | 7.5 | 2 | 6 | 3 | 2 | 21 |
| Disregard Traffic Control | 7 | 1.5 | 1 | 1 | 2 | 2 | 1 |
| Drove Wrong Way | 2 | 0.4 | 0 | 1 | 1 | 0 | 0 |
| Drove Left of Center | 5 | 1.1 | 1 | 1 | 1 | 0 | 2 |
| Improper Passing | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Improper Lane Use | 10 | 2.2 | 0 | 2 | 2 | 2 | 4 |
| Improper Turn | 12 | 2.7 | 0 | 0 | 3 | 3 | 6 |
| Improper/No Signal | 8 | 1.8 | 0 | 0 | 1 | 2 | 5 |
| Improper Backing | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| Unable to Stop in Assured Clear Distance | 17 | 3.8 | 1 | 1 | 5 | 1 | 9 |
| Reckless Driving | 22 | 4.9 | 4 | 7 | 4 | 2 | 5 |
| Careless/Negligent Driving | 48 | 10.6 | 1 | 21 | 14 | 6 | 6 |
| Other | 44 | 9.7 | 1 | 16 | 12 | 3 | 12 |
| Unknown | 39 | 8.6 | 5 | 7 | 13 | 6 | 8 |
| TOTAL | 452 | 100.0 | 21 | 124 | 111 | 64 | 132 |

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 | 2020 | 2021 | % CHANGE |
|------------------------|------|------|----------|
| Crashes | 181 | 195 | 7.7% |
| Fatalities | 5 | 5 | 0.0% |
| Injuries | 66 | 66 | 0.0% |

A total of 195 crashes involving farm equipment were reported on Michigan roadways during 2021. Of those crashes, five were fatal with five people killed.

MICHIGAN VEHICLE-TRAIN CRASHES

| VEHICLE TRAIN CRASHES | 2020 | 2021 | % CHANGE |
|-----------------------|------|------|----------|
| Crashes | 35 | 56 | 60.0% |
| Fatalities | 0 | 3 | --- |
| Injuries | 13 | 24 | 84.6% |

A total of 56 crashes involving trains were reported in Michigan during 2021. There were three fatal crashes involving trains with three people killed in 2021.

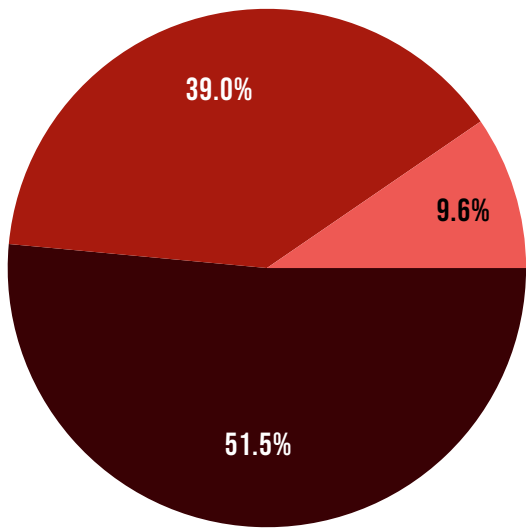
MICHIGAN MOTORCYCLE CRASHES

| MOTORCYCLE DATA | 2020 | 2021 | % CHANGE |
|---|-------------|-------------|----------|
| Motorcycle Registrations | 237,481 | 255,832 | 7.7% |
| Motorcycles in Crashes | 3,092 | 3,271 | 5.8% |
| Motorcyclist Deaths | 152 | 166 | 9.2% |
| Motorcyclists Injured | 2,429 | 2,526 | 4.0% |
| Death Rate based on 10,000 motorcycle registrations | 6.40 | 6.49 | 1.4% |
| Estimated Mileage based on 3,000 miles per motorcycle | 712,443,000 | 767,496,000 | 7.7% |
| Death Rate based on deaths per 100 million vehicle miles traveled | 21.34 | 21.63 | 1.4% |

Motorcycles were involved in 1.1 percent of all traffic crashes in Michigan in 2021. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles.

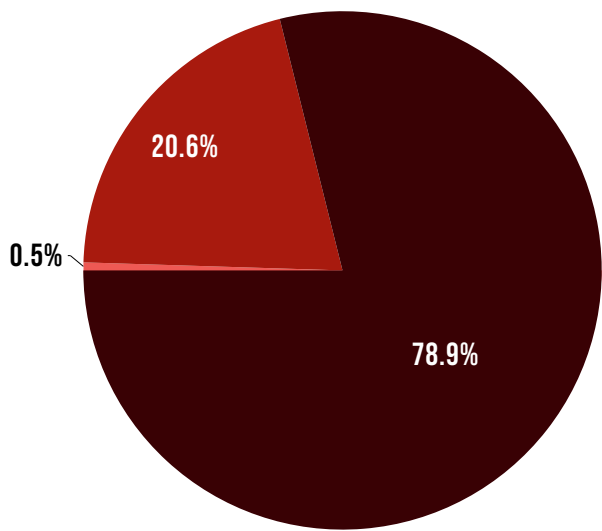
DRIVER GENDER INFORMATION

MALES FEMALES UNKNOWN

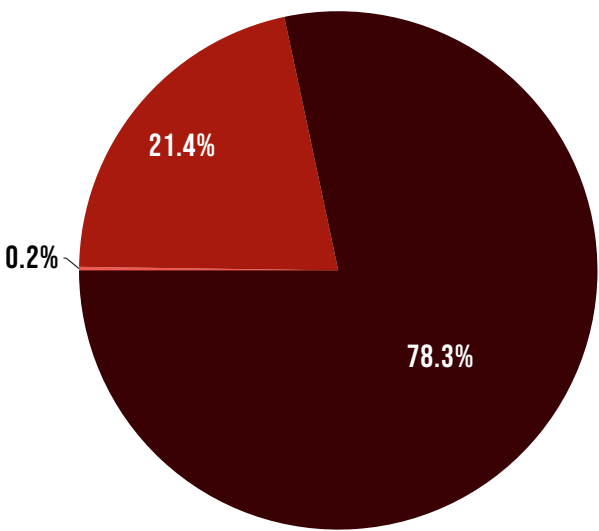


ALL DRIVERS

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. 0.2%).

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 | 46,708 | 1,892,821 | 884 | 3 | 22 | 4,220 | 243 | 5 | 212 | 6 |
| 16 | 72,601 | 129,116 | 6,492 | 14 | 6 | 1,152 | 43 | 1 | 36 | 0 |
| 17 | 85,505 | 131,442 | 9,239 | 27 | 16 | 1,396 | 35 | 0 | 34 | 2 |
| 18 | 84,581 | 131,482 | 11,314 | 35 | 19 | 1,919 | 33 | 0 | 35 | 2 |
| 19 | 94,695 | 126,914 | 11,614 | 43 | 24 | 1,965 | 43 | 0 | 34 | 4 |
| 20 | 102,599 | 133,849 | 11,623 | 41 | 25 | 1,927 | 20 | 0 | 32 | 1 |
| 21-24 | 449,816 | 537,500 | 43,732 | 146 | 80 | 7,191 | 87 | 0 | 133 | 9 |
| 25-29 | 609,913 | 662,063 | 48,826 | 193 | 104 | 7,564 | 85 | 2 | 171 | 12 |
| 30-34 | 659,108 | 654,675 | 43,885 | 174 | 94 | 6,702 | 83 | 1 | 150 | 12 |
| 35-39 | 620,993 | 611,457 | 37,150 | 146 | 70 | 5,286 | 65 | 1 | 126 | 21 |
| 40-44 | 610,103 | 596,977 | 33,049 | 137 | 75 | 4,604 | 52 | 2 | 139 | 16 |
| 45-49 | 593,271 | 576,745 | 30,498 | 126 | 61 | 4,226 | 40 | 2 | 123 | 16 |
| 50-54 | 690,664 | 648,901 | 31,411 | 103 | 59 | 4,463 | 91 | 2 | 125 | 22 |
| 55-59 | 736,472 | 689,928 | 29,835 | 114 | 64 | 4,259 | 80 | 1 | 125 | 13 |
| 60-64 | 773,321 | 704,159 | 26,497 | 81 | 47 | 3,703 | 89 | 7 | 138 | 15 |
| 65-69 | 689,288 | 617,312 | 19,475 | 76 | 39 | 2,917 | 60 | 1 | 102 | 17 |
| 70-74 | 536,314 | 500,766 | 14,089 | 54 | 34 | 2,241 | 43 | 1 | 78 | 12 |
| 75-79 | 350,550 | 317,552 | 8,847 | 51 | 35 | 1,504 | 17 | 2 | 29 | 8 |
| 80-84 | 203,960 | 199,644 | 4,867 | 28 | 22 | 899 | 4 | 1 | 24 | 4 |
| 85+ | 153,326 | 187,508 | 3,120 | 19 | 23 | 656 | 5 | 1 | 6 | 1 |
| Unknown | --- | --- | 49,682 | 77 | 0 | 27 | 42 | 0 | 39 | 0 |
| TOTAL | 8,163,788 | 10,050,811 | 476,129 | 1,688 | 919 | 68,821 | 1,260 | 30 | 1,891 | 193 |

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

| AGE | LICENSED DRIVERS | TOTAL DRIVERS IN CRASHES* | CRASH RATE |
|-------|------------------|---------------------------|------------|
| 0-15 | 46,708 | 884 | 0.019 |
| 16 | 72,601 | 6,492 | 0.089 |
| 17 | 85,505 | 9,239 | 0.108 |
| 18 | 84,581 | 11,314 | 0.134 |
| 19 | 94,695 | 11,614 | 0.123 |
| 20 | 102,599 | 11,623 | 0.113 |
| 21-24 | 449,816 | 43,732 | 0.097 |
| 25-29 | 609,913 | 48,826 | 0.080 |
| 30-34 | 659,108 | 43,885 | 0.067 |
| 35-39 | 620,993 | 37,150 | 0.060 |
| 40-44 | 610,103 | 33,049 | 0.054 |
| 45-49 | 593,271 | 30,498 | 0.051 |
| 50-54 | 690,664 | 31,411 | 0.045 |
| 55-59 | 736,472 | 29,835 | 0.041 |
| 60-64 | 773,321 | 26,497 | 0.034 |
| 65-69 | 689,288 | 19,475 | 0.028 |
| 70-74 | 536,314 | 14,089 | 0.026 |
| 75-79 | 350,550 | 8,847 | 0.025 |
| 80-84 | 203,960 | 4,867 | 0.024 |
| 85-89 | 103,449 | 2,291 | 0.022 |
| 90-94 | 41,251 | 681 | 0.017 |
| 95-99 | 8,054 | 147 | 0.018 |
| 100+ | 572 | 1 | 0.002 |
| TOTAL | 8,163,788 | 426,447 | 0.052 |

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

*Excludes 49,682 drivers with unknown age

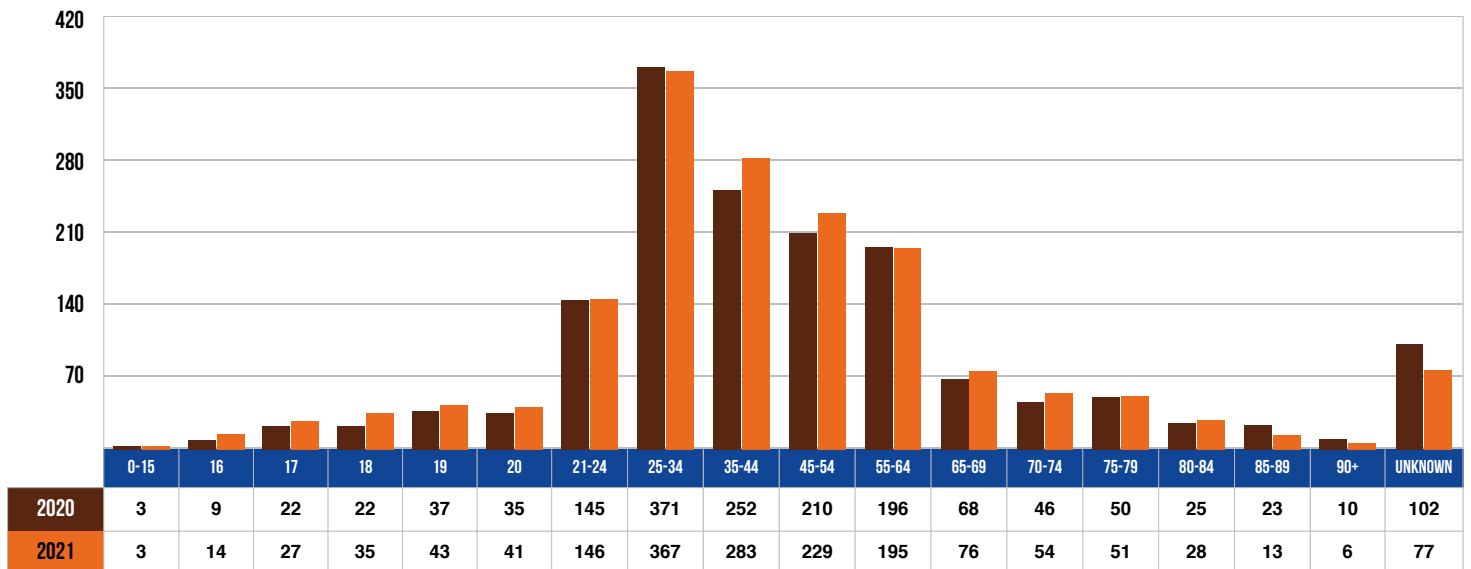
Licensed drivers age 18 have the highest crash rate at 0.134 (total crash involvements in age group divided by total number of licensed drivers in age group). The lower crash rates of the older groups (per licensed driver) may reflect reduced driving and exposure to the risk of a crash.

DRIVER AGE

| AGE OF DRIVERS IN FATAL CRASHES | 2020 | 2021 | PERCENT CHANGE | PERCENT 2021 FATAL CRASH INVOLVEMENT | PERCENT ACTIVE DRIVING POPULATION* |
|------------------------------------|-------|-------|----------------|---|---------------------------------------|
| 15 years and under | 3 | 3 | 0.0 | 0.2 | 0.6 |
| 16 years | 9 | 14 | 55.6 | 0.8 | 0.9 |
| 17 years | 22 | 27 | 22.7 | 1.6 | 1.0 |
| 18 years | 22 | 35 | 59.1 | 2.1 | 1.0 |
| 19 years | 37 | 43 | 16.2 | 2.5 | 1.2 |
| 20 years | 35 | 41 | 17.1 | 2.4 | 1.3 |
| 21 - 24 years | 145 | 146 | 0.7 | 8.6 | 5.5 |
| 25 - 34 years | 371 | 367 | -1.1 | 21.7 | 15.5 |
| 35 - 44 years | 252 | 283 | 12.3 | 16.8 | 15.1 |
| 45 - 54 years | 210 | 229 | 9.0 | 13.6 | 15.7 |
| 55 - 64 years | 196 | 195 | -0.5 | 11.6 | 18.5 |
| 65 - 69 years | 68 | 76 | 11.8 | 4.5 | 8.4 |
| 70 - 74 years | 46 | 54 | 17.4 | 3.2 | 6.6 |
| 75 - 79 years | 50 | 51 | 2.0 | 3.0 | 4.3 |
| 80 - 84 years | 25 | 28 | 12.0 | 1.7 | 2.5 |
| 85 - 89 years | 23 | 13 | -43.5 | 0.8 | 1.3 |
| 90 years and over | 10 | 6 | -40.0 | 0.4 | 0.6 |
| Unknown | 102 | 77 | -24.5 | 4.6 | --- |
| TOTAL | 1,626 | 1,688 | 3.8 | 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 | 367,584 | 660 | 4,947 | 22,442 | 45,431 | 294,104 |
| Fatigued or Asleep | 2,401 | 8 | 105 | 368 | 511 | 1,409 |
| Sick | 845 | 6 | 46 | 134 | 235 | 424 |
| Medicated | 449 | 3 | 25 | 86 | 100 | 235 |
| Emotional | 5,581 | 61 | 321 | 1,011 | 1,591 | 2,597 |
| Physically Disabled | 1,237 | 80 | 484 | 268 | 205 | 200 |
| Unknown | 39,506 | 567 | 1,173 | 2,037 | 4,253 | 31,476 |
| Other | 8,404 | 226 | 789 | 1,532 | 1,783 | 4,074 |

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* | 393,646 | 82.7 | 340 | 44.9 | 2,863 | 13,625 | 29,085 | 347,730 | 3 |
| Restraint Not Used | 5,512 | 1.2 | 287 | 37.9 | 942 | 1,149 | 837 | 2,297 | 0 |
| Unknown | 76,971 | 16.2 | 131 | 17.3 | 532 | 1,057 | 2,389 | 21,789 | 51,073 |
| TOTAL | 476,129 | 100.0 | 758 | 100.0 | 4,337 | 15,831 | 32,311 | 371,816 | 51,076 |
| DRINKING DRIVERS ONLY | | | | | | | | | |
| Restraint Used* | 5,973 | 73.2 | 41 | 31.8 | 236 | 709 | 753 | 4,234 | 0 |
| Restraint Not Used | 688 | 8.4 | 72 | 55.8 | 205 | 144 | 105 | 162 | 0 |
| Unknown | 1,497 | 18.4 | 16 | 12.4 | 85 | 172 | 165 | 1,059 | 0 |
| TOTAL | 8,158 | 100.0 | 129 | 100.0 | 526 | 1,025 | 1,023 | 5,455 | 0 |
| DRUGGED DRIVERS ONLY | | | | | | | | | |
| Restraint Used* | 1,164 | 69.9 | 31 | 37.8 | 83 | 153 | 206 | 691 | 0 |
| Restraint Not Used | 173 | 10.4 | 37 | 45.1 | 46 | 36 | 19 | 35 | 0 |
| Unknown | 328 | 19.7 | 14 | 17.1 | 33 | 44 | 59 | 178 | 0 |
| TOTAL | 1,665 | 100.0 | 82 | 100.0 | 162 | 233 | 284 | 904 | 0 |
| DRINKING AND DRUGGED DRIVERS ONLY | | | | | | | | | |
| Restraint Used* | 804 | 61.3 | 22 | 29.3 | 62 | 134 | 130 | 456 | 0 |
| Restraint Not Used | 167 | 12.7 | 39 | 52.0 | 51 | 30 | 20 | 27 | 0 |
| Unknown | 340 | 25.9 | 14 | 18.7 | 34 | 54 | 43 | 195 | 0 |
| TOTAL | 1,311 | 100.0 | 75 | 100.0 | 147 | 218 | 193 | 678 | 0 |

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 | 87,118 | 334 | 1,779 | 6,673 | 13,075 | 65,257 |
| 2. In intersection | 48,657 | 236 | 1,277 | 4,670 | 8,467 | 34,007 |
| 3. With traffic control signal | 24,098 | 82 | 572 | 2,398 | 4,479 | 16,567 |
| 4. With hazardous action* | 6,340 | 25 | 230 | 956 | 1,608 | 3,521 |

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 6,340 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 | 547 | 0 | 16 | 52 | 124 | 355 |
| 30 Miles per Hour | 765 | 0 | 17 | 81 | 219 | 448 |
| 35 Miles per Hour | 1,574 | 4 | 50 | 206 | 380 | 934 |
| 40 Miles per Hour | 978 | 2 | 30 | 175 | 254 | 517 |
| 45 Miles per Hour | 1,590 | 14 | 66 | 284 | 385 | 841 |
| 50 Miles per Hour | 348 | 3 | 17 | 76 | 96 | 156 |
| 55 Miles per Hour | 449 | 2 | 32 | 77 | 124 | 214 |
| 60 Miles per Hour | 0 | 0 | 0 | 0 | 0 | 0 |
| 65 Miles per Hour | 1 | 0 | 0 | 0 | 1 | 0 |
| 70 Miles per Hour | 2 | 0 | 0 | 0 | 0 | 2 |
| 75 Miles per Hour | 0 | 0 | 0 | 0 | 0 | 0 |
| Uncoded & Errors | 85 | 0 | 2 | 5 | 24 | 54 |
| TOTAL | 6,340 | 25 | 230 | 956 | 1,608 | 3,521 |

* 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 Motor Vehicle | 64 | 2 | 8 | 21 | 16 | 17 |
| Head-On | 21 | 0 | 1 | 4 | 7 | 9 |
| Head-On - Left Turn | 483 | 3 | 26 | 94 | 119 | 241 |
| Angle | 5,396 | 19 | 182 | 793 | 1,388 | 3,014 |
| Rear-End | 29 | 0 | 0 | 3 | 5 | 21 |
| Rear-End - Left Turn | 6 | 0 | 0 | 2 | 1 | 3 |
| Rear-End - Right Turn | 4 | 0 | 0 | 0 | 1 | 3 |
| Sideswipe - Same Direction | 93 | 0 | 0 | 4 | 13 | 76 |
| Sideswipe - Opposite Directions | 25 | 0 | 0 | 1 | 3 | 21 |
| Backing | 0 | 0 | 0 | 0 | 0 | 0 |
| Other/Unknown | 0 | 0 | 0 | 0 | 0 | 0 |
| Other | 211 | 1 | 13 | 34 | 52 | 111 |
| Unknown | 8 | 0 | 0 | 0 | 3 | 5 |
| Uncoded & Errors | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 6,340 | 25 | 230 | 956 | 1,608 | 3,521 |

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 | 13 | 0 | 1 | 2 | 2 | 8 |
| Drinking Involved | 182 | 7 | 21 | 50 | 49 | 55 |
| Drug Use Involved | 59 | 7 | 9 | 21 | 11 | 11 |
| Pedestrian Involved | 27 | 1 | 6 | 6 | 10 | 4 |
| Bicyclist Involved | 40 | 0 | 5 | 20 | 10 | 5 |
| Snowmobile Involved | 0 | 0 | 0 | 0 | 0 | 0 |
| Motorcycle Involved | 45 | 5 | 15 | 13 | 5 | 7 |
| Train Involved | 0 | 0 | 0 | 0 | 0 | 0 |
| Truck/Bus Involved | 254 | 7 | 14 | 41 | 67 | 125 |
| Emergency Vehicle Involved | 49 | 0 | 3 | 8 | 17 | 21 |
| Driver Hazardous Citation | 3,256 | 3 | 115 | 596 | 895 | 1,647 |

*Crashes may involve more than one special circumstance

| POSSIBLE CONDITIONS OF PEOPLE IN CRASH* | CONDITIONS (CODED BY POLICE) | FATAL CRASHES | INJURY CRASHES | | | PROPERTY DAMAGE ONLY |
|---|------------------------------|---------------|----------------|-----|-------|----------------------|
| | | | A | B | C | |
| Normal | 4,842 | 9 | 126 | 740 | 1,261 | 2,706 |
| Fatigued or Asleep | 27 | 0 | 2 | 8 | 6 | 11 |
| Sick | 13 | 0 | 2 | 5 | 5 | 1 |
| Medicated | 5 | 0 | 0 | 1 | 1 | 3 |
| Emotional | 178 | 0 | 11 | 40 | 60 | 67 |
| Physically Disabled | 42 | 3 | 14 | 15 | 7 | 3 |
| Unknown | 478 | 10 | 39 | 73 | 119 | 237 |
| Other | 186 | 2 | 29 | 54 | 60 | 41 |

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

HEAVY TRUCK/BUS INVOLVED CRASHES

These crashes involve a heavy truck/bus - defined as having a Gross Vehicle Weight Rating (GVWR) over 10,000 lbs., 8+ occupants, or a hazmat placard.

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 | 7,698 | 51.4 | 68 | 66.0 | 1,495 | 57.8 |
| Turning Left | 1,163 | 7.8 | 7 | 6.8 | 173 | 6.7 |
| Turning Right | 1,000 | 6.7 | 2 | 1.9 | 76 | 2.9 |
| Stopped on Roadway | 976 | 6.5 | 2 | 1.9 | 212 | 8.2 |
| Involved in Prior Crash at Same Location | 2 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Changing Lanes | 741 | 4.9 | 0 | 0.0 | 75 | 2.9 |
| Backing | 841 | 5.6 | 1 | 1.0 | 31 | 1.2 |
| Slowing/Stopping on Roadway | 971 | 6.5 | 8 | 7.8 | 239 | 9.2 |
| Slowing/Stopping Other Area | 15 | 0.1 | 0 | 0.0 | 3 | 0.1 |
| Starting Up on Roadway | 257 | 1.7 | 1 | 1.0 | 45 | 1.7 |
| Starting Up in Other Area | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Entering Parking | 23 | 0.2 | 0 | 0.0 | 2 | 0.1 |
| Leaving Parking | 10 | 0.1 | 0 | 0.0 | 1 | 0.0 |
| Entering Roadway | 116 | 0.8 | 1 | 1.0 | 19 | 0.7 |
| Leaving Roadway | 33 | 0.2 | 0 | 0.0 | 4 | 0.2 |
| Making U-Turn | 31 | 0.2 | 0 | 0.0 | 6 | 0.2 |
| Overtaking or Passing | 84 | 0.6 | 1 | 1.0 | 12 | 0.5 |
| Avoiding Object | 11 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Avoiding Animal | 12 | 0.1 | 0 | 0.0 | 3 | 0.1 |
| Avoiding Pedestrian | 3 | 0.0 | 1 | 1.0 | 0 | 0.0 |
| Avoiding Vehicle (front/back) | 133 | 0.9 | 0 | 0.0 | 32 | 1.2 |
| Avoiding Vehicle (angle) | 64 | 0.4 | 0 | 0.0 | 17 | 0.7 |
| Driverless Moving | 8 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Parked | 478 | 3.2 | 7 | 6.8 | 91 | 3.5 |
| Crossing at Intersection | 3 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Crossing Not at Intersection | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Getting On/Off Vehicle | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| In Roadway With Traffic | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| In Roadway Against Traffic | 1 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Standing/Lying in Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Pushing/Working on Vehicle | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Other Work 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 | 2 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Not in Roadway | 3 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Negotiating a Curve | 206 | 1.4 | 4 | 3.9 | 43 | 1.7 |
| Other | 36 | 0.2 | 0 | 0.0 | 3 | 0.1 |
| Unknown | 40 | 0.3 | 0 | 0.0 | 2 | 0.1 |
| Uncoded & Errors | 8 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 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 | 82 | 0.5 | 1 | 1.0 | 14 | 0.5 |
| Cross Centerline | 31 | 0.2 | 0 | 0.0 | 7 | 0.3 |
| Cross Median | 7 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Ran Off Roadway Left | 36 | 0.2 | 0 | 0.0 | 5 | 0.2 |
| Ran Off Roadway Right | 77 | 0.5 | 0 | 0.0 | 15 | 0.6 |
| Re-Enter Roadway | 6 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Overturn | 256 | 1.7 | 8 | 7.8 | 113 | 4.4 |
| Separation of Units | 20 | 0.1 | 0 | 0.0 | 2 | 0.1 |
| Fire/Explosion | 36 | 0.2 | 1 | 1.0 | 2 | 0.1 |
| Immersion | 2 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Jackknife | 122 | 0.8 | 0 | 0.0 | 8 | 0.3 |
| Downhill Runaway | 1 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Cargo Loss/Shift | 98 | 0.7 | 0 | 0.0 | 3 | 0.1 |
| Individual Fell from Vehicle | 2 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Equipment Failure (blown tire, brake failure, etc.) | 79 | 0.5 | 0 | 0.0 | 5 | 0.2 |
| Other Noncollision | 80 | 0.5 | 0 | 0.0 | 6 | 0.2 |
| SUBTOTAL | 935 | 6.2 | 10 | 9.7 | 184 | 7.1 |

| MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | |
|---|---------------------------|------------|---------------------------|------------|---------------------------|------------|
| | Number of Heavy Trucks | % of Total | Number of Heavy Trucks | % of Total | Number of Heavy Trucks | % of Total |
| Pedestrian | 30 | 0.2 | 6 | 5.8 | 23 | 0.9 |
| Bicyclist | 18 | 0.1 | 3 | 2.9 | 10 | 0.4 |
| Motor Vehicle in Transport (in motion or on roadway) | 11,382 | 76.0 | 76 | 73.8 | 2,143 | 82.9 |
| Parked Motor Vehicle | 731 | 4.9 | 1 | 1.0 | 45 | 1.7 |
| Work Zone/Maintenance Equipment | 16 | 0.1 | 1 | 1.0 | 3 | 0.1 |
| Cargo Falling/Shifting/Anything Set in Motion by a Motor Vehicle | 68 | 0.5 | 0 | 0.0 | 3 | 0.1 |
| Railroad Train | 9 | 0.1 | 0 | 0.0 | 1 | 0.0 |
| Animal | 521 | 3.5 | 0 | 0.0 | 3 | 0.1 |
| Other Nonfixed Object | 146 | 1.0 | 1 | 1.0 | 14 | 0.5 |
| SUBTOTAL | 12,921 | 86.3 | 88 | 85.4 | 2,245 | 86.8 |

The majority of heavy trucks/buses are involved in crashes with a motor vehicle in transport for all crashes (76.0%), fatal crashes (73.8%), and injury crashes (82.9%) 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 | 41 | 0.3 | 2 | 1.9 | 6 | 0.2 |
| Bridge Rail | 27 | 0.2 | 0 | 0.0 | 3 | 0.1 |
| Bridge Overhead Structure | 31 | 0.2 | 0 | 0.0 | 2 | 0.1 |
| Guardrail Face | 64 | 0.4 | 0 | 0.0 | 12 | 0.5 |
| Guardrail End | 18 | 0.1 | 0 | 0.0 | 2 | 0.1 |
| Cable Barrier | 37 | 0.2 | 0 | 0.0 | 2 | 0.1 |
| Concrete Barrier | 99 | 0.7 | 1 | 1.0 | 34 | 1.3 |
| Traffic Sign/Post | 58 | 0.4 | 0 | 0.0 | 0 | 0.0 |
| Traffic Signal Equipment | 40 | 0.3 | 0 | 0.0 | 1 | 0.0 |
| Utility Pole/Light Support | 156 | 1.0 | 1 | 1.0 | 8 | 0.3 |
| Other Post/Pole/Support | 41 | 0.3 | 0 | 0.0 | 3 | 0.1 |
| Culvert | 6 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Curb | 11 | 0.1 | 0 | 0.0 | 1 | 0.0 |
| Ditch | 155 | 1.0 | 1 | 1.0 | 30 | 1.2 |
| Embankment | 17 | 0.1 | 0 | 0.0 | 6 | 0.2 |
| Fence | 18 | 0.1 | 0 | 0.0 | 3 | 0.1 |
| Mailbox | 21 | 0.1 | 0 | 0.0 | 2 | 0.1 |
| Tree | 125 | 0.8 | 0 | 0.0 | 32 | 1.2 |
| Railroad Crossing Signal | 10 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Building | 7 | 0.0 | 0 | 0.0 | 2 | 0.1 |
| Traffic Island | 2 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Fire Hydrant | 14 | 0.1 | 0 | 0.0 | 0 | 0.0 |
| Impact Attenuator (crash cushion) | 9 | 0.1 | 0 | 0.0 | 2 | 0.1 |
| Other Fixed Object | 108 | 0.7 | 0 | 0.0 | 4 | 0.2 |
| SUBTOTAL | 1,115 | 7.4 | 5 | 4.9 | 157 | 6.1 |

| | ALL CRASHES | | FATAL CRASHES | | INJURY CRASHES | |
|--------------------------------|---------------------------|------------|---------------------------|------------|---------------------------|------------|
| | Number of Heavy Trucks | % of Total | Number of Heavy Trucks | % of Total | Number of Heavy Trucks | % of Total |
| Uncoded & Errors | 1 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| No Event Coded as Most Harmful | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| MOST HARMFUL EVENT TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 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 Motor Vehicle | 2,224 | 14.9 | 16 | 15.5 | 295 | 11.4 |
| Head-On | 144 | 1.0 | 19 | 18.4 | 64 | 2.5 |
| Head-On - Left Turn | 137 | 0.9 | 3 | 2.9 | 64 | 2.5 |
| Angle | 1,847 | 12.3 | 28 | 27.2 | 555 | 21.5 |
| Rear-End | 3,277 | 21.9 | 20 | 19.4 | 850 | 32.9 |
| Rear-End - Left Turn | 135 | 0.9 | 2 | 1.9 | 33 | 1.3 |
| Rear-End - Right Turn | 96 | 0.6 | 0 | 0.0 | 11 | 0.4 |
| Sideswipe - Same Direction | 4,631 | 30.9 | 6 | 5.8 | 453 | 17.5 |
| Sideswipe - Opposite Directions | 539 | 3.6 | 3 | 2.9 | 56 | 2.2 |
| Backing | 788 | 5.3 | 0 | 0.0 | 17 | 0.7 |
| Other | 1,106 | 7.4 | 6 | 5.8 | 184 | 7.1 |
| Unknown | 48 | 0.3 | 0 | 0.0 | 4 | 0.2 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 100.0 |

The highest percentage of heavy trucks/buses are involved in same direction sideswipes for all crashes (30.9%), angle crashes for fatal crashes (27.2%), and rear-end crashes for injury crashes (32.9%).

| 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 | 7,637 | 51.0 | 72 | 69.9 | 1,463 | 56.6 | 27 | 1.2 |
| Speed Too Fast | 557 | 3.7 | 2 | 1.9 | 141 | 5.5 | 248 | 10.8 |
| Speed Too Slow | 3 | 0.0 | 0 | 0.0 | 1 | 0.0 | 0 | 0.0 |
| Failed to Yield | 909 | 6.1 | 2 | 1.9 | 176 | 6.8 | 383 | 16.7 |
| Disregard Traffic Control | 167 | 1.1 | 5 | 4.9 | 73 | 2.8 | 88 | 3.8 |
| Drove Wrong Way | 6 | 0.0 | 0 | 0.0 | 0 | 0.0 | 2 | 0.1 |
| Drove Left of Center | 59 | 0.4 | 0 | 0.0 | 11 | 0.4 | 14 | 0.6 |
| Improper Passing | 106 | 0.7 | 1 | 1.0 | 8 | 0.3 | 27 | 1.2 |
| Improper Lane Use | 778 | 5.2 | 0 | 0.0 | 73 | 2.8 | 269 | 11.8 |
| Improper Turn | 422 | 2.8 | 0 | 0.0 | 22 | 0.9 | 129 | 5.6 |
| Improper/No Signal | 18 | 0.1 | 1 | 1.0 | 1 | 0.0 | 3 | 0.1 |
| Improper Backing | 599 | 4.0 | 0 | 0.0 | 17 | 0.7 | 161 | 7.0 |
| Unable to Stop in Assured Clear Distance | 1,338 | 8.9 | 3 | 2.9 | 333 | 12.9 | 584 | 25.5 |
| Reckless Driving | 18 | 0.1 | 1 | 1.0 | 6 | 0.2 | 3 | 0.1 |
| Careless/Negligent Driving | 257 | 1.7 | 3 | 2.9 | 55 | 2.1 | 106 | 4.6 |
| Other | 1,120 | 7.5 | 4 | 3.9 | 95 | 3.7 | 233 | 10.2 |
| Unknown | 978 | 6.5 | 9 | 8.7 | 111 | 4.3 | 10 | 0.4 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 100.0 | 2,287 | 100.0 |

After no hazardous action, the most common hazardous action coded for drivers of heavy trucks/buses in all crashes (8.9%) and injury crashes (12.9%) is unable to stop in assured clear distance and for fatal crashes is "unknown" (8.7%).

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 the Road | 13,817 | 92.3 | 94 | 91.3 | 2,402 | 92.9 |
| In the Median | 104 | 0.7 | 2 | 1.9 | 19 | 0.7 |
| On the Shoulder | 440 | 2.9 | 5 | 4.9 | 82 | 3.2 |
| Outside of the Shoulder/Curb-Line | 382 | 2.6 | 2 | 1.9 | 65 | 2.5 |
| In the Gore (area between ramp and freeway convergence) | 12 | 0.1 | 0 | 0.0 | 3 | 0.1 |
| On-Street Parking | 159 | 1.1 | 0 | 0.0 | 8 | 0.3 |
| Off the Roadway | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| On the Sidewalk | 18 | 0.1 | 0 | 0.0 | 1 | 0.0 |
| In the Bicycle Lane | 3 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| Other/Unknown | 37 | 0.2 | 0 | 0.0 | 5 | 0.2 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 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 | 418 | 2.8 | 3 | 2.9 | 71 | 2.7 |
| 3:00 AM - 5:59 AM | 569 | 3.8 | 7 | 6.8 | 104 | 4.0 |
| 6:00 AM - 8:59 AM | 2,501 | 16.7 | 15 | 14.6 | 448 | 17.3 |
| 9:00 AM - 11:59 AM | 3,208 | 21.4 | 20 | 19.4 | 544 | 21.0 |
| 12:00 PM - 2:59 PM | 3,686 | 24.6 | 29 | 28.2 | 629 | 24.3 |
| 3:00 PM - 5:59 PM | 2,959 | 19.8 | 18 | 17.5 | 490 | 18.9 |
| 6:00 PM - 8:59 PM | 1,060 | 7.1 | 7 | 6.8 | 198 | 7.7 |
| 9:00 PM - 11:59 PM | 569 | 3.8 | 4 | 3.9 | 101 | 3.9 |
| Unknown | 2 | 0.0 | 0 | 0.0 | 1 | 0.0 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 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 all crashes (24.6%), fatal crashes (28.2%), and injury crashes (24.3%).

| 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 | 3,106 | 20.7 | 19 | 18.4 | 643 | 24.9 |
| US and Michigan Routes | 4,501 | 30.1 | 45 | 43.7 | 857 | 33.1 |
| County Roads and City Streets | 7,328 | 48.9 | 39 | 37.9 | 1,078 | 41.7 |
| Uncoded & Errors | 37 | 0.2 | 0 | 0.0 | 8 | 0.3 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 100.0 |

For all crashes (48.9%) and injury crashes (41.7%), the highest percentage of heavy trucks/buses are involved in crashes on county roads and city streets. For fatal crashes, the highest percentage of heavy trucks/buses are involved in crashes on US and Michigan routes (43.7%).

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 | 2,641 | 17.6 | 15 | 14.6 | 451 | 17.4 |
| Tuesday | 2,818 | 18.8 | 19 | 18.4 | 427 | 16.5 |
| Wednesday | 2,711 | 18.1 | 19 | 18.4 | 485 | 18.8 |
| Thursday | 2,636 | 17.6 | 22 | 21.4 | 475 | 18.4 |
| Friday | 2,633 | 17.6 | 18 | 17.5 | 451 | 17.4 |
| Saturday | 957 | 6.4 | 6 | 5.8 | 179 | 6.9 |
| Sunday | 576 | 3.8 | 4 | 3.9 | 118 | 4.6 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 100.0 |

The highest percentage of heavy trucks/buses are involved in crashes on Tuesday for all crashes (18.8%), Thursday for fatal crashes (21.4%), and Wednesday for injury crashes (18.8%).

| 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 | 13,063 | 87.2 | 94 | 91.3 | 2,313 | 89.4 |
| Female | 1,125 | 7.5 | 5 | 4.9 | 187 | 7.2 |
| Uncoded & Errors | 784 | 5.2 | 4 | 3.9 | 86 | 3.3 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 100.0 |

The highest percentage of heavy truck/bus drivers are male in all crashes (87.2%), fatal crashes (91.3%), and injury crashes (89.4%).

| 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 | 12,262 | 81.9 | 86 | 83.5 | 2,098 | 81.1 |
| 2 occupants | 1,283 | 8.6 | 10 | 9.7 | 264 | 10.2 |
| 3 occupants | 249 | 1.7 | 1 | 1.0 | 56 | 2.2 |
| 4 occupants | 106 | 0.7 | 2 | 1.9 | 23 | 0.9 |
| 5 occupants | 44 | 0.3 | 0 | 0.0 | 12 | 0.5 |
| 6+ occupants | 273 | 1.8 | 0 | 0.0 | 51 | 2.0 |
| 0 occupants | 446 | 3.0 | 3 | 2.9 | 63 | 2.4 |
| Unknown | 309 | 2.1 | 1 | 1.0 | 19 | 0.7 |
| TOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 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 | 10,368 | 82.0 | 59 | 57.3 | 2,287 | 83.7 |
| Motor Home | 37 | 0.3 | 0 | 0.0 | 10 | 0.4 |
| Pickup Truck | 1,637 | 12.9 | 21 | 20.4 | 332 | 12.1 |
| Small Truck Under 10,000 lbs. GVWR | 65 | 0.5 | 1 | 1.0 | 10 | 0.4 |
| Motorcycle | 34 | 0.3 | 4 | 3.9 | 24 | 0.9 |
| Moped/Goped | 6 | 0.0 | 2 | 1.9 | 4 | 0.1 |
| Go-Cart/Golf Cart | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Snowmobile | 4 | 0.0 | 0 | 0.0 | 2 | 0.1 |
| Off-Road Vehicle (ORV)/All-Terrain Vehicle (ATV) | 6 | 0.0 | 1 | 1.0 | 1 | 0.0 |
| Other (non-registered farm equipment, construction equipment, snow plows, etc.) | 84 | 0.7 | 1 | 1.0 | 7 | 0.3 |
| Truck/Bus (over 10,000 lbs. GVWR/8+ occupants/hazmat placard) | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 |
| Uncoded & Errors | 409 | 3.2 | 14 | 13.6 | 57 | 2.1 |
| SUBTOTAL | 12,650 | 100.0 | 103 | 100.0 | 2,734 | 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 | 95 | 0.6 | 1 | 1.0 | 5 | 0.2 |
| 10,001-26,000 lbs. | 5,672 | 37.9 | 23 | 22.3 | 830 | 32.1 |
| Greater Than 26,000 lbs. | 8,943 | 59.7 | 79 | 76.7 | 1,746 | 67.5 |
| Uncoded & Errors | 262 | 1.7 | 0 | 0.0 | 5 | 0.2 |
| SUBTOTAL | 14,972 | 100.0 | 103 | 100.0 | 2,586 | 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 | 27,622 | --- | 206 | --- | 5,320 | --- |

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 | 7 | 1.7 | 20 | 1.1 | 17 | 0.7 | 136 | 1.3 | 661 | 1.0 |
| Speed Too Fast | 192 | 45.6 | 56 | 3.0 | 184 | 8.0 | 5,026 | 47.9 | 2,136 | 3.3 |
| Speed Too Slow | 0 | 0.0 | 0 | 0.0 | 3 | 0.1 | 18 | 0.2 | 23 | 0.0 |
| Failed to Yield | 8 | 1.9 | 375 | 20.1 | 587 | 25.6 | 371 | 3.5 | 19,515 | 30.2 |
| Disregard Traffic Control | 2 | 0.5 | 86 | 4.6 | 152 | 6.6 | 113 | 1.1 | 4,966 | 7.7 |
| Drove Wrong Way | 1 | 0.2 | 1 | 0.1 | 5 | 0.2 | 14 | 0.1 | 104 | 0.2 |
| Drove Left of Center | 2 | 0.5 | 12 | 0.6 | 29 | 1.3 | 121 | 1.2 | 573 | 0.9 |
| Improper Passing | 0 | 0.0 | 27 | 1.4 | 71 | 3.1 | 25 | 0.2 | 662 | 1.0 |
| Improper Lane Use | 24 | 5.7 | 245 | 13.1 | 279 | 12.2 | 288 | 2.7 | 3,626 | 5.6 |
| Improper Turn | 23 | 5.5 | 106 | 5.7 | 44 | 1.9 | 63 | 0.6 | 1,589 | 2.5 |
| Improper/No Signal | 0 | 0.0 | 3 | 0.2 | 2 | 0.1 | 0 | 0.0 | 113 | 0.2 |
| Improper Backing | 4 | 1.0 | 157 | 8.4 | 23 | 1.0 | 21 | 0.2 | 1,259 | 1.9 |
| Unable to Stop in Assured Clear Distance | 7 | 1.7 | 577 | 30.9 | 603 | 26.3 | 357 | 3.4 | 24,416 | 37.8 |
| Reckless Driving | 0 | 0.0 | 3 | 0.2 | 19 | 0.8 | 328 | 3.1 | 358 | 0.6 |
| Careless/Negligent Driving | 66 | 15.7 | 40 | 2.1 | 156 | 6.8 | 2,109 | 20.1 | 2,142 | 3.3 |
| Other | 80 | 19.0 | 153 | 8.2 | 114 | 5.0 | 1,304 | 12.4 | 2,257 | 3.5 |
| Unknown | 5 | 1.2 | 5 | 0.3 | 4 | 0.2 | 207 | 2.0 | 231 | 0.4 |
| CITED VEHICLES SUBTOTAL | 421 | 100.0 | 1,866 | 100.0 | 2,292 | 100.0 | 10,501 | 100.0 | 64,631 | 100.0 |

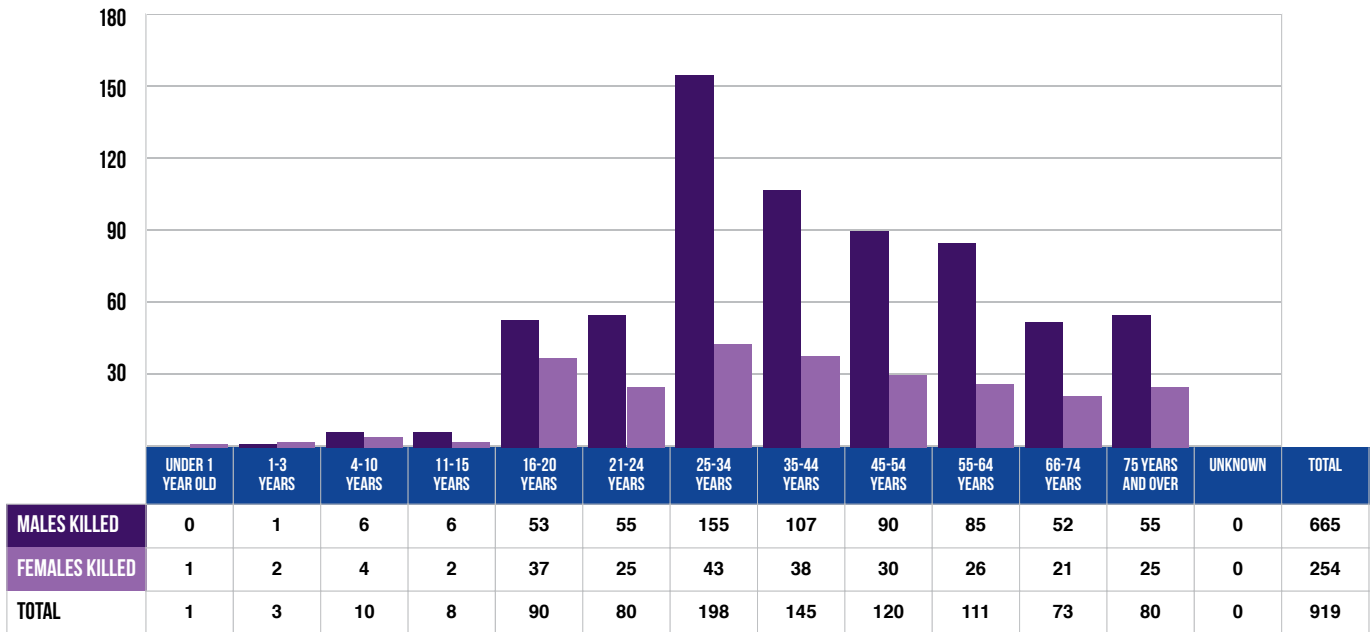
| | HEAVY TRUCK/BUS INVOLVED CRASH | | | | | | NON-HEAVY TRUCK/BUS INVOLVED CRASH | | | |
|-------------------------------------|--------------------------------|--------------|------------------------------|--------------|---|--------------|------------------------------------|--------------|-----------------------|--------------|
| | 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 | 421 | 18.3 | 1,866 | 14.7 | 2,292 | 18.7 | 10,501 | 10.3 | 64,631 | 19.4 |
| Vehicles with No Citation Issued | 1,880 | 81.7 | 10,796 | 85.2 | 9,925 | 81.1 | 91,301 | 89.7 | 268,067 | 80.4 |
| Vehicles with Unknown Citation | 0 | 0.0 | 9 | 0.1 | 14 | 0.1 | 19 | 0.0 | 533 | 0.2 |
| TOTAL VEHICLES INVOLVED | 2,301 | 100.0 | 12,671 | 100.0 | 12,231 | 100.0 | 101,821 | 100.0 | 333,231 | 100.0 |

OCCUPANT/PERSON

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

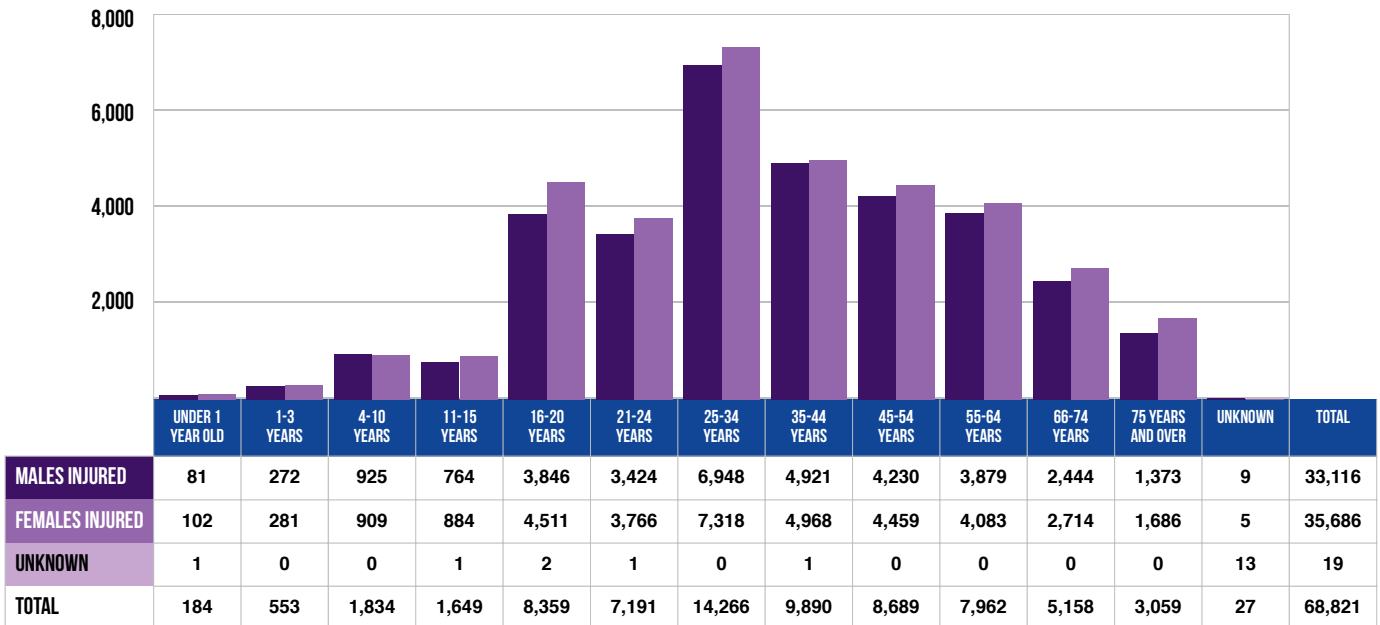
AGE AND GENDER OF OCCUPANTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

OCCUPANTS KILLED



The majority (72.4%) of occupants killed in traffic crashes in 2021 were male.

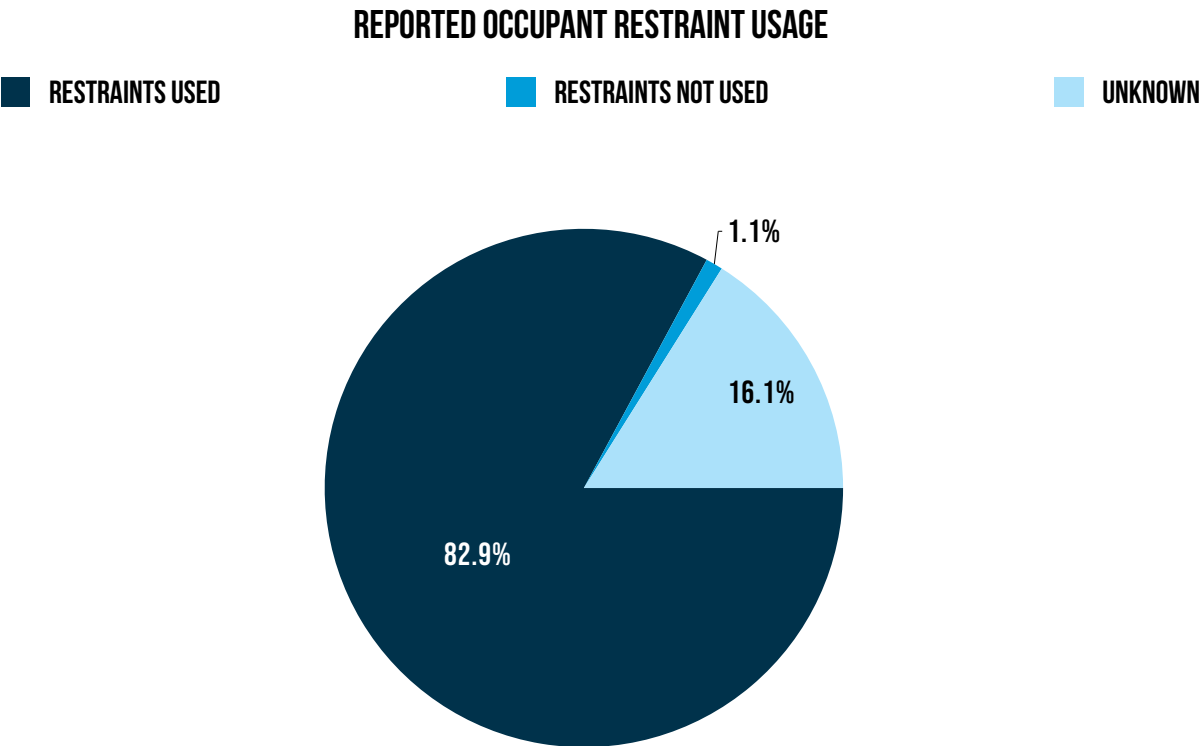
OCCUPANTS INJURED



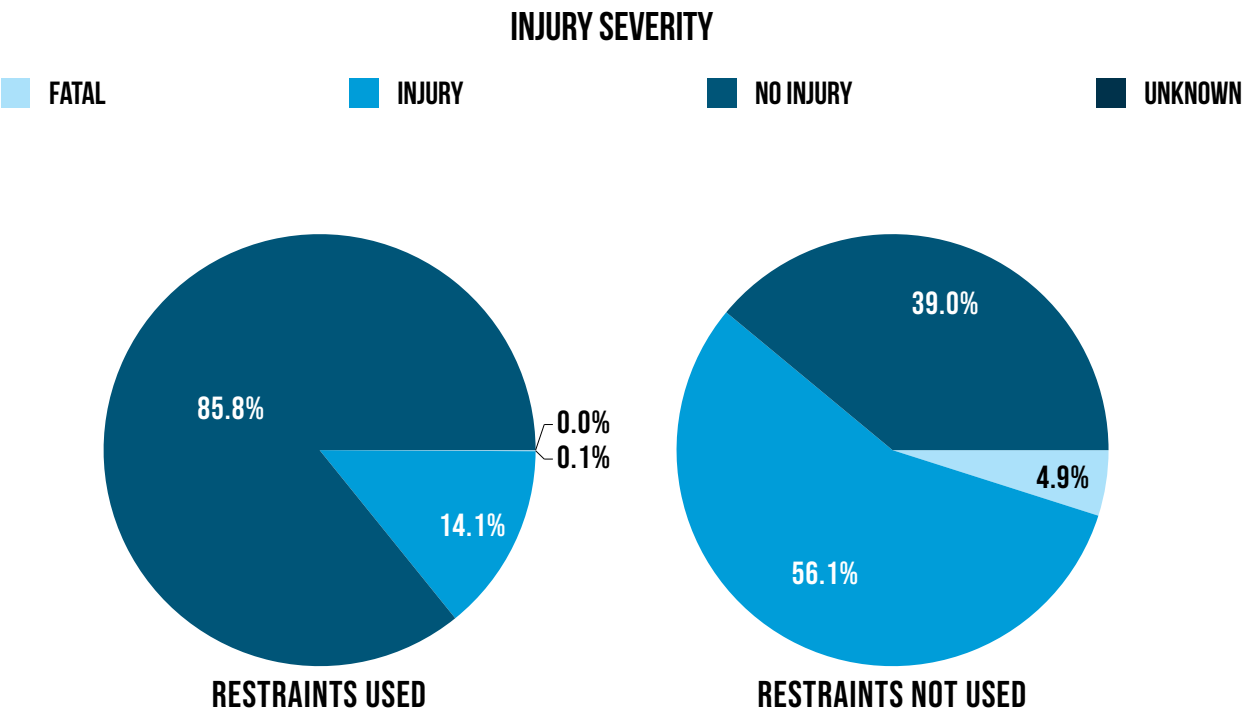
The majority (51.9%) of occupants injured in traffic crashes in 2021 were female.

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

REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS



Of the 488,392 drivers and injured passengers involved in crashes, 404,682 (82.9%) were REPORTED to be using occupant restraints.



Occupants in crashes were 60 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 | 390,948 | 96.9 | 261 | 2,403 | 12,925 | 28,817 | 346,542 |
| Center Front | 526 | 0.1 | 1 | 20 | 80 | 222 | 203 |
| Right Front | 8,979 | 2.2 | 51 | 428 | 1,879 | 6,234 | 387 |
| Left Rear Second Seat | 1,225 | 0.3 | 2 | 71 | 271 | 881 | 0 |
| Center Rear Second Seat | 173 | 0.0 | 0 | 7 | 31 | 135 | 0 |
| Right Rear Second Seat | 1,212 | 0.3 | 6 | 54 | 251 | 901 | 0 |
| Left Rear Third Seat | 152 | 0.0 | 0 | 10 | 33 | 109 | 0 |
| Center Rear Third Seat | 29 | 0.0 | 0 | 2 | 10 | 17 | 0 |
| Right Rear Third Seat | 117 | 0.0 | 0 | 5 | 22 | 90 | 0 |
| Left Rear Fourth Seat | 11 | 0.0 | 0 | 2 | 3 | 6 | 0 |
| Center Rear Fourth Seat | 8 | 0.0 | 0 | 2 | 3 | 3 | 0 |
| Right Rear Fourth Seat | 14 | 0.0 | 0 | 1 | 5 | 8 | 0 |
| Other Passenger Area | 14 | 0.0 | 1 | 0 | 3 | 10 | 0 |
| Unknown | 129 | 0.0 | 1 | 0 | 4 | 22 | 102 |
| Uncoded & Errors | 2 | 0.0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL † | 403,539 | 100.0 | 323 | 3,005 | 15,520 | 37,456 | 347,235 |

* 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 | 3,663 | 71.2 | 204 | 515 | 589 | 594 | 1,761 |
| Center Front | 62 | 1.2 | 3 | 5 | 16 | 23 | 15 |
| Right Front | 463 | 9.0 | 28 | 121 | 145 | 151 | 18 |
| Left Rear Second Seat | 184 | 3.6 | 4 | 33 | 56 | 91 | 0 |
| Center Rear Second Seat | 63 | 1.2 | 2 | 15 | 22 | 24 | 0 |
| Right Rear Second Seat | 241 | 4.7 | 9 | 41 | 72 | 119 | 0 |
| Left Rear Third Seat | 36 | 0.7 | 1 | 2 | 13 | 20 | 0 |
| Center Rear Third Seat | 9 | 0.2 | 0 | 1 | 3 | 5 | 0 |
| Right Rear Third Seat | 26 | 0.5 | 1 | 2 | 9 | 14 | 0 |
| Left Rear Fourth Seat | 8 | 0.2 | 0 | 0 | 5 | 3 | 0 |
| Center Rear Fourth Seat | 2 | 0.0 | 0 | 0 | 0 | 2 | 0 |
| Right Rear Fourth Seat | 6 | 0.1 | 0 | 1 | 1 | 4 | 0 |
| Other Passenger Area | 88 | 1.7 | 1 | 12 | 12 | 61 | 2 |
| Unknown | 291 | 5.7 | 1 | 7 | 20 | 26 | 237 |
| Uncoded & Errors | 0 | 0.0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL † | 5,142 | 100.0 | 254 | 755 | 963 | 1,137 | 2,033 |

* 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 three occupants 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 | 25 | 13.5 | 0 | 0 | 2 | 23 |
| No Belts Used | 6 | 3.2 | 0 | 0 | 1 | 5 |
| Child Restraint Used - Forward Facing | 22 | 11.9 | 1 | 0 | 3 | 18 |
| Child Restraint Used - Rear Facing | 110 | 59.5 | 0 | 4 | 7 | 99 |
| Child Restraint Used - Booster Seat | 1 | 0.5 | 0 | 0 | 0 | 1 |
| Child Restraint Not Used | 7 | 3.8 | 0 | 1 | 4 | 2 |
| Restraint Failed | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Unknown | 14 | 7.6 | 0 | 2 | 2 | 10 |
| Total | 185 | 100.0 | 1 | 7 | 19 | 158 |
| AGE 1 | | | | | | |
| Belts Used | 10 | 6.1 | 0 | 3 | 0 | 7 |
| No Belts Used | 3 | 1.8 | 0 | 1 | 1 | 1 |
| Child Restraint Used - Forward Facing | 64 | 39.0 | 0 | 0 | 11 | 53 |
| Child Restraint Used - Rear Facing | 67 | 40.9 | 0 | 0 | 11 | 56 |
| Child Restraint Used - Booster Seat | 5 | 3.0 | 0 | 0 | 0 | 5 |
| Child Restraint Not Used | 5 | 3.0 | 0 | 1 | 3 | 1 |
| Restraint Failed | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Unknown | 10 | 6.1 | 0 | 0 | 2 | 8 |
| Total | 164 | 100.0 | 0 | 5 | 28 | 131 |
| AGE 2 | | | | | | |
| Belts Used | 19 | 11.0 | 0 | 1 | 2 | 16 |
| No Belts Used | 2 | 1.2 | 0 | 0 | 1 | 1 |
| Child Restraint Used - Forward Facing | 107 | 62.2 | 0 | 2 | 21 | 84 |
| Child Restraint Used - Rear Facing | 19 | 11.0 | 0 | 1 | 1 | 17 |
| Child Restraint Used - Booster Seat | 8 | 4.7 | 0 | 0 | 1 | 7 |
| Child Restraint Not Used | 7 | 4.1 | 0 | 1 | 3 | 3 |
| Restraint Failed | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Unknown | 10 | 5.8 | 0 | 0 | 2 | 8 |
| Total | 172 | 100.0 | 0 | 5 | 31 | 136 |

REPORTED RESTRAINT USE - CHILDREN (CONTINUED)

| RESTRAINT USAGE | CHILDREN | | FATAL | INJURY | | |
|---------------------------------------|----------|------------|-------|--------|-----|-------|
| | Number | % of Total | | A | B | C |
| AGE 3 | | | | | | |
| Belts Used | 25 | 11.4 | 0 | 0 | 5 | 20 |
| No Belts Used | 3 | 1.4 | 0 | 0 | 1 | 2 |
| Child Restraint Used - Forward Facing | 137 | 62.3 | 1 | 6 | 30 | 100 |
| Child Restraint Used - Rear Facing | 10 | 4.5 | 0 | 1 | 4 | 5 |
| Child Restraint Used - Booster Seat | 19 | 8.6 | 2 | 1 | 5 | 11 |
| Child Restraint Not Used | 8 | 3.6 | 0 | 2 | 5 | 1 |
| Restraint Failed | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Unknown | 18 | 8.2 | 0 | 2 | 5 | 11 |
| Total | 220 | 100.0 | 3 | 12 | 55 | 150 |
| AGE 4-7 | | | | | | |
| Belts Used | 361 | 35.9 | 1 | 8 | 75 | 277 |
| No Belts Used | 52 | 5.2 | 2 | 3 | 19 | 28 |
| Child Restraint Used - Forward Facing | 275 | 27.4 | 1 | 7 | 61 | 206 |
| Child Restraint Used - Rear Facing | 9 | 0.9 | 0 | 0 | 3 | 6 |
| Child Restraint Used - Booster Seat | 188 | 18.7 | 1 | 5 | 47 | 135 |
| Child Restraint Not Used | 38 | 3.8 | 2 | 4 | 12 | 20 |
| Restraint Failed | 1 | 0.1 | 0 | 0 | 1 | 0 |
| Unknown | 81 | 8.1 | 1 | 7 | 18 | 55 |
| Total | 1,005 | 100.0 | 8 | 34 | 236 | 727 |
| AGE 8-15 | | | | | | |
| Belts Used | 1,873 | 79.2 | 4 | 71 | 392 | 1,406 |
| No Belts Used | 199 | 8.4 | 5 | 38 | 72 | 84 |
| Child Restraint Used - Forward Facing | 35 | 1.5 | 0 | 0 | 7 | 28 |
| Child Restraint Used - Rear Facing | 0 | 0.0 | 0 | 0 | 0 | 0 |
| Child Restraint Used - Booster Seat | 45 | 1.9 | 0 | 0 | 12 | 33 |
| Child Restraint Not Used | 8 | 0.3 | 0 | 0 | 3 | 5 |
| Restraint Failed | 3 | 0.1 | 0 | 0 | 1 | 2 |
| Unknown | 201 | 8.5 | 1 | 21 | 40 | 139 |
| Total | 2,364 | 100.0 | 10 | 130 | 527 | 1,697 |

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.

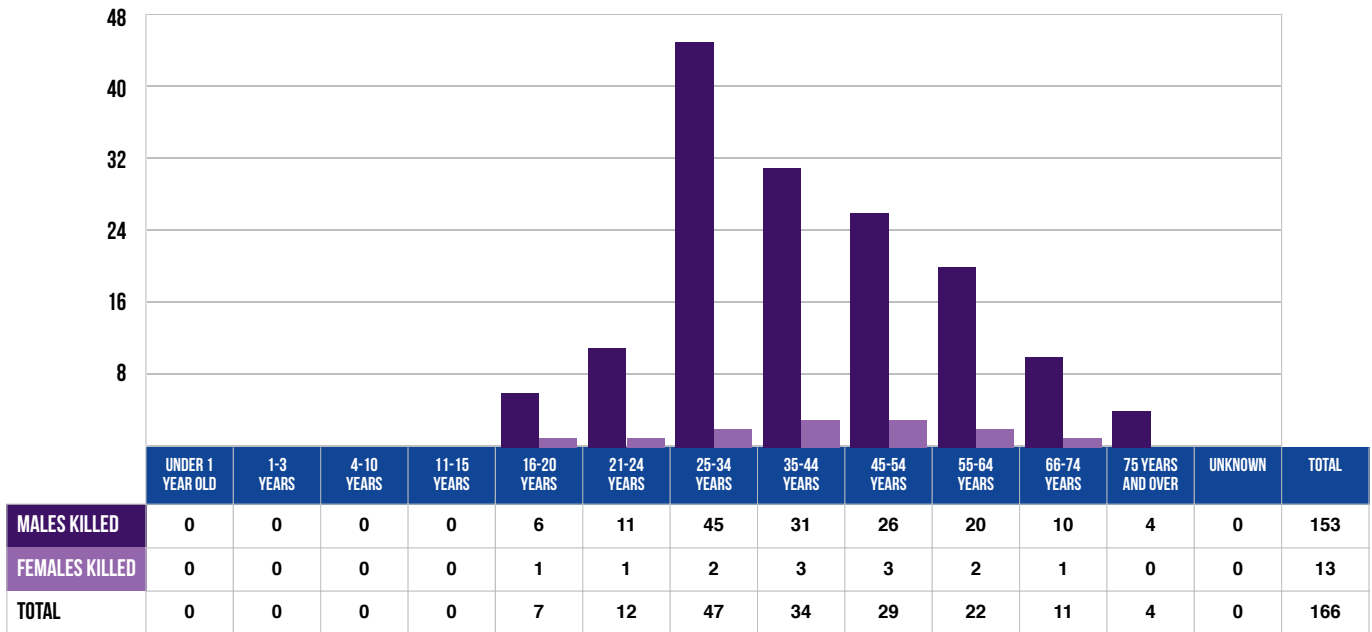
MOTOR VEHICLE OCCUPANT INJURY SEVERITY BY KNOWN AIRBAG DEPLOYMENT

| MOTOR VEHICLE OCCUPANT AIRBAG DEPLOYMENT | OCCUPANTS* | | FATAL | OCCUPANT INJURY SEVERITY | | | NO INJURY |
|---|----------------|--------------|------------|--------------------------|---------------|---------------|----------------|
| | Number | % of Total | | A | B | C | |
| Deployed - Front | 37,462 | 7.6 | 208 | 1,238 | 5,146 | 8,805 | 22,064 |
| Deployed - Side | 5,088 | 1.0 | 18 | 120 | 493 | 1,178 | 3,279 |
| Deployed - Curtain | 3,830 | 0.8 | 11 | 88 | 484 | 973 | 2,274 |
| Deployed - Combination | 29,022 | 5.9 | 261 | 1,620 | 5,248 | 8,589 | 13,302 |
| Deployed - Other | 400 | 0.1 | 1 | 8 | 52 | 95 | 244 |
| Not Deployed | 348,225 | 70.7 | 148 | 1,232 | 6,247 | 21,901 | 318,679 |
| Not Equipped | 11,068 | 2.2 | 207 | 1,072 | 1,567 | 1,392 | 5,416 |
| Unknown | 50,854 | 10.3 | 65 | 125 | 316 | 823 | 6,549 |
| Uncoded & Errors | 6,683 | 1.4 | 0 | 1 | 2 | 6 | 9 |
| TOTAL | 492,632 | 100.0 | 919 | 5,504 | 19,555 | 43,762 | 371,816 |

*Includes 51,076 occupants (drivers and passengers) with unknown injury severity.

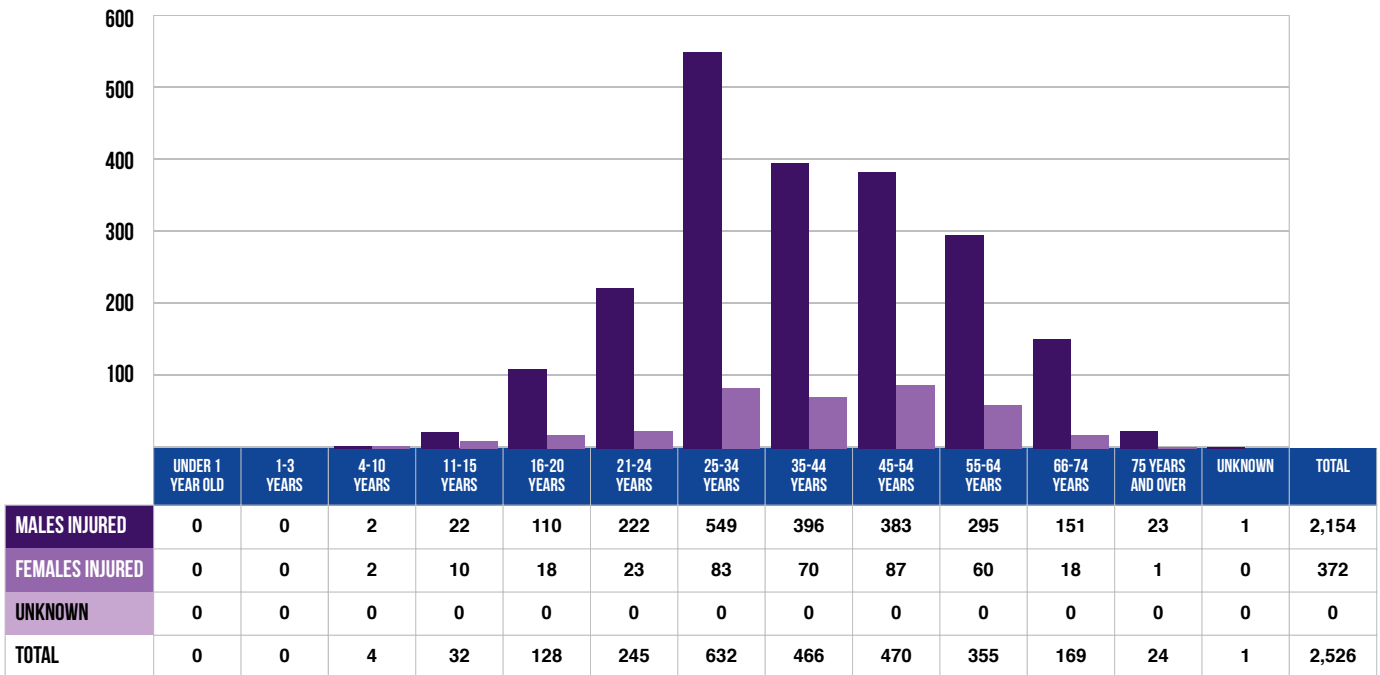
AGE AND GENDER OF MOTORCYCLISTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

MOTORCYCLISTS KILLED



Of the 166 motorcyclists killed in traffic crashes in 2021, 92.2 percent were male. In comparison, 72.4 percent of all occupants killed in crashes were male.

MOTORCYCLISTS INJURED



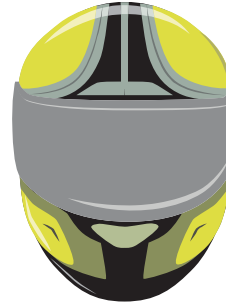
Of the 2,526 motorcyclists injured in traffic crashes in 2021, 85.3 percent were male. In comparison, 48.1 percent of all occupants injured in crashes were male.

MOTORCYCLE HELMET USAGE AND INJURY SEVERITY

| AGE OF MOTORCYCLIST | FATALITIES | INJURY | | | NO INJURY |
|------------------------|------------|--------|-------|-----|-----------|
| | | A | B | C | |
| HELMET WORN | | | | | |
| 3 years and under | 0 | 0 | 0 | 0 | 0 |
| 4 - 10 years | 0 | 0 | 1 | 2 | 1 |
| 11 - 15 years | 0 | 4 | 8 | 5 | 1 |
| 16 - 20 years | 3 | 30 | 44 | 20 | 19 |
| 21 - 24 years | 7 | 44 | 82 | 46 | 50 |
| 25 - 34 years | 20 | 111 | 174 | 74 | 103 |
| 35 - 44 years | 14 | 53 | 103 | 58 | 77 |
| 45 - 54 years | 14 | 62 | 109 | 55 | 83 |
| 55 - 64 years | 8 | 70 | 86 | 44 | 67 |
| 65 - 74 years | 7 | 37 | 48 | 29 | 44 |
| 75 years and over | 2 | 7 | 11 | 3 | 5 |
| Unknown | 0 | 0 | 0 | 0 | 0 |
| Subtotal | 75 | 418 | 666 | 336 | 450 |
| HELMET NOT WORN | | | | | |
| 3 years and under | 0 | 0 | 0 | 0 | 0 |
| 4 - 10 years | 0 | 0 | 0 | 0 | 0 |
| 11 - 15 years | 0 | 5 | 6 | 3 | 0 |
| 16 - 20 years | 2 | 12 | 12 | 3 | 4 |
| 21 - 24 years | 4 | 24 | 25 | 12 | 17 |
| 25 - 34 years | 25 | 90 | 94 | 50 | 60 |
| 35 - 44 years | 13 | 88 | 83 | 48 | 50 |
| 45 - 54 years | 11 | 69 | 97 | 37 | 44 |
| 55 - 64 years | 13 | 65 | 55 | 21 | 32 |
| 65 - 74 years | 3 | 14 | 30 | 6 | 10 |
| 75 years and over | 1 | 0 | 2 | 1 | 0 |
| Unknown | 0 | 0 | 0 | 0 | 0 |
| Subtotal | 72 | 367 | 404 | 181 | 217 |
| HELMET USE UNKNOWN | | | | | |
| 3 years and under | 0 | 0 | 0 | 0 | 1 |
| 4 - 10 years | 0 | 1 | 0 | 0 | 0 |
| 11 - 15 years | 0 | 1 | 0 | 0 | 0 |
| 16 - 20 years | 2 | 2 | 3 | 2 | 0 |
| 21 - 24 years | 1 | 1 | 7 | 3 | 5 |
| 25 - 34 years | 2 | 11 | 17 | 11 | 22 |
| 35 - 44 years | 7 | 12 | 13 | 8 | 18 |
| 45 - 54 years | 4 | 17 | 15 | 9 | 11 |
| 55 - 64 years | 1 | 7 | 5 | 2 | 12 |
| 65 - 74 years | 1 | 1 | 4 | 0 | 7 |
| 75 years and over | 1 | 0 | 0 | 0 | 2 |
| Unknown | 0 | 0 | 0 | 0 | 0 |
| Subtotal | 19 | 53 | 64 | 35 | 78 |
| TOTAL | 166 | 838 | 1,134 | 552 | 745 |

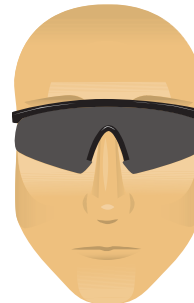
2011 Michigan motor vehicle crash data represents the last full year of data that was collected during Michigan's universal helmet law, enacted in 1969: Michigan Vehicle Code Public Act 300 of 1949, Section 257.658, requiring all motorcycle riders to wear a helmet. On April 13, 2012, Michigan changed 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: 73
PASSENGERS KILLED: 2

HELMET NOT WORN



DRIVERS KILLED: 68
PASSENGERS KILLED: 4

HELMET USE UNKNOWN



DRIVERS KILLED: 18
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 | 580 | 3,733 | 15,867 | 38,577 | 58,757 | 84.3 |
| Motor Home | 0 | 6 | 36 | 94 | 136 | 0.2 |
| Pickup Truck | 112 | 563 | 1,793 | 3,529 | 5,997 | 8.6 |
| Small Truck Under 10,000 lbs. GVWR | 2 | 16 | 46 | 106 | 170 | 0.2 |
| Motorcycle | 166 | 838 | 1,135 | 553 | 2,692 | 3.9 |
| Moped/Goped | 7 | 91 | 189 | 121 | 408 | 0.6 |
| Go-Cart/Golf Cart | 0 | 6 | 25 | 16 | 47 | 0.1 |
| Snowmobile | 5 | 32 | 20 | 12 | 69 | 0.1 |
| Off-Road Vehicle (ORV)/All-Terrain Vehicle (ATV) | 21 | 122 | 130 | 84 | 357 | 0.5 |
| Other (non-registered farm equipment, construction equipment, snow plows, etc.) | 8 | 33 | 52 | 98 | 191 | 0.3 |
| Uncoded & Errors | 0 | 1 | 3 | 7 | 11 | 0.0 |
| Truck/Bus (over 10,000 lbs. GVWR/8+ occupants/hazmat placard) (breakdown below) | 18 | 63 | 259 | 565 | 905 | 1.3 |
| Total Number of Occupants | 919 | 5,504 | 19,555 | 43,762 | 69,740 | 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 | 1 | 0 | 0 | 2 | 3 | 0.3 |
| 10,001-26,000 lbs. | 8 | 19 | 100 | 228 | 355 | 39.2 |
| Greater Than 26,000 lbs. | 9 | 44 | 159 | 335 | 547 | 60.4 |
| Uncoded & Errors | 0 | 0 | 0 | 0 | 0 | 0.0 |
| Total Number of Occupants | 18 | 63 | 259 | 565 | 905 | 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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REFERENCES AND REPORTING AGENCIES

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- [2] Leading Cause of Deaths for Ten Leading Causes by Age Michigan 2020. Michigan Department of Health & Human Services, Division for Vital Records & Health Statistics Section, Lansing, MI.
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<http://idot.illinois.gov>
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[12] Traffic Safety Facts Laws - Bicycle Helmet Laws - January 2008. National Center for Statistics & Analysis, Research & Development, 400 Seventh Street, S.W., Washington, D.C. 20590. (Source: Robert Thompson, A Case Control Study of the Effectiveness of Bicycle Safety Helmets. Centers for Disease Control.)

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[13] Michigan Department of State, Office of Policy and Planning, Research Section, 530 W Allegan St, Lansing, MI 48922.

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D

DAY OF WEEK

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G

GENDER

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H

HAZARDOUS ACTION

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| Driver Age 21-64 | 48 |
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HOLIDAY

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| Female Drivers by Age | 74 | Crashes | 97 |
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| Male Drivers by Age | 72 | Driver Age 65 & Over | 57 |
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| in Motor Vehicle | | PERSONAL INJURY CRASHES | |
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| Driver Age 21-64 | 49 | PERSONS | |
| Driver Age 65 & Over | 56 | Age & Injury Severity | 34–36 |

| | | |
|--|---|----------|
| Gender | Usage in Crashes | 2 |
| Injured | 5 | |
| Killed | 6 | |
| in Alcohol-Involved Crashes | 5 | |
| in Crashes | 5 | |
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| Crashes | All Crashes | 90 |
| Crashes by Injury Severity | Fatal Crashes | 90 |
| Driver Age 16-20 | Injury Crashes | 90 |
| Driver Age 21-64 | | |
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| in Michigan | 3, 7 | |
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| Speed Limit | Age of Drivers Involved in Fatal | 10 |
| | Number of | 2 |
| | Number of Fatal | 2 |
| | Percentage of | 2 |
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| | Driver Hazardous Action | 112 |
| | Heavy Truck/Bus | 129 |
| | in All Crashes | 23 |
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| | in Red-Light-Running Crashes | 121 |
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| Location of First Impact | | |
| | SPEED | |
| | Driver Hazardous Action | 105 |
| | Hazardous Action | |
| | Driver 16-20 | 41 |
| | Driver 21-64 | 48 |
| | Driver 65 & Over | 55 |
| | Heavy Truck/Bus | 126, 130 |
| RESTRAINT USE | | |
| 10 Year Trend | | |
| Driver Killed | | |
| Driver Alcohol and/or Drug Involvement | | |
| Driver Injury Severity | | |
| for Drivers & Injured Passengers | | |
| Passenger Killed | | |
| Occupant Injury Severity | | |
| Reported Belt Use by Seating Position | | |
| Reported Restraint Use - Children | | |

| | | | |
|---|-----|---|--------|
| in Fatal Crashes, Excessive | 2 | Persons Injured by Severity | 5 |
| Limit in Red-Light-Running Crash | 120 | Persons Killed | 6 |
| ORV/ATV Driver Hazardous Action | 112 | Registered Vehicles in Michigan | 7 |
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| TIME OF DAY | | Train Engineers Killed | 6 |
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| HBD Fatal Crashes | 68 | TREND, 10 YEAR | |
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| in All Crashes | 88 | Average Age of Drivers in Crashes | 26 |
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| by Driver 16-20 | 41 | Bicycles in Fatal Crashes | 23 |
| by Driver 21-64 | 48 | Crashes | 14 |
| by Driver 65 & Over | 55 | Death & Injury for Crash-Involved Occupants | 25 |
| in Deer Crashes | 80 | Deer Crashes | 24 |
| in Fatal Crashes | 88 | Drinking Drivers in All Crashes | 21 |
| in Injury Crashes | 88 | Drinking Drivers in Fatal Crashes | 21 |
| Injury Crashes | 70 | Farm Equipment Crashes | 24 |
| TRAFFIC CONTROL | | Fatal Crashes | 15 |
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| TRAIN | | Gender of Drivers in All Crashes | 19 |
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| Fatal Crash Rate | 7 | ORV/ATVs in All Crashes | 23 |
| Fatalities by County, Map | 8 | ORV/ATVs in Fatal Crashes | 23 |
| Gender of Persons Killed | 6 | Pedestrians in All Crashes | 22 |
| Licensed Drivers | 7 | Pedestrians in Fatal Crashes | 22 |
| Michigan Population | 7 | Property Damage Crash Rate | 18 |
| Occupants Involved in Crashes | 7 | Registrations | 14 |
| Passengers Killed | 6 | Restraint Usage | 17 |
| Pedestrians Killed | 6 | Senior Drinking Drivers in All Crashes | 21 |
| Persons in Alcohol-Involved Crashes | 5 | Senior Drinking Drivers in Fatal Crashes | 21 |
| Persons in Crashes | 5 | Senior Drivers in Crashes | 20 |
| Persons Injured by Gender | 5 | Senior Drivers in Fatal Crashes | 20 |

| | |
|--|--------|
| Snowmobiles in All Crashes | 23 |
| Snowmobiles in Fatal Crashes | 23 |
| Teen/Young Adult Drinking Drivers in All Crashes | 21 |
| Teen/Young Adult Drinking Drivers in Fatal Crashes | 21 |
| Teen/Young Adult Drivers in Crashes | 20 |
| Teen/Young Adult Drivers in Fatal Crashes | 20 |
| Total Crash Rate | 18 |
| Total Licensed Drivers | 17 |
| Train Crashes | 24 |
| Vehicle Miles Traveled | 14, 28 |

TREND, 5 YEAR

| | |
|---|----|
| Age of Bicyclists Killed | 11 |
| Age of Drivers Involved in Fatal Crashes | 10 |
| Age of Drivers Involved in Single Vehicle Fatal Crashes | 10 |
| Age of Pedestrians Killed | 11 |
| Age of Persons Killed, Total | 9 |
| Alcohol Involved Fatal Crashes for Select Holiday Periods | 12 |
| Alcohol Involved Fatalities for Select Holiday Periods | 12 |
| Fatal Crashes for Select Holiday Periods | 12 |
| Fatalities | 9 |
| Fatalities by Month | 13 |
| Fatalities for Select Holiday Periods | 12 |
| Percent Vehicle Miles Driven by Month | 13 |

| | |
|---------------------------------|----------------------------|
| TRUCK | (See also Heavy Truck/Bus) |
| Crashes | 97 |
| Crashes by Crash Severity | 98 |
| Driver Age 16-20 | 43 |
| Driver Age 21-64 | 50 |
| Driver Age 65 & Over | 57 |
| in Deer Crashes | 79 |
| Occupant Injury Outcome | 140 |

V

VEHICLE DEFECTS

| | |
|----------------------------|-----|
| in Crash Involvement | 105 |
|----------------------------|-----|

VEHICLE MILES TRAVELED

| | |
|---|-------|
| 10 Year Trend | 14 |
| Estimated Vehicle Miles Traveled | 7 |
| Michigan, U.S. & Surrounding States | 28 |
| Number of | 31–32 |
| Percent Miles Driven by Month | 13 |
| Yearly Totals of | 31–32 |

VEHICLE TYPE

| | |
|----------------------------------|-------|
| Crash Involvement | |
| Driver Age 16-20 | 43 |
| Driver Age 21-64 | 50 |
| Driver Age 65 & Over | 57 |
| in Heavy Truck/Bus Crashes | 129 |
| in Motor Vehicle Crashes | 97–98 |
| Occupant Injury Outcome | 140 |

W

WEATHER CONDITION

| | |
|----------------------|----|
| All Crashes | 91 |
| Fatal Crashes | 91 |
| Injury Crashes | 91 |