

MTCF

Michigan Traffic
Crash Facts

STATEWIDE

2017

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 2017

MichiganTrafficCrashFacts.org

PRODUCED BY:

Michigan Department of State Police
Criminal Justice Information Center-Traffic Crash Statistics
(517) 241-1699
Michigan.gov/cjic

Michigan Office of Highway Safety Planning
(517) 241-1505
Michigan.gov/ohsp

This page left intentionally blank

ACKNOWLEDGEMENTS

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

Criminal Justice Information Center

Fatality Analysis Reporting System

Michigan Department of State Police

Michigan Department of State

Michigan Department of Transportation

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.

This page left intentionally blank

FOREWORD

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 1952-2017.

This page left intentionally blank

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 “Non-truck, no data” will display counts of 0 when selected.

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

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

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

Source of Carrier Information (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.”

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

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

DATA ELEMENTS WITH CHANGES FOR 2016 DATA (CONTINUED)

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

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

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

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

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

EXECUTIVE SUMMARY

The 2017 traffic fatality count was 1,028, down 3.4 percent from the 2016 figure of 1,064. Compared with 2016, injuries were down 1.7 percent and total crashes were up 0.9 percent. These figures translated into a fatality rate of 1.0 per 100 million miles of travel, down 5.8 percent from 2016, and above the 10-year average of 0.97 (2008-2017).

Exposure factors in 2017 showed an increase in vehicle miles traveled, vehicle registrations, and licensed drivers. Vehicle miles traveled were up 2.6 percent to 101.8 billion, motor vehicle registrations increased 1.2 percent to 8.5 million, and the number of licensed drivers was up 0.3 percent to 7.2 million.

Seat belt use in Michigan was observed at 94.1 percent. Alcohol-involved crashes continued to present a problem and contributed to 34.2 percent of all fatal crashes. Crashes involving alcohol made up 3.3 percent of all crashes, and while 18.5 percent of all crashes resulted in injury or death, 43.2 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 April 27, 2018. We acknowledge, with appreciation, all involved agencies for their assistance.

UD-10 (FRONT)

MSP UD - 10 (Rev. 01/2016)
 Authority: 1949 PA 300, Sec. 257 & 22
 Compliance: Required
 Penalty: \$100 and/or 90 days

Revised September 16, 2015

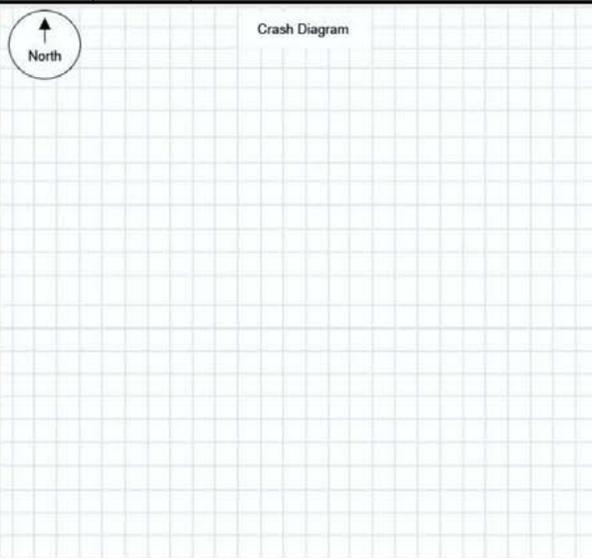
Page _____ of _____
 Incident # _____
 File Class _____ Investigated at Scene
 Yes No

State of Michigan Traffic Crash Report

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

UD-10 (BACK)

Unit / Driver												
Unit Number		Driver's License State / Number				Date of Birth			Unit Type		Sex	
[][]		[][]/[][]/[][][][][]				M M / D D / Y Y Y Y			<input type="radio"/> MV <input type="radio"/> B <input type="radio"/> P <input type="radio"/> E (Train)		<input type="radio"/> M <input type="radio"/> F	
Name						<input type="radio"/> Driver is Owner		License Type		<input type="radio"/> O <input type="radio"/> C <input type="radio"/> M		
Street Address						Endorsements		<input type="radio"/> CY <input type="radio"/> F <input type="radio"/> R				
City			State		Zip		Phone Number		Injury			
[][][]			[]		[][][]		[][][][]		<input type="radio"/> K <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> O			
Position	Restraint	Airbag	Ejected	Condition at Time of Crash		Driver Distracted By		Total Occupants	Hospital Code		Ambulance Code	
[]	[]	[]	<input type="radio"/>	1 st [][] 2 nd [][]		[][][]		[][]	[][][]		[][][]	
Citation Issued				Hazardous Action		Action Prior		Sequence of Events (M = Most Harmful Event)				
<input type="radio"/> Hazardous <input type="radio"/> Other				[][][]		[][][]		1 st [][] 2 nd [][] 3 rd [][] 4 th [][] M M M M				
Alcohol Suspected		Contributing Factor		Test Type		Breath		Blood		Urine		
<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Field <input type="radio"/> PBT		<input type="radio"/> Refused <input type="radio"/> Not Offered		<input type="radio"/> Refused <input type="radio"/> Not Offered		Test Results [][][] <input type="radio"/> Results Pending		
Drug Suspected		Contributing Factor		Test Type		Blood		Urine		Interlock Device		
<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Field <input type="radio"/> Refused		<input type="radio"/> Refused <input type="radio"/> Not Offered		<input type="radio"/> Refused <input type="radio"/> Not Offered		<input type="radio"/> Yes <input type="radio"/> No		
Vehicle												
Vehicle Registration				State		Insurance Company				Policy Number		
[][][][]				[]		[][][][]				[][][][]		
VIN						Year		Make		Model		
[][][][][][][][][][][][][][]						[]		[][]		[][][]		
Vehicle Type		Location of Greatest Damage		1 st Impact		Extent of Damage		Vehicle Direction		Private Trailer Type	Vehicle Defect	
[][]		[][][]		[][]		[][][]		[][][]		[][]	[][]	
Passengers												
Name										Ejected		
[][][][]										<input type="radio"/>		
Street Address										Sex		
[][][][]										<input type="radio"/> M <input type="radio"/> F		
City			State		ZIP		Phone		Injury			
[][][]			[]		[][][]		[][][][]		<input type="radio"/> K <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> O			
Date of Birth		Position	Restraint	Airbag	Hospital Code		Ambulance Code					
M M / D D / Y Y Y Y		[]	[]	[]	[][][]		[][][][]					
Name										Ejected		
[][][][]										<input type="radio"/>		
Street Address										Sex		
[][][][]										<input type="radio"/> M <input type="radio"/> F		
City			State		ZIP		Phone		Injury			
[][][]			[]		[][][]		[][][][]		<input type="radio"/> K <input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> O			
Date of Birth		Position	Restraint	Airbag	Hospital Code		Ambulance Code					
M M / D D / Y Y Y Y		[]	[]	[]	[][][]		[][][][]					
<input type="radio"/> Owner	Name	Address										
<input type="radio"/> Uninjured Passenger	Phone	Age	Pos.	Rest.								
<input type="radio"/> Witness	Name	Address										
<input type="radio"/> Owner	Phone	Age	Pos.	Rest.								
<input type="radio"/> Uninjured Passenger	Name	Address										
<input type="radio"/> Witness	Phone	Age	Pos.	Rest.								
Truck / Bus												
Unit #	Carrier Name											
[]	[][][][]											
Address												
[][][][]												
City			State		ZIP							
[][][]			[]		[][][]							
GVWR / GCWR			<input type="radio"/> 10,000 LBS or Less <input type="radio"/> 10,001 - 26,000 LBS <input type="radio"/> 26,001 LBS or More									
Vehicle Configuration		Cargo Body Type		HAZMAT		HAZMAT ID		HAZMAT Class				
[][]		[][]		<input type="radio"/> Placard <input type="radio"/> Cargo Spill		[][][]		[][][]				
USDOT			MC			MPSC						
[][][]			[][]			[][][][]						
CDL Type				Endorsements								
<input type="radio"/> A <input type="radio"/> B <input type="radio"/> C <input type="radio"/> None				<input type="radio"/> H <input type="radio"/> P <input type="radio"/> T <input type="radio"/> N <input type="radio"/> S <input type="radio"/> X								
Medical Card		Exempt		Remarks / Narrative								
<input type="radio"/> Yes <input type="radio"/> No		<input type="radio"/> Fam <input type="radio"/> Other		[][][][]								
UD -10 Serial Number												
[][][][]												



This page left intentionally blank

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.

This page left intentionally blank

ABBREVIATIONS & ACRONYMS

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

See Glossary for definitions.

- **MCLS** **Michigan Crash Location System**
- **MDCH** **Michigan Department of Community Health**
(formerly Michigan Department of Public Health.)
- **MDOS** **Michigan Department of State**
- **MDOT** **Michigan Department of Transportation**
- **NHTSA** **National Highway Traffic Safety Administration**
A part of the United States Department of Transportation.
- **OHSP** **Office of Highway Safety Planning**
A division of the Michigan Department of State Police.
- **ORV** **Off-Road Vehicle**

ABBREVIATIONS & ACRONYMS (CONTINUED)

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

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

Note: Access is controlled by roadway configuration, not traffic control devices such as, "No Left Turn" signs, etc.

- **Bicycle** - A device propelled by human power upon which a person may ride, having either two or three wheels in a tandem or tricycle arrangement, all of which are over 14 inches in diameter.
- **Bicyclist** - An operator or passenger riding a bicycle.
- **Bus (Also see School Bus)** - Any passenger-carrying vehicle designed to transport 18 or more passengers, including the driver.
- **Crash Date** - The date the crash occurred. If the date is unknown, and cannot be reasonably estimated, use the date the crash was discovered by the complainant or the date reported. A valid date is necessary to update records of each involved driver.
- **Crash Rate** - The number of crashes per 100 million vehicle miles traveled.
- **Crash Type** - A crash is typed by the first injury or damage-producing event, which may or may not be the most serious or significant event.
- **Death Rate** - Deaths per 100 million vehicle miles traveled.
- **Driver/Operator** - The person who is in actual physical control of a vehicle in transit.
- **Driver Condition** - Apparent condition of the driver which may have contributed to the crash. Appeared normal; had been drinking; illegal drug use; sick; fatigue; asleep; medication (prescription and over the counter medication); distracted (inside or outside of the unit); using cellular phone; unknown.
- **Drug-Involved Crash** - Drug use prior to the crash by a driver, pedestrian, or cyclist as reported by the police, the coroner, or other accepted authorities.
- **Engineer** - Engineer (railroad train)
- **Fatal Crash** - A fatality is counted when a person dies due to injuries from a traffic crash. Prior to 1979, deaths were counted if they occurred up to one year after the crash; in 1979 this time period was reduced to 90 days. In 1988 this was further reduced to 30 days.
- **Graduated Driver Licensing** - Michigan Public Act 387 effective April 1, 1997, phasing in teenage driving privileges.
- **Had Been Drinking (HBD) Crash** - Drinking prior to the crash by a driver, pedestrian, or cyclist as reported by the police, the coroner, or other accepted authorities. Beginning with year 2000 data, the information provided for alcohol contains data for alcohol-involved crashes only. This figure DOES NOT include the combined number for alcohol and drug involved crashes as has been reported in prior years.
- **Harmful Event** - A harmful event is an occurrence of injury or damage.

GLOSSARY (CONTINUED)

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

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

- **Ignition Interlock** - An alcohol concentration measuring device 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 non-collision crashes include explosion or fire in vehicle, rollover, immersion, etc.
- **Occupant** - Any injured or killed person in or on a motor vehicle, including all drivers.
- **Passenger** - Any person in or on a motor vehicle, excluding the driver.
- **Pedestrian** - Any person on foot; person on skis, skates or roller blades; rider of horse; horse and buggy (each occupant including the driver will be listed as a separate pedestrian unit); non-motorized wheelchair.
- **Property Damage Only (PDO) Crash** - A crash 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.

TABLE OF CONTENTS

QUICK FACTS AND FIGURES

2017 Quick Facts.....	3
Michigan Crash Watch 2017.....	4

HISTORICAL INFORMATION

1 Year (2016-2017)	
Statewide 2016-2017 Summary Trends.....	7
2017 Cost of Crashes in Michigan.....	9
Where Traffic Fatalities Occurred.....	10
5 Year (2013-2017)	
Fatalities by Age.....	11
Age of Drivers Involved in Fatal Crashes.....	12
Age of Drivers Involved in Single Vehicle Fatal Crashes.....	12
Age of Bicyclists Killed.....	13
Age of Pedestrians Killed.....	13
Fatal Crashes and Persons Killed for Select Holiday Periods in Michigan.....	14
Motor Vehicle Crash Deaths and Mileage by Month.....	15
2015 Percent Deaths and Percent Miles Driven.....	15
10 Year (2008-2017)	
Vehicle Registrations.....	17
Vehicle Miles Traveled.....	17
Crashes.....	17
Deaths.....	18
Injuries.....	18
Fatal Crashes.....	18
Alcohol-Involved Fatalities.....	19
Alcohol-Involved Injuries.....	19
Alcohol-Involved Fatal Crashes.....	19
Restraint Usage in Crashes.....	20
Drivers in Michigan.....	20
Mileage Death Rate.....	20
Total Crash Rate.....	21
Injury Crash Rate.....	21
Property Damage Crash Rate.....	21
Male vs. Female Drivers in All Crashes.....	22
Male vs. Female Drivers in Fatal Crashes.....	22
Male vs. Female Drinking Drivers in All Crashes	22
All Drivers in All and Fatal Crashes.....	23

TABLE OF CONTENTS (CONTINUED)

Teen/Young Adult Drivers in All and Fatal Crashes.....	23
Elderly Drivers in All and Fatal Crashes.....	23
All Drinking Drivers in All and Fatal Crashes.....	24
Teen/Young Adult Drinking Drivers in All and Fatal Crashes.....	24
Elderly Drinking Drivers in All and Fatal Crashes.....	24
Motor Vehicles in All and Fatal Crashes.....	25
Motorcycles in All and Fatal Crashes.....	25
Pedestrians in All and Fatal Crashes.....	25
Bicycles in All and Fatal Crashes.....	26
Snowmobiles on Michigan Roadways in All and Fatal Crashes.....	26
ORV/ATVs on Michigan Roadways in All and Fatal Crashes.....	26
Vehicle-Train Crashes.....	27
Vehicle-Deer Crashes.....	27
Farm Equipment Crashes.....	27
Injured Occupants in Crashes.....	28
Death & Injury for Crash-Involved Occupants.....	28
Average Age of Drivers in Crashes 2008-2017.....	29
Mileage Death Rates 2008-2017.....	30
Michigan, U.S. and Surrounding States - Fatalities and VMT.....	31
Years (1962-2017)	
Motor Vehicle Traffic Deaths in Michigan by Month.....	33
Motor Vehicle Traffic Crash and Related Data.....	35

AGE

Age and Injury Severity by Person Type.....	39
Driver Age 16-20	
Driver Action Prior to Crash.....	42
Most Harmful Event.....	43
Crash Type.....	45
Relationship to Roadway.....	45
Roadway Type.....	45
Time of Day.....	46
Hazardous Action.....	46
Day of Week.....	47
Driver Gender.....	47
Number of Occupants.....	47
Vehicle Type.....	48

TABLE OF CONTENTS (CONTINUED)

Driver Age 21-64	
Driver Action Prior to Crash.....	49
Most Harmful Event.....	50
Crash Type.....	52
Relationship to Roadway.....	52
Roadway Type.....	52
Time of Day.....	53
Hazardous Action.....	53
Day of Week.....	54
Driver Gender.....	54
Number of Occupants.....	54
Vehicle Type.....	55
Driver Age 65 & Over	
Driver Action Prior to Crash.....	56
Most Harmful Event.....	57
Crash Type.....	59
Relationship to Roadway.....	59
Roadway Type.....	59
Time of Day.....	60
Hazardous Action.....	60
Day of Week.....	61
Driver Gender.....	61
Number of Occupants.....	61
Vehicle Type.....	62

ALCOHOL

Roadway Injury Experience for Persons Who Had Been Drinking and/or Using Drugs..	65
Driver Drinking and/or Using Drugs and Injury Severity in Crash by Age.....	66
All Crashes and HBD Crashes by Injury Severity.....	67
Death & Injury for Crash Involved Occupants.....	68
Occupants in Had-been-drinking Crashes.....	68
All Drivers and HBD Drivers Injury Severity - Ejected vs. Not Ejected.....	69
All Occupants and Occupants of Had-been-drinking Crashes Injury Severity - Ejected vs. Not Ejected.....	70
Injury Severity & Restraint Use by Driver Injury.....	71
Injury Severity & Restraint Use by Occupant Injury.....	72
Alcohol Involvement in Fatal Crashes.....	73
Alcohol Involvement in Injury Crashes.....	75

TABLE OF CONTENTS (CONTINUED)

Male Drivers by Age & Injury Severity in Crash.....	78
Male Drinking Drivers by Age & Injury Severity in Crash.....	79
Female Drivers by Age & Injury Severity in Crash.....	80
Female Drinking Drivers by Age & Injury Severity in Crash.....	81
Traffic Fatalities with Drinking Involvement by County.....	82
County Ranking by HBD Fatal Crash Rate.....	83

DEER

Michigan Motor Vehicle-Deer Involved Crashes.....	87
Light Condition and Time of Day in Motor Vehicle-Deer Crashes.....	88
Monthly and Seasonal Rates for Motor Vehicle-Deer Crashes.....	89

CRASH - CIRCUMSTANCES COMMON TO ALL TRAFFIC UNITS IN A CRASH

All Crashes Injury Severity by Month.....	93
Crash Experience by Highway Class.....	95
Crash Experience by Crash Type.....	96
Relationship to Roadway.....	96
Time of Day.....	97
Day of Week.....	98
Road Condition.....	99
Weather Condition.....	100
Light Condition.....	101
Intersection Crashes by Traffic Control Type.....	102
Construction Zone Crashes.....	103

VEHICLE/DRIVER - CHARACTERISTICS SPECIFIC TO INDIVIDUAL TRAFFIC UNITS

Vehicle Type and Crash Involvement.....	107
Vehicle Types in Crashes by Crash Severity.....	108
Action Prior to Crash - Driver Action.....	109
Action Prior to Crash - Motorcyclist Action.....	110
Action Prior to Crash - Bicyclist Action.....	111
Action Prior to Crash - Pedestrian Action.....	112
Most Harmful Event.....	113
Vehicle Defects in Crash Involvement.....	115
Driver Hazardous Action.....	115
Michigan Bicycle Crashes.....	116
Michigan Pedestrian Crashes.....	117
Michigan Snowmobile Crashes on Public Roadways - Most Harmful Event.....	118

TABLE OF CONTENTS (CONTINUED)

Michigan ORV/ATV Crashes on Public Roadways - Most Harmful Event.....	120
Michigan Snowmobile Crashes on Public Roadways.....	122
Michigan ORV/ATV Crashes on Public Roadways.....	122
Michigan Farm Equipment Crashes.....	123
Michigan Vehicle-Train Crashes.....	123
Michigan Motorcycle Crashes.....	123
Driver Gender Information.....	124
Person Age - Demographics and Crash Involvements.....	125
Crash Rate per Licensed Driver by Age of Driver in All Crashes.....	126
Driver Age.....	127
Driver Condition.....	128
Driver Injury Severity by Restraint, Alcohol, and Drug Use.....	128
RED-LIGHT-RUNNING CRASHES	
Red-Light-Running Definition.....	129
Speed Limit.....	130
Crash Type.....	130
Special Circumstances.....	131
Possible Conditions of Persons in Crashes.....	131
HEAVY TRUCK/BUS	
Heavy Truck/Bus Definition.....	133
Driver Action Prior to Crash.....	134
Most Harmful Event.....	135
Crash Type.....	137
Hazardous Action.....	137
Relationship to Roadway.....	138
Time of Day.....	138
Roadway Type.....	138
Day of Week.....	139
Driver Gender.....	139
Number of Occupants	139
Vehicle Type.....	140
Hazardous Citation Issued.....	141
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.....	145
Reported Occupant Restraint Usage for All Drivers and Injured Passengers	146
Motor Vehicle Occupants & Injury Severity by Seating Position and Known Belt Usage.....	147

TABLE OF CONTENTS (CONTINUED)

Reported Restraint Use - Children.....	148
Motor Vehicle Occupant Injury Severity by Known Airbag Deployment.....	150
Age and Gender of Motorcyclists Killed or Injured in Motor Vehicle Crashes.....	151
Motorcycle Helmet Usage and Injury Severity.....	152
Occupant Injury Outcome by Vehicle Type.....	153

REFERENCES

References and Reporting Agencies.....	157
--	-----

INDEX

Index.....	161
------------	-----

QUICK FACTS AND FIGURES

2017 QUICK FACTS

- Some exposure factor comparisons between 2017 and 2016 show motor vehicle registrations increased 1.2 percent, the number of licensed drivers on Michigan roads increased 0.3 percent, and vehicle mileage increased 2.6 percent.
- The 2017 fatality rate of 1.01 deaths per 100 million miles of travel is a decrease from the 2016 fatality rate of 1.07 but is higher than the 10-year average of 0.97 (2008-2017).
- There were 1,028 people killed and 78,394 people injured in 314,921 reported motor vehicle traffic crashes in Michigan during 2017. Compared with the 2016 experience, the number of deaths decreased 3.4 percent, people injured decreased 1.7 percent, and total reported crashes increased 0.9 percent.
- There were 314,921 reported crashes, of which 937 were fatal, 57,263 were personal injury, and 256,721 were property damage only crashes.
- Of all fatal crashes, 30.3 percent occurred at intersections.
- Of all fatal crashes, 34.2 percent involved at least one drinking operator, bicyclist, or pedestrian, 21.3 percent involved drinking but no drugs, 10.8 percent involved drugs but no drinking, and 12.8 percent involved both drinking and drugs.
- Excessive speed was indicated as the hazardous action for 10.5 percent of the drivers involved in fatal crashes.
- Of the 314,921 total crashes in 2017, 106,901 (33.9%) involved one vehicle only. This is an increase of 3.3 percent from last year's count of 103,438 single-vehicle crashes.
- Of the 937 fatal crashes, 449 (47.9%) involved one vehicle.
- Of the 320 alcohol-involved fatal crashes, 197 (61.6%) involved one vehicle. This is a 15.2 percent increase from last year's figure of 171 single vehicle, alcohol-involved fatal crashes.
- Of the 1,530 drivers involved in fatal crashes, 121 (7.9%) were under 21 years of age and 295 (19.3%) were under 25 years of age.
- Of the 9,962,311 people living in Michigan [1. References and Reporting Agencies] one out of every 9,691 was killed in a traffic crash and one out of every 127 was injured.
- For each person killed, 76 people were injured.
- According to 2016 data provided by the Michigan Department of Health and Human Services [2. References and Reporting Agencies], motor vehicle crashes account for 18.5 percent of all accidental deaths in Michigan.
- The pedestrian death toll for Michigan stands at 158 people, a decrease of seven deaths from 2016.
- For each pedestrian killed, there were 12 pedestrians injured.
- Of all pedestrians killed, 10.8 percent were under the age of 21 and 10.1 percent were age 75 and older.
- The bicyclist death toll for Michigan stands at 21, a decrease of 17 deaths from 2016.
- The youngest bicycle fatality was age 18. People under the age of 21 accounted for 9.5 percent of the bicycle deaths.
- Of the 489,145 drivers and injured passengers involved in crashes where restraint use was known, 482,596 or 98.7 percent were reported to have been using occupant restraints. Restraint usage among fatal victims, where usage was known, was reported to be 60.9 percent in 2017.
- The comprehensive costs in Michigan traffic crashes amounted to \$44,514,956,700. If costs were spread across the state's population this would translate into a loss of \$4,468.34 per state resident.

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

MICHIGAN CRASH WATCH 2017



This page left intentionally blank

HISTORICAL INFORMATION

This page left intentionally blank

STATEWIDE 2016-2017 SUMMARY TRENDS: 1 YEAR TRENDS

	2016	2017	PERCENT OF CHANGE
NUMBER OF CRASHES			
Fatal Crashes	980	937	-4.4
Personal Injury Crashes	57,964	57,263	-1.2
Property Damage Crashes	253,228	256,721	1.4
TOTAL	312,172	314,921	0.9
ALCOHOL-INVOLVED CRASHES			
Fatal Crashes	254	320	26.0
Personal Injury Crashes	3,962	4,110	3.7
Property Damage Crashes	5,553	5,835	5.1
TOTAL	9,769	10,265	5.1
FATAL CRASHES			
Had Been Drinking	254 (25.9%)	320 (34.2%)	26.0
Had Not Been Drinking / Not Known If Drinking	726 (74.1%)	617 (65.8%)	-15.0
PERSONS IN CRASHES			
Killed	1,064	1,028	-3.4
Injured	79,724	78,394	-1.7
Not Injured	505,633	507,151	0.3
Unknown Injury	48,377	50,226	3.8
TOTAL	634,798	636,799	0.3
PERSONS IN ALCOHOL-INVOLVED CRASHES			
Killed	274	359	31.0
Injured	5,507	5,685	3.2
Not Injured	11,318	11,865	4.8
Unknown Injury	1,247	1,217	-2.4
TOTAL	18,346	19,126	4.3
PERSONS INJURED BY GENDER			
Male	36,948	36,101	-2.3
Female	42,707	42,261	-1.0
Unknown Gender	69	32	-53.6
TOTAL	79,724	78,394	-1.7
PERSONS INJURED BY SEVERITY			
"A" Injury	5,634	6,084	8.0
"B" Injury	19,651	20,458	4.1
"C" Injury	54,439	51,852	-4.8
TOTAL	79,724	78,394	-1.7

Michigan experienced a 0.9 percent increase in crashes, a 3.4 percent decrease in traffic fatalities, and a 1.7 percent decrease in injuries. Persons sustaining "A" level injuries (the most serious) increased 8.0 percent.

STATEWIDE 2016-2017 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

	2016	2017	PERCENT OF CHANGE
PERSONS KILLED BY GENDER			
Male	721	694	-3.7
Female	343	334	-2.6
TOTAL	1,064	1,028	-3.4
PERSONS KILLED			
Motor Vehicle Driver	658	667	1.4
Passenger	203	182	-10.3
Bicyclist	38	21	-44.7
Pedestrian	165	158	-4.2
Train Engineer	0	0	0.0
TOTAL	1,064	1,028	-3.4
BELT RESTRAINT USE BY DRIVER			
"Reported Restrained" - Killed	269	290	7.8
"Reported Not Restrained" - Killed	145	150	3.4
"Reported Restrained" - Injured	50,632	50,005	-1.2
"Reported Not Restrained" - Injured	1,445	1,440	-0.3
BELT RESTRAINT USE BY INJURED PASSENGER			
"Reported Restrained" - Killed	97	72	-25.8
"Reported Not Restrained" - Killed	62	58	-6.5
"Reported Restrained" - Injured	16,088	15,654	-2.7
"Reported Not Restrained" - Injured	1,603	1,423	-11.2
DRIVER AGE 16-20 INVOLVED			
Fatal Crashes	135	113	-16.3
Personal Injury Crashes	11,950	11,709	-2.0
Property Damage Crashes	44,023	43,094	-2.1
TOTAL ALL CRASHES	56,108	54,916	-2.1
Persons Killed	147	129	-12.2
Persons Injured	17,191	16,840	-2.0
DRIVER AGE 65 & OVER INVOLVED			
Fatal Crashes	207	204	-1.4
Personal Injury Crashes	10,417	10,554	1.3
Property Damage Crashes	38,632	40,049	3.7
TOTAL ALL CRASHES	49,256	50,807	3.1
Persons Killed	232	224	-3.4
Persons Injured	15,200	15,254	0.4

Deaths among vehicle occupants (drivers and passengers only) decreased 1.4 percent.

STATEWIDE 2016-2017 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

	2016	2017	PERCENT OF CHANGE
CRASH FACTS			
Licensed Drivers	7,176,692	7,200,386	0.3
Registered Vehicles	8,394,284	8,497,963	1.2
Michigan Population	9,928,300	9,962,311	0.3
Drivers Involved in Crashes	538,412	540,387	0.4
Occupants* Involved in Crashes	630,402	632,614	0.4
Estimated Vehicle Miles Traveled (thousands)	99,185,668	101,757,109	2.6
Death Rate Per 100 Million Vehicle Miles	1.1	1.0	-5.8
Fatal Crash Rate Per 100 Million Vehicle Miles	1.0	0.9	-6.8

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

2017 COST OF CRASHES IN MICHIGAN

The cost estimate for Michigan crashes in 2017 was **\$44,514,956,700**. 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, 2017

Death	\$10,562,000
Suspected Serious Injury	\$1,155,000
Suspected Minor Injury	\$318,000
Possible Injury	\$147,000
No Injury	\$48,700

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

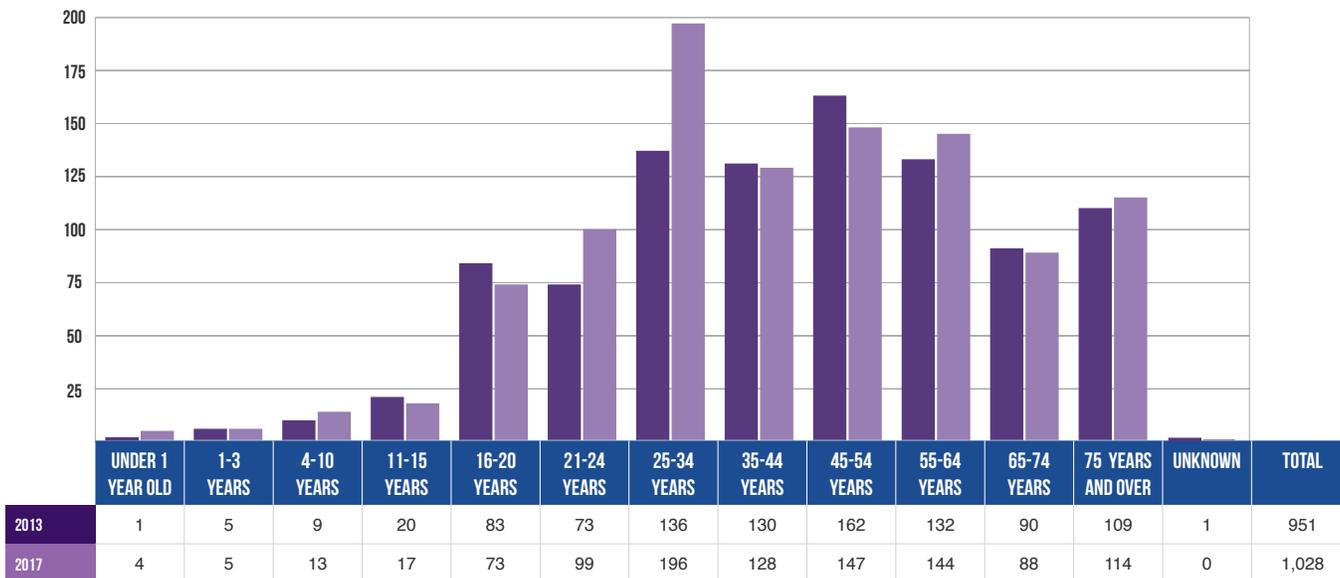
Note: Information on the cost of crashes is provided by the National Safety Council.

5 YEAR TRENDS-STATEWIDE TREND DATA FOR FATALITIES

FATALITIES BY AGE	2013	2014	2015	2016	2017
Under 1 year old	1	2	2	2	4
1 - 3 years	5	1	8	4	5
4 - 10 years	9	8	17	13	13
11 - 15 years	20	16	16	19	17
16 - 20 years	83	91	98	103	73
21 - 24 years	73	101	88	91	99
25 - 34 years	136	147	163	163	196
35 - 44 years	130	104	116	138	128
45 - 54 years	162	132	141	141	147
55 - 64 years	132	115	131	163	144
65 - 74 years	90	76	86	97	88
75 years and over	109	83	97	130	114
Unknown	1	0	0	0	0
TOTAL	951	876*	963	1,064	1,028

*Indicates the lowest total in the five year period

FATALITIES BY AGE



5 YEAR TRENDS-STATEWIDE TREND DATA FOR FATALITIES (CONTINUED)

FATALITIES BY AGE	2013	2014	2015	2016	2017
AGE OF DRIVERS INVOLVED IN FATAL CRASHES					
13 years and under	0	0	0	0	0
14 years	1	1	1	2	0
15 years	4	2	4	0	2
16 years	16	7	17	14	16
17 years	15	22	32	23	14
18 years	24	29	34	34	24
19 years	35	27	30	39	28
20 years	33	30	35	29	37
21 - 24 years	113	156	162	155	174
25 - 34 years	234	235	274	295	326
35 - 44 years	199	170	228	232	193
45 - 54 years	237	191	217	225	231
55 - 64 years	182	144	204	226	199
65 - 69 years	69	61	54	64	73
70 - 74 years	56	46	48	47	58
75 - 79 years	41	28	31	40	29
80 - 84 years	36	32	20	31	32
85 - 89 years	23	17	19	35	25
90 years and over	8	9	8	6	13
Unknown	60	73	61	73	56
Totals	1,388	1,280*	1,479	1,570	1,530
AGE OF DRIVERS INVOLVED IN SINGLE VEHICLE FATAL CRASHES					
13 years and under	0	0	0	0	0
14 years	1	1	1	0	0
15 years	1	0	3	0	1
16 years	3	4	7	7	5
17 years	5	7	15	6	1
18 years	12	10	8	12	5
19 years	15	9	10	14	8
20 years	14	15	11	11	14
21 - 24 years	48	65	65	61	61
25 - 34 years	76	69	100	99	114
35 - 44 years	74	50	57	60	53
45 - 54 years	85	57	61	75	71
55 - 64 years	62	44	60	70	51
65 - 69 years	23	20	20	20	16
70 - 74 years	14	11	14	14	12
75 - 79 years	12	6	7	9	8
80 - 84 years	11	4	9	5	6
85 - 89 years	4	6	6	5	6
90 years and over	2	1	0	0	2
Unknown	26	32	12	26	15
Totals	488	411*	466	494	449

5 YEAR TRENDS-STATEWIDE TREND DATA FOR FATALITIES (CONTINUED)

FATALITIES BY AGE	2013	2014	2015	2016	2017
AGE OF BICYCLISTS KILLED					
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	1	0	0
4 - 10 years	2	0	0	0	0
11 - 15 years	0	1	1	0	0
16 - 20 years	2	1	2	4	2
21 - 24 years	0	1	1	0	1
25 - 34 years	3	2	6	1	1
35 - 44 years	2	2	3	5	2
45 - 54 years	7	5	8	9	4
55 - 64 years	7	6	5	11	5
65 - 74 years	2	2	6	7	3
75 years and over	2	1	0	1	3
Unknown	0	0	0	0	0
Totals	27	21*	33	38	21*
AGE OF PEDESTRIANS KILLED					
Under 1 year old	0	0	0	0	0
1 - 3 years	1	1	5	2	1
4 - 10 years	3	4	7	4	5
11 - 15 years	5	2	5	6	6
16 - 20 years	8	7	9	9	5
21 - 24 years	12	11	7	8	3
25 - 34 years	24	22	24	16	24
35 - 44 years	24	23	20	28	21
45 - 54 years	29	27	37	27	35
55 - 64 years	25	35	32	29	31
65 - 74 years	10	4	11	20	11
75 years and over	7	12	13	16	16
Unknown	1	0	0	0	0
Totals	149	148*	170	165	158

*Indicates the lowest total in the five year period

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

HOLIDAY PERIOD	FATAL CRASHES	PERSONS KILLED	SUMMARY 2017
MEMORIAL DAY			
2017 (3) MON	10 [3]	10 [3]	
2016 (3) MON	5 [1]	6 [2]	
2015 (3) MON	6 [2]	8 [2]	
2014 (3) MON	19 [5]	20 [5]	
2013 (3) MON	14 [4]	15 [5]	
FOURTH OF JULY			
2017 (4) TUE	14 [6]	14 [6]	
2016 (3) MON	13 [4]	13 [4]	
2015 (3) SAT	11 [8]	12 [9]	
2014 (3) FRI	11 [3]	12 [3]	
2013 (4) THU	17 [6]	19 [7]	
LABOR DAY			
2017 (3) MON	10 [4]	15 [4]	
2016 (3) MON	10 [2]	10 [2]	
2015 (3) MON	12 [8]	15 [10]	
2014 (3) MON	6 [5]	6 [5]	
2013 (3) MON	9 [3]	10 [4]	
THANKSGIVING			
2017 (4) THU	11 [6]	11 [6]	
2016 (4) THU	10 [5]	10 [5]	
2015 (4) THU	11 [6]	11 [6]	
2014 (4) THU	6 [3]	6 [3]	
2013 (4) THU	11 [4]	12 [5]	
CHRISTMAS			
2017 (3) MON	11 [6]	11 [6]	
2016 (3) SUN	5 [3]	6 [4]	
2015 (3) FRI	5 [0]	6 [0]	
2014 (4) THU	9 [1]	10 [1]	
2013 (1) WED	3 [0]	3 [0]	
NEW YEARS			
2017 (3) MON	9 [4]	12 [5]	
2016 (3) SUN	9 [4]	11 [4]	
2015 (3) FRI	7 [3]	8 [4]	
2014 (4) THU	13 [4]	15 [5]	
2013 (1) WED	1 [1]	2 [1]	

This table shows traffic death tolls in Michigan for the past five years for the major holiday periods as defined by the National Safety Council.

Based on the total 2017 experience, deaths averaged 2.82 per day. Alcohol-involved deaths averaged 0.98 per day.

Based on the 2017 holiday period experience, deaths averaged 3.65 per day. Alcohol-related deaths averaged 1.50 per day.

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.

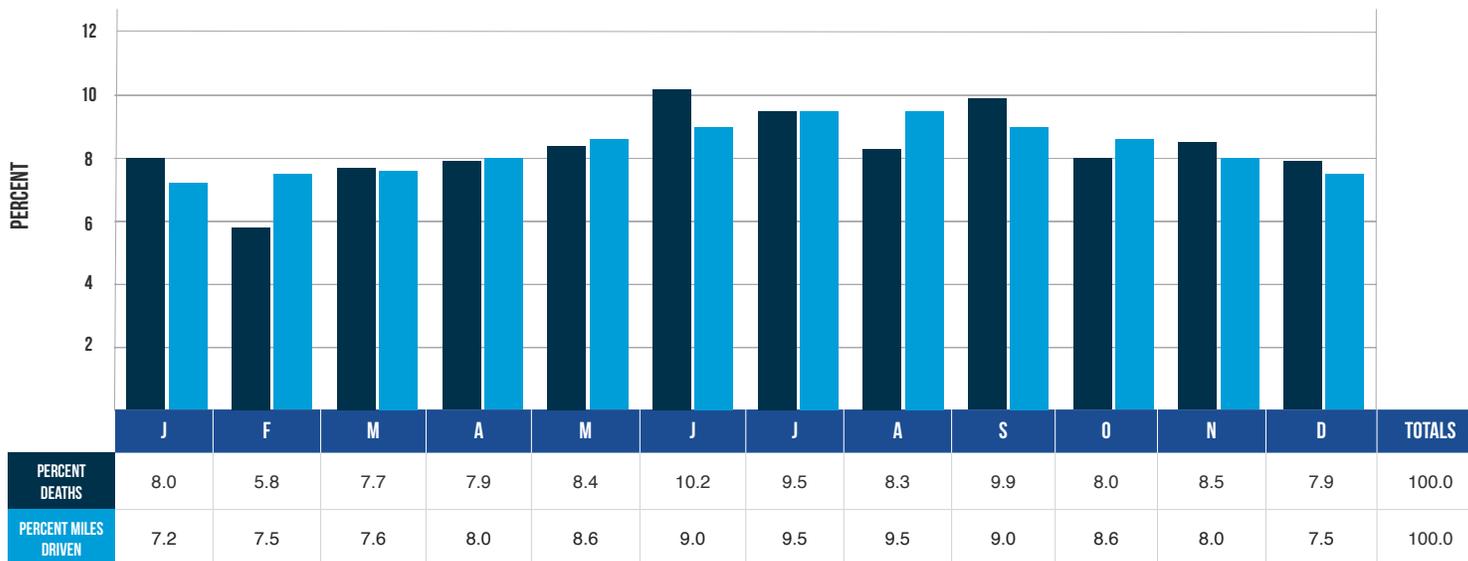
Figures in brackets in the 2nd and 3rd columns show the number of alcohol-related fatal crashes and deaths.

Please view the glossary for an explanation of holiday periods.

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

MONTH	TRAFFIC DEATHS					2017 PERCENTAGES	
	2013	2014	2015	2016	2017	Percent Deaths	Percent Miles Driven
January	73	47	67	65	82	8.0	7.2
February	59	63	43	74	60	5.8	7.5
March	55	47	48	46	79	7.7	7.6
April	52	75	58	91	81	7.9	8.0
May	80	76	82	73	86	8.4	8.6
June	75	92	102	111	105	10.2	9.0
July	110	96	118	93	98	9.5	9.5
August	101	85	114	106	85	8.3	9.5
September	104	88	82	115	102	9.9	9.0
October	92	70	85	107	82	8.0	8.6
November	91	68	88	99	87	8.5	8.0
December	59	69	76	84	81	7.9	7.5
TOTAL	951	876	963	1,064	1,028	100.0	100.0

2017 PERCENT DEATHS AND PERCENT MILES DRIVEN

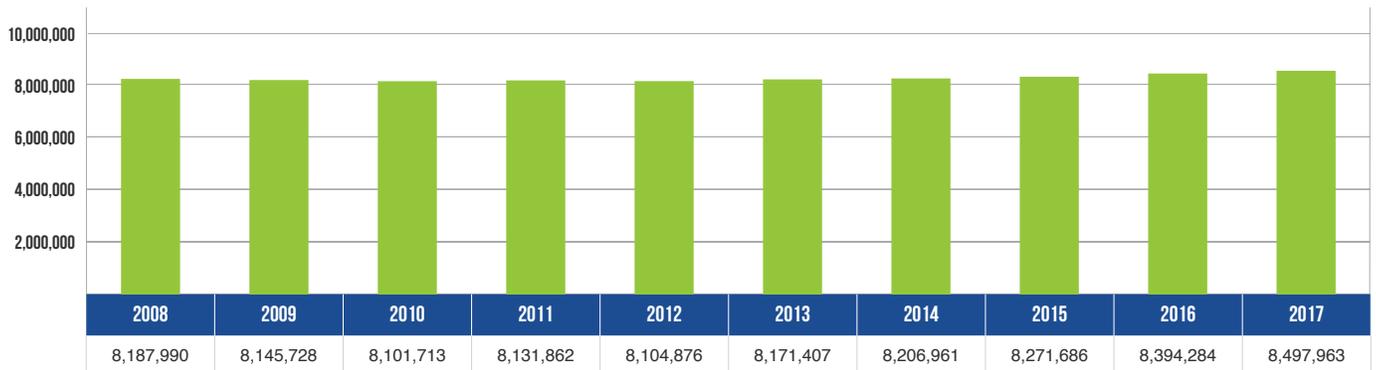


The chart above shows that the percent deaths were higher for the months of January, March, June, September, November, and December than for the other months when compared to the percent miles driven.

This page left intentionally blank

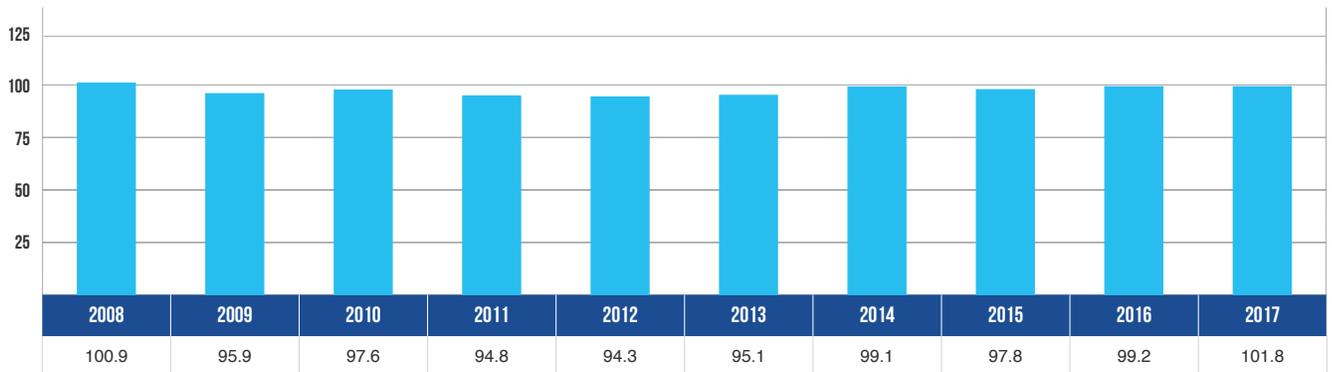
10 YEAR TRENDS-STATEWIDE

VEHICLE REGISTRATIONS



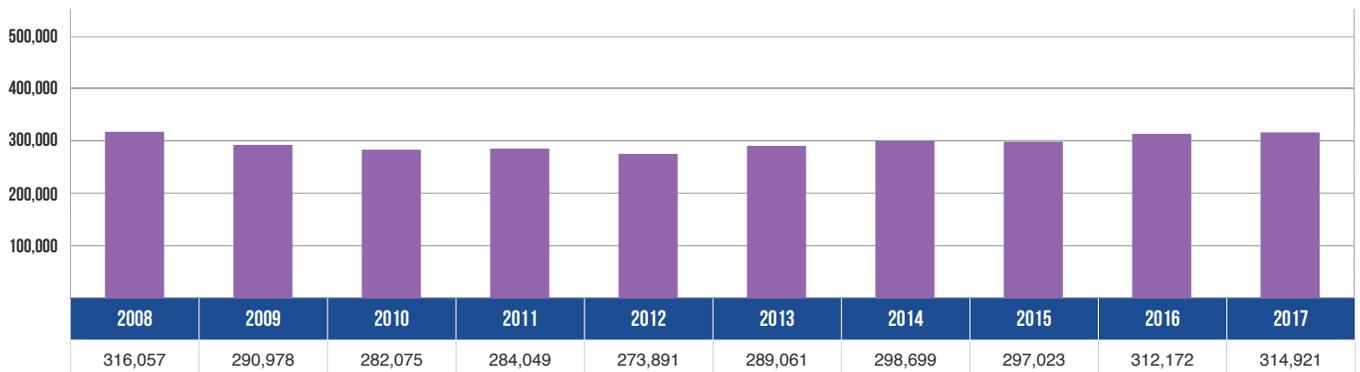
Vehicle registrations increased 3.8 percent over the 10-year period.

VEHICLE MILES TRAVELED (BILLIONS)



Vehicle miles traveled increased 0.9 percent over the 10-year period.

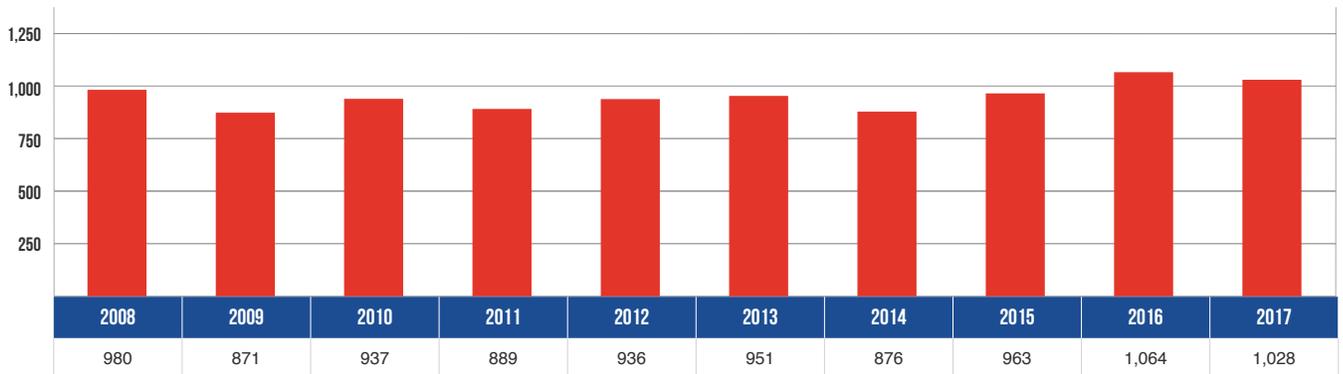
CRASHES



There were 314,921 total crashes statewide in 2017 – a 0.4 percent decrease from 2008.

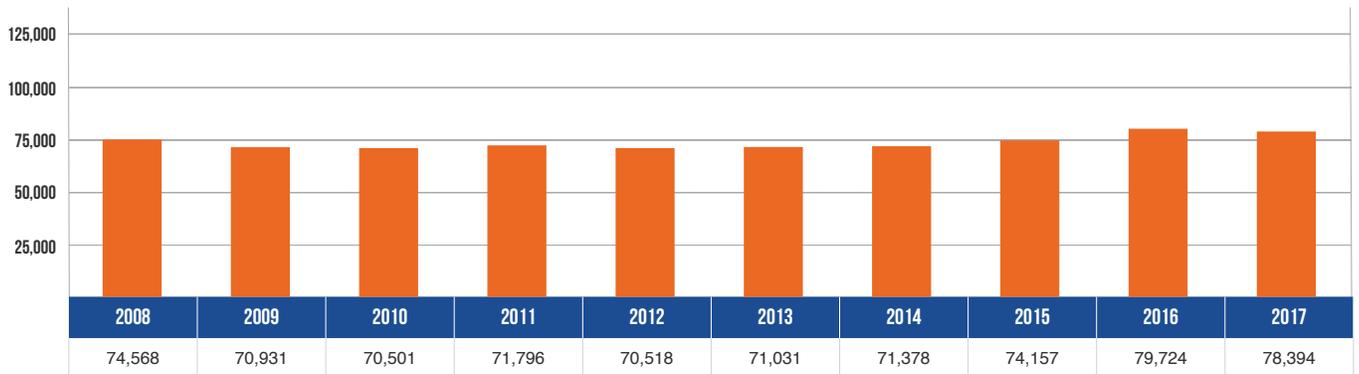
10 YEAR TRENDS-STATEWIDE (CONTINUED)

DEATHS



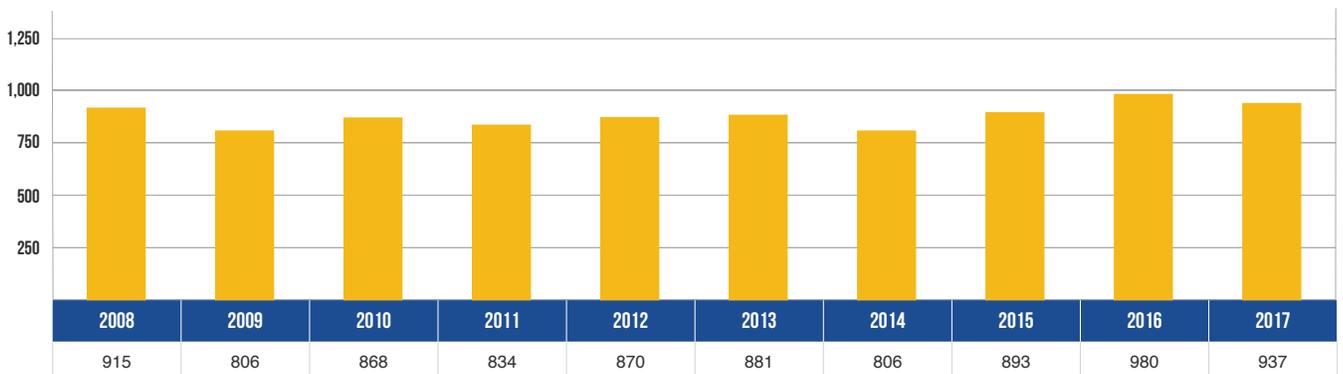
In 2017, 1,028 people died in motor vehicle crashes – an increase of 4.9 percent from 2008.

INJURIES



In 2017, 78,394 people received injuries in motor vehicle crashes – up 5.1 percent from 74,568 in 2008.

FATAL CRASHES



In 2017, there were 937 fatal crashes – up 2.4 percent from 915 in 2008.

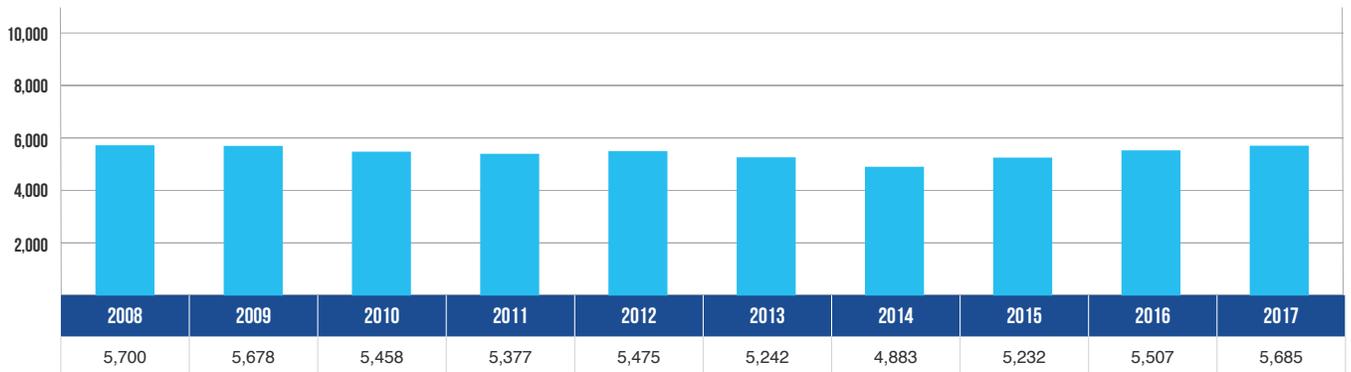
10 YEAR TRENDS-STATEWIDE (CONTINUED)

ALCOHOL-INVOLVED DEATHS



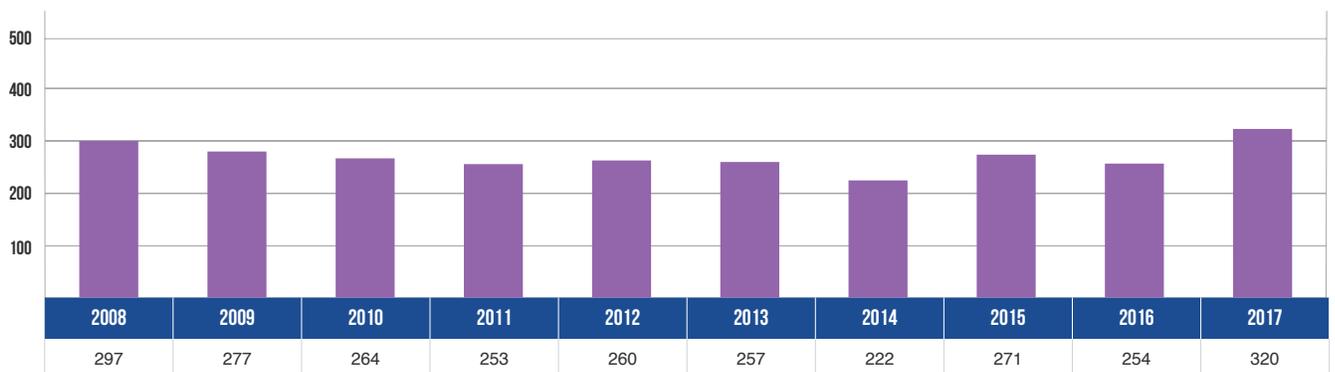
There were 359 deaths in alcohol-involved crashes in 2017 – up 13.2 percent from 2008.

ALCOHOL-INVOLVED INJURIES



There were 5,685 injuries in alcohol-involved crashes in 2017 – down 0.3 percent from 2008.

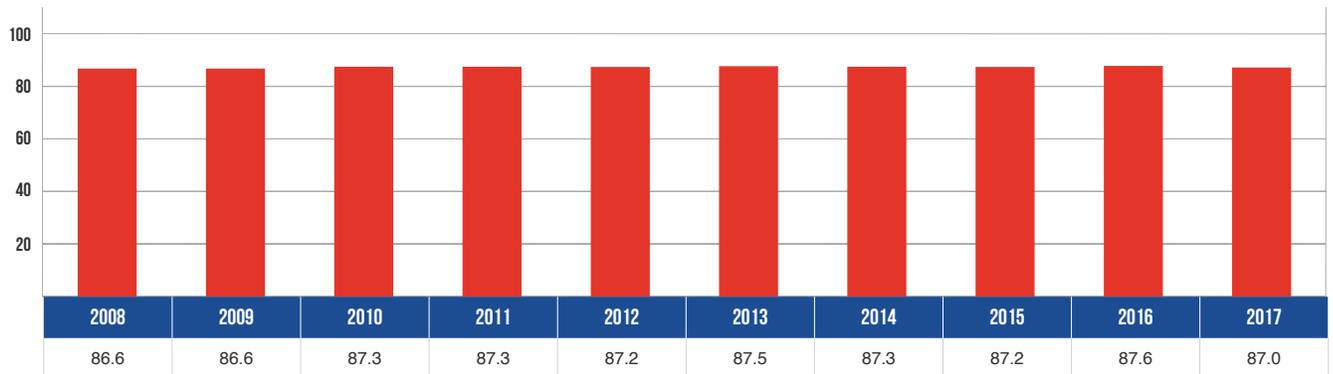
ALCOHOL-INVOLVED FATAL CRASHES



There were 320 injuries in alcohol-involved fatal crashes in 2017 – up 7.7 percent from 2008.

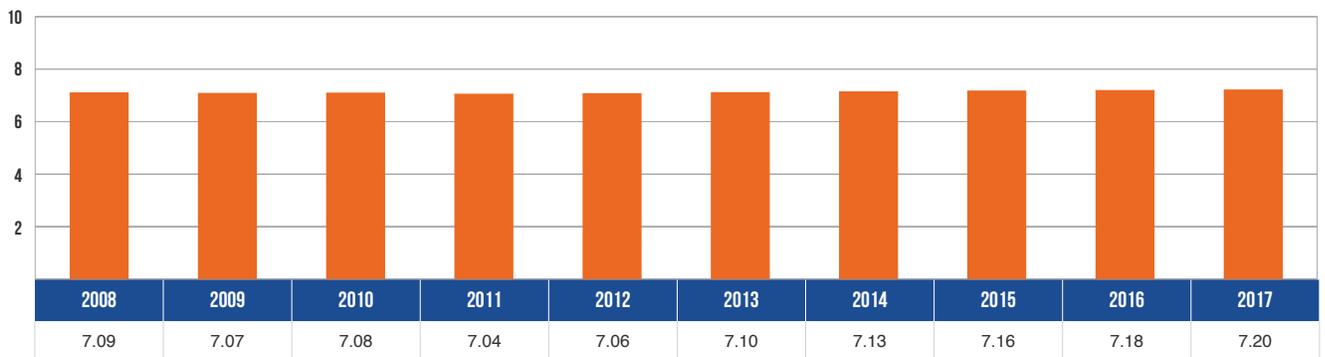
10 YEAR TRENDS-STATEWIDE (CONTINUED)

RESTRAINT USAGE IN CRASHES



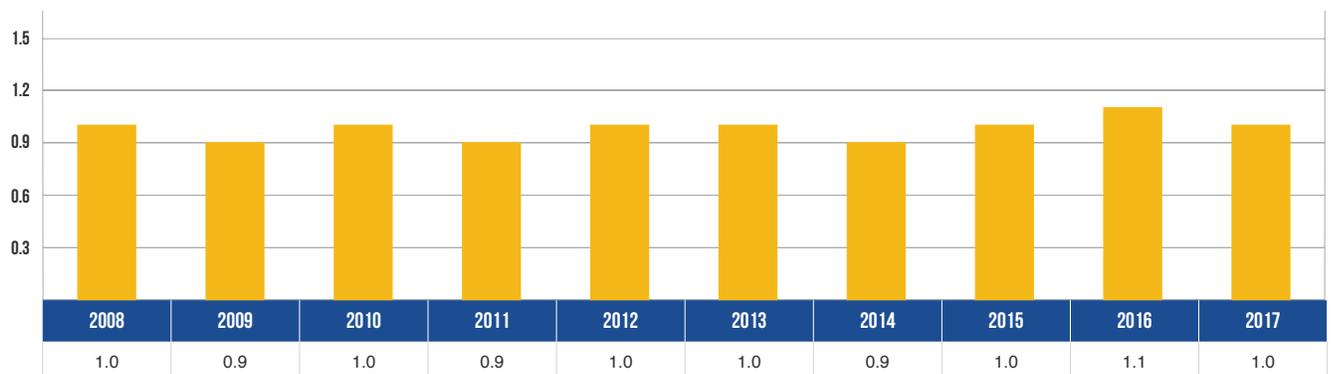
The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes increased 0.5 percent over the last ten years.

DRIVERS IN MICHIGAN (MILLIONS)



There were 7,200,401 licensed drivers on Michigan roadways in 2017 – an increase of 1.6 percent from 2008.

FATALITIES PER 100 MILLION VEHICLE MILES TRAVELED



The death rate of 1.01 fatalities per 100 million VMT in 2017 was an increase of 4.0% from the death rate of 0.97 in 2008.

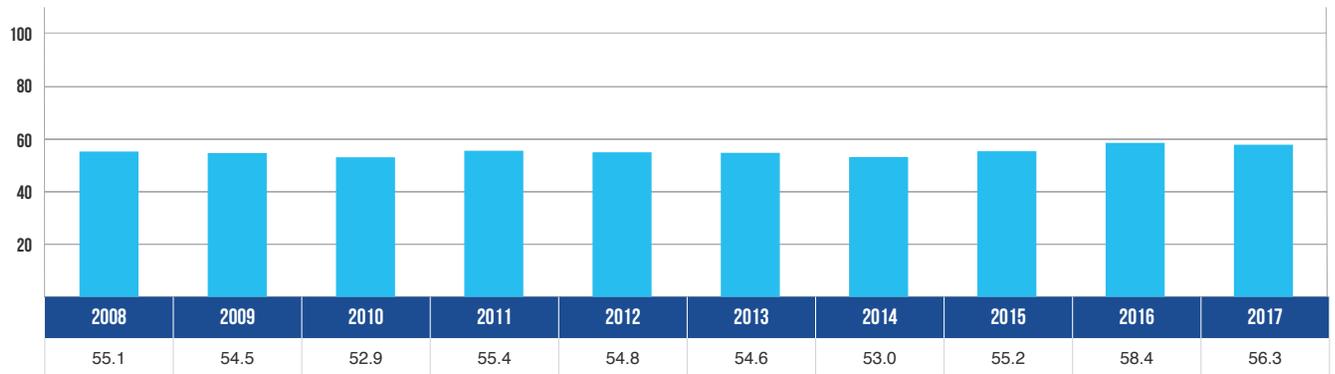
10 YEAR TRENDS-STATEWIDE (CONTINUED)

TOTAL CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



The total crash rate of 309.5 crashes in 2017 was a 1.2 percent decrease from 2008.

INJURY CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



The injury crash rate of 56.3 crashes in 2017 was a 2.2 percent increase from 2008.

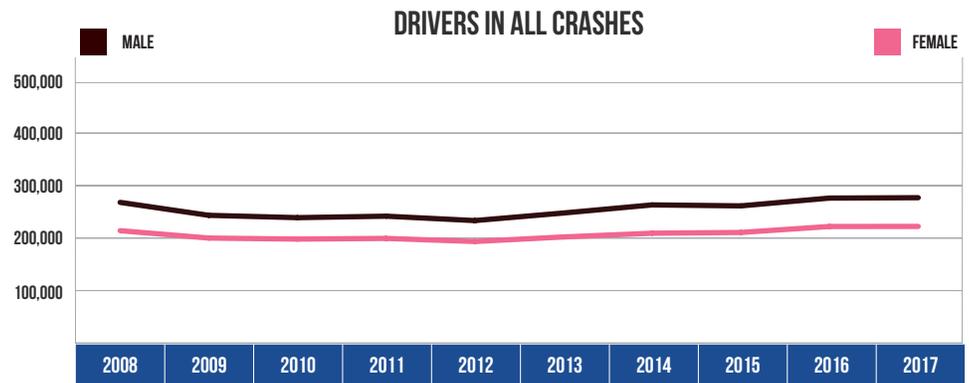
PROPERTY DAMAGE CRASHES PER 100 MILLION VEHICLE MILES TRAVELED



The property damage crash rate of 252.3 in 2017 was a 1.9 percent decrease from 2008.

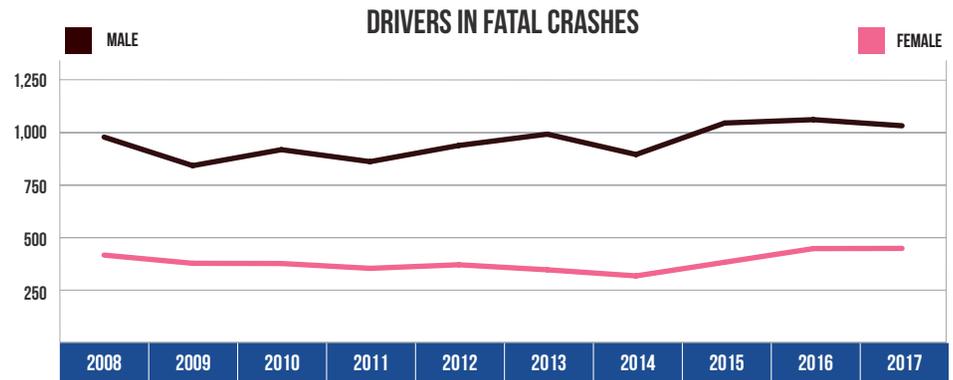
10 YEAR TRENDS-STATEWIDE (CONTINUED)

DRIVERS IN ALL CRASHES		
Year	Male	Female
2008	267,186	213,223
2009	242,490	199,166
2010	238,048	197,183
2011	240,850	198,488
2012	232,475	192,605
2013	246,908	201,264
2014	262,359	208,359
2015	260,508	209,843
2016	275,382	221,200
2017	276,112	221,365



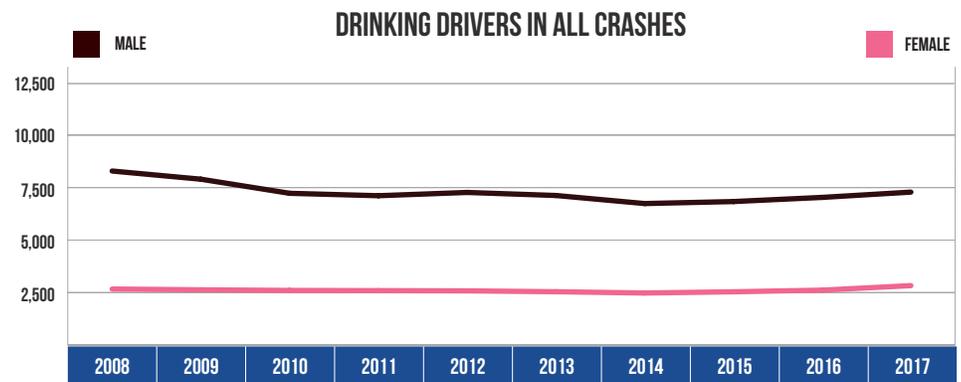
Male drivers accounted for 55.5 percent of all drivers in crashes during 2017, which was down slightly from 55.6 percent in 2008. Female drivers accounted for 44.5 percent of all drivers in crashes during 2017, which was up slightly from 44.4 percent in 2008.

DRIVERS IN FATAL CRASHES		
Year	Male	Female
2008	976	414
2009	840	375
2010	916	374
2011	859	351
2012	936	368
2013	990	344
2014	893	315
2015	1,043	380
2016	1,059	445
2017	1,030	446



Male drivers made up 69.8 percent of all drivers in fatal crashes in 2017, which was down from 70.2 percent in 2008. Female drivers made up 30.2 percent of all drivers in fatal crashes in 2017, which was up from 29.8 percent in 2008.

DRINKING DRIVERS IN ALL CRASHES		
Year	Male	Female
2008	8,270	2,650
2009	7,881	2,613
2010	7,209	2,584
2011	7,094	2,574
2012	7,250	2,563
2013	7,105	2,522
2014	6,721	2,461
2015	6,816	2,519
2016	7,014	2,597
2017	7,266	2,813

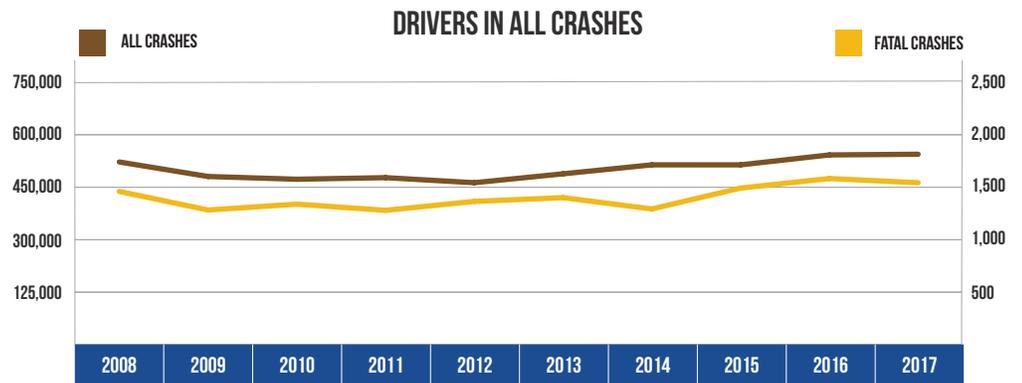


In 2017, males represented 72.1 percent of all drinking drivers, which was down from 75.7 percent in 2008. Females represented 27.9 percent of all drinking drivers in 2017, which was up from 24.3 percent in 2008.

Note: 42,910 drivers in all crashes, 54 drivers in fatal crashes, and six drinking drivers were coded as unknown gender in 2017 and are not included in the tables.

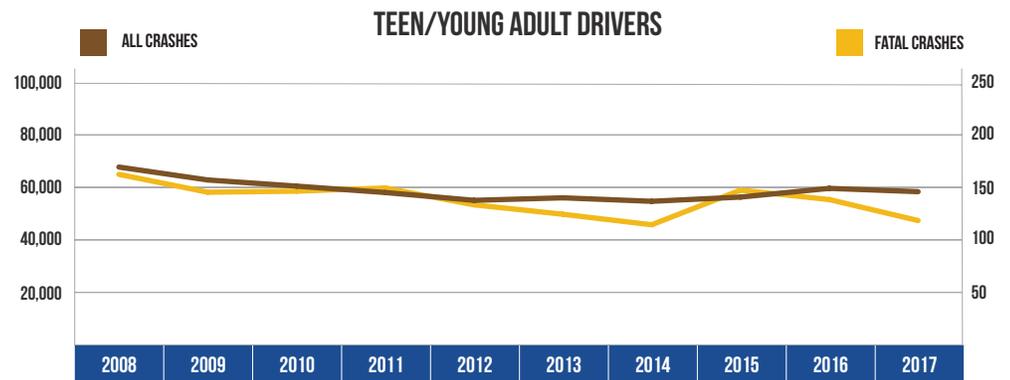
10 YEAR TRENDS-STATEWIDE (CONTINUED)

ALL CRASHES		
Year	All Crashes	Fatal Crashes
2008	518,240	1,447
2009	476,801	1,270
2010	468,968	1,326
2011	473,501	1,267
2012	459,030	1,352
2013	484,446	1,388
2014	510,086	1,280
2015	510,074	1,479
2016	538,412	1,570
2017	540,387	1,530



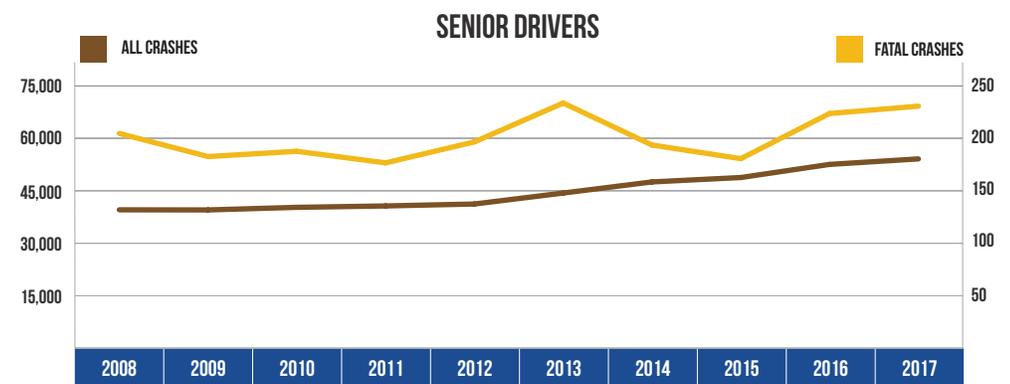
The number of drivers involved in all crashes increased 4.3 percent over the 10-year period. The number of drivers involved in fatal crashes increased 5.7 percent over the 10-year period.

TEEN/YOUNG ADULT DRIVERS (AGE 16-20)		
Year	All Crashes	Fatal Crashes
2008	67,982	163
2009	63,069	146
2010	60,721	147
2011	58,279	150
2012	55,307	134
2013	56,264	125
2014	54,935	115
2015	56,544	148
2016	59,865	139
2017	58,607	119



Teen/young adult drivers (age 16-20) represented 6.5 percent of the licensed drivers in 2017. The number of teen/young adult drivers in all crashes has decreased by 13.8 percent since 2008. Their involvement in fatal crashes has decreased 27.0 percent during the same time period.

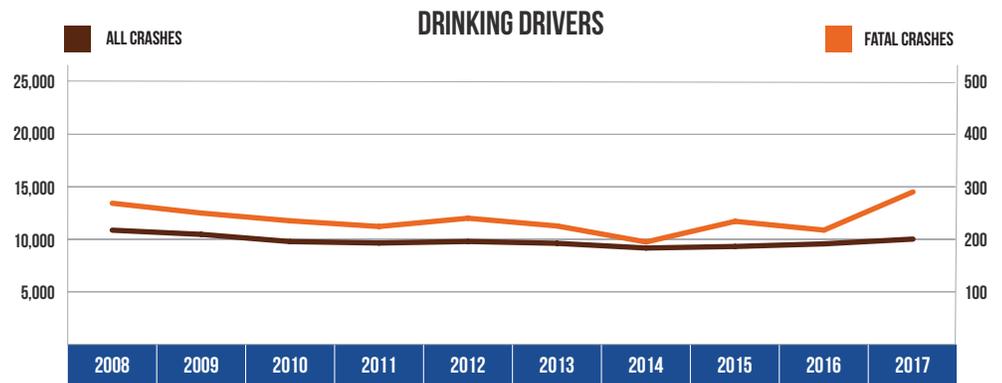
SENIOR DRIVERS (AGE 65 & OVER)		
Year	All Crashes	Fatal Crashes
2008	39,388	204
2009	39,357	182
2010	40,096	187
2011	40,495	176
2012	41,047	196
2013	44,183	233
2014	47,356	193
2015	48,615	180
2016	52,362	223
2017	53,934	230



Senior drivers (age 65 and over) represented 20.5 percent of the licensed drivers in 2017. The number of drivers age 65 and over in all crashes has increased 36.9 percent since 2008. Senior driver involvement in fatal crashes increased 12.7 percent during the same time period.

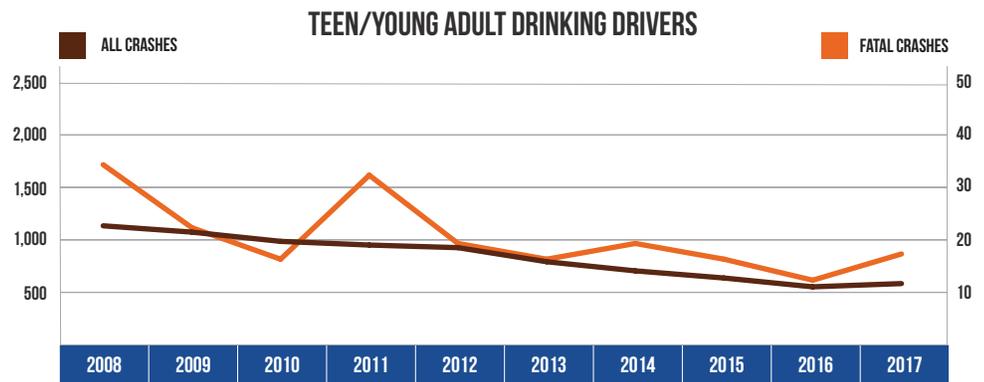
10 YEAR TRENDS-STATEWIDE (CONTINUED)

DRINKING DRIVERS		
Year	All Crashes	Fatal Crashes
2008	10,948	271
2009	10,542	252
2010	9,843	237
2011	9,701	226
2012	9,853	242
2013	9,673	227
2014	9,218	196
2015	9,368	236
2016	9,623	219
2017	10,085	293



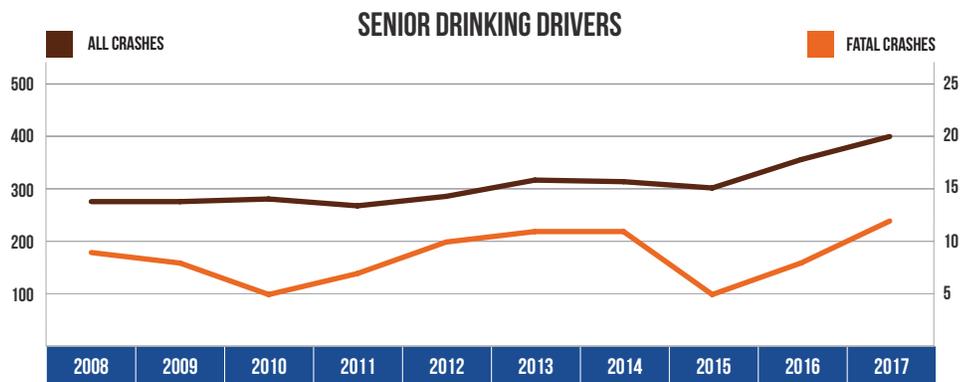
Drinking driver involvement in all crashes decreased by 7.9 percent from 2008. Drinking driver involvement in fatal crashes increased by 8.1 percent from 2008.

TEEN/YOUNG ADULT DRINKING DRIVERS (AGE 16-20)		
Year	All Crashes	Fatal Crashes
2008	1,118	34
2009	1,058	22
2010	970	16
2011	935	32
2012	910	19
2013	776	16
2014	689	19
2015	621	16
2016	537	12
2017	568	17



The number of teen/young adult drinking drivers (age 16-20) in all crashes decreased by 49.2 percent, and their involvement in fatal crashes decreased by 50.0 percent from 2008.

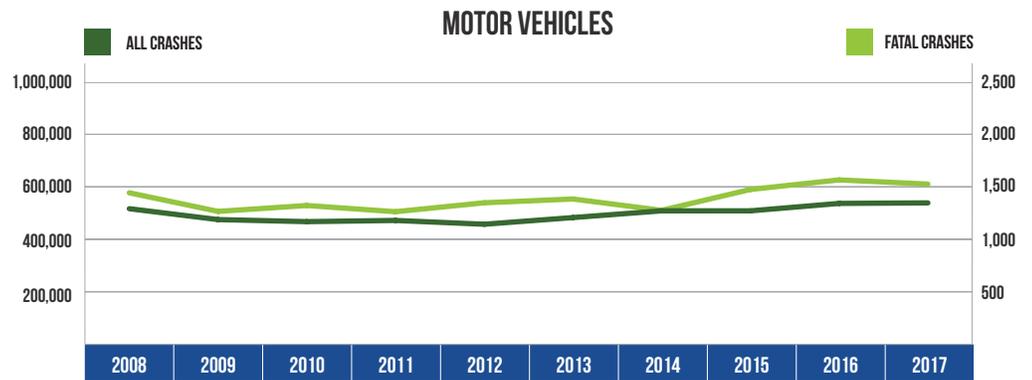
SENIOR DRINKING DRIVERS (AGE 65 & OVER)		
Year	All Crashes	Fatal Crashes
2008	277	9
2009	277	8
2010	282	5
2011	269	7
2012	287	10
2013	318	11
2014	315	11
2015	303	5
2016	357	8
2017	401	12



The number of senior drinking drivers (age 65 and over) in all crashes increased by 44.8 percent from 2008. Their involvement in fatal crashes increased by 33.3 percent from 2008.

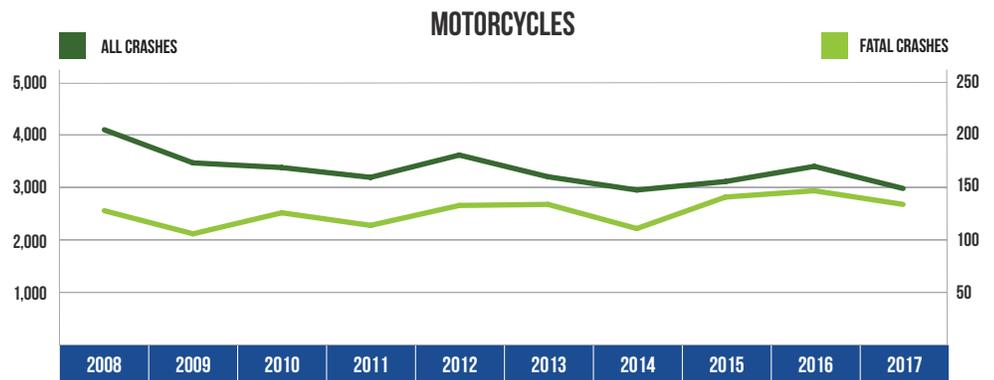
10 YEAR TRENDS-STATEWIDE (CONTINUED)

MOTOR VEHICLES		
Year	All Crashes	Fatal Crashes
2008	518,240	1,447
2009	476,801	1,270
2010	468,968	1,326
2011	473,501	1,267
2012	459,030	1,352
2013	484,446	1,388
2014	510,086	1,280
2015	510,074	1,479
2016	538,412	1,570
2017	540,387	1,530



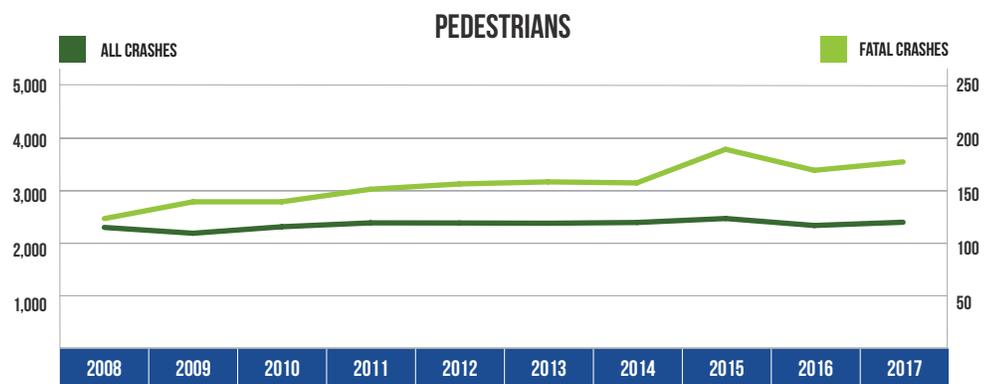
There were 540,387 motor vehicles involved in all crashes in 2017, up 4.3 percent from 2008. There were 1,530 motor vehicles involved in fatal crashes in 2017, up 5.7 percent from 2008.

MOTORCYCLES		
Year	All Crashes	Fatal Crashes
2008	4,082	127
2009	3,451	105
2010	3,362	125
2011	3,175	113
2012	3,600	132
2013	3,186	133
2014	2,934	110
2015	3,096	140
2016	3,384	146
2017	2,964	133



There were 2,964 motorcycles involved in crashes in 2017, a 27.4 percent decrease from 2008. There were 133 motorcycles involved in fatal crashes in 2017, up 4.3 percent from 2008.

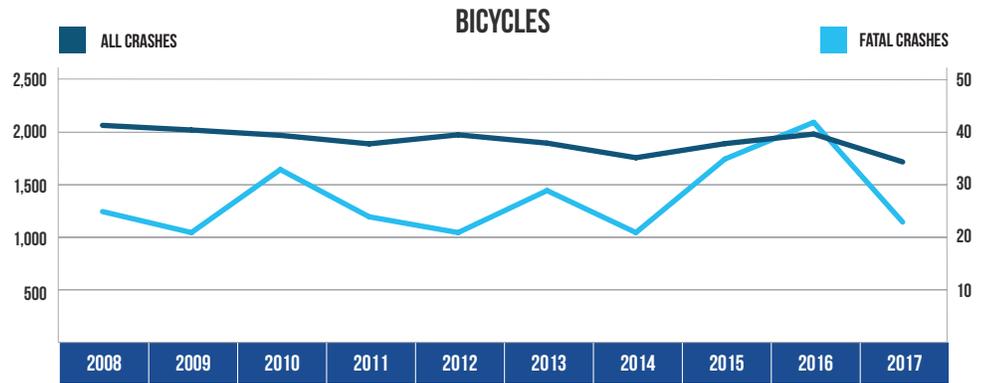
PEDESTRIANS		
Year	All Crashes	Fatal Crashes
2008	2,312	124
2009	2,201	140
2010	2,325	140
2011	2,399	152
2012	2,397	157
2013	2,392	159
2014	2,406	158
2015	2,482	190
2016	2,349	170
2017	2,411	178



There were 2,411 pedestrians involved in crashes in 2017, up 4.3 percent from 2008. There were 178 pedestrians involved in fatal crashes in 2017, up 43.5 percent from 2008.

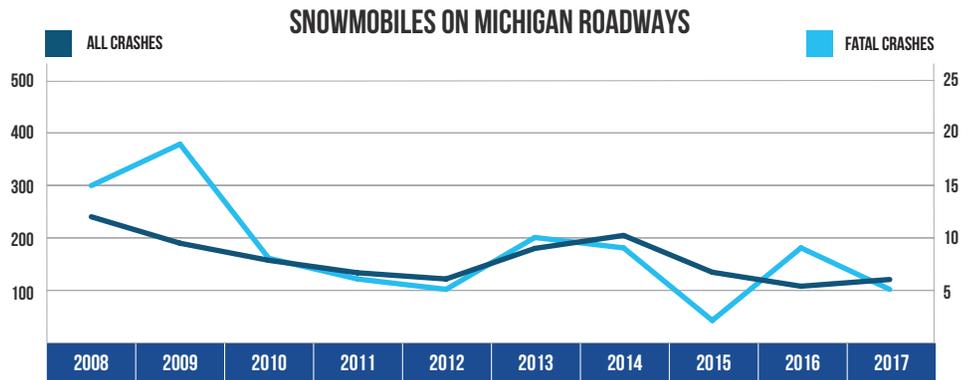
10 YEAR TRENDS-STATEWIDE (CONTINUED)

BICYCLES		
Year	All Crashes	Fatal Crashes
2008	2,071	25
2009	2,027	21
2010	1,976	33
2011	1,895	24
2012	1,981	21
2013	1,902	29
2014	1,763	21
2015	1,897	35
2016	1,988	42
2017	1,723	23



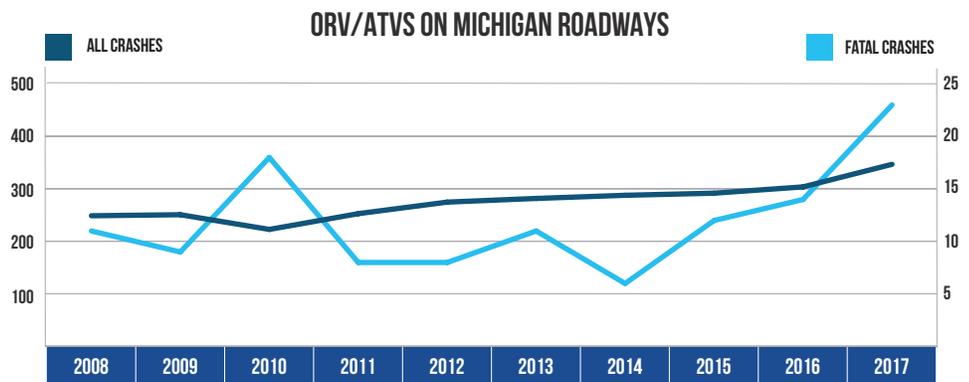
There were 1,723 bicycles involved in crashes in 2017, down 16.8 percent from 2008. There were 23 bicycles involved in fatal crashes in 2017, down 8.0 percent from 2008.

SNOWMOBILES ON MICHIGAN ROADWAYS		
Year	All Crashes	Fatal Crashes
2008	240	15
2009	189	19
2010	156	8
2011	132	6
2012	120	5
2013	179	10
2014	204	9
2015	133	2
2016	106	9
2017	119	5



There were 119 snowmobiles in crashes on roadways in 2017, down 50.4 percent from 2008. There were 5 snowmobiles in fatal crashes, down 66.7 percent from 2008.

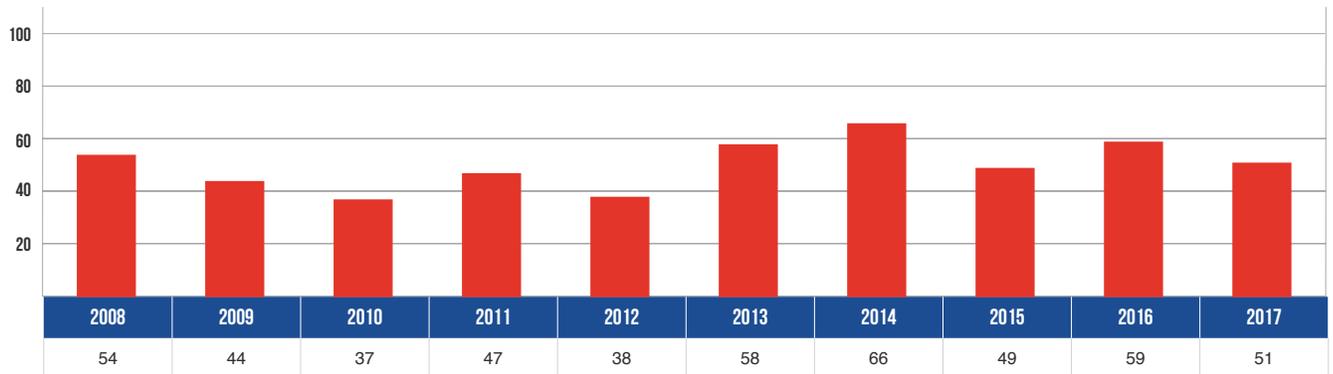
ORV/ATVS ON MICHIGAN ROADWAYS		
Year	All Crashes	Fatal Crashes
2008	249	11
2009	251	9
2010	223	18
2011	253	8
2012	275	8
2013	282	11
2014	288	6
2015	292	12
2016	304	14
2017	347	23



There were 347 ORV/ATVs in crashes on roadways in 2017, up 39.4 percent from 2008. There were 23 ORV/ATVs in fatal crashes, up 109.1 percent from 2008.

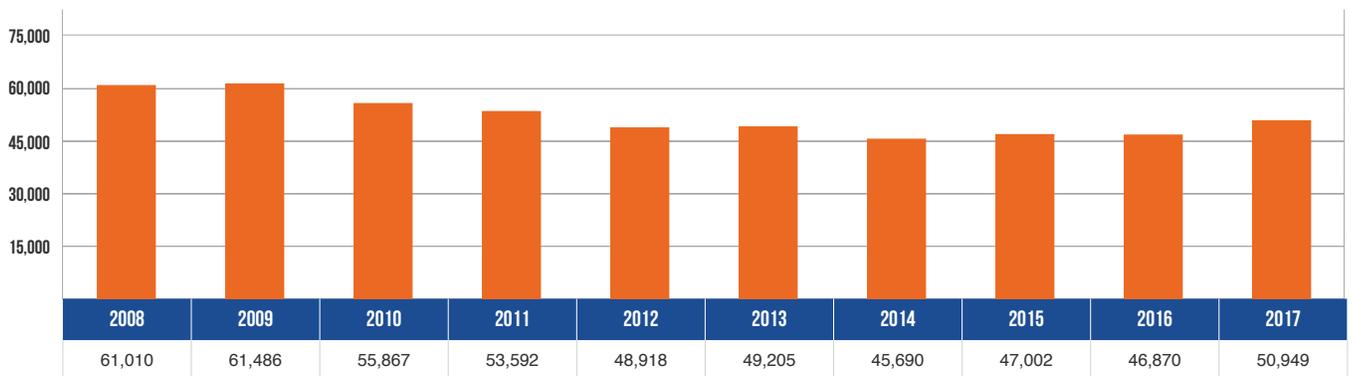
10 YEAR TRENDS-STATEWIDE (CONTINUED)

VEHICLE-TRAIN CRASHES



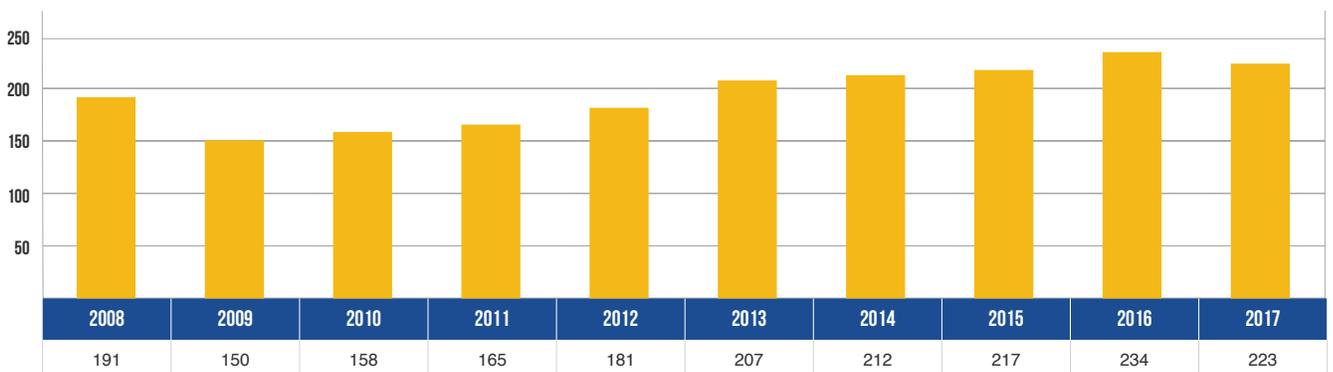
There were 51 vehicle-train crashes in 2017 – a decrease of 5.6 percent in the 10-year period.

VEHICLE-DEER CRASHES



There were 50,949 vehicle-deer crashes in 2017 – a decrease of 16.5 percent in the 10-year period.

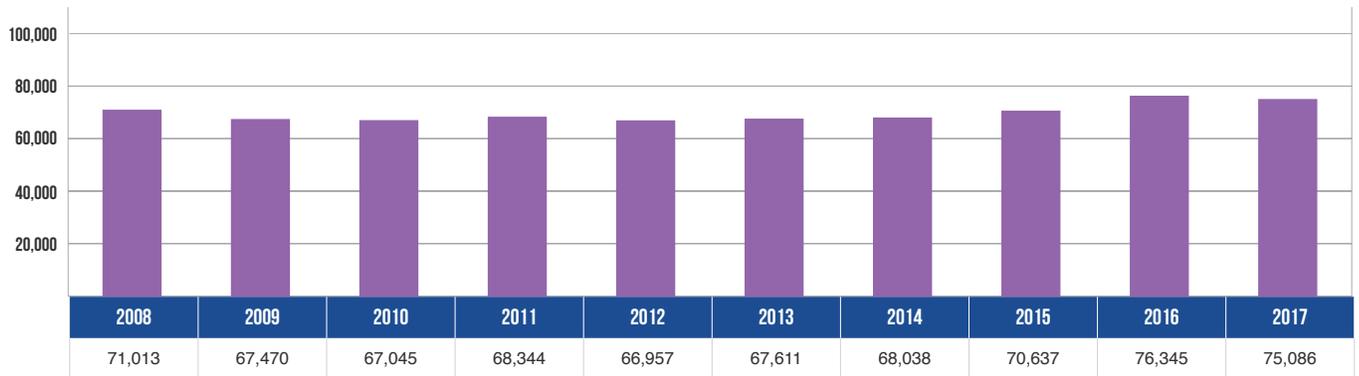
FARM EQUIPMENT CRASHES



There were 223 farm equipment crashes in 2017 – an increase of 16.8 percent from 2008.

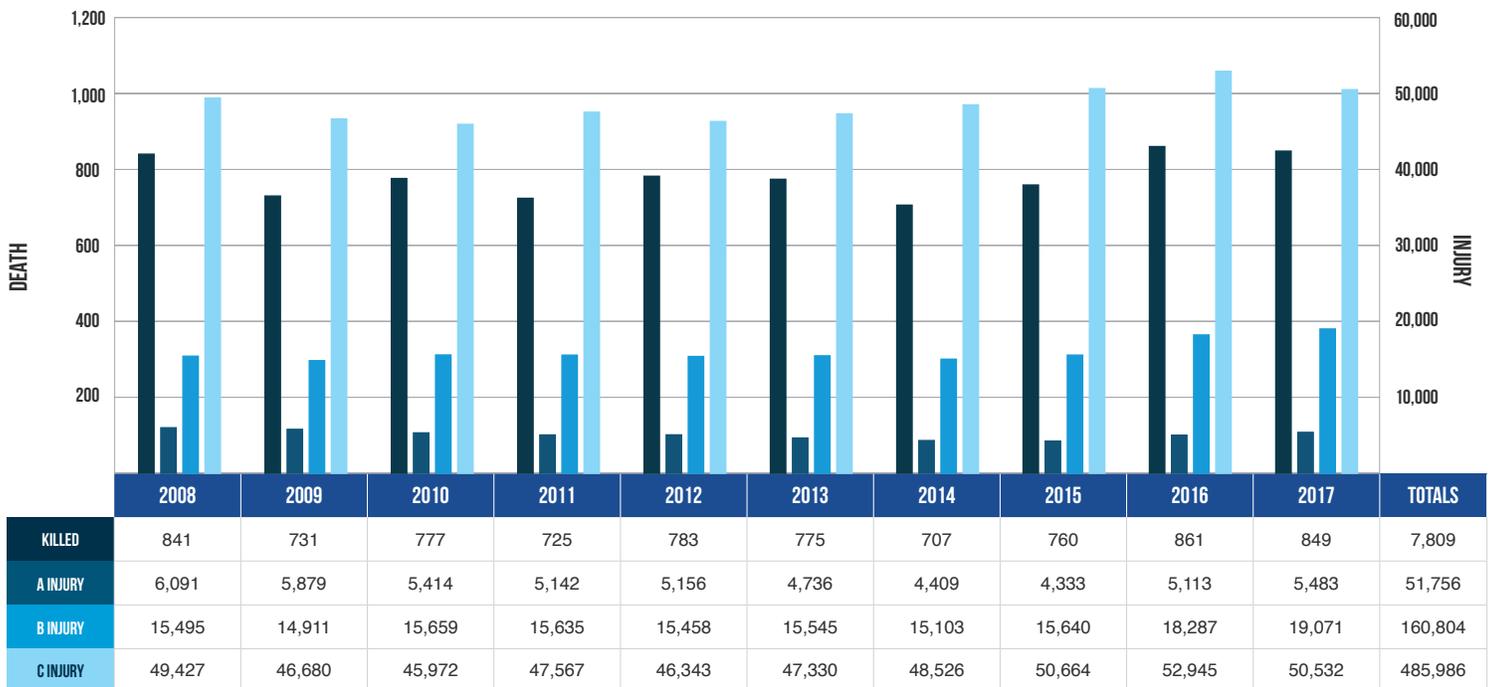
10 YEAR TRENDS-STATEWIDE (CONTINUED)

INJURED OCCUPANTS IN CRASHES



There were 75,086 occupants injured in crashes in 2017 – an increase of 5.7 percent from 2008.

DEATH AND INJURY FOR CRASH-INVOLVED OCCUPANTS



Over the period from 2008 to 2017, occupant deaths increased 1.0 percent, A injuries decreased 10.0 percent, B injuries increased 23.1 percent, and C injuries increased 2.2 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)

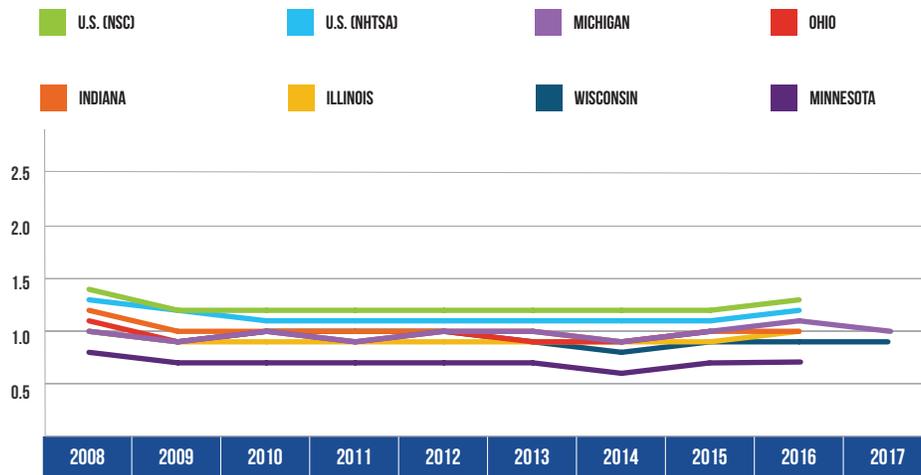
AVERAGE AGE OF DRIVERS IN CRASHES 2008 - 2017



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 more than three percent. The age of drivers involved in fatal crashes has increased nearly 23 percent. The average age of drinking drivers in crashes has decreased more than fourteen percent. The average age of drinking drivers in fatal crashes has remained about the same.

10 YEAR TRENDS-STATEWIDE (CONTINUED)

FATALITIES PER 100 MILLION VMT 2008 - 2017



YEAR	U.S. (NSC*)	U.S. (NHTSA**)	MICHIGAN	OHIO	INDIANA	ILLINOIS	WISCONSIN	MINNESOTA
2008	1.4	1.3	1.0	1.1	1.2	1.0	1.0	0.8
2009	1.2	1.2	0.9	0.9	1.0	0.9	0.9	0.7
2010	1.2	1.1	1.0	1.0	1.0	0.9	1.0	0.7
2011	1.2	1.1	0.9	0.9	1.0	0.9	1.0	0.7
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	1.0	1.0	0.9	0.9	0.7
2016	1.3	1.2	1.1	1.0	1.0	1.0	0.9	0.7
2017	--	--	1.0	--	--	--	0.9	--

* 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 accident.

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

10 YEAR TRENDS-STATEWIDE (CONTINUED)

YEAR	U.S. (NSC) FATALITIES	U.S. (NHTSA) FATALITIES	MICHIGAN FATALITIES	OHIO FATALITIES	INDIANA FATALITIES	ILLINOIS FATALITIES	WISCONSIN FATALITIES	MINNESOTA FATALITIES
2008	39,800	37,261	980	1,191	815	1,043	587	455
2009	35,900	33,963	871	1,028	692	911	542	421
2010	34,700	32,885	937	1,081	754	927	562	411
2011	34,600	32,367	889	1,015	749	918	565	368
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	998	555	411
2016	40,200	37,461	1,064	1,133	821	1,078	588	392
2017	--	--	1,028	1,179	--	--	594	--

YEAR	U.S. (FHWA) VMT	MICHIGAN VMT	OHIO VMT	INDIANA VMT	ILLINOIS VMT	WISCONSIN VMT	MINNESOTA VMT
2008	2,929	100.9	108.3	68.0	105.6	57.5	57.3
2009	2,935	95.9	110.8	68.8	105.7	58.2	56.9
2010	3,000	97.6	113.5	72.9	105.7	59.4	56.8
2011	2,946	94.8	111.7	77.5	103.4	58.6	56.7
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	--	101.8	--	--	--	65.3	--

VMT described in billions of miles

This page left intentionally blank

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
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

MOTOR VEHICLE TRAFFIC DEATHS IN MICHIGAN BY MONTH (CONTINUED)

YEAR	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
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

MOTOR VEHICLE TRAFFIC CRASH AND RELATED DATA

YEAR	DEATHS	NUMBER OF PERSONS INJURED	CRASHES	ESTIMATED MILEAGE (MILLIONS)	MOTOR VEHICLE REGISTRATIONS*	DEATH RATE PER 100 MILLION MILES OF TRAVEL
1962	1,574	108,143	233,078	34,498.0	3,498,758	4.6
1963	1,887	126,896	261,794	36,452.2	3,646,080	5.2
1964	2,122	144,623	284,444	38,617.6	3,860,791	5.5
1965	2,136	155,258	310,598	40,857.4	4,066,826	5.2
1966	2,298	156,694	302,880	43,940.1	4,133,199	5.2
1967	2,137	151,297	299,004	45,053.6	4,161,573	4.7
1968	2,392	160,413	305,495	48,047.4	4,327,885	5.0
1969	2,487	175,400	331,223	50,904.9	4,560,097	4.9
1970	2,177	161,719	313,715	53,148.1	4,683,919	4.1
1971	2,152	157,664	314,015	55,539.7	4,835,146	3.9
1972	2,258	178,929	359,745	57,817.1	5,160,985	3.9
1973	2,213	169,485	350,864	58,478.4	5,442,233	3.8
1974	1,875	141,132	324,763	55,748.7	5,652,406	3.4
1975	1,811	147,299	333,560	56,260.5	5,744,441	3.2
1976	1,955	162,894	365,600	61,638.0	5,861,908	3.2
1977	1,950	166,389	374,751	64,853.0	6,138,732	3.0
1978	2,076	169,202	389,193	67,380.0	6,436,365	3.1
1979	1,849	162,571	366,435	64,882.3	6,536,246	2.8
1980	1,774	144,972	314,594	61,190.1	6,570,735	2.9
1981	1,589	136,455	302,831	62,000.0	6,140,286	2.6
1982	1,417	130,061	294,971	61,321.0	6,400,942	2.3
1983	1,331	135,811	300,797	63,560.1	6,443,499	2.1
1984	1,556	150,740	335,193	65,727.0	6,509,192	2.4
1985	1,569	157,417	386,904	68,413.0	6,857,364	2.3
1986	1,632	158,032	400,694	70,622.0	6,952,263	2.3
1987	1,632	156,318	397,224	75,715.0	7,061,339	2.2
1988	1,704	155,713	410,437	77,700.0	7,196,609	2.2
1989	1,630	154,537	417,252	79,900.0	7,233,823	2.0
1990	1,563	145,179	387,180	81,200.0	7,300,853	1.9
1991	1,425	135,830	364,847	81,900.0	7,329,789	1.7
1992	1,300	118,727	344,942	84,000.0	7,411,192	1.5
1993	1,414	134,548	363,636	85,700.0	7,495,904	1.6
1994	1,419	142,200	398,050	85,600.0	7,669,022	1.7
1995	1,537	146,303	421,073	85,699.6	7,751,336	1.8
1996	1,505	142,553	435,477	87,700.0	8,106,972	1.7
1997	1,446	137,548	425,793	89,232.0	8,115,921	1.6
1998	1,367	131,578	403,766	91,616.0	8,227,016	1.5
1999	1,386	124,601	415,675	93,060.3	8,407,868	1.5
2000	1,382	121,826	424,852	94,915.1	8,569,124	1.5
2001	1,328	112,294	400,813	96,428.1	8,603,195	1.4
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

MOTOR VEHICLE TRAFFIC CRASH AND RELATED DATA (CONTINUED)

YEAR	DEATHS	NUMBER OF PERSONS INJURED	CRASHES	ESTIMATED MILEAGE (MILLIONS)	MOTOR VEHICLE REGISTRATIONS*	DEATH RATE PER 100 MILLION MILES OF TRAVEL
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

*Excludes trailers and trailer coaches, and includes mopeds

AGE

This page left intentionally blank

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	33	0	2	216	4	212	0	0	0	13	0	7	29	0	18
1	17	0	1	223	2	221	0	0	0	0	0	0	10	1	6
2	2	0	0	239	1	238	0	0	0	1	0	0	13	0	13
3	3	0	0	248	1	247	0	0	0	3	0	3	21	0	19
4	1	0	0	233	3	230	0	0	0	4	0	2	15	1	13
5	0	0	0	276	1	275	0	0	0	5	0	5	13	0	11
6	9	0	2	284	3	281	1	0	1	11	0	11	20	0	19
7	12	0	4	265	0	265	0	0	0	4	0	4	20	2	13
8	1	0	0	311	0	311	1	0	1	12	0	10	19	0	18
9	6	0	4	303	0	303	2	0	1	22	0	21	22	1	17
10	3	0	1	308	1	307	2	0	1	17	0	14	15	1	13
11	6	0	4	334	1	333	3	0	3	20	0	14	31	2	24
12	16	0	9	294	0	294	0	0	0	32	0	31	36	0	31
13	41	0	13	349	1	348	6	0	5	40	0	35	37	3	28
14	112	0	29	392	2	390	5	0	3	71	0	57	50	1	41
15	592	1	98	487	6	481	3	0	3	62	0	54	48	0	44
16	7,972	3	815	550	6	544	5	0	4	63	0	49	38	0	33
17	10,637	2	1,118	670	4	666	10	0	10	52	0	39	57	0	54
18	13,104	7	1,539	589	4	585	30	0	23	50	1	41	45	0	39
19	13,475	17	1,599	553	2	551	60	1	36	51	0	44	61	4	52
20	13,419	16	1,526	455	5	450	83	1	59	55	1	42	63	1	58
21	13,145	25	1,628	456	4	452	81	2	61	35	1	26	49	0	43
22	13,020	20	1,494	438	7	431	81	6	61	39	0	32	51	1	46
23	13,046	15	1,499	389	7	382	95	4	68	35	0	31	47	2	42
24	12,500	15	1,436	365	2	363	68	2	47	27	0	25	47	0	39
25	12,539	13	1,498	343	3	340	83	2	61	27	1	21	50	2	45
26	12,359	21	1,411	332	4	328	82	6	56	30	0	21	48	2	39
27	11,888	20	1,373	348	4	344	88	7	65	20	0	16	30	0	28
28	10,824	16	1,232	287	1	286	72	5	49	31	0	27	39	1	34
29	10,144	20	1,153	249	3	246	59	7	40	28	0	24	43	3	36
30	9,799	14	1,139	247	3	244	59	1	44	24	0	21	40	2	36
31	9,231	7	1,029	222	1	221	49	0	34	22	0	18	39	1	32
32	9,126	11	1,034	236	4	232	50	2	32	23	0	17	36	6	26
33	8,697	10	980	194	2	192	50	3	35	14	0	10	44	5	32
34	8,700	14	942	212	0	212	48	2	35	26	0	19	21	2	15
35	8,448	15	991	176	2	174	50	4	35	23	0	17	35	1	29
36	8,463	4	954	196	0	196	53	2	36	19	0	16	36	2	32
37	8,355	8	969	184	1	183	68	4	48	13	0	12	26	3	21

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

AGE AND INJURY SEVERITY BY PERSON TYPE (CONTINUED)

AGE	DRIVER			INJURED PASSENGER			MOTORCYCLIST			BICYCLIST			PEDESTRIAN		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
38	8,085	11	909	157	0	157	60	2	45	12	0	8	26	4	18
39	7,797	7	855	172	3	169	47	3	36	25	1	22	16	2	11
40	7,558	9	849	174	3	171	44	1	32	14	1	12	35	4	28
41	7,301	7	761	166	4	162	46	1	29	16	0	13	21	2	16
42	7,311	9	787	149	2	147	47	1	34	10	0	8	28	0	26
43	7,273	10	776	139	0	139	62	1	48	15	0	13	21	2	17
44	7,304	8	816	147	2	145	44	3	35	8	0	5	24	1	20
45	7,891	9	896	154	2	152	66	3	45	18	0	16	23	3	17
46	8,454	11	958	181	1	180	86	2	59	14	0	14	32	2	27
47	8,302	10	914	167	1	166	65	2	46	21	0	17	26	4	20
48	7,958	6	896	168	0	168	67	0	49	17	0	13	25	3	17
49	7,556	9	873	178	0	178	45	2	29	25	0	22	27	2	21
50	7,596	7	827	160	3	157	74	2	53	18	0	16	34	0	31
51	7,457	11	846	192	3	189	66	1	47	27	1	23	25	3	20
52	7,714	13	867	152	3	149	69	2	47	25	0	22	45	4	34
53	7,989	13	908	183	1	182	65	5	46	27	2	23	33	9	19
54	7,934	3	958	174	2	172	77	1	54	35	1	30	38	5	30
55	7,842	9	896	196	1	195	81	4	53	34	2	27	47	4	40
56	7,719	9	875	162	3	159	59	4	37	28	0	27	29	3	23
57	7,438	13	852	163	1	162	64	3	49	22	1	19	41	3	31
58	7,275	3	806	158	1	157	66	3	44	20	0	18	42	5	34
59	7,137	12	816	158	0	158	56	2	42	27	0	25	29	2	27
60	6,801	11	803	144	1	143	43	2	29	13	0	8	30	3	24
61	6,338	9	704	163	2	161	47	3	35	19	0	18	29	2	25
62	5,911	7	637	131	0	131	49	2	37	11	1	7	26	2	20
63	5,533	12	624	149	3	146	51	2	37	17	0	17	26	4	19
64	5,059	7	556	138	4	134	32	3	22	7	1	4	20	3	14
65	4,916	5	604	129	1	128	30	1	23	14	2	9	19	1	15
66	4,455	1	512	142	1	141	29	1	19	11	0	10	16	1	11
67	4,218	7	478	126	0	126	36	1	24	12	0	8	22	1	18
68	4,048	5	505	106	2	104	15	0	7	8	0	8	17	1	16
69	3,851	9	468	122	2	120	28	4	19	7	0	5	14	2	11
70	3,835	7	435	113	3	110	21	3	11	6	0	6	14	0	12
71	2,892	6	333	84	1	83	11	1	8	5	0	5	9	1	8
72	2,672	7	312	83	2	81	14	1	10	6	0	3	13	1	12
73	2,552	8	311	93	2	91	9	0	7	5	1	4	11	1	8
74	2,622	4	332	83	1	82	13	2	8	3	0	3	10	2	7
75	2,281	5	278	72	2	70	12	0	10	4	0	3	9	1	7
76	1,909	6	243	74	2	72	4	1	3	2	1	1	7	0	7

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	1,670	5	221	46	2	44	3	1	2	3	1	2	14	4	8
78	1,564	5	214	63	1	62	2	0	1	5	0	4	7	3	4
79	1,477	1	191	53	0	53	2	0	1	2	0	2	4	0	4
80	1,223	4	177	68	4	64	1	0	1	0	0	0	4	1	3
81	1,151	1	151	61	0	61	1	0	1	2	0	2	4	1	3
82	1,100	9	140	51	1	50	2	0	1	0	0	0	5	0	4
83	916	2	134	41	0	41	0	0	0	1	0	0	1	0	1
84	796	3	112	52	2	50	1	0	1	0	0	0	2	1	1
85	732	6	96	46	1	45	1	0	1	0	0	0	3	1	2
86	678	2	95	42	1	41	1	0	1	1	0	1	3	0	2
87	553	5	77	30	1	29	0	0	0	0	0	0	1	0	1
88	437	2	62	31	4	27	0	0	0	1	1	0	1	1	0
89	371	4	50	23	2	21	1	0	1	0	0	0	1	0	1
90	281	2	41	16	0	16	0	0	0	0	0	0	2	0	1
91	246	2	32	14	2	12	0	0	0	0	0	0	0	0	0
92	174	2	30	13	0	13	0	0	0	0	0	0	2	2	0
93	96	0	13	6	0	6	0	0	0	0	0	0	0	0	0
94	66	1	15	7	0	7	0	0	0	0	0	0	0	0	0
95	48	0	9	8	0	8	0	0	0	0	0	0	0	0	0
96	26	1	4	5	1	4	0	0	0	0	0	0	0	0	0
97	28	0	3	1	0	1	0	0	0	0	0	0	0	0	0
98	14	0	0	0	0	0	0	0	0	0	0	0	1	1	0
99	26	1	3	4	0	4	1	0	1	0	0	0	0	0	0
100	4	0	0	6	0	6	0	0	0	0	0	0	0	0	0
101	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0
102	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
103	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
104	1	0	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	3	0	0	2	0	2	0	0	0	0	0	0	0	0	0
107	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	48,175	0	19	29	0	29	74	0	1	76	0	4	53	0	10
TOTAL	540,387	667	56,491	18,777	182	18,595	3,237	137	2,238	1,723	21	1,363	2,411	158	1,945
	*Includes 49,716 drivers with unknown injury severity and 433,513 with no injury			*No passengers in 2017 had an unknown injury severity			*Includes 75 motorcyclists with unknown injury severity and 787 with no injury			*Includes 85 bicyclists with unknown injury severity and 254 with no injury			*Includes 86 pedestrians with unknown injury severity and 222 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	33,953	57.9	93	78.2	7,671	61.2
Turning left	5,252	9.0	9	7.6	1,474	11.8
Turning right	1,892	3.2	0	0.0	276	2.2
Stopped on roadway	3,538	6.0	0	0.0	749	6.0
In prior crash	54	0.1	1	0.8	18	0.1
Changing lanes	2,006	3.4	0	0.0	253	2.0
Backing	949	1.6	1	0.8	33	0.3
Slowing/stopping on roadway	6,339	10.8	2	1.7	1,039	8.3
Slowing/stopping other	74	0.1	0	0.0	17	0.1
Starting up on roadway	1,212	2.1	1	0.8	277	2.2
Starting up other	21	0.0	0	0.0	4	0.0
Entering parking	28	0.0	0	0.0	3	0.0
Leaving parking	129	0.2	0	0.0	21	0.2
Entering roadway	784	1.3	1	0.8	178	1.4
Leaving roadway	69	0.1	0	0.0	17	0.1
Making U-turn	109	0.2	0	0.0	30	0.2
Overtaking or passing	410	0.7	2	1.7	93	0.7
Avoiding object	73	0.1	0	0.0	20	0.2
Avoiding pedestrian	9	0.0	1	0.8	3	0.0
Avoiding vehicle (front/back)	444	0.8	4	3.4	101	0.8
Avoiding vehicle (angle)	172	0.3	0	0.0	32	0.3
Driverless moving	4	0.0	0	0.0	2	0.0
Parked	171	0.3	1	0.8	23	0.2
Crossing at intersection	14	0.0	0	0.0	5	0.0
Crossing not at intersection	1	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	2	0.0	0	0.0	1	0.0
In roadway against traffic	3	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	1	0.0	0	0.0	1	0.0
Other working in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	3	0.0	0	0.0	1	0.0
Not in roadway	5	0.0	0	0.0	1	0.0
Other	74	0.1	0	0.0	15	0.1
Unknown	66	0.1	2	1.7	13	0.1
Avoiding animal	181	0.3	0	0.0	54	0.4
Negotiating a curve	543	0.9	1	0.8	111	0.9
Uncoded & Errors	22	0.0	0	0.0	3	0.0
TOTAL	58,607	100.0	119	100.0	12,539	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	460	0.8	0	0.0	116	0.9
Cross center/median	56	0.1	1	0.8	19	0.2
Ran off road left	202	0.3	0	0.0	34	0.3
Ran off road right	312	0.5	0	0.0	56	0.4
Re-enter road	16	0.0	0	0.0	4	0.0
Overturn	1,430	2.4	8	6.7	651	5.2
Separation of units	27	0.0	0	0.0	6	0.0
Fire/explosion	39	0.1	1	0.8	6	0.0
Immersion	20	0.0	0	0.0	3	0.0
Jackknife	4	0.0	0	0.0	1	0.0
Downhill runaway	1	0.0	0	0.0	0	0.0
Cargo loss/shift	13	0.0	0	0.0	3	0.0
Individual fell off	44	0.1	0	0.0	40	0.3
Other noncollision	76	0.1	0	0.0	14	0.1
SUBTOTAL	2,700	4.6	10	8.4	953	7.6

For drivers age 16-20, an overturn is the most harmful event in a noncollision with the highest proportion of all crashes (2.4%), fatal crashes (6.7%), and injury crashes (5.2%).

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Pedestrian	169	0.3	12	10.1	141	1.1
Bicyclist	100	0.2	0	0.0	87	0.7
Motor vehicle in transport	43,377	74.0	74	62.2	9,571	76.3
Parked motor vehicle	1,165	2.0	0	0.0	141	1.1
Railway train	2	0.0	1	0.8	1	0.0
Animal	3,353	5.7	1	0.8	59	0.5
Other nonfixed objects	263	0.4	2	1.7	26	0.2
SUBTOTAL	48,429	82.6	90	75.6	10,026	80.0

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	40	0.1	1	0.8	11	0.1
Bridge rail	57	0.1	0	0.0	14	0.1
Guardrail face	496	0.8	0	0.0	67	0.5
Guardrail end	96	0.2	0	0.0	24	0.2
Median barrier	669	1.1	0	0.0	164	1.3
Highway traffic sign post	538	0.9	0	0.0	28	0.2
Highway signal post	14	0.0	0	0.0	4	0.0
Luminaire/light support	618	1.1	1	0.8	149	1.2
Other pole	203	0.3	1	0.8	38	0.3
Culvert	84	0.1	0	0.0	27	0.2
Curb	286	0.5	0	0.0	32	0.3
Ditch	1,195	2.0	1	0.8	239	1.9
Embankment	200	0.3	0	0.0	49	0.4
Fence	138	0.2	0	0.0	14	0.1
Mailbox	254	0.4	0	0.0	10	0.1
Tree	1,841	3.1	13	10.9	580	4.6
Rail crossing signal	7	0.0	0	0.0	2	0.0
Building	63	0.1	1	0.8	19	0.2
Traffic island	1	0.0	0	0.0	0	0.0
Fire hydrant	88	0.2	0	0.0	6	0.0
Impact attenuator	17	0.0	0	0.0	5	0.0
Other fixed object	263	0.4	1	0.8	48	0.4
SUBTOTAL	7,168	12.2	19	16.0	1,530	12.2

For drivers age 16-20, a tree is the fixed object associated with the highest proportion of all crashes (3.1%), fatal crashes (10.9%), and injury crashes (4.6%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Uncoded & Errors	302	0.5	0	0.0	28	0.2
No event coded as most harmful	8	0.0	0	0.0	2	0.0
TOTAL	58,607	100.0	119	100.0	12,539	100.0

DRIVER AGE 16-20 (CONTINUED)

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Single Vehicle	12,984	22.2	33	27.7	2,469	19.7
Head On	732	1.2	14	11.8	351	2.8
Head On - Left Turn	2,173	3.7	5	4.2	886	7.1
Angle	11,147	19.0	37	31.1	3,246	25.9
Rear End	20,112	34.3	10	8.4	3,858	30.8
Rear End - Left Turn	862	1.5	1	0.8	252	2.0
Rear End - Right Turn	520	0.9	0	0.0	73	0.6
Sideswipe - Same Direction	6,004	10.2	5	4.2	591	4.7
Sideswipe - Opposite Direction	892	1.5	2	1.7	145	1.2
Backing	733	1.3	0	0.0	16	0.1
Other	2,326	4.0	11	9.2	623	5.0
Unknown	122	0.2	1	0.8	29	0.2
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	58,607	100.0	119	100.0	12,539	100.0

Based on crash type, drivers age 16-20 are involved in the largest proportion of rear end crashes for all crashes (34.3%) and injury crashes (30.8%). For fatal crashes, the largest proportion of drivers are involved in angle crashes (31.1%).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
On Road	51,301	87.5	88	73.9	10,856	86.6
Median	540	0.9	0	0.0	113	0.9
Shoulder	1,975	3.4	7	5.9	433	3.5
Outside of Shoulder/Curb	4,232	7.2	20	16.8	1,037	8.3
Gore	152	0.3	2	1.7	38	0.3
On-Street Parking	212	0.4	0	0.0	10	0.1
Off the Roadway	13	0.0	0	0.0	5	0.0
On the Sidewalk	34	0.1	1	0.8	16	0.1
In the Bicycle Lane	7	0.0	0	0.0	2	0.0
Other/Unknown	124	0.2	1	0.8	24	0.2
Uncoded & Errors	17	0.0	0	0.0	5	0.0
TOTAL	58,607	100.0	119	100.0	12,539	100.0

Other than on the road crashes, drivers age 16-20 have the highest proportion where the first impact is outside the shoulder/curb for all crashes (7.2%), fatal crashes (16.8%), and injury crashes (8.3%).

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	6,409	10.9	7	5.9	1,299	10.4
U.S. & Michigan Roads	17,341	29.6	36	30.3	3,645	29.1
County & City Roads	34,753	59.3	76	63.9	7,575	60.4
Uncoded & Errors	104	0.2	0	0.0	20	0.2
TOTAL	58,607	100.0	119	100.0	12,539	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	2,110	3.6	12	10.1	516	4.1
3:00 AM - 5:59 AM	1,097	1.9	7	5.9	263	2.1
6:00 AM - 8:59 AM	7,069	12.1	9	7.6	1,302	10.4
9:00 AM - 11:59 AM	6,522	11.1	11	9.2	1,306	10.4
12:00 PM - 2:59 PM	10,909	18.6	16	13.4	2,359	18.8
3:00 PM - 5:59 PM	15,994	27.3	22	18.5	3,500	27.9
6:00 PM - 8:59 PM	9,241	15.8	18	15.1	2,035	16.2
9:00 PM - 11:59 PM	5,648	9.6	23	19.3	1,254	10.0
Unknown	17	0.0	1	0.8	4	0.0
TOTAL	58,607	100.0	119	100.0	12,539	100.0

For drivers age 16-20, the 3:00 - 5:59 PM time period is the highest proportion of all crashes (27.3%) and injury crashes (27.9%). The 9:00 - 11:59 PM time period is the highest proportion of fatal crashes (19.3%).

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
None	20,500	35.0	39	32.8	3,840	30.6	129	0.7
Speed too fast	6,914	11.8	15	12.6	1,476	11.8	2,677	13.6
Speed too slow	30	0.1	0	0.0	7	0.1	11	0.1
Failed to yield	7,268	12.4	9	7.6	2,002	16.0	4,425	22.4
Disregard traffic control	1,434	2.4	9	7.6	618	4.9	992	5.0
Drove wrong way	37	0.1	0	0.0	11	0.1	13	0.1
Drove left of center	272	0.5	4	3.4	96	0.8	128	0.6
Improper passing	329	0.6	0	0.0	50	0.4	145	0.7
Improper lane use	1,349	2.3	1	0.8	179	1.4	718	3.6
Improper turn	640	1.1	1	0.8	126	1.0	342	1.7
Improper/no signal	52	0.1	0	0.0	4	0.0	27	0.1
Improper backing	678	1.2	0	0.0	19	0.2	259	1.3
Unable to stop in assured clear distance	13,377	22.8	5	4.2	2,527	20.2	7,709	39.1
Other	1,975	3.4	2	1.7	443	3.5	698	3.5
Unknown	1,314	2.2	14	11.8	330	2.6	50	0.3
Reckless driving	310	0.5	10	8.4	125	1.0	138	0.7
Careless/negligent driving	2,076	3.5	10	8.4	678	5.4	1,259	6.4
Uncoded & Errors	52	0.1	0	0.0	8	0.1	3	0.0
TOTAL	58,607	100.0	119	100.0	12,539	100.0	19,723	100.0

After no hazardous action, the second highest hazardous action category for drivers age 16-20 for all crashes (22.8%) and injury crashes (20.2%) occurs when the driver is unable to stop in an assured clear distance. For drivers in fatal crashes, the second highest category is speed too fast (12.6%).

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	8,479	14.5	15	12.6	1,745	13.9
Tuesday	8,587	14.7	14	11.8	1,786	14.2
Wednesday	9,030	15.4	17	14.3	1,825	14.6
Thursday	9,242	15.8	11	9.2	1,946	15.5
Friday	10,049	17.1	23	19.3	2,182	17.4
Saturday	7,451	12.7	19	16.0	1,680	13.4
Sunday	5,769	9.8	20	16.8	1,375	11.0
TOTAL	58,607	100.0	119	100.0	12,539	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	31,289	53.4	74	62.2	6,513	51.9
Female	27,308	46.6	45	37.8	6,025	48.1
Uncoded & Errors	10	0.0	0	0.0	1	0.0
TOTAL	58,607	100.0	119	100.0	12,539	100.0

For drivers age 16-20 in fatal crashes, male drivers (62.2%) are about 1.6 times as prevalent as female drivers (37.8%).

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	43,579	74.4	70	58.8	8,476	67.6
2 occupants	11,046	18.8	27	22.7	2,822	22.5
3 occupants	2,538	4.3	10	8.4	830	6.6
4 occupants	897	1.5	8	6.7	269	2.1
5 occupants	255	0.4	1	0.8	101	0.8
6+ occupants	80	0.1	3	2.5	24	0.2
0 occupants	104	0.2	0	0.0	9	0.1
Uncoded & Errors	108	0.2	0	0.0	8	0.1
TOTAL	58,607	100.0	119	100.0	12,539	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	52,522	89.6	97	81.5	11,002	87.7
Motor home	99	0.2	0	0.0	14	0.1
Pickup truck	5,160	8.8	11	9.2	1,147	9.1
Small Truck under 10,000 lbs. GVWR	242	0.4	2	1.7	57	0.5
Motorcycle	179	0.3	1	0.8	128	1.0
Moped / goped	108	0.2	2	1.7	84	0.7
Go-cart / golf cart	8	0.0	0	0.0	4	0.0
Snowmobile	10	0.0	1	0.8	7	0.1
Off-Road Vehicle - ORV / All-Terrain Vehicle - ATV	62	0.1	5	4.2	47	0.4
Other	80	0.1	0	0.0	23	0.2
Unknown	38	0.1	0	0.0	7	0.1
CDL Truck/Bus (breakdown below)	99	0.2	0	0.0	19	0.2
TOTAL	58,607	100.0	119	100.0	12,539	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	2	2.0	0	0.0	0	0.0
10,001 - 26,000 lbs.	57	57.6	0	0.0	12	63.2
Greater than 26,000 lbs.	39	39.4	0	0.0	7	36.8
Uncoded & Errors	1	1.0	0	0.0	0	0.0
TOTAL	99	100.0	0	0.0	19	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	213,548	56.4	855	76.1	44,045	57.1
Turning left	24,639	6.5	44	3.9	6,374	8.3
Turning right	10,712	2.8	6	0.5	1,555	2.0
Stopped on roadway	42,508	11.2	60	5.3	9,614	12.5
In prior crash	291	0.1	2	0.2	97	0.1
Changing lanes	10,761	2.8	13	1.2	1,251	1.6
Backing	6,897	1.8	0	0.0	275	0.4
Slowing/stopping on roadway	43,293	11.4	36	3.2	8,491	11.0
Slowing/stopping other	543	0.1	1	0.1	106	0.1
Starting up on roadway	6,727	1.8	14	1.2	1,390	1.8
Starting up other	86	0.0	0	0.0	19	0.0
Entering parking	318	0.1	1	0.1	26	0.0
Leaving parking	750	0.2	2	0.2	120	0.2
Entering roadway	3,766	1.0	12	1.1	795	1.0
Leaving roadway	445	0.1	5	0.4	136	0.2
Making U-turn	681	0.2	6	0.5	131	0.2
Overtaking or passing	1,992	0.5	11	1.0	377	0.5
Avoiding object	354	0.1	2	0.2	74	0.1
Avoiding pedestrian	66	0.0	3	0.3	18	0.0
Avoiding vehicle (front/back)	2,690	0.7	16	1.4	656	0.9
Avoiding vehicle (angle)	1,074	0.3	1	0.1	267	0.3
Driverless moving	79	0.0	0	0.0	15	0.0
Parked	2,453	0.6	1	0.1	294	0.4
Crossing at intersection	52	0.0	0	0.0	22	0.0
Crossing not at intersection	11	0.0	0	0.0	4	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	16	0.0	0	0.0	6	0.0
In roadway against traffic	5	0.0	0	0.0	2	0.0
Standing/lying in roadway	2	0.0	0	0.0	0	0.0
Pushing/working on vehicle	6	0.0	0	0.0	3	0.0
Other working in roadway	5	0.0	0	0.0	1	0.0
Playing in roadway	1	0.0	0	0.0	0	0.0
In roadway other reason	9	0.0	1	0.1	2	0.0
Not in roadway	34	0.0	1	0.1	18	0.0
Other	518	0.1	3	0.3	130	0.2
Unknown	706	0.2	6	0.5	157	0.2
Avoiding animal	708	0.2	1	0.1	126	0.2
Negotiating a curve	1,969	0.5	20	1.8	487	0.6
Uncoded & Errors	102	0.0	0	0.0	20	0.0
TOTAL	378,817	100.0	1,123	100.0	77,104	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	2,058	0.5	3	0.3	572	0.7
Cross center/median	332	0.1	3	0.3	114	0.1
Ran off road left	752	0.2	0	0.0	170	0.2
Ran off road right	1,276	0.3	1	0.1	282	0.4
Re-enter road	77	0.0	0	0.0	11	0.0
Overturn	4,495	1.2	69	6.1	2,125	2.8
Separation of units	244	0.1	2	0.2	54	0.1
Fire/explosion	298	0.1	8	0.7	38	0.0
Immersion	204	0.1	2	0.2	13	0.0
Jackknife	184	0.0	0	0.0	29	0.0
Downhill runaway	11	0.0	0	0.0	3	0.0
Cargo loss/shift	286	0.1	0	0.0	25	0.0
Individual fell off	278	0.1	11	1.0	232	0.3
Other noncollision	748	0.2	2	0.2	160	0.2
SUBTOTAL	11,243	3.0	101	9.0	3,828	5.0

For drivers age 21-64, an overturn is the most harmful event in a noncollision with the highest proportion of all crashes (1.2%), fatal crashes (6.1%), and injury crashes (2.8%)

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	1,204	0.3	112	10.0	969	1.3
Bicyclist	1,038	0.3	18	1.6	823	1.1
Motor vehicle in transport	281,549	74.3	684	60.9	62,768	81.4
Parked motor vehicle	7,576	2.0	13	1.2	832	1.1
Railway train	33	0.0	1	0.1	8	0.0
Animal	43,049	11.4	13	1.2	763	1.0
Other nonfixed objects	2,999	0.8	11	1.0	241	0.3
SUBTOTAL	337,448	89.1	852	75.9	66,404	86.1

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	172	0.0	1	0.1	43	0.1
Bridge rail	294	0.1	1	0.1	55	0.1
Guardrail face	2,143	0.6	4	0.4	385	0.5
Guardrail end	443	0.1	3	0.3	122	0.2
Median barrier	3,347	0.9	4	0.4	942	1.2
Highway traffic sign post	2,055	0.5	3	0.3	154	0.2
Highway signal post	124	0.0	2	0.2	23	0.0
Luminaire/light support	2,492	0.7	16	1.4	754	1.0
Other pole	848	0.2	3	0.3	138	0.2
Culvert	343	0.1	2	0.2	107	0.1
Curb	1,119	0.3	2	0.2	142	0.2
Ditch	4,142	1.1	11	1.0	932	1.2
Embankment	712	0.2	5	0.4	199	0.3
Fence	514	0.1	2	0.2	85	0.1
Mailbox	892	0.2	0	0.0	40	0.1
Tree	6,247	1.6	94	8.4	1,981	2.6
Rail crossing signal	38	0.0	0	0.0	6	0.0
Building	337	0.1	6	0.5	131	0.2
Traffic island	26	0.0	0	0.0	6	0.0
Fire hydrant	309	0.1	0	0.0	52	0.1
Impact attenuator	111	0.0	0	0.0	37	0.0
Other fixed object	1,221	0.3	7	0.6	277	0.4
SUBTOTAL	27,929	7.4	166	14.8	6,611	8.6

For drivers age 21-64, a tree is the fixed object associated with the highest proportion of all crashes (1.6%), fatal crashes (8.4%), 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	2,147	0.6	3	0.3	251	0.3
No event coded as most harmful	50	0.0	1	0.1	10	0.0
TOTAL	378,817	100.0	1,123	100.0	77,104	100.0

DRIVER AGE 21-64 (CONTINUED)

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Single Vehicle	81,399	21.5	350	31.2	10,947	14.2
Head On	4,476	1.2	169	15.0	2,167	2.8
Head On - Left Turn	10,961	2.9	47	4.2	4,462	5.8
Angle	62,986	16.6	244	21.7	18,232	23.6
Rear End	130,048	34.3	141	12.6	28,471	36.9
Rear End - Left Turn	4,756	1.3	17	1.5	1,284	1.7
Rear End - Right Turn	3,844	1.0	0	0.0	531	0.7
Sideswipe - Same Direction	48,044	12.7	39	3.5	4,641	6.0
Sideswipe - Opposite Direction	6,879	1.8	16	1.4	1,170	1.5
Backing	6,239	1.6	0	0.0	169	0.2
Other	18,000	4.8	98	8.7	4,797	6.2
Unknown	1,185	0.3	2	0.2	233	0.3
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	378,817	100.0	1,123	100.0	77,104	100.0

Based on crash type, drivers age 21-64 are involved in the largest proportion of rear end crashes for all crashes (34.3%) and for injury crashes (36.9%). The single vehicle type has the largest proportion of drivers in fatal crashes (31.2%).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
On Road	349,143	92.2	929	82.7	70,266	91.1
Median	2,651	0.7	12	1.1	532	0.7
Shoulder	8,457	2.2	47	4.2	1,916	2.5
Outside of Shoulder/Curb	14,696	3.9	121	10.8	3,747	4.9
Gore	598	0.2	8	0.7	171	0.2
On-Street Parking	1,834	0.5	2	0.2	132	0.2
Off the Roadway	45	0.0	0	0.0	19	0.0
On the Sidewalk	308	0.1	1	0.1	140	0.2
In the Bicycle Lane	58	0.0	0	0.0	11	0.0
Other/Unknown	913	0.2	2	0.2	157	0.2
Uncoded & Errors	114	0.0	1	0.1	13	0.0
TOTAL	378,817	100.0	1,123	100.0	77,104	100.0

Other than on the road crashes, drivers age 21-64 have the highest proportion where the location of first impact is outside the shoulder/curb for all crashes (3.9%), fatal crashes (10.8%), and injury crashes (4.9%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Interstate Routes	56,025	14.8	127	11.3	11,519	14.9
U.S. & Michigan Roads	119,205	31.5	384	34.2	24,190	31.4
County & City Roads	203,052	53.6	612	54.5	41,297	53.6
Uncoded & Errors	535	0.1	0	0.0	98	0.1
TOTAL	378,817	100.0	1,123	100.0	77,104	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	12,786	3.4	104	9.3	3,090	4.0
3:00 AM - 5:59 AM	13,068	3.4	78	6.9	2,157	2.8
6:00 AM - 8:59 AM	60,059	15.9	108	9.6	10,380	13.5
9:00 AM - 11:59 AM	47,674	12.6	116	10.3	9,705	12.6
12:00 PM - 2:59 PM	64,810	17.1	169	15.0	14,496	18.8
3:00 PM - 5:59 PM	98,470	26.0	188	16.7	21,037	27.3
6:00 PM - 8:59 PM	55,231	14.6	201	17.9	10,860	14.1
9:00 PM - 11:59 PM	26,627	7.0	159	14.2	5,361	7.0
Unknown	92	0.0	0	0.0	18	0.0
TOTAL	378,817	100.0	1,123	100.0	77,104	100.0

For drivers age 21-64, the 3:00 - 5:59 PM time period has the highest proportion of all crashes (26.0%) and injury crashes (27.3%). The 6:00 - 8:59 PM time period has the highest proportion of fatal crashes (17.9%).

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	212,592	56.1	515	45.9	39,506	51.2	783	1.0
Speed too fast	21,728	5.7	136	12.1	4,919	6.4	7,305	9.8
Speed too slow	178	0.0	3	0.3	36	0.0	47	0.1
Failed to yield	29,565	7.8	53	4.7	7,557	9.8	16,768	22.4
Disregard traffic control	6,558	1.7	40	3.6	2,773	3.6	4,108	5.5
Drove wrong way	224	0.1	10	0.9	90	0.1	95	0.1
Drove left of center	1,533	0.4	39	3.5	573	0.7	652	0.9
Improper passing	1,738	0.5	7	0.6	261	0.3	633	0.8
Improper lane use	8,422	2.2	7	0.6	1,025	1.3	3,687	4.9
Improper turn	3,475	0.9	6	0.5	544	0.7	1,525	2.0
Improper/no signal	313	0.1	0	0.0	42	0.1	120	0.2
Improper backing	4,995	1.3	1	0.1	145	0.2	1,566	2.1
Unable to stop in assured clear distance	53,706	14.2	35	3.1	10,856	14.1	28,556	38.1
Other	12,093	3.2	53	4.7	2,664	3.5	3,532	4.7
Unknown	11,215	3.0	95	8.5	2,641	3.4	392	0.5
Reckless driving	1,717	0.5	61	5.4	746	1.0	667	0.9
Careless/negligent driving	8,304	2.2	60	5.3	2,645	3.4	4,463	6.0
Uncoded & Errors	461	0.1	2	0.2	81	0.1	16	0.0
TOTAL	378,817	100.0	1,123	100.0	77,104	100.0	74,915	100.0

After no hazardous action, the second highest hazardous action category for drivers age 21-64 for all crashes (14.2%) and injury crashes (14.1%) occurs when the driver is unable to stop in an assured clear distance. For drivers in fatal crashes, the second highest category is speed too fast (12.1%).

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	56,883	15.0	118	10.5	11,645	15.1
Tuesday	59,078	15.6	144	12.8	11,736	15.2
Wednesday	59,976	15.8	184	16.4	11,699	15.2
Thursday	60,782	16.0	193	17.2	12,100	15.7
Friday	64,186	16.9	168	15.0	12,932	16.8
Saturday	44,070	11.6	163	14.5	9,382	12.2
Sunday	33,842	8.9	153	13.6	7,610	9.9
TOTAL	378,817	100.0	1,123	100.0	77,104	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	210,021	55.4	793	70.6	41,312	53.6
Female	168,717	44.5	330	29.4	35,785	46.4
Uncoded & Errors	79	0.0	0	0.0	7	0.0
TOTAL	378,817	100.0	1,123	100.0	77,104	100.0

For drivers age 21-64, male drivers (70.6%) account for almost two and a half times that of female drivers (29.4%) 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	300,514	79.3	807	71.9	56,136	72.8
2 occupants	52,850	14.0	210	18.7	13,929	18.1
3 occupants	14,205	3.7	53	4.7	4,128	5.4
4 occupants	5,732	1.5	36	3.2	1,708	2.2
5 occupants	1,886	0.5	6	0.5	618	0.8
6+ occupants	1,339	0.4	10	0.9	380	0.5
0 occupants	1,406	0.4	0	0.0	108	0.1
Uncoded & Errors	885	0.2	1	0.1	97	0.1
TOTAL	378,817	100.0	1,123	100.0	77,104	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	313,369	82.7	721	64.2	63,928	82.9
Motor home	1,105	0.3	5	0.4	197	0.3
Pickup truck	44,637	11.8	157	14.0	7,772	10.1
Small Truck under 10,000 lbs. GVWR	2,810	0.7	6	0.5	469	0.6
Motorcycle	2,480	0.7	117	10.4	1,808	2.3
Moped / goped	246	0.1	2	0.2	216	0.3
Go-cart / golf cart	18	0.0	1	0.1	7	0.0
Snowmobile	96	0.0	4	0.4	62	0.1
Off-Road Vehicle - ORV / All-Terrain Vehicle - ATV	204	0.1	18	1.6	144	0.2
Other	1,658	0.4	6	0.5	261	0.3
Unknown	214	0.1	0	0.0	22	0.0
CDL Truck/Bus (breakdown below)	11,980	3.2	86	7.7	2,218	2.9
TOTAL	378,817	100.0	1,123	100.0	77,104	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	210	1.8	0	0.0	15	0.7
10,001 - 26,000 lbs.	3,075	25.7	17	19.8	443	20.0
Greater than 26,000 lbs.	8,621	72.0	69	80.2	1,758	79.3
Uncoded & Errors	74	0.6	0	0.0	2	0.1
TOTAL	11,980	100.0	86	100.0	2,218	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	27,794	51.5	155	67.4	5,990	52.6
Turning left	5,483	10.2	29	12.6	1,551	13.6
Turning right	2,143	4.0	1	0.4	323	2.8
Stopped on roadway	5,803	10.8	8	3.5	1,342	11.8
In prior crash	33	0.1	0	0.0	16	0.1
Changing lanes	1,974	3.7	6	2.6	162	1.4
Backing	1,515	2.8	0	0.0	48	0.4
Slowing/stopping on roadway	4,949	9.2	11	4.8	1,049	9.2
Slowing/stopping other	67	0.1	0	0.0	16	0.1
Starting up on roadway	1,215	2.3	7	3.0	310	2.7
Starting up other	21	0.0	0	0.0	3	0.0
Entering parking	81	0.2	0	0.0	9	0.1
Leaving parking	191	0.4	0	0.0	28	0.2
Entering roadway	1,003	1.9	6	2.6	199	1.7
Leaving roadway	60	0.1	0	0.0	19	0.2
Making U-turn	165	0.3	1	0.4	45	0.4
Overtaking or passing	262	0.5	1	0.4	39	0.3
Avoiding object	21	0.0	0	0.0	3	0.0
Avoiding pedestrian	9	0.0	0	0.0	7	0.1
Avoiding vehicle (front/back)	264	0.5	2	0.9	68	0.6
Avoiding vehicle (angle)	126	0.2	0	0.0	22	0.2
Driverless moving	13	0.0	0	0.0	1	0.0
Parked	293	0.5	0	0.0	24	0.2
Crossing at intersection	12	0.0	0	0.0	5	0.0
Crossing not at intersection	2	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	4	0.0	0	0.0	3	0.0
Standing/lying in roadway	1	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	0	0.0	0	0.0	0	0.0
Not in roadway	3	0.0	0	0.0	0	0.0
Other	67	0.1	1	0.4	17	0.1
Unknown	76	0.1	0	0.0	19	0.2
Avoiding animal	56	0.1	0	0.0	15	0.1
Negotiating a curve	213	0.4	2	0.9	51	0.4
Uncoded & Errors	14	0.0	0	0.0	1	0.0
TOTAL	53,934	100.0	230	100.0	11,385	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	145	0.3	2	0.9	49	0.4
Cross center/median	52	0.1	0	0.0	16	0.1
Ran off road left	96	0.2	1	0.4	23	0.2
Ran off road right	134	0.2	0	0.0	38	0.3
Re-enter road	19	0.0	0	0.0	6	0.1
Overturn	365	0.7	10	4.3	198	1.7
Separation of units	25	0.0	0	0.0	3	0.0
Fire/explosion	25	0.0	0	0.0	3	0.0
Immersion	20	0.0	2	0.9	1	0.0
Jackknife	11	0.0	0	0.0	0	0.0
Downhill runaway	3	0.0	0	0.0	1	0.0
Cargo loss/shift	31	0.1	0	0.0	0	0.0
Individual fell off	24	0.0	0	0.0	22	0.2
Other noncollision	122	0.2	0	0.0	29	0.3
SUBTOTAL	1,072	2.0	15	6.5	389	3.4

For drivers age 65 and over, an overturn is the most harmful event in a noncollision with the highest proportion of drivers in all crashes (0.7%), fatal crashes (4.3%), 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	266	0.5	13	5.7	222	1.9
Bicyclist	219	0.4	3	1.3	170	1.5
Motor vehicle in transport	41,823	77.5	168	73.0	9,626	84.5
Parked motor vehicle	1,232	2.3	1	0.4	108	0.9
Railway train	11	0.0	0	0.0	6	0.1
Animal	5,863	10.9	0	0.0	96	0.8
Other nonfixed objects	408	0.8	2	0.9	29	0.3
SUBTOTAL	49,822	92.4	187	81.3	10,257	90.1

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	24	0.0	1	0.4	3	0.0
Bridge rail	21	0.0	0	0.0	4	0.0
Guardrail face	185	0.3	1	0.4	36	0.3
Guardrail end	44	0.1	1	0.4	11	0.1
Median barrier	168	0.3	1	0.4	69	0.6
Highway traffic sign post	254	0.5	0	0.0	25	0.2
Highway signal post	15	0.0	0	0.0	4	0.0
Luminaire/light support	257	0.5	4	1.7	77	0.7
Other pole	95	0.2	1	0.4	20	0.2
Culvert	27	0.1	0	0.0	11	0.1
Curb	109	0.2	1	0.4	13	0.1
Ditch	410	0.8	3	1.3	96	0.8
Embankment	75	0.1	1	0.4	23	0.2
Fence	47	0.1	0	0.0	6	0.1
Mailbox	147	0.3	0	0.0	11	0.1
Tree	658	1.2	13	5.7	230	2.0
Rail crossing signal	15	0.0	0	0.0	4	0.0
Building	47	0.1	1	0.4	25	0.2
Traffic island	2	0.0	0	0.0	0	0.0
Fire hydrant	43	0.1	0	0.0	7	0.1
Impact attenuator	20	0.0	0	0.0	8	0.1
Other fixed object	146	0.3	0	0.0	29	0.3
SUBTOTAL	2,809	5.2	28	12.2	712	6.3

For drivers age 65 and over, a tree is the fixed object associated with the highest proportion of drivers in all crashes (1.2%), fatal crashes (5.7%), and injury crashes (2.0%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Uncoded & Errors	223	0.4	0	0.0	26	0.2
No event coded as most harmful	8	0.0	0	0.0	1	0.0
TOTAL	53,934	100.0	230	100.0	11,385	100.0

DRIVER AGE 65 AND OVER (CONTINUED)

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Single Vehicle	9,786	18.1	50	21.7	1,267	11.1
Head On	640	1.2	33	14.3	324	2.8
Head On - Left Turn	2,001	3.7	18	7.8	906	8.0
Angle	12,177	22.6	75	32.6	3,436	30.2
Rear End	14,931	27.7	30	13.0	3,520	30.9
Rear End - Left Turn	671	1.2	2	0.9	184	1.6
Rear End - Right Turn	552	1.0	0	0.0	89	0.8
Sideswipe - Same Direction	7,861	14.6	8	3.5	629	5.5
Sideswipe - Opposite Direction	1,106	2.1	3	1.3	191	1.7
Backing	1,224	2.3	0	0.0	25	0.2
Other	2,823	5.2	11	4.8	777	6.8
Unknown	162	0.3	0	0.0	37	0.3
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	53,934	100.0	230	100.0	11,385	100.0

Based on crash type, drivers age 65 and over are involved in the largest proportion of rear end crashes for all crashes (27.7%) and injury crashes (30.9%), and the largest proportion of angle crashes for fatal crashes (32.6%).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
On Road	50,612	93.8	202	87.8	10,611	93.2
Median	258	0.5	2	0.9	51	0.4
Shoulder	856	1.6	4	1.7	169	1.5
Outside of Shoulder/Curb	1,532	2.8	22	9.6	452	4.0
Gore	80	0.1	0	0.0	24	0.2
On-Street Parking	378	0.7	0	0.0	21	0.2
Off the Roadway	9	0.0	0	0.0	2	0.0
On the Sidewalk	38	0.1	0	0.0	21	0.2
In the Bicycle Lane	8	0.0	0	0.0	4	0.0
Other/Unknown	147	0.3	0	0.0	27	0.2
Uncoded & Errors	16	0.0	0	0.0	3	0.0
TOTAL	53,934	100.0	230	100.0	11,385	100.0

Other than on the road crashes, drivers age 65 and over have the highest proportion where the first impact is outside the shoulder/curb for all crashes (2.8%), fatal crashes (9.6%), and injury crashes (4.0%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Interstate Routes	5,012	9.3	15	6.5	976	8.6
U.S. & Michigan Roads	17,993	33.4	95	41.3	3,776	33.2
County & City Roads	30,847	57.2	120	52.2	6,618	58.1
Uncoded & Errors	82	0.2	0	0.0	15	0.1
TOTAL	53,934	100.0	230	100.0	11,385	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	578	1.1	3	1.3	101	0.9
3:00 AM - 5:59 AM	599	1.1	3	1.3	96	0.8
6:00 AM - 8:59 AM	4,791	8.9	11	4.8	906	8.0
9:00 AM - 11:59 AM	10,123	18.8	42	18.3	2,096	18.4
12:00 PM - 2:59 PM	13,928	25.8	65	28.3	3,265	28.7
3:00 PM - 5:59 PM	14,345	26.6	58	25.2	3,208	28.2
6:00 PM - 8:59 PM	6,979	12.9	32	13.9	1,275	11.2
9:00 PM - 11:59 PM	2,573	4.8	16	7.0	437	3.8
Unknown	18	0.0	0	0.0	1	0.0
TOTAL	53,934	100.0	230	100.0	11,385	100.0

For drivers age 65 and over, the 3:00 - 5:59 PM time period has the highest proportion of drivers in all crashes (26.6%). The 12:00 - 2:59 PM time period has the highest proportion of drivers in fatal crashes (28.3%) and injury crashes (28.7%).

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	29,208	54.2	94	40.9	5,661	49.7	67	0.6
Speed too fast	1,561	2.9	9	3.9	354	3.1	430	4.2
Speed too slow	25	0.0	0	0.0	5	0.0	7	0.1
Failed to yield	7,956	14.8	40	17.4	2,089	18.3	4,057	39.2
Disregard traffic control	1,251	2.3	18	7.8	501	4.4	725	7.0
Drove wrong way	50	0.1	3	1.3	15	0.1	15	0.1
Drove left of center	293	0.5	15	6.5	107	0.9	108	1.0
Improper passing	230	0.4	1	0.4	30	0.3	82	0.8
Improper lane use	1,748	3.2	4	1.7	162	1.4	715	6.9
Improper turn	801	1.5	2	0.9	139	1.2	347	3.4
Improper/no signal	74	0.1	0	0.0	15	0.1	28	0.3
Improper backing	1,110	2.1	0	0.0	24	0.2	302	2.9
Unable to stop in assured clear distance	5,280	9.8	12	5.2	1,225	10.8	2,572	24.8
Other	1,696	3.1	9	3.9	356	3.1	429	4.1
Unknown	1,625	3.0	11	4.8	377	3.3	28	0.3
Reckless driving	56	0.1	2	0.9	28	0.2	22	0.2
Careless/negligent driving	911	1.7	9	3.9	288	2.5	420	4.1
Uncoded & Errors	59	0.1	1	0.4	9	0.1	1	0.0
TOTAL	53,934	100.0	230	100.0	11,385	100.0	10,355	100.0

After no hazardous action, the second highest hazardous action category for drivers age 65 and over for all crashes (14.8%), fatal crashes (17.4%), and injury crashes (18.3%) occurred 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	7,917	14.7	26	11.3	1,630	14.3
Tuesday	8,372	15.5	36	15.7	1,797	15.8
Wednesday	9,001	16.7	25	10.9	1,838	16.1
Thursday	8,528	15.8	42	18.3	1,844	16.2
Friday	9,149	17.0	39	17.0	1,910	16.8
Saturday	6,245	11.6	38	16.5	1,360	11.9
Sunday	4,722	8.8	24	10.4	1,006	8.8
TOTAL	53,934	100.0	230	100.0	11,385	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	30,918	57.3	159	69.1	6,285	55.2
Female	23,005	42.7	71	30.9	5,099	44.8
Uncoded & Errors	11	0.0	0	0.0	1	0.0
TOTAL	53,934	100.0	230	100.0	11,385	100.0

For drivers age 65 and over, male drivers (69.1%) account for over two times that of female drivers (30.9%) 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	42,346	78.5	146	63.5	8,290	72.8
2 occupants	9,759	18.1	74	32.2	2,604	22.9
3 occupants	1,035	1.9	7	3.0	316	2.8
4 occupants	367	0.7	1	0.4	107	0.9
5 occupants	82	0.2	2	0.9	29	0.3
6+ occupants	100	0.2	0	0.0	26	0.2
0 occupants	166	0.3	0	0.0	10	0.1
Uncoded & Errors	79	0.1	0	0.0	3	0.0
TOTAL	53,934	100.0	230	100.0	11,385	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	46,526	86.3	187	81.3	9,864	86.6
Motor home	226	0.4	1	0.4	48	0.4
Pickup truck	5,810	10.8	17	7.4	1,082	9.5
Small Truck under 10,000 lbs. GVWR	216	0.4	1	0.4	34	0.3
Motorcycle	225	0.4	15	6.5	157	1.4
Moped / goped	16	0.0	2	0.9	13	0.1
Go-cart / golf cart	3	0.0	0	0.0	1	0.0
Snowmobile	2	0.0	0	0.0	1	0.0
Off-Road Vehicle - ORV / All-Terrain Vehicle - ATV	18	0.0	0	0.0	14	0.1
Other	128	0.2	2	0.9	26	0.2
Unknown	20	0.0	0	0.0	3	0.0
CDL Truck/Bus (breakdown below)	744	1.4	5	2.2	142	1.2
TOTAL	53,934	100.0	230	100.0	11,385	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	26	3.5	0	0.0	2	1.4
10,001 - 26,000 lbs.	216	29.0	0	0.0	30	21.1
Greater than 26,000 lbs.	498	66.9	5	100.0	110	77.5
Uncoded & Errors	4	0.5	0	0.0	0	0.0
TOTAL	744	100.0	5	100.0	142	100.0

ALCOHOL

This page left intentionally blank

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

UNIT	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	1,723	68	57	7	2	12	5	87	64
	Killed	21	4	1	2	1	1	0	7	2
	Injured	1,363	62	56	5	1	11	5	78	62
 DRIVERS	Total	540,387	13,188	8,768	2,533	1,535	1,959	1,294	17,680	11,597
	Killed	667	139	122	74	52	92	74	305	248
	Injured	56,491	3,453	2,632	895	650	697	526	5,045	3,808
 MOTORCYCLISTS	Total	3,237	251	219	27	18	45	37	323	274
	Killed	137	24	22	9	6	18	15	51	43
	Injured	2,238	198	179	16	11	26	21	240	211
 ORV/ATV RIDERS	Total	451	88	83	5	5	3	3	96	91
	Killed	21	10	10	2	2	1	1	13	13
	Injured	288	50	50	2	2	2	2	54	54
 PEDESTRIANS	Total	2,411	240	182	30	14	38	27	308	223
	Killed	158	37	27	16	8	18	14	71	49
	Injured	1,945	191	144	12	5	20	13	223	162
 SNOWMOBILERS	Total	122	14	13	0	0	1	1	15	14
	Killed	4	1	1	0	0	1	1	2	2
	Injured	74	12	11	0	0	0	0	12	11

*Total does include property damage only crashes

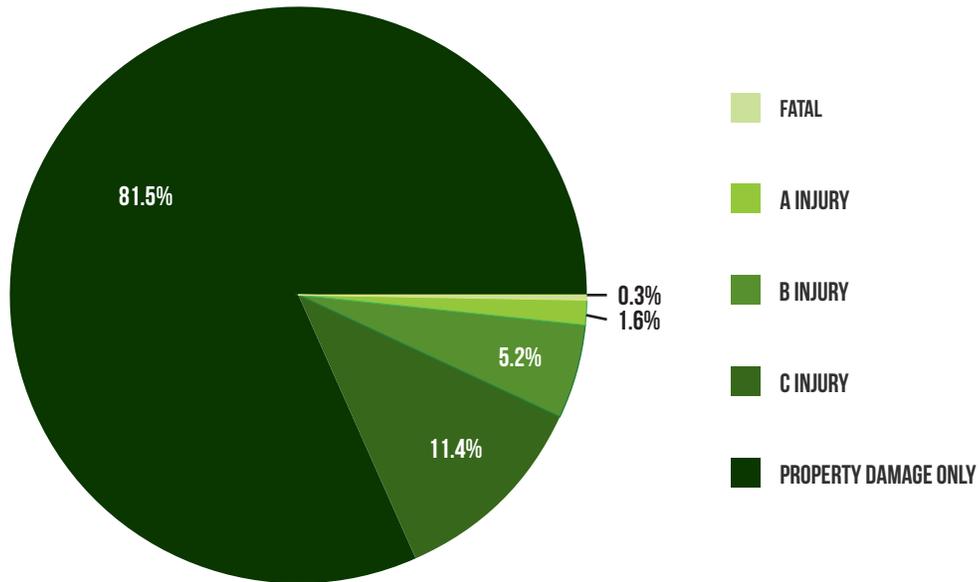
**There were two bicyclists, 248 drivers, 43 motorcyclists, 13 ORV/ATV riders, 49 pedestrians, and two snowmobilers who were killed and coded as drinking and/or using drugs by the police officer.

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	1	0	1	0	0	0	0	0	0	0	0
14 years	1	0	0	1	0	0	0	0	1	0	0	1
15 years	3	2	0	5	0	0	0	0	1	1	0	2
16 years	13	18	3	34	1	3	1	5	4	9	1	14
17 years	41	29	10	80	0	2	0	2	13	16	4	33
18 years	87	49	24	160	0	2	1	3	38	17	11	66
19 years	147	65	43	255	4	3	4	11	55	41	24	120
20 years	167	59	33	259	3	6	3	12	63	28	16	107
21 - 24 years	1,452	193	210	1,855	25	22	18	65	554	82	100	736
25 - 34 years	2,702	487	418	3,607	66	21	38	125	1,001	228	186	1,415
35 - 44 years	1,589	271	233	2,093	38	27	9	74	612	127	108	847
45 - 54 years	1,324	178	190	1,692	32	11	14	57	498	89	81	668
55 - 64 years	879	152	107	1,138	17	7	7	31	366	78	50	494
65 - 69 years	228	27	16	271	5	4	0	9	82	8	7	97
70 - 74 years	91	20	5	116	3	5	0	8	35	10	3	48
75 - 79 years	41	3	2	46	0	0	1	1	16	1	0	17
80 - 84 years	11	2	0	13	1	0	0	1	8	1	0	9
85 - 89 years	6	1	0	7	2	1	0	3	3	0	0	3
90 years and over	1	1	0	2	0	0	0	0	0	0	0	0
Unknown	8	0	0	8	0	0	0	0	3	0	0	3
Total	8,791	1,558	1,294	11,643	197	114	96	407	3,353	736	591	4,680

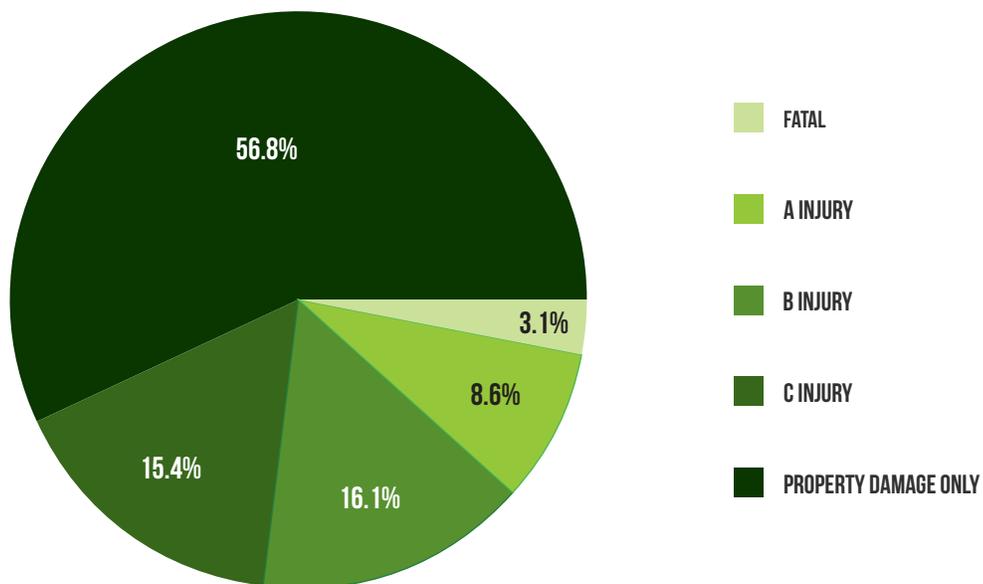
The driver age group 25 to 34 years represents the highest number of drinking and/or drug use in total crashes, injury crashes, and fatal crashes, with the exception of drugs only in fatal crashes, where the 35 to 44 age group has the highest involvement.

ALL CRASHES BY INJURY SEVERITY



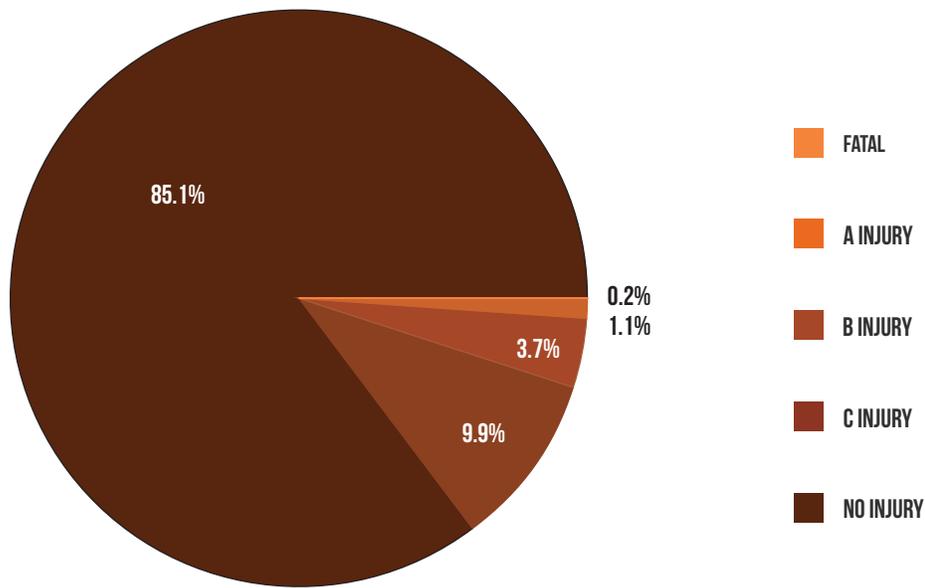
The majority of crashes do not involve injury (81.5%). Possible (C) injury crashes represent about 62% of those that do involve injury.

HAD-BEEN-DRINKING CRASHES BY INJURY SEVERITY



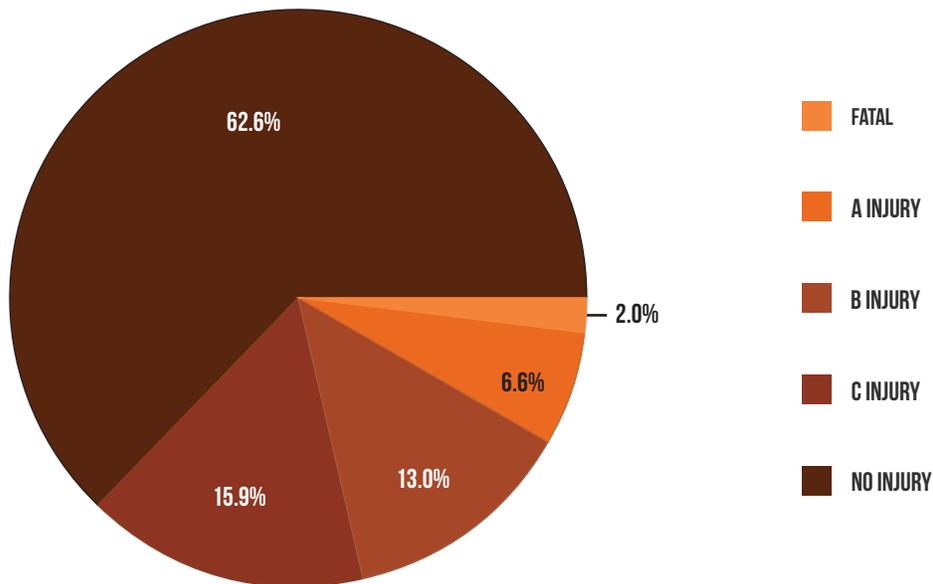
The problem of the drinking driver, pedestrian, and/or cyclist is seen by comparing the two charts on this page. For all had-been-drinking crashes, injury levels are greater, and a fatality in the crash is about ten times more likely when one of the crash-involved operators is reported as had-been-drinking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

DEATH & INJURY FOR CRASH INVOLVED OCCUPANTS



The majority of occupants involved in crashes are not injured (85.1%). About 67% percent of those who are injured receive only possible (C) injuries.

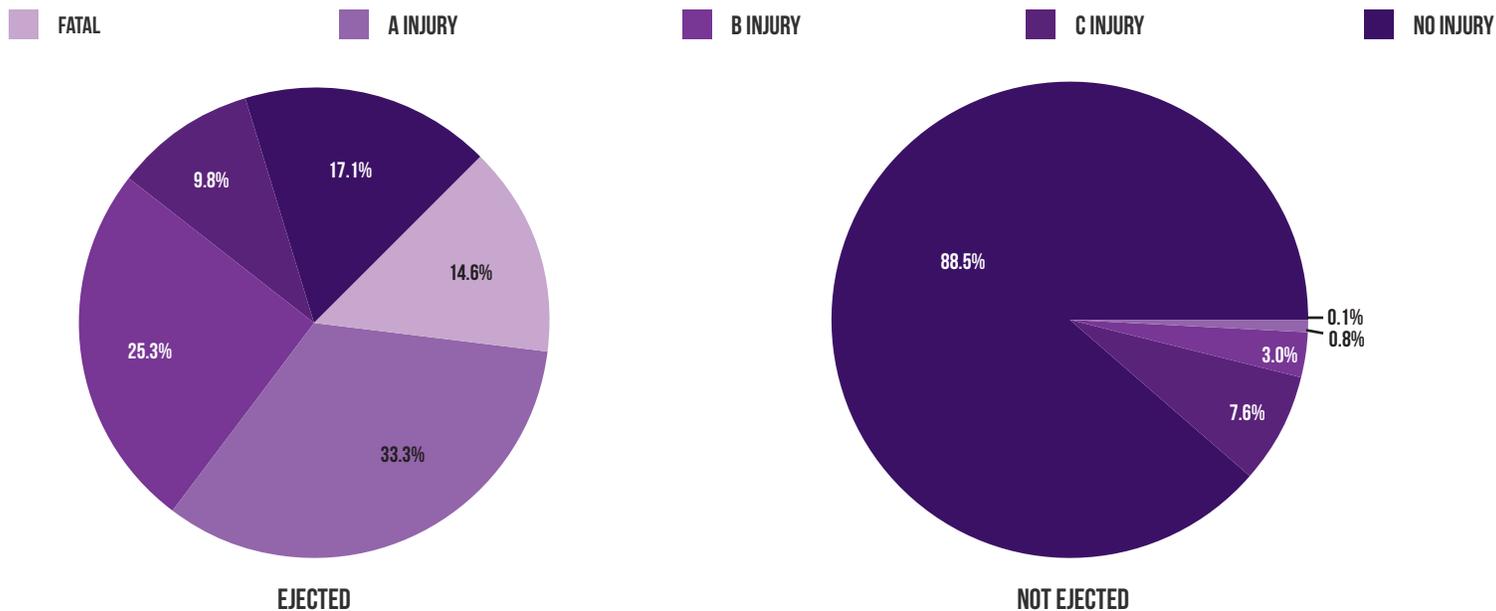
OCCUPANTS IN HAD-BEEN-DRINKING CRASHES



Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of occupant fatalities is about 12 times higher than in all crashes and the incapacitating injury level (A) is about six times higher.

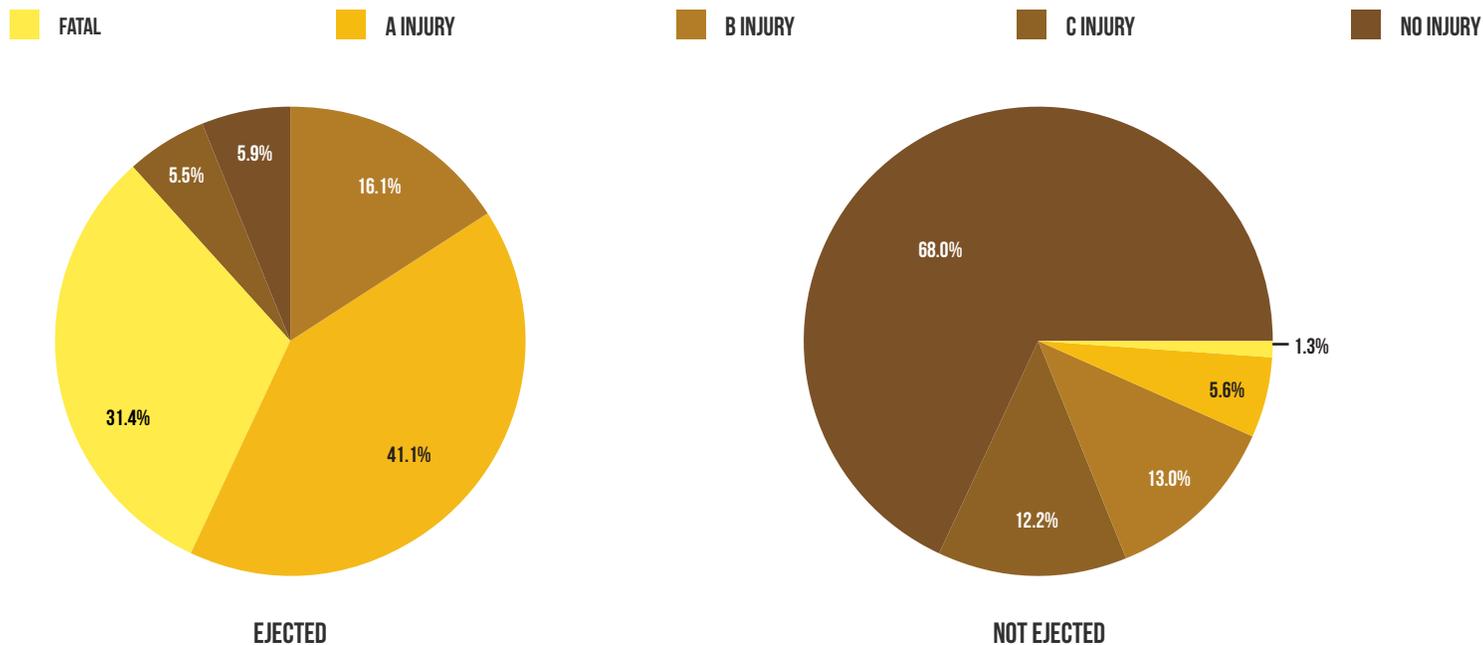
Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

ALL DRIVERS INJURY SEVERITY - EJECTED VS. NOT EJECTED



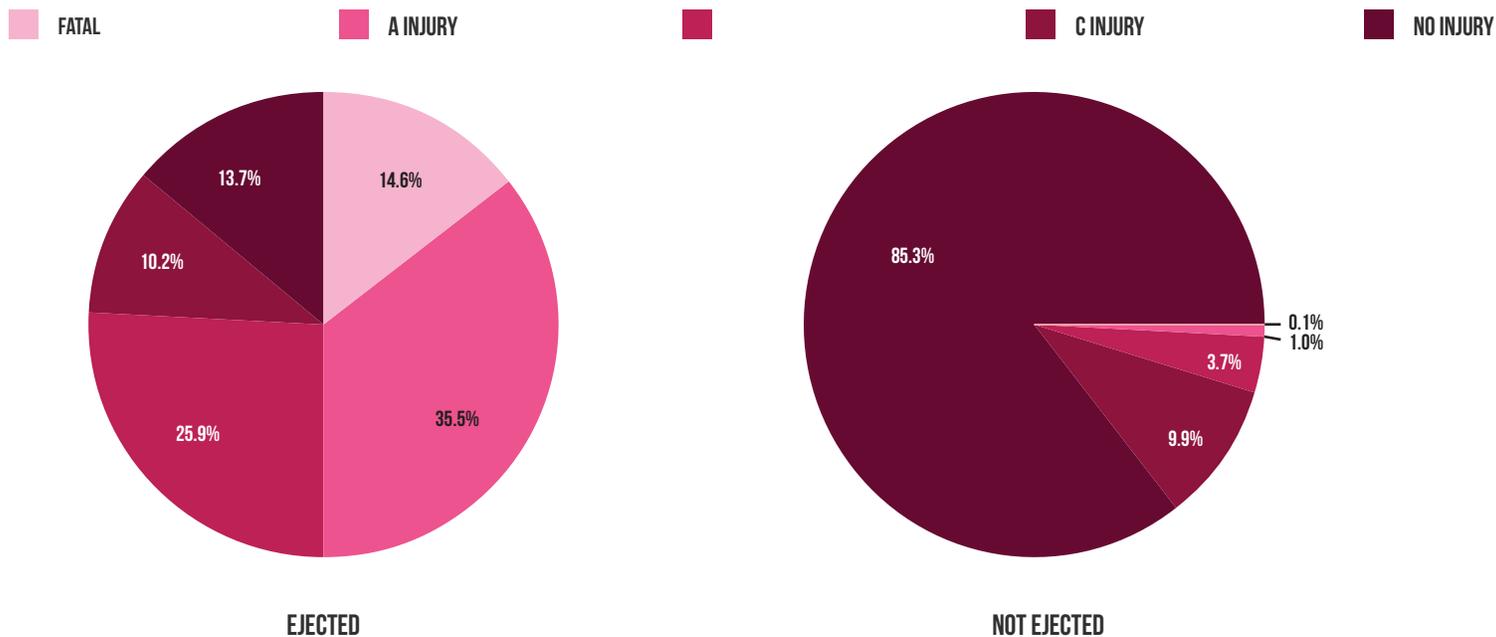
As shown by the two charts above, death and injury are much more likely when drivers are ejected from vehicles.

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



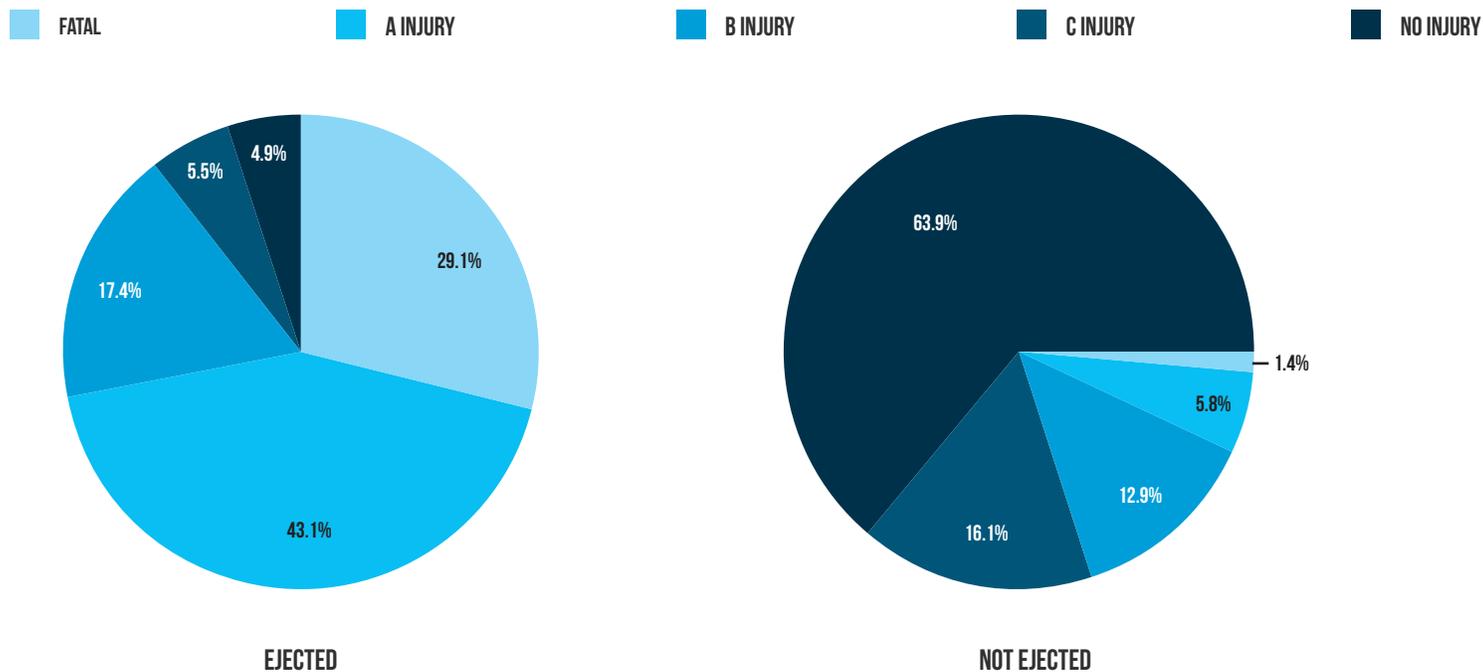
When compared to the charts above, the had-been-drinking charts demonstrate that injury severity is much worse for drivers reported to be drinking in both ejected and non-ejected events.

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



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

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

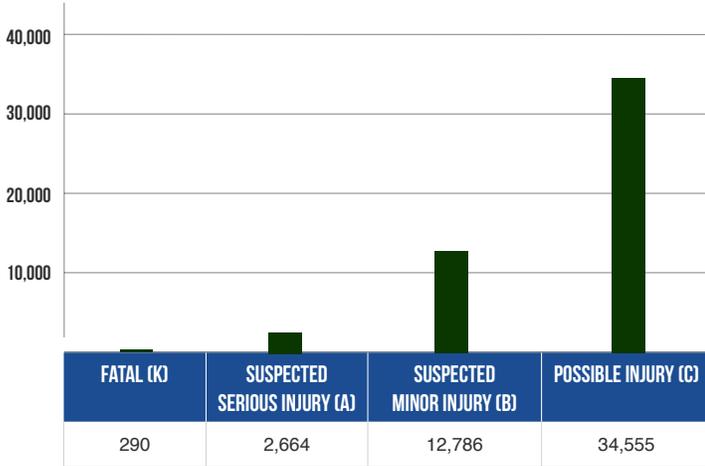


When compared to the charts above, the charts of occupants of had-been-drinking crashes demonstrate that injury severity is much worse for occupants in a crash where drinking is reported in both ejected and non-ejected events.

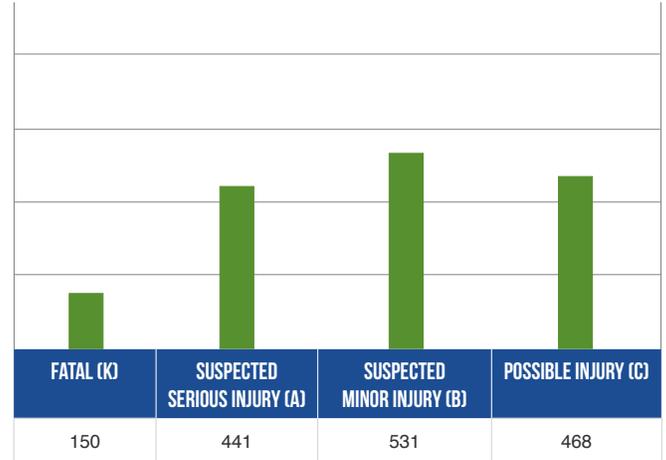
Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

INJURY SEVERITY & BELT USE BY DRIVER INJURY

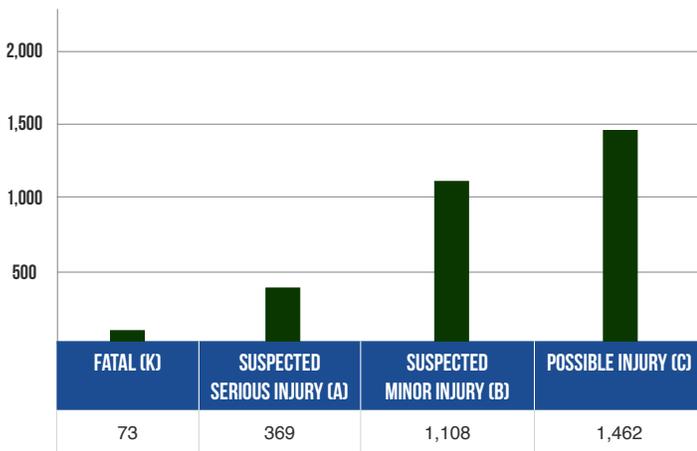
ALL CRASHES-BELTS USED



ALL CRASHES-BELTS NOT USED



HAD-BEEN DRINKING CRASHES-BELTS USED



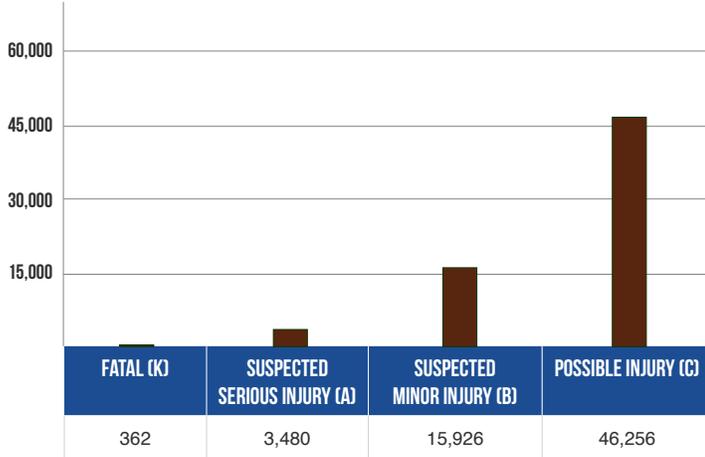
HAD-BEEN DRINKING CRASHES-BELTS NOT USED



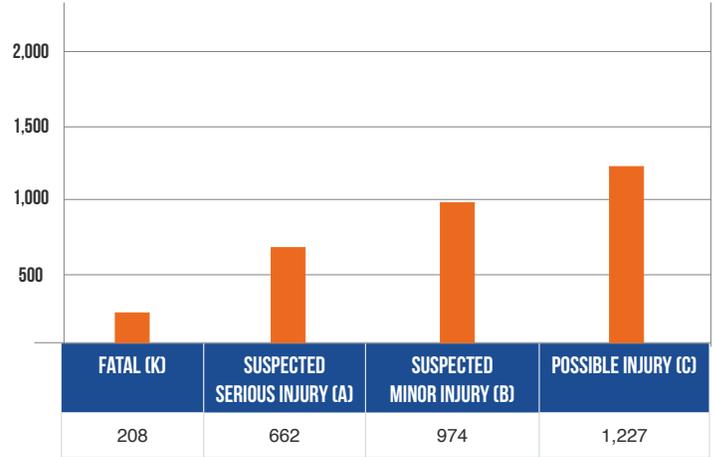
Note: "Belts Used" represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, and restraint failure. "Belts Not Used" represents no belts available and no belts used.

INJURY SEVERITY & RESTRAINT USE BY OCCUPANT INJURY

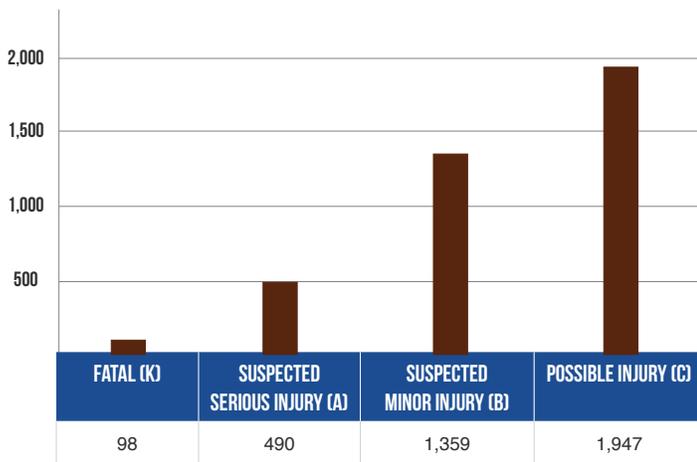
ALL CRASHES-RESTRAINTS USED



ALL CRASHES-RESTRAINTS NOT USED



HAD-BEEN DRINKING CRASHES-RESTRAINTS USED



HAD-BEEN DRINKING CRASHES-RESTRAINTS NOT USED

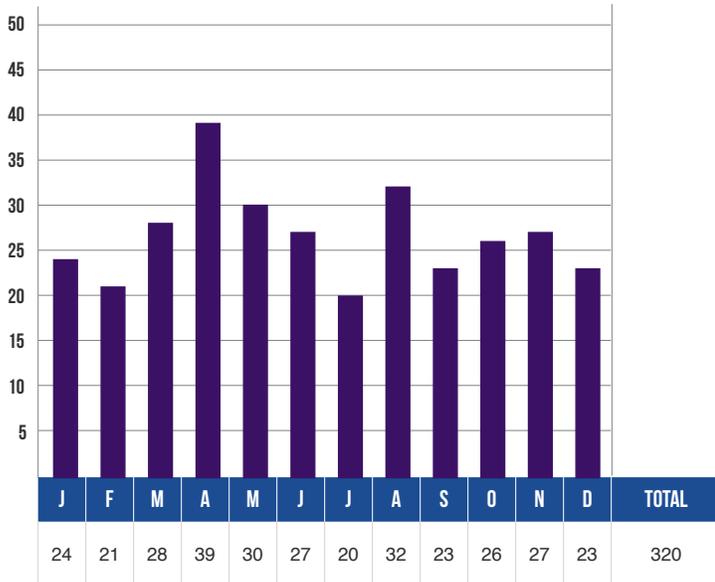


Note: "Restraints Used" represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, child restraints used, and restraint failure. "Restraints Not Used" represents no belts available; no belts used; and child restraint not used, unavailable, or improper use.

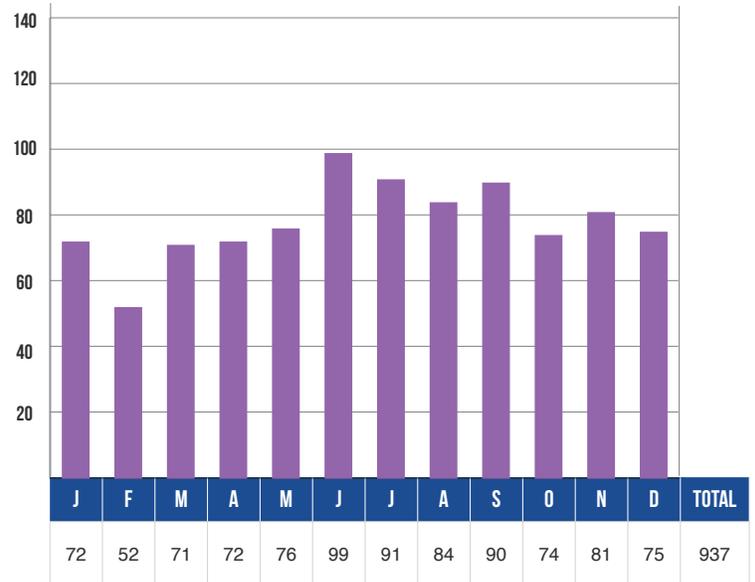
Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

ALCOHOL INVOLVEMENT IN FATAL CRASHES

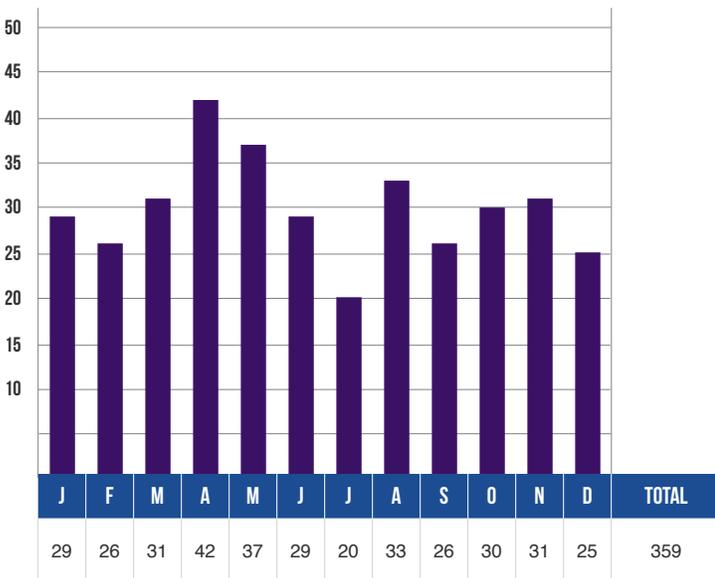
HAD-BEEN-DRINKING FATAL CRASHES BY MONTH



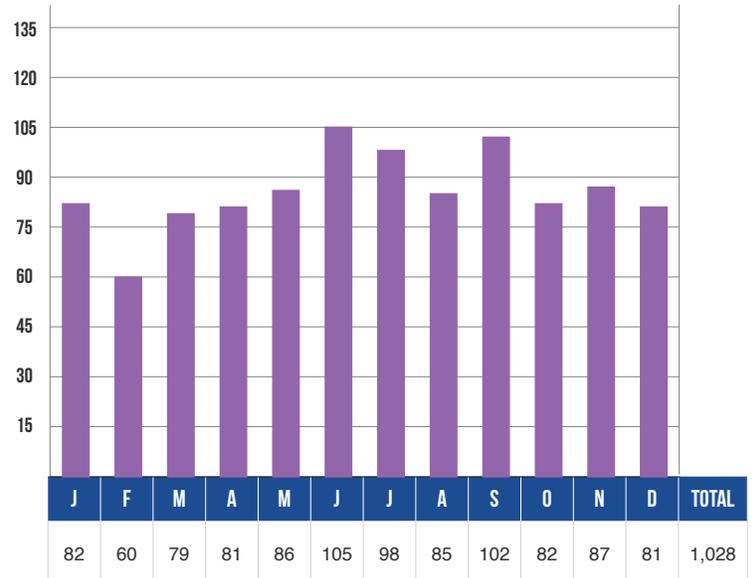
TOTAL FATAL CRASHES BY MONTH



ALCOHOL-INVOLVED FATALITIES BY MONTH



TOTAL FATALITIES BY MONTH

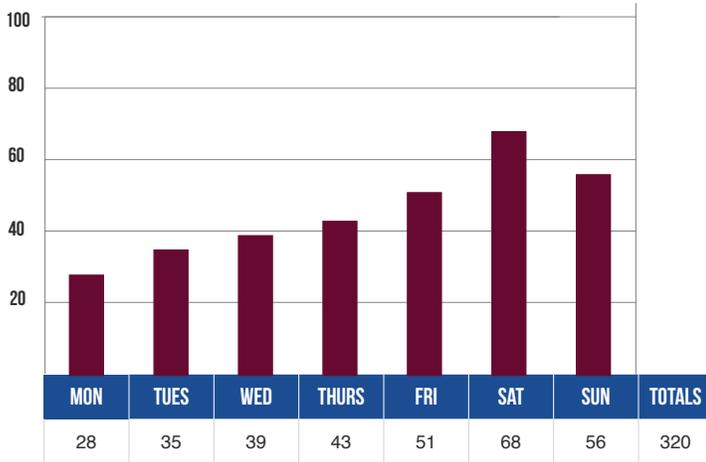


Had-been-drinking fatal crashes were highest in number during the month of April. The number of total fatal crashes (total of non-had-been-drinking and had-been-drinking fatal crashes) reached the highest level in June.

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

ALCOHOL INVOLVEMENT IN FATAL CRASHES (CONTINUED)

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

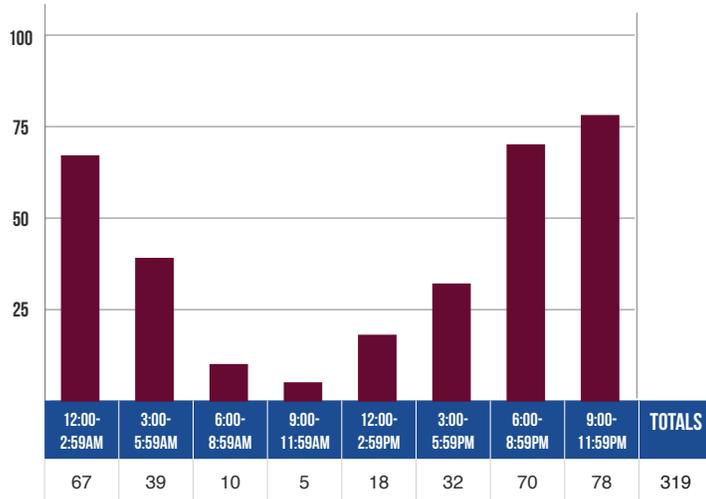


TOTAL FATAL CRASHES BY DAY OF THE WEEK

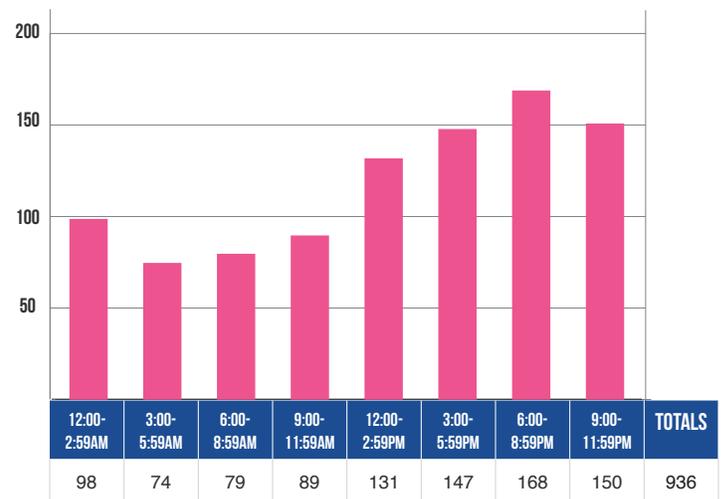


Saturday had the highest number of fatal crashes, and also the highest proportion (21.3%) of drinking-related fatal crashes in 2017.

HAD-BEEN-DRINKING FATAL CRASHES BY TIME OF DAY



TOTAL FATAL CRASHES BY TIME OF DAY

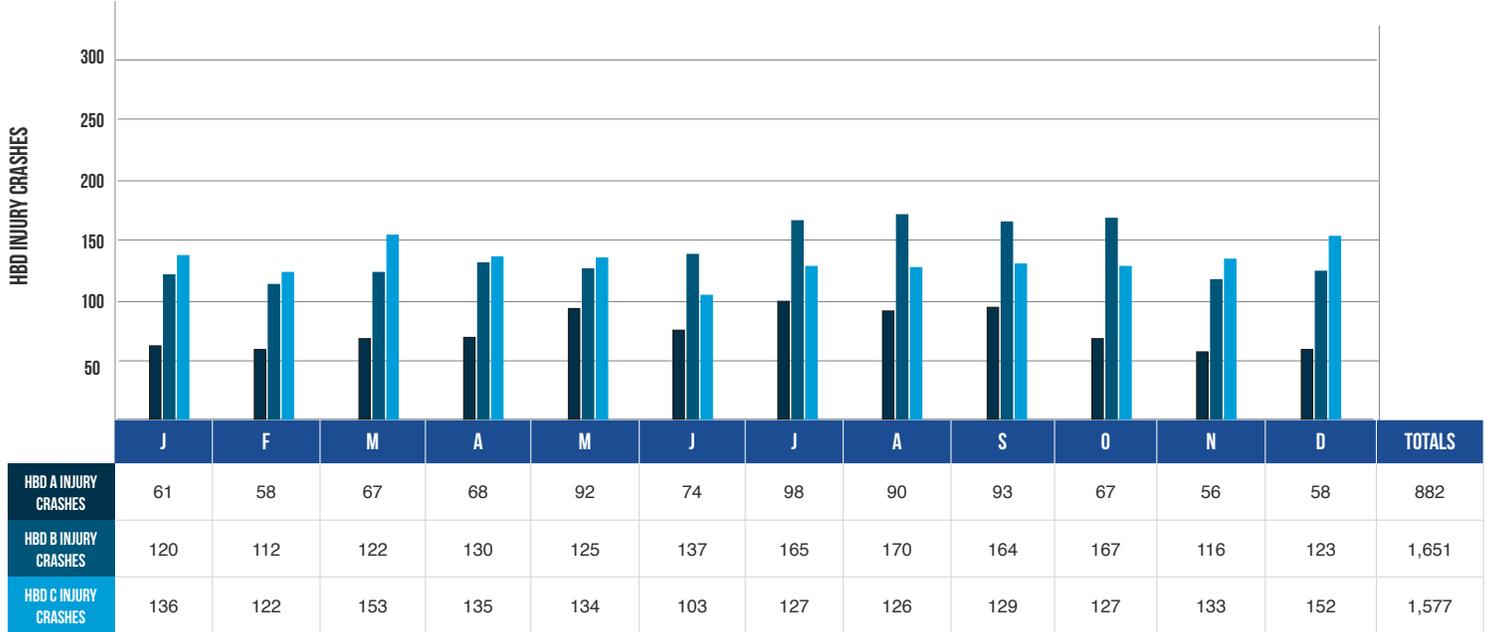


The 9:00 PM to midnight time period had the highest number of HBD fatal crashes (78). The 6:00 PM to 8:59 PM time period had the highest number of total fatal crashes (168).

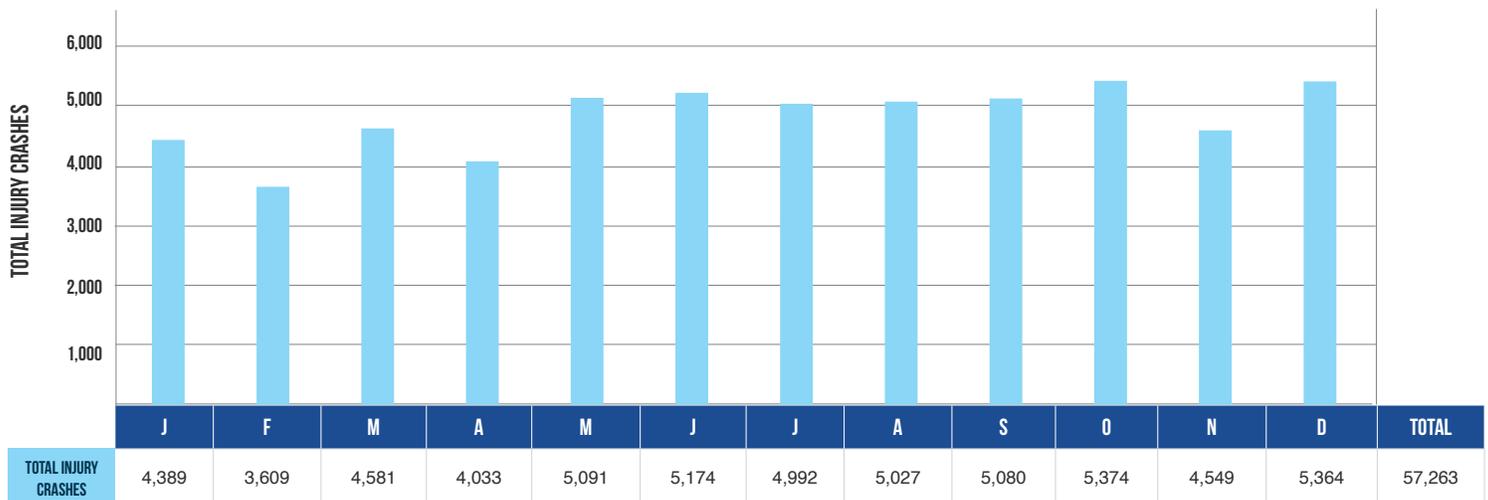
Note: these charts exclude crashes where time of day was unknown.

ALCOHOL INVOLVEMENT IN INJURY CRASHES

HAD-BEEN-DRINKING INJURY CRASHES BY MONTH



TOTAL INJURY CRASHES BY MONTH

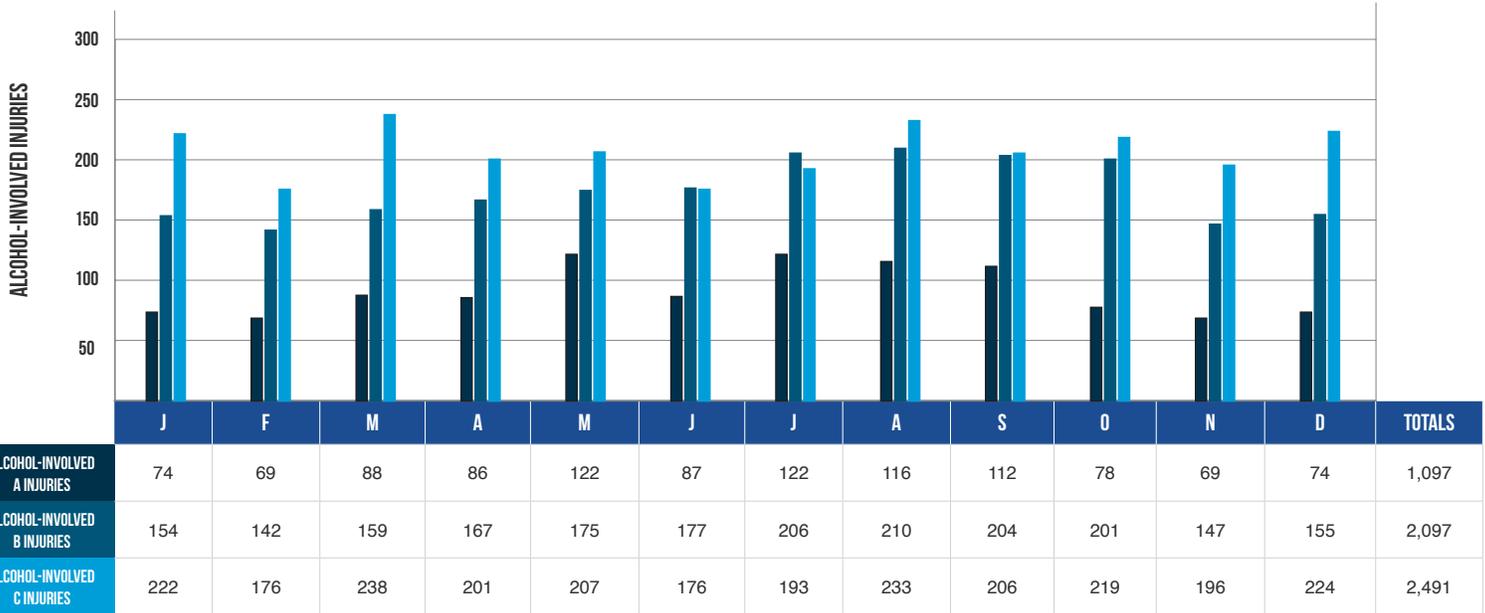


Alcohol involvement in injury crashes is an important indicator of the alcohol-impaired driving problem. In 2017, the highest number of had-been-drinking injury crashes occurred in July with 390. The highest proportion of had-been-drinking injury crashes occurred in April with 8.3 percent of the injury crashes involving alcohol.

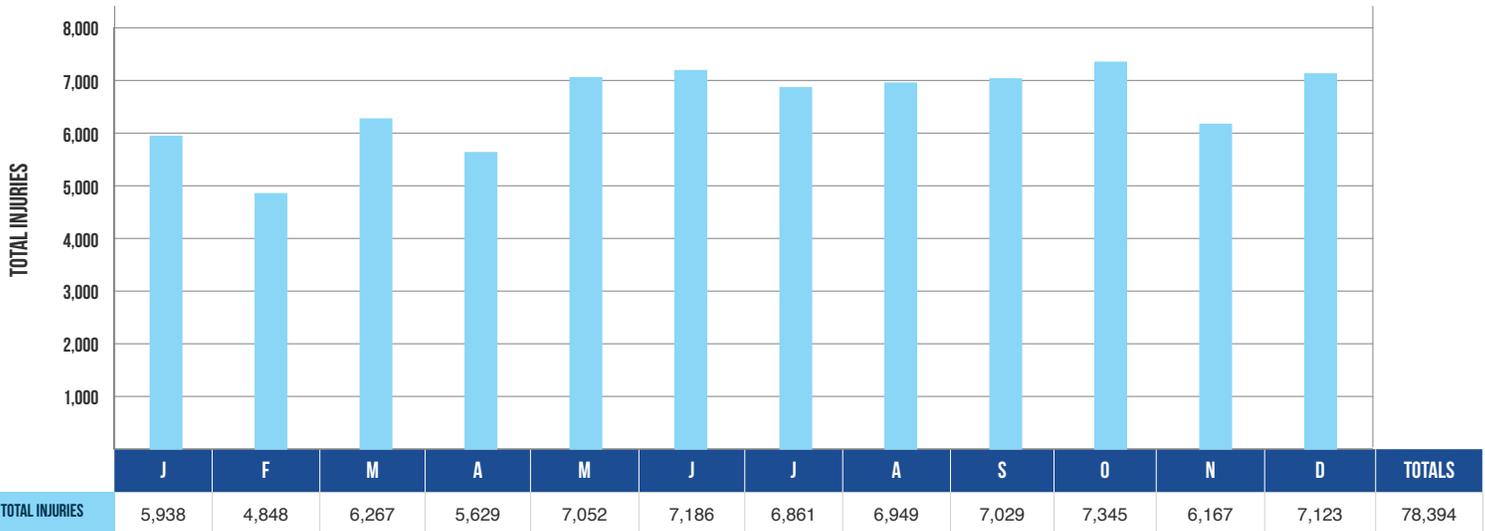
Note: An alcohol-involved fatality is any person killed in a had-been-drinking crash.

ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

ALCOHOL-INVOLVED INJURIES BY MONTH



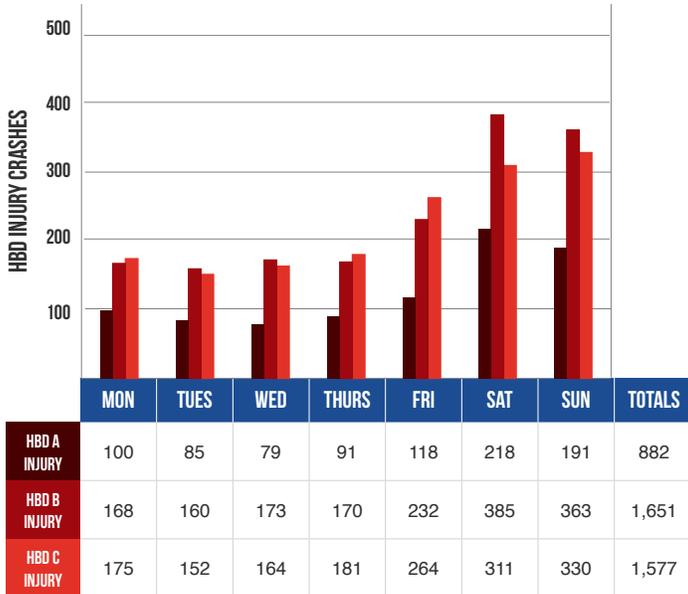
TOTAL INJURIES BY MONTH



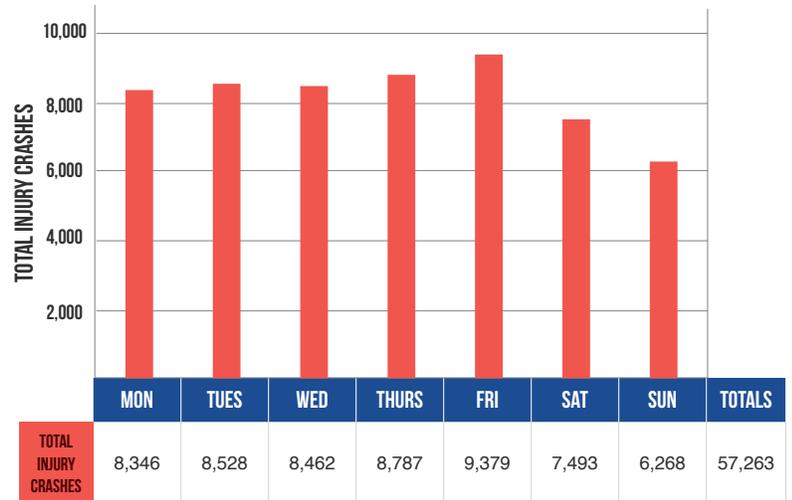
Note: An alcohol-involved injury is any person injured in a had-been-drinking crash.

ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

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

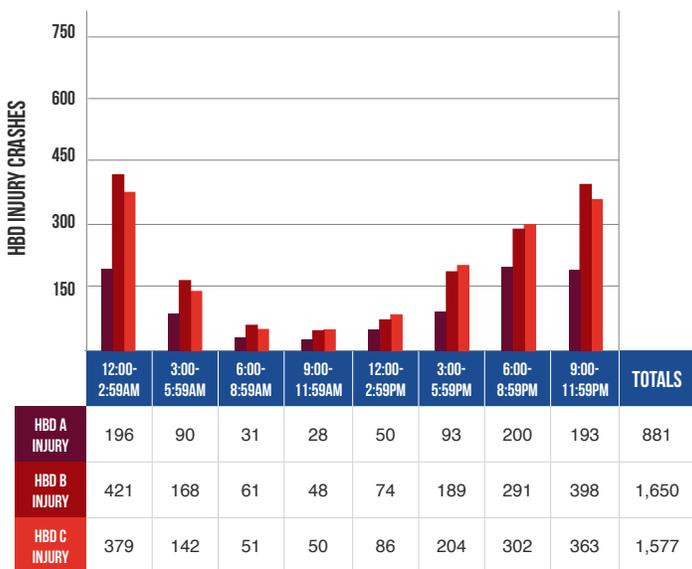


TOTAL INJURY CRASHES BY DAY OF THE WEEK

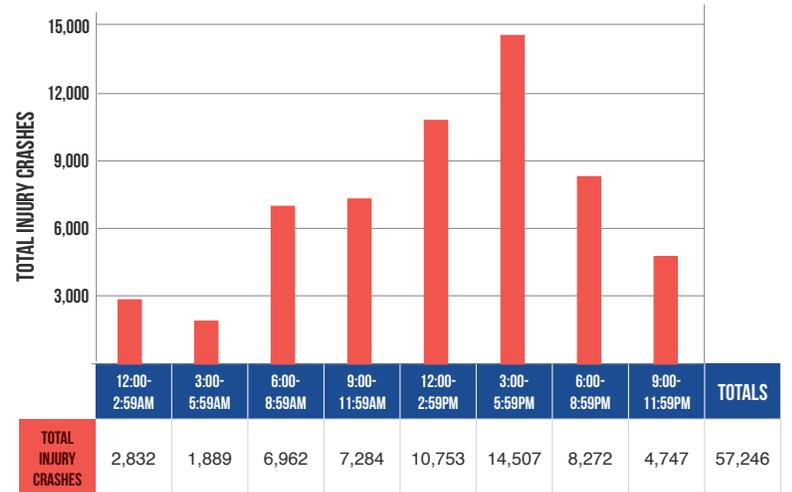


Had-been-drinking injury crashes follow the same basic trends as total crashes during the work week, but the weekend sees a dramatic increase in the proportion of had-been-drinking injury crashes to total injury crashes.

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 midnight and 2:59 AM (a particularly hazardous travel period). These frequencies exclude 17 injury crashes (including 2 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	109	0.0	0	0.0	5	11	22	71
14 years	54	0.0	0	0.0	4	11	9	30
15 years	338	0.1	2	0.2	18	35	49	234
16 years	4,076	1.5	7	0.7	65	275	500	3,229
17 years	5,548	2.0	9	0.9	86	358	700	4,395
18 years	7,124	2.6	15	1.5	132	462	892	5,623
19 years	7,288	2.6	22	2.1	152	491	907	5,716
20 years	7,253	2.6	21	2.0	143	420	930	5,739
21 - 24 years	27,812	10.1	121	11.7	552	1,723	3,412	22,004
25 - 34 years	56,432	20.4	220	21.4	1,078	3,251	7,025	44,858
35 - 44 years	42,490	15.4	138	13.4	817	2,309	5,178	34,048
45 - 54 years	44,683	16.2	165	16.0	808	2,355	5,400	35,955
55 - 64 years	38,604	14.0	149	14.5	704	2,004	4,696	31,051
65 - 69 years	12,377	4.5	49	4.8	209	673	1,533	9,913
70 - 74 years	8,328	3.0	43	4.2	157	453	1,020	6,655
75 - 79 years	5,102	1.8	20	1.9	85	318	684	3,995
80 - 84 years	2,894	1.0	19	1.8	52	200	401	2,222
85 - 89 years	1,577	0.6	17	1.7	38	112	189	1,221
90 years and over	640	0.2	11	1.1	9	58	94	468
Unknown	3,383	1.2	2	0.2	23	88	400	2,870
Total	276,112	100.0	1,030	100.0	5,137	15,607	34,041	220,297

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 42,910 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	0	0.0	0	0.0	0	0	0	0
16 years	11	0.2	2	0.9	0	0	3	6
17 years	33	0.5	0	0.0	1	4	7	21
18 years	79	1.1	1	0.4	14	17	7	40
19 years	146	2.0	6	2.6	19	24	16	81
20 years	142	2.0	3	1.3	13	23	18	85
21 - 24 years	1,198	16.5	30	13.1	85	214	181	688
25 - 34 years	2,205	30.3	77	33.6	186	330	317	1,295
35 - 44 years	1,276	17.6	34	14.8	114	206	192	730
45 - 54 years	1,085	14.9	41	17.9	108	163	164	609
55 - 64 years	771	10.6	24	10.5	71	122	140	414
65 - 69 years	184	2.5	5	2.2	19	24	24	112
70 - 74 years	80	1.1	3	1.3	5	10	14	48
75 - 79 years	37	0.5	1	0.4	2	6	5	23
80 - 84 years	10	0.1	1	0.4	2	2	3	2
85 - 89 years	5	0.1	1	0.4	1	2	0	1
90 years and over	1	0.0	0	0.0	0	0	0	1
Unknown	2	0.0	0	0.0	0	0	1	1
Total	7,266	100.0	229	100.0	640	1,148	1,092	4,157

The male 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 6 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	39	0.0	0	0.0	3	5	5	26
14 years	57	0.0	0	0.0	1	5	10	41
15 years	253	0.1	0	0.0	3	15	43	192
16 years	3,896	1.8	9	2.0	56	248	523	3,060
17 years	5,084	2.3	5	1.1	49	317	717	3,996
18 years	5,980	2.7	9	2.0	77	382	892	4,620
19 years	6,185	2.8	6	1.3	88	374	935	4,782
20 years	6,163	2.8	16	3.6	87	352	928	4,780
21 - 24 years	23,887	10.8	53	11.9	286	1,263	3,524	18,761
25 - 34 years	46,851	21.2	106	23.8	621	2,557	6,890	36,677
35 - 44 years	35,390	16.0	55	12.3	491	1,829	5,251	27,764
45 - 54 years	34,154	15.4	66	14.8	454	1,746	5,019	26,869
55 - 64 years	28,435	12.8	50	11.2	358	1,466	4,030	22,531
65 - 69 years	9,107	4.1	24	5.4	134	486	1,353	7,110
70 - 74 years	6,241	2.8	15	3.4	84	374	907	4,861
75 - 79 years	3,798	1.7	9	2.0	68	253	540	2,928
80 - 84 years	2,291	1.0	13	2.9	56	156	328	1,738
85 - 89 years	1,193	0.5	8	1.8	29	97	143	916
90 years and over	375	0.2	2	0.4	6	25	60	282
Unknown	1,986	0.9	0	0.0	8	47	210	1,721
Total	221,365	100.0	446	100.0	2,959	11,997	32,308	173,655

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 42,910 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	3	0.1	0	0.0	0	1	0	2
16 years	5	0.2	0	0.0	1	0	1	3
17 years	18	0.6	0	0.0	0	3	2	13
18 years	32	1.1	0	0.0	2	6	3	21
19 years	44	1.6	2	3.1	3	10	7	22
20 years	58	2.1	3	4.7	4	10	11	30
21 - 24 years	464	16.5	13	20.3	25	76	73	277
25 - 34 years	915	32.5	27	42.2	55	153	146	534
35 - 44 years	546	19.4	13	20.3	43	79	86	325
45 - 54 years	429	15.3	5	7.8	33	44	67	280
55 - 64 years	215	7.6	0	0.0	14	34	35	132
65 - 69 years	60	2.1	0	0.0	7	7	8	38
70 - 74 years	16	0.6	0	0.0	4	3	2	7
75 - 79 years	6	0.2	0	0.0	1	1	1	3
80 - 84 years	1	0.0	0	0.0	0	0	1	0
85 - 89 years	1	0.0	1	1.6	0	0	0	0
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	2,813	100.0	64	100.0	192	427	443	1,687

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 6 unknown gender drinking drivers.*

This page left intentionally blank

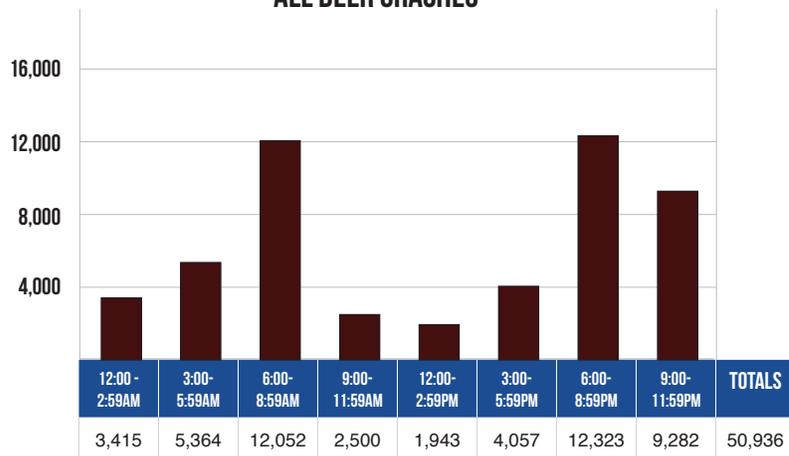
DEER

This page left intentionally blank

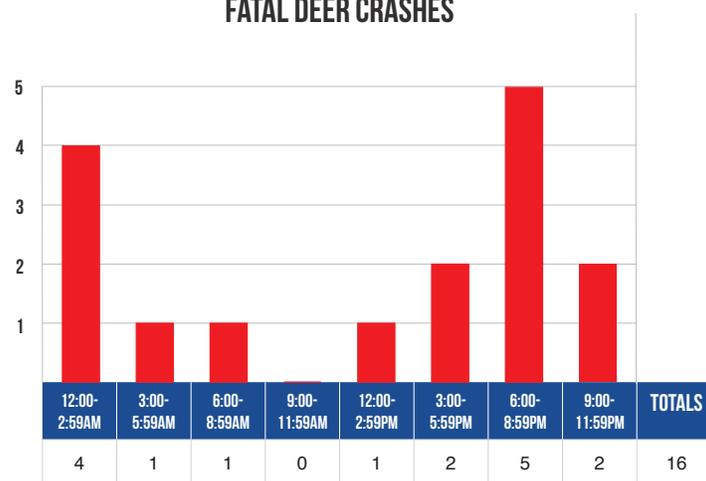
LIGHT CONDITION AND TIME OF DAY IN MOTOR VEHICLE-DEER CRASHES

LIGHT CONDITION	ALL CRASHES		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Daylight	11,791	23.1	7	43.8	31	135	170	11,448
Dawn	5,117	10.0	1	6.3	2	17	50	5,047
Dusk	2,512	4.9	1	6.3	6	21	23	2,461
Dark - Lighted	2,276	4.5	1	6.3	3	15	34	2,223
Dark - Unlighted	28,925	56.8	6	37.5	46	184	374	28,315
Other/Unknown	328	0.6	0	0.0	0	1	0	327
Total	50,949	100.0	16	100.0	88	373	651	49,821

TIME OF MOTOR VEHICLE —
ALL DEER CRASHES



TIME OF MOTOR VEHICLE —
FATAL DEER CRASHES



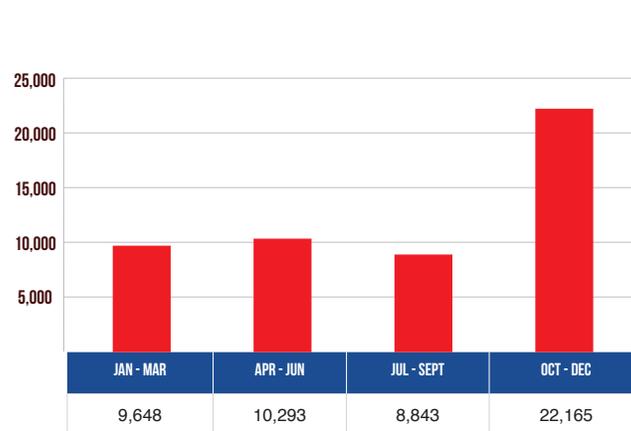
The highest number of reported vehicle-deer collisions occurred during the 6:00 PM to 8:59 PM time period, when 24.2 percent (12,323) of vehicle-deer crashes occurred. It also had the highest number of fatal vehicle-deer crashes, with five.

Note: Time and Severity chart excludes 13 crashes where time of day is unknown.

MONTHLY AND SEASONAL RATES FOR MOTOR VEHICLE-DEER CRASHES

MONTH	ALL CRASHES		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
January	3,540	6.9	0	0.0	1	14	30	3,495
February	3,265	6.4	0	0.0	1	8	26	3,230
March	2,843	5.6	0	0.0	1	9	34	2,799
April	2,582	5.1	1	6.3	7	25	32	2,517
May	3,747	7.4	2	12.5	9	35	81	3,620
June	3,964	7.8	4	25.0	14	56	57	3,833
July	2,879	5.7	4	25.0	15	40	42	2,778
August	2,401	4.7	1	6.3	10	37	45	2,308
September	3,563	7.0	1	6.3	10	36	38	3,478
October	7,721	15.2	1	6.3	10	51	130	7,529
November	9,136	17.9	2	12.5	6	45	92	8,991
December	5,308	10.4	0	0.0	4	17	44	5,243
Total	50,949	100.0	16	100.0	88	373	651	49,821

MOTOR VEHICLE — ALL DEER CRASHES



Of the total 50,949 reported vehicle-deer collisions, 43.5 percent (22,165) occurred during the fourth quarter of the year.

This page left intentionally blank

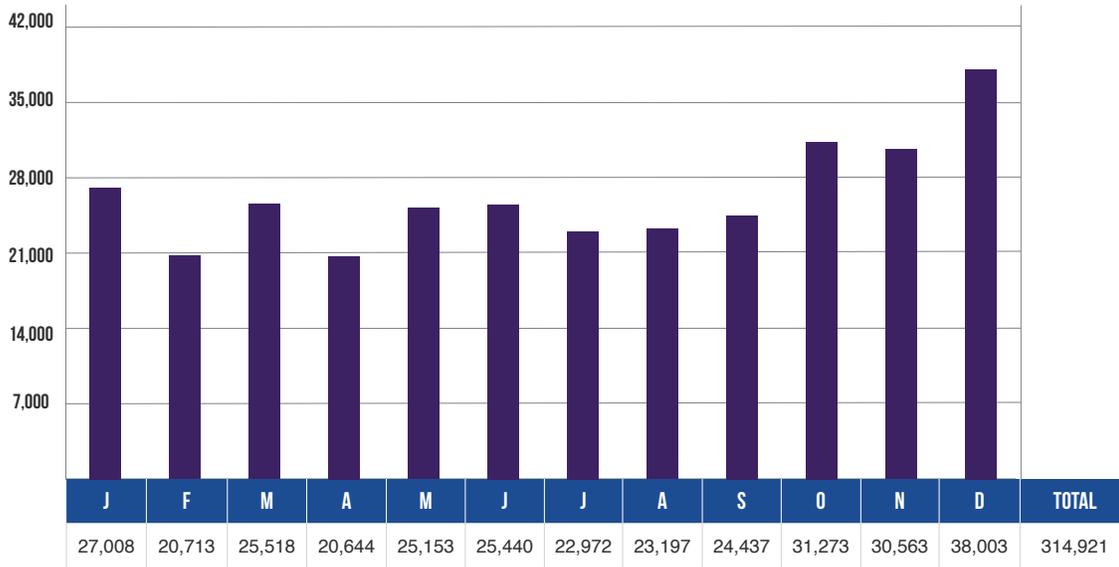
CRASH

(circumstances common to all traffic units in a crash)

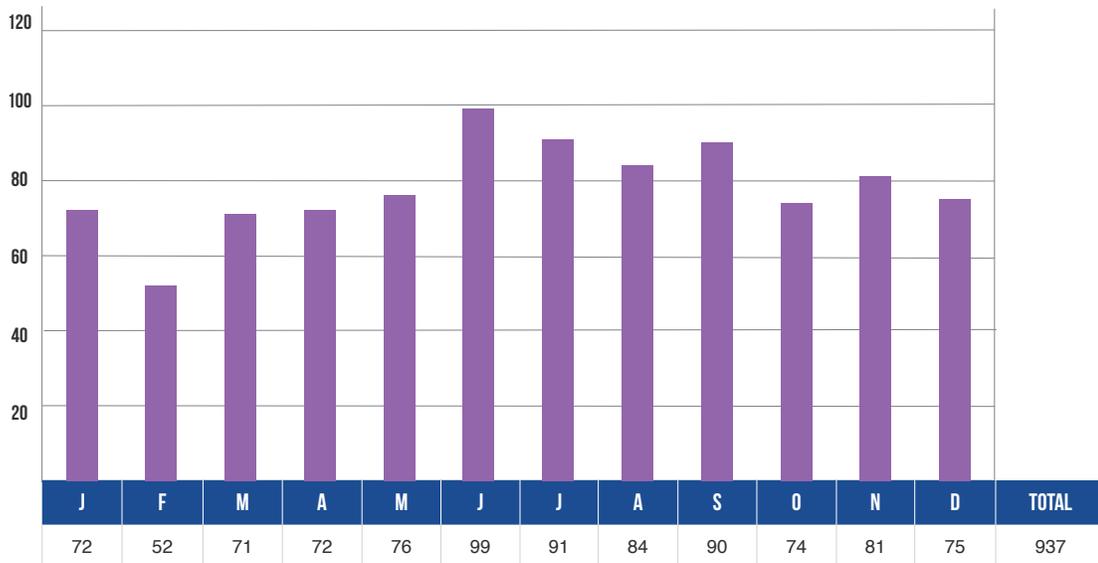
This page left intentionally blank

ALL CRASHES INJURY SEVERITY BY MONTH

TOTAL CRASHES

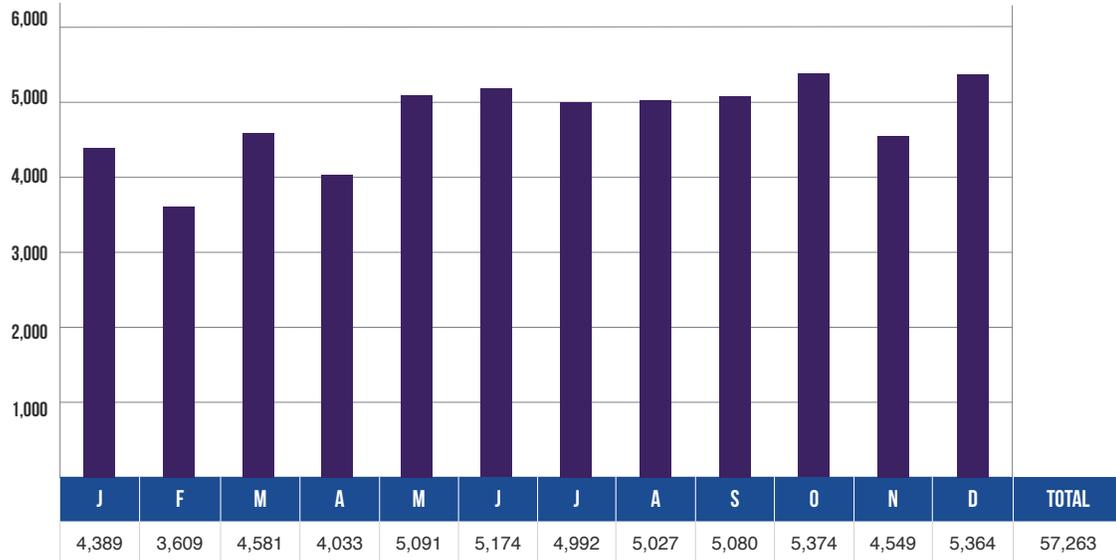


FATAL CRASHES

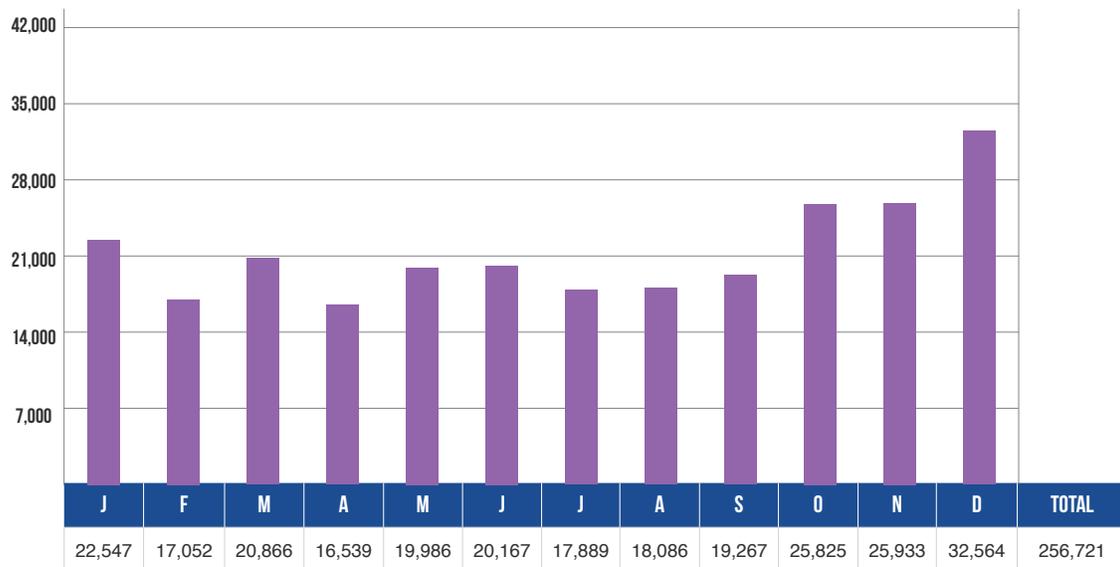


ALL CRASHES INJURY SEVERITY BY MONTH (CONTINUED)

INJURY CRASHES

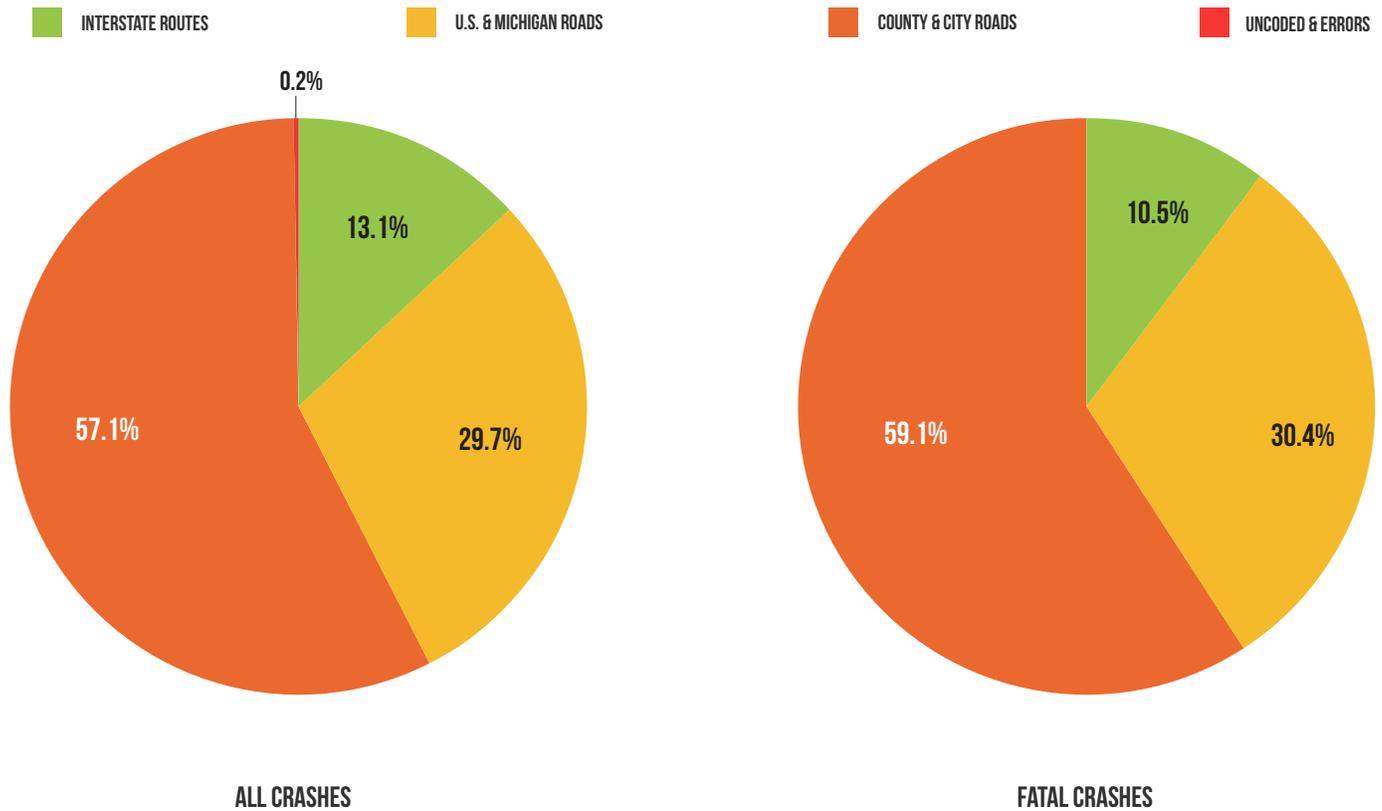


PROPERTY DAMAGE ONLY CRASHES



HIGHWAY CLASS

HIGHWAY CLASS	ALL CRASHES	FATAL CRASHES	INJURY CRASHES	PROPERTY DAMAGE ONLY
Interstate Routes	41,179	98	7,644	33,437
U.S. & Michigan Roads	93,563	285	16,934	76,344
County & City Roads	179,667	554	32,593	146,520
Uncoded & Errors	512	0	92	420



The highest percentage of all crashes (57.1%), fatal crashes (59.1%), injury crashes (56.9%), and property damage only crashes (57.1%) occur on county and city roads.

CRASH EXPERIENCE BY CRASH TYPE

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Single Vehicle	106,901	33.9	449	47.9	2,133	5,739	7,401	91,179
Head On	3,414	1.1	100	10.7	298	494	648	1,874
Head On - Left Turn	7,601	2.4	33	3.5	253	1,038	1,765	4,512
Angle	45,633	14.5	171	18.2	1,028	3,654	7,987	32,793
Rear End	82,035	26.0	78	8.3	586	3,085	12,671	65,615
Rear End - Left Turn	3,152	1.0	7	0.7	52	209	552	2,332
Rear End - Right Turn	2,520	0.8	0	0.0	12	70	263	2,175
Sideswipe - Same Direction	36,119	11.5	22	2.3	164	704	2,136	33,093
Sideswipe - Opposite Direction	5,493	1.7	8	0.9	77	216	478	4,714
Backing	5,703	1.8	0	0.0	3	31	80	5,589
Other/Unknown	16,350	5.2	69	7.4	429	1,116	1,891	12,845
TOTAL	314,921	100.0	937	100.0	5,035	16,356	35,872	256,721

RELATIONSHIP TO ROADWAY

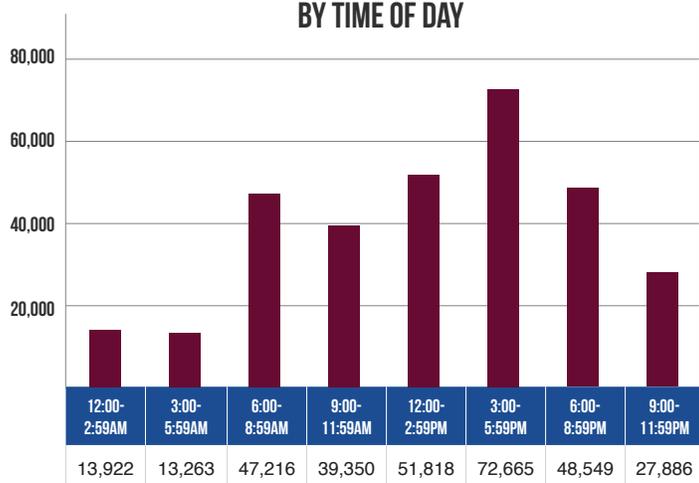
LOCATION OF FIRST IMPACT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
On Road	274,001	87.0	694	74.1	3,877	13,098	31,446	224,886
Median	3,006	1.0	12	1.3	58	188	334	2,414
Shoulder	11,102	3.5	55	5.9	288	794	1,240	8,725
Outside of Shoulder/Curb	21,108	6.7	159	17.0	701	2,011	2,470	15,767
Gore	792	0.3	9	1.0	25	77	112	569
On-Street Parking	3,269	1.0	2	0.2	16	38	80	3,133
Off the Roadway	74	0.0	0	0.0	9	11	6	48
On the Sidewalk	423	0.1	2	0.2	28	77	85	231
In the Bicycle Lane	57	0.0	0	0.0	2	11	6	38
Other/Unknown	1,089	0.3	4	0.4	31	51	93	910
TOTAL	314,921	100.0	937	100.0	5,035	16,356	35,872	256,721

Only 6.7 percent of crashes occur outside the shoulder of the road, but these crashes account for 17.0 percent of the fatal crashes.

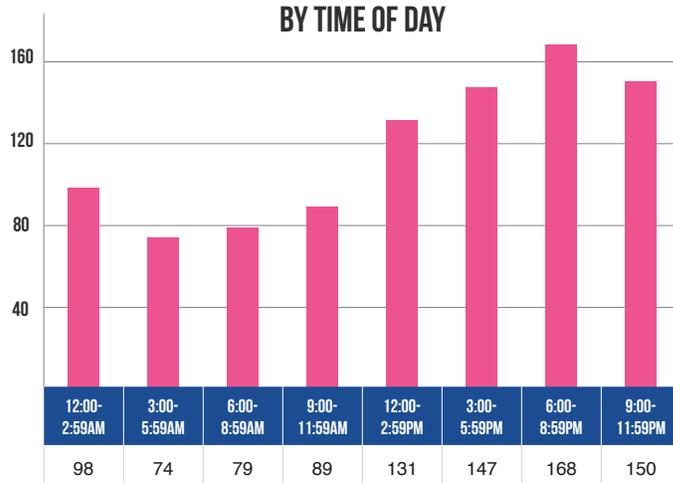
TIME AND SEVERITY

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	13,922	4.4	98	10.5	404	983	1,445	10,992
3:00 AM - 5:59 AM	13,263	4.2	74	7.9	264	602	1,023	11,300
6:00 AM - 8:59 AM	47,216	15.0	79	8.4	489	1,882	4,591	40,175
9:00 AM - 11:59 AM	39,350	12.5	89	9.5	563	2,032	4,689	31,977
12:00 PM - 2:59 PM	51,818	16.5	131	14.0	830	2,996	6,927	40,934
3:00 PM - 5:59 PM	72,665	23.1	147	15.7	1,109	3,822	9,576	58,011
6:00 PM - 8:59 PM	48,549	15.4	168	17.9	809	2,488	4,975	40,109
9:00 PM - 11:59 PM	27,886	8.9	150	16.0	565	1,547	2,635	22,989
Unknown	252	0.1	1	0.1	2	4	11	234
TOTAL	314,921	100.0	937	100.0	5,035	16,356	35,872	256,721

**ALL CRASHES
BY TIME OF DAY**



**FATAL CRASHES
BY TIME OF DAY**

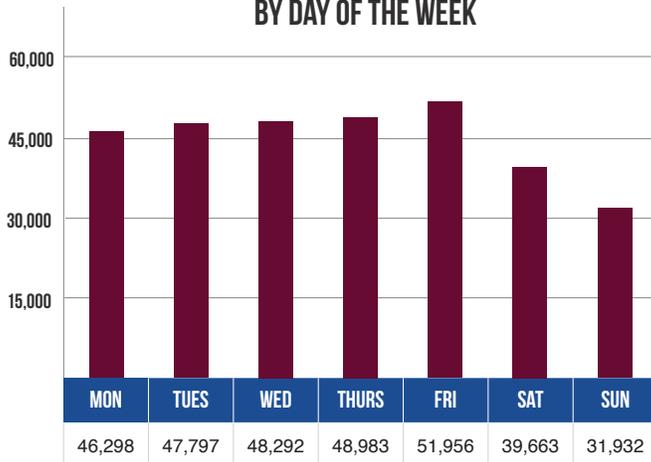


Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. In 2017, the highest percentage of fatal crashes occurs during the 6:00 PM to 8:59 PM time period (17.9%).

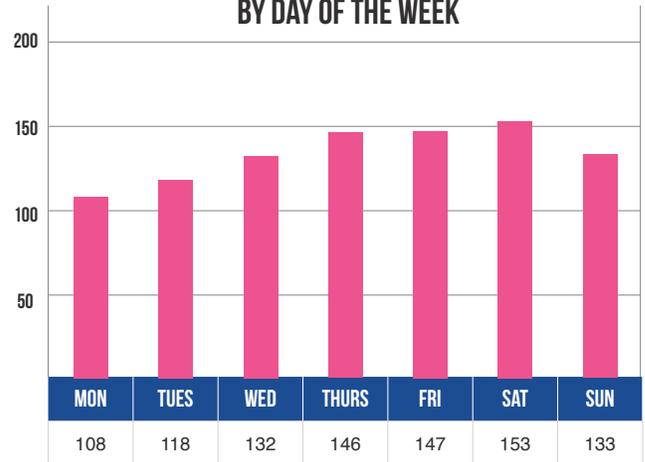
DAY OF WEEK

DAY OF WEEK	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Monday	46,298	14.7	108	11.5	638	2,298	5,410	37,844
Tuesday	47,797	15.2	118	12.6	654	2,337	5,537	39,151
Wednesday	48,292	15.3	132	14.1	675	2,324	5,463	39,698
Thursday	48,983	15.6	146	15.6	680	2,416	5,691	40,050
Friday	51,956	16.5	147	15.7	789	2,648	5,942	42,430
Saturday	39,663	12.6	153	16.3	851	2,334	4,308	32,017
Sunday	31,932	10.1	133	14.2	748	1,999	3,521	25,531
TOTAL	314,921	100.0	937	100.0	5,035	16,356	35,872	256,721

**ALL CRASHES
BY DAY OF THE WEEK**



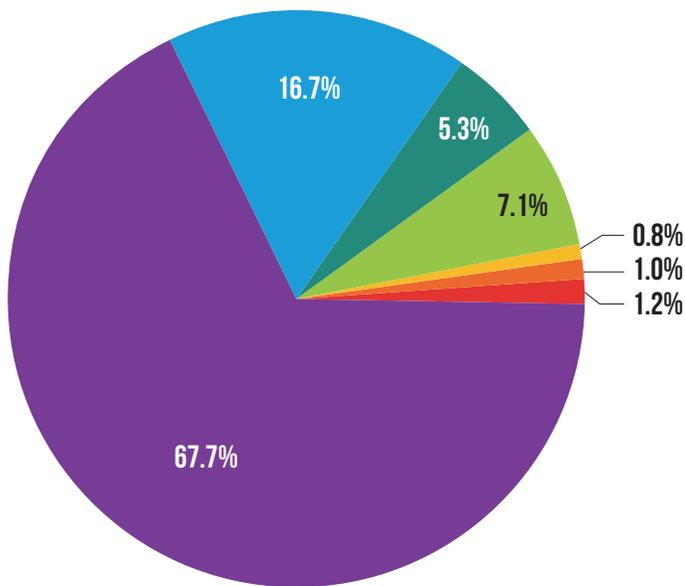
**FATAL CRASHES
BY DAY OF THE WEEK**



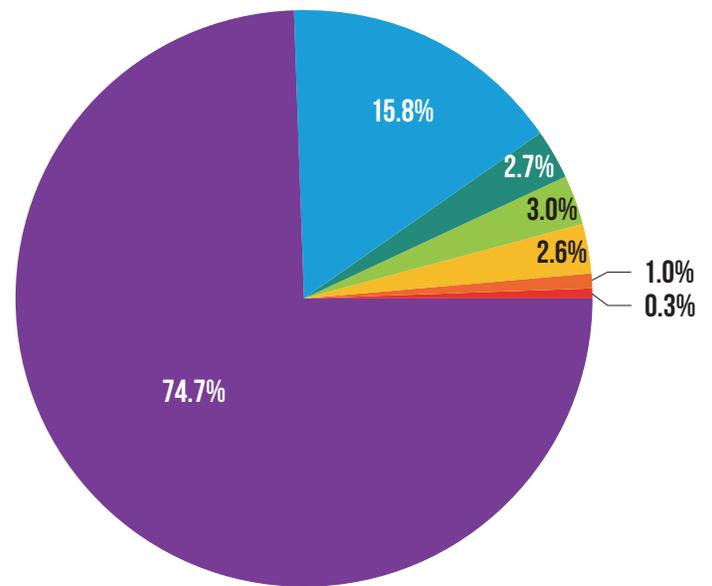
Crash frequencies are higher Monday through Friday than on the weekend. Friday (147) and Saturday (153) have the highest number of fatal crashes.

ROAD CONDITION

ROAD SURFACE CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Dry	213,324	67.7	700	74.7	3,695	11,911	25,053	171,965
Wet	52,698	16.7	148	15.8	705	2,506	6,538	42,801
Ice	16,571	5.3	25	2.7	192	696	1,702	13,956
Snow	22,444	7.1	28	3.0	218	726	1,826	19,646
Mud, Dirt, Gravel	2,535	0.8	24	2.6	134	284	255	1,838
Slush	3,209	1.0	9	1.0	50	138	331	2,681
Debris	117	0.0	0	0.0	2	8	9	98
Water (Standing/Flowing)	217	0.1	0	0.0	7	15	28	167
Sand	52	0.0	0	0.0	9	8	3	32
Oily	42	0.0	0	0.0	4	4	5	29
Other/Unknown	3,712	1.2	3	0.3	19	60	122	3,508
TOTAL	314,921	100.0	937	100.0	5,035	16,356	35,872	256,721



ALL CRASHES



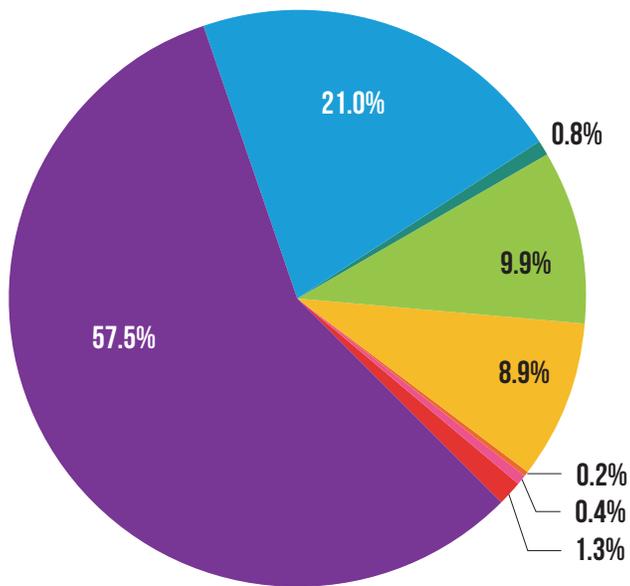
FATAL CRASHES

The highest percentage of all crashes (67.7%), fatal crashes (74.7%), injury crashes (71.0%), and property damage only crashes (66.9%) occur on dry roads.

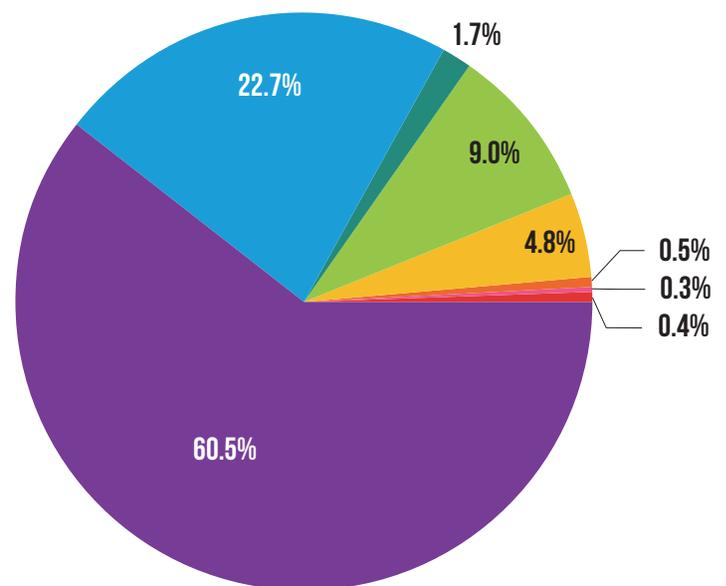
WEATHER CONDITION

WEATHER CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Clear	181,126	57.5	567	60.5	3,257	10,349	20,856	146,097
Cloudy	66,045	21.0	213	22.7	939	3,194	7,872	53,827
Fog	2,540	0.8	16	1.7	61	124	240	2,099
Rain	31,194	9.9	84	9.0	419	1,532	4,036	25,123
Snow	25,654	8.1	39	4.2	269	902	2,340	22,104
Severe Wind	684	0.2	5	0.5	9	24	56	590
Sleet/Hail	1,124	0.4	3	0.3	15	53	133	920
Blowing Snow	2,521	0.8	6	0.6	40	113	220	2,142
Blowing Sand	41	0.0	0	0.0	1	1	4	35
Smoke	34	0.0	0	0.0	1	1	1	31
Other/Unknown	3,958	1.3	4	0.4	24	63	114	3,753
TOTAL	314,921	100.0	937	100.0	5,035	16,356	35,872	256,721

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



ALL CRASHES



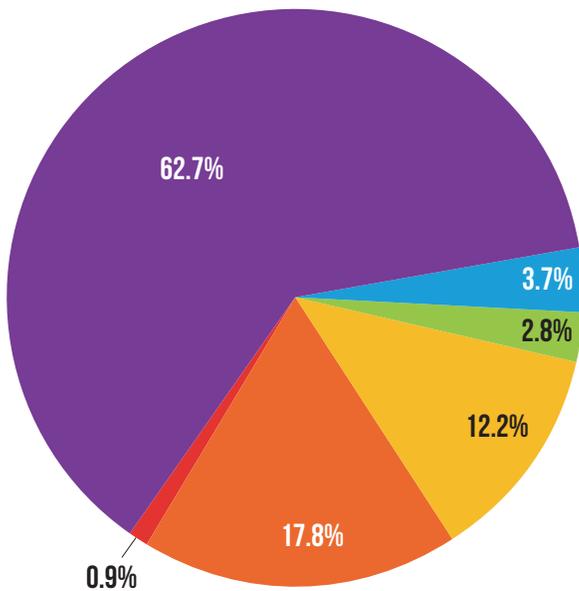
FATAL CRASHES

The highest percentage of all crashes (57.5%), fatal crashes (60.5%), injury crashes (60.2%), and property damage only crashes (56.9%) occur during clear weather conditions.

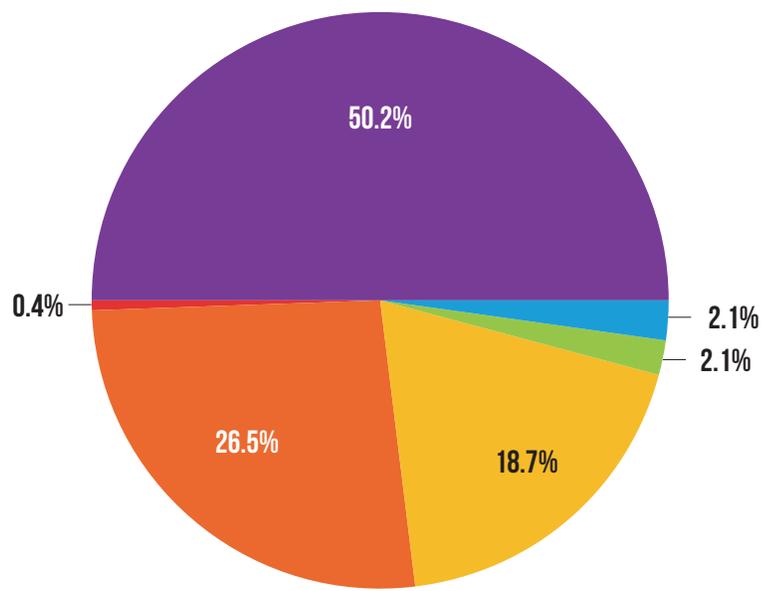
LIGHT CONDITION

LIGHT CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Daylight	197,388	62.7	470	50.2	3,131	10,985	25,486	157,316
Dawn	11,732	3.7	20	2.1	104	389	870	10,349
Dusk	8,750	2.8	20	2.1	132	402	840	7,356
Dark – Lighted	38,340	12.2	175	18.7	770	2,303	5,122	29,970
Dark – Unlighted	55,966	17.8	248	26.5	888	2,246	3,482	49,102
Other/Unknown	2,745	0.9	4	0.4	10	31	72	2,628
TOTAL	314,921	100.0	937	100.0	5,035	16,356	35,872	256,721

■ DAYLIGHT
 ■ DAWN
 ■ DUSK
 ■ DARK-LIGHTED
 ■ DARK-UNLIGHTED
 ■ OTHER/UNKNOWN



ALL CRASHES



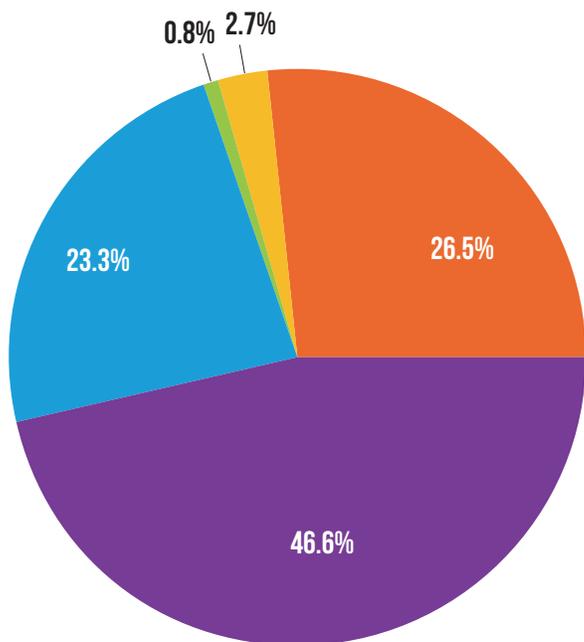
FATAL CRASHES

The highest percentage of all crashes (62.7%) , fatal crashes (50.2%), injury crashes (69.2%), and property damage only crashes (61.3%) occur during daylight hours.

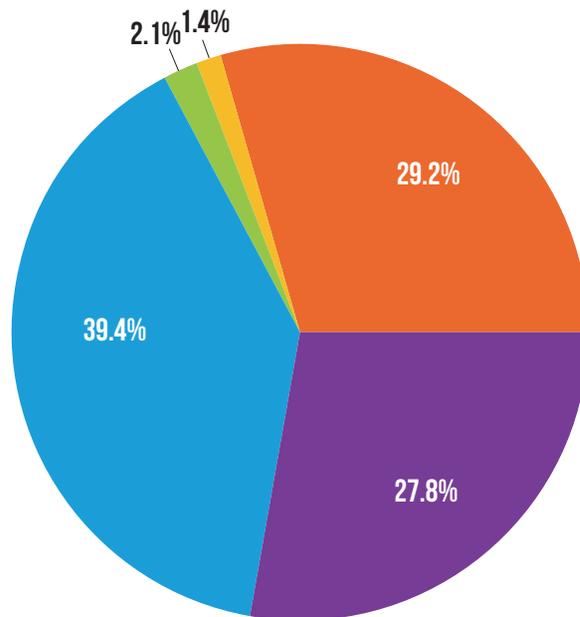
INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Signal	48,333	46.6	79	27.8	699	3,162	7,980	36,413
Stop Sign	24,181	23.3	112	39.4	609	1,814	3,820	17,826
Stop with Flashing Beacon	840	0.8	6	2.1	30	80	154	570
Yield Sign	2,842	2.7	4	1.4	40	123	363	2,312
None of These	27,490	26.5	83	29.2	544	1,675	3,663	21,525
Unknown	18	0.0	0	0.0	1	1	5	11
TOTAL	103,704	100.0	284	100.0	1,923	6,855	15,985	78,657

■ SIGNAL
 ■ STOP SIGN
 ■ STOP WITH FLASHING BEACON
 ■ YIELD SIGN
 ■ NONE
 ■ UNKNOWN



ALL CRASHES



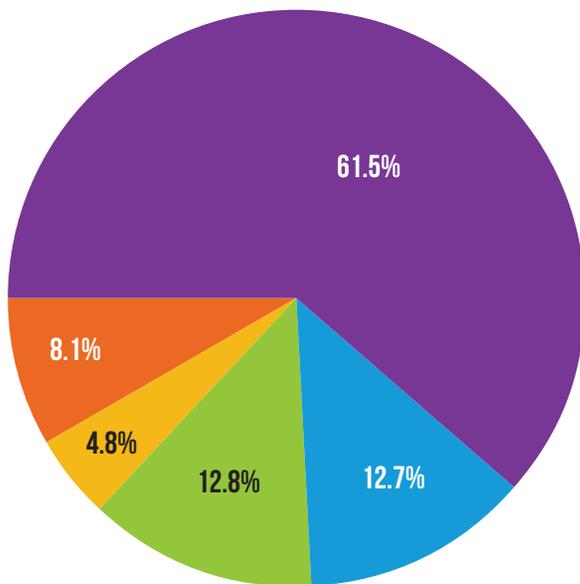
FATAL CRASHES

Compared to other intersection crashes, intersections with signals have the highest percentage of all crashes (46.6%), injury crashes (47.8%), and property damage only crashes (46.3%). Intersections with stop signs have the highest percentage of fatal crashes (39.4%).

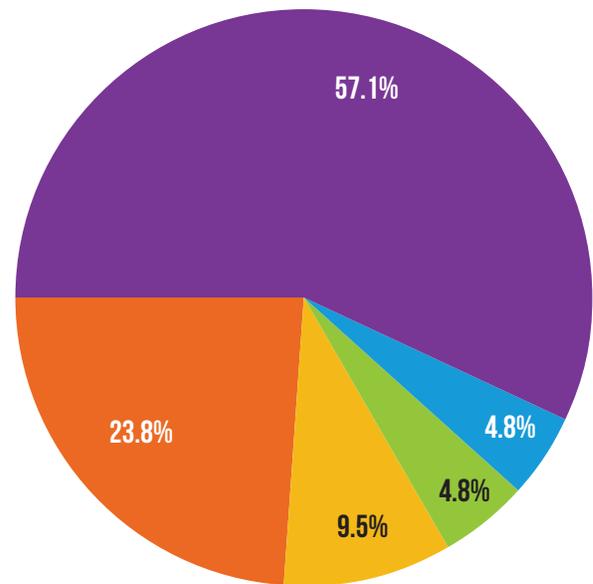
CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
CONSTRUCTION/MAINTENANCE	<i>Indicates roadway construction, maintenance, or repair. The building, maintenance, or repair of the road itself and roadway-related features (e.g., overhead signs, signals).</i>							
Lane Closure	2,502	61.5	12	57.1	39	91	353	2,007
Lane Shift/Crossover	515	12.7	1	4.8	6	21	52	435
Work on Shoulder/Median	522	12.8	1	4.8	6	28	54	433
Intermittent/Moving Work	194	4.8	2	9.5	1	12	22	157
Other	330	8.1	5	23.8	6	14	45	260
Unknown	2	0.0	0	0.0	0	0	1	1
TOTAL	4,065	100.0	21	100.0	58	166	527	3,293

■ LANE CLOSURE
 ■ LANE SHIFT/CROSSOVER
 ■ WORK ON SHOULDER/MEDIAN
 ■ INTERMITTENT/MOVING WORK
 ■ OTHER
 ■ UNKNOWN



ALL CRASHES



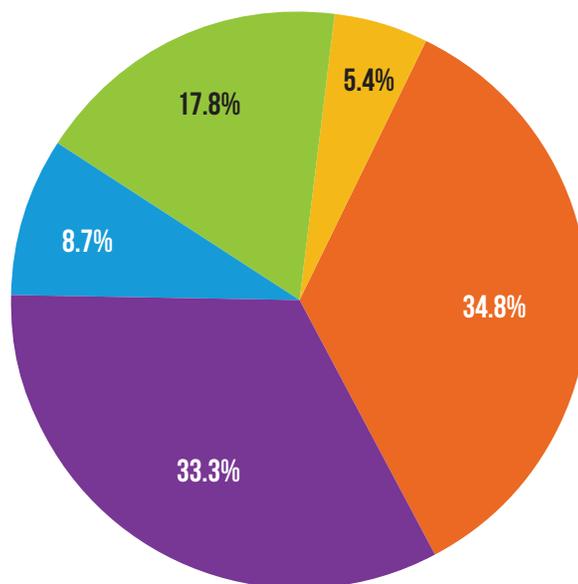
FATAL CRASHES

The highest percentage of all crashes (61.5%), injury crashes (64.3%), and property damage only crashes (60.9%) occur in closed lanes in construction/maintenance zones.

CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
UTILITY	<i>Indicates work on facilities other than the roadway such as telephone, electrical, cable television, water, or sewer.</i>							
Lane Closure	92	33.3	1	50.0	0	6	12	73
Lane Shift/Crossover	24	8.7	0	0.0	0	2	2	20
Work on Shoulder/Median	49	17.8	0	0.0	1	5	6	37
Intermittent/Moving Work	15	5.4	0	0.0	0	2	0	13
Other	96	34.8	1	50.0	2	6	13	74
Unknown	0	0.0	0	0.0	0	0	0	0
TOTAL	276	100.0	2	100.0	3	21	33	217

■ LANE CLOSURE
 ■ LANE SHIFT/CROSSOVER
 ■ WORK ON SHOULDER/MEDIAN
 ■ INTERMITTENT/MOVING WORK
 ■ OTHER
 ■ UNKNOWN



ALL CRASHES

The highest percentage of all crashes (34.8%), injury crashes (36.8%), and property damage crashes (34.1%) in utility construction zones occurred in other situations.

VEHICLE/DRIVER

(characteristics specific to individual traffic units)

This page left intentionally blank

VEHICLE TYPE AND CRASH INVOLVEMENT

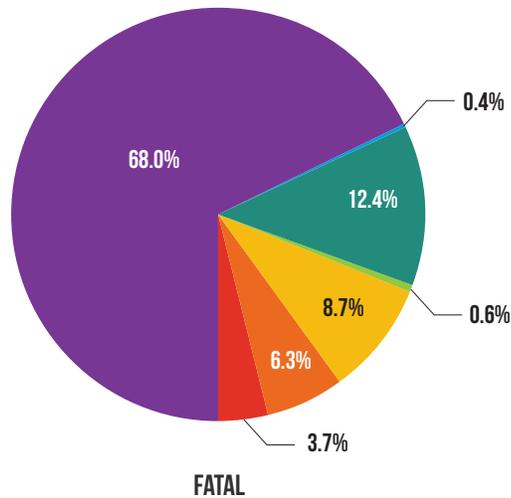
VEHICLE TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Passenger Car, SUV, Van	444,817	82.3	1,040	68.0	88,365	355,412	530	67.6	54,862	389,425
Motorhome	1,521	0.3	6	0.4	267	1,248	4	0.5	168	1,349
Pickup truck	59,444	11.0	190	12.4	10,421	48,833	69	8.8	5,261	54,114
Small Truck under 10,000 lbs. GVWR	3,575	0.7	9	0.6	595	2,971	2	0.3	245	3,328
Motorcycle	2,964	0.5	133	8.7	2,105	726	129	16.5	2,066	769
Moped / goped	417	0.1	6	0.4	348	63	6	0.8	344	67
Go-cart / golf cart	46	0.0	2	0.1	18	26	2	0.3	14	30
Snowmobile	119	0.0	5	0.3	75	39	4	0.5	71	44
Off-Road Vehicle - ORV / All-Terrain Vehicle - ATV	347	0.1	23	1.5	248	76	21	2.7	236	90
Other	2,266	0.4	8	0.5	341	1,917	4	0.5	152	2,110
Unknown	11,455	2.1	12	0.8	1,131	10,312	1	0.1	20	11,434
CDL Truck/Bus (break-down below)	13,416	2.5	96	6.3	2,437	10,883	12	1.5	666	12,738
Total Number of Vehicles	540,387	100.0	1,530	100.0	106,351	432,506	784	100.0	64,105	475,498

Note: School bus cannot be broken out of CDL Truck/Bus

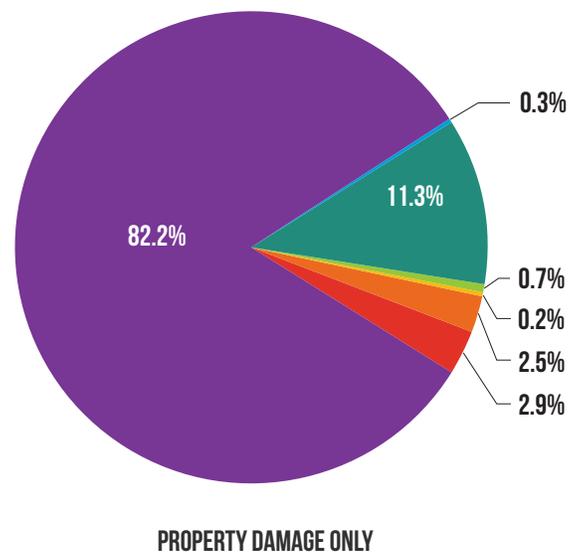
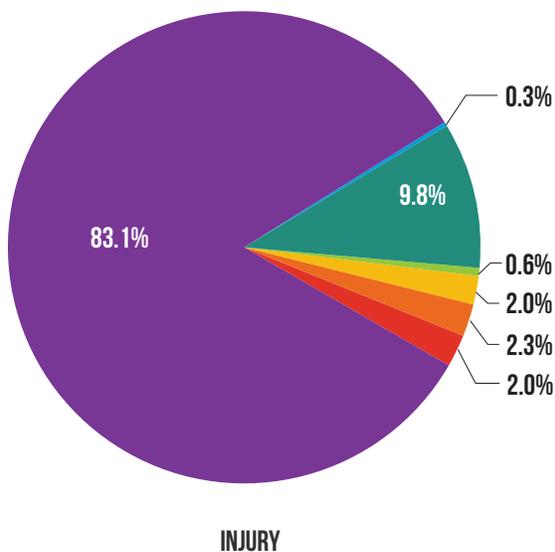
CDL TRUCK/BUS SUB-CATEGORY TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
10,000 lbs. or Less	256	1.9	0	0.0	17	239	0	0.0	6	250
10,001 - 26,000 lbs.	3,464	25.8	17	17.7	498	2,949	4	33.3	173	3,287
Greater than 26,000 lbs.	9,302	69.3	79	82.3	1,897	7,326	8	66.7	486	8,808
Unknown Truck	394	2.9	0	0.0	25	369	0	0.0	1	393
Total Number of Vehicles	13,416	100.0	96	100.0	2,437	10,883	12	100.0	666	12,738

VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

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



The chart shows that 81.4 percent of vehicles involved in fatal crashes are passenger vehicles (passenger cars, station wagons, vans, minivans, motorhomes, pickups, or trucks under 10,000 lbs.). Motorcycles have a fatal crash involvement of 8.7 percent.



Passenger vehicles (passenger cars, SUVs, vans, motorhomes, pickup trucks, or trucks under 10,000 lbs.) make up an even larger share of vehicles in injury crashes (93.7%) and property damage only (PDO) crashes (94.4%) 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	292,278	54.1	1,121	5,602	17,192	37,405	230,958
Turning left	37,136	6.9	84	788	3,056	5,827	27,381
Turning right	15,794	2.9	8	143	667	1,496	13,480
Stopped on roadway	52,877	9.8	71	439	2,603	8,849	40,915
In prior crash	428	0.1	4	19	32	90	283
Changing lanes	17,026	3.2	19	114	447	1,265	15,181
Backing	10,727	2.0	1	21	94	267	10,344
Slowing/stopping on roadway	56,101	10.4	49	373	1,925	8,485	45,269
Slowing/stopping other	709	0.1	1	7	28	111	562
Starting up on roadway	9,373	1.7	22	113	510	1,390	7,338
Starting up other	136	0.0	0	3	10	14	109
Entering parking	468	0.1	1	3	11	25	428
Leaving parking	1,205	0.2	2	11	48	124	1,020
Entering roadway	5,953	1.1	20	94	337	798	4,704
Leaving roadway	652	0.1	5	29	57	90	471
Making U-turn	1,053	0.2	7	11	67	142	826
Overtaking or passing	3,145	0.6	14	71	161	315	2,584
Avoiding object	464	0.1	2	14	31	54	363
Avoiding animal	952	0.2	1	15	82	98	756
Avoiding pedestrian	88	0.0	4	7	12	12	53
Avoiding vehicle (front/back)	3,450	0.6	22	134	251	448	2,595
Avoiding vehicle (angle)	1,394	0.3	1	27	110	186	1,070
Driverless moving	229	0.0	2	4	6	21	196
Parked	18,867	3.5	28	169	510	926	17,234
Crossing at intersection	86	0.0	0	5	10	21	50
Crossing not at intersection	14	0.0	0	2	0	2	10
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	23	0.0	0	4	0	3	16
In roadway against traffic	16	0.0	0	2	2	1	11
Standing or lying in roadway	3	0.0	0	0	0	0	3
Pushing/working on vehicle	9	0.0	0	1	1	2	5
Other working in roadway	5	0.0	0	0	1	0	4
Playing in roadway	1	0.0	0	0	0	0	1
In roadway other reason	19	0.0	1	1	2	4	11
Not in roadway	56	0.0	1	3	8	13	31
Negotiating a curve	2,829	0.5	23	126	230	302	2,148
Other	835	0.2	4	24	69	96	642
Unknown	5,986	1.1	12	54	127	339	5,454
TOTAL	540,387	100.0	1,530	8,433	28,697	69,221	432,506

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	2,015	68.0	2,205	68.1	117	523	689	369	472
Turning left	120	4.0	131	4.0	0	21	43	25	42
Turning right	79	2.7	84	2.6	0	10	26	19	28
Stopped on roadway	120	4.0	131	4.0	1	9	24	28	67
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	59	2.0	62	1.9	2	17	15	7	20
Backing	3	0.1	3	0.1	0	0	1	0	2
Slowing/stopping on roadway	176	5.9	191	5.9	6	20	57	42	62
Slowing/stopping other	3	0.1	3	0.1	0	0	1	1	1
Starting up on roadway	30	1.0	33	1.0	0	3	13	3	13
Starting up other	0	0.0	0	0.0	0	0	0	0	0
Entering parking	1	0.0	2	0.1	0	0	2	0	0
Leaving parking	3	0.1	3	0.1	0	1	1	1	0
Entering roadway	14	0.5	15	0.5	1	1	5	2	6
Leaving roadway	9	0.3	11	0.3	0	4	1	3	3
Making U-turn	5	0.2	6	0.2	1	0	1	0	4
Overtaking or passing	53	1.8	61	1.9	3	24	20	5	6
Avoiding object	4	0.1	4	0.1	0	1	0	2	1
Avoiding animal	14	0.5	14	0.4	0	3	6	1	4
Avoiding pedestrian	1	0.0	1	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	68	2.3	75	2.3	1	10	30	16	18
Avoiding vehicle (angle)	32	1.1	34	1.1	0	4	13	11	6
Driverless moving	2	0.1	2	0.1	0	0	0	0	0
Parked	34	1.1	35	1.1	0	0	0	1	12
Crossing at intersection	3	0.1	3	0.1	0	1	1	0	1
Crossing not at intersection	0	0.0	0	0.0	0	0	0	0	0
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	0	0.0	0	0.0	0	0	0	0	0
In roadway against traffic	1	0.0	1	0.0	0	0	0	1	0
Standing or lying in roadway	0	0.0	0	0.0	0	0	0	0	0
Pushing/working on vehicle	0	0.0	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0.0	0	0	0	0	0
Playing in roadway	0	0.0	0	0.0	0	0	0	0	0
In roadway other reason	0	0.0	0	0.0	0	0	0	0	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Negotiating a curve	97	3.3	108	3.3	5	28	40	21	14
Other	8	0.3	9	0.3	0	1	3	0	5
Unknown	10	0.3	10	0.3	0	3	2	2	0
TOTAL	2,964	100.0	3,237	100.0	137	684	994	560	787

*This table includes 75 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	1,030	59.8	11	90	386	348	154
Turning left	49	2.8	1	6	23	10	7
Turning right	12	0.7	0	4	2	2	4
Stopped on roadway	9	0.5	0	1	2	3	3
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	18	1.0	0	2	9	7	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	1	0.1	0	0	0	1	0
Slowing/stopping other	1	0.1	0	0	0	1	0
Starting up on roadway	11	0.6	0	1	2	5	3
Starting up other	4	0.2	0	0	0	2	2
Entering parking	2	0.1	0	0	1	1	0
Leaving parking	0	0.0	0	0	0	0	0
Entering roadway	61	3.5	1	6	20	21	4
Leaving roadway	2	0.1	0	0	0	1	1
Making U-turn	3	0.2	0	2	0	1	0
Overtaking or passing	0	0.0	0	0	0	0	0
Avoiding object	2	0.1	0	0	1	0	1
Avoiding animal	0	0.0	0	0	0	0	0
Avoiding pedestrian	1	0.1	0	0	1	0	0
Avoiding vehicle (front/back)	0	0.0	0	0	0	0	0
Avoiding vehicle (angle)	5	0.3	0	1	3	1	0
Driverless moving	2	0.1	0	0	0	0	1
Parked	3	0.2	0	0	1	0	0
Crossing at intersection	343	19.9	2	21	144	105	54
Crossing not at intersection	65	3.8	1	11	22	21	7
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	32	1.9	4	5	5	10	6
In roadway against traffic	13	0.8	0	2	5	4	1
Standing or lying in roadway	0	0.0	0	0	0	0	0
Pushing/working on vehicle	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0	0	0	0
Playing in roadway	3	0.2	0	1	0	2	0
In roadway other reason	9	0.5	0	2	4	2	1
Not in roadway	14	0.8	0	0	7	7	0
Negotiating a curve	0	0.0	0	0	0	0	0
Other	19	1.1	0	1	7	3	4
Unknown	9	0.5	1	1	0	3	1
TOTAL	1,723	100.0	21	157	645	561	254

*Includes 85 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	39	1.6	1	4	24	6	3
Turning left	2	0.1	0	0	0	0	2
Turning right	0	0.0	0	0	0	0	0
Stopped on roadway	6	0.2	0	2	0	1	3
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	0	0.0	0	0	0	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	0	0.0	0	0	0	0	0
Slowing/stopping other	0	0.0	0	0	0	0	0
Starting up on roadway	0	0.0	0	0	0	0	0
Starting up other	0	0.0	0	0	0	0	0
Entering parking	0	0.0	0	0	0	0	0
Leaving parking	0	0.0	0	0	0	0	0
Entering roadway	11	0.5	0	2	6	3	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	1	0.0	0	0	1	0	0
Avoiding object	0	0.0	0	0	0	0	0
Avoiding animal	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	1	0.0	0	0	0	1	0
Avoiding vehicle (angle)	0	0.0	0	0	0	0	0
Driverless moving	0	0.0	0	0	0	0	0
Parked	0	0.0	0	0	0	0	0
Crossing at intersection	869	36.0	20	119	278	337	89
Crossing not at intersection	542	22.5	55	111	186	140	36
Getting on/off vehicle	22	0.9	1	4	9	7	0
In roadway with traffic	221	9.2	19	51	61	60	22
In roadway against traffic	39	1.6	3	8	10	15	3
Standing or lying in roadway	120	5.0	14	29	31	32	9
Pushing/working on vehicle	20	0.8	3	5	7	3	1
Other working in roadway	31	1.3	3	6	1	15	6
Playing in roadway	27	1.1	0	2	14	10	1
In roadway other reason	197	8.2	16	57	44	46	29
Not in roadway	86	3.6	8	10	29	29	5
Negotiating a curve	0	0.0	0	0	0	0	0
Other	112	4.6	2	19	31	43	7
Unknown	65	2.7	13	15	10	11	6
TOTAL	2,411	100.0	158	444	742	759	222

*Includes 86 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	3,099	0.6	5	130	270	392	2,302
Cross center/median	605	0.1	4	21	56	94	430
Ran off road left	1,141	0.2	1	31	76	124	909
Ran off road right	1,885	0.3	1	37	132	220	1,495
Re-enter road	140	0.0	0	3	9	11	117
Overturn	6,400	1.2	87	420	1,279	1,310	3,304
Separation of units	345	0.1	2	10	21	40	272
Fire/explosion	374	0.1	9	13	14	22	316
Immersion	283	0.1	4	0	5	12	262
Jackknife	210	0.0	0	3	8	22	177
Downhill runaway	21	0.0	0	1	0	3	17
Cargo loss/shift	395	0.1	0	2	8	22	363
Individual fell off	362	0.1	11	102	159	44	46
Other noncollision	1,130	0.2	2	27	92	118	891
SUBTOTAL	16,390	3.0	126	800	2,129	2,434	10,901

COLLISION WITH A NONFIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	2,108	0.4	156	386	655	672	239
Bicycle / Pedalcycle	1,622	0.3	22	143	620	527	310
Motor vehicle in transport	404,780	74.9	958	5,708	21,299	59,126	317,689
Parked motor vehicle	16,477	3.0	17	118	419	784	15,139
Railway train	49	0.0	2	3	4	8	32
Animal	52,334	9.7	14	72	300	546	51,402
Other nonfixed objects	3,798	0.7	15	26	106	180	3,471
SUBTOTAL	481,168	89.0	1,184	6,456	23,403	61,843	388,282

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	242	0.0	3	6	22	29	182
Bridge rail	378	0.1	1	5	22	46	304
Guardrail face	2,862	0.5	5	38	122	332	2,365
Guardrail end	602	0.1	4	20	41	97	440
Median barrier	4,250	0.8	5	83	295	807	3,060
Highway traffic sign post	3,041	0.6	3	16	77	120	2,825
Highway signal post	170	0.0	2	4	7	20	137
Luminaire/light support	3,696	0.7	22	112	338	545	2,679
Other pole	1,218	0.2	5	19	69	112	1,013
Culvert	463	0.1	2	25	63	59	314
Curb	1,571	0.3	3	22	78	89	1,379
Ditch	5,834	1.1	15	129	466	674	4,550
Embankment	1,004	0.2	6	37	100	135	726
Fence	808	0.1	2	8	29	70	699
Mailbox	1,555	0.3	0	6	16	39	1,494
Tree	8,991	1.7	120	519	1,078	1,214	6,060
Rail crossing signal	72	0.0	0	2	3	7	60
Building	513	0.1	8	22	73	84	326
Traffic island	29	0.0	0	4	1	1	23
Fire hydrant	499	0.1	0	5	22	41	431
Impact attenuator	161	0.0	0	7	12	35	107
Other fixed object	1,741	0.3	8	58	127	177	1,371
SUBTOTAL	39,700	7.3	214	1,147	3,061	4,733	30,545

	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	3,129	0.6	6	30	104	211	2,778
MOST HARMFUL EVENT TOTAL	540,387	100.0	1,530	8,433	28,697	69,221	432,506

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	1,165	0.2	2	28	56	193	886
Lights/reflectors	167	0.0	1	6	11	17	132
Steering	314	0.1	0	5	27	42	240
Tires/wheels	815	0.2	2	16	65	106	626
Windows	29	0.0	0	2	3	3	21
Coupling/hitch/chains	118	0.0	0	4	1	4	109
Other	2,972	0.5	2	51	156	372	2,391
None or Unknown	534,807	99.0	1,523	8,321	28,378	68,484	428,101
TOTAL	540,387	100.0	1,530	8,433	28,697	69,221	432,506

DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
None	273,468	50.6	671	3,630	13,023	33,459	222,685
Speed too fast	31,143	5.8	161	816	2,213	3,856	24,097
Speed too slow	254	0.0	3	4	17	31	199
Failed to yield	46,812	8.7	102	921	3,726	7,391	34,672
Disregard traffic control	10,291	1.9	67	353	1,299	2,514	6,058
Drove wrong way	374	0.1	13	17	39	69	236
Drove left of center	2,446	0.5	58	149	287	377	1,575
Improper passing	2,779	0.5	8	39	115	223	2,394
Improper lane use	13,364	2.5	12	89	378	1,016	11,869
Improper turn	5,332	1.0	10	58	264	534	4,466
Improper/no signal	477	0.1	0	5	22	41	409
Improper backing	7,429	1.4	1	6	49	150	7,223
Unable to stop in assured clear distance	75,830	14.0	52	533	2,921	11,668	60,656
Reckless driving	2,564	0.5	73	230	352	406	1,503
Careless/negligent driving	12,775	2.4	81	543	1,308	1,938	8,905
Other	17,012	3.1	67	439	1,195	1,954	13,357
Unknown	38,037	7.0	151	601	1,489	3,594	32,202
TOTAL	540,387	100.0	1,530	8,433	28,697	69,221	432,506

MICHIGAN BICYCLE CRASHES

2017 BICYCLIST FATALITIES AND INJURIES



In 2017, there were 1,723 bicyclists involved in motor vehicle crashes, with 21 bicyclists killed and 1,363 injured. More bicyclists within the 55-64 years of age group died than any other age group, with 5 killed (23.8%). The 16-20 age group had the greatest percentage of total fatalities and injuries (15.7%).

BICYCLE HELMET USE AND INJURY SEVERITY

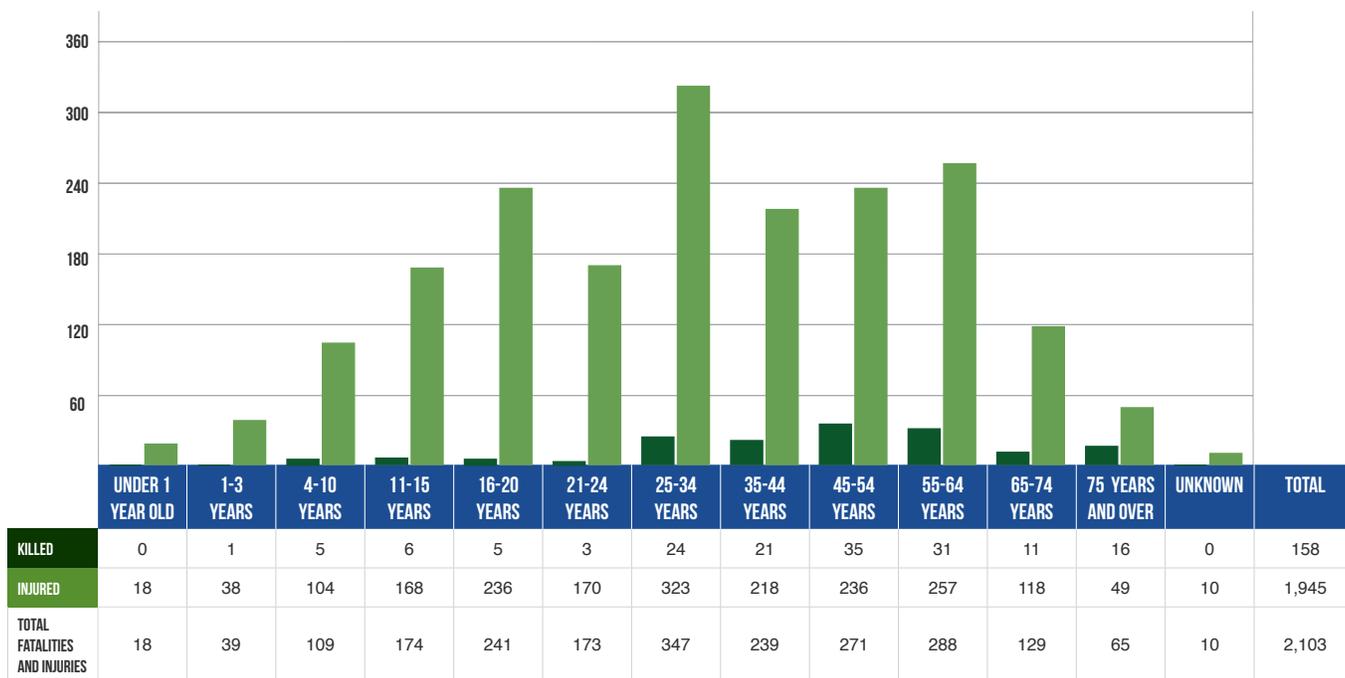
HELMET USE	FATALITY	INJURY			NO INJURY
		A	B	C	
Worn	5	17	92	61	26
Not Worn	10	80	311	265	99
Unknown	6	60	242	235	129
Total	21	157	645	561	254

Note: 85 bicyclists had an unknown degree of injury and are not represented in this table

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.”

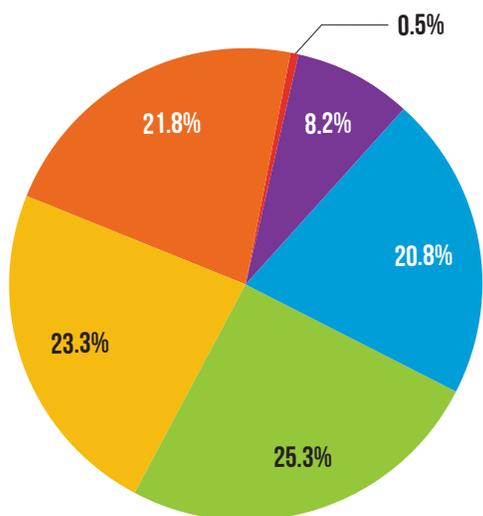
MICHIGAN PEDESTRIAN CRASHES

2017 PEDESTRIAN FATALITIES AND INJURIES

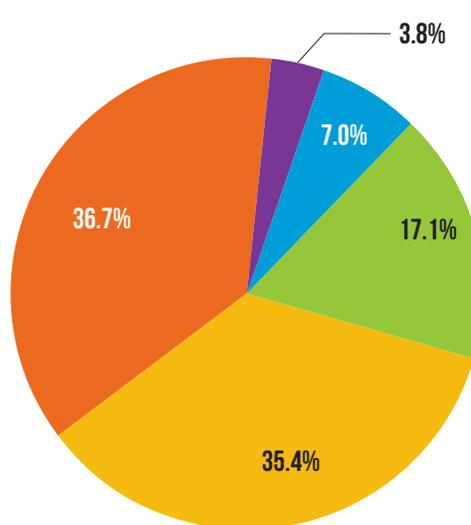


In 2017, there were 2,411 pedestrians involved in motor vehicle crashes, with 158 pedestrians killed and 1,945 injured. More pedestrians within the 45-54 years of age group died than any other age group, with 35 killed (22.2%). The 25-34 age group had the greatest number of injuries (16.6%), and the greatest percentage of total fatalities and injuries (16.5%).

■ 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	5	4.2	0	2	0	2	1
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	0	0.0	0	0	0	0	0
Ran off road right	1	0.8	0	0	0	0	1
Re-enter road	0	0.0	0	0	0	0	0
Overturn	14	11.8	0	4	2	3	5
Separation of units	1	0.8	0	0	0	1	0
Fire/explosion	3	2.5	0	0	0	0	3
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	12	10.1	0	4	5	3	0
Other noncollision	1	0.8	0	0	1	0	0
SUBTOTAL	37	31.1	0	10	8	9	10

COLLISION WITH A NONFIXED OBJECT	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	1	0.8	0	1	0	0	0
Bicycle / Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	44	37.0	3	9	4	5	23
Parked motor vehicle	0	0.0	0	0	0	0	0
Railway train	0	0.0	0	0	0	0	0
Animal	4	3.4	0	1	1	0	2
Other nonfixed objects	0	0.0	0	0	0	0	0
SUBTOTAL	49	41.2	3	11	5	5	25

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	0	0.0	0	0	0	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	2	1.7	0	0	0	1	1
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	0	0.0	0	0	0	0	0
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support	1	0.8	1	0	0	0	0
Other pole	1	0.8	0	0	0	0	1
Culvert	0	0.0	0	0	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	1	0.8	0	0	1	0	0
Embankment	1	0.8	1	0	0	0	0
Fence	0	0.0	0	0	0	0	0
Mailbox	0	0.0	0	0	0	0	0
Tree	24	20.2	0	13	4	5	2
Rail crossing signal	0	0.0	0	0	0	0	0
Building	0	0.0	0	0	0	0	0
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	0	0.0	0	0	0	0	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	1	0.8	0	1	0	0	0
SUBTOTAL	31	26.1	2	14	5	6	4

	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Unknown Event	2	1.7	0	0	1	1	0
MOST HARMFUL EVENT TOTAL	119	100.0	5	35	19	21	39

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 119 snowmobiles were reported in crashes on Michigan public roadways during 2017, resulting in four fatal crashes. A total of 75 snowmobiles were involved in 71 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	17	4.9	0	8	5	4	0
Cross center/median	2	0.6	0	0	0	1	1
Ran off road left	1	0.3	0	0	1	0	0
Ran off road right	1	0.3	0	0	0	1	0
Re-enter road	1	0.3	0	0	1	0	0
Overturn	73	21.0	5	29	19	12	8
Separation of units	1	0.3	0	0	0	0	1
Fire/explosion	4	1.2	0	0	0	0	4
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	36	10.4	1	13	19	3	0
Other noncollision	3	0.9	0	1	0	0	2
SUBTOTAL	139	40.1	6	51	45	21	16

COLLISION WITH A NONFIXED OBJECT	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Pedestrian	2	0.6	0	0	0	1	1
Bicycle / Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	120	34.6	8	26	31	12	43
Parked motor vehicle	12	3.5	0	1	3	0	8
Railway train	0	0.0	0	0	0	0	0
Animal	4	1.2	1	2	0	0	1
Other nonfixed objects	4	1.2	1	0	2	1	0
SUBTOTAL	142	40.9	10	29	36	14	53

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	1	0.3	0	0	1	0	0
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	1	0.3	0	0	0	1	0
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	1	0.3	0	0	1	0	0
Highway traffic sign post	2	0.6	0	1	0	0	1
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support	1	0.3	0	1	0	0	0
Other pole	2	0.6	0	1	1	0	0
Culvert	1	0.3	0	1	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	12	3.5	1	4	3	2	2
Embankment	5	1.4	0	3	2	0	0
Fence	2	0.6	0	0	0	0	2
Mailbox	0	0.0	0	0	0	0	0
Tree	26	7.5	2	17	3	3	1
Rail crossing signal	0	0.0	0	0	0	0	0
Building	2	0.6	1	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	0	0.0	0	0	0	0	0
Other fixed object	7	2.0	3	2	2	0	0
SUBTOTAL	63	18.2	7	31	13	6	6

	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Unknown Event	3	0.9	0	0	1	1	1
MOST HARMFUL EVENT TOTAL	347	100.0	23	111	95	42	76

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 347 off-road/all-terrain vehicles were reported in crashes on Michigan public roadways during 2017, resulting in 20 fatal crashes. An additional 248 ORV/ATVs were involved in injury crashes.

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

DRIVER HAZARDOUS ACTION	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
None	40	33.6	1	7	4	9	19
Speed too fast	30	25.2	0	12	8	3	7
Speed too slow	1	0.8	0	1	0	0	0
Failed to yield	8	6.7	1	2	0	1	4
Disregard traffic control	2	1.7	0	1	0	0	1
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	1	0.8	0	0	0	0	1
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	3	2.5	0	2	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	6	5.0	0	1	1	1	3
Reckless driving	3	2.5	0	2	0	1	0
Careless/negligent driving	10	8.4	2	3	2	0	3
Other	8	6.7	0	3	2	3	0
Unknown	7	5.9	1	1	1	3	1
TOTAL	119	100.0	5	35	19	21	39

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

DRIVER HAZARDOUS ACTION	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
None	75	21.6	2	17	19	11	26
Speed too fast	89	25.6	8	34	32	9	6
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	30	8.6	0	5	8	4	13
Disregard traffic control	7	2.0	1	3	0	3	0
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	4	1.2	0	1	1	1	1
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	3	0.9	0	0	1	1	1
Improper turn	4	1.2	0	1	1	0	2
Improper/no signal	1	0.3	0	0	1	0	0
Improper backing	1	0.3	0	1	0	0	0
Unable to stop in assured clear distance	8	2.3	0	2	1	0	5
Reckless driving	14	4.0	3	6	2	3	0
Careless/negligent driving	43	12.4	1	20	13	4	5
Other	30	8.6	3	6	10	3	8
Unknown	38	11.0	5	15	6	3	9
TOTAL	347	100.0	23	111	95	42	76

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	2016	2017	% CHANGE
Crashes	234	223	-4.7%
Fatalities	2	1	-50.0%
Injuries	79	65	-17.7%

A total of 223 crashes involving farm equipment were reported on Michigan roadways during 2017. Of those crashes, one was fatal with one person killed.

MICHIGAN VEHICLE-TRAIN CRASHES

VEHICLE-TRAIN CRASHES	2016	2017	% CHANGE
Crashes	59	51	-13.6%
Fatalities	4	2	-50.0%
Injuries	30	20	-33.3%

A total of 51 crashes involving trains were reported in Michigan during 2017. Of those crashes, two were fatal with two people killed.

MICHIGAN MOTORCYCLE CRASHES

MOTORCYCLE DATA	2016	2017	% CHANGE
Motorcycle Registrations	258,265	258,487	0.1%
Motorcycles in Crashes	3,384	2,964	-12.4%
Motorcyclist Deaths	141	137	-2.8%
Motorcyclists Injured	2,622	2,238	-14.6%
Death Rate based on 10,000 motorcycle registrations	5.46	5.30	-2.9%
Estimated Mileage based on 3,000 miles per motorcycle	774,795,000	775,461,000	0.1%
Death Rate based on deaths per 100 million vehicle miles traveled	18.20	17.67	-2.9%

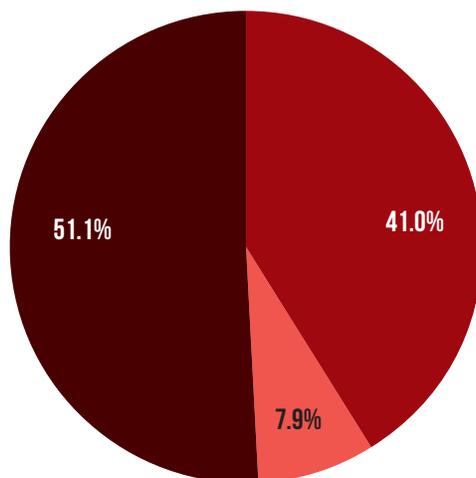
Motorcycles were involved in 0.9 percent of all traffic crashes in Michigan in 2017. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles.

DRIVER GENDER INFORMATION

MALES

FEMALES

UNKNOWN

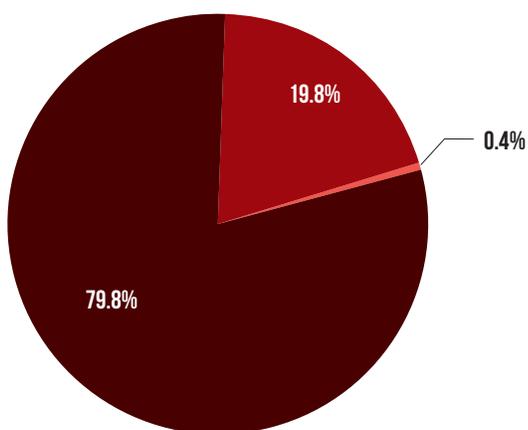


ALL CRASHES

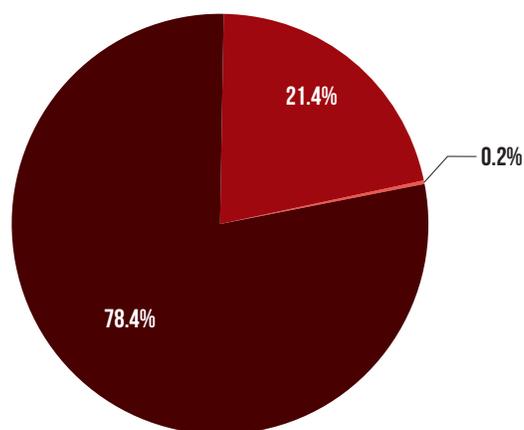
PROPERTY DAMAGE ONLY

INJURY

FATAL



MALE CRASH SEVERITY



FEMALE CRASH SEVERITY

A higher proportion of crashes involved male drivers than female drivers. When examining the severity of crashes involving drivers of each gender, fatal crashes are more prevalent among male drivers than female drivers (0.4% vs. 0.2%).

PERSON AGE - DEMOGRAPHICS AND CRASH INVOLVEMENTS

AGE	LICENSED DRIVERS	MICHIGAN POPULATION	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	49,583	1,910,519	854	2	27	4,903	317	0	399	18
16	78,400	131,824	7,972	16	9	1,359	63	0	38	1
17	93,089	134,306	10,637	14	6	1,784	52	0	57	0
18	88,310	135,643	13,104	24	11	2,124	50	1	45	0
19	101,577	132,492	13,475	28	19	2,150	51	0	61	4
20	108,381	135,667	13,419	37	21	1,976	55	1	63	3
21-24	462,279	567,005	51,711	174	95	7,685	136	1	194	4
25-29	607,287	676,087	57,754	191	105	8,211	136	1	210	8
30-34	559,817	593,016	45,553	135	66	6,224	109	0	180	17
35-39	545,410	592,177	41,148	97	51	5,557	92	1	139	12
40-44	517,288	563,657	36,747	96	54	4,753	63	1	129	10
45-49	588,874	642,154	40,161	111	49	5,381	95	0	133	16
50-54	620,180	680,338	38,690	120	59	5,255	132	4	175	24
55-59	667,102	725,134	37,411	110	52	5,076	131	3	188	17
60-64	633,182	675,096	29,642	89	56	4,039	67	2	131	14
65-69	526,687	562,365	21,488	73	33	3,186	52	4	88	8
70-74	390,997	416,853	14,573	58	41	2,170	25	1	57	5
75-79	264,018	283,027	8,901	29	29	1,448	16	2	41	9
80-84	162,512	191,193	5,186	32	26	980	3	0	16	3
85+	135,413	213,758	3,786	38	40	776	2	1	14	5
Unknown	---	---	48,175	56	0	48	76	0	53	0
TOTAL	7,200,386	9,962,311	540,387	1,530	849	75,085	1,723	23	2,411	178

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

AGE	LICENSED DRIVERS	TOTAL DRIVERS IN CRASHES*	CRASH RATE
0-15	49,583	854	0.017
16	78,400	7,972	0.102
17	93,089	10,637	0.114
18	88,310	13,104	0.148
19	101,577	13,475	0.133
20	108,381	13,419	0.124
21-24	462,279	51,711	0.112
25-29	607,287	57,754	0.095
30-34	559,817	45,553	0.081
35-39	545,410	41,148	0.075
40-44	517,288	36,747	0.071
45-49	588,874	40,161	0.068
50-54	620,180	38,690	0.062
55-59	667,102	37,411	0.056
60-64	633,182	29,642	0.047
65-69	526,687	21,488	0.041
70-74	390,997	14,573	0.037
75-79	264,018	8,901	0.034
80-84	162,512	5,186	0.032
85-89	93,837	2,771	0.030
90-94	35,469	863	0.024
95-99	5,762	142	0.025
100+	345	10	0.029
Total	7,200,386	492,212	0.068

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

* Excludes 48,175 drivers with unknown age

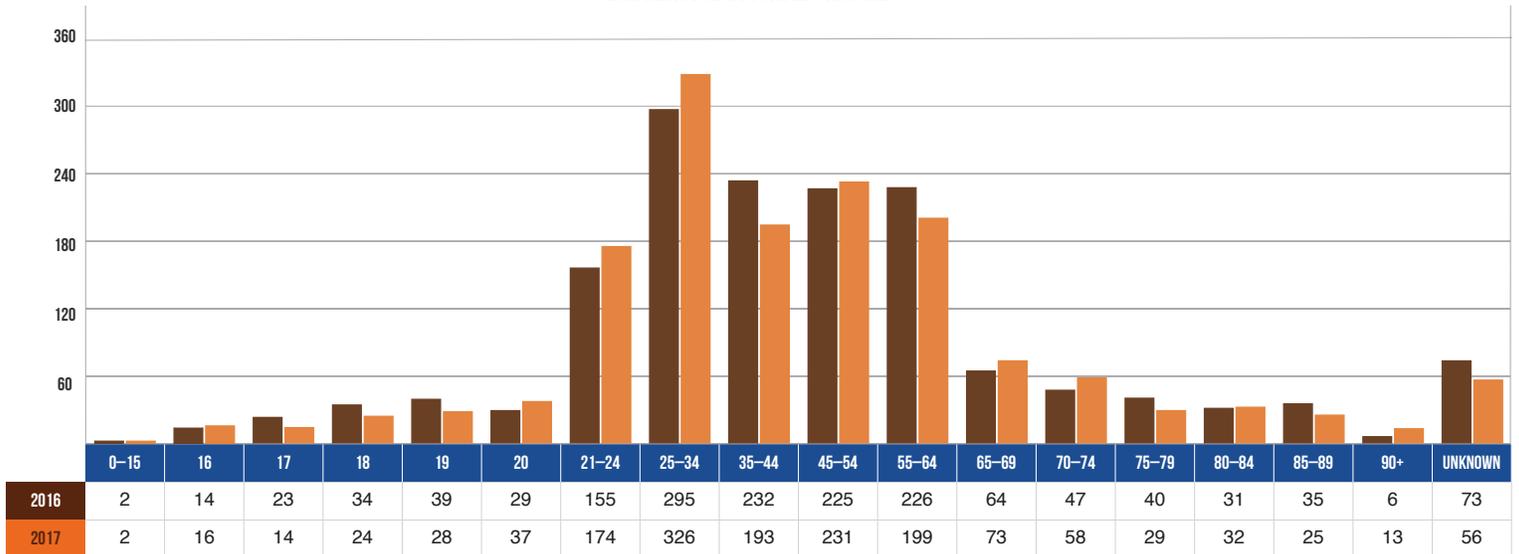
Licensed drivers age 18 have the highest crash rate at 0.148 (total crashes in age group divided by total number of licensed drivers in age group). The lower crash rates of the older groups (per licensed driver) may reflect reduced driving and exposure to the risk of a crash.

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2016	2017	PERCENT CHANGE	PERCENT 2017 FATAL CRASH INVOLVEMENT	PERCENT ACTIVE DRIVING POPULATION*
15 years and under	2	2	0.0	0.1	0.7
16 years	14	16	14.3	1.0	1.1
17 years	23	14	-39.1	0.9	1.3
18 years	34	24	-29.4	1.6	1.2
19 years	39	28	-28.2	1.8	1.4
20 years	29	37	27.6	2.4	1.5
21 - 24 years	155	174	12.3	11.4	6.4
25 - 34 years	295	326	10.5	21.3	16.2
35 - 44 years	232	193	-16.8	12.6	14.8
45 - 54 years	225	231	2.7	15.1	16.4
55 - 64 years	226	199	-11.9	13.0	18.1
65 - 69 years	64	73	14.1	4.8	7.3
70 - 74 years	47	58	23.4	3.8	5.4
75 - 79 years	40	29	-27.5	1.9	3.7
80 - 84 years	31	32	3.2	2.1	2.3
85 - 89 years	35	25	-28.6	1.6	1.3
90 years and over	6	13	116.7	0.8	0.6
Unknown	73	56	-23.3	3.7	---
Total	1,570	1,530	-2.5	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	430,601	644	5,477	22,748	57,217	344,515
Fatigued or Asleep	3,428	9	160	424	671	2,164
Sick	1,470	8	52	170	344	896
Medicated	857	5	55	107	188	502
Emotional	4,059	41	214	640	1,128	2,036
Physically Disabled	918	33	279	127	157	322
Unknown	39,868	581	1,033	1,700	4,150	32,404
Other	8,895	149	720	1,424	1,758	4,844

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 (such as distraction) will only be known if the driver admits to the condition, thus leading to possible underreporting.

DRIVER INJURY SEVERITY BY RESTRAINT, ALCOHOL, AND DRUG USE

RESTRAINT USAGE	DRIVERS		FATALITY		INJURY			NO INJURY	UNKNOWN
	Number	% of Total	Number	% of Total	A	B	C		
ALL DRIVERS									
Restraint Used*	466,686	86.4	362	54.3	3,075	13,497	34,970	414,439	343
Restraint Not Used	4,963	0.9	219	32.8	754	906	670	2,402	12
Unknown	68,738	12.7	86	12.9	378	717	1,524	16,672	49,361
TOTAL	540,387	100.0	667	100	4,207	15,120	37,164	433,513	49,716
DRINKING DRIVERS ONLY									
Restraint Used*	6,594	75	43	34.4	250	760	785	4,752	4
Restraint Not Used	647	7.4	65	52	169	188	78	146	1
Unknown	1,550	17.6	17	13.6	81	179	154	1,112	7
TOTAL	8,791	100.0	125	100	500	1,127	1,017	6,010	12
DRUGGED DRIVERS ONLY									
Restraint Used*	1,209	77.6	35	60.3	104	149	231	690	0
Restraint Not Used	114	7.3	14	24.1	32	23	13	32	0
Unknown	235	15.1	9	15.5	23	22	57	124	0
TOTAL	1,558	100.0	58	100	159	194	301	846	0
DRINKING AND DRUGGED DRIVERS ONLY									
Restraint Used*	846	65.4	27	36.5	64	122	133	497	3
Restraint Not Used	153	11.8	30	40.5	50	26	24	23	0
Unknown	295	22.8	17	23	31	39	37	170	1
TOTAL	1,294	100.0	74	100	145	187	194	690	4

Note: 'Restraint Used' includes shoulder belt only, lap belt only, both lap and shoulder belts, restraint failed, and helmet worn

RED-LIGHT-RUNNING CRASHES

INTERSECTION CRASH TYPE	CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
1. Related to intersection	103,704	284	1,923	6,855	15,985	78,657
2. In intersection	64,529	230	1,444	4,990	10,877	46,988
3. With traffic control signal	30,516	65	562	2,447	5,459	21,983
4. With hazardous action*	6,072	24	190	837	1,531	3,490

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 6,072 crashes.

RED-LIGHT-RUNNING MOST SEVERE OUTCOME IN CRASH

SPEED LIMIT*	CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
5 miles per hour	3	0	1	0	1	1
10 miles per hour	0	0	0	0	0	0
15 miles per hour	2	0	0	1	0	1
20 miles per hour	2	0	0	0	1	1
25 miles per hour	578	1	7	52	137	381
30 miles per hour	615	3	19	46	180	367
35 miles per hour	1,467	4	45	156	380	882
40 miles per hour	919	6	21	156	225	511
45 miles per hour	1,632	4	50	287	390	901
50 miles per hour	334	3	12	56	94	169
55 miles per hour	414	3	32	70	98	211
60 miles per hour	0	0	0	0	0	0
65 miles per hour	0	0	0	0	0	0
70 miles per hour	7	0	0	1	1	5
75 miles per hour	1	0	0	0	0	1
Unknown	98	0	3	12	24	59
TOTAL	6,072	24	190	837	1,531	3,490

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

CRASH TYPE	CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Single Vehicle	74	0	5	24	19	26
Head on	32	0	1	6	8	17
Head on left turn	494	1	16	73	127	277
Angle	4,772	22	138	643	1,179	2,790
Rear end	29	1	0	1	7	20
Rear end left turn	5	0	0	0	0	5
Rear end right turn	2	0	0	1	1	0
Sideswipe same direction	119	0	1	3	16	99
Sideswipe opposite direction	39	0	1	2	3	33
Backing	0	0	0	0	0	0
Other/Unknown	506	0	28	84	171	223
TOTAL	6,072	24	190	837	1,531	3,490

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

SPECIAL CIRCUMSTANCES*	CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
School Bus Involved/Associated	19	0	2	3	5	9
Drinking Involved	160	3	19	40	43	55
Drug Use Involved	27	3	5	6	5	8
Pedestrian Involved	31	0	5	11	9	6
Bicyclist Involved	48	0	3	18	15	12
Snowmobile Involved	0	0	0	0	0	0
Motorcycle Involved	22	5	6	5	3	3
Train Involved	1	0	0	0	0	1
Truck/Bus Involved	229	2	17	34	54	122
Emergency Vehicle Involved	43	0	0	7	11	25
Driver Hazardous Citation	3,702	5	100	613	981	2,003

*Crashes may involve more than one special circumstance

POSSIBLE CONDITIONS OF PERSONS IN CRASH*	CONDITIONS (CODED BY POLICE)	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Normal	4,889	11	118	704	1,214	2,842
Fatigued or Asleep	45	0	2	8	14	21
Sick	30	1	2	3	8	16
Medicated	11	0	1	4	2	4
Emotional	103	0	9	23	40	31
Physically Disabled	18	1	6	3	3	5
Unknown	355	8	26	40	100	181
Other	170	3	19	36	57	55

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

This page left intentionally blank

HEAVY TRUCK/BUS INVOLVED CRASHES

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

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

- More turning, backing, and changing lanes as the Truck/Bus Driver Action Prior.
- More collisions with bridge/pier/abutments 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 6:00 AM and 2:59 PM, and fewer crashes between 3:00 PM and 5:59 AM.
- More crashes Monday through Friday and fewer crashes Saturday and Sunday.

HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

DRIVER ACTION PRIOR TO CRASH	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Going straight ahead	6,719	50.1	57	59.4	1,408	57.8
Turning left	1,182	8.8	4	4.2	179	7.3
Turning right	1,005	7.5	1	1.0	101	4.1
Stopped on roadway	971	7.2	17	17.7	192	7.9
In prior crash	1	0.0	1	1.0	0	0.0
Changing lanes	667	5.0	0	0.0	86	3.5
Backing	642	4.8	0	0.0	26	1.1
Slowing/stopping on roadway	1,039	7.7	6	6.3	230	9.4
Slowing/stopping other	15	0.1	0	0.0	0	0.0
Starting up on roadway	240	1.8	1	1.0	46	1.9
Starting up other	1	0.0	0	0.0	0	0.0
Entering parking	20	0.1	0	0.0	0	0.0
Leaving parking	14	0.1	0	0.0	2	0.1
Entering roadway	97	0.7	2	2.1	15	0.6
Leaving roadway	15	0.1	0	0.0	4	0.2
Making U-turn	31	0.2	0	0.0	3	0.1
Overtaking or passing	77	0.6	0	0.0	9	0.4
Avoiding object	10	0.1	0	0.0	4	0.2
Avoiding animal	5	0.0	0	0.0	0	0.0
Avoiding pedestrian	5	0.0	0	0.0	2	0.1
Avoiding vehicle (front/back)	140	1.0	3	3.1	40	1.6
Avoiding vehicle (angle)	39	0.3	1	1.0	6	0.2
Driverless moving	9	0.1	1	1.0	1	0.0
Parked	243	1.8	1	1.0	48	2.0
Crossing at intersection	2	0.0	0	0.0	1	0.0
Crossing not at intersection	1	0.0	0	0.0	1	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	2	0.0	0	0.0	0	0.0
In roadway against traffic	0	0.0	0	0.0	0	0.0
Standing or lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	1	0.0	0	0.0	0	0.0
Other working in roadway	1	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	1	0.0	0	0.0	0	0.0
Not in roadway	1	0.0	0	0.0	0	0.0
Negotiating a curve	111	0.8	0	0.0	23	0.9
Other	47	0.4	1	1.0	6	0.2
Unknown	48	0.4	0	0.0	3	0.1
Uncoded & errors	14	0.1	0	0.0	1	0.0
TOTAL	13,416	100.0	96	100.0	2,437	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	51	0.4	0	0.0	9	0.4
Cross center/median	20	0.1	0	0.0	2	0.1
Ran off road left	24	0.2	0	0.0	5	0.2
Ran off road right	57	0.4	0	0.0	7	0.3
Re-enter road	4	0.0	0	0.0	0	0.0
Overturn	212	1.6	2	2.1	92	3.8
Separation of units	18	0.1	0	0.0	0	0.0
Fire/explosion	47	0.4	0	0.0	4	0.2
Immersion	2	0.0	0	0.0	0	0.0
Jackknife	102	0.8	0	0.0	12	0.5
Downhill runaway	0	0.0	0	0.0	0	0.0
Cargo loss/shift	70	0.5	0	0.0	8	0.3
Individual fell off	0	0.0	0	0.0	0	0.0
Other noncollision	63	0.5	0	0.0	16	0.7
SUBTOTAL	670	5.0	2	2.1	155	6.4

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	33	0.2	3	3.1	29	1.2
Bicycle / Pedalcycle	20	0.1	1	1.0	14	0.6
Motor vehicle in transport	10,414	77.6	84	87.5	2,058	84.4
Parked motor vehicle	561	4.2	1	1.0	29	1.2
Railway train	4	0.0	0	0.0	1	0.0
Animal	396	3.0	0	0.0	5	0.2
Other nonfixed objects	135	1.0	1	1.0	7	0.3
SUBTOTAL	11,563	86.2	90	93.8	2,143	87.9

The majority of heavy trucks/buses are involved in crashes with a motor vehicle in transport for all crashes (77.6%), fatal crashes (87.5%), and injury crashes (84.4%) 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	41	0.3	0	0.0	6	0.2
Bridge parapet end	0	0.0	0	0.0	0	0.0
Bridge rail	17	0.1	0	0.0	1	0.0
Guardrail face	62	0.5	0	0.0	12	0.5
Guardrail end	14	0.1	0	0.0	3	0.1
Median barrier	87	0.6	0	0.0	26	1.1
Highway traffic sign post	69	0.5	0	0.0	3	0.1
Highway signal post	33	0.2	0	0.0	0	0.0
Luminaire/light support	150	1.1	0	0.0	8	0.3
Utility pole	0	0.0	0	0.0	0	0.0
Other pole	43	0.3	0	0.0	2	0.1
Culvert	6	0.0	0	0.0	1	0.0
Curb	12	0.1	0	0.0	0	0.0
Ditch	127	0.9	1	1.0	29	1.2
Embankment	19	0.1	1	1.0	3	0.1
Fence	7	0.1	0	0.0	1	0.0
Mailbox	17	0.1	0	0.0	0	0.0
Tree	106	0.8	2	2.1	23	0.9
Rail crossing signal	12	0.1	0	0.0	0	0.0
Building	14	0.1	0	0.0	3	0.1
Traffic island	0	0.0	0	0.0	0	0.0
Fire hydrant	13	0.1	0	0.0	0	0.0
Impact attenuator	7	0.1	0	0.0	0	0.0
Other fixed object	101	0.8	0	0.0	4	0.2
SUBTOTAL	957	7.1	4	4.2	125	5.1

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Unknown Event	226	1.7	0	0.0	14	0.6
MOST HARMFUL EVENT TOTAL	13,416	100.0	96	100.0	2,437	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

CRASH TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Single Vehicle	1,912	14.3	6	6.3	235	9.6
Head On	124	0.9	17	17.7	56	2.3
Head On - Left Turn	154	1.1	3	3.1	59	2.4
Angle	1,614	12.0	21	21.9	478	19.6
Rear End	3,041	22.7	35	36.5	812	33.3
Rear End - Left Turn	138	1.0	1	1.0	47	1.9
Rear End - Right Turn	106	0.8	0	0.0	25	1.0
Sideswipe - Same Direction	4,216	31.4	5	5.2	421	17.3
Sideswipe - Opposite Direction	432	3.2	0	0.0	54	2.2
Backing	475	3.5	0	0.0	18	0.7
Other/Unknown	1,204	9.0	8	8.3	232	9.5
TOTAL	13,416	100.0	96	100.0	2,437	100.0

The highest percentage of heavy trucks/buses are involved in same direction sideswipes for all crashes (31.4%) and in rear-end crashes for fatal crashes (36.5%) and injury crashes (33.3%).

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
None	6,956	51.8	71	74.0	1,407	57.7	22	1.0
Speed too fast	510	3.8	2	2.1	125	5.1	223	10.5
Speed too slow	3	0.0	0	0.0	0	0.0	1	0.0
Failed to yield	670	5.0	1	1.0	156	6.4	279	13.1
Disregard traffic control	143	1.1	4	4.2	58	2.4	97	4.6
Drove wrong way	4	0.0	0	0.0	0	0.0	1	0.0
Drove left of center	60	0.4	1	1.0	10	0.4	16	0.8
Improper passing	91	0.7	0	0.0	9	0.4	24	1.1
Improper lane use	705	5.3	0	0.0	57	2.3	216	10.2
Improper turn	480	3.6	1	1.0	35	1.4	155	7.3
Improper/no signal	15	0.1	0	0.0	1	0.0	3	0.1
Improper backing	511	3.8	0	0.0	18	0.7	163	7.7
Unable to stop in assured clear distance	1,226	9.1	5	5.2	310	12.7	536	25.2
Reckless driving	14	0.1	0	0.0	5	0.2	4	0.2
Careless/negligent driving	268	2.0	3	3.1	69	2.8	153	7.2
Other	990	7.4	5	5.2	82	3.4	223	10.5
Unknown	770	5.7	3	3.1	95	3.9	11	0.5
TOTAL	13,416	100.0	96	100.0	2,437	100.0	2,127	100.0

After no hazardous action, the most common hazardous action coded for drivers of heavy trucks/buses in all crashes (9.1%) and injury crashes (12.7%) is unable to stop in assured clear distance. For fatal crashes, after no hazardous action, unable to stop in assured clear distance (5.2%) is the most common hazardous action coded, along with other hazardous action.

HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
On Road	12,290	91.6	87	90.6	2,254	92.5
Median	108	0.8	1	1.0	19	0.8
Shoulder	424	3.2	5	5.2	72	3.0
Outside of Shoulder/Curb	397	3.0	2	2.1	75	3.1
Gore	24	0.2	1	1.0	8	0.3
On-Street Parking	111	0.8	0	0.0	5	0.2
Off the Roadway	2	0.0	0	0.0	1	0.0
On the Sidewalk	24	0.2	0	0.0	1	0.0
In the Bicycle Lane	4	0.0	0	0.0	0	0.0
Other/Unknown	32	0.2	0	0.0	2	0.1
TOTAL	13,416	100.0	96	100.0	2,437	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	358	2.7	6	6.2	78	3.2
3:00 AM - 5:59 AM	509	3.8	7	7.3	109	4.5
6:00 AM - 8:59 AM	2,572	19.2	15	15.6	465	19.1
9:00 AM - 11:59 AM	2,889	21.5	19	19.8	499	20.5
12:00 PM - 2:59 PM	2,967	22.1	23	24.0	539	22.1
3:00 PM - 5:59 PM	2,695	20.1	11	11.5	462	19.0
6:00 PM - 8:59 PM	922	6.9	5	5.2	172	7.1
9:00 PM - 11:59 PM	502	3.7	10	10.4	112	4.6
Unknown	2	0.0	0	0.0	1	0.0
TOTAL	13,416	100.0	96	100.0	2,437	100.0

Heavy truck/bus frequencies in crashes peak in the early afternoon, then drop off steadily until 3:00 AM. The time period between 12:00 PM and 2:59 PM is the most common time for trucks/buses to be involved in crashes. This holds true for all crashes (22.1%), fatal crashes (24.0%), and injury crashes (22.1%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Interstate Routes	3,655	27.2	19	19.8	754	30.9
U.S. & Michigan Roads	4,120	30.7	46	47.9	847	34.8
County & City Roads	5,612	41.8	31	32.3	830	34.1
Uncoded & Errors	29	0.2	0	0.0	6	0.2
TOTAL	13,416	100.0	96	100.0	2,437	100.0

The highest percentage of heavy trucks/buses are involved in all crashes (41.8%) on county and city roads. For fatal crashes (47.9%) and injury crashes (34.8%), the highest percentage of heavy trucks/buses are involved in crashes on U.S. and Michigan roads.

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	2,436	18.2	18	18.8	446	18.3
Tuesday	2,482	18.5	14	14.6	449	18.4
Wednesday	2,483	18.5	17	17.7	431	17.7
Thursday	2,472	18.4	19	19.8	430	17.6
Friday	2,413	18.0	21	21.9	433	17.8
Saturday	752	5.6	5	5.2	163	6.7
Sunday	378	2.8	2	2.1	85	3.5
TOTAL	13,416	100.0	96	100.0	2,437	100.0

The highest percentage of heavy trucks/buses are involved in all crashes (18.5%) on Tuesday and Wednesday, fatal crashes (21.9%) on Friday, and injury crashes (18.4%) on Tuesday.

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	11,502	85.7	83	86.5	2,119	87.0
Female	1,361	10.1	8	8.3	263	10.8
Unknown	553	4.1	5	5.2	55	2.3
TOTAL	13,416	100.0	96	100.0	2,437	100.0

The highest percentage of heavy truck/bus drivers are male in all crashes (85.7%), fatal crashes (86.5%), and injury crashes (87.0%).

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	10,982	81.9	80	83.3	1,947	79.9
2 occupants	884	6.6	10	10.4	196	8.0
3 occupants	207	1.5	0	0.0	59	2.4
4 occupants	109	0.8	0	0.0	29	1.2
5 occupants	76	0.6	0	0.0	19	0.8
6 + occupants	570	4.2	2	2.1	126	5.2
0 occupants	334	2.5	4	4.2	42	1.7
Unknown	254	1.9	0	0.0	19	0.8
TOTAL	13,416	100.0	96	100.0	2,437	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.	9,862	84.5	72	71.3	2,285	84.8
Motor Home	41	0.4	1	1.0	9	0.3
Pickup	1,264	10.8	17	16.8	284	10.5
Small Truck (under 10,000 lbs.)	130	1.1	0	0.0	22	0.8
Motorcycle	27	0.2	3	3.0	16	0.6
Moped	4	0.0	0	0.0	4	0.1
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	1	0.0	0	0.0	0	0.0
Off Road Vehicle	2	0.0	0	0.0	1	0.0
Other	111	1.0	0	0.0	8	0.3
Unknown	229	2.0	8	7.9	64	2.4
SUBTOTAL	11,671	100.0	101	100.0	2,693	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	256	1.9	0	0.0	17	0.7
10,001 - 26,000 lbs.	3,464	25.8	17	17.7	498	20.4
Greater than 26,000 lbs.	9,302	69.3	79	82.3	1,897	77.8
Uncoded & Errors	394	2.9	0	0.0	25	1.0
SUBTOTAL	13,416	100.0	96	100.0	2,437	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	25,087	---	197	---	5,130	---

HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

DRIVER ACTION PRIOR TO CRASH 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	1.6	15	0.9	18	0.8	143	1.1	808	0.9
Speed too fast	163	38.4	60	3.5	310	12.9	6,437	49.2	3,471	4.0
Speed too slow	0	0.0	1	0.1	4	0.2	23	0.2	38	0.0
Failed to yield	5	1.2	274	16.1	534	22.3	501	3.8	23,983	27.4
Disregard traffic control	14	3.3	83	4.9	135	5.6	126	1.0	5,483	6.3
Drove wrong way	1	0.2	0	0.0	2	0.1	13	0.1	107	0.1
Drove left of center	0	0.0	16	0.9	25	1.0	102	0.8	746	0.9
Improper passing	0	0.0	24	1.4	74	3.1	34	0.3	730	0.8
Improper lane use	15	3.5	201	11.8	249	10.4	220	1.7	4,446	5.1
Improper turn	28	6.6	127	7.5	49	2.0	71	0.5	1,949	2.2
Improper/no signal	1	0.2	2	0.1	9	0.4	3	0.0	160	0.2
Improper backing	9	2.1	154	9.0	25	1.0	25	0.2	1,914	2.2
Unable to stop in assured clear distance	15	3.5	521	30.6	643	26.8	405	3.1	37,274	42.5
Reckless driving	1	0.2	3	0.2	16	0.7	421	3.2	391	0.4
Careless/Negligent driving	85	20.0	68	4.0	178	7.4	2,856	21.8	2,967	3.4
Other	75	17.6	148	8.7	114	4.8	1,433	11.0	2,905	3.3
Unknown	6	1.4	5	0.3	11	0.5	258	2.0	234	0.3
CITED VEHICLES SUBTOTAL	425	100.0	1,702	100.0	2,396	100.0	13,071	100.0	87,606	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	425	21.3	1,702	14.9	2,396	20.9	13,071	12.3	87,606	22.0
Vehicles with No Citation Issued	1,567	78.7	9,719	85.1	9,034	79.0	93,560	87.7	309,631	77.9
Vehicles with Unknown Citation	0	0.0	3	0.0	8	0.1	20	0.0	234	0.1
TOTAL VEHICLES INVOLVED	1,992	100.0	11,424	100.0	11,438	100.0	106,651	100.0	397,471	100.0

This page left intentionally blank

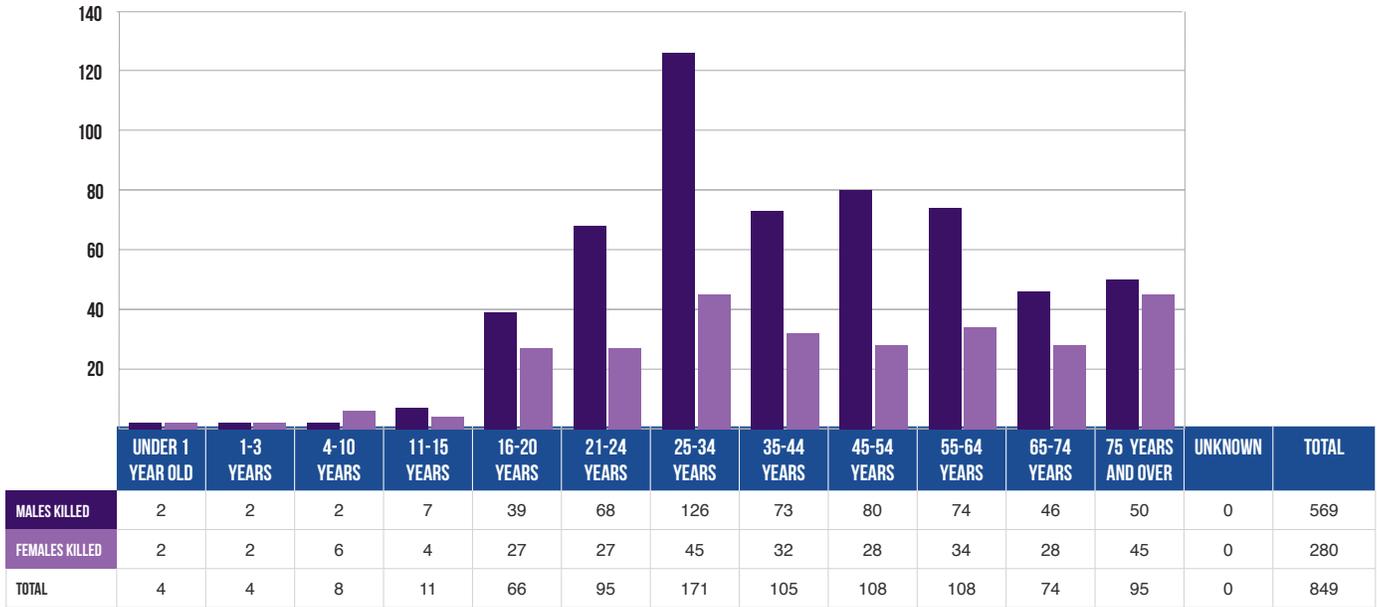
OCCUPANT/PERSON

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

This page left intentionally blank

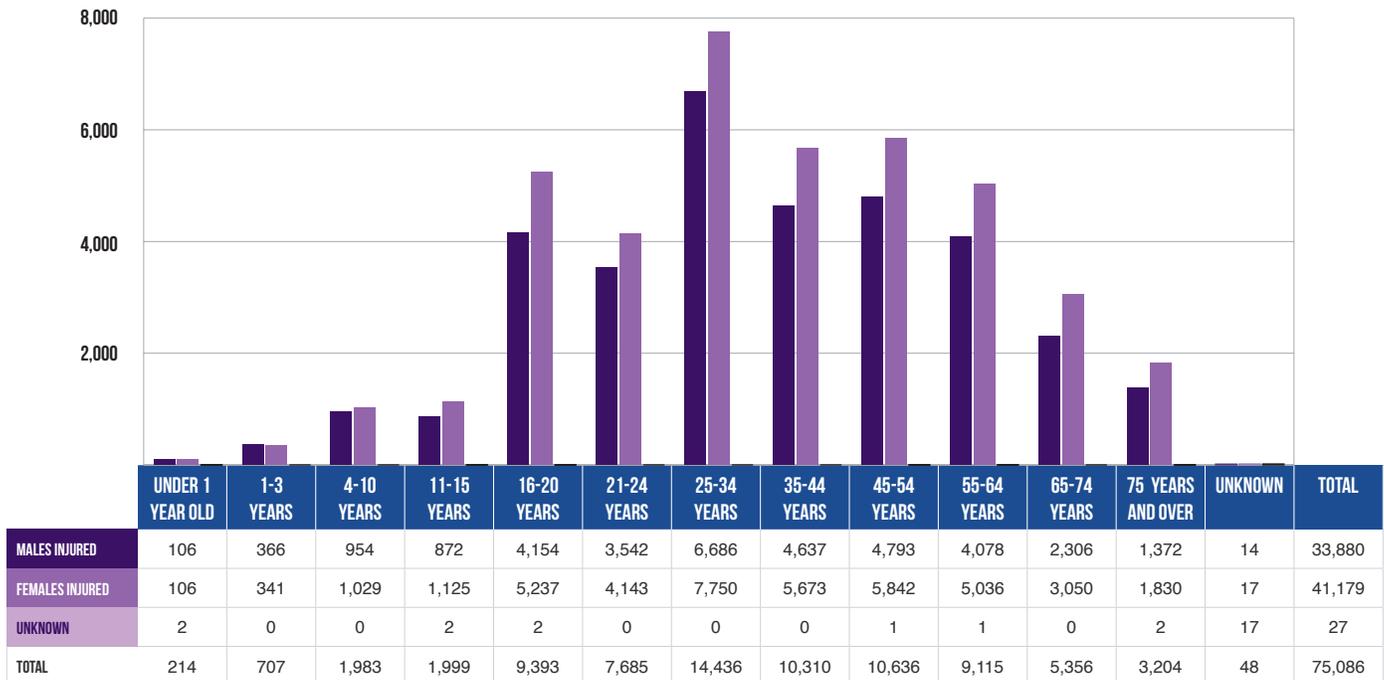
AGE AND GENDER OF OCCUPANTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

OCCUPANTS KILLED



The majority (67.0%) of occupants killed in traffic crashes in 2017 were male.

OCCUPANTS INJURED

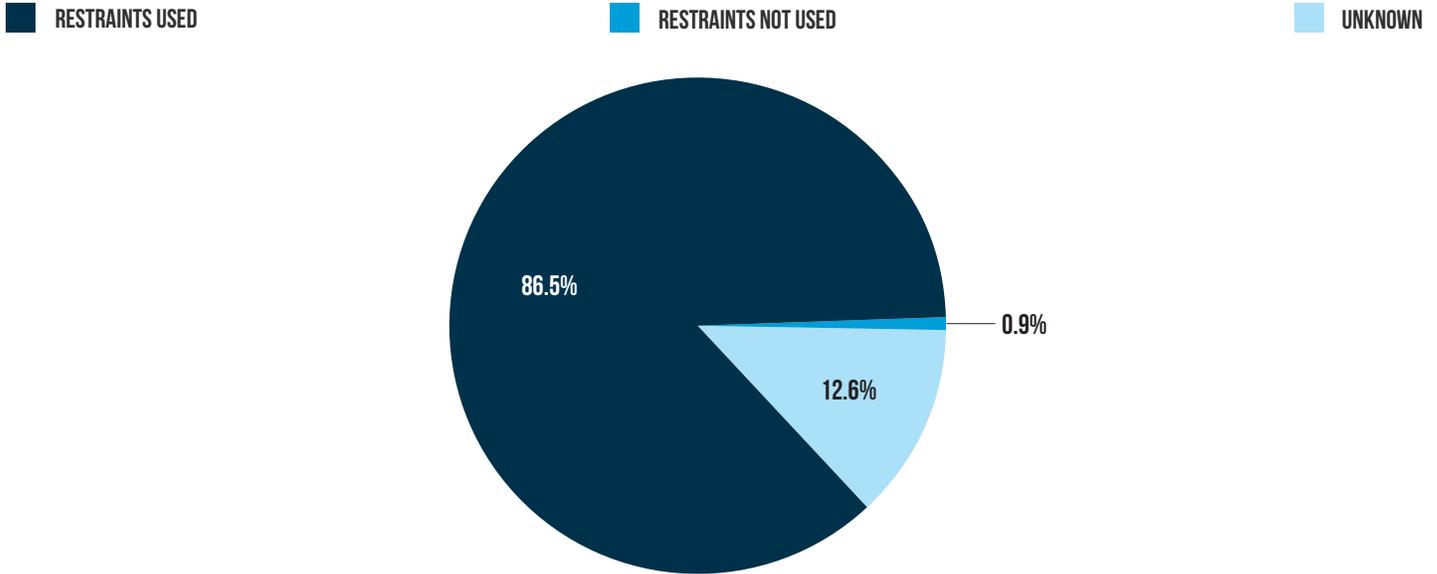


The majority (54.8%) of occupants injured in traffic crashes in 2017 were female.

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

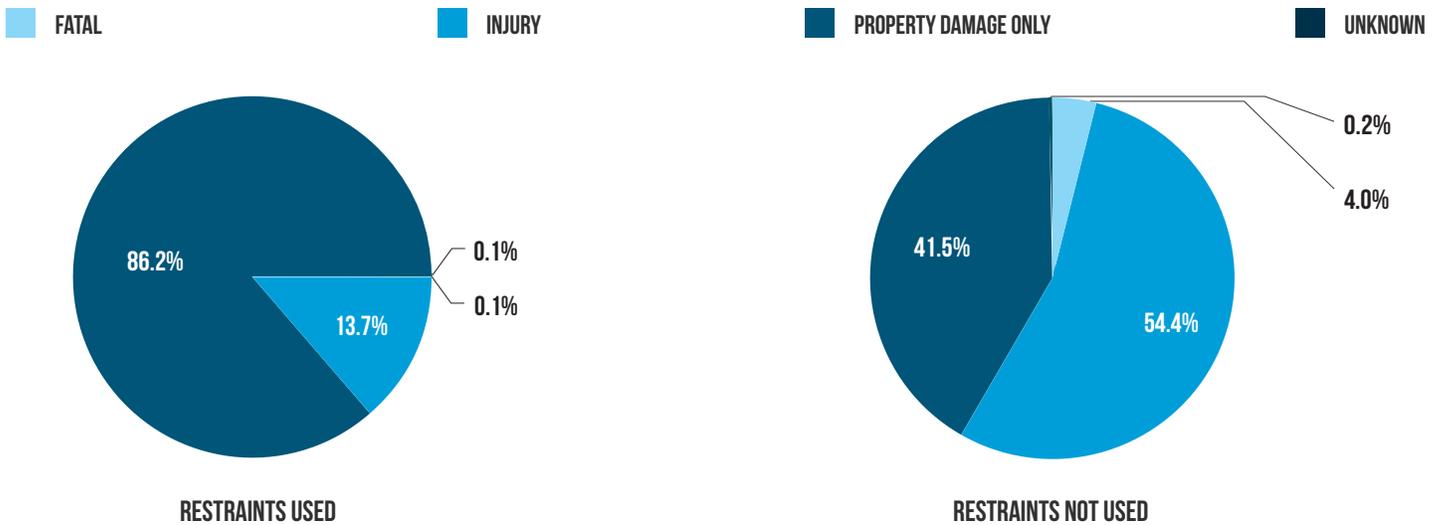
REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS

REPORTED OCCUPANT RESTRAINT USAGE



Of the 555,342 drivers and injured passengers involved in crashes, 480,274 (86.5%) were REPORTED to be using occupant restraints.

INJURY SEVERITY



Occupants in crashes were 52 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	463,437	96.9	290	2,671	12,787	34,674	413,015
Center Front	597	0.1	1	24	67	228	277
Right Front	10,715	2.2	56	573	2,124	7,503	459
Left Rear Second Seat	1,373	0.3	3	68	251	1,051	0
Center Rear Second Seat	240	0.1	0	5	56	179	0
Right Rear Second Seat	1,511	0.3	5	71	298	1,137	0
Left Rear Third Seat	158	0.0	0	8	28	122	0
Center Rear Third Seat	41	0.0	0	4	6	31	0
Right Rear Third Seat	142	0.0	0	4	27	111	0
Left Rear Fourth Seat	15	0.0	0	0	4	11	0
Center Rear Fourth Seat	9	0.0	0	0	3	6	0
Right Rear Fourth Seat	20	0.0	0	1	3	16	0
Other Passenger Area	23	0.0	0	6	1	16	0
Unknown	157	0.0	0	3	13	27	114
Uncoded & Errors	10	0.0	0	0	0	0	10
TOTAL †	478,448	100.0	355	3,438	15,668	45,112	413,875

* 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.

† This total does not include 341 occupants with unknown injury severity.

SEATING POSITION	BELTS NOT USED*		FATAL	INJURY			NO INJURY
	Number	% of Total		A	B	C	
Left Front	3,499	67.4	149	443	525	473	1,909
Center Front	46	0.9	0	8	9	14	15
Right Front	442	8.5	26	93	154	150	19
Left Rear Second Seat	208	4.0	11	34	61	102	0
Center Rear Second Seat	71	1.4	2	5	28	36	0
Right Rear Second Seat	304	5.9	9	46	97	152	0
Left Rear Third Seat	30	0.6	1	3	10	16	0
Center Rear Third Seat	14	0.3	0	1	6	7	0
Right Rear Third Seat	26	0.5	0	2	8	16	0
Left Rear Fourth Seat	9	0.2	0	1	0	8	0
Center Rear Fourth Seat	5	0.1	0	0	1	4	0
Right Rear Fourth Seat	15	0.3	0	1	5	9	0
Other Passenger Area	236	4.5	3	15	46	169	3
Unknown	283	5.4	5	5	8	34	231
Uncoded & Errors	5	0.1	0	0	0	0	5
TOTAL †	5,193	100.0	206	657	958	1,190	2,182

* 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 10 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 USE - 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	30	13.8	0	3	6	21
No Belts Used	3	1.4	0	0	1	2
Child Restraint Used - Forward Facing	38	17.4	0	1	6	31
Child Restraint Used - Rear Facing	133	61.0	3	1	8	121
Child Restraint Used - Booster Seat	2	0.9	0	0	1	1
Child Restraint Not Used	4	1.8	1	1	0	2
Restraint Failed	1	0.5	0	0	0	1
Unknown	7	3.2	0	0	2	5
Total	218	100.0	4	6	24	184
AGE 1						
Belts Used	8	3.6	0	0	0	8
No Belts Used	2	0.9	0	0	2	0
Child Restraint Used - Forward Facing	95	42.4	1	3	21	70
Child Restraint Used - Rear Facing	97	43.3	0	1	15	81
Child Restraint Used - Booster Seat	6	2.7	0	1	2	3
Child Restraint Not Used	8	3.6	1	3	2	2
Restraint Failed	1	0.4	0	0	1	0
Unknown	7	3.1	0	0	0	7
Total	224	100.0	2	8	43	171
AGE 2						
Belts Used	12	5.0	0	1	1	10
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used - Forward Facing	164	68.6	1	3	32	128
Child Restraint Used - Rear Facing	24	10.0	0	0	3	21
Child Restraint Used - Booster Seat	17	7.1	0	1	1	15
Child Restraint Not Used	13	5.4	0	0	6	7
Restraint Failed	0	0.0	0	0	0	0
Unknown	9	3.8	0	1	3	5
Total	239	100.0	1	6	46	186

REPORTED RESTRAINT USE - CHILDREN (CONTINUED)

RESTRAINT USAGE	CHILDREN		FATAL	INJURY		
	Number	% of Total		A	B	C
AGE 3						
Belts Used	26	10.5	0	3	8	15
No Belts Used	8	3.2	1	0	2	5
Child Restraint Used - Forward Facing	155	62.5	0	8	33	114
Child Restraint Used - Rear Facing	11	4.4	0	0	1	10
Child Restraint Used - Booster Seat	31	12.5	0	3	6	22
Child Restraint Not Used	7	2.8	0	0	2	5
Restraint Failed	0	0.0	0	0	0	0
Unknown	10	4.0	0	0	4	6
Total	248	100.0	1	14	56	177
AGE 4-7						
Belts Used	383	36.1	2	14	71	296
No Belts Used	41	3.9	2	2	14	23
Child Restraint Used - Forward Facing	297	28.0	0	6	54	237
Child Restraint Used - Rear Facing	6	0.6	0	3	0	3
Child Restraint Used - Booster Seat	245	23.1	2	7	45	191
Child Restraint Not Used	25	2.4	0	1	5	19
Restraint Failed	0	0.0	0	0	0	0
Unknown	65	6.1	1	1	9	54
Total	1,062	100.0	7	34	198	823
AGE 8-15						
Belts Used	2,372	83.0	4	85	461	1,822
No Belts Used	240	8.4	3	31	64	142
Child Restraint Used - Forward Facing	46	1.6	0	0	9	37
Child Restraint Used - Rear Facing	3	0.1	0	0	1	2
Child Restraint Used - Booster Seat	54	1.9	0	2	16	36
Child Restraint Not Used	2	0.1	0	0	1	1
Restraint Failed	3	0.1	0	2	1	0
Unknown	139	4.9	5	11	22	101
Total	2,859	100.0	12	131	575	2,141

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.

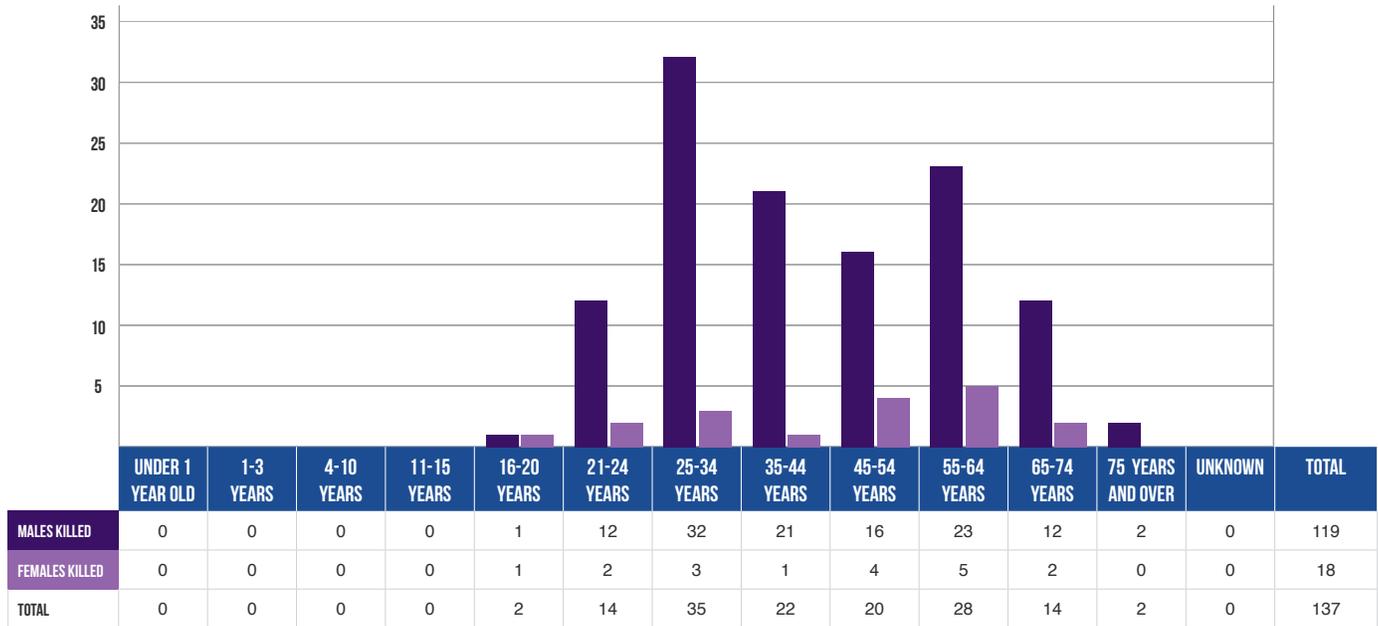
MOTOR VEHICLE OCCUPANT INJURY SEVERITY BY KNOWN AIRBAG DEPLOYMENT

MOTOR VEHICLE OCCUPANT AIRBAG DEPLOYMENT	OCCUPANTS*		FATAL	OCCUPANT INJURY SEVERITY			NO INJURY
	Number	% of Total		A	B	C	
Deployed - front	46,540	8.3	244	1,798	6,376	11,599	26,493
Deployed - side	4,352	0.8	19	88	413	1,131	2,699
Deployed - curtain	2,893	0.5	13	58	346	748	1,728
Deployed - combination	14,447	2.6	147	860	2,584	4,313	6,530
Deployed - other	338	0.1	0	8	32	88	210
Not deployed	418,831	74.9	170	1,451	7,208	29,593	380,046
Not equipped	17,368	3.1	207	1,090	1,836	2,367	9,287
Unknown	47,408	8.5	48	121	270	661	6,442
Uncoded & Errors	6,987	1.2	1	9	6	32	78
TOTAL	559,164	100.0	849	5,483	19,071	50,532	433,513

* Includes 49,716 occupants (drivers and passengers) with unknown injury severity.

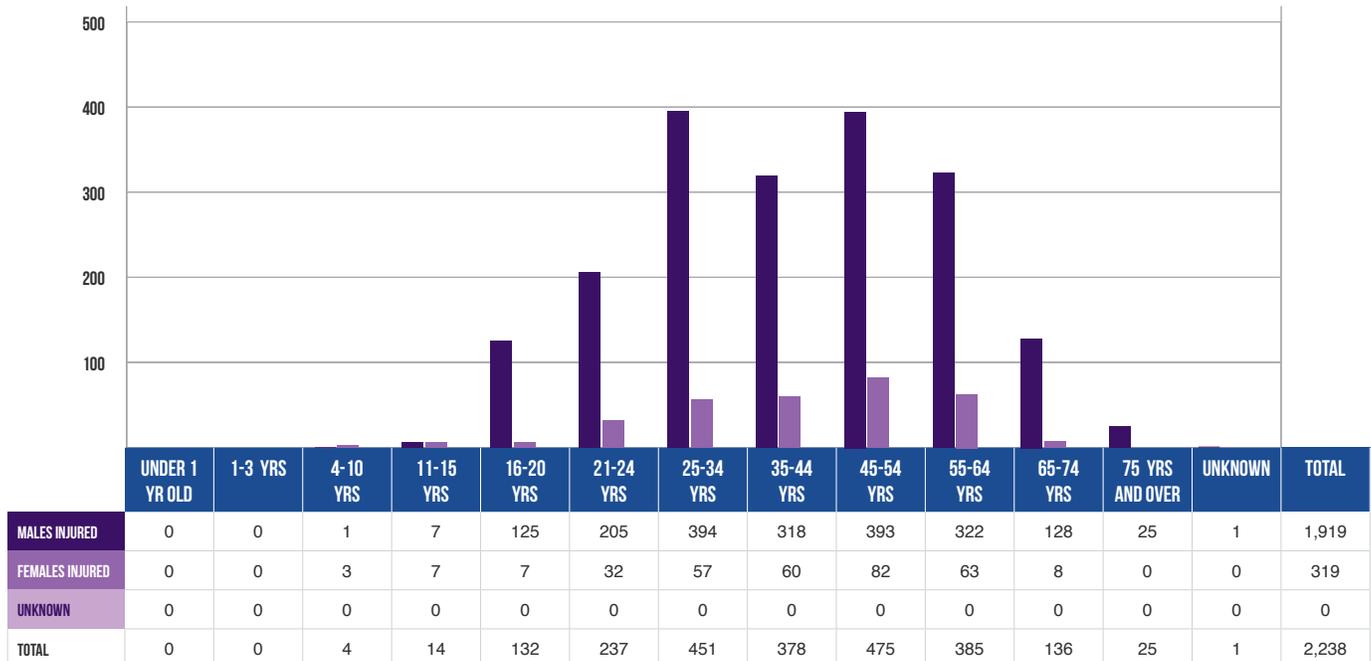
AGE AND GENDER OF MOTORCYCLISTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

MOTORCYCLISTS KILLED



Of the 137 motorcyclists killed in traffic crashes in 2017, 86.9 percent were male. In comparison, 67.0 percent of all occupants killed in crashes were male.

MOTORCYCLISTS INJURED



Of the 2,238 motorcyclists injured in traffic crashes in 2017, 85.7 percent were male. In comparison, 45.1 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	1	1	1	2
11 - 15 years	0	3	4	2	2
16 - 20 years	1	25	52	31	43
21 - 24 years	10	57	79	42	56
25 - 34 years	22	73	149	83	105
35 - 44 years	10	52	91	63	75
45 - 54 years	6	81	109	85	114
55 - 64 years	16	67	125	59	91
65 - 74 years	6	26	47	31	38
75 years and over	1	6	8	7	4
Unknown	0	1	0	0	0
Subtotal	72	392	665	404	530
HELMET NOT WORN					
3 years and under	0	0	0	0	0
4 - 10 years	0	0	1	0	0
11 - 15 years	0	0	2	2	0
16 - 20 years	1	10	9	3	6
21 - 24 years	1	13	26	15	15
25 - 34 years	11	46	61	25	39
35 - 44 years	12	72	58	21	35
45 - 54 years	14	58	84	39	51
55 - 64 years	11	47	51	21	26
65 - 74 years	8	13	8	4	12
75 years and over	1	2	1	1	0
Unknown	0	0	0	0	0
Subtotal	59	261	301	131	184
HELMET USE UNKNOWN					
3 years and under	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	0	1	0	0	0
16 - 20 years	0	0	2	0	4
21 - 24 years	3	1	2	2	3
25 - 34 years	2	4	3	7	8
35 - 44 years	0	8	7	6	11
45 - 54 years	0	9	5	5	19
55 - 64 years	1	6	5	4	17
65 - 74 years	0	2	4	1	6
75 years and over	0	0	0	0	1
Unknown	0	0	0	0	0
Subtotal	6	31	28	25	69
TOTAL	137	684	994	560	783

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: 66
PASSENGERS KILLED: 6

HELMET NOT WORN



DRIVERS KILLED: 53
PASSENGERS KILLED: 6

HELMET USE UNKNOWN



DRIVERS KILLED: 5
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	3,886	15,534	45,027	65,027	85.6
Motor home	6	17	68	127	218	0.3
Pickup truck	74	539	1,830	3,706	6,149	8.1
Small Truck under 10,000 lbs. GVWR	2	22	82	185	291	0.4
Motorcycle	137	684	994	560	2,375	3.1
Moped / goped	6	82	163	111	362	0.5
Go-cart / golf cart	2	8	9	5	24	0.0
Snowmobile	4	37	18	19	78	0.1
Off-Road Vehicle - ORV / All-Terrain Vehicle - ATV	21	118	114	56	309	0.4
Other	4	23	56	101	184	0.2
Unknown	1	2	5	17	25	0.0
CDL Truck/Bus (breakdown below)	12	65	198	617	892	1.2
Total Number of Vehicles	849	5,483	19,071	50,531	75,934	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	KILLED	INJURY			TOTAL KABC	% OF ALL CRASH INVOLVED KABC OCCUPANTS
		A	B	C		
10,000 lbs. or less	0	0	1	7	8	0.9
10,001 - 26,000 lbs.	4	20	47	146	217	24.3
Greater than 26,000 lbs.	8	45	150	463	666	74.7
Uncoded & Errors	0	0	0	1	1	0.1
Total Number of Occupants	12	65	198	617	892	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.

This page left intentionally blank

REFERENCES

This page left intentionally blank

REFERENCES AND REPORTING AGENCIES

- [1] Annual Estimates of the Resident Population for Counties of Michigan: 2010-2017. Population Division, U.S. Census Bureau. Release Date: July 2017.
<https://www.census.gov/programs-surveys/popest.html>
- [2] Number of Deaths by Underlying Cause of Death for Michigan Residents, 2016. Michigan Department of Community Health, Vital Records and Health Statistics Section, Lansing, MI.
<http://www.mdch.state.mi.us/PHA/OSR/chi/deaths/frame.asp?Topic=7&Mode=1>
- [3] Injury Facts. National Safety Council. 1121 Spring Lake Drive, Itasca, IL 60143.
http://www.nsc.org/news_resources/injury_and_death_statistics/Documents/InjuryFactsHighlights.pdf
- [4] Traffic Safety Facts. National Highway Traffic Safety Administration, National Center for Statistics and Analysis, U.S. Department of Transportation, 1200 New Jersey Avenue SE, Washington, DC 20590.
<http://www-nrd.nhtsa.dot.gov/Pubs/812055.pdf>
- [5] Annual Highway Statistics. Federal Highway Administration.
http://www.fhwa.dot.gov/policyinformation/travel_monitoring/13dectvt/page2.cfm
- [6] The Ohio Department of Public Safety, 1970 West Broad Street, Columbus, OH 43218-2081.
http://ohiohighwaysafetyoffice.ohio.gov/otso_annual_crash_facts.stm
<http://www.publicsafety.ohio.gov/links/2013CrashFacts.pdf>
- [7] Indiana University Public Policy Institute, Center for Criminal Justice Research, 334 N. Senate Avenue, Suite 300, Indianapolis, IN 46204.
<http://www.in.gov/cji/2367.htm>
- [8] Illinois Department of Transportation, Division of Traffic Safety, 1340 North 9th Street, P.O. Box 19245, Springfield, IL 62794-9245
<http://apps.dot.illinois.gov/FatalCrash/Home/CrashData/2013>
- [9] Wisconsin State Patrol, Bureau of Transportation Safety, 4802 Sheboygan Ave., Madison, WI 53707-7936.
<http://www.dot.wisconsin.gov/drivers/drivers/traffic/crash/final.htm>
<http://www.dot.wisconsin.gov/travel/counts/docs/vmt-historical.pdf>

REFERENCES AND REPORTING AGENCIES (CONTINUED)

[10] Minnesota Department of Public Safety, Office of Traffic Safety, 445 Minnesota Street, Suite 150, St. Paul, MN 55101-5150.

<https://dps.mn.gov/divisions/ots/reports-statistics/Pages/crash-facts.aspx>

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

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

<http://www.nhtsa.gov/people/injury/TSFLaws/PDFs/810886.pdf>

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

INDEX

This page left intentionally blank

A

ACCIDENTAL DEATH

Causes of, for children 3
Causes of, for teenagers and young adults 3

ACTION PRIOR TO CRASH

Bicyclist Action 111
Driver Action 109
Driver Age 16-20 42
Driver Age 21-64 49
Driver Age 65 & Over 56
Heavy Truck/Bus 134
Motorcyclist Action 110
Pedestrian Action 112

AGE

Average Age of Drivers in Crashes 29
Demographics and Crash Involvements 125

Driver 16-20

Action Prior to Crash 42
Crash Type 45
Day of Week 47
Gender 47
Hazardous Action 46
in Crashes 39
Killed and Injured 39
Most Harmful Event 43-44
Number of Occupants 47
Relationship to Roadway 45
Roadway Type 45
Time of Day 46
Vehicle Type 48

Driver 21-64

Action Prior to Crash 49
Crash Type 52
Day of Week 54
Gender 54
Hazardous Action 53
Most Harmful Event 50-51
Number of Occupants 54
Relationship to Roadway 52
Roadway Type 52
Time of Day 53
Vehicle Type 55

Driver 65 & Over

Action Prior to Crash 56
Crash Type 59
Day of Week 61
Gender 61
Hazardous Action 60
in Crashes 40-41
Killed and Injured 40-41
Most Harmful Event 57-58
Number of Occupants 61
Relationship to Roadway 59
Roadway Type 59
Time of Day 60
Vehicle Type 62

of Bicyclist & Injury Severity 39-41
of Bicyclists in All Crashes 125
of Bicyclists in Fatal Crashes 125
of Bicyclists Killed 13
of Bicyclists Killed & Injured 116
of Drinking Female Drivers 81
of Drinking Male Drivers 79
of Driver & Injury Severity 39-41
of Drivers in All Crashes 125-126
of Drivers in Fatal Crashes 125, 127
of Drivers, Involved in Fatal Crashes 12
of Drivers, Involved in Single Vehicle Fatal Crashes 12
of Female Drivers by Age 80
of Licensed Drivers in Michigan 125-126
of Male Drivers by Age 78
of Michigan Population 125
of Motorcyclist & Injury Severity 39-41
of Motorcyclists - Helmet Use 152
of Motorcyclists Killed & Injured 151
of Occupants Injured 125
of Occupants Killed 125
of Occupants Killed & Injured, by Gender 145
of Passenger & Injury Severity 39-41
of Pedestrians in All Crashes 125
of Pedestrians in Fatal Crashes 125
of Pedestrians Killed 13
of Pedestrians Killed & Injured 117
of Persons Killed, Total 11

AIRBAG

Occupant Injury Severity by Known Deployment 150

ALCOHOL

Age of Driver in Crash 66
Average Age of Drivers in Crashes 29
County Ranking by Fatal Crash Rate 83
Crashes by Injury Severity 67
Death & Injury for Crash-Involved Occupant 68
Drinking Bicyclist 65
Drinking Driver 65, 66, 128
Drinking Motorcyclist 65
Drinking ORV/ATV Rider 65
Drinking Pedestrian 65
Drinking Snowmobiler 65
Driver Ejection 69
Driver Had Been Drinking 128
Drivers in All Crashes 23
Drivers in Fatal Crashes 23
Elderly Drivers in All Crashes 23
Elderly Drivers in Fatal Crashes 23

Fatal Crashes	73-74
Fatal Crashes - 10 Year Trend	18
Fatal Crashes by Day of Week	74
Fatal Crashes by Month	73
Fatal Crashes by Time of Day	74
Fatal Crashes for Select Holiday Periods.....	14
Fatalities - 10 Year Trend	18
Fatalities by Month	73
Fatalities for Select Holiday Periods	14
Female Drivers & Injury Severity in Crash	81
Gender of Drivers in All Crashes	22
in Red-Light-Running Crashes.....	131
Injuries - 10 Year Trend.....	18
Injury Crashes.....	75-76
Injury Severity & Restraint Use by Driver	71
Injury Severity & Restraint Use by Occupant	72
Involved Fatal Crashes	7
Involved Personal Injury Crashes.....	7
Involved Persons in Crashes.....	7
Involved Property Damage Crashes.....	7
Male Drivers & Injury Severity in Crash	79
Map of County Ranking	83
Map of HBD Traffic Fatalities.....	82
Occupant Ejection.....	70
Restraint Use.....	128
Teen/Young Adult Drivers in All Crashes	23
Teen/Young Adult Drivers in Fatal Crashes	23

B

BICYCLE

in All Crashes.....	26
in Fatal Crashes.....	26

BICYCLIST

Action Prior to Crash.....	111
Age & Injury Severity	39-41
Age in All Crashes	125
Age in Fatal Crashes	125
Age of Bicyclists Killed	13
Alcohol and/or Drug Involvement.....	65
Fatalities	8, 65, 116
Helmet Use & Injury Severity.....	116
in Crashes	65
in Red-Light-Running Crashes.....	131
Injuries	65, 116

BUS

Crashes	107
Crashes by Crash Severity.....	108

Driver Age 16-20	48
Driver Age 21-64	55
Driver Age 65 & Over.....	62
Heavy Truck/Bus	140
Occupant Injury Outcome	153

C

CELLULAR PHONE

Driver Using.....	128
-------------------	-----

CHILD RESTRAINT DEVICE (CRD)

Reported Restraint Use - Children.....	148-149
--	---------

CHILDREN

5 Year Trend

Bicyclists Killed	13
for Fatalities.....	11
Pedestrians Killed.....	13

Accidental Death	3
Demographics and Crash Involvements	125
Gender of Motorcyclist Killed & Injured.....	151
Gender of Occupants Killed & Injured.....	145
in Bicycle Crashes.....	116
in Pedestrian Crashes	117
Injury Severity by Person Type.....	39-41
Motorcycle Helmet Use.....	152
Percent of Bicycle Deaths	3
Reported Restraint Use.....	148-149

CONSTRUCTION ZONE

All Crashes	103-104
Fatal Crashes	103-104
Injury Crashes.....	103-104

COST

of Crashes in Michigan.....	3, 9
-----------------------------	------

COUNTY DATA

Map of County Ranking	83
Map of Deer Crashes	87
Map of Traffic Fatalities with Drinking Involvement.....	82
Map of Where Traffic Fatalities Occurred.....	10

COUNTY RANKING

by HBD Fatal Crash Rate, Map of.....	82
--------------------------------------	----

CRASH RATES

Fatal.....	9
Map of County Ranking by HBD Fatal	83
per Licensed Driver by Age of Driver in All Crashes	126
Personal Injury.....	95
Personal Injury - 10 Year Trend	21
Property Damage - 10 Year Trend.....	21
Total.....	95
Total - 10 Year Trend.....	21

CRASH TYPE

All Motor Vehicle Crashes 96
 Driver Age 16-20 45
 Driver Age 21-64 52
 Driver Age 65 & Over 59
 Heavy Truck/Bus 137
 in Red-Light-Running Crash..... 130

CRASHES

10 Year Trend..... 17
 All Drivers in..... 22
 Average Age of Drivers..... 29
 Bicycles in 26, 111, 116
 by Injury Severity 67, 93-94
 Construction Zone..... 103-104
 Cost of..... 9
 Crash Type 96
 Day of Week 98
 Drinking Drivers in 24
 Driver Gender 124
 Driver Hazardous Action 115
 Elderly Drinking Drivers in 24
 Elderly Drivers in..... 23-24
 Farm Equipment..... 27, 123
 Gender of Drinking Drivers in 22
 Gender of Drivers in 22, 124
 Heavy Truck/Bus 133
 Intersection by Traffic Control Type..... 102
 Light Condition 101
 Location of First Impact 96
 Most Harmful Event..... 113-114
 Motor Vehicles in..... 25
 Motorcycles in 25, 110, 123
 Number of 7
 ORV/ATV Driver Hazardous Action..... 122
 ORV/ATV Most Harmful Event..... 120-121
 ORV/ATVs in 26
 Pedestrians in..... 25, 112, 117
 Persons in..... 7
 Persons in Alcohol-Involved..... 7
 Red-Light-Running Definition..... 129
 Relationship to Roadway 96
 Road Condition 99
 Roadway Type..... 95
 Single Vehicle Involved..... 3, 96
 Snowmobile, Driver Hazardous Action..... 122
 Snowmobile, Most Harmful Event..... 118-119
 Snowmobiles on Michigan Roadways 26
 Teen/Young Adult Drinking Drivers in 24

Teen/Young Adult Drivers in 23
 Time and Severity..... 97
 Vehicle Defects..... 115
 Vehicle-Train 27, 123
 Weather Condition..... 100
 Yearly Totals of 35-36

D

DAY OF WEEK

Fatal Crashes 74
 HBD Fatal Crashes..... 74
 HBD Injury Crashes 79
 in All Crashes..... 98
 in Crashes
 Driver 16-20..... 47
 Driver 21-64..... 54
 Driver 65 & Over 61
 Heavy Truck/Bus 139

in Fatal Crashes..... 98
 in Injury Crashes..... 98
 Injury Crashes..... 76

DEATH RATE

Mileage, 10 Year Trend 17
 by Roadway Type..... 95
 Michigan 3, 9, 30, 35-36
 Michigan, U.S. and Surrounding States 30
 Motorcycle..... 123
 Yearly Totals of 35-36

DEER CRASHES

10 Year Trend..... 27
 by County, Map of..... 87
 Light Condition & Time of Day 88
 Monthly & Seasonal Rates 89

DRIVER

Action Prior to Crash 109
 Age & Injury Severity 39-41
 Age 16-20
 Action Prior to Crash 42
 Crash Type 45
 Day of Week 47
 Gender..... 47
 Hazardous Action 46
 in Crashes 39
 Killed and Injured..... 39
 Most Harmful Event..... 43-44
 Number of Occupants..... 47
 Relationship to Roadway 45
 Roadway Type 45
 Time of Day in Crash 46
 Vehicle Type..... 48

Age 21-64	Involved in Crashes, Number of.....	9
Action Prior to Crash.....	Involved in Fatal Crashes, Age of.....	12
Crash Type.....	Involved in Single Vehicle Fatal Crashes, Age of.....	12
Day of Week.....	Licensed, Number of.....	9
Gender.....	Licensed, Total - 10 Year Trend.....	20
Hazardous Action.....	Male Drinking Drivers & Injury Severity in Crash by Age	79
Most Harmful Event.....	79
Number of Occupants.....	Male Drivers & Injury Severity in Crash by Age.....	78
Relationship to Roadway.....	Reported Occupant Restraint Usage.....	146
Roadway Type.....	Restraint Use.....	8, 128
Time of Day in Crash.....	DRIVER CONDITION	
Vehicle Type.....	Appeared Normal.....	128
Age 65 & Over	Asleep.....	128
Action Prior to Crash.....	Driver Distracted.....	128
Crash Type.....	Fatigue.....	128
Day of Week.....	Had Been Drinking.....	128
Gender.....	Illegal Drug Use.....	128
Hazardous Action.....	Medication.....	128
in Crashes.....	Red-Light-Running Crash.....	131
Killed and Injured.....	Sick.....	128
Most Harmful Event.....	Using Cellular Phone.....	128
Number of Occupants.....	DRUG	
Relationship to Roadway.....	And/or Drinking and Injury Severity by Age.....	66
Roadway Type.....	Bicyclist.....	65
Time of Day in Crash.....	Driver.....	65-66, 128
Vehicle Type.....	Driver Illegal Drug Use.....	128
Age in All Crashes.....	Motorcyclist.....	65
Age in Fatal Crashes.....	ORV/ATV Rider.....	65
Age in Fatal Crashes, Percent Population.....	Pedestrian.....	65
Alcohol and/or Drug Use.....	Restraint Use.....	128
Drinking and/or Using Drugs and Injury Severity by Age	Snowmobiler.....	65
.....		
Drinking in All Crashes.....	E	
Drinking in Fatal Crashes.....	EJECTION	
Driver Hazardous Action.....	All Drivers & HBD Drivers Injury Severity.....	69
Ejection.....	All Occupants & Occupants of HBD Crashes Injury Severity	70
Fatalities.....	70
Female Drinking Drivers & Injury Severity in Crash by Age	EMERGENCY VEHICLE	
.....	Red-Light-Running Crashes.....	131
Female Drivers & Injury Severity in Crash by Age.....	EXCESSIVE SPEED.....	(See Speed)
HBD - Ejection.....		
in All Crashes.....	F	
in All Crashes, Elderly.....	FARM EQUIPMENT	
in All Crashes, Elderly Drinking.....	Crashes	
in All Crashes, Teen/Young Adult.....	10 Year Trend.....	27
in All Crashes, Teen/Young Adult Drinking.....	Total.....	123
in Crashes.....	Persons	
in Fatal Crashes.....	Killed.....	8
in Fatal Crashes, Elderly.....		
in Fatal Crashes, Elderly Drinking.....		
in Fatal Crashes, Teen/Young Adult.....		
in Fatal Crashes, Teen/Young Adult Drinking.....		
Injuries.....		
Injury Severity & Restraint Use.....		

FATAL CRASHES

10 Year Trend..... 18
 Age of Drivers Involved in..... 12
 All Drivers in..... 22
 at Intersections..... 3, 102
 Average Age of Drivers..... 29
 Bicycles in 26
 by Day of Week 74, 98
 by Month 73, 95
 by Time of Day 74, 97
 Drinking Drivers in 24
 Driver Age..... 127
 Elderly Drinking Drivers in 24
 Elderly Drivers in..... 23
 Excessive Speed in 3
 for Select Holiday Periods..... 14
 Gender of Drivers in 22
 Motor Vehicles in..... 25
 Motorcycles in..... 25
 Number of 7
 ORV/ATVs in 26
 Pedestrians in..... 25
 Single Vehicle Involved..... 3, 12
 Snowmobiles in 26
 Teen/Young Adult Drinking Drivers in 24
 Teen/Young Adult Drivers in 23

FATALITIES

& Injury for Crash-Involved Occupant 28, 68
 10 Year Trend..... 18
 Age of Bicyclists..... 13
 Age of Pedestrians 13
 by County, Map 10
 by Month 11, 15, 73
 by Roadway Type..... 95
 for Select Holiday Periods..... 14
 Map of HBD Traffic Fatalities..... 81
 Number of 15, 36
 Yearly Totals of 35-36

G

GENDER

Driver Age 16-20 47
 Driver Age 21-64 54
 Driver Age 65 & Over..... 61
 Driver Information All Crashes..... 124
 Female Drinking Drivers by Age & Injury Severity in Crash
 81

Female Drivers by Age & Injury Severity in Crash 80
 Male Drinking Drivers by Age & Injury Severity in Crash
 79
 Male Drivers by Age & Injury Severity in Crash 78
 of Drinking Drivers in All Crashes..... 22
 of Drivers in All Crashes 22
 of Drivers in Fatal Crashes 22
 of Drivers in Heavy Truck/Bus Crashes..... 139
 of Motorcyclists Killed & Injured..... 151
 of Occupants Killed & Injured, by Age 145
 of Persons Injured 7
 of Persons Killed 8

H

HAZARDOUS ACTION

All Motor Vehicles..... 115
 Driver Age 16-20 46
 Driver Age 21-64 53
 Driver Age 65 & Over..... 60
 Heavy Truck/Bus 137
 ORV/ATV..... 122
 Snowmobile..... 122

HAZARDOUS CITATION ISSUED

Driver Age 16-20 46
 Driver Age 21-64 53
 Driver Age 65 & Over..... 60
 Heavy Truck/Bus Involved Crashes..... 137, 141
 Red-Light-Running Crashes..... 131
 HBD (See Alcohol)

HEAVY TRUCK/BUS

Driver Action Prior to Crash 134
 Crash Type 137
 Day of Week 139
 Driver Gender 139
 Hazardous Action..... 137
 Hazardous Citation Issued 137, 141
 Involved Crashes..... 133
 Most Harmful Event..... 135-136
 Number of Occupants in 139
 Red-Light-Running Crashes..... 131
 Relationship to Roadway 138
 Roadway Type..... 138
 Time of Day 138
 Vehicle Type..... 140

HELMET

Use and Injury Severity, Bicycle 116
 Use and Injury Severity, Motorcycle..... 152

HIGHWAY CLASS (See Roadway Type)

HOLIDAY

Alcohol Involved Fatal Crashes and Persons Killed 14
Fatal Crashes and Persons Killed 14

INJURIES

1 Year Trend.....7-8
10 Year Trend..... 18
Alcohol and/or Using Drugs 65
Alcohol Involvement75-76
for Crash-Involved Occupant, Death & 28
HBD, 10 Year Trend 19
Number of 36
Yearly Totals of 36

INJURY SEVERITY

Alcohol Involvement in Injury Crashes75-76
All Crashes and Had-Been-Drinking Crashes by 67
and Restraint Use
by Driver Injury, All and HBD Crashes 71
by Occupant Injury, All and HBD Crashes 72
Bicycle Helmet Use 116
Bicyclist Action Prior to Crash 111
by Construction Zone Type103-104
by Crash Type.....96
by Day of Week98
by Driver Hazardous Action..... 115
by Known Airbag Deployment, Occupant..... 150
by Light Condition 101
by Month
in Fatal and All Crashes.....93-94
in Injury and PDO Crashes93-94
by Relationship to Roadway 96
by Road Condition 99
by Seating Position and Known Belt Usage, Occupants
..... 147
by Time of Day 97
by Weather Condition.....100
Driver Action Prior to Crash 109
Female Drinking Drivers by Age 81
Female Drivers by Age 80
for Occupant by Vehicle Type..... 153
Intersection Crashes by Traffic Control Type 102
Male Drinking Drivers by Age..... 79
Male Drivers by Age 78
Most Harmful Event.....113-114
Motorcyclist Action Prior to Crash 110
Motorcyclist Age and Helmet Use..... 152
ORV/ATV Driver Hazardous Action..... 122

ORV/ATV Most Harmful Event..... 120-121
Pedestrian Action Prior to Crash..... 112
Reported Restraint Use - Children148-149
Snowmobile Driver Hazardous Action..... 122
Snowmobile Most Harmful Event..... 118-119
Vehicle Defects in Crash 115

INTERSECTION

Crashes by Traffic Control Type 102
Involved in Fatal Crashes 3
Pedestrian Crossing other than at..... 3
Red-Light-Running..... 129

L

LICENSED DRIVERS

10 Year Trend..... 20
in Michigan, Age of..... 125

LIGHT CONDITION

in All Crashes..... 101
in Deer Crashes..... 88
in Fatal Crashes..... 101
in Injury Crashes..... 101

M

MAP

County Ranking by HBD Fatal Crash Rate 83
Michigan Motor Vehicle-Deer Involved Crashes 87
Traffic Fatalities with Drinking Involvement by County..... 82
Where Traffic Fatalities Occurred 10

MICHIGAN

1 Year Summary Trends7-9
Crash Watch..... 4
Quick Facts 3

MILEAGE DEATH RATE

10 Year Average 3
10 Year Trend..... 20
by Roadway Type..... 95
Michigan 2013..... 9, 36
Michigan, U.S. & Surrounding States..... 30
Motorcycle..... 123
Yearly Totals of 36

MINI VAN

Crashes 107
Crashes by Injury Severity..... 108
Driver Age 16-20 48
Driver Age 21-64 55
Driver Age 65 & Over 62
Heavy Truck/Bus 140

in Deer Crashes.....	87	in Fatal Crashes.....	25
Occupant Injury Outcome	153	in Red-Light-Running Crashes.....	131
MONTH OF YEAR		Occupant Injury Outcome	153
Alcohol Involvement in Fatal Crashes	73	Registrations	123
Alcohol Involvement in Injury Crashes	75	MOTORCYCLIST	
All Crashes Injury Severity.....	93-94	Action Prior to Crash.....	110
in Fatal Crashes.....	73	Age & Injury Severity	39-41
in Injury Crashes.....	75	Age & Gender by Killed & Injured	151
Motor Vehicle Deaths & Mileage	15	Alcohol and/or Drug Involvement.....	65
Motor Vehicle-Deer Crashes	89	Fatalities	65
Yearly Motor Vehicle Traffic Deaths by Month.....	15	Fatalities and Injuries.....	123
MOPED		Helmet Use & Injury Severity.....	152
Crashes	107	in Crashes	65
Crashes by Injury Severity.....	108	Injuries	65
Driver Age 16-20	48		
Driver Age 21-64	55	<hr/>	
Driver Age 65 & Over.....	62	N	
Heavy Truck/Bus	140	NATIONAL	
in Deer Crashes.....	87	Mileage Death Rate	30
Occupant Injury Outcome	153	Vehicle Miles Traveled	31
MOST HARMFUL EVENT			
All Motor Vehicles.....	113-114	<hr/>	
Driver Age 16-20	43-44	O	
Driver Age 21-64	50-51	OCCUPANT	
Driver Age 65 & Over.....	57-58	Age & Gender by Killed & Injured	145
Heavy Truck/Bus	135-136	Age of Occupants Injured.....	125
ORV/ATV.....	121	Age of Occupants Killed.....	125
Snowmobile.....	118-119	Death & Injury for Crash-Involved	28, 68
MOTOR VEHICLE		Ejection.....	70
Driver Age 16-20	48	HBD - Ejection.....	70
Driver Age 21-64	55	in Motor Vehicle	
Driver Age 65 & Over.....	62	Driver Age 16-20	47
Heavy Truck/Bus	140	Driver Age 21-64	54
in All Crashes.....	25	Driver Age 65 & Over.....	61
in Deer Crashes.....	87	Injury Outcome by Vehicle Type	153
in Fatal Crashes.....	25	Injury Severity & Restraint Use.....	72
Registered Vehicles	9	Injury Severity by Known Airbag Deployment.....	150
Type, Occupant Injury Outcome by.....	153	Involved in Crashes	9
Types in Crashes	107	of Heavy Truck/Bus	139
Types in Crashes by Crash Severity.....	108	Reported Belt Use by Seating Position.....	147
MOTORCYCLE		Reported Restraint Usage.....	146
Annual Changes	123	ORV/ATV	
Crashes	107, 123	Crashes	107
Driver Age 16-20	48	Driver Age 16-20	48
Driver Age 21-64	55	Driver Age 21-64	55
Driver Age 65 & Over.....	62	Driver Age 65 & Over.....	62
Heavy Truck/Bus	140	Driver Hazardous Action	122
in All Crashes.....	25	Heavy Truck/Bus	140
in Deer Crashes.....	87	in All Crashes.....	26

in Deer Crashes.....	87
in Fatal Crashes.....	26
Most Harmful Event.....	120-121
Occupant Injury Outcome.....	153
ORV/ATV RIDER	
Alcohol and/or Drug Involvement.....	65
Fatalities.....	65
in Crashes.....	65
Injuries.....	65

P

PASSENGER

Age & Injury Severity.....	39-41
Fatalities.....	8
Reported Restraint Usage for Injured.....	146
Reported Restraint Use - Children.....	148-149
Restraint Use.....	8

PEDESTRIAN

Action Prior to Crash.....	112
Age & Injury Severity.....	39-41
Age in All Crashes.....	125
Age in Fatal Crashes.....	125
Age of Pedestrians Killed.....	13, 117
Alcohol and/or Drug Involvement.....	65
Crossing other than at Intersections.....	3
Fatalities.....	8, 65, 117
in All Crashes.....	25
in Crashes.....	65
in Fatal Crashes.....	25
in Red-Light-Running Crashes.....	131
Injuries.....	65, 117

PERSONAL INJURY CRASHES

Number of.....	8
----------------	---

PERSONS

Age & Injury Severity.....	39-41
Gender	
Injured.....	7
Killed.....	8
in Alcohol-Involved Crashes.....	7
in Crashes.....	7

PICKUP

Crashes.....	107
Crashes by Injury Severity.....	108
Driver Age 16-20.....	48
Driver Age 21-64.....	55
Driver Age 65 & Over.....	62
Heavy Truck/Bus.....	140
in Deer Crashes.....	87

Occupant Injury Outcome.....	153
POPULATION	
in Michigan.....	3, 9
in Michigan, Age of.....	125
Percent of Active Drivers by Age.....	127

PROPERTY DAMAGE CRASHES

Number of.....	7
----------------	---

R

RED-LIGHT-RUNNING

Crash Type.....	130
Conditions of Persons in Crashes.....	131
Intersection Crash Type.....	129
Special Circumstances.....	131
Speed Limit.....	130

REGISTRATIONS

10 Year Trend.....	17
Motorcycle.....	123
Number of.....	36
Yearly Totals of.....	36

RELATIONSHIP TO ROADWAY

Driver Age 16-20.....	45
Driver Age 21-64.....	52
Driver Age 65 & Over.....	59
Heavy Truck/Bus.....	138
Location of First Impact.....	96

RESTRAINT USE

10 Year Trend.....	20
Driver Killed.....	8
Driver Alcohol and/or Drug Involvement.....	128
Driver Injury Severity.....	71
for Drivers & Injured Passengers.....	146
Highest Usage.....	3
Passenger Killed.....	8
Lowest Usage.....	3
Occupant Injury Severity.....	72
Reported Belt Use by Seating Position.....	147
Reported Restraint Use - Children.....	148-149

ROAD CONDITION

All Crashes.....	99
Fatal Crashes.....	99
Injury Crashes.....	99

ROADWAY TYPE

All Crashes.....	95
Fatalities.....	95
Heavy Truck/Bus Crashes.....	138
in Crashes by Driver 16-20.....	45
in Crashes by Driver 21-64.....	52

in Crashes by Driver 65 & Over	59
Personal Injury Crashes	95
Vehicle Miles Traveled	95

S

SCHOOL BUS

Involved/Associated in Red-Light-Running Crashes	131
School Buses are not identified on the UD-10 and cannot be broken out of CDL Truck/Bus	

SINGLE VEHICLE CRASHES

Age of Drivers Involved in Fatal.....	12
Number of	3
Number of Fatal.....	3
Percentage of	3

SNOWMOBILE

Crashes	107
Crashes by Crash Severity	108
Driver Age 16-20	48
Driver Age 21-64	55
Driver Age 65 & Over.....	62
Driver Hazardous Action	122
Heavy Truck/Bus	140
in All Crashes.....	26
in Deer Crashes.....	87
in Fatal Crashes.....	26
in Red-Light-Running Crashes.....	131
Most Harmful Event.....	118-119
Occupant Injury Outcome	153

SNOWMOBILER

Alcohol and/or Drug Involvement.....	65
Fatalities	65
in Crashes	65
Injuries	65

SPEED

Driver Hazardous Action	115
Hazardous Action	
Driver 16-20.....	46
Driver 21-64.....	53
Driver 65 & Over	60
Heavy Truck/Bus	137
in Fatal Crashes, Excessive.....	3
Limit in Red-Light-Running Crash.....	130
ORV/ATV Driver Hazardous Action.....	122
Snowmobile Driver Hazardous Action.....	122

T

TIME OF DAY

Fatal Crashes	74
---------------------	----

HBD Fatal Crashes.....	74
HBD Injury Crashes.....	76
Heavy Truck/Bus Crashes	138
in All Crashes.....	97

in Crashes	
by Driver 16-20.....	46
by Driver 21-64.....	53
by Driver 65 & Over	60

in Deer Crashes.....	88
in Fatal Crashes.....	97
in Injury Crashes.....	97
Injury Crashes.....	76

TRAFFIC CONTROL

All Crashes at Intersections.....	102
Red-Light-Running Crashes.....	129

TRAIN

Crashes	
10 Year Trend.....	27
Fatality	123
in Red-Light-Running Crashes.....	131
Engineer	
Fatalities	8

TREND, 1 YEAR

Alcohol-Involved Crashes	7
Alcohol-Involved Fatal Crashes.....	7
Bicyclists Killed	8
Crashes	7
Death Rate.....	9
Driver Age 16-20	8
Driver Age 65 & Over.....	8
Drivers Involved in Crashes.....	9
Drivers Killed	8
Fatal Crash Rate.....	9
Fatalities by County, Map.....	10
Gender of Persons Killed	8
Licensed Drivers.....	9
Michigan Population.....	9
Occupants Involved in Crashes	9
Passengers Killed.....	8
Pedestrians Killed.....	8
Persons in Alcohol-Involved Crashes	7
Persons in Crashes	7
Persons Injured by Gender.....	7
Persons Injured by Severity.....	7
Persons Killed.....	8
Registered Vehicles in Michigan.....	9
Restraint Use by Driver	8
Restraint Use by Injured Passenger	8
Train Engineers Killed	8
Vehicle Miles Traveled	9

TREND, 10 YEAR

All Drivers in Crashes 23

All Drivers in Fatal Crashes 23

Average Age of Drivers in Crashes 29

Bicycles in All Crashes 26

Bicycles in Fatal Crashes 26

Crashes 17

Death & Injury for Crash-Involved Occupant 28

Deer Crashes 27

Drinking Drivers in All Crashes 24

Drinking Drivers in Fatal Crashes 24

Elderly Drinking Drivers in All Crashes 24

Elderly Drinking Drivers in Fatal Crashes 24

Elderly Drivers in Crashes 23

Elderly Drivers in Fatal Crashes 23

Farm Equipment Crashes 27

Fatal Crashes 18

Fatalities 18, 31

Gender of Drinking Drivers in All Crashes 22

Gender of Drivers in All Crashes 22

Gender of Drivers in Fatal Crashes 22

Had-Been-Drinking Fatal Crashes 19

Had-Been-Drinking Fatalities 19

Had-Been-Drinking Injuries 19

Injuries 18

Injury Crash Rate 21

Michigan, U.S. & Surrounding States Mileage Death Rate 30

Michigan, U.S. & Surrounding States Mileage Fatalities 31

Michigan, U.S. & Surrounding States Mileage Vehicle Miles Traveled 31

Mileage Death Rate 20, 30

Motor Vehicles in All Crashes 25

Motor Vehicles in Fatal Crashes 25

Motorcycles in All Crashes 25

Motorcycles in Fatal Crashes 25

National Fatalities 31

National Mileage Death Rate 30

ORV/ATVs in All Crashes 26

ORV/ATVs in Fatal Crashes 26

Pedestrians in All Crashes 25

Pedestrians in Fatal Crashes 25

Property Damage Crash Rate 21

Registrations 17

Restraint Usage 20

Snowmobiles in All Crashes 26

Snowmobiles in Fatal Crashes 26

Teen/Young Adult Drinking Drivers in All Crashes 24

Teen/Young Adult Drinking Drivers in Fatal Crashes 24

Teen/Young Adult Drivers in Crashes 23

Teen/Young Adult Drivers in Fatal Crashes 23

Total Crash Rate 21

Total Licensed Drivers 20

Train Crashes 27

Vehicle Miles Traveled 17, 31

TREND, 5 YEAR

Age of Bicyclists Killed 13

Age of Drivers Involved in Fatal Crashes 12

Age of Drivers Involved in Single Vehicle Fatal Crashes 12

Age of Pedestrians Killed 13

Age of Persons Killed, Total 11

Alcohol Involved Fatal Crashes for Select Holiday Periods 14

Alcohol Involved Fatalities for Select Holiday Periods 14

Fatal Crashes for Select Holiday Periods 14

Fatalities 11

Fatalities by Month 15

Fatalities for Select Holiday Periods 14

Percent Vehicle Miles Driven by Month 15

TRUCK (See also Heavy Truck/Bus)

Crashes 107

Crashes by Crash Severity 108

Driver Age 16-20 48

Driver Age 21-64 55

Driver Age 65 & Over 62

in Deer Crashes 87

Occupant Injury Outcome 153

V

VEHICLE DEFECTS

in Crash Involvement 115

VEHICLE MILES TRAVELED

10 Year Trend 17

by Roadway Type 95

Estimated MV Mileage Traveled 9

Michigan, U.S. & Surrounding States 31

Number of 36

Percent Miles Driven by Month 15

Yearly Totals of 36

VEHICLE TYPE

Crash Involvement

Driver Age 16-20 48

Driver Age 21-64 55

Driver Age 65 & Over 62

in Heavy Truck/Bus Crashes	140
in Motor Vehicle Crashes	107-108
Occupant Injury Outcome	153

W

WEATHER CONDITION

All Crashes	100
Fatal Crashes	100
Injury Crashes.....	100

This page left intentionally blank