MTCF

Michigan Traffic Crash Facts

UPPER PENINSULA

2015

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 UPPER PENINSULA ROADWAYS IN CALENDAR YEAR 2015

MichiganTrafficCrashFacts.org

PRODUCED BY:

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

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Michigan.gov/ohsp

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ACKNOWLEDGEMENTS

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

Criminal Justice Information Center

Fatality Analysis Reporting System

Michigan Department of State Police

Michigan Department of State

Michigan Department of Transportation

Michigan Office of Highway Safety Planning

University of Michigan Transportation Research Institute

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

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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 1992-2015.

DATA ELEMENTS WITH CHANGES FOR 2015 DATA

Construction Activity – "On road" and "Off road" are no longer active and will display counts of 0. Comparable selections are not currently available for 2015 data.

Driver Condition Alcohol – This variable is no longer active and all counts have been coded to "Uncoded & errors." "No, driver was not drinking" and "Yes, driver was drinking" will display counts of 0 . See Driver Drinking for comparable data.

Driver Condition Asleep – This variable is no longer active and all counts have been coded to "Uncoded & errors." "No, driver was not asleep" and "Yes, driver was asleep" will display counts of 0. Comparable selections are not currently available for 2015 data.

Driver Condition Cell Phone – This variable is no longer active and all counts have been coded to "Uncoded & errors." "No, driver was not using a cell phone" and "Yes, driver was using a cell phone" will display counts of 0. Comparable selections are not currently available for 2015 data.

Driver Condition Distracted – This variable is no longer active and all counts have been coded to "Uncoded & errors." "No, driver was not distracted" and "Yes, driver was distracted" will display counts of 0. Comparable selections are not currently available for 2015 data.

Driver Condition Drugs – This variable is no longer active and all counts have been coded to "Uncoded & errors." "No, driver was not using illegal drugs" and "Yes, driver was using illegal drugs" will display counts of 0. See Drugs Suspected for drug involvement data.

Extent of Damage – There are now two separate variables for extent of damage. The prior extent of damage variable is no longer active and all counts have been coded to "Uncoded & errors." The new extent of damage variable, Extent of Damage (2015 Only), has a condensed scale from the previous seven levels to the current four levels. Prior to 2015 data, all counts of the new variable will display values of 0 except for "Uncoded & errors." Comparable variable selections are not currently available for 2015 data.

Most Harmful Event – "Collision With Fixed Object - Bridge parapet end" is no longer active and will display a count of 0. "Collision With Fixed Object - Utility pole" has been combined with "Collision With Fixed Object - Luminaire / light support" starting with 2015 data and will display a count of 0. Comparable variable selections are not currently available for 2015 data.

DATA ELEMENTS WITH CHANGES FOR 2015 DATA (CONTINUED)

Sequence of Events 1 – See Most Harmful Event.

Sequence of Events 2 – See Most Harmful Event.

Sequence of Events 3 – See Most Harmful Event.

Sequence of Events 4 – See Most Harmful Event.

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).

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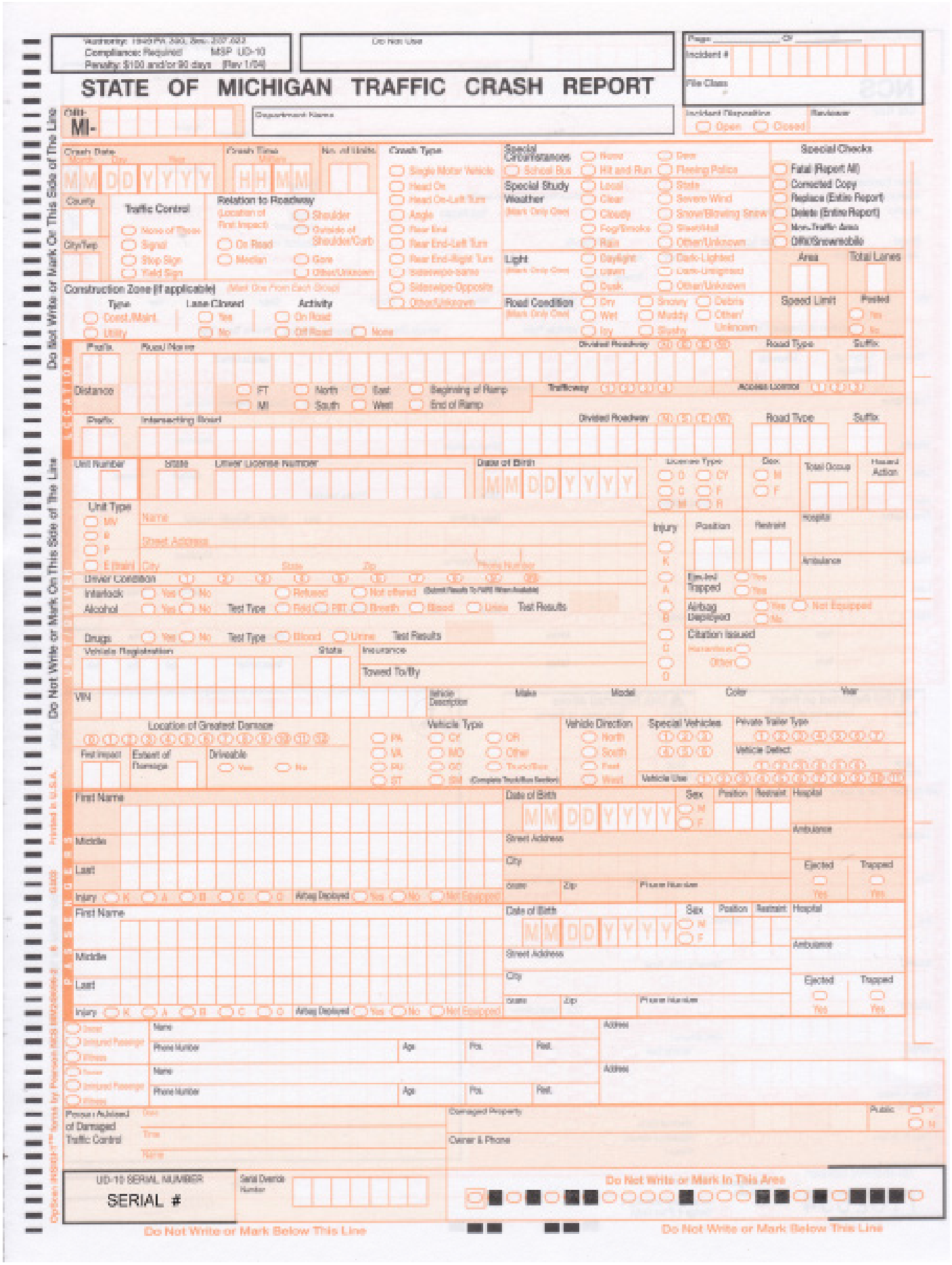
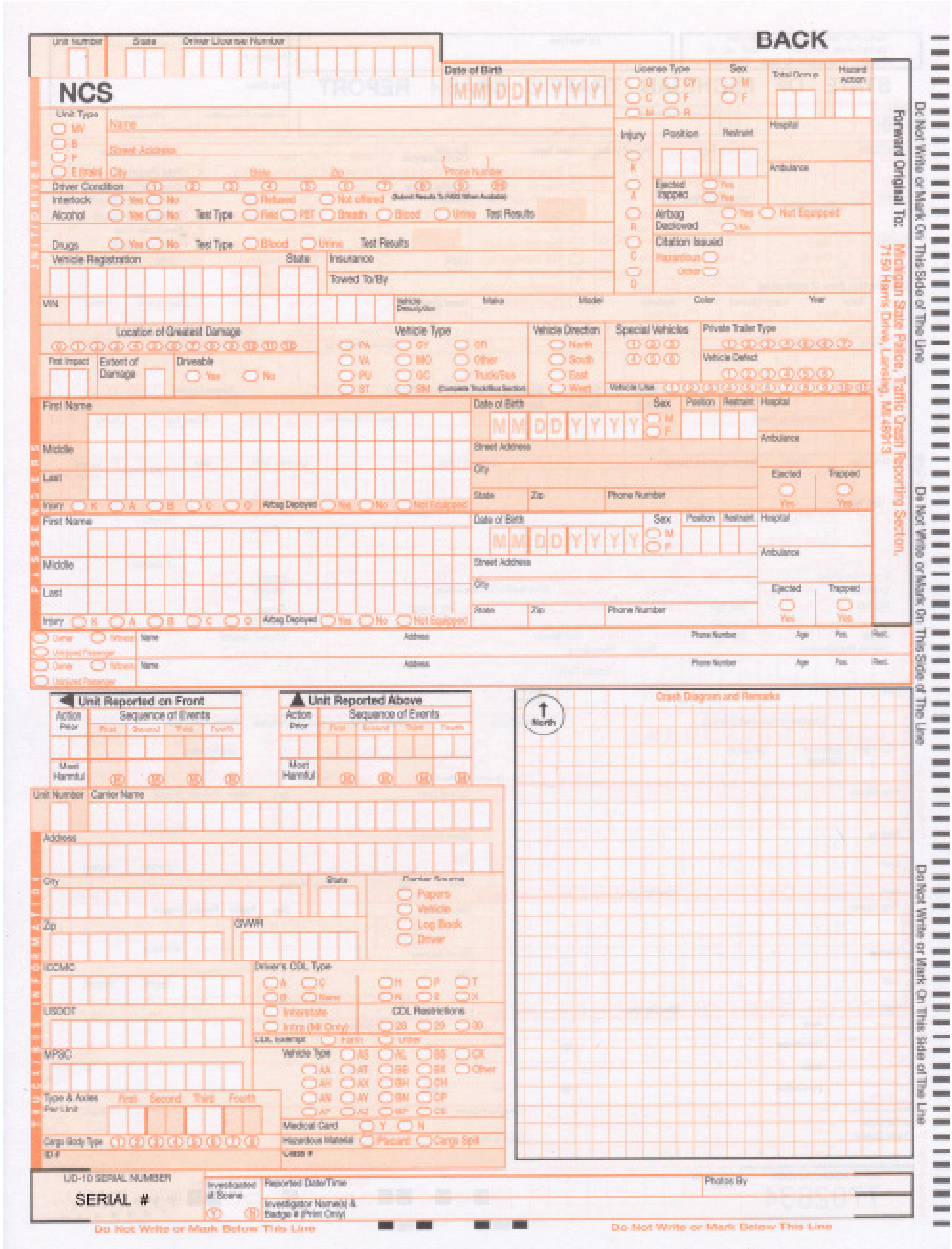

Compliance: Required MSP UD-10
Penalty: $100 and/or 90 days (Rev 1/04)
Do Not Use
STATE OF MICHIGAN TRAFFIC CRASH REPORT
Incident #
File Class
Incident Disposition
Open
Closed
OMI-
MI-
Department Name
Crash Date
Crash Time
No. of Units
Crash Type
Special Circumstances
Special Study
Weather
Light
Road Condition
Special Checks
Fatal (Report All)
Corrected Copy
Replace (Entire Report)
Delete (Entire Report)
Area
Total Lanes
Speed Limit
Posted
County
City/Twp
Traffic Control
Relation to Roadway
Construction Zone (if applicable)
Type
Lane Closed
Activity
LOCATION
Prefix
Road Name
Divided Roadway
Road Type
Suffix
Distance
Trafficway
Access Control
Intersecting Street
UNIT AND DRIVER INFORMATION
Unit Number
State
Driver License Number
Date of Birth
License Type
Sex
Total Occup
Hazard Action
Unit Type
Name
Street Address
City
Phone Number
Driver Condition
Interlock
Alcohol
Test Type
Test Results
Drugs
Vehicle Registration
Insurance
Towed To/By
Injury
Position
Restraint
Hospital
Ambulance
Ejected
Trapped
Airbag Deployed
Citation Issued
VEHICLE INFORMATION
VIN
Vehicle Description
Make
Model
Color
Year
Location of Greatest Damage
First Impact
Extent of Damage
Driveable
Vehicle Type
Vehicle Direction
Special Vehicles
Private Trailer Type
Vehicle Defect
Vehicle Use
PASSENGERS
First Name
Middle
Last
Date of Birth
Sex
Position
Restraint
Hospital
Ambulance
Ejected
Trapped
Injury
Airbag Deployed
Driver
Injured Passenger
Witness
Name
Phone Number
Age
Pos.
Rel.
Address
Person Advised of Damaged Traffic Control
Date
Time
Name
Damaged Property
Owner & Phone
Public
UD-10 SERIAL NUMBER
SERIAL #
Serial Override Number
Do Not Write or Mark In This Area
Do Not Write or Mark Below This Line
Do Not Write or Mark Below This Line
Do Not Write or Mark On This Side of The Line
Do Not Write or Mark On This Side of The Line
Printed in U.S.A.


BACK
NCS
Forward Original To: Michigan State Police, Traffic Crash Reporting Section, 7150 Harris Drive, Lansing, MI 48913
Do Not Write or Mark On This Side of The Line
Unit Number
State
Driver License Number
Date of Birth
License Type
Sex
Total Occup.
Hazard Action
Unit Type
Name
Street Address
City
State
Zip
Phone Number
Injury
Position
Restraint
Hospital
Ambulance
Ejected
Trapped
Driver Condition
Interlock
Alcohol
Test Type
Test Results
Drugs
Vehicle Registration
State
Insurance
Towed To/By
Airbag Deployed
Citation Issued
Hazardous
Other
VIN
Vehicle Description
Make
Model
Color
Year
Location of Greatest Damage
First Impact
Extent of Damage
Driveable
Vehicle Type
Vehicle Direction
North
South
East
West
Special Vehicles
Private Trailer Type
Vehicle Defect
Vehicle Use
PASSENGERS
First Name
Middle
Last
Injury
Airbag Deployed
Not Equipped
Owner
Witness
Unit Reported on Front
Unit Reported Above
Action Prior
Sequence of Events
First
Second
Third
Fourth
Most Harmful
Crash Diagram and Remarks
North
Unit Number
Carrier Name
Address
City
State
Zip
GVWR
Papers
Vehicle
Log Book
Driver
IDCMC
USDOT
MPSC
Driver's CDL Type
Interstate
Intra (MI Only)
CDL Restrictions
Vehicle Type
Type & Axles Per Unit
Cargo Body Type
ID #
Medical Card
Hazardous Material
Placard
Cargo Spill
UD-10 SERIAL NUMBER
SERIAL #
Investigated at Scene
Reported Date/Time
Investigator Name(s) & Badge # (Print Only)
Photos By
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MICHIGAN VEHICLE CODE

Public Act 300 of 1949

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

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

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

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

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ABBREVIATIONS & ACRONYMS

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

GLOSSARY

- **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.

- **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 (Incapacitating 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 (Non-Incapacitating Injury) -** Any injury not incapacitating but evident to observers at the scene of the crash in which the injury occurred.
    - **C (Possible Injury) -** Any injury reported or claimed that is not a fatal injury, incapacitating injury or non-incapacitating injury.
    - **O (No injury) -** Person reported as not receiving bodily harm from the motor vehicle crash.

  Note: Uninjured passengers are not required to be recorded by the police with the exception of a fatal crash at which point all involved parties must be listed.
- **Injury Crash -** Any crash involving an injury other than a fatal injury.
- **In Transport -** Denotes the state or condition of a vehicle that is in motion or within the portion of a way ordinarily used by similar vehicles. When applied to motor vehicles, "in transport" means in motion or on a roadway.

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

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

- **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.

- **School Bus -** Every motor vehicle, except station wagons, with a manufacturers' rated seating capacity of 18 or more passengers, including the driver, owned by a public, private, or governmental agency and operated for the transportation of children to or from school, or privately owned and operated for compensation for the transportation of children to or from school. School bus does not include buses operated by a municipally owned transportation system or by a common passenger carrier certificated by the state transportation department.
- **Traffic Unit -** Anything in transit on a public trafficway (i.e., motor vehicle, motorcycle, bicycle, pedestrian, snowmobile, farm equipment).
- **Trafficway -** Indicates whether or not a trafficway is not physically divided, or is divided with a median strip, with or without a traffic barrier, and whether it serves one-way or two-way traffic.
- **Transition Area -** Increase or decrease in the number of travel lanes.
- **Valid Drivers -** Excludes non-valid categories such as no license, out-of-state drivers with Michigan violations, deceased, and licenses expired three months prior to Department of State run date.
- **"Zero Tolerance" -** Law that began November 1, 1994, making it illegal for any person in Michigan under the age of 21 to consume alcohol in the presence of a law enforcement officer, or to have a BAC of 0.02 percent or more.

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UPPER PENINSULA 2015 QUICK FACTS

- Some exposure factor comparisons between 2015 and 2014 show motor vehicle registrations increased 2.1 percent, the number of licensed drivers on Upper Peninsula roads increased 15.9 percent, and vehicle mileage increased 16.8 percent.
- The 2015 fatality rate decreased to 0.7 deaths per 100 million miles of travel. It remains below the 10-year average of 1.17 (2006-2015).
- There were 25 people killed and 1,603 people injured in 8,099 reported motor vehicle traffic crashes in the Upper Peninsula during 2015. Compared with the 2014 experience, the number of deaths increased 8.7 percent, people injured decreased 5.5 percent, and total reported crashes decreased 11.3 percent.
- There were 8,099 reported crashes, of which 25 were fatal, 1,187 were personal injury, and 6,887 were property damage only crashes.
- Of all fatal crashes, 16.0 percent occurred at intersections.
- Of all fatal crashes, 40.0 percent involved at least one drinking operator, bicyclist, or pedestrian, 32.0 percent involved drinking but no drugs, 4.0 percent involved drugs but no drinking, and 8.0 percent involved both drinking and drugs.
- Careless/negligent driving was indicated as the hazardous action by 12.5 percent of the drivers involved in fatal crashes.
- In 2015, there were 4,622 single vehicle crashes, a decrease of 9.2 percent from last year's count of 5,088.
- Of the 8,099 total crashes, 4,622 (57.1%) involved one vehicle.
- Of the 25 fatal crashes, 15 (60.0%) involved one vehicle.
- Of the 10 alcohol-involved fatal crashes, 7 (70.0%) involved one vehicle.
- Of the 40 drivers involved in fatal crashes, six (15.0%) were under 21 years of age.
- Of the 305,731 people living in the Upper Peninsula [1. References and Reporting Agencies] one out of every 12,229 was killed in a traffic crash and one out of every 191 was injured.
- For each person killed, 64 people were injured.
- The pedestrian death toll for the Upper Peninsula stands at one person (age 55). Fourty pedestrians were injured.
- For each pedestrian killed, there were 40 pedestrians injured.
- The pedestrian who was killed was crossing the roadway not at an intersection.
- There were no bicyclist fatalities and 26 bicyclists were injured.
- Of the 11,029 drivers and injured passengers involved in crashes where restraint use was known, 10,728 or 97.3 percent were reported to have been using occupant restraints. Restraint usage among fatal crash victims, where usage was known, was reported to be 45.5 percent in 2015.
- The comprehenisve costs in traffic crashes in the Upper Peninsula amounted to $ **(see note)** in 2015.

Note: Cost of crash data from the National Safety Council is not yet available.

UPPER PENINSULA MICHIGAN CRASH WATCH 2015

HISTORICAL INFORMATION

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STATEWIDE 2014-2015 SUMMARY TRENDS: 1 YEAR TRENDS

	2014	2015	PERCENT OF CHANGE
NUMBER OF CRASHES			
Fatal Crashes	806	893	10.8
Personal Injury Crashes	52,523	54,008	2.8
Property Damage Crashes	245,370	242,122	-1.3
TOTAL	298,699	297,023	-0.6
ALCOHOL-INVOLVED CRASHES			
Fatal Crashes	222	271	22.1
Personal Injury Crashes	3,569	3,697	3.6
Property Damage Crashes	5,605	5,569	-0.6
TOTAL	9,396	9,537	1.5
FATAL CRASHES			
Had Been Drinking	222 (27.5)%	271 (30.3)%	22.1
Had Not Been Drinking / Not Known If Drinking	584 (72.5)%	622 (69.7)%	6.5
PERSONS IN CRASHES			
Killed	876	963	9.9
Injured	71,378	74,157	3.9
Not Injured	481,883	483,909	0.4
Unknown Injury	42,401	42,530	0.3
TOTAL	596,538	601,559	0.8
PERSONS IN ALCOHOL-INVOLVED CRASHES			
Killed	236	303	28.4
Injured	4,883	5,232	7.1
Not Injured	11,359	11,528	1.5
Unknown Injury	1,193	1,256	5.3
TOTAL	17,671	18,319	3.7
PERSONS INJURED BY GENDER			
Male	32,831	34,310	4.5
Female	38,434	39,765	3.5
Unknown Gender	113	82	-27.4
TOTAL	71,378	74,157	3.9
PERSONS INJURED BY SEVERITY			
"A" Injury	4,909	4,865	-0.9
"B" Injury	16,301	16,914	3.8
"C" Injury	50,168	52,378	4.4
TOTAL	71,378	74,157	3.9

Michigan experienced a 0.6 percent decrease in crashes, a 9.9 percent increase in traffic fatalities, and a 3.9 percent increase in injuries. Persons sustaining “A” level injuries (the most serious) decreased 0.9 percent.

STATEWIDE 2014-2015 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

	2014	2015	PERCENT OF CHANGE
PERSONS KILLED BY GENDER			
Male	604	701	16.1
Female	272	262	-3.7
TOTAL	876	963	9.9
PERSONS KILLED			
Motor Vehicle Driver	540	593	9.8
Passenger	167	167	0.0
Bicyclist	21	33	57.1
Pedestrian	148	170	14.9
Train Engineer	0	0	0.0
TOTAL	876	963	9.9
BELT RESTRAINT USE BY DRIVER			
"Reported Restrained" - Killed	234	241	3.0
"Reported Not Restrained" - Killed	141	152	7.8
"Reported Restrained" - Injured	44,766	46,056	2.9
"Reported Not Restrained" - Injured	1,421	1,473	3.7
BELT RESTRAINT USE BY INJURED PASSENGER			
"Reported Restrained" - Killed	63	77	22.2
"Reported Not Restrained" - Killed	60	53	-11.7
"Reported Restrained" - Injured	14,556	15,200	4.4
"Reported Not Restrained" - Injured	1,576	1,706	8.2
DRIVER AGE 16-20 INVOLVED			
Fatal Crashes	116	152	31.0
Personal Injury Crashes	10,922	11,651	6.7
Property Damage Crashes	40,999	41,698	1.7
TOTAL ALL CRASHES	52,037	53,501	2.8
Persons Killed	125	158	26.4
Persons Injured	15,022	16,265	8.3
DRIVER AGE 65 & OVER INVOLVED			
Fatal Crashes	174	170	-2.3
Personal Injury Crashes	9,090	9,568	5.3
Property Damage Crashes	35,535	36,126	1.7
TOTAL ALL CRASHES	44,799	45,864	2.4
Persons Killed	190	182	-4.2
Persons Injured	13,041	13,801	5.8

Deaths among vehicle occupants (drivers and passengers only) increased 7.5 percent.

STATEWIDE 2014-2015 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

	2014	2015	PERCENT OF CHANGE
CRASH FACTS			
Licensed Drivers	7,130,205	7,158,316	0.4
Registered Vehicles	8,206,961	8,271,686	0.8
Michigan Population	9,909,877	9,922,576	0.1
Drivers Involved in Crashes	510,086	510,074	-0.0
Occupants Involved in Crashes	592,303	597,131	0.8
Estimated Vehicle Miles Traveled (thousands)	99,111,154	97,843,201	-1.3
Death Rate Per 100 Million Vehicle Miles	0.9	1.0	11.1
Fatal Crash Rate Per 100 Million Vehicle Miles	0.8	0.9	12.5

2014 COST OF CRASHES IN MICHIGAN

The cost estimate for Michigan crashes in 2014 was **$36,971,857,800**. This estimate is based on the National Safety Council's cost estimating procedures. Average comprehensive costs are based on the following national figures:

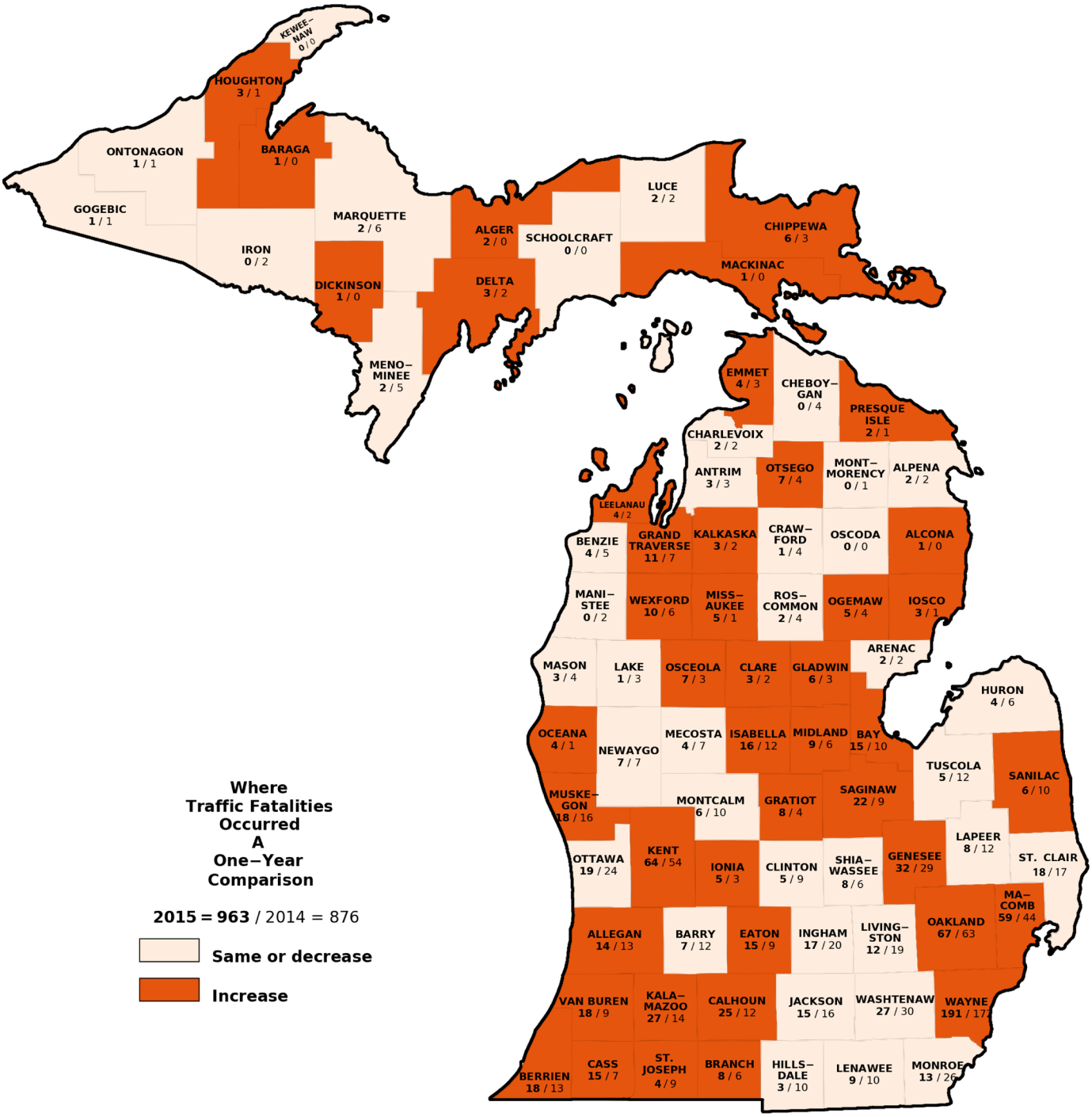
COMPREHENSIVE COSTS, 2014

Death	$9,887,000
Incapacitating Injury	$1,082,000
Non-incapacitating Injury	$298,000
Possible Injury	$138,100
No Injury	$45,700

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: Cost of crash data for 2015 is not yet available. Information on the cost of crashes is provided by the National Safety Council.

WHERE TRAFFIC FATALITIES OCCURRED

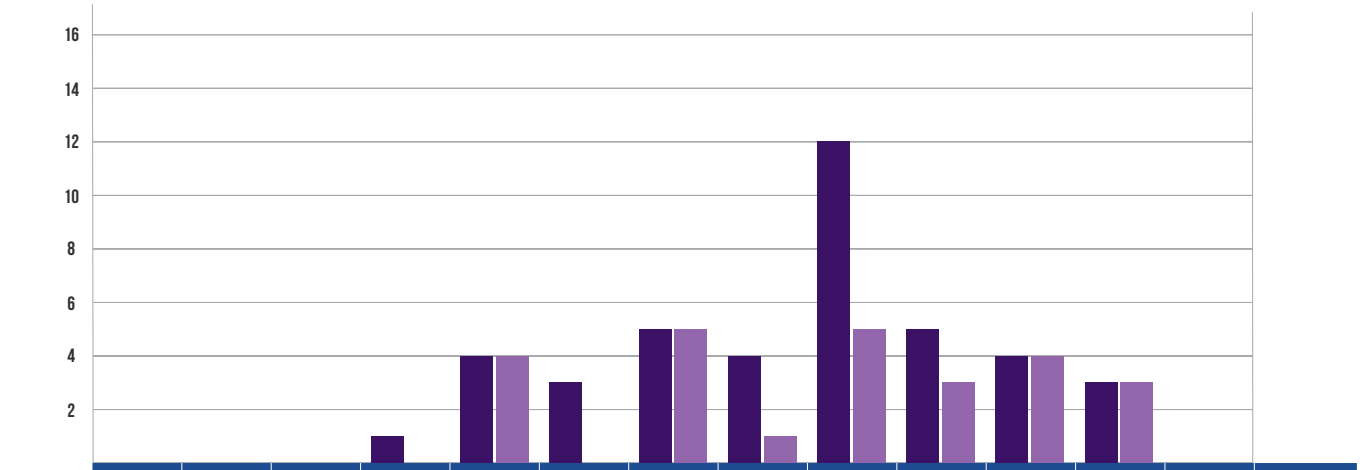


5 YEAR TRENDS-UPPER PENINSULA TREND DATA FOR FATALITIES

FATALITIES BY AGE	2011	2012	2013	2014	2015
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	1	0	0	4	0
16 - 20 years	4	1	5	2	4
21 - 24 years	3	1	4	1	0*
25 - 34 years	5	2	3	1	5
35 - 44 years	4	3	5	1	1
45 - 54 years	12	8	9	4	5
55 - 64 years	5	4	2	7	3
65 - 74 years	4	5	7	1	4
75 years and over	3	6	4	2	3
Unknown	0	0	0	0	0
TOTAL	41	30	39	23	25

**Indicates the lowest total in the five year period*

FATALITIES BY AGE



	UNDER 1 YEAR OLD	1-3 YEARS	4-10 YEARS	11-15 YEARS	16-20 YEARS	21-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
2011	0	0	0	1	4	3	5	4	12	5	4	3	0	41
2015	0	0	0	0	4	0	5	1	5	3	4	3	0	25

5 YEAR TRENDS-UPPER PENINSULA TREND DATA FOR FATALITIES (CONTINUED)

FATALITIES BY AGE	2011	2012	2013	2014	2015
AGE OF DRIVERS INVOLVED IN FATAL CRASHES					
13 years and under	0	0	0	0	0
14 years	0	0	0	0	0
15 years	1	0	0	1	0
16 years	1	0	0	0	0
17 years	0	0	1	0	2
18 years	3	0	1	1	1
19 years	2	1	3	3	2
20 years	0	0	1	0	1
21 - 24 years	6	0	5	2	5
25 - 34 years	8	5	6	1	6
35 - 44 years	6	5	7	7	4*
45 - 54 years	17	12	10	4	5
55 - 64 years	9	3	6	8	5
65 - 69 years	2	3	4	2	3
70 - 74 years	2	3	4	0	4
75 - 79 years	1	0	0	0	1
80 - 84 years	2	1	1	1	1
85 - 89 years	1	3	1	1	0*
90 years and over	0	1	0	0	0
Unknown	0	0	1	0	0
Totals	61	37	51	31	40
AGE OF DRIVERS INVOLVED IN SINGLE VEHICLE FATAL CRASHES					
13 years and under	0	0	0	0	0
14 years	0	0	0	0	0
15 years	1	0	0	0	0
16 years	1	0	0	0	0
17 years	0	0	1	0	1
18 years	1	0	1	0	0
19 years	1	1	1	0	1
20 years	0	0	0	0	1
21 - 24 years	4	0	3	1	1
25 - 34 years	1	3	2	0	3
35 - 44 years	2	3	3	3	0*
45 - 54 years	5	7	6	0	2
55 - 64 years	1	1	2	4	3
65 - 69 years	1	3	1	1	1
70 - 74 years	0	2	1	0	0
75 - 79 years	0	0	0	0	1
80 - 84 years	1	0	0	0	1
85 - 89 years	0	2	0	0	0
90 years and over	0	1	0	0	0
Unknown	0	0	0	0	0
Totals	19	23	21	9	15

5 YEAR TRENDS-UPPER PENINSULA TREND DATA FOR FATALITIES (CONTINUED)

FATALITIES BY AGE	2011	2012	2013	2014	2015
AGE OF BICYCLISTS KILLED					
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	0	0	0	0	0
16 - 20 years	0	0	0	0	0
21 - 24 years	0	0	0	0	0
25 - 34 years	0	0	0	0	0
35 - 44 years	0	0	0	0	0
45 - 54 years	0	0	0	0	0
55 - 64 years	0	0	0	0	0
65 - 74 years	0	0	0	0	0
75 years and over	0	1	0	0	0
Unknown	0	0	0	0	0
Totals	0	1	0	0	0
AGE OF PEDESTRIANS KILLED					
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	0	0	0	0	0
16 - 20 years	1	0	0	0	0
21 - 24 years	0	0	0	0	0
25 - 34 years	0	1	0	0	0
35 - 44 years	1	1	0	0	0
45 - 54 years	0	1	2	0	0
55 - 64 years	0	1	0	1	0
65 - 74 years	0	1	0	0	1
75 years and over	0	1	1	0	0
Unknown	0	0	0	0	0
Totals	2	6	3	1	1

**Indicates the lowest total in the five year period*

5 YEAR TRENDS-UPPER PENINSULA FATAL CRASHES AND PERSONS KILLED FOR SELECT HOLIDAY PERIODS

HOLIDAY PERIOD	FATAL CRASHES	PERSONS KILLED
MEMORIAL DAY		
2015 (3) MON	0 [0]	0 [0]
2014 (3) MON	0 [0]	0 [0]
2013 (3) MON	1 [0]	1 [0]
2012 (3) MON	0 [0]	0 [0]
2011 (3) MON	1 [1]	1 [1]
FOURTH OF JULY		
2015 (3) SAT	0 [0]	0 [0]
2014 (3) FRI	0 [0]	0 [0]
2013 (4) THU	1 [1]	1 [1]
2012 (1) WED	2 [1]	2 [1]
2011 (3) MON	0 [0]	0 [0]
LABOR DAY		
2015 (3) MON	1 [1]	1 [1]
2014 (3) MON	0 [0]	0 [0]
2013 (3) MON	0 [0]	0 [0]
2012 (3) MON	0 [0]	0 [0]
2011 (3) MON	0 [0]	0 [0]
THANKSGIVING		
2015 (4) THU	0 [0]	0 [0]
2014 (4) THU	0 [0]	0 [0]
2013 (4) THU	0 [0]	0 [0]
2012 (4) THU	0 [0]	0 [0]
2011 (4) THU	0 [0]	0 [0]
CHRISTMAS		
2015 (3) FRI	0 [0]	0 [0]
2014 (4) THU	1 [0]	1 [0]
2013 (1) WED	0 [0]	0 [0]
2012 (4) TUE	1 [1]	1 [1]
2011 (3) SUN	0 [0]	0 [0]
NEW YEARS		
2015 (3) FRI	0 [0]	0 [0]
2014 (4) THU	1 [0]	1 [0]
2013 (1) WED	0 [0]	0 [0]
2012 (4) TUE	1 [1]	1 [1]
2011 (3) SUN	0 [0]	0 [0]

SUMMARY 2015

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

Based on the total 2015 Upper Peninsula experience, deaths averaged 2.08 per month. Alcohol-related deaths averaged 0.83 per month.

Based on the 2015 Upper Peninsula holiday period experience, deaths averaged 0.08 per month. Alcohol-related deaths averaged 0.08 per month.

Figures in parentheses in the 1st column show number of full days in each holiday period.

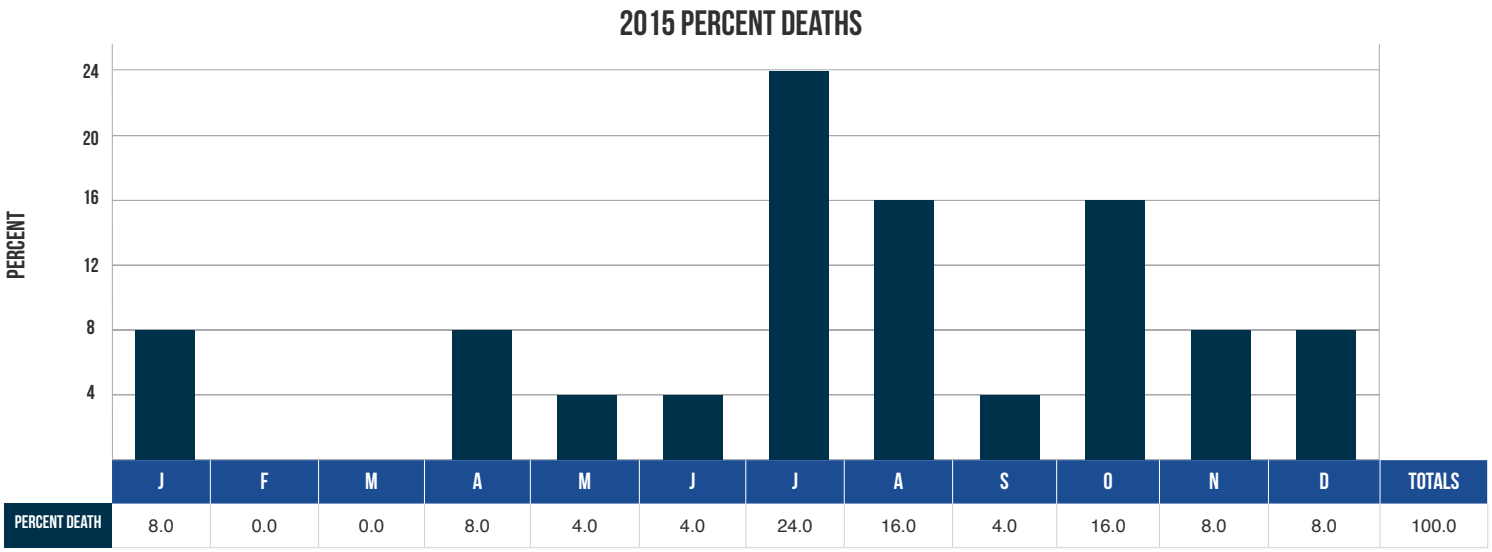
Fatal crashes and deaths are for these days plus six hours of the preceding day.

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- UPPER PENINSULA MOTOR VEHICLE CRASH DEATHS AND MILEAGE BY MONTH

MONTH	TRAFFIC DEATHS					2015 PERCENTAGES
	2011	2012	2013	2014	2015	Percent Deaths
January	5	3	5	2	2	8.0
February	2	2	0	2	0	0.0
March	3	1	4	0	0	0.0
April	0	0	3	0	2	8.0
May	2	1	4	1	1	4.0
June	6	4	2	4	1	4.0
July	4	5	3	1	6	24.0
August	7	2	5	3	4	16.0
September	2	1	4	0	1	4.0
October	3	2	2	3	4	16.0
November	3	4	3	5	2	8.0
December	4	5	4	2	2	8.0
TOTAL	41	30	39	23	25	100.0



Note: Data for percent miles driven is not available for the Upper Peninsula.

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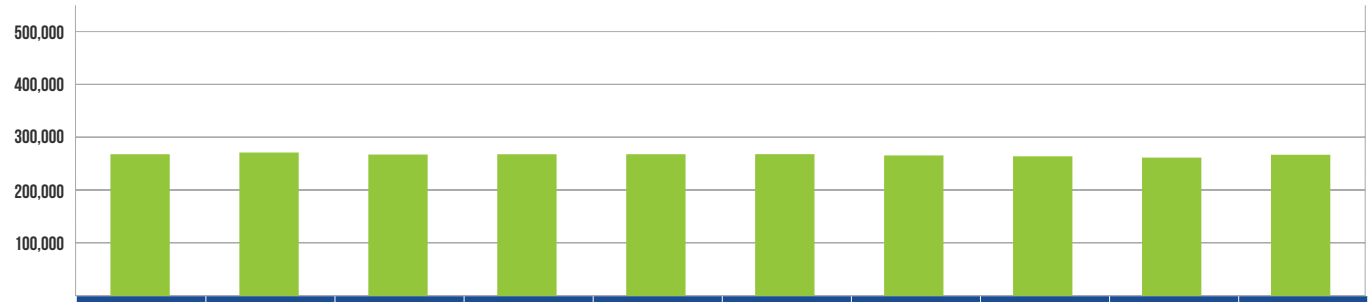
10 YEAR TRENDS-UPPER PENINSULA

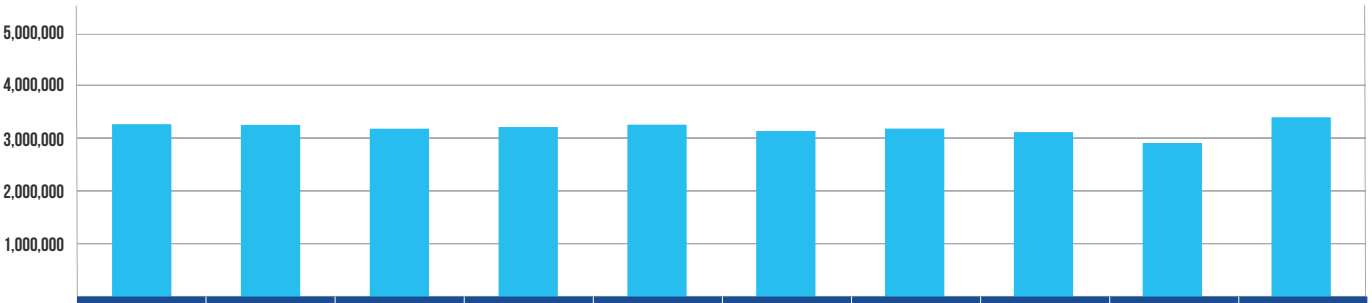
UPPER PENINSULA VEHICLE REGISTRATIONS



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
266,390	269,682	265,868	266,334	266,413	266,501	264,199	262,485	260,036	258,797

Vehicle registrations in the Upper Peninsula decreased 2.9 percent over the 10-year period.

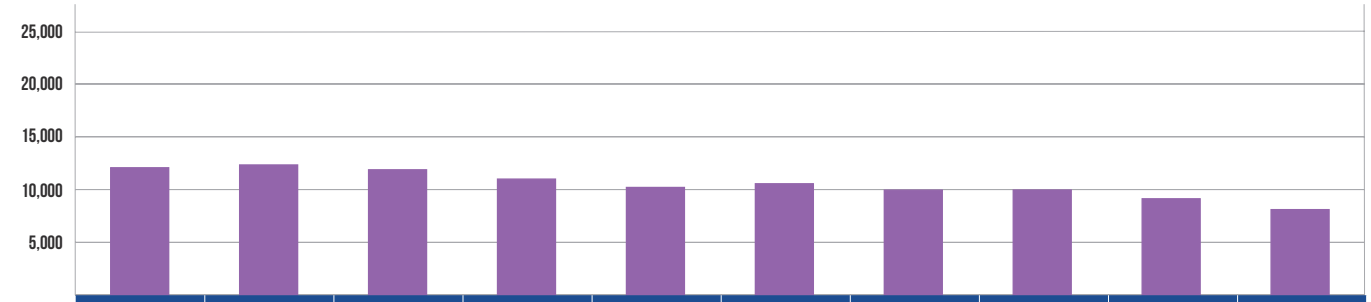
UPPER PENINSULA VEHICLE MILES TRAVELED



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
3,249,921	3,236,942	3,164,898	3,196,456	3,241,287	3,121,069	3,166,430	3,100,105	2,894,265	3,380,731

Vehicle miles traveled in the Upper Peninsula increased 4.0 percent over the 10-year period.

UPPER PENINSULA CRASHES

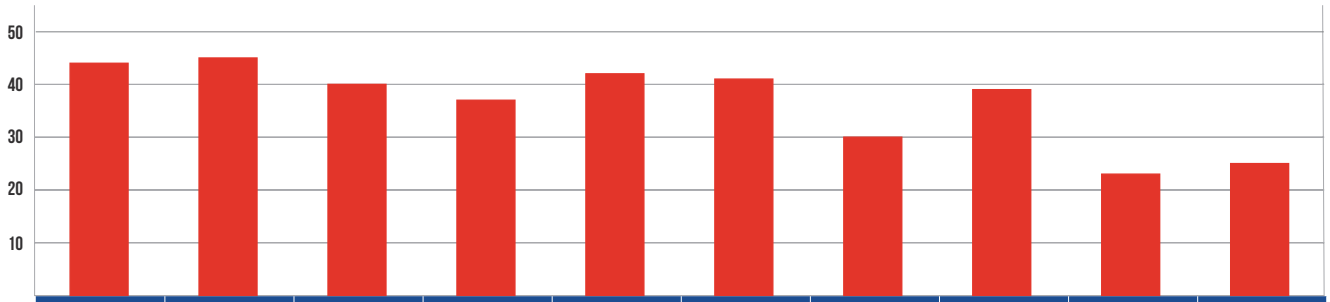


2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
12,063	12,329	11,871	10,990	10,199	10,548	9,945	9,956	9,126	8,099

There were 8,099 Upper Peninsula crashes in 2015 – a 32.9 percent decrease from 2006.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

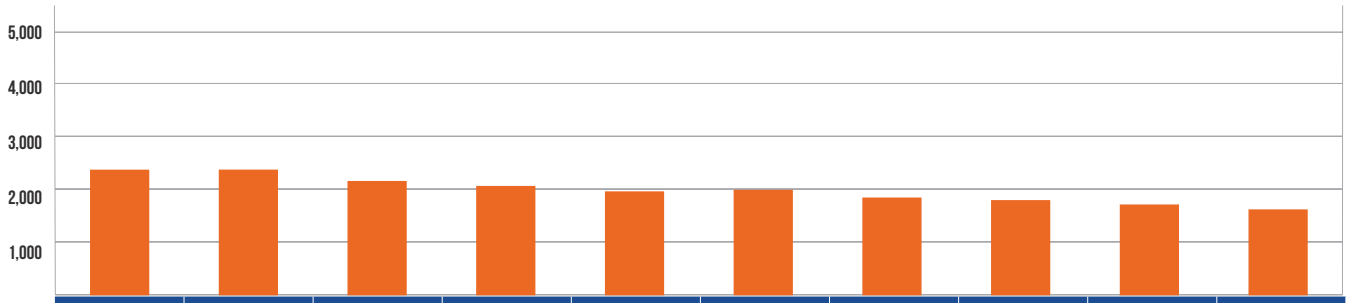
UPPER PENINSULA DEATHS



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
44	45	40	37	42	41	30	39	23	25

In 2015, 25 people died in motor vehicle crashes in the Upper Peninsula – a decrease of 43.2 percent from 2006.

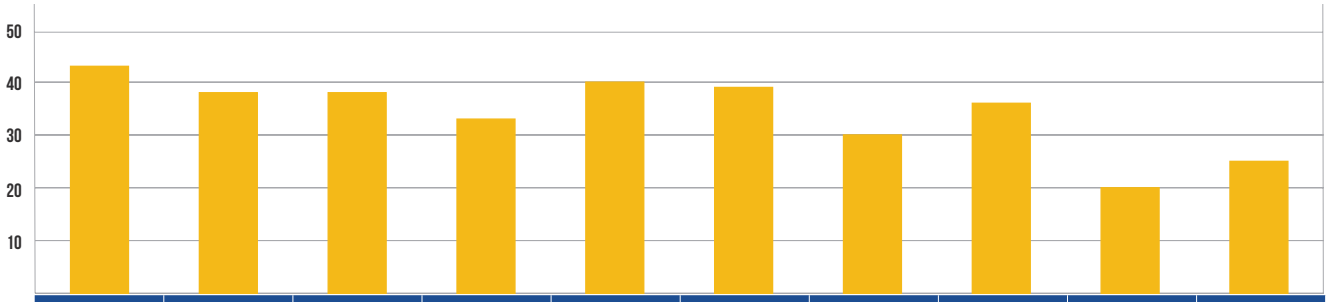
UPPER PENINSULA INJURIES



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
2,355	2,356	2,141	2,047	1,944	1,974	1,827	1,778	1,696	1,603

In 2015, 1,603 people received injuries in motor vehicle crashes in the Upper Peninsula – down 31.9 percent from 2,355 in 2006.

UPPER PENINSULA FATAL CRASHES

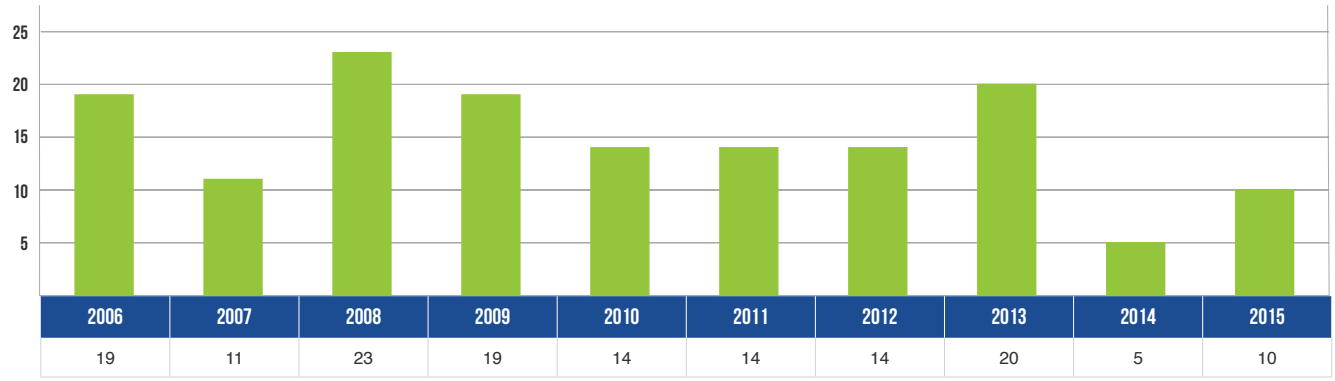


2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
43	38	38	33	40	39	30	36	20	25

In 2015, there were 25 fatal crashes in the Upper Peninsula – down 41.9 percent from 43 in 2006.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

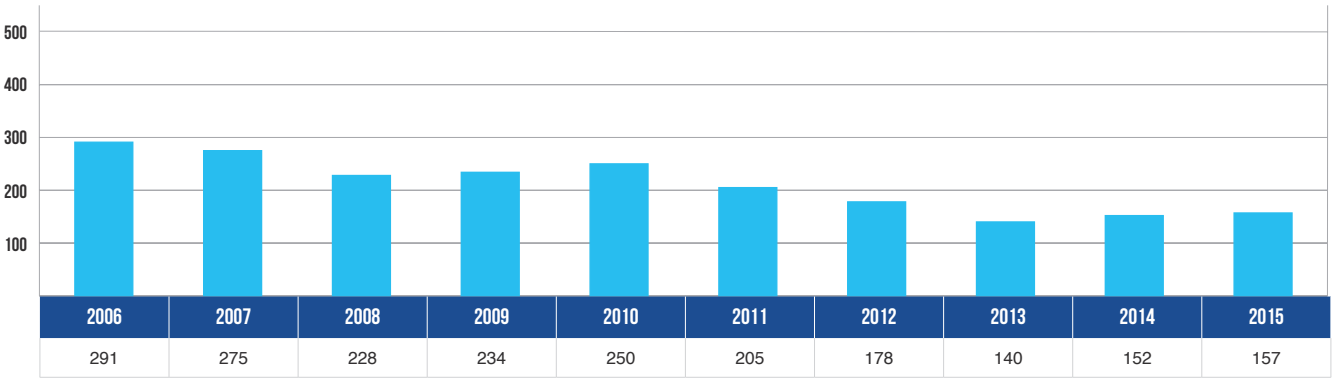
UPPER PENINSULA ALCOHOL-INVOLVED DEATHS



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
19	11	23	19	14	14	14	20	5	10

There were ten deaths in alcohol-involved crashes in the Upper Peninsula in 2015 – down 47.4 percent from 2006.

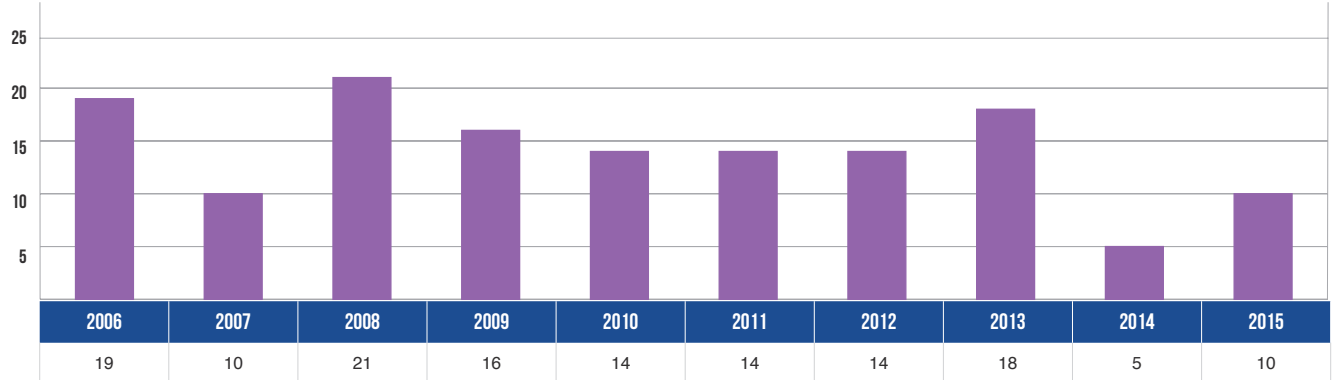
UPPER PENINSULA ALCOHOL-INVOLVED INJURIES



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
291	275	228	234	250	205	178	140	152	157

There were 157 alcohol-involved injuries in the Upper Peninsula in 2015 – down 46.0 percent from 2006.

UPPER PENINSULA ALCOHOL-INVOLVED FATAL CRASHES

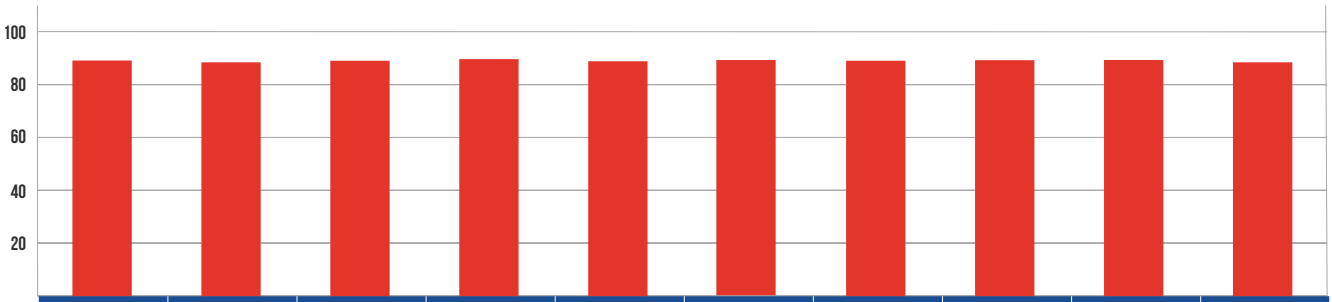


2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
19	10	21	16	14	14	14	18	5	10

There were ten injuries in alcohol-involved fatal crashes in the Upper Peninsula in 2015 – down 47.4 percent from 2006.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

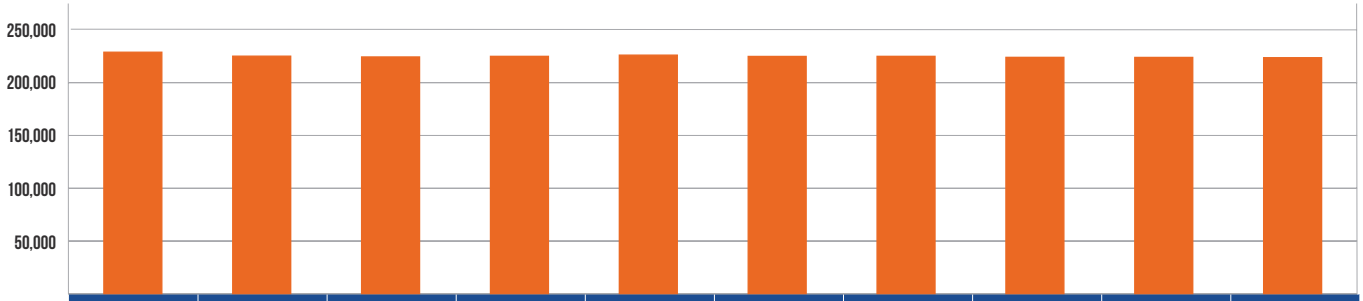
UPPER PENINSULA RESTRAINT USAGE IN CRASHES



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
88.9	88.2	88.8	89.4	88.6	88.6	88.8	89.0	89.1	88.2

The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes decreased 0.8 percent over the last ten years in the Upper Peninsula.

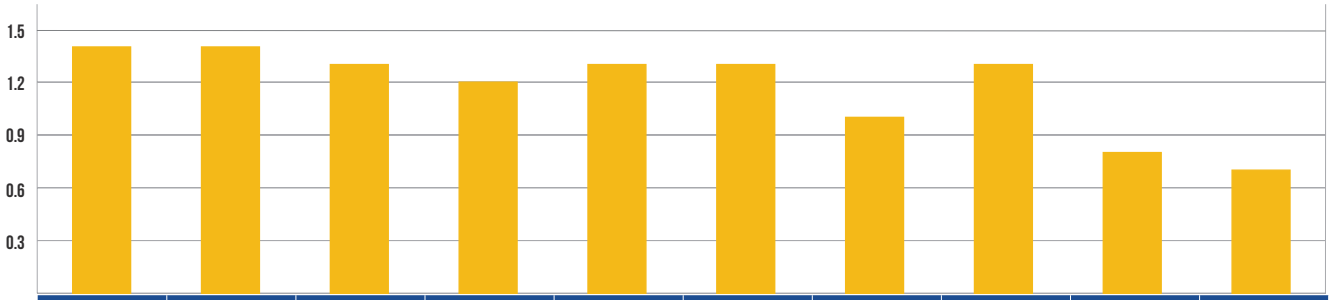
UPPER PENINSULA DRIVERS



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
228,831	225,084	224,348	224,930	226,064	224,845	224,933	223,975	223,910	223,640

There were 223,640 licensed drivers on Upper Peninsula roadways in 2015 – a decrease of 2.3 percent from 2006.

UPPER PENINSULA MILEAGE DEATH RATE

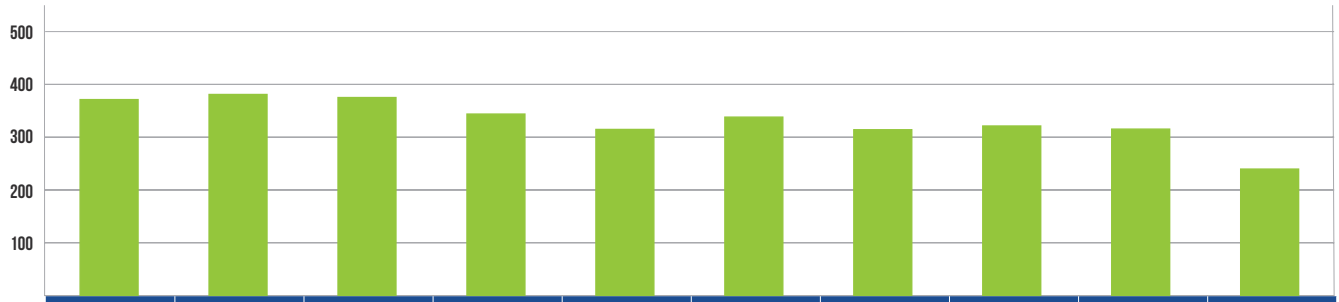


2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
1.4	1.4	1.3	1.2	1.3	1.3	1.0	1.3	0.8	0.7

The 0.7 death rate for the Upper Peninsula in 2015 was a 50.0 percent decrease from 1.4 in 2006.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

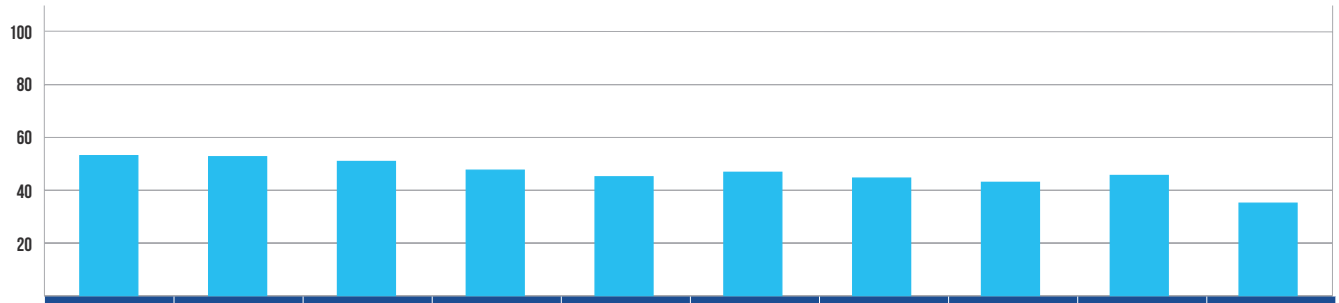
UPPER PENINSULA TOTAL CRASH RATE



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
371.2	380.9	375.1	343.8	314.7	338.0	314.1	321.2	315.3	239.6

The 10-year total crash rate of 239.6 in the Upper Peninsula in 2015 was a 35.5 percent decrease from 371.2 in 2006.

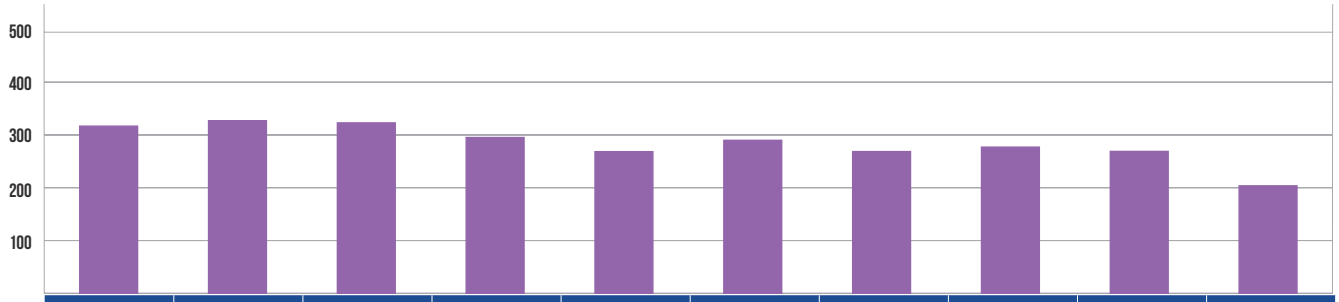
UPPER PENINSULA INJURY CRASH RATE



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
53.1	52.7	50.9	47.6	45.1	46.8	44.6	43.0	45.6	35.1

The 10-year injury crash rate of 35.1 in the Upper Peninsula in 2015 was a 33.9 percent decrease from 2006.

UPPER PENINSULA PROPERTY DAMAGE CRASH RATE

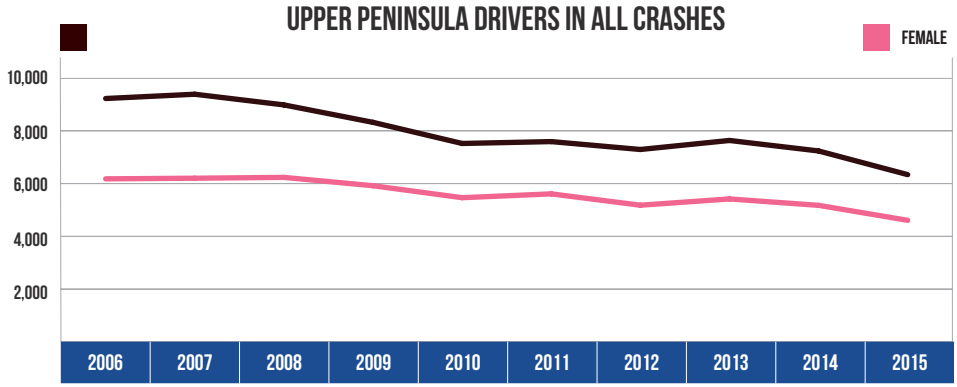


2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
316.7	327.0	322.9	295.2	268.4	289.9	268.6	277.0	268.9	203.7

The property damage crash rate of 203.7 in the Upper Peninsula in 2015 was a 35.7 percent decrease from 2006.

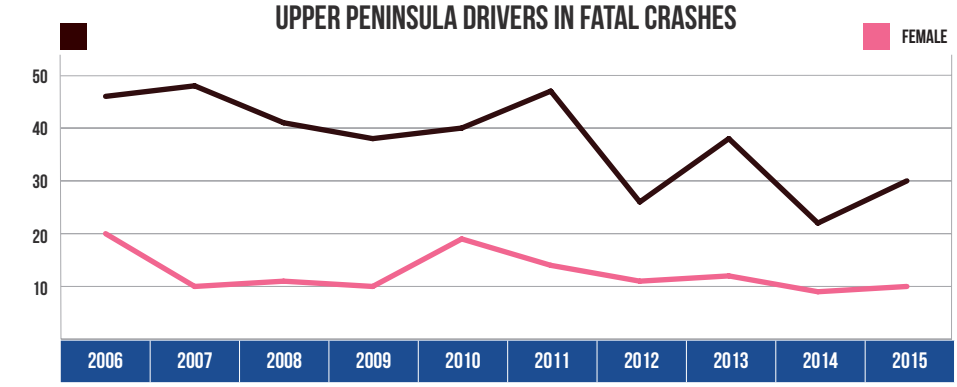
10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA DRIVERS IN ALL CRASHES		
Year	Male	Female
2006	9,222	6,179
2007	9,384	6,203
2008	8,980	6,234
2009	8,319	5,918
2010	7,519	5,465
2011	7,590	5,610
2012	7,291	5,180
2013	7,633	5,418
2014	7,235	5,175
2015	6,338	4,608



Male drivers accounted for 57.9 percent of all drivers in crashes in the Upper Peninsula during 2015, which was down from 60.0 percent in 2006. Female drivers accounted for 42.1 percent of all drivers in crashes during 2015, which was up from 40.0 percent in 2006.

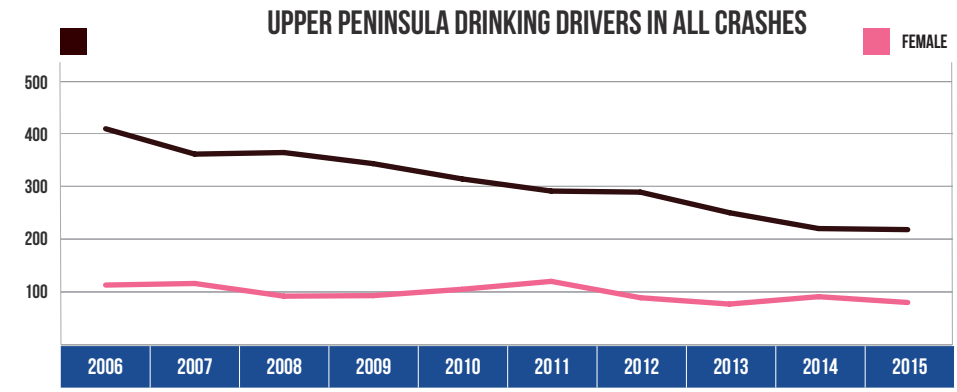
UPPER PENINSULA DRIVERS IN FATAL CRASHES		
Year	Male	Female
2006	46	20
2007	48	10
2008	41	11
2009	38	10
2010	40	19
2011	47	14
2012	26	11
2013	38	12
2014	22	9
2015	30	10



Male drivers made up 75.0 percent of all drivers in fatal crashes in the Upper Peninsula in 2015, which was up from 69.7 percent in 2006. Female drivers made up 25.0 percent of all drivers in fatal crashes in 2015, which was down from 30.3 percent in 2006.

UPPER PENINSULA DRINKING DRIVERS IN ALL CRASHES		
Year	Male	Female
2006	409	113
2007	361	116
2008	364	92
2009	343	93
2010	314	105
2011	291	120
2012	289	89
2013	250	77
2014	220	91
2015	218	80

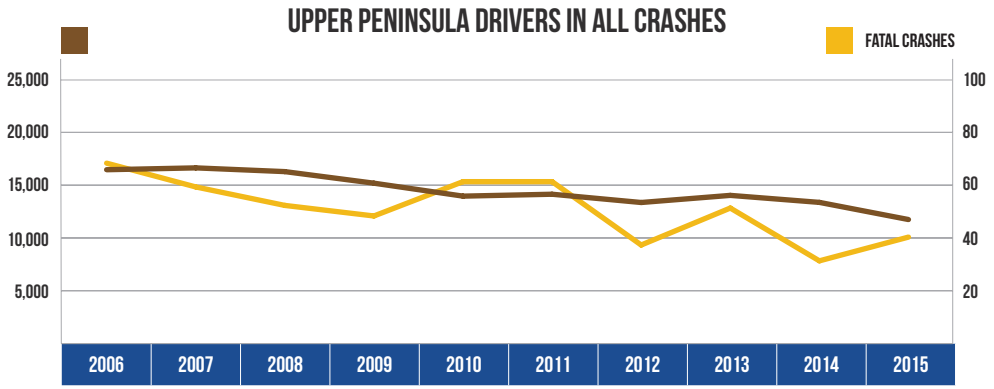
Note: 716 drivers in all crashes were coded as unknown gender in the Upper Peninsula in 2015 and are not included in the tables.



In 2015, males represented 73.2 percent of all drinking drivers in the Upper Peninsula, which was down from 78.4 percent in 2006. Females represented 26.8 percent of all drinking drivers, which was up from 21.6 percent in 2006.

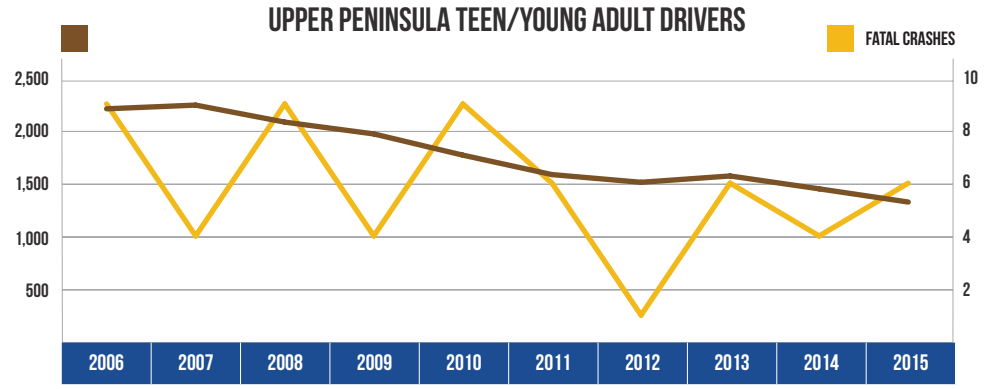
10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA ALL CRASHES		
Year	All Crashes	Fatal Crashes
2006	16,379	68
2007	16,555	59
2008	16,201	52
2009	15,105	48
2010	13,879	61
2011	14,059	61
2012	13,276	37
2013	13,950	51
2014	13,287	31
2015	11,662	40



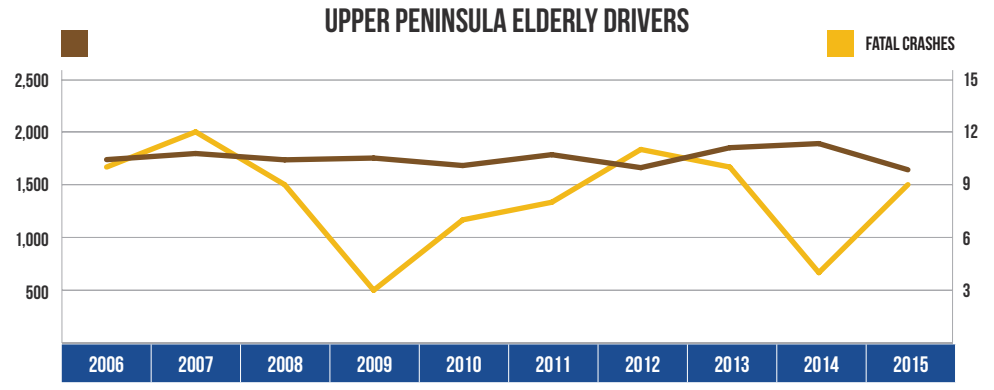
The number of drivers involved in all crashes in the Upper Peninsula decreased 28.8 percent over the 10-year period. The number of drivers involved in fatal crashes in the Upper Peninsula decreased 41.2 percent over the 10-year period.

UPPER PENINSULA TEEN/YOUNG ADULT DRIVERS (AGE 16-20)		
Year	All Crashes	Fatal Crashes
2006	2,204	9
2007	2,239	4
2008	2,078	9
2009	1,966	4
2010	1,765	9
2011	1,581	6
2012	1,508	1
2013	1,568	6
2014	1,446	4
2015	1,321	6



Teen/young adult drivers (age 16-20) in all crashes in the Upper Peninsula has decreased by 40.1 percent since 2006. The number of teen/young adult drivers in fatal crashes in the Upper Peninsula has decreased by 33.3 percent since 2006.

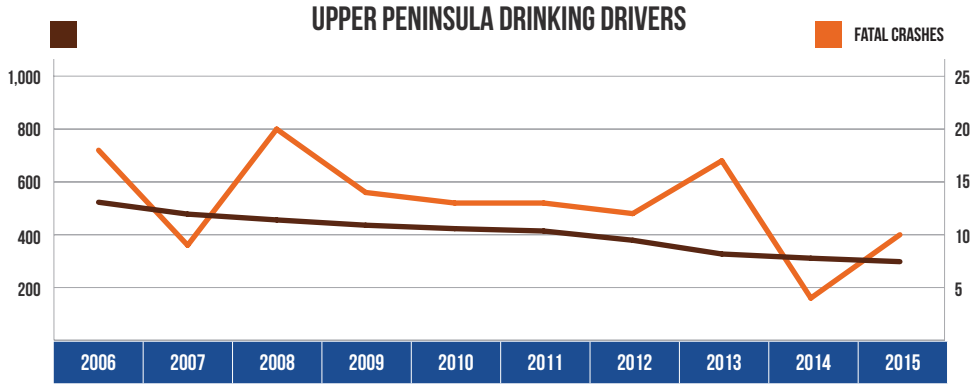
UPPER PENINSULA ELDERLY DRIVERS (AGE 65 & OVER)		
Year	All Crashes	Fatal Crashes
2006	1,737	10
2007	1,795	12
2008	1,735	9
2009	1,752	3
2010	1,681	7
2011	1,784	8
2012	1,661	11
2013	1,850	10
2014	1,889	4
2015	1,641	9



The number of drivers age 65 and over in all crashes in the Upper Peninsula has decreased 5.5 percent since 2006. Their involvement in fatal crashes decreased 10.0 percent from 2006.

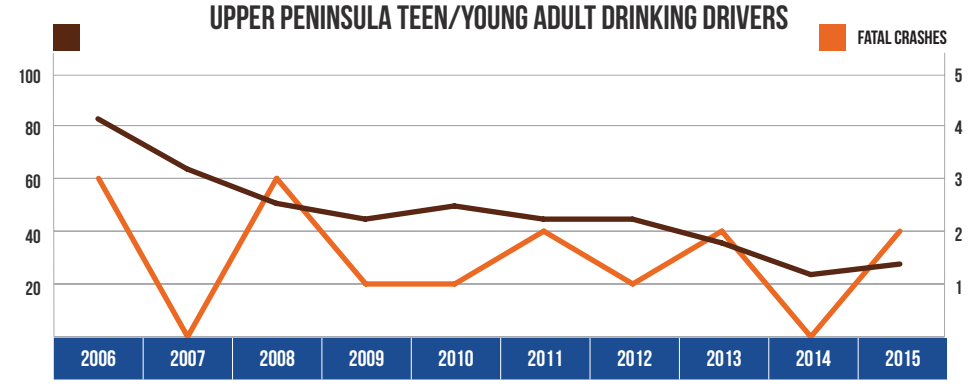
10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA DRINKING DRIVERS		
Year	All Crashes	Fatal Crashes
2006	523	18
2007	478	9
2008	456	20
2009	436	14
2010	423	13
2011	414	13
2012	379	12
2013	327	17
2014	311	4
2015	298	10



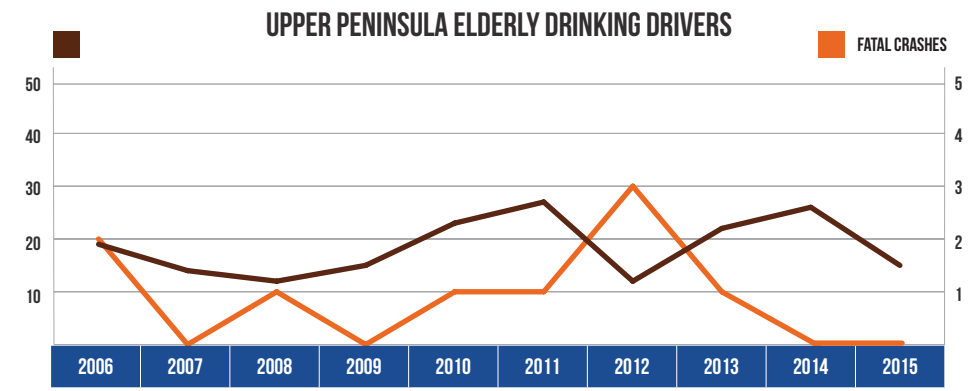
Drinking driver involvement in all crashes in the Upper Peninsula decreased by 43.0 percent since 2006. Drinking driver involvement in fatal crashes decreased by 44.4 percent from 2006.

UPPER PENINSULA TEEN/YOUNG ADULT DRINKING DRIVERS (AGE 16-20)		
Year	All Crashes	Fatal Crashes
2006	82	3
2007	63	0
2008	50	3
2009	44	1
2010	49	1
2011	44	2
2012	44	1
2013	35	2
2014	23	0
2015	27	2



The number of teen/young adult drinking drivers (age 16-20) in all crashes in the Upper Peninsula decreased by 67.1 percent. Their involvement in fatal crashes decreased by 33.3 percent from 2006.

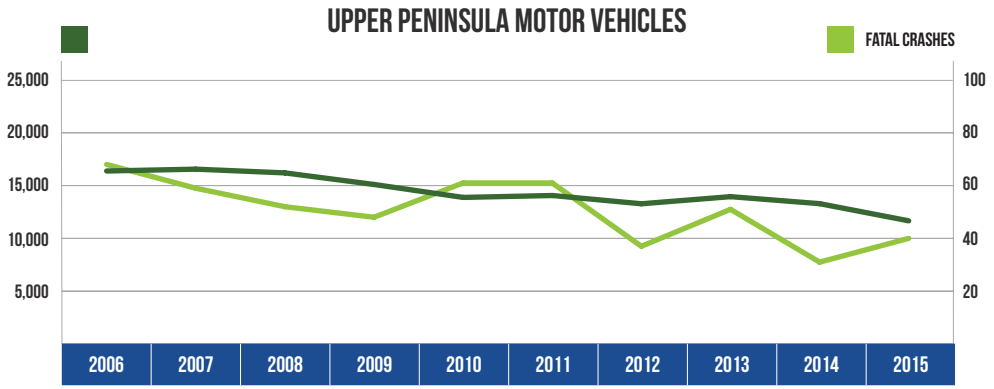
UPPER PENINSULA ELDERLY DRINKING DRIVERS (AGE 65 & OVER)		
Year	All Crashes	Fatal Crashes
2006	19	2
2007	14	0
2008	12	1
2009	15	0
2010	23	1
2011	27	1
2012	12	3
2013	22	1
2014	26	0
2015	15	0



The number of elderly drinking drivers (age 65 and over) in all crashes in the Upper Peninsula has decreased 21.1 percent over the 10-year period. There were no elderly drinking drivers involved in fatal crashes in 2015.

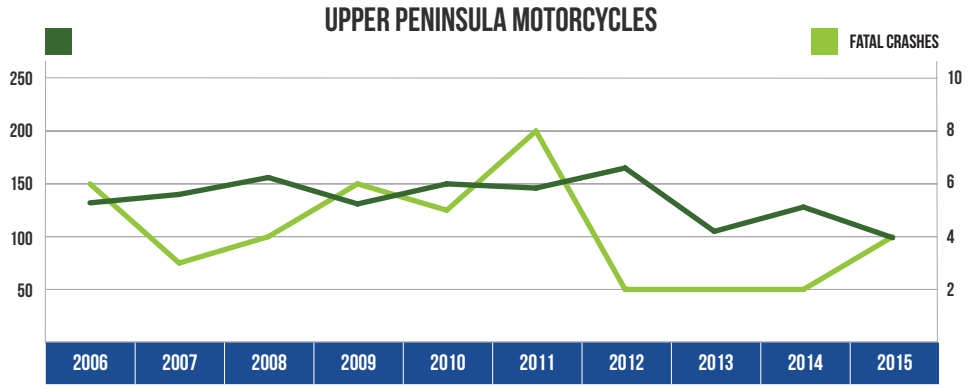
10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA MOTOR VEHICLES		
Year	All Crashes	Fatal Crashes
2006	16,379	68
2007	16,555	59
2008	16,201	52
2009	15,105	48
2010	13,879	61
2011	14,059	61
2012	13,276	37
2013	13,950	51
2014	13,287	31
2015	11,662	40



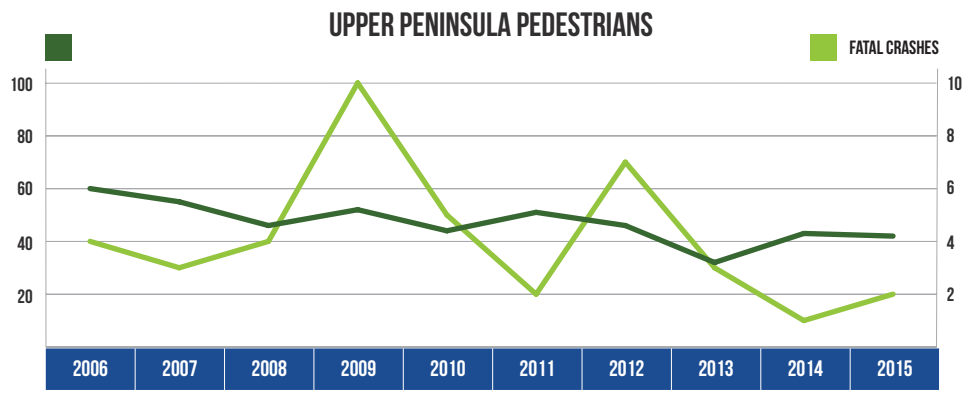
There were 11,662 motor vehicles involved in all Upper Peninsula crashes in 2015, down 28.8 percent from 2006. There were 40 motor vehicles involved in fatal crashes in 2015, down 41.2 percent from 2006.

UPPER PENINSULA MOTORCYCLES		
Year	All Crashes	Fatal Crashes
2006	132	6
2007	140	3
2008	156	4
2009	131	6
2010	150	5
2011	146	8
2012	165	2
2013	105	2
2014	128	2
2015	99	4



There were 99 motorcycles involved in crashes in the Upper Peninsula in 2015, a 25.0 percent decrease from 2006. There were four motorcycles involved in fatal crashes in 2015, down 33.3 percent from 2006.

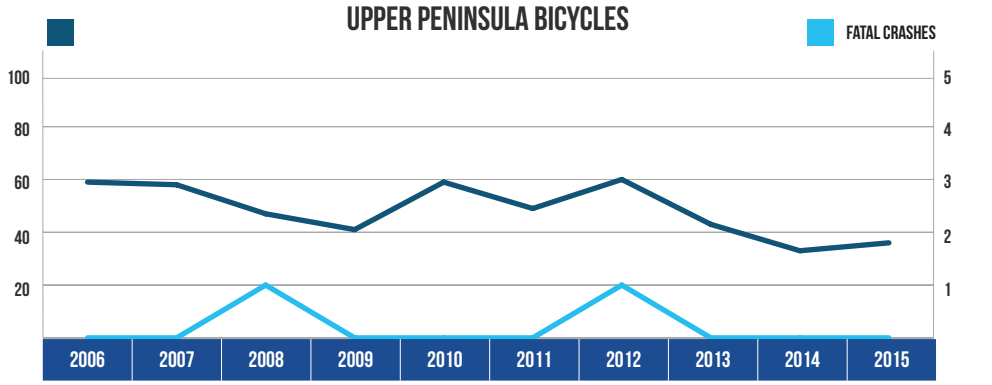
UPPER PENINSULA PEDESTRIANS		
Year	All Crashes	Fatal Crashes
2006	60	4
2007	55	3
2008	46	4
2009	52	10
2010	44	5
2011	51	2
2012	46	7
2013	32	3
2014	43	1
2015	42	2



There were 42 pedestrians involved in crashes in the Upper Peninsula in 2015, down 30.0 percent from 2006. There were two pedestrians involved in fatal crashes in 2015, down 50.0 percent from 2006.

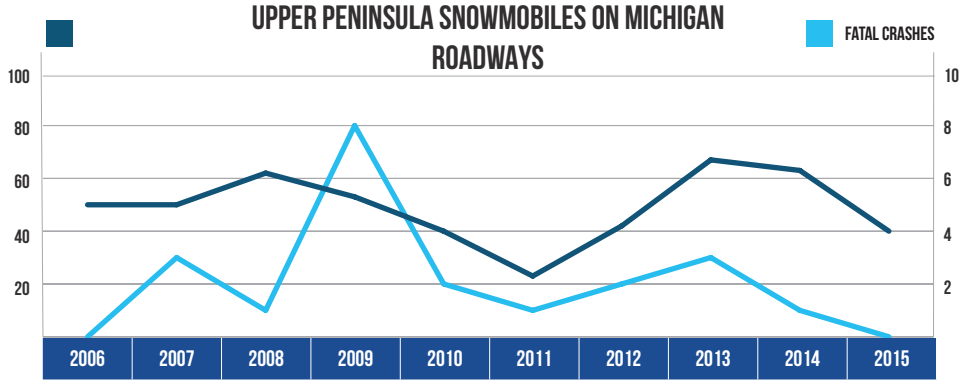
10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA BICYCLES		
Year	All Crashes	Fatal Crashes
2006	59	0
2007	58	0
2008	47	1
2009	41	0
2010	59	0
2011	49	0
2012	60	1
2013	43	0
2014	33	0
2015	36	0



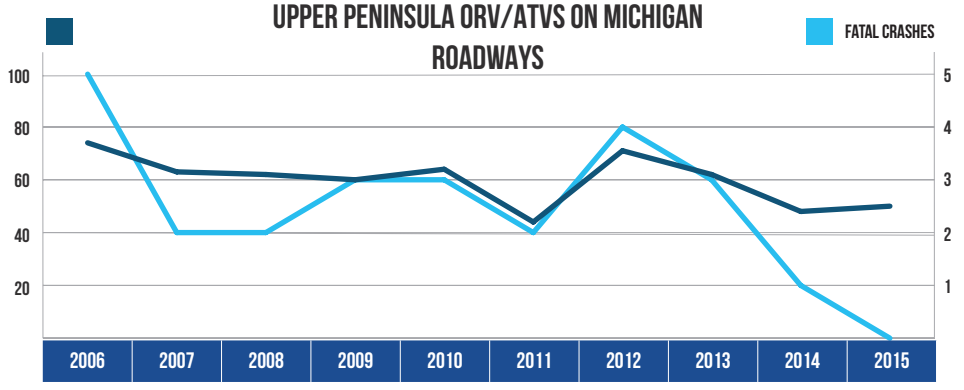
There were 36 bicycles involved in Upper Peninsula crashes in 2015, down 39.0 percent from 2006. There were no bicycles involved in fatal crashes in 2015.

UPPER PENINSULA SNOWMOBILES ON MICHIGAN ROADWAYS		
Year	All Crashes	Fatal Crashes
2006	50	0
2007	50	3
2008	62	1
2009	53	8
2010	40	2
2011	23	1
2012	42	2
2013	67	3
2014	63	1
2015	40	0



There were 40 snowmobiles in crashes on roadways in the Upper Peninsula in 2015, down 20.0 percent from 2006. There were no snowmobiles in fatal crashes in 2015.

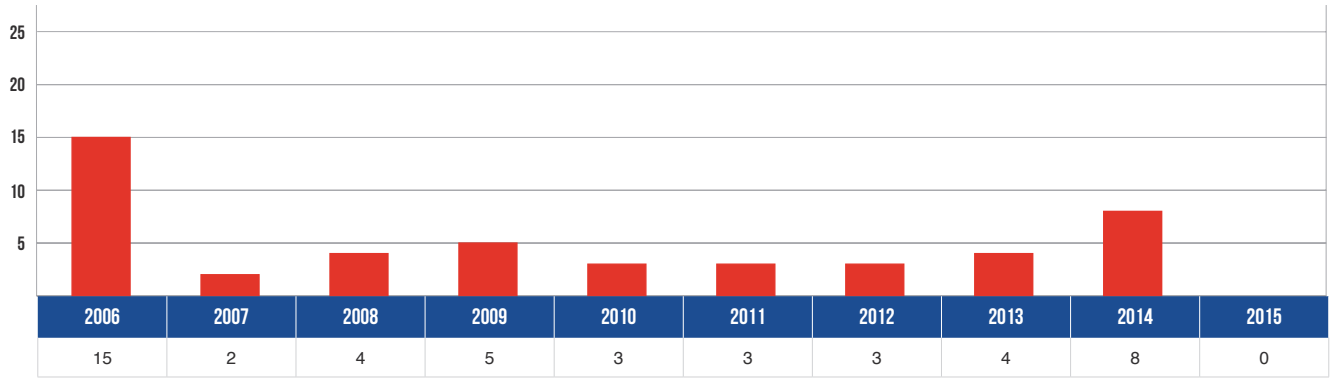
UPPER PENINSULA ORV/ATVS ON MICHIGAN ROADWAYS		
Year	All Crashes	Fatal Crashes
2006	74	5
2007	63	2
2008	62	2
2009	60	3
2010	64	3
2011	44	2
2012	71	4
2013	62	3
2014	48	1
2015	50	0



There were 50 ORV/ATVs in crashes on roadways in the Upper Peninsula in 2015, down 32.4 percent from 2006. There were no ORV/ATVs in fatal crashes in 2015.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

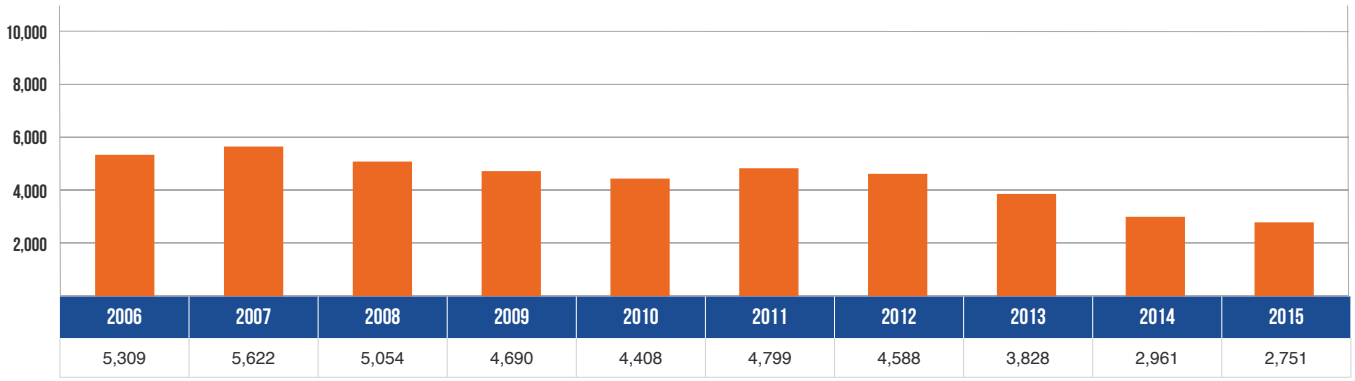
UPPER PENINSULA VEHICLE-TRAIN CRASHES



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
15	2	4	5	3	3	3	4	8	0

There were no vehicle-train crashes in the Upper Peninsula in 2015, compared to 15 vehicle-train crashes in 2006.

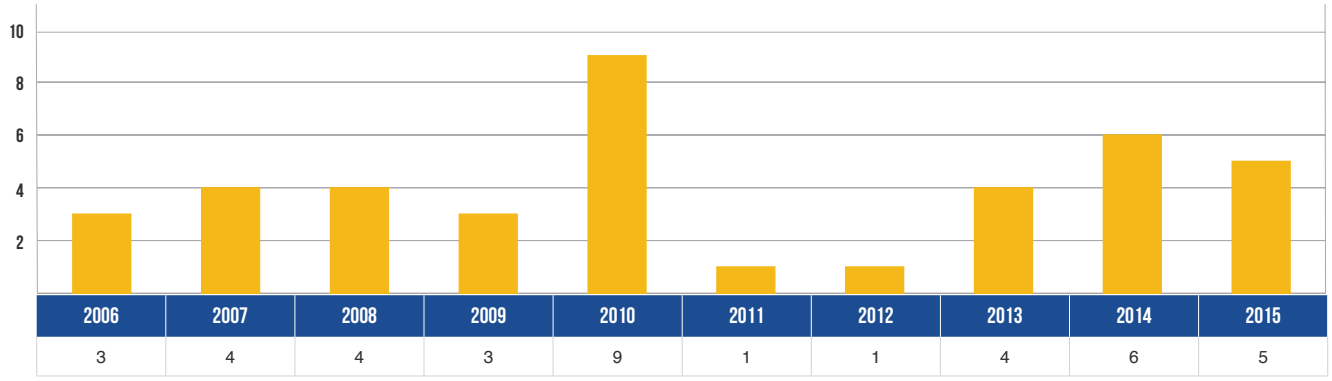
UPPER PENINSULA VEHICLE-DEER CRASHES



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
5,309	5,622	5,054	4,690	4,408	4,799	4,588	3,828	2,961	2,751

The number of vehicle-deer crashes in the Upper Peninsula decreased 48.2 percent in the 10-year period to 2,751 in 2015.

UPPER PENINSULA FARM EQUIPMENT CRASHES

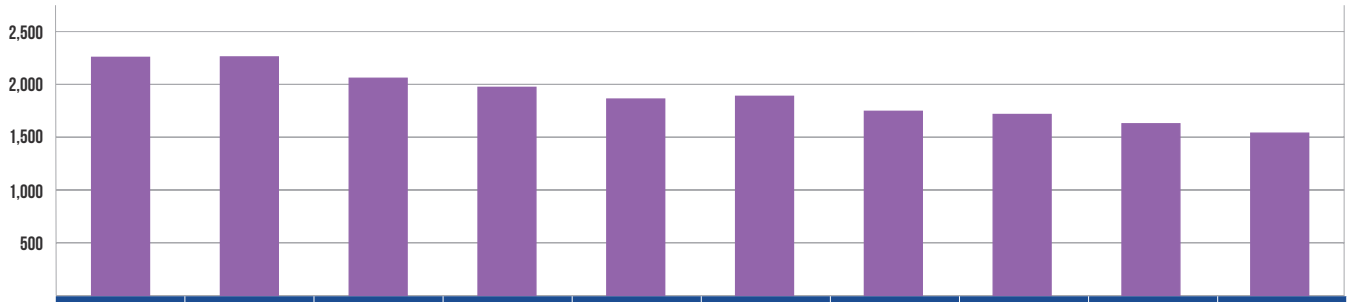


2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
3	4	4	3	9	1	1	4	6	5

There were five farm equipment crashes in the Upper Peninsula in 2015 – an increase of 66.7 percent from 2006.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

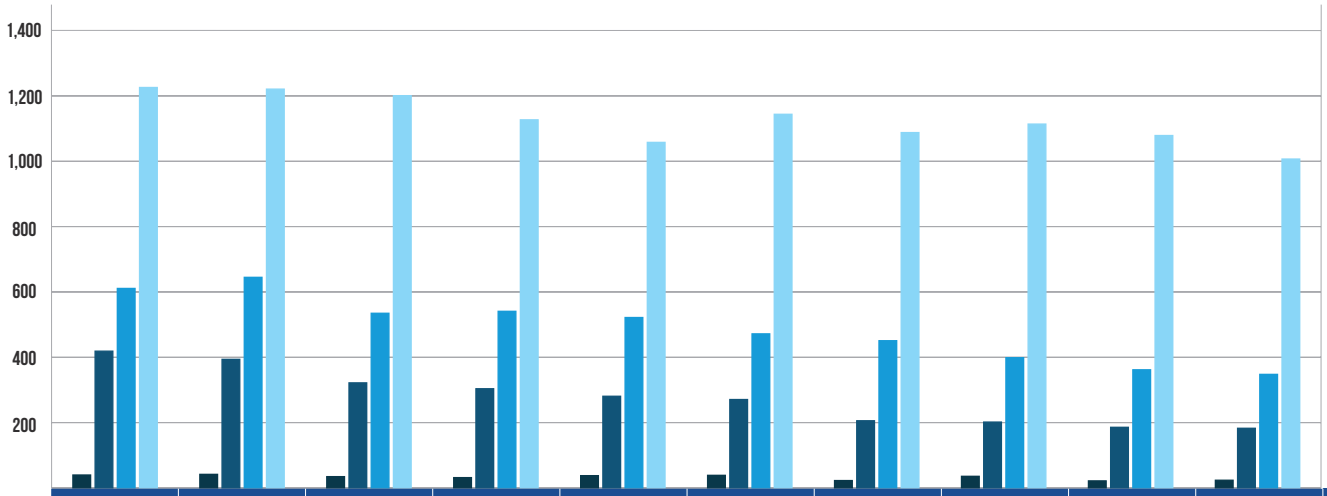
UPPER PENINSULA INJURED OCCUPANTS IN CRASHES



2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
2,256	2,260	2,058	1,972	1,861	1,887	1,745	1,715	1,627	1,538

There were 1,538 occupants injured in the Upper Peninsula in 2015 – a decrease of 31.8 percent from 2006.

UPPER PENINSULA DEATH AND INJURY FOR CRASH-INVOLVED OCCUPANTS



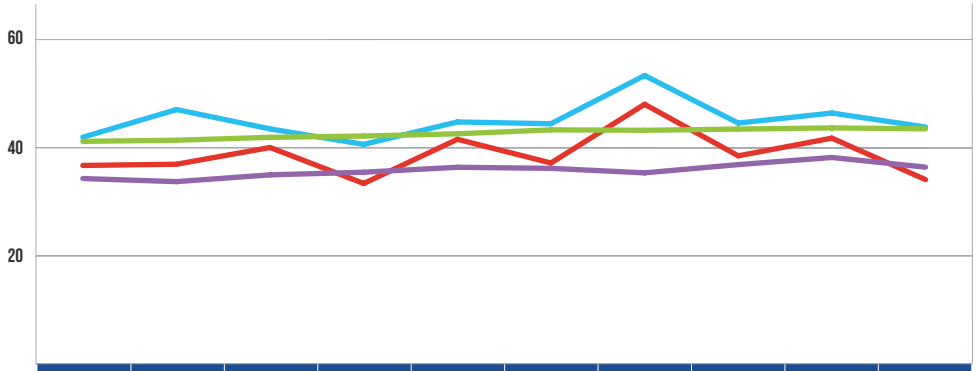
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTALS
KILLED	40	42	35	32	38	39	23	36	22	24	331
A INJURY	419	394	322	304	281	271	206	202	186	183	2,768
B INJURY	611	645	535	541	522	472	451	399	362	348	4,886
C INJURY	1,226	1,221	1,201	1,127	1,058	1,144	1,088	1,114	1,079	1,007	11,265

Over the period from 2006 to 2015 in the Upper Peninsula, occupant deaths decreased 40.0 percent, A injuries decreased 56.3 percent, B injuries decreased 43.0 percent, and C injuries decreased 17.9 percent.

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

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

AVERAGE AGE OF DRIVERS IN CRASHES 2006 - 2015



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
DRIVERS IN ALL CRASHES	41.29	41.48	41.96	42.18	42.56	43.22	43.15	43.35	43.55	43.39
DRIVERS IN FATAL CRASHES	42.03	47.05	43.54	40.73	44.80	44.48	53.24	44.60	46.42	43.88
DRINKING DRIVERS	34.38	33.84	35.03	35.49	36.36	36.17	35.37	36.83	38.08	36.38
DRINKING DRIVERS IN FATAL CRASHES	36.78	37.00	40.05	33.50	41.54	37.23	47.92	38.53	41.75	34.20

Over the 10-year period in the Upper Peninsula, reflecting the demographic trend of increasing age in the general population, the average age of drivers involved in all crashes and drinking drivers in crashes has increased more than five percent. The average age of drivers involved in fatal crashes has increased more than four percent. The average age of drinking drivers in fatal crashes has decreased seven percent since 2006.

UPPER PENINSULA MOTOR VEHICLE TRAFFIC DEATHS IN MICHIGAN BY MONTH

YEAR	January	February	March	April	May	June	July	August	September	October	November	December	TOTAL
1982	3	2	1	1	2	8	12	5	7	6	9	2	58
1983	2	1	5	5	3	7	5	6	6	5	5	11	61
1984	3	1	1	0	4	6	10	7	4	9	3	7	55
1985	0	1	2	7	3	3	9	2	7	4	7	8	53
1986	2	1	1	6	9	4	9	5	7	3	10	4	61
1987	1	3	7	5	5	2	9	4	5	6	9	8	64
1988	5	4	3	7	4	7	5	8	5	4	8	7	67
1989	4	1	2	7	3	2	5	5	8	8	4	13	62
1990	0	0	2	7	3	7	5	10	1	7	9	7	58
1991	7	1	6	8	4	7	3	5	6	3	2	2	54
1992	6	5	6	5	2	4	4	1	2	3	8	8	54
1993	6	6	3	8	5	6	16	1	12	9	9	3	84
1994	6	3	3	5	1	7	6	6	4	10	3	10	64
1995	8	3	3	8	2	6	7	7	5	6	8	2	65
1996	4	6	3	0	3	7	10	5	2	5	3	8	56
1997	4	7	4	0	3	6	9	2	4	4	2	9	54
1998	5	5	1	9	4	5	9	4	7	3	1	9	62
1999	1	2	3	1	5	12	10	7	6	3	4	8	62
2000	8	3	2	3	3	3	6	6	5	5	1	6	51
2001	1	1	3	4	0	3	5	4	3	8	4	4	40
2002	8	5	1	2	4	10	8	2	2	5	4	9	60
2003	4	1	1	5	2	8	9	6	6	2	6	7	57
2004	2	4	4	0	2	6	10	9	3	2	3	8	53
2005	1	3	2	2	3	2	3	4	5	3	5	5	38
2006	2	0	1	0	2	6	6	5	3	7	7	5	44
2007	5	5	3	1	4	2	7	4	3	2	5	4	45
2008	4	2	2	3	4	4	3	3	4	3	7	1	40
2009	5	2	1	3	1	4	6	3	5	5	0	2	37
2010	5	5	2	2	3	4	3	3	2	8	2	3	42
2011	5	2	3	0	2	6	4	7	2	3	3	4	41
2012	3	2	1	0	1	4	5	2	1	2	4	5	30
2013	5	0	4	3	4	2	3	5	4	2	3	4	39
2014	2	2	0	0	1	4	1	3	0	3	5	2	23
2015	2	0	0	2	1	1	6	4	1	4	2	2	25

Note: Data for the Upper Peninsula is not available by month prior to 1982.

UPPER PENINSULA 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
1982	58	3,546	11,137	Uppper Peninsula exposure data not available prior to 1996		
1983	61	3,320	10,840			
1984	55	3,498	11,665			
1985	53	3,605	13,033			
1986	61	3,788	12,773			
1987	64	3,659	12,816			
1988	67	3,918	14,634			
1989	62	4,124	16,538			
1990	58	3,856	14,360			
1991	54	3,724	15,929			
1992	54	3,487	15,052			
1993	84	3,779	14,866			
1994	64	3,672	16,622			
1995	65	4,037	18,656			
1996	56	4,020	18,621	3,093,620	260,906	1.8
1997	54	3,619	16,569	3,139,864	261,670	1.7
1998	62	3,419	15,473	3,136,510	263,079	2.0
1999	62	3,442	17,422	3,183,447	268,507	1.9
2000	51	3,379	17,757	3,195,509	274,010	1.6
2001	40	3,096	16,674	3,191,826	275,400	1.3
2002	60	3,354	16,677	3,259,597	277,332	1.8
2003	57	3,199	16,210	3,282,744	278,548	1.7
2004	53	2,884	14,514	3,316,529	272,886	1.6
2005	38	2,582	12,700	3,272,146	269,813	1.2
2006	44	2,355	12,063	3,249,921	266,390	1.4
2007	45	2,356	12,329	3,236,942	269,682	1.4
2008	40	2,141	11,871	3,164,898	265,868	1.3
2009	37	2,047	10,990	3,196,456	266,334	1.2
2010	42	1,944	10,199	3,241,287	266,413	1.3
2011	41	1,974	10,548	3,121,069	266,501	1.3
2012	30	1,827	9,945	3,960,576	264,199	1.0
2013	39	1,778	9,956	3,100,105	262,485	1.3
2014	23	1,696	9,126	2,894,265	260,036	0.8
2015	25	1,603	8,099	3,380,731	258,797	0.7

*Excludes trailers and trailer coaches, and includes mopeds

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AGE

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UPPER PENINSULA AGE AND INJURY SEVERITY BY PERSON TYPE

AGE	DRIVER			INJURED PASSENGER			MOTORCYCLIST			BICYCLIST			PEDESTRIAN		
	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
2	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0
3	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0
4	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0
5	0	0	0	4	0	4	0	0	0	1	0	1	0	0	0
6	0	0	0	3	0	3	0	0	0	0	0	0	0	0	0
7	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0
8	0	0	0	1	0	1	0	0	0	1	0	1	0	0	0
9	0	0	0	7	0	7	0	0	0	1	0	1	1	0	1
10	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0
11	1	0	0	6	0	6	0	0	0	0	0	0	0	0	0
12	0	0	0	4	0	4	0	0	0	0	0	0	2	0	2
13	3	0	3	6	0	6	1	0	1	2	0	1	0	0	0
14	4	0	2	7	0	7	0	0	0	1	0	1	2	0	2
15	22	0	10	11	0	11	1	0	1	1	0	1	1	0	0
16	179	0	22	13	0	13	1	0	0	0	0	0	0	0	0
17	243	1	24	9	0	9	2	0	1	1	0	1	0	0	0
18	275	0	39	17	0	17	1	0	1	2	0	2	0	0	0
19	312	2	31	15	0	15	3	0	2	1	0	1	0	0	0
20	312	1	32	11	0	11	4	0	3	0	0	0	1	0	1
21	287	0	22	12	0	12	1	0	0	3	0	2	1	0	1
22	266	0	28	13	0	13	1	0	1	2	0	1	0	0	0
23	258	0	25	9	0	9	4	0	4	1	0	1	1	0	1
24	229	0	21	10	0	10	0	0	0	0	0	0	1	0	1
25	229	1	28	7	0	7	4	0	2	0	0	0	1	0	1
26	188	1	10	10	0	10	2	0	1	0	0	0	1	0	1
27	169	1	17	2	0	2	1	0	1	2	0	1	1	0	1
28	195	0	19	6	0	6	3	0	3	0	0	0	1	0	1
29	180	1	17	3	0	3	2	0	2	1	0	1	0	0	0
30	167	0	18	4	0	4	0	0	0	1	0	1	2	0	2
31	181	0	24	7	0	7	0	0	0	0	0	0	1	0	1
32	174	1	15	6	0	6	2	1	1	0	0	0	2	0	1
33	164	0	13	9	0	9	1	0	1	0	0	0	0	0	0
34	162	0	21	1	0	1	0	0	0	0	0	0	0	0	0
35	158	0	16	8	0	8	1	0	1	1	0	1	0	0	0
36	167	0	15	7	0	7	1	0	1	0	0	0	0	0	0
37	152	0	16	4	0	4	1	0	0	1	0	0	1	0	1

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

UPPER PENINSULA 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	141	0	20	4	1	3	0	0	0	2	0	2	0	0	0
39	176	0	25	6	0	6	1	0	1	0	0	0	0	0	0
40	140	0	12	3	0	3	1	0	1	0	0	0	0	0	0
41	137	0	13	4	0	4	1	0	1	0	0	0	2	0	2
42	151	0	17	1	0	1	0	0	0	0	0	0	0	0	0
43	144	0	16	1	0	1	3	0	3	0	0	0	1	0	1
44	166	0	13	2	0	2	1	0	0	1	0	1	1	0	1
45	172	0	15	1	0	1	1	0	1	0	0	0	0	0	0
46	172	0	19	3	1	2	0	0	0	0	0	0	0	0	0
47	164	0	19	4	0	4	3	0	2	0	0	0	0	0	0
48	163	0	12	4	0	4	1	0	1	0	0	0	2	0	2
49	184	0	12	4	0	4	2	0	2	0	0	0	1	0	1
50	183	1	20	3	0	3	0	0	0	0	0	0	0	0	0
51	175	0	18	5	0	5	2	0	2	0	0	0	2	0	2
52	192	1	14	3	0	3	2	1	1	0	0	0	0	0	0
53	185	1	25	7	0	7	3	0	2	0	0	0	1	0	1
54	199	0	14	8	1	7	3	0	3	1	0	0	0	0	0
55	213	1	23	5	0	5	2	1	1	0	0	0	1	0	1
56	211	1	17	4	0	4	3	0	2	2	0	2	1	0	1
57	183	0	20	3	0	3	7	0	5	0	0	0	0	0	0
58	180	0	14	4	0	4	2	0	1	1	0	1	0	0	0
59	181	0	25	9	0	9	4	0	4	1	0	0	0	0	0
60	180	0	22	5	0	5	2	0	2	0	0	0	0	0	0
61	172	0	15	6	0	6	2	0	1	0	0	0	0	0	0
62	151	0	16	5	0	5	2	0	1	0	0	0	1	0	1
63	141	0	10	1	0	1	3	0	1	0	0	0	0	0	0
64	135	1	13	2	0	2	4	1	1	0	0	0	0	0	0
65	117	0	9	2	0	2	0	0	0	0	0	0	1	0	1
66	156	1	14	8	0	8	3	0	3	1	0	1	1	0	1
67	130	0	25	5	0	5	3	0	2	1	0	0	0	0	0
68	131	0	10	9	0	9	3	0	2	0	0	0	1	0	1
69	96	1	6	2	0	2	2	0	1	0	0	0	1	1	0
70	86	0	8	3	0	3	1	0	1	1	0	0	1	0	1
71	90	0	10	1	0	1	2	0	0	0	0	0	1	0	1
72	83	1	12	0	0	0	0	0	0	0	0	0	0	0	0
73	80	0	8	0	0	0	2	0	2	0	0	0	0	0	0
74	66	0	5	2	0	2	0	0	0	0	0	0	0	0	0
75	63	1	6	1	0	1	1	0	1	0	0	0	0	0	0
76	74	0	8	2	0	2	2	0	1	0	0	0	0	0	0

UPPER PENINSULA 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	75	0	6	1	0	1	0	0	0	1	0	1	0	0	0
78	50	0	6	2	0	2	0	0	0	0	0	0	0	0	0
79	45	0	6	5	0	5	0	0	0	0	0	0	1	0	1
80	48	0	4	1	0	1	1	0	1	0	0	0	1	0	1
81	44	0	8	3	1	2	0	0	0	0	0	0	1	0	1
82	32	0	7	0	0	0	0	0	0	0	0	0	0	0	0
83	26	1	1	1	0	1	0	0	0	0	0	0	0	0	0
84	22	0	3	1	0	1	1	0	1	0	0	0	0	0	0
85	35	0	4	2	0	2	0	0	0	0	0	0	0	0	0
86	23	0	4	0	0	0	0	0	0	0	0	0	0	0	0
87	21	0	1	0	0	0	0	0	0	0	0	0	0	0	0
88	15	0	2	1	0	1	0	0	0	0	0	0	0	0	0
89	9	0	1	1	0	1	0	0	0	0	0	0	0	0	0
90	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
91	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0
92	6	0	1	0	0	0	0	0	0	0	0	0	0	0	0
93	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
94	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
96	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
99	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
102	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
103	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
106	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown Age	753	0	0	3	0	3	1	0	0	1	0	0	0	0	0
2015 TOTALS	11,662*	20	1,123	419	4	415	114*	4	81	36*	0	26	42*	1	39
	* Includes 702 drivers with unknown injury severity and 9,817 with no injury						*Includes 29 motorcyclists with no injury			*Includes 1 bicyclist with unknown injury severity and 9 with no injury			*Includes 2 pedestrians with no injury		

UPPER PENINSULA 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	857	64.9	4	66.7	157	66.8
Turning left	83	6.3	0	0.0	20	8.5
Turning right	40	3.0	0	0.0	3	1.3
Stopped on roadway	46	3.5	0	0.0	5	2.1
In prior crash	2	0.2	0	0.0	0	0.0
Changing lanes	17	1.3	0	0.0	2	0.9
Backing	45	3.4	0	0.0	0	0.0
Slowing/stopping on roadway	97	7.3	0	0.0	14	6.0
Slowing/stopping other	3	0.2	0	0.0	1	0.4
Starting up on roadway	36	2.7	0	0.0	10	4.3
Starting up other	0	0.0	0	0.0	0	0.0
Entering parking	0	0.0	0	0.0	0	0.0
Leaving parking	6	0.5	0	0.0	0	0.0
Entering roadway	27	2.0	1	16.7	4	1.7
Leaving roadway	7	0.5	0	0.0	2	0.9
Making U-turn	1	0.1	0	0.0	1	0.4
Overtaking or passing	13	1.0	0	0.0	3	1.3
Avoiding object	2	0.2	0	0.0	1	0.4
Avoiding animal	11	0.8	0	0.0	2	0.9
Avoiding pedestrian	0	0.0	0	0.0	0	0.0
Avoiding vehicle (front/back)	14	1.1	1	16.7	7	3.0
Avoiding vehicle (angle)	2	0.2	0	0.0	1	0.4
Driverless moving	0	0.0	0	0.0	0	0.0
Parked	6	0.5	0	0.0	1	0.4
Crossing at intersection	0	0.0	0	0.0	0	0.0
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	0.0	0	0.0	0	0.0
In roadway against traffic	0	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	1	0.1	0	0.0	0	0.0
Not in roadway	0	0.0	0	0.0	0	0.0
Other	1	0.1	0	0.0	1	0.4
Unknown	4	0.3	0	0.0	0	0.0
TOTAL	1,321	100.0	6	100.0	235	100.0

UPPER PENINSULA 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	4	0.3	0	0.0	1	0.4
Cross center/median	2	0.2	0	0.0	0	0.0
Ran off road left	3	0.2	0	0.0	1	0.4
Ran off road right	6	0.5	0	0.0	1	0.4
Re-enter road	0	0.0	0	0.0	0	0.0
Overturn	64	4.8	2	33.3	22	9.4
Separation of units	1	0.1	0	0.0	0	0.0
Fire/explosion	0	0.0	0	0.0	0	0.0
Immersion	0	0.0	0	0.0	0	0.0
Jackknife	0	0.0	0	0.0	0	0.0
Downhill runaway	0	0.0	0	0.0	0	0.0
Cargo loss/shift	3	0.2	0	0.0	1	0.4
Individual fell off	7	0.5	0	0.0	6	2.6
Other noncollision	5	0.4	0	0.0	2	0.9
SUBTOTAL	95	7.2	2	33.3	34	14.5

For drivers age 16-20 in the Upper Peninsula, an overturn is the most harmful event in a noncollision with the highest proportion of drivers in all crashes (4.8%), fatal crashes (33.3%), and injury crashes (9.4%).

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Pedestrian	2	0.2	0	0.0	2	0.9
Bicyclist	6	0.5	0	0.0	4	1.7
Motor vehicle in transport	745	56.4	3	50.0	131	55.7
Parked motor vehicle	48	3.6	0	0.0	1	0.4
Railway train	0	0.0	0	0.0	0	0.0
Animal	172	13.0	0	0.0	4	1.7
Other nonfixed objects	13	1.0	0	0.0	4	1.7
SUBTOTAL	986	74.6	3	50.0	146	62.1

UPPER PENINSULA 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	1	0.1	0	0.0	0	0.0
Bridge parapet end*	---	---	---	---	---	---
Bridge rail	1	0.1	0	0.0	0	0.0
Guardrail face	12	0.9	0	0.0	3	1.3
Guardrail end	4	0.3	0	0.0	0	0.0
Median barrier	4	0.3	0	0.0	1	0.4
Highway traffic sign post	12	0.9	0	0.0	0	0.0
Highway signal post	0	0.0	0	0.0	0	0.0
Luminaire/light support*	17	1.3	0	0.0	6	2.6
Utility pole*	---	---	---	---	---	---
Other pole	3	0.2	0	0.0	0	0.0
Culvert	3	0.2	0	0.0	0	0.0
Curb	3	0.2	0	0.0	0	0.0
Ditch	56	4.2	0	0.0	9	3.8
Embankment	25	1.9	0	0.0	5	2.1
Fence	3	0.2	0	0.0	2	0.9
Mailbox	2	0.2	0	0.0	0	0.0
Tree	65	4.9	1	16.7	20	8.5
Rail crossing signal	0	0.0	0	0.0	0	0.0
Building	7	0.5	0	0.0	3	1.3
Traffic island	0	0.0	0	0.0	0	0.0
Fire hydrant	2	0.2	0	0.0	0	0.0
Impact attenuator	0	0.0	0	0.0	0	0.0
Other fixed object	17	1.3	0	0.0	5	2.1
SUBTOTAL	237	17.9	1	16.7	54	23.0

For drivers age 16-20 in the Upper Peninsula, a tree is the fixed object associated with the highest proportion of drivers in all crashes (4.9%), fatal crashes (16.7%), and injury crashes (8.5%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Unknown Event	3	0.2	0	0.0	1	0.4
MOST HARMFUL EVENT TOTAL	1,321	100.0	6	100.0	235	100.0

*Data not available for 2015. For a complete list of changes, see Data Elements with Changes for 2015 Data.

UPPER PENINSULA 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	502	38.0	3	50.0	93	39.6
Head On	19	1.4	2	33.3	7	3.0
Head On - Left Turn	27	2.0	0	0.0	8	3.4
Angle	289	21.9	1	16.7	59	25.1
Rear End	279	21.1	0	0.0	49	20.9
Rear End - Left Turn	16	1.2	0	0.0	4	1.7
Rear End - Right Turn	17	1.3	0	0.0	0	0.0
Sideswipe - Same Direction	74	5.6	0	0.0	5	2.1
Sideswipe - Opposite Direction	32	2.4	0	0.0	1	0.4
Other/Unknown	66	5.0	0	0.0	9	3.8
TOTAL	1,321	100.0	6	100.0	235	100.0

Based on crash type, drivers age 16-20 in the Upper Peninsula are involved in the largest proportion of single vehicle crashes for all crashes (38.0%), fatal crashes (50.0%), and injury crashes (39.6%).

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	1,013	76.7	4	66.7	162	68.9
Median	5	0.4	0	0.0	0	0.0
Shoulder	102	7.7	0	0.0	19	8.1
Outside of Shoulder/Curb	166	12.6	2	33.3	45	19.1
Gore	12	0.9	0	0.0	3	1.3
Other/Unknown	23	1.7	0	0.0	6	2.6
TOTAL	1,321	100.0	6	100.0	235	100.0

Other than on the road crashes, drivers age 16-20 in the Upper Peninsula have the highest proportion where the first impact is outside the shoulder/curb for all crashes (12.6%), fatal crashes (33.3%), and injury crashes (19.1%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Interstate Routes	56	4.2	0	0.0	7	3.0
U.S. & Michigan Roads	605	45.8	2	33.3	119	50.6
County & City Roads	660	50.0	4	66.7	109	46.4
TOTAL	1,321	100.0	6	100.0	235	100.0

UPPER PENINSULA 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 - 02:59 AM	53	4.0	1	16.7	6	2.6
03:00 AM - 05:59 AM	33	2.5	1	16.7	11	4.7
06:00 AM - 08:59 AM	128	9.7	1	16.7	20	8.5
09:00 AM - 11:59 AM	154	11.7	0	0.0	30	12.8
12:00 PM - 02:59 PM	243	18.4	0	0.0	38	16.2
03:00 PM - 05:59 PM	351	26.6	0	0.0	70	29.8
06:00 PM - 08:59 PM	180	13.6	1	16.7	32	13.6
09:00 PM - 11:59 PM	178	13.5	2	33.3	27	11.5
Unknown	1	0.1	0	0.0	1	0.4
TOTAL	1,321	100.0	6	100.0	235	100.0

For drivers age 16-20 in the Upper Peninsula, the 3:00 - 5:59 PM time period has the highest proportion of drivers in all crashes (26.6%) and injury crashes (29.8%). The 9:00 - 11:59 PM time period has the highest proportion of drivers in fatal crashes (33.3%).

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	515	39.0	1	16.7	71	30.2	4	1.6
Speed too fast	221	16.7	0	0.0	44	18.7	75	30.0
Speed too slow	0	0.0	0	0.0	0	0.0	0	0.0
Failed to yield	134	10.1	0	0.0	30	12.8	49	19.6
Disregard traffic control	32	2.4	1	16.7	9	3.8	20	8.0
Drove wrong way	2	0.2	0	0.0	1	0.4	1	0.4
Drove left of center	8	0.6	0	0.0	0	0.0	1	0.4
Improper passing	5	0.4	0	0.0	0	0.0	2	0.8
Improper lane use	12	0.9	0	0.0	0	0.0	2	0.8
Improper turn	15	1.1	0	0.0	3	1.3	5	2.0
Improper/no signal	3	0.2	0	0.0	0	0.0	1	0.4
Improper backing	40	3.0	0	0.0	0	0.0	2	0.8
Unable to stop in assured clear distance	186	14.1	0	0.0	30	12.8	44	17.6
Reckless driving	8	0.6	1	16.7	6	2.6	6	2.4
Careless/negligent driving	82	6.2	1	16.7	29	12.3	31	12.4
Other	45	3.4	1	16.7	9	3.8	7	2.8
Unknown	13	1.0	1	16.7	3	1.3	0	0.0
TOTAL	1,321	100.0	6	100.0	235	100.0	250	100.0

Other than no hazardous action, the second highest hazardous action category for drivers age 16-20 in the Upper Peninsula is speed too fast for all crashes (16.7%) and injury crashes (18.7%).

UPPER PENINSULA 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	193	14.6	0	0.0	37	15.7
Tuesday	162	12.3	0	0.0	28	11.9
Wednesday	185	14.0	1	16.7	23	9.8
Thursday	197	14.9	0	0.0	36	15.3
Friday	222	16.8	2	33.3	38	16.2
Saturday	188	14.2	2	33.3	40	17.0
Sunday	174	13.2	1	16.7	33	14.0
TOTAL	1,321	100.0	6	100.0	235	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	728	55.1	5	83.3	127	54.0
Female	593	44.9	1	16.7	108	46.0
Unknown	0	0.0	0	0.0	0	0.0
TOTAL	1,321	100.0	6	100.0	235	100.0

For drivers age 16-20 in the Upper Peninsula, there is a greater proportion of female drivers in all crashes and injury crashes than in both the 21-64 and 65 and over age groups. In this group, male drivers (83.3%) account for almost five times that of female drivers (16.7%) 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	944	71.5	2	33.3	152	64.7
2 occupants	257	19.5	3	50.0	62	26.4
3 occupants	75	5.7	0	0.0	12	5.1
4 occupants	30	2.3	0	0.0	8	3.4
5 occupants	7	0.5	0	0.0	0	0.0
6 + occupants	5	0.4	1	16.7	1	0.4
0 occupants	2	0.2	0	0.0	0	0.0
Unknown	1	0.1	0	0.0	0	0.0
TOTAL	1,321	100.0	6	100.0	235	100.0

UPPER PENINSULA 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 and Station Wagon	999	75.6	3	50.0	154	65.5
Van and Motorhome	24	1.8	0	0.0	4	1.7
Pickup	232	17.6	3	50.0	50	21.3
Small Truck (under 10,000 lbs.)	34	2.6	0	0.0	6	2.6
Motorcycle	11	0.8	0	0.0	7	3.0
Moped	3	0.2	0	0.0	2	0.9
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	3	0.2	0	0.0	3	1.3
Off Road Vehicle	9	0.7	0	0.0	8	3.4
Other	3	0.2	0	0.0	1	0.4
Unknown	0	0.0	0	0.0	0	0.0
CDL Truck/Bus (breakdown below)	3	0.2	0	0.0	0	0.0
TOTAL NUMBER OF DRIVERS	1,321	100.0	6	100.0	235	100.0

CDL TRUCK/BUS SUB-CATEGORY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Commercial Vehicle: Group A*	1	33.3	0	0.0	0	0.0
Commercial Vehicle: Group B**	0	0.0	0	0.0	0	0.0
Commercial Vehicle: Group C***	1	33.3	0	0.0	0	0.0
Other Truck	1	33.3	0	0.0	0	0.0
Unknown Truck	0	0.0	0	0.0	0	0.0
TOTAL NUMBER OF DRIVERS	3	100.0	0	100.0	0	100.0

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

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

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

UPPER PENINSULA 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	5,278	66.7	18	72.0	808	62.7
Turning left	384	4.9	1	4.0	103	8.0
Turning right	230	2.9	0	0.0	37	2.9
Stopped on roadway	487	6.2	4	16.0	87	6.8
In prior crash	5	0.1	0	0.0	3	0.2
Changing lanes	77	1.0	0	0.0	8	0.6
Backing	291	3.7	0	0.0	9	0.7
Slowing/stopping on roadway	478	6.0	0	0.0	89	6.9
Slowing/stopping other	20	0.3	0	0.0	5	0.4
Starting up on roadway	147	1.9	0	0.0	30	2.3
Starting up other	7	0.1	0	0.0	1	0.1
Entering parking	25	0.3	0	0.0	4	0.3
Leaving parking	29	0.4	0	0.0	3	0.2
Entering roadway	105	1.3	0	0.0	25	1.9
Leaving roadway	15	0.2	0	0.0	6	0.5
Making U-turn	24	0.3	0	0.0	10	0.8
Overtaking or passing	60	0.8	0	0.0	15	1.2
Avoiding object	7	0.1	0	0.0	2	0.2
Avoiding animal	69	0.9	0	0.0	11	0.9
Avoiding pedestrian	0	0.0	0	0.0	0	0.0
Avoiding vehicle (front/back)	60	0.8	1	4.0	16	1.2
Avoiding vehicle (angle)	23	0.3	0	0.0	7	0.5
Driverless moving	2	0.0	0	0.0	0	0.0
Parked	73	0.9	0	0.0	6	0.5
Crossing at intersection	1	0.0	0	0.0	1	0.1
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	0.0	0	0.0	0	0.0
In roadway against traffic	0	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	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	1	0.0	0	0.0	0	0.0
Other	5	0.1	0	0.0	0	0.0
Unknown	14	0.2	1	4.0	2	0.2
TOTAL	7,917	100.0	25	100.0	1,288	100.0

UPPER PENINSULA 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	24	0.3	0	0.0	8	0.6
Cross center/median	5	0.1	0	0.0	0	0.0
Ran off road left	13	0.2	0	0.0	2	0.2
Ran off road right	36	0.5	0	0.0	4	0.3
Re-enter road	0	0.0	0	0.0	0	0.0
Overturn	212	2.7	2	8.0	92	7.1
Separation of units	1	0.0	0	0.0	1	0.1
Fire/explosion	12	0.2	0	0.0	2	0.2
Immersion	0	0.0	0	0.0	0	0.0
Jackknife	6	0.1	0	0.0	0	0.0
Downhill runaway	2	0.0	0	0.0	1	0.1
Cargo loss/shift	19	0.2	0	0.0	0	0.0
Individual fell off	17	0.2	1	4.0	15	1.2
Other noncollision	45	0.6	0	0.0	8	0.6
SUBTOTAL	392	5.0	3	12.0	133	10.3

For drivers age 21-64 in the Upper Peninsula, an overturn is the most harmful event in a noncollision with the highest proportion of drivers in all crashes (2.7%), fatal crashes (8.0%), and injury crashes (7.1%).

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	23	0.3	1	4.0	19	1.5
Bicyclist	17	0.2	0	0.0	13	1.0
Motor vehicle in transport	3,981	50.3	16	64.0	865	67.2
Parked motor vehicle	316	4.0	0	0.0	23	1.8
Railway train	0	0.0	0	0.0	0	0.0
Animal	2,211	27.9	0	0.0	34	2.6
Other nonfixed objects	126	1.6	1	4.0	10	0.8
SUBTOTAL	6,674	84.3	18	72.0	964	74.8

UPPER PENINSULA 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	9	0.1	0	0.0	1	0.1
Bridge parapet end*	---	---	---	---	---	---
Bridge rail	10	0.1	0	0.0	2	0.2
Guardrail face	52	0.7	1	4.0	6	0.5
Guardrail end	16	0.2	0	0.0	4	0.3
Median barrier	9	0.1	0	0.0	1	0.1
Highway traffic sign post	45	0.6	0	0.0	4	0.3
Highway signal post	1	0.0	0	0.0	0	0.0
Luminaire/light support*	62	0.8	0	0.0	17	1.3
Utility pole*	---	---	---	---	---	---
Other pole	14	0.2	0	0.0	3	0.2
Culvert	8	0.1	0	0.0	4	0.3
Curb	13	0.2	0	0.0	2	0.2
Ditch	157	2.0	0	0.0	33	2.6
Embankment	90	1.1	1	4.0	11	0.9
Fence	7	0.1	0	0.0	0	0.0
Mailbox	46	0.6	0	0.0	4	0.3
Tree	220	2.8	2	8.0	77	6.0
Rail crossing signal	2	0.0	0	0.0	1	0.1
Building	13	0.2	0	0.0	6	0.5
Traffic island	0	0.0	0	0.0	0	0.0
Fire hydrant	7	0.1	0	0.0	2	0.2
Impact attenuator	1	0.0	0	0.0	1	0.1
Other fixed object	52	0.7	0	0.0	10	0.8
SUBTOTAL	834	10.5	4	16.0	189	14.7

For drivers age 21-64 in the Upper Peninsula, a tree is the fixed object associated with the highest proportion of drivers in all crashes (2.8%), fatal crashes (8.0%), and injury crashes (6.0%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Unknown Event	17	0.2	0	0.0	2	0.2
MOST HARMFUL EVENT TOTAL	7,917	100.0	25	100.0	1,288	100.0

*Data not available for 2015. For a complete list of changes, see Data Elements with Changes for 2015 Data.

UPPER PENINSULA 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	3,447	43.5	9	36.0	361	28.0
Head On	129	1.6	5	20.0	56	4.3
Head On - Left Turn	141	1.8	2	8.0	54	4.2
Angle	1,485	18.8	4	16.0	354	27.5
Rear End	1,361	17.2	5	20.0	289	22.4
Rear End - Left Turn	117	1.5	0	0.0	34	2.6
Rear End - Right Turn	91	1.1	0	0.0	9	0.7
Sideswipe - Same Direction	485	6.1	0	0.0	38	3.0
Sideswipe - Opposite Direction	214	2.7	0	0.0	35	2.7
Other/Unknown	447	5.6	0	0.0	58	4.5
TOTAL	7,917	100.0	25	100.0	1,288	100.0

Based on crash type, drivers age 21-64 in the Upper Peninsula are involved in the largest proportion of single vehicle crashes for all crashes (43.5%), fatal crashes (36.0%), and injury crashes (28.0%).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
On Road	6,727	85.0	17	68.0	1,003	77.9
Median	22	0.3	0	0.0	4	0.3
Shoulder	456	5.8	2	8.0	79	6.1
Outside of Shoulder/Curb	596	7.5	4	16.0	166	12.9
Gore	16	0.2	2	8.0	6	0.5
Other/Unknown	100	1.3	0	0.0	30	2.3
TOTAL	7,917	100.0	25	100.0	1,288	100.0

Other than on the road crashes, drivers age 21-64 in the Upper Peninsula have the highest proportion where the first impact is outside the shoulder/curb for all crashes (7.5%), fatal crashes (16.0%), and injury crashes (12.9%).

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	364	4.6	4	16.0	53	4.1
U.S. & Michigan Roads	4,206	53.1	13	52.0	703	54.6
County & City Roads	3,347	42.3	8	32.0	532	41.3
TOTAL	7,917	100.0	25	100.0	1,288	100.0

UPPER PENINSULA 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 - 02:59 AM	269	3.4	2	8.0	44	3.4
03:00 AM - 05:59 AM	310	3.9	1	4.0	45	3.5
06:00 AM - 08:59 AM	1,077	13.6	0	0.0	143	11.1
09:00 AM - 11:59 AM	1,102	13.9	2	8.0	215	16.7
12:00 PM - 02:59 PM	1,471	18.6	3	12.0	297	23.1
03:00 PM - 05:59 PM	1,717	21.7	6	24.0	300	23.3
06:00 PM - 08:59 PM	1,214	15.3	4	16.0	173	13.4
09:00 PM - 11:59 PM	753	9.5	7	28.0	70	5.4
Unknown	4	0.1	0	0.0	1	0.1
TOTAL	7,917	100.0	25	100.0	1,288	100.0

For drivers age 21-64 in the Upper Peninsula, the 3:00 - 5:59 PM time period has the highest proportion of drivers in all crashes (21.7%) and injury crashes (23.3%). The 9:00 - 11:59 PM time period has the highest proportion of fatal crashes (28.0%).

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	4,747	60.0	9	36.0	577	44.8	5	0.6
Speed too fast	755	9.5	2	8.0	171	13.3	214	25.5
Speed too slow	6	0.1	0	0.0	2	0.2	2	0.2
Failed to yield	579	7.3	1	4.0	145	11.3	181	21.6
Disregard traffic control	94	1.2	1	4.0	26	2.0	45	5.4
Drove wrong way	6	0.1	0	0.0	2	0.2	2	0.2
Drove left of center	47	0.6	1	4.0	11	0.9	14	1.7
Improper passing	24	0.3	0	0.0	9	0.7	7	0.8
Improper lane use	78	1.0	1	4.0	11	0.9	10	1.2
Improper turn	66	0.8	1	4.0	11	0.9	9	1.1
Improper/no signal	19	0.2	0	0.0	3	0.2	3	0.4
Improper backing	225	2.8	0	0.0	5	0.4	12	1.4
Unable to stop in assured clear distance	610	7.7	0	0.0	123	9.5	142	16.9
Reckless driving	44	0.6	3	12.0	22	1.7	21	2.5
Careless/negligent driving	291	3.7	2	8.0	95	7.4	124	14.8
Other	226	2.9	1	4.0	52	4.0	42	5.0
Unknown	100	1.3	3	12.0	23	1.8	6	0.7
TOTAL	7,917	100.0	25	100.0	1,288	100.0	839	100.0

After no hazardous action, the second highest hazardous action category for drivers age 21-64 in the Upper Peninsula for all crashes (9.5%) and injury crashes (25.5%) occurs when the driver's speed is too fast. The second highest hazardous actions for drivers in fatal crashes are reckless driving and unknown (12.0%).

UPPER PENINSULA 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	1,087	13.7	1	4.0	197	15.3
Tuesday	1,096	13.8	3	12.0	168	13.0
Wednesday	1,190	15.0	3	12.0	173	13.4
Thursday	1,259	15.9	2	8.0	193	15.0
Friday	1,372	17.3	9	36.0	213	16.5
Saturday	1,039	13.1	1	4.0	189	14.7
Sunday	874	11.0	6	24.0	155	12.0
TOTAL	7,917	100.0	25	100.0	1,288	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	4,551	57.5	19	76.0	727	56.4
Female	3,364	42.5	6	24.0	561	43.6
Unknown	2	0.0	0	0.0	0	0.0
TOTAL	7,917	100.0	25	100.0	1,288	100.0

For drivers age 21-64 in the Upper Peninsula, male drivers (76.0%) account for over three times that of female drivers (24.0%) 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	6,062	76.6	18	72.0	899	69.8
2 occupants	1,221	15.4	2	8.0	252	19.6
3 occupants	336	4.2	3	12.0	75	5.8
4 occupants	166	2.1	2	8.0	37	2.9
5 occupants	59	0.7	0	0.0	17	1.3
6 + occupants	35	0.4	0	0.0	4	0.3
0 occupants	32	0.4	0	0.0	3	0.2
Unknown	6	0.1	0	0.0	1	0.1
TOTAL	7,917	100.0	25	100.0	1,288	100.0

UPPER PENINSULA 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 and Station Wagon	5,328	67.3	13	52.0	820	63.7
Van and Motorhome	310	3.9	0	0.0	49	3.8
Pickup	1,745	22.0	5	20.0	240	18.6
Small Truck (under 10,000 lbs.)	136	1.7	0	0.0	26	2.0
Motorcycle	65	0.8	4	16.0	48	3.7
Moped	9	0.1	0	0.0	7	0.5
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	34	0.4	0	0.0	22	1.7
Off Road Vehicle	27	0.3	0	0.0	25	1.9
Other	31	0.4	0	0.0	6	0.5
Unknown	0	0.0	0	0.0	0	0.0
CDL Truck/Bus (breakdown below)	232	2.9	3	12.0	45	3.5
TOTAL NUMBER OF DRIVERS	7,917	100.0	25	100.0	1,288	100.0

CDL TRUCK/BUS SUB-CATEGORY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Commercial Vehicle: Group A*	138	59.5	1	33.3	25	55.6
Commercial Vehicle: Group B**	47	20.3	1	33.3	10	22.2
Commercial Vehicle: Group C***	6	2.6	0	0.0	3	6.7
Other Truck	22	9.5	1	33.3	6	13.3
Unknown Truck	19	8.2	0	0.0	1	2.2
TOTAL NUMBER OF DRIVERS	232	100.0	3	100.0	45	100.0

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

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

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

UPPER PENINSULA 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	1,018	62.0	4	44.4	157	54.9
Turning left	141	8.6	1	11.1	52	18.2
Turning right	46	2.8	0	0.0	6	2.1
Stopped on roadway	116	7.1	3	33.3	22	7.7
In prior crash	2	0.1	0	0.0	1	0.3
Changing lanes	19	1.2	0	0.0	2	0.7
Backing	70	4.3	0	0.0	2	0.7
Slowing/stopping on roadway	76	4.6	1	11.1	13	4.5
Slowing/stopping other	4	0.2	0	0.0	0	0.0
Starting up on roadway	42	2.6	0	0.0	12	4.2
Starting up other	1	0.1	0	0.0	0	0.0
Entering parking	5	0.3	0	0.0	0	0.0
Leaving parking	8	0.5	0	0.0	0	0.0
Entering roadway	38	2.3	0	0.0	11	3.8
Leaving roadway	4	0.2	0	0.0	2	0.7
Making U-turn	4	0.2	0	0.0	0	0.0
Overtaking or passing	14	0.9	0	0.0	2	0.7
Avoiding object	1	0.1	0	0.0	0	0.0
Avoiding animal	4	0.2	0	0.0	0	0.0
Avoiding pedestrian	0	0.0	0	0.0	0	0.0
Avoiding vehicle (front/back)	5	0.3	0	0.0	2	0.7
Avoiding vehicle (angle)	6	0.4	0	0.0	1	0.3
Driverless moving	0	0.0	0	0.0	0	0.0
Parked	14	0.9	0	0.0	1	0.3
Crossing at intersection	0	0.0	0	0.0	0	0.0
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	0.0	0	0.0	0	0.0
In roadway against traffic	0	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	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	0	0.0	0	0.0	0	0.0
Other	0	0.0	0	0.0	0	0.0
Unknown	3	0.2	0	0.0	0	0.0
TOTAL	1,641	100.0	9	100.0	286	100.0

UPPER PENINSULA 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	3	0.2	0	0.0	1	0.3
Cross center/median	2	0.1	0	0.0	1	0.3
Ran off road left	1	0.1	0	0.0	0	0.0
Ran off road right	8	0.5	1	11.1	2	0.7
Re-enter road	1	0.1	0	0.0	0	0.0
Overturn	22	1.3	0	0.0	10	3.5
Separation of units	0	0.0	0	0.0	0	0.0
Fire/explosion	3	0.2	0	0.0	0	0.0
Immersion	0	0.0	0	0.0	0	0.0
Jackknife	0	0.0	0	0.0	0	0.0
Downhill runaway	1	0.1	0	0.0	0	0.0
Cargo loss/shift	1	0.1	0	0.0	0	0.0
Individual fell off	3	0.2	0	0.0	3	1.0
Other noncollision	7	0.4	0	0.0	2	0.7
SUBTOTAL	52	3.2	1	11.1	19	6.6

For drivers age 65 and over in the Upper Peninsula, an overturn is the most harmful event in a noncollision with the highest proportion of drivers in all crashes (1.3%) and injury crashes (3.5%). Running off the road right is the most harmful event in a noncollision for fatal crashes (11.1%).

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	4	0.2	0	0.0	4	1.4
Bicyclist	7	0.4	0	0.0	4	1.4
Motor vehicle in transport	920	56.1	6	66.7	204	71.3
Parked motor vehicle	65	4.0	0	0.0	5	1.7
Railway train	0	0.0	0	0.0	0	0.0
Animal	428	26.1	0	0.0	7	2.4
Other nonfixed objects	24	1.5	0	0.0	1	0.3
SUBTOTAL	1,448	88.2	6	66.7	225	78.7

UPPER PENINSULA 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	0	0.0	0	0.0	0	0.0
Bridge parapet end*	---	---	---	---	---	---
Bridge rail	1	0.1	0	0.0	0	0.0
Guardrail face	6	0.4	0	0.0	1	0.3
Guardrail end	3	0.2	0	0.0	2	0.7
Median barrier	2	0.1	0	0.0	2	0.7
Highway traffic sign post	11	0.7	0	0.0	0	0.0
Highway signal post	0	0.0	0	0.0	0	0.0
Luminaire/light support*	7	0.4	0	0.0	2	0.7
Utility pole*	---	---	---	---	---	---
Other pole	2	0.1	0	0.0	0	0.0
Culvert	2	0.1	0	0.0	0	0.0
Curb	1	0.1	0	0.0	1	0.3
Ditch	21	1.3	0	0.0	4	1.4
Embankment	16	1.0	0	0.0	5	1.7
Fence	0	0.0	0	0.0	0	0.0
Mailbox	8	0.5	0	0.0	0	0.0
Tree	36	2.2	2	22.2	17	5.9
Rail crossing signal	2	0.1	0	0.0	1	0.3
Building	2	0.1	0	0.0	1	0.3
Traffic island	0	0.0	0	0.0	0	0.0
Fire hydrant	3	0.2	0	0.0	2	0.7
Impact attenuator	0	0.0	0	0.0	0	0.0
Other fixed object	14	0.9	0	0.0	3	1.0
SUBTOTAL	137	8.3	2	22.2	41	14.3

For drivers age 65 and over in the Upper Peninsula, a tree is the fixed object associated with the highest proportion of drivers in all crashes (2.2%), fatal crashes (22.2%), and injury crashes (5.9%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Unknown Event	4	0.2	0	0.0	1	0.3
MOST HARMFUL EVENT TOTAL	1,641	100.0	9	100.0	286	100.0

*Data not available for 2015. For a complete list of changes, see Data Elements with Changes for 2015 Data.

UPPER PENINSULA 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	618	37.7	3	33.3	64	22.4
Head On	20	1.2	1	11.1	10	3.5
Head On - Left Turn	44	2.7	0	0.0	21	7.3
Angle	376	22.9	1	11.1	86	30.1
Rear End	247	15.1	4	44.4	58	20.3
Rear End - Left Turn	23	1.4	0	0.0	8	2.8
Rear End - Right Turn	23	1.4	0	0.0	1	0.3
Sideswipe - Same Direction	122	7.4	0	0.0	10	3.5
Sideswipe - Opposite Direction	41	2.5	0	0.0	9	3.1
Other/Unknown	127	7.7	0	0.0	19	6.6
TOTAL	1,641	100.0	9	100.0	286	100.0

Based on crash type, drivers age 65 and over in the Upper Peninsula are involved in the largest proportion of single vehicle crashes for all crashes (37.7%), rear end crashes for fatal crashes (44.4%), and angle crashes for injury crashes (30.1%).

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	1,454	88.6	8	88.9	237	82.9
Median	4	0.2	0	0.0	1	0.3
Shoulder	73	4.4	0	0.0	18	6.3
Outside of Shoulder/Curb	78	4.8	1	11.1	23	8.0
Gore	2	0.1	0	0.0	0	0.0
Other/Unknown	30	1.8	0	0.0	7	2.4
TOTAL	1,641	100.0	9	100.0	286	100.0

Other than on the road crashes, drivers age 65 and over in the Upper Peninsula have the highest proportion where the first impact is on the outside the shoulder/curb for all crashes (4.8%), fatal crashes (11.1%), and injury crashes (8.0%).

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	80	4.9	3	33.3	14	4.9
U.S. & Michigan Roads	911	55.5	2	22.2	169	59.1
County & City Roads	650	39.6	4	44.4	103	36.0
TOTAL	1,641	100.0	9	100.0	286	100.0

UPPER PENINSULA 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 - 02:59 AM	17	1.0	0	0.0	3	1.0
03:00 AM - 05:59 AM	15	0.9	0	0.0	0	0.0
06:00 AM - 08:59 AM	142	8.7	1	11.1	18	6.3
09:00 AM - 11:59 AM	315	19.2	2	22.2	56	19.6
12:00 PM - 02:59 PM	420	25.6	1	11.1	90	31.5
03:00 PM - 05:59 PM	420	25.6	4	44.4	85	29.7
06:00 PM - 08:59 PM	214	13.0	1	11.1	26	9.1
09:00 PM - 11:59 PM	98	6.0	0	0.0	8	2.8
Unknown	0	0.0	0	0.0	0	0.0
TOTAL	1,641	100.0	9	100.0	286	100.0

For drivers age 65 and over in the Upper Peninsula, the 12:00 - 2:59 PM and 3:00 - 5:59 PM time periods have the highest proportion of drivers in all crashes (25.6%). The 3:00 - 5:59 PM time period has the highest proportion of drivers in fatal crashes (44.4%) and the 12:00 - 2:59 PM time period has the highest proportion of injury crashes (31.5%).

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	964	58.7	4	44.4	132	46.2	1	0.7
Speed too fast	73	4.4	0	0.0	20	7.0	9	6.3
Speed too slow	1	0.1	0	0.0	1	0.3	0	0.0
Failed to yield	237	14.4	2	22.2	67	23.4	70	49.0
Disregard traffic control	24	1.5	0	0.0	6	2.1	8	5.6
Drove wrong way	4	0.2	0	0.0	0	0.0	2	1.4
Drove left of center	9	0.5	0	0.0	2	0.7	2	1.4
Improper passing	12	0.7	0	0.0	3	1.0	0	0.0
Improper lane use	30	1.8	0	0.0	4	1.4	4	2.8
Improper turn	19	1.2	0	0.0	3	1.0	3	2.1
Improper/no signal	3	0.2	0	0.0	0	0.0	1	0.7
Improper backing	55	3.4	0	0.0	1	0.3	3	2.1
Unable to stop in assured clear distance	102	6.2	0	0.0	17	5.9	18	12.6
Reckless driving	0	0.0	0	0.0	0	0.0	0	0.0
Careless/negligent driving	44	2.7	2	22.2	13	4.5	18	12.6
Other	38	2.3	0	0.0	9	3.1	4	2.8
Unknown	26	1.6	1	11.1	8	2.8	0	0.0
TOTAL	1,641	100.0	9	100.0	286	100.0	143	100.0

After no hazardous action, the second highest hazardous action category for drivers age 65 and over in the Upper Peninsula for all crashes (14.4%) and injury crashes (23.4%) occurs when the driver fails to yield.

UPPER PENINSULA 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	208	12.7	0	0.0	31	10.8
Tuesday	236	14.4	1	11.1	35	12.2
Wednesday	279	17.0	2	22.2	54	18.9
Thursday	283	17.2	1	11.1	47	16.4
Friday	281	17.1	3	33.3	49	17.1
Saturday	193	11.8	1	11.1	34	11.9
Sunday	161	9.8	1	11.1	36	12.6
TOTAL	1,641	100.0	9	100.0	286	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	1,015	61.9	6	66.7	164	57.3
Female	625	38.1	3	33.3	122	42.7
Unknown	1	0.1	0	0.0	0	0.0
TOTAL	1,641	100.0	9	100.0	286	100.0

For drivers age 65 and over in the Upper Peninsula, there were 6 male drivers (66.7%) and 3 female drivers (33.3%) 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	1,232	75.1	5	55.6	206	72.0
2 occupants	354	21.6	3	33.3	67	23.4
3 occupants	26	1.6	1	11.1	8	2.8
4 occupants	10	0.6	0	0.0	2	0.7
5 occupants	7	0.4	0	0.0	1	0.3
6 + occupants	4	0.2	0	0.0	2	0.7
0 occupants	8	0.5	0	0.0	0	0.0
Unknown	0	0.0	0	0.0	0	0.0
TOTAL	1,641	100.0	9	100.0	286	100.0

UPPER PENINSULA 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 and Station Wagon	1,175	71.6	7	77.8	193	67.5
Van and Motorhome	62	3.8	1	11.1	15	5.2
Pickup	336	20.5	1	11.1	52	18.2
Small Truck (under 10,000 lbs.)	19	1.2	0	0.0	2	0.7
Motorcycle	20	1.2	0	0.0	16	5.6
Moped	1	0.1	0	0.0	1	0.3
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	2	0.1	0	0.0	1	0.3
Off Road Vehicle	4	0.2	0	0.0	2	0.7
Other	5	0.3	0	0.0	1	0.3
Unknown	1	0.1	0	0.0	0	0.0
CDL Truck/Bus (breakdown below)	16	1.0	0	0.0	3	1.0
TOTAL NUMBER OF DRIVERS	1,641	100.0	9	100.0	286	100.0

CDL TRUCK/BUS SUB-CATEGORY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Commercial Vehicle: Group A*	8	50.0	0	0.0	1	33.3
Commercial Vehicle: Group B**	5	31.3	0	0.0	2	66.7
Commercial Vehicle: Group C***	0	0.0	0	0.0	0	0.0
Other Truck	1	6.3	0	0.0	0	0.0
Unknown Truck	2	12.5	0	0.0	0	0.0
TOTAL NUMBER OF DRIVERS	16	100.0	0	0.0	3	100.0

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

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

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

ALCOHOL

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

VEHICLE	SEVERITY	TOTAL	CRASHES INVOLVING DRINKING, NOT DRUGS		CRASHES INVOLVING DRUGS, NOT DRINKING		CRASHES INVOLVING DRINKING AND DRUGS		TOTAL CRASHES INVOLVING DRINKING AND OR DRUGS	
			Operator in Crash	Operator Drinking	Operator in Crash	Operator Drugs	Operator in Crash	Operator Drinking and Drugs	Operator in Crash	Operator Drinking and/or Drugs
BICYCLISTS	Total*	36	2	0	1	1	0	0	3	1
	Killed	0	0	0	0	0	0	0	0	0**
	Injured	26	1	0	1	1	0	0	2	1
DRIVERS	Total*	11,662	366	267	67	42	39	31	472	340
	Killed	20	8	6	1	1	1	1	10	8**
	Injured	1,123	105	88	19	16	12	10	136	114
MOTORCYCLISTS	Total*	114	9	8	1	1	0	0	10	9
	Killed	4	2	2	1	1	0	0	3	3**
	Injured	81	7	6	0	0	0	0	7	6
ORV/ ATV RIDERS	Total*	61	12	12	0	0	0	0	12	12
	Killed	0	0	0	0	0	0	0	0	0**
	Injured	47	10	10	0	0	0	0	10	10
PEDESTRIANS	Total*	42	7	6	3	3	0	0	10	9
	Killed	1	0	0	0	0	0	0	0	0**
	Injured	39	6	5	3	3	0	0	9	8
SNOWMOBILERS	Total*	40	2	2	0	0	0	0	2	2
	Killed	0	0	0	0	0	0	0	0	0**
	Injured	23	1	1	0	0	0	0	1	1

**Total does include property damage only crashes*

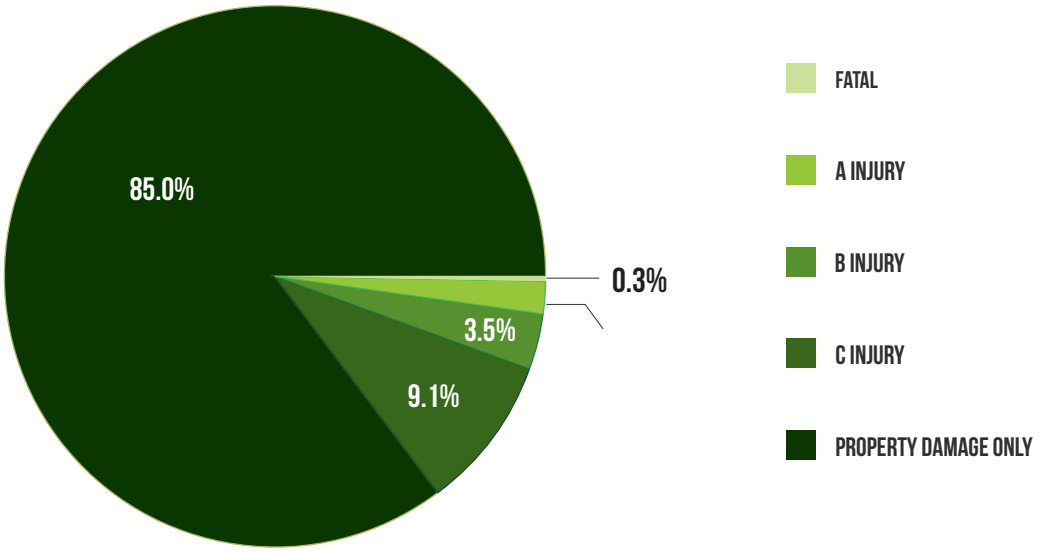
**In the Upper Peninsula, there were no bicyclists, eight drivers, three motorcyclists, no ORV/ATV riders, no pedestrians, and no snowmobilers who were killed and coded as drinking and/or using drugs by the police officer.

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

AGE OF DRIVER IN CRASH	ALL CRASHES				FATAL				INJURY			
	Drinking Only	Drug Only	Both	Total	**Drinking Only**	Drug Only	Both	Total	**Drinking Only**	Drug Only	Both	Total
13 years and under	0	0	0	0	0	0	0	0	0	0	0	0
14 years	0	0	0	0	0	0	0	0	0	0	0	0
15 years	0	0	0	0	0	0	0	0	0	0	0	0
16 years	2	1	0	3	0	0	0	0	2	1	0	3
17 years	3	0	0	3	0	0	0	0	0	0	0	0
18 years	5	1	0	6	0	0	0	0	3	0	0	3
19 years	6	1	1	8	0	0	1	1	2	1	0	3
20 years	8	0	2	10	1	0	0	1	2	0	1	3
21 - 24 years	47	7	7	61	0	0	2	2	12	3	1	16
25 - 34 years	73	17	12	102	2	1	0	3	34	7	4	45
35 - 44 years	40	8	4	52	1	0	0	1	18	6	1	25
45 - 54 years	44	6	3	53	1	0	0	1	18	3	2	23
55 - 64 years	24	0	2	26	2	0	0	2	6	0	2	8
65 - 69 years	6	1	1	8	0	0	0	0	2	0	0	2
70 - 74 years	4	0	0	4	0	0	0	0	1	0	0	1
75 - 79 years	2	0	0	2	0	0	0	0	2	0	0	2
80 - 84 years	1	0	0	1	0	0	0	0	0	0	0	0
85 - 89 years	1	0	0	1	0	0	0	0	1	0	0	1
90 years and over	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	0	0	0	0	0	0	0	0	0
Total	266	42	32	340	7	1	3	11	103	21	11	135

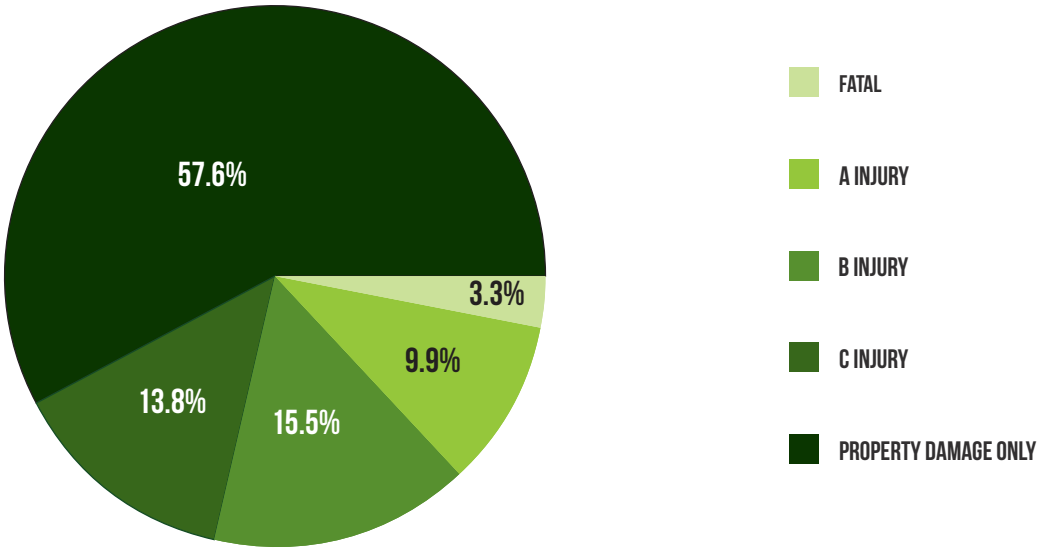
The driver age group 25 to 34 years represents the highest number of drinking and/or drug use in total crashes. The driver age groups 25 to 34 and 55 to 64 represents the highest number of drinking and/or drug use in fatal crashes.

UPPER PENINSULA ALL CRASHES BY INJURY SEVERITY



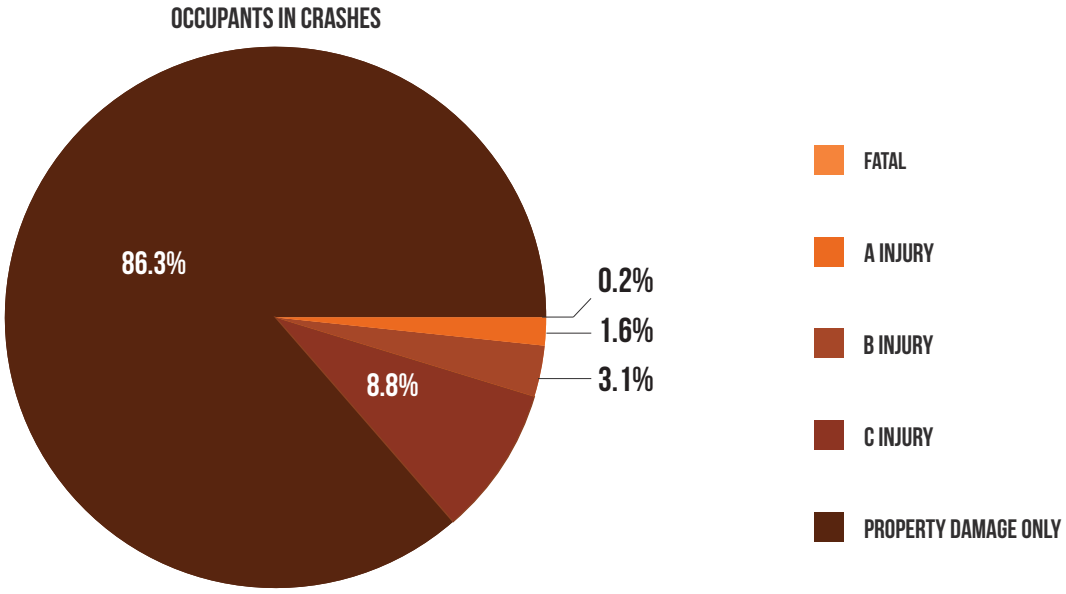
The majority of crashes do not involve injury (85.0%). Possible (C) injury crashes represent about two thirds of all injury crashes.

UPPER PENINSULA HAD-BEEN-DRINKING CRASHES BY INJURY SEVERITY

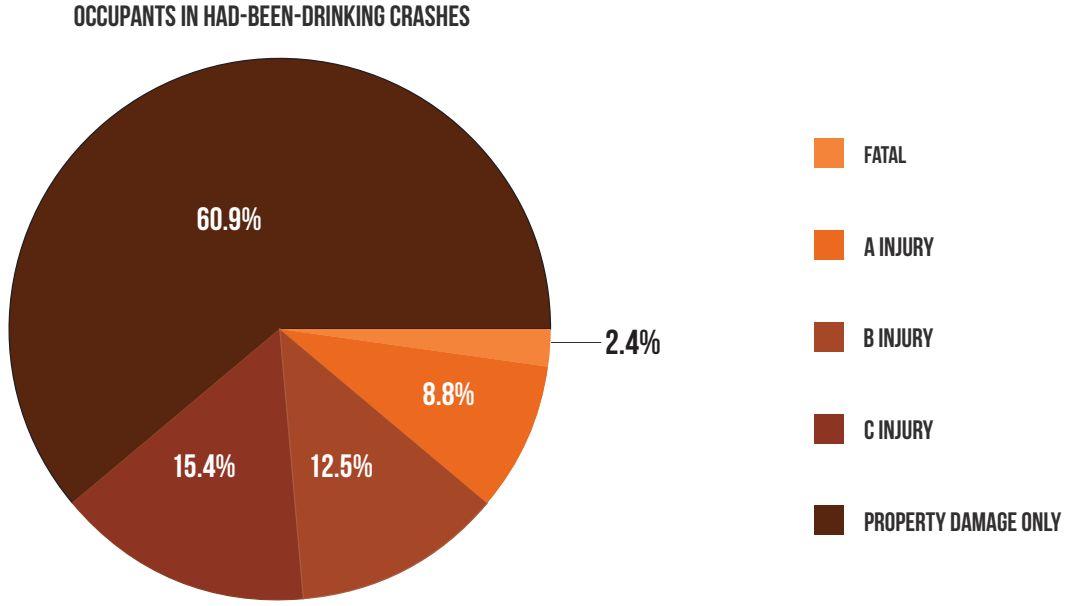


The problem of the drinking driver, pedestrian, and/or bicyclist is seen by comparing the two charts on this page. All injury levels are greater, and a fatality in the crash is eleven times more likely when one of the crash-involved operators is reported as had-been-drinking (HBD).

UPPER PENINSULA DEATH & INJURY FOR CRASH INVOLVED OCCUPANTS

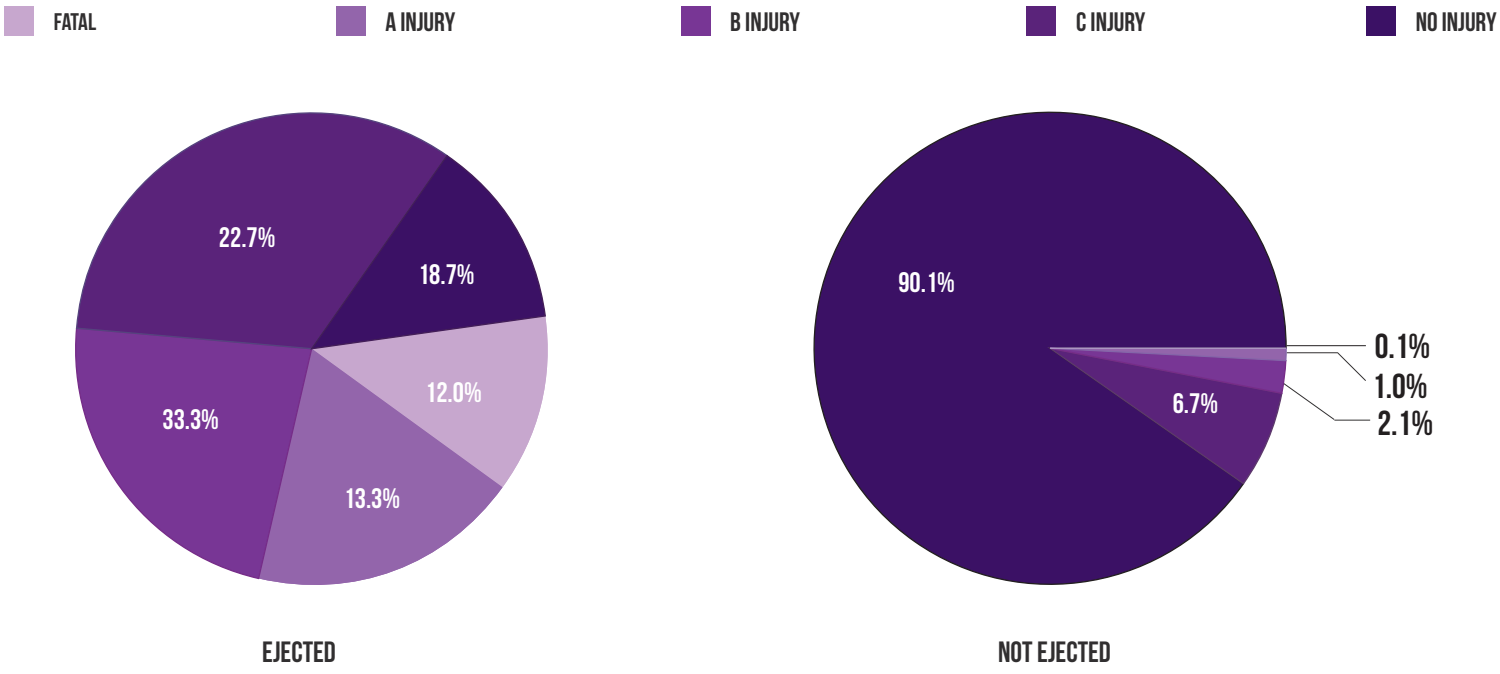


The majority of occupants involved in crashes are not injured (86.3%). About 66% of those who are injured receive only possible (C) injuries.



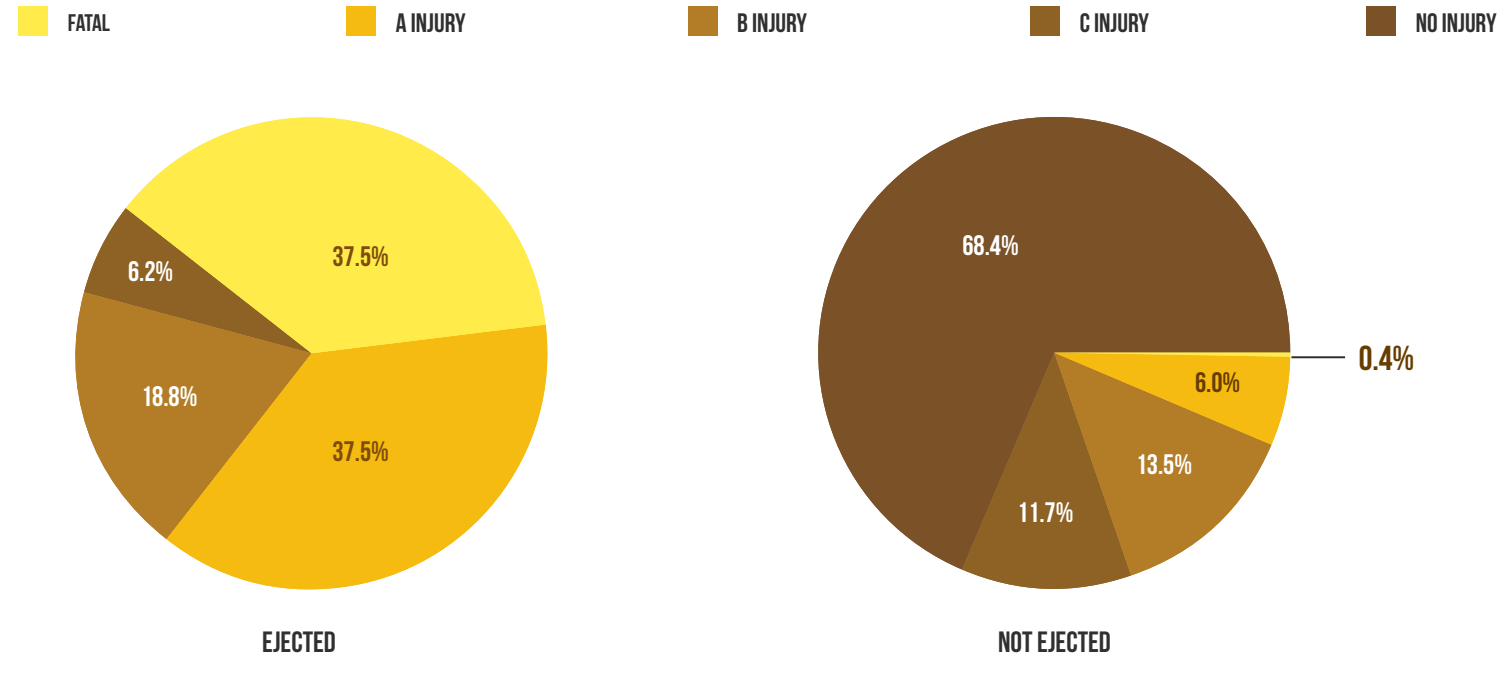
Crashes involving drinking tend to be more serious than non-drinking crashes. The percentage of fatalities is twelve times higher, and the most serious injury level (A) in had-been-drinking crashes is about five and a half times higher than in all crashes.

UPPER PENINSULA ALL DRIVERS INJURY SEVERITY - EJECTED VS. NOT EJECTED



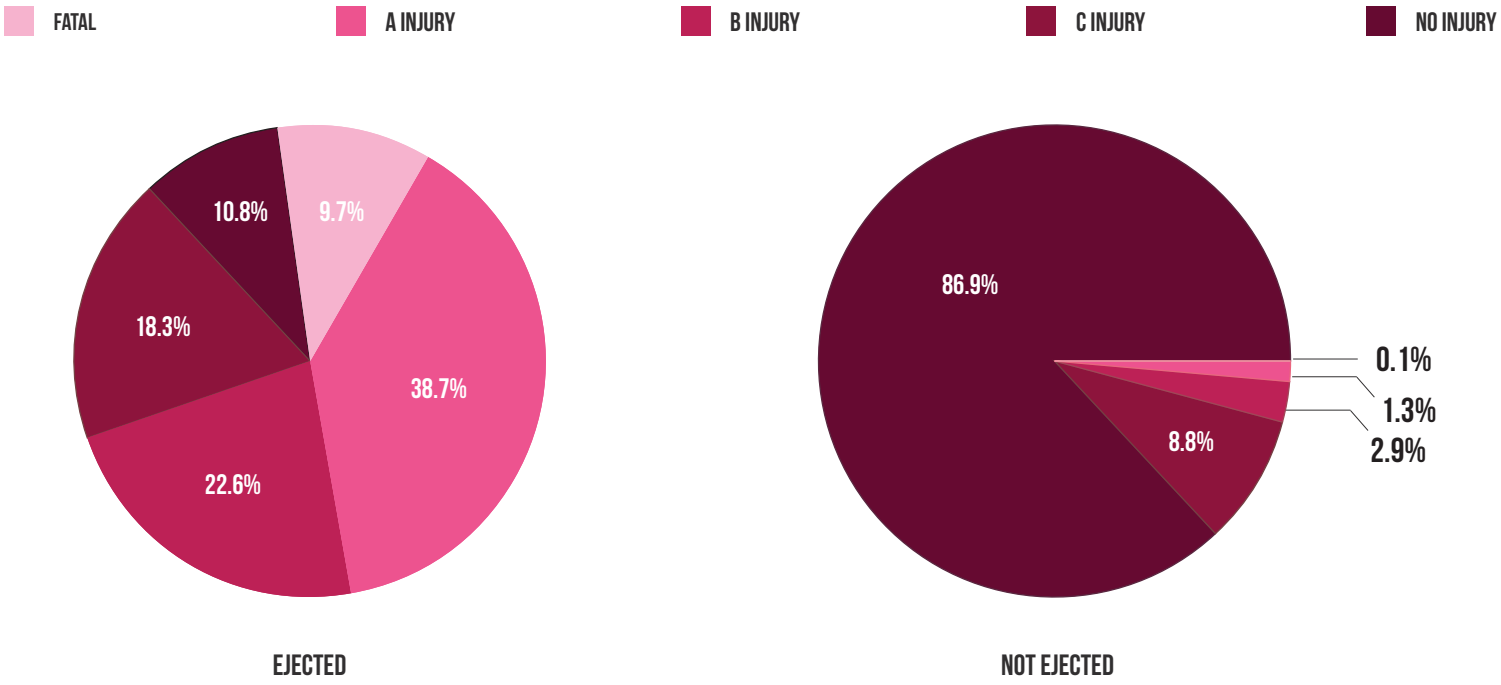
As can be seen in the two charts above, death and injury are much more likely when drivers are ejected from vehicles.

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



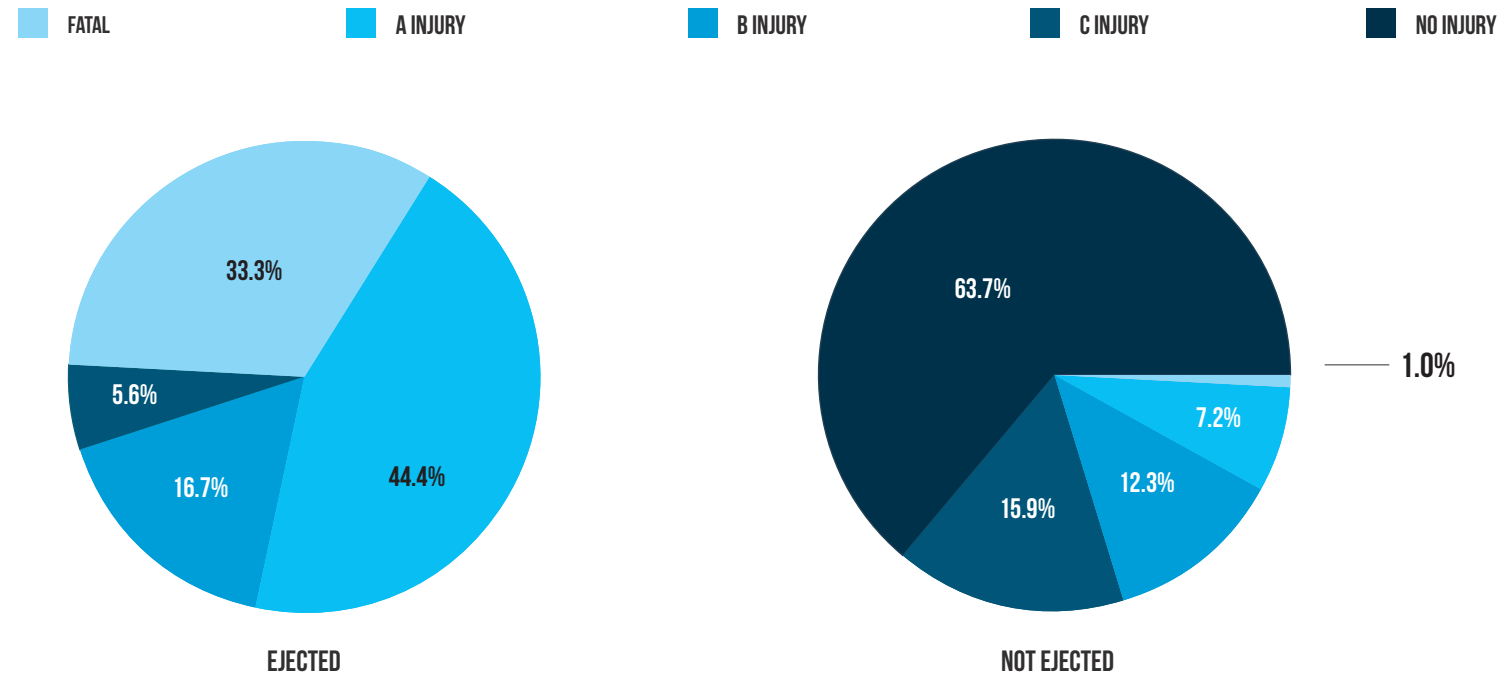
When compared to the charts above, the had-been-drinking charts demonstrate that injury severity is much worse for drivers who had been drinking in both ejected and non-ejected events.

UPPER PENINSULA ALL OCCUPANTS 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.

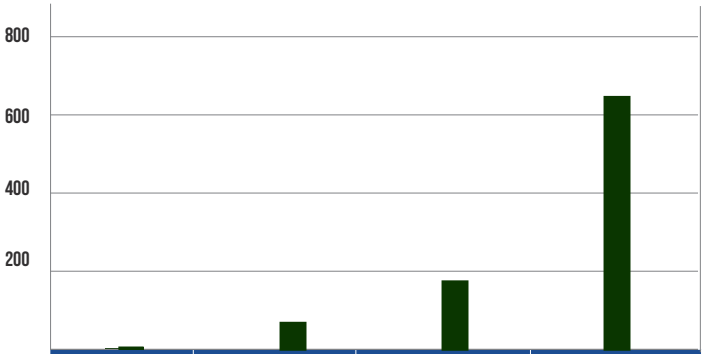
UPPER PENINSULA OCCUPANTS OF HAD-BEEN-DRINKING CRASHES INJURY SEVERITY - EJECTED VS. NOT EJECTED



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.

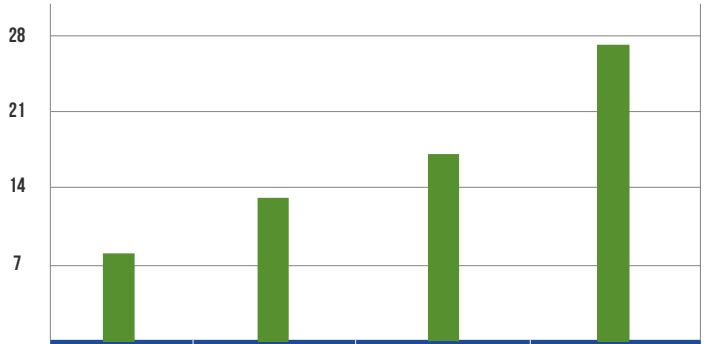
UPPER PENINSULA INJURY SEVERITY & RESTRAINT USE BY DRIVER INJURY

ALL CRASHES-RESTRAINTS USED



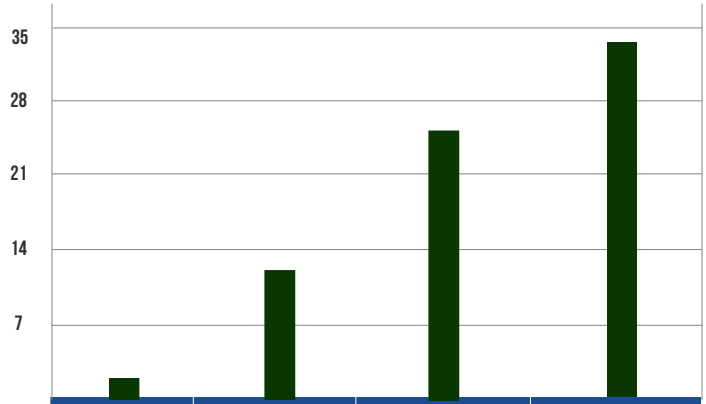
FATAL (K)	INCAPACITATING INJURY (A)	NON-INCAPACITATING INJURY (B)	POSSIBLE INJURY (C)
6	67	173	645

ALL CRASHES-RESTRAINTS NOT USED



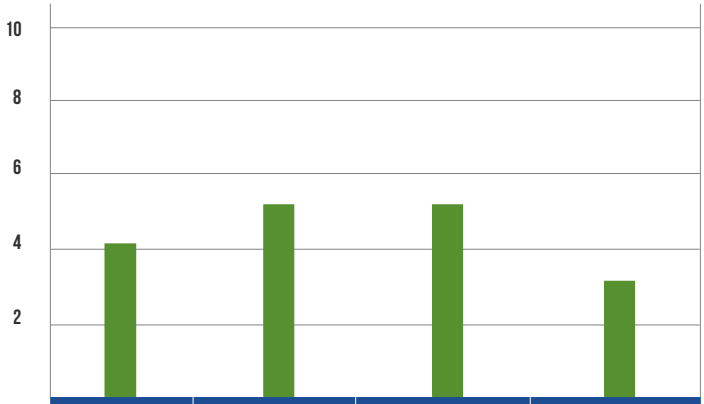
FATAL (K)	INCAPACITATING INJURY (A)	NON-INCAPACITATING INJURY (B)	POSSIBLE INJURY (C)
8	13	17	27

HAD-BEEN DRINKING CRASHES-RESTRAINTS USED



FATAL (K)	INCAPACITATING INJURY (A)	NON-INCAPACITATING INJURY (B)	POSSIBLE INJURY (C)
2	12	25	33

HAD-BEEN DRINKING CRASHES-RESTRAINTS NOT USED

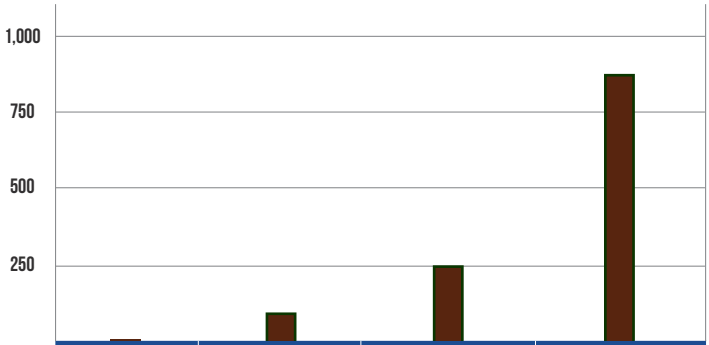


FATAL (K)	INCAPACITATING INJURY (A)	NON-INCAPACITATING INJURY (B)	POSSIBLE INJURY (C)
4	5	5	3

Note: Restraints used represent shoulder belts only used, lap belts only used, both lap and shoulder belts used, and restraint failure. Restraints not used represent no belts available and no belts used.

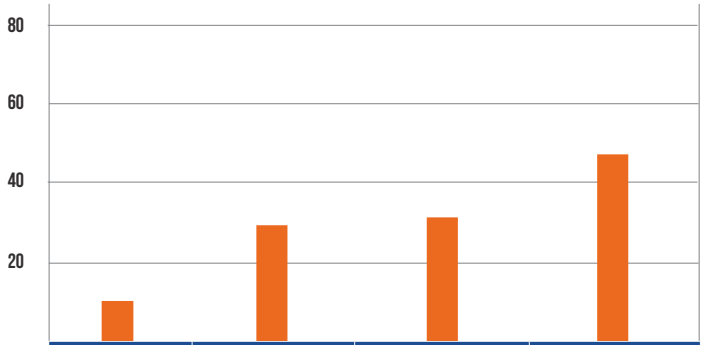
UPPER PENINSULA INJURY SEVERITY & RESTRAINT USE BY OCCUPANT INJURY

ALL CRASHES-RESTRAINTS USED



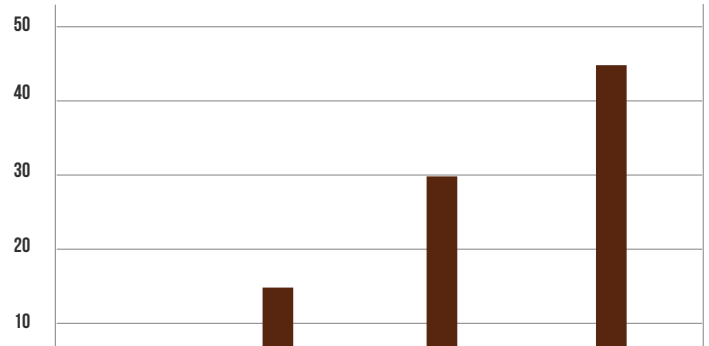
FATAL (K)	INCAPACITATING INJURY (A)	NON-INCAPACITATING INJURY (B)	POSSIBLE INJURY (C)
8	89	244	873

ALL CRASHES-RESTRAINTS NOT USED



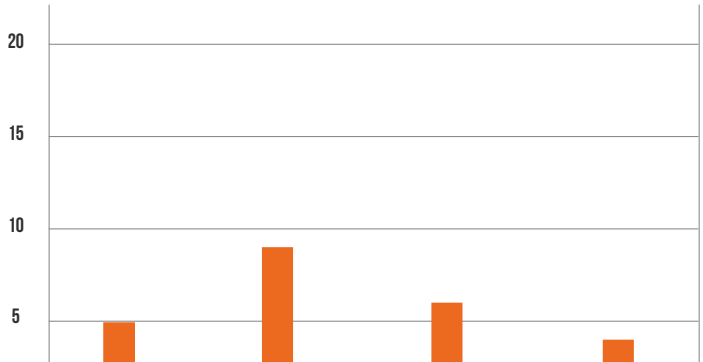
FATAL (K)	INCAPACITATING INJURY (A)	NON-INCAPACITATING INJURY (B)	POSSIBLE INJURY (C)
10	29	31	47

HAD-BEEN DRINKING CRASHES-RESTRAINTS USED



FATAL (K)	INCAPACITATING INJURY (A)	NON-INCAPACITATING INJURY (B)	POSSIBLE INJURY (C)
2	15	30	45

HAD-BEEN DRINKING CRASHES-RESTRAINTS NOT USED

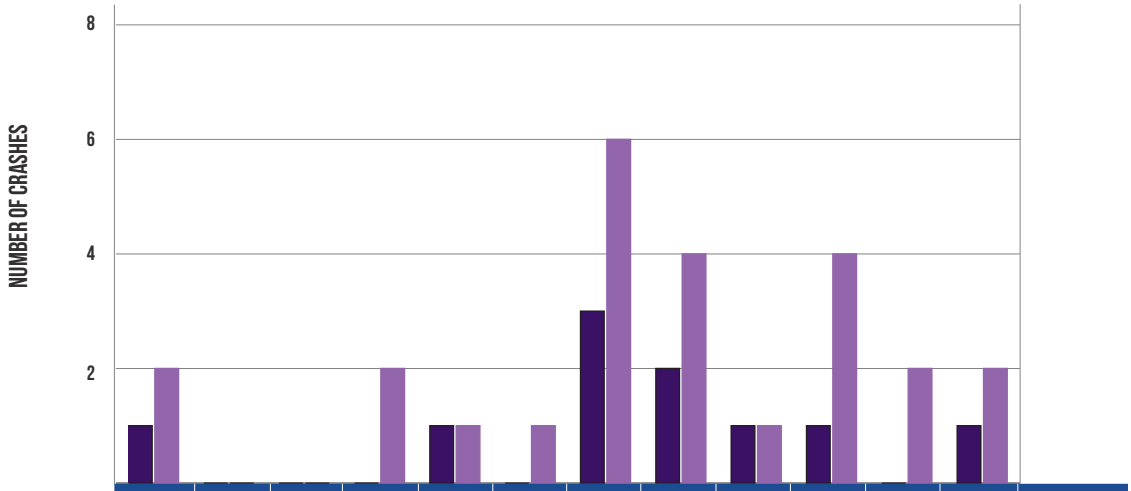


FATAL (K)	INCAPACITATING INJURY (A)	NON-INCAPACITATING INJURY (B)	POSSIBLE INJURY (C)
5	9	6	4

Note: Restraints used represent shoulder belts only used, lap belts only used, both lap and shoulder belts used, child restraints used, and restraint failure. Restraints not used represent no belts available; no belts used; and child restraint not used, unavailble, or improper use.

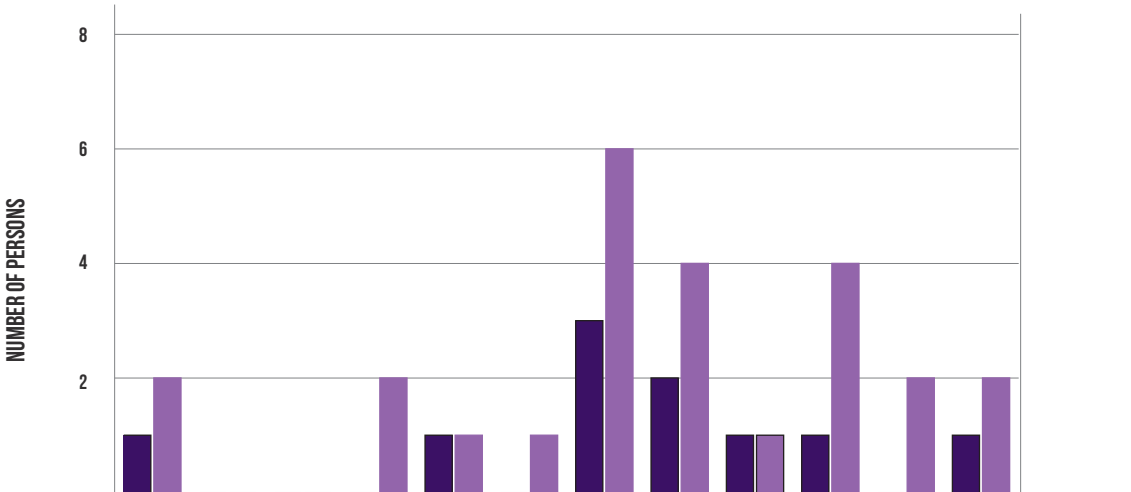
UPPER PENINSULA ALCOHOL INVOLVEMENT IN FATAL CRASHES

HAD-BEEN-DRINKING FATAL CRASHES BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
HBD FATAL CRASHES	1	0	0	0	1	0	3	2	1	1	0	1	10
TOTAL FATAL CRASHES	2	0	0	2	1	1	6	4	1	4	2	2	25

ALCOHOL-INVOLVED FATALITIES BY MONTH



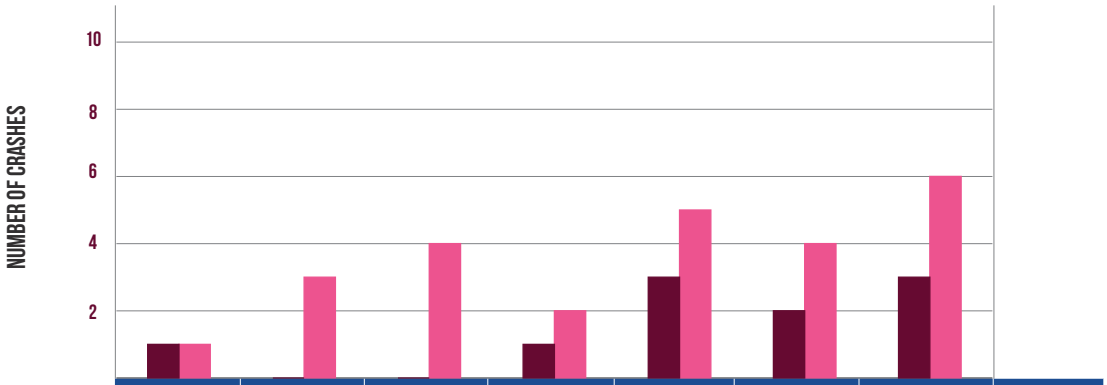
	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
ALCOHOL-INVOLVED FATALITIES	1	0	0	0	1	0	3	2	1	1	0	1	10
TOTAL FATALITIES	2	0	0	2	1	1	6	4	1	4	2	2	25

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

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

UPPER PENINSULA ALCOHOL INVOLVEMENT IN FATAL CRASHES (CONTINUED)

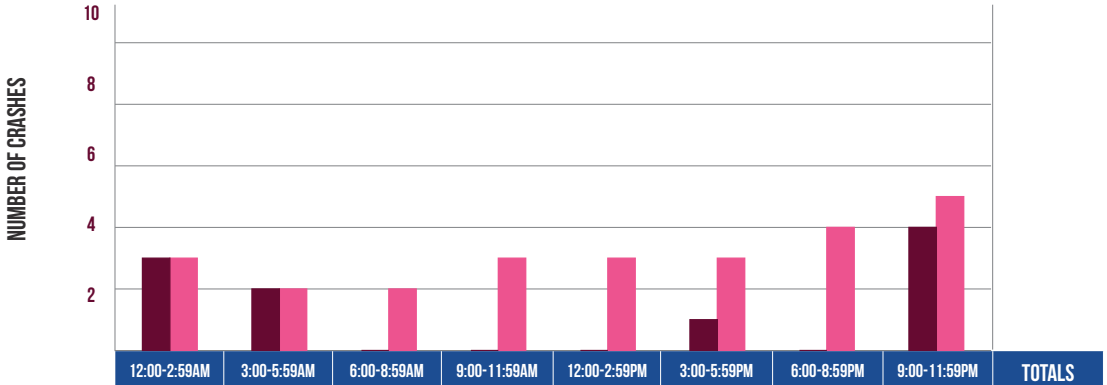
HAD-BEEN-DRINKING FATAL CRASHES BY DAY OF THE WEEK



	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTALS
HBD FATAL CRASHES	1	0	0	1	3	2	3	10
TOTAL FATAL CRASHES	1	3	4	2	5	4	6	25

Sunday had the highest number of fatal crashes and Friday and Sunday had the highest number of drinking-related fatal crashes in 2015.

HAD-BEEN-DRINKING FATAL CRASHES BY TIME OF DAY

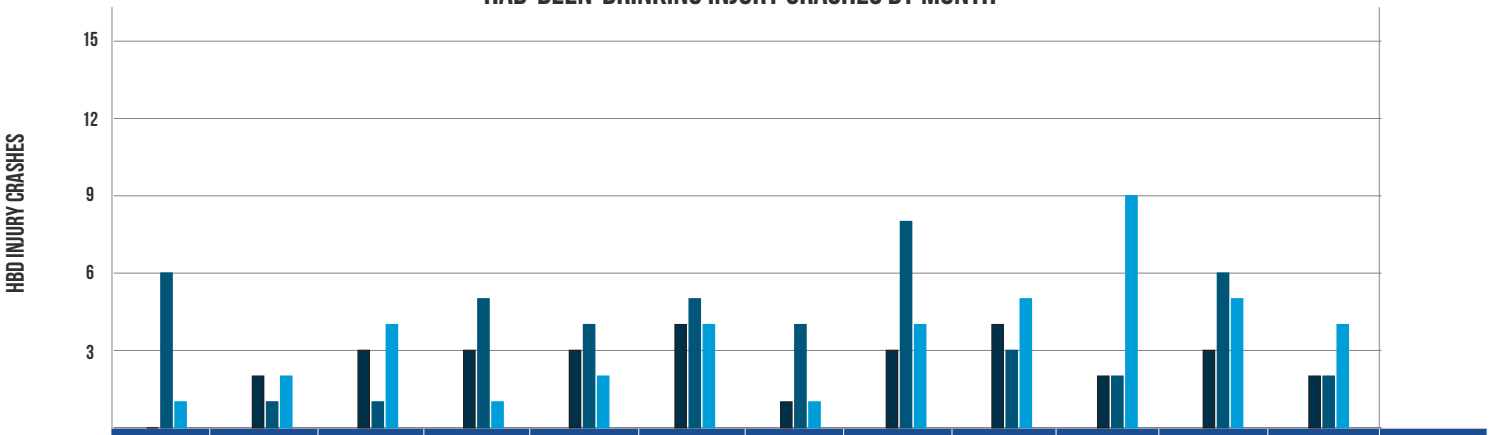


	12:00-2:59AM	3:00-5:59AM	6:00-8:59AM	9:00-11:59AM	12:00-2:59PM	3:00-5:59PM	6:00-8:59PM	9:00-11:59PM	TOTALS
HBD FATAL CRASHES	3	2	0	0	0	1	0	4	10
TOTAL FATAL CRASHES	3	2	2	3	3	3	4	5	25

The 9:00 PM to 11:59 PM time period had the highest number of HBD fatal crashes (4) and the highest number of total fatal crashes (5).

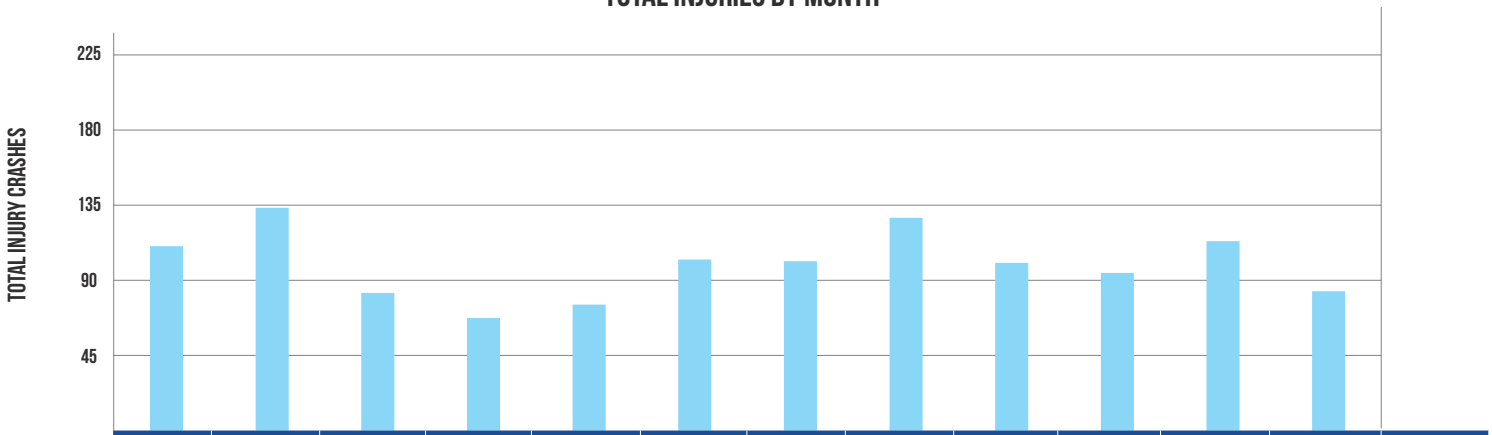
UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES

HAD-BEEN-DRINKING INJURY CRASHES BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
HBD A INJURY CRASHES	0	2	3	3	3	4	1	3	4	2	3	2	30
HBD B INJURY CRASHES	6	1	1	5	4	5	4	8	3	2	6	2	47
HBD C INJURY CRASHES	1	2	4	1	2	4	1	4	5	9	5	4	42

TOTAL INJURIES BY MONTH



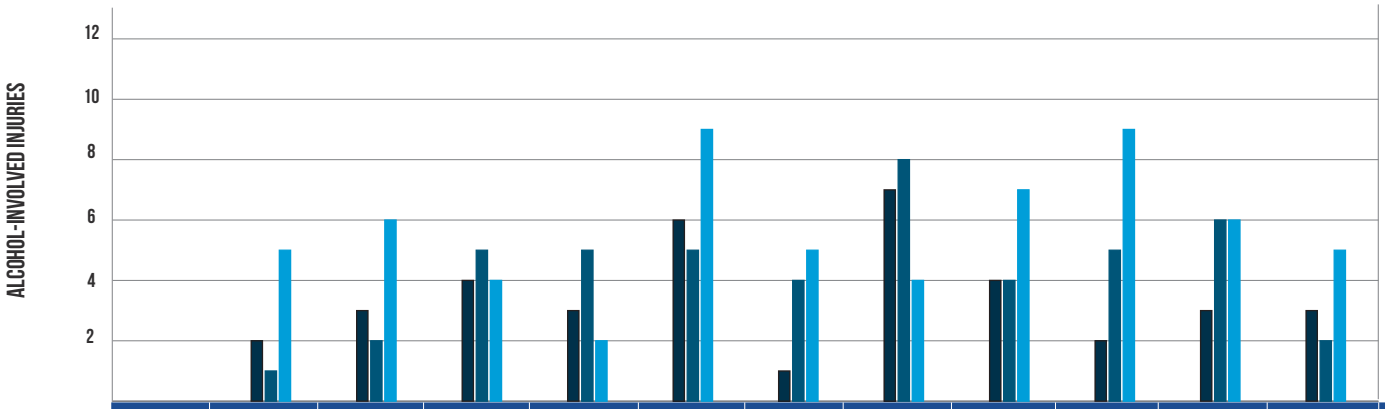
	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
TOTAL INJURY CRASHES	110	133	82	67	75	102	101	127	100	94	113	83	1,187

Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 2015, the highest number of had-been-drinking injury crashes occurred in August (15).

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

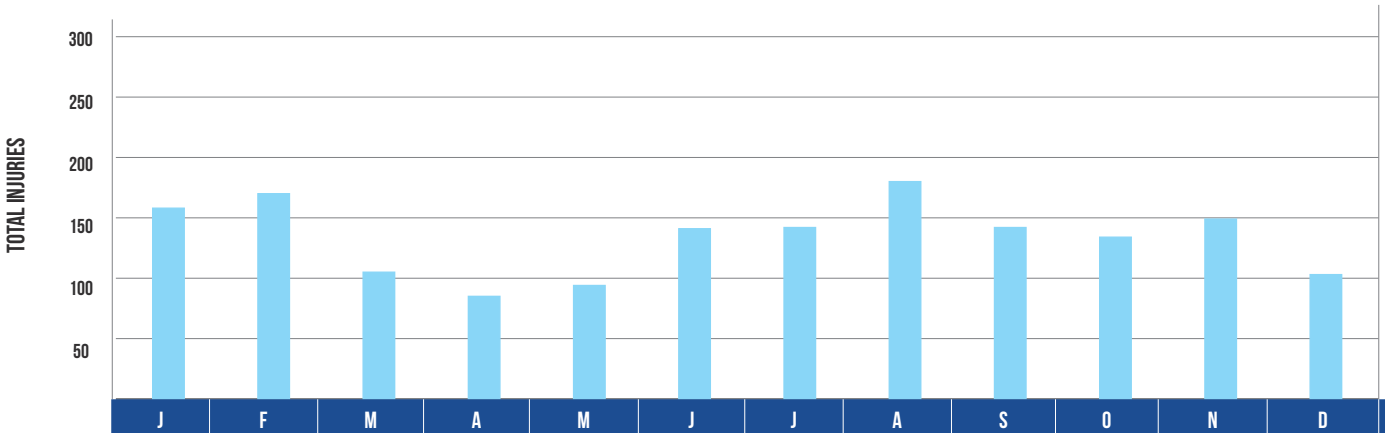
UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

ALCOHOL-INVOLVED INJURIES BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
ALCOHOL-INVOLVED A INJURIES	0	2	3	4	3	6	1	7	4	2	3	3	38
ALCOHOL-INVOLVED B INJURIES	6	1	2	5	5	5	4	8	4	5	6	2	53
ALCOHOL-INVOLVED C INJURIES	4	5	6	4	2	9	5	4	7	9	6	5	66

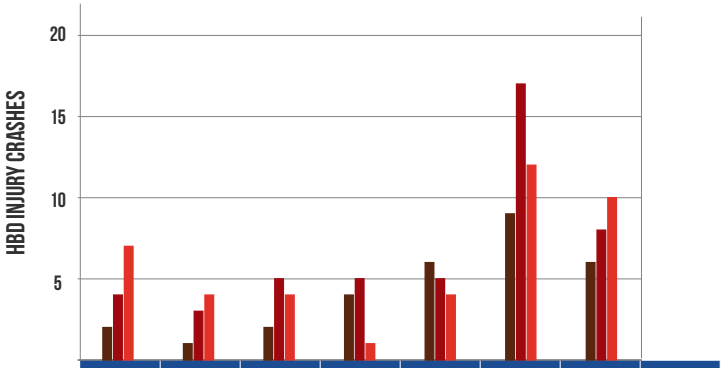
TOTAL INJURIES BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
TOTAL INJURIES	158	170	105	85	94	141	142	180	142	134	149	103	1,603

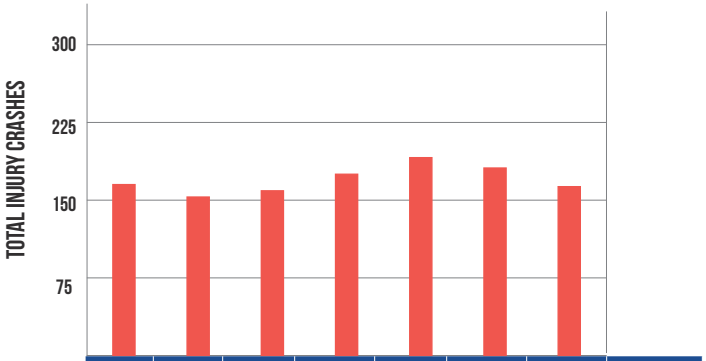
UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

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



	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTALS
HBD A INJURIES	2	1	2	4	6	9	6	30
HBD B INJURIES	4	3	5	5	5	17	8	47
HBD C INJURIES	7	4	4	1	4	12	10	42

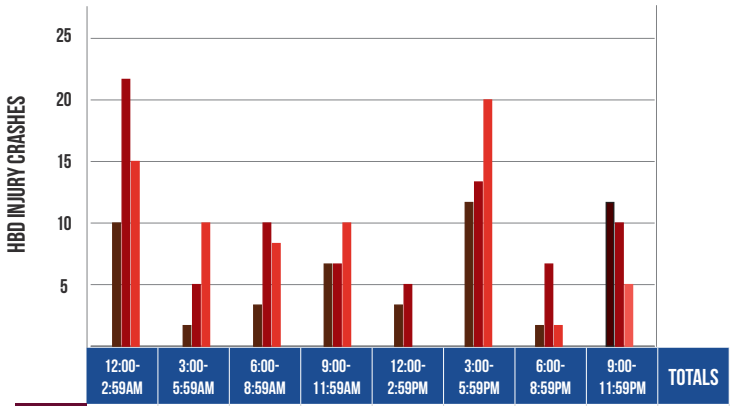
TOTAL INJURY CRASHES BY DAY OF THE WEEK



	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTALS
TOTAL INJURY CRASHES	165	153	159	175	191	181	163	1,187

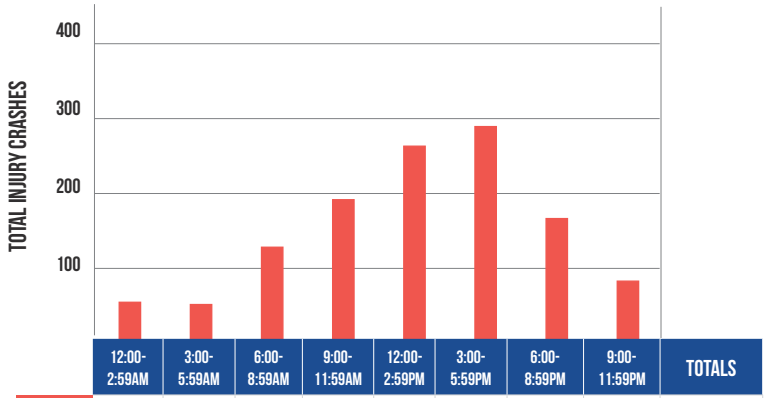
The peak day for all injury crashes is Friday. The highest proportion of had-been-drinking injury crashes to total injury crashes occurred on Saturday (21.0%).

HAD-BEEN-DRINKING INJURY CRASHES BY TIME OF DAY



	12:00-2:59AM	3:00-5:59AM	6:00-8:59AM	9:00-11:59AM	12:00-2:59PM	3:00-5:59PM	6:00-8:59PM	9:00-11:59PM	TOTALS
HBD A INJURIES	6	1	2	4	2	7	1	7	30
HBD B INJURIES	13	3	6	4	3	8	4	6	47
HBD C INJURIES	9	6	5	6	0	12	1	3	42

TOTAL INJURY CRASHES BY TIME OF DAY



	12:00-2:59AM	3:00-5:59AM	6:00-8:59AM	9:00-11:59AM	12:00-2:59PM	3:00-5:59PM	6:00-8:59PM	9:00-11:59PM	TOTALS
TOTAL INJURY CRASHES	50	47	123	186	257	283	161	78	1,185

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 12:00 AM and 2:59 AM. There were no had-been-drinking injury crashes and two injury crashes where the time of day was unknown.

UPPER PENINSULA 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	3	0.0	0	0.0	1	0	1	1
14 years	1	0.0	0	0.0	0	1	0	0
15 years	11	0.2	0	0.0	6	1	1	3
16 years	83	1.3	0	0.0	2	4	11	66
17 years	149	2.4	1	3.3	1	12	17	118
18 years	145	2.3	1	3.3	7	6	15	116
19 years	179	2.8	2	6.7	3	10	16	148
20 years	172	2.7	1	3.3	4	6	13	148
21 - 24 years	591	9.3	2	6.7	12	22	55	500
25 - 34 years	1,009	15.9	5	16.7	16	44	113	831
35 - 44 years	833	13.1	4	13.3	23	32	67	707
45 - 54 years	1,036	16.3	3	10.0	31	46	89	867
55 - 64 years	1,082	17.1	5	16.7	34	40	103	900
65 - 69 years	390	6.2	1	3.3	8	11	46	324
70 - 74 years	268	4.2	3	10.0	4	9	30	222
75 - 79 years	183	2.9	1	3.3	5	2	23	152
80 - 84 years	96	1.5	1	3.3	1	4	7	83
85 - 89 years	65	1.0	0	0.0	1	3	8	53
90 years and over	13	0.2	0	0.0	0	0	2	11
Unknown	29	0.5	0	0.0	0	1	3	25
Total	6,338**	100.0	30	100.0	159	254	620	5,275

The male driver age groups 25 to 34 and 55 to 64 experienced the highest number of fatal crashes. The male driver age group 55 to 64 years experienced the highest number of injury crashes. The male driver age group 55 to 64 years experienced the highest number of property damage only crashes.

***Note: This table excludes 590 drivers of unknown gender.*

UPPER PENINSULA 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	0	0.0	0	0.0	0	0	0	0
15 years	0	0.0	0	0.0	0	0	0	0
16 years	1	0.5	0	0.0	0	0	1	0
17 years	3	1.4	0	0.0	0	0	0	3
18 years	4	1.8	0	0.0	2	0	0	2
19 years	5	2.3	1	11.1	0	0	1	3
20 years	9	4.1	1	11.1	0	0	2	6
21 - 24 years	39	17.9	1	11.1	3	6	1	28
25 - 34 years	61	28.0	2	22.2	6	9	8	36
35 - 44 years	32	14.7	1	11.1	5	8	3	15
45 - 54 years	30	13.8	1	11.1	5	4	6	14
55 - 64 years	20	9.2	2	22.2	1	2	2	13
65 - 69 years	6	2.8	0	0.0	0	0	1	5
70 - 74 years	4	1.8	0	0.0	0	1	0	3
75 - 79 years	2	0.9	0	0.0	1	0	1	0
80 - 84 years	1	0.5	0	0.0	0	0	0	1
85 - 89 years	1	0.5	0	0.0	1	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	218**	100.0	9	100.0	24	30	26	129

The male drinking driver age groups 25 to 34 and and 55 to 64 experienced the highest number of fatal crashes. The male driver age group 25 to 34 years experienced the highest number of injury crashes and property damage only crashes.

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

UPPER PENINSULA 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	1	0.0	0	0.0	0	0	1	0
14 years	3	0.1	0	0.0	1	0	0	2
15 years	11	0.2	0	0.0	1	0	3	7
16 years	96	2.1	0	0.0	4	5	14	73
17 years	94	2.0	1	10.0	2	3	8	80
18 years	130	2.8	0	0.0	2	5	21	102
19 years	133	2.9	0	0.0	4	4	13	112
20 years	140	3.0	0	0.0	3	6	14	117
21 - 24 years	449	9.7	3	30.0	4	19	60	363
25 - 34 years	798	17.3	1	10.0	19	28	91	659
35 - 44 years	699	15.2	0	0.0	8	22	95	574
45 - 54 years	753	16.3	2	20.0	6	22	83	640
55 - 64 years	665	14.4	0	0.0	6	18	80	561
65 - 69 years	239	5.2	2	20.0	6	8	26	197
70 - 74 years	137	3.0	1	10.0	1	6	19	110
75 - 79 years	124	2.7	0	0.0	2	3	18	101
80 - 84 years	76	1.6	0	0.0	1	7	14	54
85 - 89 years	38	0.8	0	0.0	1	2	5	30
90 years and over	11	0.2	0	0.0	0	0	3	8
Unknown	11	0.2	0	0.0	1	0	2	8
Total	4,608**	100.0	10	100.0	72	158	570	3,798

The female driver age group 21 to 24 years experienced the highest number of fatal crashes. The female driver age group 25 to 34 years experienced the highest number of injury crashes and property damage only crashes.

***Note: This table excludes 877 drivers of unknown gender.*

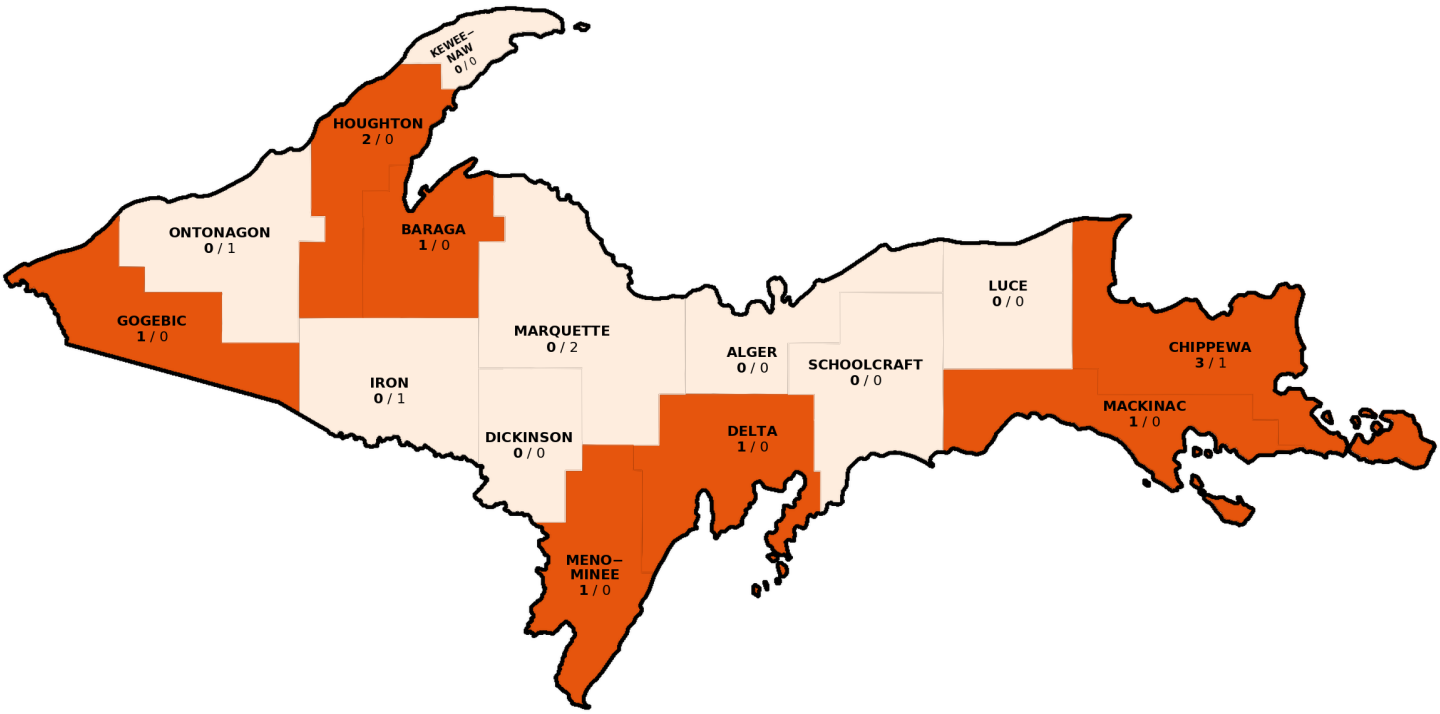
UPPER PENINSULA FEMALE DRINKING DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	FEMALE DRIVERS		FATAL		INJURY			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
13 years and under	0	0.0	0	0.0	0	0	0	0
14 years	0	0.0	0	0.0	0	0	0	0
15 years	0	0.0	0	0.0	0	0	0	0
16 years	1	1.2	0	0.0	0	1	0	0
17 years	0	0.0	0	0.0	0	0	0	0
18 years	1	1.2	0	0.0	0	0	1	0
19 years	2	2.5	0	0.0	0	0	1	1
20 years	1	1.2	0	0.0	0	0	1	0
21 - 24 years	15	18.8	1	100.0	0	2	1	11
25 - 34 years	24	30.0	0	0.0	2	8	5	9
35 - 44 years	12	15.0	0	0.0	1	1	1	9
45 - 54 years	17	21.2	0	0.0	1	1	3	12
55 - 64 years	6	7.5	0	0.0	1	2	0	3
65 - 69 years	1	1.2	0	0.0	0	1	0	0
70 - 74 years	0	0.0	0	0.0	0	0	0	0
75 - 79 years	0	0.0	0	0.0	0	0	0	0
80 - 84 years	0	0.0	0	0.0	0	0	0	0
85 - 89 years	0	0.0	0	0.0	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	80**	100.0	1	100.0	5	16	13	45

The female drinking driver age group 21 to 24 years experienced the highest number of fatal crashes. The female driver age group 25 to 34 years experienced the highest number of injury crashes. The female drinking driver age group 45 to 54 years experienced the highest number of property damage only crashes.

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

TRAFFIC FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY



Where HBD Traffic Fatalities Occurred

A One–Year Comparison

2015 = 10 / 2014 = 5

Same or decrease

Increase

DEER

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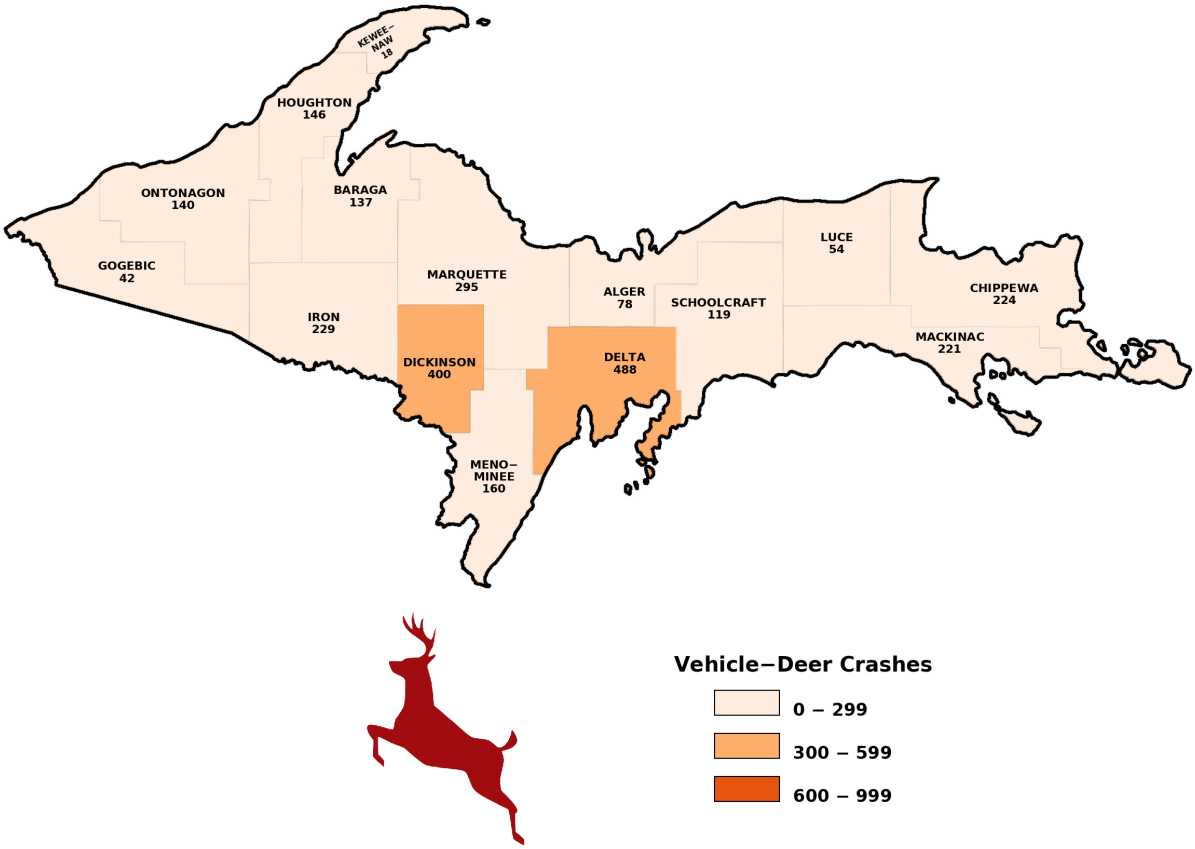
UPPER PENINSULA MICHIGAN MOTOR VEHICLE-DEER INVOLVED CRASHES



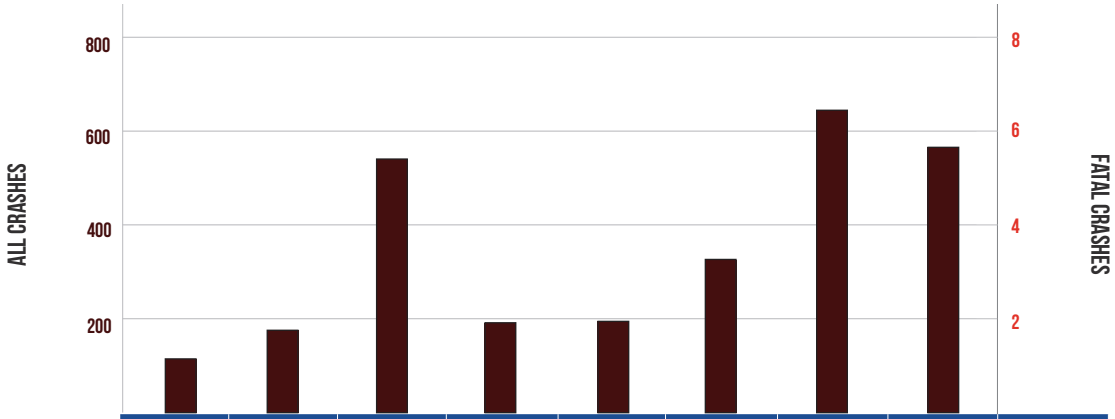
The Upper Peninsula had 2,751 reported vehicle-deer crashes during 2015. Those collisions resulted in 59 people injured and none were killed. Of the 2,760 vehicles involved, 1,987 (72.0%) were passenger cars, 588 (21.3%) were pickups, and 94 (3.4%) were minivans, vans, or motorhomes. All other vehicle types (including motorcycle, snowmobile, ORV/ATV, large truck, and moped; uncoded and errors are also included) totaled 91 (3.3%).

In the Upper Peninsula, 34.0 percent of crashes in all counties involved deer. This compares to 15.8 percent for the number of deer-involved crashes statewide. Delta County had the highest number of vehicle-deer crashes (488); translating to 42.5 percent of the total crashes in that county in 2015.

UPPER PENINSULA 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	887	32.2	0	0.0	3	9	15	860
Dawn	192	7.0	0	0.0	0	0	3	189
Dusk	175	6.4	0	0.0	1	0	2	172
Dark - Lighted	106	3.9	0	0.0	0	1	0	105
Dark - Unlighted	1,355	49.3	0	0.0	1	0	16	1,338
Other/Unknown	36	1.3	0	0.0	0	0	0	36
Total	2,751	100.0	0	---	5	10	36	2,700

TIME AND SEVERITY OF MOTOR VEHICLE — DEER CRASHES



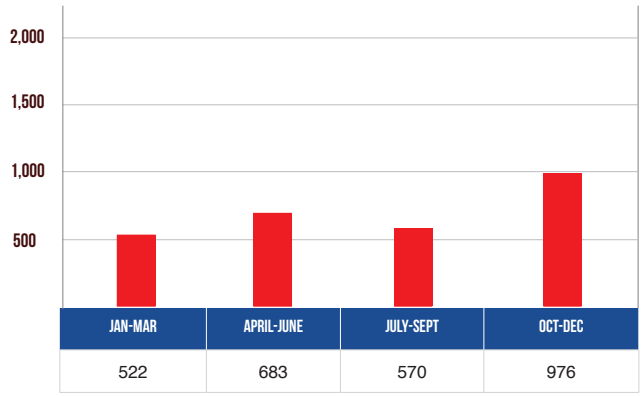
	12:00-2:59AM	3:00-5:59AM	6:00-8:59AM	9:00-11:59AM	12:00-2:59PM	3:00-5:59PM	6:00-8:59PM	9:00-11:59PM	TOTALS
ALL CRASHES	114	175	540	191	194	326	644	565	2,749
FATAL CRASHES	0	0	0	0	0	0	0	0	0

23.4 percent (644) of the reported vehicle-deer collisions occurred during the 6:00 PM to 8:59 PM time period.

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	214	7.8	0	0.0	0	0	1	213
February	130	4.7	0	0.0	0	0	0	130
March	178	6.5	0	0.0	0	1	1	176
April	230	8.4	0	0.0	1	0	4	225
May	195	7.1	0	0.0	0	2	1	192
June	258	9.4	0	0.0	2	3	6	247
July	195	7.1	0	0.0	0	1	4	190
August	167	6.1	0	0.0	1	0	4	162
September	208	7.6	0	0.0	1	1	2	204
October	312	11.3	0	0.0	0	1	5	306
November	426	15.5	0	0.0	0	1	6	419
December	238	8.7	0	0.0	0	0	2	236
Total	2,751	100.0	0	---	5	10	36	2,700

MOTOR VEHICLE — DEER CRASHES



35.5 percent (976) of the reported vehicle-deer collisions occurred during the fourth quarter of the year.

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CRASH

(circumstances common to all traffic units in a crash)

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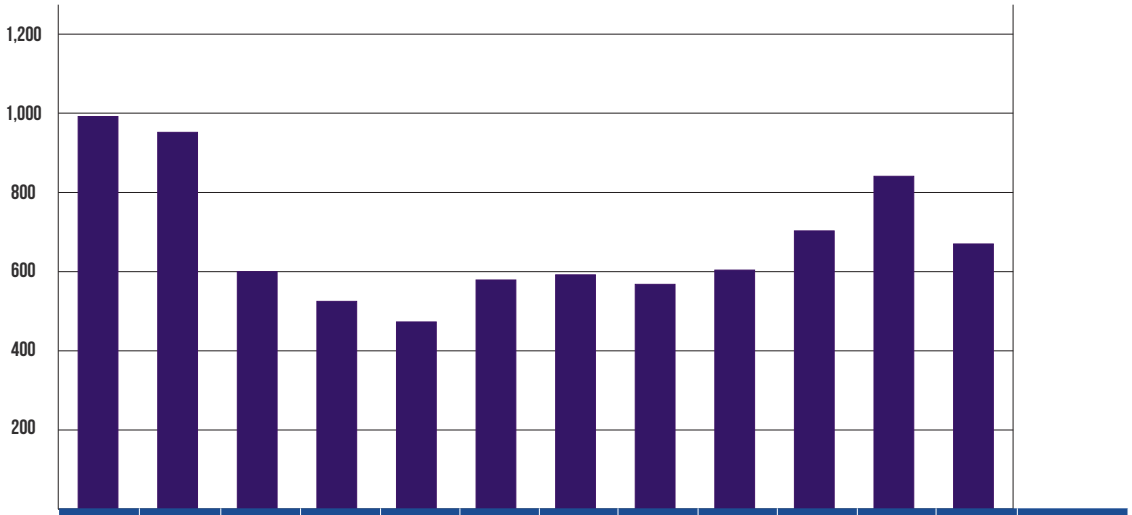
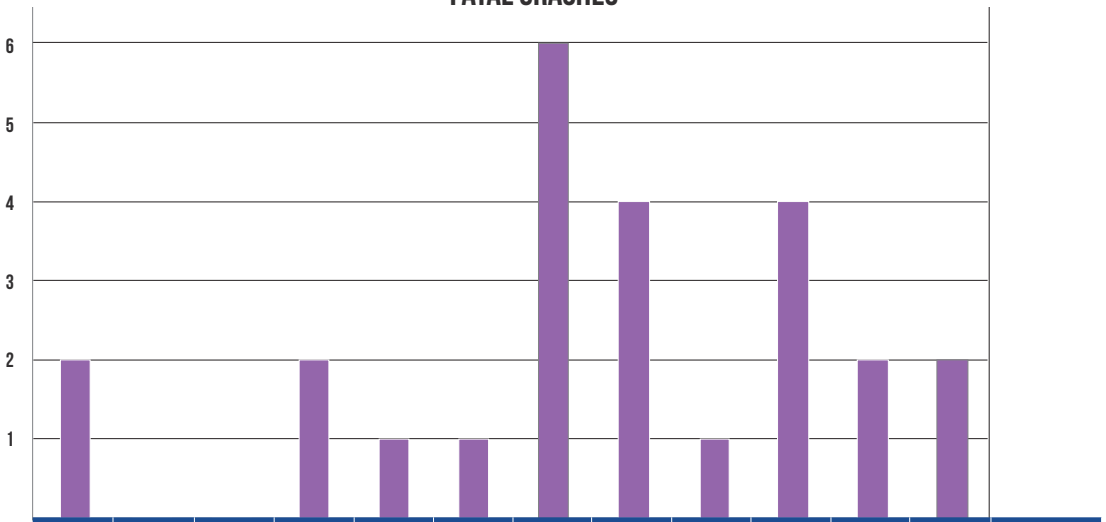
UPPER PENINSULA ALL CRASHES INJURY SEVERITY BY MONTH

TOTAL CRASHES



J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
992	952	600	525	473	579	592	568	604	703	841	670	8,099

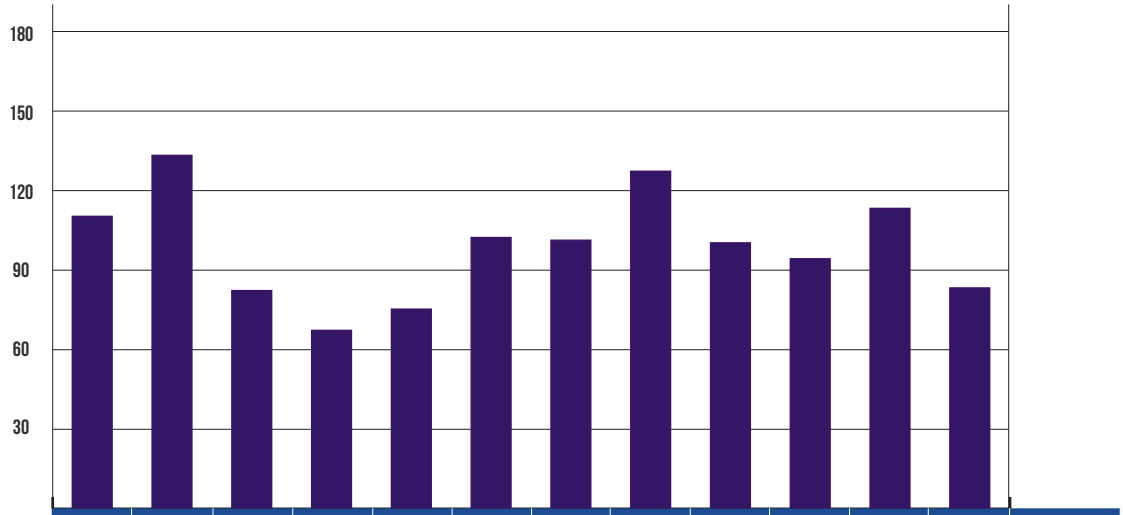
FATAL CRASHES



J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
2	0	0	2	1	1	6	4	1	4	2	2	25

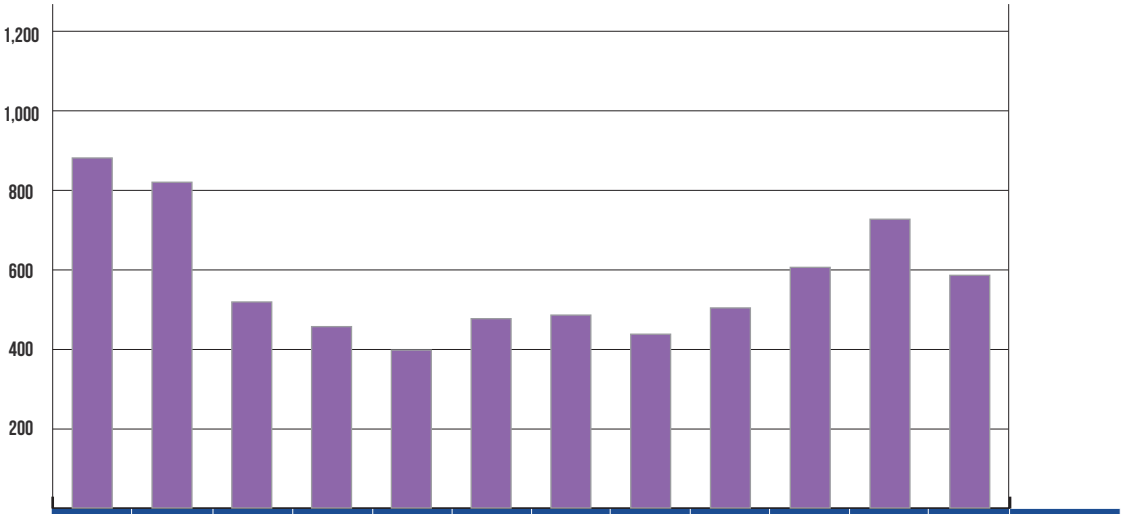
UPPER PENINSULA ALL CRASHES INJURY SEVERITY BY MONTH (CONTINUED)

INJURY CRASHES



J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
110	133	82	67	75	102	101	127	100	94	113	83	1,187

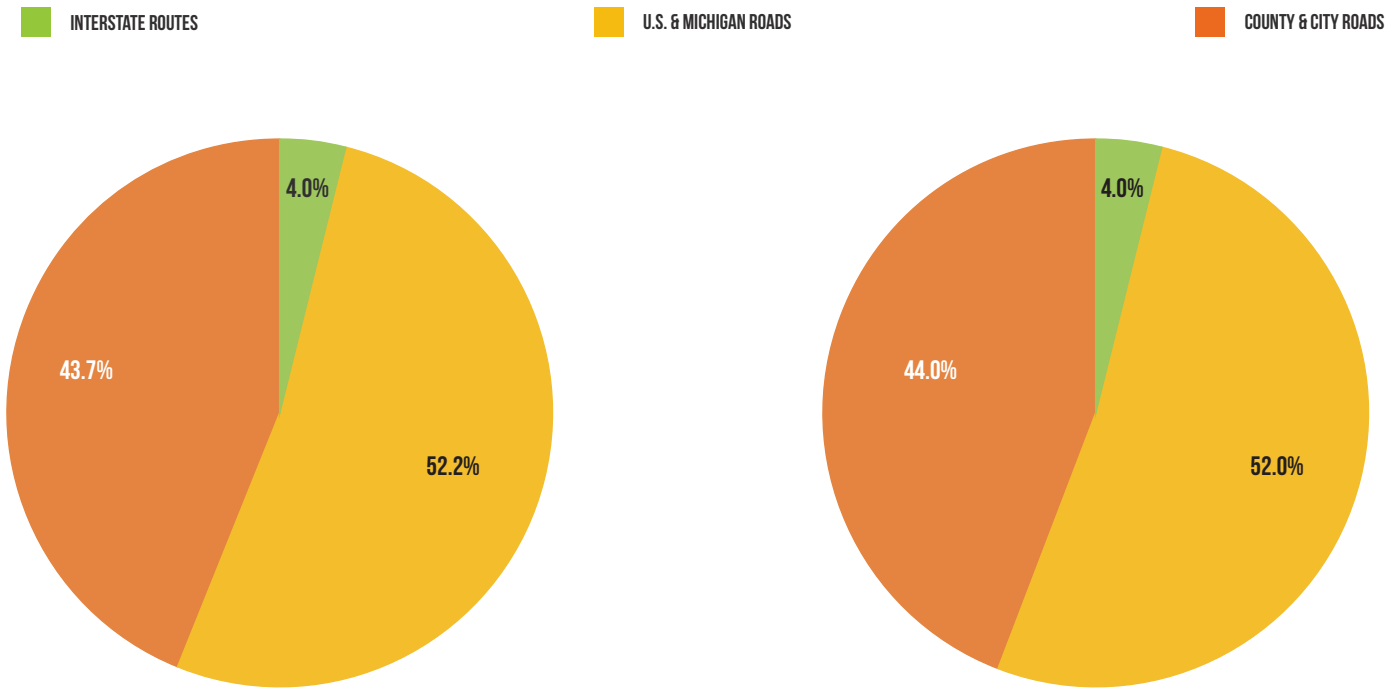
PROPERTY DAMAGE ONLY CRASHES



J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
880	819	518	456	397	476	485	437	503	605	726	585	6,887

UPPER PENINSULA CRASH EXPERIENCE BY HIGHWAY CLASS

HIGHWAY CLASS	ALL CRASHES	FATAL CRASHES	INJURY CRASHES	PROPERTY DAMAGE ONLY
Interstate Routes	328	1	46	281
U.S. & Michigan Roads	4,229	13	600	3,616
County & City Roads	3,542	11	541	2,990
TOTAL	8,099	25	1,187	6,887



ALL CRASHES

FATAL CRASHES

The majority of all crashes (52.2%), fatal crashes (52.0%), injury crashes (50.5%), and property damage only crashes (52.5%) occur on U.S. and Michigan roads.

UPPER PENINSULA 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	4,622	57.1	15	60.0	97	155	280	4,075
Head On	90	1.1	4	16.0	10	8	20	48
Head On – Left Turn	107	1.3	1	4.0	9	10	22	65
Angle	1,124	13.9	3	12.0	17	63	165	876
Rear End	963	11.9	2	8.0	12	27	155	767
Rear End – Left Turn	77	1.0	0	0.0	4	1	17	55
Rear End – Right Turn	66	0.8	0	0.0	1	0	4	61
Sideswipe – Same Direction	406	5.0	0	0.0	2	2	24	378
Sideswipe – Opposite Direction	162	2.0	0	0.0	2	6	16	138
Other/Unknown	482	6.0	0	0.0	12	14	32	424
TOTAL	8,099	100.0	25	100.0	166	286	735	6,887

In the Upper Peninsula, the single vehicle crash type produces the highest percentage of all crashes (57.1%), fatal crashes (60.0%), injury crashes (44.8%), and property damage only crashes (59.2%). Single vehicle crashes include rollovers, which are a particularly deadly crash type.

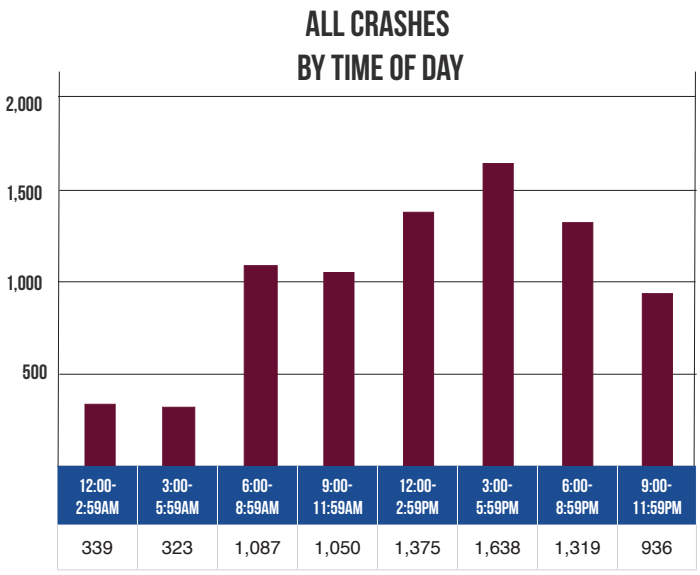
RELATIONSHIP TO ROADWAY

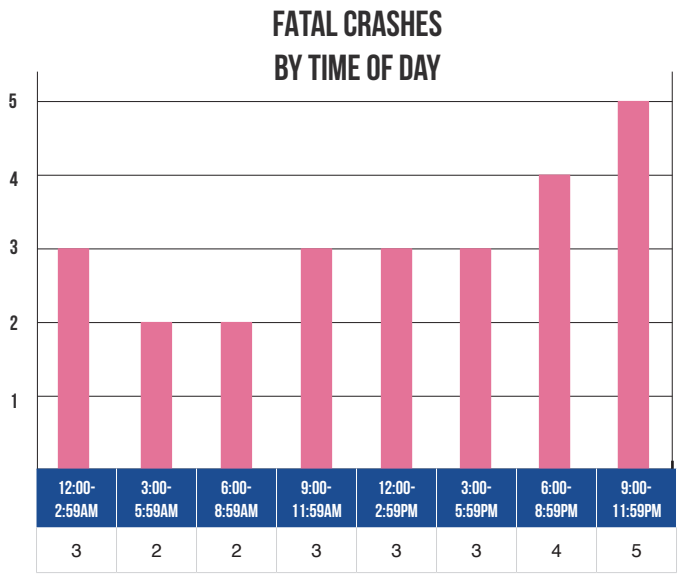
LOCATION OF FIRST IMPACT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
On Road	6,410	79.1	14	56.0	86	173	526	5,611
Median	26	0.3	0	0.0	2	1	1	22
Shoulder	639	7.9	2	8.0	26	25	63	523
Outside of Shoulder/Curb	852	10.5	7	28.0	41	73	122	609
Gore	28	0.3	2	8.0	2	3	4	17
Other/Unknown	144	1.8	0	0.0	9	11	19	105
TOTAL	8,099	100.0	25	100.0	166	286	735	6,887

Only 10.5 percent of crashes occur outside of the shoulder/curb of the road, but these crashes account for 28.0 percent of the fatal crashes.

UPPER PENINSULA 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	339	4.2	3	12.0	9	20	21	286
3:00 AM–5:59 AM	323	4.0	2	8.0	7	15	25	274
6:00 AM–8:59 AM	1,087	13.4	2	8.0	13	36	74	962
9:00 AM–11:59 AM	1,050	13.0	3	12.0	20	43	123	861
12:00 PM–2:59 PM	1,375	17.0	3	12.0	33	55	169	1,115
3:00 PM–5:59 PM	1,638	20.2	3	12.0	42	59	182	1,352
6:00 PM–8:59 PM	1,319	16.3	4	16.0	28	35	98	1,154
9:00 PM–11:59 PM	936	11.6	5	20.0	14	23	41	853
Unknown	32	0.4	0	0.0	0	0	2	30
TOTAL	8,099	100.0	25	100.0	166	286	735	6,887

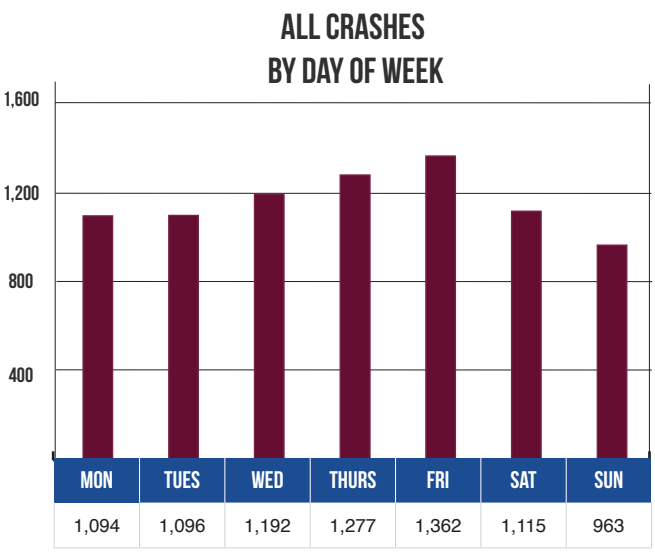


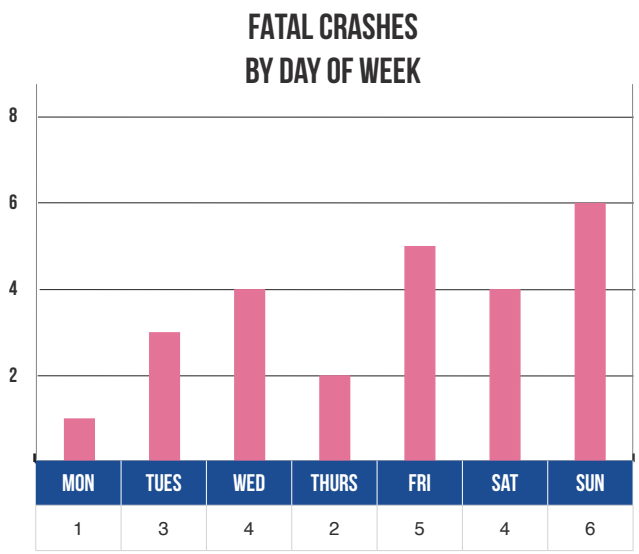


In the Upper Peninsula, crash frequencies peak in the early evening, then drop off until 6:00 AM (the morning rush hour).

UPPER PENINSULA 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	1,094	13.5	1	4.0	20	44	101	928
Tuesday	1,096	13.5	3	12.0	27	30	96	940
Wednesday	1,192	14.7	4	16.0	21	35	103	1,029
Thursday	1,277	15.8	2	8.0	18	40	117	1,100
Friday	1,362	16.8	5	20.0	34	42	115	1,166
Saturday	1,115	13.8	4	16.0	26	52	103	930
Sunday	963	11.9	6	24.0	20	43	100	794
TOTAL	8,099	100.0	25	100.0	166	286	735	6,887

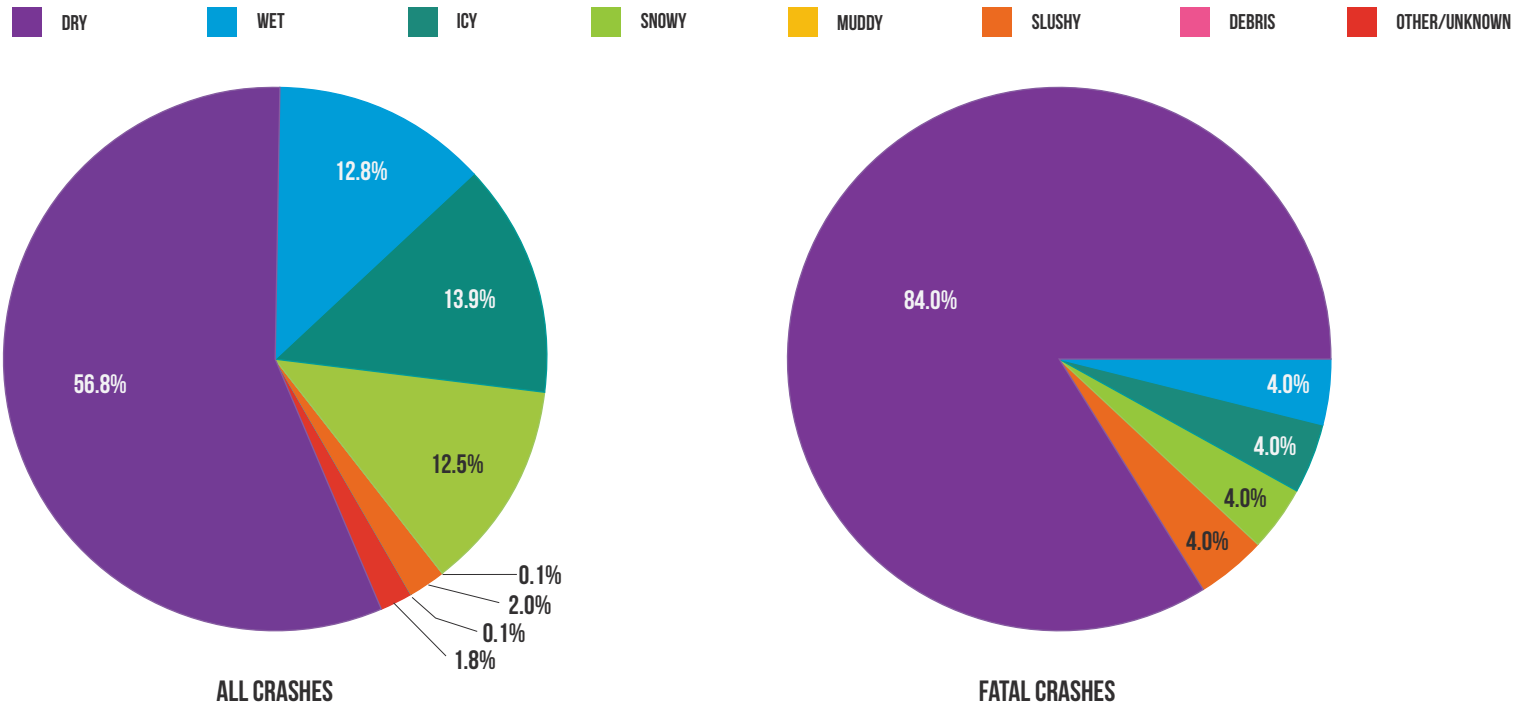




In the Upper Peninsula, crash frequencies are the highest on Friday (1,362). Sunday has the highest number of fatal crashes (6).

UPPER PENINSULA ROAD CONDITION

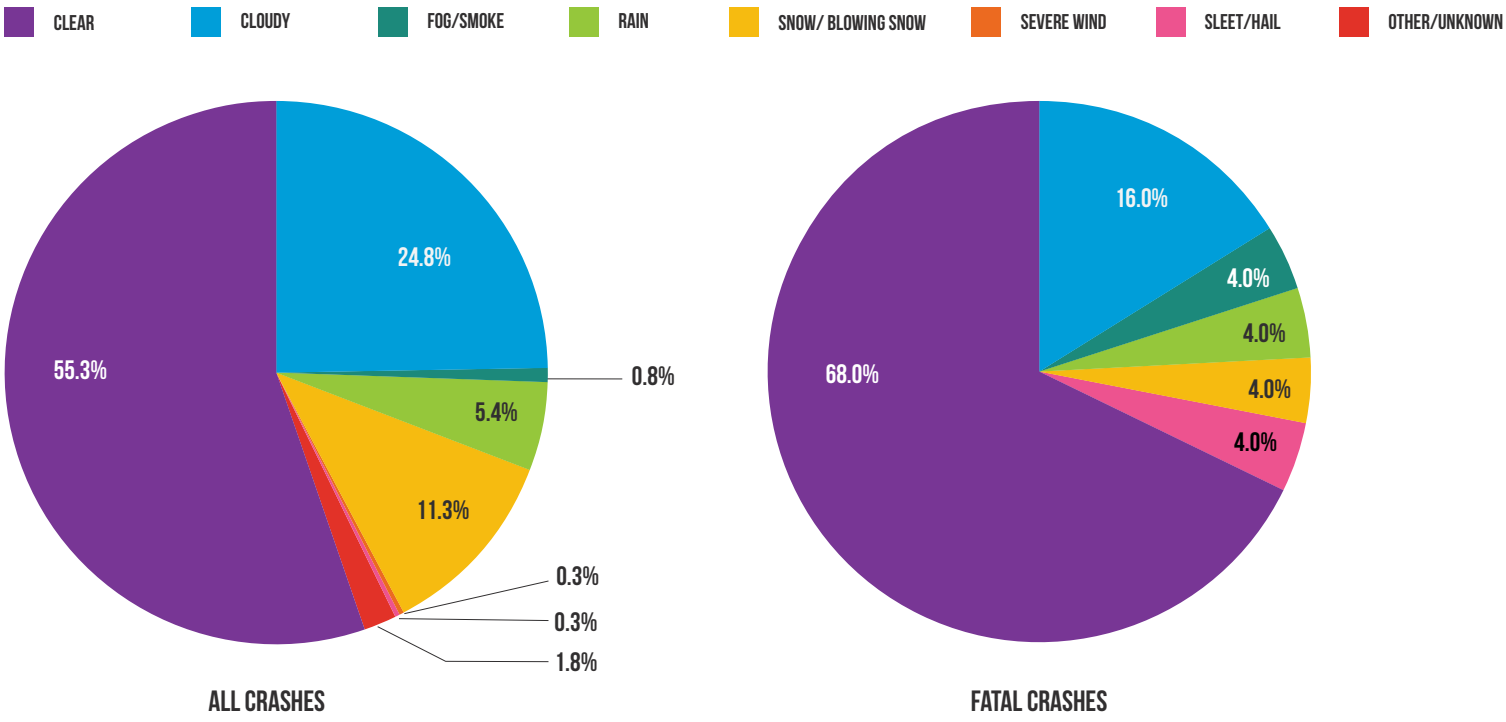
ROAD SURFACE CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Dry	4,601	56.8	21	84.0	109	176	380	3,915
Wet	1,034	12.8	1	4.0	23	39	107	864
Icy	1,128	13.9	1	4.0	14	31	129	953
Snowy	1,009	12.5	1	4.0	14	27	96	871
Muddy	11	0.1	0	0.0	1	1	1	8
Slushy	161	2.0	1	4.0	2	6	16	136
Debris	7	0.1	0	0.0	1	0	1	5
Other/Unknown	148	1.8	0	0.0	2	6	5	135
TOTAL	8,099	100.0	25	100.0	166	286	735	6,887



In the Upper Peninsula, the majority of all crashes (56.8%), fatal crashes (84.0%), injury crashes (56.0%), and property damage only crashes (56.8%) occur on dry roads.

UPPER PENINSULA WEATHER CONDITION

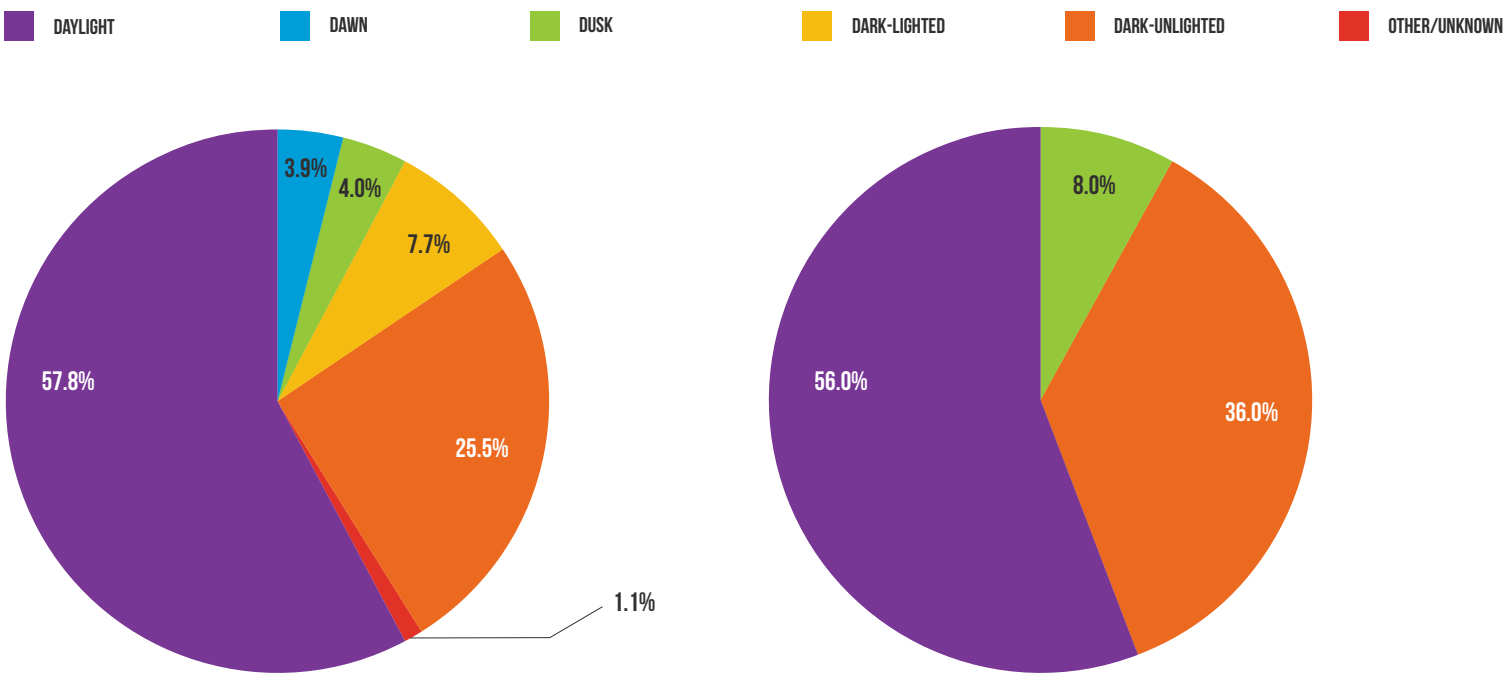
WEATHER CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Clear	4,477	55.3	17	68.0	103	174	370	3,813
Cloudy	2,010	24.8	4	16.0	38	67	188	1,713
Fog/Smoke	67	0.8	1	4.0	0	1	3	62
Rain	437	5.4	1	4.0	8	20	52	356
Snow/Blowing Snow	914	11.3	1	4.0	16	21	116	760
Severe Wind	25	0.3	0	0.0	0	0	3	22
Sleet/Hail	22	0.3	1	4.0	0	0	1	20
Other/Unknown	147	1.8	0	0.0	1	3	2	141
TOTAL	8,099	100.0	25	100.0	166	286	735	6,887



In the Upper Peninsula, the majority of all crashes (55.3%), fatal crashes (68.0%), injury crashes (54.5%), and property damage only crashes (55.4%) occur during clear weather conditions.

UPPER PENINSULA LIGHT CONDITION

LIGHT CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Daylight	4,681	57.8	14	56.0	108	195	535	3,829
Dawn	318	3.9	0	0.0	2	12	14	290
Dusk	321	4.0	2	8.0	7	5	15	292
Dark – Lighted	625	7.7	0	0.0	4	26	70	525
Dark – Unlighted	2,063	25.5	9	36.0	45	47	99	1,863
Other/Unknown	91	1.1	0	0.0	0	1	2	88
TOTAL	8,099	100.0	25	100.0	166	286	735	6,887



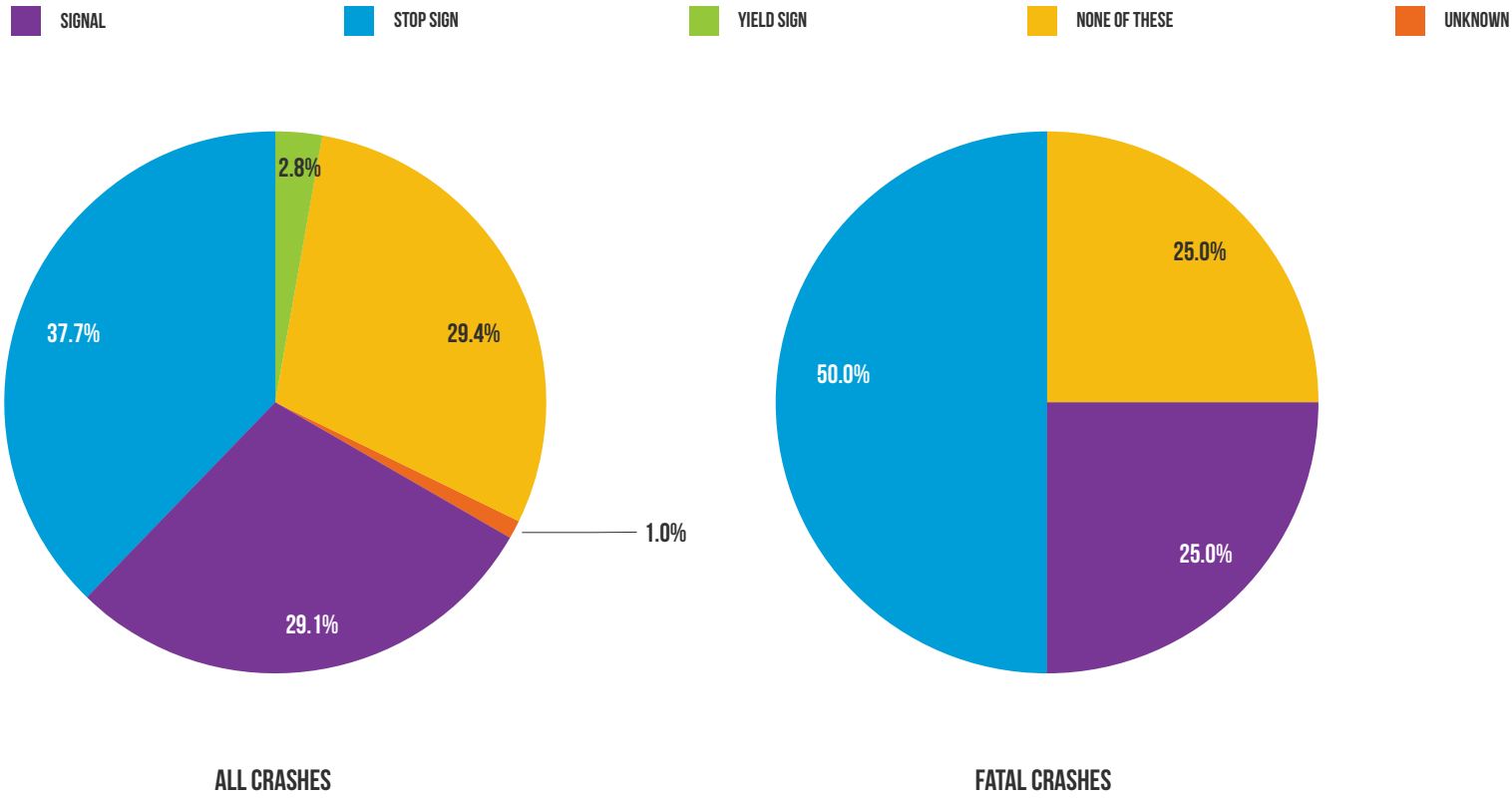
ALL CRASHES

FATAL CRASHES

In the Upper Peninsula, the majority of all crashes (57.8%), fatal crashes (56.0%), injury crashes (70.6%), and property damage only crashes (55.6%) occur during daylight hours.

UPPER PENINSULA 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	556	29.1	1	25.0	7	30	102	416
Stop Sign	720	37.7	2	50.0	9	39	101	569
Yield Sign	53	2.8	0	0.0	0	3	7	43
None of These	560	29.4	1	25.0	14	21	72	452
Unknown	19	1.0	0	0.0	2	1	2	14
TOTAL	1,908	100.0	4	100.0	32	94	284	1,494



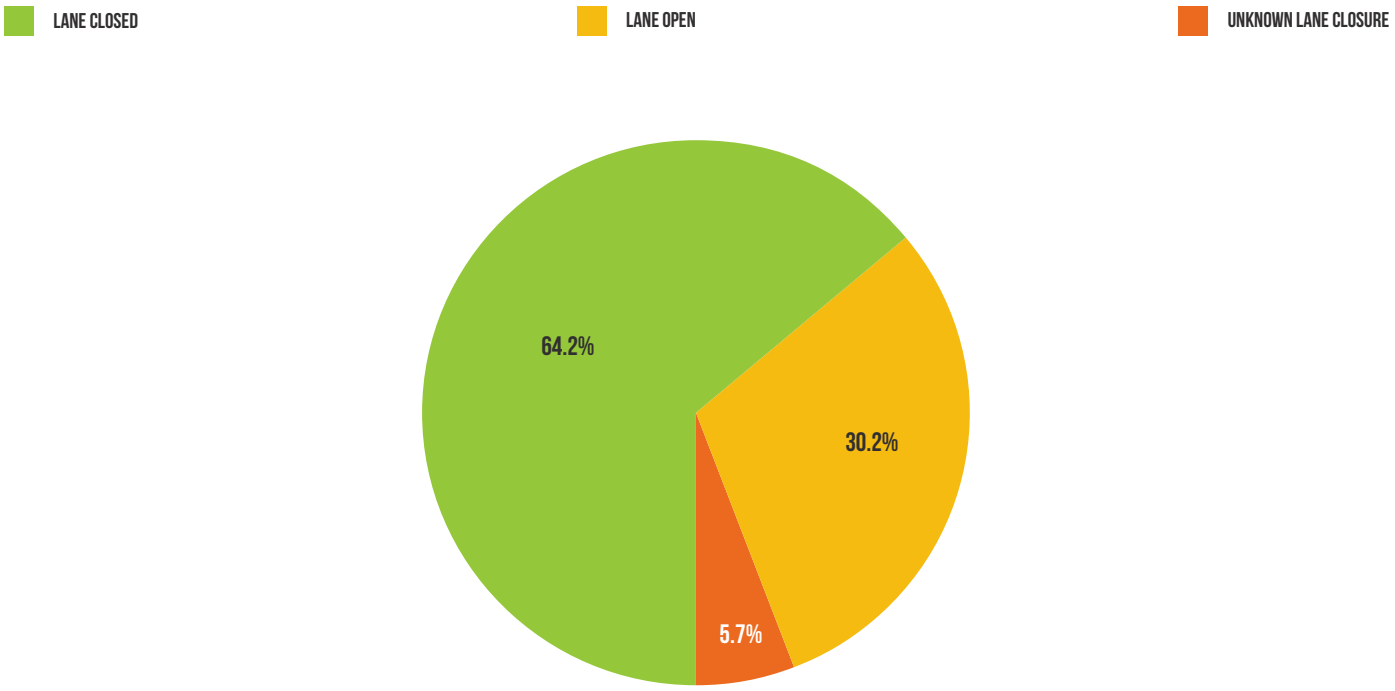
ALL CRASHES

FATAL CRASHES

Compared to other intersection crashes, Upper Peninsula intersections with stop signs have the highest percentage of all crashes (37.7%), fatal crashes (50.0%), injury crashes (36.3%), and property damage only crashes (38.1%).

UPPER PENINSULA CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
CONSTRUCTION/MAINTENANCE	*Indicates roadway construction, maintenance, or repair. The building, maintenance, or repair of the road itself and roadway-related features (e.g., overhead signs, signals).*							
Lane Closed	34	64.2	0	0.0	1	0	7	26
Lane Open	16	30.2	0	0.0	0	0	0	16
Unknown Lane Closure	3	5.7	0	0.0	0	0	0	3
TOTAL	53	100.0	0	0.0	1	0	7	45



ALL CRASHES

The majority of all crashes (64.2%), injury crashes (100.0%), and property damage only crashes (57.8%) occur in closed lanes in construction/maintenance zones.

UPPER PENINSULA CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
UTILITY	*Indicates work on facilities other than the roadway such as telephone, electrical, cable television, water, or sewer.*							
Lane Closed	**0**	**0.0**	**0**	**0.0**	**0**	**0**	**0**	**0**
Lane Open	**2**	**3.6**	**0**	**0.0**	**0**	**0**	**0**	**2**
Unknown Lane Closure	**0**	**0.0**	**0**	**0.0**	**0**	**0**	**0**	**0**
TOTAL	**2**	**100.0**	**0**	**0.0**	**0**	**0**	**0**	**2**

VEHICLE/DRIVER

(characteristics specific to individual traffic units)

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UPPER PENINSULA 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 and Station Wagon	7,936	68.1	23	57.5	1,197	6,716	17	70.8	838	7,081
Van and Motorhome	412	3.5	1	2.5	68	343	0	0.0	50	362
Pickup	2,439	20.9	9	22.5	351	2,079	3	12.5	197	2,239
Small Truck (under 10,000 lbs.)	203	1.7	0	0.0	34	169	0	0.0	24	179
Motorcycle	99	0.8	4	10.0	73	22	4	16.7	71	24
Moped	15	0.1	0	0.0	11	4	0	0.0	11	4
Go Cart	0	0.0	0	0.0	0	0	0	0.0	0	0
Snowmobile	40	0.3	0	0.0	26	14	0	0.0	23	17
Off-Road Vehicle/ATV	50	0.4	0	0.0	42	8	0	0.0	41	9
Other	45	0.4	0	0.0	10	35	0	0.0	5	40
Unknown	163	1.4	0	0.0	5	158	0	0.0	0	163
CDL Truck/Bus (break-down below)	260	2.2	3	7.5	49	208	0	0.0	19	241
Total Number of Vehicles	11,662	100.0	40	100.0	1,866	9,756	24	100.0	1,279	10,359

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

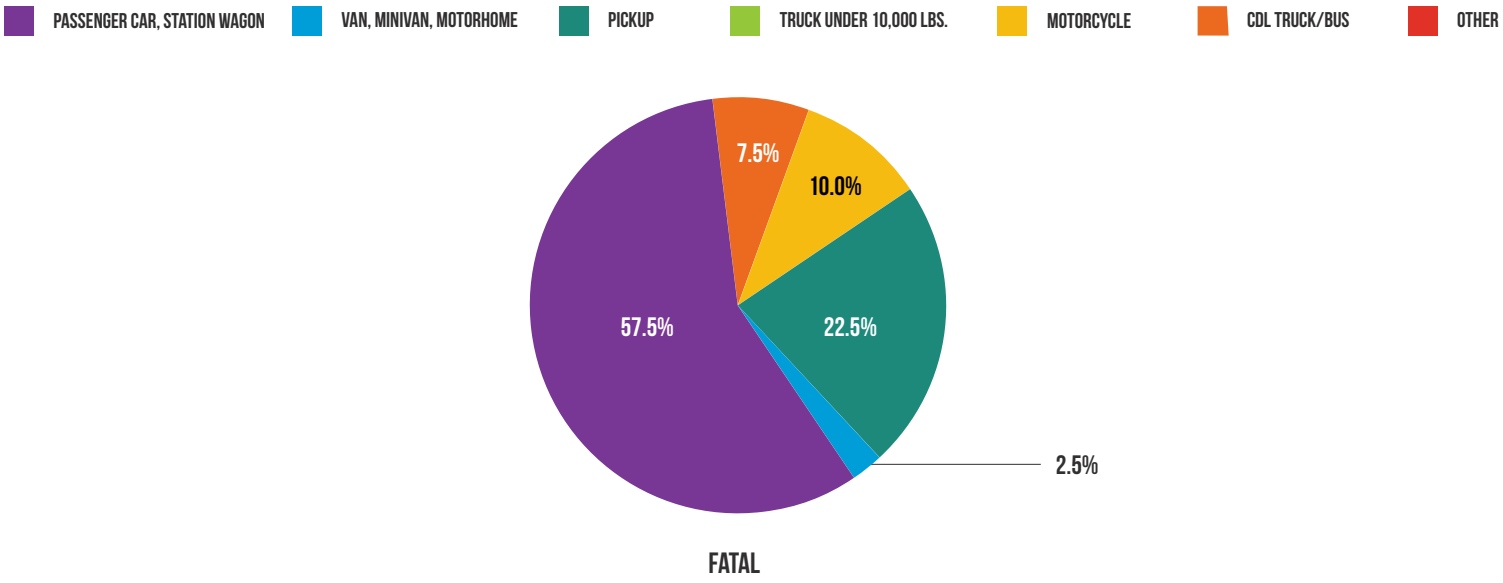
CDL TRUCK/BUS SUB-CATEGORY TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Commercial Vehicle: Group A*	150	57.7	1	33.3	26	123	0	0.0	8	142
Commercial Vehicle: Group B**	53	20.4	1	33.3	13	39	0	0.0	6	47
Commercial Vehicle: Group C***	7	2.7	0	0.0	3	4	0	0.0	3	4
Other Truck	26	10.0	1	33.3	6	19	0	0.0	2	24
Unknown Truck	24	9.2	0	0.0	1	23	0	0.0	0	24
Total Number of Vehicles	260	100.0	3	100.0	49	208	0	100.0	19	241

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

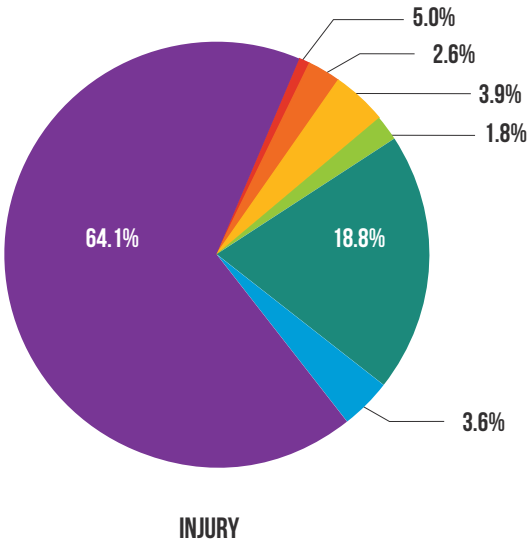
** Group "B" is any single vehicle (including buses) with a GVWR of 26,001 lbs. or more. This would include a combination of vehicles with a combined GVWR over 26,000 lbs. when towing a trailer that has a GVWR of 10,000 lbs. or less.

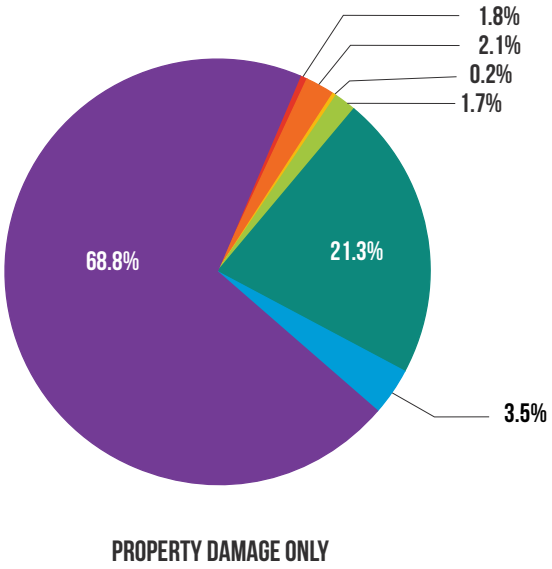
*** Group "C" is any single vehicle with a GVWR of less than 26,001 lbs. or a combination of vehicles having a combined GVWR under 26,001 lbs. when the vehicle is required to display placards for hazardous material or designed to carry 16 passengers (including driver). Group "C" is also any vehicle carrying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

UPPER PENINSULA VEHICLE TYPES IN CRASHES BY CRASH SEVERITY



The top chart shows that 82.5 percent of vehicles involved in fatal crashes in the Upper Peninsula are passenger vehicles (passenger cars, station wagons, vans, minivans, motorhomes, pickups, or trucks under 10,000 lbs.). Motorcycles have a fatal crash involvement of 10.0 percent.





As with fatal crashes, injury crashes (64.1%) and property damage only (PDO) crashes (68.8%) are represented primarily by passenger cars and station wagons.

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

UPPER PENINSULA ACTION PRIOR TO CRASH

DRIVER ACTION	VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number	% of Total		A	B	C	
Going straight ahead	7,275	62.4	26	163	273	702	6,111
Turning left	621	5.3	2	23	39	116	441
Turning right	325	2.8	0	2	14	32	277
Stopped on roadway	655	5.6	7	8	15	93	532
In prior crash	9	0.1	0	0	2	2	5
Changing lanes	117	1.0	0	3	0	10	104
Backing	422	3.6	0	0	4	7	411
Slowing/stopping on roadway	665	5.7	1	8	19	91	546
Slowing/stopping other	28	0.2	0	0	0	6	22
Starting up on roadway	227	1.9	0	1	7	44	175
Starting up other	9	0.1	0	0	0	1	8
Entering parking	31	0.3	0	0	1	3	27
Leaving parking	45	0.4	0	0	1	3	41
Entering roadway	173	1.5	1	3	10	29	130
Leaving roadway	29	0.2	0	2	8	1	18
Making U-turn	30	0.3	0	1	3	7	19
Overtaking or passing	92	0.8	0	5	6	9	72
Avoiding object	12	0.1	0	0	1	2	9
Avoiding animal	84	0.7	0	1	2	10	71
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	79	0.7	2	4	7	14	52
Avoiding vehicle (angle)	32	0.3	0	3	2	4	23
Driverless moving	8	0.1	0	0	0	0	8
Parked	572	4.9	0	4	5	23	540
Crossing at intersection	1	0.0	0	0	0	1	0
Crossing not at intersection	1	0.0	0	0	0	0	1
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	0	0.0	0	0	0	0	0
In roadway against traffic	0	0.0	0	0	0	0	0
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	0	0.0	0	0	0	0	0
In roadway other reason	1	0.0	0	0	0	0	1
Not in roadway	1	0.0	0	0	0	0	1
Other	6	0.1	0	1	0	0	5
Unknown	112	1.0	1	0	1	1	81
TOTAL	11,662	100.0	40	232	420	1,214	9,756

UPPER PENINSULA 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	61	61.6	71	62.3	4	18	18	15	16
Turning left	6	6.1	8	7.0	0	2	4	2	0
Turning right	4	4.0	5	4.4	0	0	0	3	2
Stopped on roadway	3	3.0	4	3.5	0	0	0	1	3
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	0	0.0	0	0.0	0	0	0	0	0
Backing	0	0.0	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	4	4.0	4	3.5	0	0	2	0	2
Slowing/stopping other	0	0.0	0	0.0	0	0	0	0	0
Starting up on roadway	2	2.0	2	1.8	0	0	0	2	0
Starting up other	0	0.0	0	0.0	0	0	0	0	0
Entering parking	0	0.0	0	0.0	0	0	0	0	0
Leaving parking	2	2.0	2	1.8	0	0	0	0	2
Entering roadway	1	1.0	1	0.9	0	1	0	0	0
Leaving roadway	2	2.0	2	1.8	0	0	2	0	0
Making U-turn	3	3.0	3	2.6	0	0	0	2	1
Overtaking or passing	6	6.1	6	5.3	0	3	2	0	1
Avoiding object	0	0.0	0	0.0	0	0	0	0	0
Avoiding animal	0	0.0	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	2	2.0	3	2.6	0	1	2	0	0
Avoiding vehicle (angle)	2	2.0	2	1.8	0	0	0	1	1
Driverless moving	0	0.0	0	0.0	0	0	0	0	0
Parked	1	1.0	1	0.9	0	0	0	0	1
Crossing at intersection	0	0.0	0	0.0	0	0	0	0	0
Crossing not at intersection	0	0.0	0	0.0	0	0	0	0	0
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	0	0.0	0	0.0	0	0	0	0	0
In roadway against traffic	0	0.0	0	0.0	0	0	0	0	0
Standing or lying in roadway	0	0.0	0	0.0	0	0	0	0	0
Pushing/working on vehicle	0	0.0	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0.0	0	0	0	0	0
Playing in roadway	0	0.0	0	0.0	0	0	0	0	0
In roadway other reason	0	0.0	0	0.0	0	0	0	0	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Other	0	0.0	0	0.0	0	0	0	0	0
Unknown	0	0.0	0	0.0	0	0	0	0	0
TOTAL	99	100.0	114	100.0	4	25	30	26	29

*Includes no motorcyclists (drivers and passengers) with unknown injury severity

UPPER PENINSULA ACTION PRIOR TO CRASH (CONTINUED)

BICYCLIST ACTION	BICYCLISTS*		FATALITY	INJURY			NO INJURY
	Number of Bicyclists	% of Total		A	B	C	
Going straight ahead	23	63.9	0	5	5	6	6
Turning left	4	11.1	0	0	0	1	3
Turning right	0	0.0	0	0	0	0	0
Stopped on roadway	0	0.0	0	0	0	0	0
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	1	2.8	0	1	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	1	2.8	0	0	0	1	0
Leaving roadway	0	0.0	0	0	0	0	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	0	0.0	0	0	0	0	0
Avoiding object	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)	0	0.0	0	0	0	0	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	4	11.1	0	0	2	2	0
Crossing not at intersection	1	2.8	0	0	0	1	0
Getting on/off vehicle	0	0.0	0	0	0	0	0
In roadway with traffic	0	0.0	0	0	0	0	0
In roadway against traffic	1	2.8	0	0	1	0	0
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	0	0.0	0	0	0	0	0
In roadway other reason	0	0.0	0	0	0	0	0
Not in roadway	1	2.8	0	0	0	1	0
Other	0	0.0	0	0	0	0	0
Unknown	0	0.0	0	0	0	0	0
TOTAL	36	100.0	0	6	8	12	9

*Includes one bicyclist with unknown injury severity

UPPER PENINSULA ACTION PRIOR TO CRASH (CONTINUED)

PEDESTRIAN ACTION	PEDESTRIANS*		FATALITY	INJURY			NO INJURY
	Number of Pedestrians	% of Total		A	B	C	
Going straight ahead	0	0.0	0	0	0	0	0
Turning left	0	0.0	0	0	0	0	0
Turning right	0	0.0	0	0	0	0	0
Stopped on roadway	0	0.0	0	0	0	0	0
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	0	0.0	0	0	0	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	0	0.0	0	0	0	0	0
Slowing/stopping other	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	2	4.8	0	2	0	0	0
Leaving roadway	0	0.0	0	0	0	0	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	0	0.0	0	0	0	0	0
Avoiding object	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)	0	0.0	0	0	0	0	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	10	23.8	0	0	1	9	0
Crossing not at intersection	11	26.2	1	3	3	3	1
Getting on/off vehicle	1	2.4	0	1	0	0	0
In roadway with traffic	2	4.8	0	0	0	2	0
In roadway against traffic	2	4.8	0	0	1	1	0
Standing or lying in roadway	4	9.5	0	1	2	1	0
Pushing/working on vehicle	1	2.4	0	0	0	1	0
Other working in roadway	1	2.4	0	0	1	0	0
Playing in roadway	0	0.0	0	0	0	0	0
In roadway other reason	4	9.5	0	2	1	0	1
Not in roadway	2	4.8	0	1	0	1	0
Other	2	4.8	0	0	1	1	0
Unknown	0	0.0	0	0	0	0	0
TOTAL	42	100.0	1	10	10	19	2

* Includes no pedestrians with unknown injury severity

UPPER PENINSULA MOST HARMFUL EVENT

NONCOLLISION	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Loss of control	32	0.3	0	1	4	6	21
Cross center/median	9	0.1	0	0	1	0	8
Ran off road left	18	0.2	0	1	0	2	15
Ran off road right	51	0.4	1	0	4	3	43
Re-enter road	2	0.0	0	0	0	0	2
Overturn	303	2.6	4	20	30	78	171
Separation of units	2	0.0	0	0	1	0	1
Fire/explosion	15	0.1	0	0	1	1	13
Immersion	0	0.0	0	0	0	0	0
Jackknife	6	0.1	0	0	0	0	6
Downhill runaway	4	0.0	0	0	0	1	3
Cargo loss/shift	25	0.2	0	0	0	1	24
Individual fell off	29	0.2	1	10	9	7	2
Other noncollision	63	0.5	0	2	6	5	50
SUBTOTAL	559	4.8	6	34	56	104	359

COLLISION WITH A NONFIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	35	0.3	1	5	9	17	3
Bicycle / Pedalcycle	34	0.3	0	5	8	11	10
Motor vehicle in transport	6,216	53.3	25	116	240	879	4,956
Parked motor vehicle	555	4.8	0	3	7	20	525
Railway train	0	0.0	0	0	0	0	0
Animal	2,814	24.1	0	4	9	32	2,769
Other nonfixed objects	169	1.4	1	2	6	7	153
SUBTOTAL	9,823	84.2	27	135	279	966	8,416

UPPER PENINSULA MOST HARMFUL EVENT (CONTINUED)

HAD A COLLISION WITH FIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Bridge/pier/abutment	10	0.1	0	0	0	1	9
Bridge parapet end*	---	---	---	---	---	---	---
Bridge rail	12	0.1	0	0	1	1	10
Guardrail face	72	0.6	1	1	3	6	61
Guardrail end	23	0.2	0	1	1	4	17
Median barrier	15	0.1	0	0	2	2	11
Highway traffic sign post	70	0.6	0	1	1	2	66
Highway signal post	1	0.0	0	0	0	0	1
Luminaire/light support*	90	0.8	0	4	10	12	64
Utility pole*	---	---	---	---	---	---	---
Other pole	20	0.2	0	0	1	2	17
Culvert	13	0.1	0	1	2	1	9
Curb	18	0.2	0	1	0	2	15
Ditch	235	2.0	0	12	14	20	189
Embankment	132	1.1	1	4	6	11	110
Fence	10	0.1	0	1	1	0	8
Mailbox	70	0.6	0	2	0	3	65
Tree	327	2.8	5	30	31	55	206
Rail crossing signal	4	0.0	0	0	0	2	2
Building	23	0.2	0	2	4	4	13
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	14	0.1	0	0	1	3	10
Impact attenuator	2	0.0	0	1	0	0	1
Other fixed object	85	0.7	0	2	6	10	67
SUBTOTAL	1,246	10.7	7	63	84	141	951

*Data not available for 2015. For a complete list of changes, see Data Elements with Changes for 2015 Data

	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	34	0.3	0	0	1	3	30
MOST HARMFUL EVENT TOTAL	11,662	100	40	232	420	1,214	9,756

UPPER PENINSULA VEHICLE DEFECTS IN CRASH INVOLVEMENT

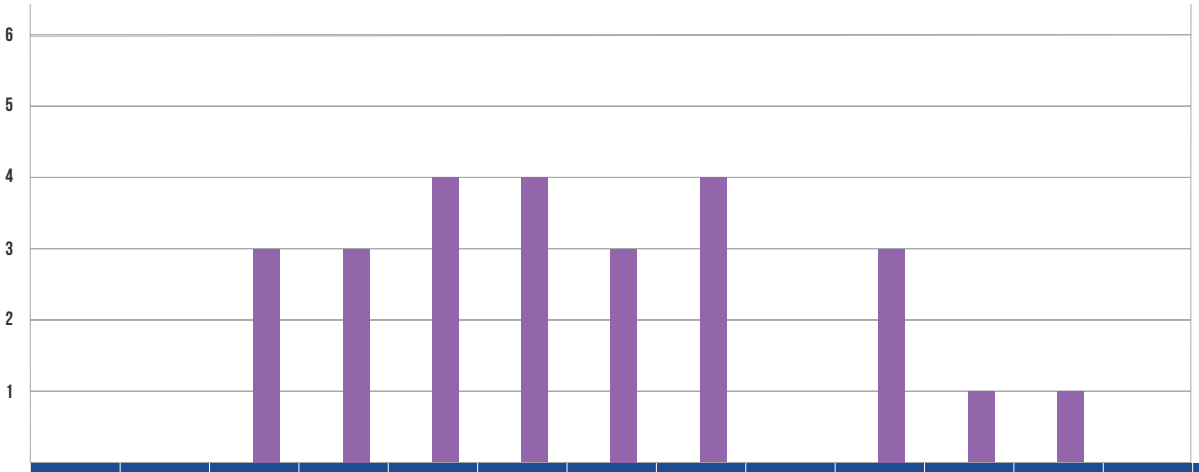
VEHICLE DEFECTS	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Brakes	23	0.2	0	1	1	3	18
Lights/reflectors	3	0	0	0	0	0	3
Steering	7	0.1	0	0	0	2	5
Tires/wheels	26	0.2	0	1	2	5	18
Windows	0	0	0	0	0	0	0
Other	12	0.1	0	0	3	0	9
None or Unknown	11,591	99.4	40	230	414	1,204	9,703
TOTAL	11,662	100	40	232	420	1,214	9,756

UPPER PENINSULA DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
None	6,787	58.2	14	89	163	562	5,959
Speed too fast	1,063	9.1	2	42	56	142	821
Speed too slow	8	0.1	0	0	1	2	5
Failed to yield	960	8.2	3	23	55	167	712
Disregard traffic control	152	1.3	2	2	13	27	108
Drove wrong way	14	0.1	0	0	0	3	11
Drove left of center	64	0.5	1	8	1	4	50
Improper passing	43	0.4	0	2	5	5	31
Improper lane use	132	1.1	1	1	5	9	116
Improper turn	102	0.9	1	0	8	10	83
Improper/no signal	26	0.2	0	0	1	2	23
Improper backing	325	2.8	0	0	2	4	319
Unable to stop in assured clear distance	913	7.8	0	7	25	140	741
Reckless driving	58	0.5	4	9	8	13	24
Careless/negligent driving	446	3.8	5	33	41	67	300
Other	328	2.8	2	10	23	38	255
Unknown	241	2.1	5	6	13	19	198
TOTAL	11,662	100	40	232	420	1,214	9,756

UPPER PENINSULA MICHIGAN BICYCLE CRASHES

2015 BICYCLIST FATALITIES AND INJURIES



	UNDER 1 YEAR OLD	1-3 YEARS	4-10 YEARS	11-15 YEARS	16-20 YEARS	21-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
KILLED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
INJURED	0	0	3	3	4	4	3	4	0	3	1	1	0	26
TOTAL FATALITIES AND INJURIES	0	0	3	3	4	4	3	4	0	3	1	1	0	26

In 2015 in the Upper Peninsula, there were 36 bicyclists involved in motor vehicles crashes, with 0 bicyclists killed and 26 injured.

BICYCLE HELMET USE AND INJURY SEVERITY

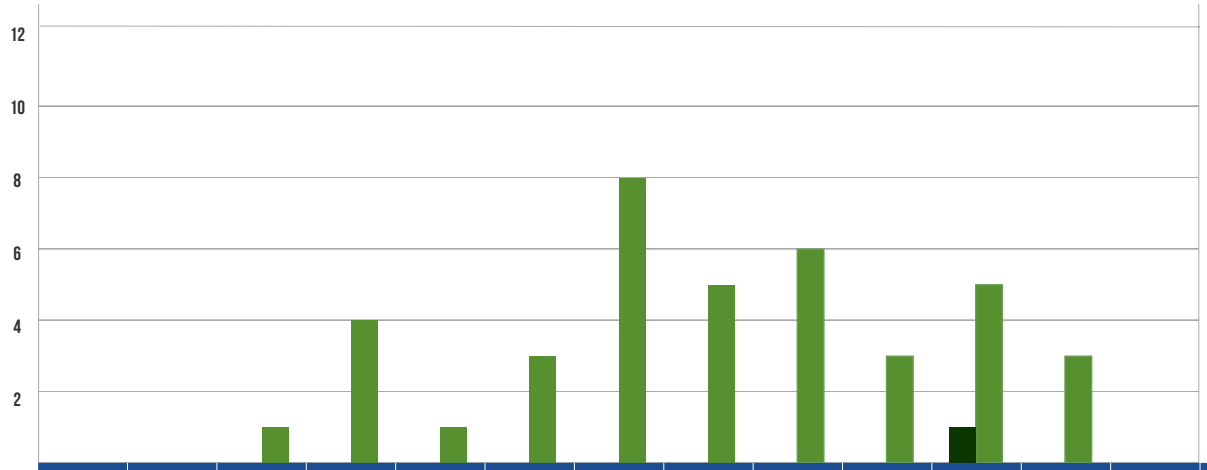
HELMET USE	FATALITY	INJURY			NO INJURY
		A	B	C	
Worn	**0**	**1**	**1**	**0**	**2**
Not worn	**0**	**0**	**4**	**9**	**2**
Unknown	**0**	**5**	**3**	**3**	**5**
Total	**0**	**6**	**8**	**12**	**9**

Note: One bicyclist had an unknown degree of injury and was 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.”

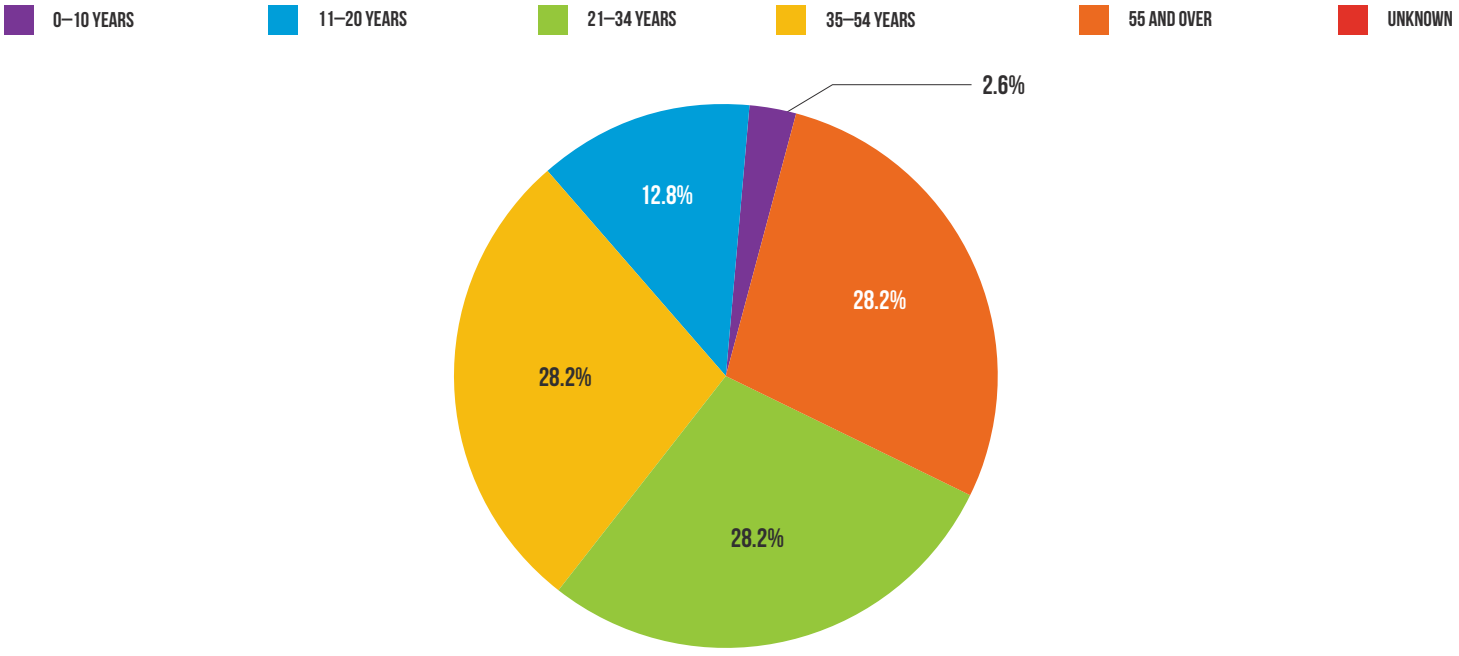
UPPER PENINSULA MICHIGAN PEDESTRIAN CRASHES

2015 PEDESTRIAN FATALITIES AND INJURIES



	UNDER 1 YR OLD	1-3 YRS	4-10 YRS	11-15 YRS	16-20 YRS	21-24 YRS	25-34 YRS	35-44 YRS	45-54 YRS	55-64 YRS	65-74 YRS	75 YRS AND OVER	UNKNOWN	TOTAL
KILLED	0	0	0	0	0	0	0	0	0	0	1	0	0	1
INJURED	0	0	1	4	1	3	8	5	6	3	5	3	0	39
TOTAL FATALITIES AND INJURIES	0	0	1	4	1	3	8	5	6	3	6	3	0	40

In 2015 in the Upper Peninsula, there were 42 pedestrians involved in motor vehicles crashes, with 1 pedestrian killed and 39 injured.



PEDESTRIANS INJURED

UPPER PENINSULA 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	0	0.0	0	0	0	0	0
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	0	0.0	0	0	0	0	0
Ran off road right	0	0.0	0	0	0	0	0
Re-enter road	0	0.0	0	0	0	0	0
Overturn	4	10.0	0	1	0	2	1
Separation of units	0	0.0	0	0	0	0	0
Fire/explosion	1	2.5	0	0	0	0	1
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	5	12.5	0	1	1	2	1
Other noncollision	3	7.5	0	0	1	1	1
SUBTOTAL	13	32.5	0	2	2	5	4

COLLISION WITH A NONFIXED OBJECT	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	0	0.0	0	0	0	0	0
Bicycle / Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	19	47.5	0	5	0	7	7
Parked motor vehicle	1	2.5	0	1	0	0	0
Railway train	0	0.0	0	0	0	0	0
Animal	0	0.0	0	0	0	0	0
Other nonfixed objects	1	2.5	0	0	0	0	1
SUBTOTAL	21	52.5	0	6	0	7	8

UPPER PENINSULA 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 parapet end*	---	---	---	---	---	---	---
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	0	0.0	0	0	0	0	0
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	0	0.0	0	0	0	0	0
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support*	0	0.0	0	0	0	0	0
Utility pole*	---	---	---	---	---	---	---
Other pole	0	0.0	0	0	0	0	0
Culvert	0	0.0	0	0	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	0	0.0	0	0	0	0	0
Embankment	0	0.0	0	0	0	0	0
Fence	1	2.5	0	1	0	0	0
Mailbox	0	0.0	0	0	0	0	0
Tree	3	7.5	0	0	0	1	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	2	5.0	0	1	1	0	0
SUBTOTAL	6	15.0	0	2	1	1	2

*Data not available for 2015. For a complete list of changes, see Data Elements with Changes for 2015 Data

	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
Unknown Event	0	0.0	0	0	0	0	0
MOST HARMFUL EVENT TOTAL	40	100.0	0	10	3	13	14

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 40 snowmobiles were reported in crashes on Upper Peninsula public roadways during 2015, resulting in no fatal crashes. An additional 26 snowmobiles were involved in injury crashes.

UPPER PENINSULA 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	2	4.0	0	0	2	0	0
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	0	0.0	0	0	0	0	0
Ran off road right	0	0.0	0	0	0	0	0
Re-enter road	0	0.0	0	0	0	0	0
Overturn	13	26.0	0	1	6	6	0
Separation of units	1	2.0	0	0	1	0	0
Fire/explosion	1	2.0	0	0	0	0	1
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	9	18.0	0	4	4	1	0
Other noncollision	1	2.0	0	0	1	0	0
SUBTOTAL	27	54.0	0	5	14	7	1

COLLISION WITH A NONFIXED OBJECT	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Pedestrian	0	0.0	0	0	0	0	0
Bicycle / Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	9	18.0	0	1	1	2	5
Parked motor vehicle	1	2.0	0	0	0	1	0
Railway train	0	0.0	0	0	0	0	0
Animal	0	0.0	0	0	0	0	0
Other nonfixed objects	1	2.0	0	0	0	1	0
SUBTOTAL	11	22.0	0	1	1	4	5

UPPER PENINSULA 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	0	0.0	0	0	0	0	0
Bridge parapet end*	---	---	---	---	---	---	---
Bridge rail	0	0.0	0	0	0	0	0
Guardrail face	0	0.0	0	0	0	0	0
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	1	2.0	0	1	0	0	0
Highway signal post	0	0.0	0	0	0	0	0
Luminaire/light support*	0	0.0	0	0	0	0	0
Utility pole*	---	---	---	---	---	---	---
Other pole	0	0.0	0	0	0	0	0
Culvert	0	0.0	0	0	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	1	2.0	0	1	0	0	0
Embankment	0	0.0	0	0	0	0	0
Fence	0	0.0	0	0	0	0	0
Mailbox	1	2.0	0	1	0	0	0
Tree	6	12.0	0	4	0	2	0
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	2.0	0	1	0	0	0
SUBTOTAL	10	20.0	0	8	0	2	0

*Data not available for 2015. For a complete list of changes, see Data Elements with Changes for 2015 Data

	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ATVs	% of Total		A	B	C	
Unknown Event	2	4.0	0	0	0	0	2
MOST HARMFUL EVENT TOTAL	50	100.0	0	14	15	13	8

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 50 off-road/all-terrain vehicles were reported in crashes on Upper Peninsula public roadways during 2015, resulting in no fatal crashes. An additional 42 ORV/ATVs were involved in injury crashes.

UPPER PENINSULA 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	15	37.5	0	4	2	3	6
Speed too fast	8	20.0	0	1	1	3	3
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	5	12.5	0	1	0	1	3
Disregard traffic control	0	0.0	0	0	0	0	0
Drove wrong way	1	2.5	0	0	0	1	0
Drove left of center	0	0.0	0	0	0	0	0
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	0	0.0	0	0	0	0	0
Improper turn	0	0.0	0	0	0	0	0
Improper/no signal	1	2.5	0	0	0	1	0
Improper backing	0	0.0	0	0	0	0	0
Unable to stop in assured clear distance	3	7.5	0	1	0	2	0
Reckless driving	1	2.5	0	1	0	0	0
Careless/negligent driving	3	7.5	0	2	0	1	0
Other	3	7.5	0	0	0	1	2
Unknown	0	0.0	0	0	0	0	0
TOTAL	40	100.0	0	10	3	13	14

UPPER PENINSULA 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	11	22.0	0	2	3	3	3
Speed too fast	12	24.0	0	5	3	4	0
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	4	8.0	0	1	1	0	2
Disregard traffic control	0	0.0	0	0	0	0	0
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	0	0.0	0	0	0	0	0
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	0	0.0	0	0	0	0	0
Improper turn	1	2.0	0	0	0	1	0
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	0	0.0	0	0	0	0	0
Unable to stop in assured clear distance	2	4.0	0	0	1	0	1
Reckless driving	1	2.0	0	0	0	1	0
Careless/negligent driving	10	20.0	0	5	4	0	1
Other	7	14.0	0	1	3	2	1
Unknown	2	4.0	0	0	0	2	0
TOTAL	50	100.0	0	14	15	13	8

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.

UPPER PENINSULA MICHIGAN FARM EQUIPMENT CRASHES

FARM EQUIPMENT CRASHES	2014	2015	% CHANGE
Crashes	6	5	-16.7%
Fatalities	0	0	---
Injuries	0	2	---

Five crashes involving farm equipment and two passenger cars, one pickup, and five other vehicle types were reported on Upper Peninsula roadways during 2015. None of those crashes involved a fatality.

UPPER PENINSULA MICHIGAN VEHICLE-TRAIN CRASHES

VEHICLE-TRAIN CRASHES	2014	2015	% CHANGE
Crashes	8	0	-100.0%
Fatalities	1	0	-100.0%
Injuries	6	0	-100.0%

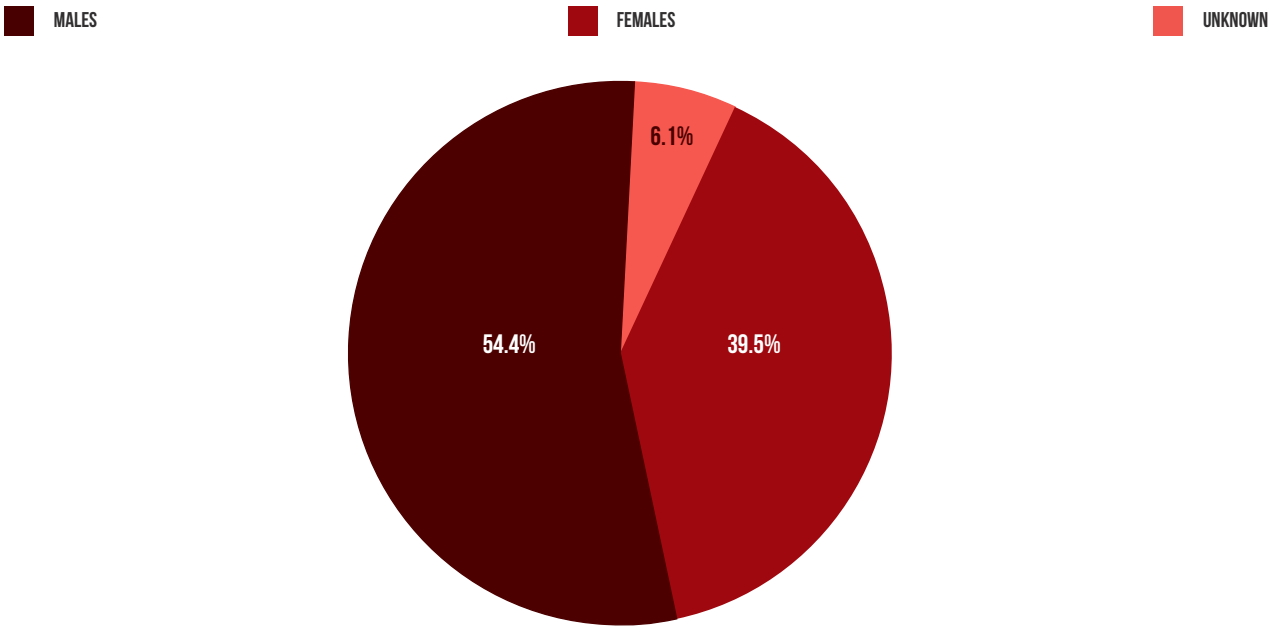
There were no crashes involving a train reported on the Upper Peninsula during 2015.

UPPER PENINSULA MICHIGAN MOTORCYCLE CRASHES

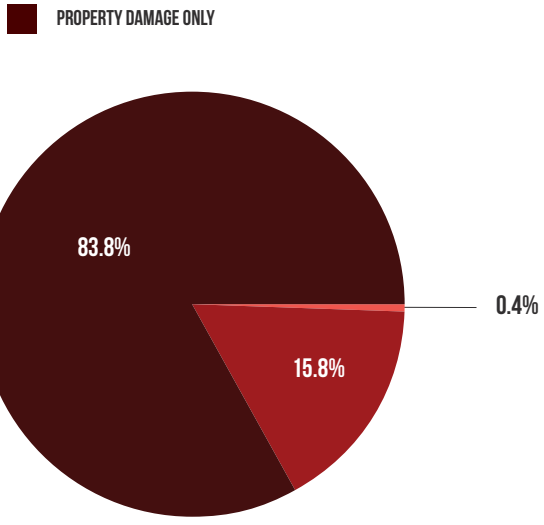
MOTORCYCLE DATA	2014	2015	% CHANGE
Motorcycle Registrations	9,312	9,287	-0.3
Motorcycles in Crashes	128	99	-22.7
Motorcyclist Deaths	3	4	33.3
Motorcyclists Injured	102	81	-20.6
Death Rate based on 10,000 motorcycle registrations	3.22	4.31	33.7
Estimated Mileage based on 3,000 miles per motorcycle	27,936,000	27,861,000	-0.3
Death Rate based on deaths per 100 million vehicle miles traveled	10.74	14.36	33.7

Motorcycles were involved in 1.2 percent of all traffic crashes in the Upper Peninsula in 2015. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles.

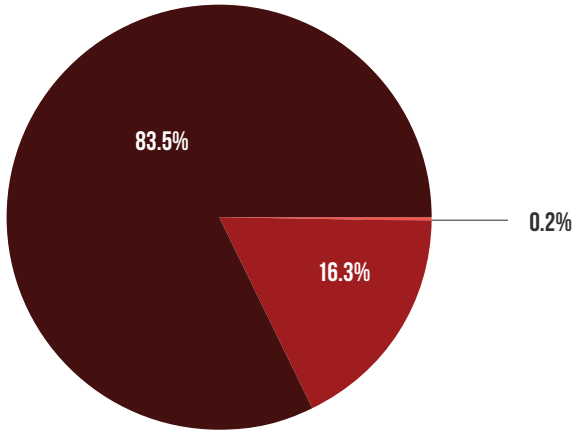
UPPER PENINSULA DRIVER GENDER INFORMATION



ALL CRASHES



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%).

UPPER PENINSULA 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	1,551	49,199	30	0	0	87	7	0	6	0
16	2,390	3,477	179	0	0	35	0	0	0	0
17	2,624	3,567	243	2	1	33	1	0	0	0
18	2,595	4,317	275	1	0	56	2	0	0	0
19	2,849	5,273	312	2	2	46	1	0	0	0
20	3,013	5,429	312	1	1	43	0	0	1	0
21-24	12,770	19,500	1,040	5	0	140	6	0	3	0
25-29	15,285	16,061	961	4	4	119	3	0	4	0
30-34	14,872	16,719	848	2	1	118	1	0	5	0
35-39	14,503	16,186	794	3	1	120	4	0	1	0
40-44	14,216	16,197	738	1	0	82	1	0	4	0
45-49	16,023	17,925	855	0	1	92	0	0	3	0
50-54	19,638	21,804	934	5	4	116	1	0	3	0
55-59	22,401	23,974	968	2	2	124	4	0	2	0
60-64	22,966	23,778	779	3	1	95	0	0	1	0
65-69	19,830	20,325	630	3	2	90	2	0	4	1
70-74	13,889	14,618	405	4	1	49	1	0	2	1
75-79	10,203	11,028	307	1	1	43	1	0	1	0
80-84	6,655	7,739	172	1	2	28	0	0	2	0
85+	5,367	8,615	127	0	0	19	0	0	0	0
Unknown	---	---	753	0	0	3	1	0	0	0
TOTAL	223,640	305,731	11,662	40	24	1,538	36	0	42	2

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

AGE	LICENSED DRIVERS	TOTAL DRIVERS IN CRASHES*	CRASH RATE
0-15	1,551	30	0.019
16	2,390	179	0.075
17	2,624	243	0.093
18	2,595	275	0.106
19	2,849	312	0.110
20	3,013	312	0.104
21-24	12,770	1,040	0.081
25-29	15,285	961	0.063
30-34	14,872	848	0.057
35-39	14,503	794	0.055
40-44	14,216	738	0.052
45-49	16,023	855	0.053
50-54	19,638	934	0.048
55-59	22,401	968	0.043
60-64	22,966	779	0.034
65-69	19,830	630	0.032
70-74	13,889	405	0.029
75-79	10,203	307	0.030
80-84	6,655	172	0.026
85-89	3,953	103	0.026
90-94	1,211	23	0.019
95-99	196	1	0.005
100+	7	0	0.000
Total	223,640	10,909	---

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

* Excludes 915 drivers with unknown age

Licensed drivers age 19 have the highest crash rate at 0.110 (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.

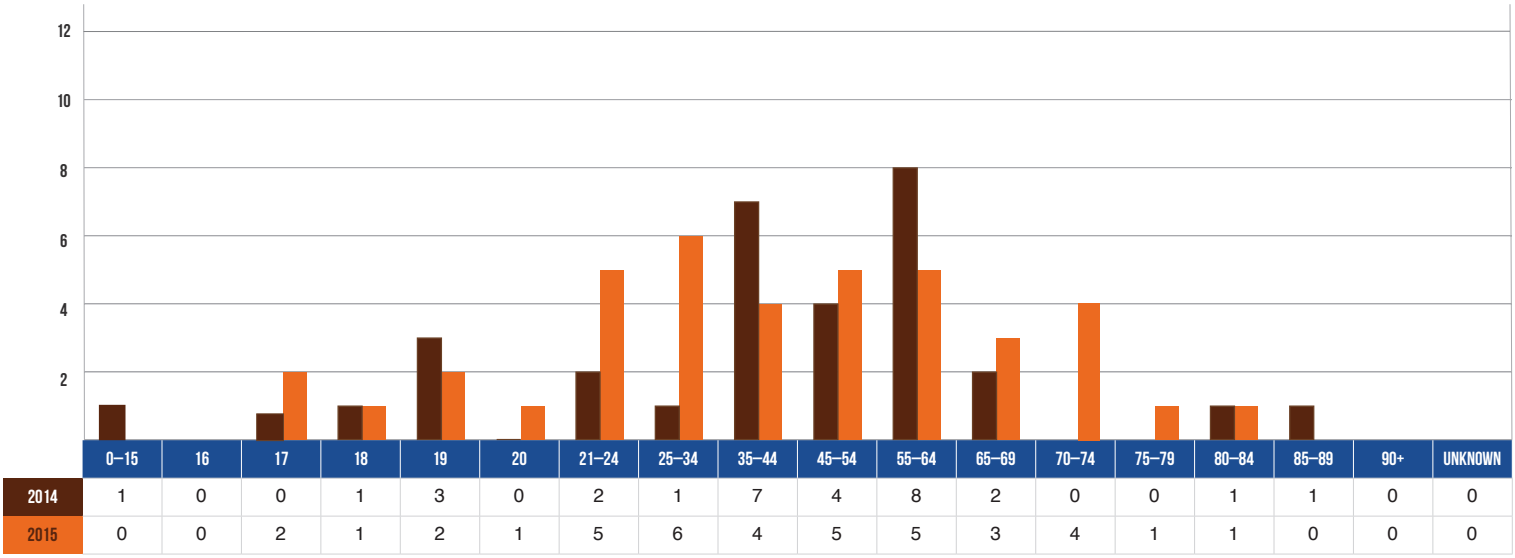
UPPER PENINSULA DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2014	2015	PERCENT CHANGE	PERCENT 2015 FATAL CRASH INVOLVEMENT	PERCENT ACTIVE DRIVING POPULATION*
15 years and under	1	0	-100.0	0.0	0.7
16 years	0	0	†	0.0	1.1
17 years	0	2	†	5.0	1.2
18 years	1	1	0.0	2.5	1.2
19 years	3	2	-33.3	5.0	1.3
20 years	0	1	†	2.5	1.3
21 - 24 years	2	5	150.0	12.5	5.7
25 - 34 years	1	6	500.0	15.0	13.5
35 - 44 years	7	4	-42.9	10.0	12.8
45 - 54 years	4	5	25.0	12.5	14.3
55 - 64 years	8	5	-37.5	12.5	20.3
65 - 69 years	2	3	50.0	7.5	8.9
70 - 74 years	0	4	†	10.0	6.2
75 - 79 years	0	1	†	2.5	4.6
80 - 84 years	1	1	0.0	2.5	3.0
85 - 89 years	1	0	-100.0	0.0	1.8
90 years and over	0	0	†	0.0	0.6
Unknown	0	0	†	0.0	---
Total	31	40	29.0	100.0	100.0

*Figures courtesy of the Michigan Department of State [5]

† Not calculable

DRIVER AGE IN FATAL CRASHES



UPPER PENINSULA DRIVER CONDITION

POSSIBLE CONDITIONS OF DRIVER	CONDITIONS (CODED BY POLICE)	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Appeared Normal	9,740	17	162	319	1,062	8,180
Had Been Drinking*	---	---	---	---	---	---
Illegal Drug Use*	---	---	---	---	---	---
Sick	23	1	4	4	4	10
Fatigue	63	0	5	5	13	40
Asleep*	---	---	---	---	---	---
Medication	18	0	2	0	7	9
Driver Distracted*	---	---	---	---	---	---
Using Cellular Phone*	---	---	---	---	---	---
Unknown	737	15	30	28	34	630

Note: Drivers may have more than one condition including "Appeared Normal." These are driver conditions that, in the opinion of the investigating officer, were involved in the crash. While some conditions may be evident, others (such as distraction) will only be known if the driver admits to the condition, thus leading to possible underreporting.

*Data not available for 2015. For a complete list of changes, see Data Elements with Changes for 2015 Data."

UPPER PENINSULA 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*	10,391	89.1	8	40.0	98	198	680	9,402	5
Restraint Not Used	243	2.1	10	50.0	23	32	40	135	3
Unknown	1,028	8.8	2	10.0	9	18	25	280	694
TOTAL	11,662	100.0	20	100.0	130	248	745	9,817	702
DRINKING DRIVERS ONLY									
Restraint Used*	192	72.2	2	33.3	12	25	19	134	0
Restraint Not Used	25	9.4	4	66.7	4	8	5	4	0
Unknown	49	18.4	0	0.0	2	6	6	35	0
TOTAL	266	100.0	6	100.0	18	39	30	173	0
DRUGGED DRIVERS ONLY									
Restraint Used*	28	66.7	0	0.0	0	4	8	16	0
Restraint Not Used	5	11.9	1	100.0	0	2	0	2	0
Unknown	9	21.4	0	0.0	0	1	1	7	0
TOTAL	42	100.0	1	100.0	0	7	9	25	0
DRINKING AND DRUGGED DRIVERS ONLY									
Restraint Used*	18	56.2	0	0.0	1	0	3	14	0
Restraint Not Used	5	15.6	1	100.0	2	0	0	2	0
Unknown	9	28.1	0	0.0	2	2	1	4	0
TOTAL	32	100.0	1	100.0	5	2	4	20	0

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

UPPER PENINSULA RED-LIGHT-RUNNING CRASHES

INTERSECTION CRASH TYPE	CRASHES	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
1. Related to intersection	1,908	4	32	94	284	1,494
2. In intersection	992	3	20	63	171	735
3. With traffic control signal	282	1	6	21	63	191
4. With hazardous action*	64	1	0	8	15	40

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 64 crashes.

UPPER PENINSULA 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	0	0	0	0	0	0
10 miles per hour	0	0	0	0	0	0
15 miles per hour	0	0	0	0	0	0
20 miles per hour	0	0	0	0	0	0
25 miles per hour	26	0	0	5	5	16
30 miles per hour	1	0	0	0	0	1
35 miles per hour	10	0	0	1	2	7
40 miles per hour	2	0	0	1	0	1
45 miles per hour	12	1	0	0	1	10
50 miles per hour	3	0	0	1	2	0
55 miles per hour	10	0	0	0	5	5
60 miles per hour	0	0	0	0	0	0
65 miles per hour	0	0	0	0	0	0
70 miles per hour	0	0	0	0	0	0
75 miles per hour	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
TOTAL	64	1	0	8	15	40

*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	0	0	0	0	0	0
Head on	0	0	0	0	0	0
Head on left turn	2	1	0	0	0	1
Angle	59	0	0	8	15	36
Rear end	1	0	0	0	0	1
Rear end left turn	0	0	0	0	0	0
Rear end right turn	0	0	0	0	0	0
Sideswipe same direction	1	0	0	0	0	1
Sideswipe opposite direction	0	0	0	0	0	0
Other/ Unknown	1	0	0	0	0	1
TOTAL	64	1	0	8	15	40

UPPER PENINSULA 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	1	0	0	0	1	0
Drinking involved	3	1	0	0	1	1
Drug Use Involved	0	0	0	0	0	0
Pedestrian Involved	0	0	0	0	0	0
Bicyclist Involved	0	0	0	0	0	0
Snowmobile Involved	0	0	0	0	0	0
Motorcycle Involved	2	1	0	0	0	1
Train Involved	0	0	0	0	0	0
Truck/Bus Involved	3	0	0	1	2	0
Emergency Vehicle Involved	0	0	0	0	0	0
Driver Hazardous Citation	39	0	0	5	12	22

*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	
Appeared Normal	58	0	0	8	14	36
Had Been Drinking**	---	---	---	---	---	---
Illegal Drug Use**	---	---	---	---	---	---
Sick	2	0	0	0	0	2
Fatigue	0	0	0	0	0	0
Asleep**	---	---	---	---	---	---
Medication	0	0	0	0	0	0
Driver Distracted**	---	---	---	---	---	---
Using Cellular Phone**	---	---	---	---	---	---
Unknown	1	1	0	0	0	0

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

**Data not available for 2015. For a complete list of changes, see Data Elements with Changes for 2015 Data

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UPPER PENINSULA 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 avoiding vehicle as the Truck/Bus Driver Action Prior to Crash.
- More fire/explosion, cargo loss/shift, jackknife, and “other non-collisions” as the Most Harmful Event.
- Fewer single-vehicle crashes, but more sideswipe, rear-end, and angle crashes.
- Fewer truck/bus drivers indicated to be speeding or careless/negligent driving, but more truck/bus drivers indicated to be making backing and turning errors.
- More median crashes, but less shoulder crashes.
- More crashes between the hours of 6:00 AM and 5:59 PM, but fewer crashes between 6:00 PM and 5:59 AM.
- More crashes most weekdays but a drop in weekend crashes.

UPPER PENINSULA HEAVY TRUCK/BUS INVOLVED CRASHES

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	145	55.8	2	66.7	26	53.1
Turning left	20	7.7	0	0.0	6	12.2
Turning right	21	8.1	0	0.0	2	4.1
Stopped on roadway	16	6.2	1	33.3	4	8.2
In prior crash	1	0.4	0	0.0	0	0.0
Changing lanes	3	1.2	0	0.0	0	0.0
Backing	14	5.4	0	0.0	1	2.0
Slowing/stopping on roadway	16	6.2	0	0.0	5	10.2
Slowing/stopping other	1	0.4	0	0.0	0	0.0
Starting up on roadway	3	1.2	0	0.0	2	4.1
Starting up other	0	0.0	0	0.0	0	0.0
Entering parking	1	0.4	0	0.0	0	0.0
Leaving parking	0	0.0	0	0.0	0	0.0
Entering roadway	2	0.8	0	0.0	0	0.0
Leaving roadway	1	0.4	0	0.0	0	0.0
Making U-turn	1	0.4	0	0.0	0	0.0
Overtaking or passing	3	1.2	0	0.0	1	2.0
Avoiding object	0	0.0	0	0.0	0	0.0
Avoiding animal	0	0.0	0	0.0	0	0.0
Avoiding pedestrian	0	0.0	0	0.0	0	0.0
Avoiding vehicle (front/back)	4	1.5	0	0.0	2	4.1
Avoiding vehicle (angle)	1	0.4	0	0.0	0	0.0
Driverless moving	1	0.4	0	0.0	0	0.0
Parked	5	1.9	0	0.0	0	0.0
Crossing at intersection	0	0.0	0	0.0	0	0.0
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	0.0	0	0.0	0	0.0
In roadway against traffic	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	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	0	0.0	0	0.0	0	0.0
Other	0	0.0	0	0.0	0	0.0
Unknown	1	0.4	0	0.0	0	0.0
TOTAL	260	100.0	3	100.0	49	100.0

UPPER PENINSULA 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	0	0.0	0	0.0	0	0.0
Cross center/median	1	0.4	0	0.0	0	0.0
Ran off road left	1	0.4	0	0.0	0	0.0
Ran off road right	1	0.4	0	0.0	0	0.0
Re-enter road	0	0.0	0	0.0	0	0.0
Overturn	5	1.9	0	0.0	3	6.1
Separation of units	0	0.0	0	0.0	0	0.0
Fire/explosion	1	0.4	0	0.0	0	0.0
Immersion	0	0.0	0	0.0	0	0.0
Jackknife	2	0.8	0	0.0	0	0.0
Downhill runaway	0	0.0	0	0.0	0	0.0
Cargo loss/shift	7	2.7	0	0.0	0	0.0
Individual fell off	0	0.0	0	0.0	0	0.0
Other noncollision	9	3.5	0	0.0	4	8.2
SUBTOTAL	27	10.4	0	0.0	7	14.3

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	0	0.0	0	0.0	0	0.0
Bicycle / Pedalcycle	0	0.0	0	0.0	0	0.0
Motor vehicle in transport	150	57.7	3	100.0	39	79.6
Parked motor vehicle	18	6.9	0	0.0	0	0.0
Railway train	0	0.0	0	0.0	0	0.0
Animal	27	10.4	0	0.0	0	0.0
Other nonfixed objects	7	2.7	0	0.0	1	2.0
SUBTOTAL	202	77.7	3	100.0	40	81.6

In the Upper Peninsula, the majority of heavy trucks/buses are involved in crashes with a motor vehicle in transport for all crashes (57.7%), fatal crashes (100.0%),and injury crashes (79.6%) for most harmful event in the crash.

UPPER PENINSULA 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	5	1.9	0	0.0	0	0.0
Bridge parapet end	0	0.0	0	0.0	0	0.0
Bridge rail	1	0.4	0	0.0	0	0.0
Guardrail face	2	0.8	0	0.0	0	0.0
Guardrail end	1	0.4	0	0.0	1	2.0
Median barrier	0	0.0	0	0.0	0	0.0
Highway traffic sign post	1	0.4	0	0.0	0	0.0
Highway signal post	0	0.0	0	0.0	0	0.0
Luminaire/light support	3	1.2	0	0.0	0	0.0
Utility pole	0	0.0	0	0.0	0	0.0
Other pole	1	0.4	0	0.0	0	0.0
Culvert	0	0.0	0	0.0	0	0.0
Curb	1	0.4	0	0.0	0	0.0
Ditch	2	0.8	0	0.0	1	2.0
Embankment	2	0.8	0	0.0	0	0.0
Fence	0	0.0	0	0.0	0	0.0
Mailbox	1	0.4	0	0.0	0	0.0
Tree	2	0.8	0	0.0	0	0.0
Rail crossing signal	1	0.4	0	0.0	0	0.0
Building	0	0.0	0	0.0	0	0.0
Traffic island	0	0.0	0	0.0	0	0.0
Fire hydrant	0	0.0	0	0.0	0	0.0
Impact attenuator	0	0.0	0	0.0	0	0.0
Other fixed object	5	1.9	0	0.0	0	0.0
SUBTOTAL	28	10.8	0	0.0	2	4.1

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Unknown Event	3	1.2	0	0.0	0	0.0
MOST HARMFUL EVENT TOTAL	260	100.0	3	100.0	49	100.0

UPPER PENINSULA 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	69	26.5	0	0.0	6	12.2
Head On	6	2.3	0	0.0	2	4.1
Head On - Left Turn	4	1.5	0	0.0	1	2.0
Angle	38	14.6	1	33.3	13	26.5
Rear End	54	20.8	2	66.7	15	30.6
Rear End - Left Turn	4	1.5	0	0.0	3	6.1
Rear End - Right Turn	1	0.4	0	0.0	0	0.0
Sideswipe - Same Direction	34	13.1	0	0.0	3	6.1
Sideswipe - Opposite Direction	10	3.8	0	0.0	1	2.0
Other/Unknown	40	15.4	0	0.0	5	10.2
TOTAL	260	100.0	3	100.0	49	100.0

The majority of heavy trucks/buses are involved in single vehicle crashes for all crashes (26.5%), rear end crashes for fatal crashes (66.7%), and rear end crashes for injury crashes (30.6%).

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	147	56.5	2	66.7	30	61.2	0	0.0
Speed too fast	11	4.2	0	0.0	2	4.1	6	26.1
Speed too slow	0	0.0	0	0.0	0	0.0	0	0.0
Failed to yield	9	3.5	0	0.0	3	6.1	2	8.7
Disregard traffic control	2	0.8	0	0.0	2	4.1	1	4.3
Drove wrong way	0	0.0	0	0.0	0	0.0	0	0.0
Drove left of center	1	0.4	0	0.0	0	0.0	0	0.0
Improper passing	1	0.4	0	0.0	0	0.0	0	0.0
Improper lane use	7	2.7	0	0.0	1	2.0	1	4.3
Improper turn	11	4.2	0	0.0	2	4.1	1	4.3
Improper/no signal	3	1.2	0	0.0	1	2.0	0	0.0
Improper backing	12	4.6	0	0.0	0	0.0	0	0.0
Unable to stop in assured clear distance	14	5.4	0	0.0	4	8.2	5	21.7
Reckless driving	2	0.8	1	33.3	0	0.0	1	4.3
Careless/negligent driving	15	5.8	0	0.0	1	2.0	4	17.4
Other	22	8.5	0	0.0	2	4.1	2	8.7
Unknown	3	1.2	0	0.0	1	2.0	0	0.0
TOTAL	260	100.0	3	100.0	49	100.0	23	100.0

After no hazardous action and other, in the Upper Peninsula the majority of heavy trucks/buses have a hazardous action of careless/negligent driving for all crashes (5.8%). The most common hazardous action for heavy/trucks/buses involved in injury crashes after no hazardous action is unable to stop in assured clear distance (8.2%).

UPPER PENINSULA 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	230	88.5	3	100.0	42	85.7
Median	3	1.2	0	0.0	1	2.0
Shoulder	9	3.5	0	0.0	3	6.1
Outside of Shoulder/Curb	13	5.0	0	0.0	2	4.1
Gore	0	0.0	0	0.0	0	0.0
Other/Unknown	5	1.9	0	0.0	1	2.0
TOTAL	260	100.0	3	100.0	49	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 - 02:59 AM	4	1.5	0	0.0	0	0.0
03:00 AM - 05:59 AM	19	7.3	0	0.0	2	4.1
06:00 AM - 08:59 AM	43	16.5	0	0.0	10	20.4
09:00 AM - 11:59 AM	50	19.2	1	33.3	10	20.4
12:00 PM - 02:59 PM	62	23.8	1	33.3	9	18.4
03:00 PM - 05:59 PM	48	18.5	1	33.3	13	26.5
06:00 PM - 08:59 PM	24	9.2	0	0.0	3	6.1
09:00 PM - 11:59 PM	10	3.8	0	0.0	2	4.1
Unknown	0	0.0	0	0.0	0	0.0
TOTAL	260	100.0	3	100.0	49	100.0

In the Upper Peninsula, heavy truck/bus frequencies in crashes peak in the early afternoon, then drop off steadily until 3:00 AM. The majority of heavy trucks/buses are involved in injury crashes from 3:00 to 5:59 AM (26.5%).

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	13	5.0	1	33.3	2	4.1
U.S. & Michigan Roads	166	63.8	1	33.3	36	73.5
County & City Roads	81	31.2	1	33.3	11	22.4
TOTAL	260	100.0	3	100.0	49	100.0

In the Upper Peninsula, the majority of heavy trucks/buses are involved in crashes on U.S. and Michigan roads for all crashes (63.8%) and injury crashes (73.5%).

UPPER PENINSULA 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	38	14.6	0	0.0	13	26.5
Tuesday	54	20.8	0	0.0	11	22.4
Wednesday	45	17.3	1	33.3	8	16.3
Thursday	43	16.5	1	33.3	7	14.3
Friday	47	18.1	1	33.3	8	16.3
Saturday	24	9.2	0	0.0	2	4.1
Sunday	9	3.5	0	0.0	0	0.0
TOTAL	260	100.0	3	100.0	49	100.0

In the Upper Peninsula, the majority of heavy trucks/buses are involved in all crashes (20.8%) on Tuesday and injury crashes (26.5%) on Monday.

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	234	90.0	2	66.7	45	91.8
Female	17	6.5	1	33.3	3	6.1
Unknown	9	3.5	0	0.0	1	2.0
TOTAL	260	100.0	3	100.0	49	100.0

In the Upper Peninsula, the majority of heavy truck/bus drivers are male in all crashes (90.0%), fatal crashes (66.7%), and injury crashes (91.8%).

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	212	81.5	2	66.7	37	75.5
2 occupants	16	6.2	0	0.0	4	8.2
3 occupants	2	0.8	1	33.3	1	2.0
4 occupants	0	0.0	0	0.0	0	0.0
5 occupants	0	0.0	0	0.0	0	0.0
6 + occupants	21	8.1	0	0.0	6	12.2
0 occupants	7	2.7	0	0.0	1	2.0
Unknown	2	0.8	0	0.0	0	0.0
TOTAL	260	100.0	3	100.0	49	100.0

UPPER PENINSULA 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 and Station Wagon	141	72.7	6	75.0	32	71.1
Van and Motorhome	10	5.2	1	12.5	2	4.4
Pickup	38	19.6	1	12.5	9	20.0
Small Truck (under 10,000 lbs.)	2	1.0	0	0.0	1	2.2
Motorcycle	1	0.5	0	0.0	0	0.0
Moped	1	0.5	0	0.0	1	2.2
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	0	0.0	0	0.0	0	0.0
Off Road Vehicle	0	0.0	0	0.0	0	0.0
Other	1	0.5	0	0.0	0	0.0
Unknown	0	0.0	0	0.0	0	0.0
SUBTOTAL	194	100.0	8	100.0	45	100.0

HEAVY TRUCK/BUS VEHICLE TYPES	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Commercial Vehicle: Group A*	150	57.7	1	33.3	26	53.1
Commercial Vehicle: Group B**	53	20.4	1	33.3	13	26.5
Commercial Vehicle: Group C***	7	2.7	0	0.0	3	6.1
Other Truck	26	10.0	1	33.3	6	12.2
Unknown Truck	24	9.2	0	0.0	1	2.0
SUBTOTAL	260	100.0	3	100.0	49	100.0

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

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

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

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Total Vehicle Types in Heavy Truck/Bus Crashes	454	---	11	---	94	---

UPPER PENINSULA HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

HEAVY TRUCK/BUS 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	0	0.0	0	0.0	1	2.8	3	0.8	6	0.8
Speed too fast	4	57.1	2	12.5	9	25.0	208	52.1	75	9.7
Speed too slow	0	0.0	0	0.0	1	2.8	1	0.3	0	0.0
Failed to yield	0	0.0	2	12.5	10	27.8	4	1.0	286	36.8
Disregard traffic control	0	0.0	1	6.3	1	2.8	1	0.3	70	9.0
Drove wrong way	0	0.0	0	0.0	0	0.0	0	0.0	5	0.6
Drove left of center	0	0.0	0	0.0	2	5.6	2	0.5	13	1.7
Improper passing	0	0.0	0	0.0	1	2.8	0	0.0	8	1.0
Improper lane use	0	0.0	1	6.3	2	5.6	1	0.3	12	1.5
Improper turn	0	0.0	1	6.3	0	0.0	0	0.0	16	2.1
Improper/no signal	0	0.0	0	0.0	0	0.0	0	0.0	5	0.6
Improper backing	0	0.0	0	0.0	1	2.8	1	0.3	15	1.9
Unable to stop in assured clear distance	0	0.0	5	31.3	4	11.1	7	1.8	188	24.2
Reckless driving	0	0.0	1	6.3	0	0.0	17	4.3	10	1.3
Careless/Negligent driving	3	42.9	1	6.3	3	8.3	118	29.6	48	6.2
Other	0	0.0	2	12.5	1	2.8	30	7.5	20	2.6
Unknown	0	0.0	0	0.0	0	0.0	6	1.5	0	0.0
CITED VEHICLES SUBTOTAL	7	100.0	16	100.0	36	100.0	399	100.0	777	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	7	10.0	16	8.4	36	18.6	399	8.7	777	12.1
Vehicles with No Citation Issued	63	90.0	174	91.6	158	81.4	4,208	91.3	5,661	87.9
TOTAL VEHICLES INVOLVED	70	100.0	190	100.0	194	100.0	4,607	100.0	6,438	100.0

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OCCUPANT/PERSON

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

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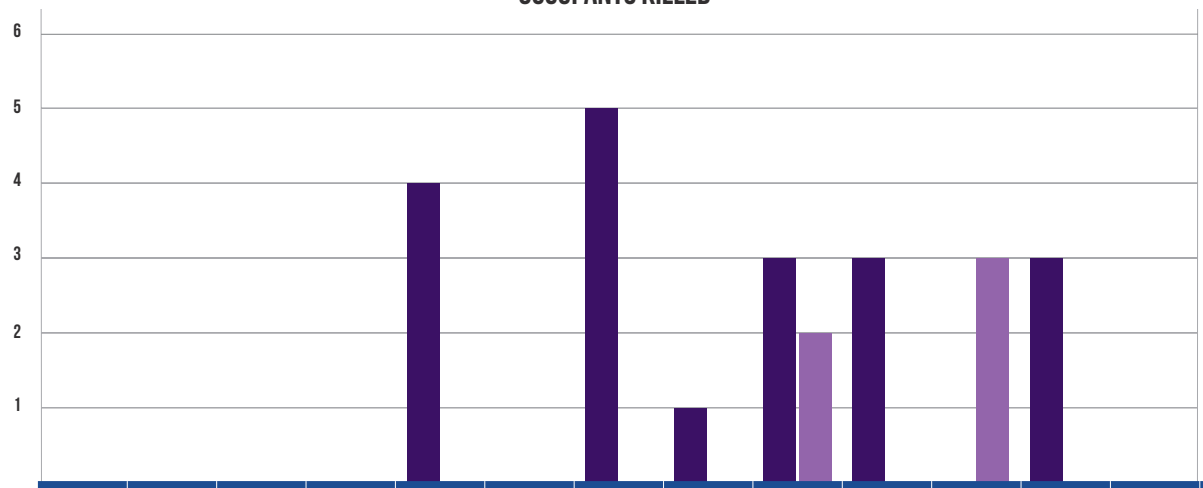
UPPER PENINSULA AGE AND GENDER OF OCCUPANTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

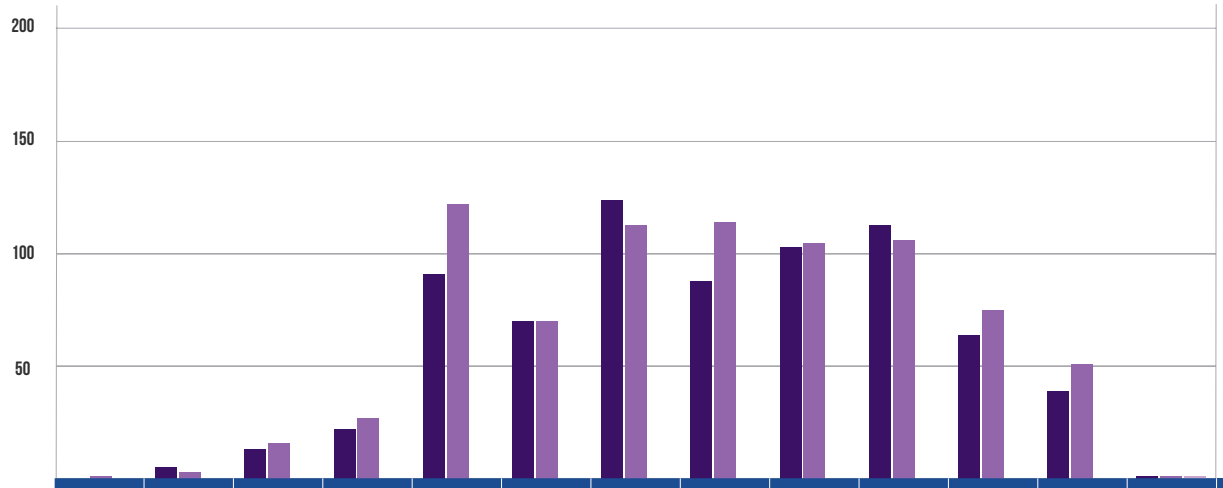
OCCUPANTS KILLED



	UNDER 1 YEAR OLD	1-3 YEARS	4-10 YEARS	11-15 YEARS	16-20 YEARS	21-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
MALES KILLED	0	0	0	0	4	0	5	1	3	3	0	3	0	19
FEMALES KILLIED	0	0	0	0	0	0	0	0	2	0	3	0	0	5
TOTAL	0	0	0	0	4	0	5	1	5	3	3	3	0	24

The majority (79.2%) of occupants killed in traffic crashes in 2015 were male.

OCCUPANTS INJURED



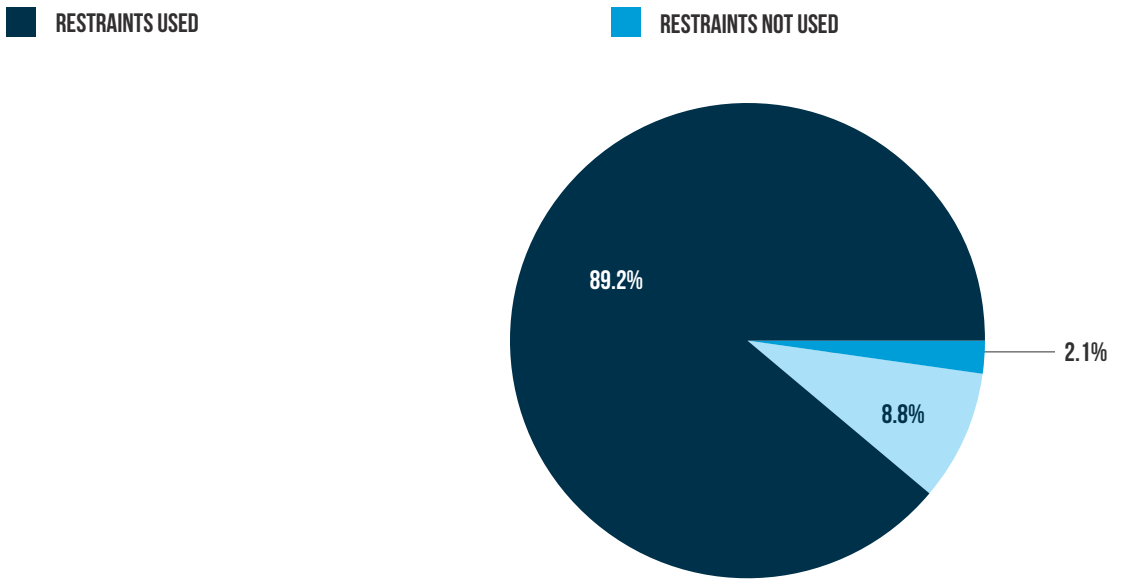
	UNDER 1 YEAR OLD	1-3 YEARS	4-10 YEARS	11-15 YEARS	16-20 YEARS	21-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
MALES INJURED	0	5	13	22	91	70	124	88	103	113	64	39	1	733
FEMALES INJURED	1	3	16	27	122	70	113	114	105	106	75	51	1	804
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	1	1
TOTAL	1	8	29	49	213	140	237	202	208	219	139	90	3	1,538

The majority (52.3%) of occupants injured in traffic crashes in 2015 were female.

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

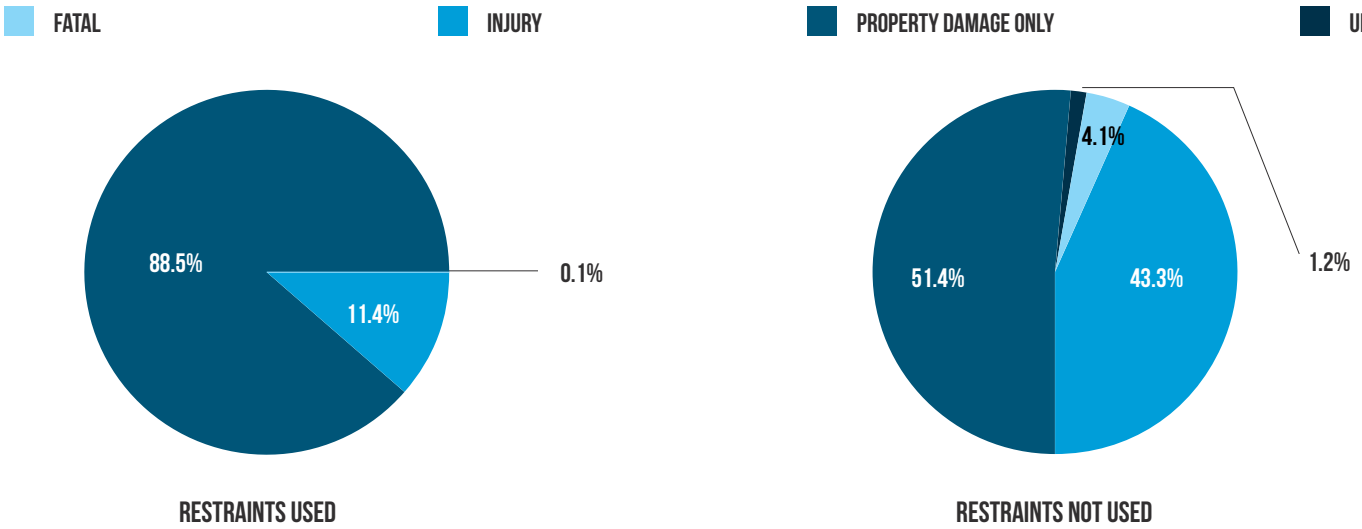
UPPER PENINSULA REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS

REPORTED OCCUPANT RESTRAINT USAGE



Of the 11,870 drivers and injured passengers involved in crashes in the Upper Peninsula, 10,583 (89.2%) were REPORTED to be using occupant restraints.

INJURY SEVERITY



Occupants in crashes were 41 times more likely to be killed if they were not wearing their restraints.

Note: These charts do not include helmet usage.

UPPER PENINSULA MOTOR VEHICLE DRIVERS AND INJURED PASSENGERS BY SEATING POSITION AND KNOWN BELT USAGE

SEATING POSITION	BELTS USED*		FATAL	INJURY			NO INJURY
	Number	% of Total		A	B	C	
Left Front	10,238	97.0	6	68	173	644	9,347
Center Front	10	0.1	0	0	2	6	2
Right Front	237	2.2	0	21	45	167	4
Left Rear	17	0.2	1	0	5	11	0
Center Rear	0	0.0	0	0	0	0	0
Right Rear	30	0.3	1	0	8	21	0
Left Rear Third Seat	4	0.0	0	0	2	2	0
Center Rear Third Seat	3	0.0	0	0	0	3	0
Right Rear Third Seat	8	0.1	0	0	5	3	0
Other/Unknown	12	0.1	0	0	0	1	11
TOTAL	10,559 †	100.0	8	89	240	858	9,364

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

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

SEATING POSITION	BELTS NOT USED*		FATAL	INJURY			NO INJURY
	Number	% of Total		A	B	C	
Left Front	186	77.2	8	12	18	27	121
Center Front	0	0.0	0	0	0	0	0
Right Front	8	3.3	1	2	3	2	0
Left Rear	8	3.3	1	2	2	3	0
Center Rear	6	2.5	0	0	2	4	0
Right Rear	15	6.2	0	5	3	7	0
Left Rear Third Seat	1	0.4	0	1	0	0	0
Center Rear Third Seat	1	0.4	0	0	0	1	0
Right Rear Third Seat	2	0.8	0	1	0	1	0
Other/Unknown	14	5.8	0	5	2	2	5
TOTAL	241 †	100.0	10	28	30	47	126

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

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

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

UPPER PENINSULA 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	0	0.0	0	0	0	0
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used	1	100.0	0	0	0	1
Child Restraint Not Used	0	0.0	0	0	0	0
Restraint Failed	0	0.0	0	0	0	0
Unknown	0	0.0	0	0	0	0
TOTAL	1	100.0	0	0	0	1
AGE 1						
Belts Used	0	0.0	0	0	0	0
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used	1	100.0	0	0	0	1
Child Restraint Not Used	0	0.0	0	0	0	0
Restraint Failed	0	0.0	0	0	0	0
Unknown	0	0.0	0	0	0	0
TOTAL	1	100.0	0	0	0	1
AGE 2						
Belts Used	1	33.3	0	0	1	0
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used	2	66.7	0	0	0	2
Child Restraint Not Used	0	0.0	0	0	0	0
Restraint Failed	0	0.0	0	0	0	0
Unknown	0	0.0	0	0	0	0
TOTAL	3	100.0	0	0	1	2

UPPER PENINSULA REPORTED RESTRAINT USE - CHILDREN (CONTINUED)

RESTRAINT USAGE	CHILDREN		FATAL	INJURY		
	Number	% of Total		A	B	C
AGE 3						
Belts Used	0	0.0	0	0	0	0
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used	4	100.0	0	0	1	3
Child Restraint Not Used	0	0.0	0	0	0	0
Restraint Failed	0	0.0	0	0	0	0
Unknown	0	0.0	0	0	0	0
TOTAL	4	100.0	0	0	1	3
AGE 4-7						
Belts Used	6	37.5	0	0	3	3
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used	9	56.2	0	0	2	7
Child Restraint Not Used	1	6.2	0	0	1	0
Restraint Failed	0	0.0	0	0	0	0
Unknown	0	0.0	0	0	0	0
TOTAL	16	100.0	0	0	6	10
AGE 8-15						
Belts Used	33	73.3	0	0	12	21
No Belts Used	6	13.3	0	1	4	1
Child Restraint Used	2	4.4	0	0	1	1
Child Restraint Not Used	0	0.0	0	0	0	0
Restraint Failed	0	0.0	0	0	0	0
Unknown	4	8.9	0	2	1	1
TOTAL	45	100.0	0	3	18	24

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 child passengers with injuries in crashes.

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

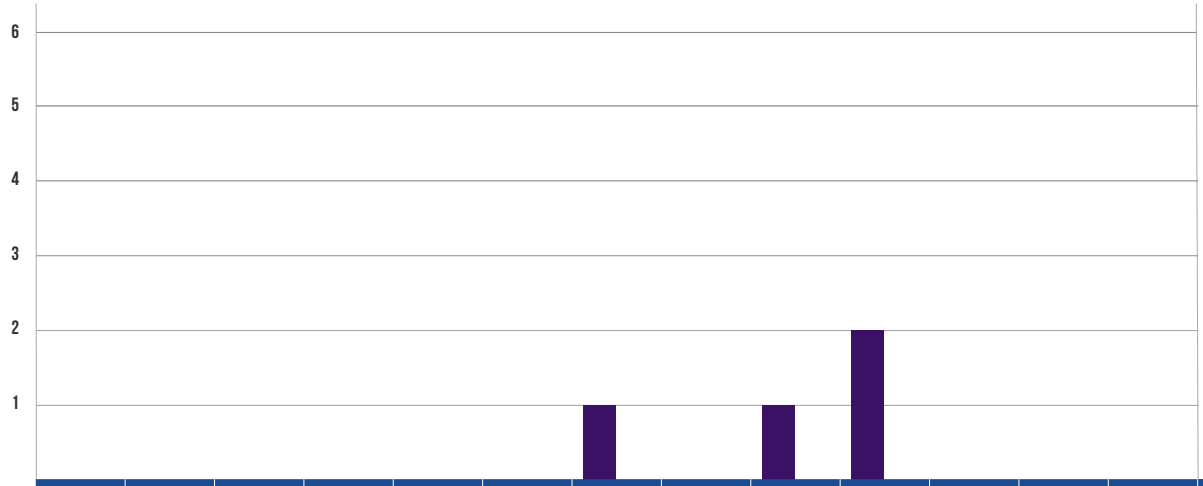
UPPER PENINSULA MOTOR VEHICLE OCCUPANT INJURY SEVERITY BY KNOWN AIRBAG DEPLOYMENT

MOTOR VEHICLE OCCUPANT AIRBAG DEPLOYMENT	OCCUPANTS		FATAL	OCCUPANT INJURY SEVERITY			NO INJURY
	Number	% of Total		A	B	C	
Deployed	957	7.9	11	65	121	287	473
Not deployed	10,009	82.8	6	55	155	623	9,037
Not equipped	503	4.2	7	62	72	94	259
Unknown	612	5.1	0	1	0	3	48
TOTAL	12,081	100.0	24	183	348	1,007	9,817

* Includes 702 occupants (drivers and passengers) with unknown injury severity.

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

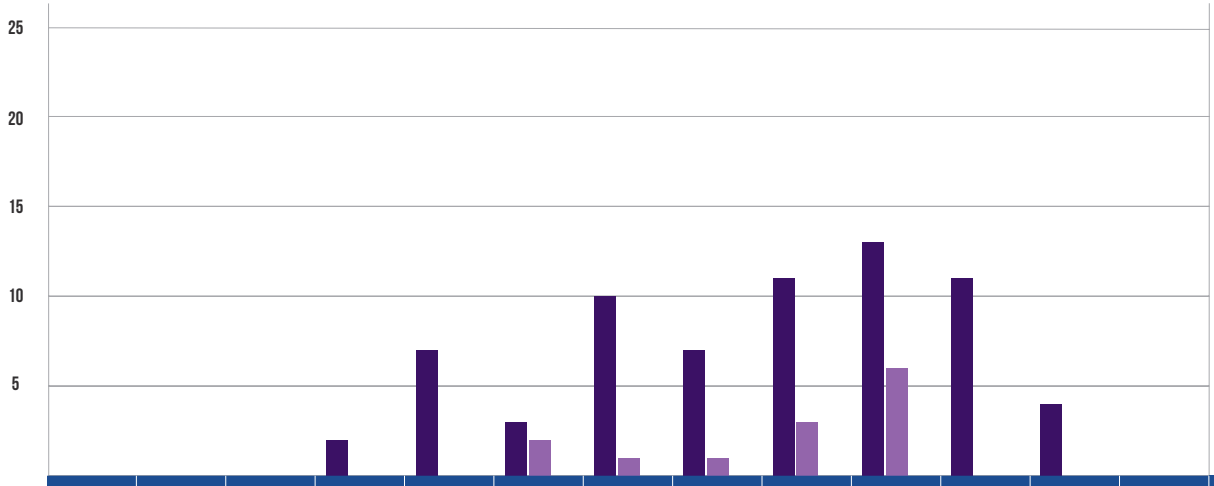
MOTORCYCLISTS KILLED



	UNDER 1 YEAR OLD	1-3 YEARS	4-10 YEARS	11-15 YEARS	16-20 YEARS	21-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
MALES KILLED	0	0	0	0	0	0	1	0	1	2	0	0	0	4
FEMALES KILLIED	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	1	0	1	2	0	0	0	4

Of the four motorcyclists killed in traffic crashes in the Upper Peninsula in 2015, four were male and none were female.

MOTORCYCLISTS INJURED



	UNDER 1 YEAR OLD	1-3 YEARS	4-10 YEARS	11-15 YEARS	16-20 YEARS	21-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	65-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
MALES INJURED	0	0	0	2	7	3	10	7	11	13	11	4	0	68
FEMALES INJURED	0	0	0	0	0	2	1	1	3	6	0	0	0	13
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	2	7	5	11	8	14	19	11	4	0	81

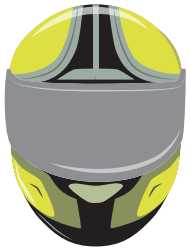
Of the 81 motorcyclists injured in traffic crashes in the Upper Peninsula in 2015, 84.0 percent were male.

UPPER PENINSULA MOTORCYCLE HELMET USAGE AND INJURY SEVERITY

AGE OF MOTORCYCLIST	FATALITIES	INJURY			NO INJURY
		A	B	C	
HELMET WORN					
3 years and under	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	0	2	0	0	0
16 - 20 years	0	2	3	1	2
21 - 24 years	0	1	1	1	0
25 - 34 years	0	2	2	2	3
35 - 44 years	0	3	0	0	2
45 - 54 years	1	2	6	1	0
55 - 64 years	1	2	5	6	9
65 - 74 years	0	2	2	5	3
75 years and over	0	1	0	2	1
Unknown	0	0	0	0	0
Subtotal	2	17	19	18	20
HELMET NOT WORN					
3 years and under	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	0	0	0	0	0
16 - 20 years	0	1	0	0	0
21 - 24 years	0	1	0	1	1
25 - 34 years	1	0	1	1	0
35 - 44 years	0	2	3	0	0
45 - 54 years	0	2	1	1	0
55 - 64 years	1	1	3	1	1
65 - 74 years	0	1	0	1	2
75 years and over	0	0	0	1	0
Unknown	0	0	0	0	0
Subtotal	2	8	8	6	4
HELMET USE UNKNOWN					
3 years and under	0	0	0	0	0
4 - 10 years	0	0	0	0	0
11 - 15 years	0	0	0	0	0
16 - 20 years	0	0	0	0	2
21 - 24 years	0	0	0	0	0
25 - 34 years	0	0	1	2	0
35 - 44 years	0	0	0	0	0
45 - 54 years	0	0	0	0	1
55 - 64 years	0	0	0	0	0
65 - 74 years	0	0	0	0	0
75 years and over	0	0	0	0	0
Unknown	0	0	0	0	0
Subtotal	0	0	1	2	3
Total	4	25	28	26	27

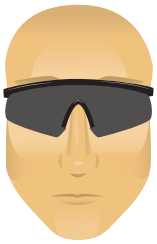
2011 Michigan motor vehicle crash data represents the last full year of data that was collected during Michigan's universal helmet law, enacted in 1969: Michigan Vehicle Code Public Act 300 of 1949, Section 257.658, requiring all motorcycle riders to wear a helmet. On April 13, 2012, Michigan changed 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: 2
PASSENGERS KILLED: 0

HELMET NOT WORN



DRIVERS KILLED: 2
PASSENGERS KILLED: 0

HELMET USE UNKNOWN

DRIVERS KILLED: 0
PASSENGERS KILLED: 0

UPPER PENINSULA OCCUPANT INJURY OUTCOME BY VEHICLE TYPE

VEHICLE	KILLED	INJURY			TOTAL KABC	% OF ALL CRASH INVOLVED KABC OCCUPANTS
		A	B	C		
Passenger Car and Station Wagon	17	80	225	726	1,048	67.1
Van (Minivan) and Motorhome	0	3	14	42	59	3.8
Pickup	3	38	49	145	235	15.0
Small Truck (under 10,000 lbs.)	0	3	5	19	27	1.7
Motorcycle	4	25	30	26	85	5.4
Moped	0	3	4	4	11	0.7
Go Cart	0	0	0	0	0	0.0
Snowmobile	0	9	3	11	23	1.5
Off Road Vehicle	0	15	17	15	47	3.0
Other	0	3	0	2	5	0.3
Unknown	0	0	0	0	0	0.0
CDL Truck/Bus (breakdown below)	0	4	1	17	22	1.4
Total Number of Occupants	24	183	347	1,007	1,562	100.0

CDL TRUCK/BUS SUB-CATEGORY TYPE	KILLED	INJURY			TOTAL KABC	% OF ALL CRASH INVOLVED KABC OCCUPANTS
		A	B	C		
Commercial Vehicle: Group A*	0	3	1	4	8	36.4
Commercial Vehicle: Group B**	0	1	0	6	7	31.8
Commercial Vehicle: Group C***	0	0	0	4	4	18.2
Other Truck	0	0	0	3	3	13.6
Unknown Truck	0	0	0	0	0	0.0
Total Number of Occupants	0	4	1	17	22	100.0

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

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

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

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 roadway and result in injury, death, or at least $1,000 in property damage.

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REFERENCES

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REFERENCES AND REPORTING AGENCIES

[1] Annual Estimates of the Resident Population for Counties of Michigan: 2010-2013. Population Division, U.S. Census Bureau. Release Date: March 2014. http://www.census.gov/popest/data/counties/asrh/2014/PEPSR6H.html

[2] Number of Deaths by Underlying Cause of Death Michigan Residents, 2012. 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] Statistics Department, National Safety Council, 1121 Spring Lake Drive, Itasca, Illinois 60143-3201. http://www.nsc.org/news_resources/injury_and_death_statistics/Documents/InjuryFactsHighlights.pdf

[4] 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

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

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