MTCF

Michigan Traffic Crash Facts

UPPER PENINSULA

2018

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 2018

MichiganTrafficCrashFacts.org

PRODUCED BY:

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Michigan Department of State Police

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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 1952-2018.

DATA ELEMENTS WITH CHANGES FOR 2016 DATA

CDL Restriction 28 (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.”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

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

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

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

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

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

Complaint Status (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.”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

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

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

Construction Lane Closed (2004-2015) – This variable is no longer active starting with 2016 data and all counts have been coded to “Uncoded & errors.”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

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

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

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

DATA ELEMENTS WITH CHANGES FOR 2016 DATA (CONTINUED)

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

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

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

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

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

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

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

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

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

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

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

DATA ELEMENTS WITH CHANGES FOR 2016 DATA (CONTINUED)

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

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

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

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

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

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

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

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

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

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

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

DATA ELEMENTS WITH CHANGES FOR 2016 DATA (CONTINUED)

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

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

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

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

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

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UD-10 (FRONT)

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

Revised September16, 2015

State of Michigan Traffic Crash Report

Page ____ of ____
Incident #
File Class
Investigated at Scene ◯ Yes ◯ No

ORI MI | Department Name | Investigator(s) | Badge # | Photos ◯ Yes ◯ No | Reviewer

Crash Date M M D D Y Y Y Y | Crash Time (Milt.) H H M M | No. of Units

Crash Type ◯ Single Motor Vehicle ◯ Head On ◯ Head On-Left Turn ◯ Angle ◯ Backing ◯ Rear End ◯ Rear End-Left Turn ◯ Rear End-Right Turn ◯ Sideswipe-Same ◯ Sideswipe-Opposite ◯ Other ◯ Unknown

Special Circumstances ◯ None ◯ Hit and Run ◯ School Bus ◯ Fleeing Police ◯ Unknown Animal

Special Checks ◯ Fatal ◯ Corrected Copy ◯ Replace ◯ Delete ◯ Non-Traffic ◯ ORV/Snowmobile

Weather | Light | Road Surface Condition | Total Lanes

County | City/Twp | Area | Traffic Control | Relation to Roadway

Work Zone-Type ◯ Const. / Maint. ◯ Utility | Work Zone-Workers Present ◯ Yes ◯ No | Work Zone-Activity | Work Zone-Location

Contributing Circumstances 1st | 2nd

Location

Prefix | Primary Road Name | Road Type | Suffix | Divided Roadway ◯ N ◯ S ◯ E ◯ W

Distance ◯ Feet ◯ Miles | Direction ◯ North ◯ South ◯ East ◯ West ◯ Beginning of Ramp ◯ End of Ramp | Trafficway ◯ 1 ◯ 2 ◯ 3 ◯ 4 ◯ 5 ◯ 6 | Speed Limit | Posted ◯ Yes ◯ No

Prefix | Intersecting Road Name | Road Type | Suffix | Divided Roadway ◯ N ◯ S ◯ E ◯ W

Unit / Driver

Unit Number | Driver's License State / Number | Date of Birth M M / D D / Y Y Y Y | Unit Type ◯ MV ◯ B ◯ P ◯ E (Train) | Sex ◯ M ◯ F

Name | ◯ Driver is Owner | License Type ◯ O ◯ C ◯ M

Street Address | Endorsements ◯ CY ◯ F ◯ R

City | State | ZIP | Phone | Injury ◯ K ◯ A ◯ B ◯ C ◯ O

Position | Restraint | Airbag | Ejected ◯ | Trapped ◯ | Condition at Time of Crash 1st 2nd | Driver Distracted By | Total Occupants | Hospital Code | Ambulance Code

Citation Issued ◯ Hazardous ◯ Other _____ | Hazardous Action | Action Prior | Sequence of Events (M = Most Harmful Event) 1st (M) 2nd (M) 3rd (M) 4th (M)

Alcohol Suspected ◯ Yes ◯ No | Contributing Factor ◯ Yes ◯ No | Test Type ◯ Breath ◯ Blood ◯ Urine ◯ Field ◯ PBT ◯ Refused ◯ Not Offered | Test Results ● | ◯ Results Pending | Interlock Device ◯ Yes ◯ No

Drug Suspected ◯ Yes ◯ No | Contributing Factor ◯ Yes ◯ No | Test Type ◯ Blood ◯ Urine ◯ Field ◯ Refused ◯ Not Offered | Test Results | ◯ Results Pending

Vehicle

Vehicle Registration | State | Insurance Company | Policy Number | Towed By | Towed To

VIN | Year | Make | Model | Color | Special Vehicles | Vehicle Use

Vehicle Type | Location of Greatest Damage | 1st Impact | Extent of Damage | Vehicle Direction | Private Trailer Type | Vehicle Defect

Passengers

Name | Ejected ◯
Street Address | Sex ◯ M ◯ F | Trapped ◯
City | State | ZIP | Phone | Injury ◯ K ◯ A ◯ B ◯ C ◯ O
Date of Birth M M D D Y Y Y Y | Position | Restraint | Airbag | Hospital Code | Ambulance Code

Name | Ejected ◯
Street Address | Sex ◯ M ◯ F | Trapped ◯
City | State | ZIP | Phone | Injury ◯ K ◯ A ◯ B ◯ C ◯ O
Date of Birth M M D D Y Y Y Y | Position | Restraint | Airbag | Hospital Code | Ambulance Code

◯ Owner ◯ Uninjured Passenger ◯ Witness | Name | Phone | Age | Pos. | Rest. | Address

◯ Owner ◯ Uninjured Passenger ◯ Witness | Name | Phone | Age | Pos. | Rest. | Address

Reported Date | Reported Time | Damaged Property _____

UD-10 SERIAL NUMBER | Serial Override Number | Owner & Phone _____ / _____ Public ◯ Yes ◯ No

UD-10 (BACK)

Unit / Driver

Unit Number | Driver's License State / Number | Date of Birth (M M / D D / Y Y Y Y) | Unit Type (MV, B, P, E (Train)) | Sex (M, F)

Name | Driver is Owner | License Type (O, C, M)

Street Address | Endorsements (CY, F, R)

City | State | Zip | Phone Number | Injury (K, A, B, C, O)

Position | Restraint | Airbag | Ejected | Trapped | Condition at Time of Crash (1st, 2nd) | Driver Distracted By | Total Occupants | Hospital Code | Ambulance Code

Citation Issued (Hazardous, Other) | Hazardous Action | Action Prior | Sequence of Events (M = Most Harmful Event) (1st, 2nd, 3rd, 4th)

Alcohol Suspected (Yes, No) | Contributing Factor (Yes, No) | Test Type (Breath, Blood, Urine, Field, PBT, Refused, Not Offered) | Test Results | Results Pending | Interlock Device (Yes, No)

Drug Suspected (Yes, No) | Contributing Factor (Yes, No) | Test Type (Blood, Urine, Field, Refused, Not Offered) | Test Results | Results Pending

Vehicle

Vehicle Registration | State | Insurance Company | Policy Number

Towed By | Towed To

VIN | Year | Make | Model | Color | Special Vehicles | Vehicle Use

Vehicle Type | Location of Greatest Damage | 1st Impact | Extent of Damage | Vehicle Direction | Private Trailer Type | Vehicle Defect

Passengers

Name | Ejected

Street Address | Sex (M, F) | Trapped

City | State | ZIP | Phone | Injury (K, A, B, C, O)

Date of Birth (M M D D Y Y Y Y) | Position | Restraint | Airbag | Hospital Code | Ambulance Code

Name | Ejected

Street Address | Sex (M, F) | Trapped

City | State | ZIP | Phone | Injury (K, A, B, C, O)

Date of Birth (M M D D Y Y Y Y) | Position | Restraint | Airbag | Hospital Code | Ambulance Code

(Owner, Uninjured Passenger, Witness) | Name | Phone | Age | Pos. | Rest. | Address

(Owner, Uninjured Passenger, Witness) | Name | Phone | Age | Pos. | Rest. | Address

Truck / Bus

Unit # | Carrier Name

Address

City | State | ZIP

GVWR / GCWR (10,000 LBS or Less, 10,001 - 26,000 LBS, 26,001 LBS or More)

Vehicle Configuration | Cargo Body Type | HAZMAT (Placard, Cargo Spill) | HAZMAT ID | HAZMAT Class

USDOT | MC | MPSC

CDL Type (A, B, C, None) | Endorsements (H, P, T, N, S, X)

Medical Card (Yes, No) | Exempt (Farm, Other) | Remarks / Narrative

UD -10 Serial Number

Crash Diagram

North

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 - Suspected Serious
  - B - Suspected Minor
  - C - Possible

See Glossary for definitions.

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

ABBREVIATIONS & ACRONYMS (CONTINUED)

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

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 ¼**
Monday	**6:00 PM FRI**	**23:59 PM MON**	**3 ¼**
Tuesday	**6:00 PM FRI**	**23:59 PM TUE**	**4 ¼**
Wednesday	**6:00 PM TUE**	**23:59 PM WED**	**1 ¼**
Thursday	**6:00 PM WED**	**23:59 PM SUN**	**3 ¼**
Friday	**6:00 PM THU**	**23:59 PM SUN**	**3 ¼**
Saturday	**6:00 PM THU**	**23:59 PM SUN**	**3 ¼**

- **Ignition Interlock -** An alcohol concentration measuring device preventing a motor vehicle from being started at any time without first determining through a deep lung sample the operator's breath alcohol level. Michigan Vehicle Code, Sec. 257.625L (6).

- **Injury Codes -**
  - **K (Fatal)** - Any injury resulting in death.
  - **A (Suspected Serious Injury)** - Any injury, other than a fatal injury, preventing the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.
  - **B (Suspected Minor Injury)** - Any injury not incapacitating but evident to observers at the scene of the crash in which the injury occurred.
  - **C (Possible Injury)** - Any injury reported or claimed that is not a fatal injury, incapacitating injury or non-incapacitating injury.
  - **O (No injury)** - Person reported as not receiving bodily harm from the motor vehicle crash.

  Note: Uninjured passengers are not required to be recorded by the police with the exception of a fatal crash at which point all involved parties must be listed.

- **Injury Crash -** Any crash involving an injury other than a fatal injury.

- **In Transport -** Denotes the state or condition of a vehicle that is in motion or within the portion of a way ordinarily used by similar vehicles. When applied to motor vehicles, "in transport" means in motion or on a roadway.

  Inclusions: Motor vehicle in traffic on a highway; driverless motor vehicle in motion; motionless motor vehicle abandoned on a roadway; disabled motor vehicle on a roadway; and others.
  A parked motor vehicle in roadway lanes used to travel during rush hours and parking during off-peak periods is in transport during periods when parking is forbidden.

- **Licensed Drivers -** All valid Michigan drivers on file, including suspended, revoked, and denied drivers (does not include expired licenses).
- **Location (Crash Location) -** Location of a crash is defined by:
    - The road name on which the crash occurred including prefix, road name, type, and suffix
    - The distance and direction of the point of impact from a cross road (located within the county of the crash)
    - The name of the cross road including prefix, road name, type, and suffix
- **Most Severe Outcome in Crash -** The most severe injury sustained by any person involved in the crash, or property damage only.
- **Most Severe Outcome in Vehicle -** The most severe injury sustained by any person in the vehicle, or property damage only.
- **Motorcyclist -** An operator or passenger riding a motored cycle.
- **Motor Vehicle -** "Motor vehicle" means every vehicle which is self-propelled and every vehicle which is propelled by electric power obtained from overhead trolley wires, but not operated upon rails.
    - **Standard motor vehicles** - Cars, pickups, vans, buses, trucks, motorcycles, etc.
    - **Emergency vehicles** - Police, fire, ambulance.
    - **Farm equipment** - Farm tractors, combines, etc.
    - **Off Road Vehicles (ORV)** - Snowmobiles, mopeds, all-terrain vehicles (ATV), dirt bikes, motorbikes, go-carts, garden tractors, motorized wheelchairs, scooters.
    - **Road maintenance equipment** - dump trucks, snowplows, road graders
    - **Construction equipment** - Rollers, front-end loaders, scrapers, mobile cranes, etc.
- **Motor Vehicle Crash -** A crash involving a motor vehicle in transport on a public trafficway (in Michigan) resulting in injury, death, or at least $1,000 in property damage.
- **Non-collision -** A crash not involving a collision with another motor vehicle. Types of noncollision crashes include explosion or fire in vehicle, rollover, immersion, etc.
- **Occupant -** Any injured or killed person in or on a motor vehicle, including all drivers.
- **Passenger -** Any person in or on a motor vehicle, excluding the driver.
- **Pedestrian -** Any person on foot; person on skis, skates or roller blades; rider of horse; horse and buggy (each occupant including the driver will be listed as a separate pedestrian unit); non-motorized wheelchair.
- **Property Damage Only (PDO) Crash -** A crash resulting in no fatalities or injuries, with a value of $1,000 as a reporting threshold.

GLOSSARY (CONTINUED)

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

TABLE OF CONTENTS

QUICK FACTS AND FIGURES

HISTORICAL INFORMATION

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

DEER

CRASH - CIRCUMSTANCES COMMON TO ALL TRAFFIC UNITS IN A CRASH

VEHICLE/DRIVER - CHARACTERISTICS SPECIFIC TO INDIVIDUAL TRAFFIC UNITS

TABLE OF CONTENTS (CONTINUED)

TABLE OF CONTENTS (CONTINUED)

REFERENCES

INDEX

QUICK FACTS AND FIGURES

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UPPER PENINSULA 2018 QUICK FACTS

- Some exposure factor comparisons between 2018 and 2017 show motor vehicle registrations decreased by a count of 2,598 (1.0%), the number of licensed drivers on Upper Peninsula roads decreased 0.3 percent, and vehicle mileage decreased 0.3 percent.

- The 2018 fatality rate of 1.04 deaths per 100 million miles of travel is a decrease from the 2017 fatality rate of 1.15 and is lower than the 10-year average of 1.07 (2009-2018).

- There were 35 people killed and 1,538 people injured in 8,948 reported motor vehicle traffic crashes in the Upper Peninsula during 2018. Compared with the 2017 experience, the number of deaths decreased 10.3 percent, people injured decreased 7.0 percent, and total reported crashes decreased 6.2 percent.

- There were 8,948 reported crashes, of which 33 were fatal, 1,153 were personal injury, and 7,762 were property damage only crashes.

- Of all fatal crashes, 18.2 percent occurred at intersections.

- Of all fatal crashes, 24.2 percent involved at least one drinking operator, bicyclist, or pedestrian, 15.2 percent involved drinking but no drugs, 15.2 percent involved drugs but no drinking, and 9.1 percent involved both drinking and drugs.

- Excessive speed was indicated as the hazardous action for 15.3 percent of the drivers involved in fatal crashes.

- Of the 8,948 total crashes in 2018, 5,649 (63.1%) involved one vehicle only. This is a decrease of 8.2 percent from last year's count of 6,151 single-vehicle crashes.

- Of the 33 fatal crashes, 11 (33.3%) involved one vehicle.

- Of the eight alcohol-involved fatal crashes, five (62.5%) involved one vehicle.

- Of the 59 drivers involved in fatal crashes, five (8.5%) were under 21 years of age and 14 (23.7%) were under 25 years of age.

- Of the 301,151 people living in the Upper Peninsula [1. References and Reporting Agencies] one out of every 8,604 was killed in a traffic crash and one out of every 196 was injured.

- For each person killed, 44 were injured.

- There was one pedestrian death in the Upper Peninsula in 2018. Twenty-nine pedestrians were injured.

- There were no bicyclist fatalities and 23 bicyclists were injured.

- Of the 11,423 drivers and injured passengers involved in crashes where restraint use was known, 11,222 or 98.2 percent were reported to have been using occupant restraints. Restraint usage among fatal victims, where usage was known, was reported to be 62.1 percent in 2018.

- The comprehensive costs in the Upper Peninsula traffic crashes amounted to $1,303,551,000.

UPPER PENINSULA MICHIGAN CRASH WATCH 2018

HISTORICAL INFORMATION

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UPPER PENINSULA 2017-2018 SUMMARY TRENDS: 1 YEAR TRENDS

	2017	2018	PERCENT OF CHANGE
NUMBER OF CRASHES			
Fatal Crashes	35	33	-5.7
Personal Injury Crashes	1,234	1,153	-6.6
Property Damage Crashes	8,273	7,762	-6.2
TOTAL	9,542	8,948	-6.2
ALCOHOL-INVOLVED CRASHES			
Fatal Crashes	13	8	-38.5
Personal Injury Crashes	147	127	-13.6
Property Damage Crashes	205	174	-15.1
TOTAL	365	309	-15.3
FATAL CRASHES			
Had Been Drinking	13 (37.1%)	8 (24.2%)	-38.5
Had Not Been Drinking / Not Known If Drinking	22 (62.9%)	25 (75.8%)	13.6
PERSONS IN CRASHES			
Killed	39	35	-10.3
Injured	1,654	1,538	-7.0
Not Injured	12,851	12,093	-5.9
Unknown Injury	730	750	2.7
TOTAL	15,274	14,416	-5.6
PERSONS IN ALCOHOL-INVOLVED CRASHES			
Killed	13	8	-38.5
Injured	187	157	-16.0
Not Injured	318	292	-8.2
Unknown Injury	35	34	-2.9
TOTAL	553	491	-11.2
PERSONS INJURED BY GENDER			
Male	828	753	-9.1
Female	826	784	-5.1
Unknown Gender	0	1	---
TOTAL	1,654	1,538	-7.0
PERSONS INJURED BY SEVERITY			
A Injury	253	218	-13.8
B Injury	435	440	1.1
C Injury	966	880	-8.9
TOTAL	1,654	1,538	-7.0

The Upper Peninsula experienced a 6.2 percent decrease in crashes, a 10.3 percent decrease in traffic fatalities, and a 7.0 percent decrease in injuries. Persons sustaining A level injuries (the most serious) decreased 13.8 percent.

UPPER PENINSULA 2017-2018 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

	2017	2018	PERCENT OF CHANGE
PERSONS KILLED BY GENDER			
Male	25	25	0.0
Female	14	10	-28.6
TOTAL	39	35	-10.3
PERSONS KILLED			
Motor Vehicle Driver	28	28	0.0
Passenger	11	6	-45.5
Bicyclist	0	0	0.0
Pedestrian	0	1	---
Train Engineer	0	0	0.0
TOTAL	39	35	-10.3
BELT RESTRAINT USE BY DRIVER			
Reported Restrained – Killed	9	13	44.4
Reported Not Restrained – Killed	9	8	-11.1
Reported Restrained – Injured	956	916	-4.2
Reported Not Restrained – Injured	71	45	-36.6
BELT AND CHILD RESTRAINT USE BY INJURED PASSENGER			
Reported Restrained – Killed	5	2	-60.0
Reported Not Restrained – Killed	4	1	-75.0
Reported Restrained – Injured	322	269	-16.5
Reported Not Restrained – Injured	54	48	-11.1
DRIVER AGE 16-20 INVOLVED			
Fatal Crashes	4	5	25.0
Personal Injury Crashes	288	215	-25.3
Property Damage Crashes	1,151	1,011	-12.2
TOTAL ALL CRASHES	1,443	1,231	-14.7
Persons Killed	6	5	-16.7
Persons Injured	430	306	-28.8
DRIVER AGE 65 & OVER INVOLVED			
Fatal Crashes	10	11	10.0
Personal Injury Crashes	265	268	1.1
Property Damage Crashes	1,538	1,614	4.9
TOTAL ALL CRASHES	1,813	1,893	4.4
Persons Killed	13	13	0.0
Persons Injured	376	378	0.5

Deaths among vehicle occupants (drivers and passengers only) decreased 12.8 percent.

UPPER PENINSULA 2017-2018 SUMMARY TRENDS: 1 YEAR TRENDS (CONTINUED)

	2017	2018	PERCENT OF CHANGE
CRASH FACTS			
Licensed Drivers	221,126	220,395	-0.3
Registered Vehicles	259,530	256,932	-1.0
Population	302,077	301,151	-0.3
Drivers Involved in Crashes	13,050	12,351	-5.4
Occupants* Involved in Crashes	15,209	14,351	-5.6
Estimated Vehicle Miles Traveled (thousands)	3,380,362	3,371,820	-0.3
Death Rate Per 100 Million Vehicle Miles	1.2	1.0	-10.0
Fatal Crash Rate Per 100 Million Vehicle Miles	1.0	1.0	-5.5

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

UPPER PENINSULA 2018 COST OF CRASHES IN MICHIGAN

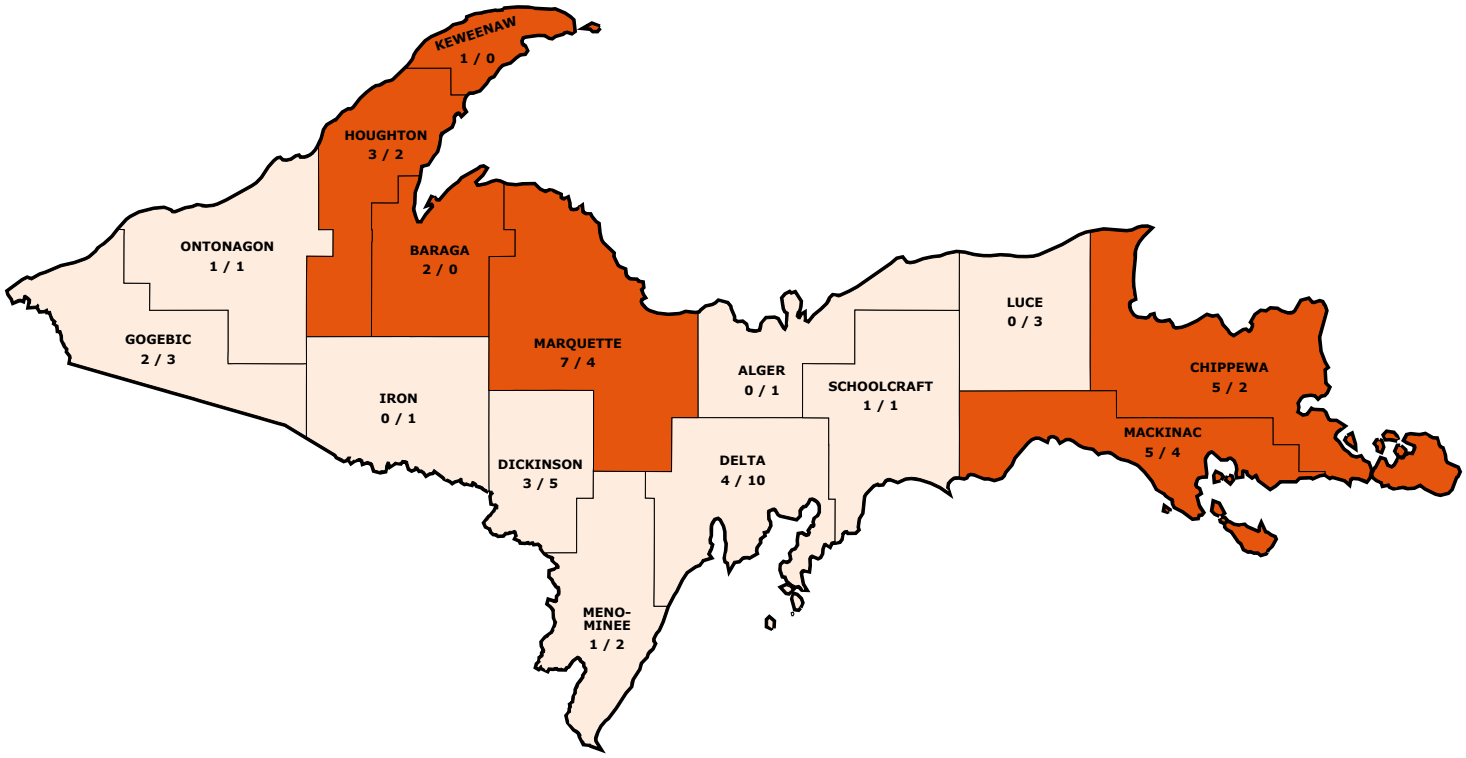
The cost estimate for Upper Peninsula crashes in 2018 was **$1,303,551,000**. This estimate is based on the National Safety Council's cost estimating procedures. Average comprehensive costs are based on the following national figures:

COMPREHENSIVE COSTS, 2018

Death	$10,855,000
Suspected Serious Injury	$1,187,000
Suspected Minor Injury	$327,000
Possible Injury	$151,000
No Injury	$50,000

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

UPPER PENINSULA WHERE TRAFFIC FATALITIES OCCURRED



Where Traffic Fatalities Occurred - A One-Year Comparison

2018 = 35 / 2017 = 39

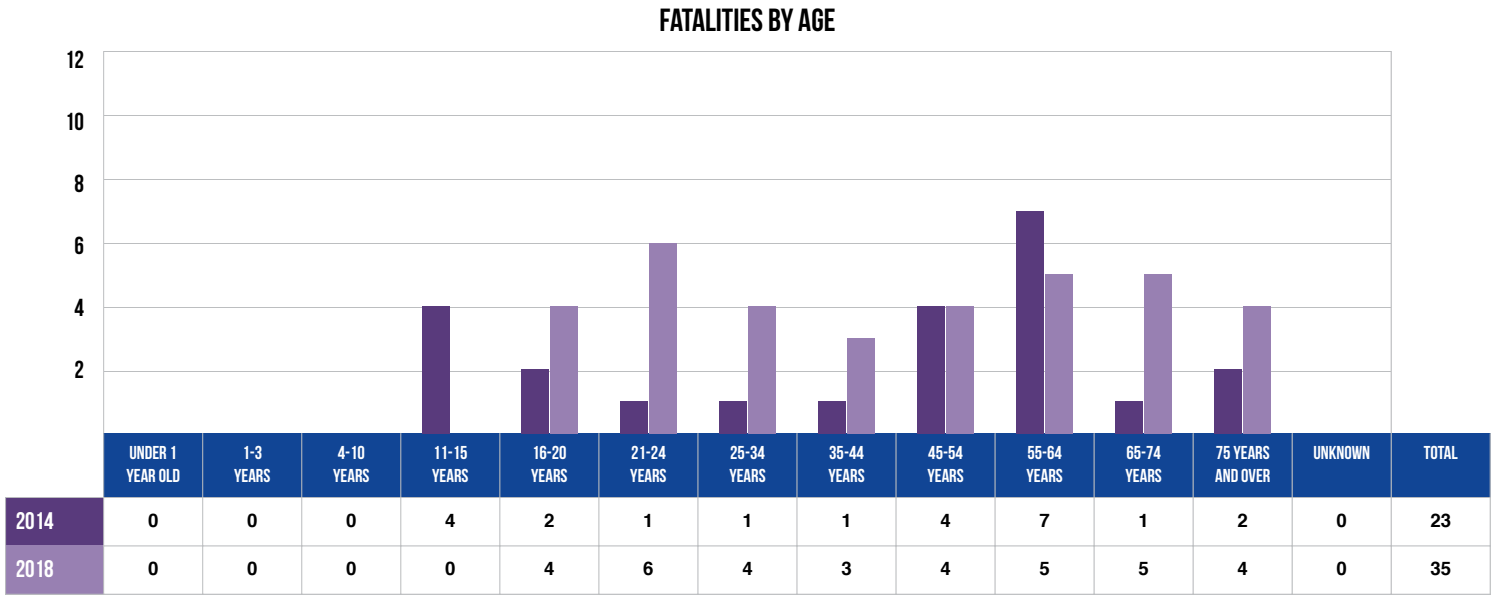
Same or decrease

Increase

5 YEAR TRENDS - UPPER PENINSULA FATALITIES

FATALITIES BY AGE	2014	2015	2016	2017	2018
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	0
4 - 10 years	0	0	0	1	0
11 - 15 years	4	0	0	1	0
16 - 20 years	2	4	1	2	4
21 - 24 years	1	0	3	2	6
25 - 34 years	1	5	3	5	4
35 - 44 years	1	1	7	1	3
45 - 54 years	4	5	3	10	4
55 - 64 years	7	3	9	6	5
65 - 74 years	1	4	2	3	5
75 years and over	2	3	4	8	4
Unknown	0	0	0	0	0
TOTAL	23	25	32	39	35

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



	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
2014	0	0	0	4	2	1	1	1	4	7	1	2	0	23
2018	0	0	0	0	4	6	4	3	4	5	5	4	0	35

5 YEAR TRENDS - UPPER PENINSULA DRIVERS IN FATAL CRASHES

DRIVER AGE	2014	2015	2016	2017	2018
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	0	0	1	0	0
17 years	0	2	1	2	0
18 years	1	1	1	1	1
19 years	3	2	0	1	2
20 years	0	1	1	0	2
21 - 24 years	2	5	3	4	9
25 - 34 years	1	6	4	4	7
35 - 44 years	7	4	8	5	9
45 - 54 years	4	5	5	14	9
55 - 64 years	8	5	13	8	8
65 - 69 years	2	3	0	4	4
70 - 74 years	0	4	1	2	2
75 - 79 years	0	1	0	1	0
80 - 84 years	1	1	4	2	1
85 - 89 years	1	0	0	2	3
90 years and over	0	0	0	0	1
Unknown	0	0	0	2	1
Totals	31	40	42	53	59
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	0	0	0	0	0
16 years	0	0	0	0	0
17 years	0	1	0	0	0
18 years	0	0	0	0	0
19 years	0	1	0	0	1
20 years	0	1	1	0	1
21 - 24 years	1	1	1	0	3
25 - 34 years	0	3	3	3	1
35 - 44 years	3	0	4	2	1
45 - 54 years	0	2	3	7	2
55 - 64 years	4	3	4	4	1
65 - 69 years	1	1	0	1	0
70 - 74 years	0	0	0	0	0
75 - 79 years	0	1	0	0	0
80 - 84 years	0	1	1	0	0
85 - 89 years	0	0	0	1	0
90 years and over	0	0	0	0	0
Unknown	0	0	0	0	1
Totals	9	15	17	18	11

5 YEAR TRENDS - UPPER PENINSULA BICYCLIST AND PEDESTRIAN FATALITIES

FATALITIES BY AGE	2014	2015	2016	2017	2018
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	1	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	0	0	0	0
Unknown	0	0	0	0	0
Totals	0	0	1	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	0	0	0	0	0
21 - 24 years	0	0	0	0	0
25 - 34 years	0	0	0	0	1
35 - 44 years	0	0	1	0	0
45 - 54 years	0	0	0	0	0
55 - 64 years	1	0	0	0	0
65 - 74 years	0	1	1	0	0
75 years and over	0	0	0	0	0
Unknown	0	0	0	0	0
Totals	1	1	2	0	1

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

HOLIDAY PERIOD	FATAL CRASHES	PERSONS KILLED
MEMORIAL DAY		
2018 (3) MON	1 [0]	1 [0]
2017 (3) MON	0 [0]	0 [0]
2016 (3) MON	0 [0]	0 [0]
2015 (3) MON	0 [0]	0 [0]
2014 (3) MON	0 [0]	0 [0]
FOURTH OF JULY		
2018 (1) WED	0 [0]	0 [0]
2017 (4) TUE	1 [1]	1 [1]
2016 (3) MON	0 [0]	0 [0]
2015 (3) SAT	0 [0]	0 [0]
2014 (3) FRI	0 [0]	0 [0]
LABOR DAY		
2018 (3) MON	2 [1]	2 [1]
2017 (3) MON	0 [0]	0 [0]
2016 (3) MON	0 [0]	0 [0]
2015 (3) MON	1 [1]	1 [1]
2014 (3) MON	0 [0]	0 [0]
THANKSGIVING		
2018 (4) THU	0 [0]	0 [0]
2017 (4) THU	0 [0]	0 [0]
2016 (4) THU	0 [0]	0 [0]
2015 (4) THU	0 [0]	0 [0]
2014 (4) THU	0 [0]	0 [0]
CHRISTMAS		
2018 (4) TUE	0 [0]	0 [0]
2017 (3) MON	0 [0]	0 [0]
2016 (3) SUN	0 [0]	0 [0]
2015 (3) FRI	0 [0]	0 [0]
2014 (4) THU	1 [0]	1 [0]
NEW YEAR'S		
2018 (4) TUE	1[1]	1[1]
2017 (3) MON	2[0]	3[0]
2016 (3) SUN	0[0]	0[0]
2015 (3) FRI	0[0]	0[0]
2014 (4) THU	1[0]	1[0]

SUMMARY 2018

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

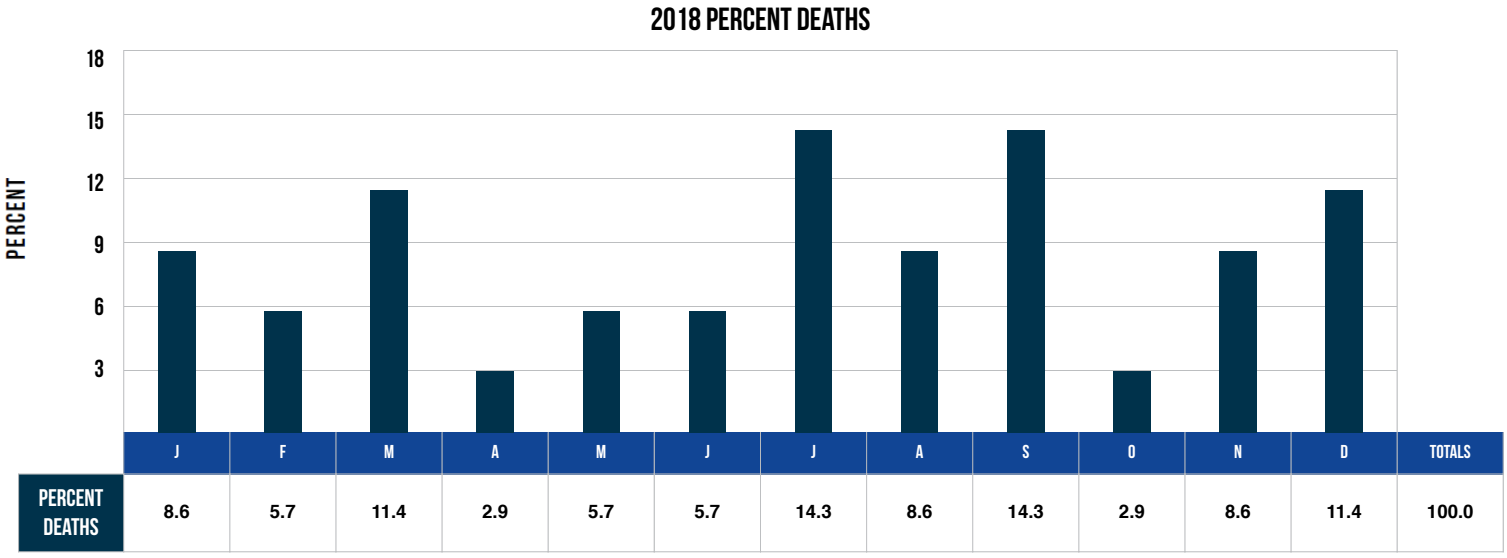
Based on the total 2018 Upper Peninsula experience, deaths averaged 0.10 per day. Alcohol-related deaths averaged 0.02 per day.

Based on the total 2018 Upper Peninsula holiday period experience, deaths averaged 0.21 per day. Alcohol-related deaths averaged 0.11 per day.

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

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

MONTH	TRAFFIC DEATHS					2018 PERCENTAGES
	2014	2015	2016	2017	2018	Percent Deaths
January	2	2	6	2	3	8.6
February	2	0	4	3	2	5.7
March	0	0	2	4	4	11.4
April	0	2	0	5	1	2.9
May	1	1	1	3	2	5.7
June	4	1	8	5	2	5.7
July	1	6	3	4	5	14.3
August	3	4	1	1	3	8.6
September	0	1	1	2	5	14.3
October	3	4	1	1	1	2.9
November	5	2	2	2	3	8.6
December	2	2	3	7	4	11.4
Totals	23	25	32	39	35	100.0



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

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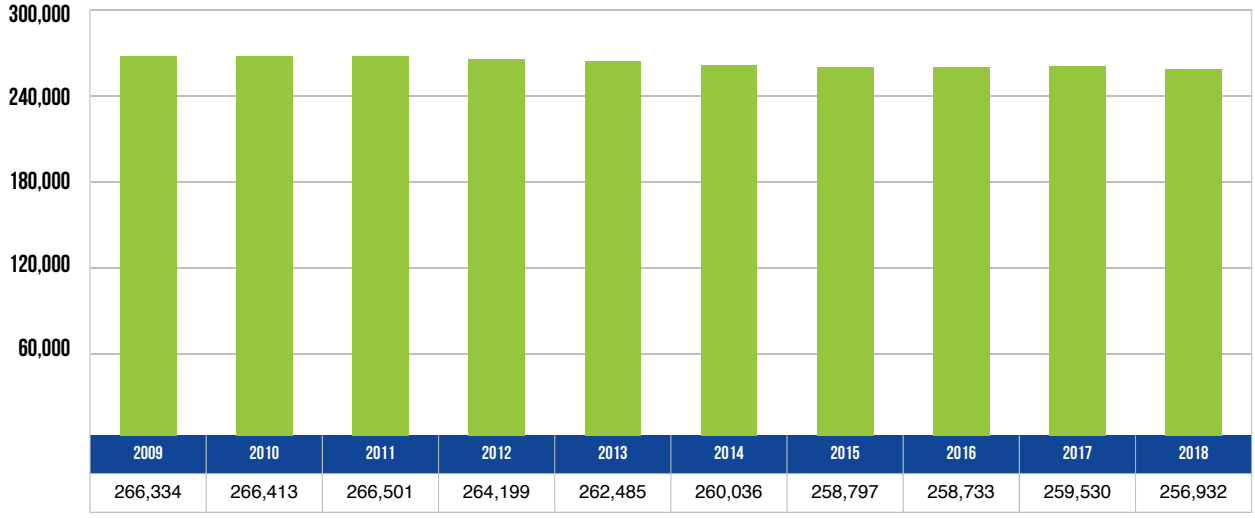
10 YEAR TRENDS-UPPER PENINSULA

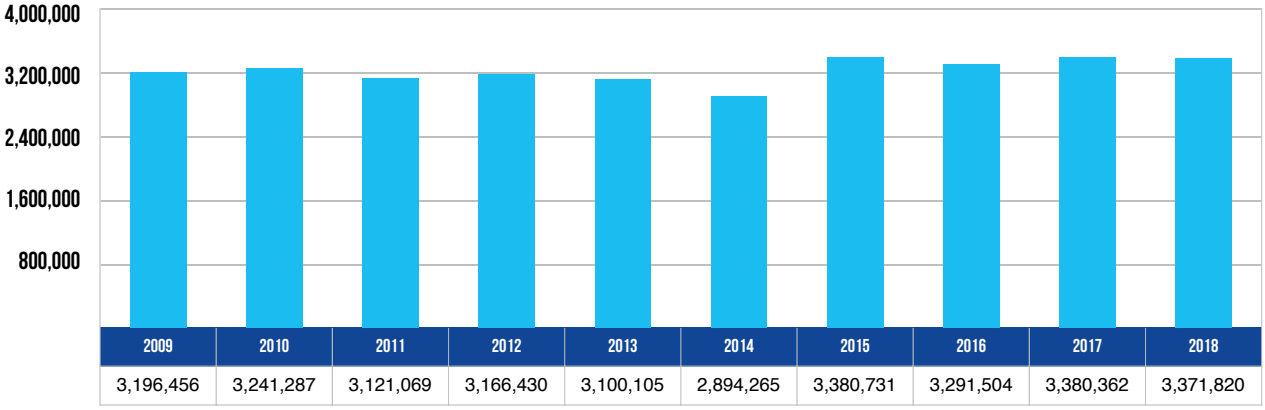
UPPER PENINSULA VEHICLE REGISTRATIONS



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
266,334	266,413	266,501	264,199	262,485	260,036	258,797	258,733	259,530	256,932

Vehicle registrations in the Upper Peninsula decreased 3.5 percent over the 10-year period.

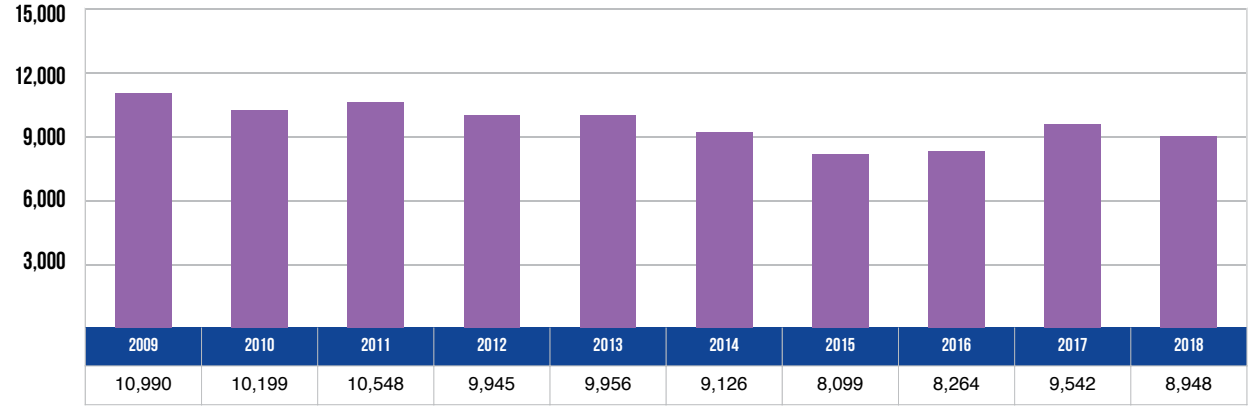
UPPER PENINSULA VEHICLE MILES TRAVELED (THOUSANDS)



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
3,196,456	3,241,287	3,121,069	3,166,430	3,100,105	2,894,265	3,380,731	3,291,504	3,380,362	3,371,820

Vehicle miles traveled in the Upper Peninsula increased 5.5 percent over the 10-year period.

UPPER PENINSULA CRASHES

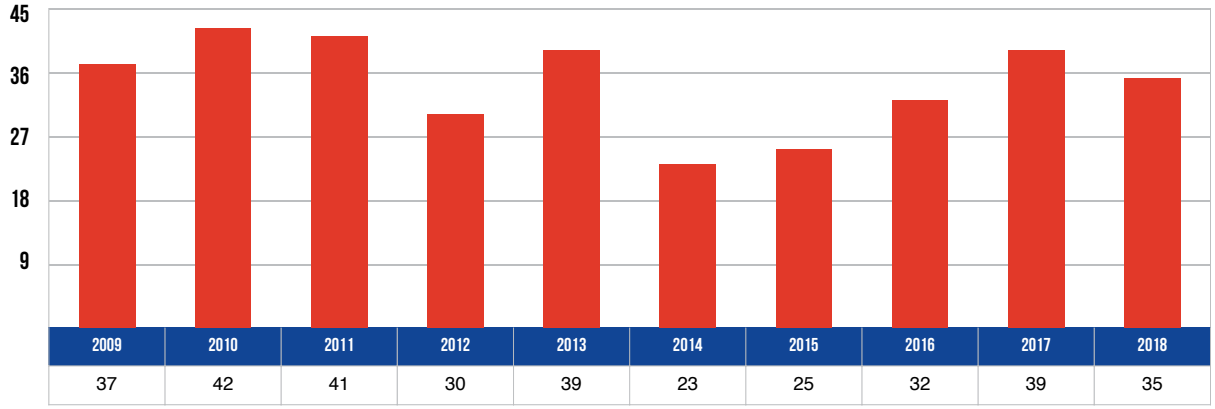


2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
10,990	10,199	10,548	9,945	9,956	9,126	8,099	8,264	9,542	8,948

There were 8,948 Upper Peninsula crashes in 2018 - a 18.6 percent decrease from 2009.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

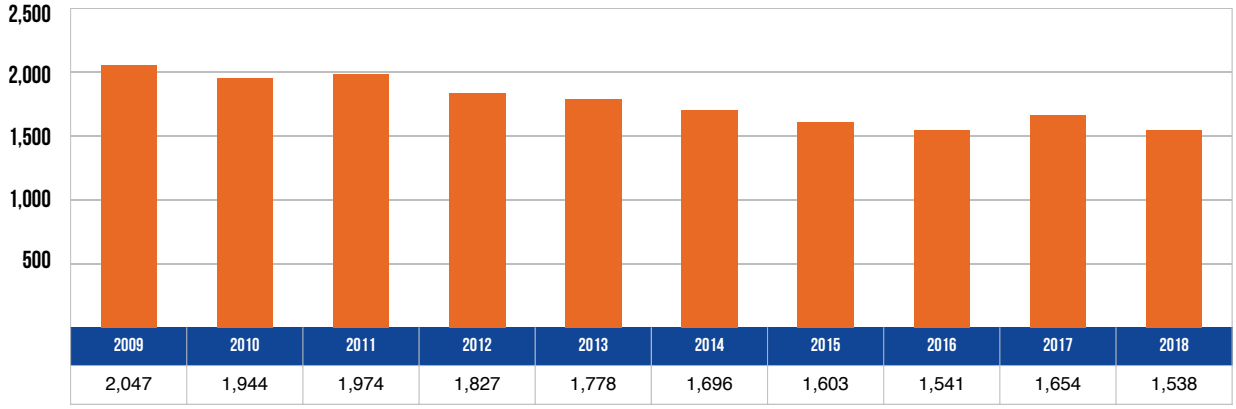
UPPER PENINSULA DEATHS



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
37	42	41	30	39	23	25	32	39	35

In 2018, 35 people died in motor vehicle crashes in the Upper Peninsula - a decrease of 5.4 percent from 2009.

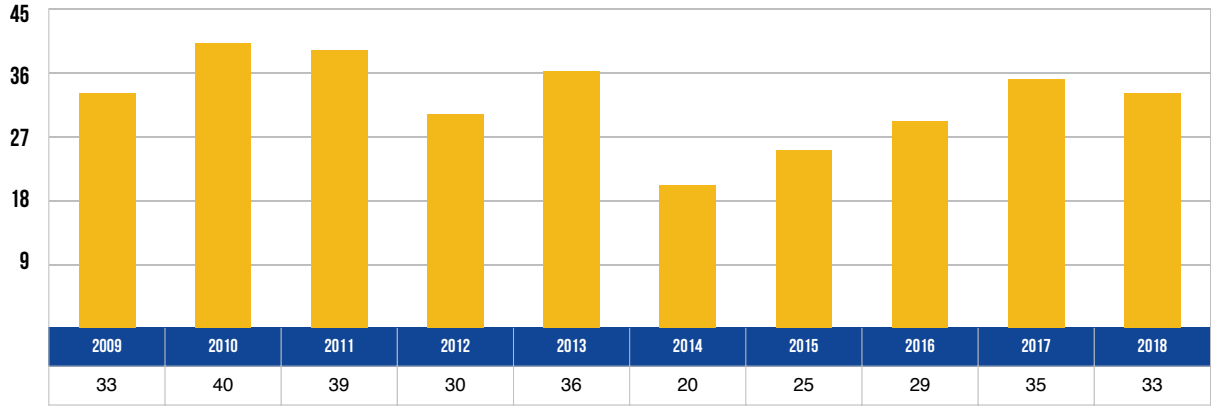
UPPER PENINSULA INJURIES



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
2,047	1,944	1,974	1,827	1,778	1,696	1,603	1,541	1,654	1,538

In 2018, 1,538 people received injuries in motor vehicle crashes in the Upper Peninsula - down 24.9 percent from 2,047 in 2009.

UPPER PENINSULA FATAL CRASHES

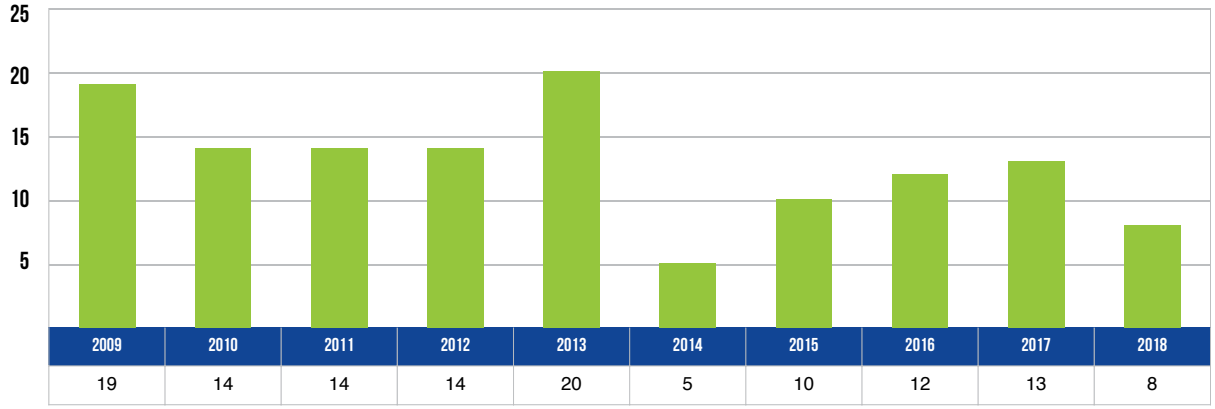


2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
33	40	39	30	36	20	25	29	35	33

In 2018, there were 33 fatal crashes in the Upper Peninsula, the same number as in 2009.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

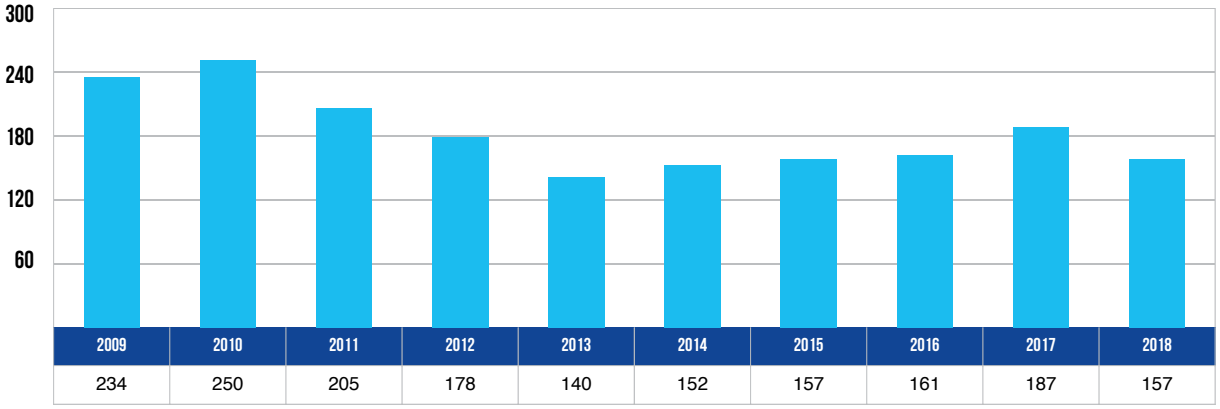
UPPER PENINSULA ALCOHOL-INVOLVED DEATHS



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
19	14	14	14	20	5	10	12	13	8

There were eight deaths in alcohol-involved crashes in the Upper Peninsula in 2018 - down 57.9 percent from 2009.

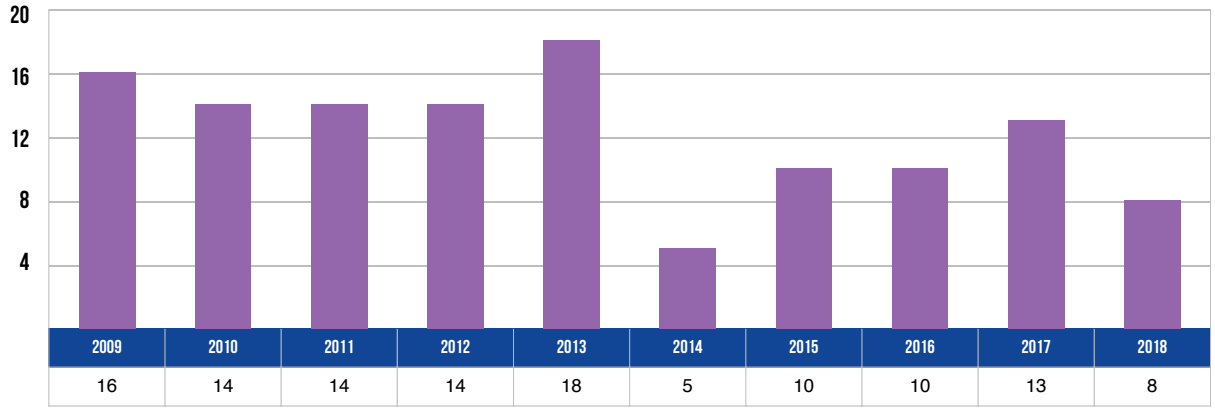
UPPER PENINSULA ALCOHOL-INVOLVED INJURIES



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
234	250	205	178	140	152	157	161	187	157

There were 157 alcohol-involved injuries in the Upper Peninsula in 2018 - down 32.9 percent from 2009.

UPPER PENINSULA ALCOHOL-INVOLVED FATAL CRASHES

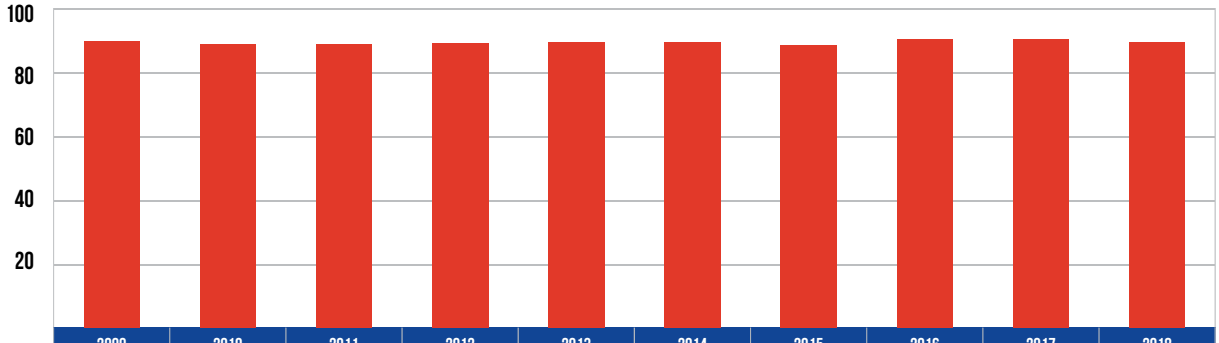


2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
16	14	14	14	18	5	10	10	13	8

There were eight alcohol-involved fatal crashes in the Upper Peninsula in 2018 - down 50.0 percent from 2009.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

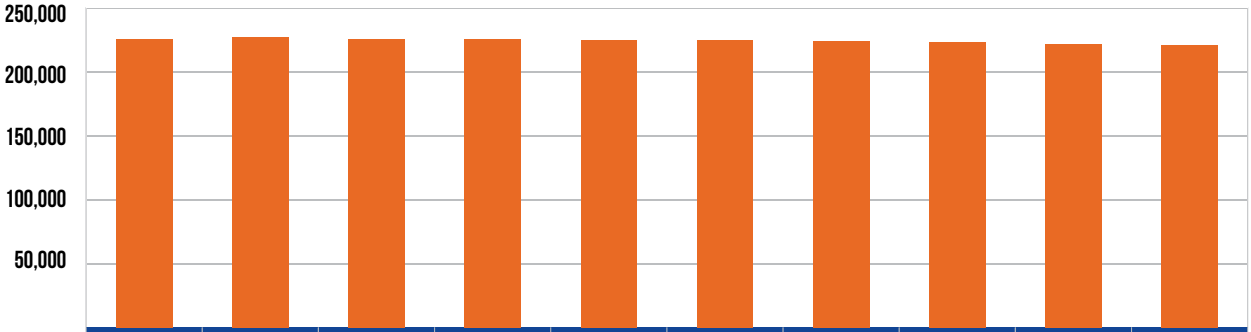
UPPER PENINSULA RESTRAINT USAGE IN CRASHES



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
89.4	88.6	88.6	88.8	89.0	89.1	88.2	89.9	90.1	89.2

The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes was nearly the same in 2018 (89.2%) as in 2009 (89.4%).

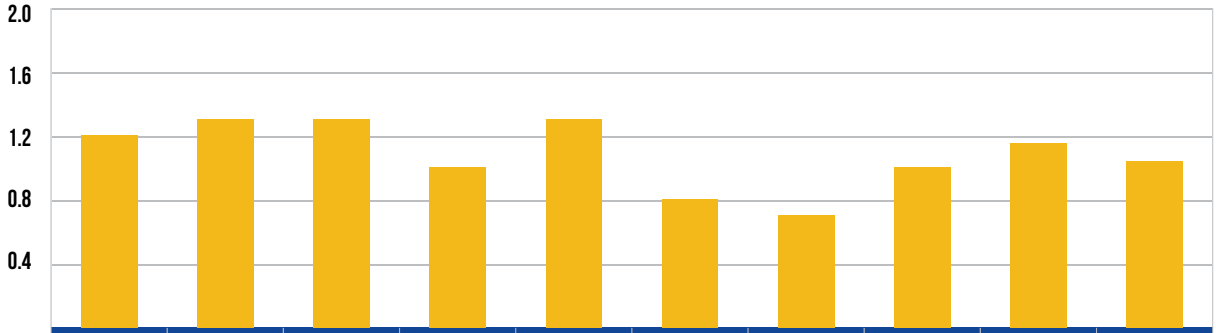
UPPER PENINSULA DRIVERS



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
224,930	226,064	224,845	224,933	223,975	223,910	223,640	222,220	221,126	220,395

There were 220,395 licensed drivers on Upper Peninsula roadways in 2018 - a decrease of 2.0 percent from 2009.

UPPER PENINSULA FATALITIES PER 100 MILLION VMT

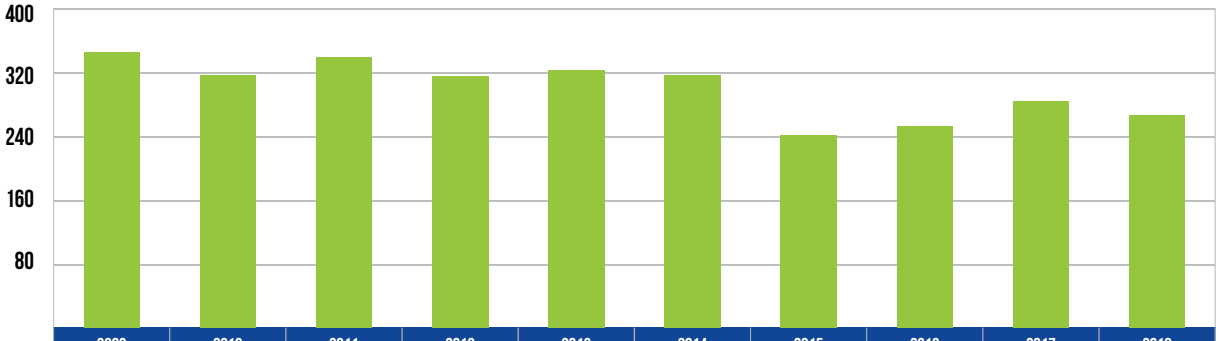


2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1.2	1.3	1.3	1.0	1.3	0.8	0.7	1.0	1.2	1.0

The 1.0 death rate for the Upper Peninsula in 2018 was a 20.0 percent decrease from 1.2 in 2009.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

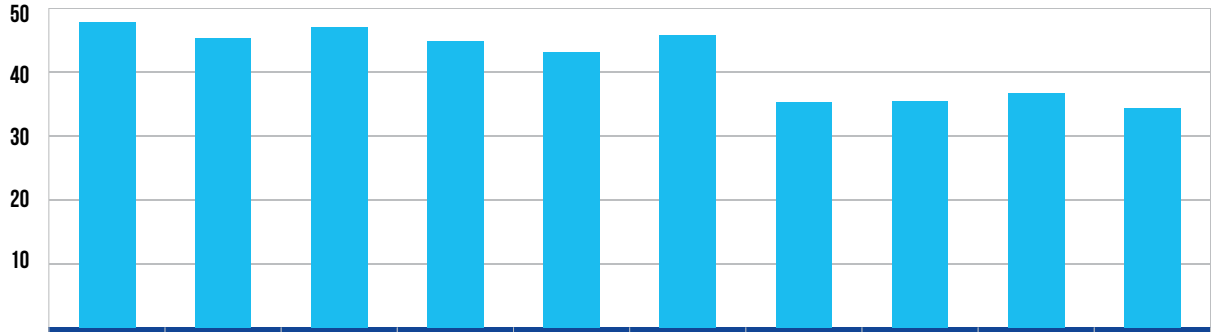
UPPER PENINSULA TOTAL CRASHES PER 100 MILLION VMT



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
343.8	314.7	338.0	314.1	321.2	315.3	239.6	251.1	282.3	265.4

The total crash rate of 265.4 in the Upper Peninsula in 2018 was a 22.8 percent decrease from 343.8 in 2009.

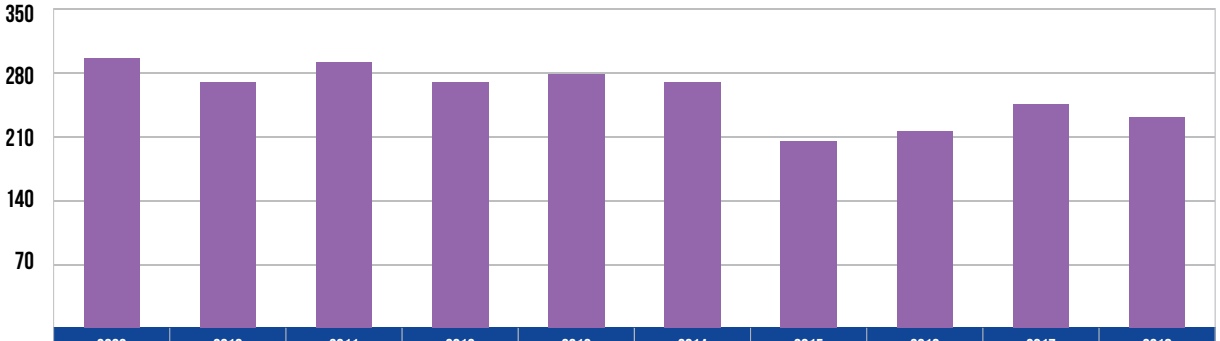
UPPER PENINSULA INJURY CRASHES PER 100 MILLION VMT



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
47.6	45.1	46.8	44.6	43.0	45.6	35.1	35.3	36.5	34.2

The injury crash rate of 34.2 in the Upper Peninsula in 2018 was a 28.2 percent decrease from 2009.

UPPER PENINSULA PROPERTY DAMAGE CRASHES PER 100 MILLION VMT



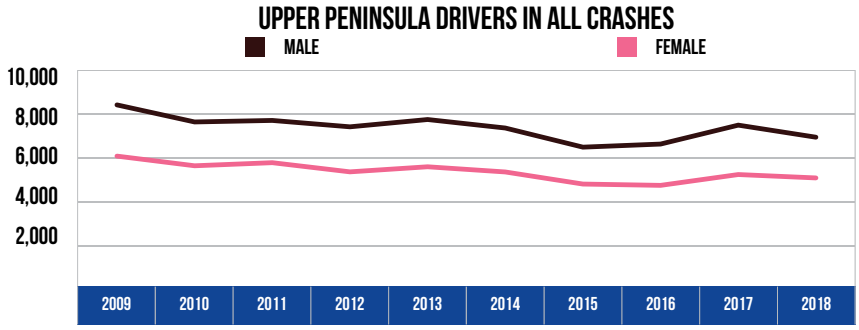
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
295.2	268.4	289.9	268.6	277.0	268.9	203.7	214.9	244.7	230.2

The property damage crash rate of 230.2 in the Upper Peninsula in 2018 was a 22.0 percent decrease from 2009.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA DRIVERS IN ALL CRASHES

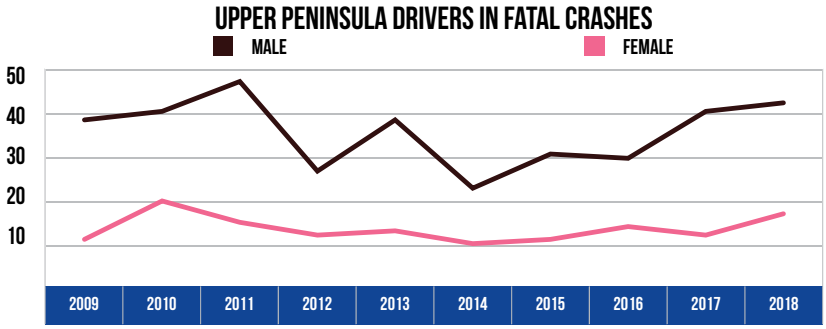
Year	Male	Female
2009	8,319	5,918
2010	7,519	5,465
2011	7,590	5,610
2012	7,291	5,180
2013	7,633	5,418
2014	7,235	5,175
2015	6,338	4,608
2016	6,483	4,547
2017	7,370	5,054
2018	6,804	4,895



Male drivers accounted for 58.2 percent of all drivers in crashes in the Upper Peninsula during 2018, which was similar to the 58.4 percent figure in 2009. Female drivers accounted for 41.8 percent of all drivers in crashes during 2018, similar to 41.6 percent in 2009.

UPPER PENINSULA DRIVERS IN FATAL CRASHES

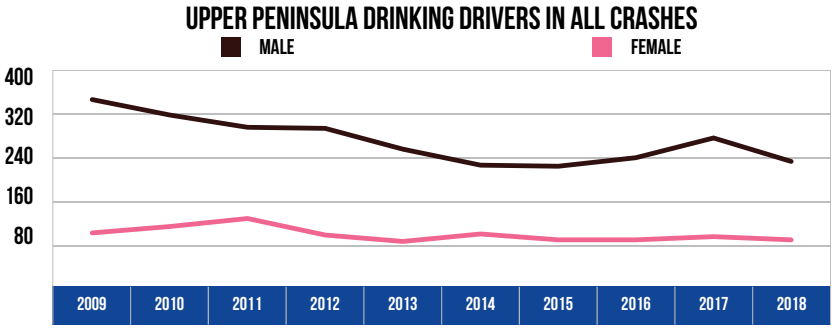
Year	Male	Female
2009	38	10
2010	40	19
2011	47	14
2012	26	11
2013	38	12
2014	22	9
2015	30	10
2016	29	13
2017	40	11
2018	42	16



Male drivers made up 72.4 percent of all drivers in fatal crashes in the Upper Peninsula in 2018, which was down from 79.2 percent in 2009. Female drivers made up 27.6 percent of all drivers in fatal crashes in 2018, which was up from 20.8 percent in 2009.

UPPER PENINSULA DRINKING DRIVERS IN ALL CRASHES

Year	Male	Female
2009	343	93
2010	314	105
2011	291	120
2012	289	89
2013	250	77
2014	220	91
2015	218	80
2016	234	80
2017	271	86
2018	227	80



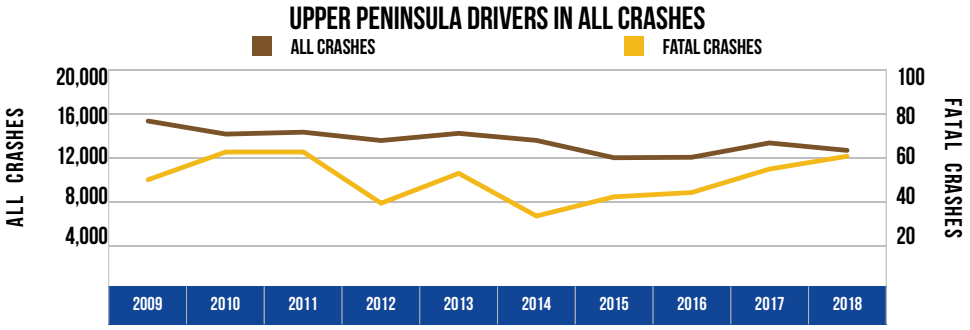
In 2018, males represented 73.9 percent of all drinking drivers in the Upper Peninsula, which was down from 78.7 percent in 2009. Females represented 26.1 percent of all drinking drivers, which was up from 21.3 percent in 2009.

Note: 652 drivers in all crashes and one driver in a fatal crash were coded as unknown gender in the Upper Peninsula in 2018 and are not included in the tables.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA DRIVERS IN ALL CRASHES

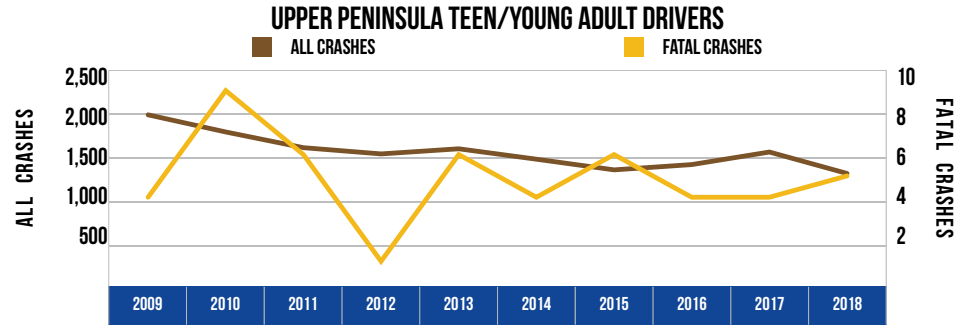
Year	All Crashes	Fatal Crashes
2009	15,105	48
2010	13,879	61
2011	14,059	61
2012	13,276	37
2013	13,950	51
2014	13,287	31
2015	11,662	40
2016	11,707	42
2017	13,050	53
2018	12,351	59



The number of drivers involved in all crashes in the Upper Peninsula decreased 18.2 percent over the 10-year period. The number of drivers involved in fatal crashes in the Upper Peninsula increased 22.9 percent over the 10-year period.

UPPER PENINSULA TEEN/YOUNG ADULT DRIVERS (AGE 16-20)

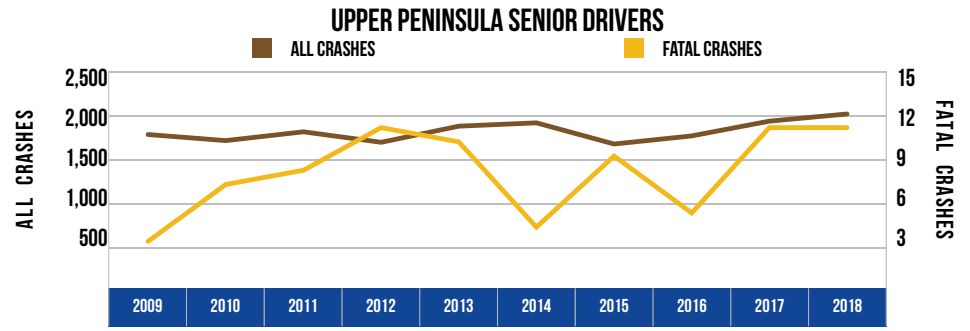
Year	All Crashes	Fatal Crashes
2009	1,966	4
2010	1,765	9
2011	1,581	6
2012	1,508	1
2013	1,568	6
2014	1,446	4
2015	1,321	6
2016	1,383	4
2017	1,530	4
2018	1,279	5



Teen/young adult drivers (age 16-20) in all crashes in the Upper Peninsula has decreased by 34.9 percent since 2009. The number of teen/young adult drivers in fatal crashes in the Upper Peninsula has increased by 25.0 percent since 2009.

UPPER PENINSULA SENIOR DRIVERS (AGE 65 & OVER)

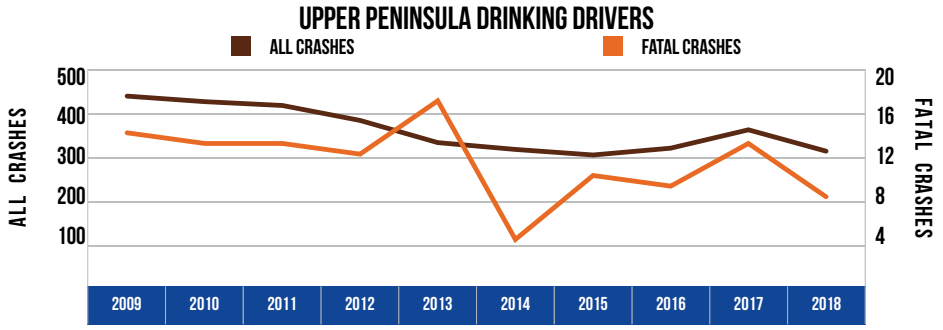
Year	All Crashes	Fatal Crashes
2009	1,752	3
2010	1,681	7
2011	1,784	8
2012	1,661	11
2013	1,850	10
2014	1,889	4
2015	1,641	9
2016	1,736	5
2017	1,909	11
2018	1,993	11



The number of drivers age 65 and over in all crashes in the Upper Peninsula has increased 13.8 percent since 2009. Their involvement in fatal crashes increased by a factor of 3.7 from 2009.

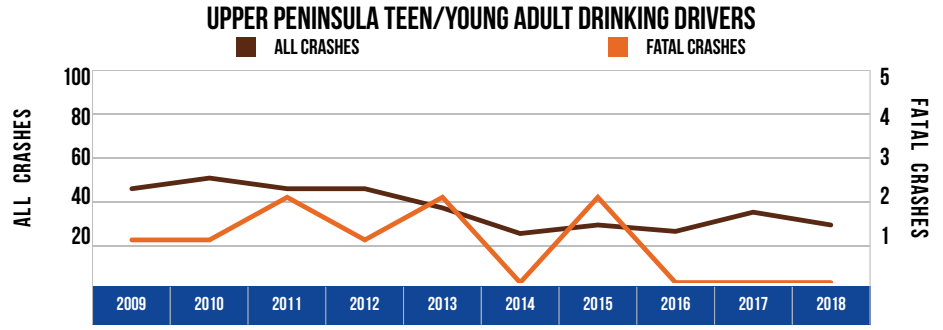
10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA DRINKING DRIVERS		
Year	All Crashes	Fatal Crashes
2009	436	14
2010	423	13
2011	414	13
2012	379	12
2013	327	17
2014	311	4
2015	298	10
2016	314	9
2017	357	13
2018	307	8



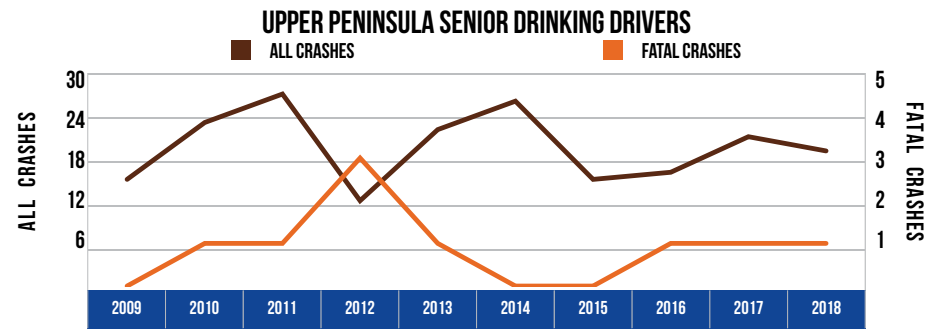
Drinking driver involvement in all crashes in the Upper Peninsula decreased by 29.6 percent since 2009. Drinking driver involvement in fatal crashes decreased by 42.9 percent from 2009.

UPPER PENINSULA TEEN/YOUNG ADULT DRINKING DRIVERS (AGE 16-20)		
Year	All Crashes	Fatal Crashes
2009	44	1
2010	49	1
2011	44	2
2012	44	1
2013	35	2
2014	23	0
2015	27	2
2016	24	0
2017	33	0
2018	27	0



The number of teen/young adult drinking drivers (age 16-20) in all crashes in the Upper Peninsula decreased by 38.6 percent. There were no teen/young adult drinking drivers in fatal crashes in 2018.

UPPER PENINSULA SENIOR DRINKING DRIVERS (AGE 65 & OVER)		
Year	All Crashes	Fatal Crashes
2009	15	0
2010	23	1
2011	27	1
2012	12	3
2013	22	1
2014	26	0
2015	15	0
2016	16	1
2017	21	1
2018	19	1

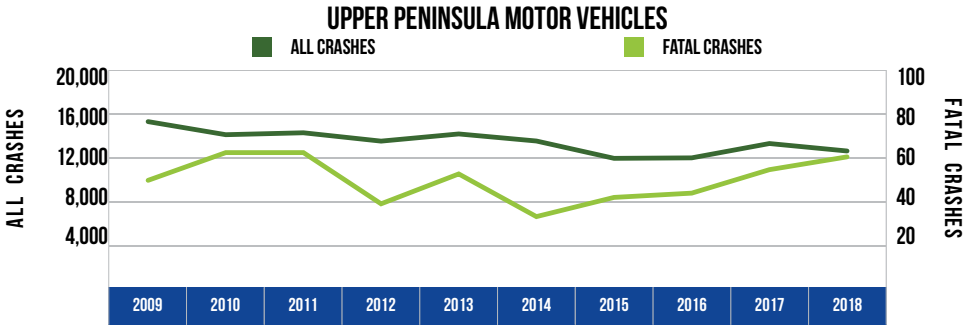


The number of senior drinking drivers (age 65 and over) in all crashes in the Upper Peninsula has increased 26.7 percent over the 10-year period. There was one senior drinking driver involved in a fatal crash in 2018.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA MOTOR VEHICLES

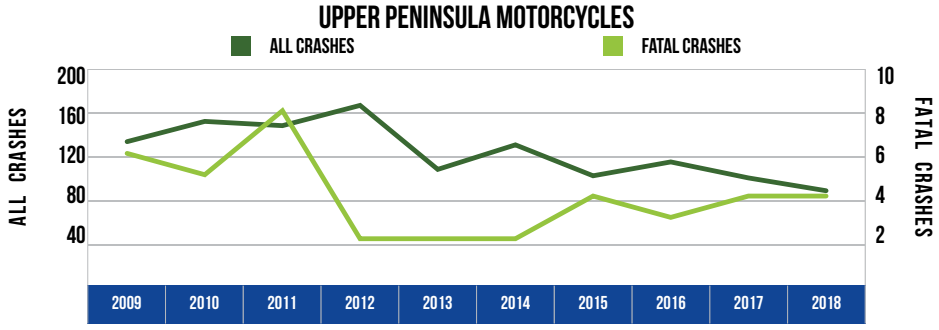
Year	All Crashes	Fatal Crashes
2009	15,105	48
2010	13,879	61
2011	14,059	61
2012	13,276	37
2013	13,950	51
2014	13,287	31
2015	11,662	40
2016	11,707	42
2017	13,050	53
2018	12,351	59



There were 12,351 motor vehicles involved in all Upper Peninsula crashes in 2018, down 18.2 percent from 2009. There were 59 motor vehicles involved in fatal crashes in 2018, up 22.9 percent from 2009.

UPPER PENINSULA MOTORCYCLES

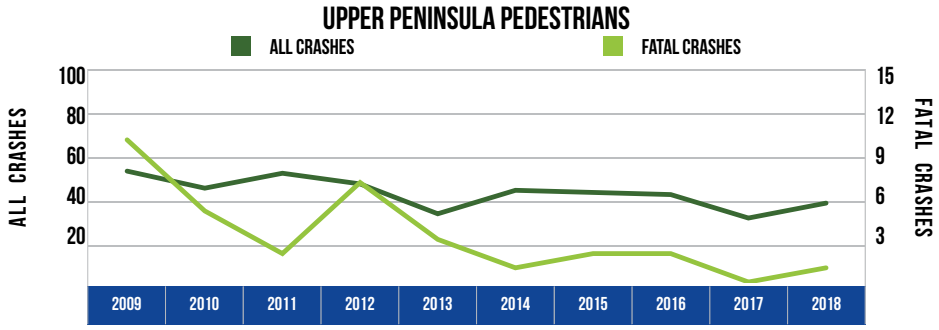
Year	All Crashes	Fatal Crashes
2009	131	6
2010	150	5
2011	146	8
2012	165	2
2013	105	2
2014	128	2
2015	99	4
2016	112	3
2017	97	4
2018	85	4



There were 85 motorcycles involved in crashes in the Upper Peninsula in 2018, a 35.1 percent decrease from 2009. There were four motorcycles involved in fatal crashes in 2018, down 33.3 percent from 2009.

UPPER PENINSULA PEDESTRIANS

Year	All Crashes	Fatal Crashes
2009	52	10
2010	44	5
2011	51	2
2012	46	7
2013	32	3
2014	43	1
2015	42	2
2016	41	2
2017	30	0
2018	37	1

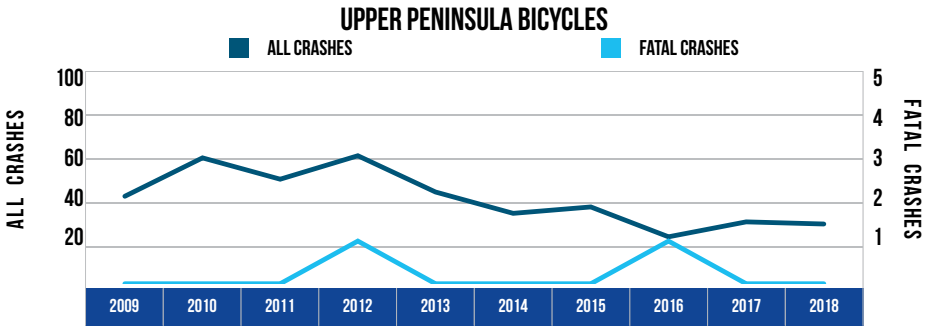


There were 37 pedestrians involved in crashes in the Upper Peninsula in 2018, down 28.8 percent from 2009. One pedestrian was involved in a fatal crash in 2018, down from ten in 2009.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

UPPER PENINSULA BICYCLES

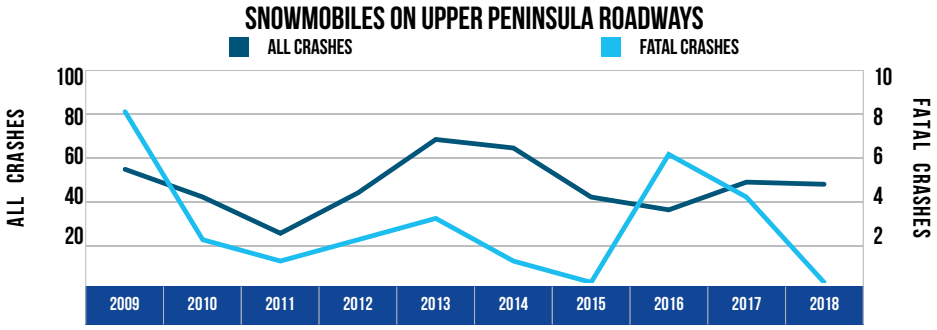
Year	All Crashes	Fatal Crashes
2009	41	0
2010	59	0
2011	49	0
2012	60	1
2013	43	0
2014	33	0
2015	36	0
2016	22	1
2017	29	0
2018	28	0



There were 28 bicycles involved in Upper Peninsula crashes in 2018, down 31.7 percent from 2009. There were no bicycles involved in fatal crashes in 2018.

SNOWMOBILES ON UPPER PENINSULA ROADWAYS

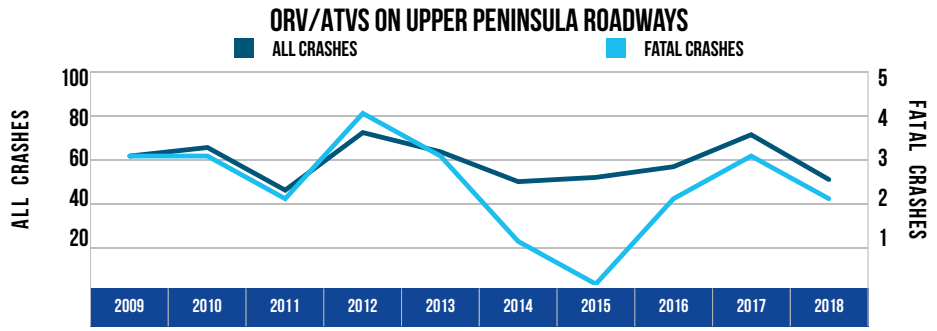
Year	All Crashes	Fatal Crashes
2009	53	8
2010	40	2
2011	23	1
2012	42	2
2013	67	3
2014	63	1
2015	40	0
2016	34	6
2017	47	4
2018	46	0



There were 46 snowmobiles in crashes on roadways in the Upper Peninsula in 2018, down 13.2 percent from 2009. There were no snowmobiles involved in fatal crashes in 2018.

ORV/ATVS ON UPPER PENINSULA ROADWAYS

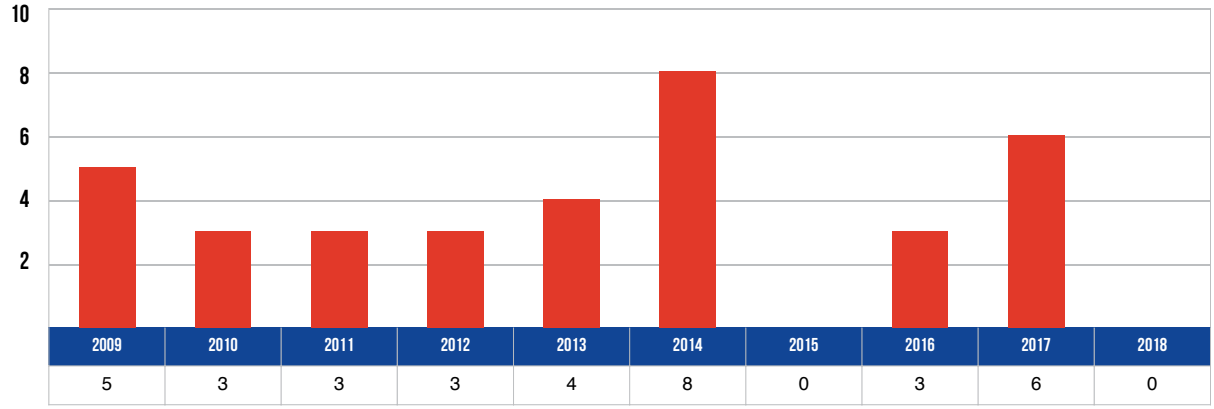
Year	All Crashes	Fatal Crashes
2009	60	3
2010	64	3
2011	44	2
2012	71	4
2013	62	3
2014	48	1
2015	50	0
2016	55	2
2017	70	3
2018	49	2



There were 49 ORV/ATVs in crashes on roadways in the Upper Peninsula in 2018, down 18.3 percent from 2009. There were two ORV/ATVs in fatal crashes in 2018, compared with three in 2009.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

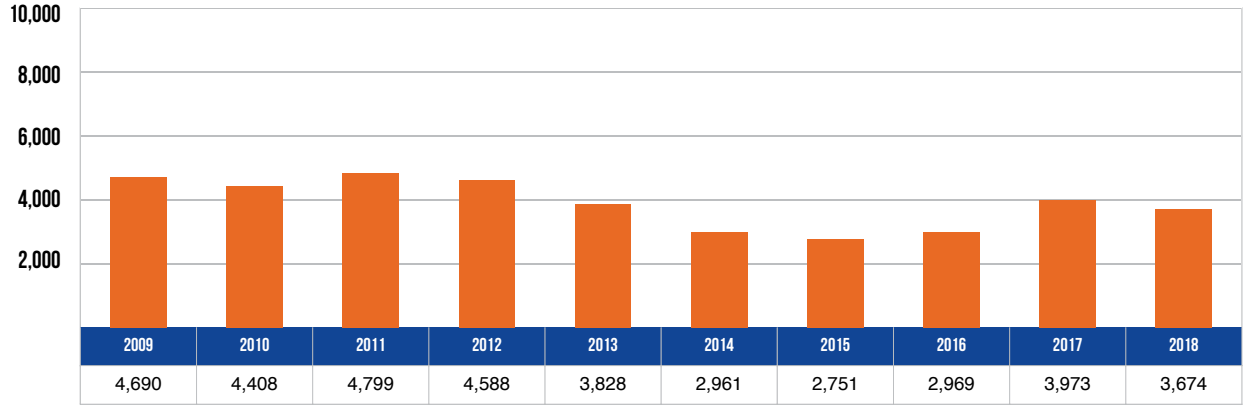
UPPER PENINSULA VEHICLE-TRAIN CRASHES



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
5	3	3	3	4	8	0	3	6	0

There were no vehicle-train crashes in the Upper Peninsula in 2018, compared with five in 2009.

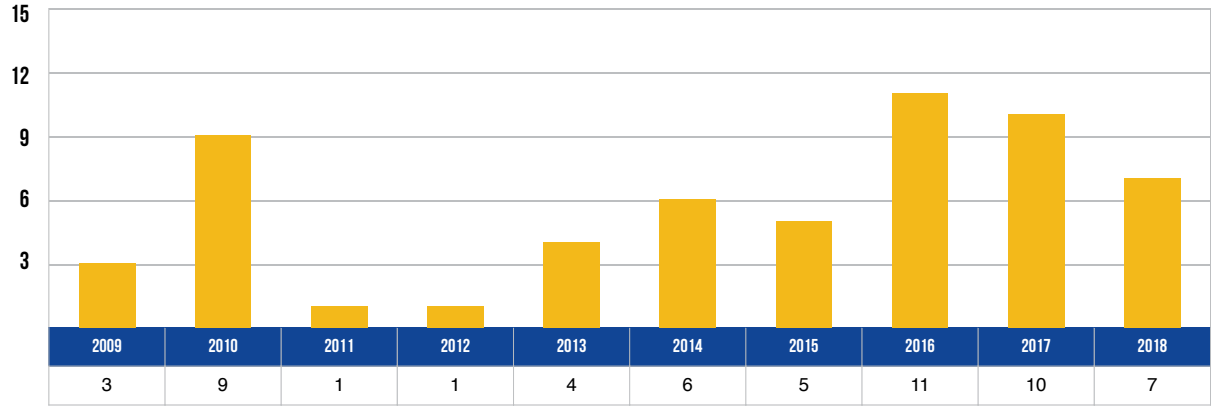
UPPER PENINSULA VEHICLE-DEER CRASHES



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
4,690	4,408	4,799	4,588	3,828	2,961	2,751	2,969	3,973	3,674

The number of vehicle-deer crashes in the Upper Peninsula decreased 21.7 percent in the 10-year period to 3,674 in 2018.

UPPER PENINSULA FARM EQUIPMENT CRASHES

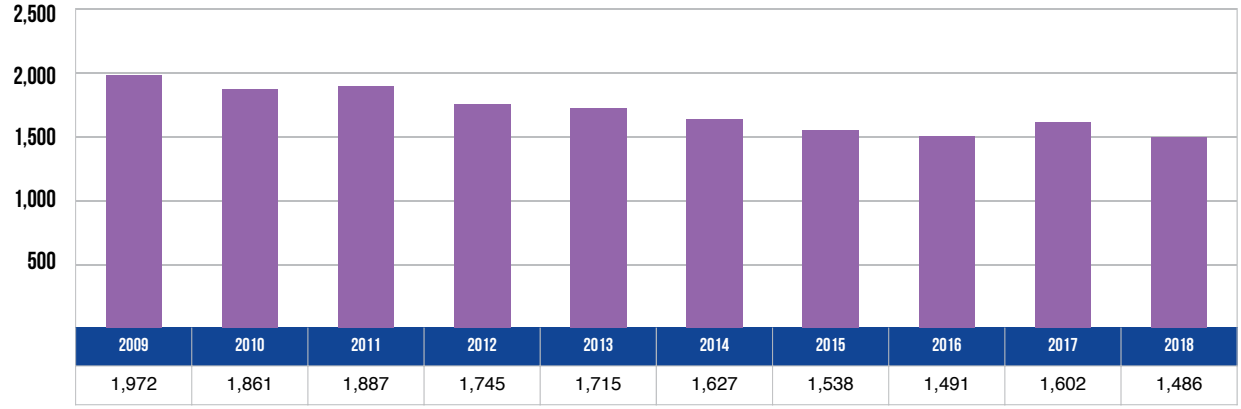


2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
3	9	1	1	4	6	5	11	10	7

There were seven farm equipment crashes in the Upper Peninsula in 2018, more than twice as many as in 2009.

10 YEAR TRENDS-UPPER PENINSULA (CONTINUED)

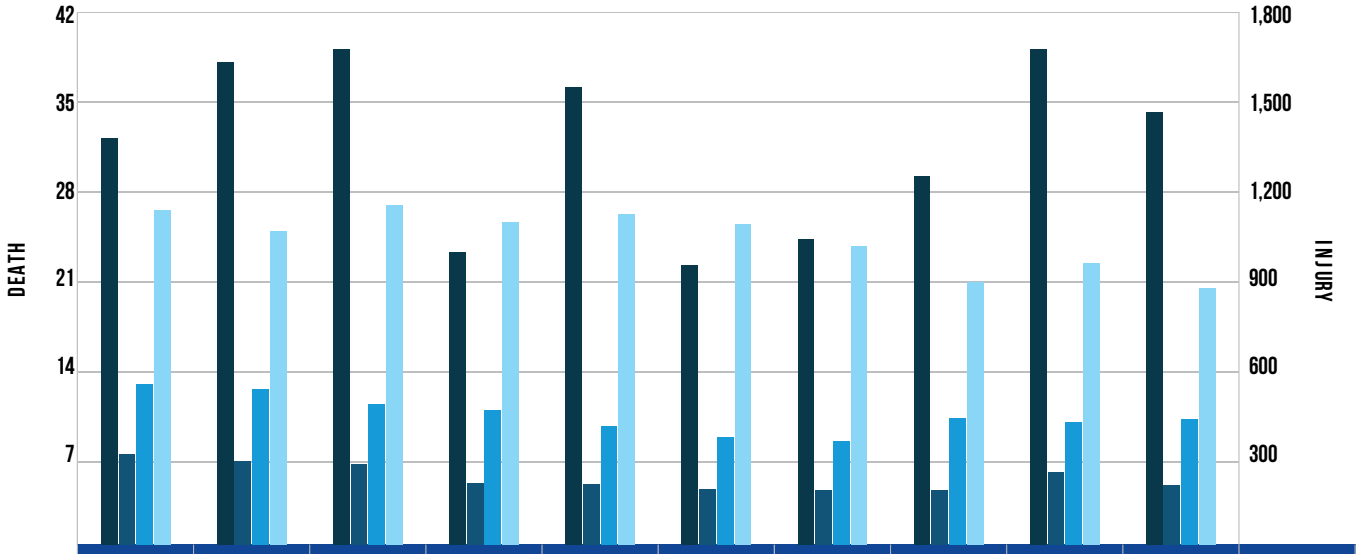
UPPER PENINSULA INJURED OCCUPANTS IN CRASHES



2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
1,972	1,861	1,887	1,745	1,715	1,627	1,538	1,491	1,602	1,486

There were 1,486 occupants injured in the Upper Peninsula in 2018 - a decrease of 24.6 percent from 2009.

UPPER PENINSULA DEATH AND INJURY FOR CRASH-INVOLVED OCCUPANTS



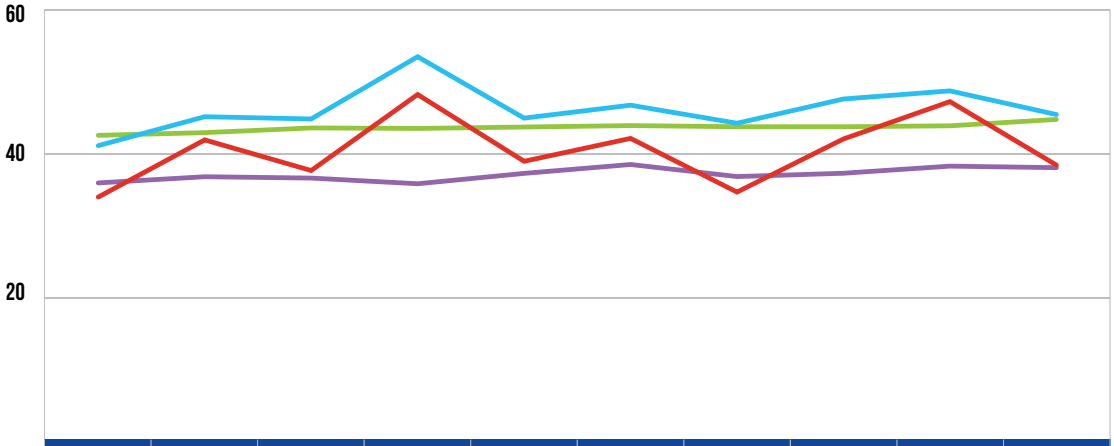
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	TOTALS
KILLED	32	38	39	23	36	22	24	29	39	34	316
A INJURY	304	281	271	206	202	186	183	181	242	199	2,255
B INJURY	541	522	472	451	399	362	348	426	411	423	4,355
C INJURY	1,127	1,058	1,144	1,088	1,114	1,079	1,007	884	949	864	10,314

Over the period from 2009 to 2018 in the Upper Peninsula, occupant deaths increased 6.3 percent, A injuries decreased 34.5 percent, B injuries decreased 21.8 percent, and C injuries decreased 23.3 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)

UPPER PENINSULA AVERAGE AGE OF DRIVERS IN CRASHES 2009 - 2018



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
DRIVERS IN ALL CRASHES	42.18	42.56	43.22	43.15	43.35	43.55	43.39	43.39	43.52	44.42
DRIVERS IN FATAL CRASHES	40.73	44.80	44.48	53.24	44.60	46.42	43.88	47.29	48.43	45.10
DRINKING DRIVERS	35.49	36.36	36.17	35.37	36.83	38.08	36.38	36.85	37.85	37.64
DRINKING DRIVERS IN FATAL CRASHES	33.50	41.54	37.23	47.92	38.53	41.75	34.20	41.67	46.92	38.00

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 has increased over five percent. The average age of drivers involved in fatal crashes has increased nearly eleven percent. Drinking drivers in crashes has increased more than six percent. The average age of drinking drivers in fatal crashes has increased 13.4 percent since 2009.

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
2016	6	4	2	0	1	8	3	1	1	1	2	3	32
2017	2	3	4	5	3	5	4	1	2	1	2	7	39
2018	3	2	4	1	2	2	5	3	5	1	3	4	35

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 (THOUSANDS)	MOTOR VEHICLE REGISTRATIONS*	DEATH RATE PER 100 MILLION MILES OF TRAVEL
1982	58	3,546	11,137	Upper 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
2016	32	1,541	8,264	3,291,504	258,733	1.0
2017	39	1,654	9,542	3,380,362	259,530	1.2
2018	35	1,538	8,948	3,371,820	256,932	1.0

*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	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	0	0	0	7	0	7	0	0	0	0	0	0	0	0	0
2	0	0	0	4	0	4	0	0	0	0	0	0	0	0	0
3	0	0	0	3	0	3	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	0	0	0	1	0	1
6	0	0	0	5	0	5	0	0	0	1	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	9	0	9	0	0	0	1	0	1	0	0	0
9	0	0	0	10	0	10	0	0	0	0	0	0	1	0	1
10	0	0	0	6	0	6	0	0	0	2	0	2	0	0	0
11	0	0	0	5	0	5	0	0	0	0	0	0	0	0	0
12	3	0	2	3	0	3	0	0	0	0	0	0	0	0	0
13	3	0	3	7	0	7	0	0	0	0	0	0	1	0	1
14	8	0	3	7	0	7	1	0	1	1	0	1	1	0	1
15	14	0	3	15	0	15	0	0	0	3	0	3	0	0	0
16	183	0	26	10	0	10	1	0	1	2	0	2	0	0	0
17	223	0	33	7	0	7	2	0	2	0	0	0	0	0	0
18	290	0	34	13	1	12	1	0	1	2	0	1	0	0	0
19	300	1	27	11	0	11	0	0	0	1	0	1	0	0	0
20	283	2	23	9	0	9	1	0	0	1	0	1	0	0	0
21	320	3	30	10	2	8	0	0	0	1	0	1	2	0	2
22	263	1	25	6	0	6	2	0	2	1	0	1	0	0	0
23	240	0	22	4	0	4	0	0	0	0	0	0	0	0	0
24	230	0	22	1	0	1	0	0	0	0	0	0	2	0	1
25	220	0	29	9	0	9	2	0	1	0	0	0	1	0	1
26	172	0	20	3	0	3	1	0	1	0	0	0	2	0	1
27	194	0	12	2	0	2	0	0	0	0	0	0	2	0	1
28	202	0	18	6	0	6	1	0	1	0	0	0	1	0	1
29	197	0	22	2	0	2	1	0	1	1	0	1	1	0	1
30	190	0	18	5	0	5	0	0	0	1	0	1	0	0	0
31	194	1	22	8	0	8	1	0	0	0	0	0	0	0	0
32	194	1	18	2	0	2	2	0	2	0	0	0	0	0	0
33	188	0	20	6	0	6	2	0	2	0	0	0	1	1	0
34	190	1	15	1	0	1	1	0	1	0	0	0	1	0	1
35	169	1	18	9	0	9	3	0	2	0	0	0	1	0	0
36	156	0	16	1	0	1	0	0	0	0	0	0	0	0	0
37	165	0	12	3	0	3	1	0	1	0	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	181	0	20	2	0	2	2	0	1	0	0	0	1	0	1
39	194	0	11	3	0	3	0	0	0	0	0	0	0	0	0
40	156	0	16	3	0	3	2	0	2	0	0	0	2	0	2
41	179	1	19	4	0	4	1	0	0	0	0	0	0	0	0
42	142	0	16	2	0	2	1	0	1	0	0	0	0	0	0
43	155	1	22	2	0	2	4	1	3	0	0	0	0	0	0
44	135	0	11	4	0	4	1	0	1	1	0	1	0	0	0
45	167	1	17	0	0	0	2	0	1	0	0	0	0	0	0
46	173	0	17	1	0	1	0	0	0	0	0	0	2	0	2
47	178	0	11	1	0	1	0	0	0	0	0	0	0	0	0
48	210	2	18	1	0	1	2	1	0	0	0	0	1	0	1
49	176	0	21	3	0	3	3	0	2	0	0	0	0	0	0
50	156	0	17	7	0	7	5	0	4	0	0	0	0	0	0
51	183	0	25	4	0	4	3	0	1	0	0	0	0	0	0
52	183	1	21	5	0	5	3	0	1	0	0	0	1	0	1
53	203	0	19	1	0	1	1	0	0	0	0	0	0	0	0
54	221	0	22	5	0	5	3	0	3	0	0	0	0	0	0
55	212	0	19	6	0	6	3	0	2	0	0	0	0	0	0
56	230	0	18	6	0	6	3	0	3	0	0	0	0	0	0
57	177	1	22	8	1	7	3	1	2	1	0	1	3	0	3
58	212	1	24	3	0	3	2	0	2	0	0	0	0	0	0
59	162	1	10	2	0	2	2	0	1	0	0	0	1	0	1
60	185	1	14	2	0	2	5	0	2	1	0	1	1	0	0
61	207	0	15	4	0	4	1	0	0	1	0	0	0	0	0
62	169	0	17	2	0	2	7	0	5	0	0	0	0	0	0
63	168	0	13	3	0	3	3	0	2	0	0	0	0	0	0
64	165	0	16	4	0	4	3	0	2	0	0	0	0	0	0
65	153	0	11	2	0	2	1	0	1	2	0	1	1	0	1
66	167	1	14	5	0	5	2	0	1	1	0	1	0	0	0
67	139	0	10	0	0	0	2	0	1	0	0	0	1	0	1
68	141	1	10	3	0	3	2	1	0	0	0	0	0	0	0
69	153	1	10	4	1	3	0	0	0	2	0	2	0	0	0
70	114	0	15	3	0	3	2	0	2	0	0	0	1	0	1
71	134	0	14	4	0	4	2	0	0	0	0	0	0	0	0
72	84	1	3	1	0	1	0	0	0	0	0	0	1	0	1
73	106	0	8	0	0	0	1	0	0	0	0	0	0	0	0
74	80	0	11	4	0	4	1	0	1	0	0	0	0	0	0
75	87	0	5	6	0	6	0	0	0	0	0	0	0	0	0
76	76	0	8	1	0	1	0	0	0	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	56	0	6	1	0	1	0	0	0	0	0	0	0	0	0
78	68	0	9	0	0	0	1	0	1	0	0	0	0	0	0
79	67	0	6	2	0	2	0	0	0	0	0	0	1	0	0
80	55	1	7	1	0	1	0	0	0	0	0	0	0	0	0
81	50	0	3	2	1	1	0	0	0	0	0	0	0	0	0
82	48	0	4	1	0	1	1	0	1	0	0	0	0	0	0
83	34	0	1	0	0	0	0	0	0	0	0	0	0	0	0
84	26	0	4	0	0	0	0	0	0	0	0	0	0	0	0
85	45	0	6	2	0	2	0	0	0	0	0	0	0	0	0
86	29	0	2	1	0	1	0	0	0	0	0	0	0	0	0
87	19	0	1	2	0	2	0	0	0	0	0	0	0	0	0
88	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0
89	13	1	1	0	0	0	0	0	0	0	0	0	0	0	0
90	9	0	1	0	0	0	0	0	0	0	0	0	0	0	0
91	11	0	2	0	0	0	0	0	0	0	0	0	0	0	0
92	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0
93	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0
94	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
95	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
96	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
97	2	1	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	0	0	0	0	0	0	0	0	0	0	0	0
107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
109	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
110	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	685	0	0	0	0	0	1	0	0	1	0	0	1	0	0
TOTAL	12,351	28	1,137	355	6	349	104	4	68	28	0	23	37	1	29
	* Includes 734 drivers with unknown injury severity and 10,452 with no injury						* Includes 1 motorcyclist with unknown injury severity and 31 with no injury			* Includes 1 bicyclist with unknown injury severity and 4 with no injury			* Includes 2 pedestrians with unknown injury severity and 5 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	849	66.4	5	100.0	151	66.5
Turning left	75	5.9	0	0.0	20	8.8
Turning right	43	3.4	0	0.0	7	3.1
Stopped on roadway	32	2.5	0	0.0	7	3.1
In prior crash	0	0.0	0	0.0	0	0.0
Changing lanes	20	1.6	0	0.0	2	0.9
Backing	42	3.3	0	0.0	1	0.4
Slowing/stopping on roadway	87	6.8	0	0.0	13	5.7
Slowing/stopping other	4	0.3	0	0.0	0	0.0
Starting up on roadway	24	1.9	0	0.0	2	0.9
Starting up other	0	0.0	0	0.0	0	0.0
Entering parking	2	0.2	0	0.0	0	0.0
Leaving parking	3	0.2	0	0.0	0	0.0
Entering roadway	18	1.4	0	0.0	3	1.3
Leaving roadway	5	0.4	0	0.0	2	0.9
Making U-turn	2	0.2	0	0.0	0	0.0
Overtaking or passing	11	0.9	0	0.0	4	1.8
Avoiding object	3	0.2	0	0.0	0	0.0
Avoiding pedestrian	0	0.0	0	0.0	0	0.0
Avoiding vehicle (front/back)	9	0.7	0	0.0	1	0.4
Avoiding vehicle (angle)	3	0.2	0	0.0	0	0.0
Driverless moving	0	0.0	0	0.0	0	0.0
Parked	5	0.4	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/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	2	0.2	0	0.0	1	0.4
Avoiding animal	11	0.9	0	0.0	3	1.3
Negotiating a curve	29	2.3	0	0.0	10	4.4
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,279	100.0	5	100.0	227	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	26	2.0	0	0.0	7	3.1
Cross center/median	1	0.1	0	0.0	0	0.0
Ran off road left	6	0.5	0	0.0	0	0.0
Ran off road right	11	0.9	0	0.0	2	0.9
Re-enter road	2	0.2	0	0.0	0	0.0
Overturn	86	6.7	1	20.0	26	11.5
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	0	0.0	0	0.0	0	0.0
Cargo loss/shift	0	0.0	0	0.0	0	0.0
Individual fell off	4	0.3	0	0.0	4	1.8
Other noncollision	0	0.0	0	0.0	0	0.0
SUBTOTAL	139	10.9	1	20.0	39	17.2

For drivers age 16-20 in the Upper Peninsula, an overturn is the most common harmful event in a noncollision with the highest proportion of all crashes (6.7%) and injury crashes (11.5%).

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	1	20.0	1	0.4
Bicyclist	1	0.1	0	0.0	1	0.4
Motor vehicle in transport	655	51.2	3	60.0	137	60.4
Parked motor vehicle	56	4.4	0	0.0	6	2.6
Railway train	0	0.0	0	0.0	0	0.0
Animal	196	15.3	0	0.0	5	2.2
Other nonfixed objects	13	1.0	0	0.0	2	0.9
SUBTOTAL	923	72.2	4	80.0	152	67.0

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	0	0.0	0	0.0	0	0.0
Bridge rail	1	0.1	0	0.0	0	0.0
Guardrail face	15	1.2	0	0.0	0	0.0
Guardrail end	4	0.3	0	0.0	1	0.4
Median barrier	2	0.2	0	0.0	0	0.0
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	16	1.3	0	0.0	2	0.9
Other pole	6	0.5	0	0.0	1	0.4
Culvert	2	0.2	0	0.0	1	0.4
Curb	1	0.1	0	0.0	0	0.0
Ditch	36	2.8	0	0.0	4	1.8
Embankment	18	1.4	0	0.0	1	0.4
Fence	3	0.2	0	0.0	1	0.4
Mailbox	10	0.8	0	0.0	1	0.4
Tree	60	4.7	0	0.0	17	7.5
Rail crossing signal	0	0.0	0	0.0	0	0.0
Building	3	0.2	0	0.0	2	0.9
Traffic island	0	0.0	0	0.0	0	0.0
Fire hydrant	3	0.2	0	0.0	0	0.0
Impact attenuator	0	0.0	0	0.0	0	0.0
Other fixed object	15	1.2	0	0.0	2	0.9
SUBTOTAL	207	16.2	0	0.0	33	14.5

For drivers age 16-20 in the Upper Peninsula, a tree is the fixed object associated with the highest proportion of all crashes (4.7%) and injury crashes (7.5%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Uncoded & Errors	9	0.7	0	0.0	3	1.3
No event coded as most harmful	1	0.1	0	0.0	0	0.0
TOTAL	1,279	100.0	5	100.0	227	100.0

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	542	42.4	2	40.0	76	33.5
Head On	39	3.0	2	40.0	16	7.0
Head On - Left Turn	26	2.0	0	0.0	9	4.0
Angle	229	17.9	1	20.0	56	24.7
Rear End	230	18.0	0	0.0	44	19.4
Rear End - Left Turn	28	2.2	0	0.0	7	3.1
Rear End - Right Turn	11	0.9	0	0.0	3	1.3
Sideswipe - Same Direction	70	5.5	0	0.0	2	0.9
Sideswipe - Opposite Direction	18	1.4	0	0.0	2	0.9
Backing	31	2.4	0	0.0	0	0.0
Other	54	4.2	0	0.0	11	4.8
Unknown	1	0.1	0	0.0	1	0.4
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,279	100.0	5	100.0	227	100.0

Single-vehicle crashes are the most common type of crash that drivers age 16-20 in the Upper Peninsula are involved in for all crashes (42.4%) and injury crashes (33.5%).

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT)	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
On Road	994	77.7	4	80.0	179	78.9
Median	9	0.7	0	0.0	2	0.9
Shoulder	82	6.4	0	0.0	8	3.5
Outside of Shoulder/Curb	169	13.2	1	20.0	34	15.0
Gore	6	0.5	0	0.0	0	0.0
On-Street Parking	16	1.3	0	0.0	2	0.9
Off the Roadway	0	0.0	0	0.0	0	0.0
On the Sidewalk	0	0.0	0	0.0	0	0.0
In the Bicycle Lane	0	0.0	0	0.0	0	0.0
Other/Unknown	1	0.1	0	0.0	1	0.4
Uncoded & Errors	2	0.2	0	0.0	1	0.4
TOTAL	1,279	100.0	5	100.0	227	100.0

Other than on the road crashes, drivers age 16-20 in the Upper Peninsula are most commonly involved in crashes where the first impact is outside the shoulder/curb for all crashes (13.2%) and injury crashes (15.0%). The highest proportion of fatal crashes occurred on the road (80.0%).

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	50	3.9	0	0.0	11	4.8
U.S. & Michigan Roads	619	48.4	3	60.0	104	45.8
County & City Roads	605	47.3	2	40.0	111	48.9
Uncoded & Errors	5	0.4	0	0.0	1	0.4
TOTAL	1,279	100.0	5	100.0	227	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 - 2:59 AM	58	4.5	0	0.0	12	5.3
3:00 AM - 5:59 AM	36	2.8	0	0.0	5	2.2
6:00 AM - 8:59 AM	153	12.0	1	20.0	24	10.6
9:00 AM - 11:59 AM	133	10.4	1	20.0	31	13.7
12:00 PM - 2:59 PM	241	18.8	0	0.0	34	15.0
3:00 PM - 5:59 PM	316	24.7	1	20.0	72	31.7
6:00 PM - 8:59 PM	212	16.6	0	0.0	27	11.9
9:00 PM - 11:59 PM	130	10.2	2	40.0	22	9.7
Unknown	0	0.0	0	0.0	0	0.0
TOTAL	1,279	100.0	5	100.0	227	100.0

For drivers age 16-20 in the Upper Peninsula, the 3:00 - 5:59 PM time period has the highest proportion of all crashes (24.7%) and injury crashes (31.7%).

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
None	491	38.4	1	20.0	71	31.3	0	0.0
Speed too fast	239	18.7	2	40.0	46	20.3	59	28.8
Speed too slow	2	0.2	0	0.0	0	0.0	0	0.0
Failed to yield	125	9.8	0	0.0	27	11.9	39	19.0
Disregard traffic control	18	1.4	0	0.0	7	3.1	13	6.3
Drove wrong way	2	0.2	1	20.0	0	0.0	1	0.5
Drove left of center	7	0.5	0	0.0	2	0.9	2	1.0
Improper passing	4	0.3	0	0.0	1	0.4	2	1.0
Improper lane use	19	1.5	0	0.0	2	0.9	1	0.5
Improper turn	4	0.3	0	0.0	0	0.0	0	0.0
Improper/no signal	2	0.2	0	0.0	0	0.0	0	0.0
Improper backing	34	2.7	0	0.0	0	0.0	2	1.0
Unable to stop in assured clear distance	182	14.2	1	20.0	35	15.4	42	20.5
Other	42	3.3	0	0.0	4	1.8	2	1.0
Unknown	26	2.0	0	0.0	5	2.2	0	0.0
Reckless driving	5	0.4	0	0.0	2	0.9	2	1.0
Careless/negligent driving	75	5.9	0	0.0	25	11.0	40	19.5
Uncoded & Errors	2	0.2	0	0.0	0	0.0	0	0.0
TOTAL	1,279	100.0	5	100.0	227	100.0	205	100.0

Other than no hazardous action, the second highest known hazardous action category for drivers age 16-20 in the Upper Peninsula is speed too fast for all crashes (18.7%), fatal crashes (40.0%), and injury crashes (20.3%).

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	194	15.2	0	0.0	46	20.3
Tuesday	156	12.2	1	20.0	29	12.8
Wednesday	171	13.4	1	20.0	30	13.2
Thursday	190	14.9	2	40.0	25	11.0
Friday	246	19.2	1	20.0	43	18.9
Saturday	169	13.2	0	0.0	36	15.9
Sunday	153	12.0	0	0.0	18	7.9
TOTAL	1,279	100.0	5	100.0	227	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	674	52.7	4	80.0	105	46.3
Female	605	47.3	1	20.0	122	53.7
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,279	100.0	5	100.0	227	100.0

Among drivers involved in all crashes in the Upper Peninsula, females make up 47.3% of the drivers in the 16-20 age group, compared with only 42.5% of drivers age 21-64, and 35.5% of drivers age 65 and over.

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	920	71.9	4	80.0	147	64.8
2 occupants	251	19.6	1	20.0	50	22.0
3 occupants	74	5.8	0	0.0	20	8.8
4 occupants	24	1.9	0	0.0	8	3.5
5 occupants	4	0.3	0	0.0	0	0.0
6+ occupants	2	0.2	0	0.0	2	0.9
0 occupants	4	0.3	0	0.0	0	0.0
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,279	100.0	5	100.0	227	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, SUV, van	1,039	81.2	4	80.0	176	77.5
Motor home	3	0.2	0	0.0	1	0.4
Pickup truck	217	17.0	1	20.0	38	16.7
Small Truck under 10,000 lbs. GVWR	4	0.3	0	0.0	0	0.0
Motorcycle	4	0.3	0	0.0	3	1.3
Moped/goped	0	0.0	0	0.0	0	0.0
Go-cart/golf cart	0	0.0	0	0.0	0	0.0
Snowmobile	1	0.1	0	0.0	0	0.0
Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV	5	0.4	0	0.0	4	1.8
Other	2	0.2	0	0.0	1	0.4
Uncoded & Errors	0	0.0	0	0.0	0	0.0
CDL Truck/Bus (breakdown below)	4	0.3	0	0.0	4	1.8
TOTAL	1,279	100.0	5	100.0	227	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
10,000 lbs. or less	0	0.0	0	0	0	0.0
10,001 - 26,000 lbs.	2	50.0	0	0	2	50.0
Greater than 26,000 lbs.	2	50.0	0	0	2	50.0
Uncoded & Errors	0	0.0	0	0	0	0.0
TOTAL	4	100.0	0	0	4	100.0

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	5,870	70.2	33	78.6	777	61.4
Turning left	397	4.7	2	4.8	111	8.8
Turning right	199	2.4	0	0.0	36	2.8
Stopped on roadway	402	4.8	3	7.1	87	6.9
In prior crash	4	0.0	0	0.0	1	0.1
Changing lanes	71	0.8	0	0.0	3	0.2
Backing	263	3.1	0	0.0	7	0.6
Slowing/stopping on roadway	453	5.4	0	0.0	92	7.3
Slowing/stopping other	8	0.1	0	0.0	0	0.0
Starting up on roadway	125	1.5	0	0.0	31	2.4
Starting up other	4	0.0	0	0.0	0	0.0
Entering parking	13	0.2	0	0.0	1	0.1
Leaving parking	16	0.2	0	0.0	1	0.1
Entering roadway	89	1.1	0	0.0	21	1.7
Leaving roadway	14	0.2	0	0.0	6	0.5
Making U-turn	6	0.1	0	0.0	1	0.1
Overtaking or passing	57	0.7	3	7.1	18	1.4
Avoiding object	6	0.1	0	0.0	0	0.0
Avoiding pedestrian	0	0.0	0	0.0	0	0.0
Avoiding vehicle (front/back)	47	0.6	0	0.0	10	0.8
Avoiding vehicle (angle)	14	0.2	0	0.0	4	0.3
Driverless moving	3	0.0	0	0.0	0	0.0
Parked	81	1.0	0	0.0	6	0.5
Crossing at intersection	5	0.1	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	1	0.0	0	0.0	1	0.1
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	12	0.1	0	0.0	4	0.3
Unknown	9	0.1	0	0.0	6	0.5
Avoiding animal	51	0.6	0	0.0	7	0.6
Negotiating a curve	137	1.6	1	2.4	33	2.6
Uncoded & Errors	6	0.1	0	0.0	1	0.1
TOTAL	8,363	100.0	42	100.0	1,266	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	68	0.8	0	0.0	19	1.5
Cross center/median	15	0.2	0	0.0	4	0.3
Ran off road left	38	0.5	0	0.0	9	0.7
Ran off road right	61	0.7	0	0.0	9	0.7
Re-enter road	6	0.1	0	0.0	1	0.1
Overturn	201	2.4	2	4.8	85	6.7
Separation of units	10	0.1	0	0.0	3	0.2
Fire/explosion	13	0.2	2	4.8	0	0.0
Immersion	3	0.0	1	2.4	0	0.0
Jackknife	7	0.1	0	0.0	0	0.0
Downhill runaway	2	0.0	0	0.0	1	0.1
Cargo loss/shift	11	0.1	0	0.0	1	0.1
Individual fell off	21	0.3	1	2.4	19	1.5
Other noncollision	20	0.2	0	0.0	4	0.3
SUBTOTAL	476	5.7	6	14.3	155	12.2

For drivers age 21-64 in the Upper Peninsula, an overturn is the most common harmful event in a noncollision with the highest proportion of all crashes (2.4%) and injury crashes (6.7%).

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Pedestrian	19	0.2	0	0.0	17	1.3
Bicyclist	19	0.2	0	0.0	15	1.2
Motor vehicle in transport	3,641	43.5	29	69.0	816	64.5
Parked motor vehicle	289	3.5	0	0.0	11	0.9
Railway train	0	0.0	0	0.0	0	0.0
Animal	2,925	35.0	3	7.1	49	3.9
Other nonfixed objects	108	1.3	0	0.0	12	0.9
SUBTOTAL	7,001	83.7	32	76.2	920	72.7

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	3	0.0	0	0.0	0	0.0
Bridge rail	11	0.1	0	0.0	1	0.1
Guardrail face	46	0.6	0	0.0	5	0.4
Guardrail end	11	0.1	0	0.0	6	0.5
Median barrier	5	0.1	0	0.0	0	0.0
Highway traffic sign post	71	0.8	0	0.0	6	0.5
Highway signal post	2	0.0	0	0.0	0	0.0
Luminaire/light support	72	0.9	1	2.4	16	1.3
Other pole	15	0.2	0	0.0	1	0.1
Culvert	14	0.2	0	0.0	4	0.3
Curb	11	0.1	0	0.0	1	0.1
Ditch	140	1.7	1	2.4	26	2.1
Embankment	53	0.6	0	0.0	12	0.9
Fence	11	0.1	0	0.0	1	0.1
Mailbox	23	0.3	0	0.0	1	0.1
Tree	281	3.4	2	4.8	86	6.8
Rail crossing signal	3	0.0	0	0.0	1	0.1
Building	19	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	0	0.0
Impact attenuator	0	0.0	0	0.0	0	0.0
Other fixed object	40	0.5	0	0.0	12	0.9
SUBTOTAL	838	10.0	4	9.5	185	14.6

For drivers age 21-64 in the Upper Peninsula, a tree is the fixed object associated with the highest proportion of all crashes (3.4%), fatal crashes (4.8%), and injury crashes (6.8%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Uncoded & Errors	47	0.6	0	0.0	6	0.5
No event coded as most harmful	1	0.0	0	0.0	0	0.0
TOTAL	8,363	100.0	42	100.0	1,266	100.0

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	4,184	50.0	8	19.0	382	30.2
Head On	146	1.7	16	38.1	61	4.8
Head On - Left Turn	145	1.7	3	7.1	63	5.0
Angle	1,142	13.7	6	14.3	261	20.6
Rear End	1,256	15.0	4	9.5	289	22.8
Rear End - Left Turn	118	1.4	0	0.0	34	2.7
Rear End - Right Turn	67	0.8	0	0.0	13	1.0
Sideswipe - Same Direction	457	5.5	0	0.0	31	2.4
Sideswipe - Opposite Direction	212	2.5	2	4.8	39	3.1
Backing	229	2.7	0	0.0	3	0.2
Other	389	4.7	3	7.1	87	6.9
Unknown	18	0.2	0	0.0	3	0.2
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	8,363	100.0	42	100.0	1,266	100.0

Single-vehicle crashes are the most common type of crash that drivers age 21-64 in the Upper Peninsula are involved in for all crashes (50.0%) and injury crashes (30.2%). Among fatal crashes, head-on crashes (38.1%) are the most common crash type for this age group.

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	7,317	87.5	36	85.7	1,038	82.0
Median	21	0.3	0	0.0	1	0.1
Shoulder	351	4.2	2	4.8	72	5.7
Outside of Shoulder/Curb	520	6.2	3	7.1	141	11.1
Gore	25	0.3	1	2.4	6	0.5
On-Street Parking	93	1.1	0	0.0	0	0.0
Off the Roadway	2	0.0	0	0.0	0	0.0
On the Sidewalk	7	0.1	0	0.0	2	0.2
In the Bicycle Lane	1	0.0	0	0.0	1	0.1
Other/Unknown	22	0.3	0	0.0	4	0.3
Uncoded & Errors	4	0.0	0	0.0	1	0.1
TOTAL	8,363	100.0	42	100.0	1,266	100.0

Other than on the road crashes, drivers age 21-64 in the Upper Peninsula are most commonly involved in crashes where the first impact is outside the shoulder/curb for all crashes (6.2%), fatal crashes (7.1%), and injury crashes (11.1%).

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	345	4.1	1	2.4	65	5.1
U.S. & Michigan Roads	4,751	56.8	32	76.2	733	57.9
County & City Roads	3,219	38.5	9	21.4	457	36.1
Uncoded & Errors	48	0.6	0	0.0	11	0.9
TOTAL	8,363	100.0	42	100.0	1,266	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 - 2:59 AM	316	3.8	1	2.4	56	4.4
3:00 AM - 5:59 AM	369	4.4	7	16.7	39	3.1
6:00 AM - 8:59 AM	1,163	13.9	6	14.3	126	10.0
9:00 AM - 11:59 AM	1,040	12.4	7	16.7	178	14.1
12:00 PM - 2:59 PM	1,457	17.4	6	14.3	278	22.0
3:00 PM - 5:59 PM	1,749	20.9	6	14.3	327	25.8
6:00 PM - 8:59 PM	1,417	16.9	5	11.9	172	13.6
9:00 PM - 11:59 PM	849	10.2	4	9.5	90	7.1
Unknown	3	0.0	0	0.0	0	0.0
TOTAL	8,363	100.0	42	100.0	1,266	100.0

For drivers age 21-64 in the Upper Peninsula, the 3:00 - 5:59 PM time period has the highest proportion of all crashes (20.9%) and injury crashes (25.8%). The highest proportion of fatal crashes occurs during the 3:00 - 5:59 AM and 9:00 - 11:59 AM time periods, both at 16.7%.

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
None	5,351	64.0	25	59.5	582	46.0	11	1.3
Speed too fast	669	8.0	6	14.3	148	11.7	193	23.3
Speed too slow	6	0.1	0	0.0	1	0.1	1	0.1
Failed to yield	487	5.8	1	2.4	130	10.3	151	18.2
Disregard traffic control	70	0.8	0	0.0	21	1.7	39	4.7
Drove wrong way	7	0.1	1	2.4	3	0.2	3	0.4
Drove left of center	49	0.6	1	2.4	17	1.3	18	2.2
Improper passing	42	0.5	0	0.0	12	0.9	11	1.3
Improper lane use	83	1.0	0	0.0	6	0.5	15	1.8
Improper turn	60	0.7	1	2.4	8	0.6	10	1.2
Improper/no signal	8	0.1	0	0.0	1	0.1	0	0.0
Improper backing	178	2.1	0	0.0	3	0.2	4	0.5
Unable to stop in assured clear distance	597	7.1	0	0.0	124	9.8	167	20.1
Other	221	2.6	0	0.0	47	3.7	46	5.5
Unknown	209	2.5	3	7.1	48	3.8	4	0.5
Reckless driving	34	0.4	2	4.8	15	1.2	17	2.1
Careless/negligent driving	285	3.4	2	4.8	99	7.8	139	16.8
Uncoded & Errors	7	0.1	0	0.0	1	0.1	0	0.0
TOTAL	8,363	100.0	42	100.0	1,266	100.0	829	100.0

After no hazardous action, the second highest hazardous action category for drivers age 21-64 in the Upper Peninsula for all crashes (8.0%), fatal crashes (14.3%), and injury crashes (11.7%) occurs when the driver's speed is too fast.

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	1,252	15.0	5	11.9	191	15.1
Tuesday	1,079	12.9	5	11.9	134	10.6
Wednesday	1,292	15.4	4	9.5	213	16.8
Thursday	1,263	15.1	6	14.3	212	16.7
Friday	1,488	17.8	4	9.5	245	19.4
Saturday	1,038	12.4	13	31.0	143	11.3
Sunday	951	11.4	5	11.9	128	10.1
TOTAL	8,363	100.0	42	100.0	1,266	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	4,810	57.5	29	69.0	714	56.4
Female	3,553	42.5	13	31.0	552	43.6
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	8,363	100.0	42	100.0	1,266	100.0

For drivers age 21-64 in the Upper Peninsula, male drivers (69.0%) account for over two times that of female drivers (31.0%) 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	6,496	77.7	28	66.7	931	73.5
2 occupants	1,280	15.3	11	26.2	223	17.6
3 occupants	328	3.9	3	7.1	63	5.0
4 occupants	135	1.6	0	0.0	32	2.5
5 occupants	49	0.6	0	0.0	11	0.9
6+ occupants	29	0.3	0	0.0	6	0.5
0 occupants	44	0.5	0	0.0	0	0.0
Uncoded & Errors	2	0.0	0	0.0	0	0.0
TOTAL	8,363	100.0	42	100.0	1,266	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, SUV, van	5,945	71.1	26	61.9	832	65.7
Motor home	26	0.3	0	0.0	2	0.2
Pickup truck	1,882	22.5	5	11.9	253	20.0
Small Truck under 10,000 lbs. GVWR	61	0.7	1	2.4	13	1.0
Motorcycle	65	0.8	3	7.1	46	3.6
Moped/goped	5	0.1	0	0.0	5	0.4
Go-cart/golf cart	1	0.0	0	0.0	0	0.0
Snowmobile	40	0.5	0	0.0	25	2.0
Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV	32	0.4	2	4.8	29	2.3
Other	41	0.5	0	0.0	5	0.4
Uncoded & Errors	0	0.0	0	0.0	0	0.0
CDL Truck/Bus (breakdown below)	265	3.2	5	11.9	56	4.4
TOTAL	8,363	100.0	42	100.0	1,266	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
10,000 lbs. or less	3	1.1	0	0.0	0	0.0
10,001 - 26,000 lbs.	82	30.9	0	0.0	11	19.6
Greater than 26,000 lbs.	178	67.2	5	100.0	45	80.4
Uncoded & Errors	2	0.8	0	0.0	0	0.0
TOTAL	265	100.0	5	100.0	56	100.0

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	1,305	65.5	10	90.9	178	61.8
Turning left	125	6.3	1	9.1	26	9.0
Turning right	67	3.4	0	0.0	9	3.1
Stopped on roadway	78	3.9	0	0.0	19	6.6
In prior crash	0	0.0	0	0.0	0	0.0
Changing lanes	26	1.3	0	0.0	0	0.0
Backing	91	4.6	0	0.0	1	0.3
Slowing/stopping on roadway	99	5.0	0	0.0	21	7.3
Slowing/stopping other	0	0.0	0	0.0	0	0.0
Starting up on roadway	49	2.5	0	0.0	12	4.2
Starting up other	0	0.0	0	0.0	0	0.0
Entering parking	10	0.5	0	0.0	1	0.3
Leaving parking	12	0.6	0	0.0	0	0.0
Entering roadway	39	2.0	0	0.0	7	2.4
Leaving roadway	2	0.1	0	0.0	0	0.0
Making U-turn	3	0.2	0	0.0	0	0.0
Overtaking or passing	12	0.6	0	0.0	4	1.4
Avoiding object	2	0.1	0	0.0	0	0.0
Avoiding pedestrian	0	0.0	0	0.0	0	0.0
Avoiding vehicle (front/back)	12	0.6	0	0.0	2	0.7
Avoiding vehicle (angle)	7	0.4	0	0.0	1	0.3
Driverless moving	1	0.1	0	0.0	0	0.0
Parked	21	1.1	0	0.0	0	0.0
Crossing at intersection	1	0.1	0	0.0	1	0.3
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	1	0.1	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	4	0.2	0	0.0	1	0.3
Unknown	2	0.1	0	0.0	1	0.3
Avoiding animal	6	0.3	0	0.0	1	0.3
Negotiating a curve	18	0.9	0	0.0	3	1.0
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,993	100.0	11	100.0	288	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	9	0.5	0	0.0	0	0.0
Cross center/median	7	0.4	1	9.1	2	0.7
Ran off road left	1	0.1	0	0.0	0	0.0
Ran off road right	13	0.7	0	0.0	3	1.0
Re-enter road	1	0.1	0	0.0	0	0.0
Overturn	17	0.9	0	0.0	8	2.8
Separation of units	0	0.0	0	0.0	0	0.0
Fire/explosion	1	0.1	0	0.0	0	0.0
Immersion	2	0.1	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	2	0.1	0	0.0	0	0.0
Individual fell off	2	0.1	0	0.0	2	0.7
Other noncollision	5	0.3	0	0.0	0	0.0
SUBTOTAL	60	3.0	1	9.1	15	5.2

For drivers age 65 and over in the Upper Peninsula, an overturn is the most common harmful event in a noncollision with the highest proportion of all crashes (0.9%) and injury crashes (2.8%).

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Pedestrian	6	0.3	0	0.0	6	2.1
Bicyclist	6	0.3	0	0.0	5	1.7
Motor vehicle in transport	984	49.4	9	81.8	210	72.9
Parked motor vehicle	88	4.4	1	9.1	7	2.4
Railway train	0	0.0	0	0.0	0	0.0
Animal	669	33.6	0	0.0	11	3.8
Other nonfixed objects	29	1.5	0	0.0	1	0.3
SUBTOTAL	1,782	89.4	10	90.9	240	83.3

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	2	0.1	0	0.0	0	0.0
Bridge rail	2	0.1	0	0.0	0	0.0
Guardrail face	9	0.5	0	0.0	1	0.3
Guardrail end	1	0.1	0	0.0	0	0.0
Median barrier	1	0.1	0	0.0	0	0.0
Highway traffic sign post	19	1.0	0	0.0	0	0.0
Highway signal post	2	0.1	0	0.0	0	0.0
Luminaire/light support	18	0.9	0	0.0	5	1.7
Other pole	2	0.1	0	0.0	0	0.0
Culvert	0	0.0	0	0.0	0	0.0
Curb	4	0.2	0	0.0	0	0.0
Ditch	18	0.9	0	0.0	5	1.7
Embankment	10	0.5	0	0.0	0	0.0
Fence	2	0.1	0	0.0	1	0.3
Mailbox	4	0.2	0	0.0	0	0.0
Tree	35	1.8	0	0.0	15	5.2
Rail crossing signal	2	0.1	0	0.0	0	0.0
Building	4	0.2	0	0.0	2	0.7
Traffic island	0	0.0	0	0.0	0	0.0
Fire hydrant	1	0.1	0	0.0	0	0.0
Impact attenuator	0	0.0	0	0.0	0	0.0
Other fixed object	8	0.4	0	0.0	3	1.0
SUBTOTAL	144	7.2	0	0.0	32	11.1

For drivers age 65 and over in the Upper Peninsula, a tree is the fixed object associated with the highest proportion of all crashes (1.8%) and injury crashes (5.2%).

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Uncoded & Errors	7	0.4	0	0.0	1	0.3
No event coded as most harmful	0	0.0	0	0.0	0	0.0
TOTAL	1,993	100.0	11	100.0	288	100.0

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	868	43.6	0	0.0	64	22.2
Head On	19	1.0	3	27.3	7	2.4
Head On - Left Turn	42	2.1	1	9.1	16	5.6
Angle	363	18.2	5	45.5	93	32.3
Rear End	235	11.8	1	9.1	57	19.8
Rear End - Left Turn	30	1.5	0	0.0	9	3.1
Rear End - Right Turn	21	1.1	0	0.0	4	1.4
Sideswipe - Same Direction	177	8.9	0	0.0	9	3.1
Sideswipe - Opposite Direction	52	2.6	0	0.0	10	3.5
Backing	75	3.8	0	0.0	1	0.3
Other	107	5.4	1	9.1	17	5.9
Unknown	4	0.2	0	0.0	1	0.3
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,993	100.0	11	100.0	288	100.0

Single-vehicle crashes are the most common type of crash that drivers age 65 and over in the Upper Peninsula are involved in for all crashes (43.6%). Angle crashes are the most common crash type for these drivers to be involved in among fatal (45.5%) and injury (32.3%) crashes.

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	1,795	90.1	11	100.0	251	87.2
Median	7	0.4	0	0.0	0	0.0
Shoulder	73	3.7	0	0.0	14	4.9
Outside of Shoulder/Curb	77	3.9	0	0.0	18	6.3
Gore	5	0.3	0	0.0	2	0.7
On-Street Parking	27	1.4	0	0.0	1	0.3
Off the Roadway	2	0.1	0	0.0	0	0.0
On the Sidewalk	3	0.2	0	0.0	1	0.3
In the Bicycle Lane	0	0.0	0	0.0	0	0.0
Other/Unknown	4	0.2	0	0.0	1	0.3
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,993	100.0	11	100.0	288	100.0

Other than on the road crashes, drivers age 65 and over in the Upper Peninsula are most commonly involved in crashes where the first impact is outside the shoulder/curb for all crashes (3.9%) and injury crashes (6.3%).

ROADWAY TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
Interstate Routes	83	4.2	0	0.0	13	4.5
U.S. & Michigan Roads	1,142	57.3	9	81.8	175	60.8
County & City Roads	756	37.9	2	18.2	98	34.0
Uncoded & Errors	12	0.6	0	0.0	2	0.7
TOTAL	1,993	100.0	11	100.0	288	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 - 2:59 AM	21	1.1	0	0.0	3	1.0
3:00 AM - 5:59 AM	37	1.9	0	0.0	3	1.0
6:00 AM - 8:59 AM	148	7.4	0	0.0	20	6.9
9:00 AM - 11:59 AM	420	21.1	1	9.1	65	22.6
12:00 PM - 2:59 PM	485	24.3	4	36.4	74	25.7
3:00 PM - 5:59 PM	463	23.2	4	36.4	92	31.9
6:00 PM - 8:59 PM	296	14.9	2	18.2	23	8.0
9:00 PM - 11:59 PM	122	6.1	0	0.0	8	2.8
Unknown	1	0.1	0	0.0	0	0.0
TOTAL	1,993	100.0	11	100.0	288	100.0

For drivers age 65 and over in the Upper Peninsula, the 12:00 - 2:59 PM time period has the highest proportion of all crashes (24.3%), and the 3:00 - 5:59 PM time period has the highest proportion of injury crashes (31.9%). The highest proportion of fatal crashes occurs in both of those time periods, 36.4% each.

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
None	1,203	60.4	3	27.3	125	43.4	0	0.0
Speed too fast	86	4.3	1	9.1	22	7.6	19	10.7
Speed too slow	3	0.2	0	0.0	1	0.3	0	0.0
Failed to yield	254	12.7	3	27.3	61	21.2	77	43.5
Disregard traffic control	34	1.7	0	0.0	8	2.8	15	8.5
Drove wrong way	0	0.0	0	0.0	0	0.0	0	0.0
Drove left of center	11	0.6	3	27.3	2	0.7	0	0.0
Improper passing	8	0.4	0	0.0	4	1.4	3	1.7
Improper lane use	40	2.0	0	0.0	6	2.1	8	4.5
Improper turn	19	1.0	0	0.0	2	0.7	5	2.8
Improper/no signal	6	0.3	0	0.0	0	0.0	0	0.0
Improper backing	64	3.2	0	0.0	0	0.0	3	1.7
Unable to stop in assured clear distance	112	5.6	1	9.1	27	9.4	24	13.6
Other	67	3.4	0	0.0	18	6.3	7	4.0
Unknown	44	2.2	0	0.0	4	1.4	0	0.0
Reckless driving	1	0.1	0	0.0	1	0.3	1	0.6
Careless/negligent driving	41	2.1	0	0.0	7	2.4	15	8.5
Uncoded & Errors	0	0.0	0	0.0	0	0.0	0	0.0
TOTAL	1,993	100.0	11	100.0	288	100.0	177	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 (12.7%) and injury crashes (21.2%) 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	317	15.9	3	27.3	56	19.4
Tuesday	273	13.7	1	9.1	31	10.8
Wednesday	321	16.1	2	18.2	32	11.1
Thursday	307	15.4	1	9.1	49	17.0
Friday	328	16.5	1	9.1	58	20.1
Saturday	247	12.4	1	9.1	40	13.9
Sunday	200	10.0	2	18.2	22	7.6
TOTAL	1,993	100.0	11	100.0	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	1,285	64.5	9	81.8	176	61.1
Female	708	35.5	2	18.2	112	38.9
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,993	100.0	11	100.0	288	100.0

For drivers age 65 and over in the Upper Peninsula, there were nine male drivers (81.8%) and two female drivers (18.2%) 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	1,514	76.0	7	63.6	214	74.3
2 occupants	411	20.6	4	36.4	61	21.2
3 occupants	38	1.9	0	0.0	11	3.8
4 occupants	11	0.6	0	0.0	0	0.0
5 occupants	7	0.4	0	0.0	1	0.3
6+ occupants	5	0.3	0	0.0	1	0.3
0 occupants	7	0.4	0	0.0	0	0.0
Uncoded & Errors	0	0.0	0	0.0	0	0.0
TOTAL	1,993	100.0	11	100.0	288	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, SUV, van	1,486	74.6	8	72.7	204	70.8
Motor home	8	0.4	0	0.0	0	0.0
Pickup truck	439	22.0	2	18.2	65	22.6
Small Truck under 10,000 lbs. GVWR	7	0.4	0	0.0	2	0.7
Motorcycle	14	0.7	1	9.1	8	2.8
Moped/goped	1	0.1	0	0.0	1	0.3
Go-cart/golf cart	0	0.0	0	0.0	0	0.0
Snowmobile	1	0.1	0	0.0	0	0.0
Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV	4	0.2	0	0.0	3	1.0
Other	7	0.4	0	0.0	1	0.3
Uncoded & Errors	0	0.0	0	0.0	0	0.0
CDL Truck/Bus (breakdown below)	26	1.3	0	0.0	4	1.4
TOTAL	1,993	100.0	11	100.0	288	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Drivers	% of Total	Number of Drivers	% of Total	Number of Drivers	% of Total
10,000 lbs. or less	0	0.0	0	0	0	0.0
10,001 - 26,000 lbs.	7	26.9	0	0	0	0.0
Greater than 26,000 lbs.	19	73.1	0	0	4	100.0
Uncoded & Errors	0	0.0	0	0	0	0.0
TOTAL	26	100.0	0	0	4	100.0

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*	28	1	1	0	0	0	0	1	1
	Killed	0	0	0	0	0	0	0	0	0**
	Injured	23	1	1	0	0	0	0	1	1
DRIVERS	Total*	12,351	358	269	80	54	47	38	485	361
	Killed	28	4	3	4	4	3	3	11	10**
	Injured	1,137	107	96	28	21	13	11	148	128
MOTORCYCLISTS	Total*	104	1	1	2	1	1	1	4	3
	Killed	4	0	0	0	0	1	1	1	1**
	Injured	68	1	1	2	1	0	0	3	2
ORV/ATV RIDERS	Total*	59	13	13	0	0	0	0	13	13
	Killed	2	1	1	0	0	0	0	1	1**
	Injured	46	11	11	0	0	0	0	11	11
PEDESTRIANS	Total*	37	5	5	2	1	2	0	9	6
	Killed	1	0	0	1	1	0	0	1	1**
	Injured	29	4	4	1	0	2	0	7	4
SNOWMOBILERS	Total*	47	10	10	0	0	1	1	11	11
	Killed	0	0	0	0	0	0	0	0	0**
	Injured	24	8	8	0	0	1	1	9	9

**Total does include property damage only classes*

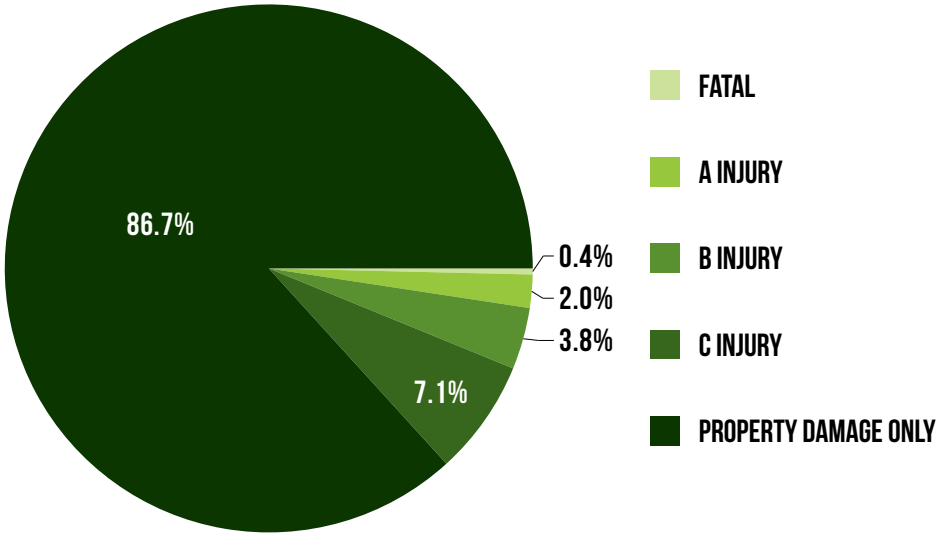
**In the Upper Peninsula, there were no bicyclists, ten drivers, one motorcyclist, one ORV/ATV rider, one pedestrian, and no snowmobilers who were killed and coded as drinking and/or using drugs by the police officer.

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

AGE OF DRIVER IN CRASH	ALL CRASHES				FATAL				INJURY			
	Drinking Only	Drugs Only	Both	Total	Drinking Only	Drugs Only	Both	Total	Drinking Only	Drugs Only	Both	Total
13 years and under	0	0	0	0	0	0	0	0	0	0	0	0
14 years	0	0	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	0	1	3	0	0	0	0	2	0	0	2
17 years	1	1	2	4	0	0	0	0	1	0	1	2
18 years	1	0	0	1	0	0	0	0	1	0	0	1
19 years	10	2	0	12	0	0	0	0	4	1	0	5
20 years	8	2	2	12	0	1	0	1	1	1	1	3
21 - 24 years	35	3	5	43	2	0	1	3	17	3	1	21
25 - 34 years	80	22	11	113	0	1	1	2	33	11	3	47
35 - 44 years	51	14	6	71	0	2	1	3	21	6	4	31
45 - 54 years	35	5	5	45	2	0	0	2	14	2	0	16
55 - 64 years	29	3	4	36	0	0	0	0	11	2	2	15
65 - 69 years	8	0	2	10	1	0	0	1	3	0	2	5
70 - 74 years	5	1	0	6	0	1	0	1	3	0	0	3
75 - 79 years	3	0	0	3	0	0	0	0	1	0	0	1
80 - 84 years	0	1	0	1	0	0	0	0	0	0	0	0
85 - 89 years	1	0	0	1	0	0	0	0	0	0	0	0
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	269	54	38	361	5	5	3	13	112	26	14	152

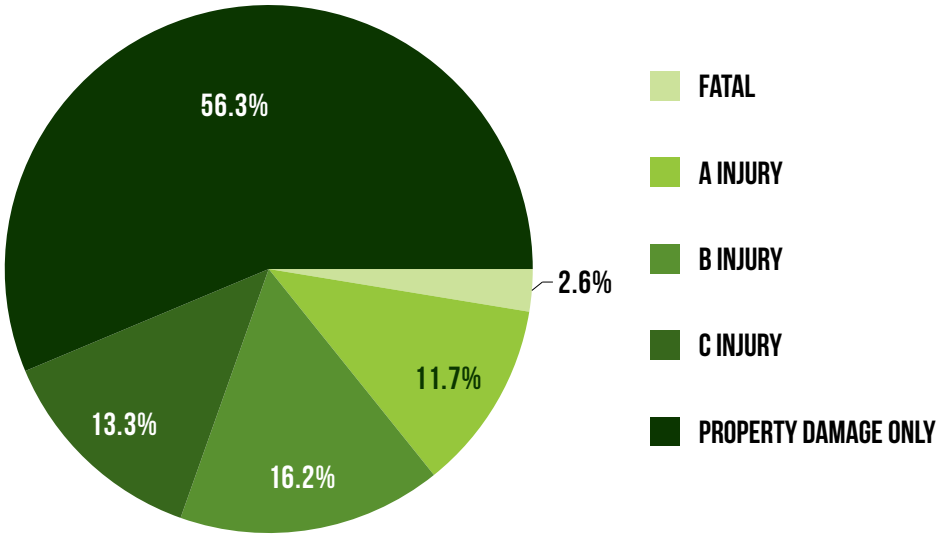
The driver age group 25 to 34 years represents the highest number of drinking and/or drug use in total crashes and injury crashes.

UPPER PENINSULA ALL CRASHES BY INJURY SEVERITY



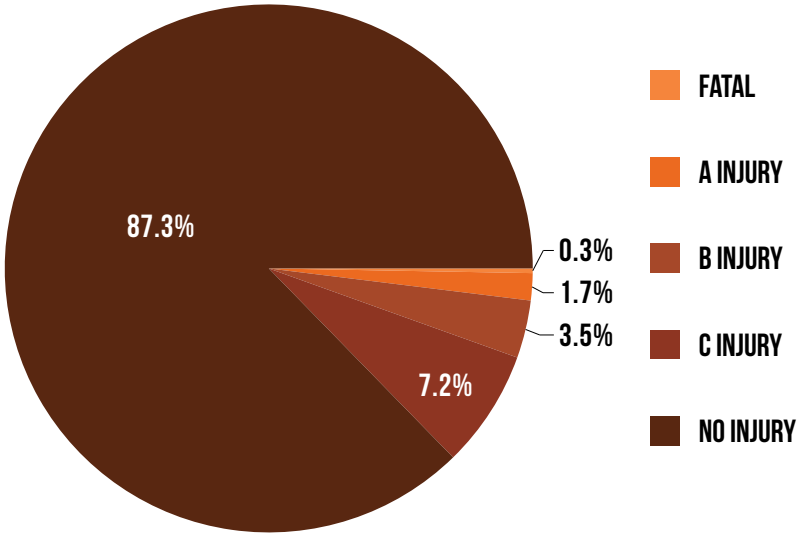
The majority of crashes do not involve injury (86.7%). Possible (C) injury crashes represent about 53% of all injury crashes.

UPPER PENINSULA HAD-BEEN-DRINKING CRASHES BY INJURY SEVERITY



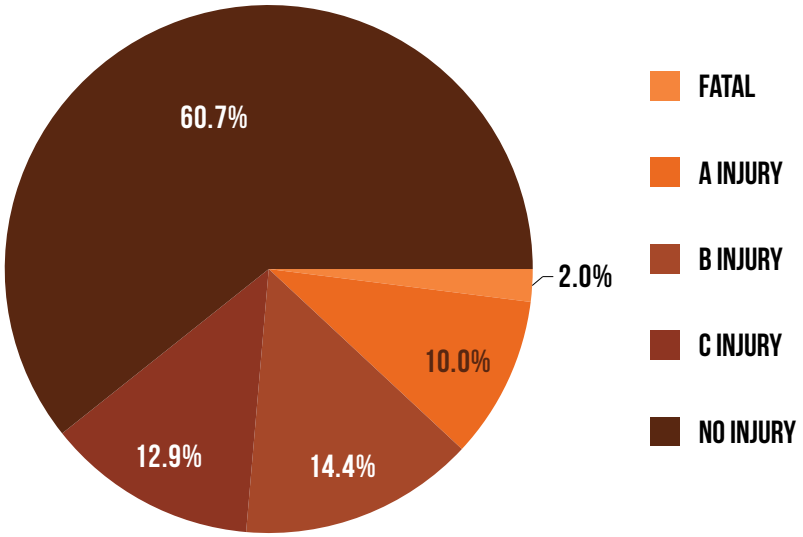
The problem of the drinking driver, pedestrian, and/or bicyclist is seen by comparing the two charts on this page. All injury levels are greater, and a fatality in the crash is about seven times more likely, when one of the crash-involved operators is reported as had-been-drinking (HBD).

UPPER PENINSULA DEATH & INJURY FOR CRASH INVOLVED OCCUPANTS



The majority of occupants involved in crashes are not injured (87.3%). About 57% of those who are injured receive only possible (C) injuries.

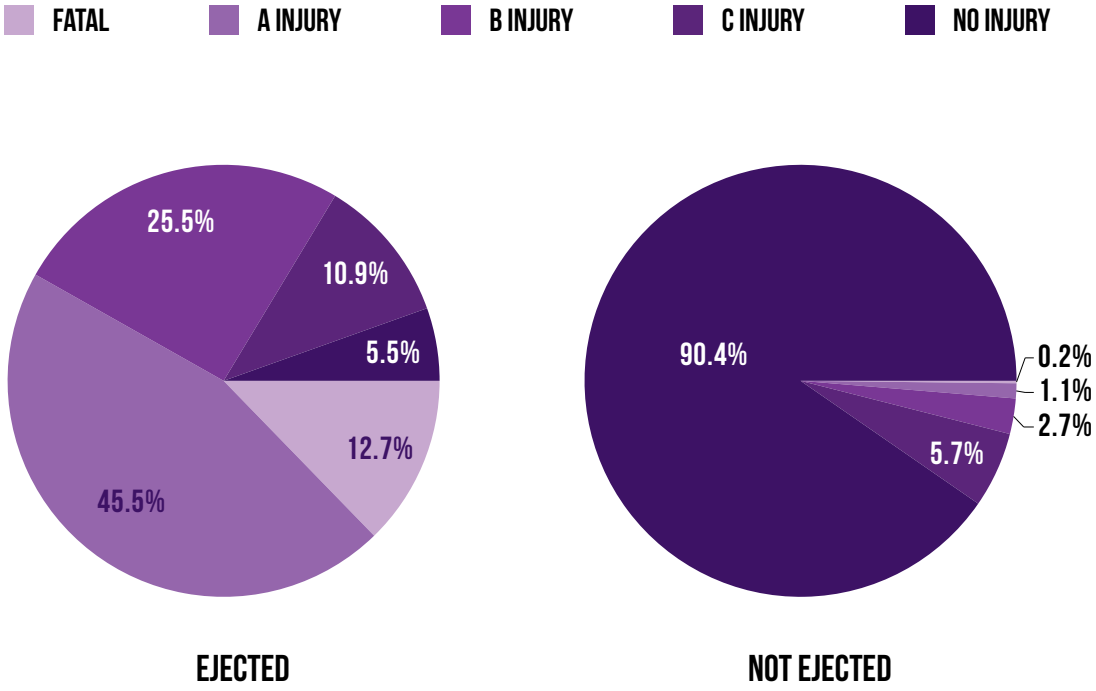
UPPER PENINSULA OCCUPANTS IN HAD-BEEN-DRINKING CRASHES



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

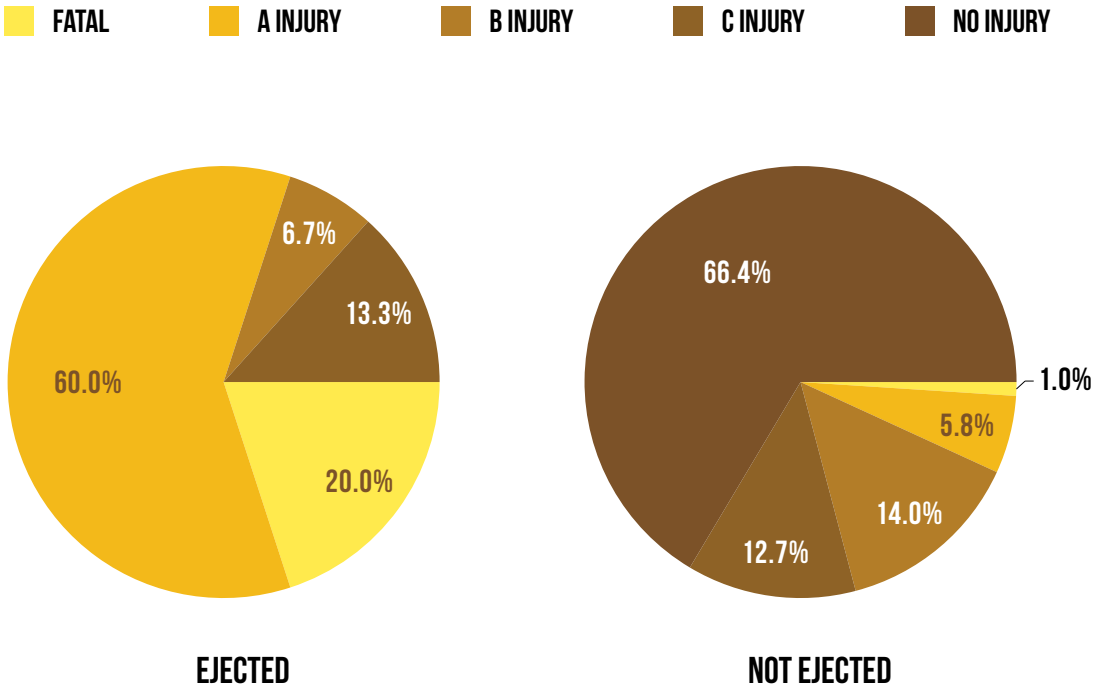
Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

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



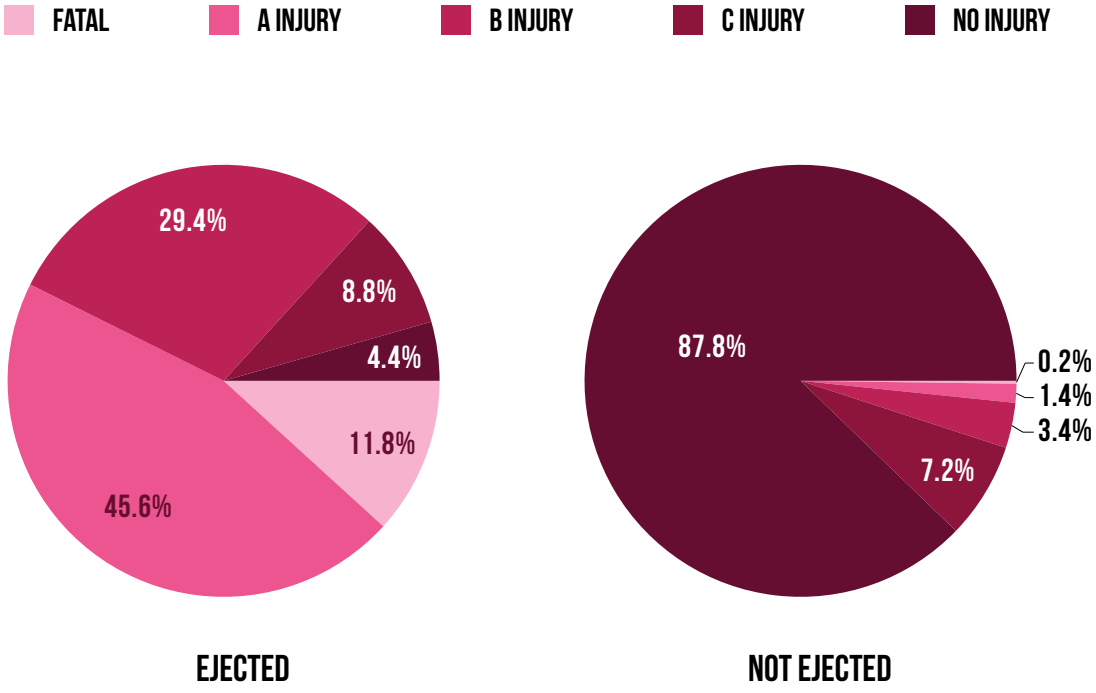
As shown by the two charts above, death and injury are much more likely when drivers are ejected from vehicles.

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



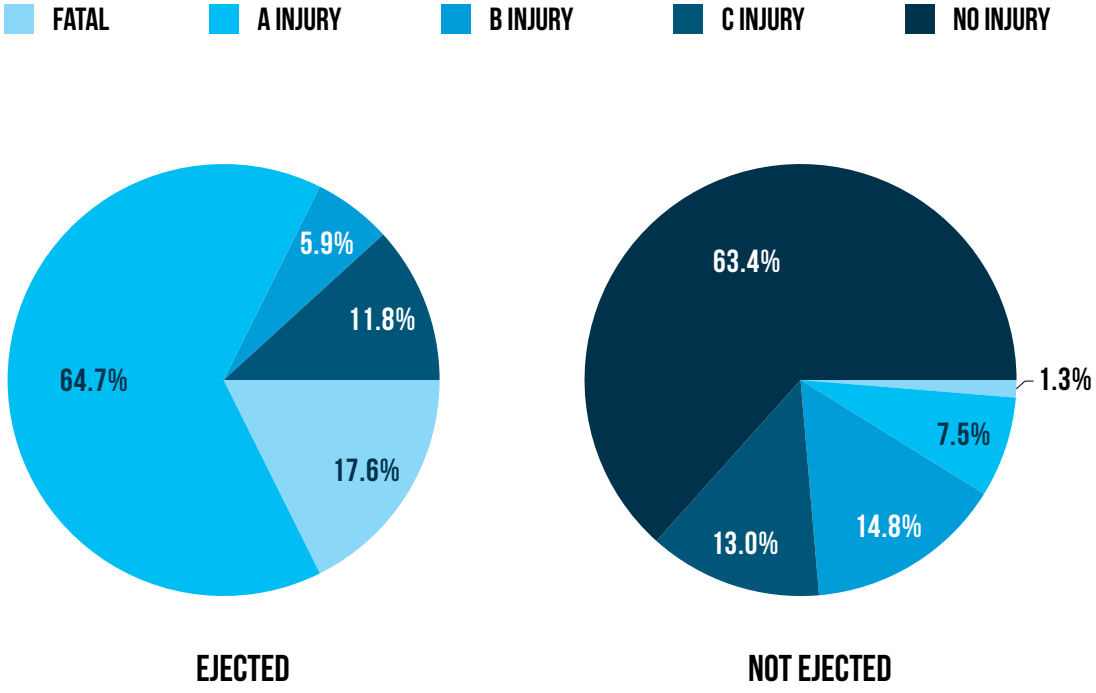
When compared to the charts above, the had-been-drinking charts demonstrate that injury severity is much worse for drivers reported to be drinking in both ejected and non-ejected events.

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



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

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

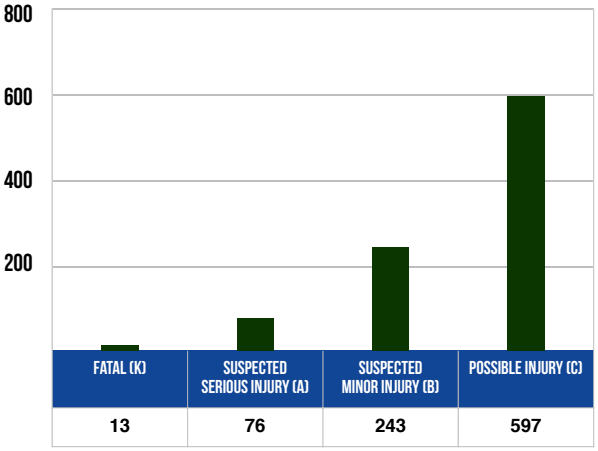


When compared to the charts above, the charts of occupants of had-been-drinking crashes demonstrate that injury severity is much worse for occupants in a crash where drinking is reported in both ejected and non-ejected events.

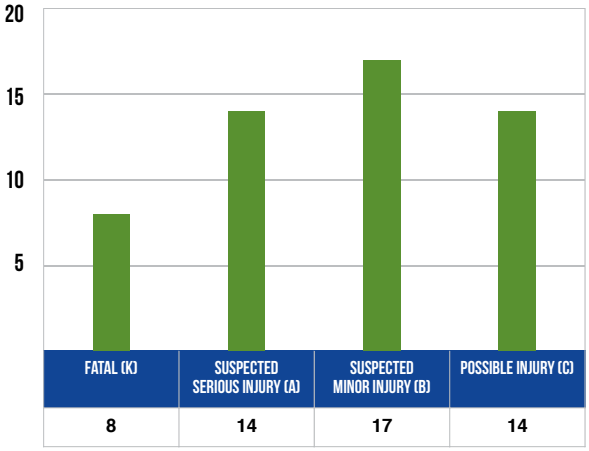
Note: Occupants include all drivers plus all injured or killed persons in or on a motor vehicle.

UPPER PENINSULA INJURY SEVERITY & BELT USE BY DRIVER INJURY

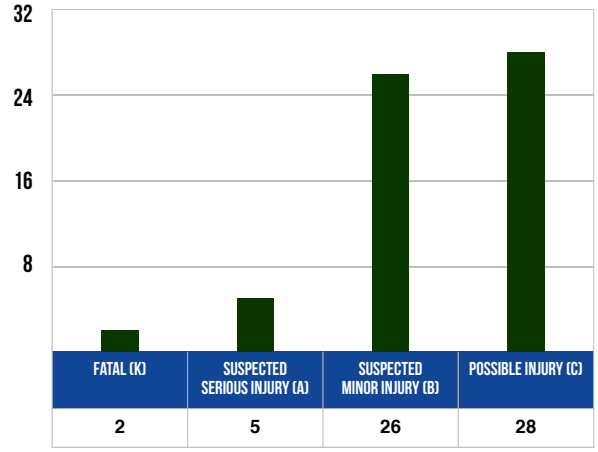
ALL CRASHES-BELTS USED



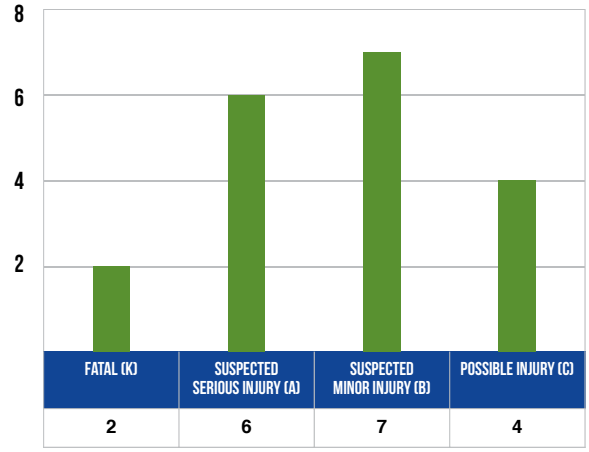
ALL CRASHES-BELTS NOT USED



HAD-BEEN DRINKING CRASHES-BELTS USED



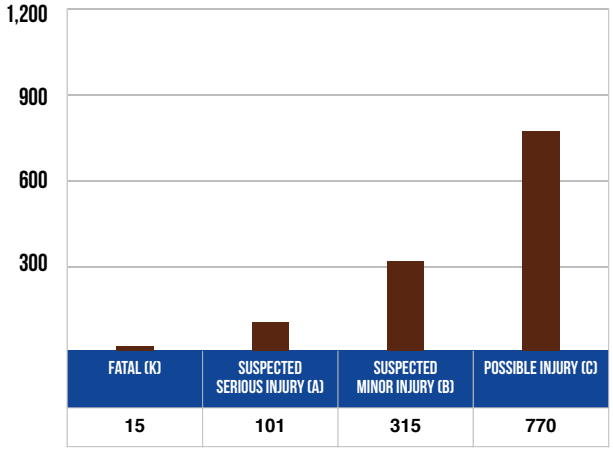
HAD-BEEN DRINKING CRASHES-BELTS NOT USED



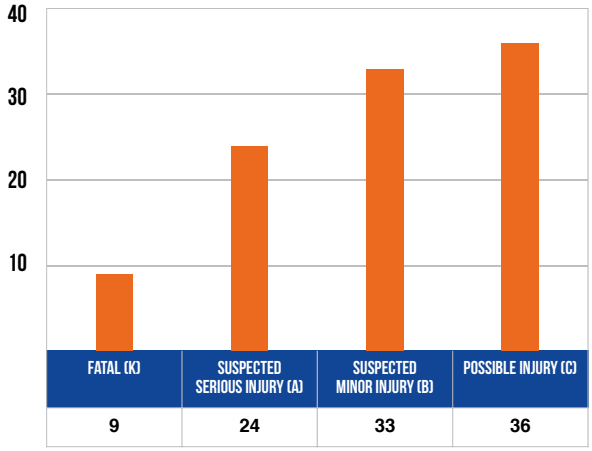
Note: "Belts Used" represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, and restraint failure. "Belts Not Used" represents no belts available and no belts used.

UPPER PENINSULA INJURY SEVERITY & RESTRAINT USE BY OCCUPANT INJURY

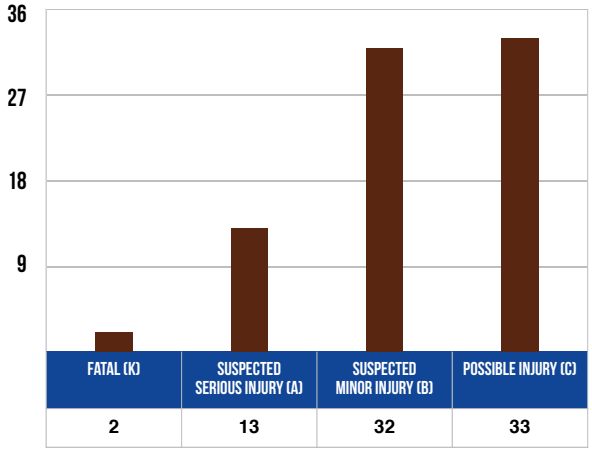
ALL CRASHES - RESTRAINTS USED



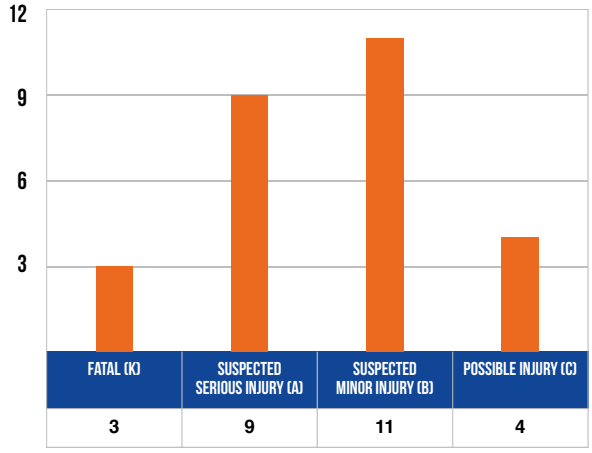
ALL CRASHES - RESTRAINTS NOT USED



HAD-BEEN-DRINKING CRASHES - RESTRAINTS USED



HAD-BEEN-DRINKING CRASHES - RESTRAINTS NOT USED

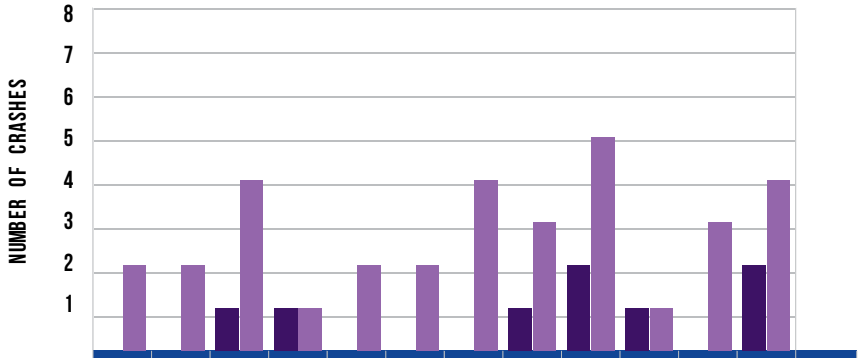


Note: "Restraints Used" represents shoulder belts only used, lap belts only used, both lap and shoulder belts used, child restraints used, and restraint failure. "Restraints Not Used" represents no belts available; no belts used; and child restraint not used, unavailable, or improper use.

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

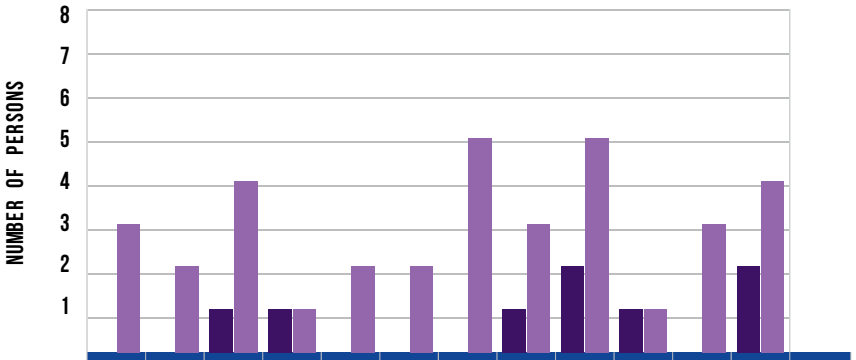
UPPER PENINSULA ALCOHOL INVOLVMENT IN FATAL CRASHES

HAD-BEEN-DRINKING FATAL CRASHES BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
HBD FATAL CRASHES	0	0	1	1	0	0	0	1	2	1	0	2	8
TOTAL FATAL CRASHES	2	2	4	1	2	2	4	3	5	1	3	4	33

ALCOHOL-INVOLVED FATALITIES BY MONTH

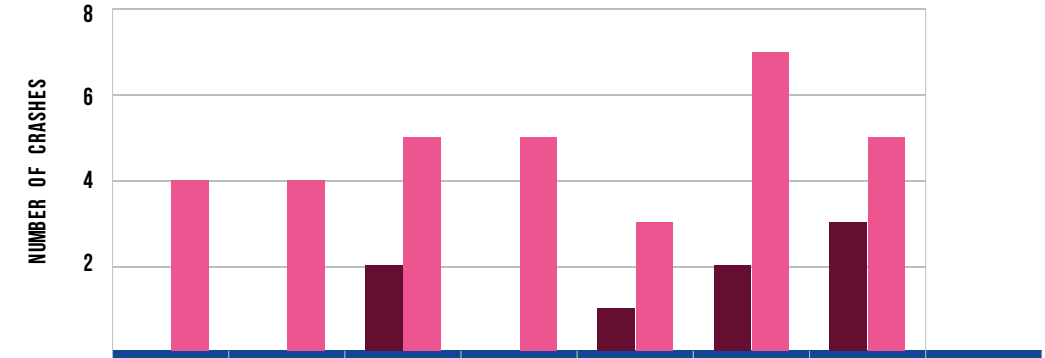


	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
ALCOHOL-INVOLVED FATALITIES	0	0	1	1	0	0	0	1	2	1	0	2	8
TOTAL FATALITIES	3	2	4	1	2	2	5	3	5	1	3	4	35

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

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

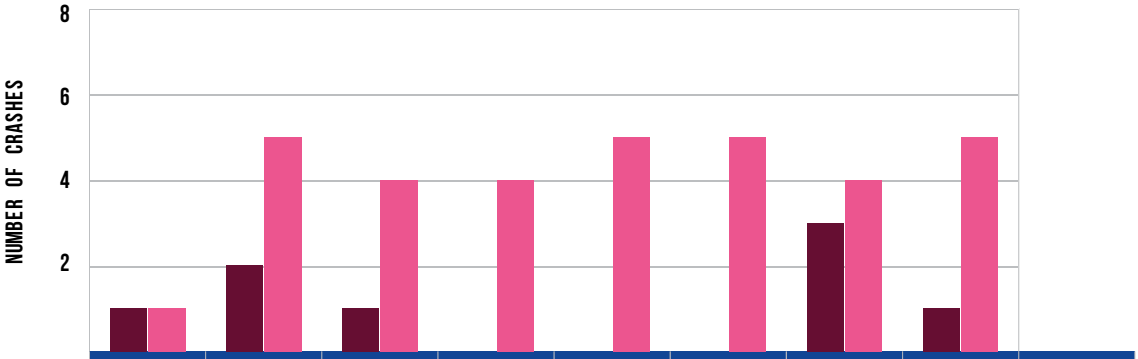
HAD-BEEN-DRINKING FATAL CRASHES BY DAY OF THE WEEK



	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTALS
HBD FATAL CRASHES	0	0	2	0	1	2	3	8
TOTAL FATAL CRASHES	4	4	5	5	3	7	5	33

Saturday had the highest number of fatal crashes, and Sunday had the highest number of drinking-related fatal crashes in 2018.

HAD-BEEN-DRINKING FATAL CRASHES BY TIME OF DAY

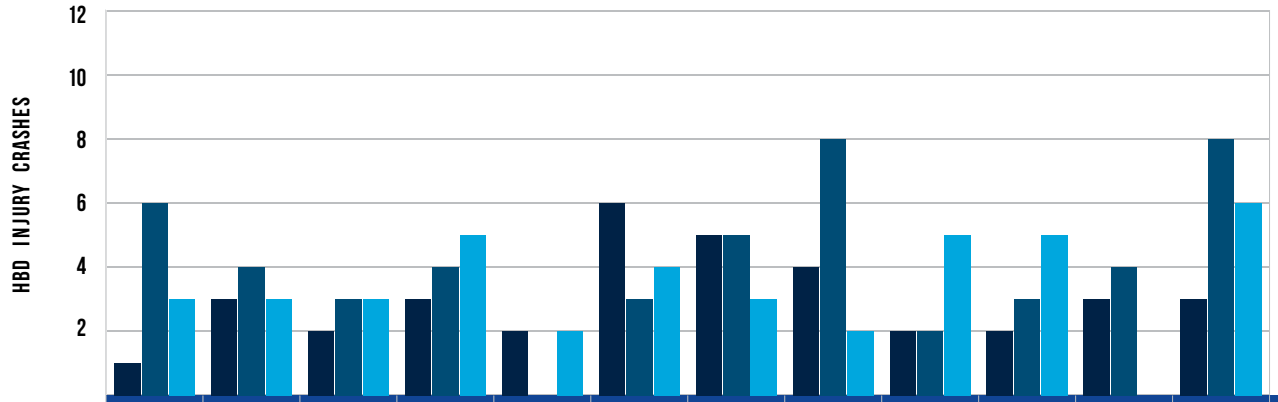


	12:00-2:59AM	3:00-5:59AM	6:00-8:59AM	9:00-11:59AM	12:00-2:59PM	3:00-5:59PM	6:00-8:59PM	9:00-11:59PM	TOTALS
HBD FATAL CRASHES	1	2	1	0	0	0	3	1	8
TOTAL FATAL CRASHES	1	5	4	4	5	5	4	5	33

The 6:00 PM to 8:59 PM time period had the highest number of HBD fatal crashes (3), while four different time periods had the highest number of total fatal crashes (5).

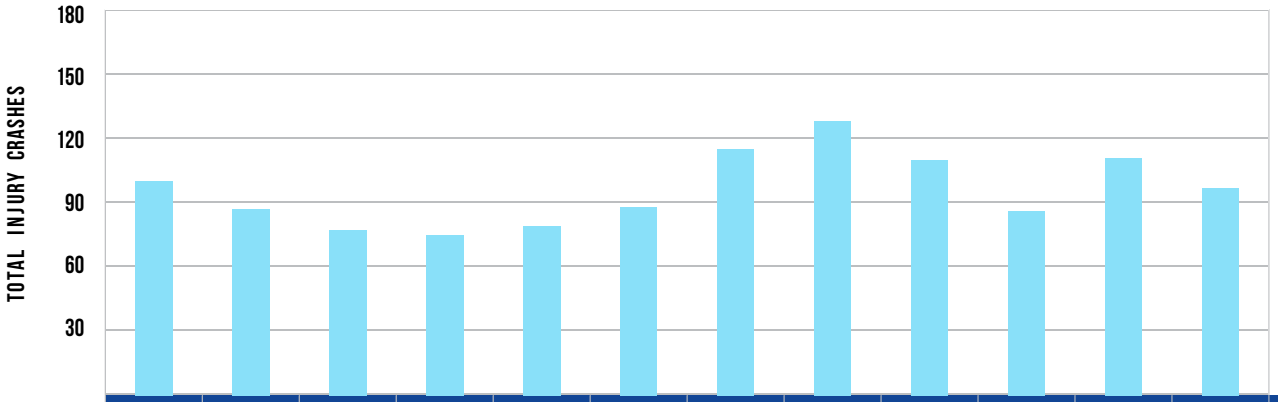
UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES

HAD-BEEN-DRINKING INJURY CRASHES BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
HBD A INJURY CRASHES	1	3	2	3	2	6	5	4	2	2	3	3	36
HBD B INJURY CRASHES	6	4	3	4	0	3	5	8	2	3	4	8	50
HBD C INJURY CRASHES	3	3	3	5	2	4	3	2	5	5	0	6	41

TOTAL INJURY CRASHES BY MONTH



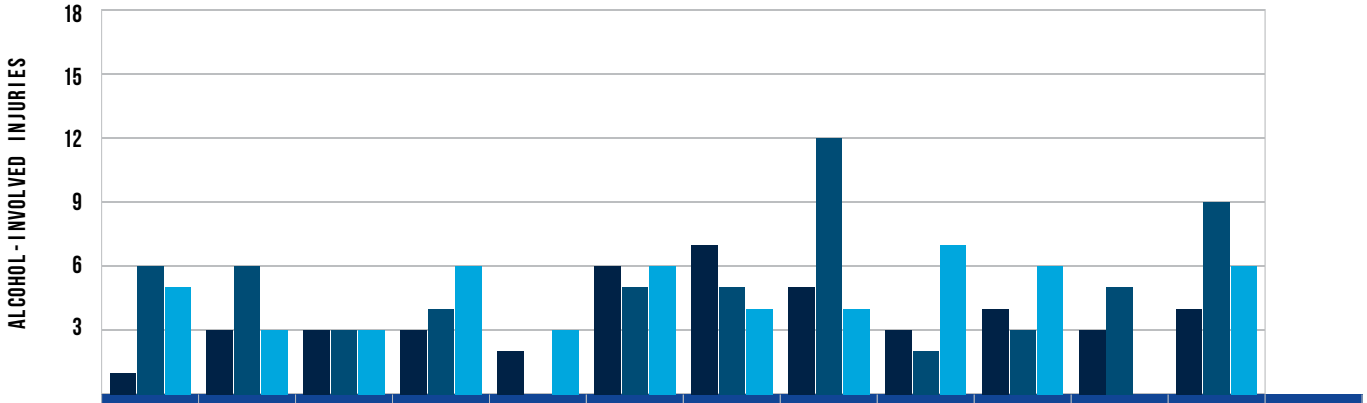
	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
TOTAL INJURY CRASHES	100	87	77	75	79	88	115	128	110	86	111	97	1,153

Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 2018, the highest number of had-been-drinking injury crashes occurred in December (17).

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

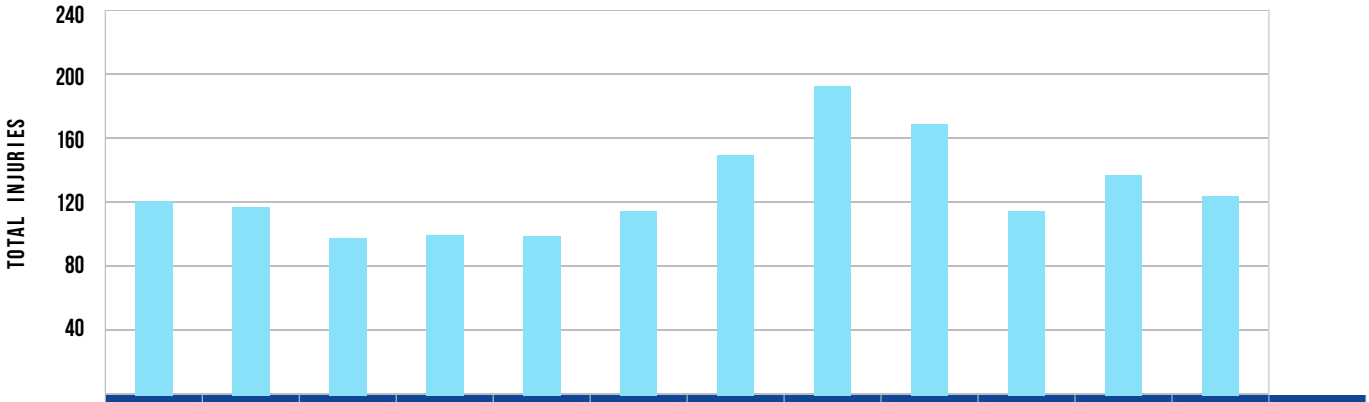
UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

ALCOHOL-INVOLVED INJURIES BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D	TOTALS
ALCOHOL-INVOLVED A INJURIES	1	3	3	3	2	6	7	5	3	4	3	4	44
ALCOHOL-INVOLVED B INJURIES	6	6	3	4	0	5	5	12	2	3	5	9	60
ALCOHOL-INVOLVED C INJURIES	5	3	3	6	3	6	4	4	7	6	0	6	53

TOTAL INJURIES BY MONTH

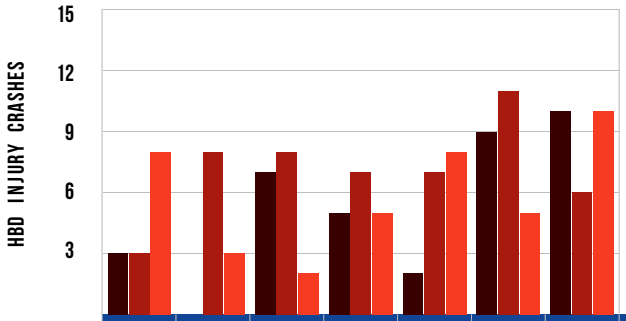


	J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
TOTAL INJURIES	121	117	98	100	99	115	150	193	169	115	137	124	1,538

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

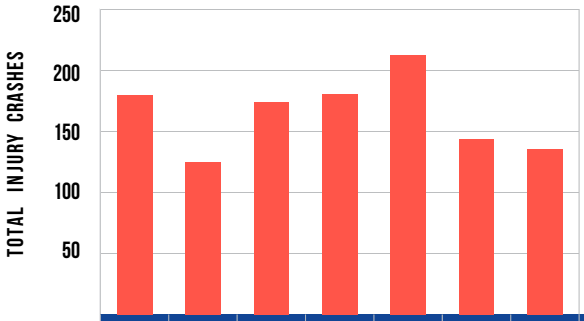
UPPER PENINSULA ALCOHOL INVOLVEMENT IN INJURY CRASHES (CONTINUED)

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



	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTALS
HBD A INJURY CRASHES	3	0	7	5	2	9	10	36
HBD B INJURY CRASHES	3	8	8	7	7	11	6	50
HBD C INJURY CRASHES	8	3	2	5	8	5	10	41

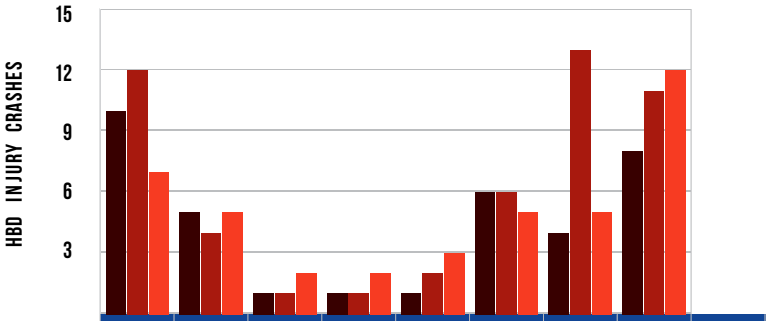
TOTAL INJURY CRASHES BY DAY OF THE WEEK



	MON	TUES	WED	THURS	FRI	SAT	SUN	TOTALS
TOTAL INJURY CRASHES	180	125	174	181	213	144	136	1,153

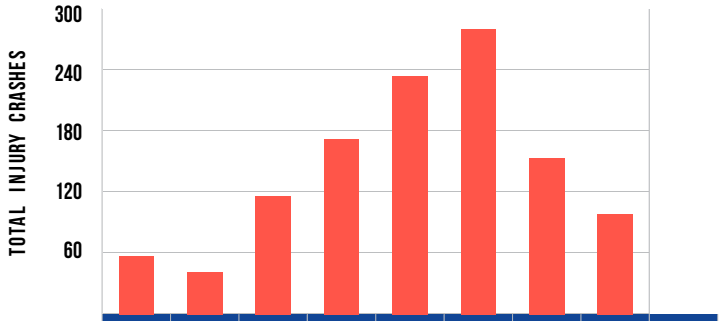
The peak day for all injury crashes is Friday. The highest proportion of had-been-drinking injury crashes to total injury crashes occurred on Sunday (19.1%).

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 INJURY CRASHES	10	5	1	1	1	6	4	8	36
HBD B INJURY CRASHES	12	4	1	1	2	6	13	11	50
HBD C INJURY CRASHES	7	5	2	2	3	5	5	12	41

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	57	41	116	172	234	281	154	98	1,153

Total injury crash frequencies peak in the hours between 3:00 PM and 5:59 PM, while had-been-drinking injury crash frequencies peak between 9:00 PM and 11:59 PM. There were no 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	4	0.1	0	0.0	0	1	0	3
14 years	5	0.1	0	0.0	0	2	1	2
15 years	6	0.1	0	0.0	0	0	2	4
16 years	84	1.2	0	0.0	3	5	12	64
17 years	110	1.6	0	0.0	5	4	7	94
18 years	154	2.3	1	2.4	3	7	12	131
19 years	160	2.4	1	2.4	3	8	15	133
20 years	166	2.4	2	4.8	2	8	11	143
21 - 24 years	616	9.1	5	11.9	20	30	37	524
25 - 34 years	1,110	16.3	7	16.7	25	56	97	925
35 - 44 years	925	13.6	6	14.3	26	42	75	776
45 - 54 years	1,076	15.8	5	11.9	28	51	89	903
55 - 64 years	1,083	15.9	6	14.3	28	43	67	939
65 - 69 years	463	6.8	4	9.5	12	11	26	410
70 - 74 years	353	5.2	1	2.4	9	17	24	302
75 - 79 years	233	3.4	0	0.0	3	9	25	196
80 - 84 years	141	2.1	1	2.4	2	6	14	118
85 - 89 years	67	1.0	2	4.8	0	5	9	51
90 years and over	28	0.4	1	2.4	0	2	2	23
Unknown	20	0.3	0	0.0	0	1	1	18
TOTAL	6,804**	100.0	42	100.0	169	308	526	5,759

The male driver age group 25 to 34 experienced the highest number of fatal crashes and injury crashes. Property damage only crashes were highest among the male driver age group 55 to 64.

***Note: This table excludes 652 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	2	0.9	0	0.0	0	1	0	1
17 years	0	0.0	0	0.0	0	0	0	0
18 years	0	0.0	0	0.0	0	0	0	0
19 years	6	2.6	0	0.0	0	2	0	4
20 years	9	4.0	0	0.0	0	1	0	8
21 - 24 years	29	12.8	2	28.6	7	4	2	14
25 - 34 years	69	30.4	1	14.3	8	14	9	37
35 - 44 years	40	17.6	1	14.3	4	6	7	22
45 - 54 years	31	13.7	2	28.6	4	3	6	16
55 - 64 years	26	11.5	0	0.0	5	5	1	15
65 - 69 years	7	3.1	1	14.3	1	2	1	2
70 - 74 years	4	1.8	0	0.0	0	1	1	2
75 - 79 years	3	1.3	0	0.0	0	0	1	2
80 - 84 years	0	0.0	0	0.0	0	0	0	0
85 - 89 years	1	0.4	0	0.0	0	0	0	1
90 years and over	0	0.0	0	0.0	0	0	0	0
Unknown	0	0.0	0	0.0	0	0	0	0
TOTAL	227**	100.0	7	100.0	29	39	28	124

The male drinking 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	5	0.1	0	0.0	2	2	0	1
14 years	3	0.1	0	0.0	0	1	0	2
15 years	8	0.2	0	0.0	1	1	0	6
16 years	99	2.0	0	0.0	4	5	11	79
17 years	113	2.3	0	0.0	5	9	22	77
18 years	136	2.8	0	0.0	2	5	23	106
19 years	140	2.9	1	6.3	3	5	15	116
20 years	117	2.4	0	0.0	0	4	9	104
21 - 24 years	437	8.9	4	25.0	5	20	39	369
25 - 34 years	831	17.0	0	0.0	20	41	83	687
35 - 44 years	707	14.4	3	18.8	15	27	72	590
45 - 54 years	774	15.8	4	25.0	13	23	79	655
55 - 64 years	804	16.4	2	12.5	10	22	83	687
65 - 69 years	290	5.9	0	0.0	3	14	33	240
70 - 74 years	165	3.4	1	6.3	5	5	15	139
75 - 79 years	121	2.5	0	0.0	2	6	10	103
80 - 84 years	72	1.5	0	0.0	2	3	3	64
85 - 89 years	50	1.0	1	6.3	2	2	6	39
90 years and over	10	0.2	0	0.0	0	1	0	9
Unknown	13	0.3	0	0.0	0	1	2	10
TOTAL	4,895**	100.0	16	100.0	94	197	505	4,083

The female driver age groups 21 to 24 and 45 to 54 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 that age group along with the 55 to 64 age group experienced the highest number of property damage only crashes.

***Note: This table excludes 652 drivers of unknown gender.*

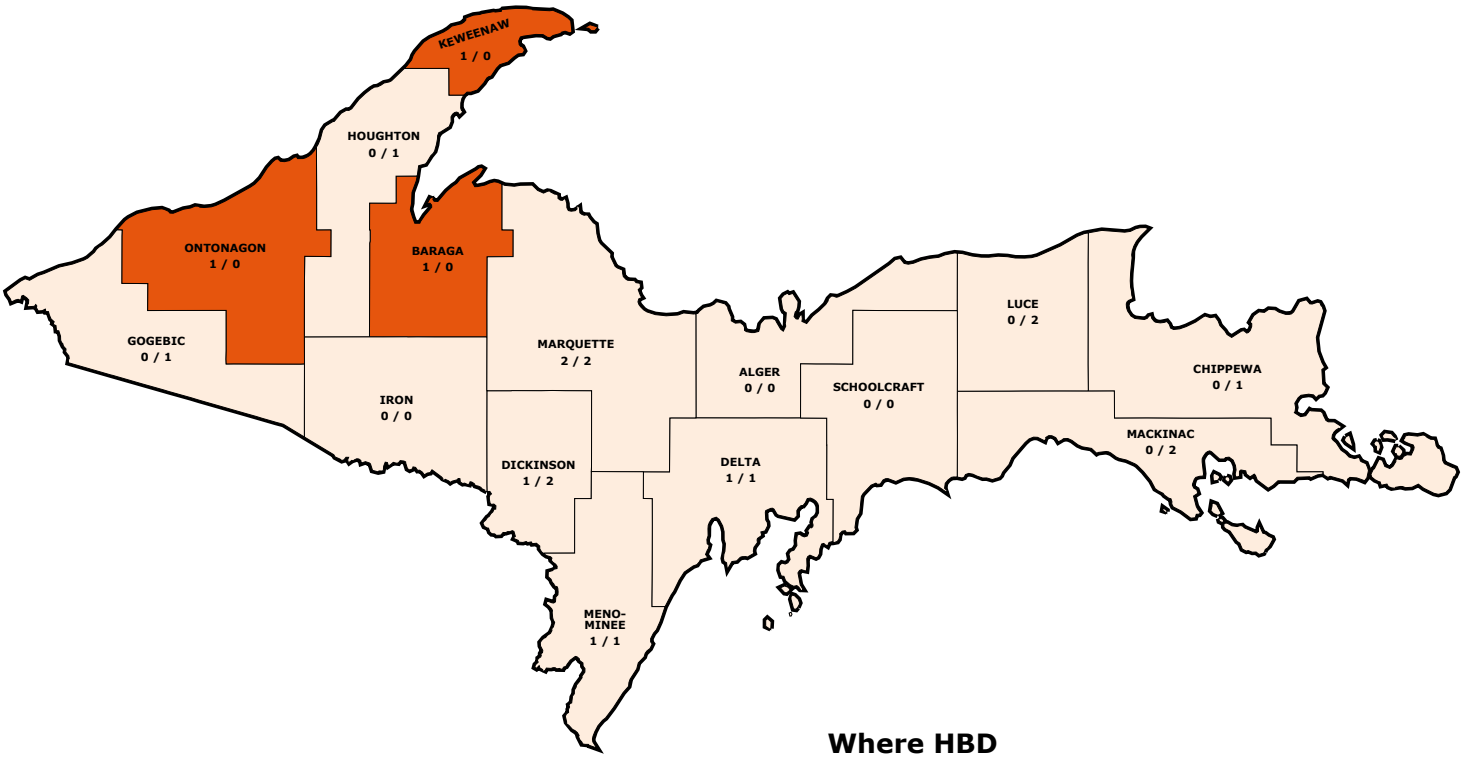
UPPER PENINSULA FEMALE DRINKING DRIVERS BY AGE AND INJURY SEVERITY IN CRASH

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	1.3	0	0.0	0	0	1	0
17 years	3	3.8	0	0.0	1	1	0	1
18 years	1	1.3	0	0.0	0	0	1	0
19 years	4	5.0	0	0.0	1	0	1	2
20 years	1	1.3	0	0.0	0	1	0	0
21 - 24 years	11	13.8	1	100.0	0	2	3	5
25 - 34 years	22	27.5	0	0.0	3	1	1	17
35 - 44 years	17	21.3	0	0.0	1	3	4	9
45 - 54 years	9	11.3	0	0.0	0	1	0	8
55 - 64 years	7	8.8	0	0.0	0	1	1	5
65 - 69 years	3	3.8	0	0.0	0	1	0	2
70 - 74 years	1	1.3	0	0.0	1	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	7	11	12	49

The female drinking driver age group 35 to 44 experienced the highest number of injury crashes. The age group 25 to 34 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 Occured

A One-Year Comparision
2018 = 8 / 2017 = 13

Same or decrease
Increase

DEER

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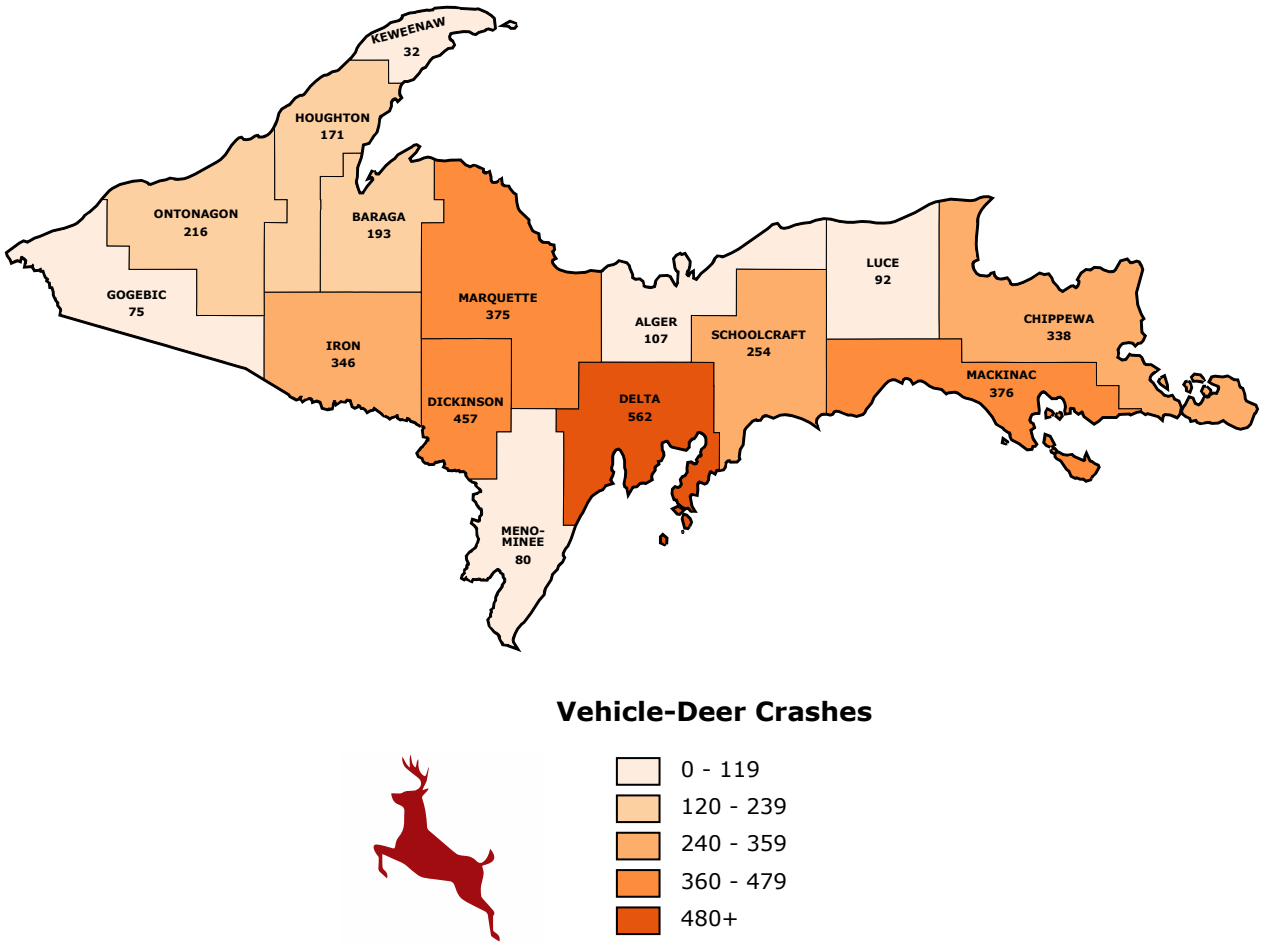
UPPER PENINSULA MICHIGAN MOTOR VEHICLE-DEER INVOLVED CRASHES



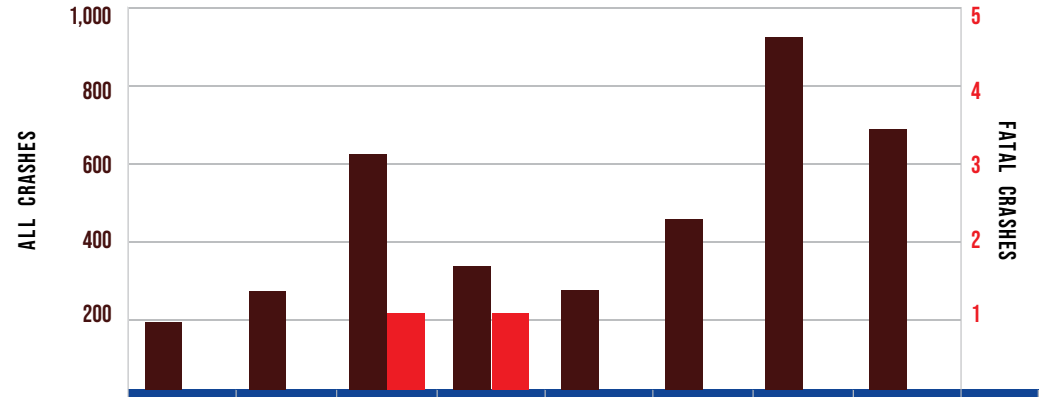
The Upper Peninsula had 3,674 reported vehicle-deer crashes during 2018. Those collisions resulted in 79 people injured and two killed. Of the 3,680 vehicles involved, 2,792 (75.9%) were passenger cars, SUVs, or vans; 786 (21.4%) were pickups; and 12 (0.3%) were motorhomes. All other vehicle types (including motorcycle, snowmobile, ORV/ATV, large truck, and moped; uncoded and errors are also included) totaled 90 (2.4).

In the Upper Peninsula, 41.1 percent of crashes in all counties involved deer. This compares to 17.1 percent for the number of deer-involved crashes statewide. Delta County had the highest number of vehicle-deer crashes (562), translating to 45.4 percent of the total crashes in that county in 2018.

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	1,257	34.2	1	50.0	4	9	19	1,224
Dawn	219	6.0	0	0.0	0	0	3	216
Dusk	255	6.9	0	0.0	1	2	4	248
Dark lighted	153	4.2	0	0.0	1	1	2	149
Dark unlighted	1,768	48.1	1	50.0	0	6	17	1,744
Other/Unknown	22	0.6	0	0.0	0	0	0	22
Total	3,674	100.0	2	100.0	6	18	45	3,603

TIME OF DAY AND SEVERITY OF DEER CRASHES



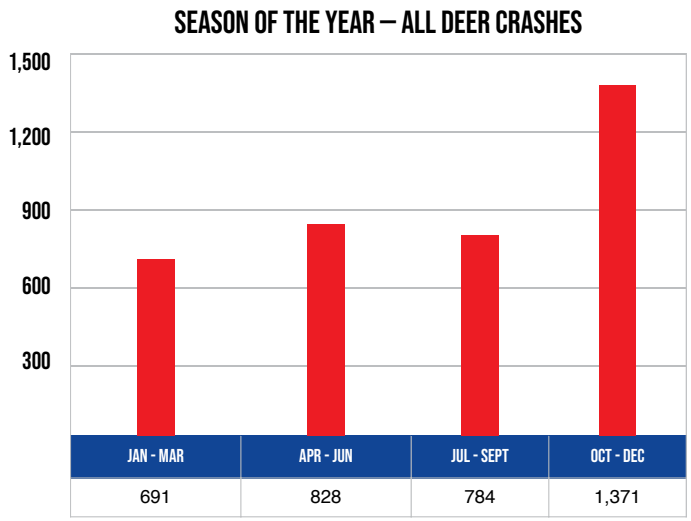
	12:00 - 2:59AM	3:00 - 5:59AM	6:00 - 8:59AM	9:00 - 11:59AM	12:00 - 2:59PM	3:00 - 5:59PM	6:00 - 8:59PM	9:00 - 11:59PM	TOTALS
ALL CRASHES	177	257	615	321	260	444	920	679	3,673
FATAL CRASHES	0	0	1	1	0	0	0	0	2

The highest number of reported vehicle-deer collisions occurred during the 6:00 PM to 8:59 PM time period, when 25.0 percent (920) of the vehicle-deer crashes occurred. One fatal vehicle-deer crash occurred in the 6:00 AM to 8:59 AM time period and in the 9:00 AM to 11:59 AM time period in the Upper Peninsula in 2018.

Note: Time and Severity chart excludes one crash where time of day is unknown.

MONTHLY AND SEASONAL RATES FOR MOTOR VEHICLE-DEER CRASHES

MONTH	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
January	297	8.1	0	0.0	0	0	1	296
February	154	4.2	0	0.0	0	1	0	153
March	240	6.5	0	0.0	0	1	4	235
April	269	7.3	0	0.0	0	1	3	265
May	229	6.2	0	0.0	0	3	2	224
June	330	9.0	0	0.0	2	1	4	323
July	270	7.3	1	50.0	0	5	4	260
August	203	5.5	0	0.0	1	2	7	193
September	311	8.5	0	0.0	1	2	3	305
October	471	12.8	0	0.0	1	1	10	459
November	509	13.9	1	50.0	0	0	3	505
December	391	10.6	0	0.0	1	1	4	385
Total	3,674	100.0	2	100.0	6	18	45	3,603



Of the total 3,674 reported vehicle-deer collisions in the Upper Peninsula, 37.3 percent (1,371) 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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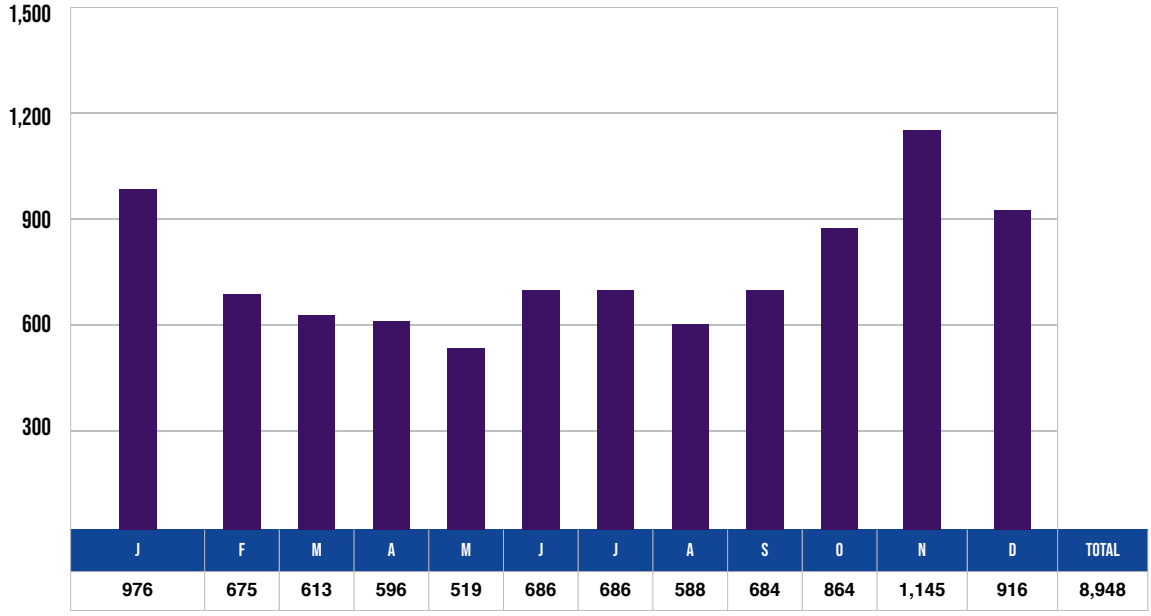
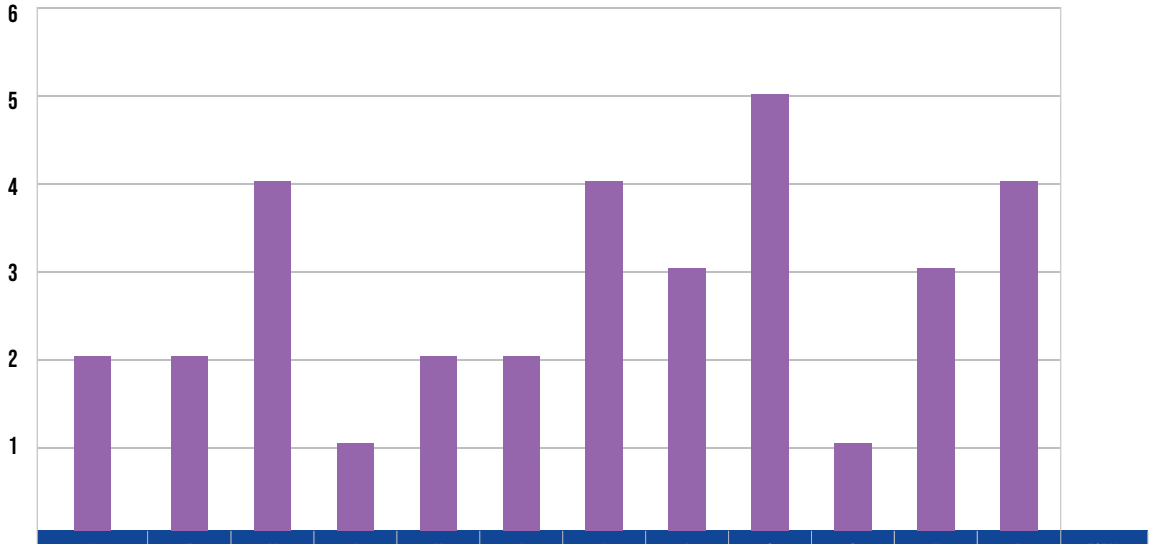
UPPER PENINSULA ALL CRASHES INJURY SEVERITY BY MONTH

TOTAL CRASHES



J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
976	675	613	596	519	686	686	588	684	864	1,145	916	8,948

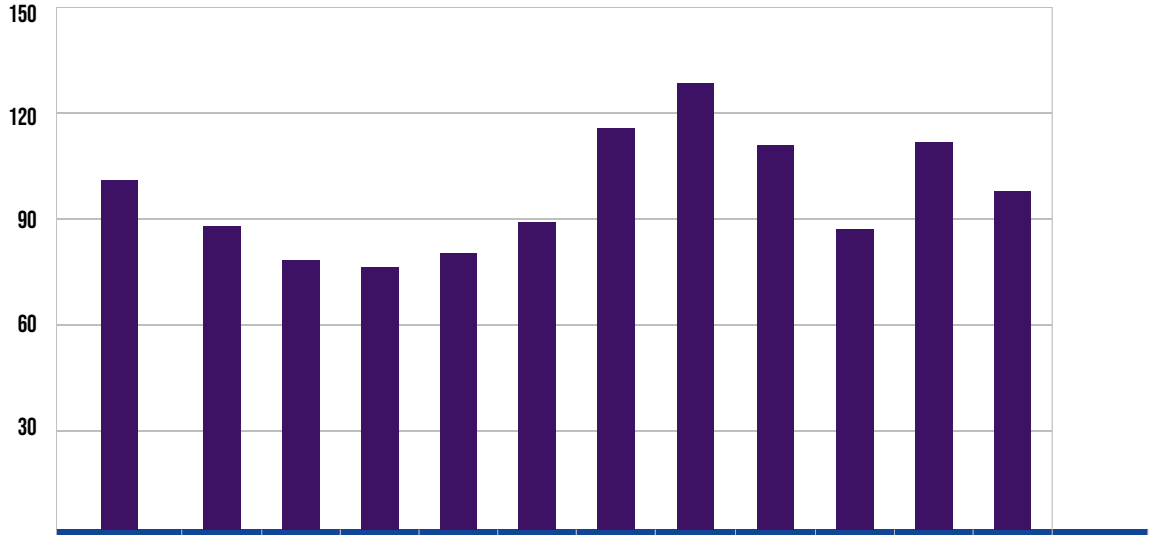
FATAL CRASHES



J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
2	2	4	1	2	2	4	3	5	1	3	4	33

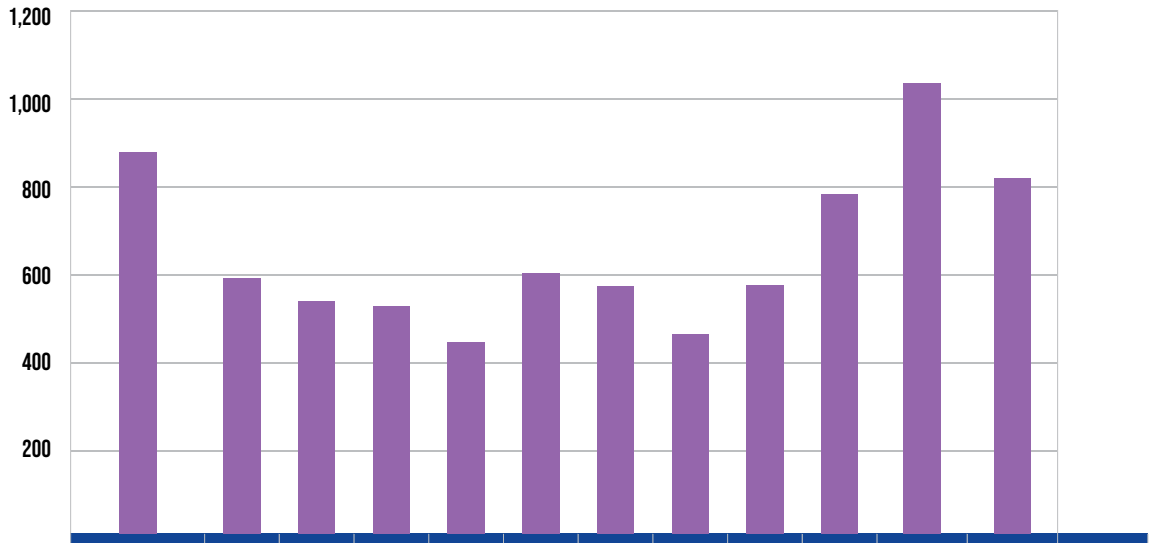
UPPER PENINSULA ALL CRASHES INJURY SEVERITY BY MONTH (CONTINUED)

INJURY CRASHES



J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
100	87	77	75	79	88	115	128	110	86	111	97	1,153

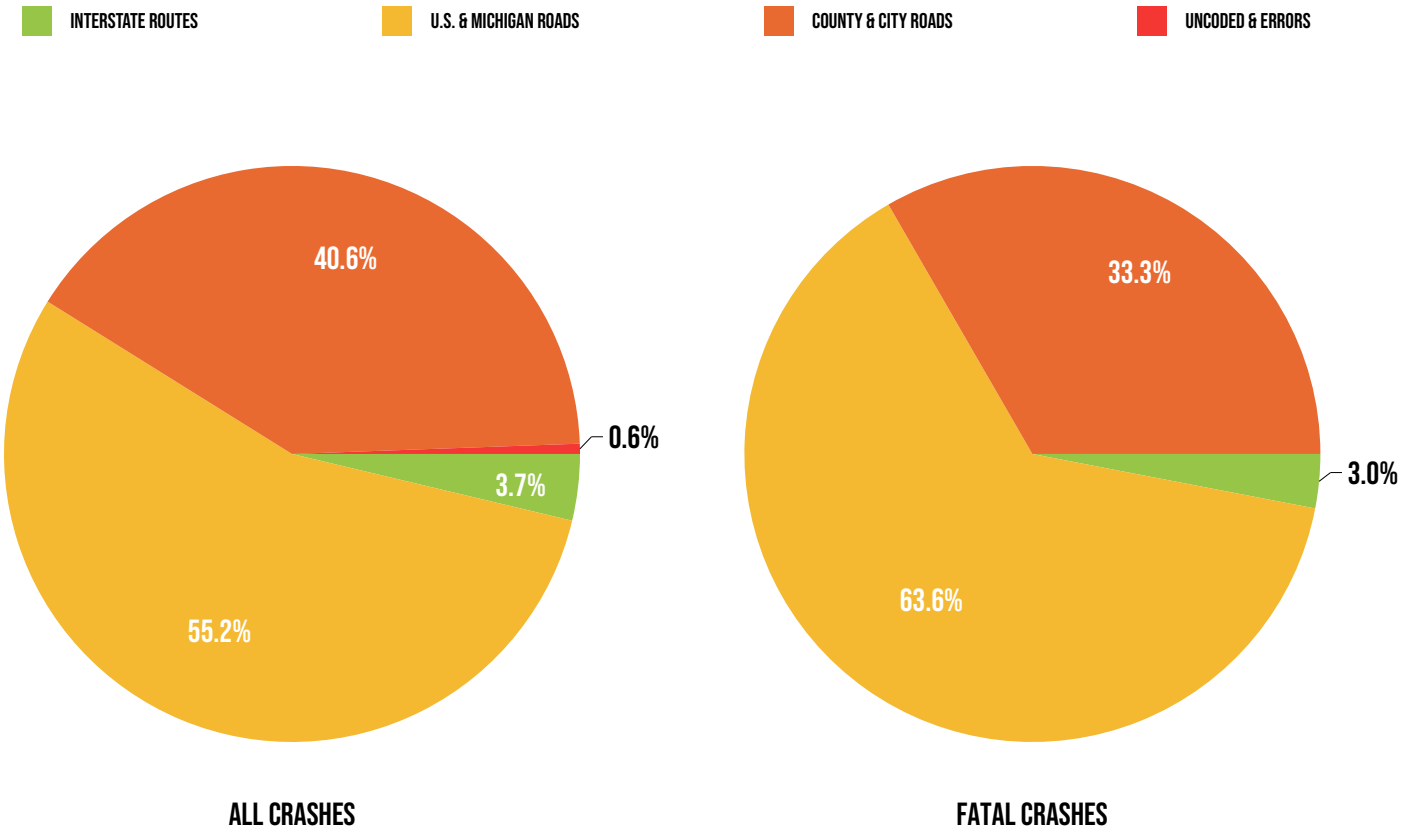
PROPERTY DAMAGE ONLY CRASHES



J	F	M	A	M	J	J	A	S	O	N	D	TOTAL
874	586	532	520	438	596	567	457	569	777	1,031	815	7,762

UPPER PENINSULA CRASH EXPERIENCE BY HIGHWAY CLASS

HIGHWAY CLASS	ALL CRASHES	FATAL CRASHES	INJURY CRASHES	PROPERTY DAMAGE ONLY
Interstate Routes	333	1	55	277
U.S. & Michigan Roads	4,935	21	600	4,314
County & City Roads	3,629	11	487	3,131
Uncoded & Errors	51	0	11	40



ALL CRASHES

FATAL CRASHES

The highest percentage of all crashes (55.2%), fatal crashes (63.6%), injury crashes (52.0%), and property damage only crashes (55.6%) occurred 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	5,649	63.1	11	33.3	103	177	251	5,107
Head On	105	1.2	9	27.3	11	16	15	54
Head On – Left Turn	106	1.2	2	6.1	8	10	25	61
Angle	903	10.1	6	18.2	28	59	120	690
Rear End	873	9.8	2	6.1	9	38	142	682
Rear End – Left Turn	84	0.9	0	0.0	2	4	17	61
Rear End – Right Turn	50	0.6	0	0.0	0	2	8	40
Sideswipe – Same Direction	411	4.6	0	0.0	2	6	12	391
Sideswipe – Opposite Direction	154	1.7	1	3.0	5	6	13	129
Backing	227	2.5	0	0.0	0	0	2	225
Other/Unknown	386	4.3	2	6.1	14	20	28	322
TOTAL	8,948	100.0	33	100.0	182	338	633	7,762

RELATIONSHIP TO ROADWAY

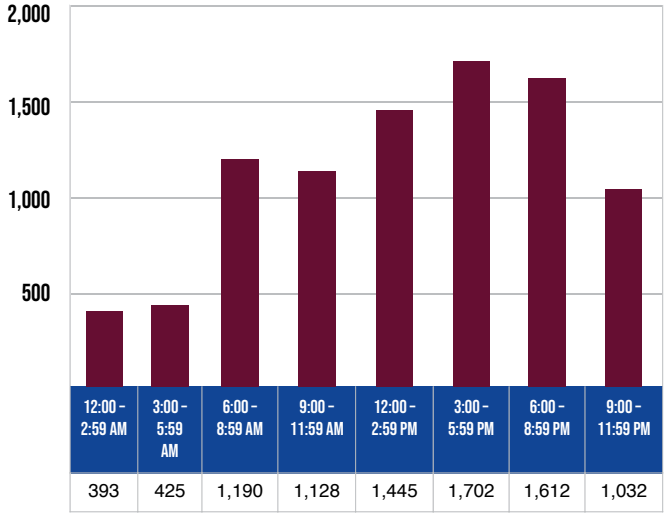
LOCATION OF FIRST IMPACT	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
On Road	7,409	82.8	26	78.8	130	243	473	6,537
Median	36	0.4	0	0.0	0	1	2	33
Shoulder	496	5.5	1	3.0	18	26	44	407
Outside of Shoulder/Curb	774	8.6	5	15.2	32	60	102	575
Gore	35	0.4	1	3.0	1	4	3	26
On-Street Parking	151	1.7	0	0.0	0	2	1	148
Off the Roadway	4	0.0	0	0.0	0	0	0	4
On the Sidewalk	11	0.1	0	0.0	1	1	1	8
In the Bicycle Lane	1	0.0	0	0.0	0	0	1	0
Other/Unknown	31	0.3	0	0.0	0	1	6	24
TOTAL	8,948	100.0	33	100.0	182	338	633	7,762

In the Upper Peninsula, only 8.6 percent of crashes occur outside of the shoulder/curb of the road, but these crashes account for 15.2 percent of the fatal crashes.

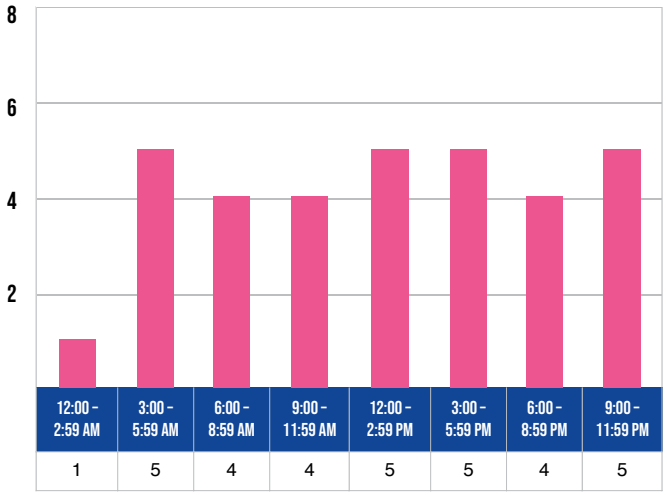
UPPER PENINSULA TIME AND SEVERITY

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	393	4.4	1	3.0	11	21	25	335
3:00 AM – 5:59 AM	425	4.7	5	15.2	9	15	17	379
6:00 AM – 8:59 AM	1,190	13.3	4	12.1	14	32	70	1,070
9:00 AM – 11:59 AM	1,128	12.6	4	12.1	30	40	102	952
12:00 PM – 2:59 PM	1,445	16.1	5	15.2	35	62	137	1,206
3:00 PM – 5:59 PM	1,702	19.0	5	15.2	43	84	154	1,416
6:00 PM – 8:59 PM	1,612	18.0	4	12.1	21	55	78	1,454
9:00 PM – 11:59 PM	1,032	11.5	5	15.2	19	29	50	929
Unknown	21	0.2	0	0.0	0	0	0	21
TOTAL	8,948	100.0	33	100.0	182	338	633	7,762

ALL CRASHES BY TIME OF DAY



FATAL CRASHES BY TIME OF DAY

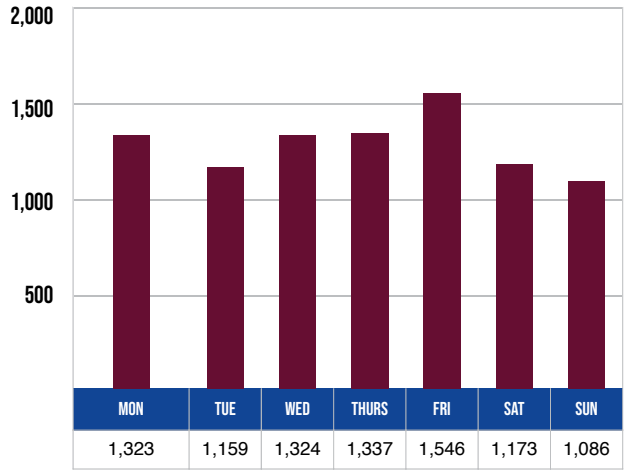


In the Upper Peninsula, crash frequencies peak in the early evening, then drop off until 6:00 AM (the morning rush hour). In 2018, fatal crashes were fairly evenly distributed across the hours of the day, except for the 12:00 AM to 2:59 AM time period when only one fatal crash occurred.

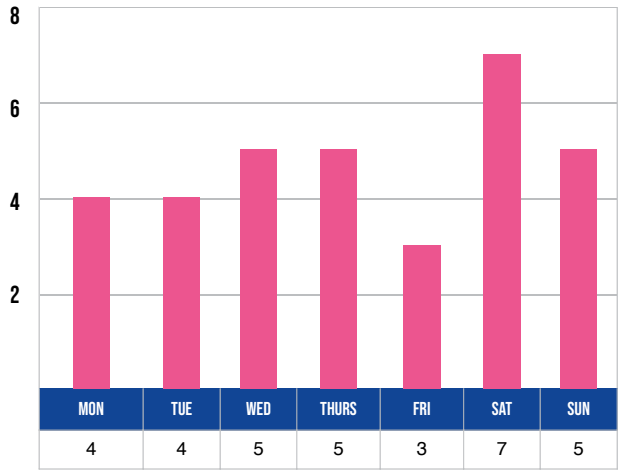
UPPER PENINSULA DAY OF WEEK

DAY OF WEEK	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Monday	1,323	14.8	4	12.1	26	53	101	1,139
Tuesday	1,159	13.0	4	12.1	10	34	81	1,030
Wednesday	1,324	14.8	5	15.2	26	59	89	1,145
Thursday	1,337	14.9	5	15.2	26	53	102	1,151
Friday	1,546	17.3	3	9.1	32	54	127	1,330
Saturday	1,173	13.1	7	21.2	30	45	69	1,022
Sunday	1,086	12.1	5	15.2	32	40	64	945
TOTAL	8,948	100.0	33	100.0	182	338	633	7,762

ALL CRASHES BY DAY OF WEEK



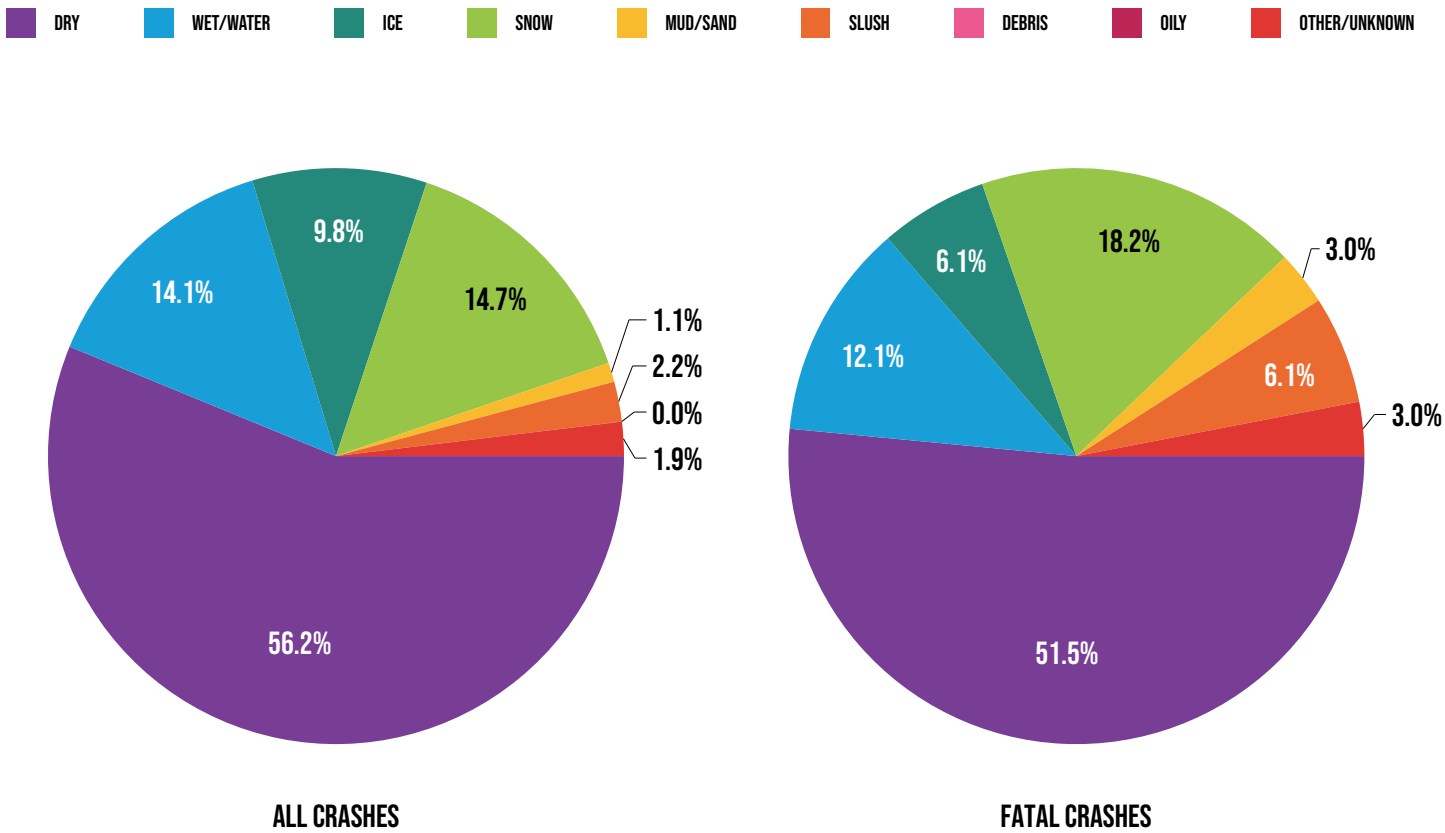
FATAL CRASHES BY DAY OF WEEK



In the Upper Peninsula, overall crash frequencies are the highest on Friday (1,546), but Saturday has the highest number of fatal crashes (seven).

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	5,029	56.2	17	51.5	112	196	363	4,341
Wet	1,259	14.1	4	12.1	15	48	91	1,101
Ice	876	9.8	2	6.1	17	34	67	756
Snow	1,312	14.7	6	18.2	15	37	71	1,183
Mud, Dirt, Gravel	84	0.9	1	3.0	13	11	10	49
Slush	200	2.2	2	6.1	5	9	23	161
Debris	0	0.0	0	0.0	0	0	0	0
Water (Standing/Flowing)	3	0.0	0	0.0	1	0	0	2
Sand	13	0.1	0	0.0	4	1	2	6
Oily	1	0.0	0	0.0	0	1	0	0
Other/Unknown	171	1.9	1	3.0	0	1	6	163
TOTAL	8,948	100.0	33	100.0	182	338	633	7,762



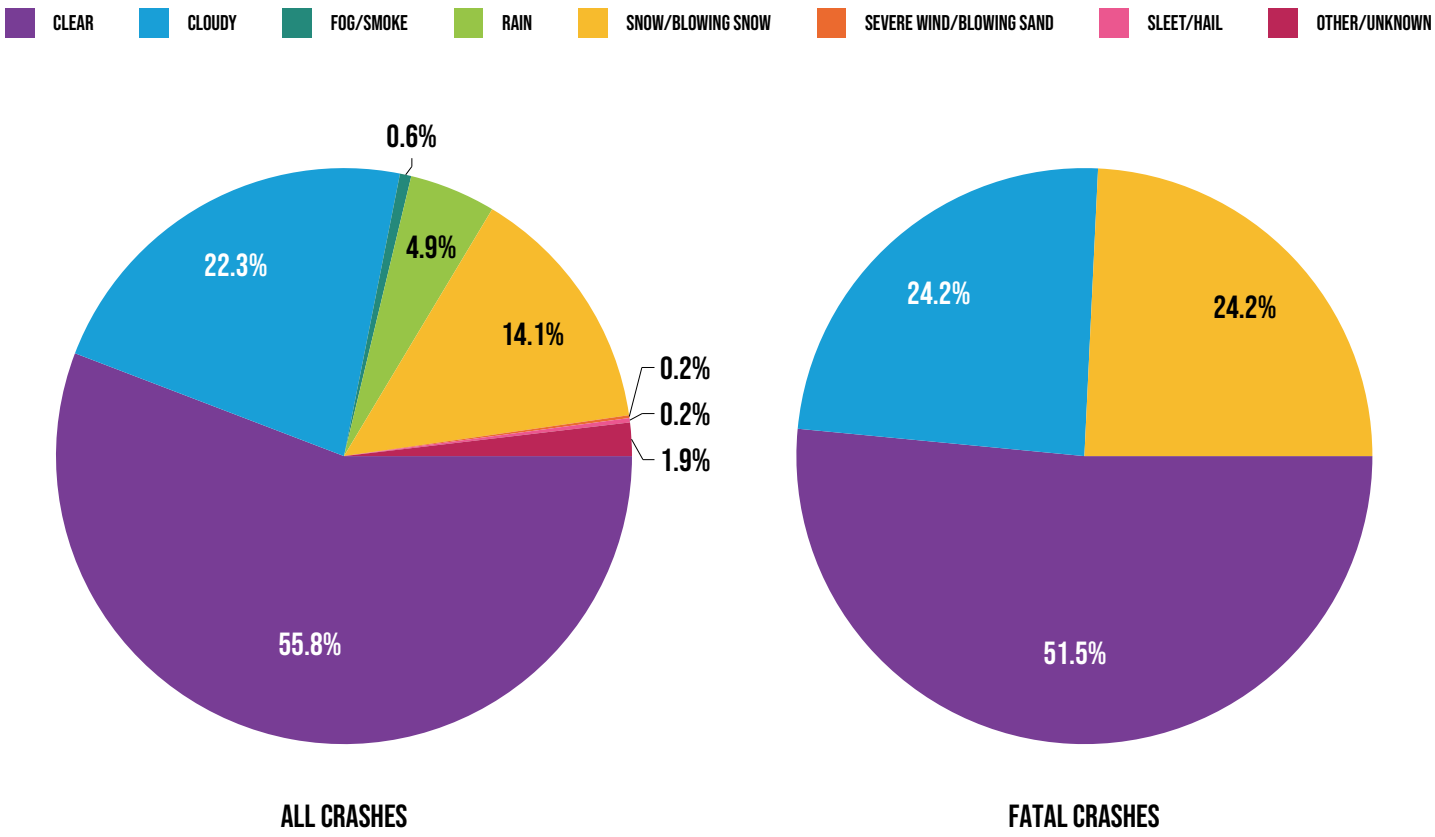
ALL CRASHES

FATAL CRASHES

In the Upper Peninsula, the highest percentage of all crashes (56.2%), fatal crashes (51.5%), injury crashes (58.2%), and property damage only crashes (55.9%) occur on dry roads.

UPPER PENINSULA WEATHER CONDITION

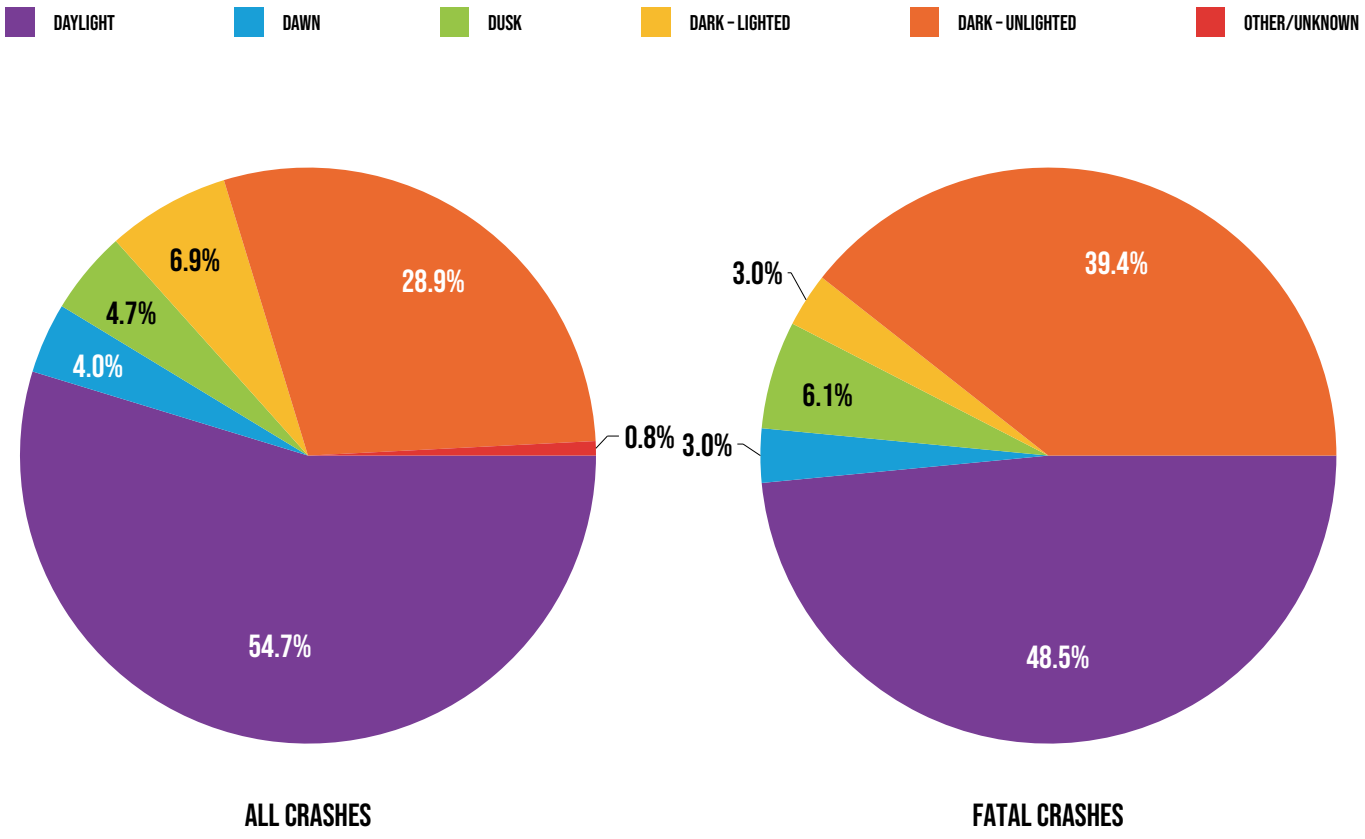
WEATHER CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Clear	4,994	55.8	17	51.5	112	192	350	4,323
Cloudy	1,996	22.3	8	24.2	38	79	136	1,735
Fog	55	0.6	0	0.0	1	2	2	50
Rain	434	4.9	0	0.0	10	19	43	362
Snow	1,110	12.4	8	24.2	19	39	80	964
Severe Crosswinds	14	0.2	0	0.0	0	2	0	12
Sleet/Hail	22	0.2	0	0.0	0	0	0	22
Blowing Snow	154	1.7	0	0.0	2	4	16	132
Blowing Sand, Soil, Dirt	0	0.0	0	0.0	0	0	0	0
Smoke	2	0.0	0	0.0	0	0	0	2
Other/Unknown	167	1.9	0	0.0	0	1	6	160
TOTAL	8,948	100.0	33	100.0	182	338	633	7,762



In the Upper Peninsula, the highest percentage of all crashes (55.8%), fatal crashes (51.5%), injury crashes (56.7%), and property damage only crashes (55.7%) occur during clear weather conditions.

UPPER PENINSULA LIGHT CONDITION

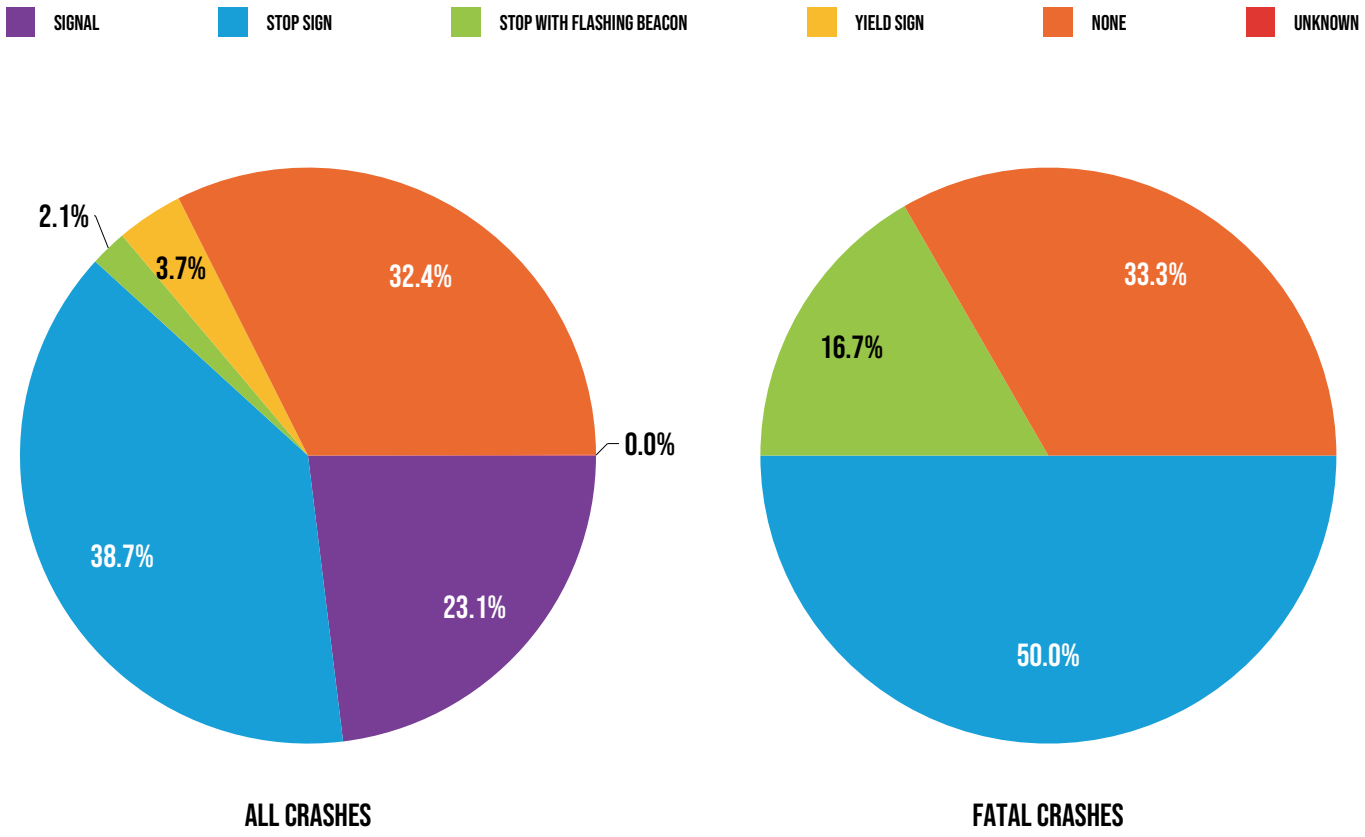
LIGHT CONDITION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Daylight	4,896	54.7	16	48.5	126	216	444	4,094
Dawn	355	4.0	1	3.0	5	8	17	324
Dusk	420	4.7	2	6.1	7	12	16	383
Dark – Lighted	618	6.9	1	3.0	10	31	50	526
Dark – Unlighted	2,587	28.9	13	39.4	34	71	104	2,365
Other/Unknown	72	0.8	0	0.0	0	0	2	70
TOTAL	8,948	100.0	33	100.0	182	338	633	7,762



In the Upper Peninsula, the highest percentage of all crashes (54.7%), fatal crashes (48.5%), injury crashes (68.2%), and property damage only crashes (52.7%) occur during during daylight hours.

UPPER PENINSULA INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

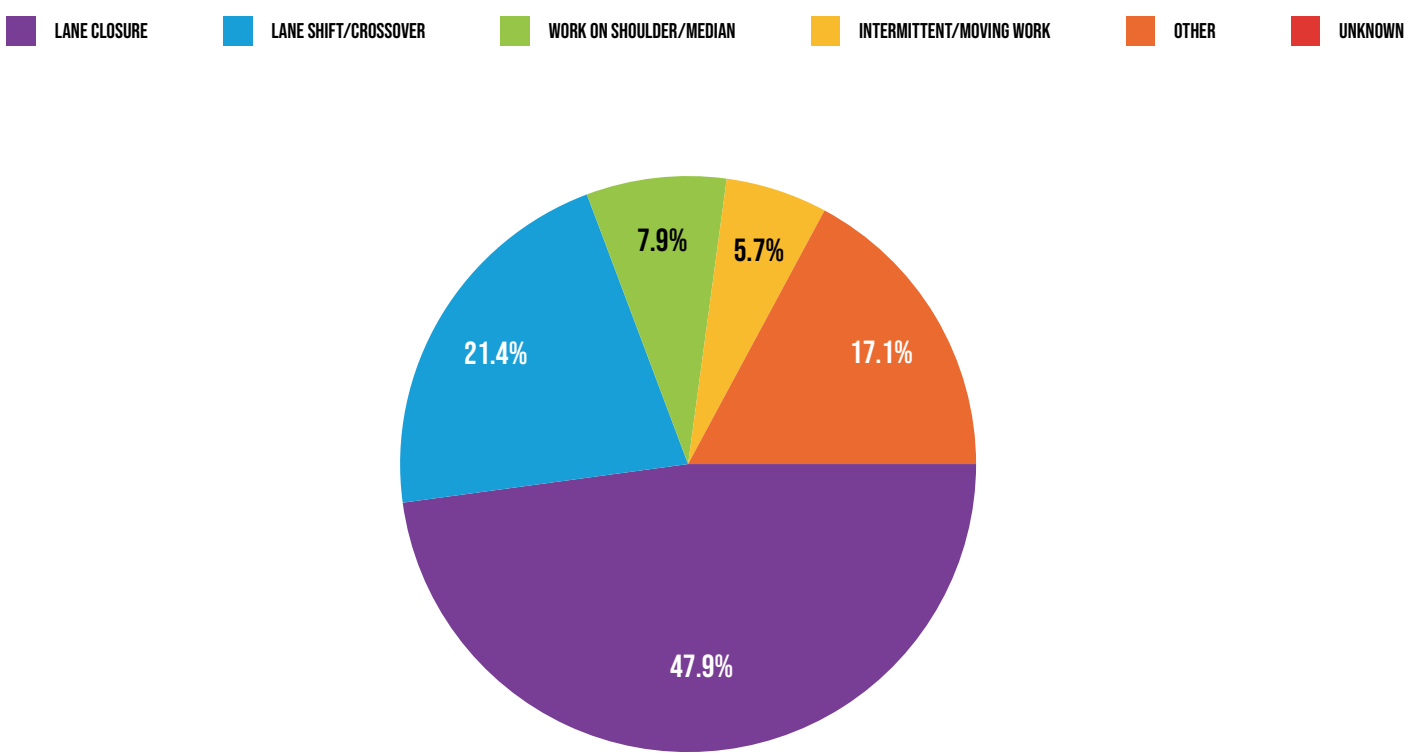
TRAFFIC CONTROL TYPE	ALL CRASHES		FATAL CRASHES		INJURY CRASHES			PROPERTY DAMAGE ONLY
	Number	% of Total	Number	% of Total	A	B	C	
Signal	468	23.1	0	0.0	7	25	83	353
Stop Sign	786	38.7	3	50.0	21	47	95	620
Stop with Flashing Beacon	42	2.1	1	16.7	0	2	9	30
Yield Sign	76	3.7	0	0.0	2	2	6	66
None	657	32.4	2	33.3	19	29	72	535
Unknown	1	0.0	0	0.0	0	0	1	0
TOTAL	2,030	100.0	6	100.0	49	105	266	1,604



Compared to other intersection crashes, Upper Peninsula intersections with stop signs have the highest percentage of all crashes (38.7%) and fatal crashes (50.0%).

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 Closure	67	47.9	1	100.0	2	3	7	54
Lane Shift/Crossover	30	21.4	0	0.0	1	0	3	26
Work on Shoulder/Median	11	7.9	0	0.0	2	0	1	8
Intermittent/Moving Work	8	5.7	0	0.0	0	1	1	6
Other	24	17.1	0	0.0	1	2	3	18
Unknown	0	0.0	0	0.0	0	0	0	0
TOTAL	140	100.0	1	100.0	6	6	15	112

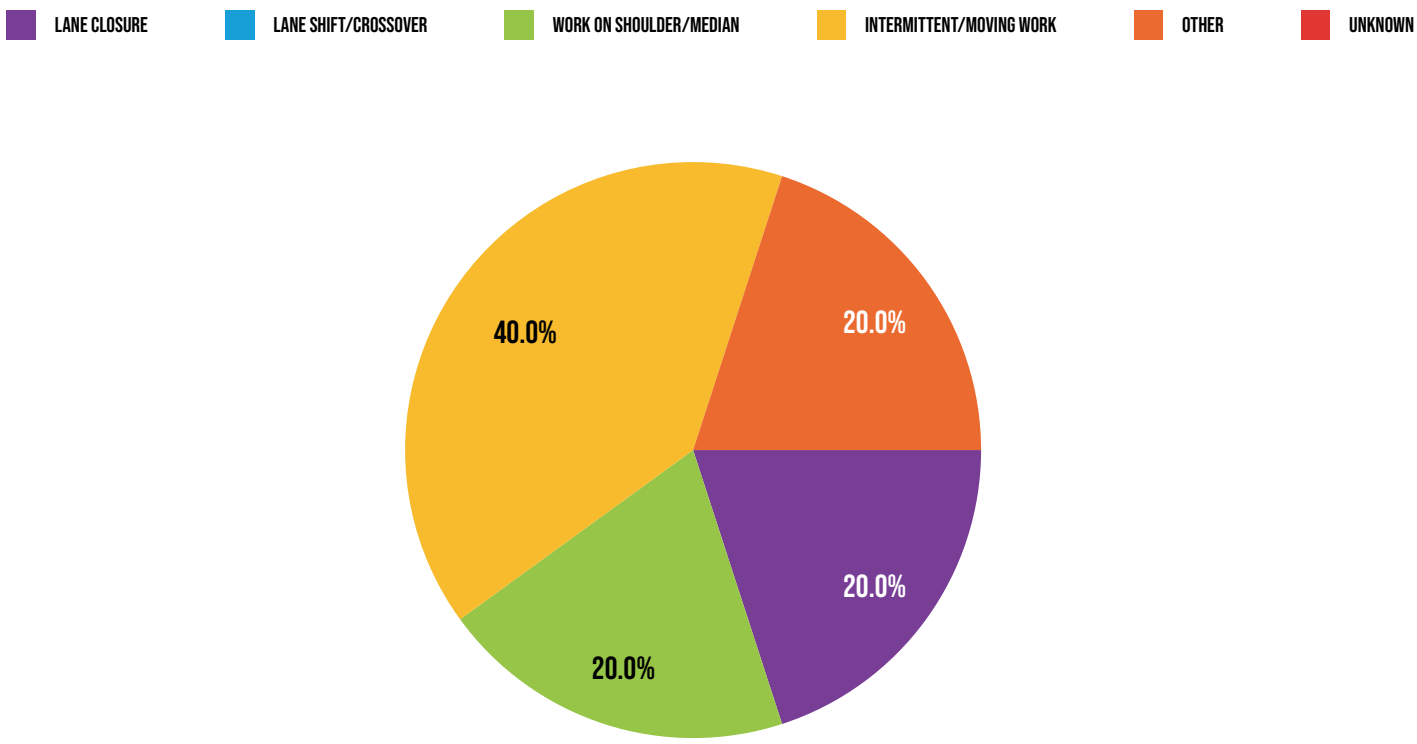


ALL CRASHES

For crashes taking place in construction/maintenance zones, the highest percentage of all crashes (47.9%), injury crashes (44.4%), and property damage only crashes (48.2%) occur in closed lanes.

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 Closure	1	20.0	0	0.0	0	0	0	1
Lane Shift/Crossover	0	0.0	0	0.0	0	0	0	0
Work on Shoulder/Median	1	20.0	0	0.0	0	0	0	1
Intermittent/Moving Work	2	40.0	0	0.0	0	0	0	2
Other	1	20.0	0	0.0	0	1	0	0
Unknown	0	0.0	0	0.0	0	0	0	0
TOTAL	5	100.0	0	0.0	0	1	0	4



ALL CRASHES

Five crashes occurred in a utility construction zone in the Upper Peninsula in 2018. Four of these were property damage only, two of which involved intermittent/moving work.

VEHICLE/DRIVER

(characteristics specific to individual traffic units)

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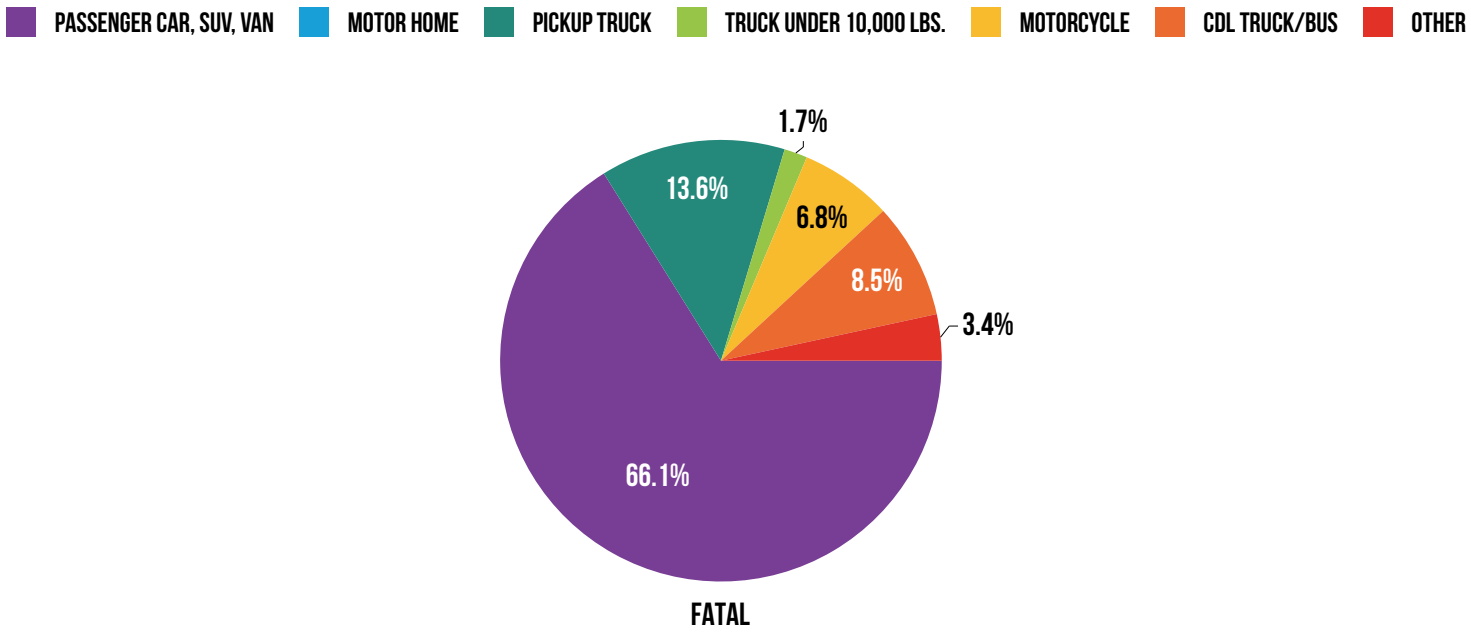
UPPER PENINSULA VEHICLE TYPE AND CRASH INVOLVEMENT

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, SUV, Van	8,841	71.6	39	66.1	1,233	7,569	23	69.7	868	7,950
Motor Home	38	0.3	0	0.0	3	35	0	0.0	2	36
Pickup Truck	2,661	21.5	8	13.6	371	2,282	4	12.1	234	2,423
Small Truck under 10,000 lbs. GVWR	77	0.6	1	1.7	15	61	0	0.0	8	69
Motorcycle	85	0.7	4	6.8	58	23	4	12.1	57	24
Moped / Goped	7	0.1	0	0.0	7	0	0	0.0	7	0
Go-cart / Golf Cart	1	0.0	0	0.0	0	1	0	0.0	0	1
Snowmobile	46	0.4	0	0.0	26	20	0	0.0	24	22
Off-Road Vehicle - ORV / All-Terrain Vehicle - ATV	49	0.4	2	3.4	43	4	2	6.1	41	6
Other	55	0.4	0	0.0	9	46	0	0.0	0	55
Unknown	190	1.5	0	0.0	10	180	0	0.0	0	190
CDL Truck/Bus (breakdown below)	301	2.4	5	8.5	65	231	0	0.0	21	280
Total Number of Vehicles	12,351	100.0	59	100.0	1,840	10,452	33	100.0	1,262	11,056

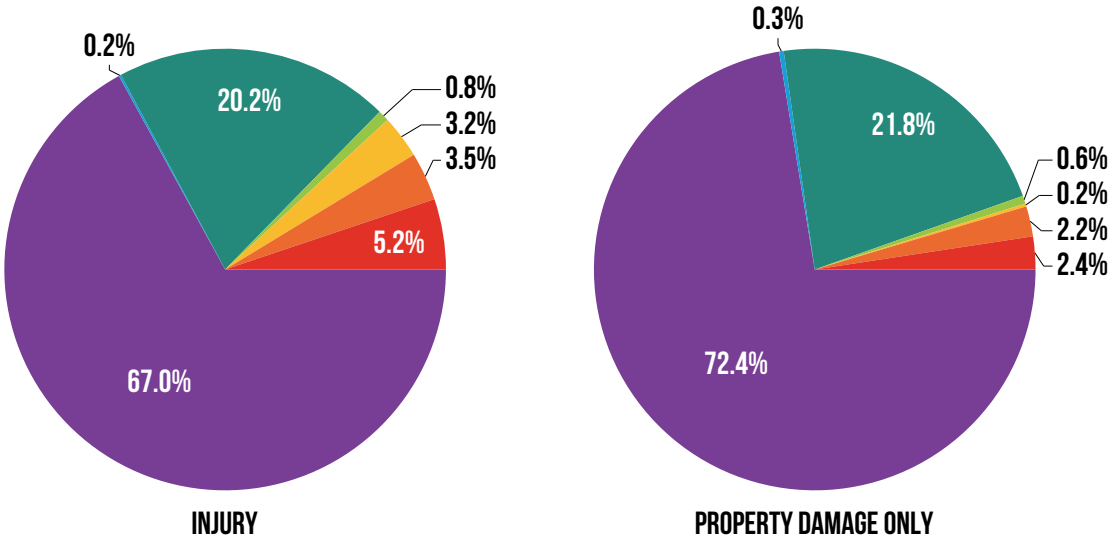
Note: School bus cannot be broken out of CDL Truck/Bus

CDL TRUCK/BUS SUB-CATEGORY TYPE	MOTOR VEHICLES		FATAL CRASH		INJURY CRASH	PROPERTY DAMAGE ONLY	FATALITY IN VEHICLE		INJURY	NO INJURY
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
10,000 lbs. or Less	3	1.0	0	0.0	0	3	0	0.0	0	3
10,001 - 26,000 lbs.	95	31.6	0	0.0	13	82	0	0.0	6	89
Greater than 26,000 lbs.	201	66.8	5	100.0	52	144	0	0.0	15	186
Unknown Truck	2	0.7	0	0.0	0	2	0	0.0	0	2
Total Number of Vehicles	301	100.0	5	100.0	65	231	0	0.0	21	280

UPPER PENINSULA VEHICLE TYPES IN CRASHES BY CRASH SEVERITY



The top chart shows that 81.4 percent of vehicles involved in fatal crashes in the Upper Peninsula are passenger vehicles (passenger cars, SUVs, vans, motor homes, pickup trucks, or trucks under 10,000 lbs.). Motorcycles make up 6.8 percent of fatal crash involvements.



Passenger vehicles (passenger cars, SUVs, vans, motorhomes, pickup trucks, or trucks under 10,000 lbs.) make up an even larger share of vehicles in injury crashes (88.2%) and property damage only (PDO) crashes (95.2%) than they do of fatal crashes.

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	8,125	65.8	49	165	327	629	6,955
Turning left	614	5.0	3	36	31	93	451
Turning right	315	2.6	0	6	19	31	259
Stopped on roadway	517	4.2	3	3	25	85	401
In prior crash	4	0.0	0	0	0	1	3
Changing lanes	126	1.0	0	1	0	4	121
Backing	407	3.3	0	2	2	5	398
Slowing/stopping on roadway	645	5.2	0	8	31	89	517
Slowing/stopping other	12	0.1	0	0	0	0	12
Starting up on roadway	199	1.6	0	7	10	28	154
Starting up other	4	0.0	0	0	0	0	4
Entering parking	27	0.2	0	0	0	2	25
Leaving parking	31	0.3	0	1	0	0	30
Entering roadway	149	1.2	0	3	10	18	118
Leaving roadway	21	0.2	0	3	1	4	13
Making U-turn	12	0.1	0	0	0	2	10
Overtaking or passing	83	0.7	3	8	12	6	54
Avoiding object	12	0.1	0	0	0	0	12
Avoiding animal	68	0.6	0	0	4	7	57
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	70	0.6	0	2	5	6	57
Avoiding vehicle (angle)	24	0.2	0	0	3	2	19
Driverless moving	9	0.1	0	0	0	0	9
Parked	533	4.3	0	3	15	18	497
Crossing at intersection	6	0.0	0	1	1	0	4
Crossing not at intersection	0	0.0	0	0	0	0	0
Getting on/off vehicle	1	0.0	0	0	1	0	0
In roadway with traffic	2	0.0	0	0	0	1	1
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	0	0.0	0	0	0	0	0
Not in roadway	1	0.0	0	0	0	0	1
Negotiating a curve	185	1.5	1	13	19	14	138
Other	19	0.2	0	1	2	3	13
Unknown	130	1.1	0	3	3	5	119
TOTAL	12,351	100.0	59	266	521	1,053	10,452

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	63	74.1	74	71.2	4	20	18	9	23
Turning left	2	2.4	4	3.8	0	2	2	0	0
Turning right	3	3.5	3	2.9	0	0	1	1	1
Stopped on roadway	0	0.0	0	0.0	0	0	0	0	0
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	3	3.5	3	2.9	0	0	1	1	1
Slowing/stopping other	0	0.0	0	0.0	0	0	0	0	0
Starting up on roadway	0	0.0	0	0.0	0	0	0	0	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	1	1.2	1	1.0	0	0	0	0	1
Entering roadway	0	0.0	0	0.0	0	0	0	0	0
Leaving roadway	0	0.0	0	0.0	0	0	0	0	0
Making U-turn	1	1.2	1	1.0	0	0	0	1	0
Overtaking or passing	3	3.5	3	2.9	0	3	0	0	0
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)	1	1.2	2	1.9	0	1	1	0	0
Avoiding vehicle (angle)	1	1.2	2	1.9	0	0	0	1	1
Driverless moving	0	0.0	0	0.0	0	0	0	0	0
Parked	1	1.2	1	1.0	0	0	0	0	0
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
Negotiating a curve	5	5.9	8	7.7	0	3	2	0	3
Other	1	1.2	2	1.9	0	1	0	0	1
Unknown	0	0.0	0	0.0	0	0	0	0	0
TOTAL	85	100.0	104	100.0	4	30	25	13.0	31.0

*Includes one motorcyclist (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	18	64.3	0	3	7	5	3
Turning left	1	3.6	0	1	0	0	0
Turning right	0	0.0	0	0	0	0	0
Stopped on roadway	1	3.6	0	0	1	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	1	3.6	0	1	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	1	3.6	0	0	1	0	0
Avoiding object	0	0.0	0	0	0	0	0
Avoiding animal	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	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	3	10.7	0	0	1	1	0
Crossing not at intersection	2	7.1	0	1	1	0	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	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	0	0.0	0	0	0	0	0
Not in roadway	0	0.0	0	0	0	0	0
Negotiating a curve	0	0.0	0	0	0	0	0
Other	0	0.0	0	0	0	0	0
Unknown	1	3.6	0	0	0	0	1
TOTAL	28	100.0	0	6	11	6	4

*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	1	2.7	0	0	0	0	1
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	1	2.7	0	0	0	0	1
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	0	0.0	0	0	0	0	0
Leaving roadway	1	2.7	0	1	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	9	24.3	0	2	2	4	0
Crossing not at intersection	4	10.8	0	2	0	2	0
Getting on/off vehicle	2	5.4	0	0	2	0	0
In roadway with traffic	4	10.8	0	1	1	0	2
In roadway against traffic	1	2.7	0	0	1	0	0
Standing or lying in roadway	5	13.5	1	3	0	1	0
Pushing/working on vehicle	0	0.0	0	0	0	0	0
Other working in roadway	1	2.7	0	1	0	0	0
Playing in roadway	0	0.0	0	0	0	0	0
In roadway other reason	1	2.7	0	0	0	0	0
Not in roadway	2	5.4	0	1	0	1	0
Negotiating a curve	1	2.7	0	0	0	0	1
Other	3	8.1	0	1	0	2	0
Unknown	1	2.7	0	1	0	0	0
TOTAL	37	100.0	1	13	6	10	5

*Includes two 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	105	0.9	0	4	10	13	78
Cross center/median	23	0.2	1	3	1	2	16
Ran off road left	45	0.4	0	0	3	6	36
Ran off road right	88	0.7	0	2	3	9	74
Re-center road	9	0.1	0	0	0	1	8
Overturn	308	2.5	3	23	45	52	185
Separation of Units	10	0.1	0	0	2	1	7
Fire/explosion	17	0.1	2	0	0	0	15
Immersion	5	0.0	1	0	0	0	4
Jackknife	7	0.1	0	0	0	0	7
Downhill runaway	2	0.0	0	0	0	1	1
Cargo loss/shift	15	0.1	0	0	1	1	13
Individual fell off	29	0.2	1	16	9	2	1
Other noncollision	25	0.2	0	1	2	1	21
SUBTOTAL	688	5.6	8	49	76	89	466

COLLISION WITH A NONFIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	33	0.3	1	11	6	11	4
Bicycle/ Pedalcycle	28	0.2	0	6	11	6	5
Motor vehicle in transport	5,775	46.8	41	143	307	755	4,529
Parked motor vehicle	565	4.6	1	1	10	15	538
Railway train	0	0.0	0	0	0	0	0
Animal	3,794	30.7	3	3	21	41	3,726
Other nonfixed objects	162	1.3	0	2	4	9	147
SUBTOTAL	10,357	83.9	46	166	359	837	8,949

UPPER PENINSULA MOST HARMFUL EVENT (CONTINUED)

COLLISION WITH A FIXED OBJECT	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Bridge/pier/abutment	5	0.0	0	0	0	0	5
Bridge rail	14	0.1	0	0	0	1	13
Guardrail face	71	0.6	0	1	2	3	65
Guardrail end	16	0.1	0	0	3	4	9
Median barrier	8	0.1	0	0	0	0	8
Highway traffic sign post	108	0.9	0	0	2	4	102
Highway signal post	4	0.0	0	0	0	0	4
Luminaire/light support	110	0.9	1	1	3	19	86
Other pole	23	0.2	0	0	1	1	21
Culvert	16	0.1	0	3	2	0	11
Curb	16	0.1	0	0	0	1	15
Ditch	197	1.6	1	6	12	17	161
Embankment	81	0.7	0	5	2	6	68
Fence	18	0.1	0	0	3	0	15
Mailbox	45	0.4	0	1	0	1	43
Tree	385	3.1	3	27	39	55	261
Rail crossing signal	5	0.0	0	1	0	0	4
Building	26	0.2	0	1	5	4	16
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	14	0.1	0	0	0	0	14
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	67	0.5	0	5	8	4	50
SUBTOTAL	1,229	10.0	5	51	82	120	971

	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	77	0.6	0	0	4	7	66
MOST HARMFUL EVENT TOTAL	12,351	100.0	59	266	521	1,053	10,452

UPPER PENINSULA VEHICLE DEFECTS IN CRASH INVOLVEMENT

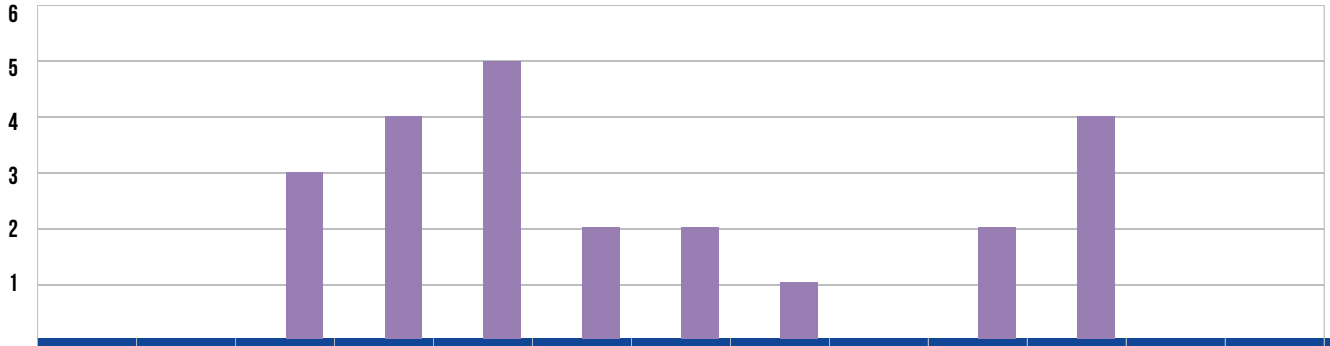
VEHICLE DEFECTS	MOTOR VEHICLES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Vehicles	% of Total		A	B	C	
Brakes	37	0.3	0	1	4	10	22
Lights/reflectors	9	0.1	0	0	1	0	8
Steering	4	0.0	0	0	0	2	2
Tires/wheels	18	0.1	0	0	3	1	14
Windows	2	0.0	0	0	0	0	2
Coupling/hitch/chains	4	0.0	0	0	0	0	4
Other	16	0.1	0	0	2	0	14
None or Unknown	12,261	99.3	59	265	511	1,040	10,386
TOTAL	12,351	100.0	59	266	521	1,053	10,452

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	7,405	60.0	29	95	219	490	6,572
Speed too fast	1,007	8.2	9	40	73	107	778
Speed too slow	11	0.1	0	0	0	2	9
Failed to yield	886	7.2	4	36	61	126	659
Disregard traffic control	122	1.0	0	1	13	22	86
Drove wrong way	9	0.1	2	2	1	0	4
Drove left of center	70	0.6	4	4	4	13	45
Improper passing	56	0.5	0	6	7	4	39
Improper lane use	151	1.2	0	1	4	9	137
Improper turn	84	0.7	1	2	2	6	73
Improper/no signal	17	0.1	0	0	0	1	16
Improper backing	283	2.3	0	0	1	2	280
Unable to stop in assured clear distance	904	7.3	2	9	37	145	711
Reckless driving	45	0.4	2	4	4	10	25
Careless/negligent driving	432	3.5	2	28	45	60	297
Other	350	2.8	0	11	33	28	278
Unknown	519	4.2	4	27	17	28	443
Total	12,351	100.0	59	266	521	1,053	10,452

UPPER PENINSULA MICHIGAN BICYCLE CRASHES

2018 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	4	5	2	2	1	0	2	4	0	0	23
TOTAL FATALITIES AND INJURIES	0	0	3	4	5	2	2	1	0	2	4	0	0	23

In 2018 in the Upper Peninsula, there were 28 bicyclists involved in motor vehicle crashes, with 0 bicyclists killed and 23 injured.

BICYCLE HELMET USE AND INJURY SEVERITY

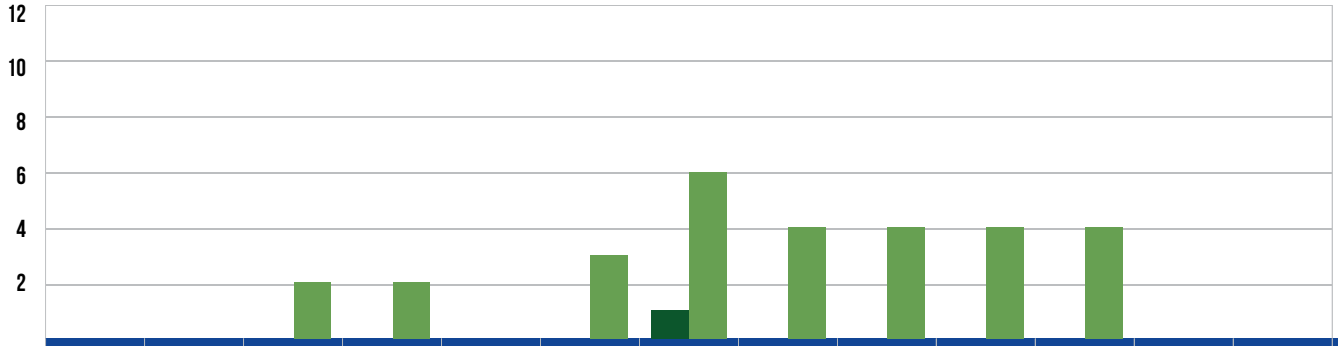
HELMET USE	FATALITY	INJURY			NO INJURY
		A	B	C	
Worn	0	1	3	1	0
Not Worn	0	4	4	3	2
Unknown	0	1	4	2	2
Total	0	6	11	6	4

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.”

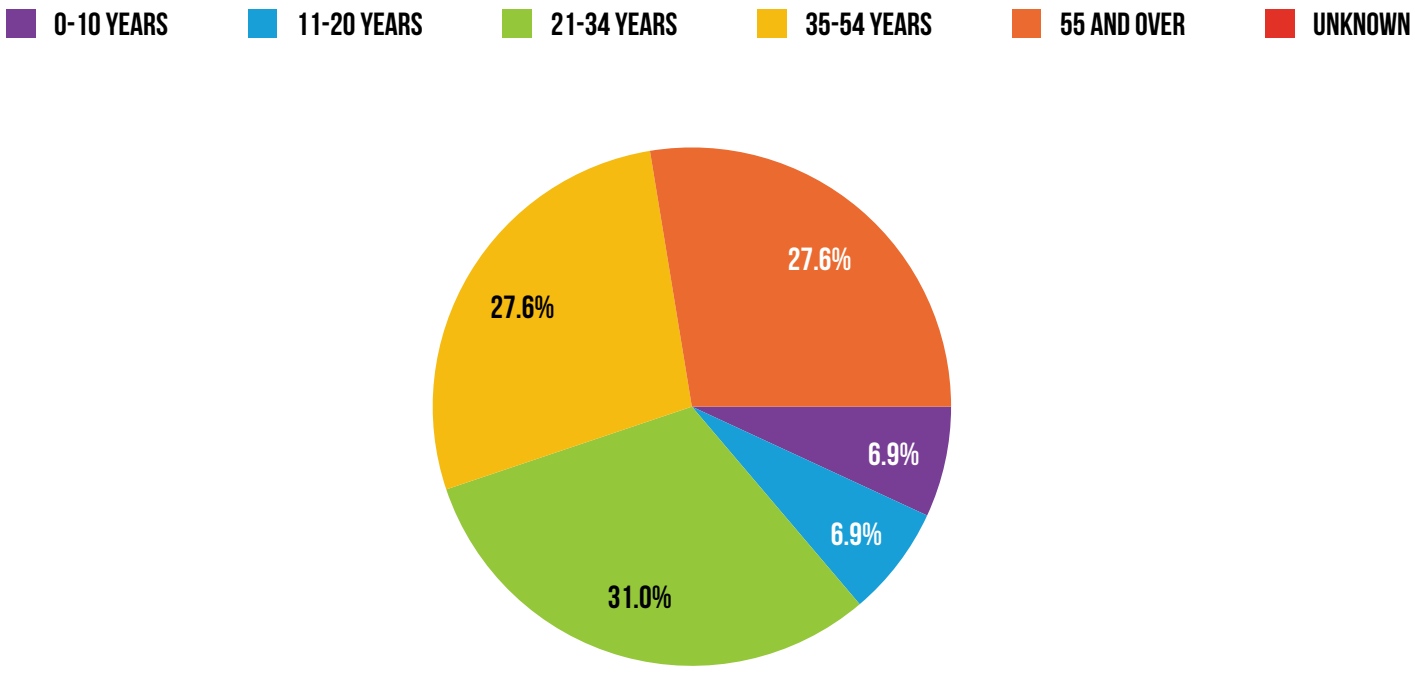
UPPER PENINSULA MICHIGAN PEDESTRIAN CRASHES

2018 PEDESTRIAN 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	1	0	0	0	0	0	0	1
INJURED	0	0	2	2	0	3	6	4	4	4	4	0	0	29
TOTAL FATALITIES AND INJURIES	0	0	2	2	0	3	7	4	4	4	4	0	0	30

In 2018 in the Upper Peninsula, there were 37 pedestrians involved in motor vehicle crashes, with one pedestrian killed and 29 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	1	2.2	0	0	0	0	1
Ran off road right	0	0.0	0	0	0	0	0
Re-center road	0	0.0	0	0	0	0	0
Overturn	4	8.7	0	1	0	1	2
Separation of Units	0	0.0	0	0	0	0	0
Fire/explosion	1	2.2	0	0	0	0	1
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	7	15.2	0	4	3	0	0
Other noncollision	1	2.2	0	0	0	1	0
SUBTOTAL	14	30.4	0	5	3	2	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	18	39.1	0	5	2	2	9
Parked motor vehicle	2	4.3	0	0	1	0	1
Railway train	0	0.0	0	0	0	0	0
Animal	1	2.2	0	0	0	0	1
Other nonfixed objects	0	0.0	0	0	0	0	0
SUBTOTAL	21	45.7	0	5	3	2	11

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 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
Other pole	0	0.0	0	0	0	0	0
Culvert	1	2.2	0	0	0	0	1
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	2.2	0	0	1	0	0
Mailbox	0	0.0	0	0	0	0	0
Tree	8	17.4	0	1	2	1	4
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	2.2	0	1	0	0	0
SUBTOTAL	11	23.9	0	2	3	1	5

	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	46	100.0	0	12	9	5	20

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 46 snowmobiles were reported in crashes on Upper Peninsula public roadways during 2018, but none of the crashes involved fatalities. A total of 26 snowmobiles were involved in 23 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	3	6.1	0	1	1	1	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-center road	0	0.0	0	0	0	0	0
Overturn	12	24.5	0	7	4	1	0
Separation of Units	0	0.0	0	0	0	0	0
Fire/explosion	0	0.0	0	0	0	0	0
Immersion	0	0.0	0	0	0	0	0
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	0	0.0	0	0	0	0	0
Individual fell off	10	20.4	0	5	4	1	0
Other noncollision	0	0.0	0	0	0	0	0
SUBTOTAL	25	51.0	0	13	9	3	0

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	11	22.4	0	1	4	2	4
Parked motor vehicle	0	0.0	0	0	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	0	0.0	0	0	0	0	0
SUBTOTAL	11	22.4	0	1	4	2	4

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 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
Other pole	0	0.0	0	0	0	0	0
Culvert	1	2.0	0	1	0	0	0
Curb	0	0.0	0	0	0	0	0
Ditch	2	4.1	0	0	1	1	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	12.2	2	3	1	0	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	3	6.1	0	2	0	1	0
SUBTOTAL	13	26.5	2	7	2	2	0

	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ ATVs	% of Total		A	B	C	
Unknown Event	0	0.0	0	0	0	0	0
MOST HARMFUL EVENT TOTAL	49	100.0	2	21	15	7	4

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 49 off-road/all-terrain vehicles were reported in crashes on Upper Peninsula public roadways during 2018, resulting in two fatal crashes. An additional 43 ORV/ATVs were involved in 39 injury crashes.

UPPER PENINSULA MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

HAZARDOUS ACTION	SNOWMOBILES		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of Snowmobiles	% of Total		A	B	C	
None	14	30.4	0	2	3	2	7
Speed too fast	14	30.4	0	3	3	1	7
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	8	17.4	0	1	0	1	6
Disregard traffic control	1	2.2	0	0	0	1	0
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	0	0.0	0	0	0	0	0
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	0	0.0	0	0	0	0	0
Improper turn	0	0.0	0	0	0	0	0
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	0	0.0	0	0	0	0	0
Unable to stop in assured clear distance	0	0.0	0	0	0	0	0
Reckless driving	1	2.2	0	0	1	0	0
Careless/negligent driving	2	4.3	0	2	0	0	0
Other	3	6.5	0	2	1	0	0
Unknown	3	6.5	0	2	1	0	0
Total	46	100.0	0	12	9	5	20

UPPER PENINSULA MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

HAZARDOUS ACTION	ORV/ATV		FATAL CRASH	INJURY CRASH			PROPERTY DAMAGE ONLY
	Number of ORV/ ATVs	% of Total		A	B	C	
None	6	12.2	0	2	4	0	0
Speed too fast	13	26.5	2	6	4	1	0
Speed too slow	0	0.0	0	0	0	0	0
Failed to yield	5	10.2	0	1	2	0	2
Disregard traffic control	0	0.0	0	0	0	0	0
Drove wrong way	1	2.0	0	0	1	0	0
Drove left of center	0	0.0	0	0	0	0	0
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	0	0.0	0	0	0	0	0
Improper turn	0	0.0	0	0	0	0	0
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	1	2.0	0	0	0	0	1
Unable to stop in assured clear distance	2	4.1	0	1	1	0	0
Reckless driving	3	6.1	0	1	0	1	1
Careless/negligent driving	4	8.2	0	2	1	1	0
Other	4	8.2	0	1	2	1	0
Unknown	10	20.4	0	7	0	3	0
Total	49	100.0	2	21	15	7	4

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	2017	2018	% CHANGE
Crashes	**10**	**7**	**-30.0%**
Fatalities	**0**	**0**	**0.0%**
Injuries	**3**	**4**	**33.3%**

Seven crashes involving farm equipment were reported on Upper Peninsula roadways during 2018. None of those crashes involved a fatality

UPPER PENINSULA MICHIGAN VEHICLE-TRAIN CRASHES

VEHICLE TRAIN CRASHES	2017	2018	% CHANGE
Crashes	**6**	**0**	**-100.0%**
Fatalities	**0**	**0**	**0.0%**
Injuries	**5**	**0**	**-100.0%**

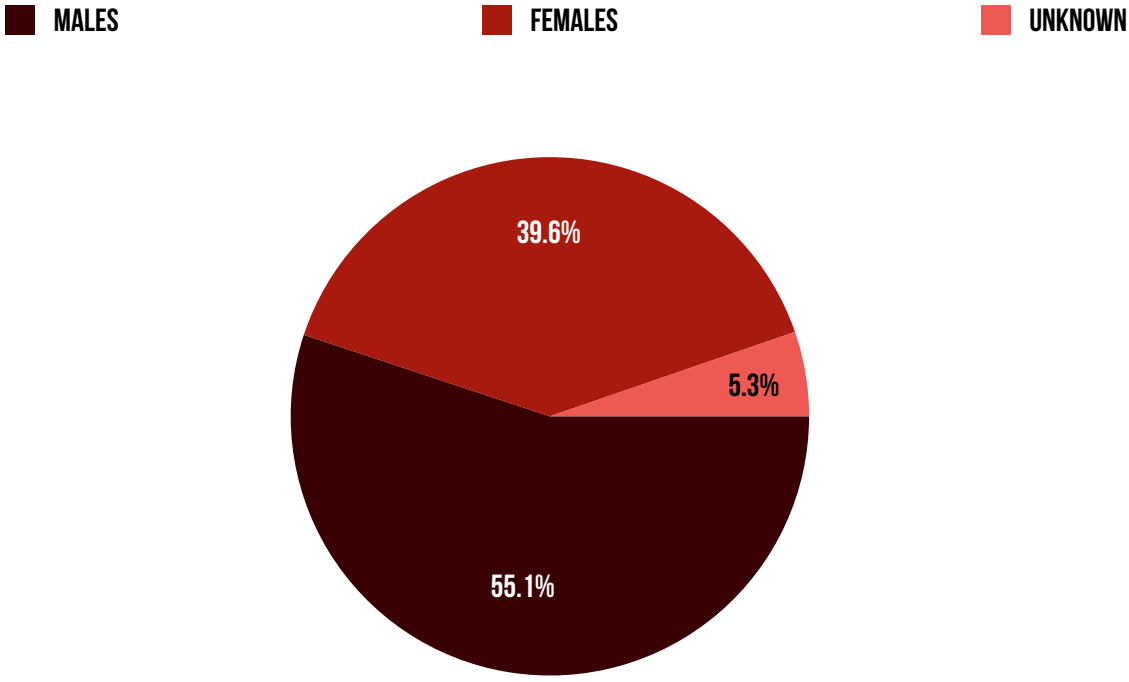
No motor-vehicle crashes involving trains were reported in the Upper Peninsula during 2018, down from six in 2017.

UPPER PENINSULA MICHIGAN MOTORCYLE CRASHES

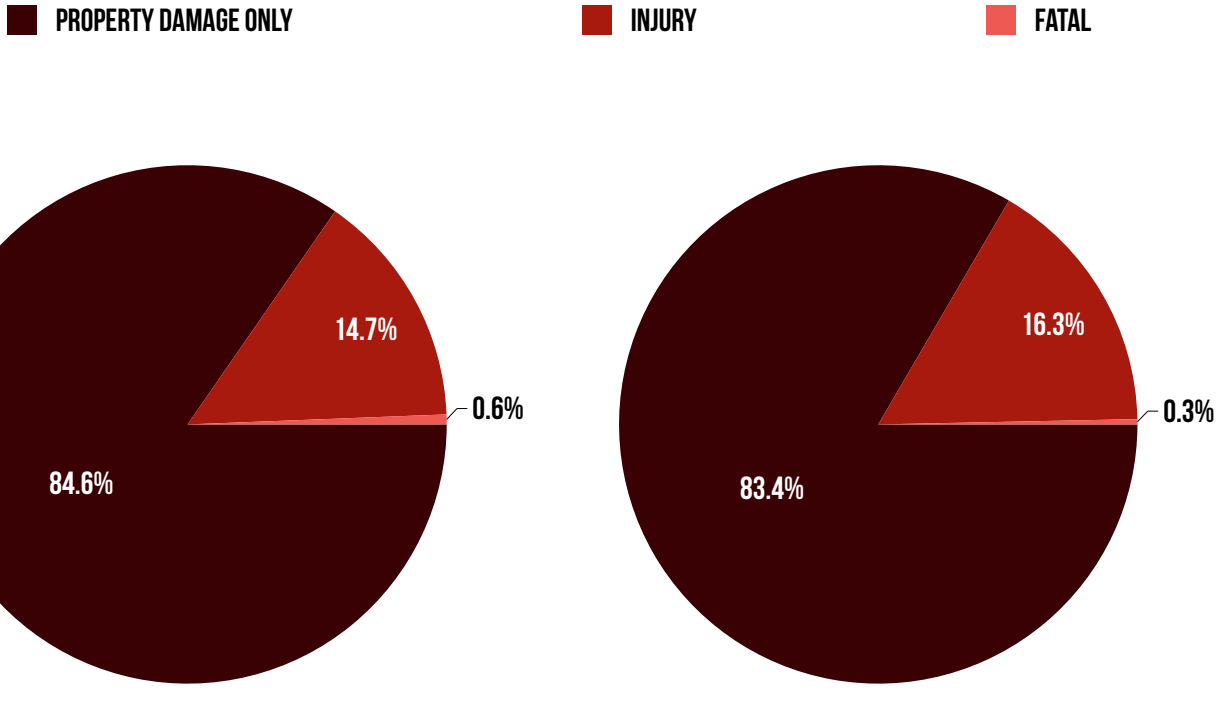
MOTORCYCLE DATA	2017	2018	% CHANGE
Motorcycle Registrations	**9,080**	**8,895**	**-2.0%**
Motorcycles in Crashes	**97**	**85**	**-12.4%**
Motorcyclist Deaths	**4**	**4**	**0.0%**
Motorcyclists Injured	**74**	**68**	**-8.1%**
Death Rate based on 10,000 motorcycle registrations	**4.41**	**4.50**	**2.1%**
Estimated Mileage based on 3,000 miles per motorcycle	**27,240,000**	**26,685,000**	**-2.0%**
Death Rate based on deaths per 100 million vehicle miles traveled	**14.68**	**14.99**	**2.1%**

Motorcycles were involved in 0.9 percent of all traffic crashes in the Upper Peninsula in 2018. 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 (0.6% vs. 0.3%).

UPPER PENINSULA PERSON AGE - DEMOGRAPHICS AND CRASH INVOLVEMENTS

AGE	LICENSED DRIVERS	POPULATION	TOTAL DRIVERS IN CRASHES	DRIVERS IN FATAL CRASHES	OCCUPANTS KILLED	OCCUPANTS INJURED	TOTAL BICYCLISTS IN CRASHES	BICYCLISTS IN FATAL CRASHES	TOTAL PEDESTRIANS IN CRASHES	PEDESTRIANS IN FATAL CRASHES
0-15	1,446	48,033	31	0	0	105	8	0	4	0
16	2,199	3,316	183	0	0	36	2	0	0	0
17	2,571	3,369	223	0	0	40	0	0	0	0
18	2,317	4,132	290	1	1	46	2	0	0	0
19	2,636	5,106	300	2	1	38	1	0	0	0
20	2,744	5,268	283	2	2	32	1	0	0	0
21-24	11,850	19,044	1,053	9	6	118	2	0	4	0
25-29	14,313	16,681	985	2	0	123	1	0	7	0
30-34	14,484	15,447	956	5	3	115	1	0	2	1
35-39	14,912	16,697	865	4	1	95	0	0	3	0
40-44	13,993	15,459	767	5	2	99	1	0	2	0
45-49	15,040	16,780	904	7	3	90	0	0	3	0
50-54	16,941	18,703	946	2	1	126	0	0	1	0
55-59	20,966	22,629	993	5	4	117	1	0	4	0
60-64	22,809	23,929	894	3	1	90	2	0	1	0
65-69	21,251	21,685	753	4	4	68	5	0	2	0
70-74	16,128	16,330	518	2	1	63	0	0	2	0
75-79	11,242	11,791	354	0	0	44	0	0	1	0
80-84	7,046	7,992	213	1	2	22	0	0	0	0
85+	5,507	8,760	155	4	2	19	0	0	0	0
Unknown	---	---	685	1	0	0	1	0	1	0
TOTAL	220,395	301,151	12,351	59	34	1,486	28	0	37	1

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	1,446	31	0.021
16	2,199	183	0.083
17	2,571	223	0.087
18	2,317	290	0.125
19	2,636	300	0.114
20	2,744	283	0.103
21-24	11,850	1,053	0.089
25-29	14,313	985	0.069
30-34	14,484	956	0.066
35-39	14,912	865	0.058
40-44	13,993	767	0.055
45-49	15,040	904	0.060
50-54	16,941	946	0.056
55-59	20,966	993	0.047
60-64	22,809	894	0.039
65-69	21,251	753	0.035
70-74	16,128	518	0.032
75-79	11,242	354	0.031
80-84	7,046	213	0.030
85-89	3,853	117	0.030
90-94	1,459	34	0.023
95-99	182	4	0.022
100+	13	0	0.000
TOTAL	220,395	11,666	0.053

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

* Excludes 685 drivers with unknown age

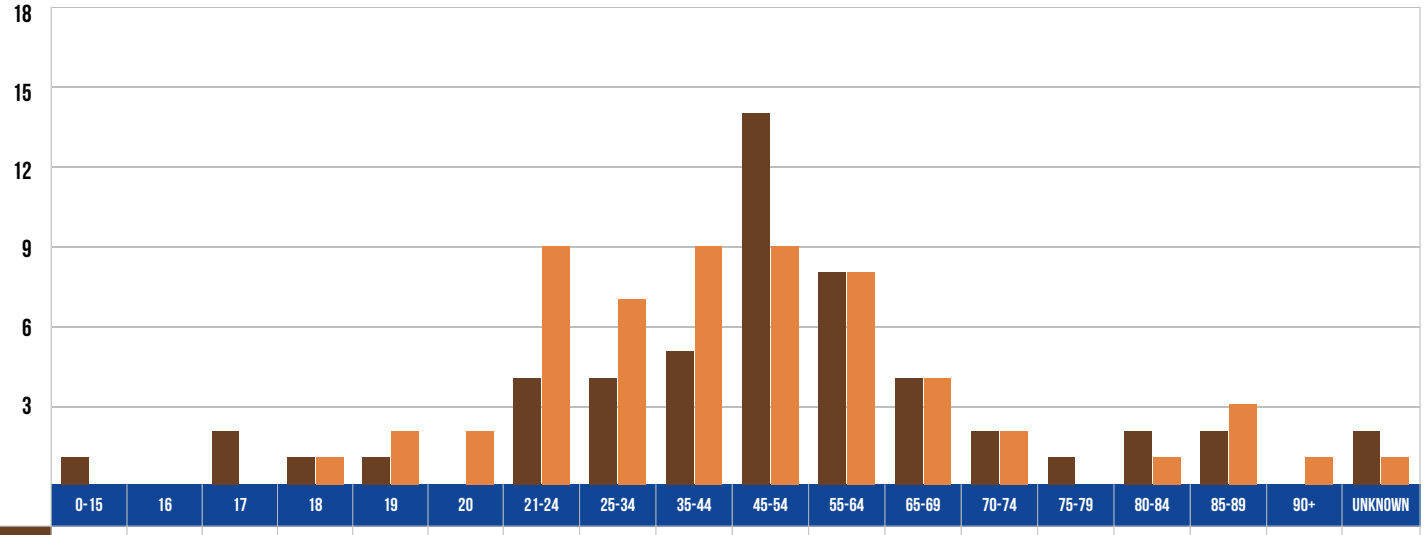
Licensed drivers age 18 have the highest crash rate at 0.125 (total crash involvements in age group divided by total number of licensed drivers in age group). The lower crash rates of the older groups (per licensed driver) may reflect reduced driving and exposure to the risk of a crash.

UPPER PENINSULA DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2017	2018	PERCENT CHANGE	PERCENT 2018 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	0.0	1.0
17 years	2	0	-100.0	0.0	1.2
18 years	1	1	0.0	1.7	1.1
19 years	1	2	100.0	3.4	1.2
20 years	0	2	---	3.4	1.3
21 - 24 years	4	9	125.0	15.3	5.4
25 - 34 years	4	7	75.0	11.9	13.2
35 - 44 years	5	9	80.0	15.3	13.2
45 - 54 years	14	9	-35.7	15.3	13.8
55 - 64 years	8	8	0.0	13.6	20.0
65 - 69 years	4	4	0.0	6.8	9.7
70 - 74 years	2	2	0.0	3.4	7.4
75 - 79 years	1	0	-100.0	0.0	5.1
80 - 84 years	2	1	-50.0	1.7	3.2
85 - 89 years	2	3	50.0	5.1	1.8
90 years and over	0	1	---	1.7	0.8
Unknown	2	1	-50.0	1.7	---
Total	53	59	11.3	100.0	100.0

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

DRIVER AGE IN FATAL CRASHES



	0-15	16	17	18	19	20	21-24	25-34	35-44	45-54	55-64	65-69	70-74	75-79	80-84	85-89	90+	UNKNOWN
2017	1	0	2	1	1	0	4	4	5	14	8	4	2	1	2	2	0	2
2018	0	0	0	1	2	2	9	7	9	9	8	4	2	0	1	3	1	1

UPPER PENINSULA DRIVER CONDITION

POSSIBLE CONDITIONS OF DRIVER	CONDITIONS (CODED BY POLICE)	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Normal	9,246	29	163	371	846	7,837
Fatigued or Asleep	79	0	8	16	18	37
Sick	27	1	1	3	4	18
Medicated	17	0	1	4	3	9
Emotional	135	2	9	18	23	83
Physically Disabled	33	3	13	4	2	11
Unknown	1,810	18	46	49	95	1,602
Other	239	5	24	43	37	130

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

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*	10,939	88.6	16	57.1	116	269	615	9,914	9
Restraint Not Used	147	1.2	10	35.7	25	31	18	62	1
Unknown	1,265	10.2	2	7.1	14	21	28	476	724
TOTAL	12,351	100.0	28	100.0	155	321	661	10,452	734
DRINKING DRIVERS ONLY									
Restraint Used*	175	65.1	0	0.0	12	24	21	118	0
Restraint Not Used	22	8.2	1	33.3	8	7	4	2	0
Unknown	72	26.8	2	66.7	4	8	8	50	0
TOTAL	269	100.0	3	100.0	24	39	33	170	0
DRUGGED DRIVERS ONLY									
Restraint Used*	40	74.1	2	50.0	4	7	4	23	0
Restraint Not Used	7	13.0	2	50.0	2	0	1	2	0
Unknown	7	13.0	0	0.0	1	2	0	4	0
TOTAL	54	100.0	4	100.0	7	9	5	29	0
DRINKING AND DRUGGED DRIVERS ONLY									
Restraint Used*	20	52.6	1	33.3	1	1	3	14	0
Restraint Not Used	4	10.5	2	66.7	1	0	0	1	0
Unknown	14	36.8	0	0.0	0	2	3	9	0
TOTAL	38	100.0	3	100.0	2	3	6	24	0

Note: '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	2,030	6	49	105	266	1,604
2. In intersection	1,116	4	30	64	165	853
3. With traffic control signal	309	0	6	17	58	228
4. With hazardous action*	65	0	1	5	12	47

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 65 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	23	0	0	1	6	16
30 miles per hour	5	0	0	0	1	4
35 miles per hour	16	0	0	1	3	12
40 miles per hour	1	0	0	0	0	1
45 miles per hour	7	0	0	1	1	5
50 miles per hour	2	0	0	0	0	2
55 miles per hour	9	0	1	2	1	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	2	0	0	0	0	2
TOTAL	65	0	1	5	12	47

* 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	1	0	0	0	1	0
Head on	0	0	0	0	0	0
Head on left turn	4	0	0	1	1	2
Angle	47	0	1	3	9	34
Rear end	2	0	0	0	0	2
Rear end left turn	0	0	0	0	0	0
Rear end right turn	0	0	0	0	0	0
Sideswipe same direction	2	0	0	0	0	2
Sideswipe opposite direction	1	0	0	0	0	1
Backing	0	0	0	0	0	0
Other/Unknown	8	0	0	1	1	6
TOTAL	65	0	1	5	12	47

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	0	0	0	0	0	0
Drinking involved	2	0	0	0	0	2
Drug Use Involved	1	0	0	0	0	1
Pedestrian Involved	0	0	0	0	0	0
Bicyclist Involved	1	0	0	0	1	0
Snowmobile Involved	0	0	0	0	0	0
Motorcycle Involved	0	0	0	0	0	0
Train Involved	0	0	0	0	0	0
Truck/Bus Involved	4	0	0	0	0	4
Emergency Vehicle Involved	1	0	0	1	0	0
Driver Hazardous Citation	40	0	1	3	11	25

*Crashes may involve more than one special circumstance

POSSIBLE CONDITIONS OF PERSONS IN CRASH*	CONDITIONS (CODED BY POLICE)	FATAL CRASHES	INJURY CRASHES			PROPERTY DAMAGE ONLY
			A	B	C	
Normal	53	0	1	4	10	38
Fatigued or Asleep	0	0	0	0	0	0
Sick	0	0	0	0	0	0
Medicated	0	0	0	0	0	0
Emotional	3	0	0	1	0	2
Physically Disabled	0	0	0	0	0	0
Unknown	7	0	0	0	2	5
Other	2	0	0	1	0	1

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

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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 Upper Peninsula crash picture, heavy truck/bus crashes in the Upper Peninsula involve:**

- More turning and backing as the Truck/Bus Driver Action Prior.
- More noncollision events such as jackknife, cargo loss/shift, and overturn as the Most Harmful Event.
- Fewer collisions with ditches, trees, and animals.
- Fewer single-vehicle crashes but more sideswipes.
- Fewer drivers indicated to be speeding, failing to yield, reckless driving, and disregarding traffic control, but more drivers indicated to be making backing, lane use, and turning errors.
- Fewer crashes outside of the shoulder/curb.
- More crashes between the hours of midnight and 2:59 PM, and fewer crashes between 3:00 PM and 11:59 PM.
- More crashes Monday through Friday and fewer crashes Saturday and Sunday.

UPPER PENINSULA HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

DRIVER ACTION PRIOR TO CRASH	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Going straight ahead	175	58.1	4	80.0	32	49.2
Turning left	20	6.6	0	0.0	8	12.3
Turning right	21	7.0	0	0.0	6	9.2
Stopped on roadway	13	4.3	1	20.0	3	4.6
In prior crash	0	0.0	0	0.0	0	0.0
Changing lanes	3	1.0	0	0.0	0	0.0
Backing	15	5.0	0	0.0	0	0.0
Slowing/stopping on roadway	12	4.0	0	0.0	5	7.7
Slowing/stopping on other	0	0.0	0	0.0	0	0.0
Starting up on roadway	6	2.0	0	0.0	3	4.6
Starting up on other	0	0.0	0	0.0	0	0.0
Entering parking	0	0.0	0	0.0	0	0.0
Leaving parking	0	0.0	0	0.0	0	0.0
Entering roadway	3	1.0	0	0.0	0	0.0
Leaving roadway	2	0.7	0	0.0	0	0.0
Making U-turn	1	0.3	0	0.0	0	0.0
Overtaking or passing	5	1.7	0	0.0	3	4.6
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	1.3	0	0.0	1	1.5
Avoiding vehicle (angle)	0	0.0	0	0.0	0	0.0
Driverless moving	0	0.0	0	0.0	0	0.0
Parked	10	3.3	0	0.0	2	3.1
Crossing at intersection	0	0.0	0	0.0	0	0.0
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on / off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	0.0	0	0.0	0	0.0
In roadway against traffic	0	0.0	0	0.0	0	0.0
Standing / laying in roadway	0	0.0	0	0.0	0	0.0
Pushing / working on vehicle	0	0.0	0	0.0	0	0.0
Other work in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	0	0.0	0	0.0	0	0.0
Not in roadway	0	0.0	0	0.0	0	0.0
Negotiating a curve	9	3.0	0	0.0	2	3.1
Other	2	0.7	0	0.0	0	0.0
Unknown	0	0.0	0	0.0	0	0.0
Uncoded & errors	0	0.0	0	0.0	0	0.0
TOTAL	301	100.0	5	100.0	65	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	3	1.0	0	0.0	0	0.0
Cross centerline / median	2	0.7	0	0.0	1	1.5
Ran off roadway left	0	0.0	0	0.0	0	0.0
Ran off roadway right	5	1.7	0	0.0	1	1.5
Re-enter roadway	0	0.0	0	0.0	0	0.0
Overturn	13	4.3	0	0.0	8	12.3
Separation of units	0	0.0	0	0.0	0	0.0
Fire / explosion	2	0.7	1	20.0	0	0.0
Immersion	0	0.0	0	0.0	0	0.0
Jackknife	2	0.7	0	0.0	0	0.0
Downhill runaway	0	0.0	0	0.0	0	0.0
Cargo loss / shift	3	1.0	0	0.0	0	0.0
Individual fell from vehicle	0	0.0	0	0.0	0	0.0
Other noncollision	2	0.7	0	0.0	1	1.5
SUBTOTAL	32	10.6	1	20.0	11	16.9

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	1	0.3	0	0.0	1	1.5
Bicyclist (pedalcycle)	1	0.3	0	0.0	1	1.5
Motor vehicle in transport	166	55.1	4	80.0	50	76.9
Parked motor vehicle	13	4.3	0	0.0	0	0.0
Railroad train / engineer	0	0.0	0	0.0	0	0.0
Animal	37	12.3	0	0.0	0	0.0
Other nonfixed object	6	2.0	0	0.0	0	0.0
SUBTOTAL	224	74.4	4	80.0	52	80.0

The majority of heavy trucks/buses are involved in crashes with a motor vehicle in transport for all crashes (55.1%), fatal crashes (80.0%), and injury crashes (76.9%) 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	0	0.0	0	0.0	0	0.0
Bridge parapet end	0	0.0	0	0.0	0	0.0
Bridge rail	0	0.0	0	0.0	0	0.0
Guardrail face	3	1.0	0	0.0	1	1.5
Guardrail end	0	0.0	0	0.0	0	0.0
Median barrier	0	0.0	0	0.0	0	0.0
Highway traffic sign post	2	0.7	0	0.0	0	0.0
Highway signal post	2	0.7	0	0.0	0	0.0
Luminaire / light support	9	3.0	0	0.0	0	0.0
Utility pole	0	0.0	0	0.0	0	0.0
Other pole	1	0.3	0	0.0	0	0.0
Culvert	1	0.3	0	0.0	0	0.0
Curb	0	0.0	0	0.0	0	0.0
Ditch	3	1.0	0	0.0	0	0.0
Embankment	1	0.3	0	0.0	0	0.0
Fence	1	0.3	0	0.0	0	0.0
Mailbox	1	0.3	0	0.0	0	0.0
Tree	3	1.0	0	0.0	0	0.0
Railroad crossing signal	0	0.0	0	0.0	0	0.0
Building	1	0.3	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 (crash cushion)	0	0.0	0	0.0	0	0.0
Other fixed object	7	2.3	0	0.0	0	0.0
SUBTOTAL	35	11.6	0	0.0	1	1.5

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Uncoded & errors	10	3.3	0	0.0	1	1.5
MOST HARMFUL EVENT TOTAL	301	100.0	5	100.0	65	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	97	32.2	0	0.0	12	18.5
Head On	10	3.3	2	40.0	5	7.7
Head On - Left Turn	0	0.0	0	0.0	0	0.0
Angle	35	11.6	1	20.0	12	18.5
Rear-end	46	15.3	2	40.0	15	23.1
Rear End - Left Turn	6	2.0	0	0.0	3	4.6
Rear End - Right Turn	2	0.7	0	0.0	1	1.5
Sideswipe - Same Direction	42	14.0	0	0.0	5	7.7
Sideswipe - Opposite Direction	18	6.0	0	0.0	4	6.2
Backing	14	4.7	0	0.0	0	0.0
Other / Unknown	31	10.3	0	0.0	8	12.3
TOTAL	301	100.0	5	100.0	65	100.0

The highest percentage of heavy trucks/buses are involved in single vehicle crashes for all crashes (32.2%) and rear end crashes for injury crashes (23.1%).

HAZARDOUS ACTION	ALL CRASHES		FATAL CRASHES		INJURY CRASHES		HAZARDOUS CITATION ISSUED	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
None	180	59.8	5	100.0	41	63.1	0	0.0
Speed too fast	16	5.3	0	0.0	3	4.6	6	15.8
Speed too slow	0	0.0	0	0.0	0	0.0	0	0.0
Failed to yield	13	4.3	0	0.0	4	6.2	6	15.8
Disregard traffic control	1	0.3	0	0.0	0	0.0	0	0.0
Drove wrong way	0	0.0	0	0.0	0	0.0	0	0.0
Drove left of center	7	2.3	0	0.0	1	1.5	0	0.0
Improper passing	2	0.7	0	0.0	1	1.5	0	0.0
Improper lane use	5	1.7	0	0.0	0	0.0	1	2.6
Improper turn	4	1.3	0	0.0	0	0.0	0	0.0
Improper / no signal	0	0.0	0	0.0	0	0.0	0	0.0
Improper backing	10	3.3	0	0.0	0	0.0	1	2.6
Unable to stop in assured clear distance	24	8.0	0	0.0	8	12.3	11	28.9
Reckless driving	0	0.0	0	0.0	0	0.0	0	0.0
Careless / negligent driving	13	4.3	0	0.0	3	4.6	7	18.4
Other	22	7.3	0	0.0	2	3.1	6	15.8
Unknown	4	1.3	0	0.0	2	3.1	0	0.0
TOTAL	301	100.0	5	100.0	65	100.0	38	100.0

After no hazardous action, the most common hazardous action coded for drivers of heavy trucks/buses in all crashes (8.0%) and injury crashes (12.3%) is unable to stop in assured clear distance.

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	252	83.7	5	100.0	56	86.2
Median	2	0.7	0	0.0	0	0.0
Shoulder	21	7.0	0	0.0	6	9.2
Outside of Shoulder/Curb	17	5.6	0	0.0	3	4.6
Gore	1	0.3	0	0.0	0	0.0
On-Street Parking	5	1.7	0	0.0	0	0.0
Off the Roadway	0	0.0	0	0.0	0	0.0
On the Sidewalk	2	0.7	0	0.0	0	0.0
In the Bicycle Lane	0	0.0	0	0.0	0	0.0
Other/Unknown	1	0.3	0	0.0	0	0.0
TOTAL	301	100.0	5	100.0	65	100.0

TIME OF DAY	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
12:00 AM - 2:59 AM	14	4.7	0	0.0	4	6.2
3:00 AM - 5:59 AM	15	5.0	1	20.0	2	3.1
6:00 AM - 8:59 AM	62	20.6	0	0.0	11	16.9
9:00 AM - 11:59 AM	58	19.3	2	40.0	16	24.6
12:00 PM - 2:59 PM	64	21.3	1	20.0	16	24.6
3:00 PM - 5:59 PM	56	18.6	0	0.0	12	18.5
6:00 PM - 8:59 PM	24	8.0	1	20.0	2	3.1
9:00 PM - 11:59 PM	8	2.7	0	0.0	2	3.1
Unknown	0	0.0	0	0.0	0	0.0
TOTAL	301	100.0	5	100.0	65	100.0

Heavy truck/bus frequencies in crashes peak in the early afternoon, then drop off steadily until midnight. The most common time for heavy trucks/buses to be involved in crashes is between 12:00 PM and 2:59 PM (21.3%) for all crashes, between 9:00 AM and 11:59 AM (40.0%) for fatal crashes, and between both 9:00 AM and 11:59 AM as well as 12:00 PM and 2:59 PM (24.6% each) for injury crashes.

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	4.3	0	0.0	0	0.0
U.S. and Michigan Roads	200	66.4	5	100.0	51	78.5
County & City Roads	87	28.9	0	0.0	14	21.5
Uncoded & Errors	1	0.3	0	0.0	0	0.0
TOTAL	301	100.0	5	100.0	65	100.0

The highest percentage of heavy trucks/buses are involved in crashes on U.S. & Michigan roads for all crashes (66.4%), fatal crashes (100.0%), and injury crashes (78.5%).

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	46	15.3	0	0.0	8	12.3
Tuesday	44	14.6	0	0.0	8	12.3
Wednesday	54	17.9	0	0.0	14	21.5
Thursday	50	16.6	0	0.0	13	20.0
Friday	67	22.3	2	40.0	15	23.1
Saturday	29	9.6	3	60.0	6	9.2
Sunday	11	3.7	0	0.0	1	1.5
TOTAL	301	100.0	5	100.0	65	100.0

The highest percentage of heavy trucks/buses are involved in crashes on Friday for all crashes (22.3%) and for injury crashes (23.1%).

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	279	92.7	5	100.0	57	87.7
Female	17	5.6	0	0.0	7	10.8
Unknown	5	1.7	0	0.0	1	1.5
TOTAL	301	100.0	5	100.0	65	100.0

The majority of heavy truck/bus drivers are male in all crashes (92.7%), fatal crashes (100.0%), and injury crashes (87.7%).

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	259	86.0	5	100.0	54	83.1
2 occupants	9	3.0	0	0.0	3	4.6
3 occupants	2	0.7	0	0.0	0	0.0
4 occupants	5	1.7	0	0.0	2	3.1
5 occupants	0	0.0	0	0.0	0	0.0
6+ occupants	18	6.0	0	0.0	5	7.7
0 occupants	7	2.3	0	0.0	1	1.5
Unknown	1	0.3	0	0.0	0	0.0
TOTAL	301	100.0	5	100.0	65	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, SUV, Van	156	75.4	8	100.0	44	73.3
Motor Home	0	0.0	0	0.0	0	0.0
Pickup	46	22.2	0	0.0	14	23.3
Small Truck (under 10,000 lbs.)	1	0.5	0	0.0	0	0.0
Motorcycle	0	0.0	0	0.0	0	0.0
Moped	0	0.0	0	0.0	0	0.0
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	0	0.0	0	0.0	0	0.0
Off Road Vehicle	0	0.0	0	0.0	0	0.0
Other	2	1.0	0	0.0	0	0.0
Unknown	2	1.0	0	0.0	2	3.3
SUBTOTAL	207	100.0	8	100.0	60	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
10,000 lbs. or less	3	1.0	0	0.0	0	0.0
10,001 - 26,000 lbs	95	31.6	0	0.0	13	20.0
Greater than 26,000 lbs.	201	66.8	5	100.0	52	80.0
Uncoded & Errors	2	0.7	0	0.0	0	0.0
SUBTOTAL	301	100.0	5	100.0	65	100.0

	ALL CRASHES		FATAL CRASHES		INJURY CRASHES	
	Number of Vehicles	% of Total	Number of Vehicles	% of Total	Number of Vehicles	% of Total
Total Number of Vehicles in Heavy Truck/ Bus Crashes	508	---	13	---	125	---

UPPER PENINSULA HEAVY TRUCK/BUS INVOLVED CRASHES (CONTINUED)

DRIVER ACTION PRIOR TO CRASH HAZARDOUS CITATION ISSUED	HEAVY TRUCK/BUS INVOLVED CRASH						NON-HEAVY TRUCK/BUS INVOLVED CRASH			
	Single Vehicle Crash		Multi-Vehicle Crash				Single Vehicle Crash		Multi-Vehicle Crash	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Non-Heavy Truck Vehicles	% of Total	Number of Vehicles	% of Total	Number of Vehicles	% of Total
None	0	0.0	0	0.0	1	2.6	4	1.0	9	1.2
Speed too fast	4	40.0	2	7.1	11	28.2	193	50.0	62	8.2
Speed too slow	0	0.0	0	0.0	0	0.0	1	0.3	0	0.0
Failed to yield	0	0.0	6	21.4	9	23.1	3	0.8	251	33.1
Disregard traffic control	0	0.0	0	0.0	3	7.7	3	0.8	61	8.0
Drove wrong way	0	0.0	0	0.0	0	0.0	1	0.3	3	0.4
Drove left of center	0	0.0	0	0.0	2	5.1	6	1.6	12	1.6
Improper passing	0	0.0	0	0.0	1	2.6	3	0.8	12	1.6
Improper lane use	0	0.0	1	3.6	0	0.0	0	0.0	24	3.2
Improper turn	0	0.0	0	0.0	1	2.6	0	0.0	14	1.8
Improper / no signal	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Improper backing	0	0.0	1	3.6	0	0.0	0	0.0	8	1.1
Unable to stop in assured clear distance	0	0.0	11	39.3	5	12.8	19	4.9	199	26.2
Reckless driving	0	0.0	0	0.0	1	2.6	13	3.4	6	0.8
Careless / negligent driving	3	30.0	4	14.3	5	12.8	114	29.5	68	9.0
Other	3	30.0	3	10.7	0	0.0	23	6.0	28	3.7
Unknown	0	0.0	0	0.0	0	0.0	3	0.8	2	0.3
CITED VEHICLES SUBTOTAL	10	100.0	28	100.0	39	100.0	386	100.0	759	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	10	10.1	28	13.9	39	19.0	386	6.9	759	12.5
Vehicles with No Citation Issued	89	89.9	174	86.1	166	81.0	5,217	93.1	5,295	87.5
Vehicles with Unknown Citation	0	0.0	0	0.0	0	0.0	1	0.0	0	0.0
TOTAL VEHICLES INVOLVED	99	100.0	202	100.0	205	100.0	5,604	100.0	6,054	100.0

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OCCUPANT/PERSON

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

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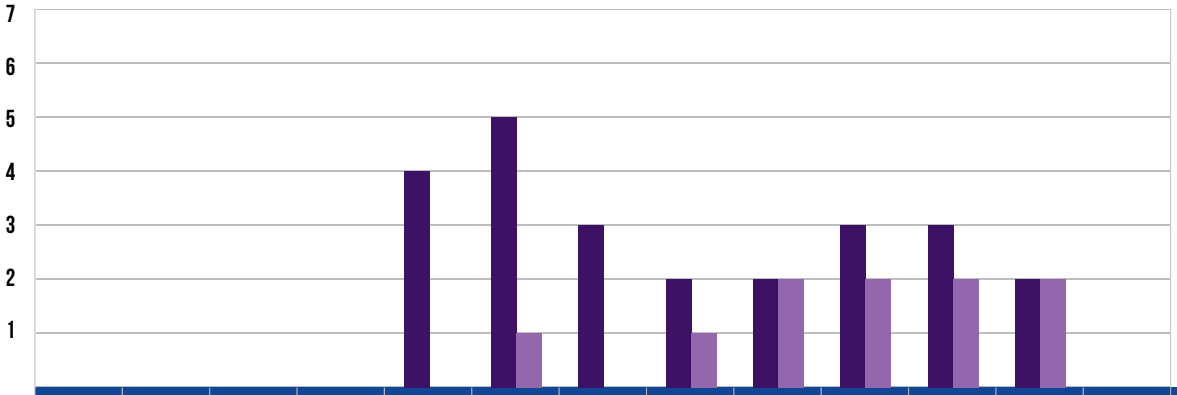
UPPER PENINSULA AGE AND GENDER OF OCCUPANTS KILLED OR INJURED IN MOTOR VEHICLE CRASHES

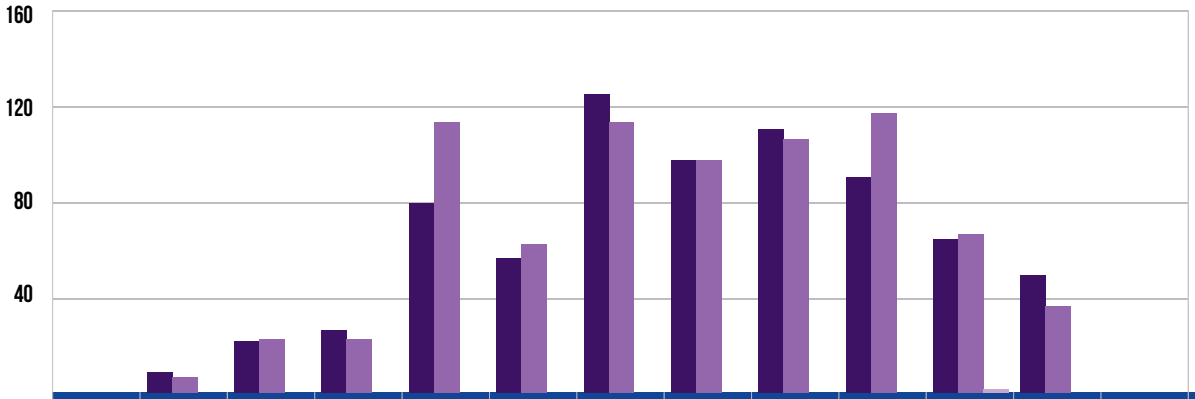
OCCUPANTS KILLED



	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	66-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
MALES KILLED	0	0	0	0	4	5	3	2	2	3	3	2	0	24
FEMALES KILLED	0	0	0	0	0	1	0	1	2	2	2	2	0	10
TOTAL	0	0	0	0	4	6	3	3	4	5	5	4	0	34

The majority (70.6%) of occupants killed in traffic crashes in 2018 were male.

OCCUPANTS INJURED



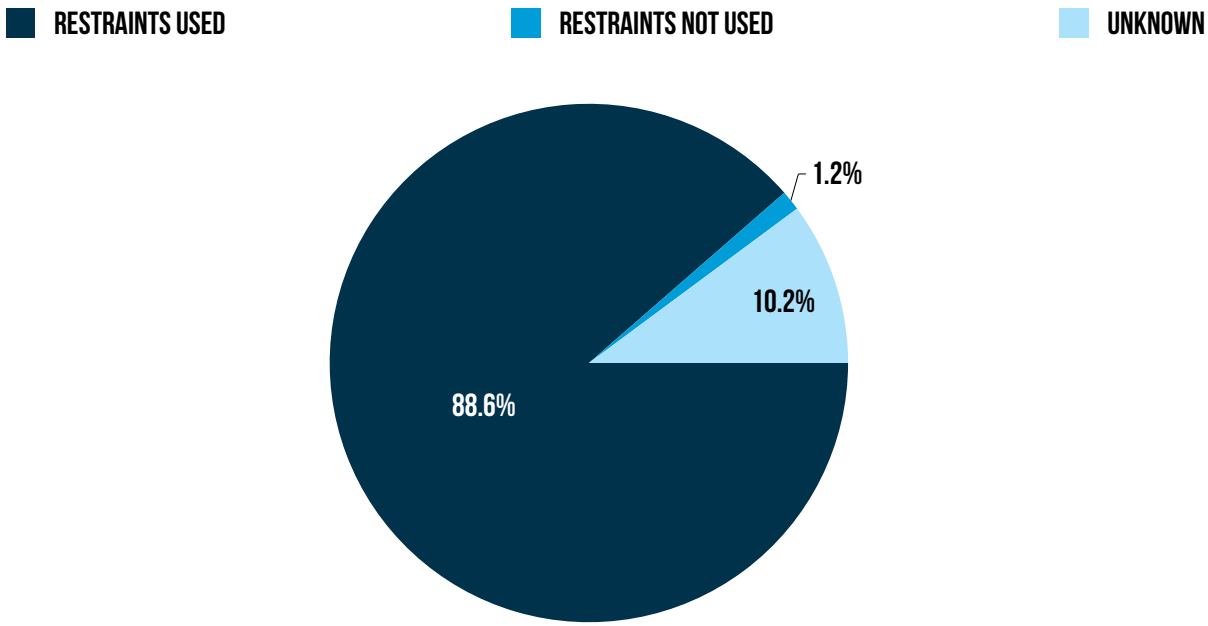
	UNDER 1 YEAR OLD	1-3 YEARS	4-10 YEARS	11-15 YEARS	16-20 YEARS	21-24 YEARS	25-34 YEARS	35-44 YEARS	45-54 YEARS	55-64 YEARS	66-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
MALES INJURED	0	8	21	26	79	56	125	97	110	90	64	49	0	725
FEMALES INJURED	0	6	22	22	113	62	113	97	106	117	66	36	0	760
UNKNOWN	0	0	0	0	0	0	0	0	0	0	1	0	0	1
TOTAL	0	14	43	48	192	118	238	194	216	207	131	85	0	1,486

The majority (51.1%) of occupants injured in traffic crashes in 2018 were female.

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

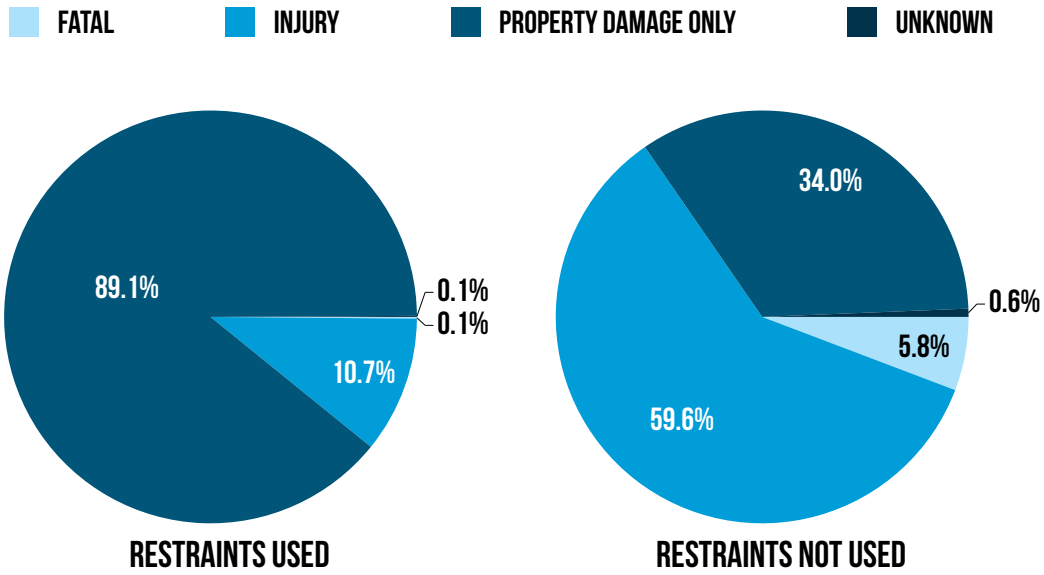
UPPER PENINSULA REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS

REPORTED OCCUPANT RESTRAINT USAGE



Of the 12,506 drivers and injured passengers involved in crashes in the Upper Peninsula, 11,080 (88.6%) were REPORTED to be using occupant restraints.

INJURY SEVERITY



Occupants in crashes were 43 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 OCCUPANTS & INJURY SEVERITY BY SEATING POSITION AND KNOWN BELT USAGE

SEATING POSITION	BELTS USED *		FATAL	INJURY			NO INJURY
	Number	% of Total		A	B	C	
Left Front	10,779	97.6	13	76	242	601	9,847
Center Front	22	0.2	0	1	2	9	10
Right Front	178	1.6	2	15	46	103	12
Left Rear Second Seat	29	0.3	0	6	7	16	0
Center Rear Second Seat	5	0.0	0	1	1	3	0
Right Rear Second Seat	24	0.2	0	1	10	13	0
Left Rear Third Seat	1	0.0	0	0	0	1	0
Center Rear Third Seat	0	0.0	0	0	0	0	0
Right Rear Third Seat	1	0.0	0	0	0	1	0
Left Rear Fourth Seat	0	0.0	0	0	0	0	0
Center Rear Fourth Seat	0	0.0	0	0	0	0	0
Right Rear Fourth Seat	0	0.0	0	0	0	0	0
Other Passenger Area	0	0.0	0	0	0	0	0
Unknown	2	0.0	0	0	0	1	1
Uncoded & Errors	0	0.0	0	0	0	0	0
TOTAL †	11,041	100.0	15	100	308	748	9,870

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

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

SEATING POSITION	BELTS NOT USED *		FATAL	INJURY			NO INJURY
	Number	% of Total		A	B	C	
Left Front	100	64.9	8	14	17	15	46
Center Front	5	3.2	0	1	2	1	1
Right Front	10	6.5	1	3	4	2	0
Left Rear Second Seat	5	3.2	0	1	2	2	0
Center Rear Second Seat	1	0.6	0	0	1	0	0
Right Rear Second Seat	9	5.8	0	4	2	3	0
Left Rear Third Seat	0	0.0	0	0	0	0	0
Center Rear Third Seat	1	0.6	0	0	0	1	0
Right Rear Third Seat	1	0.6	0	0	1	0	0
Left Rear Fourth Seat	0	0.0	0	0	0	0	0
Center Rear Fourth Seat	0	0.0	0	0	0	0	0
Right Rear Fourth Seat	1	0.6	0	0	0	1	0
Other Passenger Area	13	8.4	0	1	3	9	0
Unknown	8	5.2	0	0	0	2	6
Uncoded & Errors	0	0.0	0	0	0	0	0
TOTAL †	154	100.0	9	24	32	36	53

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

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

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

UPPER PENINSULA REPORTED RESTRAINT USAGE - CHILDREN

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

Any child under four years of age must be in an approved Child Safety Seat (CSS)/Child Restraint Device (CRD), and riding in the rear seat. All children less than 8 years of age AND who are less than 4'9" in height, must be properly restrained in a child restraint system. All children ages 8 through 15 must wear a properly adjusted and fastened seat belt when riding in either the front or back seat of a vehicle.

RESTRAINT USAGE	CHILDREN		FATAL	INJURY		
	Number	% of Total		A	B	C
AGE 0						
Belts Used	0	0	0	0	0	0
No Belts Used	0	0	0	0	0	0
Child Restraint Used - Forward Facing	0	0	0	0	0	0
Child Restraint Used - Rear Facing	0	0	0	0	0	0
Child Restraint Used - Booster Seat	0	0	0	0	0	0
Child Restraint Not Used	0	0	0	0	0	0
Restraint Failed	0	0	0	0	0	0
Unknown	0	0	0	0	0	0
Total	0	0	0	0	0	0
AGE 1						
Belts Used	1	14.3	0	0	0	1
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used - Forward Facing	1	14.3	0	0	1	0
Child Restraint Used - Rear Facing	5	71.4	0	1	0	4
Child Restraint Used - Booster Seat	0	0.0	0	0	0	0
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	7	100.0	0	1	1	5
AGE 2						
Belts Used	0	0.0	0	0	0	0
No Belts Used	0	0.0	0	0	0	0
Child Restraint Used - Forward Facing	4	100.0	0	0	1	3
Child Restraint Used - Rear Facing	0	0.0	0	0	0	0
Child Restraint Used - Booster Seat	0	0.0	0	0	0	0
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

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 - Forward Facing	3	100.0	0	0	0	3
Child Restraint Used - Rear Facing	0	0.0	0	0	0	0
Child Restraint Used - Booster Seat	0	0.0	0	0	0	0
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	0	3
AGE 4-7						
Belts Used	4	22.2	0	0	0	4
No Belts Used	4	22.2	0	0	2	2
Child Restraint Used - Forward Facing	7	38.9	0	0	1	6
Child Restraint Used - Rear Facing	0	0.0	0	0	0	0
Child Restraint Used - Booster Seat	2	11.1	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	1	5.6	0	0	0	1
Total	18	100.0	0	0	4	14
AGE 8-15						
Belts Used	42	64.6	0	1	13	28
No Belts Used	14	21.5	0	1	4	9
Child Restraint Used - Forward Facing	2	3.1	0	0	0	2
Child Restraint Used - Rear Facing	0	0.0	0	0	0	0
Child Restraint Used - Booster Seat	4	6.2	0	0	3	1
Child Restraint Not Used	0	0.0	0	0	0	0
Restraint Failed	0	0.0	0	0	0	0
Unknown	3	4.6	0	0	1	2
Total	65	100.0	0	2	21	42

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

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

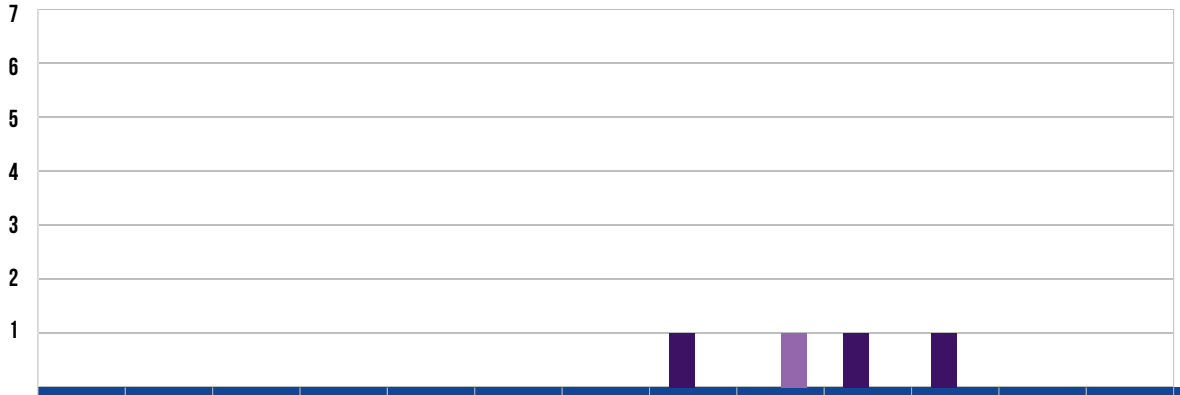
UPPER PENINSULA MOTOR VEHICLE OCCUPANT INJURY SEVERITY BY KNOWN AIRBAG DEPLOYMENT

MOTOR VEHICLE OCCUPANT AIRBAG DEPLOYMENT	OCCUPANTS*		FATAL	OCCUPANT INJURY SEVERITY			NO INJURY
	Number	% of Total		A	B	C	
Deployed - front	755	5.9	10	39	118	193	393
Deployed - side	108	0.8	4	5	7	23	69
Deployed - curtain	58	0.5	0	1	7	16	34
Deployed - combination	263	2.1	2	23	50	62	126
Deployed - other	2	0.0	0	0	0	0	1
Not deployed	10,305	81.1	9	60	162	509	9,554
Not equipped	396	3.1	7	65	72	52	200
Unknown	780	6.1	2	6	7	9	67
Uncoded & Errors	39	0.3	0	0	0	0	8
TOTAL	12,706	100.0	34	199	423	864	10,452

**Includes 734 occupants (drivers and passengers) with unknown injury severity.*

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

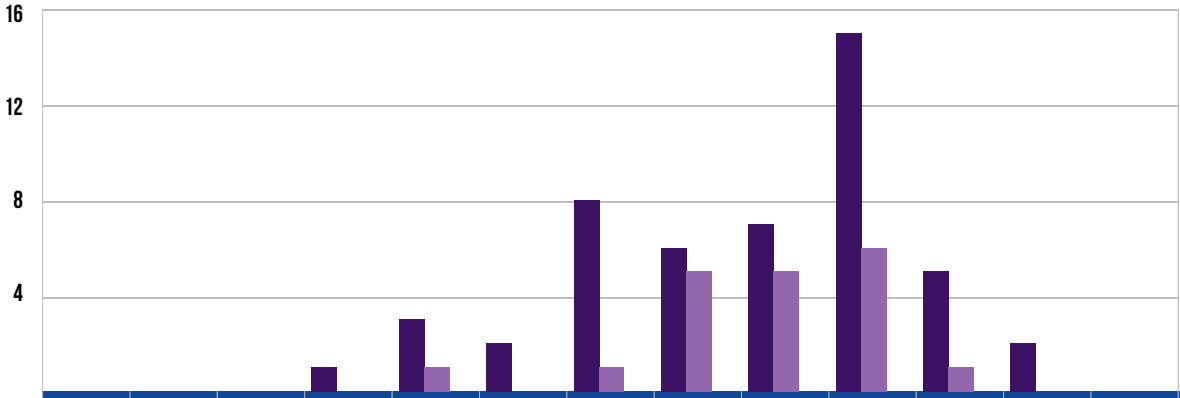
MOTORCYCLISTS KILLED



	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	66-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
MALES KILLED	0	0	0	0	0	0	0	1	0	1	1	0	0	3
FEMALES KILLED	0	0	0	0	0	0	0	0	1	0	0	0	0	1
TOTAL	0	0	0	0	0	0	0	1	1	1	1	0	0	4

Of the four motorcyclists killed in traffic crashes in the Upper Peninsula in 2018, three were male and one was 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	66-74 YEARS	75 YEARS AND OVER	UNKNOWN	TOTAL
MALES INJURED	0	0	0	1	3	2	8	6	7	15	5	2	0	49
FEMALES INJURED	0	0	0	0	1	0	1	5	5	6	1	0	0	19
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	1	4	2	9	11	12	21	6	2	0	68

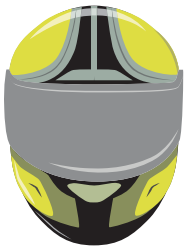
Of the 68 motorcyclists injured in traffic crashes in the Upper Peninsula in 2018, 72.1 percent were male.

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	0	0	1	0
16 - 20 years	0	2	1	1	1
21 - 24 years	0	1	1	0	0
25 - 34 years	0	3	2	2	0
35 - 44 years	0	2	2	0	2
45 - 54 years	0	3	3	2	7
55 - 64 years	1	8	5	2	8
65 - 74 years	1	2	2	2	5
75 years and over	0	1	0	0	0
Unknown	0	0	0	0	0
Subtotal	2	22	16	10	23
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	0	0	0	0
21 - 24 years	0	0	0	0	0
25 - 34 years	0	2	0	0	2
35 - 44 years	1	1	4	1	1
45 - 54 years	1	1	3	0	1
55 - 64 years	0	3	2	1	2
65 - 74 years	0	0	0	0	0
75 years and over	0	0	0	1	0
Unknown	0	0	0	0	0
Subtotal	2	7	9	3	6
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	0
21 - 24 years	0	0	0	0	0
25 - 34 years	0	0	0	0	0
35 - 44 years	0	1	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	1
75 years and over	0	0	0	0	0
Unknown	0	0	0	0	0
Subtotal	0	1	0	0	2
TOTAL	4	30	25	13	31

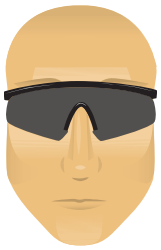
2011 Michigan motor vehicle crash data represents the last full year of data that was collected during Michigan's universal helmet law, enacted in 1969: Michigan Vehicle Code Public Act 300 of 1949, Section 257.658, requiring all motorcycle riders to wear a helmet. On April 13, 2012, Michigan changed 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, SUV, van	24	99	270	664	1,057	69.5
Motor home	0	0	0	2	2	0.1
Pickup truck	4	32	84	148	268	17.6
Small Truck under 10,000 lbs. GVWR	0	0	3	6	9	0.6
Motorcycle	4	30	25	13	72	4.7
Moped/goped	0	1	6	1	8	0.5
Go-cart/golf cart	0	0	0	0	0	0.0
Snowmobile	0	11	8	5	24	1.6
Off-Road Vehicle - ORV/All-Terrain Vehicle - ATV	2	22	18	6	48	3.2
Other	0	0	0	0	0	0.0
Unknown	0	0	0	0	0	0.0
CDL Truck/Bus (breakdown below)	0	4	9	19	32	2.1
Total Number of Occupants	34	199	423	864	1,520	100.0

HEAVY TRUCK/BUS GROSS VEHICLE WEIGHT RATING	KILLED	INJURY			TOTAL KABC	% OF ALL CRASH INVOLVED KABC OCCUPANTS
		A	B	C		
10,000 lbs. or less	0	0	0	0	0	0.0
10,001 - 26,000 lbs.	0	0	3	3	6	18.8
Greater than 26,000 lbs.	0	4	6	16	26	81.3
Uncoded & Errors	0	0	0	0	0	0.0
Total Number of Occupants	0	4	9	19	32	100.0

Note:
1) School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.
2) These crashes involve a motor vehicle in transport on a public trafficway (in Michigan) and result in injury, death, or at least $1,000 in property damage.

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REFERENCES

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REFERENCES AND REPORTING AGENCIES

[1] Annual Estimates of the Resident Population for Counties of Michigan: 2010-2018. Population Division, U.S. Census Bureau. Release Date: July 2019. https://www.census.gov/programs-surveys/popest.html

[2] Number of Deaths by Underlying Cause of Death Michigan Residents, 2018. 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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INDEX

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A

B

C

D

E

F

G

H

I

L

M

O

P

R

S

T

U

V

W