2001

Michigan Traffic Crash Facts

Funding for this project was provided by the Michigan Office of Highway Safety Planning (OHSP), which administers funding from the National Highway Traffic Safety Administration. 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.

2001
Michigan Traffic
Crash Facts

A summary of traffic crashes on Michigan roadways in calendar year 2001

Produced by:

Michigan Department of State Police
Criminal Justice Information Center - Traffic Crash Statistics
(517) 322-1150

Office of Highway Safety Planning - Traffic Safety Programs
(517) 333-5306

WWW.MICHIGAN.GOV/MSP

FOREWORD

We are pleased to announce a new and improved web site for the 2001 Michigan Traffic Crash Facts. Please visit ***www.umtri.umich.edu/tdc/mtcf/crash_facts.htm*** for easy access to all of the 2001 information in pdf format. We hope that you will find the new site easier to use, and while you are there please take a few moments to fill out the survey offered to capture your experience.

Please Read - Data Exceptions

As you review the 2001 Michigan Traffic Crash Facts, you will see cautionary notes inserted for the data presented for pedestrians and bicyclists. Due to processing errors approximately 1,600 pedestrians and 1,600 bicyclists are incorrectly identified as drivers in the 2001 data. This shortfall in data reporting must be considered when making comparisons to previous years and in any trend analysis in the future.

New this year, we are including information in the County/Community Traffic Crash Summary section on Ignition Interlock crashes. It has been determined that much of the data collected for this variable is incorrect due to initial errors in completing the UD-10 form and subsequent scanning problems, therefore this data should not be used for 2001 analysis.

Also, please keep in mind that beginning with the year 2000 reporting, the information provided for alcohol contains data for alcohol-related crashes only. This figure DOES NOT include the combined number for alcohol- and drug-related crashes as had been reported prior to 2000. Alcohol-related crash data for year 2000 and after CANNOT be compared with prior years. Drug-related crash information is now presented separately in the Alcohol section of the main book and in the Traffic Crash Summary section of the County/Community book.

In order to provide familiar data with the highest level of accuracy, the book retains the format used in the past, and we ask the reader to be attentive to all special notes.

A comprehensive, multi-year project is underway using federal grant funds to improve the quality, timeliness and accuracy of traffic crash data collection and processing. This includes encouraging and accepting the electronic collection of data. We regret any inconvenience caused by the exceptions reported above, however, every effort is being made within the resources available to improve future crash data.

EXECUTIVE SUMMARY

The 2001 traffic fatality count was 1,328, down 3.9 percent from the 2000 figure of 1,382. Compared with 2000, injuries were down 7.8 percent and total crashes were down 5.7 percent. These figures translated into a death rate of 1.4 per 100 million miles of travel, down 6.7 percent from the 2000 death rate. Nationally, fatalities were up 0.4 percent.

Exposure factors in 2001 showed increases in vehicle registrations, the number of drivers on Michigan roads, and travel mileage. They included motor vehicle registrations up 0.4 percent to 8.60 million, the number of licensed drivers is up 0.7 percent to 7.09 million, and vehicle travel mileage up 1.6 percent to 96.43 billion.

Consumption of alcohol continues to be a major factor in Michigan crashes, particularly the more serious crashes. In 2001, 3.9 percent of all crashes, including property damage only, were reported to involve drinking, and 20.5 percent resulted in injury or death. However, 43.7 percent of alcohol-related crashes involved injury or death, and 34.7 percent of fatal crashes involved drinking. Over 67.8 percent of alcohol-related fatal crashes involved only one vehicle, whereas only 48.3 percent of all crashes involved one vehicle.

Data on crashes in this book was obtained from 2001 Michigan Traffic Crash Report Forms (UD-10) submitted by local police departments, sheriff jurisdictions, and the Department of State Police. Other related information was obtained from the Departments of Transportation, State, and Community Health.

The University of Michigan Transportation Research Institute produced this publication with data on file at the Michigan Department of State Police as of June 18, 2002. We acknowledge, with appreciation, all involved agencies for their assistance.

OHSP has a NEW Web Address

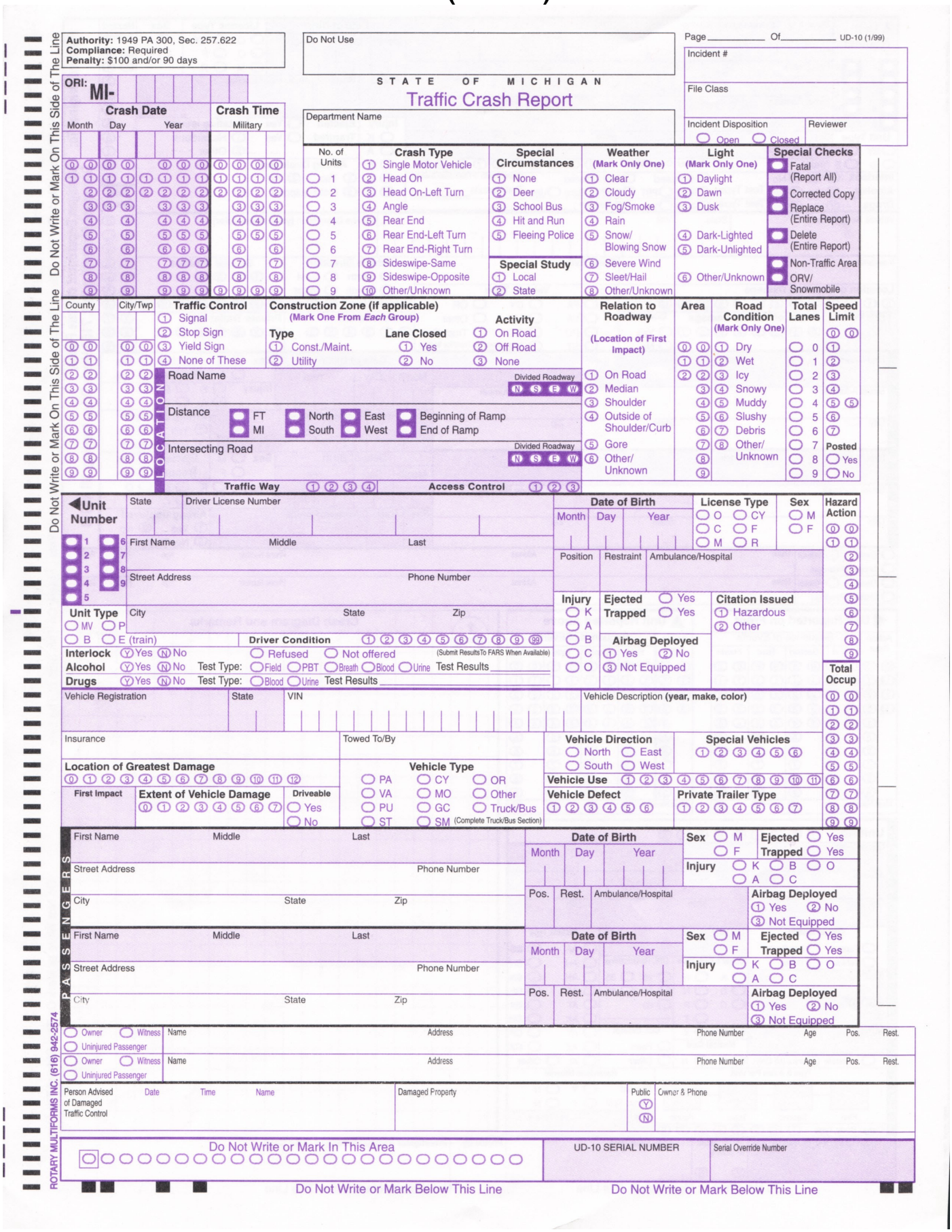
OHSP's web is now a part of the Michigan State Police web site, adhering to the new e-Michigan standards. The purpose of these standards is to provide consistency in the navigation of all State of Michigan web sites.

Follow these steps to find the OHSP web site and book mark the page for future reference:

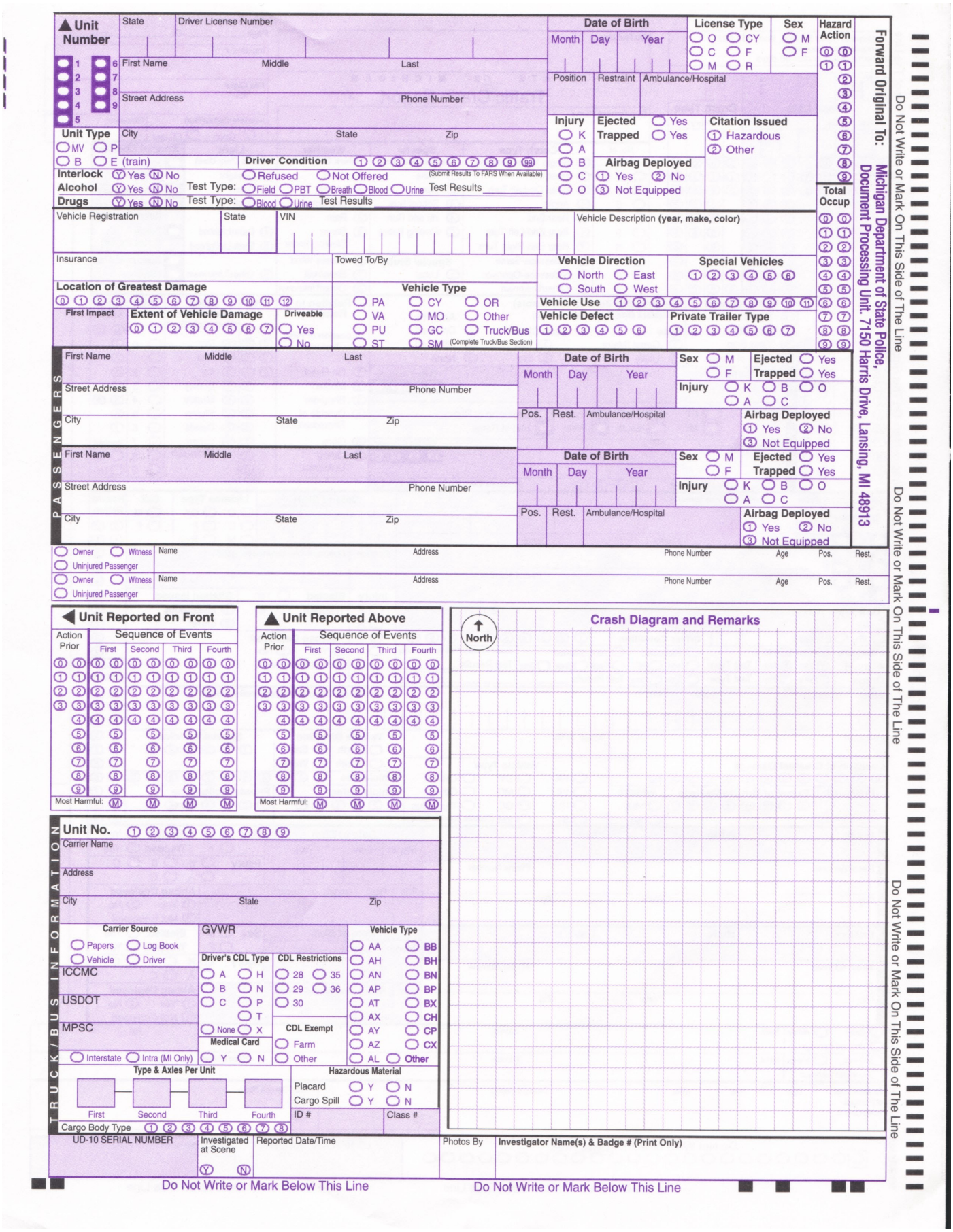
1. www.michigan.gov/msp
2. Click on Services to Government Agencies
3. Click on Office of Highway Safety Planning

www.michigan.gov/msp

UD-10 (FRONT)


Authority: 1949 PA 300, Sec. 257.622
Compliance: Required
Penalty: $100 and/or 90 days
Do Not Use
STATE OF MICHIGAN
Traffic Crash Report
Page _____ Of _____ UD-10 (1/99)
Incident #
File Class
Incident Disposition
Open
Closed
Reviewer
Department Name
ORI: MI-
Crash Date
Month
Day
Year
Crash Time
Military
No. of Units
Crash Type
1 Single Motor Vehicle
2 Head On
3 Head On-Left Turn
4 Angle
5 Rear End
6 Rear End-Left Turn
7 Rear End-Right Turn
8 Sideswipe-Same
9 Sideswipe-Opposite
10 Other/Unknown
Special Circumstances
1 None
2 Deer
3 School Bus
4 Hit and Run
5 Fleeing Police
Special Study
1 Local
2 State
Weather (Mark Only One)
1 Clear
2 Cloudy
3 Fog/Smoke
4 Rain
5 Snow/ Blowing Snow
6 Severe Wind
7 Sleet/Hail
8 Other/Unknown
Light (Mark Only One)
1 Daylight
2 Dawn
3 Dusk
4 Dark-Lighted
5 Dark-Unlighted
6 Other/Unknown
Special Checks
Fatal (Report All)
Corrected Copy
Replace (Entire Report)
Delete (Entire Report)
Non-Traffic Area
ORV/ Snowmobile
Do Not Write or Mark On This Side of The Line
Do Not Write or Mark On This Side of The Line
County
City/Twp
LOCATION
Traffic Control
1 Signal
2 Stop Sign
3 Yield Sign
4 None of These
Construction Zone (if applicable)
(Mark One From Each Group)
Type
1 Const./Maint.
2 Utility
Lane Closed
1 Yes
2 No
Activity
1 On Road
2 Off Road
3 None
Road Name
Divided Roadway N S E W
Distance
FT
MI
North
South
East
West
Beginning of Ramp
End of Ramp
Intersecting Road
Divided Roadway N S E W
Traffic Way 1 2 3 4
Access Control 1 2 3
Relation to Roadway
(Location of First Impact)
1 On Road
2 Median
3 Shoulder
4 Outside of Shoulder/Curb
5 Gore
6 Other/ Unknown
Area
Road Condition (Mark Only One)
1 Dry
2 Wet
3 Icy
4 Snowy
5 Muddy
6 Slushy
7 Debris
8 Other/ Unknown
Total Lanes
0 1 2 3 4 5 6 7 8 9
Speed Limit
Posted
Yes
No
Unit Number
State
Driver License Number
Date of Birth
Month
Day
Year
License Type
O
CY
C
F
M
R
Sex
M
F
Hazard Action
First Name
Middle
Last
Street Address
Phone Number
Position
Restraint
Ambulance/Hospital
Unit Type
MV
P
B
E (train)
City
State
Zip
Injury
K
A
B
C
O
Ejected
Yes
Trapped
Yes
Airbag Deployed
1 Yes
2 No
3 Not Equipped
Citation Issued
1 Hazardous
2 Other
Driver Condition 1 2 3 4 5 6 7 8 9 99
Interlock Yes No
Alcohol Yes No Test Type: Field PBT Breath Blood Urine Test Results
Drugs Yes No Test Type: Blood Urine Test Results
Refused
Not offered
(Submit Results To FARS When Available)
Total Occup
Vehicle Registration
State
VIN
Vehicle Description (year, make, color)
Insurance
Towed To/By
Location of Greatest Damage
0 1 2 3 4 5 6 7 8 9 10 11 12
First Impact
Extent of Vehicle Damage
0 1 2 3 4 5 6 7
Driveable
Yes
No
Vehicle Type
PA
CY
OR
VA
MO
Other
PU
GC
Truck/Bus
ST
SM
(Complete Truck/Bus Section)
Vehicle Direction
North
East
South
West
Special Vehicles
1 2 3 4 5 6
Vehicle Use 1 2 3 4 5 6 7 8 9 10 11
Vehicle Defect
1 2 3 4 5 6
Private Trailer Type
1 2 3 4 5 6 7
PASSENGERS
First Name
Middle
Last
Street Address
Phone Number
City
State
Zip
Date of Birth
Month
Day
Year
Sex
M
F
Ejected
Yes
Trapped
Yes
Injury
K
B
O
A
C
Pos.
Rest.
Ambulance/Hospital
Airbag Deployed
1 Yes
2 No
3 Not Equipped
Owner
Witness
Uninjured Passenger
Name
Address
Phone Number
Age
Pos.
Rest.
Person Advised of Damaged Traffic Control
Date
Time
Name
Damaged Property
Public
Y
N
Owner & Phone
Do Not Write or Mark In This Area
UD-10 SERIAL NUMBER
Serial Override Number
Do Not Write or Mark Below This Line
Do Not Write or Mark Below This Line
ROTARY MULTIFORMS INC. (616) 942-2574

UD-10 (BACK)


▲ Unit Number
State
Driver License Number
First Name
Middle
Last
Street Address
Phone Number
City
State
Zip
Unit Type
MV P
B E (train)
Driver Condition
Interlock Yes No
Alcohol Yes No
Drugs Yes No
Test Type:
Refused
Not Offered
Field PBT Breath Blood Urine
Test Results
Blood Urine
Date of Birth
Month
Day
Year
License Type
Sex
Position
Restraint
Ambulance/Hospital
Injury
Ejected Yes
Trapped Yes
Airbag Deployed
Yes No
Not Equipped
Citation Issued
Hazardous
Other
Hazard Action
Total Occup
Forward Original To: Michigan Department of State Police, Document Processing Unit, 7150 Harris Drive, Lansing, MI 48913
Vehicle Registration
State
VIN
Vehicle Description (year, make, color)
Insurance
Towed To/By
Location of Greatest Damage
First Impact
Extent of Vehicle Damage
Driveable
Vehicle Type
PA CY OR
VA MO Other
PU GC Truck/Bus
ST SM
(Complete Truck/Bus Section)
Vehicle Direction
North East
South West
Special Vehicles
Vehicle Use
Vehicle Defect
Private Trailer Type
PASSENGERS
Owner Witness
Uninjured Passenger
Name
Address
Phone Number
Age
Pos.
Rest.
◀ Unit Reported on Front
▲ Unit Reported Above
Action Prior
Sequence of Events
First
Second
Third
Fourth
Most Harmful:
Crash Diagram and Remarks
North
TRUCK/BUS INFORMATION
Unit No.
Carrier Name
Address
City
State
Zip
Carrier Source
Papers Log Book
Vehicle Driver
ICCMC
USDOT
MPSC
Interstate Intra (MI Only)
GVWR
Driver's CDL Type
A H
B N
C P
T
None X
Medical Card
Y N
CDL Restrictions
28 35
29 36
30
CDL Exempt
Farm
Other
Vehicle Type
AA BB
AH BH
AN BN
AP BP
AT BX
AX CH
AY CP
AZ CX
AL Other
Type & Axles Per Unit
First
Second
Third
Fourth
Cargo Body Type
Hazardous Material
Placard Y N
Cargo Spill Y N
ID #
Class #
UD-10 SERIAL NUMBER
Investigated at Scene
Y N
Reported Date/Time
Photos By
Investigator Name(s) & Badge # (Print Only)
Do Not Write or Mark Below This Line
Do Not Write or Mark Below This Line
Do Not Write or Mark On This Side of The Line
Do Not Write or Mark On This Side of The Line
Do Not Write or Mark On This Side of The Line

MICHIGAN VEHICLE CODE
Public Act 300 of 1949

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

MCL 257.622, Amended 1967 - 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 $400 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 State Police on forms prescribed by the director 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 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 . . . 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 UD-10s submitted by all Michigan law enforcement agencies, the Department of State Police microfilms all UD-10s received at its Criminal Justice Data Center. The Data Center retains a microfilm copy of UD-10s for a period including the current processing year plus the three previous years. Microfilm copies and electronic databases containing information from individual UD-10s for crashes prior to this time period are purged.)*

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

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

ABBREVIATIONS & ACRONYMS

- **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.
- **CJDC** **Criminal Justice Data Center.** A division of the Michigan Department of State Police that administers data on the mainframe computer.
- **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 seats.
- **FHWA** **Federal Highway Administration**. A part of the United States Department of Transportation.
- **GDL** **Graduated Driver Licensing**
- **HBD** **Had Been Drinking**
- **HNBD** **Had Not Been Drinking**
- **KABC** Injury severity scale for traffic crash-related injuries: **K - Fatal**, **A - Incapacitating**, **B - Nonincapacitating**, **C - Possible.** See Glossary for definitions.
- **MALI** **Michigan Accident Location Index** (pronounced “MAY-lie”)
- **MDCH** **Michigan Department of Community Health** (formerly Michigan Department of Public Health)
- **MDOS** **Michigan Department of State**
- **MDOT** **Michigan Department of Transportation** (pronounced “EM-dot”)
- **NHTSA** **National Highway Traffic Safety Administration** (pronounced “NIT-zah”). A part of the United States Department of Transportation.
- **OHSP** **Office of Highway Safety Planning**. A division of the Michigan Department of State Police.
- **OUIL** **Operating Under the Influence of Liquor**. More serious of the drinking and driving violations in Michigan. Refers to driving with bodily alcohol content of 0.10g or more.
- **OWI** **Operating While Impaired**. Less serious of the drinking and driving violations in Michigan. Refers to driving with bodily alcohol content levels of 0.08g or 0.09g.
- **PDO** **Property Damage Only**. Refers to a traffic crash lacking personal injuries.
- **UD-10** Form number ascribed to *Michigan Traffic Crash Report* form, official document used to report traffic crashes in Michigan.
- **UMTRI** **University of Michigan Transportation Research Institute** (pronounced “UM-tree”)
- **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

- **Bicyclist** – "Bicycle" means 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.
- **Bus** - Any passenger-carrying vehicle designed to transport 16 or more passengers, including the 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.
- **Driver/Operator** - The person who is in actual physical control of a vehicle in transit.
- **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. NEW
- **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-related crashes only. This figure DOES NOT include the combined number for alcohol and drug related crashes as has been reported in prior years. NEW
- **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.

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

- **Ignition Interlock** - An alcohol concentration measuring device that prevents 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). NEW
- **Injury Severity**

  K (Fatal) - Any injury that results in death.

  A (Incapacitating Injury) - Any injury, other than a fatal injury, that prevents the injured person from walking, driving or normally continuing the activities the person was capable of performing before the injury occurred.

  B (Nonincapacitating 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 nonincapacitating injury.

GLOSSARY (continued)

- **In Transport** - Denotes a motor vehicle in motion or on a roadway.
- **Licensed Drivers** - All valid Michigan drivers on file including; suspended, revoked, and denied drivers (as long as their license has not expired).
- **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.
- **Motor Vehicle Crash** - A crash that involves a motor vehicle in transport on a public trafficway (in Michigan) and results in injury, death or at least $400.00 in property damage.
- **Noncollision** - A crash that does not involve 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* the driver.
- **Passenger** - Any injured or killed 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); nonmotorized wheelchair.
- **Property Damage Only (PDO) Crash** - A crash that results in no fatalities or injuries, with a value of $400.00 as a reporting threshold.
- **Traffic Unit** - Anything in transit on a public trafficway (i.e., motor vehicle, motorcycle, bicycle, pedestrian, snowmobile, farm equipment).
- **Transition Area** - Increase or decrease in the number or 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 which 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. Sometimes referred to as Michigan's "Point Oh Two" law.

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SPECIAL FOCUS

AGE

2001
2001
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Quick Facts & Figures

2001 QUICK FACTS

★ Some exposure factor comparisons between 2001 and 2000 show motor vehicle registrations rose **0.4** percent, number of licensed drivers on Michigan roads increased **0.7** percent, and vehicle mileage increased **1.6** percent.

★ The 2001 death rate dropped to **1.4** deaths per 100 million miles of travel; below the ten-year average of **1.6** (1992-2001).

★ There were **1,328** persons killed and **112,294** persons injured in **400,813** reported motor vehicle traffic crashes in Michigan during 2001. Compared with the 2000 experience, deaths decreased **3.9** percent, persons injured decreased **7.8** percent, and total reported crashes decreased **5.7** percent.

★ This year's death toll of **1,328** was down **3.9** percent from the 2000 figure of **1,382**.

★ The **1,328** persons killed were the result of **1,206** fatal crashes for an average of **1.1** deaths per fatal crash.

★ There were **400,813** reported crashes of which **1,206** were fatal, **80,922** were personal injury, and **318,685** were property damage only crashes.

★ Of all fatal crashes, **29.5** percent occurred at intersections.

★ Of all fatal crashes, **28.4** percent involved at least one drinking operator or pedestrian, **3.2** percent involved at least one drugged operator or pedestrian, and **6.4** percent involved both drinking and drugs.

★ Excessive speed was indicated as the hazardous action by **13.2** percent of the drivers involved in fatal crashes.

★ In 2001 there were **128,040** single vehicle crashes, a decrease of **4.3** percent from last year's count of **133,790**.

★ Of the **400,813** total crashes, **128,040 (31.9%)** involved one vehicle.

★ Of the **1,206** fatal crashes, **582 (48.3%)** involved one vehicle.

★ Of the **419** alcohol-related fatal crashes, **284 (67.8%)** involved one vehicle. This is a **12.3** percent increase from last year's figure of **253** single vehicle, alcohol-related fatal crashes.

★ Of the **1,981** drivers involved in fatal crashes, **13.9** percent were under 21 years of age and **22.9** percent of all drivers involved in fatal crashes were under 25 years of age.

★ In the last five years (1997-2001), **6,909** persons have been killed in Michigan traffic crashes. This is an average of **1,382** per year. During the previous five-year period (1996-2000), **7,086** persons were killed, for an average of **1,417** per year.

★ Of the **9,990,817** persons living in Michigan [1] one out of every **7,523** was killed in a traffic crash; one out of every **89** persons was injured.

★ For each person killed there were **84.6** persons injured.

- ★ There were **112,294** persons injured, crippled, or maimed in crashes.
- ★ According to figures provided by the Michigan Department of Community Health [2], accidental death for children in motor vehicle crashes routinely outpaces the next two most frequent causes: fire and drowning.
- ★ According to the Michigan Department of Community Health, four out of five accidental deaths for teenagers and young adults (ages 15-24) are due to motor vehicle crashes.
- ★ The pedestrian death toll for Michigan stands at **160** persons, a decrease of **8** deaths from the 2000 figure.
- ★ For each pedestrian killed, there were **11.0** pedestrians injured.
- ★ Of the pedestrians killed, **29.4** percent were killed while crossing streets other than at intersections.
- ★ Of all pedestrians killed, **18.8** percent were under the age of 21 years and **26.3** percent were 55 and older.
- ★ During the past five years, a total of **843** pedestrians have been killed, an average of **169** per year.
- ★ The number of pedestrians injured in traffic crashes on Michigan roadways has decreased by **45.0** percent in the last five years (1997-2001).
- ★ During the past five years, a total of **136** bicyclists have been killed, an average of **27** per year.
- ★ Children under the age of 16 accounted for **23.1** percent of the bicycle deaths.
- ★ The number of bicyclists injured in traffic crashes on Michigan roadways has decreased by **53.4** percent in the last five years (1997-2001).
- ★ Of the **713,996** drivers and injured passengers involved in crashes, **576,318** or **80.7** percent were *reported* to have been using occupant restraints. Restraint usage among fatal victims, where usage was known, was reported to be **52.9** percent in 2001.
- ★ Motor vehicle occupants age 75 to 101 had the highest reported restraint usage **(94.5%)** among age groups. Children age 11 to 15 had the lowest reported restraint usage **(70.3%)**.
- ★ The economic loss in Michigan traffic crashes amounted to **$9,421,709,300**.

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

REPORTED STATEWIDE TRAFFIC CRASHES BY COUNTY IN MICHIGAN

COUNTY	All	Fatal	Injury	Property Damage	Inter-state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Alcona	791	1	66	724	37	66	127	561	1	83
Alger	568	3	100	465	33	17	166	352	3	135
Allegan	4,006	17	774	3,215	233	209	629	2,935	19	1,091
Alpena	1,131	2	185	944	90	196	148	697	2	261
Antrim	1,233	8	172	1,053	47	162	143	881	11	257
Arenac	1,051	1	149	901	101	151	64	735	1	198
Baraga	550	2	69	479	23	124	76	327	4	93
Barry	2,580	16	404	2,160	167	0	723	1,690	18	581
Bay	3,860	17	902	2,941	451	65	813	2,531	18	1,217
Benzie	723	4	101	618	29	120	67	507	5	146
Berrien	5,439	28	1,198	4,213	695	329	761	3,654	29	1,750
Branch	2,146	7	294	1,845	196	312	72	1,566	7	414
Calhoun	6,706	12	1,093	5,601	1,123	4	985	4,594	13	1,442
Cass	2,004	6	332	1,666	145	142	471	1,246	7	475
Charlevoix	1,340	4	206	1,130	66	310	151	813	5	299
Cheboygan	1,162	5	227	930	143	50	188	781	5	335
Chippewa	1,470	5	204	1,261	268	3	271	928	6	273
Clare	1,684	8	281	1,395	51	264	201	1,168	8	380
Clinton	2,711	7	433	2,271	328	129	135	2,119	8	635
Crawford	913	2	162	749	118	13	229	553	2	208
Delta	2,477	2	293	2,182	103	255	213	1,906	2	425
Dickinson	1,524	3	165	1,356	68	412	264	780	3	226
Eaton	4,454	16	737	3,701	705	3	1,057	2,689	18	1,054
Emmet	1,765	6	280	1,479	82	431	116	1,136	6	381
Genesee	15,424	43	3,720	11,661	1,561	193	1,597	12,073	48	5,372
Gladwin	1,159	5	169	985	71	0	315	773	8	234
Gogebic	586	1	81	504	38	203	20	325	1	114
Grand Traverse	3,880	11	695	3,174	192	768	336	2,584	13	969
Gratiot	1,814	8	302	1,504	123	321	228	1,142	13	465
Hillsdale	2,170	11	322	1,837	98	176	384	1,512	12	464
Houghton	1,496	3	271	1,222	65	238	176	1,017	3	350
Huron	1,868	3	250	1,615	119	0	657	1,092	3	369
Ingham	12,171	20	2,438	9,713	1,891	393	1,882	8,005	23	3,306
Ionia	2,881	16	419	2,446	304	2	628	1,947	18	564
Iosco	1,124	2	179	943	54	199	194	677	2	233
Iron	1,012	1	95	916	52	264	106	590	1	134
Isabella	3,147	7	496	2,644	145	363	315	2,324	7	720
Jackson	7,064	22	1,222	5,820	1,076	221	816	4,951	26	1,698
Kalamazoo	10,519	30	2,003	8,486	1,331	357	1,275	7,556	33	2,682
Kalkaska	838	3	132	703	42	103	129	564	3	182
Kent	25,614	54	5,182	20,378	2,452	1,158	4,667	17,337	58	7,074
Keweenaw	102	0	13	89	2	19	5	76	0	22
Lake	730	2	97	631	27	106	105	492	2	146
Lapeer	3,634	14	634	2,986	330	2	763	2,539	17	878
Leelanau	682	2	125	555	39	0	206	437	2	178
Lenawee	3,464	18	697	2,749	253	480	678	2,053	20	1,025

REPORTED STATEWIDE TRAFFIC CRASHES BY COUNTY IN MICHIGAN (Continued)

COUNTY	All	Fatal	Injury	Property Damage	Inter-state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Livingston	5,932	14	1,298	4,620	1,051	308	558	4,015	15	1,759
Luce	293	3	48	242	16	0	129	148	3	62
Mackinac	900	2	124	774	126	150	151	473	2	158
Macomb	25,977	66	5,809	20,102	2,622	18	4,914	18,423	69	7,901
Manistee	1,222	2	156	1,064	59	232	205	726	2	238
Marquette	2,655	7	458	2,190	144	505	263	1,743	8	611
Mason	1,883	8	261	1,614	92	407	94	1,290	10	386
Mecosta	2,719	10	371	2,338	176	103	727	1,713	11	518
Menominee	1,874	2	217	1,655	90	412	141	1,231	2	304
Midland	3,205	8	589	2,608	152	274	320	2,459	9	845
Missaukee	802	6	87	709	49	0	168	585	6	117
Monroe	4,562	22	1,057	3,483	454	581	449	3,078	26	1,508
Montcalm	3,406	14	494	2,898	223	92	965	2,126	17	708
Montmorency	461	3	79	379	13	0	121	327	3	101
Muskegon	5,936	27	1,297	4,612	323	574	578	4,461	30	1,826
Newaygo	2,156	7	351	1,798	142	0	538	1,476	10	498
Oakland	45,754	91	10,226	35,437	5,357	1,967	4,929	33,501	97	14,010
Oceana	1,292	6	233	1,053	48	171	120	953	7	321
Ogemaw	1,255	9	183	1,063	171	1	286	797	9	288
Ontonagon	576	1	53	522	48	108	140	280	1	65
Osceola	1,659	2	233	1,424	61	297	192	1,109	2	333
Oscoda	437	4	75	358	18	0	117	302	4	110
Otsego	1,167	6	242	919	200	1	182	784	7	331
Ottawa	7,781	32	1,618	6,131	796	721	570	5,694	33	2,256
Presque Isle	713	2	84	627	32	90	149	442	3	110
Roscommon	1,297	8	216	1,073	106	72	272	847	8	305
Saginaw	8,089	36	1,760	6,293	942	6	1,724	5,417	41	2,509
St. Clair	5,157	21	1,197	3,939	826	2	778	3,551	22	1,721
St. Joseph	2,200	9	395	1,796	175	332	399	1,294	9	564
Sanilac	1,921	9	230	1,682	129	0	541	1,251	11	343
Schoolcraft	591	1	85	505	25	131	81	354	1	124
Shiawassee	2,697	16	453	2,228	313	2	640	1,742	17	623
Tuscola	2,273	13	369	1,891	134	0	633	1,506	15	555
Van Buren	3,069	21	614	2,434	395	2	443	2,229	24	931
Washtenaw	12,738	33	2,575	10,130	1,531	1,093	796	9,318	38	3,432
Wayne	80,619	223	18,707	61,689	7,854	2,302	6,863	63,600	238	25,824
Wexford	1,878	4	309	1,565	130	406	415	927	4	461
UNKNOWN	0	0	0	0	0	0	0	0	0	0
Totals	400,813	1,206	80,922	318,685	40,590	20,693	54,143	285,387	1,328	112,294

Michigan's Crash Watch 2001

Every 1.3 minutes a traffic crash occurs

One person is killed in a crash every 6.6 hours

One person is injured in a crash every 4.7 minutes

One person is killed in an alcohol-related crash every 19.0 hours

One driver under age 21 is in a fatal crash every 31.7 hours

One bicyclist is injured every 7.9 hours

One pedestrian is injured every 5.0 hours

One motorcyclist is injured every 3.4 hours

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

WHO DIED IN MICHIGAN MOTOR VEHICLE CRASHES IN 2001?

THE DAILY TOLL

- ★ **Four people died everyday.**
- ★ Between one and two persons died in an alcohol-related crash everyday.
- ★ The daily economic cost to Michigan residents was:

$ $ $ $ $ **26 MILLION DOLLARS** $ $ $ $ $

12.2 million - for fatalities

12.1 million - for injuries

1.7 million - for property damage

THE ANNUAL TOLL

- ★ The economic cost of motor vehicle crashes to Michigan residents was $9.4 billion last year.
- ★ $4.4 billion in economic loss was due to Michigan motor vehicle fatalities.
- ★ Alcohol-related fatalities amounted to 461 people in 2001.
- ★ 1,328 people died in 2001 in a motor vehicle crash.
- ★ **Every 6 hours and 36 minutes one person died in a motor vehicle crash.**

2001
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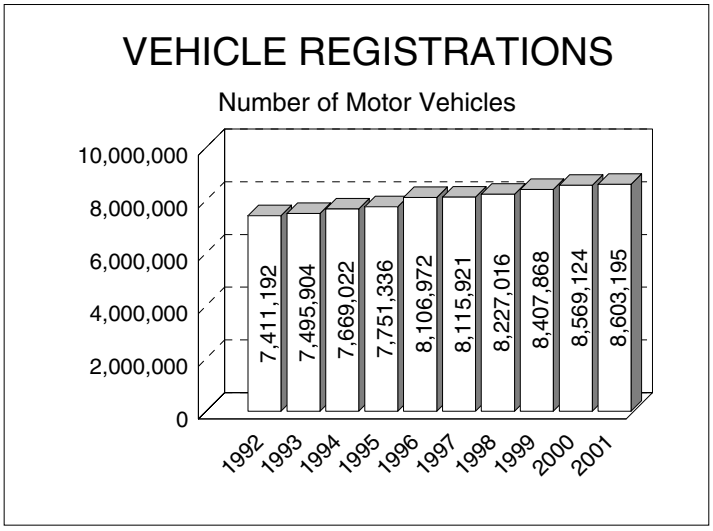
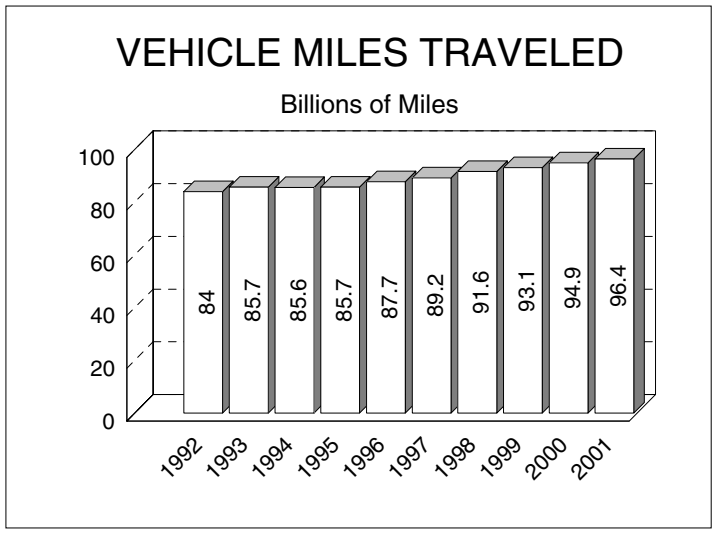
Historical Information

10-, 5-, and 1-year

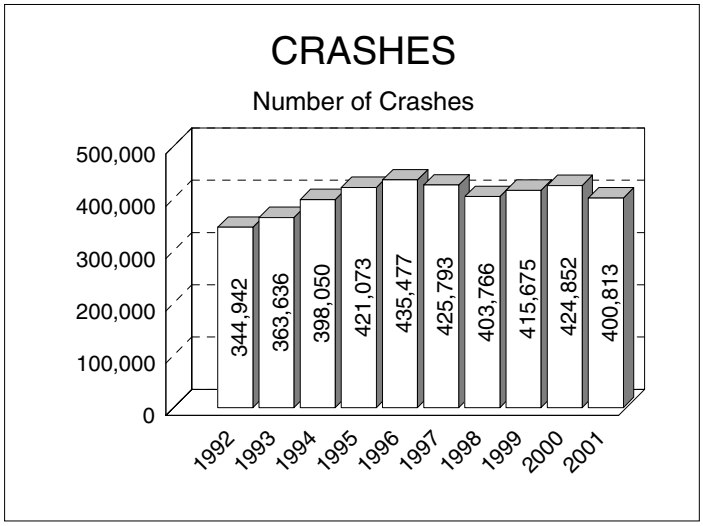
10 YEAR



Vehicle registrations have been increasing steadily since 1992, reaching 8,603,195 in 2001.

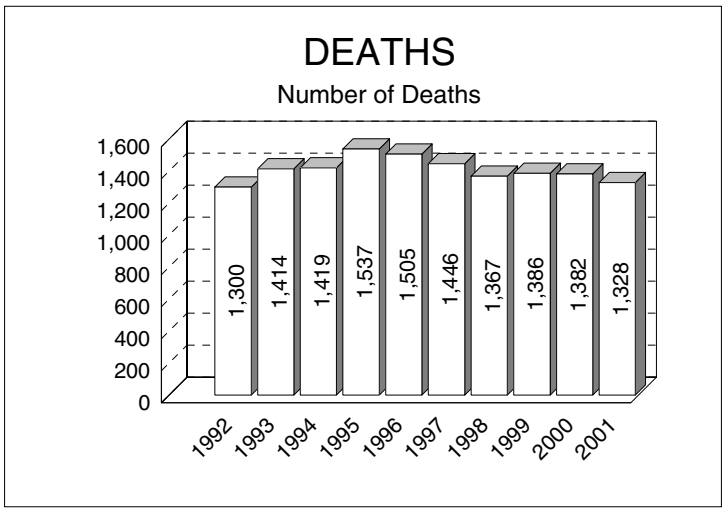


Vehicle miles of travel have increased 14.8 percent since 1992, reaching 96.4 billion miles in 2001.

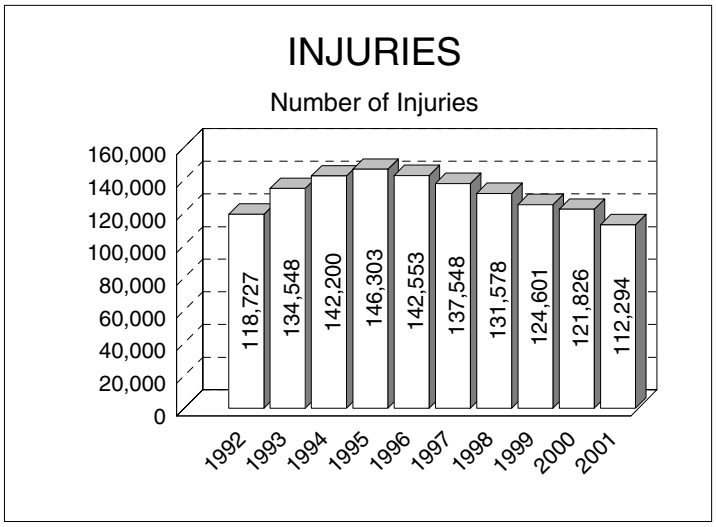


There were 400,813 total crashes statewide in 2001, a 5.7 percent decrease from 2000.

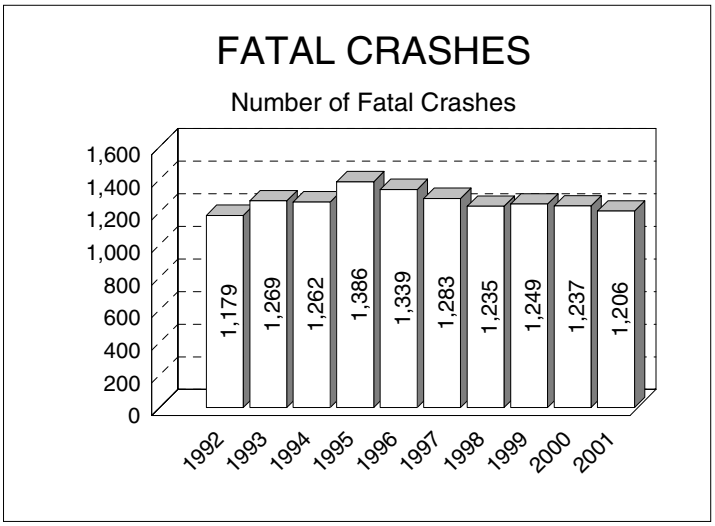
10 YEAR TRENDS (continued)



In 2001, 1,328 people died in motor vehicle crashes, a decrease of 3.9 percent from 2000.

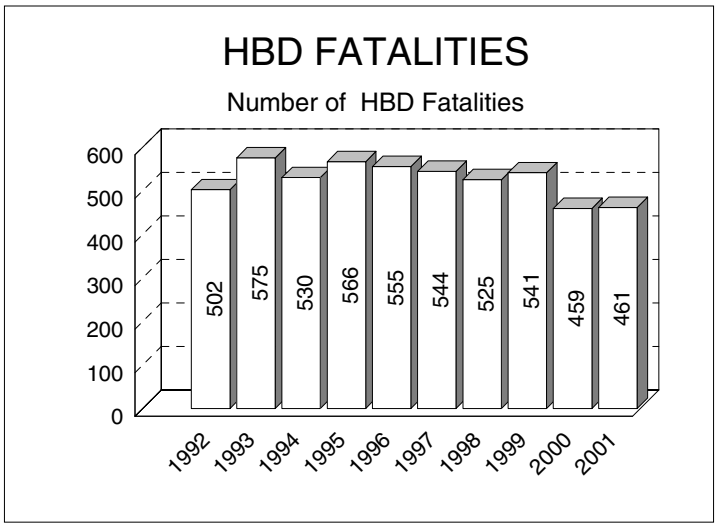


112,294 people received nonfatal injuries in Michigan motor vehicle crashes in 2001, down 7.8 percent from 121,826 in 2000.

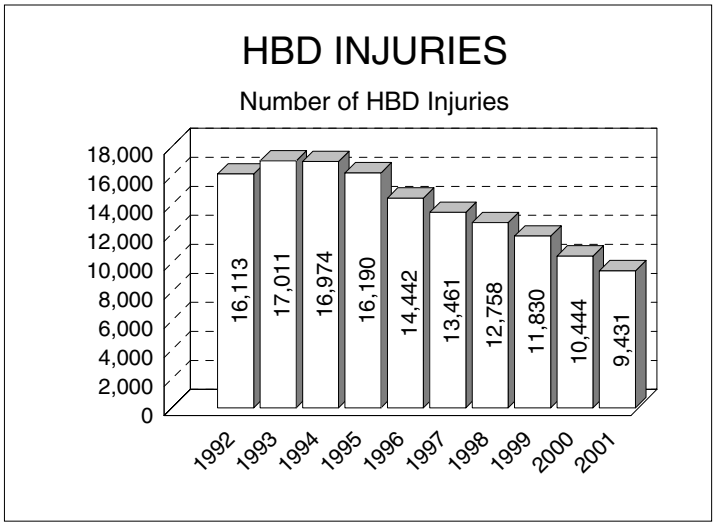


In 2001, there were 1,206 fatal crashes, down 13.0 percent from the high of 1,386 in 1995.

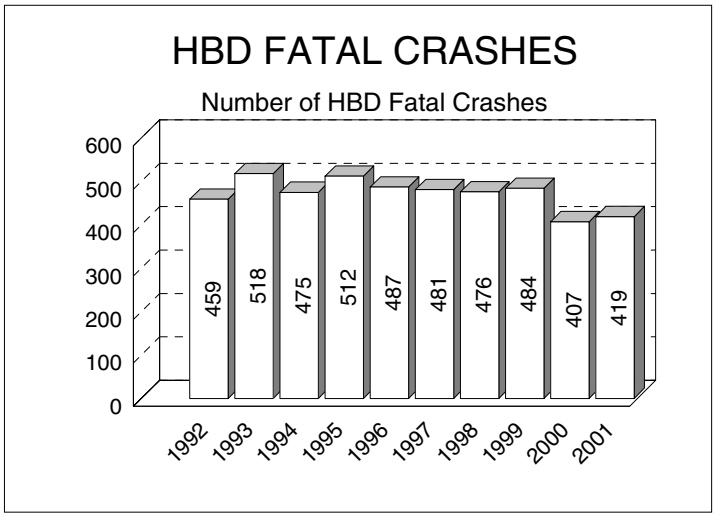
10 YEAR



Deaths in alcohol-related crashes have decreased over the last ten years. There were 461 HBD fatalities in 2001.



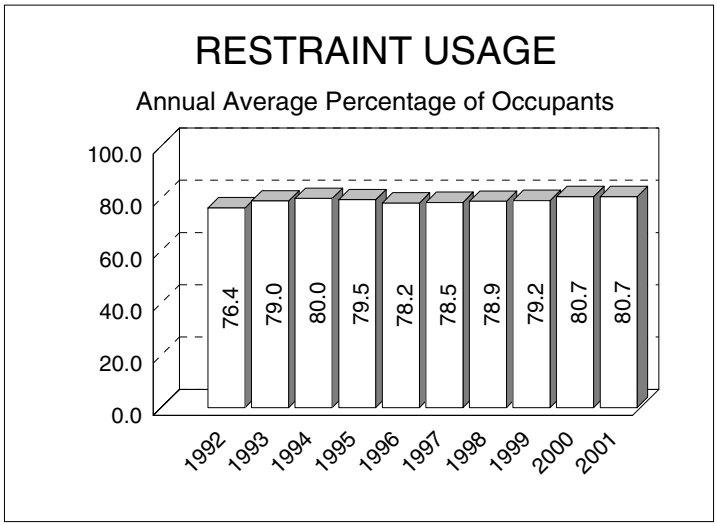
Mirroring the trend in deaths, HBD injuries have decreased over the last ten years. There were 9,431 injuries in 2001.



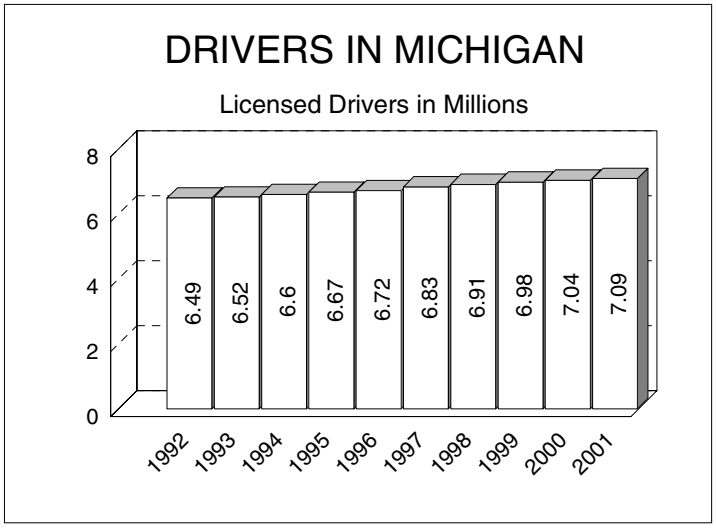
Alcohol involvement in fatal crashes has decreased 19.1 percent from the highest count of 518 in 1993. In 2001, there were 419 HBD fatal crashes.

Note: The 2001 information provided for alcohol contains data for alcohol-related crashes only. This figure DOES NOT include the combined number for alcohol- and drug-related crashes as had been reported prior to 2000.

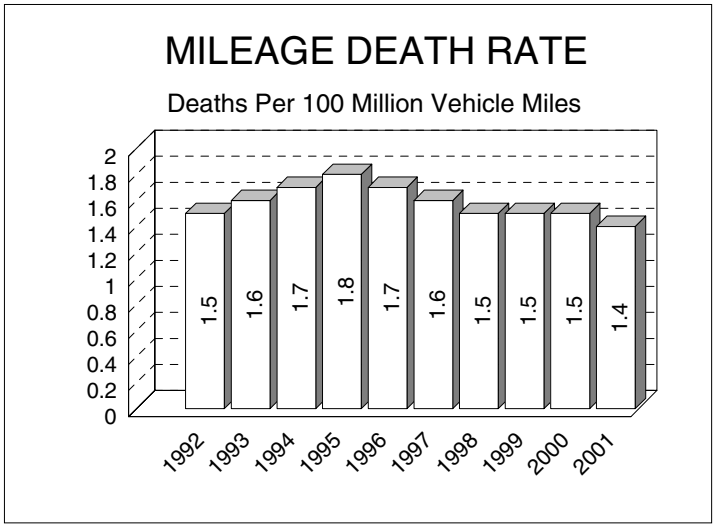
10 YEAR TRENDS (continued)



The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes increased dramatically following implementation of Michigan's safety belt use law in July 1985. The ten-year average percentage is 79.1.



There were 7,090,899 licensed drivers on Michigan roadways in 2001.

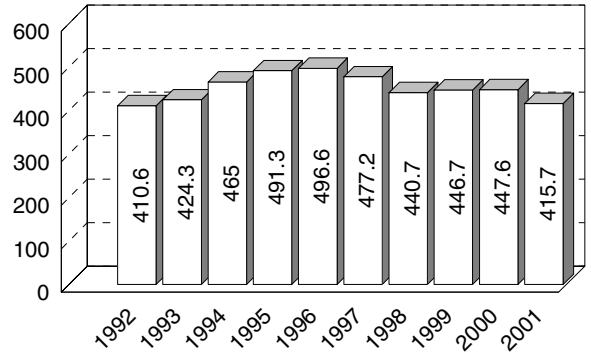


The 1.4 death rate in 2001 is a 6.7 percent decrease from 1992.

10 YEAR

TOTAL CRASH RATE

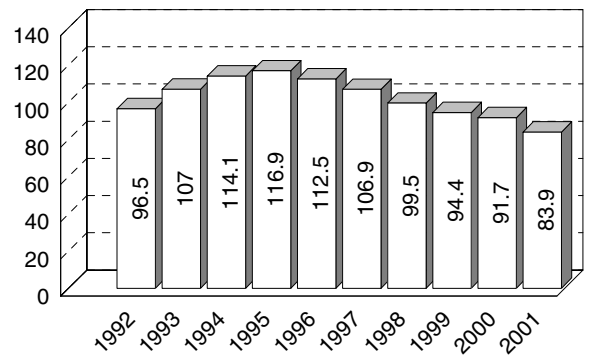
All Crashes Per 100 Million Vehicle Miles



The total crash rate peaked in 1996 at 496.6, then decreased by 16.3 percent to 415.7 in 2001.

PERSONAL INJURY CRASH RATE

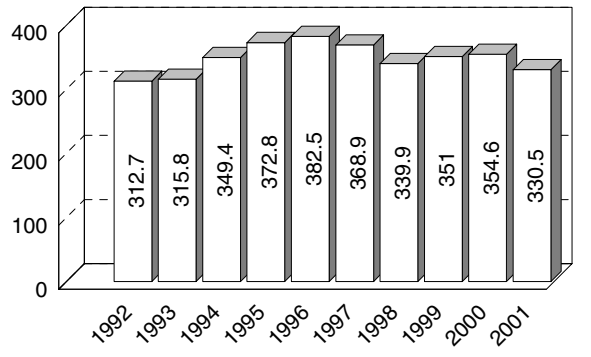
Injury Crashes Per 100 Million Vehicle Miles



The personal injury crash rate has been steadily decreasing since 1995. The 83.9 personal injury crash rate in 2001 is a 8.5 percent decrease from 2000, and a 13.1 percent decrease from 1992.

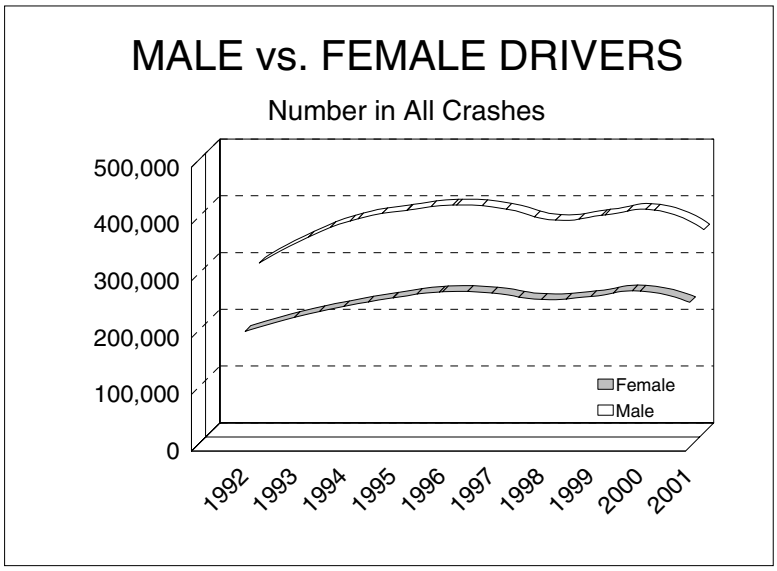
PROPERTY DAMAGE CRASH RATE

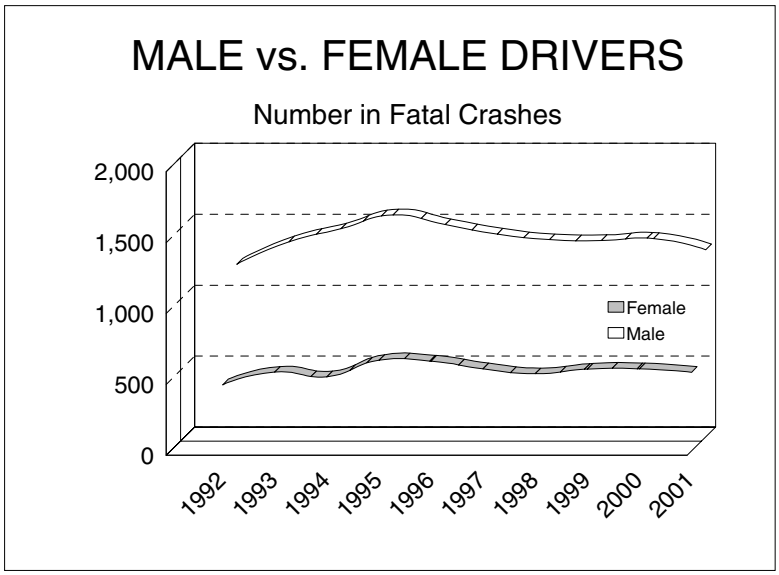
Property Damage Crashes Per 100 Million Vehicle Miles

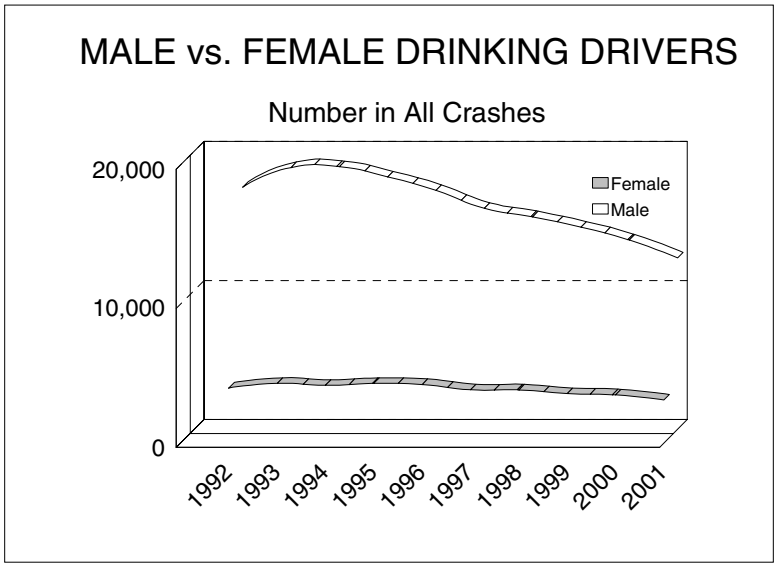


The 330.5 property damage crash rate in 2001 is a 6.8 percent decrease from 2000, and a 5.7 percent increase from 1992.

10 YEAR TRENDS (continued)







10
YEAR

DRIVERS IN ALL CRASHES		
	Male	Female
1992	299,006	203,795
1993	344,859	228,287
1994	377,212	247,333
1995	392,103	262,577
1996	401,350	273,361
1997	394,044	271,131
1998	374,505	259,843
1999	383,733	264,985
2000	392,347	274,675
2001	357,684	254,636

The crash data collection form (UD-10) was changed in 1992. Prior to 1992, drivers whose gender was not identified were coded as male. 11 percent of all drivers were coded as unknown gender in 2001.

DRIVERS IN FATAL CRASHES		
	Male	Female
1992	1,219	468
1993	1,376	557
1994	1,468	524
1995	1,566	640
1996	1,497	634
1997	1,430	580
1998	1,391	545
1999	1,385	578
2000	1,399	580
2001	1,320	556

Male drivers make up 66.6 percent of all drivers in fatal crashes.

Female driver involvement in fatal crashes generally follows overall fatal crash trends.

DRINKING DRIVERS IN ALL CRASHES		
	Male	Female
1992	17,414	3,976
1993	18,831	4,308
1994	18,889	4,163
1995	18,153	4,300
1996	17,186	4,225
1997	15,901	3,842
1998	15,280	3,833
1999	14,541	3,569
2000	13,609	3,474
2001	12,331	3,112

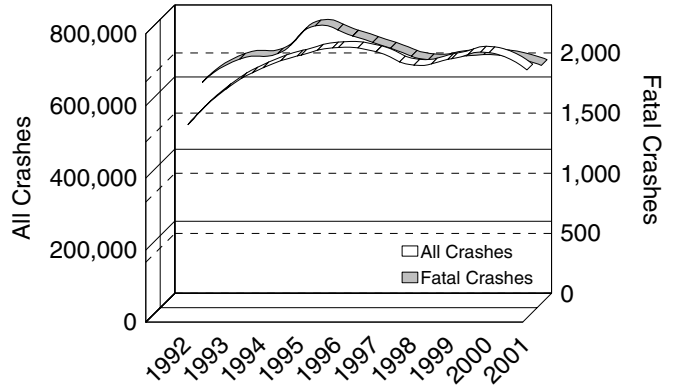
Note: The 2001 information provided for alcohol contains data for alcohol-related crashes only. This figure DOES NOT include the combined number for alcohol- and drug-related crashes as had been reported prior to 2000.

Males drivers have always accounted for the majority of all drinking drivers.

10 YEAR TRENDS (continued)

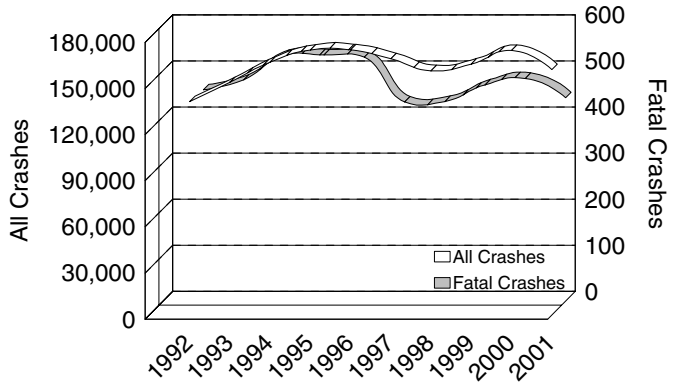
ALL DRIVERS

Number in All and Fatal Crashes



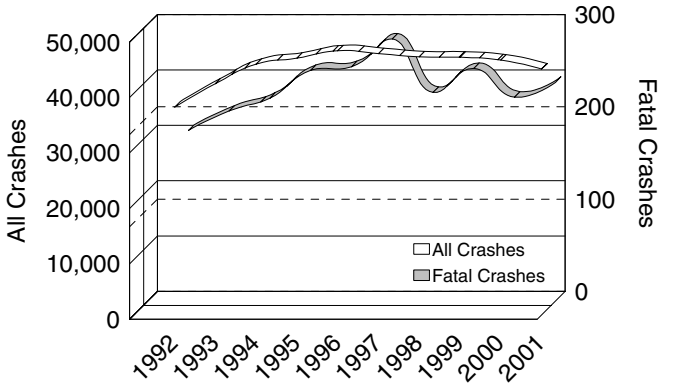
TEEN/YOUNG ADULT DRIVERS

Age 16-24: Number in All and Fatal Crashes



ELDERLY DRIVERS

Age 65-101: Number in All and Fatal Crashes



10 YEAR

ALL DRIVERS		
	All Crashes	Fatal Crashes
1992	536,279	1,841
1993	633,930	2,035
1994	693,575	2,078
1995	729,050	2,311
1996	750,103	2,226
1997	737,939	2,124
1998	701,056	2,029
1999	718,639	2,061
2000	735,664	2,062
2001	687,836	1,981

Driver involvement in all crashes increased 28.3 percent over the ten-year period.

Driver involvement in fatal crashes increased 7.6 percent over the ten-year period.

TEEN/YOUNG ADULT DRIVERS		
	All Crashes	Fatal Crashes
1992	138,781	458
1993	151,284	480
1994	164,421	533
1995	172,373	534
1996	172,442	529
1997	166,693	432
1998	158,887	433
1999	163,239	469
2000	172,059	483
2001	159,597	441

Teen/young adult drivers (age 16-24) represent 14.9 percent of the licensed drivers in 2001.

The number of teen/young adult drivers in all crashes has increased by 15.0 percent since 1992. Their involvement in fatal crashes decreased 3.7 percent during the same time period.

ELDERLY DRIVERS		
	All Crashes	Fatal Crashes
1992	37,539	185
1993	41,753	206
1994	45,280	220
1995	46,371	250
1996	47,695	254
1997	47,190	284
1998	46,582	226
1999	46,519	252
2000	46,023	221
2001	44,393	237

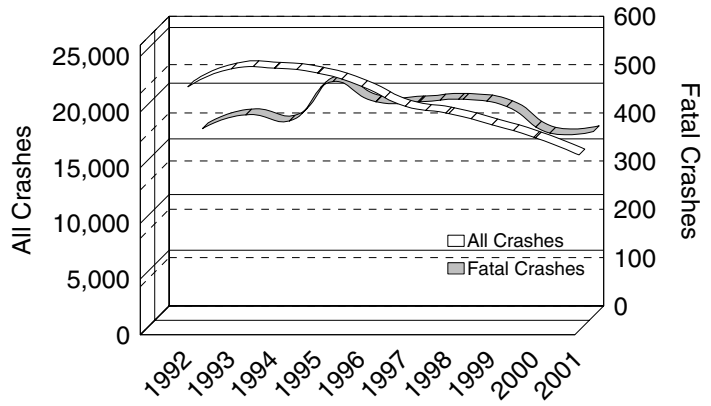
Elderly drivers (age 65-101) represent 14.2 percent of the licensed drivers in 2001.

The number of drivers age 65 and older in all crashes has increased 18.3 percent since 1992. Their involvement in fatal crashes increased 28.1 percent during the same time period.

10 YEAR TRENDS (continued)

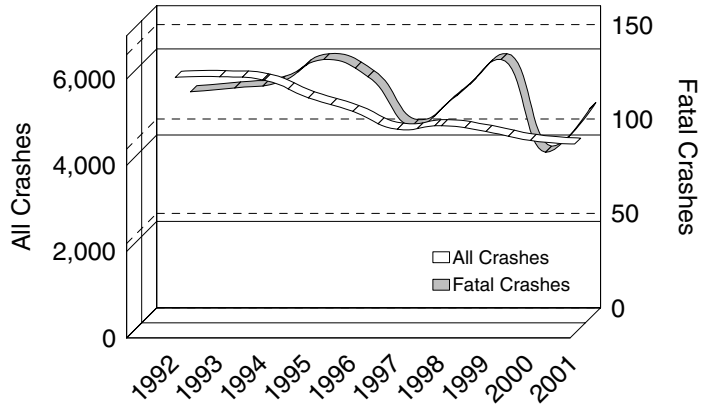
ALL DRINKING DRIVERS

Number in All and Fatal Crashes



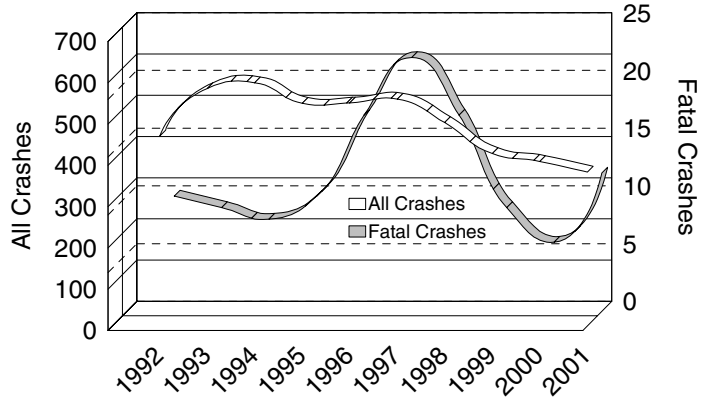
TEEN/YOUNG ADULT DRINKING DRIVERS

Age 16-24: Number in All and Fatal Crashes



ELDERLY DRINKING DRIVERS

Age 65-101: Number in All and Fatal Crashes



10
YEAR

DRINKING DRIVERS		
	All Crashes	Fatal Crashes
1992	21,879	388
1993	23,500	417
1994	23,546	404
1995	23,097	486
1996	21,919	444
1997	20,139	444
1998	19,483	449
1999	18,469	434
2000	17,295	379
2001	15,760	382

Drinking driver involvement in all crashes continues to decrease. Drinking driver involvement in fatal crashes increased by 0.8 percent from 2000.

TEEN/YOUNG ADULT DRINKING DRIVERS		
	All Crashes	Fatal Crashes
1992	5,934	120
1993	5,947	122
1994	5,868	125
1995	5,461	137
1996	5,142	128
1997	4,731	102
1998	4,812	118
1999	4,676	137
2000	4,470	88
2001	4,386	111

Following the trend for all drinking drivers, the number of teen/young adult drinking drivers in all crashes continues to decrease, and their involvement in fatal crashes increased by 26.1 percent from 2000.

ELDERLY DRINKING DRIVERS		
	All Crashes	Fatal Crashes
1992	461	10
1993	576	9
1994	590	8
1995	540	10
1996	541	17
1997	550	22
1998	493	17
1999	418	9
2000	399	6
2001	373	12

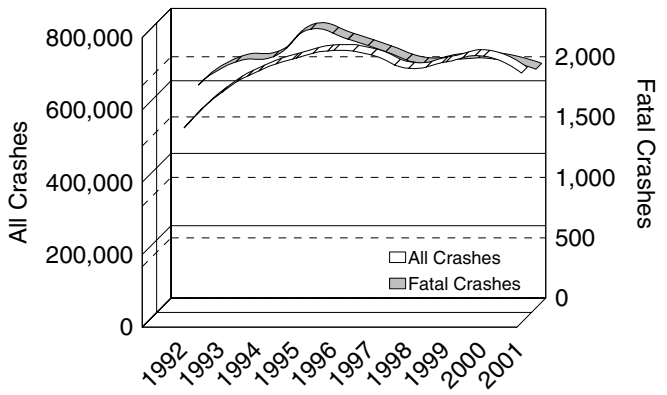
Following the trend for all drinking drivers, the number of elderly drinking drivers in all crashes continues to decrease, and their involvement in fatal crashes increased by 100.0 percent from 2000.

Note: The 2001 information provided for alcohol contains data for alcohol-related crashes only. This figure DOES NOT include the combined number for alcohol- and drug-related crashes as had been reported prior to 2000.

10 YEAR TRENDS (continued)

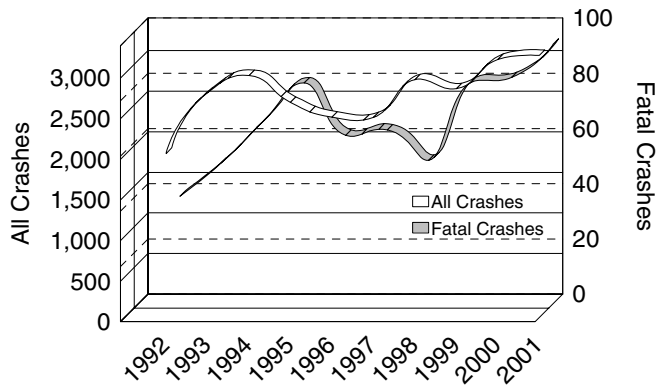
MOTOR VEHICLES

Number in All and Fatal Crashes



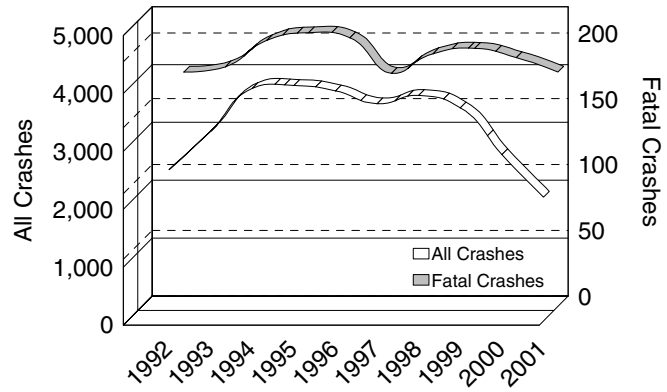
MOTORCYCLES

Number in All and Fatal Crashes



PEDESTRIANS

Number in All and Fatal Crashes



10 YEAR

MOTOR VEHICLES		
	All Crashes	Fatal Crashes
1992	538,025	1,851
1993	635,711	2,042
1994	695,423	2,084
1995	730,952	2,313
1996	751,804	2,229
1997	739,538	2,126
1998	702,680	2,029
1999	720,393	2,066
2000	736,219	2,062
2001	689,122	1,981

There were 1,981 motor vehicles involved in fatal crashes in 2001, down 3.9 percent from 2000.

MOTORCYCLES		
	All Crashes	Fatal Crashes
1992	2,022	39
1993	2,768	51
1994	2,982	66
1995	2,651	80
1996	2,468	61
1997	2,465	63
1998	2,931	52
1999	2,820	80
2000	3,180	82
2001	3,228	94

The number of motorcycles involved in fatal crashes has fluctuated over the ten-year period with a high of 94 in 2001.

PEDESTRIANS		
	All Crashes	Fatal Crashes
1992	2,609	178
1993	3,275	182
1994	4,014	202
1995	4,064	208
1996	3,971	204
1997	3,749	177
1998	3,891	192
1999	3,677	196
2000	2,868	189
2001	2,135	178

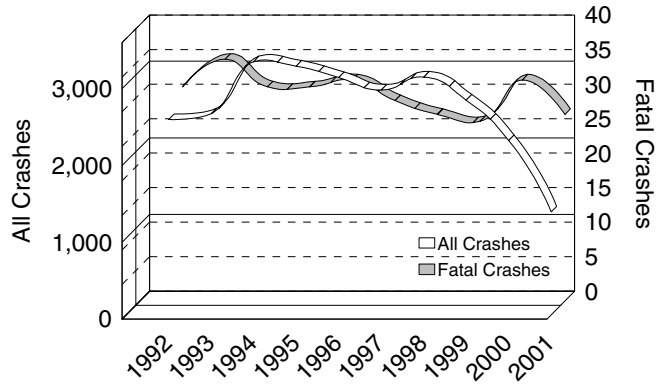
Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

There were 178 pedestrians involved in fatal crashes in 2001, down 5.8 percent from 2000.

10 YEAR TRENDS (continued)

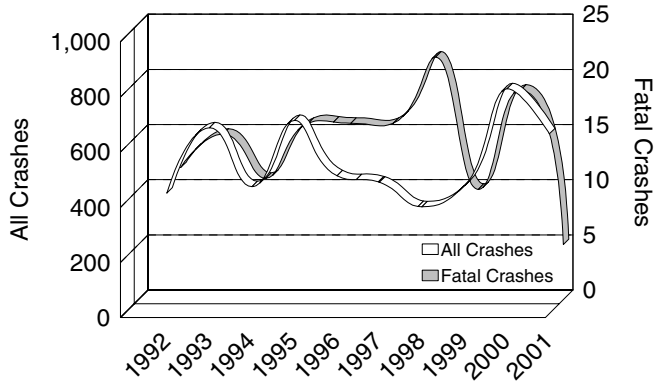
BICYCLES

Number in All and Fatal Crashes



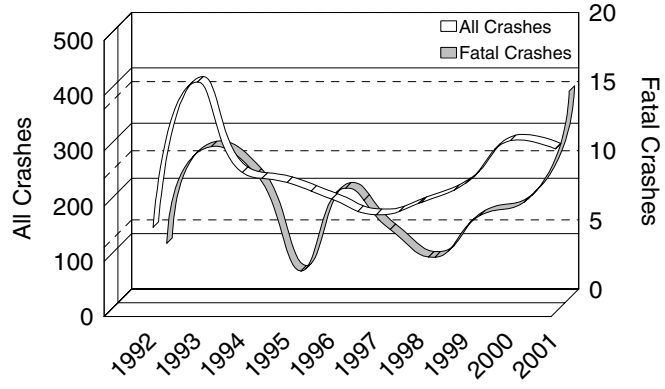
SNOWMOBILES on roadway

Number in All and Fatal Crashes



ORV/ATV's on roadway

Number in All and Fatal Crashes



10 YEAR

BICYCLES		
	All Crashes	Fatal Crashes
1992	2,544	31
1993	2,620	35
1994	3,298	31
1995	3,239	31
1996	3,091	32
1997	2,929	29
1998	3,097	27
1999	2,797	26
2000	2,271	32
2001	1,342	27

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

There were 27 bicycles involved in fatal crashes in 2001, down 15.6 percent from 2000.

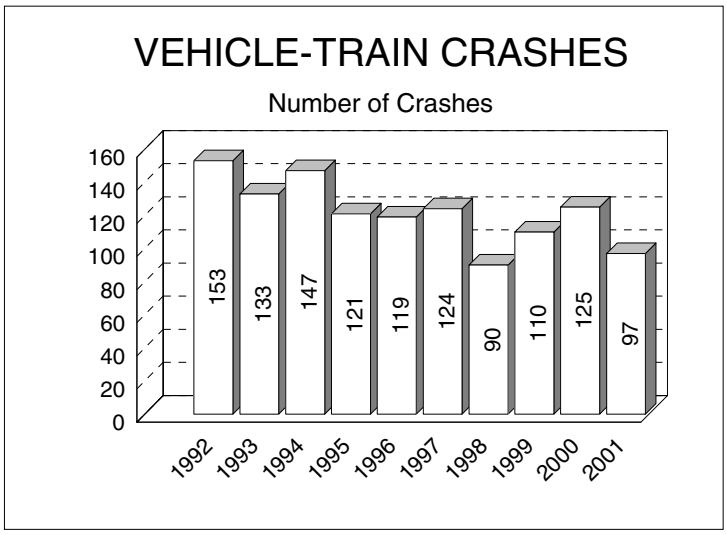
SNOWMOBILES on Michigan roadways		
	All Crashes	Fatal Crashes
1992	437	12
1993	673	15
1994	460	11
1995	700	16
1996	499	16
1997	476	16
1998	387	22
1999	463	10
2000	815	19
2001	651	5

There were 5 snowmobiles involved in fatal crashes on Michigan public roadways in 2001, a ten-year low.

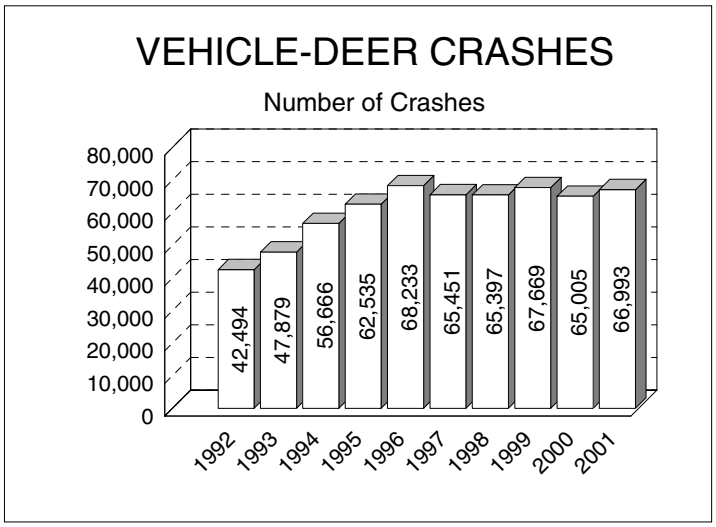
ORV/ATV's on Michigan roadways		
	All Crashes	Fatal Crashes
1992	154	4
1993	417	11
1994	253	9
1995	235	2
1996	205	8
1997	177	5
1998	199	3
1999	234	6
2000	311	7
2001	296	15

There were 15 ORV/ATV's involved in fatal crashes on Michigan public roadways in 2001, a ten-year high.

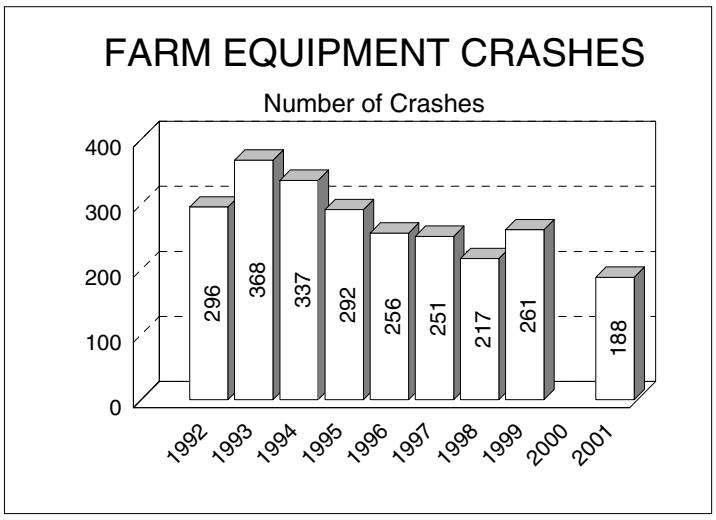
10 YEAR TRENDS (continued)



97 vehicle-train crashes occurred in 2001, a decrease of 36.6 percent in the ten-year period.



There has been a 57.7 percent rise from 42,494 vehicle-deer crashes in 1992 to 66,993 in 2001.

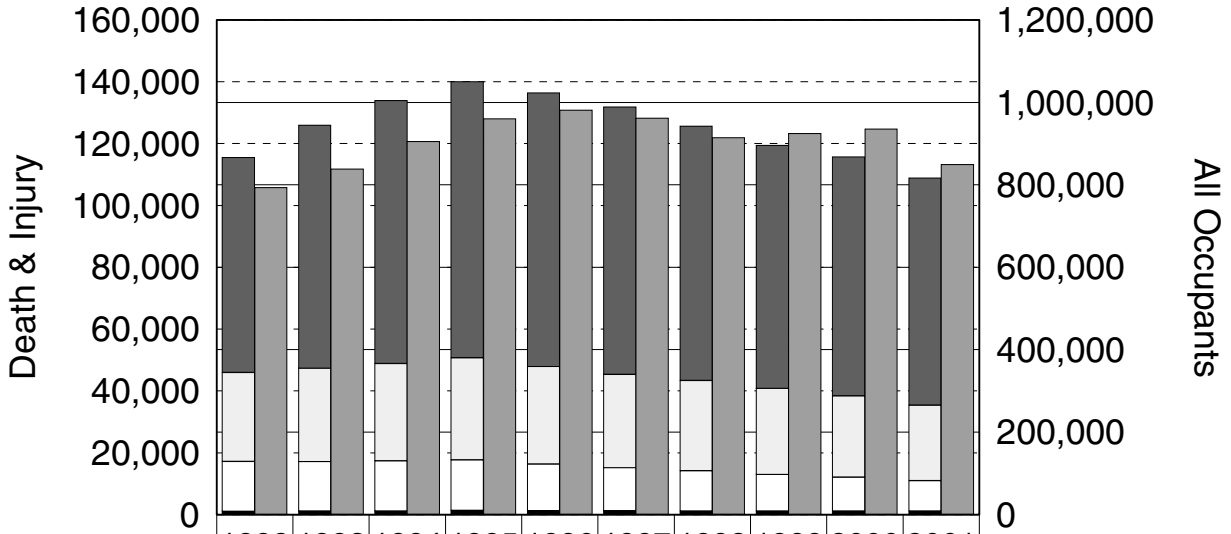


Data not available for calendar year 2000 farm equipment crashes. Please refer to last year's book for details.

The 188 farm equipment crashes in 2001 marks a 48.9 percent decrease from the ten-year high of 368 farm equipment crashes in 1993.

10
YEAR

DEATH AND INJURY PER CRASH-INVOLVED OCCUPANT

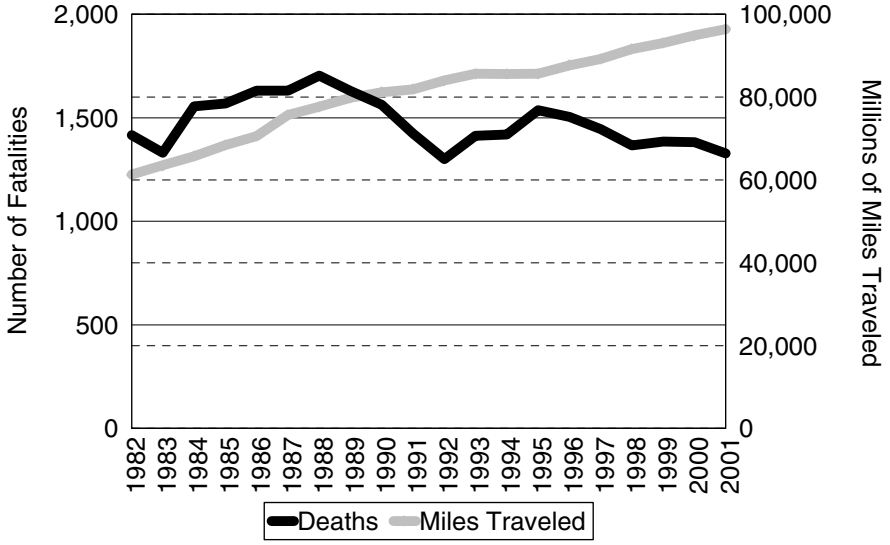


	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
All Occupants	793,055	838,445	904,876	960,537	981,260	961,595	914,248	924,476	935,411	849,316
C - Injured	69,542	78,563	85,107	89,289	88,570	86,559	82,218	78,565	77,258	73,396
B - Injured	28,798	30,226	31,476	33,070	31,502	30,209	29,236	27,856	26,335	24,442
A - Injured	16,043	15,940	16,184	16,355	15,080	13,890	12,989	11,789	10,918	9,852
K - Killed	1,105	1,186	1,191	1,314	1,273	1,246	1,166	1,183	1,174	1,136

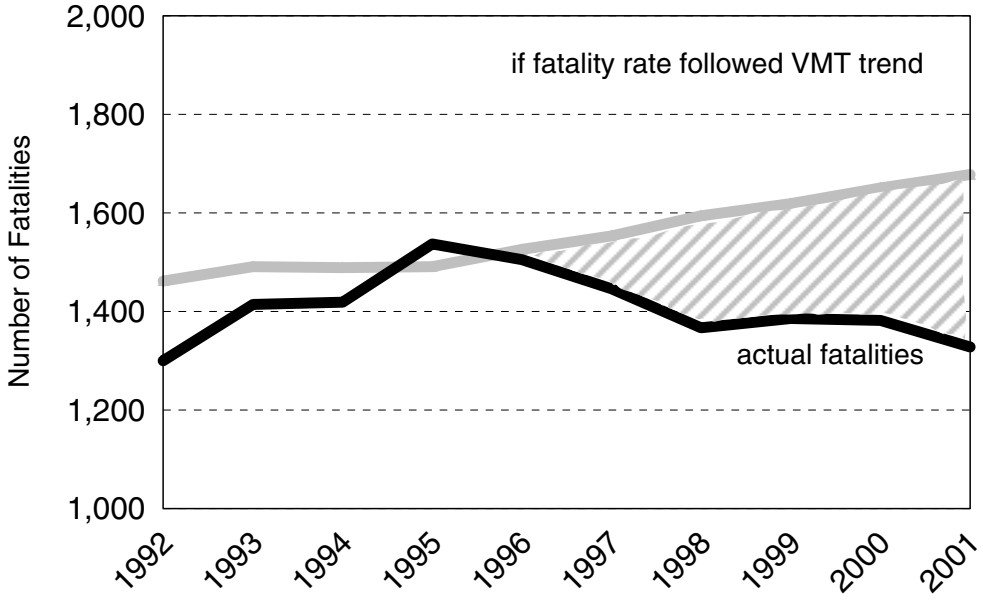
The proportion of death and injury to crash-involved occupants has decreased over the last ten years. In 2001, 1,136 occupants of motor vehicles were fatally injured, 9,852 suffered an A (incapacitating) injury, 24,442 sustained a B (nonincapacitating) injury, and 73,396 sustained a C (possible) injury.

10 YEAR

FATALITIES AND VMT TRENDS



10 Year Highlight

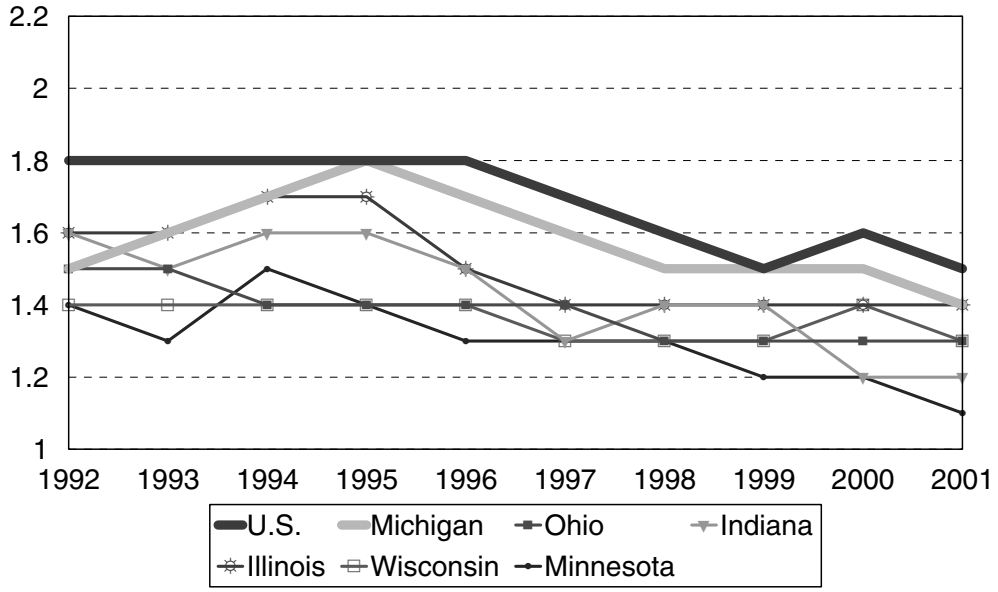


In the 1980's, the number of fatalities had been steadily increasing, following the VMT trend. A reversal in the fatality rate began in 1989, with actual fatalities remaining near or below the VMT trend. A projection of losses that would have been incurred if the fatality rate had continued to follow the VMT trend is provided above.

10 YEAR

MILEAGE DEATH RATES 1992 - 2001

Comparison - Michigan to U.S. and Surrounding States



The chart above shows the reduction in mileage death rates (motor vehicle traffic deaths per 100,000,000 vehicle miles) for Michigan, its neighboring states and the U.S. over the last ten years.

	U.S.	Michigan	Ohio	Indiana	Illinois	Wisconsin	Minnesota
1992	1.8	1.5	1.5	1.6	1.6	1.4	1.4
1993	1.8	1.6	1.5	1.5	1.6	1.4	1.3
1994	1.8	1.7	1.4	1.6	1.7	1.4	1.5
1995	1.8	1.8	1.4	1.6	1.7	1.4	1.4
1996	1.8	1.7	1.4	1.5	1.5	1.4	1.3
1997	1.7	1.6	1.4	1.3	1.4	1.3	1.3
1998	1.6	1.5	1.3	1.4	1.4	1.3	1.3
1999	1.5	1.5	1.3	1.4	1.4	1.3	1.2
2000	1.5	1.5	1.3	1.2	1.4	1.4	1.2
2001	1.5	1.4	1.3	1.2	1.4	1.3	1.1

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

10
YEAR

MICHIGAN AND SURROUNDING STATES
COMPARISON OF FATALITIES AND VMT

Year	U.S. Persons Killed	Michigan Persons Killed	Ohio Persons Killed	Indiana Persons Killed	Illinois Persons Killed	Wisconsin Persons Killed	Minnesota Persons Killed
1992	40,982	1,300	1,440	901	1,384	645	581
1993	41,893	1,414	1,484	901	1,392	703	538
1994	42,700	1,419	1,368	974	1,554	706	644
1995	43,900	1,537	1,357	960	1,586	739	597
1996	43,300	1,505	1,395	982	1,477	759	576
1997	43,200	1,446	1,439	936	1,393	721	600
1998	41,200	1,367	1,423	978	1,393	709	650
1999	41,300	1,386	1,430	1,017	1,456	744	626
2000	41,945	1,382	1,361	875	1,418	801	625
2001	42,116	1,328	1,379	895	1,414	764	568

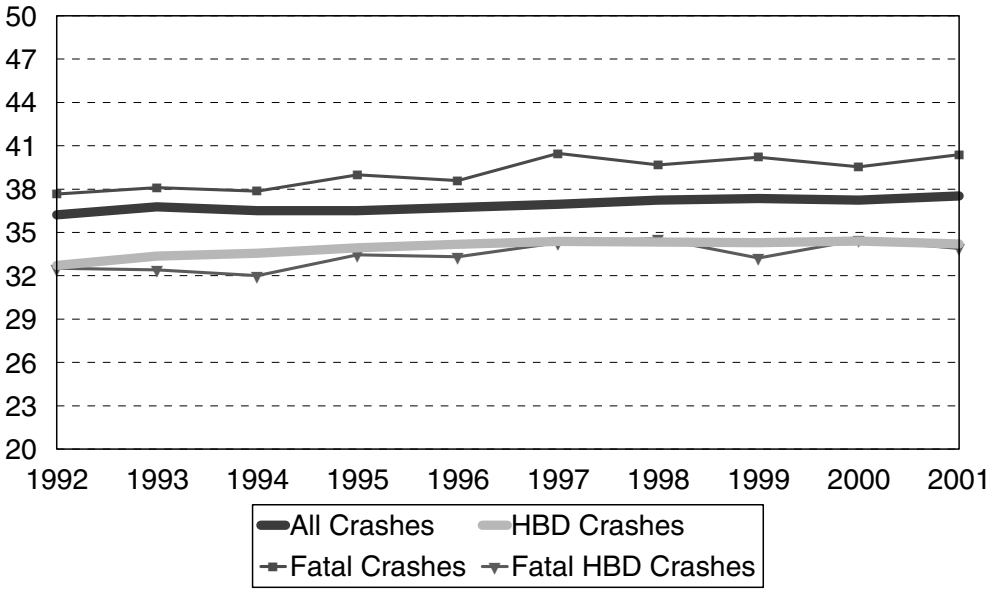
The U.S. Department of Transportation estimates a national increase in traffic fatalities of 0.4 percent between 2000 (41,945) and 2001 (42,116).

Year	U.S. VMT	Michigan VMT	Ohio VMT	Indiana VMT	Illinois VMT	Wisconsin VMT	Minnesota VMT
1992	2,240	84.0	95.2	57.1	87.9	47.5	41.3
1993	2,289	85.7	97.5	60.5	89.8	48.8	42.3
1994	2,347	85.6	99.0	62.1	92.1	50.3	43.4
1995	2,405	85.7	99.7	62.0	94.3	51.4	44.1
1996	2,467	87.7	102.8	66.0	96.9	52.6	45.2
1997	2,531	89.2	104.8	70.4	98.7	53.7	46.9
1998	2,618	91.6	106.0	70.7	100.9	56.0	48.5
1999	2,679	93.1	106.4	71.5	101.8	57.0	50.7
2000	2,750	94.9	106.5	72.3	102.9	57.3	52.4
2001	2,778	96.4	107.0	74.1	103.1	57.3	53.2

VMT described in billions of miles

10
YEAR

AVERAGE AGE OF DRIVERS IN CRASHES 1992 - 2001

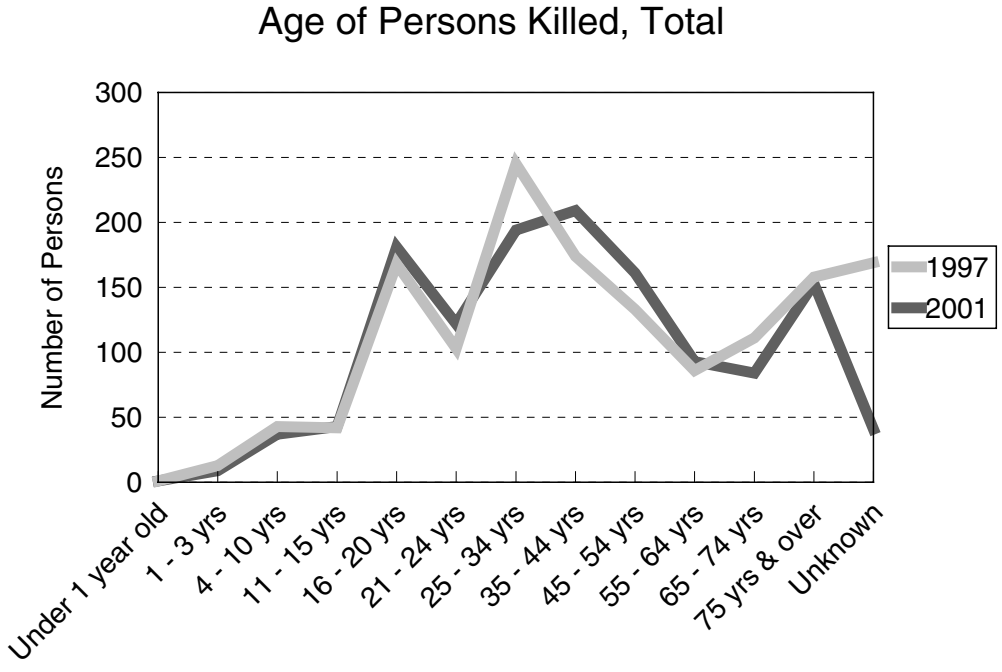


Reflecting the demographic trend of increasing age in the general population, the average age of crash-involved drivers has also increased. An aging driving population has implications for law enforcement prioritizing, highway design, traffic signing considerations, and Emergency Medical System procedures.

5
YEAR

TREND DATA FOR FATALITIES

TREND DATA FOR FATALITIES	1997	1998	1999	2000	2001
Age of Persons Killed, Total					
Under 1 year old	1	3	4	3	1
1 - 3 years	13	14	19	12	9
4 - 10 years	43	44	34	33	37
11 - 15 years	42	46	48	57	43
16 - 20 years	168	171	153	199	181
21 - 24 years	103	117	129	107	122
25 - 34 years	245	219	215	217	194
35 - 44 years	174	213	231	196	209
45 - 54 years	133	166	172	155	161
55 - 64 years	86	99	100	129	93
65 - 74 years	111	99	93	101	84
75 years and over	158	147	150	140	153
Unknown	169	29	38	33	41
Totals	1,446	1,367	1,386	1,382	1,328



The chart above shows the total number of deaths in motor vehicle crashes in Michigan by age, comparing 1997 with 2001.

5
YEAR

TREND DATA FOR FATALITIES	1997	1998	1999	2000	2001
Age of Drivers Involved in Fatal Crashes					
13 years and under	1	2	2	0	3
14 years	4	2	2	3	0
15 years	7	10	7	8	9
16 years	58	42	37	49	35
17 years	43	53	55	66	55
18 years	72	52	63	69	50
19 years	52	61	59	63	73
20 years	39	54	51	53	51
21 - 24 years	168	171	204	183	177
25 - 34 years	463	410	378	398	351
35 - 44 years	347	374	376	317	347
45 - 54 years	239	261	264	278	275
55 - 64 years	156	149	145	178	140
65 - 69 years	72	58	56	50	50
70 - 74 years	64	52	65	60	51
75 - 79 years	64	55	57	41	55
80 - 84 years	51	39	42	42	50
85 - 89 years	30	16	22	24	24
90 years and over	3	6	10	4	7
Unknown	191	162	166	176	178
Totals	2,124	2,029	2,061	2,062	1,981
Age of Drivers Involved in Single Vehicle Fatal Crashes					
13 years and under	0	1	2	0	2
14 years	3	2	2	3	0
15 years	4	4	2	3	4
16 years	23	12	12	15	11
17 years	18	18	21	25	13
18 years	30	19	19	26	18
19 years	14	24	18	20	29
20 years	10	21	21	15	24
21 - 24 years	46	65	72	74	74
25 - 34 years	149	127	118	127	106
35 - 44 years	87	104	108	82	98
45 - 54 years	54	75	73	67	71
55 - 64 years	35	35	24	40	36
65 - 69 years	19	17	12	8	12
70 - 74 years	12	9	9	11	13
75 - 79 years	10	8	9	11	11
80 - 84 years	7	9	4	4	11
85 - 89 years	3	0	6	0	3
90 years and over	2	0	1	0	0
Unknown	35	34	39	32	53
Totals	561	584	572	563	589

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

5 YEAR

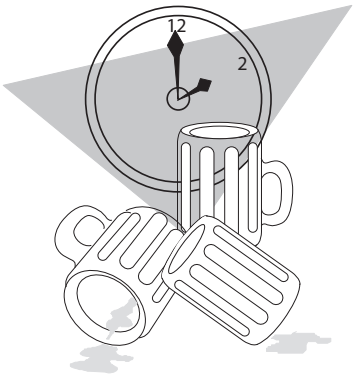
TREND DATA FOR FATALITIES	1997	1998	1999	2000	2001
Age of Bicyclists Killed					
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	0
4 - 10 years	5	6	1	5	4
11 - 15 years	5	5	11	9	2
16 - 20 years	2	0	2	1	3
21 - 24 years	0	1	1	0	0
25 - 34 years	4	4	0	4	1
35 - 44 years	2	5	4	1	7
45 - 54 years	5	3	3	3	4
55 - 64 years	0	0	2	3	2
65 - 74 years	3	1	0	2	1
75 years and over	3	2	1	1	2
Unknown	0	0	0	0	0
Totals	29	27	25	29	26
Age of Pedestrians Killed					
Under 1 year old	0	0	1	0	0
1 - 3 years	1	6	8	6	2
4 - 10 years	16	17	20	11	11
11 - 15 years	9	9	7	10	8
16 - 20 years	10	9	6	8	9
21 - 24 years	8	4	6	9	5
25 - 34 years	27	22	25	11	22
35 - 44 years	32	30	37	45	32
45 - 54 years	26	20	31	31	28
55 - 64 years	6	15	15	12	10
65 - 74 years	17	14	8	12	9
75 years and over	14	25	12	13	23
Unknown	1	1	0	0	1
Totals	167	172	176	168	160
Action of Pedestrians Killed					
Crossing at intersection	14	16	10	21	22
Cross not at intersection	72	80	66	62	47
Getting on/off vehicle	1	1	4	1	2
In road with traffic	19	13	15	19	23
In road against traffic	4	3	9	6	6
Standing or lying in road	13	14	17	15	16
Pushing/working on vehicle	3	1	2	1	3
Other working in road	1	0	0	4	2
Playing in road	3	3	2	0	1
In road for other reason	7	8	12	10	8
Not in road	10	9	20	13	8
Other/Unknown	20	24	19	16	9
Totals	167	172	176	168	147

5 YEAR

FATAL CRASHES AND PERSONS KILLED FOR SELECTED HOLIDAY PERIODS IN MICHIGAN

Revised February 19, 2010

HOLIDAY PERIOD	Fatal Crashes	Persons Killed	SUMMARY 2001
Memorial Day			This table shows traffic death tolls in Michigan for the past five years for the major holiday periods. Based on the *total* **2001** experience, deaths averaged **3.64** per day. Alcohol-related deaths averaged **1.26** per day. Based on the **2001** *holiday period* experience, deaths averaged **4.3** per day. Alcohol-related deaths averaged **2.1** per day.
2001 (3) MON	15 [6]	18 [8]	
2000 (3) MON	18 [11]	18 [11]	
1999 (3) MON	15 [9]	17 [10]	
1998 (3) MON	18 [7]	21 [8]	
1997 (3) MON	14 [8]	16 [9]	
Fourth of July			
2001 (1) THU	10 [4]	10 [4]	
2000 (4) TUE	14 [3]	21 [3]	
1999 (3) SUN	15 [8]	15 [8]	
1998 (3) SAT	15 [9]	16 [10]	
1997 (3) FRI	14 [9]	16 [10]	
Labor Day			
2001 (3) MON	18 [10]	21 [12]	
2000 (3) MON	20 [11]	27 [14]	
1999 (3) MON	18 [12]	21 [14]	
1998 (3) MON	20 [13]	22 [13]	
1997 (3) MON	15 [8]	19 [10]	
Thanksgiving			
2001 (4) THU	11 [7]	12 [8]	
2000 (4) THU	11 [5]	12 [5]	
1999 (4) THU	20 [9]	22 [9]	
1998 (4) THU	19 [10]	22 [10]	
1997 (4) THU	18 [6]	20 [6]	
Christmas			
2001 (4) TUE	10 [2]	10 [2]	
2000 (3) MON	10 [2]	11 [2]	
1999 (3) SAT	12 [6]	16 [6]	
1998 (3) FRI	8 [2]	8 [2]	
1997 (4) THU	11 [3]	13 [3]	
New Years			
2001 (4) TUE	10 [5]	11 [5]	
2000 (3) MON	12 [5]	13 [5]	
1999 (3) SAT	19 [10]	22 [12]	
1998 (3) FRI	12 [2]	12 [2]	
1997 (4) THU	18 [8]	21 [11]	

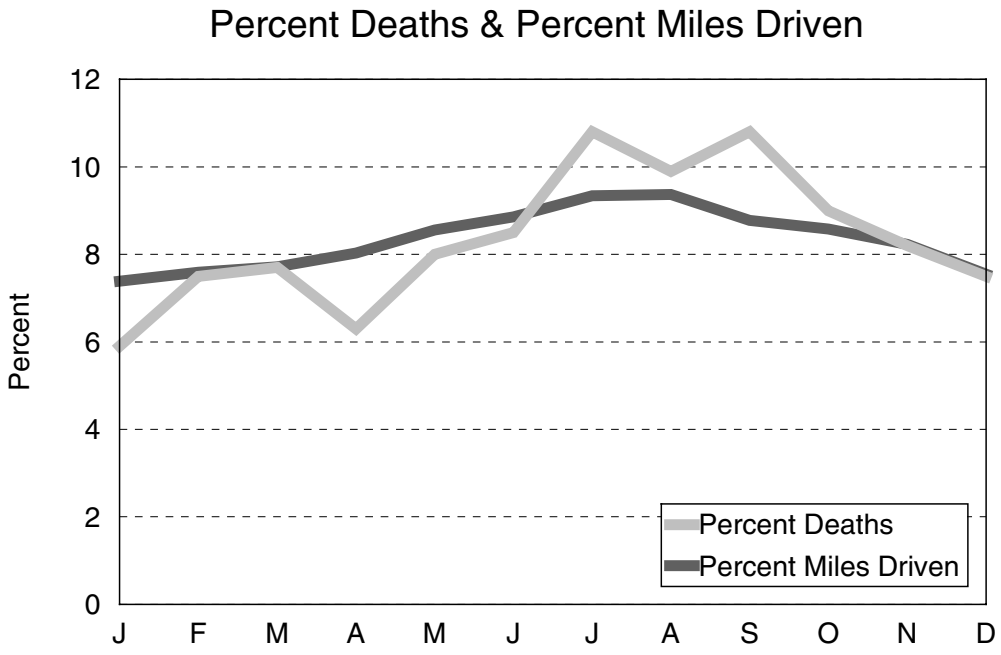


Figures in parentheses in the 1st column show number of full days in each holiday period.
Deaths are for these days plus six hours of the preceding day.
Figures in brackets in the 2nd and 3rd columns show the number of alcohol-related fatal crashes and deaths.

5 YEAR

MOTOR VEHICLE DEATHS AND MILEAGE BY MONTH

Month	TRAFFIC DEATHS					2001 PERCENTAGES	
	1997	1998	1999	2000	2001	Percent Deaths	Percent Miles Driven
January	102	116	76	121	79	5.9	7.39
February	106	71	84	83	99	7.5	7.59
March	85	97	92	70	102	7.7	7.72
April	80	91	98	107	83	6.3	8.03
May	128	113	125	114	106	8.0	8.56
June	140	120	116	136	113	8.5	8.86
July	166	133	128	135	143	10.8	9.34
August	130	116	160	133	131	9.9	9.37
September	128	123	128	135	143	10.8	8.78
October	134	126	129	124	120	9.0	8.58
November	125	117	130	118	109	8.2	8.23
December	122	144	120	106	100	7.5	7.55
Totals	1,446	1,367	1,386	1,382	1,328	100.0	100.0



The above chart shows that the *percent deaths* were lower for the months of January, April, May, and June than for the other months in 2001 when compared to the *percent miles driven*.

1 YEAR

2000 - 2001 SUMMARY TRENDS

- Michigan experienced a **3.9** percent decrease in traffic fatalities, as well as a **7.8** percent decrease in injuries and a **5.7** percent decrease in crashes.
- Deaths among vehicle occupants (drivers and passengers) decreased **4.3** percent.
- Persons sustaining "A" level injuries (the most serious) decreased **11.9** percent.

	2000	2001	% CHANGE
NUMBER OF CRASHES			
Fatal Crashes	1,237	1,206	-2.5
Personal Injury Crashes	87,043	80,922	-7.0
Property Damage Crashes	336,572	318,685	-5.3
Total	**424,852**	**400,813**	**-5.7**
ALCOHOL-INVOLVED CRASHES			
Fatal Crashes	407	419	2.9
Personal Injury Crashes	7,222	6,484	-10.2
Property Damage Crashes	9,686	8,876	-8.4
Total	**17,315**	**15,779**	**-8.9**
ALCOHOL-INVOLVED FATAL CRASHES			
Had Been Drinking (HBD)	407 (32.9)	419 (34.7)	2.9
Had Not (HNBD)/Not Known If Drinking	830 (67.1)	787 (65.3)	-5.2
PERSONS IN CRASHES			
Killed	1,382	1,328	-3.9
Injured	121,826	112,294	-7.8
Not Injured	578,140	530,363	-8.3
Unknown Injury	73,771	78,567	6.5
Total	**775,119**	**722,552**	**-6.8**
PERSONS IN ALCOHOL-INVOLVED CRASHES			
Killed	459	461	0.4
Injured	10,444	9,431	-9.7
Not Injured	16,869	15,141	-10.2
Unknown Injury	2,084	2,020	-3.1
Total	**29,856**	**27,053**	**-9.4**
PERSONS INJURED BY GENDER			
Male	55,902	50,835	-9.1
Female	62,921	57,318	-8.9
Unknown Gender	3,003	4,141	37.9
Total	**121,826**	**112,294**	**-7.8**
PERSONS INJURED BY SEVERITY			
"A" Injury	11,956	10,530	-11.9
"B" Injury	29,090	26,350	-9.4
"C" Injury	80,780	75,414	-6.6
Total	**121,826**	**112,294**	**-7.8**

Note: The 2000 & 2001 information provided for alcohol contains data for alcohol-related crashes only.

1 YEAR

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

2000 - 2001 SUMMARY TRENDS (continued)

	2000	2001	% CHANGE
PERSONS KILLED BY GENDER			
Male	901	852	-5.4
Female	467	452	-3.2
Unknown Gender	14	24	71.4
Total	**1,382**	**1,328**	**-3.9**
PERSONS KILLED			
Driver	729	714	-2.1
Passenger	327	297	-9.2
Pedestrian	168	160	-4.8
Bicyclist	29	26	-10.3
Motorcyclist	78	90	15.4
Farm Equipment	6	3	-50.0
Train Engineer	0	0	---
Snowmobile	17	4	-76.5
ORV/ATV	8	15	87.5
Other/Unknown	20	19	-5.0
Total	**1,382**	**1,328**	**-3.9**
RESTRAINT USE BY DRIVER			
"Reported Restrained" - Killed	346	336	-2.9
"Reported Not Restrained" - Killed	293	290	-1.0
"Reported Restrained" - Injured	69,466	65,720	-5.4
"Reported Not Restrained" - Injured	5,488	4,627	-15.7
RESTRAINT USE BY INJURED PASSENGER			
"Reported Restrained" -Killed	156	133	-14.7
"Reported Not Restrained" - Killed	133	128	-3.8
"Reported Restrained" - Injured	23,793	21,374	-10.2
"Reported Not Restrained" - Injured	4,676	4,114	-12.0
DRIVER AGE 16-19 INVOLVED			
Fatal Crashes	230	200	-13.0
Personal Injury Crashes	19,440	17,920	-7.8
Property Damage Crashes	59,534	54,827	-7.9
Total All Crashes	**79,204**	**72,947**	**-7.9**
Persons Killed	272	230	-15.4
Persons Injured	28,989	26,593	-8.3
DRIVER AGE 65 & OVER INVOLVED			
Fatal Crashes	215	217	0.9
Personal Injury Crashes	10,629	10,113	-4.9
Property Damage Crashes	33,098	32,052	-3.2
Total All Crashes	**43,942**	**42,382**	**-3.6**
Persons Killed	238	233	-2.1
Persons Injured	15,796	14,687	-7.0

1 YEAR

MORE MICHIGAN CRASH FACTS

CRASH FACTS	2000	2001	% Change
Licensed Drivers	7,040,412	7,090,899	0.7
Registered Vehicles in Michigan	8,569,124	8,603,195	0.4
Michigan Population	9,938,444	9,990,817	0.5
Drivers Involved in Crashes	735,664	687,836	-6.5
Vehicles Involved in Crashes	736,219	689,122	-6.4
Injured Occupants Involved in Crashes	935,411	849,316	-9.2
Estimated MV Mileage Traveled (thousands)	94,915,070	96,428,062	1.6
Death Rate Per 100 Million Vehicle Miles	1.5	1.4	-6.7
Fatal Crash Rate Per 100 Million Veh Miles	1.3	1.3	0.0

Vehicle mileage increased 1.6 percent and the death rate per 100 million vehicle miles decreased to 1.4.

2001 COST OF CRASHES IN MICHIGAN

The cost estimate for Michigan crashes in 2001 is **$9,421,709,300**. This estimate is based on the National Safety Council's cost estimating procedures. Average comprehensive costs are based on the following figures:

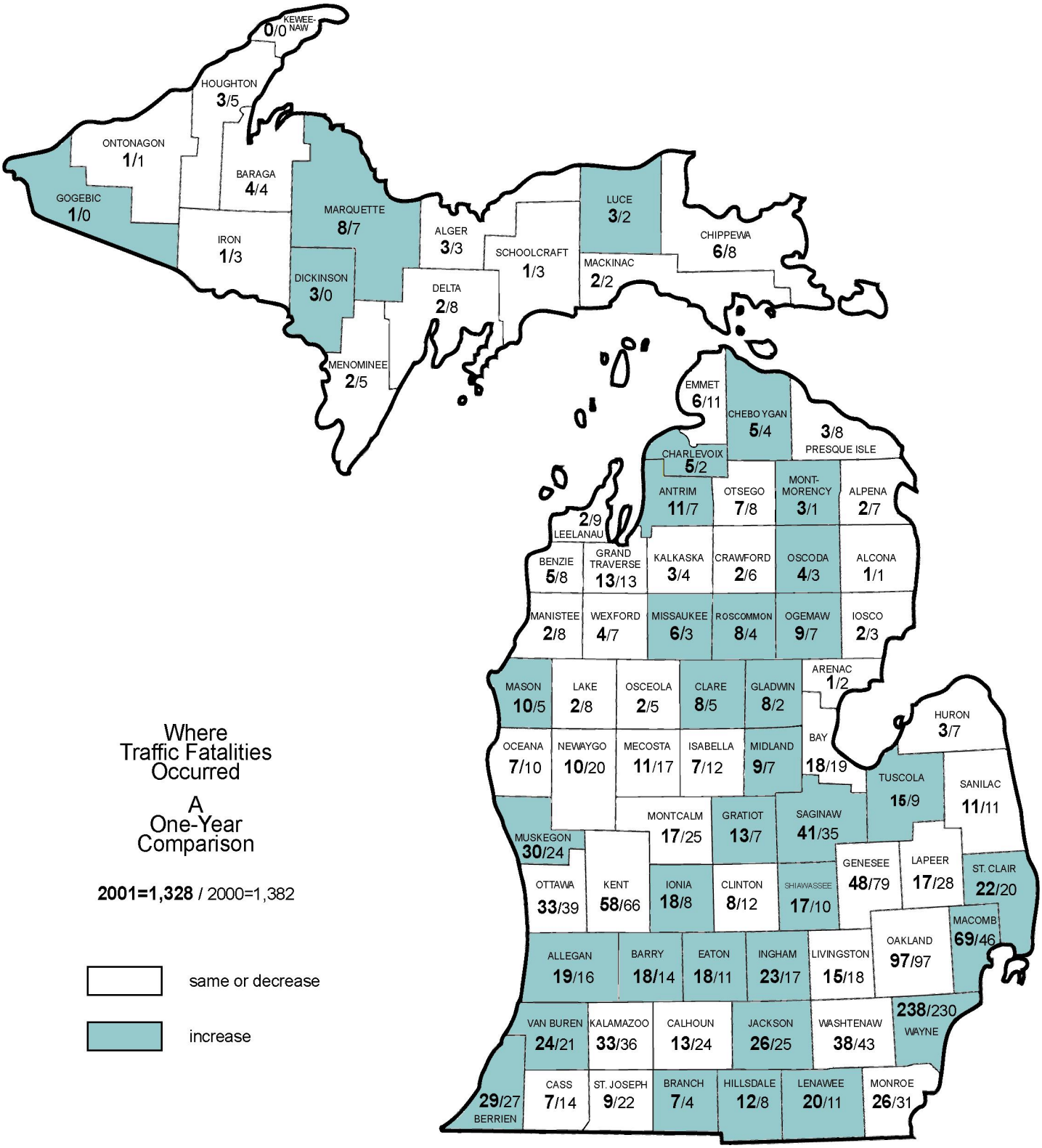
Comprehensive Costs, 2001

Death	$3,340,000
Incapacitating injury	$165,000
Nonincapacitating evident injury	$42,500
Possible injury	$20,200
No injury	$1,900

These cost estimates are not intended for comparisons to previous years.

1 YEAR

WHERE TRAFFIC FATALITIES OCCURRED



MOTOR VEHICLE TRAFFIC DEATHS IN MICHIGAN BY MONTH

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1950	105	84	87	139	122	125	153	152	157	174	154	153	1,605
1951	131	103	103	117	119	137	170	163	158	146	160	133	1,640
1952	81	121	125	94	145	169	140	184	181	152	166	178	1,736
1953	139	116	136	132	134	173	176	183	187	187	167	175	1,905
1954	130	126	100	119	149	132	182	167	168	167	153	200	1,793
1955	134	117	116	160	157	192	169	209	160	204	208	190	2,016
1956	166	136	132	140	133	115	149	159	169	144	145	158	1,746
1957	121	98	118	118	130	122	127	152	123	143	135	161	1,548
1958	94	90	95	89	92	112	120	134	132	113	165	146	1,382
1959	76	69	91	126	126	124	148	128	155	125	144	161	1,473
1960	139	76	102	105	107	133	159	154	137	186	152	154	1,604
1961	105	99	113	138	133	114	141	166	128	139	148	143	1,567
1962	94	70	115	110	123	147	166	175	170	172	118	114	1,574
1963	107	95	124	142	148	173	188	177	163	179	196	195	1,887
1964	170	159	158	144	164	167	217	197	177	199	177	193	2,122
1965	153	113	135	143	156	181	211	220	193	214	172	245	2,136
1966	147	156	179	151	207	204	212	206	203	220	205	208	2,298
1967	130	105	141	162	187	140	210	189	223	230	216	204	2,137
1968	130	147	164	150	240	214	208	233	209	248	283	166	2,392
1969	137	158	173	169	239	236	218	254	230	236	219	218	2,487
1970	167	143	160	141	214	205	197	204	213	217	178	138	2,177
1971	137	124	155	144	187	212	222	227	155	209	202	178	2,152
1972	156	161	155	150	204	209	225	210	225	219	174	170	2,258
1973	187	156	173	140	180	230	225	201	204	209	171	137	2,213
1974	111	112	107	116	144	197	189	178	200	195	201	125	1,875
1975	120	97	112	93	149	169	195	203	190	162	161	160	1,811
1976	118	102	134	150	163	169	196	227	189	171	174	162	1,955
1977	126	87	122	143	184	179	223	194	164	189	181	158	1,950
1978	98	104	128	177	178	203	206	229	214	199	183	157	2,076
1979	102	103	129	152	146	155	190	171	174	187	171	169	1,849
1980	117	131	109	116	153	170	142	183	192	152	133	176	1,774
1981	99	100	108	116	116	155	159	171	149	155	113	148	1,589
1982	98	79	93	91	114	121	154	153	128	144	131	111	1,417
1983	113	94	83	91	91	121	121	117	131	153	115	95	1,331
1984	93	84	104	91	125	143	175	174	135	153	134	142	1,556
1985	108	91	77	133	137	167	146	136	131	135	161	147	1,569
1986	86	77	103	127	131	175	186	176	131	144	159	137	1,632
1987	91	104	99	106	138	165	151	176	149	164	161	128	1,632
1988	129	107	103	104	145	152	175	158	178	159	127	167	1,704
1989	138	102	94	96	123	156	156	177	155	146	123	164	1,630
1990	99	84	122	94	135	151	165	170	141	147	130	125	1,563
1991	103	79	115	106	129	145	130	141	125	129	104	119	1,425
1992	83	81	83	86	100	122	134	119	123	129	120	120	1,300
1993	123	91	89	72	127	103	149	140	131	146	134	109	1,414
1994	106	86	82	116	111	123	126	143	132	133	123	138	1,419
1995	122	90	109	111	118	141	127	159	157	134	136	133	1,537
1996	131	98	103	98	128	135	146	121	138	135	136	136	1,505
1997	102	106	85	80	128	140	166	130	128	134	125	122	1,446
1998	116	71	97	91	113	120	133	116	123	126	117	144	1,367
1999	76	84	92	98	125	116	128	160	128	129	130	120	1,386
2000	121	83	70	107	114	136	135	133	135	124	118	106	1,382
2001	79	99	102	83	106	113	143	131	143	120	109	100	1,328

MOTOR VEHICLE TRAFFIC CRASH AND RELATED DATA

Year	Deaths	Injuries	Crashes	Estimated Mileage (Millions)	Motor Vehicle Registrations*	Death Rate Per 100 million miles of travel
1950	1,605	45,734	161,750	21,494.5	2,439,593	7.5
1951	1,640	48,418	176,587	22,668.1	2,560,652	7.2
1952	1,736	49,119	160,829	23,093.1	2,586,834	7.5
1953	1,905	57,834	184,174	25,346.9	2,808,921	7.5
1954	1,793	56,444	185,534	26,041.2	2,889,740	6.9
1955	2,016	62,234	196,812	28,282.5	3,149,323	7.1
1956	1,746	61,158	197,995	28,429.3	3,173,704	6.1
1957	1,548	60,067	191,915	29,252.2	3,256,150	5.3
1958	1,382	57,767	177,934	29,411.3	3,157,441	4.7
1959	1,473	64,873	198,771	30,679.0	3,252,492	4.8
1960	1,604	91,026	209,724	31,842.4	3,352,234	5.0
1961	1,567	93,350	199,973	32,101.5	3,395,736	4.9
1962	1,574	108,143	233,078	34,498.0	3,498,758	4.6
1963	1,887	126,896	261,794	36,452.2	3,646,080	5.2
1964	2,122	144,623	284,444	38,617.6	3,860,791	5.5
1965	2,136	155,258	310,598	40,857.4	4,066,826	5.2
1966	2,298	156,694	302,880	43,940.1	4,133,199	5.2
1967	2,137	151,297	299,004	45,053.6	4,161,573	4.7
1968	2,392	160,413	305,495	48,047.4	4,327,885	5.0
1969	2,487	175,400	331,223	50,904.9	4,560,097	4.9
1970	2,177	161,719	313,715	53,148.1	4,683,919	4.1
1971	2,152	157,664	314,015	55,539.7	4,835,146	3.9
1972	2,258	178,929	359,745	57,817.1	5,160,985	3.9
1973	2,213	169,485	350,864	58,478.4	5,442,233	3.8
1974	1,875	141,132	324,763	55,748.7	5,652,406	3.4
1975	1,811	147,299	333,560	56,260.5	5,744,441	3.2
1976	1,955	162,894	365,600	61,638.0	5,861,908	3.2
1977	1,950	166,389	374,751	64,853.0	6,138,732	3.0
1978	2,076	169,202	389,193	67,380.0	6,436,365	3.1
1979	1,849	162,571	366,435	64,882.3	6,536,246	2.8
1980	1,774	144,972	314,594	61,190.1	6,570,735	2.9
1981	1,589	136,455	302,831	62,000.0	6,140,286	2.6
1982	1,417	130,061	294,971	61,321.0	6,400,942	2.3
1983	1,331	135,811	300,797	63,560.1	6,443,499	2.1
1984	1,556	150,740	335,193	65,727.0	6,509,192	2.4
1985	1,569	157,417	386,904	68,413.0	6,857,364	2.3
1986	1,632	158,032	400,694	70,622.0	6,952,263	2.3
1987	1,632	156,318	397,224	75,715.0	7,061,339	2.2
1988	1,704	155,713	410,437	77,700.0	7,196,609	2.2
1989	1,630	154,537	417,252	79,900.0	7,233,823	2.0
1990	1,563	145,179	387,180	81,200.0	7,300,853	1.9
1991	1,425	135,830	364,847	81,900.0	7,329,789	1.7
1992	1,300	118,727	344,942	84,000.0	7,411,192	1.5
1993	1,414	134,548	363,636	85,700.0	7,495,904	1.6
1994	1,419	142,200	398,050	85,600.0	7,669,022	1.7
1995	1,537	146,303	421,073	85,699.6	7,751,336	1.8
1996	1,505	142,553	435,477	87,700.0	8,106,972	1.7
1997	1,446	137,548	425,793	89,232.0	8,115,921	1.6
1998	1,367	131,578	403,766	91,616.0	8,227,016	1.5
1999	1,386	124,601	415,675	93,060.3	8,407,868	1.5
2000	1,382	121,826	424,852	94,915.1	8,569,124	1.5
2001	1,328	112,294	400,813	96,428.1	8,603,195	1.4

* Excludes trailers and trailer coaches

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Special Focus

Red-Light-Running Heavy Truck/Bus

RED-LIGHT-RUNNING CRASHES

INTERSECTION CRASH TYPE	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
Related to intersection	126,892	356	2,993	7,733	22,884	92,926
In intersection	65,265	265	2,141	5,207	13,179	44,473
with traffic control signal	28,979	81	897	2328	6,368	19,305
with hazardous action	**8,252**	40	357	934	2,288	4,633

"Related to intersection" captures crashes that were related to or within 150 feet of an intersection. This corresponds to the crash information on page 138, *Intersection Crashes by Traffic Control Type*.

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

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

"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 **8,252** crashes.

RED-LIGHT-RUNNING - MOST SEVERE OUTCOME IN CRASH

SPEED LIMIT	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
15 miles per hour	3	0	0	0	1	2
20 miles per hour	1	0	0	0	0	1
25 miles per hour	992	2	27	98	260	605
30 miles per hour	1,460	3	44	152	419	842
35 miles per hour	2,323	13	89	229	643	1,349
40 miles per hour	1,089	5	47	122	301	614
45 miles per hour	1,490	9	91	206	413	771
50 miles per hour	301	1	20	48	76	156
55 miles per hour	314	4	31	49	96	134
65 miles per hour	1	0	0	1	0	0
Unknown	278	3	8	29	79	159
TOTAL	8,252	40	357	934	2,288	4,633

CRASH TYPE	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
Single Vehicle	47	2	5	16	9	15
Head on	83	0	3	12	28	40
Head on left	747	4	38	105	192	408
Angle	6,896	34	287	762	1,951	3,862
Rear end	43	0	3	4	13	23
Rear end left	18	0	0	1	3	14
Rear end right	4	0	0	0	0	4
Sideswipe same direction	102	0	3	4	16	79
Sideswipe opposite direction	64	0	3	5	13	43
Other	195	0	11	20	50	114
Unknown	53	0	4	5	13	31
TOTAL	8,252	40	357	934	2,288	4,633

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

SPECIAL CIRCUMSTANCES	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
School Bus Involved/Associated	31	1	5	0	6	19
Drinking Involved	276	12	25	45	92	102
Pedestrian Involved	50	2	5	14	19	10
Bicyclist Involved	62	0	10	26	11	15
Snowmobile Involved	3	0	0	1	1	1
Motorcycle Involved	37	0	6	14	9	8
Train Involved	1	0	0	0	0	1
Truck/Bus Involved	309	3	19	47	83	157
Emergency Vehicle Involved	77	2	2	13	26	34
Driver Hazardous Citation	4,774	6	221	599	1,368	2,580

POSSIBLE CONDITIONS OF DRIVER*	MOST SEVERE OUTCOME IN CRASH					
	Conditions Coded by Police	Fatal	Injury			PDO
			A	B	C	
Appeared Normal	6,340	19	263	745	1,779	3,534
Had Been Drinking	224	7	18	36	78	85
Illegal Drug Use	7	1	1	0	3	2
Sick	14	0	0	1	5	8
Fatigue	31	0	0	6	13	12
Asleep	8	0	1	0	3	4
Medication	10	0	2	3	3	2
Driver Distracted	136	0	7	28	37	64
Using Cellular Phone	39	0	4	4	12	19
Unknown	453	11	30	34	97	281

*Drivers may have more than 1 condition, including “Appeared Normal”.

HEAVY TRUCK/BUS

The crashes highlighted in this section all involve a heavy truck/bus - defined as having a Gross Vehicle Weight Rating (GVWR) over 10,000 lbs. These vehicles require a Commercial Driver's License (CDL).

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

- More turning, backing and changing lanes (see Driver Action Prior)
- More separation of units, fire/explosion, jackknife, cargo loss/shift and other non-collisions (see Most Harmful Event)
- Fewer single-vehicle crashes but more sideswipes (see Crash Type)
- Fewer drivers indicated to be speeding and failing to yield, but more drivers indicated to be making backing, lane use and turning errors (see Hazardous Action, Citation)
- More on road crashes (see Location of First Impact in Crash - On Road)
- More crashes between the hours of 6:00 AM and 2:59 PM, but fewer crashes between 3:00 PM and 5:59 AM (see Time of Day)
- More weekday crashes (see Day of Week)

HEAVY TRUCK/BUS INVOLVED CRASHES

HEAVY TRUCK/BUS DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Going straight ahead	7,829	42.8	89	66.4	1,569	48.9
Turning left	1,573	8.6	3	2.2	225	7.0
Turning right	1,534	8.4	4	3.0	155	4.8
Stopped on roadway	1,218	6.7	11	8.2	262	8.2
In prior crash	16	0.1	0	0.0	2	0.1
Changing lanes	741	4.1	1	0.7	99	3.1
Backing	1,184	6.5	0	0.0	69	2.2
Slowing/stopping on roadway	1,193	6.5	2	1.5	300	9.4
Slowing/stopping other	20	0.1	0	0.0	5	0.2
Starting up on roadway	389	2.1	3	2.2	79	2.5
Starting up other	20	0.1	0	0.0	2	0.1
Entering parking	36	0.2	1	0.7	2	0.1
Leaving parking	42	0.2	0	0.0	4	0.1
Entering roadway	210	1.1	0	0.0	47	1.5
Leaving roadway	31	0.2	0	0.0	7	0.2
Making U-turn	43	0.2	0	0.0	9	0.3
Overtaking or passing	149	0.8	0	0.0	18	0.6
Avoiding object	34	0.2	0	0.0	6	0.2
Avoiding animal	10	0.1	0	0.0	4	0.1
Avoiding pedestrian	3	0.0	0	0.0	1	0.0
Avoiding vehicle (front/back)	223	1.2	9	6.7	53	1.7
Avoiding vehicle (angle)	67	0.4	1	0.7	15	0.5
Driverless moving	26	0.1	0	0.0	1	0.0
Parked	394	2.2	5	3.7	67	2.1
Crossing at intersection	1	0.0	0	0.0	0	0.0
Crossing not at intersection	1	0.0	0	0.0	1	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	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	1	0.0	0	0.0	0	0.0
Other working in roadway	1	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	0	0.0	0	0.0	0	0.0
Not in roadway	0	0.0	0	0.0	0	0.0
Other	40	0.2	0	0.0	5	0.2
Unknown	1,252	6.8	5	3.7	199	6.2
Total	18,281	100.0	134	100.0	3,206	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

MOST HARMFUL EVENT IN A NONCOLLISION	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Loss of control	43	0.2	0	0.0	13	0.4
Cross center/median	23	0.1	0	0.0	3	0.1
Ran off road left	19	0.1	0	0.0	2	0.1
Ran off road right	40	0.2	0	0.0	7	0.2
Re-enter road	4	0.0	0	0.0	1	0.0
Overturn	236	1.3	4	3.0	98	3.1
Separation of units	38	0.2	0	0.0	5	0.2
Fire/explosion	36	0.2	2	1.5	2	0.1
Immersion	3	0.0	0	0.0	0	0.0
Jackknife	122	0.7	0	0.0	12	0.4
Downhill runaway	6	0.0	0	0.0	2	0.1
Cargo loss/shift	237	1.3	0	0.0	18	0.6
Individual fell off	7	0.0	1	0.7	4	0.1
Other noncollision	212	1.2	0	0.0	20	0.6
NONCOLLISION Subtotal	1,026	5.6	7	5.2	187	5.8

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	59	0.3	7	5.2	47	1.5
Pedalcycle	20	0.1	1	0.7	17	0.5
Motor vehicle in transport	12,007	65.7	105	78.4	2,405	75.0
Parked motor vehicle	790	4.3	2	1.5	33	1.0
Railway train	10	0.1	1	0.7	2	0.1
Animal	526	2.9	0	0.0	10	0.3
Other nonfixed objects	237	1.3	0	0.0	7	0.2
COLLISION NONFIXED Subtotal	13,649	74.7	116	86.6	2,521	78.6

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	100	0.5	0	0.0	7	0.2
Bridge parapet end	7	0.0	0	0.0	0	0.0
Bridge rail	15	0.1	0	0.0	0	0.0
Guardrail face	51	0.3	0	0.0	7	0.2
Guardrail end	15	0.1	0	0.0	1	0.0
Median barrier	45	0.2	0	0.0	13	0.4
Highway traffic sign post	59	0.3	0	0.0	5	0.2
Signal post	19	0.1	0	0.0	0	0.0
Luminaire/light support	39	0.2	0	0.0	1	0.0
Utility pole	148	0.8	0	0.0	7	0.2
Other pole	36	0.2	0	0.0	1	0.0
Culvert	5	0.0	0	0.0	2	0.1
Curb	17	0.1	0	0.0	3	0.1
Ditch	123	0.7	1	0.7	30	0.9
Embankment	37	0.2	0	0.0	7	0.2
Fence	24	0.1	0	0.0	0	0.0
Mailbox	30	0.2	0	0.0	0	0.0
Tree	118	0.6	1	0.7	28	0.9
Rail crossing signal	35	0.2	0	0.0	0	0.0
Building	19	0.1	0	0.0	2	0.1
Traffic island	2	0.0	0	0.0	0	0.0
Fire hydrant	34	0.2	0	0.0	0	0.0
Impact attenuator	0	0.0	0	0.0	0	0.0
Other fixed object	236	1.3	0	0.0	8	0.2
COLLISION FIXED Subtotal	1,214	6.6	2	1.5	122	3.8

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Total
Unknown Event	2,392	13.1	9	6.7	376	11.7
TOTAL MOST HARMFUL EVENT	18,281	100.0	134	100.0	3,206	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Single Vehicle	2,461	13.5	12	9.0	286	8.9
Head On	283	1.5	24	17.9	105	3.3
Head On - Left Turn	216	1.2	3	2.2	89	2.8
Angle	2,995	16.4	45	33.6	823	25.7
Rear End	4,159	22.8	33	24.6	1,078	33.6
Rear End - Left Turn	171	0.9	4	3.0	42	1.3
Rear End - Right Turn	180	1.0	0	0.0	27	0.8
Sideswipe - Same Direction	4,358	23.8	2	1.5	381	11.9
Sideswipe - Opposite Direct	1,169	6.4	4	3.0	136	4.2
Other	2,079	11.4	7	5.2	208	6.5
Unknown	210	1.1	0	0.0	31	1.0
Total	18,281	100.0	134	100.0	3,206	100.0

HAZARDOUS ACTION OF HEAVY TRUCK/BUS	Truck/Bus Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury	Number of Heavy Trucks	% of Issued
None	7,864	43.0	92	68.7	1,539	48.0	20	0.7
Speed too fast	521	2.8	4	3.0	145	4.5	230	7.7
Speed too slow	17	0.1	1	0.7	5	0.2	9	0.3
Failed to yield	965	5.3	0	0.0	233	7.3	402	13.4
Disregard traffic control	224	1.2	4	3.0	96	3.0	119	4.0
Drove wrong way	6	0.0	0	0.0	1	0.0	3	0.1
Drove left of center	113	0.6	3	2.2	18	0.6	29	1.0
Improper passing	145	0.8	0	0.0	11	0.3	28	0.9
Improper lane use	968	5.3	0	0.0	93	2.9	269	9.0
Improper turn	831	4.5	1	0.7	60	1.9	241	8.0
Improper/no signal	39	0.2	0	0.0	4	0.1	14	0.5
Improper backing	1,016	5.6	0	0.0	42	1.3	264	8.8
Unable to stop in assured clear distance	1,734	9.5	11	8.2	475	14.8	805	26.9
Reckless driving	16	0.1	0	0.0	3	0.1	5	0.2
Careless/Negligent driving	325	1.8	5	3.7	86	2.7	152	5.1
Other	1,835	10.0	6	4.5	158	4.9	358	11.9
Unknown	1,662	9.1	7	5.2	237	7.4	48	1.6
Total	18,281	100.0	134	100.0	3,206	100.0	2,996	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT IN CRASH)	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
On Road	16,518	90.4	124	92.5	2,939	91.7
Median	84	0.5	2	1.5	20	0.6
Shoulder	578	3.2	6	4.5	86	2.7
Outside of Shoulder/Curb	639	3.5	1	0.7	105	3.3
Gore	26	0.1	0	0.0	5	0.2
Other/Unknown	436	2.4	1	0.7	51	1.6
Total	18,281	100.0	134	100.0	3,206	100.0

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
12:00 mid. - 02:59 a.m.	477	2.6	10	7.5	104	3.2
03:00 a.m. - 05:59 a.m.	539	2.9	9	6.7	103	3.2
06:00 a.m. - 08:59 a.m.	3,094	16.9	24	17.9	556	17.3
09:00 a.m. - 11:59 a.m.	3,607	19.7	18	13.4	608	19.0
12:00 noon - 02:59 p.m.	3,835	21.0	41	30.6	681	21.2
03:00 p.m. - 05:59 p.m.	3,684	20.2	21	15.7	619	19.3
06:00 p.m. - 08:59 p.m.	1,212	6.6	3	2.2	221	6.9
09:00 p.m. - 11:59 p.m.	663	3.6	6	4.5	110	3.4
Unknown	1,170	6.4	2	1.5	204	6.4
Total	18,281	100.0	134	100.0	3,206	100.0

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Interstate Routes	2,995	16.4	27	20.1	570	17.8
U.S. & Michigan Roads	3,597	19.7	49	36.6	740	23.1
County & City Roads	11,689	63.9	58	43.3	1,896	59.1
Total	18,281	100.0	134	100.0	3,206	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Sunday	463	2.5	6	4.5	102	3.2
Monday	3,389	18.5	17	12.7	624	19.5
Tuesday	3,312	18.1	31	23.1	565	17.6
Wednesday	3,416	18.7	33	24.6	602	18.8
Thursday	3,320	18.2	12	9.0	551	17.2
Friday	3,413	18.7	21	15.7	577	18.0
Saturday	968	5.3	14	10.4	185	5.8
Total	18,281	100.0	134	100.0	3,206	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Male	14,777	80.8	120	89.6	2,691	83.9
Female	1,993	10.9	7	5.2	326	10.2
Unknown	1,511	8.3	7	5.2	189	5.9
Total	18,281	100.0	134	100.0	3,206	100.0

NUMBER OF OCCUPANTS in Heavy Truck/Bus	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Total	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
1 occupant	13,599	74.4	110	82.1	2,345	73.1
2 occupants	1,475	8.1	11	8.2	298	9.3
3 occupants	314	1.7	1	0.7	74	2.3
4 occupants	168	0.9	1	0.7	38	1.2
5 occupants	99	0.5	1	0.7	24	0.7
6 + occupants	913	5.0	3	2.2	189	5.9
0 occupants	359	2.0	5	3.7	61	1.9
Unknown	1,354	7.4	2	1.5	177	5.5
Total	18,281	100.0	134	100.0	3,206	100.0

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

VEHICLE TYPES Involved in Crash with Heavy Truck/Bus	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Vehicles	% of Subtotal	Number of Vehicles	% of Fatal	Number of Vehicles	% of Injury
Passenger Car and Station Wagon	11,164	70.6	111	68.1	2,357	70.5
Van and Motorhome	1,328	8.4	11	6.7	277	8.3
Pickup	2,190	13.8	23	14.1	457	13.7
Small Truck (under 10,000 lbs.)	335	2.1	0	0.0	61	1.8
Motorcycle	33	0.2	5	3.1	19	0.6
Moped	2	0.0	0	0.0	1	0.0
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	7	0.0	0	0.0	1	0.0
Off Road Vehicle	1	0.0	0	0.0	1	0.0
Other	92	0.6	1	0.6	15	0.4
Unknown	661	4.2	12	7.4	156	4.7
Subtotal	15,813	100.0	163	100.0	3,345	100.0

HEAVY TRUCK/BUS VEHICLE TYPES	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Heavy Trucks	% of Subtotal	Number of Heavy Trucks	% of Fatal	Number of Heavy Trucks	% of Injury
Commercial Vehicle: Group A	7,632	41.7	80	59.7	1,370	42.7
Commercial Vehicle: Group B	3,729	20.4	28	20.9	687	21.4
Commercial Vehicle: Group C	548	3.0	2	1.5	110	3.4
Other Truck	911	5.0	3	2.2	166	5.2
Unknown Truck	5,461	29.9	21	15.7	873	27.2
Subtotal	18,281	100.0	134	100.0	3,206	100.0
Total Vehicle Types in Heavy Truck/Bus Crashes	34,094		297		6,551	

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

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

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

HEAVY TRUCK/BUS INVOLVED CRASHES (continued)

Hazardous Citation Issued	Heavy Truck/Bus				Passenger Vehicles Involved with Heavy Trucks					
	Single Vehicle Crash		Multi-Vehicle Crash		Single Vehicle Crash		Multi-Vehicle All Crashes		Multi-Vehicle Heavy Truck /Bus Involved Crash	
	Number of Vehicles	% of citation	Number of Vehicles	% of citation	Number of Vehicles	% of citation	Number of Vehicles	% of citation	Number of Vehicles	% of citation
None	7	1.2	13	0.5	82	0.5	431	0.4	11	0.5
Speed too fast	167	27.7	63	2.6	7,089	39.0	3,352	3.4	236	9.8
Speed too slow	5	0.8	4	0.2	52	0.3	208	0.2	3	0.1
Failed to yield	5	0.8	397	16.6	88	0.5	29,521	30.3	527	21.9
Disregard traffic control	10	1.7	109	4.6	129	0.7	7,180	7.4	157	6.5
Drove wrong way	1	0.2	2	0.1	20	0.1	140	0.1	5	0.2
Drove left of center	1	0.2	28	1.2	180	1.0	993	1.0	57	2.4
Improper passing	3	0.5	25	1.0	85	0.5	1,174	1.2	108	4.5
Improper lane use	26	4.3	243	10.2	402	2.2	4,003	4.1	201	8.4
Improper turn	60	10.0	181	7.6	82	0.5	2,489	2.6	66	2.7
Improper/no signal	0	0.0	14	0.6	8	0.0	171	0.2	9	0.4
Improper backing	43	7.1	221	9.2	1,131	6.2	1,664	1.7	20	0.8
Unable to stop in assured clear distance	28	4.6	777	32.5	981	5.4	38,680	39.7	646	26.9
Reckless driving	4	0.7	1	0.0	693	3.8	336	0.3	15	0.6
Careless/Negligent driving	92	15.3	60	2.5	3,902	21.5	1,998	2.0	146	6.1
Other	143	23.7	215	9.0	2,722	15.0	3,121	3.2	136	5.7
Unknown	8	1.3	40	1.7	521	2.9	2,025	2.1	59	2.5
Total Cited Vehicles	603	100.0	2,393	100.0	18,167	100.0	97,486	100.0	2,402	100.0
Percent of Total Vehicles		15.1		16.8		10.7		21.7		17.3
Vehicles with No Citation Issued	3,382	84.9	11,885	83.2	150,877	89.3	352,412	78.3	11,472	82.7
Total Vehicles Involved	3,985	100.0	14,278	100.0	169,044	100.0	449,898	100.0	13,874	100.0

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Age

PERSON'S AGE and THEIR INJURY SEVERITY
by PERSON TYPE

Age	Drivers				Passengers			Bicyclist			Pedestrian		
	Total	Killed	Injured	No Injury	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
0*	33	0	1	31	221	1	220	0	0	0	0	0	0
1	13	0	5	8	251	1	250	1	0	1	4	1	3
2	20	0	9	11	320	1	319	1	0	1	8	1	7
3	23	0	8	14	324	4	319	3	0	3	32	0	30
4	33	0	17	15	372	3	368	3	0	3	33	2	29
5	40	0	27	12	418	0	418	16	1	11	36	1	32
6	42	0	29	13	390	3	387	20	3	16	43	2	36
7	55	0	43	10	442	4	438	32	0	25	47	0	46
8	59	1	40	17	474	3	471	39	0	34	58	3	49
9	74	0	50	22	470	6	464	40	0	32	51	1	44
10	93	0	63	28	492	2	490	42	0	36	52	2	45
11	120	0	74	43	509	4	505	68	0	61	58	3	49
12	177	0	115	60	491	4	487	82	0	70	59	0	53
13	214	1	108	100	555	6	548	86	1	64	62	4	53
14	352	0	148	199	715	5	710	84	1	69	57	0	53
15	1,188	4	250	907	1,064	9	1,053	69	0	57	68	1	59
16	16,824	18	2,152	14,363	1,379	11	1,337	56	2	40	56	3	48
17	19,908	21	2,489	17,013	1,338	15	1,284	32	0	31	48	1	41
18	22,012	16	3,034	18,477	1,188	17	1,138	47	0	36	39	1	36
19	20,501	27	2,753	17,261	943	14	904	30	0	25	44	2	38
20	18,495	21	2,522	15,564	807	8	771	27	1	23	33	2	28
21	17,465	30	2,356	14,727	775	10	735	29	0	24	39	1	36
22	16,065	23	2,162	13,492	646	8	603	15	0	13	33	1	28
23	14,762	18	1,910	12,494	575	10	543	16	0	15	30	2	25
24	13,565	15	1,769	11,439	463	3	445	21	0	19	29	1	26
25	12,762	21	1,663	10,768	394	5	367	13	0	12	26	3	22
26	12,498	10	1,607	10,562	411	4	384	11	0	9	17	1	15
27	12,254	15	1,568	10,343	357	4	329	16	0	14	21	1	17
28	12,321	17	1,587	10,410	366	2	341	8	0	8	20	3	17
29	12,741	12	1,673	10,676	352	2	332	9	0	9	27	3	21
30	13,400	11	1,743	11,289	383	6	346	11	1	7	17	5	9
31	12,907	10	1,618	10,918	359	3	333	10	0	9	20	1	19
32	12,570	10	1,546	10,660	323	4	292	9	0	7	23	1	18
33	12,059	14	1,456	10,267	269	2	246	7	0	5	29	2	27
34	12,033	16	1,517	10,192	300	3	277	18	0	17	27	2	24
35	11,976	11	1,498	10,167	322	3	293	12	0	10	24	3	20
36	12,459	10	1,543	10,562	287	2	268	9	0	7	27	3	20
37	12,480	9	1,501	10,656	285	3	261	14	1	11	19	2	15
38	12,562	20	1,529	10,672	291	7	256	13	2	10	33	2	28
39	12,450	13	1,481	10,676	260	2	232	16	2	11	17	3	12
40	12,575	15	1,526	10,696	295	4	270	20	0	17	26	5	19
41	12,053	18	1,488	10,252	280	3	245	14	1	12	30	1	27

* Driver age is calculated from birth date. Data entry errors may result in age "0" drivers.

PERSON'S AGE and THEIR INJURY SEVERITY by PERSON TYPE (continued)

Age	Drivers				Passengers			Bicyclist			Pedestrian		
	Total	Killed	Injured	No Injury	Total	Killed	Injured	Total	Killed	Injured	Total	Killed	Injured
42	12,141	12	1,515	10,303	288	1	260	15	0	14	30	4	24
43	11,843	18	1,465	10,054	307	2	285	21	1	19	35	5	29
44	11,654	15	1,455	9,869	295	2	256	17	0	17	35	4	26
45	11,265	13	1,404	9,571	297	2	271	20	0	17	34	4	26
46	10,609	10	1,344	8,984	288	3	264	13	0	11	43	1	36
47	10,401	12	1,296	8,823	261	1	239	15	1	9	29	3	22
48	9,540	10	1,274	8,056	238	6	219	11	1	8	28	3	24
49	9,399	15	1,177	7,987	245	1	225	14	0	12	27	6	18
50	8,754	9	1,167	7,377	227	3	199	14	1	9	22	2	19
51	8,222	11	1,094	6,897	219	2	196	9	1	8	30	6	22
52	8,166	8	1,069	6,889	214	1	196	14	0	12	23	1	20
53	8,007	7	991	6,819	224	3	210	7	0	5	20	2	14
54	7,810	11	958	6,651	198	1	180	3	0	3	15	0	13
55	6,145	6	793	5,173	163	3	148	5	0	4	13	1	11
56	5,565	6	717	4,689	163	2	149	2	0	2	15	2	11
57	5,358	6	698	4,511	161	2	151	7	1	6	8	1	6
58	5,663	3	708	4,831	180	0	173	3	0	3	11	1	10
59	5,014	4	647	4,233	130	3	117	3	0	3	17	1	13
60	4,329	8	538	3,687	127	1	119	5	0	5	7	1	5
61	3,919	10	503	3,315	127	2	120	3	0	3	5	0	5
62	3,596	9	429	3,069	144	2	136	1	1	0	7	0	5
63	3,478	9	423	2,957	132	1	126	2	0	2	8	3	4
64	3,249	4	409	2,732	123	0	116	1	0	1	7	0	6
65	3,010	6	416	2,518	114	2	105	4	0	4	9	2	7
66	2,889	4	375	2,426	97	0	93	4	0	4	3	0	3
67	2,628	6	361	2,201	88	2	81	2	0	1	5	0	5
68	2,644	5	360	2,216	97	1	89	2	0	2	5	0	5
69	2,595	7	347	2,181	102	3	96	2	0	1	6	1	4
70	2,562	6	329	2,163	118	1	111	3	0	3	7	1	6
71	2,508	9	318	2,113	100	3	96	1	0	1	7	2	5
72	2,354	4	307	1,989	109	1	103	0	0	0	6	2	4
73	2,355	5	277	2,007	123	5	115	1	0	1	4	0	4
74	2,281	1	300	1,931	113	2	102	4	1	3	6	1	5
75	2164	5	293	1,820	104	4	96	4	1	3	2	0	2
76	2099	8	306	1,739	100	3	94	2	0	2	5	1	2
77	1974	9	278	1,651	102	2	98	1	1	0	4	1	3
78	1847	8	245	1,544	96	6	86	0	0	0	5	1	4
79	1649	5	213	1,384	88	3	82	1	0	1	5	1	3
80	1531	8	202	1,286	95	1	92	0	0	0	6	1	5
81	1359	10	209	1,107	70	0	70	1	0	1	4	2	2
82	1180	4	183	964	58	1	56	0	0	0	2	1	1
83	1050	5	152	869	45	1	43	0	0	0	6	2	1

PERSON'S AGE and THEIR INJURY SEVERITY by PERSON TYPE (continued)

Age	Drivers				Passengers			Bicyclist			Pedestrian		
	Total*	Killed	Injured	No Injury	Total*	Killed	Injured	Total*	Killed	Injured	Total*	Killed	Injured
84	878	7	119	736	44	0	43	0	0	0	6	3	3
85	718	4	112	583	40	3	35	0	0	0	3	2	1
86	563	3	90	460	35	2	31	0	0	0	4	2	2
87	454	3	87	355	38	1	37	0	0	0	2	2	0
88	340	8	55	269	29	2	27	0	0	0	1	1	0
89	260	2	34	215	24	2	21	0	0	0	1	1	0
90	160	1	27	131	15	0	15	1	0	1	0	0	0
91	123	2	20	101	12	1	11	0	0	0	2	2	0
92	87	2	13	71	13	0	13	0	0	0	1	0	1
93	46	0	7	39	2	0	2	0	0	0	0	0	0
94	32	1	4	27	7	0	7	0	0	0	0	0	0
95	23	0	5	17	5	0	5	0	0	0	1	0	1
96	16	0	3	11	2	0	2	0	0	0	0	0	0
97	9	1	1	7	0	0	0	0	0	0	0	0	0
98	2	0	0	2	1	0	1	0	0	0	0	0	0
99	1	0	0	1	1	0	1	0	0	0	0	0	0
100	2	0	0	2	1	0	1	0	0	0	0	0	0
101	0	0	0	0	0	0	0	0	0	0	1	0	1
103	0	0	0	0	1	0	1	0	0	0	0	0	0
171	0	0	0	0	1	0	1	0	0	0	0	0	0
303	1	0	1	0	0	0	0	0	0	0	0	0	0
Unknown	95,082	35	2,861	28,247	781	2	772	35	0	19	125	1	86
Totals	687,836	827	79,662	528,946	28,778	309	27,368	1,342	26	1,104	2,135	160	1,759
	*Includes 78,401 drivers with unknown injury severity				*Includes 45 passengers with unknown injury severity and 1,056 with no injury			*Includes 37 bicyclists with unknown injury severity and 175 with no injury			*Includes 81 pedestrians with unknown injury severity and 135 with no injury		

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

DRIVER AGE

Drivers on Michigan Roads:

The following tables describe driver actions and crash characteristics for motor vehicle drivers age 16-24; 25-64; and 65 & Over. These tables are provided to demonstrate the differences in the nature of the crashes for these age groups.

Generally, younger drivers are more involved in single-vehicle and off road crashes. Older drivers are more involved in angle type crashes, and are more likely to commit "Failed to Yield" as a hazardous action while younger drivers are more likely to be speeding. Younger drivers are least likely to be alone in their car at the time of the crash.

For more information on age and the crash experience please visit the Michigan Traffic Crash Facts section of the OHSP web site www.ohsp.state.mi.us

Nationally:

According to a Policy Statement by the American Academy of Pediatrics [10], motor vehicle-related crashes remain the leading cause of death in youth from 16 through 20 years of age, resulting in more than 5,000 such deaths annually. This age group constitutes only 7 percent of the U.S. population yet accounts for 14 percent of all motor vehicle-related deaths. Youth 16 through 19 years of age constitute 5 percent of all licensed drivers and 3 percent of all vehicle miles traveled, yet teenage drivers are involved in 15 percent of the crashes in which they or other occupants are killed. The motor vehicle fatality rate of teenagers is higher than that of any other age group; on a per-mile-driven basis, 16-year-old drivers are more than 20 times as likely to have a crash as is the general population of drivers, and 17-year-old drivers are more than 6 times as likely.

DRIVER AGE 16-24

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Going straight ahead	83,490	52.3	318	72.1	20,891	54.4
Turning left	13,404	8.4	18	4.1	3,823	10.0
Turning right	4,182	2.6	4	0.9	711	1.9
Stopped on roadway	12,288	7.7	8	1.8	3,005	7.8
In prior crash	242	0.2	1	0.2	60	0.2
Changing lanes	3,809	2.4	5	1.1	616	1.6
Backing	3,402	2.1	4	0.9	201	0.5
Slowing/stopping on roadway	14,948	9.4	10	2.3	3,244	8.4
Slowing/stopping other	195	0.1	1	0.2	42	0.1
Starting up on roadway	3,162	2.0	9	2.0	845	2.2
Starting up other	97	0.1	0	0.0	29	0.1
Entering parking	161	0.1	0	0.0	21	0.1
Leaving parking	579	0.4	0	0.0	123	0.3
Entering roadway	2,956	1.9	5	1.1	703	1.8
Leaving roadway	376	0.2	5	1.1	122	0.3
Making U-turn	333	0.2	0	0.0	94	0.2
Overtaking or passing	1,600	1.0	15	3.4	370	1.0
Avoiding object	290	0.2	0	0.0	83	0.2
Avoiding animal	680	0.4	0	0.0	195	0.5
Avoiding pedestrian	44	0.0	1	0.2	19	0.0
Avoiding vehicle (front/back)	1,647	1.0	9	2.0	436	1.1
Avoiding vehicle (angle)	704	0.4	2	0.5	172	0.4
Driverless moving	28	0.0	0	0.0	7	0.0
Parked	489	0.3	0	0.0	50	0.1
Crossing at intersection	89	0.1	0	0.0	78	0.2
Crossing not at intersection	44	0.0	0	0.0	40	0.1
Getting on/off vehicle	11	0.0	0	0.0	7	0.0
In roadway with traffic	21	0.0	0	0.0	20	0.1
In roadway against traffic	9	0.0	0	0.0	8	0.0
Standing/lying in roadway	8	0.0	0	0.0	7	0.0
Pushing/working on vehicle	4	0.0	0	0.0	3	0.0
Other working in roadway	7	0.0	0	0.0	4	0.0
Playing in roadway	3	0.0	0	0.0	2	0.0
In roadway other reason	17	0.0	0	0.0	14	0.0
Not in roadway	20	0.0	0	0.0	17	0.0
Other	165	0.1	2	0.5	53	0.1
Unknown	10,093	6.3	24	5.4	2,299	6.0
Total Drivers	159,597	100.0	441	100.0	38,414	100.0

DRIVER AGE 16-24 (continued)

MOST HARMFUL EVENT IN A NONCOLLISION	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Loss of control	749	0.5	0	0.0	226	0.6
Cross center/median	130	0.1	0	0.0	31	0.1
Ran off road left	248	0.2	0	0.0	59	0.2
Ran off road right	443	0.3	0	0.0	101	0.3
Re-enter road	28	0.0	0	0.0	9	0.0
Overturn	3,326	2.1	34	7.7	1,634	4.3
Separation of units	229	0.1	0	0.0	63	0.2
Fire/explosion	196	0.1	4	0.9	34	0.1
Immersion	24	0.0	1	0.2	3	0.0
Jackknife	50	0.0	0	0.0	7	0.0
Downhill runaway	13	0.0	0	0.0	2	0.0
Cargo loss/shift	91	0.1	0	0.0	6	0.0
Individual fell off	138	0.1	3	0.7	110	0.3
Other noncollision	393	0.2	0	0.0	70	0.2
NONCOLLISION Subtotal	6,058	3.8	42	9.5	2,355	6.1

Teens and young adults have the highest incidence of overturn in fatal crashes when compared to the other two age groups (25-64 and 65 & over).

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Pedestrian	528	0.3	25	5.7	441	1.1
Pedalcycle	399	0.3	4	0.9	322	0.8
Motor vehicle in transport	103,781	65.0	234	53.1	26,061	67.8
Parked motor vehicle	2,938	1.8	4	0.9	388	1.0
Railway train	37	0.0	2	0.5	17	0.0
Animal	10,870	6.8	0	0.0	261	0.7
Other nonfixed objects	1,171	0.7	2	0.5	143	0.4
COLLISION NONFIXED Subtotal	119,724	75.0	271	61.5	27,633	71.9

DRIVER AGE 16-24 (continued)

MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Bridge/pier/abutment	151	0.1	1	0.2	46	0.1
Bridge parapet end	34	0.0	0	0.0	9	0.0
Bridge rail	116	0.1	1	0.2	23	0.1
Guardrail face	934	0.6	0	0.0	176	0.5
Guardrail end	157	0.1	0	0.0	53	0.1
Median barrier	887	0.6	1	0.2	294	0.8
Highway traffic sign post	744	0.5	2	0.5	58	0.2
Signal post	73	0.0	0	0.0	14	0.0
Luminaire/light support	164	0.1	3	0.7	37	0.1
Utility pole	1,086	0.7	9	2.0	425	1.1
Other pole	283	0.2	0	0.0	58	0.2
Culvert	242	0.2	4	0.9	97	0.3
Curb	722	0.5	1	0.2	88	0.2
Ditch	2,773	1.7	4	0.9	692	1.8
Embankment	644	0.4	0	0.0	192	0.5
Fence	455	0.3	1	0.2	78	0.2
Mailbox	701	0.4	1	0.2	53	0.1
Tree	3,827	2.4	60	13.6	1,462	3.8
Rail crossing signal	14	0.0	0	0.0	2	0.0
Building	211	0.1	2	0.5	69	0.2
Traffic island	20	0.0	0	0.0	4	0.0
Fire hydrant	148	0.1	0	0.0	24	0.1
Impact attenuator	13	0.0	0	0.0	5	0.0
Other fixed object	994	0.6	5	1.1	231	0.6
COLLISION FIXED Subtotal	15,393	9.6	95	21.5	4,190	10.9

Teens and young adults have the highest incidence of collision with ditches and trees in crashes when compared to the other two age groups.

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	18,422	11.5	33	7.5	4,236	11.0
TOTAL MOST HARMFUL EVENT	159,597	100.0	441	100.0	38,414	100.0

DRIVER AGE 16-24 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Single Vehicle	33,821	21.2	169	38.3	7,104	18.5
Head On	2,790	1.7	81	18.4	1,230	3.2
Head On - Left Turn	6,347	4.0	13	2.9	2,554	6.6
Angle	38,131	23.9	122	27.7	11,261	29.3
Rear End	50,165	31.4	20	4.5	11,964	31.1
Rear End - Left Turn	2,487	1.6	4	0.9	726	1.9
Rear End - Right Turn	1,535	1.0	0	0.0	243	0.6
Sideswipe - Same Direction	12,473	7.8	8	1.8	1,216	3.2
Sideswipe - Opposite Direct	3,761	2.4	8	1.8	571	1.5
Other	5,970	3.7	13	2.9	1,156	3.0
Unknown	2,117	1.3	3	0.7	389	1.0
Total Drivers	159,597	100.0	441	100.0	38,414	100.0

Teen and young adult drivers are involved in the largest proportion of single vehicle fatal crashes when compared to the other two age groups.

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT IN CRASH)	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
On Road	138,749	86.9	310	70.3	32,491	84.6
Median	920	0.6	4	0.9	303	0.8
Shoulder	5,409	3.4	29	6.6	1,416	3.7
Outside of Shoulder/Curb	10,518	6.6	84	19.0	3,241	8.4
Gore	327	0.2	2	0.5	106	0.3
Other/Unknown	3,674	2.3	12	2.7	857	2.2
Total Drivers	159,597	100.0	441	100.0	38,414	100.0

When compared to the other two age groups in all crashes, teen and young adult drivers have the highest incidence of crashes where the first impact is on the shoulder of the roadway or outside the shoulder/curb.

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Interstate Routes	16,114	10.1	35	7.9	3,751	9.8
U.S. & Michigan Roads	30,282	19.0	103	23.4	7,260	18.9
County & City Roads	113,201	70.9	303	68.7	27,403	71.3
Total Drivers	159,597	100.0	441	100.0	38,414	100.0

DRIVER AGE 16-24 (continued)

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
12:00 mid. - 02:59 a.m.	8,057	5.0	61	13.8	2,184	5.7
03:00 a.m. - 05:59 a.m.	3,649	2.3	36	8.2	997	2.6
06:00 a.m. - 08:59 a.m.	15,956	10.0	37	8.4	3,631	9.5
09:00 a.m. - 11:59 a.m.	14,302	9.0	25	5.7	3,440	9.0
12:00 noon - 02:59 p.m.	26,530	16.6	59	13.4	6,724	17.5
03:00 p.m. - 05:59 p.m.	39,667	24.9	75	17.0	9,592	25.0
06:00 p.m. - 08:59 p.m.	24,010	15.0	59	13.4	5,685	14.8
09:00 p.m. - 11:59 p.m.	16,302	10.2	79	17.9	3,807	9.9
Unknown	11,124	7.0	10	2.3	2,354	6.1
Total Drivers	159,597	100.0	441	100.0	38,414	100.0

6:00 PM to 2:59 AM shows the highest involvement for teen and young adult drivers in all crashes compared to the other two age groups.

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury	Number	% of Issued
None	65,051	40.8	120	27.2	13,519	35.2	139	0.3
Speed too fast	13,406	8.4	103	23.4	3,880	10.1	5,248	11.8
Speed too slow	238	0.1	0	0.0	81	0.2	107	0.2
Failed to yield	17,700	11.1	33	7.5	5,154	13.4	10,441	23.4
Disregard traffic control	3,921	2.5	24	5.4	1,731	4.5	2,532	5.7
Drove wrong way	91	0.1	3	0.7	31	0.1	46	0.1
Drove left of center	868	0.5	17	3.9	299	0.8	381	0.9
Improper passing	1,146	0.7	2	0.5	206	0.5	519	1.2
Improper lane use	2,964	1.9	2	0.5	391	1.0	1,423	3.2
Improper turn	1,748	1.1	2	0.5	327	0.9	814	1.8
Improper/no signal	209	0.1	0	0.0	36	0.1	48	0.1
Improper backing	2,508	1.6	1	0.2	98	0.3	828	1.9
Unable to stop in assured clear distance	28,720	18.0	5	1.1	6,745	17.6	15,783	35.4
Reckless driving	948	0.6	14	3.2	401	1.0	522	1.2
Careless\Negligent driving	4,466	2.8	32	7.3	1,675	4.4	2,701	6.1
Other	6,458	4.0	39	8.8	1,750	4.6	2,034	4.6
Unknown	9,155	5.7	44	10.0	2,090	5.4	1,073	2.4
Total Drivers	159,597	100.0	441	100.0	38,414	100.0	44,639	100.0

Compared to the other two age groups, teen and young adult drivers have the highest incidence of fatal crashes when their speed is too fast.

DRIVER AGE 16-24 (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Sunday	16,894	10.6	66	15.0	4,313	11.2
Monday	22,906	14.4	55	12.5	5,408	14.1
Tuesday	21,300	13.3	56	12.7	5,049	13.1
Wednesday	24,003	15.0	58	13.2	5,644	14.7
Thursday	23,696	14.8	49	11.1	5,653	14.7
Friday	29,809	18.7	68	15.4	7,142	18.6
Saturday	20,989	13.2	89	20.2	5,205	13.5
Total Drivers	159,597	100.0	441	100.0	38,414	100.0

The weekend shows higher involvement of teen and young adult drivers in all crashes when compared to the other two age groups.

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	89,448	56.0	311	70.5	20,508	53.4
Female	66,101	41.4	121	27.4	16,992	44.2
Unknown	4,048	2.5	9	2.0	914	2.4
Total Drivers	159,597	100.0	441	100.0	38,414	100.0

NUMBER OF OCCUPANTS IN MOTOR VEHICLE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
1 occupant	103,062	64.6	231	52.4	22,543	58.7
2 occupants	34,366	21.5	117	26.5	9,440	24.6
3 occupants	9,732	6.1	52	11.8	3,010	7.8
4 occupants	3,598	2.3	16	3.6	1,196	3.1
5 occupants	923	0.6	11	2.5	339	0.9
6 + occupants	362	0.2	4	0.9	132	0.3
0 occupants	534	0.3	0	0.0	61	0.2
Unknown	7,020	4.4	10	2.3	1,693	4.4
Total Drivers	159,597	100.0	441	100.0	38,414	100.0

DRIVER AGE 16-24 (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Passenger Car and Station Wagon	121,072	75.9	282	63.9	29,428	76.6
Van and Motorhome	5,566	3.5	14	3.2	1,393	3.6
Pickup	24,032	15.1	85	19.3	5,048	13.1
Small Truck (under 10,000 lbs.)	2,984	1.9	7	1.6	656	1.7
Motorcycle	654	0.4	26	5.9	478	1.2
Moped	49	0.0	0	0.0	36	0.1
Go Cart	3	0.0	1	0.2	1	0.0
Snowmobile	82	0.1	0	0.0	54	0.1
Off Road Vehicle	83	0.1	9	2.0	61	0.2
Other	249	0.2	0	0.0	91	0.2
Unknown	3,814	2.4	9	2.0	992	2.6
CDL Truck/Bus (breakdown below)	1,009	0.6	8	1.8	176	0.5
Total Number of Drivers	159,597	100.0	441	100.0	38,414	100.0

Special Note: School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.

CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Commercial Vehicle: Group A	292	28.9	6	75.0	58	33.0
Commercial Vehicle: Group B	246	24.4	1	12.5	30	17.0
Commercial Vehicle: Group C	50	5.0	0	0.0	12	6.8
Other Truck	141	14.0	0	0.0	25	14.2
Unknown Truck	280	27.8	1	12.5	51	29.0
Total Number of Drivers	1,009	100.0	8	100.0	176	100.0

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

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

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

DRIVER AGE 25-64

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Going straight ahead	197,955	51.3	802	72.1	44,203	50.5
Turning left	25,353	6.6	46	4.1	6,840	7.8
Turning right	10,039	2.6	7	0.6	1,722	2.0
Stopped on roadway	44,764	11.6	61	5.5	12,091	13.8
In prior crash	493	0.1	1	0.1	152	0.2
Changing lanes	7,697	2.0	19	1.7	1,111	1.3
Backing	9,513	2.5	2	0.2	515	0.6
Slowing/stopping on roadway	35,554	9.2	24	2.2	8,546	9.8
Slowing/stopping other	488	0.1	0	0.0	100	0.1
Starting up on roadway	7,679	2.0	12	1.1	1,869	2.1
Starting up other	222	0.1	0	0.0	50	0.1
Entering parking	513	0.1	1	0.1	45	0.1
Leaving parking	1,275	0.3	0	0.0	220	0.3
Entering roadway	5,152	1.3	7	0.6	1,177	1.3
Leaving roadway	625	0.2	11	1.0	207	0.2
Making U-turn	725	0.2	5	0.4	226	0.3
Overtaking or passing	2,844	0.7	22	2.0	540	0.6
Avoiding object	505	0.1	3	0.3	121	0.1
Avoiding animal	856	0.2	1	0.1	197	0.2
Avoiding pedestrian	128	0.0	5	0.4	58	0.1
Avoiding vehicle (front/back)	3,258	0.8	23	2.1	909	1.0
Avoiding vehicle (angle)	1,531	0.4	7	0.6	436	0.5
Driverless moving	71	0.0	0	0.0	17	0.0
Parked	2,279	0.6	2	0.2	220	0.3
Crossing at intersection	140	0.0	0	0.0	119	0.1
Crossing not at intersection	100	0.0	1	0.1	88	0.1
Getting on/off vehicle	7	0.0	0	0.0	6	0.0
In roadway with traffic	36	0.0	1	0.1	30	0.0
In roadway against traffic	16	0.0	0	0.0	12	0.0
Standing/lying in roadway	25	0.0	0	0.0	23	0.0
Pushing/working on vehicle	15	0.0	0	0.0	13	0.0
Other working in roadway	16	0.0	0	0.0	14	0.0
Playing in roadway	1	0.0	0	0.0	0	0.0
In roadway other reason	33	0.0	0	0.0	29	0.0
Not in roadway	28	0.0	0	0.0	24	0.0
Other	326	0.1	0	0.0	107	0.1
Unknown	25,965	6.7	50	4.5	5,579	6.4
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0

DRIVER AGE 25-64 (continued)

MOST HARMFUL EVENT IN A NONCOLLISION	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Loss of control	1,299	0.3	1	0.1	367	0.4
Cross center/median	270	0.1	0	0.0	96	0.1
Ran off road left	390	0.1	0	0.0	88	0.1
Ran off road right	772	0.2	0	0.0	174	0.2
Re-enter road	49	0.0	1	0.1	11	0.0
Overturn	4,463	1.2	68	6.1	2,179	2.5
Separation of units	575	0.1	1	0.1	121	0.1
Fire/explosion	435	0.1	8	0.7	42	0.0
Immersion	29	0.0	2	0.2	4	0.0
Jackknife	219	0.1	0	0.0	28	0.0
Downhill runaway	31	0.0	0	0.0	12	0.0
Cargo loss/shift	491	0.1	0	0.0	43	0.0
Individual fell off	256	0.1	9	0.8	208	0.2
Other noncollision	1,166	0.3	0	0.0	192	0.2
NONCOLLISION Subtotal	10,445	2.7	90	8.1	3,565	4.1

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Pedestrian	1,293	0.3	87	7.8	1,059	1.2
Pedalcycle	1,117	0.3	13	1.2	859	1.0
Motor vehicle in transport	247,905	64.2	698	62.7	63,749	72.8
Parked motor vehicle	6,746	1.7	6	0.5	708	0.8
Railway train	66	0.0	6	0.5	24	0.0
Animal	43,801	11.3	2	0.2	884	1.0
Other nonfixed objects	4,389	1.1	3	0.3	353	0.4
COLLISION NONFIXED Subtotal	305,317	79.1	815	73.2	67,636	77.2

DRIVER AGE 25-64 (continued)

MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Bridge/pier/abutment	323	0.1	6	0.5	87	0.1
Bridge parapet end	107	0.0	0	0.0	16	0.0
Bridge rail	211	0.1	0	0.0	52	0.1
Guardrail face	1,490	0.4	3	0.3	302	0.3
Guardrail end	242	0.1	2	0.2	86	0.1
Median barrier	1,608	0.4	4	0.4	568	0.6
Highway traffic sign post	1,071	0.3	1	0.1	100	0.1
Signal post	147	0.0	0	0.0	14	0.0
Luminaire/light support	254	0.1	2	0.2	66	0.1
Utility pole	1,549	0.4	15	1.3	569	0.6
Other pole	496	0.1	2	0.2	110	0.1
Culvert	293	0.1	4	0.4	110	0.1
Curb	984	0.3	2	0.2	174	0.2
Ditch	3,584	0.9	10	0.9	991	1.1
Embankment	990	0.3	9	0.8	284	0.3
Fence	545	0.1	1	0.1	86	0.1
Mailbox	869	0.2	0	0.0	62	0.1
Tree	4,670	1.2	75	6.7	1,690	1.9
Rail crossing signal	45	0.0	0	0.0	4	0.0
Building	339	0.1	5	0.4	141	0.2
Traffic island	22	0.0	0	0.0	5	0.0
Fire hydrant	213	0.1	1	0.1	47	0.1
Impact attenuator	24	0.0	0	0.0	8	0.0
Other fixed object	1,861	0.5	5	0.4	392	0.4
COLLISION FIXED Subtotal	21,937	5.7	147	13.2	5,964	6.8

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	48,528	12.6	61	5.5	10,451	11.9
TOTAL MOST HARMFUL EVENT	386,227	100.0	1,113	100.0	87,616	100.0

DRIVER AGE 25-64 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Single Vehicle	80,504	20.8	311	27.9	10,803	12.3
Head On	6,723	1.7	192	17.3	2,877	3.3
Head On - Left Turn	13,151	3.4	51	4.6	5,385	6.1
Angle	84,845	22.0	334	30.0	25,123	28.7
Rear End	124,047	32.1	118	10.6	32,469	37.1
Rear End - Left Turn	4,998	1.3	15	1.3	1,420	1.6
Rear End - Right Turn	4,140	1.1	1	0.1	729	0.8
Sideswipe - Same Direction	33,900	8.8	21	1.9	3,352	3.8
Sideswipe - Opposite Direct	10,450	2.7	19	1.7	1,483	1.7
Other	17,733	4.6	44	4.0	2,920	3.3
Unknown	5,736	1.5	7	0.6	1,055	1.2
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT IN CRASH)	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
On Road	353,233	91.5	881	79.2	78,802	89.9
Median	1,675	0.4	15	1.3	553	0.6
Shoulder	8,785	2.3	72	6.5	2,141	2.4
Outside of Shoulder/Curb	13,624	3.5	116	10.4	4,187	4.8
Gore	451	0.1	5	0.4	140	0.2
Other/Unknown	8,459	2.2	24	2.2	1,793	2.0
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Interstate Routes	41,757	10.8	128	11.5	9,260	10.6
U.S. & Michigan Roads	76,896	19.9	301	27.0	17,874	20.4
County & City Roads	267,574	69.3	684	61.5	60,482	69.0
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0

DRIVER AGE 25-64 (continued)

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
12:00 mid. - 02:59 a.m.	12,185	3.2	117	10.5	3,044	3.5
03:00 a.m. - 05:59 a.m.	11,005	2.8	60	5.4	1,871	2.1
06:00 a.m. - 08:59 a.m.	52,829	13.7	130	11.7	10,738	12.3
09:00 a.m. - 11:59 a.m.	44,620	11.6	99	8.9	10,613	12.1
12:00 noon - 02:59 p.m.	63,959	16.6	175	15.7	15,916	18.2
03:00 p.m. - 05:59 p.m.	93,490	24.2	211	19.0	22,797	26.0
06:00 p.m. - 08:59 p.m.	52,597	13.6	153	13.7	11,243	12.8
09:00 p.m. - 11:59 p.m.	27,123	7.0	141	12.7	5,669	6.5
Unknown	28,419	7.4	27	2.4	5,725	6.5
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury	Number	% of Issued
None	216,386	56.0	509	45.7	45,448	51.9	356	0.6
Speed too fast	16,339	4.2	124	11.1	4,710	5.4	4,982	7.8
Speed too slow	417	0.1	0	0.0	112	0.1	142	0.2
Failed to yield	29,790	7.7	58	5.2	8,274	9.4	15,535	24.3
Disregard traffic control	6,975	1.8	55	4.9	3,051	3.5	3,973	6.2
Drove wrong way	237	0.1	5	0.4	87	0.1	87	0.1
Drove left of center	1,828	0.5	49	4.4	666	0.8	730	1.1
Improper passing	2,214	0.6	9	0.8	324	0.4	758	1.2
Improper lane use	6,951	1.8	6	0.5	834	1.0	2,722	4.3
Improper turn	3,958	1.0	7	0.6	726	0.8	1,497	2.3
Improper/no signal	461	0.1	0	0.0	87	0.1	121	0.2
Improper backing	7,335	1.9	2	0.2	280	0.3	1,876	2.9
Unable to stop in assured clear distance	47,432	12.3	37	3.3	11,763	13.4	22,527	35.2
Reckless driving	975	0.3	19	1.7	358	0.4	474	0.7
Careless\Negligent driving	5,474	1.4	40	3.6	1,907	2.2	2,938	4.6
Other	14,170	3.7	65	5.8	3,622	4.1	3,724	5.8
Unknown	25,285	6.5	128	11.5	5,367	6.1	1,584	2.5
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0	64,026	100.0

DRIVER AGE 25-64 (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Sunday	34,137	8.8	139	12.5	8,094	9.2
Monday	58,475	15.1	152	13.7	13,019	14.9
Tuesday	57,017	14.8	132	11.9	12,810	14.6
Wednesday	60,855	15.8	158	14.2	13,537	15.5
Thursday	60,114	15.6	142	12.8	13,329	15.2
Friday	70,264	18.2	212	19.0	16,012	18.3
Saturday	45,365	11.7	178	16.0	10,815	12.3
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	215,947	55.9	767	68.9	46,773	53.4
Female	159,072	41.2	325	29.2	38,529	44.0
Unknown	11,208	2.9	21	1.9	2,314	2.6
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0

NUMBER OF OCCUPANTS IN MOTOR VEHICLE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
1 occupant	274,479	71.1	736	66.1	58,203	66.4
2 occupants	60,149	15.6	223	20.0	16,184	18.5
3 occupants	18,270	4.7	68	6.1	5,279	6.0
4 occupants	7,793	2.0	35	3.1	2,264	2.6
5 occupants	2,680	0.7	16	1.4	800	0.9
6 + occupants	2,113	0.5	8	0.7	589	0.7
0 occupants	2,028	0.5	0	0.0	198	0.2
Unknown	18,715	4.8	27	2.4	4,099	4.7
Total Drivers	386,227	100.0	1,113	100.0	87,616	100.0

DRIVER AGE 25-64 (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Passenger Car and Station Wagon	245,659	63.6	602	54.1	57,338	65.4
Van and Motorhome	36,099	9.3	101	9.1	8,324	9.5
Pickup	65,968	17.1	201	18.1	12,453	14.2
Small Truck (under 10,000 lbs.)	11,488	3.0	17	1.5	2,380	2.7
Motorcycle	2,244	0.6	64	5.8	1,688	1.9
Moped	129	0.0	3	0.3	84	0.1
Go Cart	3	0.0	0	0.0	2	0.0
Snowmobile	345	0.1	4	0.4	168	0.2
Off Road Vehicle	104	0.0	4	0.4	79	0.1
Other	1,344	0.3	8	0.7	297	0.3
Unknown	10,753	2.8	21	1.9	2,595	3.0
CDL Truck/Bus (breakdown below)	12,091	3.1	88	7.9	2,208	2.5
Total Number of Drivers	386,227	100.0	1,113	100.0	87,616	100.0

Special Note: School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.

CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Commercial Vehicle: Group A	4,625	38.3	52	59.1	856	38.8
Commercial Vehicle: Group B	3,119	25.8	23	26.1	590	26.7
Commercial Vehicle: Group C	452	3.7	1	1.1	89	4.0
Other Truck	655	5.4	3	3.4	117	5.3
Unknown Truck	3,240	26.8	9	10.2	556	25.2
Total Number of Drivers	12,091	100.0	88	100.0	2,208	100.0

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

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

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

DRIVER AGE 65 & OVER

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Going straight ahead	20,984	47.3	147	62.0	5,157	48.1
Turning left	5,104	11.5	32	13.5	1,516	14.1
Turning right	1,600	3.6	1	0.4	233	2.2
Stopped on roadway	3,964	8.9	7	3.0	1,141	10.6
In prior crash	44	0.1	1	0.4	16	0.1
Changing lanes	1,218	2.7	3	1.3	119	1.1
Backing	1,418	3.2	1	0.4	61	0.6
Slowing/stopping on roadway	3,125	7.0	2	0.8	864	8.1
Slowing/stopping other	59	0.1	0	0.0	19	0.2
Starting up on roadway	1,141	2.6	16	6.8	308	2.9
Starting up other	34	0.1	0	0.0	10	0.1
Entering parking	125	0.3	0	0.0	15	0.1
Leaving parking	267	0.6	1	0.4	37	0.3
Entering roadway	1,198	2.7	8	3.4	251	2.3
Leaving roadway	60	0.1	0	0.0	21	0.2
Making U-turn	156	0.4	4	1.7	36	0.3
Overtaking or passing	245	0.6	0	0.0	47	0.4
Avoiding object	21	0.0	0	0.0	6	0.1
Avoiding animal	35	0.1	0	0.0	11	0.1
Avoiding pedestrian	6	0.0	0	0.0	1	0.0
Avoiding vehicle (front/back)	209	0.5	1	0.4	47	0.4
Avoiding vehicle (angle)	86	0.2	2	0.8	16	0.1
Driverless moving	8	0.0	0	0.0	2	0.0
Parked	195	0.4	0	0.0	19	0.2
Crossing at intersection	44	0.1	0	0.0	37	0.3
Crossing not at intersection	9	0.0	0	0.0	8	0.1
Getting on/off vehicle	1	0.0	0	0.0	1	0.0
In roadway with traffic	5	0.0	1	0.4	3	0.0
In roadway against traffic	1	0.0	0	0.0	1	0.0
Standing/lying in roadway	3	0.0	0	0.0	1	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	6	0.0	0	0.0	6	0.1
Not in roadway	3	0.0	0	0.0	3	0.0
Other	30	0.1	0	0.0	15	0.1
Unknown	2,989	6.7	10	4.2	688	6.4
Total Drivers	44,393	100.0	237	100.0	10,716	100.0

DRIVER AGE 65 & OVER (continued)

MOST HARMFUL EVENT IN A NONCOLLISION	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Loss of control	100	0.2	0	0.0	23	0.2
Cross center/median	38	0.1	0	0.0	7	0.1
Ran off road left	32	0.1	0	0.0	10	0.1
Ran off road right	80	0.2	0	0.0	10	0.1
Re-enter road	9	0.0	0	0.0	3	0.0
Overturn	218	0.5	10	4.2	116	1.1
Separation of units	83	0.2	0	0.0	21	0.2
Fire/explosion	36	0.1	0	0.0	6	0.1
Immersion	3	0.0	0	0.0	2	0.0
Jackknife	15	0.0	0	0.0	1	0.0
Downhill runaway	4	0.0	0	0.0	1	0.0
Cargo loss/shift	19	0.0	0	0.0	1	0.0
Individual fell off	16	0.0	0	0.0	11	0.1
Other noncollision	103	0.2	0	0.0	18	0.2
NONCOLLISION Subtotal	756	1.7	10	4.2	230	2.1

MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Pedestrian	196	0.4	10	4.2	161	1.5
Pedalcycle	163	0.4	5	2.1	130	1.2
Motor vehicle in transport	30,877	69.6	164	69.2	8,148	76.0
Parked motor vehicle	1,128	2.5	2	0.8	112	1.0
Railway train	12	0.0	0	0.0	2	0.0
Animal	3,404	7.7	0	0.0	77	0.7
Other nonfixed objects	400	0.9	0	0.0	42	0.4
COLLISION NONFIXED Subtotal	36,180	81.5	181	76.4	8,672	80.9

DRIVER AGE 65 & 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 Total	Number	% of Total
Bridge/pier/abutment	19	0.0	0	0.0	5	0.0
Bridge parapet end	7	0.0	0	0.0	1	0.0
Bridge rail	17	0.0	0	0.0	4	0.0
Guardrail face	91	0.2	3	1.3	31	0.3
Guardrail end	21	0.0	1	0.4	14	0.1
Median barrier	64	0.1	0	0.0	20	0.2
Highway traffic sign post	118	0.3	0	0.0	12	0.1
Signal post	13	0.0	0	0.0	1	0.0
Luminaire/light support	31	0.1	2	0.8	11	0.1
Utility pole	159	0.4	3	1.3	61	0.6
Other pole	41	0.1	1	0.4	14	0.1
Culvert	27	0.1	1	0.4	7	0.1
Curb	70	0.2	1	0.4	14	0.1
Ditch	270	0.6	1	0.4	76	0.7
Embankment	75	0.2	3	1.3	37	0.3
Fence	62	0.1	0	0.0	9	0.1
Mailbox	92	0.2	0	0.0	8	0.1
Tree	392	0.9	11	4.6	150	1.4
Rail crossing signal	7	0.0	0	0.0	0	0.0
Building	60	0.1	1	0.4	26	0.2
Traffic island	6	0.0	0	0.0	1	0.0
Fire hydrant	25	0.1	0	0.0	7	0.1
Impact attenuator	2	0.0	0	0.0	2	0.0
Other fixed object	152	0.3	3	1.3	29	0.3
COLLISION FIXED Subtotal	1,821	4.1	31	13.1	540	5.0

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	5,636	12.7	15	6.3	1,274	11.9
TOTAL MOST HARMFUL EVENT	44,393	100.0	237	100.0	10,716	100.0

DRIVER AGE 65 & OVER (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Single Vehicle	6,336	14.3	50	21.1	907	8.5
Head On	672	1.5	38	16.0	304	2.8
Head On - Left Turn	2,219	5.0	18	7.6	898	8.4
Angle	14,293	32.2	103	43.5	4,054	37.8
Rear End	11,332	25.5	15	6.3	3,288	30.7
Rear End - Left Turn	625	1.4	2	0.8	210	2.0
Rear End - Right Turn	422	1.0	0	0.0	75	0.7
Sideswipe - Same Direction	4,468	10.1	3	1.3	360	3.4
Sideswipe - Opposite Direct	1,279	2.9	2	0.8	167	1.6
Other	2,055	4.6	5	2.1	326	3.0
Unknown	692	1.6	1	0.4	127	1.2
Total Drivers	44,393	100.0	237	100.0	10,716	100.0

Elderly drivers have the highest incidence of angle type crashes when compared to the other two age groups (16-24 and 25-64) in all crashes and fatal crashes.

RELATIONSHIP TO ROADWAY (LOCATION OF FIRST IMPACT IN CRASH)	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
On Road	41,390	93.2	198	83.5	9,972	93.1
Median	112	0.3	4	1.7	42	0.4
Shoulder	753	1.7	6	2.5	150	1.4
Outside of Shoulder/Curb	1,108	2.5	20	8.4	351	3.3
Gore	35	0.1	0	0.0	9	0.1
Other/Unknown	995	2.2	9	3.8	192	1.8
Total Drivers	44,393	100.0	237	100.0	10,716	100.0

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Interstate Routes	4,123	9.3	17	7.2	888	8.3
U.S. & Michigan Roads	9,535	21.5	84	35.4	2,415	22.5
County & City Roads	30,735	69.2	136	57.4	7,413	69.2
Total Drivers	44,393	100.0	237	100.0	10,716	100.0

DRIVER AGE 65 & OVER (continued)

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
12:00 mid. - 02:59 a.m.	334	0.8	0	0.0	72	0.7
03:00 a.m. - 05:59 a.m.	366	0.8	2	0.8	55	0.5
06:00 a.m. - 08:59 a.m.	3,052	6.9	13	5.5	687	6.4
09:00 a.m. - 11:59 a.m.	8,526	19.2	51	21.5	2,131	19.9
12:00 noon - 02:59 p.m.	11,142	25.1	73	30.8	2,898	27.0
03:00 p.m. - 05:59 p.m.	10,853	24.4	50	21.1	2,716	25.3
06:00 p.m. - 08:59 p.m.	5,014	11.3	30	12.7	1,084	10.1
09:00 p.m. - 11:59 p.m.	1,844	4.2	9	3.8	348	3.2
Unknown	3,262	7.3	9	3.8	725	6.8
Total Drivers	44,393	100.0	237	100.0	10,716	100.0

9:00 AM to 2:59 PM shows the highest involvement for elderly drivers compared to the other two age groups.

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury	Number	% of Issued
None	20,524	46.2	78	32.9	4,570	42.6	35	0.4
Speed too fast	922	2.1	10	4.2	257	2.4	196	2.2
Speed too slow	42	0.1	0	0.0	14	0.1	13	0.1
Failed to yield	7,632	17.2	56	23.6	2,169	20.2	3,665	41.7
Disregard traffic control	1,500	3.4	21	8.9	604	5.6	848	9.7
Drove wrong way	56	0.1	2	0.8	21	0.2	28	0.3
Drove left of center	279	0.6	14	5.9	102	1.0	108	1.2
Improper passing	270	0.6	0	0.0	40	0.4	76	0.9
Improper lane use	1,342	3.0	4	1.7	140	1.3	473	5.4
Improper turn	862	1.9	2	0.8	172	1.6	358	4.1
Improper/no signal	60	0.1	0	0.0	10	0.1	20	0.2
Improper backing	1,159	2.6	0	0.0	40	0.4	233	2.7
Unable to stop in assured clear distance	4,607	10.4	7	3.0	1,359	12.7	1,963	22.4
Reckless driving	18	0.0	0	0.0	9	0.1	9	0.1
Careless\Negligent driving	599	1.3	7	3.0	181	1.7	237	2.7
Other	1,667	3.8	8	3.4	392	3.7	307	3.5
Unknown	2,854	6.4	28	11.8	636	5.9	211	2.4
Total Drivers	44,393	100.0	237	100.0	10,716	100.0	8,780	100.0

Compared to the other two age groups, elderly drivers have the highest incidence of failed to yield, disregard of traffic control, improper lane use, improper turn, and improper backing as a hazardous action in all crashes.

DRIVER AGE 65 & OVER (continued)

DAY of WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Sunday	4,080	9.2	21	8.9	1,061	9.9
Monday	6,708	15.1	25	10.5	1,584	14.8
Tuesday	6,765	15.2	33	13.9	1,646	15.4
Wednesday	7,035	15.8	39	16.5	1,681	15.7
Thursday	6,894	15.5	36	15.2	1,650	15.4
Friday	7,932	17.9	53	22.4	1,844	17.2
Saturday	4,979	11.2	30	12.7	1,250	11.7
Total Drivers	44,393	100.0	237	100.0	10,716	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	25,161	56.7	149	62.9	5,917	55.2
Female	18,011	40.6	86	36.3	4,535	42.3
Unknown	1,221	2.8	2	0.8	264	2.5
Total Drivers	44,393	100.0	237	100.0	10,716	100.0

NUMBER OF OCCUPANTS IN MOTOR VEHICLE	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
1 occupant	31,439	70.8	160	67.5	7,262	67.8
2 occupants	9,171	20.7	60	25.3	2,497	23.3
3 occupants	992	2.2	9	3.8	287	2.7
4 occupants	343	0.8	3	1.3	102	1.0
5 occupants	71	0.2	0	0.0	25	0.2
6 + occupants	83	0.2	0	0.0	21	0.2
0 occupants	196	0.4	0	0.0	28	0.3
Unknown	2,098	4.7	5	2.1	494	4.6
Total Drivers	44,393	100.0	237	100.0	10,716	100.0

DRIVER AGE 65 & OVER (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Passenger Car and Station Wagon	34,113	76.8	186	78.5	8,349	77.9
Van and Motorhome	3,372	7.6	11	4.6	783	7.3
Pickup	4,553	10.3	26	11.0	976	9.1
Small Truck (under 10,000 lbs.)	653	1.5	3	1.3	144	1.3
Motorcycle	54	0.1	0	0.0	48	0.4
Moped	5	0.0	0	0.0	3	0.0
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	7	0.0	0	0.0	3	0.0
Off Road Vehicle	3	0.0	0	0.0	1	0.0
Other	70	0.2	1	0.4	17	0.2
Unknown	1,243	2.8	5	2.1	334	3.1
CDL Truck/Bus (breakdown below)	320	0.7	5	2.1	58	0.5
Total Number of Drivers	44,393	100.0	237	100.0	10,716	100.0

Special Note: School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.

CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Commercial Vehicle: Group A	95	29.7	1	20.0	17	29.3
Commercial Vehicle: Group B	88	27.5	2	40.0	17	29.3
Commercial Vehicle: Group C	23	7.2	1	20.0	2	3.4
Other Truck	12	3.8	0	0.0	3	5.2
Unknown Truck	102	31.9	1	20.0	19	32.8
Total Number of Drivers	320	100.0	5	100.0	58	100.0

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

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

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

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Alcohol

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

Alcohol and/or drug use affects the judgment and behavior of persons in addition to motor vehicle drivers. Consider the experience of impaired bicyclists, pedestrians, motorcyclists, snowmobilers, and ORV/ATV riders, when looking at crash statistics. Alcohol and drugs should not be used by anyone intending to navigate a roadway.

BICYCLIST	Total	In Crash				Bicyclist			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	26	6	3	1	10	5	3	0	8
Injured	1,104	49	0	1	50	35	0	0	35
in Crashes	1,342	61	3	2	66	44	3	0	47

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

PEDESTRIAN	Total	In Crash				Pedestrian			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	160	53	8	12	73	44	9	11	64
Injured	1,759	150	6	6	162	97	1	2	100
In Crashes	2,135	217	14	18	249	149	10	13	172

MOTORCYCLIST	Total	In Crash				Motorcyclist			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	90	28	3	4	35	24	3	4	31
Injured	2,593	267	7	14	288	238	3	12	253
in Crashes	3,560	337	10	20	367	295	6	16	317

SNOWMOBILER *	Total	In Crash				Snowmobiler			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	4	3	0	0	3	3	0	0	3
Injured	284	52	0	0	52	51	0	0	51
in Crashes	686	75	0	1	76	67	0	1	68

ORV/ATV RIDER *	Total	In Crash				ORV/ATV Rider			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	15	6	1	1	8	6	1	1	8
Injured	237	33	0	1	34	33	0	1	34
in Crashes	332	43	1	2	46	43	1	2	46

* on Michigan public roadways

INJURY EXPERIENCE FOR PERSONS WHO HAD BEEN DRINKING AND/OR USING DRUGS (continued)

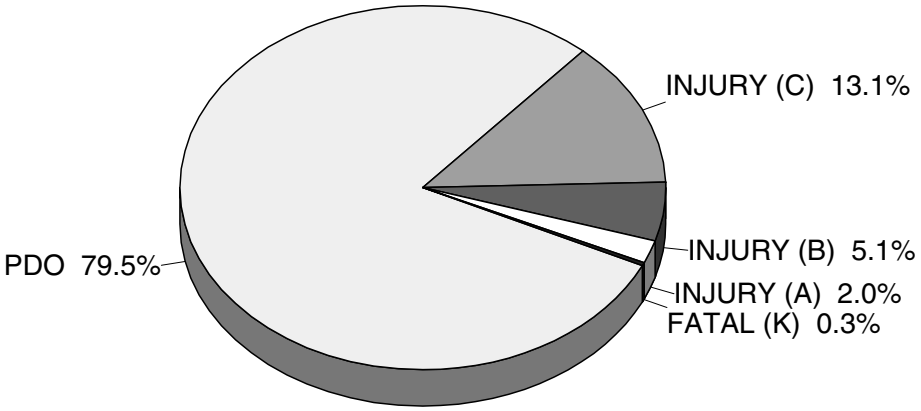
DRIVER*	Total	In Crash				Driver			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	827	238	24	61	323	218	21	51	290
Injured	79,662	6,332	280	245	6,857	4,587	181	182	4,950
in Crashes	687,836	22,995	892	978	24,865	15,160	527	600	16,287

* Includes drivers NOT drinking/drug but in drinking/drug crash

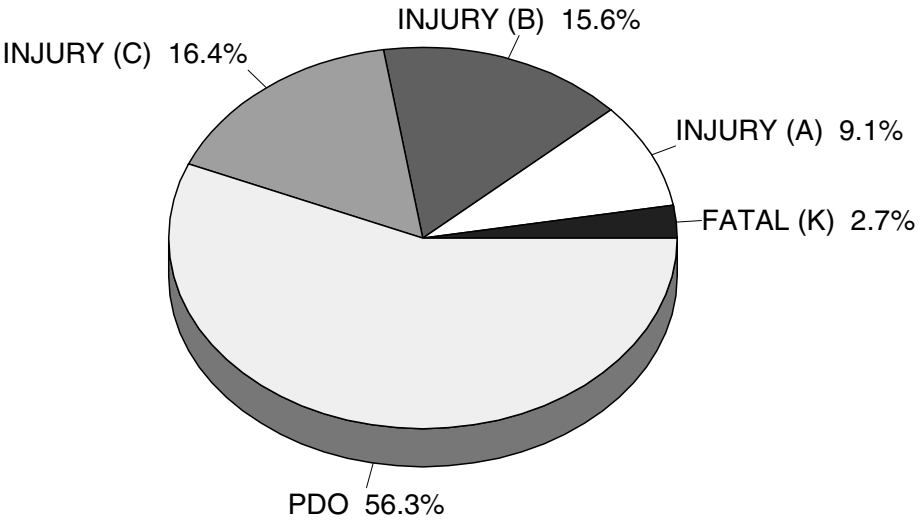
DRIVERS DRINKING AND/OR USING DRUGS & INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH											
	Drivers				Fatal				Injury			
	HBD	Drug	Both	Total	HBD	Drug	Both	Total	HBD	Drug	Both	Total
13 years & under	3	0	0	3	0	0	0	0	0	0	0	0
14 years	6	1	3	10	0	0	0	0	2	1	2	5
15 years	17	4	0	21	2	0	0	2	7	3	0	10
16 years	87	8	6	101	2	0	1	3	33	5	4	42
17 years	204	17	8	229	4	3	0	7	82	6	2	90
18 years	395	17	17	429	8	0	0	8	175	11	7	193
19 years	497	24	24	545	14	1	3	18	208	10	7	225
20 years	517	12	22	551	9	1	1	11	215	5	10	230
21 - 24 years	2,535	43	74	2,652	57	4	12	73	1,046	18	26	1,090
25 - 34 years	3,738	97	143	3,978	80	1	22	103	1,557	35	47	1,639
35 - 44 years	3,621	175	172	3,968	66	7	20	93	1,512	83	64	1,659
45 - 54 years	1,917	94	70	2,081	35	8	4	47	784	40	23	847
55 - 64 years	625	12	27	664	14	1	1	16	243	3	8	254
65 - 69 years	170	3	5	178	6	1	0	7	76	2	1	79
70 - 74 years	121	0	1	122	4	0	0	4	52	0	0	52
75 - 79 years	41	1	3	45	0	1	0	1	24	0	2	26
80 - 84 years	28	0	1	29	2	0	0	2	8	0	1	9
85 - 89 years	3	0	0	3	0	0	0	0	1	0	0	1
90 years & over	0	1	0	1	0	1	0	1	0	0	0	0
Not Stated	635	18	24	677	15	2	0	17	227	5	7	239
TOTAL	15,160	527	600	16,287	318	31	64	413	6,252	227	211	6,690

ALL CRASHES BY INJURY SEVERITY

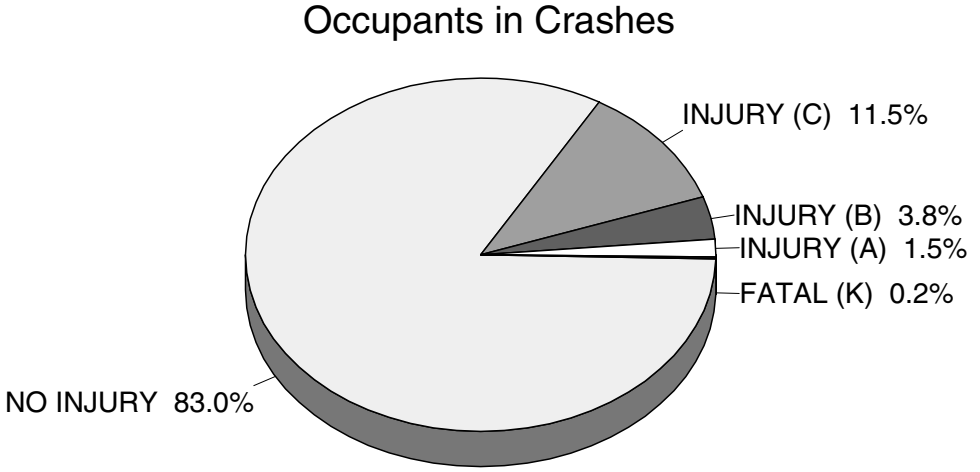


HBD CRASHES BY INJURY SEVERITY

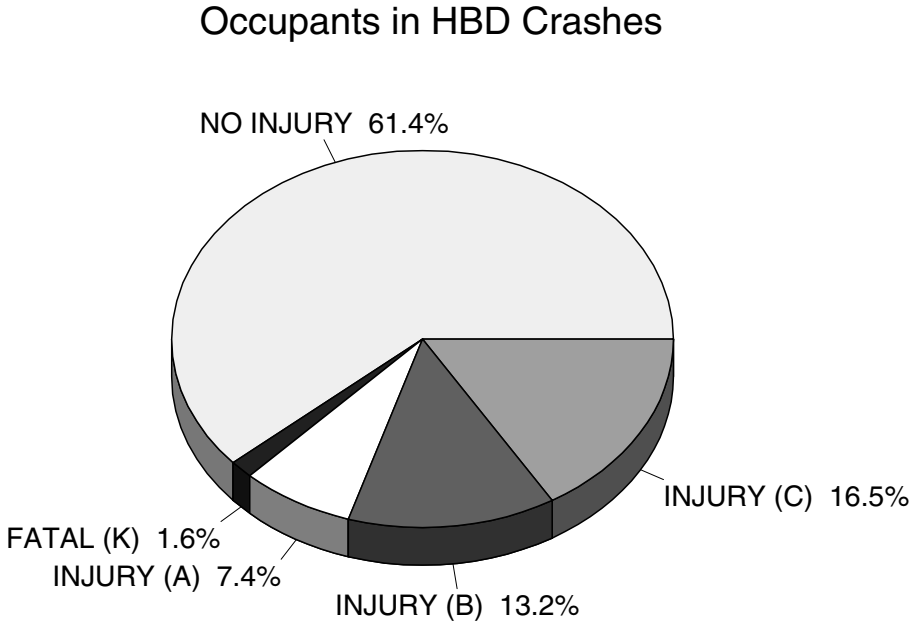


The problem of the drinking driver, pedestrian, and/or cyclist is seen when one compares the two charts on this page. A fatality in the crash is **nine times** more likely when one of the crash-involved operators is reported as had been drinking.

DEATH & INJURY PER CRASH INVOLVED OCCUPANT



The majority of occupants involved in crashes are not injured (83.0%). Two thirds of those who are injured receive only minor (C) injuries. Increased use of occupant restraints and airbags can reduce the number of killed and injured even further.

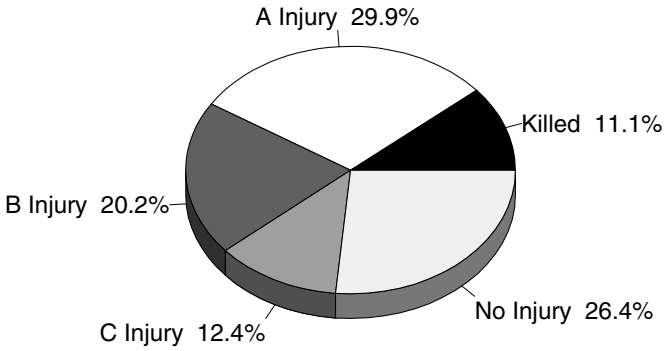


Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of fatalities is eight times higher than in all crashes and the more serious injury levels are almost four times higher.

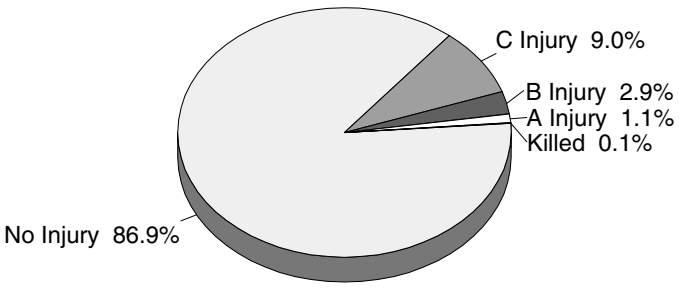
ALL DRIVERS and *HBD DRIVERS*
INJURY SEVERITY - EJECTED vs. NOT EJECTED

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

Ejected

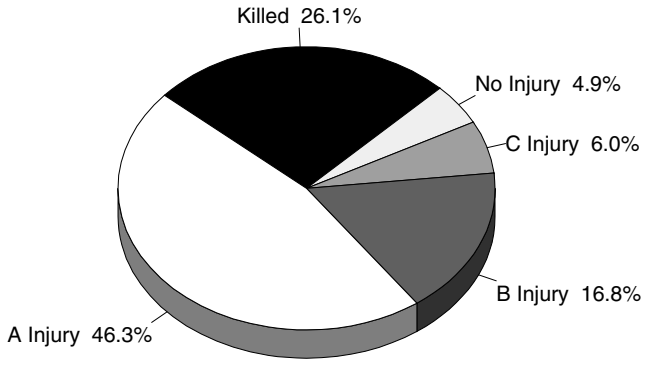


Not Ejected

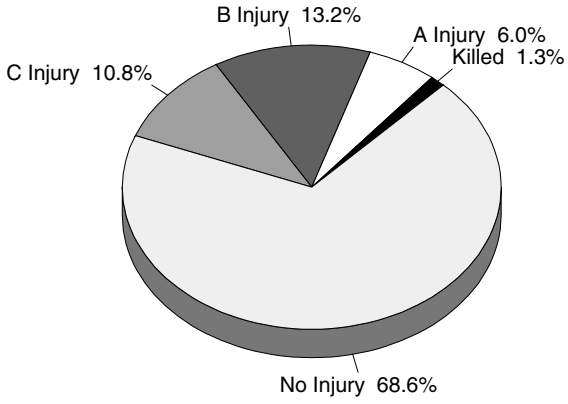


When compared to the charts above, the charts below demonstrate that the injury severity is much worse for drivers who had been drinking in both ejected, and nonejected events.

HBD Ejected

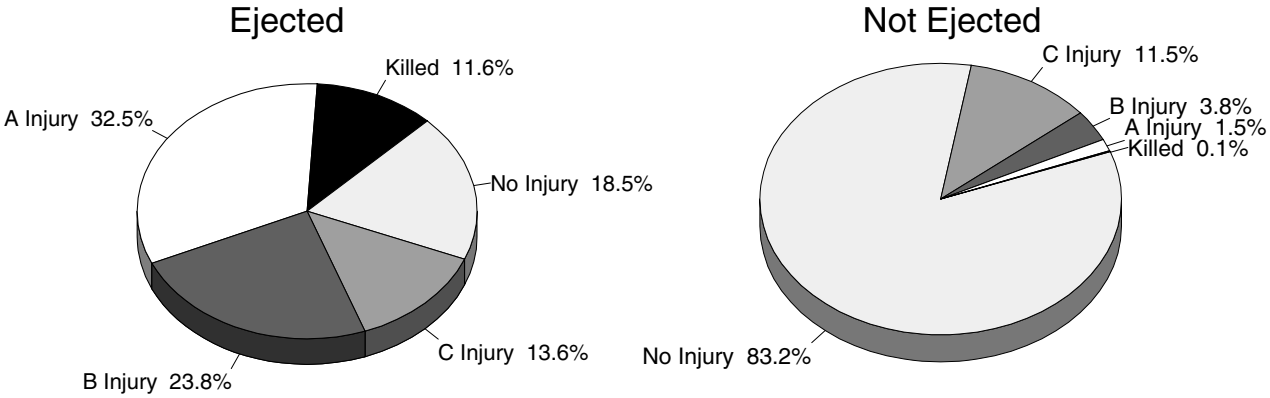


HBD Not Ejected

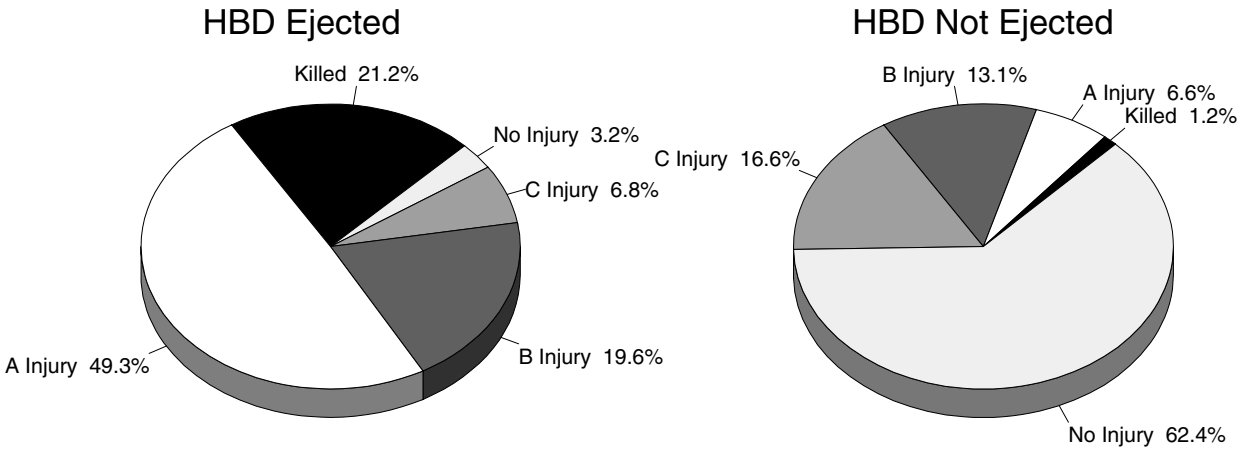


ALL OCCUPANTS and *OCCUPANTS of HBD CRASHES*
INJURY SEVERITY - EJECTED vs. NOT EJECTED

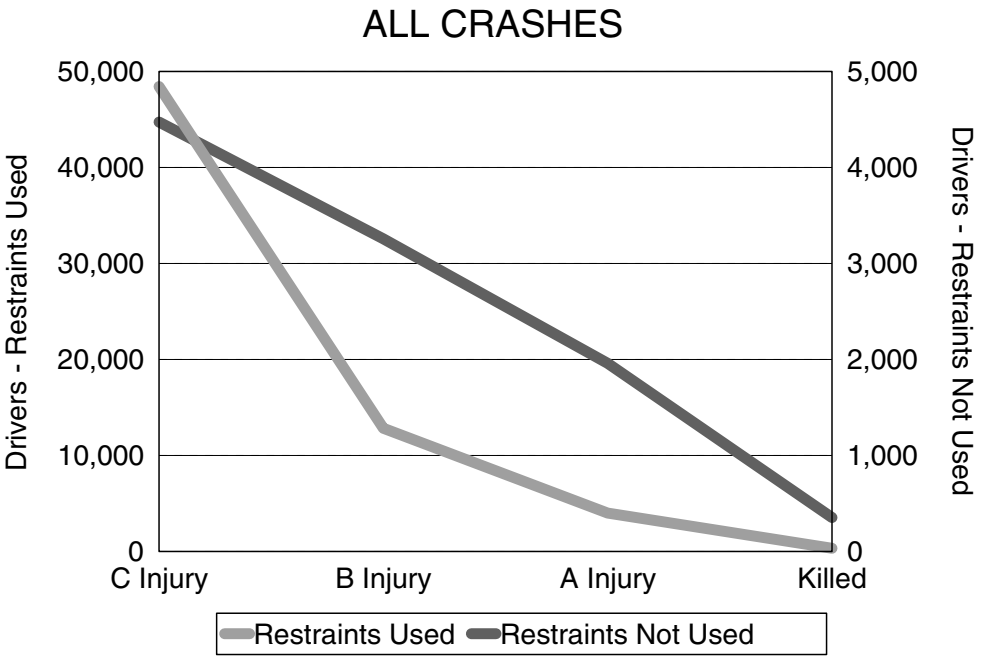
As can be seen in the two charts below, death and injury are much more likely when occupants are ejected from their vehicles.

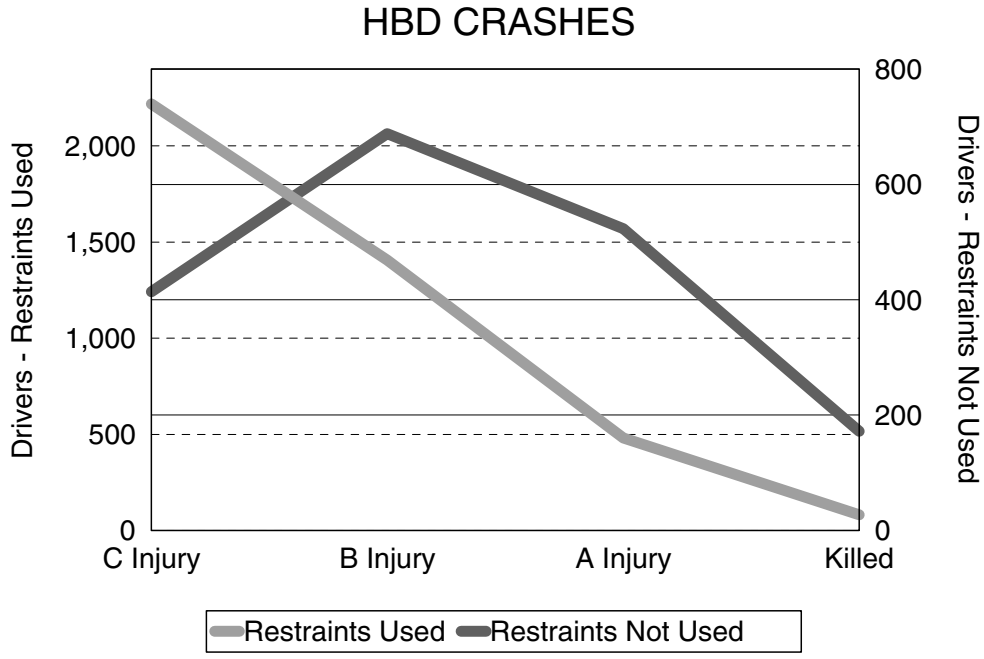


When compared to the charts above, the charts below demonstrate that the injury severity is much worse for occupants in a crash where drinking is reported in both ejected, and nonejected events.

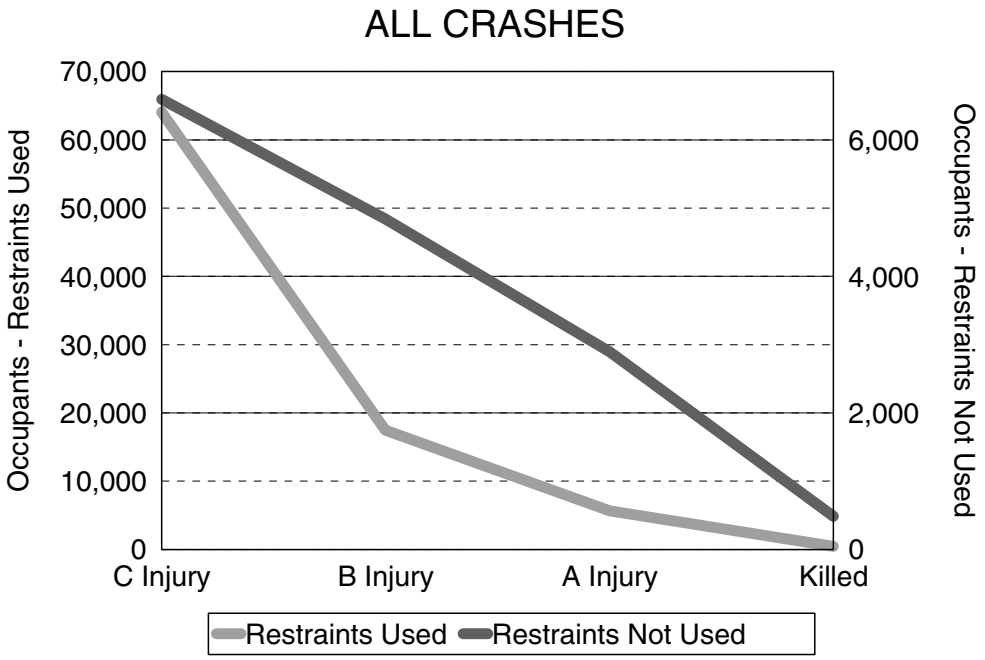


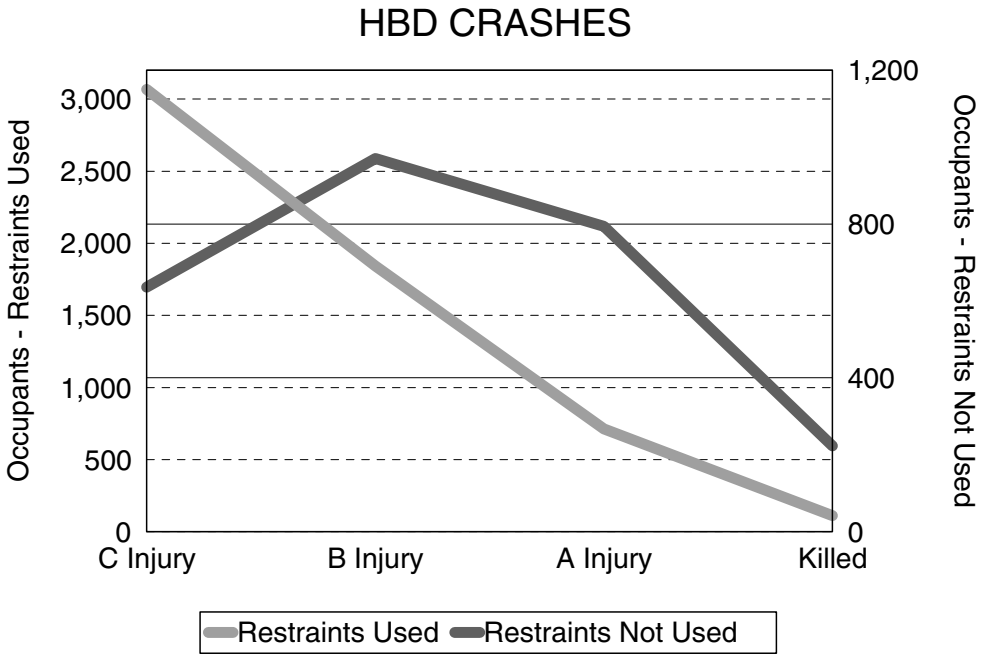
INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC *DRIVERS*





INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC *OCCUPANTS*

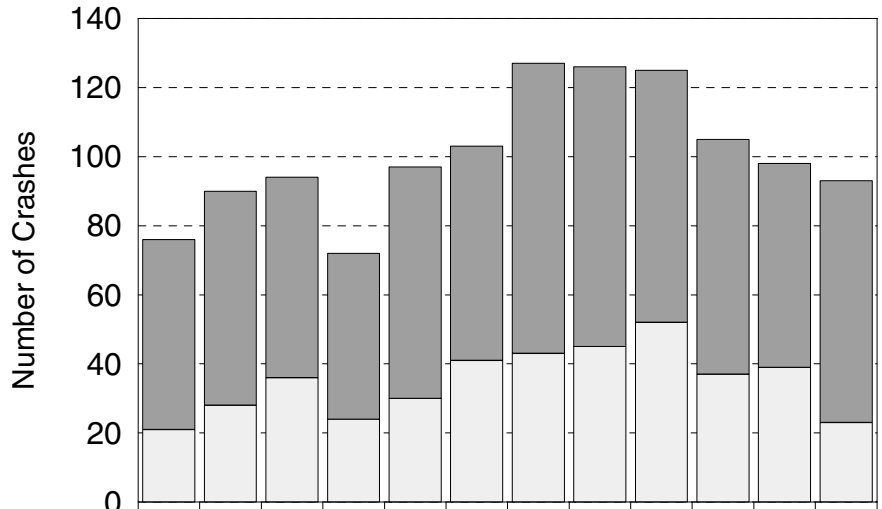




ALCOHOL INVOLVEMENT IN FATAL CRASHES

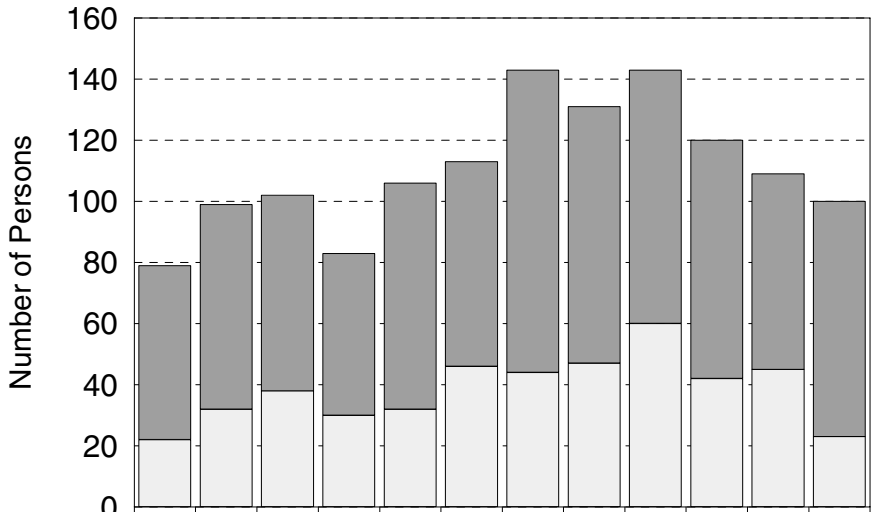
Fatal crashes were lowest in number during April. The number of fatal crashes then increased, reaching highs in July, August, and September. The number of HBD fatal crashes follows the overall trend, with the highest number of HBD fatal crashes in September. Total persons killed in fatal crashes closely follows the number of crashes, as would be expected.

HBD Fatal Crashes by Month



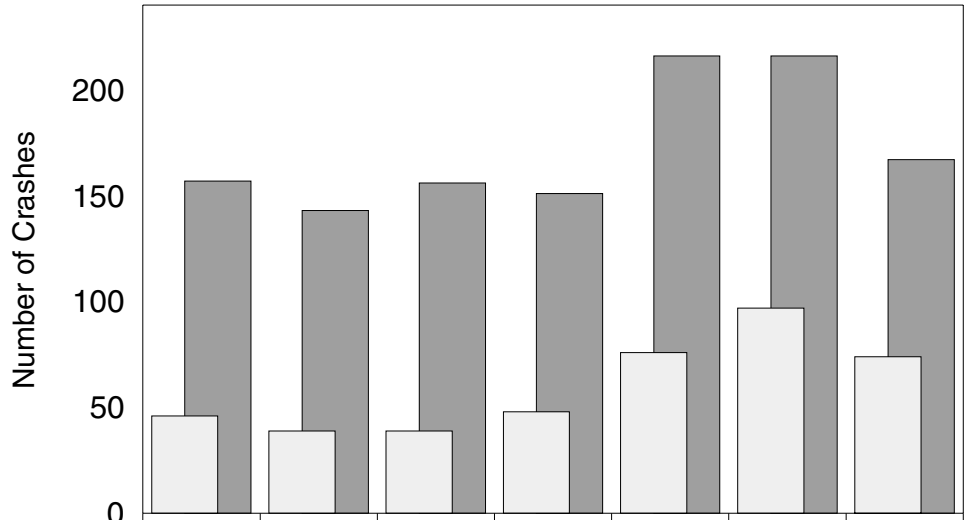
	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Non-HBD Fatal Crashes	55	62	58	48	67	62	84	81	73	68	59	70	787
HBD Fatal Crashes	21	28	36	24	30	41	43	45	52	37	39	23	419

Alcohol-related Fatalities by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Nonalcohol-related Fatalities	57	67	64	53	74	67	99	84	83	78	64	77	867
Alcohol-related Fatalities	22	32	38	30	32	46	44	47	60	42	45	23	461

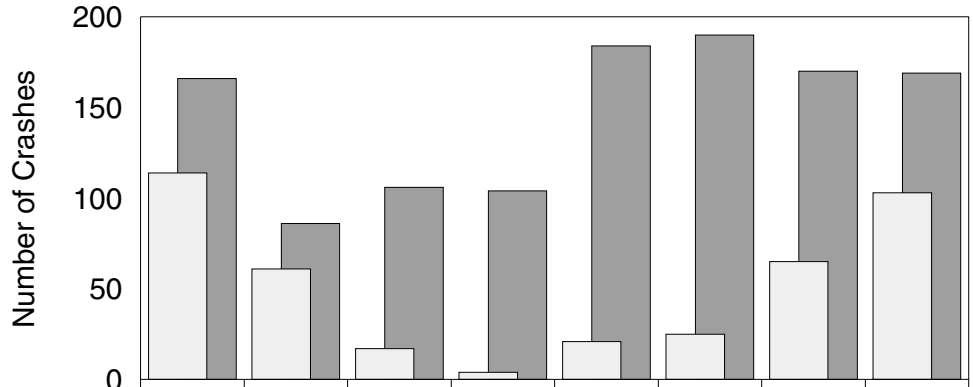
HBD Fatal Crashes by Day of Week



	Mon	Tue	Wed	Thu	Fri	Sat	Sun
HBD Fatal Crashes	46	39	39	48	76	97	74
All Fatal Crashes	157	143	156	151	216	216	167

Friday and Saturday had the most fatal crashes in 2001. Saturday and Sunday had the highest proportions of drinking-related fatal crashes. Almost half of the weekend fatal crashes involved drinking, while only 25.0 percent of fatal crashes on Wednesday involved drinking.

HBD Fatal Crashes by Time of Day



	12:00-2:59 A	3:00-5:59 A	6:00-8:59 A	9:00-11:59 A	12:00-2:59 P	3:00-5:59 P	6:00-8:59 P	9:00-11:59 P
HBD Fatal Crashes	114	61	17	4	21	25	65	103
All Fatal Crashes	166	86	106	104	184	190	170	169

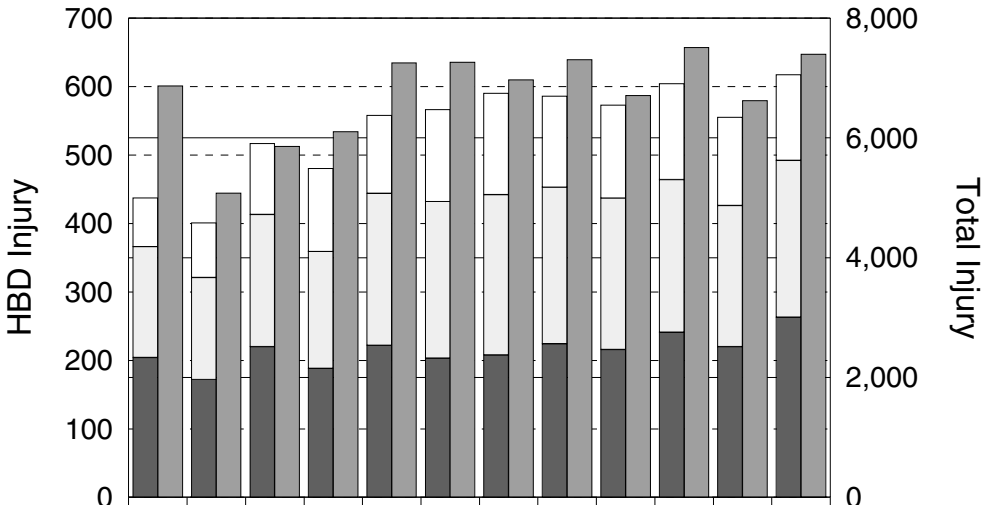
Not surprisingly, the midnight to 2:59 AM and 3:00 to 5:59 AM time periods had the highest rate of drinking involvement (68.7% and 70.9%), while the late morning hours had the lowest (3.8%).

There were 31 fatal crashes where the time of day was unknown. Of these 31 fatal crashes, 9 were HBD.

ALCOHOL INVOLVEMENT IN INJURY CRASHES

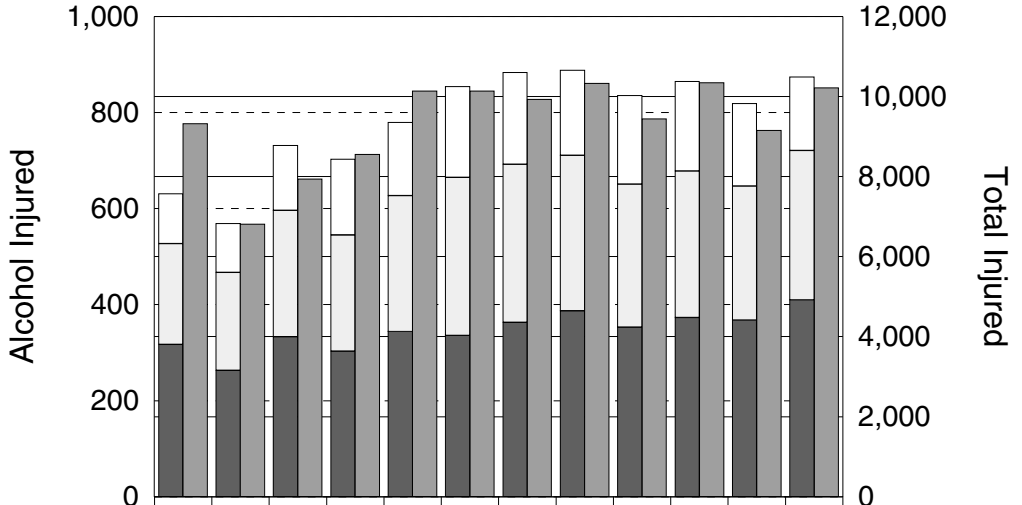
Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 2001, the highest number of HBD injury crashes occurred in December with 617. The highest proportion of HBD injury crashes occurred in March with 8.8 percent of the injury crashes in that month involving alcohol.

HBD Injury Crashes by Month



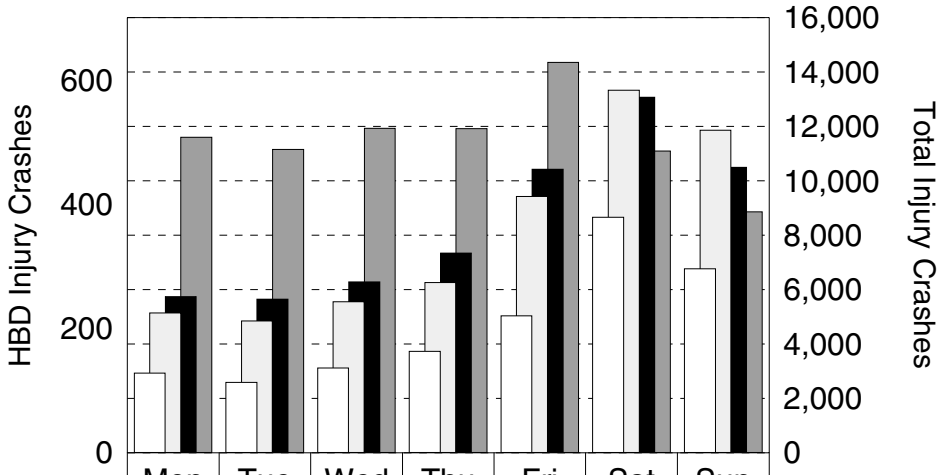
	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Total Injury Crashes	6,865	5,076	5,859	6,101	7,250	7,260	6,970	7,305	6,707	7,509	6,623	7,397	80,922
A Injury - HBD Crashes	71	80	104	121	114	134	148	133	136	140	129	125	1,435
B Injury - HBD Crashes	162	149	193	171	222	229	234	229	221	223	206	229	2,468
C Injury - HBD Crashes	204	172	220	188	222	203	208	224	216	241	220	263	2,581

Alcohol-related Injuries by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Total Persons Injured	9,317	6,810	7,939	8,551	10,138	10,137	9,924	10,329	9,437	10,342	9,156	10,214	112,294
Alcohol-related A Injury	104	102	135	158	152	189	191	177	184	187	172	153	1,904
Alcohol-related B Injury	210	204	263	242	283	329	329	324	298	305	279	311	3,377
Alcohol-related C Injury	317	263	333	303	344	336	363	387	353	373	368	410	4,150

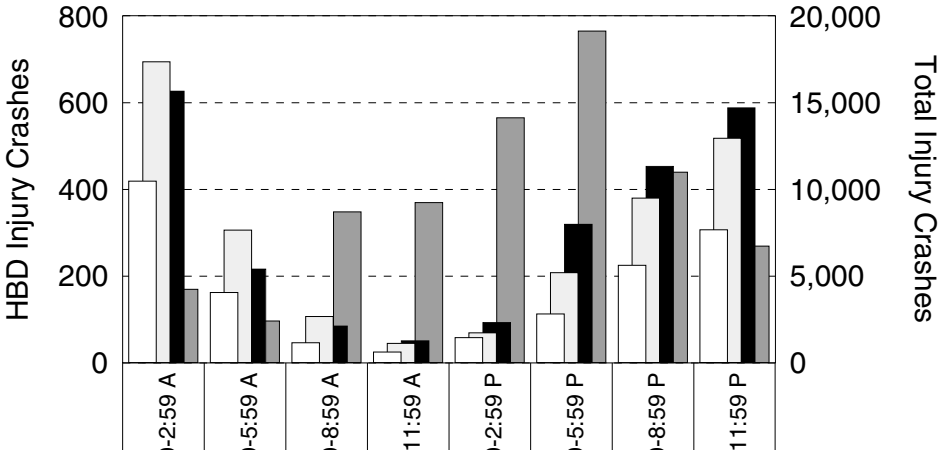
HBD Injury Crashes by Day of Week



	Mon	Tue	Wed	Thu	Fri	Sat	Sun
A Injury - HBD	128	113	136	163	220	379	296
B Injury - HBD	225	212	243	274	412	583	519
C Injury - HBD	251	247	275	321	456	572	459
Total Injury Crashes	11,606	11,159	11,928	11,914	14,358	11,092	8,865

HBD injury crashes follow the same basic trends as total crashes through the work week, but the weekend sees a dramatic increase in the proportion of HBD injury crashes to total injury crashes.

HBD Injury Crashes by Time of Day



	12:00-2:59 A	3:00-5:59 A	6:00-8:59 A	9:00-11:59 A	12:00-2:59 P	3:00-5:59 P	6:00-8:59 P	9:00-11:59 P
A Injury - HBD	419	162	46	25	58	113	225	307
B Injury - HBD	694	306	107	45	69	208	380	518
C Injury - HBD	626	216	85	51	93	319	453	588
Total Injury Crashes	4,233	2,404	8,696	9,230	14,128	19,125	10,984	6,730

Total injury crash frequencies peak in the hours between 3:00 PM and 5:59 PM, while HBD injury crash frequencies peak between 12:00 AM and 2:59 AM (a particularly hazardous travel period).

REPORTED AGE OF DRINKING DRIVERS INVOLVED IN CRASHES

COUNTY	All ages	0-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 yrs & over	DOB unk
Alcona	26	0	4	4	6	6	1	3	2	0	0
Alger	38	0	6	6	9	7	4	1	2	0	3
Allegan	218	0	20	45	60	48	26	3	1	0	15
Alpena	50	0	8	8	10	10	7	3	1	1	2
Antrim	54	0	7	9	12	11	9	3	0	0	3
Arenac	37	0	4	3	11	10	5	1	1	1	1
Baraga	23	0	3	3	3	10	3	1	0	0	0
Barry	124	0	28	19	34	24	10	4	2	0	3
Bay	280	1	30	35	87	71	36	10	3	0	7
Benzie	39	0	4	6	8	15	2	2	2	0	0
Berrien	247	0	24	37	59	55	27	8	8	1	28
Branch	66	0	6	16	21	14	5	2	0	0	2
Calhoun	213	0	25	31	49	53	27	12	7	1	8
Cass	86	0	2	18	23	21	10	1	0	2	9
Charlevoix	54	0	7	12	8	12	5	3	0	3	4
Cheboygan	51	0	4	8	12	12	11	2	2	0	0
Chippewa	71	0	9	17	13	13	6	3	2	1	7
Clare	56	0	4	9	10	19	6	6	1	1	0
Clinton	119	0	20	35	30	18	10	3	1	0	2
Crawford	37	0	5	5	1	16	7	1	1	0	1
Delta	59	0	12	9	12	11	8	1	0	0	6
Dickinson	47	1	4	12	11	6	6	1	1	0	5
Eaton	147	0	28	23	34	39	11	3	0	0	9
Emmet	66	0	9	11	13	14	10	0	2	1	6
Genesee	896	4	60	138	225	225	137	39	25	5	38
Gladwin	53	0	2	9	12	18	4	6	1	0	1
Gogebic	28	0	0	9	4	4	3	1	1	0	6
Grand Traverse	139	0	23	20	25	36	24	4	1	1	5
Gratiot	61	0	10	13	14	15	5	1	1	0	2
Hillsdale	79	0	6	20	13	31	3	0	1	0	5
Houghton	69	1	7	14	11	19	5	5	0	0	7
Huron	55	1	8	7	16	14	6	0	2	1	0
Ingham	424	0	36	96	103	101	50	13	7	1	17
Ionia	136	0	21	30	27	31	18	4	1	0	4
Iosco	43	1	5	6	4	16	5	3	1	0	2
Iron	31	0	4	6	4	9	3	1	1	0	3
Isabella	120	0	23	24	31	29	10	0	0	1	2
Jackson	318	0	32	58	75	69	40	18	6	3	17
Kalamazoo	445	0	49	84	113	95	60	14	10	2	18
Kalkaska	44	0	3	8	12	14	6	1	0	0	0
Kent	1,053	2	134	212	281	220	110	38	10	4	42
Keweenaw	11	0	2	1	4	3	0	1	0	0	0
Lake	31	0	4	3	6	5	6	4	2	0	1
Lapeer	157	0	21	20	36	44	23	6	3	0	4
Leelanau	61	0	3	7	13	17	9	0	2	1	9

REPORTED AGE OF DRINKING DRIVERS INVOLVED IN CRASHES (continued)

COUNTY	All ages	0-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 yrs & over	DOB unk
Lenawee	169	0	19	36	36	37	17	6	5	0	13
Livingston	267	2	34	47	64	71	30	7	3	2	7
Luce	13	0	1	1	1	5	1	0	2	0	2
Mackinac	34	0	7	2	8	8	7	0	1	0	1
Macomb	1,034	1	118	142	268	277	141	48	20	5	14
Manistee	33	0	4	4	8	9	2	4	0	0	2
Marquette	118	0	14	21	35	27	10	3	0	1	7
Mason	60	0	8	7	8	20	12	2	0	0	3
Mecosta	94	0	13	20	27	18	8	4	1	0	3
Menominee	46	1	3	6	3	11	8	3	0	0	11
Midland	139	0	18	20	42	31	14	4	3	0	7
Missaukee	31	0	6	5	9	4	3	2	2	0	0
Monroe	253	1	24	35	64	57	18	9	3	0	42
Montcalm	131	0	18	27	25	38	14	2	2	0	5
Montmorency	22	0	3	5	2	5	3	3	0	1	0
Muskegon	229	0	19	33	70	55	30	6	4	0	12
Newaygo	95	0	8	12	24	28	16	0	4	1	2
Oakland	1,599	1	164	234	378	400	242	86	32	11	51
Oceana	74	0	12	16	18	12	11	2	2	0	1
Ogemaw	50	0	7	5	14	17	2	4	1	0	0
Ontonagon	22	0	4	2	5	3	2	1	0	0	5
Osceola	58	0	7	16	10	12	9	1	1	0	2
Oscoda	26	0	4	5	4	5	5	2	0	0	1
Otsego	59	0	6	15	13	12	5	4	2	1	1
Ottawa	347	2	61	81	85	70	21	6	2	4	15
Presque Isle	26	0	3	5	4	6	3	1	1	0	3
Roscommon	80	0	8	14	15	23	12	4	0	0	4
Saginaw	369	1	47	63	94	85	41	20	11	1	6
St. Clair	278	1	33	51	63	66	34	8	7	0	15
St. Joseph	97	1	15	14	22	24	7	4	1	0	9
Sanilac	57	0	9	10	15	12	6	2	1	1	1
Schoolcraft	23	0	5	6	3	1	3	3	2	0	0
Shiawassee	121	1	16	25	22	35	11	4	3	3	1
Tuscola	127	1	19	21	39	24	18	5	0	0	0
Van Buren	191	0	20	31	49	48	23	8	1	1	10
Washtenaw	488	0	73	91	117	111	58	14	5	0	19
Wayne	2,359	5	209	301	634	574	354	131	60	13	78
Wexford	79	0	12	14	18	22	7	3	1	0	2
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
Totals	15,760	29	1,777	2,609	3,881	3,793	1,987	652	297	76	659

MALE DRIVERS & INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							
	Male Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	635	0.2	3	0.2	72	173	163	224
14 years	210	0.1	0	0.0	22	54	31	103
15 years	649	0.2	8	0.6	34	88	106	413
16 years	9,078	2.5	25	1.9	220	606	1,339	6,888
17 years	10,880	3.0	33	2.5	239	695	1,583	8,330
18 years	12,637	3.5	34	2.6	282	831	1,816	9,674
19 years	11,656	3.3	46	3.5	294	752	1,634	8,930
20 years	10,303	2.9	31	2.3	271	609	1,457	7,935
21 - 24 years	34,894	9.8	142	10.8	852	2,144	4,884	26,872
25 - 34 years	70,054	19.6	253	19.2	1,620	3,713	10,209	54,259
35 - 44 years	67,252	18.8	232	17.6	1,517	3,479	9,514	52,510
45 - 54 years	51,647	14.4	179	13.6	1,126	2,594	7,326	40,422
55 - 64 years	26,994	7.5	103	7.8	554	1,304	3,817	21,216
65 - 69 years	8,058	2.3	30	2.3	156	402	1,269	6,201
70 - 74 years	6,900	1.9	38	2.9	118	411	1,019	5,314
75 - 79 years	5,333	1.5	31	2.3	114	298	837	4,053
80 - 84 years	3,244	0.9	34	2.6	92	249	500	2,369
85 - 89 years	1,317	0.4	11	0.8	46	84	230	946
90 years and over	309	0.1	5	0.4	8	25	59	212
Not Stated	25,634	7.2	82	6.2	534	1,120	3,420	20,478
TOTAL	357,684	100.0	1,320	100.0	8,171	19,631	51,213	277,349

NOTE: The tables on this page and page 109 exclude 75,516 drivers of unknown gender.

The crash involvement for male drivers is down 8.8 percent from 2000.

The fatal crash involvement for male drivers is down 5.6 percent from 2000.

MALE DRINKING DRIVERS & INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							
	Male Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	2	0.0	0	0.0	0	0	0	2
14 years	6	0.0	0	0.0	0	3	0	3
15 years	11	0.1	2	0.6	0	2	3	4
16 years	71	0.6	3	1.0	8	11	9	40
17 years	167	1.4	2	0.6	14	33	22	96
18 years	327	2.7	3	1.0	33	65	49	177
19 years	427	3.5	14	4.5	42	73	48	250
20 years	442	3.6	9	2.9	55	73	57	248
21 - 24 years	2,161	17.5	63	20.4	182	367	323	1,226
25 - 34 years	3,040	24.7	85	27.5	300	506	478	1,671
35 - 44 years	2,748	22.3	64	20.7	268	437	474	1,505
45 - 54 years	1,577	12.8	30	9.7	163	215	255	914
55 - 64 years	542	4.4	13	4.2	32	76	106	315
65 - 69 years	148	1.2	5	1.6	11	22	31	79
70 - 74 years	107	0.9	3	1.0	10	17	22	55
75 - 79 years	35	0.3	0	0.0	3	5	13	14
80 - 84 years	19	0.2	1	0.3	0	2	4	12
85 - 89 years	3	0.0	0	0.0	0	1	0	2
90 years and over	0	0.0	0	0.0	0	0	0	0
Not Stated	498	4.0	12	3.9	45	61	86	294
TOTAL	12,331	100.0	309	100.0	1,166	1,969	1,980	6,907

NOTE: The tables on this page and page 110 exclude 317 drinking drivers of unknown gender.

FEMALE DRIVERS & INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	Female Drivers		MOST SEVERE OUTCOME IN CRASH: Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	327	0.1	0	0.0	44	89	76	118
14 years	131	0.1	0	0.0	16	27	25	63
15 years	512	0.2	1	0.2	14	51	96	350
16 years	7,350	2.9	9	1.6	173	478	1,263	5,427
17 years	8,544	3.4	21	3.8	154	540	1,543	6,286
18 years	8,787	3.5	12	2.2	186	583	1,628	6,378
19 years	8,315	3.3	27	4.9	153	484	1,486	6,165
20 years	7,694	3.0	19	3.4	142	390	1,427	5,716
21 - 24 years	25,411	10.0	33	5.9	453	1,349	4,560	19,016
25 - 34 years	51,867	20.4	92	16.5	940	2,585	9,242	39,008
35 - 44 years	51,394	20.2	106	19.1	913	2,408	8,925	39,042
45 - 54 years	37,852	14.9	92	16.5	686	1,797	6,613	28,664
55 - 64 years	17,959	7.1	35	6.3	353	854	3,213	13,504
65 - 69 years	5,299	2.1	18	3.2	113	276	918	3,974
70 - 74 years	4,845	1.9	13	2.3	96	260	814	3,662
75 - 79 years	4,149	1.6	24	4.3	87	253	736	3,049
80 - 84 years	2,585	1.0	16	2.9	58	189	417	1,905
85 - 89 years	951	0.4	13	2.3	38	48	180	672
90 years and over	182	0.1	2	0.4	7	8	37	128
Not Stated	10,482	4.1	23	4.1	198	485	1,543	8,233
TOTAL	254,636	100.0	556	100.0	4,824	13,154	44,742	191,360

The crash involvement for female drivers is down 7.3 percent from 2000.

The fatal crash involvement for female drivers is down 4.1 percent from 2000.

FEMALE DRINKING DRIVERS & INJURY SEVERITY IN CRASH

AGE OF DRINKING DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							
	Female Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	1	0.0	0	0.0	0	0	0	1
14 years	3	0.1	0	0.0	1	0	0	2
15 years	6	0.2	0	0.0	0	1	1	4
16 years	20	0.6	0	0.0	2	3	4	11
17 years	40	1.3	2	2.9	4	5	6	23
18 years	76	2.4	5	7.4	7	14	11	39
19 years	88	2.8	3	4.4	6	15	27	37
20 years	90	2.9	1	1.5	12	11	14	52
21 - 24 years	404	13.0	5	7.4	39	74	67	219
25 - 34 years	779	25.0	17	25.0	61	110	128	463
35 - 44 years	982	31.6	21	30.9	70	126	178	587
45 - 54 years	379	12.2	8	11.8	30	50	77	214
55 - 64 years	95	3.1	1	1.5	7	6	20	61
65 - 69 years	26	0.8	1	1.5	3	0	9	13
70 - 74 years	11	0.4	1	1.5	0	1	2	7
75 - 79 years	8	0.3	0	0.0	0	2	2	4
80 - 84 years	8	0.3	1	1.5	0	2	1	4
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
Not Stated	96	3.1	2	2.9	9	10	16	59
TOTAL	3,112	100.0	68	100.0	251	430	563	1,800

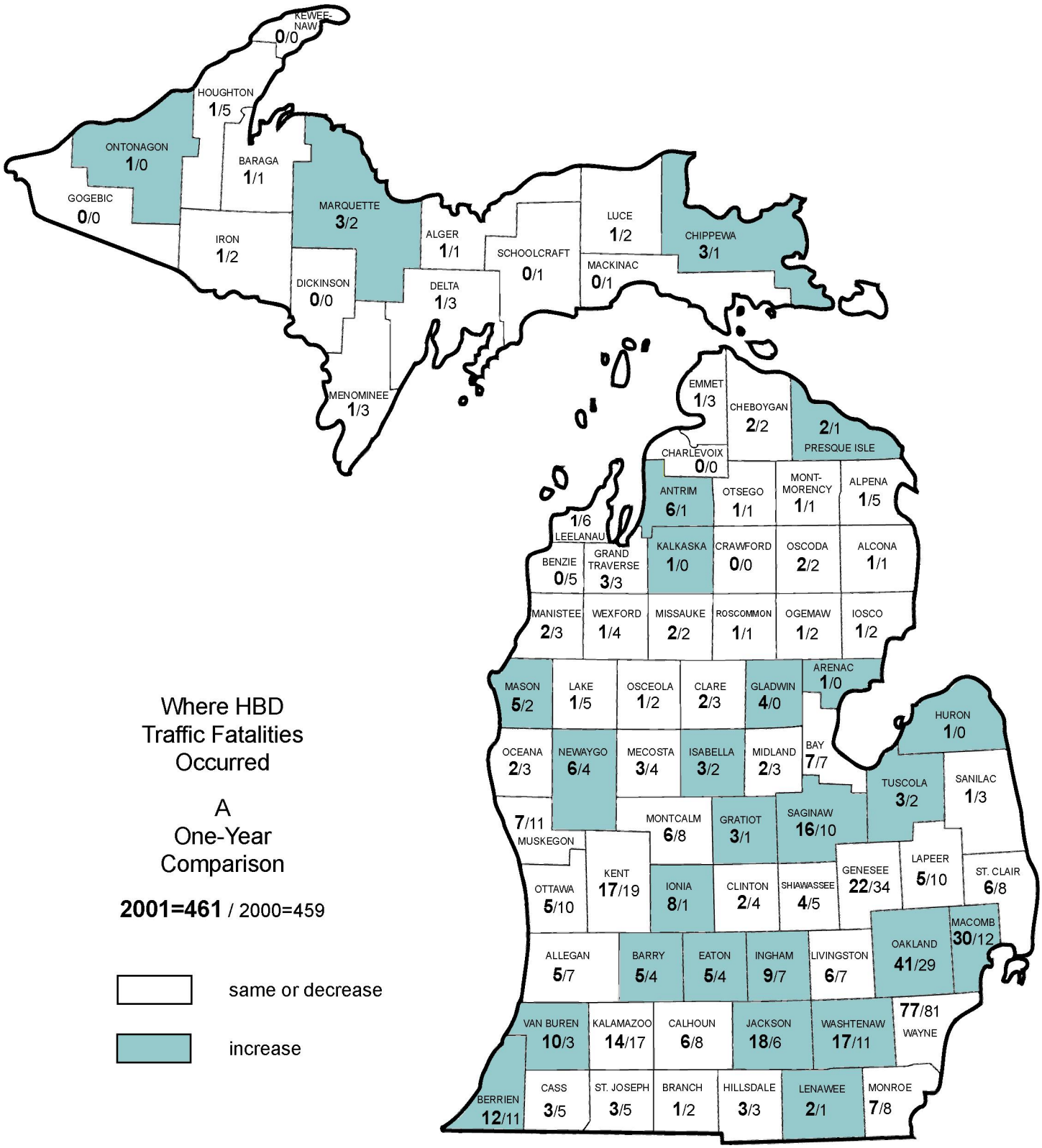
FATAL CRASHES AND FATALITIES
WITH DRINKING INVOLVEMENT BY COUNTY

COUNTY	C R A S H E S			P E R S O N S		
	All Fatal Crashes	HBD Fatal Crashes	Percent HBD	Total Fatalities	HBD Fatalities	Percent HBD
Alcona	1	1	100.0	1	1	100.0
Alger	3	1	33.3	3	1	33.3
Allegan	17	5	29.4	19	5	26.3
Alpena	2	1	50.0	2	1	50.0
Antrim	8	5	62.5	11	6	54.5
Arenac	1	1	100.0	1	1	100.0
Baraga	2	1	50.0	4	1	25.0
Barry	16	5	31.3	18	5	27.8
Bay	17	7	41.2	18	7	38.9
Benzie	4	0	0.0	5	0	0.0
Berrien	28	12	42.9	29	12	41.4
Branch	7	1	14.3	7	1	14.3
Calhoun	12	5	41.7	13	6	46.2
Cass	6	3	50.0	7	3	42.9
Charlevoix	4	0	0.0	5	0	0.0
Cheboygan	5	2	40.0	5	2	40.0
Chippewa	5	2	40.0	6	3	50.0
Clare	8	2	25.0	8	2	25.0
Clinton	7	2	28.6	8	2	25.0
Crawford	2	0	0.0	2	0	0.0
Delta	2	1	50.0	2	1	50.0
Dickinson	3	0	0.0	3	0	0.0
Eaton	16	4	25.0	18	5	27.8
Emmet	6	1	16.7	6	1	16.7
Genesee	43	20	46.5	48	22	45.8
Gladwin	5	2	40.0	8	4	50.0
Gogebic	1	0	0.0	1	0	0.0
Grand Traverse	11	2	18.2	13	3	23.1
Gratiot	8	3	37.5	13	3	23.1
Hillsdale	11	3	27.3	12	3	25.0
Houghton	3	1	33.3	3	1	33.3
Huron	3	1	33.3	3	1	33.3
Ingham	20	8	40.0	23	9	39.1
Ionia	16	6	37.5	18	8	44.4
Iosco	2	1	50.0	2	1	50.0
Iron	1	1	100.0	1	1	100.0
Isabella	7	3	42.9	7	3	42.9
Jackson	22	14	63.6	26	18	69.2
Kalamazoo	30	11	36.7	33	14	42.4
Kalkaska	3	1	33.3	3	1	33.3
Kent	54	17	31.5	58	17	29.3
Keweenaw	0	0	---	0	0	---
Lake	2	1	50.0	2	1	50.0
Lapeer	14	5	35.7	17	5	29.4

FATAL CRASHES AND FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY (continued)

	C R A S H E S			P E R S O N S		
COUNTY	All Fatal Crashes	HBD Fatal Crashes	Percent HBD	Total Fatalities	HBD Fatalities	Percent HBD
Leelanau	2	1	50.0	2	1	50.0
Lenawee	18	2	11.1	20	2	10.0
Livingston	14	6	42.9	15	6	40.0
Luce	3	1	33.3	3	1	33.3
Mackinac	2	0	0.0	2	0	0.0
Macomb	66	27	40.9	69	30	43.5
Manistee	2	2	100.0	2	2	100.0
Marquette	7	3	42.9	8	3	37.5
Mason	8	5	62.5	10	5	50.0
Mecosta	10	3	30.0	11	3	27.3
Menominee	2	1	50.0	2	1	50.0
Midland	8	2	25.0	9	2	22.2
Missaukee	6	2	33.3	6	2	33.3
Monroe	22	5	22.7	26	7	26.9
Montcalm	14	5	35.7	17	6	35.3
Montmorency	3	1	33.3	3	1	33.3
Muskegon	27	6	22.2	30	7	23.3
Newaygo	7	3	42.9	10	6	60.0
Oakland	91	38	41.8	97	41	42.3
Oceana	6	2	33.3	7	2	28.6
Ogemaw	9	1	11.1	9	1	11.1
Ontonagon	1	1	100.0	1	1	100.0
Osceola	2	1	50.0	2	1	50.0
Oscoda	4	2	50.0	4	2	50.0
Otsego	6	1	16.7	7	1	14.3
Ottawa	32	4	12.5	33	5	15.2
Presque Isle	2	1	50.0	3	2	66.7
Roscommon	8	1	12.5	8	1	12.5
Saginaw	36	15	41.7	41	16	39.0
St. Clair	21	6	28.6	22	6	27.3
St. Joseph	9	3	33.3	9	3	33.3
Sanilac	9	1	11.1	11	1	9.1
Schoolcraft	1	0	0.0	1	0	0.0
Shiawassee	16	3	18.8	17	4	23.5
Tuscola	13	3	23.1	15	3	20.0
Van Buren	21	9	42.9	24	10	41.7
Washtenaw	33	15	45.5	38	17	44.7
Wayne	223	74	33.2	238	77	32.4
Wexford	4	1	25.0	4	1	25.0
Totals	1,206	419	34.7	1,328	461	34.7

TRAFFIC FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY



MOST SEVERE OUTCOME IN HBD CRASHES BY COUNTY

Note: While the Michigan *Traffic Crash Report* (UD-10) requests officers to report Bodily Alcohol Content (BAC) of all persons tested for alcohol after a traffic crash, only the BAC testing of deceased motor vehicle drivers and deceased railroad train engineers is required by law. Consequently, alcohol involvement in nonfatal crashes is frequently unreported, and is therefore generally believed to be higher than indicated in this table.

COUNTY	All HBD Crashes	MOST SEVERE OUTCOME IN HBD CRASH				
		Fatal	Injury			PDO
			A	B	C	
Alcona	25	1	2	5	2	15
Alger	39	1	6	12	6	14
Allegan	218	5	20	32	26	135
Alpena	51	1	3	11	10	26
Antrim	52	5	5	8	8	26
Arenac	37	1	4	7	11	14
Baraga	23	1	5	3	3	11
Barry	123	5	16	22	13	67
Bay	276	7	22	50	35	162
Benzie	38	0	3	10	5	20
Berrien	251	12	20	39	29	151
Branch	67	1	5	14	9	38
Calhoun	220	5	21	47	25	122
Cass	86	3	12	15	11	45
Charlevoix	55	0	7	13	15	20
Cheboygan	49	2	1	13	6	27
Chippewa	69	2	5	13	8	41
Clare	56	2	5	8	10	31
Clinton	118	2	8	19	13	76
Crawford	38	0	7	9	6	16
Delta	59	1	4	14	4	36
Dickinson	47	0	4	6	7	30
Eaton	148	4	13	28	31	72
Emmet	66	1	6	15	12	32
Genesee	887	20	57	168	164	478
Gladwin	53	2	2	13	7	29
Gogebic	28	0	2	7	2	17
Grand Traverse	138	2	10	30	19	77
Gratiot	63	3	10	12	4	34
Hillsdale	79	3	13	12	12	39
Houghton	69	1	11	7	12	38
Huron	55	1	4	13	12	25
Ingham	423	8	39	64	72	240
Ionia	137	6	17	25	8	81
Iosco	43	1	10	10	7	15
Iron	32	1	9	4	2	16
Isabella	117	3	19	18	11	66
Jackson	318	14	26	52	50	176
Kalamazoo	448	11	57	70	61	249
Kalkaska	44	1	7	7	3	26
Kent	1,048	17	69	163	144	655
Keweenaw	11	0	2	1	1	7

MOST SEVERE OUTCOME IN HBD CRASHES BY COUNTY (continued)

COUNTY	All HBD Crashes	MOST SEVERE OUTCOME IN HBD CRASH				
		Fatal	Injury			PDO
			A	B	C	
Lake	30	1	4	3	6	16
Lapeer	157	5	14	26	35	77
Leelanau	61	1	4	14	4	38
Lenawee	166	2	22	26	28	88
Livingston	265	6	24	50	39	146
Luce	12	1	1	3	2	5
Mackinac	34	0	7	4	3	20
Macomb	1,041	27	75	134	192	613
Manistee	33	2	7	2	2	20
Marquette	117	3	10	14	22	68
Mason	60	5	4	9	14	28
Mecosta	94	3	9	20	11	51
Menominee	47	1	7	11	6	22
Midland	136	2	12	30	16	76
Missaukee	32	2	4	3	5	18
Monroe	256	5	26	34	45	146
Montcalm	128	5	17	14	21	71
Montmorency	22	1	3	7	2	9
Muskegon	225	6	32	34	32	121
Newaygo	96	3	15	8	9	61
Oakland	1,600	38	125	221	321	895
Oceana	73	2	10	12	12	37
Ogemaw	50	1	10	6	5	28
Ontonagon	21	1	3	1	3	13
Osceola	59	1	7	15	8	28
Oscoda	26	2	4	5	2	13
Otsego	57	1	4	18	7	27
Ottawa	345	4	23	45	58	215
Presque Isle	27	1	3	7	5	11
Roscommon	81	1	9	6	13	52
Saginaw	372	15	21	65	49	222
St. Clair	277	6	26	37	45	163
St. Joseph	97	3	8	19	11	56
Sanilac	58	1	3	11	8	35
Schoolcraft	23	0	2	3	1	17
Shiawassee	120	3	16	14	22	65
Tuscola	128	3	19	17	21	68
Van Buren	194	9	25	27	27	106
Washtenaw	493	15	38	72	89	279
Wayne	2,383	74	204	316	473	1,316
Wexford	79	1	10	16	11	41
Unknown	0	0	0	0	0	0
Totals	15,779	419	1,435	2,468	2,581	8,876

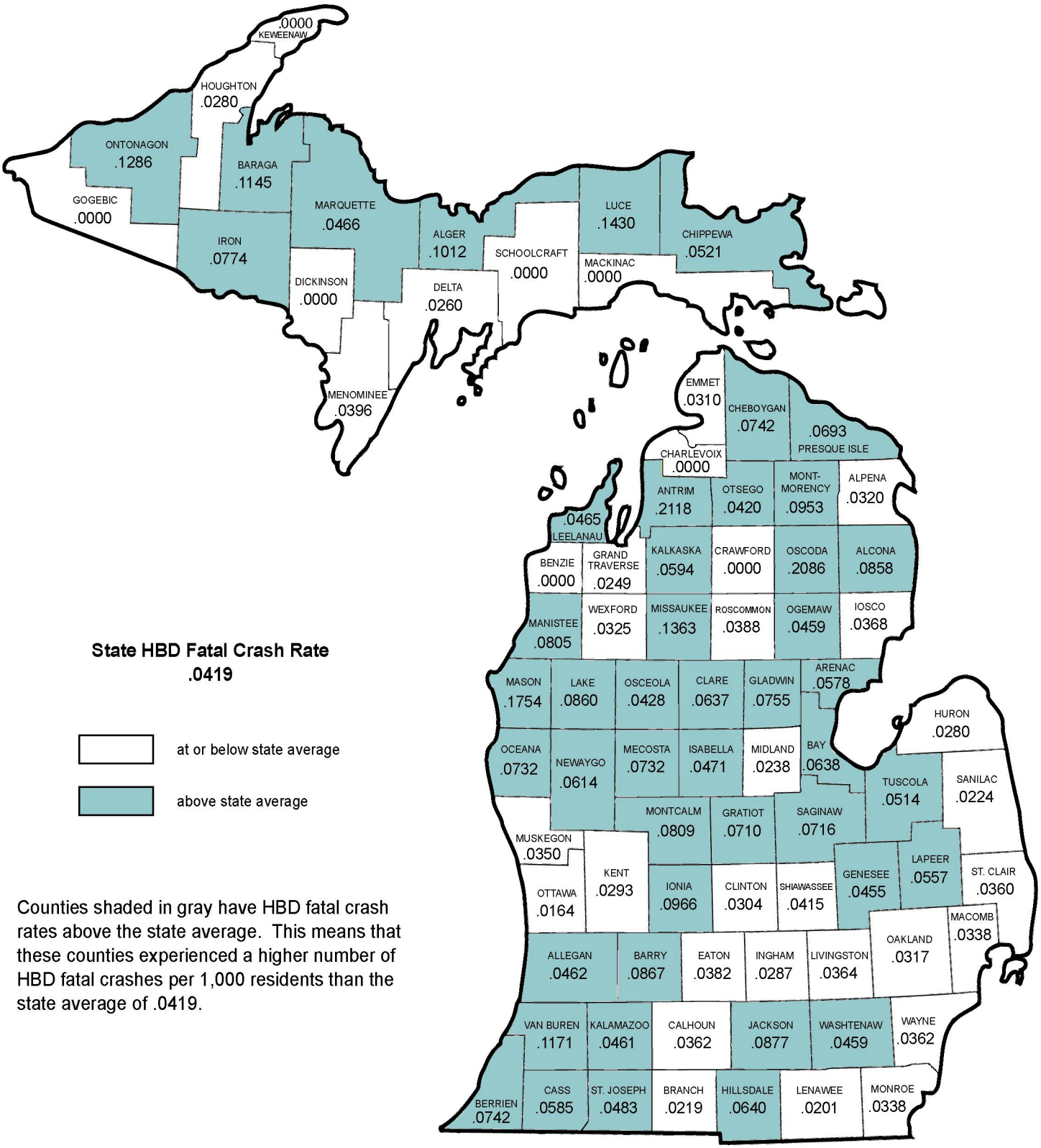
COUNTY RANKING BY HBD FATAL CRASH RATE
per 1,000 Michigan Residents

COUNTY	2001 Population Estimate	All Crashes	Fatal Crashes	HBD Crashes	HBD Fatal Crashes	HBD Fatal Crash Rate per 1,000 people	Rank
Antrim	23,610	1,233	8	52	5	0.2118	1
Oscoda	9,588	437	4	26	2	0.2086	2
Mason	28,508	1,883	8	60	5	0.1754	3
Luce	6,991	293	3	12	1	0.1430	4
Missaukee	14,672	802	6	32	2	0.1363	5
Ontonagon	7,775	576	1	21	1	0.1286	6
Van Buren	76,880	3,069	21	194	9	0.1171	7
Baraga	8,735	550	2	23	1	0.1145	8
Alger	9,884	568	3	39	1	0.1012	9
Ionia	62,111	2,881	16	137	6	0.0966	10
Montmorency	10,494	461	3	22	1	0.0953	11
Jackson	159,665	7,064	22	318	14	0.0877	12
Barry	57,661	2,580	16	123	5	0.0867	13
Lake	11,630	730	2	30	1	0.0860	14
Alcona	11,651	791	1	25	1	0.0858	15
Montcalm	61,828	3,406	14	128	5	0.0809	16
Manistee	24,857	1,222	2	33	2	0.0805	17
Iron	12,915	1,012	1	32	1	0.0774	18
Gladwin	26,507	1,159	5	53	2	0.0755	19
Berrien	161,820	5,439	28	251	12	0.0742	20
Cheboygan	26,960	1,162	5	49	2	0.0742	21
Mecosta	41,011	2,719	10	94	3	0.0732	22
Oceana	27,321	1,292	6	73	2	0.0732	23
Saginaw	209,461	8,089	36	372	15	0.0716	24
Gratiot	42,272	1,814	8	63	3	0.0710	25
Presque Isle	14,440	713	2	27	1	0.0693	26
Hillsdale	46,879	2,170	11	79	3	0.0640	27
Bay	109,659	3,860	17	276	7	0.0638	28
Clare	31,398	1,684	8	56	2	0.0637	29
Newaygo	48,875	2,156	7	96	3	0.0614	30
Kalkaska	16,827	838	3	44	1	0.0594	31
Cass	51,321	2,004	6	86	3	0.0585	32
Arenac	17,310	1,051	1	37	1	0.0578	33
Lapeer	89,728	3,634	14	157	5	0.0557	34
Chippewa	38,413	1,470	5	69	2	0.0521	35
Tuscola	58,364	2,273	13	128	3	0.0514	36
St. Joseph	62,144	2,200	9	97	3	0.0483	37
Isabella	63,725	3,147	7	117	3	0.0471	38
Marquette	64,383	2,655	7	117	3	0.0466	39
Leelanau	21,518	682	2	61	1	0.0465	40
Allegan	108,225	4,006	17	218	5	0.0462	41
Kalamazoo	238,544	10,519	30	448	11	0.0461	42
Ogemaw	21,810	1,255	9	50	1	0.0459	43
Washtenaw	326,627	12,738	33	493	15	0.0459	44
Genesee	439,117	15,424	43	887	20	0.0455	45

COUNTY RANKING BY HBD FATAL CRASH RATE
per 1,000 Michigan Residents (continued)

COUNTY	2001 Population Estimate	All Crashes	Fatal Crashes	HBD Crashes	HBD Fatal Crashes	HBD Fatal Crash Rate per 1,000 people	Rank
Osceola	23,365	1,659	2	59	1	0.0428	46
Otsego	23,818	1,167	6	57	1	0.0420	47
Shiawassee	72,217	2,697	16	120	3	0.0415	48
Menominee	25,246	1,874	2	47	1	0.0396	49
Roscommon	25,784	1,297	8	81	1	0.0388	50
Eaton	104,837	4,454	16	148	4	0.0382	51
Iosco	27,162	1,124	2	43	1	0.0368	52
Livingston	164,678	5,932	14	265	6	0.0364	53
Calhoun	138,031	6,706	12	220	5	0.0362	54
Wayne	2,045,473	80,619	223	2,383	74	0.0362	55
St. Clair	166,541	5,157	21	277	6	0.0360	56
Muskegon	171,361	5,936	27	225	6	0.0350	57
Macomb	799,954	25,977	66	1,041	27	0.0338	58
Monroe	147,946	4,562	22	256	5	0.0338	59
Wexford	30,779	1,878	4	79	1	0.0325	60
Alpena	31,263	1,131	2	51	1	0.0320	61
Oakland	1,198,593	45,754	91	1,600	38	0.0317	62
Emmet	32,217	1,765	6	66	1	0.0310	63
Clinton	65,883	2,711	7	118	2	0.0304	64
Kent	580,331	25,614	54	1,048	17	0.0293	65
Ingham	278,398	12,171	20	423	8	0.0287	66
Houghton	35,698	1,496	3	69	1	0.0280	67
Huron	35,688	1,868	3	55	1	0.0280	68
Delta	38,477	2,477	2	59	1	0.0260	69
Grand Traverse	80,203	3,880	11	138	2	0.0249	70
Midland	83,879	3,205	8	136	2	0.0238	71
Sanilac	44,554	1,921	9	58	1	0.0224	72
Branch	45,726	2,146	7	67	1	0.0219	73
Lenawee	99,605	3,464	18	166	2	0.0201	74
Ottawa	243,571	7,781	32	345	4	0.0164	75
Benzie	16,489	723	4	38	0	0.0000	76
Charlevoix	26,458	1,340	4	55	0	0.0000	77
Crawford	14,626	913	2	38	0	0.0000	78
Dickinson	27,284	1,524	3	47	0	0.0000	79
Gogebic	17,670	586	1	28	0	0.0000	80
Keweenaw	2,257	102	0	11	0	0.0000	81
Mackinac	11,782	900	2	34	0	0.0000	82
Schoolcraft	8,859	591	1	23	0	0.0000	83
Unknown	0	0	0	0	0		
State Totals	9,990,817	400,813	1,206	15,779	419	0.04194	

COUNTY RANKING
BY HBD FATAL CRASH RATE



State HBD Fatal Crash Rate
.0419

at or below state average

above state average

Counties shaded in gray have HBD fatal crash rates above the state average. This means that these counties experienced a higher number of HBD fatal crashes per 1,000 residents than the state average of .0419.

REPORTED STATEWIDE ALCOHOL INVOLVED TRAFFIC CRASHES BY COUNTY IN MICHIGAN

COUNTY	All	Fatal	Injury	Property Damage	Inter-state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Alcona	25	1	9	15	0	1	3	21	1	13
Alger	39	1	24	14	3	1	5	30	1	28
Allegan	218	5	78	135	5	13	20	180	5	111
Alpena	51	1	24	26	5	8	3	35	1	43
Antrim	52	5	21	26	2	4	2	44	6	41
Arenac	37	1	22	14	3	4	2	28	1	31
Baraga	23	1	11	11	1	5	4	13	1	12
Barry	123	5	51	67	9	0	17	97	5	71
Bay	276	7	107	162	20	3	41	212	7	142
Benzie	38	0	18	20	2	5	0	31	0	24
Berrien	251	12	88	151	25	10	29	187	12	125
Branch	67	1	28	38	4	12	0	51	1	38
Calhoun	220	5	93	122	35	0	27	158	6	120
Cass	86	3	38	45	5	7	17	57	3	59
Charlevoix	55	0	35	20	4	3	4	44	0	50
Cheboygan	49	2	20	27	2	3	4	40	2	29
Chippewa	69	2	26	41	8	0	1	60	3	35
Clare	56	2	23	31	2	3	5	46	2	27
Clinton	118	2	40	76	8	5	5	100	2	60
Crawford	38	0	22	16	4	0	5	29	0	27
Delta	59	1	22	36	2	5	3	49	1	36
Dickinson	47	0	17	30	1	3	4	39	0	18
Eaton	148	4	72	72	24	1	28	95	5	108
Emmet	66	1	33	32	5	12	1	48	1	43
Genesee	887	20	389	478	73	7	103	704	22	591
Gladwin	53	2	22	29	2	0	10	41	4	32
Gogebic	28	0	11	17	2	6	0	20	0	17
Grand Traverse	138	2	59	77	6	15	11	106	3	85
Gratiot	63	3	26	34	3	11	3	46	3	46
Hillsdale	79	3	37	39	4	5	7	63	3	48
Houghton	69	1	30	38	5	10	8	46	1	39
Huron	55	1	29	25	5	0	10	40	1	49
Ingham	423	8	175	240	56	22	54	291	9	243
Ionia	137	6	50	81	16	0	12	109	8	75
Iosco	43	1	27	15	1	8	4	30	1	31
Iron	32	1	15	16	3	4	3	22	1	23
Isabella	117	3	48	66	3	7	12	95	3	73
Jackson	318	14	128	176	31	9	23	255	18	181
Kalamazoo	448	11	188	249	51	11	45	341	14	280
Kalkaska	44	1	17	26	5	5	3	31	1	22
Kent	1,048	17	376	655	85	49	154	760	17	513
Keweenaw	11	0	4	7	0	2	0	9	0	6
Lake	30	1	13	16	3	4	3	20	1	23
Lapeer	157	5	75	77	15	0	25	117	5	97
Leelanau	61	1	22	38	4	0	17	40	1	31
Lenawee	166	2	76	88	10	22	20	114	2	111

REPORTED STATEWIDE ALCOHOL INVOLVED TRAFFIC CRASHES BY COUNTY IN MICHIGAN (Continued)

COUNTY	All	Fatal	Injury	Property Damage	Inter-state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Livingston	265	6	113	146	35	12	14	204	6	159
Luce	12	1	6	5	1	0	3	8	1	7
Mackinac	34	0	14	20	4	0	5	25	0	19
Macomb	1,041	27	401	613	98	0	188	755	30	611
Manistee	33	2	11	20	2	5	4	22	2	17
Marquette	117	3	46	68	4	14	12	87	3	62
Mason	60	5	27	28	2	13	1	44	5	41
Mecosta	94	3	40	51	2	2	9	81	3	52
Menominee	47	1	24	22	1	3	0	43	1	35
Midland	136	2	58	76	3	8	12	113	2	86
Missaukee	32	2	12	18	4	0	5	23	2	19
Monroe	256	5	105	146	14	29	13	200	7	156
Montcalm	128	5	52	71	7	2	34	85	6	79
Montmorency	22	1	12	9	2	0	1	19	1	13
Muskegon	225	6	98	121	11	24	13	177	7	138
Newaygo	96	3	32	61	3	0	13	80	6	57
Oakland	1,600	38	667	895	203	55	179	1,163	41	992
Oceana	73	2	34	37	3	11	5	54	2	52
Ogemaw	50	1	21	28	8	0	10	32	1	33
Ontonagon	21	1	7	13	4	0	3	14	1	7
Osceola	59	1	30	28	3	7	4	45	1	46
Oscoda	26	2	11	13	1	0	5	20	2	21
Otsego	57	1	29	27	4	0	12	41	1	39
Ottawa	345	4	126	215	30	21	17	277	5	193
Presque Isle	27	1	15	11	1	2	3	21	2	20
Roscommon	81	1	28	52	5	1	12	63	1	36
Saginaw	372	15	135	222	31	0	72	269	16	195
St. Clair	277	6	108	163	33	1	39	204	6	147
St. Joseph	97	3	38	56	9	11	9	68	3	61
Sanilac	58	1	22	35	6	0	12	40	1	34
Schoolcraft	23	0	6	17	0	2	1	20	0	7
Shiawassee	120	3	52	65	13	0	25	82	4	72
Tuscola	128	3	57	68	9	0	19	100	3	78
Van Buren	194	9	79	106	15	0	19	160	10	118
Washtenaw	493	15	199	279	46	41	31	375	17	278
Wayne	2,383	74	993	1,316	291	67	212	1,813	77	1,485
Wexford	79	1	37	41	6	10	11	52	1	59
UNKNOWN	0	0	0	0	0	0	0	0	0	0
Totals	15,779	419	6,484	8,876	1,476	646	1,784	11,873	461	9,431

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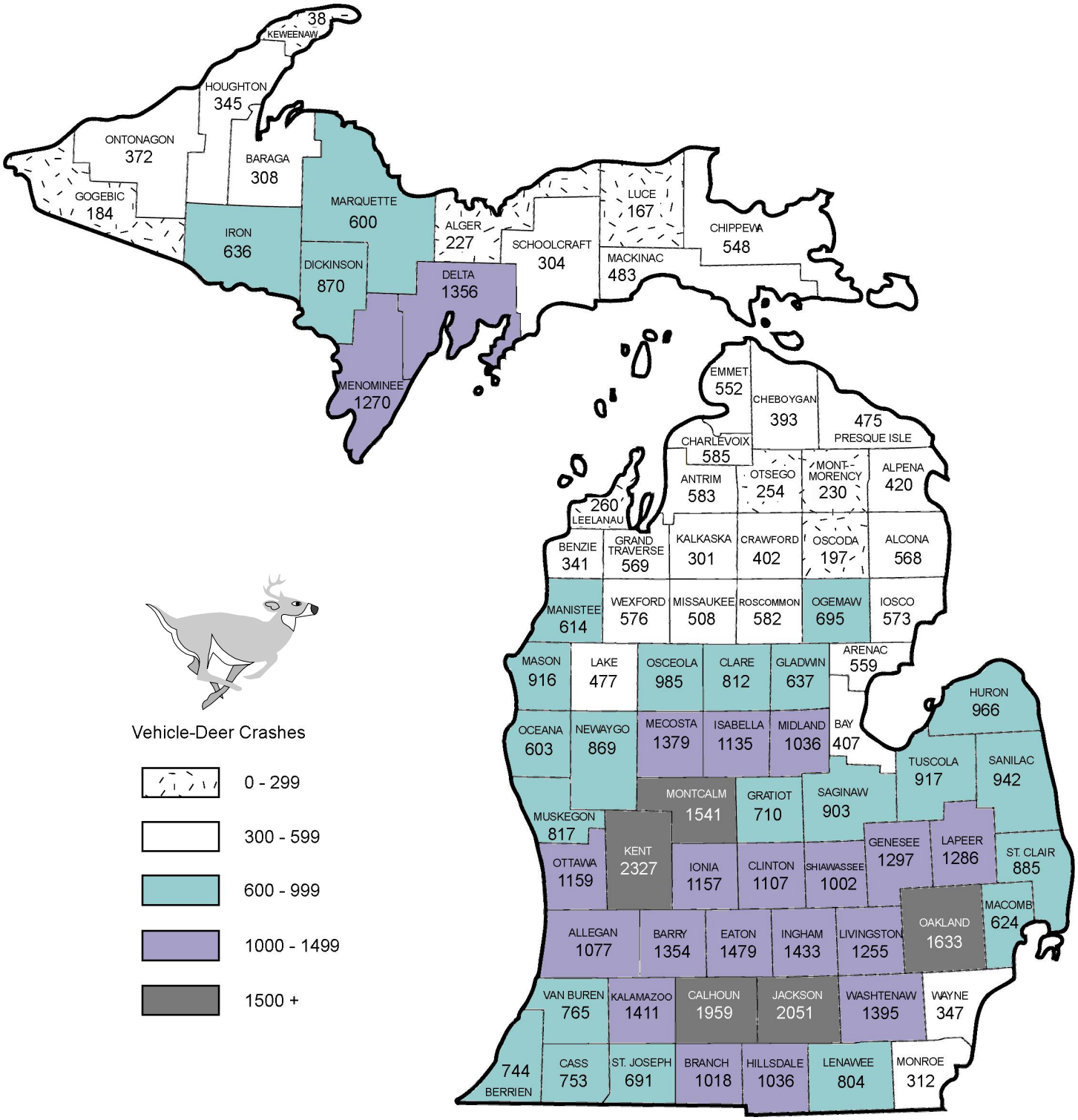
2001

Deer

MICHIGAN MOTOR VEHICLE-DEER INVOLVED/ASSOCIATED CRASHES

Michigan had 66,993 reported motor vehicle-deer crashes during 2001. 2,109 people were injured and 11 people were killed as a result of those collisions. Of the 67,483 vehicles involved, 41,970 (62.2%) were passenger cars, 16,965 (25.1%) were pickups, and 5,408 (8.0%) were minivans, vans, motorhomes. All other vehicle types (including motorcycle, snowmobile, ORV/ATV, large trucks, moped) totaled 3.6 percent.

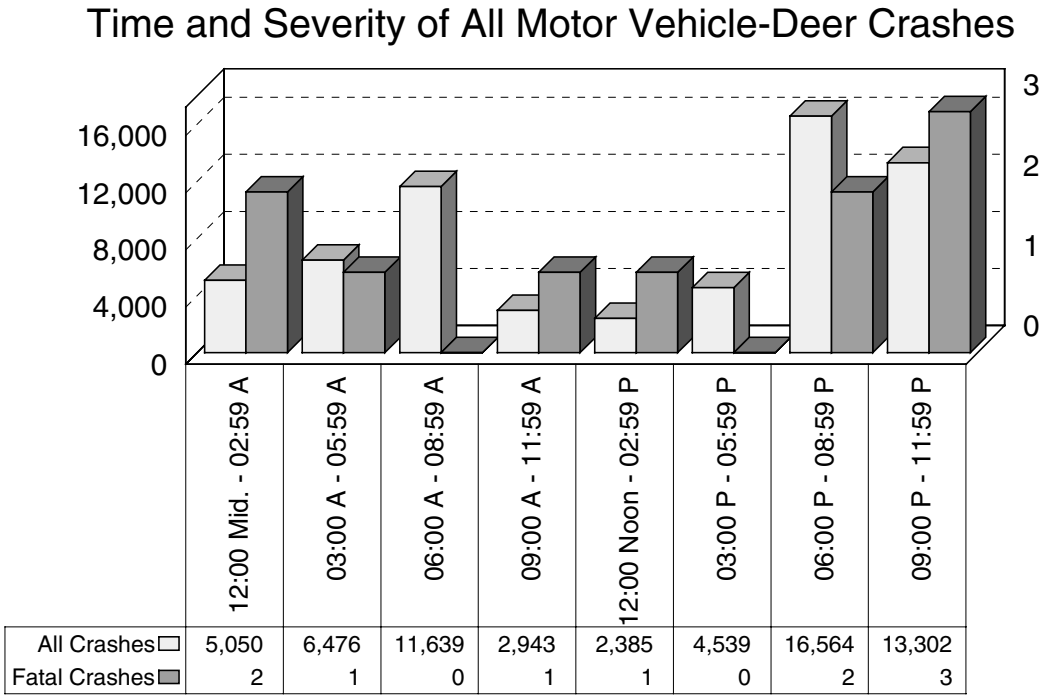
Contrary to common belief, motor vehicle-deer crashes are happening most often in Michigan's southern, heavily populated counties; Kent County had the highest number with 2,327 such crashes in 2001.



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

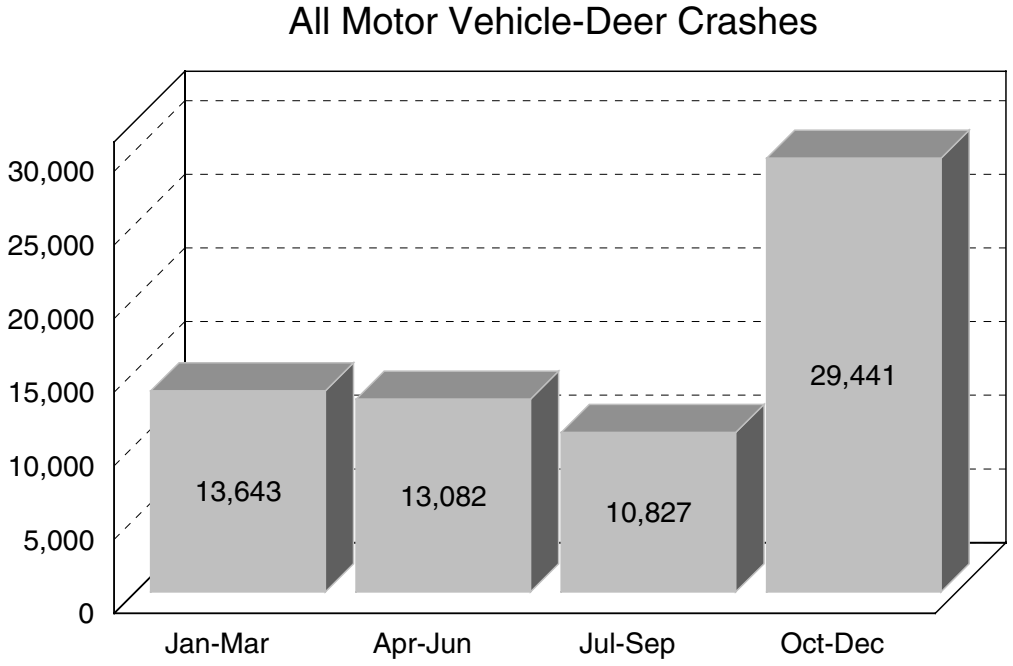
LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	13,476	20.1	2	20.0	43	198	302	12,931
Dawn	5,459	8.1	0	0.0	8	34	83	5,334
Dusk	3,577	5.3	1	10.0	5	32	51	3,488
Dark - Lighted	2,117	3.2	0	0.0	3	11	37	2,066
Dark - Unlighted	41,196	61.5	7	70.0	54	316	656	40,163
Other/Unknown	1,168	1.7	0	0.0	0	11	18	1,139
Totals	66,993	100.0	10	100.0	113	602	1,147	65,121

The ten fatal deer crashes in Michigan in 2001 occurred in daylight, dusk and dark-unlighted conditions. All motor vehicle-deer involved/associated crashes peaked during the 6:00 PM - 8:59 PM time period. There were two fatal deer crashes during this time period.



MONTHLY AND SEASONAL RATES FOR MOTOR VEHICLE-DEER CRASHES

MONTH	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
January	4,854	7.2	1	10.0	1	14	50	4,788
February	4,004	6.0	0	0.0	2	23	45	3,934
March	4,785	7.1	0	0.0	5	30	69	4,681
April	3,703	5.5	0	0.0	8	30	62	3,603
May	4,313	6.4	0	0.0	11	52	99	4,151
June	5,066	7.6	0	0.0	23	65	93	4,885
July	3,789	5.7	2	20.0	14	58	71	3,644
August	2,937	4.4	1	10.0	16	61	84	2,775
September	4,101	6.1	0	0.0	9	49	67	3,976
October	9,592	14.3	1	10.0	9	82	164	9,336
November	13,198	19.7	2	20.0	11	89	222	12,874
December	6,651	9.9	3	30.0	4	49	121	6,474
Totals	66,993	100.0	10	100.0	113	602	1,147	65,121



29,441 (43.9%) of all reported motor vehicle-deer collisions occurred during the fourth quarter of the year.

REPORTED STATEWIDE MOTOR VEHICLE-DEER CRASHES BY COUNTY IN MICHIGAN

COUNTY	All	Fatal	Injury	Property Damage	Inter-state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Alcona	568	0	11	557	26	48	102	392	0	14
Alger	227	0	9	218	8	11	75	133	0	10
Allegan	1,077	0	34	1,043	47	43	176	811	0	39
Alpena	420	0	4	416	21	46	65	288	0	4
Antrim	583	0	10	573	18	73	76	416	0	11
Arenac	559	0	15	544	30	72	36	421	0	20
Baraga	308	0	5	303	14	67	60	167	0	5
Barry	1,354	0	53	1,301	73	0	403	878	0	58
Bay	407	0	16	391	37	15	59	296	0	18
Benzie	341	0	6	335	8	56	41	236	0	7
Berrien	744	1	38	705	65	100	61	518	1	43
Branch	1,018	0	30	988	73	76	45	824	0	33
Calhoun	1,959	0	49	1,910	224	1	265	1,469	0	51
Cass	753	0	25	728	48	54	187	464	0	27
Charlevoix	585	0	14	571	18	134	69	364	0	15
Cheboygan	393	1	17	375	44	15	61	273	1	19
Chippewa	548	0	21	527	48	1	159	340	0	23
Clare	812	0	24	788	14	109	98	591	0	25
Clinton	1,107	0	27	1,080	114	57	51	885	0	32
Crawford	402	0	8	394	47	3	139	213	0	11
Delta	1,356	0	29	1,327	49	120	145	1,042	0	32
Dickinson	870	0	19	851	34	237	148	451	0	22
Eaton	1,479	0	36	1,443	141	0	310	1,028	0	43
Emmet	552	0	12	540	13	86	43	410	0	13
Genesee	1,297	0	31	1,266	135	15	133	1,014	0	33
Gladwin	637	0	20	617	37	0	165	435	0	21
Gogebic	184	0	6	178	7	70	6	101	0	6
Grand Traverse	569	0	19	550	19	40	70	440	0	21
Gratiot	829	0	18	811	48	84	93	604	0	21
Hillsdale	1,036	2	25	1,009	45	75	163	753	2	27
Houghton	345	0	11	334	5	49	60	231	0	12
Huron	1,090	0	19	1,071	50	0	371	669	0	19
Ingham	1,433	0	43	1,390	113	67	153	1,100	0	50
Ionia	1,157	1	21	1,135	87	0	232	838	1	22
Iosco	573	0	13	560	24	56	120	373	0	13
Iron	636	0	16	620	27	204	85	320	0	19
Isabella	1,135	0	33	1,102	37	53	114	931	0	44
Jackson	2,051	0	30	2,021	147	88	311	1,505	0	36
Kalamazoo	1,411	0	42	1,369	65	58	110	1,178	0	43
Kalkaska	301	0	6	295	8	25	61	207	0	6
Kent	2,327	1	61	2,265	152	104	310	1,761	2	69
Keweenaw	38	0	1	37	0	8	2	28	0	1
Lake	477	0	14	463	16	69	83	309	0	15
Lapeer	1,286	0	35	1,251	91	0	177	1,018	0	38
Leelanau	260	0	6	254	14	0	80	166	0	8
Lenawee	804	1	23	780	32	140	173	459	1	25

REPORTED STATEWIDE MOTOR VEHICLE-DEER CRASHES BY COUNTY IN MICHIGAN (Continued)

COUNTY	All	Fatal	Injury	Property Damage	Inter-state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Livingston	1,255	0	37	1,218	99	39	122	995	0	40
Luce	167	0	7	160	8	0	72	87	0	9
Mackinac	483	0	17	466	41	90	119	233	0	18
Macomb	624	0	26	598	35	0	91	498	0	30
Manistee	614	0	15	599	20	80	145	369	0	17
Marquette	600	1	27	572	22	88	105	385	1	32
Mason	916	0	26	890	27	154	35	700	0	29
Mecosta	1,379	0	33	1,346	91	40	312	936	0	36
Menominee	1,270	0	29	1,241	65	275	109	821	0	39
Midland	1,036	0	37	999	19	47	86	884	0	42
Missaukee	508	0	13	495	26	0	92	390	0	15
Monroe	312	0	19	293	26	49	11	226	0	22
Montcalm	1,643	0	34	1,609	94	32	387	1,130	0	38
Montmorency	230	0	7	223	8	0	81	141	0	7
Muskegon	817	0	35	782	40	67	56	654	0	45
Newaygo	869	0	20	849	54	0	175	640	0	22
Oakland	1,633	0	54	1,579	117	21	123	1,372	0	61
Oceana	603	0	29	574	18	85	61	439	0	37
Ogemaw	695	1	15	679	62	0	145	488	1	17
Ontonagon	372	0	15	357	28	82	106	156	0	17
Osceola	985	0	28	957	25	153	136	671	0	30
Oscoda	197	0	6	191	8	0	52	137	0	6
Otsego	254	0	10	244	21	0	28	205	0	12
Ottawa	1,159	0	51	1,108	95	50	90	924	0	59
Presque Isle	475	0	12	463	18	64	110	283	0	14
Roscommon	582	0	10	572	50	35	86	411	0	11
Saginaw	907	0	26	881	57	0	173	677	0	28
St. Clair	885	0	33	852	69	0	98	718	0	40
St. Joseph	691	0	21	670	42	65	133	451	0	22
Sanilac	1,097	0	26	1,071	71	0	284	742	0	33
Schoolcraft	304	0	8	296	8	75	49	172	0	9
Shiawassee	1,002	0	23	979	105	0	177	720	0	24
Tuscola	1,048	0	19	1,029	47	0	278	723	0	21
Van Buren	765	1	21	743	54	0	140	571	1	26
Washtenaw	1,395	0	42	1,353	65	87	92	1,151	0	48
Wayne	347	0	18	329	42	13	33	259	0	19
Wexford	576	0	8	568	28	43	186	319	0	10
UNKNOWN	0	0	0	0	0	0	0	0	0	0
Totals	66,993	10	1,862	65,121	4,078	4,363	10,524	48,028	11	2,109

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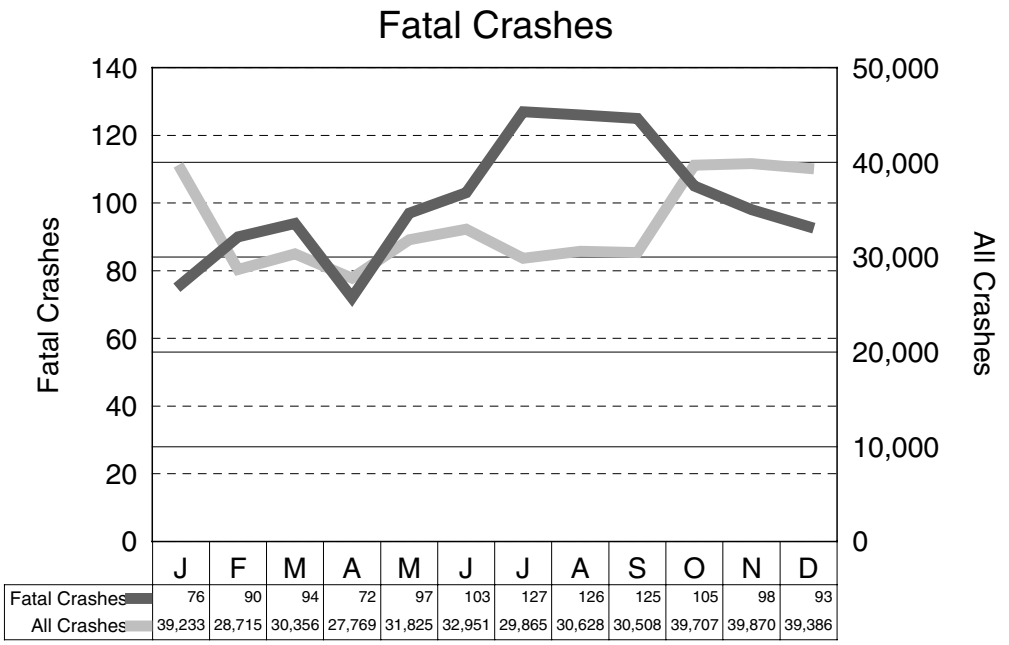
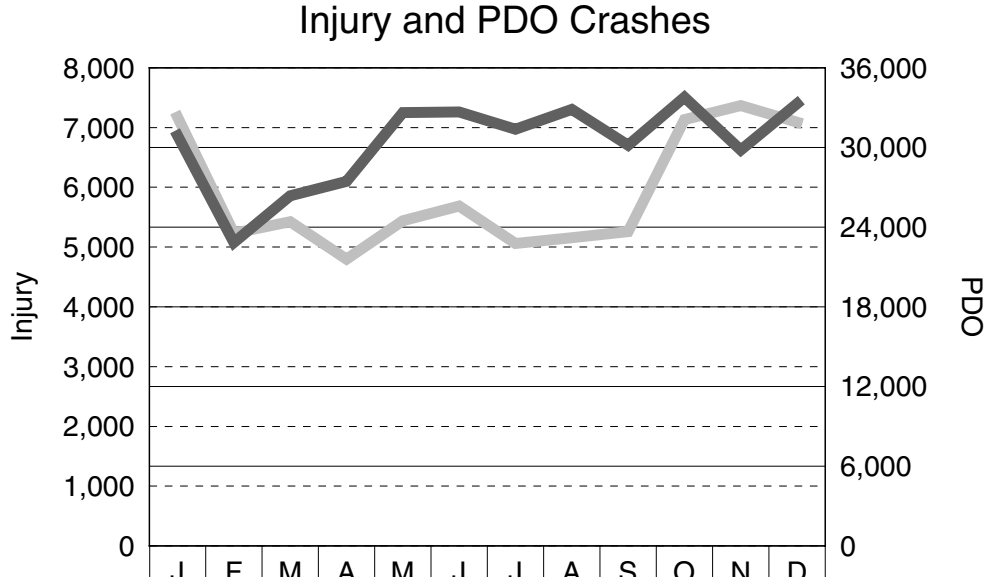
Crash

ALL CRASHES INJURY SEVERITY BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D
Fatal Crashes	76	90	94	72	97	103	127	126	125	105	98	93
All Crashes	39,233	28,715	30,356	27,769	31,825	32,951	29,865	30,628	30,508	39,707	39,870	39,386



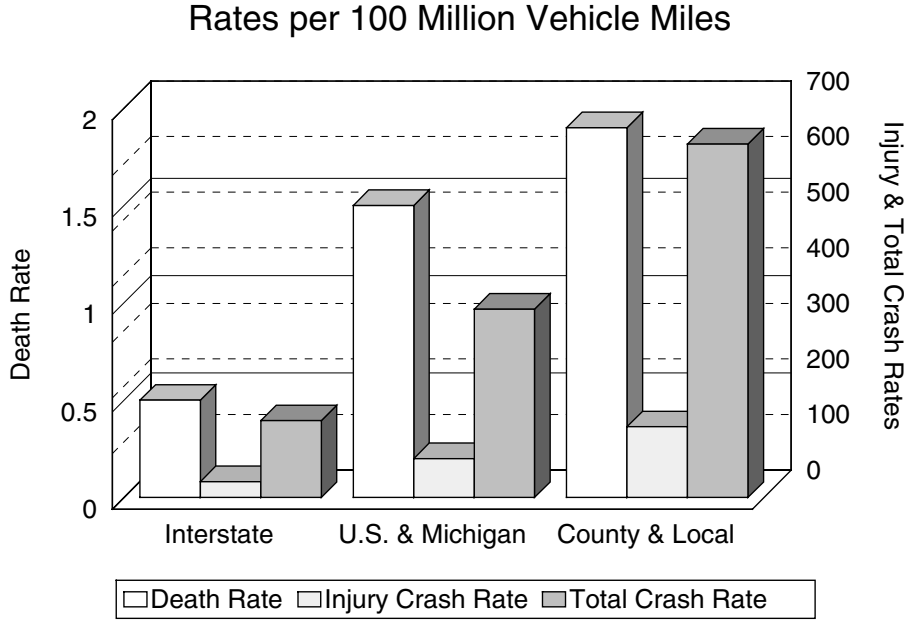
	J	F	M	A	M	J	J	A	S	O	N	D
INJURY	6,865	5,076	5,859	6,101	7,250	7,260	6,970	7,305	6,707	7,509	6,623	7,397
PDO	32,292	23,549	24,403	21,596	24,478	25,588	22,768	23,197	23,676	32,093	33,149	31,896

The charts on this page show that the months of April through September are peak months (22% or above) in terms of the percent of the number of crashes involving death or injury to the number of all crashes. That is, if a person was in a motor vehicle crash during one of these months there was a higher chance of that crash resulting in death or injury to one of the involved persons than if that crash happened during one of the other months.

CRASH EXPERIENCE BY ROADWAY TYPE

The table below provides a detailed breakdown of estimated vehicle mileage, crashes, death rates (deaths per 100 million vehicle miles), and crash rates (crashes per 100 million vehicle miles) for the major roadway types in Michigan. All rates are lowest on interstate routes. 2001 estimated mileage figures were provided by the Michigan Department of Transportation [11].

STATEWIDE	Estimated Mileage (Billions)	All Crashes	Injury Crashes	Deaths	Total Crash Rate	Injury Crash Rate	Death Rate
Interstate Routes	29.4	40,590	8,354	141	138.1	28.4	0.5
U.S. & Michigan Roads	22.1	74,836	15,435	340	338.6	69.8	1.5
County & City Roads	44.9	285,387	57,133	847	635.6	127.2	1.9
Totals	96.43	400,813	80,922	1,328	415.7	83.9	1.4



CRASH TYPE

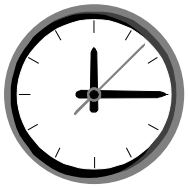
CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	128,040	31.9	582	48.3	3,129	7,240	9,518	107,571
Head On	7,049	1.8	158	13.1	521	870	1,144	4,356
Head On - Left Turn	11,294	2.8	40	3.3	492	1,351	2,630	6,781
Angle	77,295	19.3	274	22.7	2,199	5,510	13,722	55,590
Rear End	97,273	24.3	67	5.6	926	3,056	19,048	74,176
Rear End - Left Turn	4,299	1.1	9	0.7	79	215	867	3,129
Rear End - Right Turn	3,298	0.8	1	0.1	7	74	464	2,752
Sideswipe - Same Direction	33,753	8.4	16	1.3	194	640	1,998	30,905
Sideswipe - Opposite Direct	10,782	2.7	12	1.0	131	307	800	9,532
Other/Unknown	27,730	6.9	47	3.9	504	1,064	2,222	23,893
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

Single Vehicle, Head On, Head On-Left Turn, and Angle crash types produce the highest number of fatal crashes (87.4%). Single Vehicle crashes include rollovers, which are particularly deadly crash types. Rear End-Turning and Sideswipe crashes produce the lowest number of fatal crashes (3.1%).

RELATIONSHIP TO ROADWAY

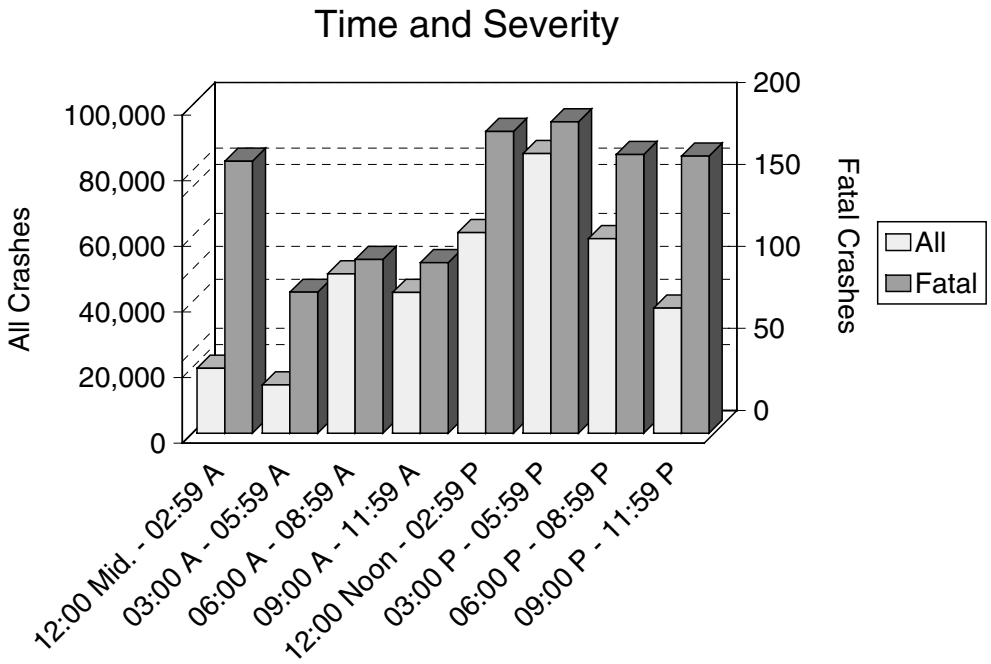
LOCATION OF FIRST IMPACT	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
On Road	342,089	85.3	800	66.3	5,810	14,962	44,895	275,622
Median	2,757	0.7	25	2.1	100	317	501	1,814
Shoulder	15,719	3.9	103	8.5	537	1,245	1,863	11,971
Outside of Shoulder/Curb	27,727	6.9	232	19.2	1,371	2,973	3,781	19,370
Gore	822	0.2	6	0.5	42	85	126	563
Other/Unknown	11,699	2.9	40	3.3	322	745	1,247	9,345
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

Crashes that happen outside of the normal driving lanes are overrepresented in the fatal count. Only 6.9 percent of crashes occur outside the shoulder of the road, but these crashes account for 19.2 percent of the fatal crashes.

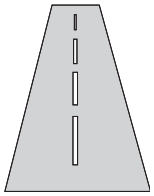


TIME AND SEVERITY

TIME OF DAY	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
12:00 mid. - 02:59 a.m.	19,823	4.9	166	13.8	744	1,493	1,996	15,424
03:00 a.m. - 05:59 a.m.	14,782	3.7	86	7.1	398	824	1,182	12,292
06:00 a.m. - 08:59 a.m.	48,625	12.1	106	8.8	785	1,974	5,937	39,823
09:00 a.m. - 11:59 a.m.	42,920	10.7	104	8.6	795	2,105	6,330	33,586
12:00 noon - 02:59 p.m.	61,203	15.3	184	15.3	1,219	3,283	9,626	46,891
03:00 p.m. - 05:59 p.m.	85,277	21.3	190	15.8	1,669	4,422	13,034	65,962
06:00 p.m. - 08:59 p.m.	59,315	14.8	170	14.1	1,165	2,942	6,877	48,161
09:00 p.m. - 11:59 p.m.	38,161	9.5	169	14.0	886	1,997	3,847	31,262
Unknown	30,707	7.7	31	2.6	521	1,287	3,584	25,284
Total	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685



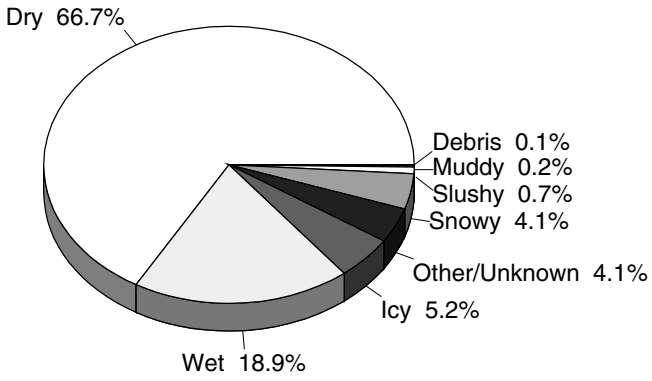
Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. There are proportionally more fatal crashes during the midnight to 2:59 AM time period.



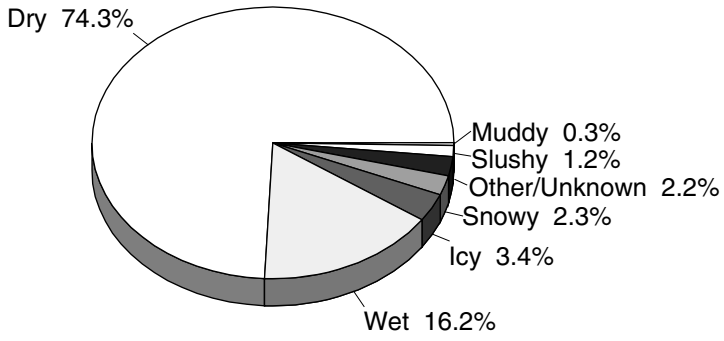
ROAD CONDITION

ROAD SURFACE CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Dry	267,396	66.7	896	74.3	5,858	14,268	34,695	211,679
Wet	75,801	18.9	195	16.2	1,345	3,541	11,335	59,385
Icy	20,715	5.2	41	3.4	372	972	2,662	16,668
Snowy	16,422	4.1	28	2.3	285	655	1,585	13,869
Muddy	777	0.2	4	0.3	33	54	100	586
Slushy	2,847	0.7	15	1.2	54	159	374	2,245
Debris	265	0.1	0	0.0	12	24	26	203
Other/Unknown	16,590	4.1	27	2.2	223	654	1,636	14,050
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

ALL CRASHES



FATAL CRASHES

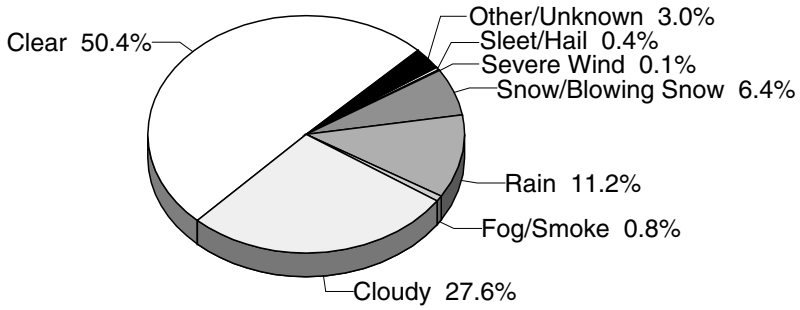


Most crashes (66.7%) and most fatal crashes (74.3%) occur on dry roads. This indicates that Michigan drivers do a good job of adjusting their driving behavior for bad road conditions.

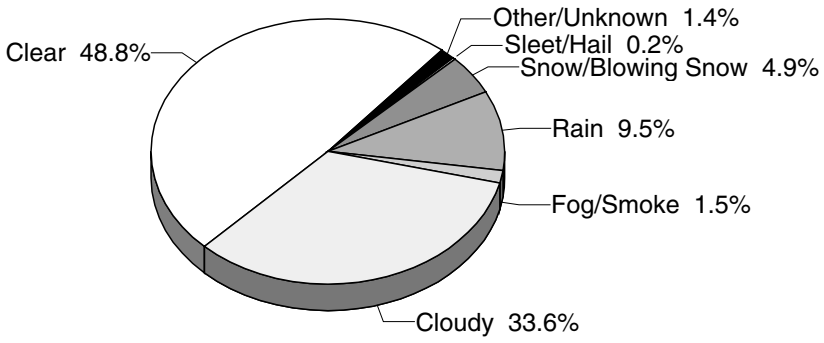
WEATHER CONDITION

WEATHER CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	202,177	50.4	589	48.8	4,496	10,793	26,093	160,206
Cloudy	110,809	27.6	405	33.6	2,171	5,537	14,612	88,084
Fog/Smoke	3,080	0.8	18	1.5	72	161	288	2,541
Rain	44,902	11.2	115	9.5	843	2,153	6,987	34,804
Snow/Blowing Snow	25,667	6.4	59	4.9	450	1,167	3,106	20,885
Severe Wind	510	0.1	0	0.0	12	28	48	422
Sleet/Hail	1,469	0.4	3	0.2	27	80	208	1,151
Other/Unknown	12,199	3.0	17	1.4	111	408	1,071	10,592
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

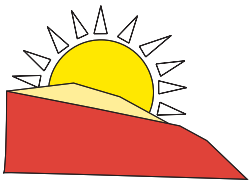
ALL CRASHES



FATAL CRASHES



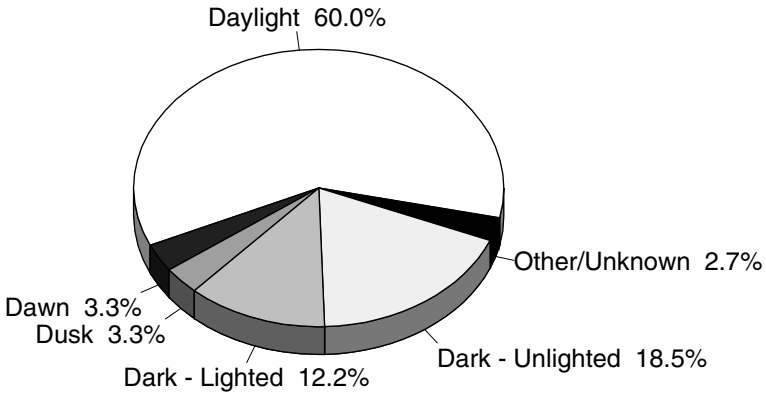
Half of all crashes occur in good weather (50.4%). Fog/smoke is a particularly deadly weather condition as it is overrepresented in fatal crashes.



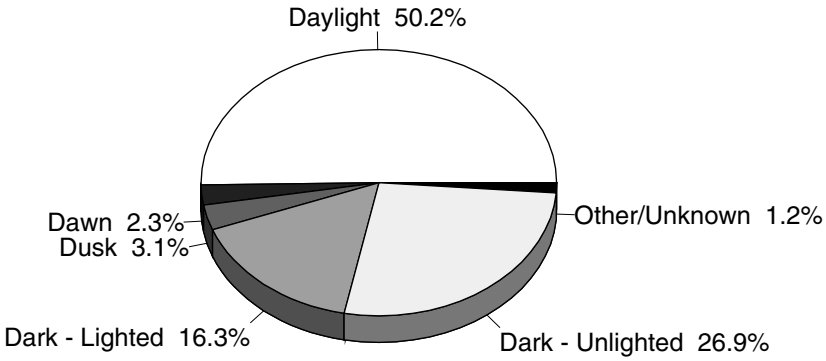
LIGHT CONDITION

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	240,504	60.0	606	50.2	4,848	12,770	36,625	185,655
Dawn	13,273	3.3	28	2.3	190	473	1,229	11,353
Dusk	13,358	3.3	37	3.1	202	618	1,486	11,015
Dark – Lighted	48,761	12.2	197	16.3	1,349	2,980	7,212	37,023
Dark – Unlighted	74,070	18.5	324	26.9	1,467	3,118	4,866	64,295
Other/Unknown	10,847	2.7	14	1.2	126	368	995	9,344
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

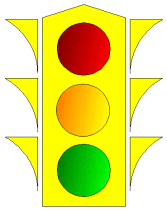
ALL CRASHES



FATAL CRASHES



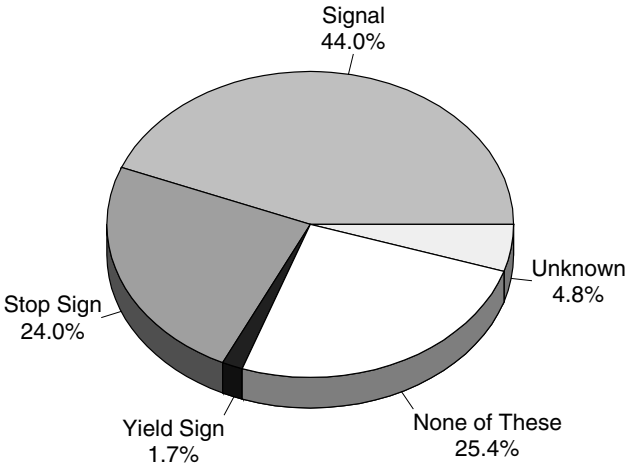
The majority (60.0%) of all crashes happen during daylight hours. Dark conditions create the greatest hazard, as they are overrepresented in fatal crashes. Areas without street lights have the highest fatality rate.



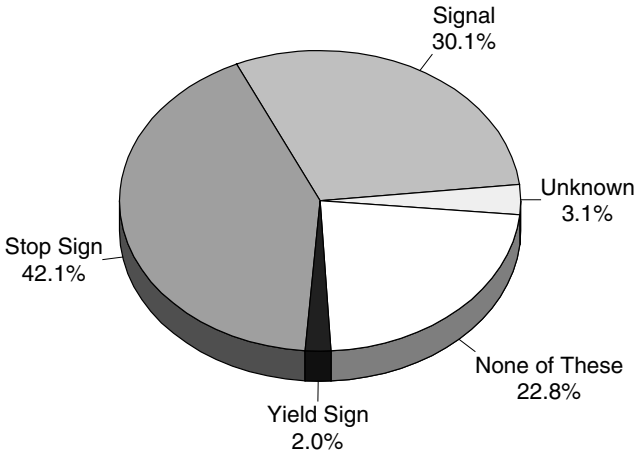
INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Signal	55,866	44.0	107	30.1	1,131	3,182	11,261	40,185
Stop Sign	30,468	24.0	150	42.1	966	2,301	5,267	21,784
Yield Sign	2,115	1.7	7	2.0	52	162	429	1,465
None of These	32,289	25.4	81	22.8	721	1,789	5,016	24,682
Unknown	6,154	4.8	11	3.1	123	299	911	4,810
Totals	126,892	100.0	356	100.0	2,993	7,733	22,884	92,926

ALL CRASHES



FATAL CRASHES



Intersections with stop signs are overrepresented in fatal crashes. Driver perception, awareness, and adherence to traffic control signing are all key factors in crashes at intersections.

CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Subtotal	Number	% of Subtotal	A	B	C	
Construction/Maintenance								
Activity - On Road								
Lane Closed	3,027	47.8	5	29.4	44	122	463	2,393
Lane Open	857	13.5	4	23.5	14	39	117	683
Unknown Lane Closure	153	2.4	0	0.0	0	5	26	122
Activity - Off Road								
Lane Closed	315	5.0	0	0.0	3	17	64	231
Lane Open	472	7.5	1	5.9	8	17	75	371
Unknown Lane Closure	45	0.7	0	0.0	1	3	6	35
Activity - None								
Lane Closed	693	10.9	1	5.9	11	29	120	532
Lane Open	397	6.3	5	29.4	14	19	52	307
Unknown Lane Closure	36	0.6	1	5.9	0	2	5	28
Activity – Unknown								
Lane Closed	144	2.3	0	0.0	0	9	29	106
Lane Open	54	0.9	0	0.0	1	6	12	35
Unknown Lane Closure	138	2.2	0	0.0	3	6	10	119
Subtotal	6,331	100.0	17	100.0	99	274	979	4,962
Utility								
Activity - On Road								
Lane Closed	97	35.3	1	100.0	2	4	10	80
Lane Open	42	15.3	0	0.0	0	2	4	36
Unknown Lane Closure	4	1.5	0	0.0	0	0	0	4
Activity - Off Road								
Lane Closed	33	12.0	0	0.0	0	3	8	22
Lane Open	46	16.7	0	0.0	3	6	10	27
Unknown Lane Closure	4	1.5	0	0.0	0	1	1	2
Activity - None								
Lane Closed	1	0.4	0	0.0	0	0	0	1
Lane Open	31	11.3	0	0.0	1	0	3	27
Unknown Lane Closure	0	0.0	0	0.0	0	0	0	0
Activity - Unknown								
Lane Closed	5	1.8	0	0.0	0	0	0	5
Lane Open	1	0.4	0	0.0	0	1	0	0
Unknown Lane Closure	11	4.0	0	0.0	0	0	1	10
Subtotal	275	100.0	1	100.0	6	17	37	214
Unknown Type								
Subtotal	14,684		30		301	649	1,919	11,785
Total	21,290		48		406	940	2,935	16,961

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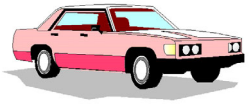
Vehicle/ Driver



VEHICLE TYPE CRASH INVOLVEMENT

Vehicle Types	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH: Fatal Crash		Injury	PDO	MOST SEVERE OUTCOME IN VEHICLE: Fatality in Veh		Injury	No Injury
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Passenger Car and Station Wagon	455,307	66.1	1,169	59.0	103,074	351,064	702	66.9	66,242	388,363
Van and Motorhome	50,788	7.4	137	6.9	11,406	39,245	44	4.2	6,262	44,482
Pickup	104,329	15.1	336	17.0	19,796	84,197	150	14.3	10,299	93,880
Small Truck (under 10,000 lbs.)	16,928	2.5	29	1.5	3,454	13,445	11	1.0	1,899	15,018
Motorcycle	3,228	0.5	94	4.7	2,381	753	87	8.3	2,327	814
Moped	255	0.0	3	0.2	172	80	3	0.3	165	87
Go Cart	18	0.0	2	0.1	12	4	1	0.1	10	7
Snowmobile	651	0.1	5	0.3	316	330	4	0.4	267	380
Off Road Vehicle	296	0.0	15	0.8	219	62	15	1.4	208	73
Other	2,331	0.3	10	0.5	599	1,722	4	0.4	371	1,956
Unkown	36,710	5.3	47	2.4	6,182	30,481	18	1.7	3,484	33,208
CDL Truck/Bus (breakdown below)	18,281	2.7	134	6.8	3,206	14,941	10	1.0	813	17,458
Total Number of Vehicles	689,122	100.0	1,981	100.0	150,817	536,324	1,049	100.0	92,347	595,726

Special Note: School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.

CDL Truck/Bus Sub-category Types	Motor Vehicles		Fatal Crash		Injury	PDO	Fatality in Veh		Injury	No Injury
	Number of Vehicles	% of Total	Number	% of Total			Number	% of Total		
Commercial Vehicle: Group A	7,632	41.7	80	59.7	1,370	6,182	6	60.0	276	7,350
Commercial Vehicle: Group B	3,729	20.4	28	20.9	687	3,014	3	30.0	216	3,510
Commercial Vehicle: Group C	548	3.0	2	1.5	110	436	0	0.0	43	505
Other Truck	911	5.0	3	2.2	166	742	0	0.0	50	861
Unknown Truck	5,461	29.9	21	15.7	873	4,567	1	10.0	228	5,232
Total Number of Vehicles	18,281	100.0	134	100.0	3,206	14,941	10	100.0	813	17,458

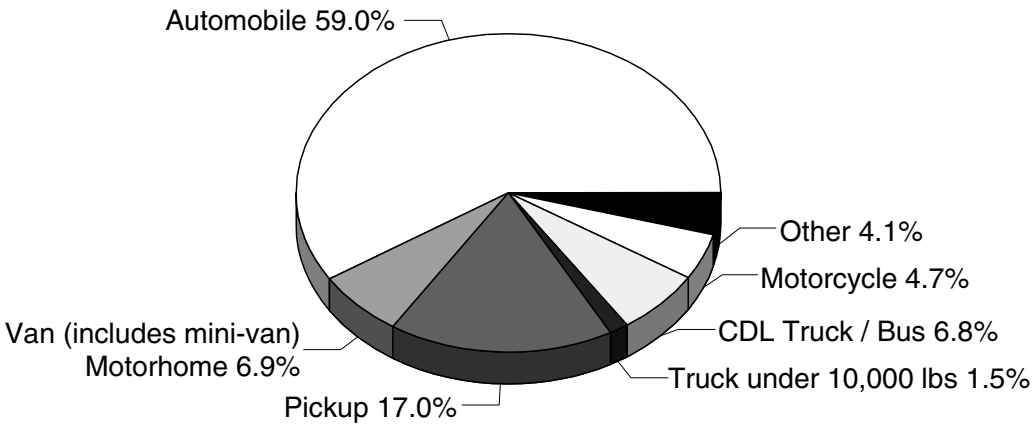
Group “A” is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

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

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

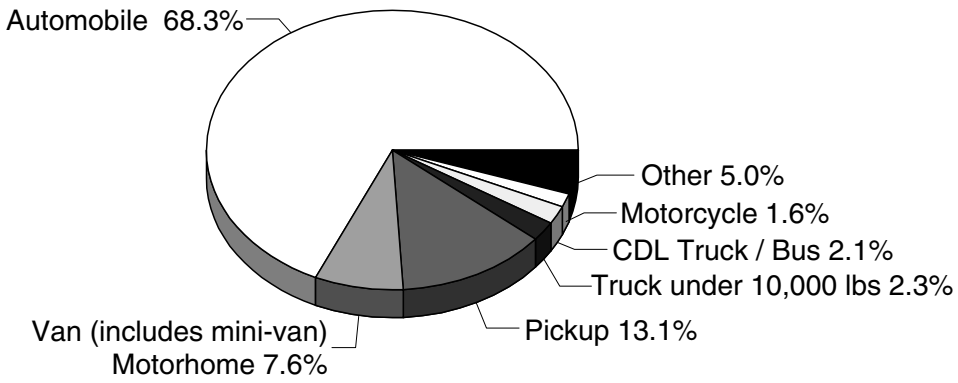
VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

FATAL



The top chart shows that 3 out of 4 vehicles involved in fatal crashes are automobiles or pickups. Van, motorhome, the vehicle type that includes the popular minivan, has a fatal crash involvement of 6.9 percent.

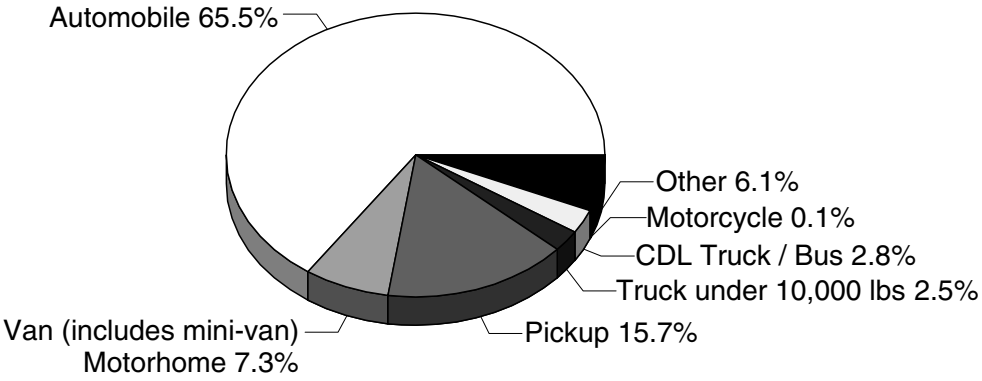
INJURY



Special Note: "Other" consists of Moped, Go Cart, Snowmobile, Off Road Vehicle, Other, and Unknown.

As with fatal crashes, injury and PDO crashes are represented primarily by cars and pickups. One should also note the decline in proportional representation for motorcycles and heavy trucks compared to their levels in fatal crashes.

PROPERTY DAMAGE ONLY



ACTION PRIOR TO CRASH

DRIVER ACTION	All Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Going straight ahead	334,873	48.6	1,369	8,395	19,713	48,337	257,059
Turning left	47,902	7.0	101	1,270	3,425	8,242	34,864
Turning right	18,211	2.6	14	222	723	2,026	15,226
Stopped on roadway	64,356	9.3	89	721	2,375	13,915	47,256
In prior crash	973	0.1	6	31	81	167	688
Changing lanes	15,274	2.2	29	192	479	1,453	13,121
Backing	17,581	2.6	7	58	213	635	16,668
Slowing/stopping on roadway	57,042	8.3	40	463	1,746	11,183	43,610
Slowing/stopping other	788	0.1	1	13	31	130	613
Starting up on roadway	12,796	1.9	37	243	640	2,328	9,548
Starting up other	410	0.1	1	14	22	60	313
Entering parking	976	0.1	1	2	25	68	880
Leaving parking	2,540	0.4	1	34	109	279	2,117
Entering roadway	10,301	1.5	20	206	592	1,537	7,946
Leaving roadway	1,260	0.2	16	81	142	162	859
Making U-turn	1,526	0.2	11	52	97	260	1,106
Overtaking or passing	5,505	0.8	38	151	309	585	4,422
Avoiding object	1,099	0.2	4	31	71	153	840
Avoiding animal	1,630	0.2	1	29	181	217	1,202
Avoiding pedestrian	192	0.0	6	26	25	33	102
Avoiding vehicle (front/back)	5,450	0.8	38	160	396	914	3,942
Avoiding vehicle (angle)	2,461	0.4	14	71	202	377	1,797
Driverless moving	441	0.1	0	8	18	29	386
Parked	29,225	4.2	34	306	760	1,235	26,890
Crossing at intersection	476	0.1	0	76	138	169	93
Crossing not at intersection	379	0.1	1	97	121	106	54
Getting on/off vehicle	32	0.0	0	3	7	9	13
In roadway with traffic	101	0.0	2	19	19	40	21
In roadway against traffic	38	0.0	0	6	12	13	7
Standing or lying in roadway	51	0.0	0	14	10	17	10
Pushing/working on vehicle	28	0.0	0	3	8	9	8
Other working in roadway	26	0.0	0	6	6	8	6
Playing in roadway	35	0.0	0	5	11	7	12
In roadway other reason	91	0.0	0	14	25	35	17
Not in roadway	78	0.0	0	16	29	21	12
Other	752	0.1	2	36	70	115	529
Unknown	54,223	7.9	98	831	2,204	7,003	44,087
TOTAL	689,122	100.0	1,981	13,905	35,035	101,877	536,324

ACTION PRIOR TO CRASH (continued)

MOTORCYCLIST – INJURY SEVERITY

MOTORCYCLIST ACTION	All Motorcycles		All Motorcyclists		Fatal	Injury			No Injury
	Number of Motorcycles	% of Total	Number of Motorcyclist	% of Total		A	B	C	
Going straight ahead	1,973	61.1	2,175	61.1	69	462	719	502	380
Turning left	139	4.3	155	4.4	2	25	55	30	42
Turning right	135	4.2	151	4.2	2	25	40	36	47
Stopped on roadway	142	4.4	149	4.2	1	7	14	42	82
In prior crash	2	0.1	2	0.1	0	0	1	0	1
Changing lanes	50	1.5	52	1.5	1	12	13	10	14
Backing	7	0.2	7	0.2	0	0	2	1	4
Slowing/stopping on roadway	163	5.0	179	5.0	2	24	60	39	52
Slowing/stopping other	6	0.2	6	0.2	0	0	4	2	0
Starting up on roadway	56	1.7	64	1.8	1	8	17	18	19
Starting up other	3	0.1	3	0.1	0	3	0	0	0
Entering parking	4	0.1	4	0.1	0	0	0	2	0
Leaving parking	6	0.2	6	0.2	0	1	1	2	2
Entering roadway	27	0.8	34	1.0	0	2	11	8	13
Leaving roadway	15	0.5	17	0.5	0	4	4	6	3
Making U-turn	10	0.3	10	0.3	0	3	3	3	1
Overtaking or passing	70	2.2	79	2.2	7	20	32	12	7
Avoiding object	11	0.3	11	0.3	0	6	1	2	1
Avoiding animal	30	0.9	32	0.9	0	5	13	9	5
Avoiding pedestrian	2	0.1	2	0.1	0	0	2	0	0
Avoiding vehicle (front/back)	92	2.9	104	2.9	0	18	33	24	29
Avoiding vehicle (angle)	50	1.5	53	1.5	1	5	22	10	14
Driverless moving	2	0.1	2	0.1	0	0	0	1	1
Parked	47	1.5	49	1.4	0	1	1	2	9
Crossing at intersection	5	0.2	10	0.3	0	0	3	2	5
Crossing not at intersection	2	0.1	7	0.2	0	1	3	3	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	1	0.0	0	0	1	0	0
Standing or lying in roadway	0	0.0	0	0.0	0	0	0	0	0
Pushing/working on vehicle	1	0.0	1	0.0	0	0	1	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	2	0.1	3	0.1	0	2	1	0	0
Other	9	0.3	11	0.3	0	2	6	3	0
Unknown	167	5.2	181	5.1	4	33	52	40	33
TOTAL	3,228	100.0	3,560*	100.0	90	669	1,115	809	764

* Includes 113 motorcyclists (drivers and passengers) with unknown injury severity

ACTION PRIOR TO CRASH (continued)

BICYCLIST - INJURY SEVERITY

BICYCLIST ACTION	All Bicycles		Fatal	Injury			No Injury
	Number of Bicycles	% of Total		A	B	C	
Going straight ahead	658	49.0	8	69	268	220	82
Turning left	40	3.0	0	11	12	9	8
Turning right	13	1.0	0	2	7	1	3
Stopped on roadway	9	0.7	0	1	3	2	3
In prior crash	0	0.0	0	0	0	0	0
Changing lanes	14	1.0	2	2	4	4	2
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	6	0.4	0	3	0	1	2
Slowing/stopping other	2	0.1	0	0	1	0	1
Starting up on roadway	9	0.7	0	2	4	2	1
Starting up other	0	0.0	0	0	0	0	0
Entering parking	2	0.1	0	0	2	0	0
Leaving parking	1	0.1	0	0	0	0	1
Entering roadway	76	5.7	1	6	37	24	5
Leaving roadway	0	0.0	0	0	0	0	0
Making U-turn	2	0.1	0	1	0	0	1
Overtaking or passing	2	0.1	0	1	0	1	0
Avoiding object	0	0.0	0	0	0	0	0
Avoiding animal	1	0.1	0	1	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	3	0.2	0	1	1	1	0
Avoiding vehicle (angle)	2	0.1	0	0	0	2	0
Driverless moving	0	0.0	0	0	0	0	0
Parked	1	0.1	0	0	0	0	0
Crossing at intersection	207	15.4	2	19	76	77	27
Crossing not at intersection	68	5.1	3	18	24	16	7
Getting on/off vehicle	1	0.1	0	0	0	0	0
In roadway with traffic	24	1.8	5	4	8	6	0
In roadway against traffic	13	1.0	0	2	7	4	0
Standing or lying in roadway	2	0.1	0	0	0	2	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	12	0.9	0	2	3	4	3
In roadway other reason	13	1.0	0	1	4	3	4
Not in roadway	10	0.7	0	1	7	1	1
Other	28	2.1	2	6	10	6	4
Unknown	123	9.2	3	12	38	37	20
TOTAL	1,342*	100.0	26	165	516	423	175

* Includes 37 bicyclists with unknown injury severity

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

ACTION PRIOR TO CRASH (continued)

PEDESTRIAN - INJURY SEVERITY

PEDESTRIAN ACTION	All Pedestrians		Fatal	Injury			No Injury
	Number of Pedestrians	% of Total		A	B	C	
Going straight ahead	74	3.5	1	10	31	24	5
Turning left	4	0.2	0	0	1	3	0
Turning right	1	0.0	0	0	0	1	0
Stopped on roadway	6	0.3	0	0	2	1	3
In prior crash	3	0.1	2	0	0	0	1
Changing lanes	0	0.0	0	0	0	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	1	0.0	0	0	0	0	1
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	1	0.0	0	1	0	0	0
Entering roadway	13	0.6	1	5	2	5	0
Leaving roadway	0	0.0	0	0	0	0	0
Making U-turn	1	0.0	0	0	1	0	0
Overtaking or passing	3	0.1	0	0	0	2	1
Avoiding object	1	0.0	1	0	0	0	0
Avoiding animal	1	0.0	1	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	2	0.1	0	0	0	1	1
Parked	17	0.8	0	1	1	2	10
Crossing at intersection	501	23.5	22	89	155	192	25
Crossing not at intersection	606	28.4	47	146	195	173	29
Getting on/off vehicle	30	1.4	2	4	16	6	2
In roadway with traffic	100	4.7	23	16	23	28	6
In roadway against traffic	24	1.1	6	1	10	5	1
Standing or lying in roadway	87	4.1	16	18	23	26	2
Pushing/working on vehicle	21	1.0	3	7	6	5	0
Other working in roadway	33	1.5	2	7	5	13	6
Playing in roadway	46	2.2	1	11	16	13	5
In roadway other reason	145	6.8	8	36	45	39	10
Not in roadway	105	4.9	8	18	30	34	10
Other	79	3.7	3	15	29	27	4
Unknown	230	10.8	13	42	62	79	13
TOTAL	2,135*	100.0	160	427	653	679	135

* Includes 81 pedestrians with unknown injury severity

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

MOST HARMFUL EVENT

MOST SEVERE OUTCOME IN CRASH

NONCOLLISION	Motor Vehicles		Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Loss of control	2,513	0.4	1	87	209	391	1,825
Cross center/median	539	0.1	0	44	39	66	390
Ran off road left	756	0.1	0	27	62	85	582
Ran off road right	1,438	0.2	0	34	98	176	1,130
Re-enter road	100	0.0	1	1	8	15	75
Overturn	8,669	1.3	124	677	1,677	1,867	4,324
Separation of units	1,027	0.1	1	26	53	147	800
Fire/explosion	756	0.1	14	17	13	59	653
Immersion	66	0.0	3	2	1	6	54
Jackknife	336	0.0	0	3	7	30	296
Downhill runaway	60	0.0	0	1	7	9	43
Cargo loss/shift	818	0.1	0	8	14	43	753
Individual fell off	483	0.1	14	135	172	77	85
Other noncollision	2,069	0.3	0	47	95	185	1,742
NONCOLLISION Subtotal	19,630	2.8	158	1,109	2,455	3,156	12,752

MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH NONFIXED OBJECT	Motor Vehicles		Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Pedestrian	2,628	0.4	153	548	779	841	307
Pedalcycle	2,037	0.3	24	208	718	635	452
Motor vehicle in transport	442,254	64.2	1,202	8,388	22,029	76,738	333,897
Parked motor vehicle	20,324	2.9	15	163	477	830	18,839
Railway train	138	0.0	8	12	11	22	85
Animal	60,076	8.7	3	67	395	838	58,773
Other nonfixed objects	6,670	1.0	5	72	172	350	6,071
COLLISION NONFIXED Subtotal	534,127	77.5	1,410	9,458	24,581	80,254	418,424

MOST HARMFUL EVENT (continued)

MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH FIXED OBJECT	Motor Vehicles		Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Bridge/pier/abutment	580	0.1	7	22	62	70	419
Bridge parapet end	380	0.1	0	5	12	20	343
Bridge rail	385	0.1	1	10	27	48	299
Guardrail face	2,734	0.4	6	54	165	329	2,180
Guardrail end	454	0.1	3	25	46	85	295
Median barrier	2,750	0.4	5	80	278	577	1,810
Highway traffic sign post	2,147	0.3	3	20	46	121	1,957
Signal post	266	0.0	0	6	8	17	235
Luminaire/light support	537	0.1	7	18	46	57	409
Utility pole	3,199	0.5	28	175	419	518	2,059
Other pole	930	0.1	3	27	69	98	733
Culvert	595	0.1	9	41	95	89	361
Curb	1,909	0.3	5	44	77	167	1,616
Ditch	7,133	1.0	19	239	662	994	5,219
Embankment	1,856	0.3	14	77	190	273	1,302
Fence	1,365	0.2	2	20	66	102	1,175
Mailbox	1,926	0.3	1	5	42	81	1,797
Tree	9,651	1.4	159	750	1,297	1,479	5,966
Rail crossing signal	97	0.0	0	2	4	2	89
Building	824	0.1	9	39	101	113	562
Traffic island	51	0.0	0	0	4	7	40
Fire hydrant	453	0.1	1	12	22	51	367
Impact attenuator	40	0.0	0	4	5	6	25
Other fixed object	3,404	0.5	13	120	253	331	2,687
COLLISION FIXED Subtotal	43,666	6.3	295	1,795	3,996	5,635	31,945

MOST SEVERE OUTCOME IN CRASH

	Motor Vehicles		Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	91,699	13.3	118	1,543	4,003	12,832	73,203
TOTAL MOST HARMFUL EVENT	689,122	100.0	1,981	13,905	35,035	101,877	536,324

VEHICLE DEFECTS IN CRASH INVOLVEMENT

VEHICLE DEFECTS	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Brakes	1,860	0.3	6	42	116	345	1,351
Lights/reflectors	394	0.1	2	5	17	70	300
Steering	273	0.0	1	16	37	42	177
Tires/wheels	841	0.1	5	19	65	100	652
Windows	49	0.0	0	0	3	4	42
Other	1,845	0.3	3	52	88	251	1,451
Unknown	683,860	99.2	1,964	13,771	34,709	101,065	532,351
TOTAL	689,122	100.0	1,981	13,905	35,035	101,877	536,324

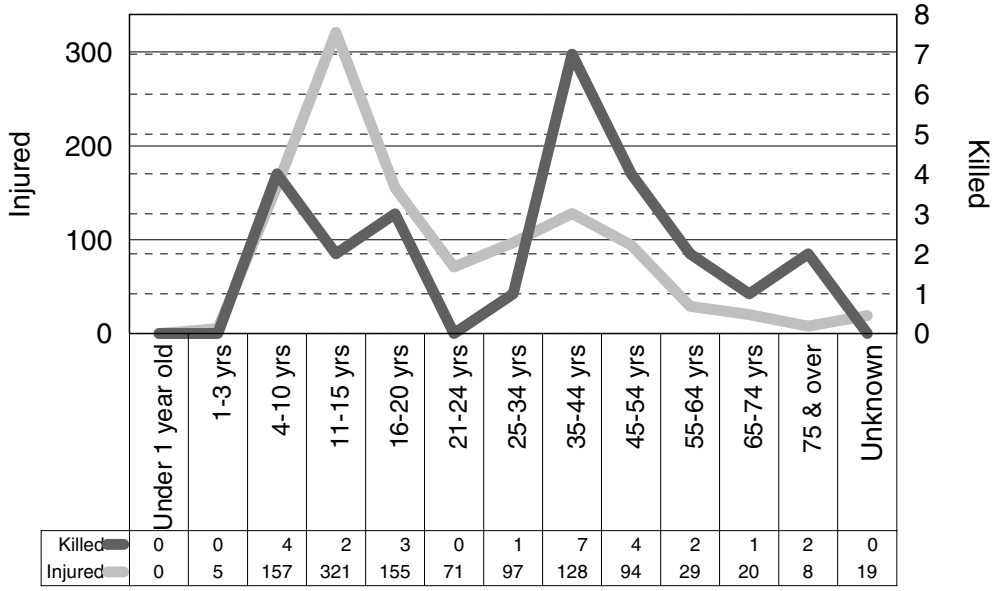
DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	All Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
None	337,191	48.9	777	5,622	15,006	47,494	268,292
Speed too fast	33,597	4.9	262	1,308	3,028	5,215	23,784
Speed too slow	782	0.1	2	22	40	165	553
Failed to yield	60,317	8.8	159	1,611	4,514	10,802	43,231
Disregard traffic control	14,731	2.1	103	688	1,603	3,764	8,573
Drove wrong way	508	0.1	10	26	47	91	334
Drove left of center	3,658	0.5	84	247	412	494	2,421
Improper passing	4,581	0.7	11	59	164	416	3,931
Improper lane use	14,325	2.1	13	125	363	1,086	12,738
Improper turn	7,949	1.2	11	115	312	964	6,547
Improper/no signal	829	0.1	0	16	24	102	687
Improper backing	13,208	1.9	3	22	99	366	12,718
Unable to stop in assured clear distance	88,571	12.9	55	859	2,879	17,850	66,928
Reckless driving	2,799	0.4	36	222	335	366	1,840
Careless/Negligent driving	12,519	1.8	88	762	1,601	1,830	8,238
Other	26,716	3.9	126	1,025	2,030	3,497	20,038
Unknown	66,841	9.7	241	1,176	2,578	7,375	55,471
TOTAL	689,122	100.0	1,981	13,905	35,035	101,877	536,324

MICHIGAN BICYCLE CRASHES

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

2001 Bicycle Crash Information



	Under 1 year old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 & over	Unknown
Killed	0	0	4	2	3	0	1	7	4	2	1	2	0
Injured	0	5	157	321	155	71	97	128	94	29	20	8	19

In 2001, there were 1,342 bicyclists involved in motor vehicles crashes, with 26 bicyclists killed and 1,104 injured. The number of bicyclists killed represents a 10.3 percent decrease from 2000.

Children under 16 years of age accounted for 6 (23.1%) of the bicycle deaths in 2001.

BICYCLE HELMET USE AND INJURY SEVERITY

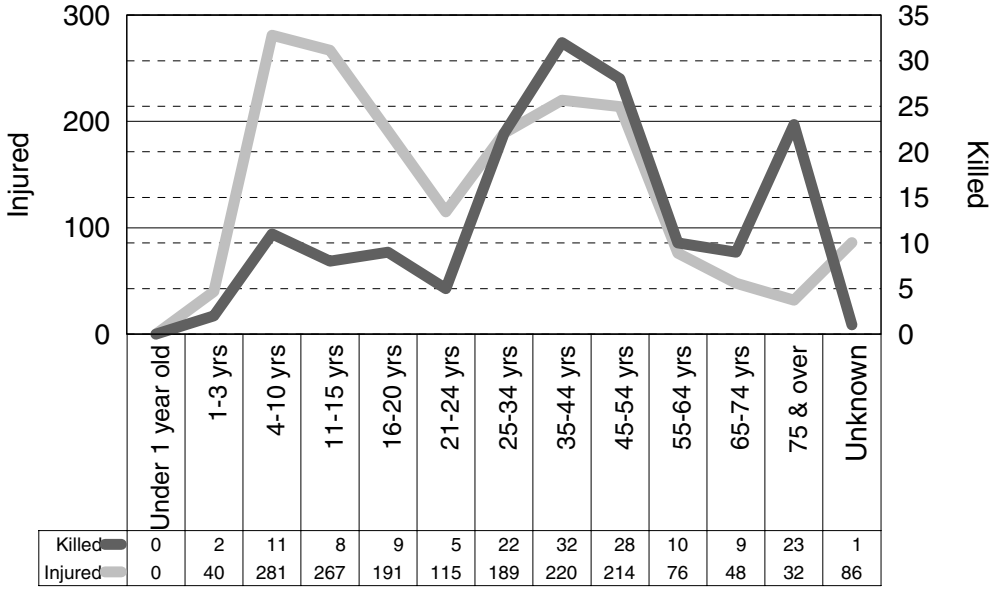
HELMET USE	Fatality	Injury			No Injury
		A	B	C	
Worn	1	13	39	24	11
Not Worn	6	68	201	164	50
Unknown	19	84	276	235	114
TOTALS	26	165	516	423	175

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

MICHIGAN PEDESTRIAN CRASHES

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

2001 Pedestrian Crash Information

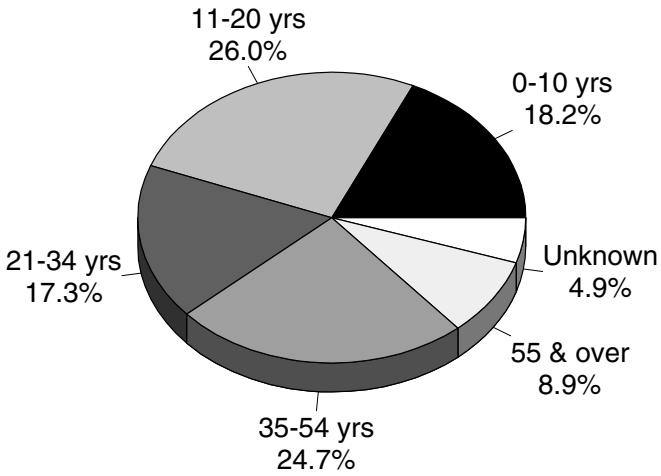


	Under 1 year old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 & over	Unknown
Killed	0	2	11	8	9	5	22	32	28	10	9	23	1
Injured	0	40	281	267	191	115	189	220	214	76	48	32	86

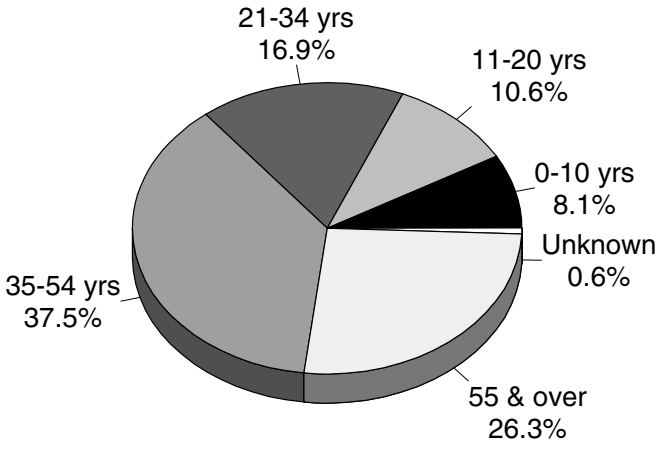
In 2001, there were 2,135 pedestrians involved in motor vehicles crashes, with 160 pedestrians killed and 1,759 injured. The number killed represents a 4.8 percent decrease in fatalities from 2000.

Children under 16 years of age accounted for 21 (13.1%) of the pedestrian deaths in 2001. Adults over the age of 54 accounted for 42 (26.3%) of the pedestrian deaths in 2001.

Pedestrians Injured



Pedestrians Killed



MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

Most Harmful Event

MOST SEVERE OUTCOME IN CRASH

NONCOLLISION	Snowmobiles		Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
Loss of control	4	0.6	0	1	1	1	1
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	1	0.2	0	0	0	0	1
Ran off road right	2	0.3	0	0	1	1	0
Re-enter road	0	0.0	0	0	0	0	0
Overturn	34	5.2	0	10	10	8	6
Separation of units	0	0.0	0	0	0	0	0
Fire/explosion	3	0.5	0	0	0	0	3
Immersion	1	0.2	0	0	0	0	1
Jackknife	4	0.6	0	0	0	0	4
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	6	0.9	0	0	0	0	6
Individual fell off	41	6.3	0	19	10	11	1
Other noncollision	12	1.8	0	2	3	1	6
NONCOLLISION Subtotal	108	16.6	0	32	25	22	29

MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH NONFIXED OBJECT	Snowmobiles		Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	2	0.3	0	1	1	0	0
Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	267	41.0	3	36	30	37	161
Parked motor vehicle	17	2.6	0	4	2	1	10
Railway train	4	0.6	0	0	0	0	4
Animal	32	4.9	0	1	1	4	26
Other nonfixed objects	16	2.5	0	2	0	2	12
COLLISION NONFIXED Subtotal	338	51.9	3	44	34	44	213

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS (continued)

Most Harmful Event

HAD A COLLISION WITH FIXED OBJECT	Snowmobiles		Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
			MOST SEVERE OUTCOME IN CRASH				
Bridge/pier/abutment	4	0.6	0	0	1	0	3
Bridge parapet end	0	0.0	0	0	0	0	0
Bridge rail	1	0.2	0	0	0	0	1
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	3	0.5	0	0	0	0	3
Signal post	0	0.0	0	0	0	0	0
Luminaire/light support	0	0.0	0	0	0	0	0
Utility pole	5	0.8	0	0	1	1	3
Other pole	3	0.5	0	0	1	0	2
Culvert	0	0.0	0	0	0	0	0
Curb	2	0.3	0	0	0	1	1
Ditch	10	1.5	0	3	1	3	3
Embankment	10	1.5	0	4	3	2	1
Fence	0	0.0	0	0	0	0	0
Mailbox	2	0.3	0	0	0	1	1
Tree	53	8.1	1	26	9	9	8
Rail crossing signal	0	0.0	0	0	0	0	0
Building	2	0.3	0	0	1	0	1
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	2	0.3	0	0	0	1	1
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	18	2.8	1	2	0	6	9
COLLISION FIXED Subtotal	115	17.7	2	35	17	24	37
Unknown Event	90	13.8	0	12	9	18	51
TOTAL MOST HARMFUL EVENT	651	100.0	5	123	85	108	330

A total of 651 snowmobiles were reported in crashes on Michigan public roadways during 2001 Of these snowmobiles, 5 were involved in fatal crashes with 4 of their drivers and 1 pedestrian killed.

MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

Most Harmful Event

MOST SEVERE OUTCOME IN CRASH

	ORV/ATV		Fatal	Injury			PDO
NONCOLLISION	Number of ORV/ATVs	% of Total		A	B	C	
Loss of control	6	2.0	0	2	3	0	1
Cross center/median	2	0.7	0	0	0	0	2
Overturn	43	14.5	2	12	16	13	0
Cargo loss/shift	1	0.3	0	0	0	0	1
Individual fell off	42	14.2	1	17	18	6	0
Other noncollision	2	0.7	0	1	0	1	0
NONCOLLISION Subtotal	96	32.4	3	32	37	20	4
HAD A COLLISION WITH NONFIXED OBJECT							
Pedestrian	2	0.7	0	0	2	0	0
Motor vehicle in transport	89	30.1	6	18	21	12	32
Parked motor vehicle	10	3.4	0	0	1	0	9
Railway Train	0	0.0	0	0	0	0	0
Animal	3	1.0	0	2	0	0	1
Other nonfixed objects	4	1.4	0	0	3	1	0
COLLISION NONFIXED Subtotal	108	36.5	6	20	27	13	42
HAD A COLLISION WITH FIXED OBJECT							
Traffic sign post	1	0.3	1	0	0	0	0
Luminaire support	2	0.7	1	1	0	0	0
Utility pole	3	1.0	0	2	0	1	0
Other pole	1	0.3	0	0	1	0	0
Culvert	1	0.3	0	1	0	0	0
Curb	3	1.0	1	1	0	1	0
Ditch	5	1.7	1	2	1	1	0
Embankment	4	1.4	0	1	2	1	0
Fence	5	1.7	0	2	2	0	1
Mailbox	1	0.3	0	0	1	0	0
Tree	24	8.1	2	10	7	2	3
Fire hydrant	1	0.3	0	0	0	0	1
Other fixed object	14	4.7	0	5	5	2	2
COLLISION FIXED Subtotal	65	22.0	6	25	19	8	7
Unknown Event	27	9.1	0	7	10	1	9
TOTAL MOST HARMFUL EVENT	296	100.0	15	84	93	42	62

A total of 296 Off Road Vehicles/All Terrain Vehicles were reported in crashes on Michigan public roadways during 2001. Of these ORV/ATVs, 15 were involved in fatal crashes with 13 of their operators and 2 passengers killed. Eight of the ORV/ATV riders had been drinking and/or using drugs prior to their fatal collisions.

MICHIGAN SNOWMOBILE CRASHES ON PUBLIC ROADWAYS

MOST SEVERE OUTCOME IN CRASH

Driver Hazardous Action	Snowmobiles		Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
None	190	29.2	1	27	23	29	110
Speed too fast	122	18.7	1	43	33	23	22
Speed too slow	2	0.3	0	1	0	0	1
Failed to yield	56	8.6	1	11	2	6	36
Disregard traffic control	14	2.2	0	3	1	4	6
Drove wrong way	3	0.5	0	1	0	0	2
Drove left of center	5	0.8	0	0	2	1	2
Improper passing	3	0.5	0	0	0	0	3
Improper lane use	18	2.8	1	1	0	1	15
Improper turn	19	2.9	0	0	0	1	18
Improper/no signal	0	0.0	0	0	0	0	0
Improper backing	12	1.8	0	0	0	1	11
Unable to stop in assured clear distance	51	7.8	0	5	5	18	23
Reckless driving	8	1.2	0	4	0	1	3
Careless/Negligent driving	31	4.8	0	8	6	7	10
Other	55	8.4	0	8	8	7	32
Unknown	62	9.5	1	11	5	9	36
TOTAL	651	100.0	5	123	85	108	330

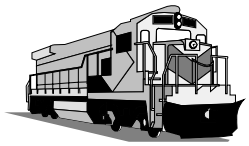
MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

MOST SEVERE OUTCOME IN CRASH

Driver Hazardous Action	ORV/ATV		Fatal	Injury			PDO
	Number of ORV/ATVs	% of Total		A	B	C	
None	49	16.6	0	9	15	11	14
Speed too fast	63	21.3	6	14	25	13	5
Speed too slow	1	0.3	0	0	1	0	0
Failed to yield	22	7.4	1	3	6	1	11
Disregard traffic control	6	2.0	0	3	1	0	2
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	7	2.4	0	2	2	1	2
Improper passing	2	0.7	0	0	0	1	1
Improper lane use	4	1.4	0	0	2	0	2
Improper turn	4	1.4	0	0	4	0	0
Improper/no signal	2	0.7	0	1	0	0	1
Improper backing	4	1.4	0	0	1	1	2
Unable to stop in assured clear distance	10	3.4	1	4	0	1	4
Reckless driving	9	3.0	2	4	0	0	3
Careless/Negligent driving	31	10.5	2	16	9	4	0
Other	49	16.6	3	19	15	7	5
Unknown	33	11.1	0	9	12	2	10
TOTAL	296	100.0	15	84	93	42	62

MICHIGAN FARM EQUIPMENT CRASHES

A total of 188 crashes involving farm equipment were reported on Michigan roadways during 2001. Of these crashes, 2 were fatal with 2 persons killed in other vehicles. There were no farm equipment operators killed on Michigan roadways in 2001.



MICHIGAN VEHICLE - TRAIN CRASHES

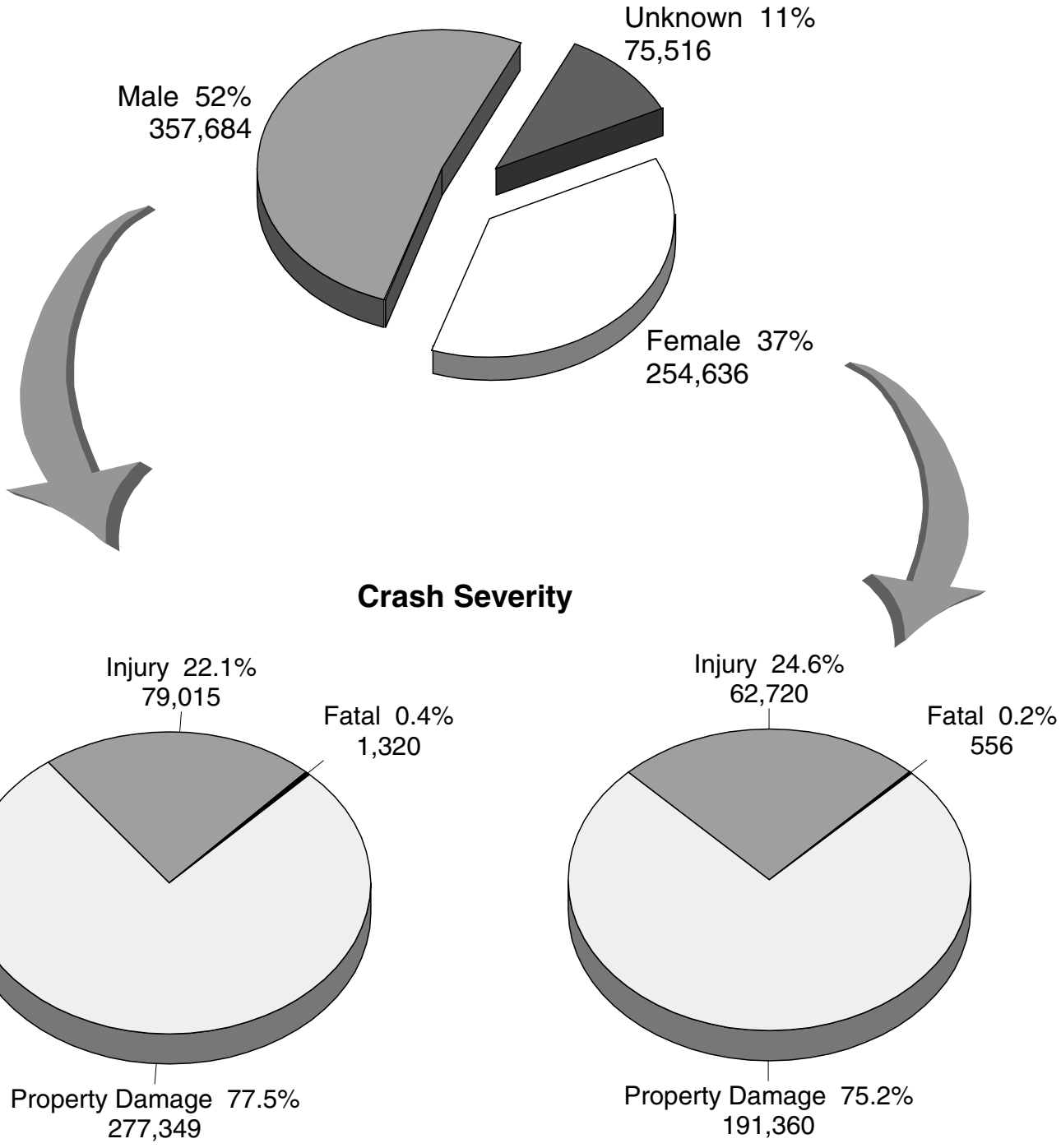
A total of 97 crashes involving trains were reported in Michigan during 2001. The National Highway Traffic Safety Administration's 2001 Fatality Analysis Reporting System [13] reported 8 fatal train crashes in Michigan, and 9 persons killed as a result of those collisions.

MICHIGAN MOTORCYCLE CRASHES

MOTORCYCLE DATA	2000	2001	% Change
Registrations	176,334.0	191,888.0	8.8
Crashes	3,180.0	3,228.0	1.5
Deaths	78.0	90.0	15.4
Persons Injured	2,541.0	2,593.0	2.0
Death Rate based on 10,000 motorcycle registrations	4.4	4.7	6.8
Estimated Mileage based on 3,000 miles per motorcycle	529,002,000.0	575,664,000.0	8.8
Death Rate based on deaths per 100 million vehicle miles traveled	14.7	15.6	6.1

Motorcycles were involved in 0.81 percent of all traffic crashes in Michigan in 2001. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles. The 2001 death rate for motorcyclists was 15.6 per 100 million vehicle miles traveled compared to the overall 1.4 mileage death rate per 100 million vehicle miles traveled.

DRIVER GENDER INFORMATION - ALL CRASHES



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

This 2001 chart was processed with numbers for all drivers (vehicle level).

PERSON AGE:
DEMOGRAPHICS AND CRASH INVOLVEMENTS

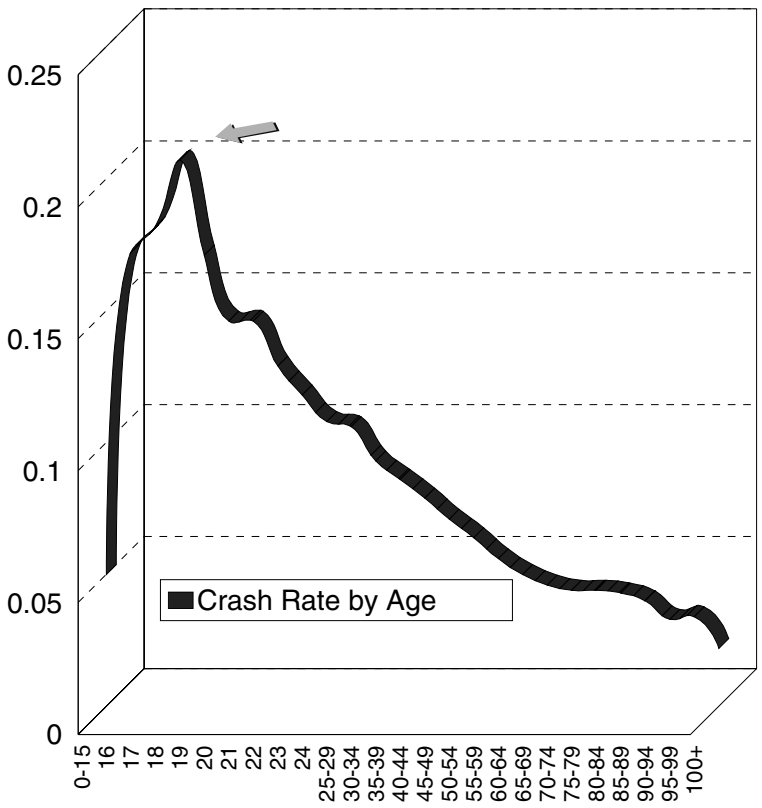
Age	Licensed Drivers	Michigan Population	Drivers in all crashes	Drivers in Fatal crashes	Occupants killed	Occupants injured	Bicyclist all crashes	Bicyclist fatal crashes	Pedestrian all crashes	Pedestrian fatal crashes
0-15	50,928		2,536	12	62	8,556	586	6	668	26
16	97,869		16,824	35	29	3,526	56	2	56	3
17	109,095		19,908	55	36	3,803	32	0	48	2
18	106,242		22,012	50	33	4,196	47	0	39	1
19	120,052		20,501	73	41	3,672	30	0	44	2
20	126,398		18,495	51	29	3,307	27	1	33	2
21	119,312		17,465	56	40	3,111	29	0	39	1
22	124,825		16,065	49	31	2,785	15	0	33	2
23	124,981		14,762	41	28	2,471	16	0	30	2
24	125,942		13,565	31	18	2,222	21	0	29	1
25-29	588,692		62,576	173	92	9,901	57	0	111	13
30-34	678,906		62,969	178	79	9,423	55	2	116	14
35-39	716,886		61,927	169	80	8,898	64	5	120	14
40-44	763,116		60,266	178	90	8,808	87	2	156	21
45-49	723,776		51,214	158	73	7,745	73	2	161	19
50-54	637,860		40,959	117	56	6,291	47	2	110	11
55-59	495,755		27,745	70	35	4,321	20	1	64	6
60-64	372,787		18,571	70	46	2,942	12	1	34	4
65-69	299,966		13,766	50	36	2,335	14	0	28	3
70-74	273,883		12,060	51	37	2,074	9	1	30	6
75-79	221,339		9,733	55	53	1,802	8	2	21	4
80-84	138,194		5,998	50	37	1,174	1	0	24	9
85-100+	74,095		2,836	31	38	671	1	0	16	10
Unknown	---		95,083	178	37	3,656	35	0	125	2
Totals	7,090,899	9,990,817	687,836	1,981	1,136	107,690	1,342	27	2,135	178

State population estimates by age for 2001 were not released by the U. S. Census Bureau. They cite many factors in their decision to cancel the release this year.

Due to data processing errors ~1,600 pedestrians and ~1,600 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

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

Age	Rate	Licensed Drivers	Drivers in all crashes
0-15	0.050	50,928	2,536
16	0.172	97,869	16,824
17	0.182	109,095	19,908
18	0.207	106,242	22,012
19	0.171	120,052	20,501
20	0.146	126,398	18,495
21	0.146	119,312	17,465
22	0.129	124,825	16,065
23	0.118	124,981	14,762
24	0.108	125,942	13,565
25-29	0.106	588,692	62,576
30-34	0.093	678,906	62,969
35-39	0.086	716,886	61,927
40-44	0.079	763,116	60,266
45-49	0.071	723,776	51,214
50-54	0.064	637,860	40,959
55-59	0.056	495,755	27,745
60-64	0.050	372,787	18,571
65-69	0.046	299,966	13,766
70-74	0.044	273,883	12,060
75-79	0.044	221,339	9,733
80-84	0.043	138,194	5,998
85-89	0.040	58,817	2,335
90-94	0.033	13,690	448
95-99	0.034	1,499	51
100+	0.022	89	2
Total		7,090,899	592,753



Drivers age 18 have the highest rate (total crashes in age group divided by total number of licensed drivers in age group). The low crash rates of the oldest groups (per licensed driver) may reflect reduced driving and exposure to the risk of a crash relative to younger drivers.

REPORTED AGE OF DRIVERS INVOLVED IN ALL CRASHES

COUNTY	All ages	0-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 yrs & over	DOB unk
Alcona	855	2	105	58	133	206	151	95	64	19	22
Alger	745	2	100	67	112	135	123	54	33	22	97
Allegan	5,929	34	1,036	549	1,149	1,101	819	388	192	169	492
Alpena	1,649	8	327	113	236	328	248	131	107	77	74
Antrim	1,555	13	251	102	259	334	244	135	83	29	105
Arenac	1,322	5	196	106	227	283	233	102	58	46	66
Baraga	649	6	78	47	95	139	103	62	41	16	62
Barry	3,221	11	554	294	647	632	489	224	130	88	152
Bay	6,583	27	1,157	612	1,111	1,107	881	489	297	243	659
Benzie	939	5	136	65	164	183	154	81	48	25	78
Berrien	8,931	42	1,192	673	1,523	1,372	1,129	629	403	387	1,581
Branch	2,865	9	485	272	493	529	366	208	111	67	325
Calhoun	10,182	44	1,498	938	1,697	1,686	1,462	771	447	298	1,341
Cass	2,715	13	393	213	431	459	353	199	99	63	492
Charlevoix	1,795	7	272	155	269	371	260	154	99	54	154
Cheboygan	1,536	8	282	118	233	274	231	128	78	47	137
Chippewa	1,991	10	301	180	298	361	292	162	102	54	231
Clare	2,102	12	330	167	382	415	335	183	99	63	116
Clinton	3,599	11	622	346	631	719	565	259	118	82	246
Crawford	1,148	1	156	99	185	238	189	107	64	32	77
Delta	3,318	9	517	252	465	578	541	269	163	131	393
Dickinson	2,015	9	251	144	241	369	320	159	102	77	343
Eaton	6,740	32	1,176	648	1,167	1,287	1,058	450	234	171	517
Emmet	2,637	8	395	217	434	502	417	196	125	90	253
Genesee	27,330	115	4,074	2,482	5,057	4,913	3,694	1,870	1,138	745	3,242
Gladwin	1,428	6	212	107	242	298	239	152	81	36	55
Gogebic	892	1	120	57	98	104	90	61	36	48	277
Grand Traverse	6,752	13	1,243	593	1,157	1,201	1,013	492	303	231	506
Gratiot	2,402	10	417	249	411	432	374	212	105	63	129
Hillsdale	2,902	10	477	288	499	549	398	257	104	77	243
Houghton	2,417	17	381	263	328	383	279	191	90	81	404
Huron	2,318	13	385	209	411	414	355	190	128	99	114
Ingham	21,830	86	3,437	2,836	4,045	3,547	3,023	1,400	644	419	2,393
Ionia	3,872	14	735	374	748	753	524	222	118	78	306
Iosco	1,480	12	269	97	210	288	228	147	86	76	67
Iron	1,220	6	120	66	125	198	191	110	70	78	256
Isabella	4,696	13	1,024	706	722	744	588	293	173	117	316
Jackson	10,884	62	1,719	1,000	1,900	1,944	1,483	736	461	329	1,250
Kalamazoo	18,562	59	3,274	2,359	3,169	2,962	2,352	1,070	593	465	2,259
Kalkaska	1,129	7	163	78	223	225	182	118	65	28	40
Kent	47,419	195	7,455	5,359	9,555	8,502	5,885	2,805	1,493	1,089	5,081
Keweenaw	126	1	20	7	20	20	9	16	5	3	25
Lake	835	5	93	57	153	189	140	94	51	17	36
Lapeer	5,134	20	1,009	448	941	1,117	692	370	174	94	269
Leelanau	909	5	135	53	138	160	154	79	62	29	94

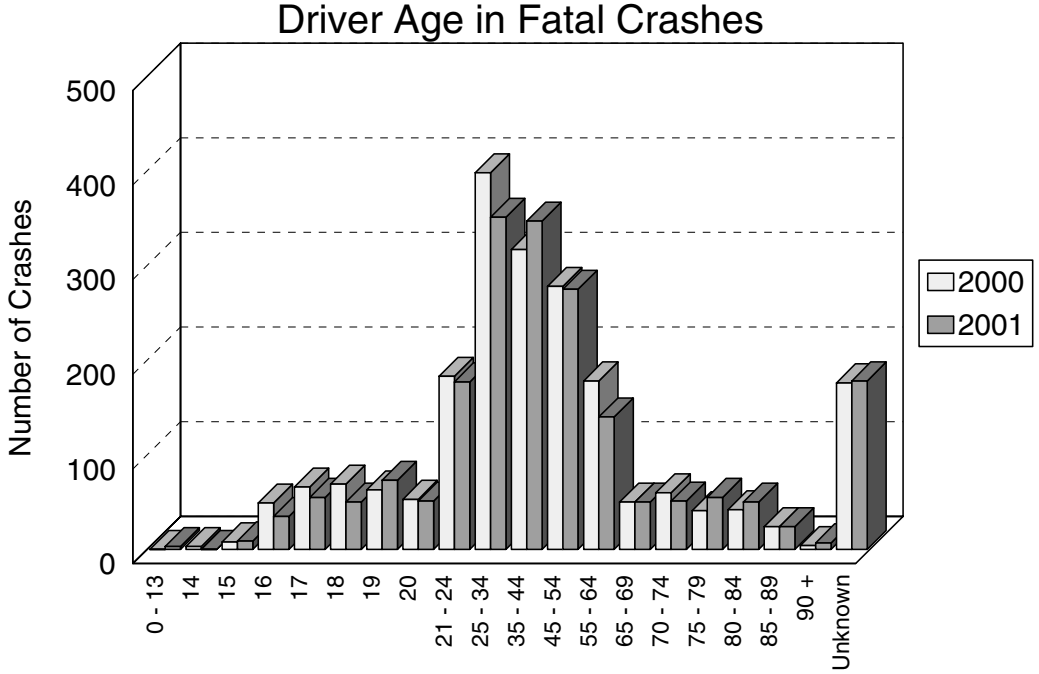
REPORTED AGE OF DRIVERS INVOLVED IN ALL CRASHES (continued)

COUNTY	All ages	0-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 yrs & over	DOB unk
Lenawee	5,436	27	882	453	864	922	717	410	238	181	742
Livingston	9,391	38	1,862	792	1,734	1,951	1,295	625	299	191	604
Luce	350	2	38	25	73	60	54	30	22	12	34
Mackinac	1,089	9	137	67	181	198	179	101	65	27	125
Macomb	50,768	147	7,620	4,334	9,620	9,452	6,536	3,521	2,009	1,689	5,840
Manistee	1,609	6	202	106	276	298	260	158	89	70	144
Marquette	4,190	17	703	389	637	640	576	302	182	150	594
Mason	2,586	8	399	186	447	484	425	212	137	63	225
Mecosta	3,512	13	643	448	596	609	500	256	154	85	208
Menominee	2,269	6	272	146	279	400	342	167	105	65	487
Midland	4,872	20	915	446	886	921	705	349	215	146	269
Missaukee	941	9	142	82	172	182	152	102	34	26	40
Monroe	7,686	35	1,357	583	1,142	1,166	860	434	230	196	1,683
Montcalm	4,481	19	737	442	820	933	668	353	184	104	221
Montmorency	582	5	86	54	103	116	88	49	34	17	30
Muskegon	10,040	62	1,670	926	1,887	1,845	1,356	726	442	345	781
Newaygo	2,879	11	455	276	538	590	437	199	146	84	143
Oakland	88,575	265	12,006	7,585	18,116	17,697	12,928	6,294	3,189	2,276	8,219
Oceana	1,571	12	232	148	293	305	227	134	66	31	123
Ogemaw	1,547	3	245	118	249	317	258	164	73	51	69
Ontonagon	685	0	58	49	76	120	124	72	38	25	123
Osceola	1,980	7	314	170	382	357	355	172	79	59	85
Oscoda	571	7	96	47	98	99	85	58	35	16	30
Otsego	1,714	8	306	147	320	334	242	115	79	46	117
Ottawa	13,374	60	2,765	1,443	2,411	2,404	1,638	806	416	385	1,046
Presque Isle	821	2	124	53	126	163	134	90	56	30	43
Roscommon	1,669	10	224	108	262	343	260	172	118	66	106
Saginaw	13,956	72	2,233	1,338	2,531	2,453	1,857	1,065	587	529	1,291
St. Clair	8,542	45	1,499	721	1,444	1,608	1,167	602	347	265	844
St. Joseph	3,199	10	515	271	493	560	386	236	130	106	492
Sanilac	2,344	13	394	218	413	475	363	183	121	57	107
Schoolcraft	747	4	106	55	120	124	126	64	46	21	81
Shiawassee	3,806	17	659	367	700	713	515	303	163	119	250
Tuscola	2,914	9	518	280	570	547	423	238	115	85	129
Van Buren	4,392	24	675	432	774	802	550	306	175	125	529
Washtenaw	22,458	79	3,086	2,519	4,423	4,014	3,066	1,317	610	425	2,919
Wayne	157,934	443	14,551	11,685	28,278	24,927	19,056	9,201	5,380	3,779	40,634
Wexford	2,798	14	442	225	477	513	407	210	141	68	301
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
Totals	687,836	2,536	97,740	61,857	125,545	122,193	92,173	46,316	25,826	18,567	95,083

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2000	2001	% Change	% 2001 Fatal Crash Involvement	Percent Active Driving Population*
15 years and under	11	12	9.1	0.6	0.7
16 years	49	35	-28.6	1.8	1.4
17 years	66	55	-16.7	2.8	1.5
18 years	69	50	-27.5	2.5	1.5
19 years	63	73	15.9	3.7	1.7
20 years	53	51	-3.8	2.6	1.8
21 - 24 years	183	177	-3.3	8.9	7.0
25 - 34 years	398	351	-11.8	17.7	17.9
35 - 44 years	317	347	9.5	17.5	20.9
45 - 54 years	278	275	-1.1	13.9	19.2
55 - 64 years	178	140	-21.3	7.1	12.2
65 - 69 years	50	50	0.0	2.5	4.2
70 - 74 years	60	51	-15.0	2.6	3.9
75 - 79 years	41	55	34.1	2.8	3.1
80 - 84 years	42	50	19.0	2.5	1.9
85 - 89 years	24	24	0.0	1.2	0.8
90 years and over	4	7	75.0	0.4	0.2
Unknown	176	178	1.1	9.0	---
TOTALS	2,062	1,981	-3.9	100.0	100.0

* Figures courtesy of the Michigan Department of State [14]



DRIVER CONDITION

POSSIBLE CONDITIONS OF DRIVER*	Conditions Coded by Police	MOST SEVERE OUTCOME IN CRASH				
		Fatal	Injury			PDO
		Number	A	B	C	
Appeared Normal	517,988	866	9,327	26,650	81,721	399,424
Had Been Drinking	14,219	215	1,335	2,271	2,438	7,960
Illegal Drug Use	392	11	50	56	68	207
Sick	1,025	8	93	165	317	442
Fatigue	1,102	4	59	146	224	669
Asleep	1,404	17	113	236	268	770
Medication	830	1	56	110	205	458
Driver Distracted	4,280	18	174	404	980	2,704
Using Cellular Phone	822	5	29	73	181	534
Unknown	37,712	589	1,134	1,373	3,806	30,810

*Drivers may have more than 1 condition, including “Appeared Normal”.

These are driver conditions that, in the opinion of the investigating officer, were involved in the crash. While some conditions may be evident, others (such as distraction) will only be known if the driver admits to the condtion, thus leading to possible under-reporting.

REGISTRATION TRANSACTIONS

(Includes Original, Renewal, Correction, and Replacements)

Registration data courtesy of the Michigan Department of State [15]

	VEHICLE						OTHER		
COUNTY	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Alcona	7,418	4,055	3,364	290	15,127	922,440.41	2,640	1,055	62
Alger	5,027	3,170	1,869	257	10,323	624,641.17	1,792	1,614	24
Allegan	61,874	27,701	18,513	2,359	110,447	7,704,052.85	11,390	3,958	342
Alpena	18,750	10,116	7,272	661	36,799	2,481,769.20	4,688	2,809	63
Antrim	14,846	6,922	5,368	541	27,677	1,812,846.95	5,189	2,460	60
Arenac	9,804	5,565	3,970	471	19,810	1,280,011.19	3,993	1,615	61
Baraga	3,927	2,560	1,433	155	8,075	517,051.41	1,057	883	9
Barry	33,663	16,082	11,010	1,581	62,336	3,897,670.59	9,235	1,995	90
Bay	70,101	25,234	20,098	2,221	117,654	8,221,266.48	9,828	6,176	204
Benzie	10,815	4,823	3,853	399	19,890	1,228,658.89	3,936	1,462	64
Berrien	106,311	34,299	20,014	3,402	164,026	11,123,520.27	12,898	3,103	372
Branch	24,982	12,558	7,820	948	46,308	3,060,672.28	6,327	1,076	133
Calhoun	88,522	29,172	17,243	2,772	137,709	9,219,000.59	10,291	1,698	344
Cass	29,671	13,728	8,669	1,179	53,247	3,407,904.81	8,538	1,973	98
Charlevoix	17,104	8,052	5,595	746	31,497	2,210,539.93	4,963	3,041	72
Cheboygan	15,994	8,508	6,024	672	31,198	2,023,112.98	5,576	3,701	84
Chippewa	17,887	9,830	6,601	601	34,919	2,278,055.99	4,421	4,725	75
Clare	18,108	9,919	6,922	714	35,663	2,334,391.45	4,558	2,346	67
Clinton	40,237	17,247	12,604	1,237	71,325	5,109,034.41	6,742	2,914	165
Crawford	7,626	4,125	3,015	281	15,047	935,459.74	2,892	1,644	22
Delta	23,818	13,137	8,974	859	46,788	3,131,210.80	4,619	3,775	115
Dickinson	16,774	8,810	5,856	734	32,174	2,222,513.51	3,620	2,022	126
Eaton	64,166	23,851	15,836	2,112	105,965	8,688,839.31	8,807	2,640	179
Emmet	21,383	9,130	6,141	735	37,389	2,660,106.57	5,298	3,124	109
Genesee	275,510	86,000	49,158	8,632	419,300	29,990,708.22	31,827	13,387	547
Gladwin	15,647	8,392	6,100	646	30,785	1,961,745.55	4,879	1,878	54
Gogebic	9,296	5,063	2,632	358	17,349	1,059,362.83	2,344	1,527	70
Grand Traverse	56,427	19,571	15,928	1,779	93,705	7,070,607.35	13,017	5,576	124

REGISTRATION TRANSACTIONS (continued)

	VEHICLE						OTHER		
COUNTY	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Gratiot	23,283	11,451	7,962	844	43,540	2,907,750.79	3,435	1,764	120
Hillsdale	26,353	14,035	8,413	1,107	49,908	3,260,209.91	5,154	1,118	106
Houghton	18,500	8,312	4,325	736	31,873	1,990,090.79	3,816	2,546	74
Huron	22,834	12,636	7,659	771	43,900	3,193,727.06	3,193	2,740	211
Ingham	180,559	44,203	24,950	4,392	254,104	18,273,828.65	15,431	4,127	366
Ionia	33,814	15,586	9,790	1,276	60,466	3,842,321.03	5,194	1,767	177
Iosco	17,211	8,494	6,482	655	32,842	2,105,882.60	5,207	1,804	109
Iron	7,483	4,505	2,727	328	15,043	955,109.42	2,438	1,214	47
Isabella	29,660	13,739	9,074	984	53,457	4,024,504.91	4,778	2,117	71
Jackson	96,957	37,584	22,969	3,564	161,074	11,171,274.96	15,787	3,719	330
Kalamazoo	151,949	40,012	25,333	4,455	221,749	16,406,439.82	18,222	3,258	545
Kalkaska	9,552	6,050	4,004	387	19,993	1,610,684.66	2,642	2,029	22
Kent	381,646	105,583	71,077	10,084	568,390	49,247,419.62	45,001	11,127	862
Keweenaw	1,203	636	321	44	2,204	128,905.22	358	180	4
Lake	6,108	3,467	2,215	265	12,055	691,302.91	2,310	1,004	23
Lapeer	50,899	26,232	15,812	2,604	95,547	6,700,008.68	7,392	4,494	108
Leelanau	13,872	5,238	4,647	397	24,154	1,650,000.16	5,586	1,751	65
Lenawee	59,943	26,409	15,257	2,550	104,159	7,108,094.35	9,083	3,280	303
Livingston	100,539	37,456	25,435	4,602	168,032	12,843,470.72	18,348	6,407	197
Luce	3,321	2,363	1,623	113	7,420	532,440.15	1,382	1,285	15
Mackinac	6,741	3,969	2,569	225	13,504	885,423.40	2,974	2,462	32
Macomb	548,216	141,723	67,600	14,947	772,486	62,876,881.61	48,252	18,296	1,114
Manistee	15,205	7,398	5,349	590	28,542	1,871,331.54	3,710	1,581	86
Marquette	37,759	17,003	9,736	1,529	66,027	4,344,609.43	7,016	4,771	123
Mason	17,812	8,250	5,739	806	32,607	2,108,872.91	4,289	1,566	101
Mecosta	20,904	10,039	6,815	780	38,538	2,520,439.33	5,095	1,758	47
Menominee	13,769	7,307	5,066	542	26,684	1,730,252.57	2,708	1,637	270
Midland	56,793	18,859	15,836	2,015	93,503	6,272,673.66	9,341	3,222	165
Missaukee	7,654	5,213	3,391	364	16,622	1,132,138.77	2,083	1,468	23

REGISTRATION TRANSACTIONS (continued)

	VEHICLE						OTHER		
COUNTY	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Monroe	91,598	38,879	20,768	4,020	155,265	11,289,715.97	10,866	5,017	353
Montcalm	35,085	17,656	11,711	1,226	65,678	4,168,820.91	7,195	2,488	149
Montmorency	6,127	3,816	2,906	237	13,086	833,065.21	2,310	1,559	14
Muskegon	108,187	34,054	23,833	4,041	170,115	10,755,591.50	14,831	5,120	375
Newaygo	27,527	13,890	10,039	1,134	52,590	3,253,015.32	7,129	2,817	100
Oakland	894,434	185,573	98,459	23,354	1,201,820	104,158,062.68	82,290	24,683	1,482
Oceana	15,696	8,084	4,680	597	29,057	1,866,361.11	2,969	1,938	84
Ogemaw	12,826	7,621	5,351	720	26,518	1,791,691.29	3,431	1,951	43
Ontonagon	4,432	2,893	1,718	179	9,222	569,185.01	1,146	1,241	21
Osceola	12,950	7,603	4,667	439	25,659	1,737,207.56	2,716	1,789	36
Oscoda	5,453	3,227	2,141	263	11,084	690,178.37	2,073	1,028	20
Otsego	14,347	7,807	5,468	604	28,226	2,220,436.09	3,197	3,446	33
Ottawa	150,607	45,231	38,780	4,573	239,191	18,009,202.17	24,099	6,687	653
Presque Isle	8,514	5,451	3,463	256	17,684	1,128,454.39	3,016	1,917	43
Roscommon	16,494	7,799	6,502	630	31,425	1,998,247.87	6,281	3,880	149
Saginaw	133,022	41,634	29,613	3,549	207,818	16,234,930.02	15,949	8,090	315
St. Clair	102,423	41,647	23,597	3,958	171,625	12,075,852.78	15,213	6,538	296
St. Joseph	37,443	16,896	11,003	1,827	67,169	4,338,997.13	8,616	1,036	169
Sanilac	25,523	14,517	7,842	1,178	49,060	3,415,576.77	2,218	2,199	78
Schoolcraft	4,697	3,266	2,215	238	10,416	692,933.47	1,775	1,447	39
Shiawassee	44,022	20,863	12,898	1,743	79,526	5,413,629.71	6,130	3,434	160
Tuscola	34,576	18,947	12,118	1,516	67,157	4,361,822.44	4,675	3,734	191
Van Buren	45,316	19,387	11,303	1,820	77,826	5,103,658.09	8,376	2,342	184
Washtenaw	200,752	46,450	23,359	5,589	276,150	21,601,318.40	15,231	4,229	392
Wayne	1,247,613	267,242	102,518	27,658	1,645,031	133,967,013.70	68,023	17,081	1,932
Wexford	18,993	8,990	6,123	711	34,817	2,329,695.06	4,551	2,720	64
Non-Resident	58,203	30,490	14,575	530	103,798	43,174,204.10	31,788	5,671	104
Unknown County							15,871	109	5
Totals	6,403,087	1,991,285	1,171,708	191,888	9,757,968	$776,742,152.48	827,555	302,860	16,935

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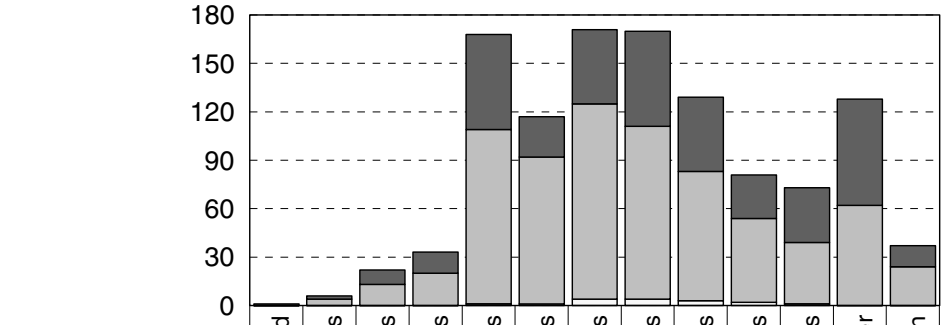
Occupant/ Person

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

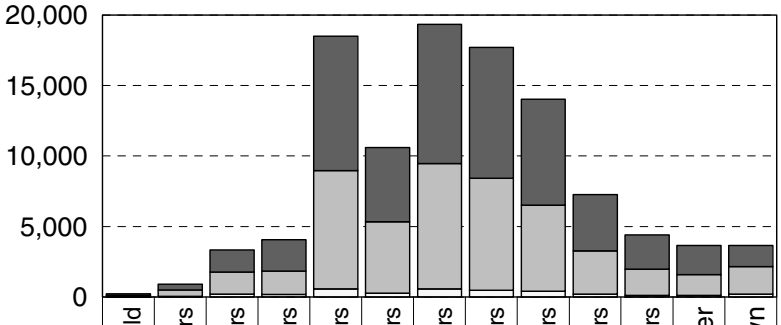
Occupants Killed



	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown
Females killed	1	2	9	13	59	25	46	59	46	27	34	66	13
Males killed	0	4	13	20	108	91	121	107	80	52	38	62	24
Unknown gender killed	0	0	0	0	1	1	4	4	3	2	1	0	0

There were 720 male occupants, 400 female occupants, and 16 occupants of unknown gender killed in motor vehicle crashes in 2001. The majority (63.4%) of occupants killed in traffic crashes in 2001 were male.

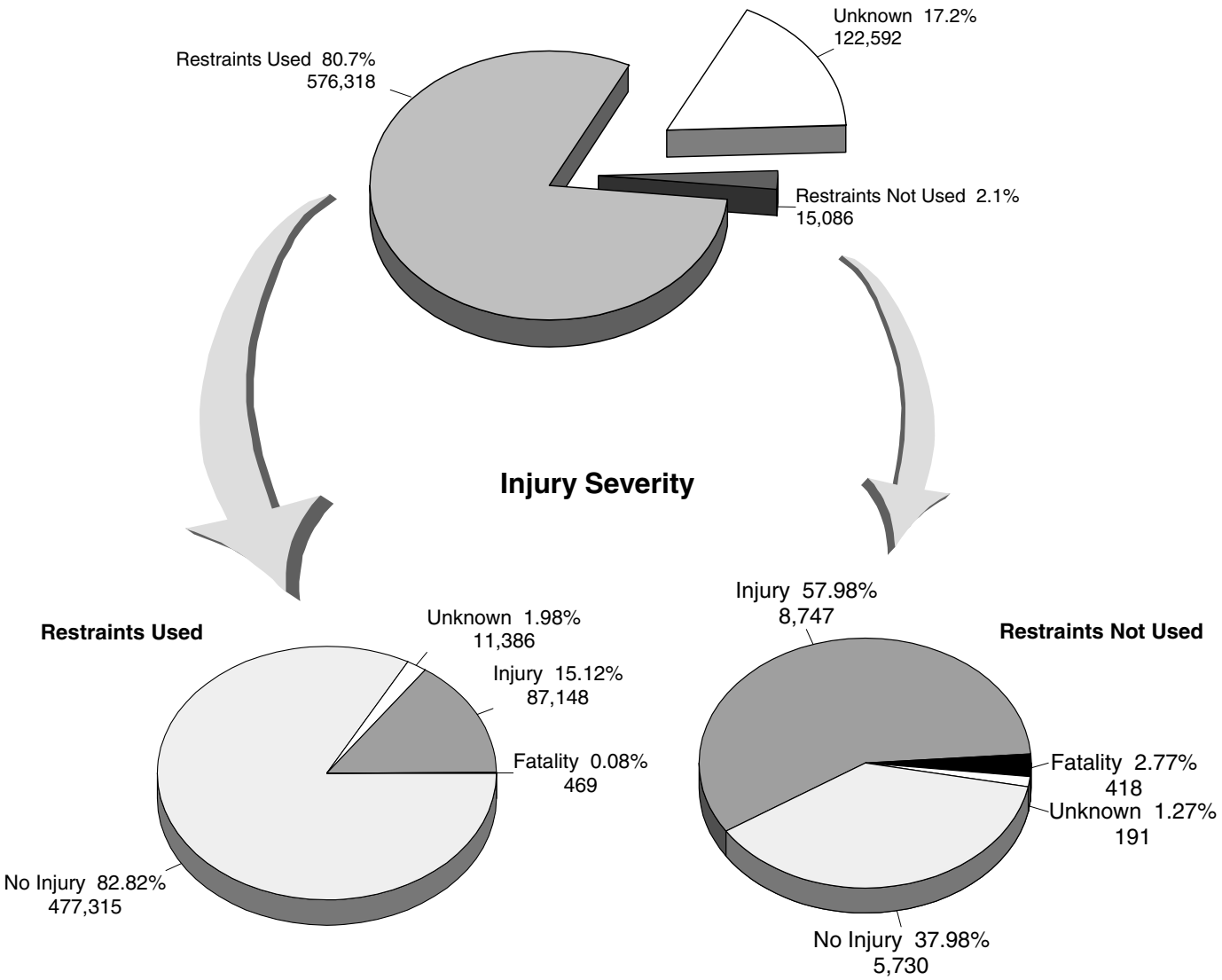
Occupants Injured



	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown
Females injured	95	425	1,567	2,222	9,547	5,245	9,865	9,277	7,530	3,984	2,430	2,062	1,507
Males injured	103	438	1,578	1,664	8,381	5,068	8,892	7,946	6,091	3,060	1,855	1,476	1,938
Unknown gender injured	25	54	202	183	576	276	567	483	415	219	124	109	211

There were 48,490 male occupants, 55,756 female occupants, and 3,444 occupants of unknown gender injured in motor vehicle crashes in 2001. The majority (51.8%) of occupants injured in traffic crashes in 2001 were female.

REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS

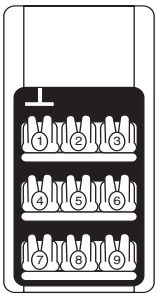


Restraint use by motorists is measured two ways: by what motorists REPORT to police at the scene of a traffic crash (reported usage), and by DIRECT OBSERVATION studies where motorists are totally unaware of the presence of researchers (observed usage).

Of the 713,996 drivers and injured passengers involved in crashes, 576,318 (80.7%) were REPORTED to be using occupant restraints.

In a DIRECT OBSERVATION study by the University of Michigan Transportation Research Institute [16] estimated overall safety belt use was 84.5 percent for passenger cars, 81.9 percent for sport-utility vehicles, 86.6 percent for vans, and 73.2 percent for pickup trucks in 2001.

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



MOTOR VEHICLE OCCUPANTS & INJURY SEVERITY BY SEATING POSITION AND KNOWN BELT USAGE

Seating Position	Belts Used*		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Left Front	542,931	96.3	336	4,002	12,911	48,807	476,875
Center Front	515	0.1	1	43	112	323	36
Right Front	15,477	2.7	106	1,162	3,175	10,864	170
Left Rear	1,827	0.3	6	141	371	1,203	106
Center Rear	448	0.1	0	38	89	313	8
Right Rear	2,008	0.4	13	144	396	1,453	2
Left Rear Third Seat	259	0.0	2	14	58	168	17
Center Rear Third Seat	108	0.0	0	12	35	60	1
Right Rear Third Seat	268	0.0	0	18	54	193	3
Unknown	61	0.0	0	2	16	16	27
TOTAL	563,902**	100.0	464	5,576	17,217	63,400	477,245

* Lap belt, shoulder belt or a combination of lap and shoulder belts used. Children who were coded as using or not using a child restraint device appear in separate tables on pages 174-175.

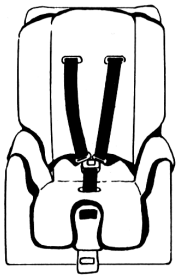
**This total does not include 11,375 occupants with unknown injury severity.

Seating Position	Belts Not Used*		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Left Front	10,082	68.4	290	1,217	1,773	1,637	5,165
Center Front	190	1.3	1	49	61	59	20
Right Front	1,925	13.1	67	426	689	690	53
Left Rear	1,015	6.9	16	101	215	306	377
Center Rear	295	2.0	8	62	99	119	7
Right Rear	603	4.1	23	102	190	287	1
Left Rear Third Seat	94	0.6	1	14	28	49	2
Center Rear Third Seat	62	0.4	0	7	24	31	0
Right Rear Third Seat	117	0.8	3	18	32	57	7
Unknown	363	2.5	9	47	88	160	59
TOTAL	14,746**	100.0	418	2,043	3,199	3,395	5,691

* No belts available or no belts used. Children who were coded as using or not using a child restraint device appear in separate tables on page 174-175.

**This total does not include 189 occupants with unknown injury severity.

Michigan law requires that all persons must wear a safety belt when riding in the front seat of a motor vehicle



REPORTED RESTRAINT USE - CHILDREN

Michigan law requires:

*Any child **under four years of age** riding in either the front or back seat of a vehicle must be in a Child Restraint Device (CRD).*

Sitting in all seats excluding Left Front Seats:

Restraint Usage **Children Age 0**	Number	% of Total	Fatal	Injury A	Injury B	Injury C	No Injury
Belts Used	30	13.6	0	2	5	23	0
No Belts Used	5	2.3	0	1	2	2	0
CRD Used	163	73.8	1	8	25	129	0
CRD Not Used	14	6.3	0	2	3	9	0
Restraint Failed	0	0.0	0	0	0	0	0
Unknown	9	4.1	0	3	1	5	0
Total Children Age 0	221	100.0	1	16	36	168	0
Restraint Usage **Children Age 1**							
Belts Used	26	10.4	0	0	6	20	0
No Belts Used	8	3.2	0	4	2	2	0
CRD Used	197	78.5	1	9	60	127	0
CRD Not Used	15	6.0	0	3	5	7	0
Restraint Failed	1	0.4	0	0	0	1	0
Unknown	4	1.6	0	0	0	4	0
Total Children Age 1	251	100.0	1	16	73	161	0
Restraint Usage **Children Age 2**							
Belts Used	82	25.6	0	8	21	53	0
No Belts Used	14	4.4	0	2	7	5	0
CRD Used	189	59.1	1	13	51	124	0
CRD Not Used	19	5.9	0	0	7	12	0
Restraint Failed	0	0.0	0	0	0	0	0
Unknown	16	5.0	0	5	2	9	0
Total Children Age 2	320	100.0	1	28	88	203	0
Restraint Usage **Children Age 3**							
Belts Used	117	36.1	0	9	23	84	1
No Belts Used	21	6.5	2	5	7	7	0
CRD Used	154	47.5	1	7	46	100	0
CRD Not Used	20	6.2	0	5	6	9	0
Restraint Failed	0	0.0	0	0	0	0	0
Unknown	12	3.7	1	1	3	7	0
Total Children Age 3	324	100.0	4	27	85	207	1

REPORTED RESTRAINT USE - CHILDREN (continued)

*All children **ages 4 through 15** must wear a safety belt when riding in either the front or back seat of a vehicle.*

Sitting in all seats excluding Left Front Seats:

Restraint Usage	Children age 4-15		Fatal	Injury			No Injury
	Number	% of Total		A	B	C	
Belts Used	4,973	77.8	25	326	1,152	3,470	0
No Belts Used	840	13.1	17	131	299	390	3
CRD Used	148	2.3	0	9	42	97	0
CRD Not Used	27	0.4	0	3	11	13	0
Restraint Failed	4	0.1	0	0	2	2	0
Unknown	400	6.3	7	74	101	217	1
TOTAL	6,392	100.0	49	543	1,607	4,189	4

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

In a study of child safety seat use [17] at the University of Michigan Transportation Research Institute, researchers found that 85.5 (+/- 2.6) percent of children under four years of age in Michigan were restrained in a child safety seat (CSS) when traveling in a motor vehicle. CSS use rates were highest in vehicles driven by a belted driver, females, and drivers between the ages of 30 and 59. When compared to a similar study conducted in 1997 [18], CSS use has increased across all categories. The study also showed that compared to 1997, unbelted drivers are increasingly more apt to restrain child occupants.

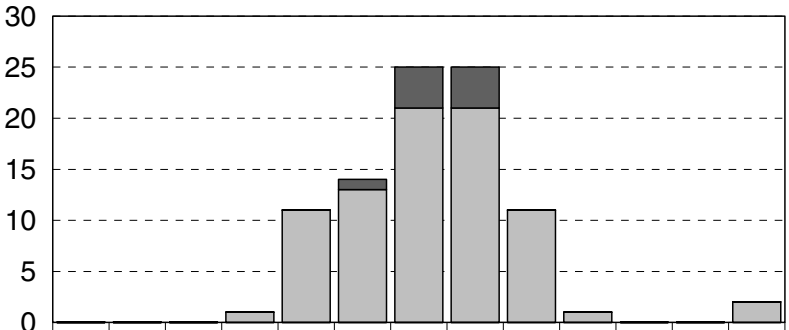
The driver of the vehicle can be stopped and will receive a citation for any child (under age 16) not restrained.

A vehicle can be stopped if an officer observes; the driver or front seat passenger not wearing a safety belt, or, a child not properly restrained.

Placing a CRD in the front seat is not recommended in vehicles with passenger side airbags.

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

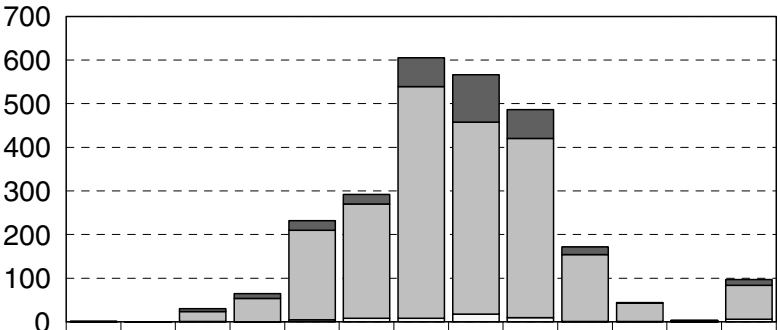
Motorcyclists Killed



	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown
Females killed	0	0	0	0	0	1	4	4	0	0	0	0	0
Males killed	0	0	0	1	11	13	21	21	11	1	0	0	2
Unknown gender killed	0	0	0	0	0	0	0	0	0	0	0	0	0

90.0 percent of the motorcyclists killed in traffic crashes in 2001 were male.
In comparison, 68.3 percent of all persons killed in crashes were male.

Motorcyclists Injured



	Under 1 yr old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 yrs & over	Unknown
Females injured	0	0	6	11	22	22	66	108	66	18	1	0	13
Males injured	1	0	23	54	205	262	531	440	410	153	42	3	78
Unknown gender injured	0	0	1	0	5	8	8	18	10	1	1	0	6

84.9 percent of the motorcyclists injured in traffic crashes in 2001 were male.
In comparison, 49.9 percent of all persons injured in crashes were male.

MOTORCYCLE HELMET USE AND INJURY SEVERITY

Helmet Worn Age of Motorcyclist	Fatality	Injury			No Injury
		A	B	C	
3 years and under	0	0	0	0	0
4 - 10 years	0	3	6	2	1
11 - 15 years	0	8	14	6	3
16 - 20 years	9	41	77	36	36
21 - 24 years	9	44	93	55	71
25 - 34 years	16	98	174	116	94
35 - 44 years	22	110	158	119	113
45 - 54 years	7	88	153	117	88
55 - 64 years	1	27	53	43	29
65 - 74 years	0	11	12	8	5
75 years and over	0	0	2	1	0
Unknown	0	3	2	3	0
Subtotal	64	433	744	506	440

Drivers killed 61

Passengers killed 3

Helmet Not Worn Age of Motorcyclist	Fatality	Injury			No Injury
		A	B	C	
3 years and under	0	0	0	0	0
4 - 10 years	0	0	5	0	0
11 - 15 years	0	0	6	3	2
16 - 20 years	0	1	4	6	1
21 - 24 years	1	3	3	2	1
25 - 34 years	2	7	2	1	3
35 - 44 years	1	10	3	2	2
45 - 54 years	0	1	1	1	1
55 - 64 years	0	0	0	0	0
65 - 74 years	0	0	1	0	0
75 years and over	0	0	0	0	0
Unknown	0	0	0	0	0
Subtotal	4	22	25	15	10

Drivers killed 3

Passengers killed 1

Helmet Use Unknown Age of Motorcyclist	Fatality	Injury			No Injury
		A	B	C	
3 years and under	0	0	0	0	0
4 - 10 years	0	1	7	6	3
11 - 15 years	1	7	11	10	6
16 - 20 years	2	19	31	17	17
21 - 24 years	4	16	42	34	40
25 - 34 years	7	55	77	75	72
35 - 44 years	2	36	78	50	64
45 - 54 years	4	30	48	47	62
55 - 64 years	0	18	11	20	18
65 - 74 years	0	6	3	3	2
75 years and over	0	0	0	0	0
Unknown	2	26	38	26	30
Subtotal	22	214	346	288	314
TOTAL	90	669	1,115	809	764

In Michigan, helmet use law (Michigan Vehicle Code Public Act 300 of 1949, Section 257.658) requires that all motorcycle riders wear a helmet. As a result, according to studies by UMTRI [19], approximately 99 percent of the motorcyclists in Michigan wear helmets when riding. The fact that most fatalities (where helmet use is known) are wearing their helmets does not indicate that helmets are not an effective safety device.

OCCUPANT INJURY OUTCOME BY VEHICLE TYPE




Vehicle Types	Killed	A Injured	B Injured	C Injured	Total KABC	% of All Crash Involved KABC Occupants
Passenger Car and Station Wagon	771	6,344	16,608	54,751	78,474	72.1
Van (Minivan) and Motorhome	47	620	1,608	5,415	7,690	7.1
Pickup	159	1,213	3,066	7,537	11,975	11.0
Small Truck (under 10,000 lbs.)	13	181	514	1,575	2,283	2.1
Motorcycle	90	656	1,089	786	2,621	2.4
Moped	3	34	94	44	175	0.2
Go Cart	1	5	5	4	15	0.0
Snowmobile	4	110	76	93	283	0.3
Off Road Vehicle	15	83	103	49	250	0.2
Other	4	53	151	182	390	0.4
Unknown	19	473	928	2,294	3,714	3.4
CDL Truck/Bus (breakdown below)	10	80	200	666	956	0.9
Total Number of Occupants	1,136	9,852	24,442	73,396	108,826	100.0

Special Note: School bus is not recorded on the UD-10 and cannot be broken out of CDL Truck/Bus.

CDL Truck/Bus Sub-category Types	Killed	A Injured	B Injured	C Injured	Total KABC	% of All Crash Involved KABC Occupants
Commercial Vehicle: Group A	6	28	84	170	288	30.1
Commercial Vehicle: Group B	3	21	50	227	301	31.5
Commercial Vehicle: Group C	0	5	11	40	56	5.9
Other Truck	0	6	16	31	53	5.5
Unknown Truck	1	20	39	198	258	27.0
Total Number of Occupants	10	80	200	666	956	100.0

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

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

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

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[1] Component Change in Population in Michigan Counties, 2000 - 2001. Center for Geographic Information, Michigan Census Website, Michigan Department of Management and Budget, P.O. Box 30026, Lansing, MI 48909.

[2] Table 31DP Deaths by County Underlying Cause of Death by Age Michigan Residents, 2000. Michigan Department of Community Health, Office of the State Registrar and Division for Vital Records and Health Statistics, 3423 N Martin Luther King Blvd, PO Box 30195, Lansing, MI 48909.

[3] INJURY FACTS 2002 Edition. National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143, 2001.

[4] US Department of Transportation, National Highway Traffic Safety Administration, 400 7th Street, S.W., Washington, DC 20590.

[5] The Ohio Department of Public Safety, Office of the Governor's Highway Safety Representative, 240 Parsons Avenue, Columbus, OH 43215.

[6] Indiana Department of Transportation, Roadway Management Division, 100 N. Senate Avenue, Room N808, Indianapolis, IN 46204-2218.

[7] Illinois Department of Transportation, Division of Traffic Safety, 3215 Executive Park Drive, P.O. Box 19245, Springfield, IL 62794-9245.

[8] Wisconsin Bureau of Transportation Safety, P.O. Box 7913, Madison, WI 53707-7913.

[9] Minnesota Department of Public Safety, Office of Traffic Safety, 444 Cedar Street, Suite 100-B, Town Square, St. Paul, MN 55101-2156.

[10] American Academy of Pediatrics. The Teenage Driver (RE9642). *Pediatrics. Volume 98, Number 5*. Department of Government Liaison, 601 13th Street, NW Suite 400 North, Washington, DC 20005, November 1996.

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

[12] Traffic Safety Facts 2000 - Children. 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).

[13] 2001 Fatality Analysis Reporting System Version Annual Report File. U.S. Department of Transportation, National Highway Traffic Safety Administration, National Center for Statistics and Analysis, Washington, D.C. 20590.

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

[15] Summary of Fees Collected and Number of Transactions October 1, 2000 through September 30, 2001. Michigan Department of State, Bureau of Research and Management Systems, Finance Division, Lansing, MI 48918.

[16] Eby, David W., Vivoda, Jonathan M. Direct Observation of Safety Belt Use in Michigan: Fall 2001. UMTRI-2001-36, University of Michigan Transportation Research Institute, Ann Arbor, MI 48109-2150, November 2001.

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[18] Eby, David W., Kostyniuk, Lidia P., Christoff, Carl. Child Restraint Device Use and Misuse in Michigan. UMTRI-97-36, University of Michigan Transportation Research Institute, Ann Arbor, MI 48109-2150, September 1997.

[19] Streff, Fredrick M., Eby, David W., Molnar, Lisa J., Joksch, Hans C., Wallace, Richard R. Direct Observation of Safety Belt Use and Motorcycle Helmet Use in Michigan: Fall 1993. UMTRI-93-44, University of Michigan Transportation Research Institute, Ann Arbor, MI 48109-2150, November 1993.

RESOURCES

Websites:

www.umtri.umich.edu/tdc/mtcf/crash_facts.htm Michigan Traffic Crash Facts

Please refer to this site for more county crash information on; Age by Crash Severity for Drivers and Pedestrians & Bicyclists, Age by Crash Severity in Alcohol Involved Crashes, Type of Roadway by County/Community, Driver Hazardous Action by Community, and Motor Vehicle Occupant Restraint Use.

www.michigan.gov/msp Michigan State Police; follow links to the Office of Highway Safety Planning

www.michigan.gov/sos Michigan Department of State

www.michigan.gov/mdot Michigan Department of Transportation

www.michigan.gov/mdch Michigan Department of Community Health

www.michigan.gov/dmb Michigan Department of Management and Budget (MDMB)

www.michigan.gov/census Census & Statistical Data for Michigan

www.michiganresourcecenter.org Michigan Resource Center

www.michigan.gov/dnr Michigan Department of Natural Resources

www.dot.state.wi.us Wisconsin Traffic Crash Facts

www.dps.state.mn.us Minnesota Traffic Crash Facts

www.state.oh.us/odps Ohio Traffic Crash Reports/Facts

www.nsc.org National Safety Council Accident Facts

www.nhtsa.dot.gov NHTSA - Fatality Analysis Reporting Systems, Traffic Safety Fact Sheets

www.umtri.umich.edu University of Michigan Transportation Research Institute

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