2002

Michigan Traffic Crash Facts

MICHIGAN

OHSP

Office of Highway Safety Planning

This material was developed through a project funded by the Michigan Office of Highway Safety Planning and the U.S. Department of Transportation. OHSP is committed to saving lives and reducing injuries on Michigan roads through leadership, innovation, facilitation, and program support in partnership with other public and private organizations.

2002
Michigan Traffic
Crash Facts

A summary of traffic crashes on Michigan roadways in calendar year 2002

Produced by:

Michigan Department of State Police
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WWW.MICHIGAN.GOV/OHSP

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Traffic Crash Reporting Section Staff
&
Office of Highway Safety Planning

University of Michigan Transportation Research Institute
Transportation Data Center

Michigan Department of Transportation

Michigan Department of State

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

FOREWORD

Please visit ***www.michigantrafficcrashfacts.org*** for easy access to all of the 1992 through 2002 information in pdf format.

Please Read - Data Exceptions

As you review the 2002 Michigan Traffic Crash Facts, you will see cautionary notes inserted for the data presented for pedestrians and bicyclists. Due to processing errors approximately 800 pedestrians and 700 bicyclists are incorrectly identified as drivers in the 2002 data. This shortfall in data reporting must be considered when making comparisons to previous years and in any trend analysis in the future.

The roadway type variable Highway Class shows a large decrease in Interstate crashes. This may be a result of the new location software currently in development and comparisons to prior years should be done with this in mind.

For the second year, we are including information in the County/Community Traffic Crash Summary section on Ignition Interlock crashes. It has been determined that some 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 2002 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 2002 traffic fatality count was 1,279, down 3.7 percent from the 2001 figure of 1,328. Compared with 2001, injuries were down 0.2 percent and total crashes were down 1.3 percent. These figures translated into a death rate of 1.3 per 100 million miles of travel, down 7.1 percent from the 2001 death rate. Nationally, fatalities were up 0.7 percent.

Exposure factors in 2002 showed increases in vehicle registrations, the number of drivers on Michigan roads, and travel mileage. They included motor vehicle registrations up 1.0 percent to 8.69 million, the number of licensed drivers is up 0.7 percent to 7.14 million, and vehicle travel mileage up 1.8 percent to 98.17 billion.

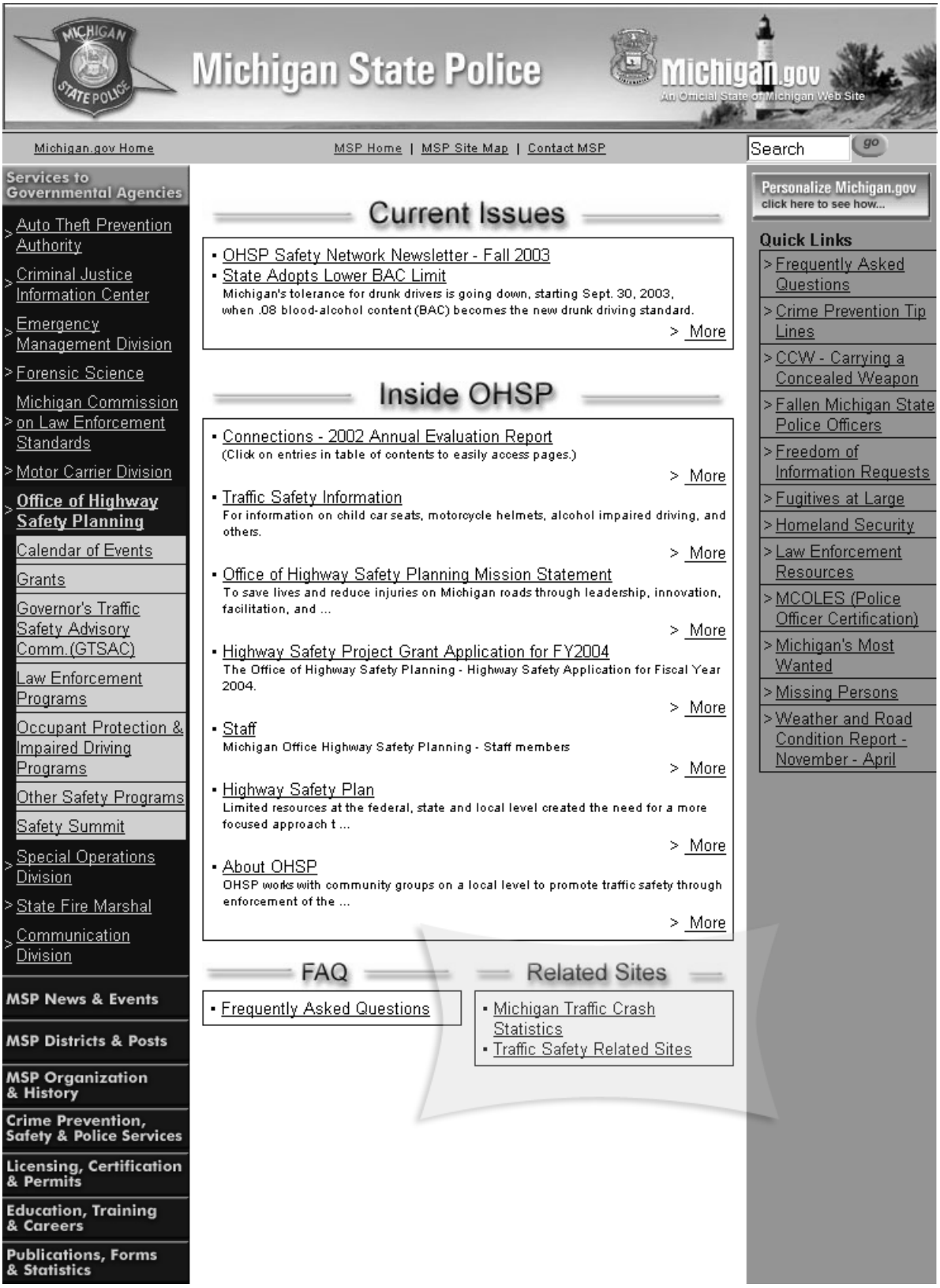
Consumption of alcohol continues to be a major factor in Michigan crashes, particularly the more serious crashes. In 2002, 4.0 percent of all crashes, including property damage only, were reported to involve drinking, and 20.7 percent of all crashes resulted in injury or death. However, 43.9 percent of alcohol-related crashes involved injury or death, and 32.7 percent of fatal crashes involved drinking. 60.9 percent of alcohol-related fatal crashes involved one vehicle, whereas only 32.9 percent of all crashes involved one vehicle.

Data on crashes in this book was obtained from 2002 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.

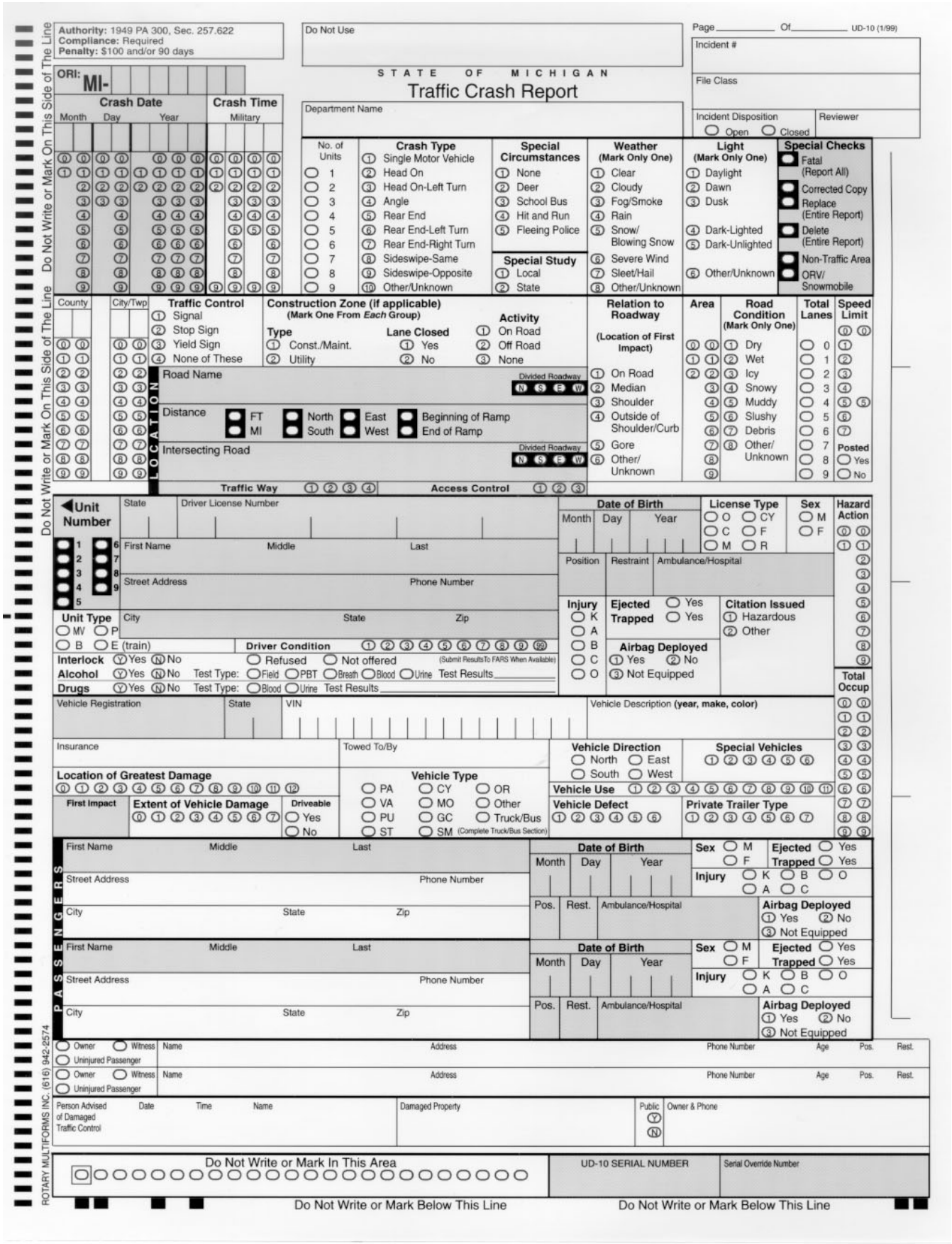
The University of Michigan Transportation Research Institute produced this publication with data on file at the Michigan Department of State Police as of May 19, 2003. We acknowledge, with appreciation, all involved agencies for their assistance.

OHSP Web Site

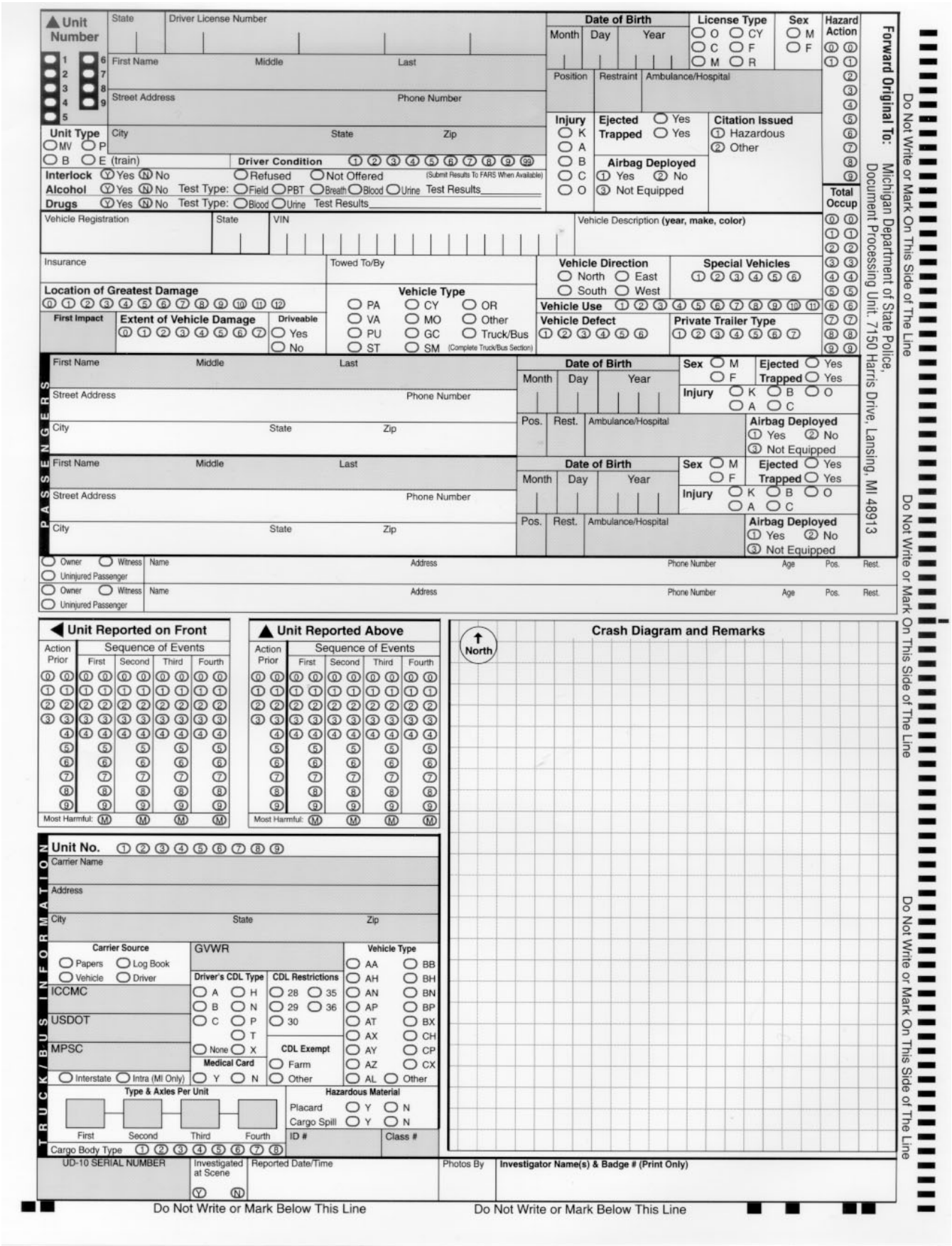
www.michigan.gov/ohsp



UD-10 (FRONT)


Authority: 1949 PA 300, Sec. 257.622
Compliance: Required
Penalty: $100 and/or 90 days
Do Not Use
Page ____ Of ____ UD-10 (1/99)
Incident #
File Class
Incident Disposition
Open
Closed
Reviewer
STATE OF MICHIGAN
Traffic Crash Report
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
LOCATION
County
City/Twp
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
1 2 3 4 5 6 7 8 9
State
Driver License Number
First Name
Middle
Last
Street Address
Phone Number
City
State
Zip
Date of Birth
Month
Day
Year
License Type
O CY C F M R
Sex
M F
Hazard Action
Position
Restraint
Ambulance/Hospital
Injury
K A B C O
Ejected
Trapped
Yes
Citation Issued
1 Hazardous
2 Other
Airbag Deployed
1 Yes 2 No
3 Not Equipped
Unit Type
MV P B E (train)
Driver Condition 1 2 3 4 5 6 7 8 9 99
Interlock Y Yes N No
Alcohol Y Yes N No Test Type: Field PBT Breath Blood Urine Test Results
Drugs Y Yes N 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
Pos.
Rest.
Owner
Witness
Uninjured Passenger
Name
Address
Phone Number
Age
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)



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**
- **MCLS** **Michigan Crash Location System**
- **MDCH** **Michigan Department of Community Health** (formerly Michigan Department of Public Health)
- **MDOS** **Michigan Department of State**
- **MDOT** **Michigan Department of Transportation**
- **NHTSA** **National Highway Traffic Safety Administration**. A part of the United States Department of Transportation.
- **OHSP** **Office of Highway Safety Planning**. A division of the Michigan Department of State Police.
- **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**
- **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.
- **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.
- **Harmful Event** - A harmful event is an occurrence of injury or damage.
- **Holiday** - Refers to the length of the Holiday weekend period, including the hours of 6:00 PM to midnight of the day preceding the Holiday. Please refer to the table below for the time period connected to Holidays falling on a given day of the week.

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

- **Ignition Interlock** - An alcohol concentration measuring device 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).
- **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

Quick Facts & Figures

2002

2002 QUICK FACTS

★ Some exposure factor comparisons between 2002 and 2001 show motor vehicle registrations rose **1.0** percent, number of licensed drivers on Michigan roads increased **0.7** percent, and vehicle mileage increased **1.8** percent.

★ The 2002 death rate dropped to **1.3** deaths per 100 million miles of travel; below the ten-year average of **1.6** (1993-2002).

★ There were **1,279** persons killed and **112,484** persons injured in **395,515** reported motor vehicle traffic crashes in Michigan during 2002. Compared with the 2001 experience, deaths decreased **3.7** percent, persons injured increased **0.2** percent, and total reported crashes decreased **1.3** percent.

★ This year's death toll of **1,279** was down **3.7** percent from the 2001 figure of **1,328**.

★ The **1,279** persons killed were the result of **1,175** fatal crashes for an average of **1.1** deaths per fatal crash.

★ There were **395,515** reported crashes of which **1,175** were fatal, **80,567** were personal injury, and **313,773** were property damage only crashes.

★ Of all fatal crashes, **28.9** percent occurred at intersections.

★ Of all fatal crashes, **32.7** percent involved at least one drinking operator or pedestrian, **3.1** percent involved at least one drugged operator or pedestrian, and **4.6** percent involved both drinking and drugs.

★ Excessive speed was indicated as the hazardous action by **12.7** percent of the drivers involved in fatal crashes.

★ In 2002 there were **129,928** single vehicle crashes, a increase of **1.5** percent from last year's count of **128,040**.

★ Of the **395,515** total crashes, **129,928 (32.9%)** involved one vehicle.

★ Of the **1,175** fatal crashes, **538 (45.8%)** involved one vehicle.

★ Of the **384** alcohol-related fatal crashes, **234 (60.9%)** involved one vehicle. This is a **17.6** percent decrease from last year's figure of **284** single vehicle, alcohol-related fatal crashes.

★ Of the **1,907** drivers involved in fatal crashes, **14.6** percent were under 21 years of age and **23.9** percent of all drivers involved in fatal crashes were under 25 years of age.

★ In the last five years (1998-2002), **6,742** persons have been killed in Michigan traffic crashes. This is an average of **1,348** per year. During the previous five-year period (1997-2001), **6,909** persons were killed, for an average of **1,382** per year.

★ Of the **10,050,446** persons living in Michigan [1] one out of every **7,858** was killed in a traffic crash; one out of every **89** persons was injured.

★ For each person killed there were **87.9** persons injured.

- ★ There were **112,484** 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 **173** persons, a increase of **13** deaths from the 2001 figure.
- ★ For each pedestrian killed, there were **12.9** pedestrians injured.
- ★ Of the pedestrians killed, **38.7** percent were killed while crossing streets other than at intersections.
- ★ Of all pedestrians killed, **22.0** percent were under the age of 21 and **24.9** percent were 55 and older.
- ★ During the past five years, **849** pedestrians have been killed, an average of **170** per year.
- ★ During the past five years, **127** bicyclists have been killed, an average of **25** per year.
- ★ Children under the age of 16 accounted for **25.0** percent of the bicycle deaths.
- ★ Of the **702,420** drivers and injured passengers involved in crashes, **570,002** or **81.1** percent were ***reported*** to have been using occupant restraints. Restraint usage among fatal victims, where usage was known, was reported to be **57.6** percent in 2002.
- ★ Motor vehicle occupants age 75 to 102 had the highest reported restraint usage **(95.0%)** among age groups. Children age 11 to 15 had the lowest reported restraint usage **(74.3%)**.
- ★ The economic loss in Michigan traffic crashes amounted to **$9,666,083,200**.

Due to data processing errors ~800 pedestrians and ~700 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	710	4	62	644	0	80	115	515	4	86
Alger	501	4	103	394	0	19	132	350	5	128
Allegan	3,947	23	762	3,162	100	255	613	2,979	24	1,066
Alpena	1,249	3	198	1,048	0	218	212	819	6	267
Antrim	1,123	4	175	944	0	180	146	797	5	228
Arenac	970	4	180	786	65	180	54	671	4	261
Baraga	489	3	63	423	0	119	66	304	4	87
Barry	2,583	13	384	2,186	0	0	898	1,685	13	546
Bay	3,894	9	888	2,997	207	71	918	2,698	11	1,259
Benzie	632	6	93	533	0	104	82	446	6	126
Berrien	5,868	23	1,307	4,538	426	364	863	4,215	28	1,908
Branch	2,229	9	350	1,870	109	395	78	1,647	9	485
Calhoun	6,871	17	1,060	5,794	782	0	1,128	4,961	21	1,449
Cass	1,988	13	382	1,593	0	144	478	1,366	17	508
Charlevoix	1,292	2	164	1,126	0	286	157	849	2	219
Cheboygan	1,286	4	278	1,004	121	67	188	910	5	375
Chippewa	1,615	2	267	1,346	195	0	374	1,046	2	368
Clare	1,690	6	248	1,436	0	277	210	1,203	6	376
Clinton	2,830	10	476	2,344	218	126	185	2,301	11	733
Crawford	810	6	128	676	47	10	227	526	6	193
Delta	2,440	6	303	2,131	0	318	268	1,854	7	420
Dickinson	1,475	3	232	1,240	0	362	264	849	3	318
Eaton	4,452	16	750	3,686	389	0	1,293	2,770	17	1,087
Emmet	1,818	4	297	1,517	0	485	108	1,225	5	413
Genesee	15,520	46	3,748	11,726	808	228	1,846	12,638	51	5,393
Gladwin	1,148	1	185	962	0	0	364	784	1	247
Gogebic	519	2	74	443	0	186	12	321	2	107
Grand Traverse	4,029	8	725	3,296	0	912	337	2,780	8	990
Gratiot	1,872	4	269	1,599	0	345	260	1,267	6	389
Hillsdale	2,154	8	339	1,807	0	188	449	1,517	8	464
Houghton	1,684	4	294	1,386	0	260	174	1,250	4	399
Huron	1,822	9	258	1,555	0	0	681	1,141	9	384
Ingham	12,257	21	2,373	9,863	972	442	2,096	8,747	23	3,230
Ionia	2,989	16	407	2,566	151	0	747	2,091	17	555
Iosco	1,140	3	178	959	0	199	240	701	5	238
Iron	937	2	97	838	0	258	94	585	2	128
Isabella	3,234	11	607	2,616	0	439	345	2,450	13	885
Jackson	6,900	19	1,111	5,770	720	247	801	5,132	19	1,499
Kalamazoo	10,768	22	2,016	8,730	893	344	1,293	8,238	23	2,720
Kalkaska	809	6	160	643	0	143	159	507	6	237
Kent	25,321	75	5,052	20,194	1,128	1,347	3,641	19,205	81	6,884
Keweenaw	115	0	19	96	0	25	8	82	0	22
Lake	594	0	112	482	0	94	61	439	0	142
Lapeer	3,819	21	709	3,089	137	0	788	2,894	21	1,033
Leelanau	696	2	119	575	0	0	179	517	2	157
Lenawee	3,467	18	737	2,712	0	538	756	2,173	20	1,045

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	5,967	17	1,223	4,727	721	290	611	4,345	18	1,653
Luce	314	2	44	268	0	0	153	161	2	58
Mackinac	908	4	120	784	82	173	157	496	10	177
Macomb	26,578	52	6,004	20,522	1,121	0	5,866	19,591	56	8,324
Manistee	1,153	5	163	985	0	268	149	736	5	237
Marquette	2,618	9	452	2,157	0	580	261	1,777	9	605
Mason	1,721	3	277	1,441	0	451	95	1,175	3	389
Mecosta	2,763	9	376	2,378	0	111	784	1,868	9	531
Menominee	1,871	7	240	1,624	0	477	136	1,258	7	337
Midland	3,205	11	615	2,579	0	374	395	2,436	11	871
Missaukee	760	1	97	662	0	0	211	549	1	137
Monroe	4,499	23	1,053	3,423	204	604	469	3,222	23	1,514
Montcalm	3,476	17	577	2,882	0	65	1,031	2,380	18	832
Montmorency	481	3	84	394	0	0	142	339	3	119
Muskegon	5,934	27	1,369	4,538	56	630	621	4,627	29	2,000
Newaygo	2,239	6	362	1,871	0	0	647	1,592	7	510
Oakland	44,186	85	9,777	34,324	3,436	1,920	5,178	33,652	88	13,382
Oceana	1,341	10	269	1,062	0	143	140	1,058	14	396
Ogemaw	1,188	7	193	988	84	0	321	783	8	286
Ontonagon	569	2	73	494	0	93	190	286	2	91
Osceola	1,393	4	210	1,179	0	235	172	986	4	303
Oscoda	457	2	76	379	0	0	138	319	4	103
Otsego	1,070	4	251	815	110	0	189	771	4	359
Ottawa	8,057	26	1,702	6,329	361	915	695	6,086	27	2,454
Presque Isle	668	3	83	582	0	74	151	443	3	117
Roscommon	1,221	4	206	1,011	43	34	301	843	4	310
Saginaw	8,005	25	1,757	6,223	288	0	2,076	5,641	26	2,511
St. Clair	5,199	24	1,222	3,953	578	0	824	3,797	26	1,760
St. Joseph	2,461	16	466	1,979	0	428	495	1,538	17	701
Sanilac	1,966	6	312	1,648	0	0	638	1,328	7	455
Schoolcraft	622	1	75	546	0	134	138	350	1	109
Shiawassee	2,853	15	463	2,375	104	0	738	2,011	17	661
Tuscola	2,267	13	412	1,842	0	0	679	1,588	18	594
Van Buren	2,935	10	579	2,346	207	0	507	2,221	10	829
Washtenaw	12,998	24	2,648	10,326	1,093	1,309	872	9,724	24	3,508
Wayne	75,343	195	17,683	57,465	4,215	2,597	7,193	61,338	210	24,718
Wexford	1,673	11	315	1,347	0	328	392	953	12	489
UNKNOWN	0	0	0	0	0	0	0	0	0	0
Totals	395,515	1,175	80,567	313,773	20,171	22,488	58,143	294,713	1,279	112,484

Please see foreword regarding roadway type classification issue.

Michigan's Crash Watch 2002

Every
1 minute
20 seconds
a traffic crash
occurs

One person
is killed in a
crash every
6 hours
51 minutes

One person
is injured in
a crash every
4 minutes
40 seconds

One person
is killed in an
alcohol-related
crash every
20 hours
45 minutes

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

One
motorcyclist
is injured every
3 hours
33 minutes

One
pedestrian
is injured every
3 hours
56 minutes

One bicyclist
is injured every
5 hours
18 minutes

Due to data processing errors ~800 pedestrians and ~700 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

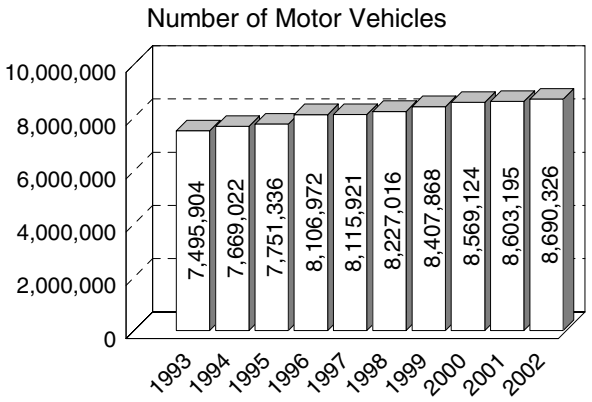
2002
2002
2002
2002
2002
2002
2002
2002
2002
2002

Historical Information

10-, 5-, and 1-year

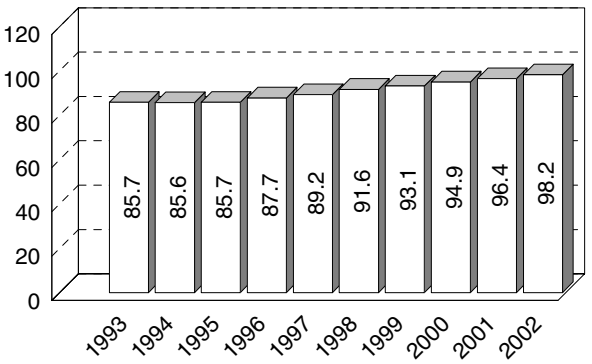
10 YEAR

VEHICLE REGISTRATIONS



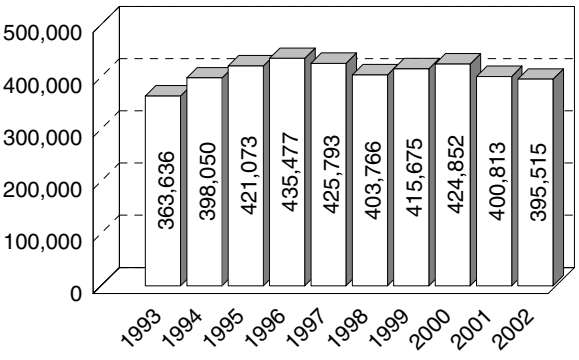
Vehicle registrations have been increasing steadily since 1993, reaching 8,690,326 in 2002.

VEHICLE MILES TRAVELED



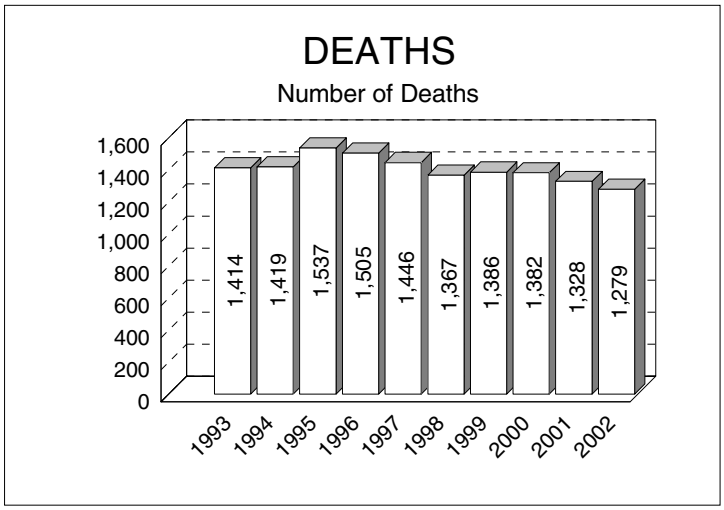
Vehicle miles of travel have increased 14.6 percent since 1993, reaching 98.2 billion miles in 2002.

CRASHES

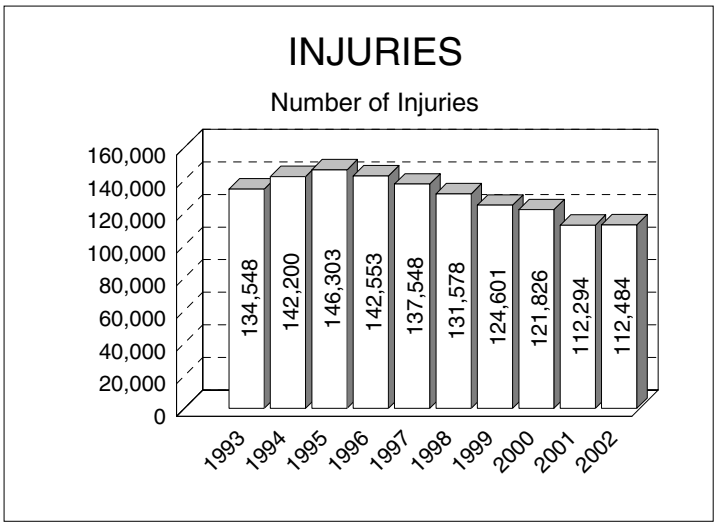


There were 395,515 total crashes statewide in 2002, an 8.8 percent increase from 1993.

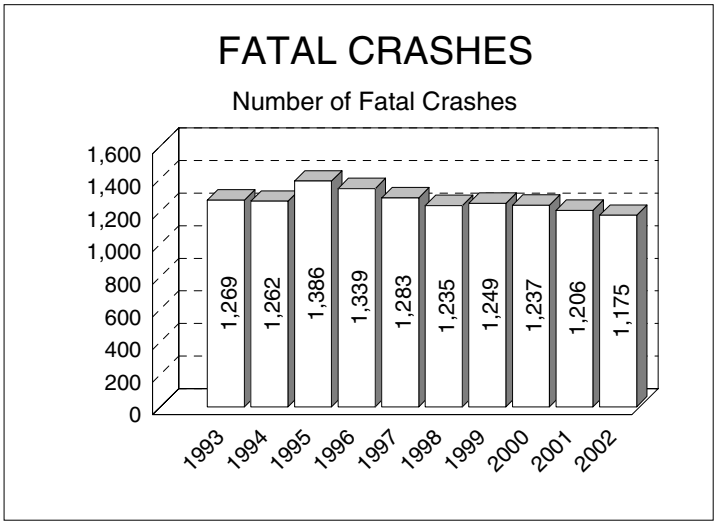
10 YEAR TRENDS (continued)



In 2002, 1,279 people died in motor vehicle crashes, a decrease of 9.5 percent from 1993.

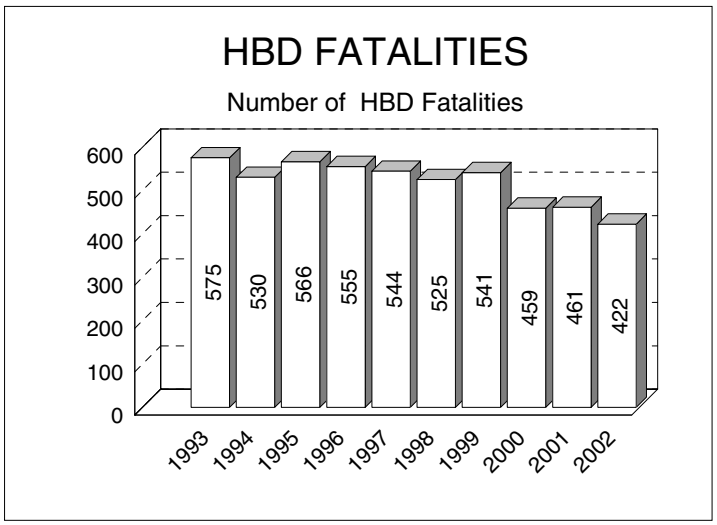


112,484 people received nonfatal injuries in Michigan motor vehicle crashes in 2002, down 23.1 percent from the ten-year high of 146,303 in 1995.

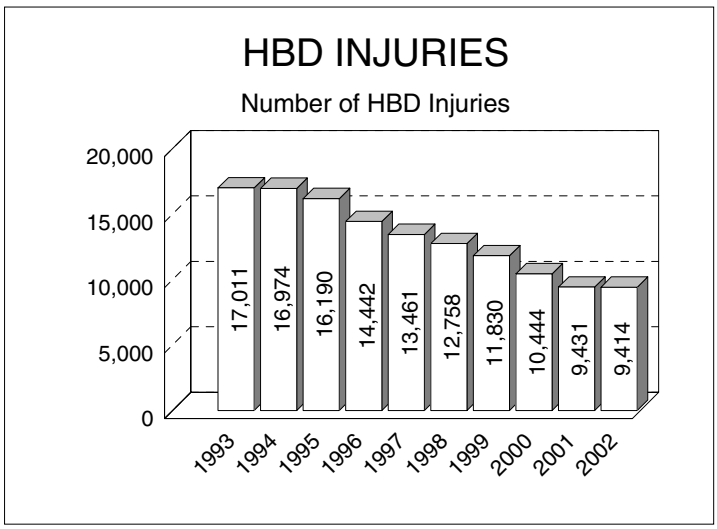


In 2002, there were 1,175 fatal crashes, down 15.2 percent from the high of 1,386 in 1995.

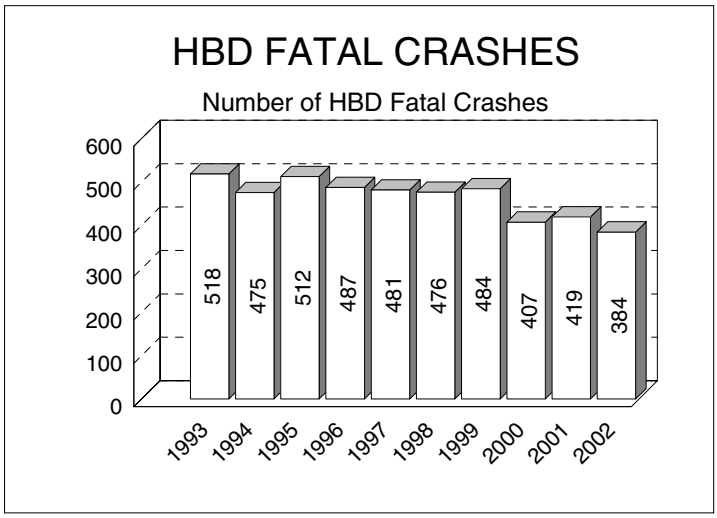
10 YEAR



Deaths in alcohol-related crashes have decreased over the last ten years. There were 422 had been drinking (HBD) fatalities in 2002.



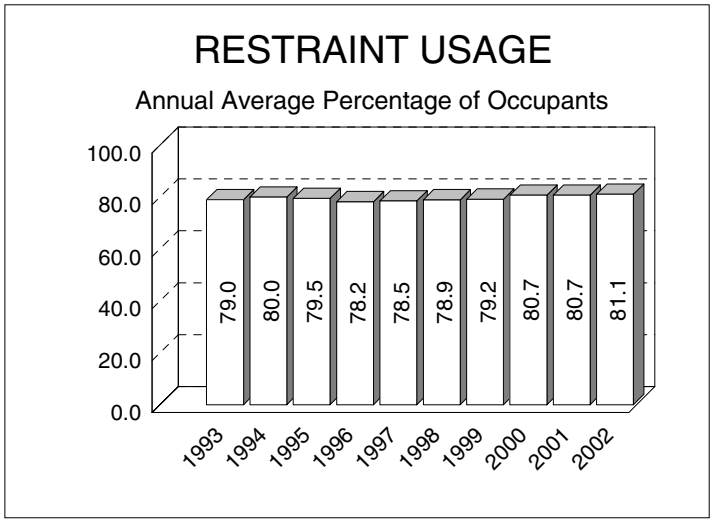
Mirroring the trend in deaths, HBD injuries have decreased over the last ten years. There were 9,414 injuries in 2002.



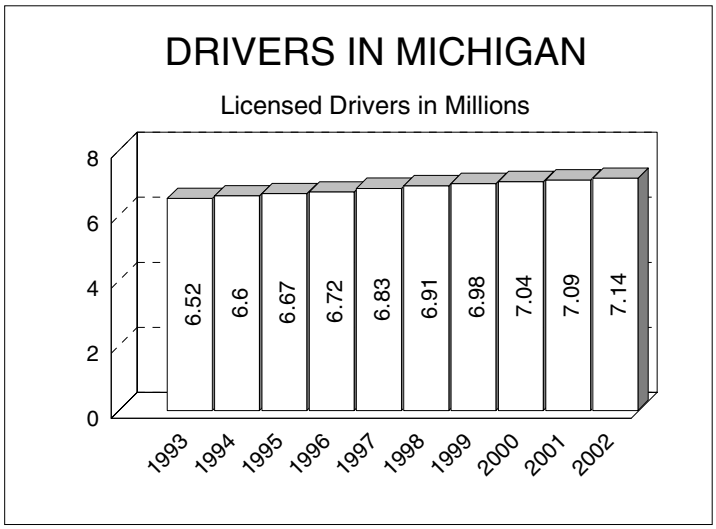
Alcohol involvement in fatal crashes has also decreased over the ten-year period. In 2002, there were 384 HBD fatal crashes.

Note: The 2002 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.

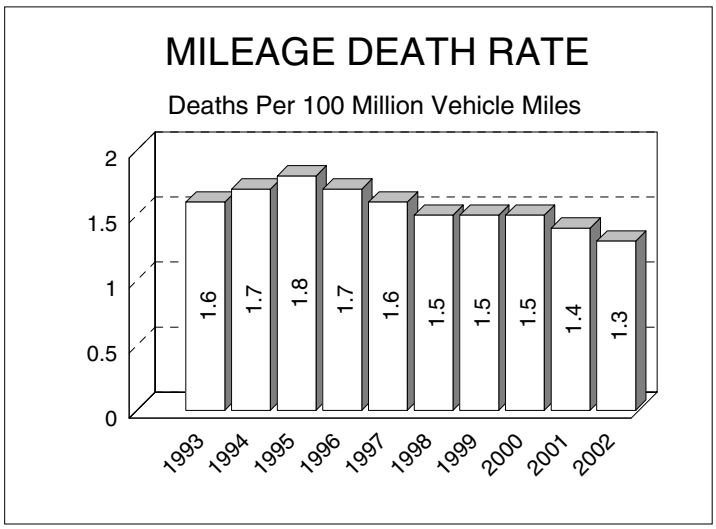
10 YEAR TRENDS (continued)



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 79.6.



There were 7,141,883 licensed drivers on Michigan roadways in 2002.

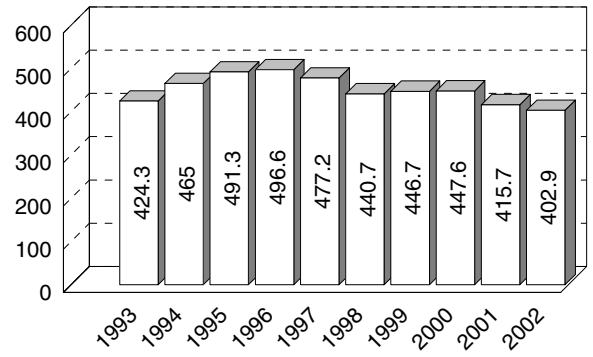


The 1.3 death rate in 2002 is an 18.8 percent decrease from 1993, and a 27.8 percent decrease from the ten-year high of 1.8 in 1995.

10 YEAR

TOTAL CRASH RATE

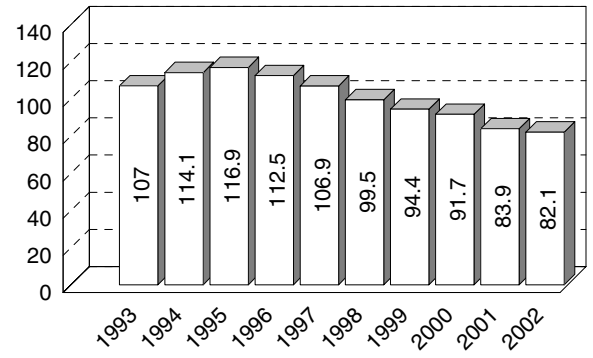
All Crashes Per 100 Million Vehicle Miles



The total crash rate peaked in 1996 at 496.6, then decreased by 18.9 percent to 402.9 in 2002.

PERSONAL INJURY CRASH RATE

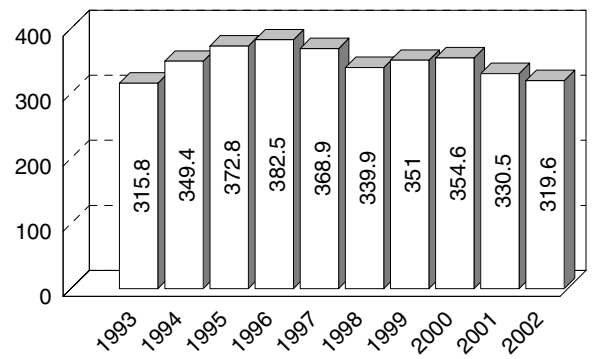
Injury Crashes Per 100 Million Vehicle Miles



The personal injury crash rate has been steadily decreasing since 1995. The 82.1 personal injury crash rate in 2002 is a 2.1 percent decrease from 2001, and a 23.3 percent decrease from 1993.

PROPERTY DAMAGE CRASH RATE

Property Damage Crashes Per 100 Million Vehicle Miles

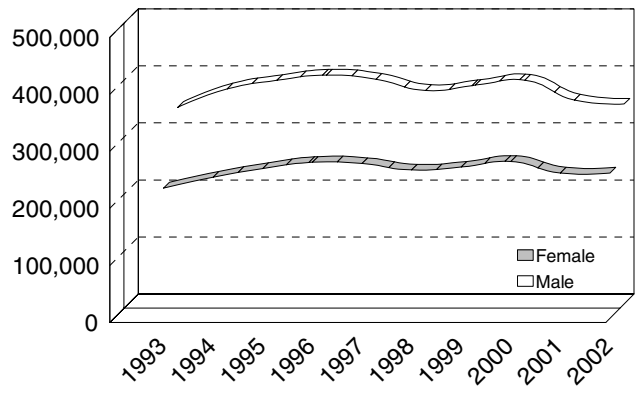


The 319.6 property damage crash rate in 2002 is a 3.3 percent decrease from 2001, and a 1.2 percent increase from 1993.

10 YEAR TRENDS (continued)

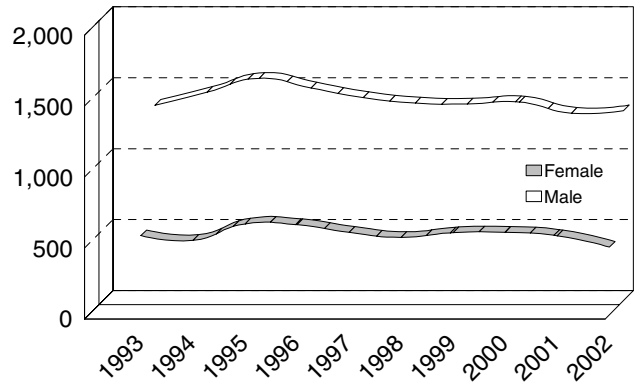
MALE vs. FEMALE DRIVERS

Number in All Crashes



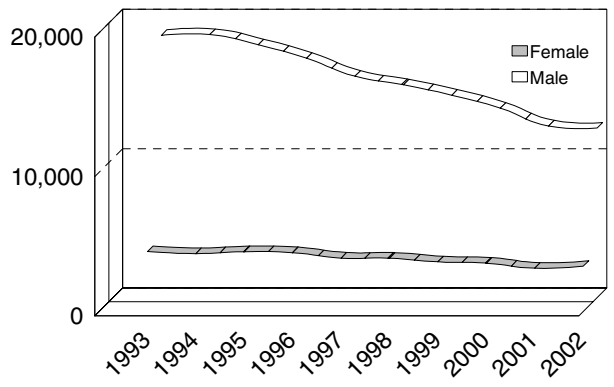
MALE vs. FEMALE DRIVERS

Number in Fatal Crashes



MALE vs. FEMALE DRINKING DRIVERS

Number in All Crashes



10
YEAR

DRIVERS IN ALL CRASHES		
	Male	Female
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
2002	350,528	254,561

Note: 10.7 percent of all drivers (72,438) were coded as unknown gender in 2002.

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

DRIVERS IN FATAL CRASHES		
	Male	Female
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
2002	1,337	476

Male drivers make up 70.1 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
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
2002	12,173	3,257

Note: 2.3 percent of all drinking drivers (361) were coded as unknown gender in 2002.

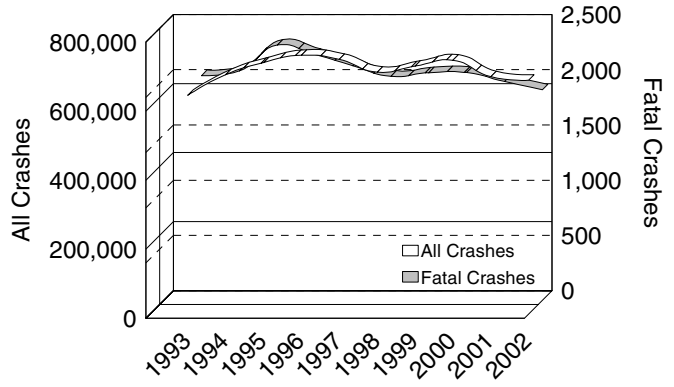
Note: The 2002 information provided for alcohol contains data for alcohol-related crashes only. This figure DOES NOT include the combined number for alcohol- and drug-related crashes as had been reported prior to 2000.

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

10 YEAR TRENDS (continued)

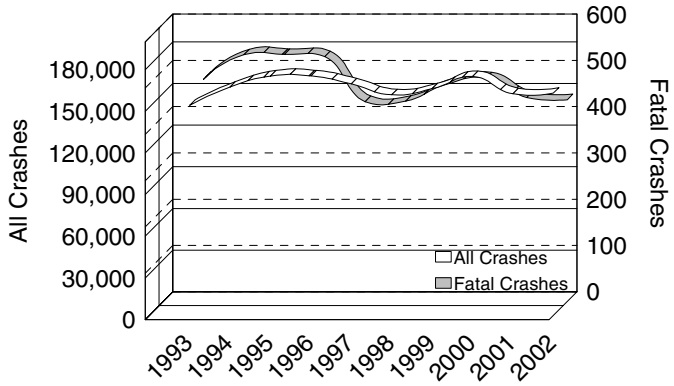
ALL DRIVERS

Number in All and Fatal Crashes



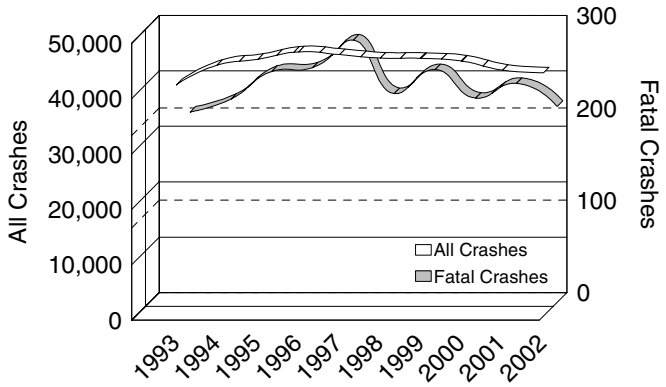
TEEN/YOUNG ADULT DRIVERS

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
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
2002	677,527	1,907

Driver involvement in all crashes increased 6.9 percent over the ten-year period.

Driver involvement in fatal crashes decreased 6.3 percent over the ten-year period.

TEEN/YOUNG ADULT DRIVERS		
	All Crashes	Fatal Crashes
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
2002	160,003	436

Teen/young adult drivers (age 16-24) represent 14.9 percent of the licensed drivers in 2002.

The number of teen/young adult drivers in all crashes has increased by 5.8 percent since 1993. Their involvement in fatal crashes decreased 9.2 percent during the same time period.

ELDERLY DRIVERS		
	All Crashes	Fatal Crashes
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
2002	43,923	212

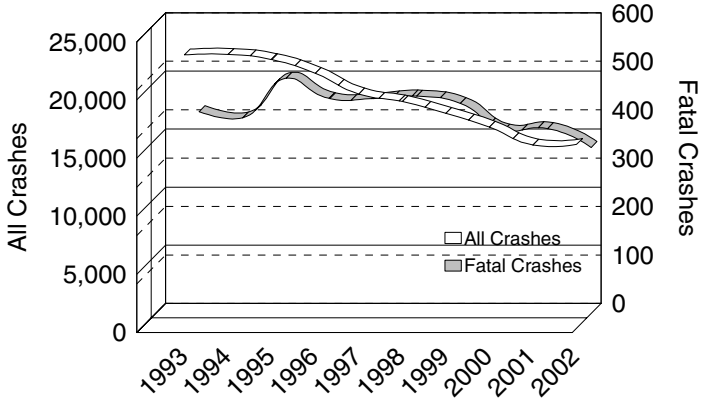
Elderly drivers (age 65-102) represent 14.3 percent of the licensed drivers in 2002.

The number of drivers age 65 and older in all crashes has increased 5.2 percent since 1993. Their involvement in fatal crashes increased 2.9 percent during the same time period.

10 YEAR TRENDS (continued)

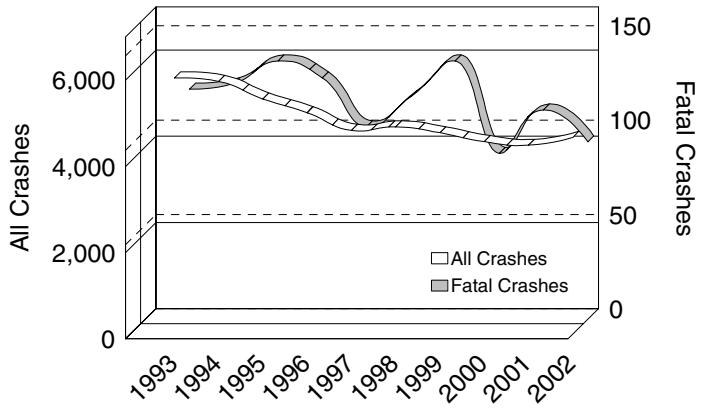
ALL DRINKING DRIVERS

Number in All and Fatal Crashes



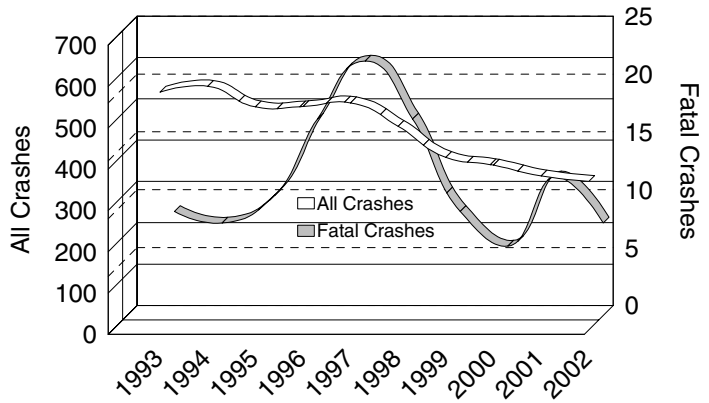
TEEN/YOUNG ADULT DRINKING DRIVERS

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
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
2002	15,791	343

Drinking driver involvement in all crashes decreased by 32.8 percent from 1993. Drinking driver involvement in fatal crashes decreased by 17.7 percent from 1993.

TEEN/YOUNG ADULT DRINKING DRIVERS		
	All Crashes	Fatal Crashes
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
2002	4,571	94

Following the trend for all drinking drivers, the number of teen/young adult drinking drivers in all crashes decreased by 23.1 percent, and their involvement in fatal crashes decreased by 23.0 percent from 1993.

ELDERLY DRINKING DRIVERS		
	All Crashes	Fatal Crashes
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
2002	360	8

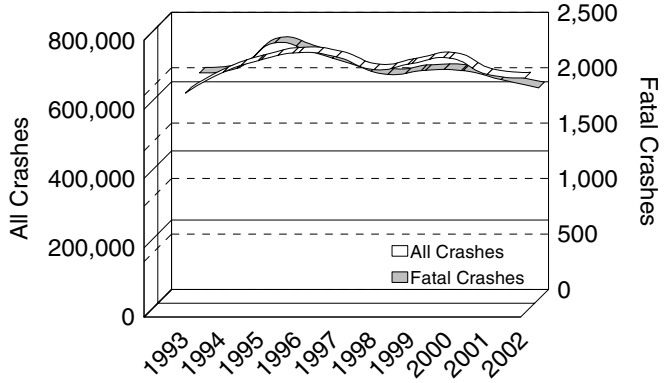
The number of elderly drinking drivers in all crashes continues to decrease, reaching a ten-year low of 360 in 2002. Their involvement in fatal crashes has fluctuated over the ten-year period with a high of 22 in 1997.

Note: The 2002 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)

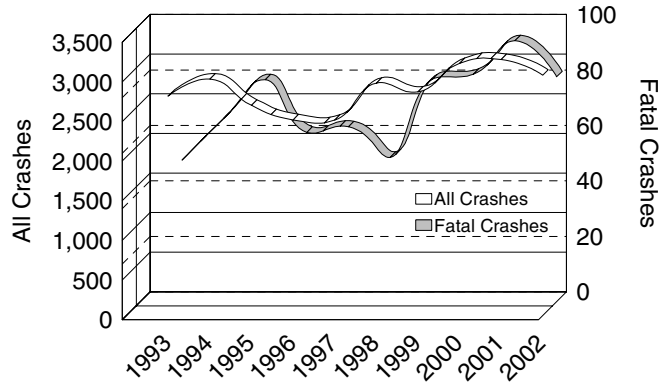
MOTOR VEHICLES

Number in All and Fatal Crashes



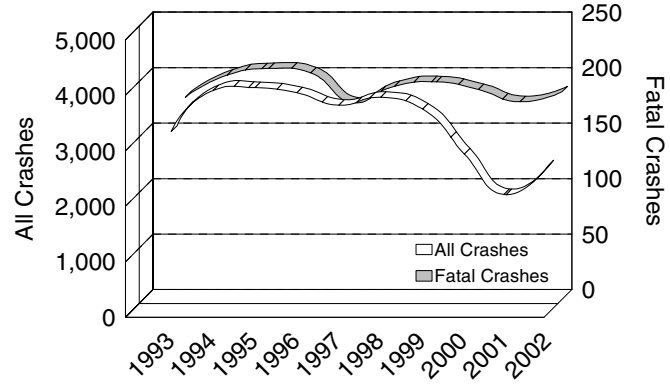
MOTORCYCLES

Number in All and Fatal Crashes



PEDESTRIANS

Number in All and Fatal Crashes



10 YEAR

MOTOR VEHICLES		
	All Crashes	Fatal Crashes
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
2002	678,990	1,908

There were 1,908 motor vehicles involved in fatal crashes in 2002, down 6.6 percent from 1993.

MOTORCYCLES		
	All Crashes	Fatal Crashes
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
2002	3,030	81

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
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
2002	2,660	187

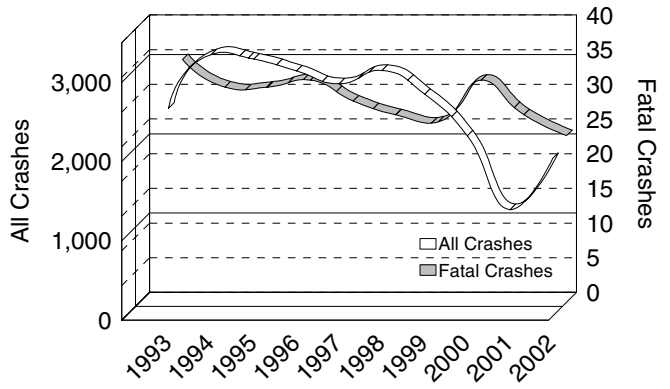
Due to data processing errors ~800 pedestrians and ~700 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

The number of pedestrians involved in fatal crashes has fluctuated over the ten-year period with a high of 208 in 1995.

10 YEAR TRENDS (continued)

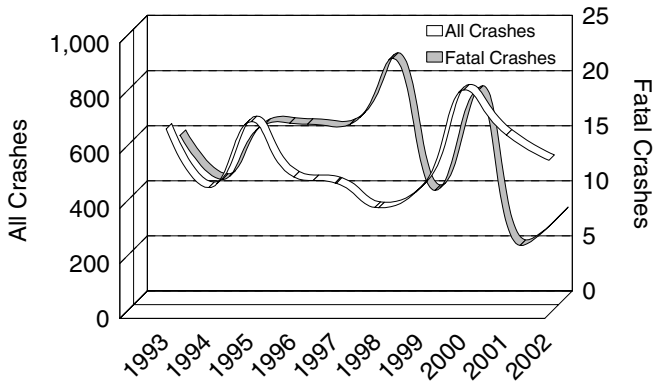
BICYCLES

Number in All and Fatal Crashes



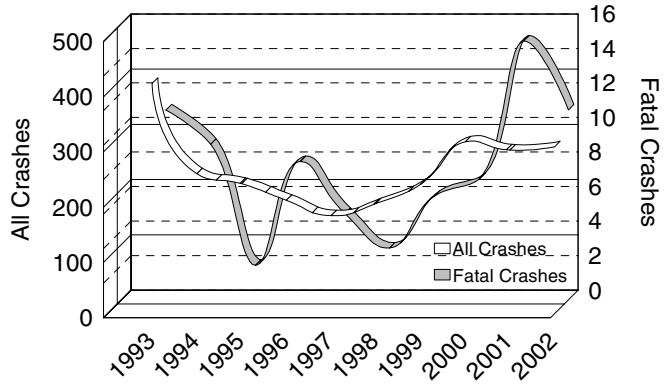
SNOWMOBILES on roadway

Number in All and Fatal Crashes



ORV/ATV's on roadway

Number in All and Fatal Crashes



10 YEAR

BICYCLES		
	All Crashes	Fatal Crashes
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
2002	1,988	24

Due to data processing errors ~800 pedestrians and ~700 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

There were 24 bicycles involved in fatal crashes in 2002, down 31.4 percent from 1993.

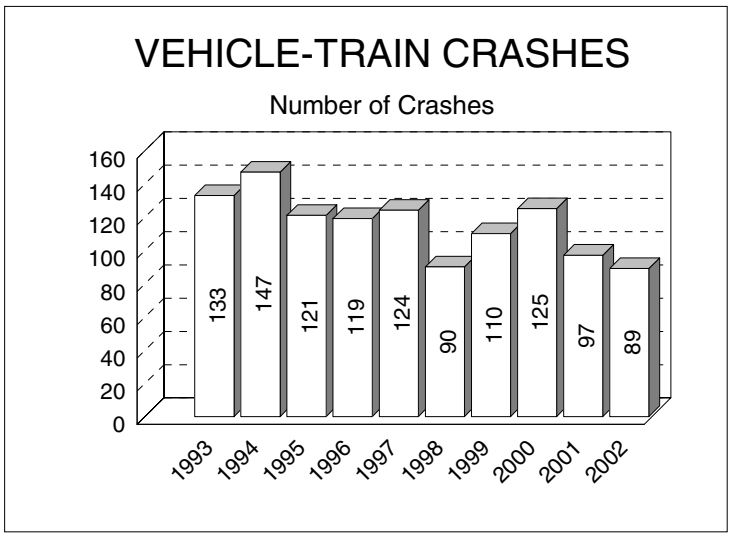
SNOWMOBILES on Michigan roadways		
	All Crashes	Fatal Crashes
1993	673	15
1994	460	11
1995	700	16
1996	499	16
1997	476	16
1998	387	22
1999	463	10
2000	815	19
2001	651	5
2002	559	8

There were 8 snowmobiles involved in fatal crashes on Michigan public roadways in 2002, up slightly from the ten-year low of 5 in 2001.

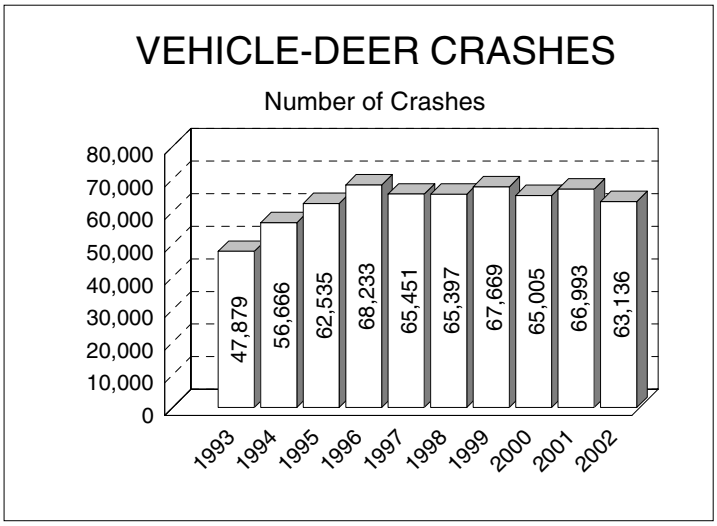
ORV/ATV's on Michigan roadways		
	All Crashes	Fatal Crashes
1993	417	11
1994	253	9
1995	235	2
1996	205	8
1997	177	5
1998	199	3
1999	234	6
2000	311	7
2001	296	15
2002	302	11

There were 11 ORV/ATV's involved in fatal crashes on Michigan public roadways in 2002, the same number that occurred in 1993.

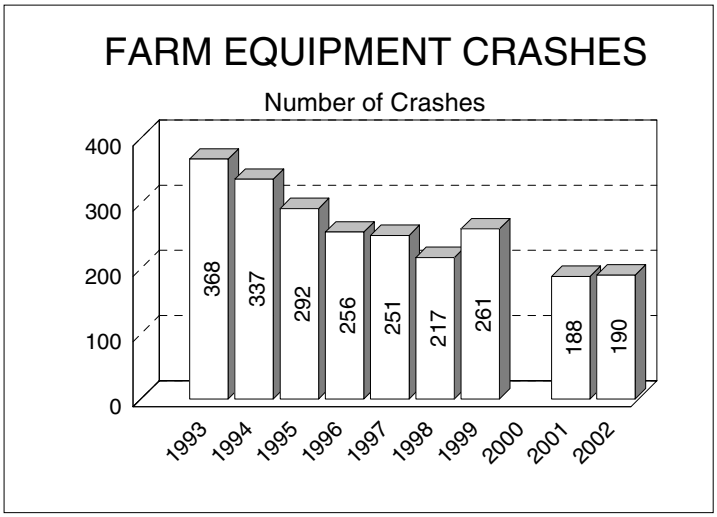
10 YEAR TRENDS (continued)



89 vehicle-train crashes occurred in 2002, a decrease of 33.1 percent in the ten-year period.



There has been a 31.9 percent rise from 47,879 vehicle-deer crashes in 1993 to 63,136 in 2002.

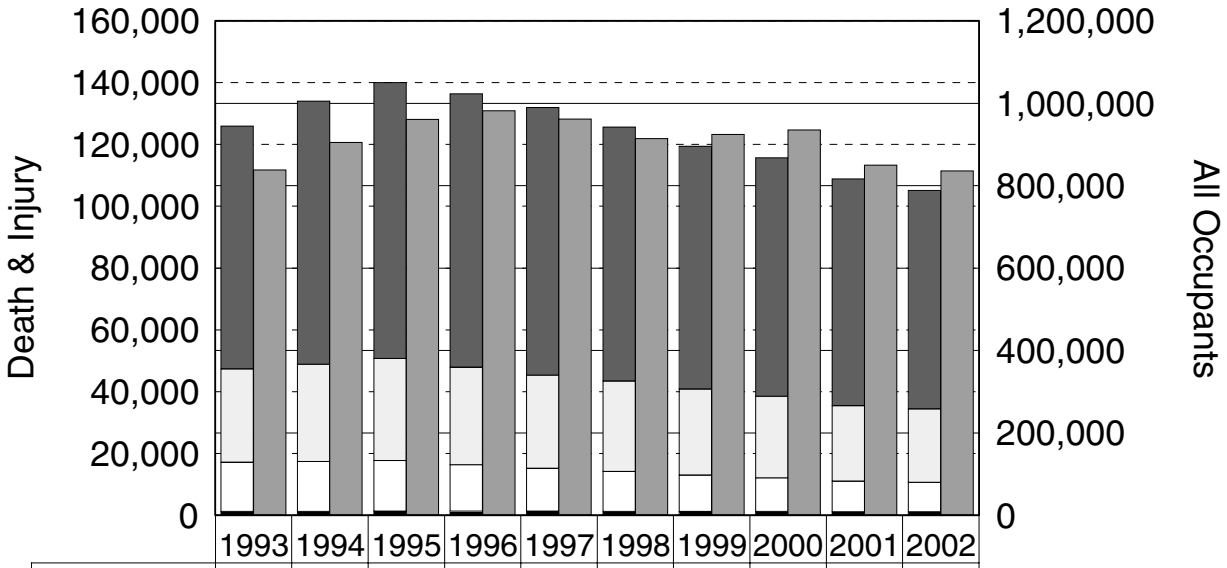


Data not available for calendar year 2000 farm equipment crashes. Please refer to that year's book for details.

The 190 farm equipment crashes in 2002 marks a 48.4 percent decrease from the ten-year high of 368 farm equipment crashes in 1993.

10
YEAR

DEATH AND INJURY PER CRASH-INVOLVED OCCUPANT

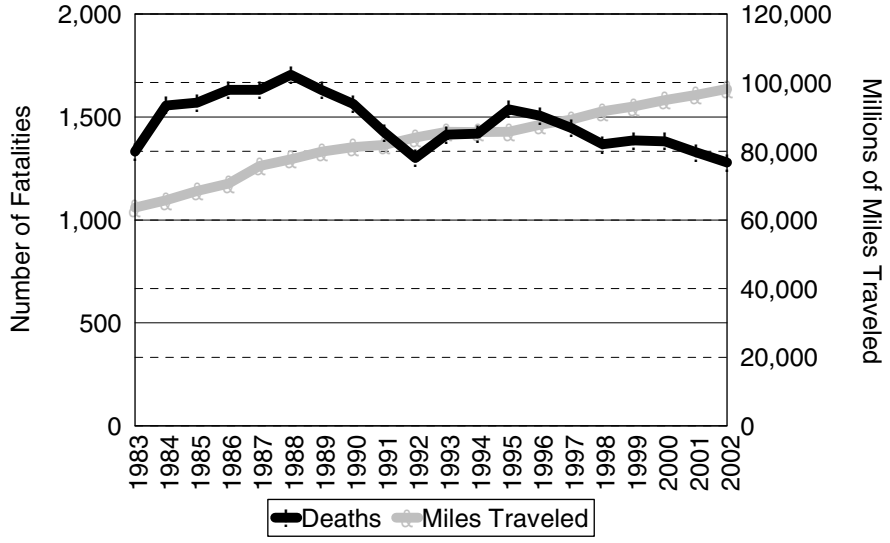


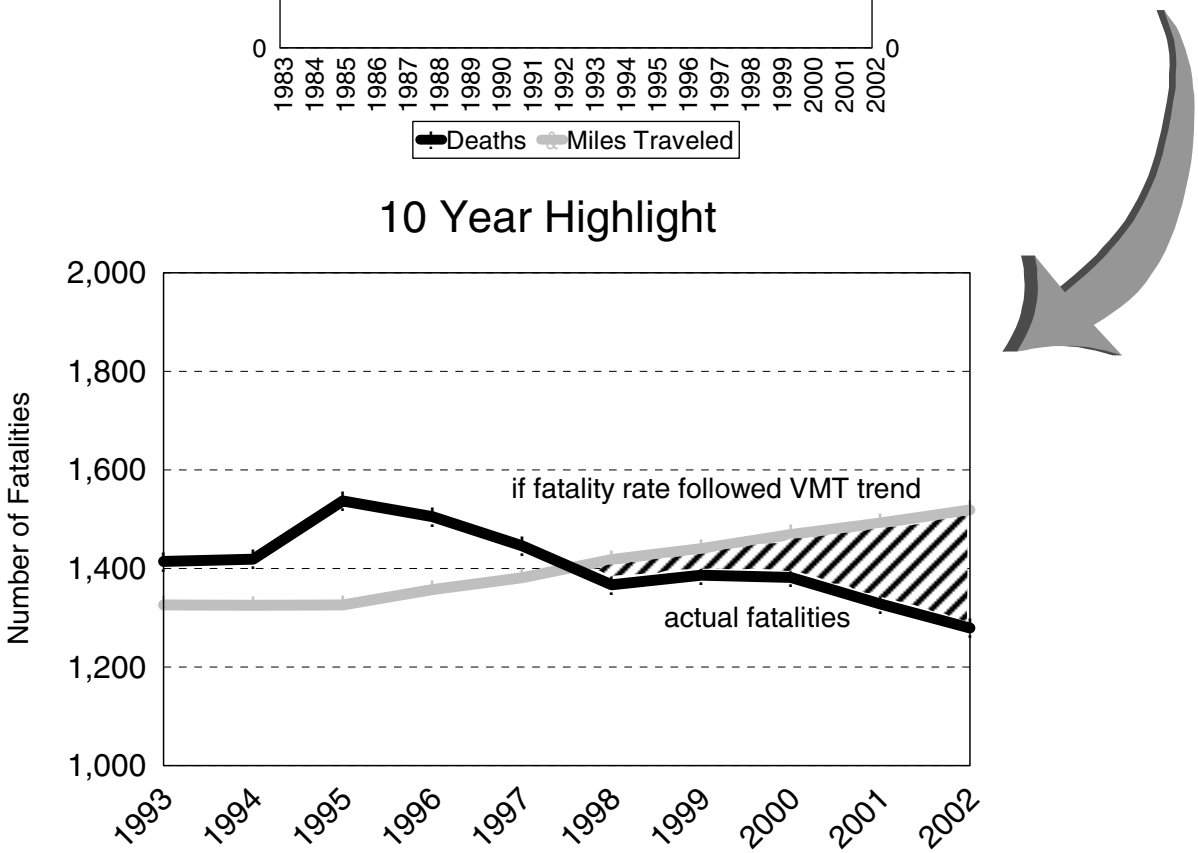
	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
All Occupants	838,445	904,876	960,537	981,260	961,595	914,248	924,476	935,411	849,316	835,576
C - Injured	78,563	85,107	89,289	88,570	86,559	82,218	78,565	77,258	73,396	70,687
B - Injured	30,226	31,476	33,070	31,502	30,209	29,236	27,856	26,335	24,442	23,744
A - Injured	15,940	16,184	16,355	15,080	13,890	12,989	11,789	10,918	9,852	9,579
K - Killed	1,186	1,191	1,314	1,273	1,246	1,166	1,183	1,174	1,136	1,073

The proportion of death and injury to crash-involved occupants has decreased over the last ten years. In 2002, 1,073 occupants of motor vehicles were fatally injured, 9,579 suffered an A (incapacitating) injury, 23,744 sustained a B (nonincapacitating) injury, and 70,687 sustained a C (possible) injury.

10
YEAR

FATALITIES AND VMT TRENDS



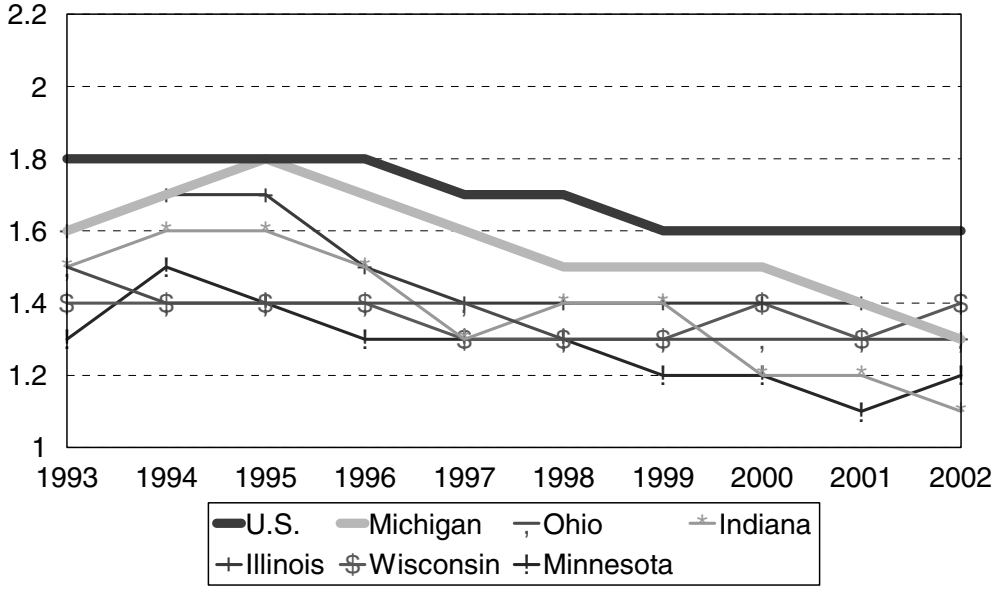


In the 1980s, the number of fatalities had been steadily increasing, following the VMT trend. A reversal in the fatality rate began in 1989, with actual fatalities remaining near or below the VMT trend. A projection of losses that would have been incurred if the fatality rate had continued to follow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

10 YEAR

MILEAGE DEATH RATES 1993 - 2002

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
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	1.7	1.5	1.3	1.4	1.4	1.3	1.3
1999	1.6	1.5	1.3	1.4	1.4	1.3	1.2
2000	1.6	1.5	1.3	1.2	1.4	1.4	1.2
2001	1.6	1.4	1.3	1.2	1.4	1.3	1.1
2002	1.6	1.3	1.3	1.1	*1.3	1.4	1.2

* Provisional mileage death rate

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

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
1993	41,893	1,414	1,484	901	1,392	703	538
1994	42,524	1,419	1,368	974	1,554	706	644
1995	43,363	1,537	1,357	960	1,586	739	597
1996	43,649	1,505	1,395	982	1,477	759	576
1997	43,458	1,446	1,439	936	1,393	721	600
1998	43,501	1,367	1,423	978	1,393	709	650
1999	42,401	1,386	1,430	1,017	1,456	744	626
2000	43,354	1,382	1,361	875	1,418	801	625
2001	43,700	1,328	1,379	895	1,414	764	568
2002	44,000	1,279	1,417	792	*1,420	805	657

* Provisional fatalities

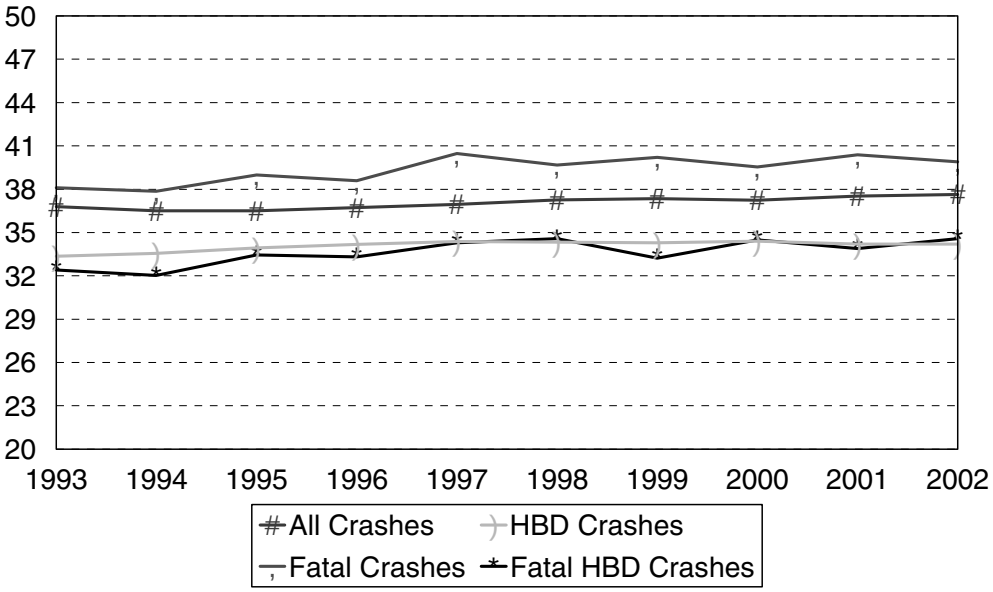
The National Safety Council estimates a national increase in traffic fatalities of 0.7 percent between 2001 (43,700) and 2002 (44,000).

Year	U.S. VMT	Michigan VMT	Ohio VMT	Indiana VMT	Illinois VMT	Wisconsin VMT	Minnesota VMT
1993	2,297	85.7	97.5	60.5	89.8	48.8	42.3
1994	2,360	85.6	99.0	62.1	92.1	50.3	43.4
1995	2,423	85.7	99.7	62.0	94.3	51.4	44.1
1996	2,486	87.7	102.8	66.0	96.9	52.6	45.2
1997	2,562	89.2	104.8	70.4	98.7	53.7	46.9
1998	2,632	91.6	106.0	70.7	100.9	56.0	48.5
1999	2,691	93.1	106.4	71.5	101.8	57.0	50.7
2000	2,747	94.9	106.5	72.3	102.9	57.3	52.4
2001	2,782	96.4	107.0	74.1	103.1	57.3	53.2
2002	2,829	98.2	107.9	74.6	*106.2	58.7	54.4

* Projected VMT
VMT described in billions of miles

10
YEAR

AVERAGE AGE OF DRIVERS IN CRASHES 1993 - 2002

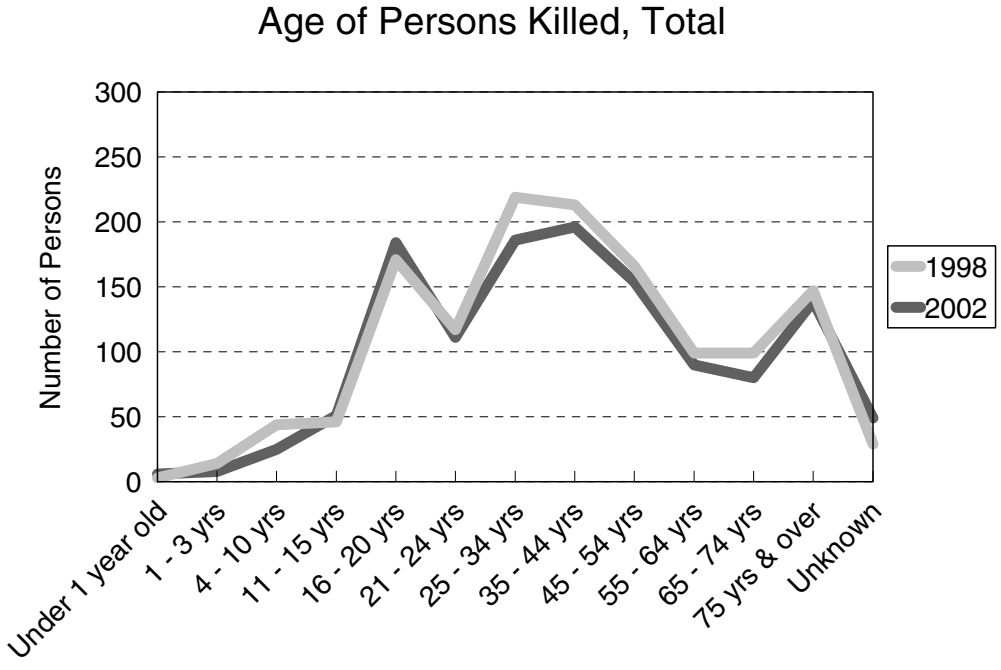


Reflecting the demographic trend of increasing age in the general population, the average age of crash-involved drivers has also increased. An aging driving population has implications for law enforcement prioritizing, highway design, traffic signing considerations, and Emergency Medical System procedures.

5 YEAR

TREND DATA FOR FATALITIES

TREND DATA FOR FATALITIES	1998	1999	2000	2001	2002
Age of Persons Killed, Total					
Under 1 year old	3	4	3	1	6
1 - 3 years	14	19	12	9	8
4 - 10 years	44	34	33	37	25
11 - 15 years	46	48	57	43	51
16 - 20 years	171	153	199	181	184
21 - 24 years	117	129	107	122	111
25 - 34 years	219	215	217	194	186
35 - 44 years	213	231	196	209	196
45 - 54 years	166	172	155	161	154
55 - 64 years	99	100	129	93	90
65 - 74 years	99	93	101	84	80
75 years and over	147	150	140	153	139
Unknown	29	38	33	41	49
Totals	1,367	1,386	1,382	1,328	1,279



The chart above shows the total number of deaths in motor vehicle crashes in Michigan by age, comparing 1998 with 2002.

5
YEAR

TREND DATA FOR FATALITIES	1998	1999	2000	2001	2002
Age of Drivers Involved in Fatal Crashes					
13 years and under	2	2	0	3	4
14 years	2	2	3	0	7
15 years	10	7	8	9	8
16 years	42	37	49	35	50
17 years	53	55	66	55	44
18 years	52	63	69	50	57
19 years	61	59	63	73	57
20 years	54	51	53	51	51
21 - 24 years	171	204	183	177	177
25 - 34 years	410	378	398	351	336
35 - 44 years	374	376	317	347	328
45 - 54 years	261	264	278	275	255
55 - 64 years	149	145	178	140	147
65 - 69 years	58	56	50	50	48
70 - 74 years	52	65	60	51	38
75 - 79 years	55	57	41	55	53
80 - 84 years	39	42	42	50	38
85 - 89 years	16	22	24	24	20
90 years and over	6	10	4	7	15
Unknown	162	166	176	178	174
Totals	2,029	2,061	2,062	1,981	1,907
Age of Drivers Involved in Single Vehicle Fatal Crashes					
13 years and under	1	2	0	2	2
14 years	2	2	3	0	3
15 years	4	2	3	4	3
16 years	12	12	15	11	17
17 years	18	21	25	13	18
18 years	19	19	26	18	20
19 years	24	18	20	29	25
20 years	21	21	15	24	20
21 - 24 years	65	72	74	74	65
25 - 34 years	127	118	127	106	101
35 - 44 years	104	108	82	98	85
45 - 54 years	75	73	67	71	73
55 - 64 years	35	24	40	36	32
65 - 69 years	17	12	8	12	5
70 - 74 years	9	9	11	13	8
75 - 79 years	8	9	11	11	15
80 - 84 years	9	4	4	11	5
85 - 89 years	0	6	0	3	4
90 years and over	0	1	0	0	1
Unknown	34	39	32	53	39
Totals	584	572	563	589	541

Due to data processing errors ~800 pedestrians and ~700 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

5 YEAR

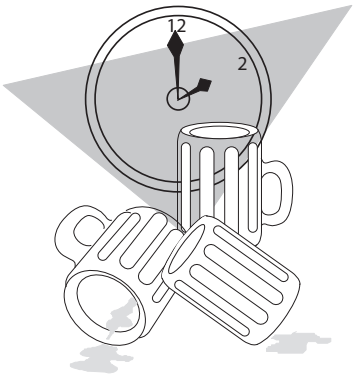
TREND DATA FOR FATALITIES	1998	1999	2000	2001	2002
Age of Bicyclists Killed					
Under 1 year old	0	0	0	0	0
1 - 3 years	0	0	0	0	0
4 - 10 years	6	1	5	4	0
11 - 15 years	5	11	9	2	5
16 - 20 years	0	2	1	3	1
21 - 24 years	1	1	0	0	2
25 - 34 years	4	0	4	1	3
35 - 44 years	5	4	1	7	3
45 - 54 years	3	3	3	4	1
55 - 64 years	0	2	3	2	0
65 - 74 years	1	0	2	1	3
75 years and over	2	1	1	2	2
Unknown	0	0	0	0	0
Totals	27	25	29	26	20
Age of Pedestrians Killed					
Under 1 year old	0	1	0	0	0
1 - 3 years	6	8	6	2	3
4 - 10 years	17	20	11	11	10
11 - 15 years	9	7	10	8	14
16 - 20 years	9	6	8	9	11
21 - 24 years	4	6	9	5	8
25 - 34 years	22	25	11	22	23
35 - 44 years	30	37	45	32	34
45 - 54 years	20	31	31	28	25
55 - 64 years	15	15	12	10	14
65 - 74 years	14	8	12	9	13
75 years and over	25	12	13	23	16
Unknown	1	0	0	1	2
Totals	172	176	168	160	173
Action of Pedestrians Killed					
Crossing at intersection	16	10	21	22	10
Cross not at intersection	80	66	62	47	67
Getting on/off vehicle	1	4	1	2	1
In road with traffic	13	15	19	23	19
In road against traffic	3	9	6	6	4
Standing or lying in road	14	17	15	16	13
Pushing/working on vehicle	1	2	1	3	3
Other working in road	0	0	4	2	0
Playing in road	3	2	0	1	1
In road for other reason	8	12	10	8	16
Not in road	9	20	13	8	11
Other/Unknown	24	19	16	22	28
Totals	172	176	168	160	173

5 YEAR

FATAL CRASHES AND PERSONS KILLED FOR SELECTED HOLIDAY PERIODS IN MICHIGAN

Revised February 19, 2010

HOLIDAY PERIOD	Fatal Crashes	Persons Killed	SUMMARY 2002
Memorial Day			This table shows traffic death tolls in Michigan for the past five years for the major holiday periods. Based on the *total* **2002** experience, deaths averaged **3.50** per day. Alcohol-related deaths averaged **1.16** per day. Based on the **2002** *holiday period* experience, deaths averaged **5.06** per day. Alcohol-related deaths averaged **2.0** per day.
2002 (3) MON	13 [6]	14 [6]	
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]	
Fourth of July			
2002 (4) THU	26 [10]	30 [11]	
2001 (1) WED	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]	
Labor Day			
2002 (3) MON	13 [7]	13 [7]	
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]	
Thanksgiving			
2002 (4) THU	18 [8]	20 [8]	
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]	
Christmas			
2002 (1) WED	0 [0]	0 [0]	
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]	
New Years			
2002 (1) WED	4 [0]	4 [0]	
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]	

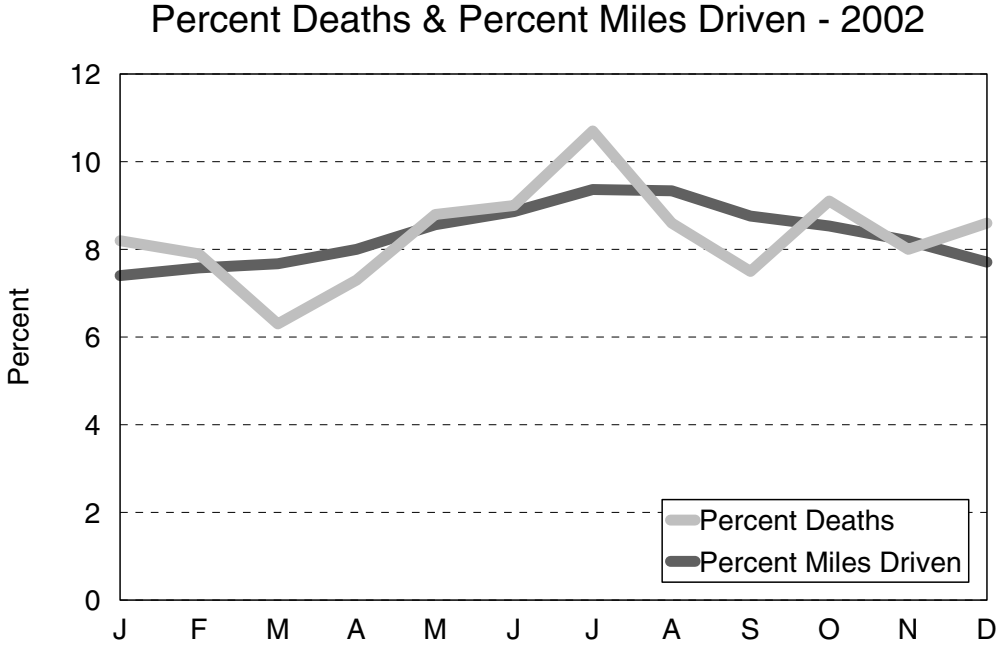


Figures in parentheses in the 1st column show number of full days in each holiday period.
Deaths are for these days plus six hours of the preceding day.
Figures in brackets in the 2nd and 3rd columns show the number of alcohol-related fatal crashes and deaths.

5 YEAR

MOTOR VEHICLE DEATHS AND MILEAGE BY MONTH

Month	TRAFFIC DEATHS					2002 PERCENTAGES	
	1998	1999	2000	2001	2002	Percent Deaths	Percent Miles Driven
January	116	76	121	79	105	8.2	7.40
February	71	84	83	99	101	7.9	7.58
March	97	92	70	102	81	6.3	7.67
April	91	98	107	83	93	7.3	8.00
May	113	125	114	106	112	8.8	8.56
June	120	116	136	113	115	9.0	8.86
July	133	128	135	143	137	10.7	9.37
August	116	160	133	131	110	8.6	9.34
September	123	128	135	143	96	7.5	8.76
October	126	129	124	120	117	9.1	8.53
November	117	130	118	109	102	8.0	8.20
December	144	120	106	100	110	8.6	7.71
Totals	1,367	1,386	1,382	1,328	1,279	100.0	100.0



The above chart shows that the ***percent deaths*** were lower for the months of March, April, August, and September than for the other months in 2002 when compared to the ***percent miles driven***.

1 YEAR

2001 - 2002 SUMMARY TRENDS

- Michigan experienced a **3.7** percent decrease in traffic fatalities, as well as a **0.2** percent increase in injuries and a **1.3** percent decrease in crashes.
- Deaths among vehicle occupants (drivers and passengers) decreased **4.7** percent.
- Persons sustaining "A" level injuries (the most serious) increased **0.2** percent.

	2001	2002	% CHANGE
NUMBER OF CRASHES			
Fatal Crashes	1,206	1,175	-2.6
Personal Injury Crashes	80,922	80,567	-0.4
Property Damage Crashes	318,685	313,773	-1.5
Total	**400,813**	**395,515**	**-1.3**
ALCOHOL-INVOLVED CRASHES			
Fatal Crashes	419	384	-8.4
Personal Injury Crashes	6,484	6,575	1.4
Property Damage Crashes	8,876	8,890	0.2
Total	**15,779**	**15,849**	**0.4**
ALCOHOL-INVOLVED FATAL CRASHES			
Had Been Drinking (HBD)	419 (34.7)	384 (32.7)	-8.4
Had Not (HNBD)/Not Known If Drinking	787 (65.3)	791 (67.3)	0.5
PERSONS IN CRASHES			
Killed	1,328	1,279	-3.7
Injured	112,294	112,484	0.2
Not Injured	530,363	528,529	-0.3
Unknown Injury	78,567	72,365	-7.9
Total	**722,552**	**714,657**	**-1.1**
PERSONS IN ALCOHOL-INVOLVED CRASHES			
Killed	461	422	-8.5
Injured	9,431	9,414	-0.2
Not Injured	15,141	15,151	0.1
Unknown Injury	2,020	2,061	2.0
Total	**27,053**	**27,048**	**0.0**
PERSONS INJURED BY GENDER			
Male	50,835	50,514	-0.6
Female	57,318	57,202	-0.2
Unknown Gender	4,141	4,768	15.1
Total	**112,294**	**112,484**	**0.2**
PERSONS INJURED BY SEVERITY			
"A" Injury	10,530	10,556	0.2
"B" Injury	26,350	27,771	5.4
"C" Injury	75,414	74,157	-1.7
Total	**112,294**	**112,484**	**0.2**

Note: The 2000 thru 2002 information provided for alcohol contains data for alcohol-related crashes only.

1 YEAR

Due to data processing errors ~800 pedestrians and ~700 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)

	2001	2002	% CHANGE
PERSONS KILLED BY GENDER			
Male	852	854	0.2
Female	452	398	-11.9
Unknown Gender	24	27	12.5
Total	**1,328**	**1,279**	**-3.7**
PERSONS KILLED			
Driver	714	709	-0.7
Passenger	297	254	-14.5
Pedestrian	160	173	8.1
Bicyclist	26	20	-23.1
Motorcyclist	90	82	-8.9
Farm Equipment	3	1	-66.7
Train Engineer	0	0	---
Snowmobile	4	9	125.0
ORV/ATV	15	10	-33.3
Other/Unknown	19	21	10.5
Total	**1,328**	**1,279**	**-3.7**
RESTRAINT USE BY DRIVER			
"Reported Restrained" - Killed	336	357	6.3
"Reported Not Restrained" - Killed	290	247	-14.8
"Reported Restrained" - Injured	65,720	64,963	-1.2
"Reported Not Restrained" - Injured	4,627	4,377	-5.4
RESTRAINT USE BY INJURED PASSENGER			
"Reported Restrained" -Killed	133	121	-9.0
"Reported Not Restrained" - Killed	128	107	-16.4
"Reported Restrained" - Injured	21,374	20,169	-5.6
"Reported Not Restrained" - Injured	4,114	3,698	-10.1
DRIVER AGE 16-19 INVOLVED			
Fatal Crashes	200	201	0.5
Personal Injury Crashes	17,920	17,804	-0.6
Property Damage Crashes	54,827	55,501	1.2
Total All Crashes	**72,947**	**73,506**	**0.8**
Persons Killed	230	233	1.3
Persons Injured	26,593	26,658	0.2
DRIVER AGE 65 & OVER INVOLVED			
Fatal Crashes	217	196	-9.7
Personal Injury Crashes	10,113	10,055	-0.6
Property Damage Crashes	32,052	31,683	-1.2
Total All Crashes	**42,382**	**41,934**	**-1.1**
Persons Killed	233	212	-9.0
Persons Injured	14,687	14,784	0.7

MORE MICHIGAN CRASH FACTS

CRASH FACTS	2001	2002	% Change
Licensed Drivers	7,090,899	7,141,883	0.7
Registered Vehicles in Michigan	8,603,195	8,690,326	1.0
Michigan Population	9,990,817	10,050,446	0.6
Drivers Involved in Crashes	687,836	677,527	-1.5
Vehicles Involved in Crashes	689,122	678,990	-1.5
Occupants Involved in Crashes	849,316	835,576	-1.6
Estimated MV Mileage Traveled (thousands)	96,428,062	98,173,158	1.8
Death Rate Per 100 Million Vehicle Miles	1.4	1.3	-7.1
Fatal Crash Rate Per 100 Million Veh Miles	1.3	1.2	-7.7

Vehicle mileage increased 1.8 percent and the death rate per 100 million vehicle miles decreased by 7.1 percent to 1.3.

2002 COST OF CRASHES IN MICHIGAN

The cost estimate for Michigan crashes in 2002 is **$9,666,083,200**. This estimate is based on the National Safety Council's cost estimating procedures. Average comprehensive costs are based on the following figures:

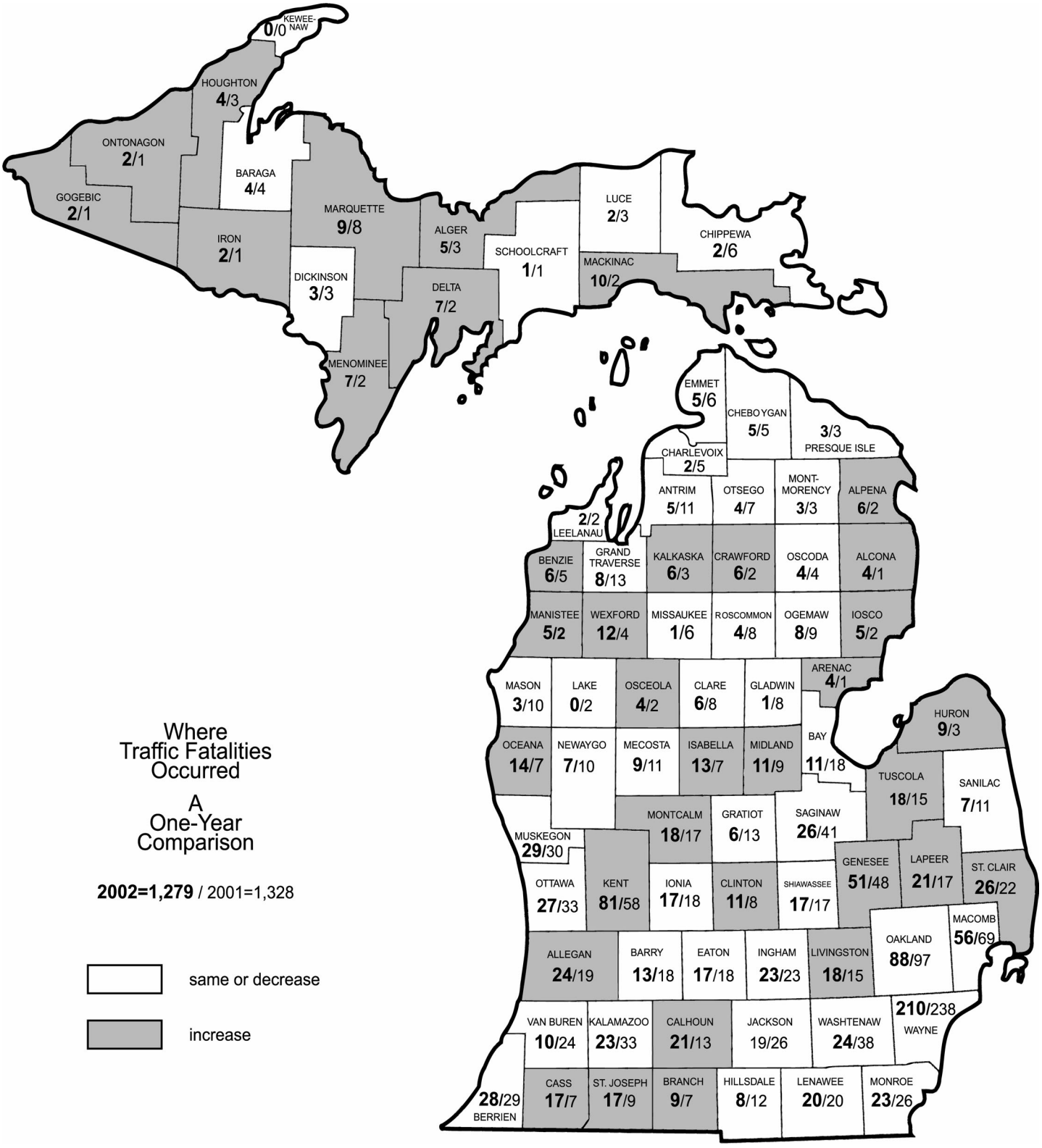
Comprehensive Costs, 2002

Death	$3,470,000
Incapacitating injury	$172,000
Nonincapacitating evident injury	$44,200
Possible injury	$21,000
No injury	$2,000

These cost estimates are not intended for comparisons to previous years. Deaths and injuries are calculated by number of persons. "No injury" is calculated per crash.

1 YEAR

WHERE TRAFFIC FATALITIES OCCURRED



Where Traffic Fatalities Occurred

A One-Year Comparison

2002=1,279 / 2001=1,328

same or decrease

increase

MICHIGAN OHSP Office of Highway Safety Planning

MOTOR VEHICLE TRAFFIC DEATHS IN MICHIGAN BY MONTH

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
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
2002	105	101	81	93	112	115	137	110	96	117	102	110	1,279

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
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
2002	1,279	112,484	395,515	98,173.2	8,690,326	1.3

* Excludes trailers and trailer coaches, and includes moped

2002

Special Focus

Red-Light-Running Heavy Truck/Bus

RED-LIGHT-RUNNING CRASHES

INTERSECTION CRASH TYPE	Crashes	MOST SEVERE OUTCOME IN CRASH				
		Fatal	Injury			PDO
			A	B	C	
Related to intersection	122,361	339	2,814	7,790	21,735	89,683
In intersection	62,715	268	1,983	5,114	12,678	42,672
with traffic control signal	28,142	79	870	2,329	6,093	18,771
with hazardous action	**7,845**	33	365	923	2,092	4,432

"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 **7,845** crashes.

RED-LIGHT-RUNNING - MOST SEVERE OUTCOME IN CRASH

SPEED LIMIT	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
Stopped	1	0	0	0	1	0
15 miles per hour	2	0	0	1	0	1
20 miles per hour	3	0	0	0	0	3
25 miles per hour	858	1	25	83	228	521
30 miles per hour	1,287	3	46	136	358	744
35 miles per hour	2,204	5	91	234	597	1,277
40 miles per hour	958	5	54	133	245	521
45 miles per hour	1,511	9	81	213	386	822
50 miles per hour	309	1	21	42	82	163
55 miles per hour	334	9	32	46	86	161
60 miles per hour	2	0	0	1	0	1
70 miles per hour	1	0	0	0	0	1
Unknown	375	0	15	34	109	217
TOTAL	7,845	33	365	923	2,092	4,432

CRASH TYPE	MOST SEVERE OUTCOME IN CRASH					
	Crashes	Fatal	Injury			PDO
			A	B	C	
Single Vehicle	42	0	6	9	16	11
Head on	80	0	5	16	24	35
Head on left	746	2	46	102	195	401
Angle	6,566	31	293	762	1,777	3,703
Rear end	46	0	1	3	12	30
Rear end left	18	0	3	0	1	14
Rear end right	2	0	0	0	0	2
Sideswipe same direction	90	0	4	3	12	71
Sideswipe opposite direction	61	0	1	5	8	47
Other	155	0	3	18	38	96
Unknown	39	0	3	5	9	22
TOTAL	7,845	33	365	923	2,092	4,432

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	18	0	2	4	4	8
Drinking Involved	267	3	34	56	70	104
Pedestrian Involved	33	0	8	6	14	5
Bicyclist Involved	56	0	7	19	15	15
Snowmobile Involved	1	0	0	0	1	0
Motorcycle Involved	29	0	6	11	7	5
Train Involved	1	0	0	0	1	0
Truck/Bus Involved	310	8	24	45	81	152
Emergency Vehicle Involved	61	0	6	9	19	27
Driver Hazardous Citation	4,638	3	229	590	1,306	2,510

POSSIBLE CONDITIONS OF DRIVER*	MOST SEVERE OUTCOME IN CRASH					
	Conditions Coded by Police	Fatal	Injury			PDO
			A	B	C	
Appeared Normal	6,114	20	269	728	1,653	3,444
Had Been Drinking	240	3	32	51	66	88
Illegal Drug Use	4	0	1	1	2	0
Sick	22	0	0	3	11	8
Fatigue	20	0	1	3	7	9
Asleep	3	0	1	0	1	1
Medication	16	0	0	4	6	6
Driver Distracted	136	1	11	17	39	68
Using Cellular Phone	54	0	2	8	15	29
Unknown	443	8	33	43	98	261

*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	7,529	43.1	90	65.7	1,658	50.9
Turning left	1,392	8.0	7	5.1	212	6.5
Turning right	1,376	7.9	2	1.5	118	3.6
Stopped on roadway	1,174	6.7	6	4.4	250	7.7
In prior crash	8	0.0	0	0.0	4	0.1
Changing lanes	722	4.1	0	0.0	98	3.0
Backing	1,039	5.9	3	2.2	63	1.9
Slowing/stopping on roadway	1,178	6.7	5	3.6	261	8.0
Slowing/stopping other	23	0.1	0	0.0	6	0.2
Starting up on roadway	372	2.1	0	0.0	77	2.4
Starting up other	16	0.1	0	0.0	4	0.1
Entering parking	37	0.2	0	0.0	1	0.0
Leaving parking	29	0.2	0	0.0	2	0.1
Entering roadway	177	1.0	1	0.7	40	1.2
Leaving roadway	30	0.2	0	0.0	6	0.2
Making U-turn	37	0.2	0	0.0	10	0.3
Overtaking or passing	129	0.7	0	0.0	13	0.4
Avoiding object	17	0.1	0	0.0	5	0.2
Avoiding animal	5	0.0	0	0.0	0	0.0
Avoiding pedestrian	5	0.0	1	0.7	2	0.1
Avoiding vehicle (front/back)	189	1.1	7	5.1	58	1.8
Avoiding vehicle (angle)	80	0.5	3	2.2	16	0.5
Driverless moving	13	0.1	0	0.0	1	0.0
Parked	395	2.3	6	4.4	86	2.6
Crossing at intersection	0	0.0	0	0.0	0	0.0
Crossing not at intersection	0	0.0	0	0.0	0	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	0.0	0	0.0	0	0.0
In roadway against traffic	0	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	0	0.0	0	0.0	0	0.0
Not in roadway	0	0.0	0	0.0	0	0.0
Other	35	0.2	0	0.0	5	0.2
Unknown	1,469	8.4	6	4.4	264	8.1
Total	17,476	100.0	137	100.0	3,260	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	30	0.2	0	0.0	7	0.2
Cross center/median	20	0.1	0	0.0	3	0.1
Ran off road left	23	0.1	0	0.0	1	0.0
Ran off road right	31	0.2	0	0.0	6	0.2
Re-enter road	3	0.0	0	0.0	2	0.1
Overturn	216	1.2	2	1.5	97	3.0
Separation of units	42	0.2	1	0.7	3	0.1
Fire/explosion	41	0.2	0	0.0	1	0.0
Immersion	1	0.0	0	0.0	0	0.0
Jackknife	81	0.5	0	0.0	11	0.3
Downhill runaway	2	0.0	0	0.0	0	0.0
Cargo loss/shift	229	1.3	1	0.7	14	0.4
Individual fell off	8	0.0	0	0.0	5	0.2
Other noncollision	214	1.2	0	0.0	20	0.6
NONCOLLISION Subtotal	941	5.4	4	2.9	170	5.2

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	51	0.3	6	4.4	42	1.3
Pedalcycle	21	0.1	2	1.5	14	0.4
Motor vehicle in transport	11,372	65.1	113	82.5	2,406	73.8
Parked motor vehicle	638	3.7	1	0.7	24	0.7
Railway train	5	0.0	0	0.0	2	0.1
Animal	466	2.7	0	0.0	5	0.2
Other nonfixed objects	195	1.1	0	0.0	16	0.5
COLLISION NONFIXED Subtotal	12,748	72.9	122	89.1	2,509	77.0

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	96	0.5	1	0.7	11	0.3
Bridge parapet end	5	0.0	0	0.0	1	0.0
Bridge rail	12	0.1	0	0.0	1	0.0
Guardrail face	47	0.3	1	0.7	9	0.3
Guardrail end	9	0.1	1	0.7	1	0.0
Median barrier	32	0.2	0	0.0	12	0.4
Highway traffic sign post	63	0.4	0	0.0	1	0.0
Signal post	17	0.1	0	0.0	0	0.0
Luminaire/light support	49	0.3	0	0.0	4	0.1
Utility pole	138	0.8	0	0.0	8	0.2
Other pole	31	0.2	0	0.0	2	0.1
Culvert	8	0.0	0	0.0	4	0.1
Curb	12	0.1	0	0.0	3	0.1
Ditch	117	0.7	0	0.0	34	1.0
Embankment	35	0.2	0	0.0	11	0.3
Fence	16	0.1	0	0.0	1	0.0
Mailbox	27	0.2	0	0.0	0	0.0
Tree	97	0.6	1	0.7	20	0.6
Rail crossing signal	24	0.1	0	0.0	0	0.0
Building	22	0.1	0	0.0	5	0.2
Traffic island	1	0.0	0	0.0	0	0.0
Fire hydrant	31	0.2	0	0.0	0	0.0
Impact attenuator	1	0.0	0	0.0	1	0.0
Other fixed object	246	1.4	0	0.0	8	0.2
COLLISION FIXED Subtotal	1,136	6.5	4	2.9	137	4.2

	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	2,651	15.2	7	5.1	444	13.6
TOTAL MOST HARMFUL EVENT	17,476	100.0	137	100.0	3,260	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	2,296	13.1	11	8.0	272	8.3
Head On	294	1.7	36	26.3	109	3.3
Head On - Left Turn	193	1.1	4	2.9	80	2.5
Angle	2,870	16.4	49	35.8	819	25.1
Rear End	3,986	22.8	19	13.9	1,041	31.9
Rear End - Left Turn	147	0.8	2	1.5	46	1.4
Rear End - Right Turn	146	0.8	0	0.0	23	0.7
Sideswipe - Same Direction	4,387	25.1	3	2.2	470	14.4
Sideswipe - Opposite Direct	1,028	5.9	6	4.4	128	3.9
Other	1,952	11.2	6	4.4	239	7.3
Unknown	177	1.0	1	0.7	33	1.0
Total	17,476	100.0	137	100.0	3,260	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	7,985	45.7	105	76.6	1,661	51.0	13	0.5
Speed too fast	465	2.7	0	0.0	133	4.1	192	7.0
Speed too slow	11	0.1	0	0.0	3	0.1	4	0.1
Failed to yield	891	5.1	3	2.2	229	7.0	377	13.8
Disregard traffic control	200	1.1	4	2.9	88	2.7	129	4.7
Drove wrong way	2	0.0	0	0.0	0	0.0	1	0.0
Drove left of center	99	0.6	2	1.5	11	0.3	30	1.1
Improper passing	129	0.7	0	0.0	19	0.6	27	1.0
Improper lane use	866	5.0	0	0.0	92	2.8	217	7.9
Improper turn	756	4.3	0	0.0	47	1.4	201	7.3
Improper/no signal	34	0.2	0	0.0	3	0.1	11	0.4
Improper backing	881	5.0	1	0.7	41	1.3	229	8.4
Unable to stop in assured clear distance	1,561	8.9	3	2.2	440	13.5	693	25.3
Reckless driving	19	0.1	0	0.0	5	0.2	8	0.3
Careless/Negligent driving	339	1.9	3	2.2	105	3.2	190	6.9
Other	1,687	9.7	2	1.5	156	4.8	337	12.3
Unknown	1,551	8.9	14	10.2	227	7.0	77	2.8
Total	17,476	100.0	137	100.0	3,260	100.0	2,736	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	15,811	90.5	123	89.8	2,986	91.6
Median	78	0.4	2	1.5	25	0.8
Shoulder	559	3.2	8	5.8	105	3.2
Outside of Shoulder/Curb	613	3.5	3	2.2	98	3.0
Gore	18	0.1	0	0.0	2	0.1
Other/Unknown	397	2.3	1	0.7	44	1.3
Total	17,476	100.0	137	100.0	3,260	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.	485	2.8	9	6.6	107	3.3
03:00 a.m. - 05:59 a.m.	531	3.0	11	8.0	116	3.6
06:00 a.m. - 08:59 a.m.	3,022	17.3	24	17.5	572	17.5
09:00 a.m. - 11:59 a.m.	3,592	20.6	26	19.0	641	19.7
12:00 noon - 02:59 p.m.	3,822	21.9	23	16.8	703	21.6
03:00 p.m. - 05:59 p.m.	3,329	19.0	23	16.8	585	17.9
06:00 p.m. - 08:59 p.m.	1,163	6.7	9	6.6	252	7.7
09:00 p.m. - 11:59 p.m.	645	3.7	10	7.3	145	4.4
Unknown	887	5.1	2	1.5	139	4.3
Total	17,476	100.0	137	100.0	3,260	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	2,046	11.7	14	10.2	423	13.0
U.S. & Michigan Roads	3,750	21.5	58	42.3	789	24.2
County & City Roads	11,680	66.8	65	47.4	2,048	62.8
Total	17,476	100.0	137	100.0	3,260	100.0

Please see foreword regarding roadway type classification issue.

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	451	2.6	5	3.6	82	2.5
Monday	3,343	19.1	26	19.0	652	20.0
Tuesday	3,299	18.9	21	15.3	582	17.9
Wednesday	3,214	18.4	27	19.7	564	17.3
Thursday	3,125	17.9	21	15.3	575	17.6
Friday	3,103	17.8	28	20.4	597	18.3
Saturday	941	5.4	9	6.6	208	6.4
Total	17,476	100.0	137	100.0	3,260	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	14,196	81.2	125	91.2	2,715	83.3
Female	1,809	10.4	6	4.4	331	10.2
Unknown	1,471	8.4	6	4.4	214	6.6
Total	17,476	100.0	137	100.0	3,260	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	13,051	74.7	115	83.9	2,408	73.9
2 occupants	1,308	7.5	5	3.6	268	8.2
3 occupants	271	1.6	1	0.7	71	2.2
4 occupants	142	0.8	0	0.0	49	1.5
5 occupants	85	0.5	0	0.0	23	0.7
6 + occupants	842	4.8	6	4.4	180	5.5
0 occupants	379	2.2	5	3.6	80	2.5
Unknown	1,398	8.0	5	3.6	181	5.6
Total	17,476	100.0	137	100.0	3,260	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	10,535	70.4	91	61.5	2,371	69.6
Van and Motorhome	1,280	8.5	11	7.4	282	8.3
Pickup	2,102	14.0	26	17.6	490	14.4
Small Truck (under 10,000 lbs.)	372	2.5	3	2.0	79	2.3
Motorcycle	43	0.3	6	4.1	24	0.7
Moped	4	0.0	0	0.0	1	0.0
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	4	0.0	0	0.0	2	0.1
Off Road Vehicle	0	0.0	0	0.0	0	0.0
Other	72	0.5	0	0.0	17	0.5
Unknown	560	3.7	11	7.4	140	4.1
Subtotal	14,972	100.0	148	100.0	3,406	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	7,355	42.1	90	65.7	1,420	43.6
Commercial Vehicle: Group B	3,391	19.4	28	20.4	637	19.5
Commercial Vehicle: Group C	493	2.8	2	1.5	87	2.7
Other Truck	791	4.5	3	2.2	164	5.0
Unknown Truck	5,446	31.2	14	10.2	952	29.2
Subtotal	17,476	100.0	137	100.0	3,260	100.0
Total Vehicle Types in Heavy Truck/Bus Crashes	32,448		285		6,666	

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	2	0.4	11	0.5	69	0.4	433	0.4	19	0.8
Speed too fast	132	24.6	60	2.7	7,872	40.6	3,351	3.4	253	10.0
Speed too slow	0	0.0	4	0.2	59	0.3	185	0.2	8	0.3
Failed to yield	5	0.9	372	16.9	81	0.4	28,736	29.3	529	20.9
Disregard traffic control	11	2.0	118	5.4	128	0.7	7,065	7.2	188	7.4
Drove wrong way	1	0.2	0	0.0	15	0.1	133	0.1	4	0.2
Drove left of center	5	0.9	25	1.1	185	1.0	954	1.0	50	2.0
Improper passing	1	0.2	26	1.2	66	0.3	1,101	1.1	83	3.3
Improper lane use	25	4.7	192	8.7	423	2.2	4,087	4.2	213	8.4
Improper turn	47	8.8	154	7.0	81	0.4	2,399	2.4	55	2.2
Improper/no signal	0	0.0	11	0.5	8	0.0	205	0.2	6	0.2
Improper backing	38	7.1	191	8.7	1,140	5.9	1,624	1.7	25	1.0
Unable to stop in assured clear distance	25	4.7	668	30.4	971	5.0	39,225	40.0	665	26.3
Reckless driving	2	0.4	6	0.3	739	3.8	396	0.4	22	0.9
Careless/Negligent driving	95	17.7	95	4.3	4,286	22.1	2,233	2.3	198	7.8
Other	131	24.4	205	9.3	2,598	13.4	3,144	3.2	143	5.7
Unknown	17	3.2	60	2.7	666	3.4	2,737	2.8	69	2.7
Total Cited Vehicles	537	100.0	2,198	100.0	19,387	100.0	98,008	100.0	2,530	100.0
Percent of Total Vehicles		15.0		15.8		11.5		22.0		19.0
Vehicles with No Citation Issued	3,052	85.0	11,673	84.2	148,969	88.5	348,048	78.0	10,792	81.0
Total Vehicles Involved	3,589	100.0	13,871	100.0	168,356	100.0	446,056	100.0	13,322	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*	6	0	0	5	270	6	264	0	0	0	2	0	2
1	2	0	1	1	259	2	257	0	0	0	5	0	3
2	6	0	1	5	274	1	273	0	0	0	20	2	17
3	16	0	6	10	348	2	344	0	0	0	29	1	26
4	30	0	12	17	359	2	356	17	0	13	30	2	26
5	35	0	20	14	392	1	391	22	0	20	49	3	40
6	23	0	12	11	387	3	384	29	0	22	48	0	45
7	21	0	13	8	409	2	407	37	0	32	60	0	57
8	21	0	11	10	449	1	448	53	0	44	49	3	39
9	40	0	27	13	424	0	424	64	0	58	53	1	49
10	42	2	26	14	451	3	448	85	0	67	45	1	38
11	55	0	35	19	477	2	475	108	1	92	61	1	55
12	74	0	41	30	528	3	525	124	1	107	78	4	70
13	166	0	70	89	508	8	500	145	0	120	87	2	74
14	308	3	95	207	692	3	688	134	3	105	87	2	80
15	1,125	2	203	891	1,059	10	1,048	109	0	90	89	5	73
16	16,955	22	2,115	14,603	1,328	14	1,286	70	0	60	68	1	59
17	21,126	20	2,660	18,135	1,294	14	1,251	47	1	41	62	2	52
18	21,755	25	2,864	18,518	1,069	7	1,041	50	0	41	65	2	50
19	19,967	28	2,673	16,942	881	13	833	44	0	39	59	5	48
20	18,292	22	2,448	15,528	695	6	654	47	0	41	57	1	54
21	17,449	22	2,267	14,845	705	3	670	37	0	29	54	1	48
22	15,778	18	2,149	13,333	606	5	575	30	1	25	47	4	39
23	14,763	17	1,924	12,574	475	7	441	20	1	17	42	2	35
24	13,918	21	1,794	11,842	464	8	431	19	0	16	42	1	40
25	12,674	16	1,623	10,800	422	7	392	21	0	20	37	3	29
26	11,827	16	1,495	10,089	345	3	318	11	0	10	26	3	22
27	11,678	6	1,489	9,950	340	3	311	17	0	12	31	2	28
28	11,571	8	1,486	9,845	370	6	327	22	0	20	28	0	25
29	11,489	9	1,436	9,816	311	5	284	14	1	12	35	0	33
30	12,214	19	1,596	10,362	340	2	307	18	0	13	32	2	27
31	12,956	18	1,594	11,086	300	1	266	15	0	12	34	1	27
32	12,488	8	1,546	10,680	319	2	282	13	1	11	26	3	21
33	11,821	15	1,478	10,115	285	0	254	22	1	18	27	3	20
34	11,534	13	1,483	9,802	275	2	256	14	0	8	44	6	36
35	11,749	10	1,351	10,143	264	1	241	15	0	14	31	3	24
36	11,651	13	1,459	9,957	277	4	241	24	0	19	33	4	24
37	11,660	19	1,400	10,008	293	2	258	17	0	13	36	2	29
38	12,236	15	1,515	10,464	292	6	254	25	1	21	33	5	27
39	12,275	16	1,425	10,631	271	2	234	18	0	13	27	1	23
40	12,241	12	1,481	10,531	271	4	237	27	1	24	38	3	34
41	11,937	9	1,446	10,249	271	2	246	23	0	18	38	4	30

* 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	11,609	10	1,438	9,934	279	0	245	23	0	20	35	4	30
43	11,512	16	1,437	9,831	248	2	213	23	1	21	36	3	29
44	11,172	11	1,455	9,506	267	5	234	17	0	16	44	5	35
45	11,133	16	1,393	9,503	263	4	236	22	0	19	43	2	38
46	10,611	11	1,318	9,065	257	3	227	25	0	24	40	4	35
47	10,316	19	1,238	8,873	265	4	226	20	0	18	31	2	25
48	9,874	8	1,225	8,451	227	2	202	15	0	15	34	2	28
49	9,072	8	1,161	7,755	213	2	193	13	0	6	33	3	25
50	9,043	8	1,150	7,711	229	2	202	16	0	12	31	4	26
51	8,452	10	1,123	7,151	212	1	185	16	0	14	33	5	25
52	8,019	10	999	6,865	211	1	187	11	0	9	28	2	24
53	7,725	7	980	6,600	226	1	208	13	1	9	17	1	16
54	7,582	9	963	6,456	156	1	141	8	0	8	16	0	12
55	7,353	8	901	6,321	206	3	189	10	0	8	20	2	17
56	5,686	6	769	4,825	160	1	144	11	0	11	19	1	18
57	5,472	5	739	4,623	169	0	155	7	0	7	12	1	10
58	5,267	4	676	4,484	151	0	140	9	0	7	19	1	15
59	5,530	5	731	4,714	158	0	146	7	0	6	7	0	7
60	4,909	6	612	4,201	148	1	135	4	0	4	25	2	21
61	4,126	4	469	3,579	105	1	96	6	0	6	10	2	7
62	3,720	6	464	3,186	105	0	97	9	0	7	11	0	10
63	3,411	16	418	2,928	106	3	98	3	0	3	7	2	5
64	3,247	6	415	2,765	111	1	104	4	0	2	13	3	9
65	2,936	7	319	2,569	119	0	115	2	0	2	6	0	5
66	2,824	4	379	2,396	105	2	98	5	1	4	8	2	6
67	2,739	6	329	2,340	101	2	97	4	0	3	12	1	9
68	2,453	4	304	2,098	100	2	95	3	1	2	9	0	8
69	2,422	3	305	2,059	93	3	85	1	0	1	8	1	5
70	2,474	1	333	2,096	94	2	89	0	0	0	11	1	8
71	2,397	4	337	2,012	89	1	86	3	0	3	6	2	4
72	2,359	8	301	2,013	102	1	96	2	0	2	8	5	3
73	2,281	2	280	1,962	114	2	102	4	0	4	7	0	6
74	2,237	8	272	1,912	93	1	89	5	1	2	6	1	5
75	2,187	12	308	1,824	100	1	94	1	1	0	8	0	8
76	2,011	8	291	1,682	97	2	90	4	0	4	6	0	6
77	1,967	4	284	1,650	98	2	91	3	0	3	10	0	8
78	1,787	6	248	1,500	73	1	66	2	0	2	9	2	5
79	1,721	7	243	1,443	74	3	71	2	0	2	8	2	6
80	1,552	5	219	1,303	70	0	66	1	0	1	7	1	5
81	1,428	5	232	1,175	61	0	60	1	0	1	8	1	5
82	1,225	11	181	1,015	80	4	76	3	1	2	4	0	4
83	1,005	7	159	823	59	2	54	1	0	1	4	2	2

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	938	2	152	774	58	4	54	0	0	0	4	1	3
85	749	3	102	627	36	1	35	0	0	0	4	0	3
86	591	5	88	489	31	2	29	1	0	1	6	4	2
87	478	1	75	391	23	1	21	0	0	0	1	0	1
88	328	1	53	268	27	1	25	0	0	0	2	0	2
89	264	4	42	210	29	1	28	0	0	0	1	1	0
90	185	3	27	151	18	1	15	0	0	0	4	0	4
91	133	3	16	111	11	1	10	0	0	0	2	2	0
92	90	2	14	72	14	0	14	0	0	0	0	0	0
93	60	2	13	45	7	0	7	0	0	0	0	0	0
94	39	2	9	28	7	0	7	0	0	0	1	0	0
95	29	0	9	20	1	0	1	0	0	0	0	0	0
96	14	0	1	12	5	0	5	0	0	0	0	0	0
97	9	0	1	8	1	0	1	0	0	0	0	0	0
98	2	0	0	2	1	0	1	0	0	0	0	0	0
99	4	0	1	3	2	0	2	0	0	0	0	0	0
100	3	0	0	3	2	0	2	0	0	0	0	0	0
101	1	0	1	0	3	0	3	0	0	0	0	0	0
102	1	0	1	0	2	0	2	0	0	0	0	0	0
Unknown	92,789	32	2,961	28,160	667	8	645	41	0	25	82	2	62
Totals	677,527	805	77,734	526,765	27,188	267	25,652	1,988	20	1,654	2,660	173	2,230
	*Includes 61,636 drivers with unknown injury severity				*Includes 44 passengers with unknown injury severity and 1,225 with no injury			*Includes 29 bicyclists with unknown injury severity and 285 with no injury			*Includes 64 pedestrians with unknown injury severity and 193 with no injury		

Due to data processing errors ~800 pedestrians and ~700 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 web site **www.michigantrafficcrashfacts.org**.

Nationally:

According to a policy statement by the American Academy of Pediatrics [9], 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	82,474	51.5	342	78.4	20,465	53.6
Turning left	13,244	8.3	18	4.1	3,795	9.9
Turning right	4,262	2.7	5	1.1	702	1.8
Stopped on roadway	12,267	7.7	7	1.6	2,945	7.7
In prior crash	220	0.1	0	0.0	67	0.2
Changing lanes	4,055	2.5	9	2.1	589	1.5
Backing	3,103	1.9	0	0.0	175	0.5
Slowing/stopping on roadway	15,175	9.5	10	2.3	3,242	8.5
Slowing/stopping other	184	0.1	0	0.0	44	0.1
Starting up on roadway	3,073	1.9	5	1.1	818	2.1
Starting up other	93	0.1	0	0.0	21	0.1
Entering parking	147	0.1	0	0.0	23	0.1
Leaving parking	513	0.3	0	0.0	101	0.3
Entering roadway	2,770	1.7	5	1.1	666	1.7
Leaving roadway	368	0.2	5	1.1	112	0.3
Making U-turn	318	0.2	1	0.2	95	0.2
Overtaking or passing	1,532	1.0	9	2.1	361	0.9
Avoiding object	256	0.2	0	0.0	78	0.2
Avoiding animal	720	0.4	0	0.0	208	0.5
Avoiding pedestrian	51	0.0	4	0.9	29	0.1
Avoiding vehicle (front/back)	1,578	1.0	4	0.9	397	1.0
Avoiding vehicle (angle)	677	0.4	1	0.2	184	0.5
Driverless moving	20	0.0	0	0.0	4	0.0
Parked	385	0.2	0	0.0	56	0.1
Crossing at intersection	37	0.0	0	0.0	33	0.1
Crossing not at intersection	25	0.0	0	0.0	22	0.1
Getting on/off vehicle	1	0.0	0	0.0	1	0.0
In roadway with traffic	3	0.0	0	0.0	3	0.0
In roadway against traffic	3	0.0	0	0.0	2	0.0
Standing/lying in roadway	2	0.0	0	0.0	2	0.0
Pushing/working on vehicle	3	0.0	0	0.0	1	0.0
Other working in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	7	0.0	0	0.0	6	0.0
Not in roadway	3	0.0	0	0.0	2	0.0
Other	160	0.1	1	0.2	53	0.1
Unknown	12,274	7.7	10	2.3	2,870	7.5
Total Drivers	160,003	100.0	436	100.0	38,172	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	748	0.5	0	0.0	235	0.6
Cross center/median	131	0.1	1	0.2	42	0.1
Ran off road left	222	0.1	0	0.0	49	0.1
Ran off road right	378	0.2	0	0.0	73	0.2
Re-enter road	19	0.0	0	0.0	6	0.0
Overturn	3,177	2.0	33	7.6	1,513	4.0
Separation of units	193	0.1	0	0.0	41	0.1
Fire/explosion	184	0.1	5	1.1	29	0.1
Immersion	16	0.0	1	0.2	1	0.0
Jackknife	29	0.0	0	0.0	7	0.0
Downhill runaway	14	0.0	0	0.0	3	0.0
Cargo loss/shift	99	0.1	0	0.0	12	0.0
Individual fell off	123	0.1	2	0.5	87	0.2
Other noncollision	388	0.2	0	0.0	88	0.2
NONCOLLISION Subtotal	5,721	3.6	42	9.6	2,186	5.7

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	503	0.3	32	7.3	421	1.1
Pedalcycle	412	0.3	4	0.9	317	0.8
Motor vehicle in transport	101,429	63.4	239	54.8	25,290	66.3
Parked motor vehicle	2,832	1.8	1	0.2	352	0.9
Railway train	22	0.0	2	0.5	6	0.0
Animal	9,671	6.0	0	0.0	232	0.6
Other nonfixed objects	1,114	0.7	0	0.0	117	0.3
COLLISION NONFIXED Subtotal	115,983	72.5	278	63.8	26,735	70.0

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	143	0.1	0	0.0	50	0.1
Bridge parapet end	32	0.0	0	0.0	5	0.0
Bridge rail	123	0.1	0	0.0	24	0.1
Guardrail face	988	0.6	2	0.5	181	0.5
Guardrail end	181	0.1	2	0.5	53	0.1
Median barrier	916	0.6	1	0.2	298	0.8
Highway traffic sign post	873	0.5	1	0.2	60	0.2
Signal post	69	0.0	0	0.0	11	0.0
Luminaire/light support	177	0.1	1	0.2	38	0.1
Utility pole	1,247	0.8	11	2.5	424	1.1
Other pole	319	0.2	0	0.0	49	0.1
Culvert	261	0.2	1	0.2	103	0.3
Curb	760	0.5	0	0.0	73	0.2
Ditch	3,089	1.9	4	0.9	761	2.0
Embankment	602	0.4	3	0.7	191	0.5
Fence	450	0.3	0	0.0	52	0.1
Mailbox	738	0.5	1	0.2	52	0.1
Tree	4,503	2.8	67	15.4	1,619	4.2
Rail crossing signal	16	0.0	0	0.0	2	0.0
Building	237	0.1	2	0.5	76	0.2
Traffic island	12	0.0	0	0.0	0	0.0
Fire hydrant	189	0.1	0	0.0	47	0.1
Impact attenuator	15	0.0	0	0.0	5	0.0
Other fixed object	943	0.6	4	0.9	185	0.5
COLLISION FIXED Subtotal	16,883	10.6	100	22.9	4,359	11.4

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	21,416	13.4	16	3.7	4,892	12.8
TOTAL MOST HARMFUL EVENT	160,003	100.0	436	100.0	38,172	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	34,931	21.8	165	37.8	7,223	18.9
Head On	2,893	1.8	86	19.7	1,287	3.4
Head On - Left Turn	6,478	4.0	11	2.5	2,636	6.9
Angle	36,810	23.0	129	29.6	10,754	28.2
Rear End	50,775	31.7	22	5.0	12,042	31.5
Rear End - Left Turn	2,397	1.5	1	0.2	669	1.8
Rear End - Right Turn	1,472	0.9	0	0.0	230	0.6
Sideswipe - Same Direction	13,095	8.2	4	0.9	1,350	3.5
Sideswipe - Opposite Direct	3,631	2.3	5	1.1	543	1.4
Other	5,807	3.6	13	3.0	1,115	2.9
Unknown	1,714	1.1	0	0.0	323	0.8
Total Drivers	160,003	100.0	436	100.0	38,172	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	137,114	85.7	311	71.3	31,928	83.6
Median	934	0.6	5	1.1	292	0.8
Shoulder	5,807	3.6	35	8.0	1,418	3.7
Outside of Shoulder/Curb	12,344	7.7	80	18.3	3,598	9.4
Gore	324	0.2	1	0.2	94	0.2
Other/Unknown	3,480	2.2	4	0.9	842	2.2
Total Drivers	160,003	100.0	436	100.0	38,172	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	7,896	4.9	28	6.4	1,828	4.8
U.S. & Michigan Roads	33,313	20.8	95	21.8	7,758	20.3
County & City Roads	118,794	74.2	313	71.8	28,586	74.9
Total Drivers	160,003	100.0	436	100.0	38,172	100.0

Please see foreword regarding roadway type classification issue.

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.	8,270	5.2	73	16.7	2,261	5.9
03:00 a.m. - 05:59 a.m.	3,878	2.4	31	7.1	997	2.6
06:00 a.m. - 08:59 a.m.	15,871	9.9	41	9.4	3,444	9.0
09:00 a.m. - 11:59 a.m.	14,897	9.3	32	7.3	3,518	9.2
12:00 noon – 02:59 p.m.	27,389	17.1	41	9.4	6,874	18.0
03:00 p.m. - 05:59 p.m.	39,914	24.9	74	17.0	9,643	25.3
06:00 p.m. - 08:59 p.m.	24,199	15.1	71	16.3	5,698	14.9
09:00 p.m. - 11:59 p.m.	16,492	10.3	62	14.2	3,786	9.9
Unknown	9,093	5.7	11	2.5	1,951	5.1
Total Drivers	160,003	100.0	436	100.0	38,172	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	63,661	39.8	103	23.6	13,451	35.2	139	0.3
Speed too fast	14,815	9.3	96	22.0	3,915	10.3	5,709	12.4
Speed too slow	250	0.2	1	0.2	54	0.1	96	0.2
Failed to yield	17,292	10.8	36	8.3	5,039	13.2	10,347	22.5
Disregard traffic control	3,843	2.4	37	8.5	1,665	4.4	2,466	5.4
Drove wrong way	85	0.1	2	0.5	23	0.1	40	0.1
Drove left of center	894	0.6	17	3.9	294	0.8	400	0.9
Improper passing	1,117	0.7	5	1.1	177	0.5	489	1.1
Improper lane use	3,225	2.0	1	0.2	390	1.0	1,589	3.5
Improper turn	1,685	1.1	0	0.0	333	0.9	818	1.8
Improper/no signal	209	0.1	0	0.0	31	0.1	65	0.1
Improper backing	2,304	1.4	0	0.0	81	0.2	800	1.7
Unable to stop in assured clear distance	29,079	18.2	7	1.6	6,669	17.5	16,054	34.9
Reckless driving	1,033	0.6	22	5.0	429	1.1	571	1.2
Careless\Negligent driving	4,911	3.1	29	6.7	1,773	4.6	3,047	6.6
Other	6,256	3.9	30	6.9	1,656	4.3	1,979	4.3
Unknown	9,344	5.8	50	11.5	2,192	5.7	1,395	3.0
Total Drivers	160,003	100.0	436	100.0	38,172	100.0	46,004	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. In all crashes they are “unable to stop in assured clear distance” more often than older drivers.

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	16,345	10.2	67	15.4	4,196	11.0
Monday	23,218	14.5	56	12.8	5,451	14.3
Tuesday	23,216	14.5	51	11.7	5,375	14.1
Wednesday	23,669	14.8	61	14.0	5,517	14.5
Thursday	23,436	14.6	54	12.4	5,419	14.2
Friday	28,438	17.8	63	14.4	6,823	17.9
Saturday	21,681	13.6	84	19.3	5,391	14.1
Total Drivers	160,003	100.0	436	100.0	38,172	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	88,251	55.2	311	71.3	20,046	52.5
Female	67,687	42.3	119	27.3	17,204	45.1
Unknown	4,065	2.5	6	1.4	922	2.4
Total Drivers	160,003	100.0	436	100.0	38,172	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	103,608	64.8	235	53.9	22,391	58.7
2 occupants	34,189	21.4	122	28.0	9,336	24.5
3 occupants	9,498	5.9	49	11.2	2,910	7.6
4 occupants	3,651	2.3	17	3.9	1,205	3.2
5 occupants	907	0.6	8	1.8	338	0.9
6 + occupants	351	0.2	0	0.0	122	0.3
0 occupants	451	0.3	0	0.0	72	0.2
Unknown	7,348	4.6	5	1.1	1,798	4.7
Total Drivers	160,003	100.0	436	100.0	38,172	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	124,201	77.6	317	72.7	29,991	78.6
Van and Motorhome	5,343	3.3	13	3.0	1,234	3.2
Pickup	22,274	13.9	68	15.6	4,653	12.2
Small Truck (under 10,000 lbs.)	3,123	2.0	8	1.8	721	1.9
Motorcycle	524	0.3	16	3.7	401	1.1
Moped	46	0.0	0	0.0	31	0.1
Go Cart	4	0.0	0	0.0	3	0.0
Snowmobile	79	0.0	1	0.2	49	0.1
Off Road Vehicle	83	0.1	2	0.5	67	0.2
Other	185	0.1	1	0.2	58	0.2
Unknown	3,343	2.1	5	1.1	807	2.1
CDL Truck/Bus (breakdown below)	798	0.5	5	1.1	157	0.4
Total Number of Drivers	160,003	100.0	436	100.0	38,172	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	244	30.6	3	60.0	47	29.9
Commercial Vehicle: Group B	207	25.9	2	40.0	41	26.1
Commercial Vehicle: Group C	39	4.9	0	0.0	8	5.1
Other Truck	92	11.5	0	0.0	22	14.0
Unknown Truck	216	27.1	0	0.0	39	24.8
Total Number of Drivers	798	100.0	5	100.0	157	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	191,690	50.6	810	76.0	43,296	50.3
Turning left	24,163	6.4	47	4.4	6,555	7.6
Turning right	9,306	2.5	12	1.1	1,438	1.7
Stopped on roadway	44,771	11.8	26	2.4	11,895	13.8
In prior crash	404	0.1	4	0.4	118	0.1
Changing lanes	7,387	1.9	20	1.9	1,033	1.2
Backing	8,884	2.3	5	0.5	461	0.5
Slowing/stopping on roadway	36,011	9.5	24	2.3	8,409	9.8
Slowing/stopping other	476	0.1	0	0.0	113	0.1
Starting up on roadway	7,031	1.9	12	1.1	1,677	1.9
Starting up other	197	0.1	0	0.0	46	0.1
Entering parking	489	0.1	0	0.0	52	0.1
Leaving parking	1,068	0.3	2	0.2	181	0.2
Entering roadway	4,788	1.3	8	0.8	1,116	1.3
Leaving roadway	585	0.2	8	0.8	173	0.2
Making U-turn	713	0.2	1	0.1	213	0.2
Overtaking or passing	2,595	0.7	24	2.3	502	0.6
Avoiding object	447	0.1	0	0.0	120	0.1
Avoiding animal	908	0.2	0	0.0	226	0.3
Avoiding pedestrian	120	0.0	3	0.3	54	0.1
Avoiding vehicle (front/back)	3,149	0.8	15	1.4	891	1.0
Avoiding vehicle (angle)	1,430	0.4	7	0.7	397	0.5
Driverless moving	53	0.0	0	0.0	9	0.0
Parked	1,825	0.5	4	0.4	204	0.2
Crossing at intersection	71	0.0	0	0.0	55	0.1
Crossing not at intersection	37	0.0	1	0.1	30	0.0
Getting on/off vehicle	3	0.0	0	0.0	2	0.0
In roadway with traffic	15	0.0	0	0.0	14	0.0
In roadway against traffic	6	0.0	0	0.0	4	0.0
Standing/lying in roadway	9	0.0	1	0.1	6	0.0
Pushing/working on vehicle	8	0.0	0	0.0	7	0.0
Other working in roadway	1	0.0	0	0.0	1	0.0
Playing in roadway	1	0.0	0	0.0	1	0.0
In roadway other reason	7	0.0	1	0.1	5	0.0
Not in roadway	10	0.0	0	0.0	8	0.0
Other	302	0.1	1	0.1	81	0.1
Unknown	29,882	7.9	30	2.8	6,663	7.7
Total Drivers	378,842	100.0	1,066	100.0	86,056	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	1,192	0.3	1	0.1	366	0.4
Cross center/median	233	0.1	0	0.0	82	0.1
Ran off road left	353	0.1	4	0.4	84	0.1
Ran off road right	627	0.2	0	0.0	147	0.2
Re-enter road	42	0.0	0	0.0	14	0.0
Overturn	4,274	1.1	54	5.1	2,145	2.5
Separation of units	551	0.1	2	0.2	108	0.1
Fire/explosion	398	0.1	4	0.4	51	0.1
Immersion	22	0.0	0	0.0	4	0.0
Jackknife	167	0.0	0	0.0	23	0.0
Downhill runaway	22	0.0	0	0.0	8	0.0
Cargo loss/shift	450	0.1	1	0.1	30	0.0
Individual fell off	239	0.1	14	1.3	183	0.2
Other noncollision	1,070	0.3	2	0.2	176	0.2
NONCOLLISION Subtotal	9,640	2.5	82	7.7	3,421	4.0

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	1,183	0.3	95	8.9	964	1.1
Pedalcycle	1,101	0.3	13	1.2	864	1.0
Motor vehicle in transport	239,217	63.1	672	63.0	60,861	70.7
Parked motor vehicle	6,173	1.6	9	0.8	662	0.8
Railway train	67	0.0	3	0.3	28	0.0
Animal	40,175	10.6	3	0.3	869	1.0
Other nonfixed objects	3,868	1.0	3	0.3	356	0.4
COLLISION NONFIXED Subtotal	291,784	77.0	798	74.9	64,604	75.1

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	320	0.1	3	0.3	90	0.1
Bridge parapet end	70	0.0	0	0.0	15	0.0
Bridge rail	248	0.1	1	0.1	47	0.1
Guardrail face	1,578	0.4	3	0.3	336	0.4
Guardrail end	249	0.1	4	0.4	73	0.1
Median barrier	1,597	0.4	4	0.4	540	0.6
Highway traffic sign post	1,109	0.3	1	0.1	85	0.1
Signal post	125	0.0	0	0.0	15	0.0
Luminaire/light support	307	0.1	3	0.3	87	0.1
Utility pole	1,706	0.5	11	1.0	587	0.7
Other pole	528	0.1	3	0.3	98	0.1
Culvert	337	0.1	3	0.3	114	0.1
Curb	984	0.3	2	0.2	133	0.2
Ditch	3,878	1.0	10	0.9	1,007	1.2
Embankment	839	0.2	10	0.9	268	0.3
Fence	624	0.2	0	0.0	82	0.1
Mailbox	964	0.3	1	0.1	73	0.1
Tree	5,469	1.4	79	7.4	1,837	2.1
Rail crossing signal	45	0.0	0	0.0	12	0.0
Building	309	0.1	1	0.1	131	0.2
Traffic island	25	0.0	0	0.0	6	0.0
Fire hydrant	223	0.1	0	0.0	42	0.0
Impact attenuator	20	0.0	0	0.0	15	0.0
Other fixed object	1,713	0.5	10	0.9	370	0.4
COLLISION FIXED Subtotal	23,267	6.1	149	14.0	6,063	7.0

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	54,151	14.3	37	3.5	11,968	13.9
TOTAL MOST HARMFUL EVENT	378,842	100.0	1,066	100.0	86,056	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	80,761	21.3	291	27.3	11,261	13.1
Head On	6,491	1.7	228	21.4	2,724	3.2
Head On - Left Turn	12,803	3.4	52	4.9	5,208	6.1
Angle	81,293	21.5	316	29.6	24,409	28.4
Rear End	123,519	32.6	80	7.5	31,733	36.9
Rear End - Left Turn	4,925	1.3	8	0.8	1,452	1.7
Rear End - Right Turn	4,109	1.1	0	0.0	728	0.8
Sideswipe - Same Direction	33,908	9.0	16	1.5	3,508	4.1
Sideswipe - Opposite Direct	9,768	2.6	26	2.4	1,403	1.6
Other	16,641	4.4	46	4.3	2,700	3.1
Unknown	4,624	1.2	3	0.3	930	1.1
Total Drivers	378,842	100.0	1,066	100.0	86,056	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	343,898	90.8	855	80.2	76,799	89.2
Median	1,612	0.4	12	1.1	521	0.6
Shoulder	8,908	2.4	41	3.8	2,164	2.5
Outside of Shoulder/Curb	16,084	4.2	127	11.9	4,651	5.4
Gore	453	0.1	6	0.6	143	0.2
Other/Unknown	7,887	2.1	25	2.3	1,778	2.1
Total Drivers	378,842	100.0	1,066	100.0	86,056	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	21,559	5.7	65	6.1	5,096	5.9
U.S. & Michigan Roads	83,098	21.9	317	29.7	18,840	21.9
County & City Roads	274,185	72.4	684	64.2	62,120	72.2
Total Drivers	378,842	100.0	1,066	100.0	86,056	100.0

Please see foreword regarding roadway type classification issue.

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.	11,997	3.2	126	11.8	3,072	3.6
03:00 a.m. - 05:59 a.m.	11,194	3.0	71	6.7	1,818	2.1
06:00 a.m. - 08:59 a.m.	51,712	13.7	105	9.8	10,337	12.0
09:00 a.m. - 11:59 a.m.	45,023	11.9	98	9.2	10,769	12.5
12:00 noon - 02:59 p.m.	64,828	17.1	148	13.9	16,274	18.9
03:00 p.m. - 05:59 p.m.	92,500	24.4	204	19.1	22,382	26.0
06:00 p.m. - 08:59 p.m.	52,845	13.9	177	16.6	11,204	13.0
09:00 p.m. - 11:59 p.m.	26,931	7.1	111	10.4	5,655	6.6
Unknown	21,812	5.8	26	2.4	4,545	5.3
Total Drivers	378,842	100.0	1,066	100.0	86,056	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	212,640	56.1	511	47.9	44,899	52.2	349	0.5
Speed too fast	17,880	4.7	119	11.2	4,948	5.7	5,202	8.1
Speed too slow	385	0.1	1	0.1	111	0.1	130	0.2
Failed to yield	27,979	7.4	58	5.4	7,901	9.2	14,851	23.2
Disregard traffic control	6,763	1.8	41	3.8	2,915	3.4	3,929	6.1
Drove wrong way	206	0.1	2	0.2	76	0.1	77	0.1
Drove left of center	1,678	0.4	54	5.1	574	0.7	686	1.1
Improper passing	2,001	0.5	5	0.5	301	0.3	694	1.1
Improper lane use	6,622	1.7	9	0.8	808	0.9	2,591	4.0
Improper turn	3,621	1.0	3	0.3	611	0.7	1,396	2.2
Improper/no signal	456	0.1	0	0.0	73	0.1	145	0.2
Improper backing	6,980	1.8	2	0.2	257	0.3	1,887	2.9
Unable to stop in assured clear distance	47,009	12.4	23	2.2	11,436	13.3	22,648	35.4
Reckless driving	1,115	0.3	17	1.6	428	0.5	525	0.8
Careless\Negligent driving	5,959	1.6	54	5.1	2,153	2.5	3,202	5.0
Other	13,449	3.6	72	6.8	3,317	3.9	3,639	5.7
Unknown	24,099	6.4	95	8.9	5,248	6.1	2,046	3.2
Total Drivers	378,842	100.0	1,066	100.0	86,056	100.0	63,997	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	32,415	8.6	135	12.7	7,834	9.1
Monday	58,544	15.5	130	12.2	13,047	15.2
Tuesday	59,097	15.6	123	11.5	12,998	15.1
Wednesday	59,095	15.6	141	13.2	13,007	15.1
Thursday	58,180	15.4	155	14.5	12,957	15.1
Friday	66,015	17.4	179	16.8	15,374	17.9
Saturday	45,496	12.0	203	19.0	10,839	12.6
Total Drivers	378,842	100.0	1,066	100.0	86,056	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	210,899	55.7	785	73.6	45,574	53.0
Female	157,898	41.7	268	25.1	38,360	44.6
Unknown	10,045	2.7	13	1.2	2,122	2.5
Total Drivers	378,842	100.0	1,066	100.0	86,056	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	270,652	71.4	715	67.1	57,158	66.4
2 occupants	58,923	15.6	192	18.0	15,903	18.5
3 occupants	17,620	4.7	79	7.4	5,021	5.8
4 occupants	7,586	2.0	39	3.7	2,326	2.7
5 occupants	2,545	0.7	8	0.8	792	0.9
6 + occupants	1,956	0.5	14	1.3	569	0.7
0 occupants	1,808	0.5	1	0.1	204	0.2
Unknown	17,752	4.7	18	1.7	4,083	4.7
Total Drivers	378,842	100.0	1,066	100.0	86,056	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	242,020	63.9	557	52.3	56,387	65.5
Van and Motorhome	35,239	9.3	89	8.3	8,113	9.4
Pickup	65,265	17.2	213	20.0	12,555	14.6
Small Truck (under 10,000 lbs.)	11,783	3.1	31	2.9	2,478	2.9
Motorcycle	2,177	0.6	62	5.8	1,628	1.9
Moped	102	0.0	1	0.1	68	0.1
Go Cart	2	0.0	0	0.0	1	0.0
Snowmobile	294	0.1	6	0.6	127	0.1
Off Road Vehicle	109	0.0	4	0.4	85	0.1
Other	1,151	0.3	3	0.3	271	0.3
Unknown	9,236	2.4	10	0.9	2,154	2.5
CDL Truck/Bus (breakdown below)	11,464	3.0	90	8.4	2,189	2.5
Total Number of Drivers	378,842	100.0	1,066	100.0	86,056	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	4,463	38.9	54	60.0	858	39.2
Commercial Vehicle: Group B	2,819	24.6	22	24.4	530	24.2
Commercial Vehicle: Group C	410	3.6	2	2.2	71	3.2
Other Truck	591	5.2	2	2.2	125	5.7
Unknown Truck	3,181	27.7	10	11.1	605	27.6
Total Number of Drivers	11,464	100.0	90	100.0	2,189	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	20,590	46.9	129	60.8	5,067	47.7
Turning left	4,911	11.2	34	16.0	1,477	13.9
Turning right	1,510	3.4	3	1.4	204	1.9
Stopped on roadway	3,916	8.9	6	2.8	1,129	10.6
In prior crash	38	0.1	0	0.0	18	0.2
Changing lanes	1,285	2.9	1	0.5	108	1.0
Backing	1,507	3.4	2	0.9	61	0.6
Slowing/stopping on roadway	3,145	7.2	2	0.9	814	7.7
Slowing/stopping other	43	0.1	0	0.0	12	0.1
Starting up on roadway	1,127	2.6	11	5.2	314	3.0
Starting up other	33	0.1	1	0.5	5	0.0
Entering parking	74	0.2	0	0.0	8	0.1
Leaving parking	255	0.6	0	0.0	63	0.6
Entering roadway	1,097	2.5	10	4.7	269	2.5
Leaving roadway	57	0.1	2	0.9	19	0.2
Making U-turn	129	0.3	1	0.5	31	0.3
Overtaking or passing	265	0.6	1	0.5	32	0.3
Avoiding object	35	0.1	0	0.0	6	0.1
Avoiding animal	41	0.1	0	0.0	10	0.1
Avoiding pedestrian	7	0.0	0	0.0	4	0.0
Avoiding vehicle (front/back)	228	0.5	0	0.0	72	0.7
Avoiding vehicle (angle)	120	0.3	0	0.0	36	0.3
Driverless moving	7	0.0	0	0.0	4	0.0
Parked	160	0.4	0	0.0	22	0.2
Crossing at intersection	13	0.0	0	0.0	9	0.1
Crossing not at intersection	8	0.0	1	0.5	7	0.1
Getting on/off vehicle	2	0.0	0	0.0	1	0.0
In roadway with traffic	2	0.0	0	0.0	2	0.0
In roadway against traffic	2	0.0	0	0.0	2	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	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	2	0.0	0	0.0	2	0.0
Other	37	0.1	1	0.5	10	0.1
Unknown	3,276	7.5	7	3.3	799	7.5
Total Drivers	43,923	100.0	212	100.0	10,617	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	89	0.2	0	0.0	26	0.2
Cross center/median	40	0.1	0	0.0	7	0.1
Ran off road left	24	0.1	0	0.0	10	0.1
Ran off road right	49	0.1	0	0.0	14	0.1
Re-enter road	5	0.0	0	0.0	2	0.0
Overturn	251	0.6	10	4.7	142	1.3
Separation of units	59	0.1	1	0.5	7	0.1
Fire/explosion	31	0.1	0	0.0	6	0.1
Immersion	3	0.0	1	0.5	1	0.0
Jackknife	15	0.0	0	0.0	3	0.0
Downhill runaway	3	0.0	0	0.0	2	0.0
Cargo loss/shift	17	0.0	0	0.0	1	0.0
Individual fell off	11	0.0	1	0.5	7	0.1
Other noncollision	107	0.2	0	0.0	16	0.2
NONCOLLISION Subtotal	704	1.6	13	6.1	244	2.3

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	175	0.4	8	3.8	148	1.4
Pedalcycle	177	0.4	2	0.9	126	1.2
Motor vehicle in transport	30,228	68.8	153	72.2	7,889	74.3
Parked motor vehicle	1,078	2.5	0	0.0	93	0.9
Railway train	10	0.0	1	0.5	3	0.0
Animal	3,196	7.3	0	0.0	76	0.7
Other nonfixed objects	351	0.8	0	0.0	28	0.3
COLLISION NONFIXED Subtotal	35,215	80.2	164	77.4	8,363	78.8

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	17	0.0	0	0.0	9	0.1
Bridge parapet end	5	0.0	0	0.0	1	0.0
Bridge rail	11	0.0	0	0.0	3	0.0
Guardrail face	85	0.2	0	0.0	14	0.1
Guardrail end	20	0.0	1	0.5	2	0.0
Median barrier	72	0.2	0	0.0	29	0.3
Highway traffic sign post	125	0.3	0	0.0	14	0.1
Signal post	9	0.0	0	0.0	2	0.0
Luminaire/light support	33	0.1	0	0.0	9	0.1
Utility pole	171	0.4	1	0.5	89	0.8
Other pole	44	0.1	0	0.0	14	0.1
Culvert	29	0.1	1	0.5	11	0.1
Curb	82	0.2	0	0.0	11	0.1
Ditch	288	0.7	1	0.5	88	0.8
Embankment	68	0.2	1	0.5	25	0.2
Fence	48	0.1	0	0.0	8	0.1
Mailbox	83	0.2	0	0.0	8	0.1
Tree	504	1.1	17	8.0	188	1.8
Rail crossing signal	10	0.0	0	0.0	1	0.0
Building	54	0.1	1	0.5	32	0.3
Traffic island	2	0.0	0	0.0	1	0.0
Fire hydrant	22	0.1	0	0.0	6	0.1
Impact attenuator	4	0.0	0	0.0	1	0.0
Other fixed object	142	0.3	0	0.0	33	0.3
COLLISION FIXED Subtotal	1,928	4.4	23	10.8	599	5.6

	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Total	Number	% of Total
Unknown Event	6,076	13.8	12	5.7	1,411	13.3
TOTAL MOST HARMFUL EVENT	43,923	100.0	212	100.0	10,617	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	6,326	14.4	38	17.9	1,014	9.6
Head On	687	1.6	34	16.0	326	3.1
Head On - Left Turn	2,228	5.1	26	12.3	908	8.6
Angle	13,790	31.4	88	41.5	3,889	36.6
Rear End	11,234	25.6	12	5.7	3,264	30.7
Rear End - Left Turn	603	1.4	1	0.5	197	1.9
Rear End - Right Turn	387	0.9	0	0.0	64	0.6
Sideswipe - Same Direction	4,754	10.8	3	1.4	356	3.4
Sideswipe - Opposite Direct	1,251	2.8	6	2.8	172	1.6
Other	2,106	4.8	4	1.9	317	3.0
Unknown	557	1.3	0	0.0	110	1.0
Total Drivers	43,923	100.0	212	100.0	10,617	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	40,744	92.8	180	84.9	9,736	91.7
Median	97	0.2	0	0.0	30	0.3
Shoulder	760	1.7	8	3.8	194	1.8
Outside of Shoulder/Curb	1,366	3.1	19	9.0	436	4.1
Gore	42	0.1	0	0.0	11	0.1
Other/Unknown	914	2.1	5	2.4	210	2.0
Total Drivers	43,923	100.0	212	100.0	10,617	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	1,509	3.4	11	5.2	376	3.5
U.S. & Michigan Roads	10,365	23.6	71	33.5	2,555	24.1
County & City Roads	32,049	73.0	130	61.3	7,686	72.4
Total Drivers	43,923	100.0	212	100.0	10,617	100.0

Please see foreword regarding roadway type classification issue.

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.	382	0.9	1	0.5	83	0.8
03:00 a.m. - 05:59 a.m.	348	0.8	1	0.5	67	0.6
06:00 a.m. - 08:59 a.m.	3,072	7.0	18	8.5	665	6.3
09:00 a.m. - 11:59 a.m.	8,546	19.5	48	22.6	2,100	19.8
12:00 noon - 02:59 p.m.	11,228	25.6	60	28.3	2,947	27.8
03:00 p.m. - 05:59 p.m.	10,848	24.7	38	17.9	2,705	25.5
06:00 p.m. - 08:59 p.m.	5,003	11.4	29	13.7	1,085	10.2
09:00 p.m. - 11:59 p.m.	1,911	4.4	11	5.2	387	3.6
Unknown	2,585	5.9	6	2.8	578	5.4
Total Drivers	43,923	100.0	212	100.0	10,617	100.0

9:00 AM to 2:59 PM shows the highest involvement for elderly drivers in all crashes when 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	20,173	45.9	71	33.5	4,490	42.3	29	0.3
Speed too fast	1,039	2.4	13	6.1	293	2.8	254	2.8
Speed too slow	56	0.1	0	0.0	17	0.2	17	0.2
Failed to yield	7,501	17.1	52	24.5	2,179	20.5	3,678	40.9
Disregard traffic control	1,408	3.2	13	6.1	577	5.4	819	9.1
Drove wrong way	52	0.1	2	0.9	16	0.2	19	0.2
Drove left of center	272	0.6	15	7.1	87	0.8	91	1.0
Improper passing	229	0.5	0	0.0	22	0.2	60	0.7
Improper lane use	1,385	3.2	1	0.5	151	1.4	531	5.9
Improper turn	765	1.7	2	0.9	131	1.2	317	3.5
Improper/no signal	47	0.1	0	0.0	9	0.1	13	0.1
Improper backing	1,167	2.7	1	0.5	29	0.3	242	2.7
Unable to stop in assured clear distance	4,677	10.6	6	2.8	1,384	13.0	2,026	22.6
Reckless driving	17	0.0	0	0.0	10	0.1	7	0.1
Careless\Negligent driving	647	1.5	7	3.3	214	2.0	279	3.1
Other	1,667	3.8	11	5.2	398	3.7	347	3.9
Unknown	2,821	6.4	18	8.5	610	5.7	253	2.8
Total Drivers	43,923	100.0	212	100.0	10,617	100.0	8,982	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	3,706	8.4	19	9.0	929	8.8
Monday	6,920	15.8	32	15.1	1,629	15.3
Tuesday	6,770	15.4	33	15.6	1,619	15.2
Wednesday	6,921	15.8	19	9.0	1,628	15.3
Thursday	6,769	15.4	32	15.1	1,694	16.0
Friday	7,791	17.7	38	17.9	1,920	18.1
Saturday	5,046	11.5	39	18.4	1,198	11.3
Total Drivers	43,923	100.0	212	100.0	10,617	100.0

DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number of Drivers	% of Total	Number	% of Fatal	Number	% of Injury
Male	25,006	56.9	142	67.0	5,918	55.7
Female	17,776	40.5	68	32.1	4,444	41.9
Unknown	1,141	2.6	2	0.9	255	2.4
Total Drivers	43,923	100.0	212	100.0	10,617	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	31,261	71.2	138	65.1	7,227	68.1
2 occupants	8,946	20.4	62	29.2	2,455	23.1
3 occupants	1,004	2.3	5	2.4	295	2.8
4 occupants	348	0.8	2	0.9	98	0.9
5 occupants	77	0.2	2	0.9	20	0.2
6 + occupants	86	0.2	1	0.5	19	0.2
0 occupants	172	0.4	0	0.0	27	0.3
Unknown	2,029	4.6	2	0.9	476	4.5
Total Drivers	43,923	100.0	212	100.0	10,617	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	33,452	76.2	149	70.3	8,244	77.6
Van and Motorhome	3,451	7.9	20	9.4	824	7.8
Pickup	4,807	10.9	23	10.8	1,023	9.6
Small Truck (under 10,000 lbs.)	741	1.7	3	1.4	160	1.5
Motorcycle	46	0.1	0	0.0	35	0.3
Moped	12	0.0	2	0.9	8	0.1
Go Cart	1	0.0	1	0.5	0	0.0
Snowmobile	12	0.0	0	0.0	6	0.1
Off Road Vehicle	11	0.0	1	0.5	8	0.1
Other	68	0.2	1	0.5	19	0.2
Unknown	1,001	2.3	4	1.9	230	2.2
CDL Truck/Bus (breakdown below)	321	0.7	8	3.8	60	0.6
Total Number of Drivers	43,923	100.0	212	100.0	10,617	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	115	35.8	6	75.0	24	40.0
Commercial Vehicle: Group B	84	26.2	2	25.0	14	23.3
Commercial Vehicle: Group C	24	7.5	0	0.0	4	6.7
Other Truck	13	4.0	0	0.0	2	3.3
Unknown Truck	85	26.5	0	0.0	16	26.7
Total Number of Drivers	321	100.0	8	100.0	60	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	20	5	1	0	6	2	1	0	3
Injured	1,654	66	0	2	68	43	0	0	43
in Crashes	1,988	77	1	2	80	48	1	0	49

Due to data processing errors ~800 pedestrians and ~700 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	173	53	9	14	76	26	8	14	48
Injured	2,230	201	4	5	210	77	1	1	79
In Crashes	2,660	262	13	20	295	105	9	16	130

MOTORCYCLIST	Total	In Crash				Motorcyclist			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	82	20	2	4	26	18	2	3	23
Injured	2,470	247	2	7	256	188	1	4	193
in Crashes	3,391	312	4	12	328	231	3	8	242

SNOWMOBILER *	Total	In Crash				Snowmobiler			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	9	7	0	0	7	5	0	0	5
Injured	233	40	0	0	40	31	0	0	31
in Crashes	587	58	1	0	59	43	0	0	43

ORV/ATV RIDER *	Total	In Crash				ORV/ATV Rider			
		Drinking	Drug	Both	Total	Drinking	Drug	Both	Total
Killed	10	3	0	0	3	2	0	0	2
Injured	255	42	2	0	44	33	2	0	35
in Crashes	340	46	2	0	48	36	2	0	38

* 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	805	231	26	34	291	164	26	27	217
Injured	77,734	6,238	315	318	6,871	4,054	191	236	4,481
in Crashes	677,527	22,971	998	999	24,968	13,387	527	624	14,538

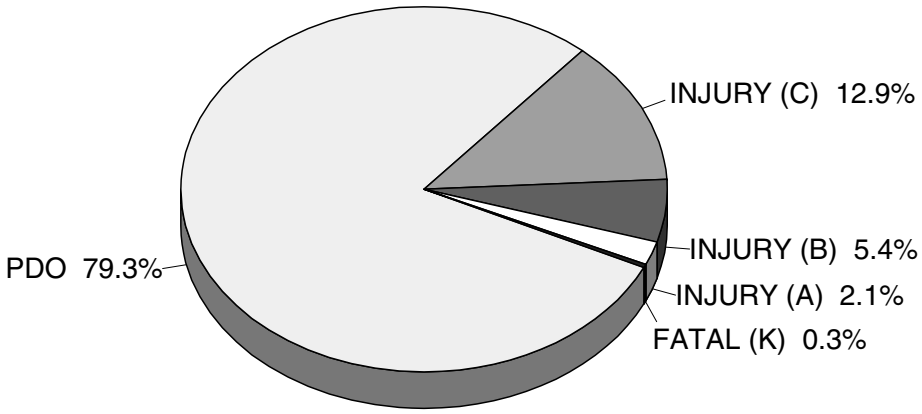
* Includes drivers NOT drinking/drug but in drinking/drug crash

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

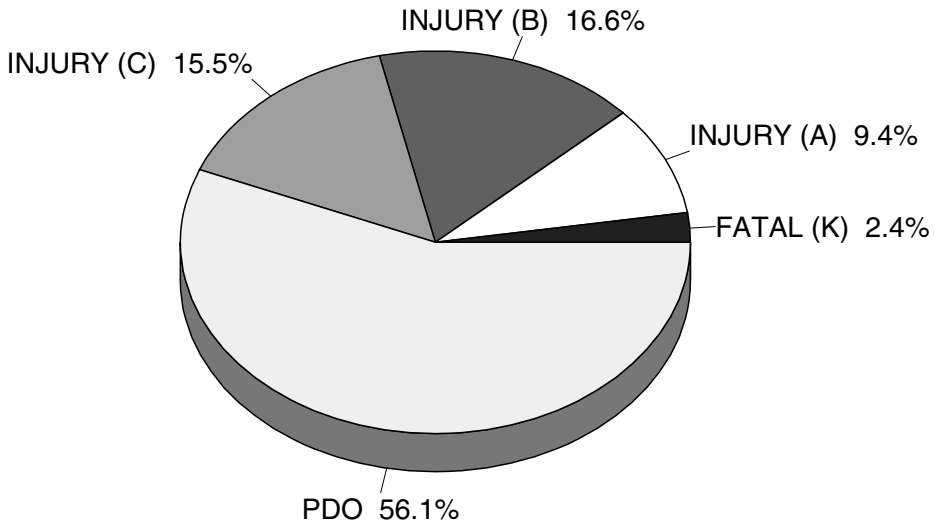
MOST SEVERE OUTCOME IN CRASH

AGE OF DRIVER IN CRASH	Drivers				Fatal				Injury			
	HBD	Drug	Both	Total	HBD	Drug	Both	Total	HBD	Drug	Both	Total
13 years & under	7	0	0	7	0	0	0	0	0	0	0	0
14 years	7	0	0	7	0	0	0	0	3	0	0	3
15 years	9	1	1	11	0	0	0	0	5	0	0	5
16 years	77	12	10	99	1	1	1	3	39	3	3	45
17 years	236	10	13	259	2	0	2	4	109	6	6	121
18 years	373	15	15	403	4	1	3	8	154	8	7	169
19 years	424	15	31	470	6	1	1	8	169	8	18	195
20 years	462	14	20	496	5	2	2	9	182	7	8	197
21 - 24 years	2,355	52	92	2,499	43	3	3	49	955	22	46	1,023
25 - 34 years	3,211	104	148	3,463	66	7	7	80	1,304	42	67	1,413
35 - 44 years	2,978	179	163	3,320	46	9	8	63	1,212	86	71	1,369
45 - 54 years	1,756	92	82	1,930	41	6	6	53	720	38	41	799
55 - 64 years	644	16	21	681	17	0	1	18	243	9	5	257
65 - 69 years	126	3	1	130	2	0	0	2	46	2	0	48
70 - 74 years	94	1	2	97	2	0	0	2	40	0	1	41
75 - 79 years	59	0	1	60	2	0	0	2	18	0	1	19
80 - 84 years	24	2	2	28	1	0	0	1	11	1	0	12
85 - 89 years	3	0	2	5	0	0	0	0	0	0	1	1
90 years & over	3	0	0	3	0	0	0	0	3	0	0	3
Not Stated	539	11	20	570	7	1	3	11	235	7	7	249
TOTAL	13,387	527	624	14,538	245	31	37	313	5,448	239	282	5,969

ALL CRASHES BY INJURY SEVERITY



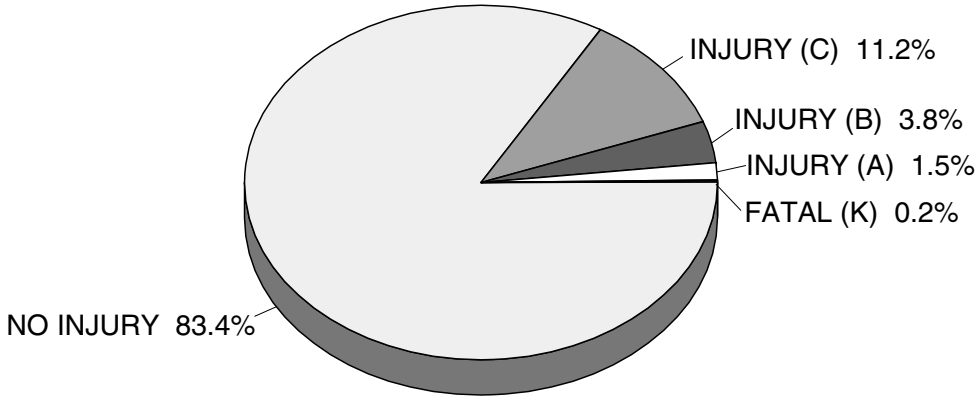
HBD CRASHES BY INJURY SEVERITY



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 **eight times** more likely when one of the crash-involved operators is reported as had been drinking.

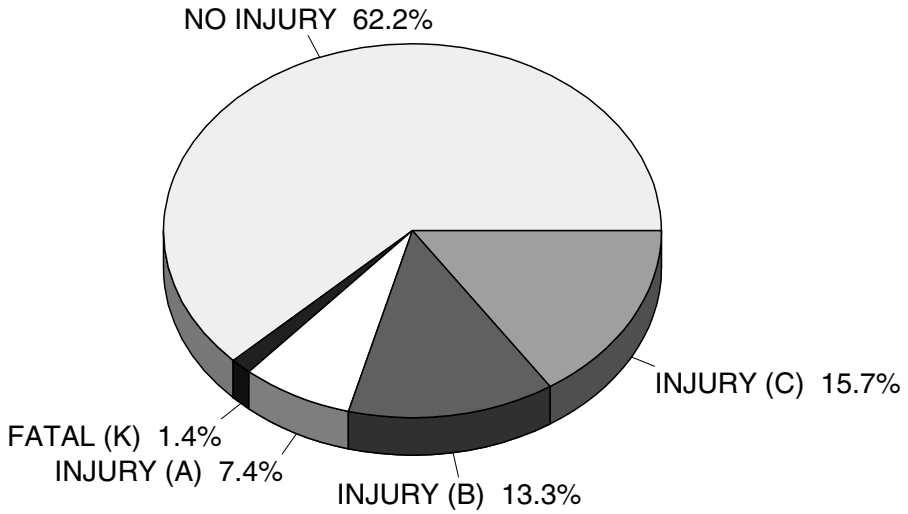
DEATH & INJURY PER CRASH INVOLVED OCCUPANT

Occupants in Crashes



The majority of occupants involved in crashes are not injured (83.4%). 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.

Occupants in HBD Crashes

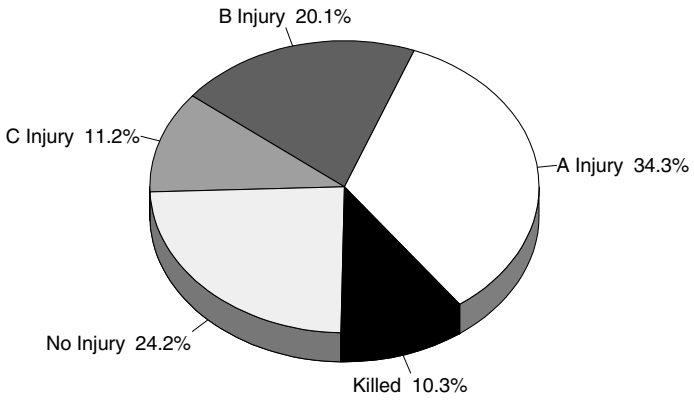


Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of fatalities is seven times higher than in all crashes and the most serious injury level (A) is almost five times higher.

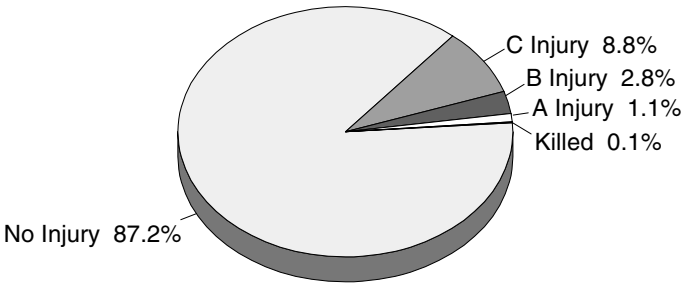
ALL DRIVERS and *HBD DRIVERS*
INJURY SEVERITY - EJECTED vs. NOT EJECTED

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

Ejected

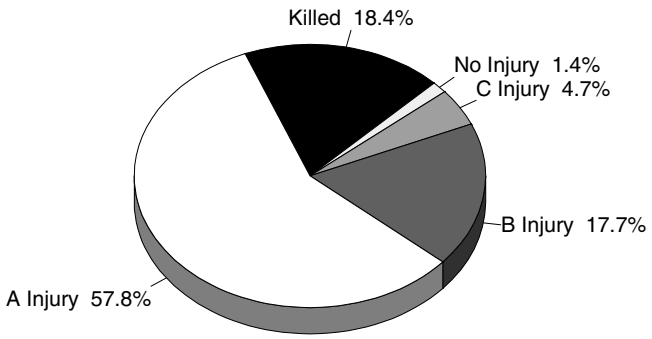


Not Ejected

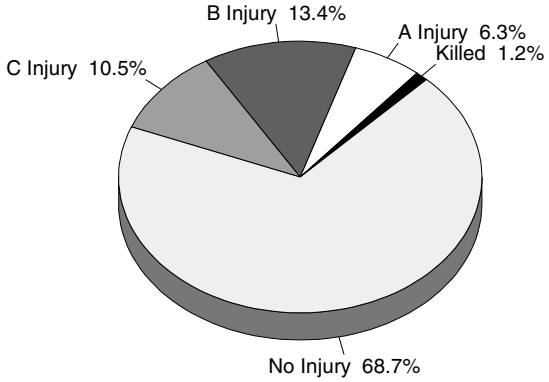


When compared to the charts above, the charts below demonstrate that the injury severity is much worse for drivers who had been drinking in both ejected, and nonejected events.

HBD Ejected

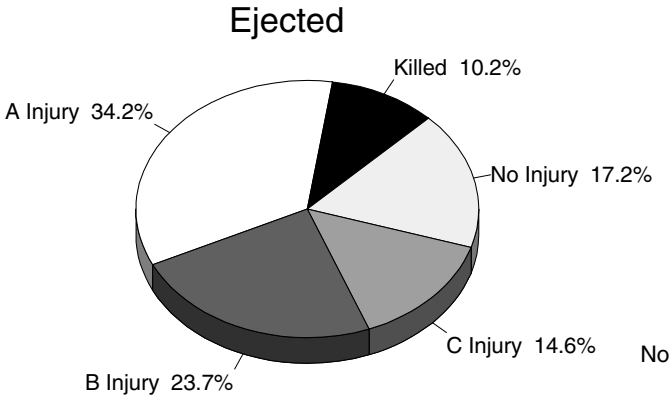


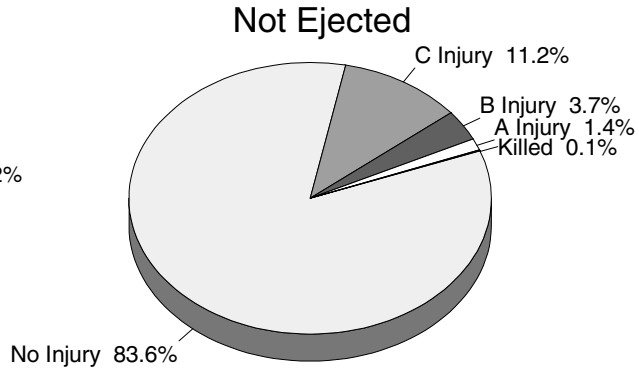
HBD Not Ejected



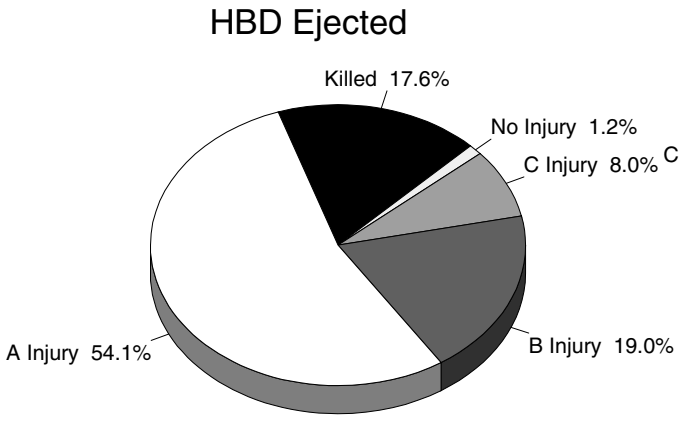
ALL OCCUPANTS and *OCCUPANTS of HBD CRASHES*
INJURY SEVERITY - EJECTED vs. NOT EJECTED

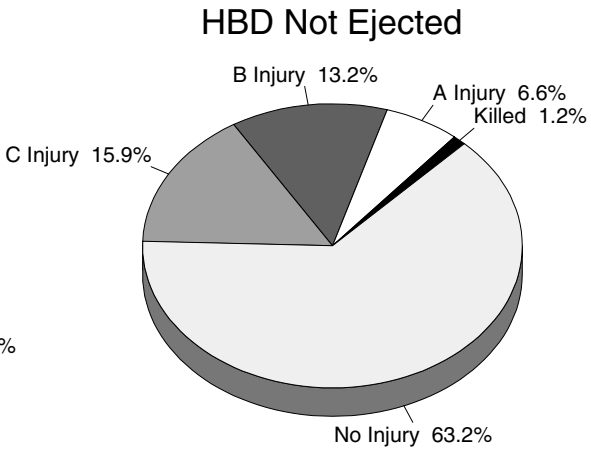
As can be seen in the two charts below, death and injury are much more likely when occupants are ejected from their vehicles.



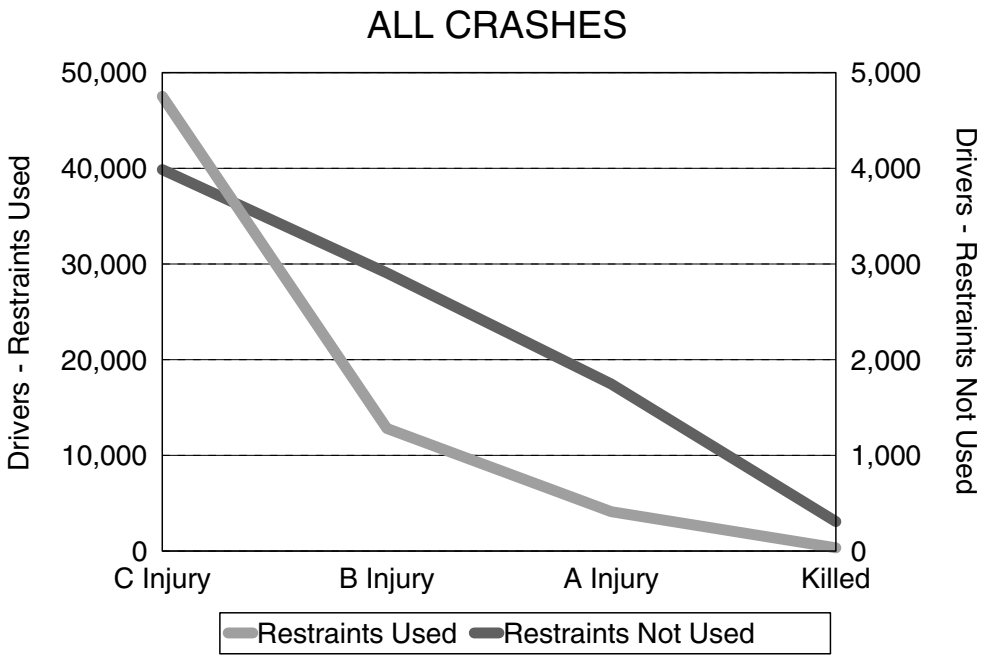


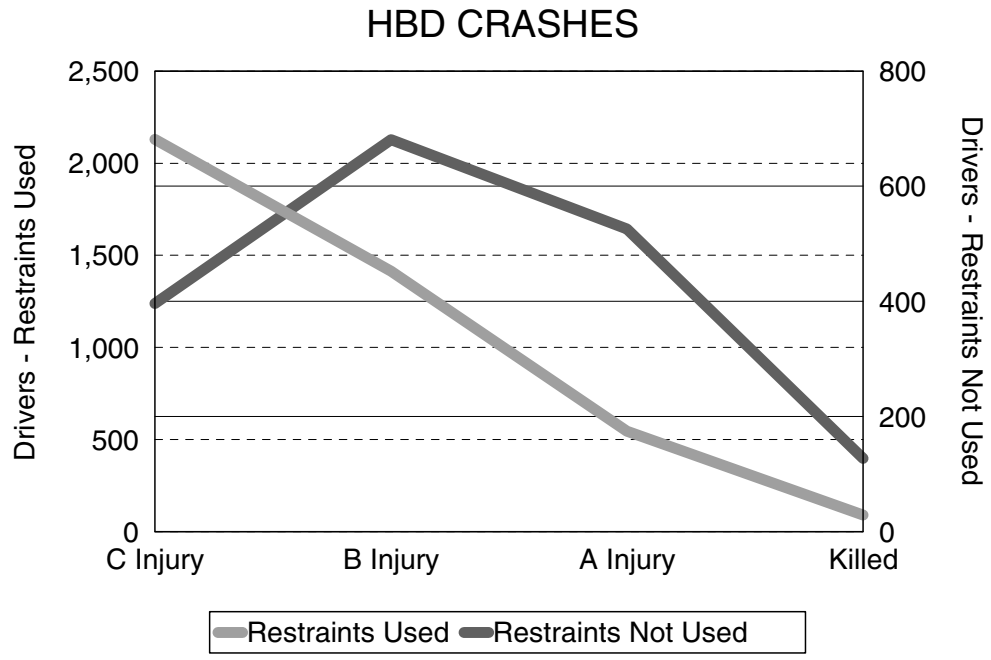
When compared to the charts above, the charts below demonstrate that the injury severity is much worse for occupants in a crash where drinking is reported in both ejected, and nonejected events.



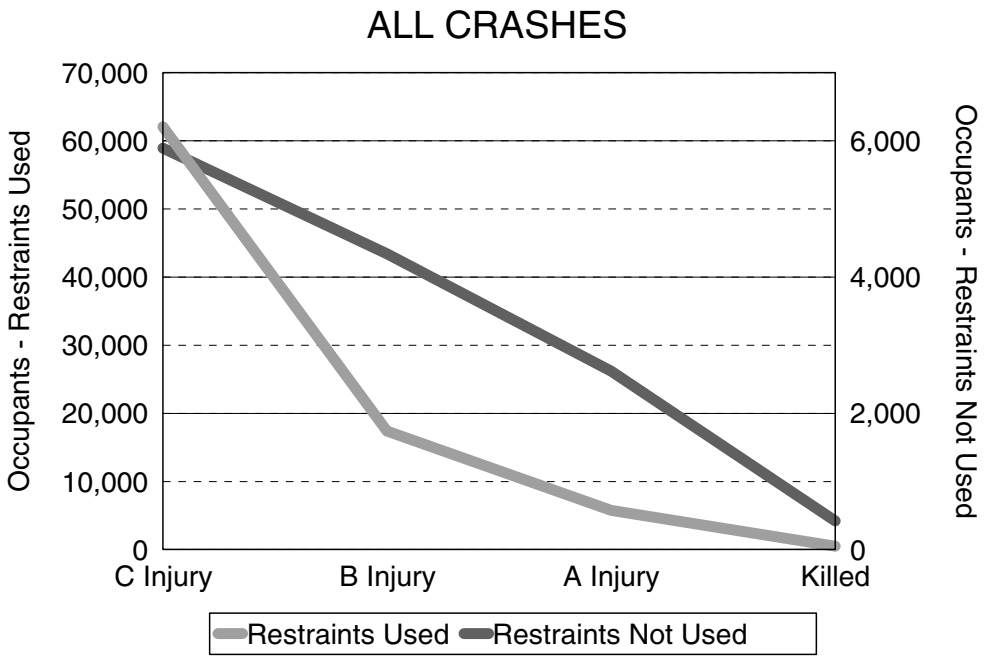


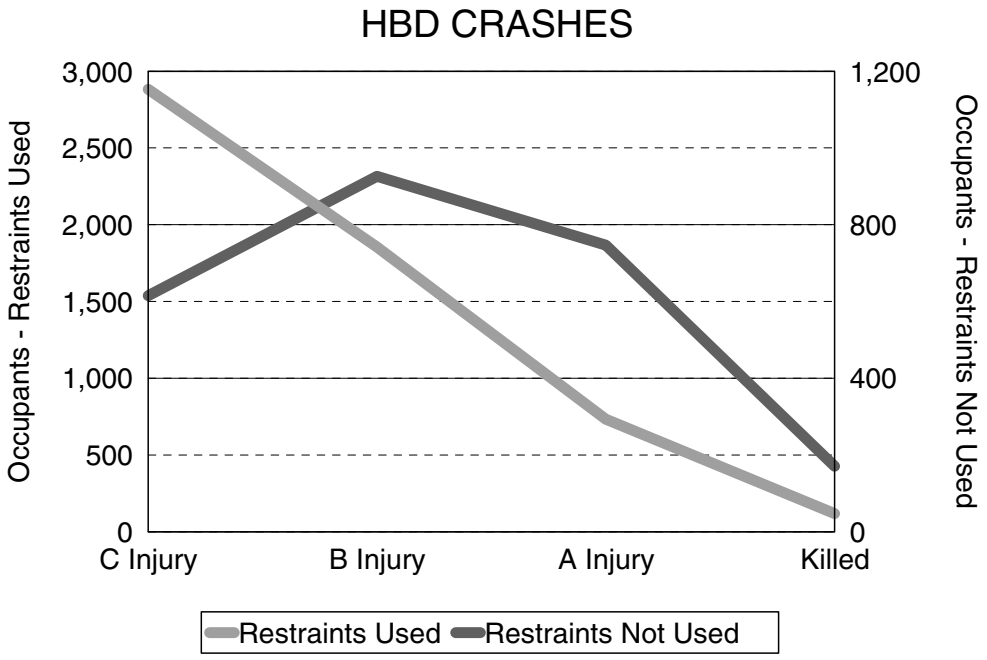
INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC *DRIVERS*





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

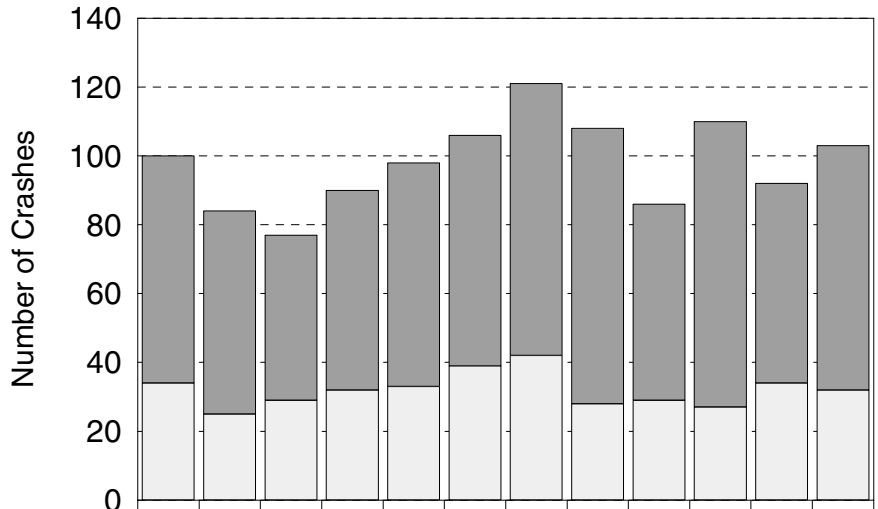




ALCOHOL INVOLVEMENT IN FATAL CRASHES

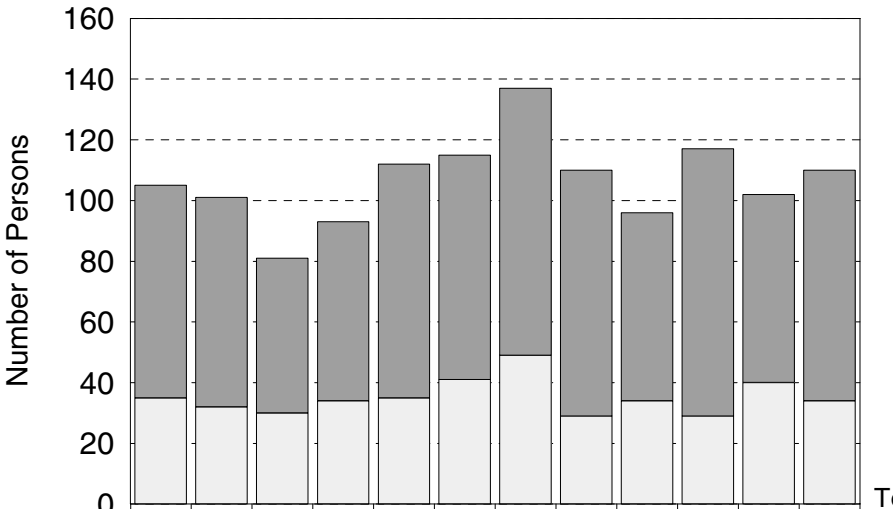
Fatal crashes were lowest during March. The number of fatal crashes then increased, reaching highs in July, August, and October. The number of HBD fatal crashes follows the overall trend, with the highest number of HBD fatal crashes in July.

HBD Fatal Crashes by Month



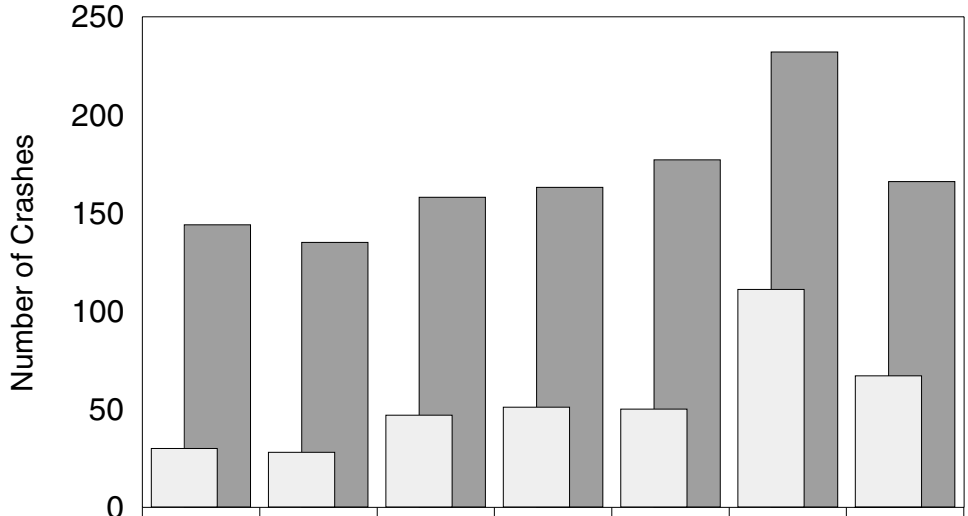
	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Non-HBD Fatal Crashes	66	59	48	58	65	67	79	80	57	83	58	71	791
HBD Fatal Crashes	34	25	29	32	33	39	42	28	29	27	34	32	384

Alcohol-related Fatalities by Month



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Nonalcohol-related Fatalities	70	69	51	59	77	74	88	81	62	88	62	76	857
Alcohol-related Fatalities	35	32	30	34	35	41	49	29	34	29	40	34	422

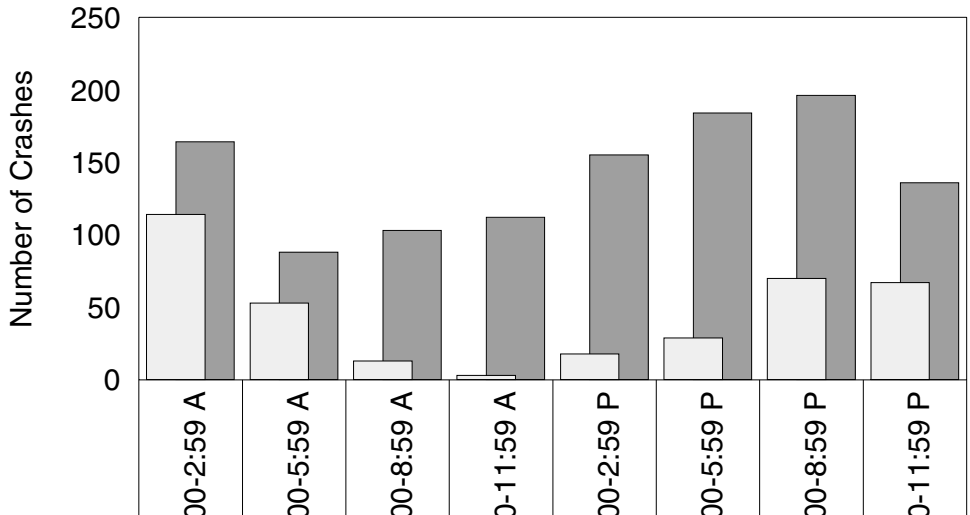
HBD Fatal Crashes by Day of Week



	Mon	Tue	Wed	Thu	Fri	Sat	Sun
HBD Fatal Crashes	30	28	47	51	50	111	67
All Fatal Crashes	144	135	158	163	177	232	166

Friday and Saturday had the most fatal crashes in 2002. Saturday and Sunday had the highest proportions of drinking-related fatal crashes. Almost half of the fatal crashes on Saturday involved drinking, while only 20.7 percent of fatal crashes on Tuesday involved drinking.

HBD Fatal Crashes by Time of Day



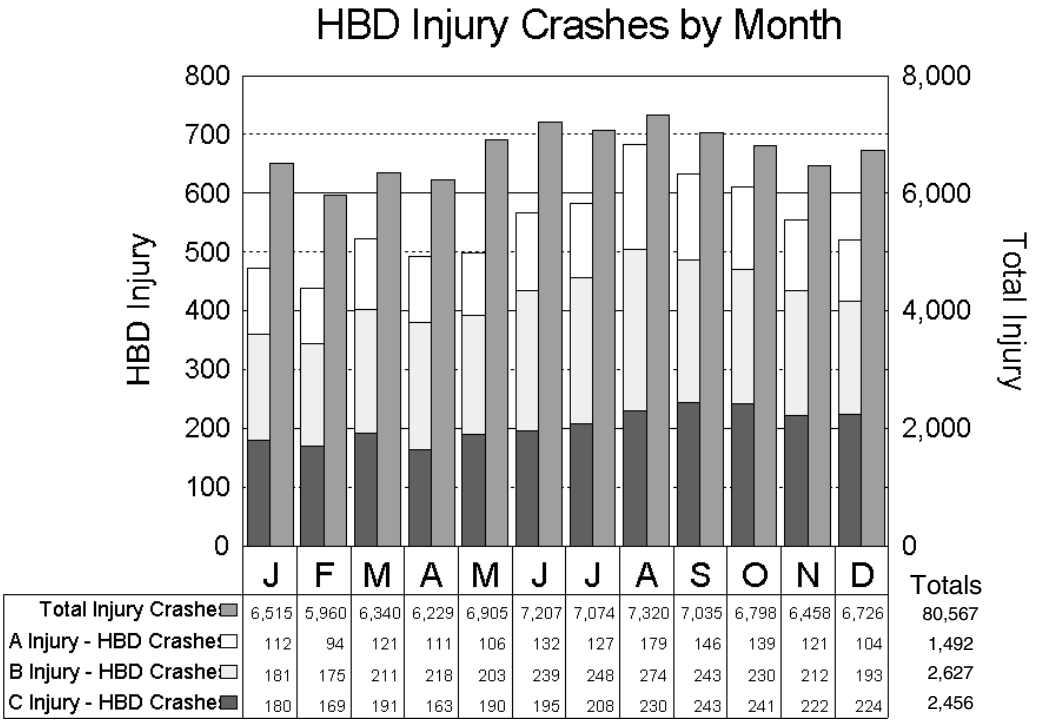
	12:00-2:59 A	3:00-5:59 A	6:00-8:59 A	9:00-11:59 A	12:00-2:59 P	3:00-5:59 P	6:00-8:59 P	9:00-11:59 P
HBD Fatal Crashes	114	53	13	3	18	29	70	67
All Fatal Crashes	164	88	103	112	155	184	196	136

Not surprisingly, the midnight to 2:59 AM and 3:00 to 5:59 AM time periods had the highest rate of drinking involvement (69.5% and 60.2%), while the late morning hours had the lowest (2.7%).

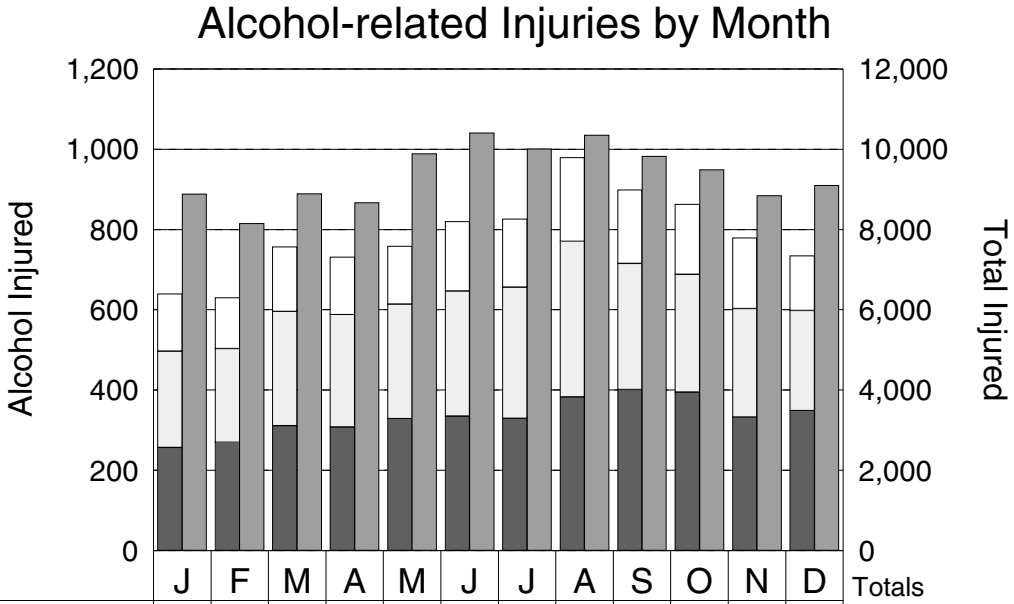
There were 37 fatal crashes where the time of day was unknown. Of these 37 fatal crashes, 17 were HBD.

ALCOHOL INVOLVEMENT IN INJURY CRASHES

Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 2002, the highest number of HBD injury crashes occurred in August with 683. The highest proportion of HBD injury crashes occurred in August with 9.3 percent of the injury crashes in that month involving alcohol.

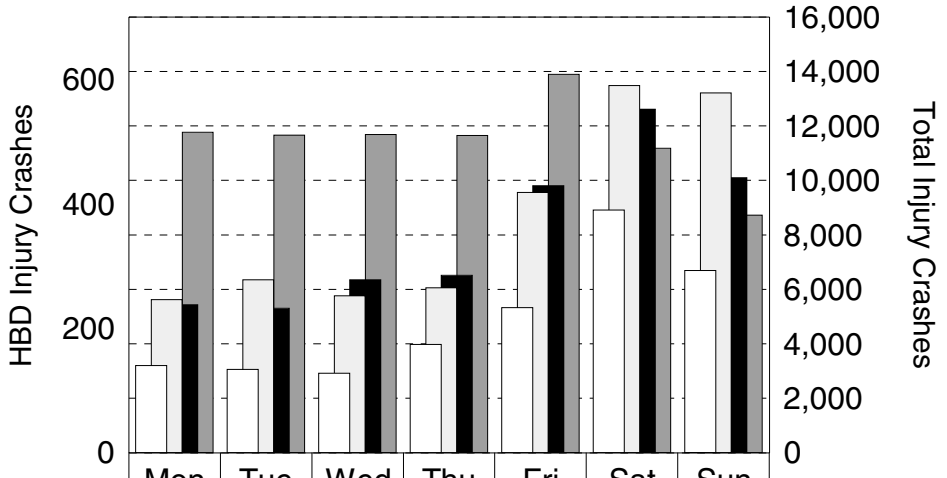


	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Total Injury Crashes	6,515	5,960	6,340	6,229	6,905	7,207	7,074	7,320	7,035	6,798	6,458	6,726	80,567
A Injury - HBD Crashes	112	94	121	111	106	132	127	179	146	139	121	104	1,492
B Injury - HBD Crashes	181	175	211	218	203	239	248	274	243	230	212	193	2,627
C Injury - HBD Crashes	180	169	191	163	190	195	208	230	243	241	222	224	2,456



	J	F	M	A	M	J	J	A	S	O	N	D	Totals
Total Persons Injured	8,880	8,150	8,890	8,666	9,888	10,405	10,007	10,348	9,825	9,484	8,843	9,098	112,484
Alcohol-related A Injury	142	127	161	143	144	173	170	209	183	175	176	136	1,939
Alcohol-related B Injury	240	233	285	280	285	312	326	387	314	293	270	249	3,474
Alcohol-related C Injury	257	270	311	308	329	335	330	383	401	395	333	349	4,001

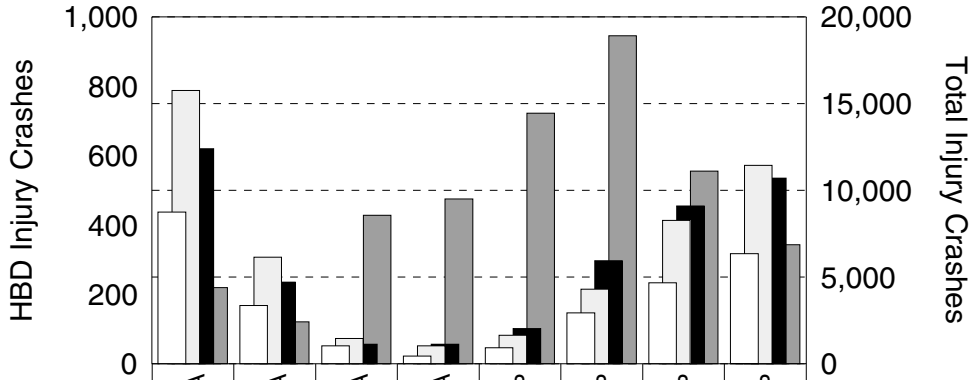
HBD Injury Crashes by Day of Week



	Mon	Tue	Wed	Thu	Fri	Sat	Sun
A Injury - HBD	140	134	128	174	233	390	293
B Injury - HBD	246	278	252	265	418	590	578
C Injury - HBD	238	232	278	285	429	552	442
Total Injury Crashes	11,773	11,661	11,683	11,648	13,892	11,182	8,728

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	437	168	52	22	46	147	234	317
B Injury - HBD	788	307	73	52	82	215	413	572
C Injury - HBD	620	235	56	56	102	297	455	535
Total Injury Crashes	4,401	2,429	8,559	9,500	14,447	18,912	11,102	6,874

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	2	4	6	5	4	2	2	0	1
Alger	34	0	3	4	5	7	7	4	1	0	3
Allegan	230	0	36	35	55	55	28	7	2	1	11
Alpena	51	0	7	12	8	9	10	3	1	0	1
Antrim	53	0	1	11	8	16	7	4	0	0	6
Arenac	32	0	2	6	11	5	2	2	1	1	2
Baraga	18	0	3	3	3	6	2	0	1	0	0
Barry	110	1	10	16	33	28	14	4	2	0	2
Bay	262	0	28	48	54	66	42	12	5	0	7
Benzie	33	0	3	3	8	11	5	3	0	0	0
Berrien	277	1	29	35	55	58	31	13	6	5	44
Branch	64	0	10	13	13	17	3	2	0	1	5
Calhoun	241	0	30	36	60	59	29	10	3	4	10
Cass	122	1	8	15	27	19	9	4	3	0	36
Charlevoix	43	0	4	8	11	13	2	1	0	0	4
Cheboygan	64	0	6	12	18	13	8	4	2	0	1
Chippewa	58	0	9	10	15	12	3	5	1	0	3
Clare	66	0	5	8	13	21	10	4	4	0	1
Clinton	128	0	23	20	27	34	15	3	1	1	4
Crawford	40	2	9	7	5	7	8	2	0	0	0
Delta	77	0	10	16	9	17	8	5	4	1	7
Dickinson	47	0	4	5	8	10	6	3	3	0	8
Eaton	143	0	21	26	36	29	13	10	1	1	6
Emmet	66	0	6	8	21	17	9	3	0	0	2
Genesee	853	1	92	150	205	207	116	42	11	3	26
Gladwin	58	0	8	8	13	12	8	2	4	0	3
Gogebic	18	0	2	0	3	5	2	1	0	0	5
Grand Traverse	139	0	19	28	29	25	25	8	3	0	2
Gratiot	69	0	11	14	11	17	12	0	1	0	3
Hillsdale	79	0	14	16	8	18	11	3	0	2	7
Houghton	68	1	4	17	16	9	7	8	1	0	5
Huron	44	0	3	7	13	9	6	1	1	1	3
Ingham	408	1	57	89	103	61	59	17	4	3	14
Ionia	124	2	19	31	28	21	15	4	2	0	2
Iosco	57	0	8	13	16	5	12	0	3	0	0
Iron	37	0	12	5	7	4	4	1	1	0	3
Isabella	142	0	23	41	34	20	13	4	1	3	3
Jackson	298	0	26	47	74	79	43	11	5	3	10
Kalamazoo	421	1	57	104	87	91	47	10	3	1	20
Kalkaska	39	0	7	5	15	4	6	1	0	0	1
Kent	1,060	2	123	242	299	190	111	42	9	3	39
Keweenaw	10	0	1	4	1	1	2	0	0	0	1
Lake	28	0	3	3	6	6	7	0	3	0	0
Lapeer	166	0	16	36	45	32	25	7	0	1	4
Leelanau	48	0	6	5	14	11	7	0	0	1	4

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	160	1	16	36	32	36	10	6	0	3	20
Livingston	283	0	46	45	53	73	43	10	2	2	9
Luce	10	0	2	0	4	2	1	0	0	0	1
Mackinac	31	0	2	5	6	6	6	3	1	0	2
Macomb	1,072	4	103	164	261	274	161	54	23	6	22
Manistee	45	0	10	4	16	5	6	2	1	1	0
Marquette	105	1	16	23	16	20	16	2	2	0	9
Mason	67	0	11	9	20	13	9	1	1	1	2
Mecosta	79	0	10	19	18	18	6	4	2	0	2
Menominee	57	0	6	8	12	11	6	4	1	1	8
Midland	137	1	14	31	29	36	16	4	1	1	4
Missaukee	37	0	6	10	5	8	7	0	0	0	1
Monroe	277	0	42	45	59	50	29	11	1	2	38
Montcalm	159	1	24	27	43	32	17	6	2	1	6
Montmorency	34	0	7	4	1	6	12	3	1	0	0
Muskegon	254	0	37	32	54	66	41	8	7	0	9
Newaygo	111	0	15	21	29	25	10	7	0	0	4
Oakland	1,552	3	162	258	404	341	224	86	26	12	36
Oceana	97	0	20	13	30	18	10	2	2	0	2
Ogemaw	60	0	11	8	10	16	11	2	0	2	0
Ontonagon	23	0	2	2	1	10	1	2	1	0	4
Osceola	51	0	3	18	7	6	6	4	4	1	2
Oscoda	21	0	1	8	3	4	4	1	0	0	0
Otsego	36	0	3	10	8	10	2	1	0	0	2
Ottawa	366	1	70	72	71	72	45	13	4	3	15
Presque Isle	30	1	2	8	3	8	4	2	0	0	2
Roscommon	56	0	10	7	11	10	9	2	4	2	1
Saginaw	369	0	38	57	89	91	54	25	6	1	8
St. Clair	260	1	38	40	66	54	32	18	1	2	8
St. Joseph	113	0	9	23	32	14	12	2	0	0	21
Sanilac	85	0	12	14	25	18	4	3	7	1	1
Schoolcraft	23	0	1	3	8	7	2	0	0	0	2
Shiawassee	129	0	22	28	29	26	16	4	1	2	1
Tuscola	125	1	20	18	32	27	14	6	1	3	3
Van Buren	157	0	21	32	35	28	16	9	1	2	13
Washtenaw	466	0	46	92	112	93	65	26	4	3	25
Wayne	2,331	2	194	301	606	612	337	137	54	16	72
Wexford	72	0	7	11	17	24	7	4	0	0	2
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
Totals	15,791	30	1,839	2,732	3,793	3,531	2,084	746	256	104	676

MALE DRIVERS BY AGE & INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	Male Drivers		MOST SEVERE OUTCOME IN CRASH: Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	339	0.1	3	0.2	29	93	78	136
14 years	175	0.0	5	0.4	13	37	32	88
15 years	609	0.2	3	0.2	30	71	93	412
16 years	9,040	2.6	36	2.7	191	620	1,260	6,933
17 years	11,446	3.3	28	2.1	259	787	1,651	8,721
18 years	12,295	3.5	34	2.5	281	818	1,707	9,455
19 years	11,085	3.2	43	3.2	282	688	1,525	8,547
20 years	10,114	2.9	32	2.4	253	643	1,373	7,813
21 - 24 years	34,271	9.8	138	10.3	877	2,149	4,682	26,425
25 - 34 years	66,763	19.0	259	19.4	1,533	3,772	9,445	51,754
35 - 44 years	64,860	18.5	226	16.9	1,487	3,403	9,045	50,699
45 - 54 years	51,019	14.6	189	14.1	1,146	2,633	7,055	39,996
55 - 64 years	28,257	8.1	111	8.3	585	1,495	3,975	22,091
65 - 69 years	7,907	2.3	33	2.5	199	420	1,118	6,137
70 - 74 years	6,812	1.9	25	1.9	167	346	1,037	5,237
75 - 79 years	5,353	1.5	35	2.6	131	351	869	3,967
80 - 84 years	3,263	0.9	24	1.8	82	229	511	2,417
85 - 89 years	1,341	0.4	15	1.1	31	105	223	967
90 years and over	330	0.1	10	0.7	15	36	48	221
Not Stated	25,249	7.2	88	6.6	550	1,347	3,387	19,877
TOTAL	350,528	100.0	1,337	100.0	8,141	20,043	49,114	271,893

NOTE: The tables on this page and page 109 exclude 72,438 drivers of unknown gender.

The crash involvement for male drivers is down 2.0 percent from 2001.

The fatal crash involvement for male drivers is up 1.3 percent from 2001.

MALE DRINKING DRIVERS BY AGE& 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	4	0.0	0	0.0	0	0	0	4
14 years	7	0.1	2	0.7	0	1	0	4
15 years	9	0.1	0	0.0	0	4	1	4
16 years	73	0.6	2	0.7	5	16	10	40
17 years	199	1.6	4	1.4	15	44	30	106
18 years	331	2.7	8	2.8	29	59	46	189
19 years	417	3.4	11	3.8	46	72	48	240
20 years	429	3.5	8	2.8	38	80	45	258
21 - 24 years	2,196	18.0	47	16.2	215	404	283	1,247
25 - 34 years	2,965	24.4	79	27.2	271	513	433	1,669
35 - 44 years	2,518	20.7	55	19.0	231	388	400	1,444
45 - 54 years	1,614	13.3	43	14.8	166	253	287	865
55 - 64 years	600	4.9	15	5.2	49	80	98	358
65 - 69 years	119	1.0	1	0.3	13	17	11	77
70 - 74 years	94	0.8	3	1.0	7	14	17	53
75 - 79 years	57	0.5	2	0.7	2	7	8	38
80 - 84 years	23	0.2	1	0.3	1	6	4	11
85 - 89 years	3	0.0	0	0.0	0	0	0	3
90 years and over	3	0.0	0	0.0	1	2	0	0
Not Stated	512	4.2	9	3.1	53	105	74	271
TOTAL	12,173	100.0	290	100.0	1,142	2,065	1,795	6,881

NOTE: The tables on this page and page 110 exclude 361 drinking drivers of unknown gender.

FEMALE DRIVERS BY AGE& 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	180	0.1	1	0.2	16	34	40	89
14 years	126	0.0	2	0.4	7	17	17	83
15 years	492	0.2	4	0.8	22	41	82	343
16 years	7,484	2.9	14	2.9	161	528	1,268	5,513
17 years	9,128	3.6	15	3.2	185	580	1,577	6,771
18 years	8,924	3.5	23	4.8	189	561	1,593	6,558
19 years	8,368	3.3	13	2.7	180	529	1,479	6,167
20 years	7,743	3.0	18	3.8	133	462	1,370	5,760
21 - 24 years	26,040	10.2	36	7.6	507	1,430	4,472	19,595
25 - 34 years	50,269	19.7	73	15.3	987	2,679	8,911	37,619
35 - 44 years	50,045	19.7	95	20.0	878	2,488	8,585	37,999
45 - 54 years	38,356	15.1	64	13.4	710	1,860	6,596	29,126
55 - 64 years	19,228	7.6	36	7.6	317	971	3,378	14,526
65 - 69 years	5,120	2.0	15	3.2	93	274	858	3,880
70 - 74 years	4,613	1.8	12	2.5	103	265	776	3,457
75 - 79 years	4,082	1.6	17	3.6	106	243	687	3,029
80 - 84 years	2,732	1.1	14	2.9	84	180	465	1,989
85 - 89 years	1,004	0.4	5	1.1	22	78	156	743
90 years and over	225	0.1	5	1.1	7	11	36	166
Not Stated	10,402	4.1	14	2.9	185	517	1,502	8,184
TOTAL	254,561	100.0	476	100.0	4,892	13,748	43,848	191,597

The crash involvement for female drivers is down 0.03 percent from 2001.

The fatal crash involvement for female drivers is down 14.4 percent from 2001.

FEMALE DRINKING DRIVERS BY AGE & INJURY SEVERITY IN CRASH

AGE OF DRINKING 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	2	0.1	0	0.0	0	0	0	2
14 years	3	0.1	0	0.0	1	1	0	1
15 years	4	0.1	0	0.0	0	0	2	2
16 years	24	0.7	0	0.0	4	6	4	10
17 years	69	2.1	1	2.1	12	15	9	32
18 years	86	2.6	0	0.0	2	17	20	47
19 years	81	2.5	2	4.3	10	14	17	38
20 years	95	2.9	2	4.3	11	20	14	48
21 - 24 years	482	14.8	7	14.9	48	86	69	272
25 - 34 years	752	23.1	9	19.1	78	129	115	421
35 - 44 years	950	29.2	9	19.1	73	138	200	530
45 - 54 years	428	13.1	10	21.3	31	45	71	271
55 - 64 years	123	3.8	3	6.4	6	14	27	73
65 - 69 years	24	0.7	1	2.1	0	4	6	13
70 - 74 years	13	0.4	0	0.0	0	3	0	10
75 - 79 years	9	0.3	0	0.0	1	0	3	5
80 - 84 years	4	0.1	0	0.0	0	0	1	3
85 - 89 years	3	0.1	0	0.0	0	1	0	2
90 years and over	0	0.0	0	0.0	0	0	0	0
Not Stated	105	3.2	3	6.4	11	11	19	61
TOTAL	3,257	100.0	47	100.0	288	504	577	1,841

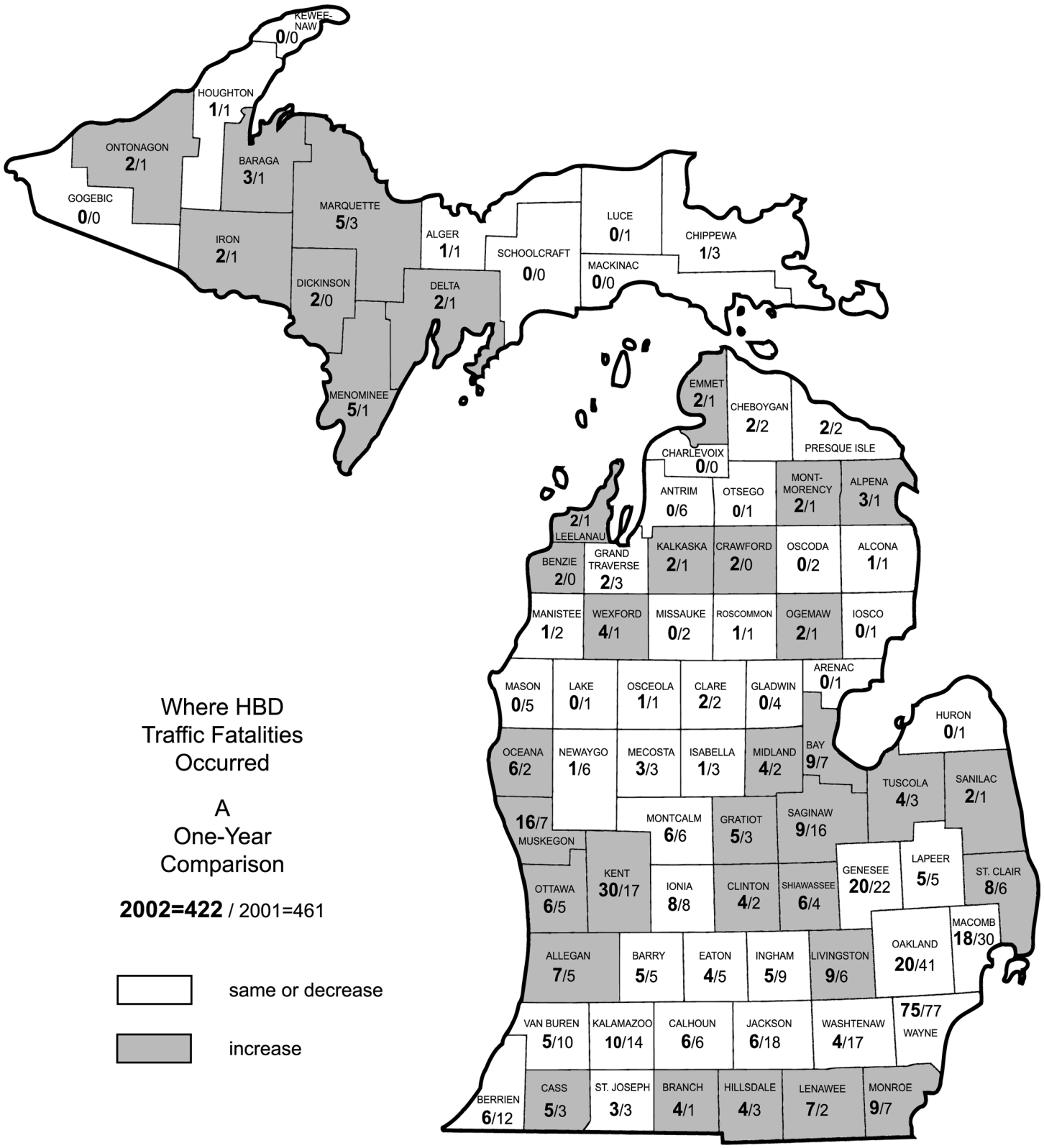
FATAL CRASHES AND FATALITIES
WITH DRINKING INVOLVEMENT BY COUNTY

	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
Alcona	4	1	25.0	4	1	25.0
Alger	4	1	25.0	5	1	20.0
Allegan	23	7	30.4	24	7	29.2
Alpena	3	1	33.3	6	3	50.0
Antrim	4	0	0.0	5	0	0.0
Arenac	4	0	0.0	4	0	0.0
Baraga	3	2	66.7	4	3	75.0
Barry	13	5	38.5	13	5	38.5
Bay	9	7	77.8	11	9	81.8
Benzie	6	2	33.3	6	2	33.3
Berrien	23	6	26.1	28	6	21.4
Branch	9	4	44.4	9	4	44.4
Calhoun	17	6	35.3	21	6	28.6
Cass	13	5	38.5	17	5	29.4
Charlevoix	2	0	0.0	2	0	0.0
Cheboygan	4	1	25.0	5	2	40.0
Chippewa	2	1	50.0	2	1	50.0
Clare	6	2	33.3	6	2	33.3
Clinton	10	4	40.0	11	4	36.4
Crawford	6	2	33.3	6	2	33.3
Delta	6	2	33.3	7	2	28.6
Dickinson	3	2	66.7	3	2	66.7
Eaton	16	4	25.0	17	4	23.5
Emmet	4	2	50.0	5	2	40.0
Genesee	46	18	39.1	51	20	39.2
Gladwin	1	0	0.0	1	0	0.0
Gogebic	2	0	0.0	2	0	0.0
Grand Traverse	8	2	25.0	8	2	25.0
Gratiot	4	3	75.0	6	5	83.3
Hillsdale	8	4	50.0	8	4	50.0
Houghton	4	1	25.0	4	1	25.0
Huron	9	0	0.0	9	0	0.0
Ingham	21	4	19.0	23	5	21.7
Ionia	16	8	50.0	17	8	47.1
Iosco	3	0	0.0	5	0	0.0
Iron	2	2	100.0	2	2	100.0
Isabella	11	1	9.1	13	1	7.7
Jackson	19	6	31.6	19	6	31.6
Kalamazoo	22	9	40.9	23	10	43.5
Kalkaska	6	2	33.3	6	2	33.3
Kent	75	26	34.7	81	30	37.0
Keweenaw	0	0	---	0	0	---
Lake	0	0	---	0	0	---
Lapeer	21	5	23.8	21	5	23.8

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

	CRASHES			PERSONS		
COUNTY	All Fatal Crashes	HBD Fatal Crashes	Percent HBD	Total Fatalities	HBD Fatalities	Percent HBD
Leelanau	2	2	100.0	2	2	100.0
Lenawee	18	5	27.8	20	7	35.0
Livingston	17	8	47.1	18	9	50.0
Luce	2	0	0.0	2	0	0.0
Mackinac	4	0	0.0	10	0	0.0
Macomb	52	15	28.8	56	18	32.1
Manistee	5	1	20.0	5	1	20.0
Marquette	9	5	55.6	9	5	55.6
Mason	3	0	0.0	3	0	0.0
Mecosta	9	3	33.3	9	3	33.3
Menominee	7	5	71.4	7	5	71.4
Midland	11	4	36.4	11	4	36.4
Missaukee	1	0	0.0	1	0	0.0
Monroe	23	9	39.1	23	9	39.1
Montcalm	17	6	35.3	18	6	33.3
Montmorency	3	2	66.7	3	2	66.7
Muskegon	27	14	51.9	29	16	55.2
Newaygo	6	1	16.7	7	1	14.3
Oakland	85	19	22.4	88	20	22.7
Oceana	10	4	40.0	14	6	42.9
Ogemaw	7	2	28.6	8	2	25.0
Ontonagon	2	2	100.0	2	2	100.0
Osceola	4	1	25.0	4	1	25.0
Oscoda	2	0	0.0	4	0	0.0
Otsego	4	0	0.0	4	0	0.0
Ottawa	26	6	23.1	27	6	22.2
Presque Isle	3	2	66.7	3	2	66.7
Roscommon	4	1	25.0	4	1	25.0
Saginaw	25	9	36.0	26	9	34.6
St. Clair	24	8	33.3	26	8	30.8
St. Joseph	16	3	18.8	17	3	17.6
Sanilac	6	2	33.3	7	2	28.6
Schoolcraft	1	0	0.0	1	0	0.0
Shiawassee	15	6	40.0	17	6	35.3
Tuscola	13	3	23.1	18	4	22.2
Van Buren	10	5	50.0	10	5	50.0
Washtenaw	24	4	16.7	24	4	16.7
Wayne	195	65	33.3	210	75	35.7
Wexford	11	4	36.4	12	4	33.3
Totals	1,175	384	32.7	1,279	422	33.0

TRAFFIC FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY



Where HBD Traffic Fatalities Occurred

A One-Year Comparison

2002=422 / 2001=461

same or decrease

increase

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	26	1	4	3	4	14
Alger	34	1	8	8	4	13
Allegan	230	7	29	37	28	129
Alpena	50	1	5	7	9	28
Antrim	54	0	5	15	6	28
Arenac	33	0	3	4	8	18
Baraga	19	2	2	1	0	14
Barry	109	5	16	22	8	58
Bay	262	7	22	44	28	161
Benzie	33	2	4	6	3	18
Berrien	276	6	24	47	40	159
Branch	64	4	7	13	5	35
Calhoun	244	6	19	37	30	152
Cass	121	5	14	28	18	56
Charlevoix	42	0	6	6	8	22
Cheboygan	64	1	6	16	6	35
Chippewa	57	1	6	11	6	33
Clare	66	2	5	8	10	41
Clinton	127	4	14	31	11	67
Crawford	39	2	4	5	7	21
Delta	77	2	15	13	9	38
Dickinson	47	2	3	10	10	22
Eaton	144	4	12	26	25	77
Emmet	67	2	6	9	8	42
Genesee	871	18	43	151	174	485
Gladwin	57	0	10	8	6	33
Gogebic	18	0	2	2	3	11
Grand Traverse	142	2	11	21	24	84
Gratiot	68	3	9	14	10	32
Hillsdale	79	4	7	19	12	37
Houghton	66	1	10	14	8	33
Huron	44	0	3	7	6	28
Ingham	411	4	37	58	71	241
Ionia	123	8	12	22	10	71
Iosco	56	0	6	14	2	34
Iron	36	2	4	13	6	11
Isabella	144	1	20	26	14	83
Jackson	297	6	25	46	37	183
Kalamazoo	429	9	37	79	65	239
Kalkaska	39	2	9	6	1	21
Kent	1,068	26	75	141	157	669
Keweenaw	10	0	1	3	1	5

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	28	0	5	7	1	15
Lapeer	166	5	22	24	31	84
Leelanau	46	2	4	10	8	22
Lenawee	158	5	11	29	27	86
Livingston	284	8	30	48	40	158
Luce	10	0	3	1	2	4
Mackinac	31	0	3	6	7	15
Macomb	1,091	15	93	166	174	643
Manistee	45	1	9	8	2	25
Marquette	106	5	11	18	15	57
Mason	67	0	9	17	3	38
Mecosta	80	3	13	20	6	38
Menominee	56	5	6	16	7	22
Midland	138	4	12	24	26	72
Missaukee	35	0	2	8	1	24
Monroe	278	9	24	50	43	152
Montcalm	156	6	18	37	20	75
Montmorency	34	2	9	7	2	14
Muskegon	257	14	32	45	43	123
Newaygo	111	1	22	12	16	60
Oakland	1,542	19	128	215	254	926
Oceana	98	4	5	23	18	48
Ogemaw	60	2	6	4	12	36
Ontonagon	23	2	4	3	2	12
Osceola	51	1	7	9	5	29
Oscoda	21	0	5	5	1	10
Otsego	36	0	1	9	8	18
Ottawa	366	6	32	49	62	217
Presque Isle	30	2	2	12	6	8
Roscommon	57	1	8	11	2	35
Saginaw	368	9	44	70	49	196
St. Clair	258	8	35	58	43	114
St. Joseph	114	3	20	21	18	52
Sanilac	84	2	12	19	12	39
Schoolcraft	23	0	8	3	3	9
Shiawassee	130	6	12	26	17	69
Tuscola	128	3	22	23	10	70
Van Buren	157	5	25	23	17	87
Washtenaw	463	4	35	85	88	251
Wayne	2,347	65	175	338	448	1,321
Wexford	73	4	8	17	9	35
Unknown	0	0	0	0	0	0
Totals	15,849	384	1,492	2,627	2,456	8,890

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

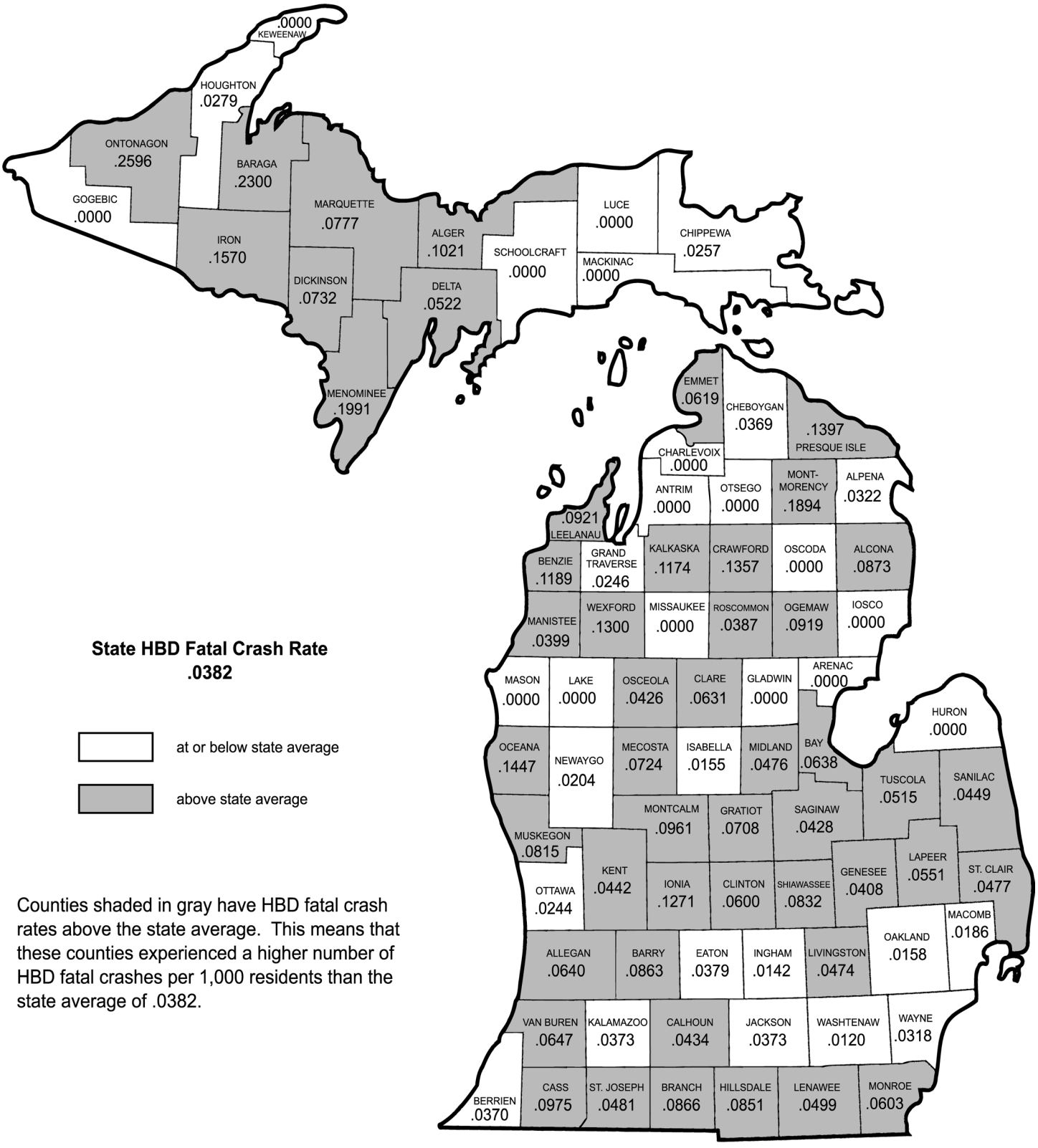
COUNTY	2002 Population Estimate	All Crashes	Fatal Crashes	HBD Crashes	HBD Fatal Crashes	HBD Fatal Crash Rate per 1,000 people	Rank
Ontonagon	7,703	569	2	23	2	0.2596	1
Baraga	8,694	489	3	19	2	0.2300	2
Menominee	25,109	1,871	7	56	5	0.1991	3
Montmorency	10,560	481	3	34	2	0.1894	4
Iron	12,736	937	2	36	2	0.1570	5
Oceana	27,650	1,341	10	98	4	0.1447	6
Presque Isle	14,320	668	3	30	2	0.1397	7
Crawford	14,734	810	6	39	2	0.1357	8
Wexford	30,777	1,673	11	73	4	0.1300	9
Ionia	62,941	2,989	16	123	8	0.1271	10
Benzie	16,818	632	6	33	2	0.1189	11
Kalkaska	17,043	809	6	39	2	0.1174	12
Alger	9,796	501	4	34	1	0.1021	13
Cass	51,284	1,988	13	121	5	0.0975	14
Montcalm	62,420	3,476	17	156	6	0.0961	15
Leelanau	21,722	696	2	46	2	0.0921	16
Ogemaw	21,758	1,188	7	60	2	0.0919	17
Alcona	11,455	710	4	26	1	0.0873	18
Branch	46,189	2,229	9	64	4	0.0866	19
Barry	57,943	2,583	13	109	5	0.0863	20
Hillsdale	46,980	2,154	8	79	4	0.0851	21
Shiawassee	72,122	2,853	15	130	6	0.0832	22
Muskegon	171,765	5,934	27	257	14	0.0815	23
Marquette	64,342	2,618	9	106	5	0.0777	24
Dickinson	27,325	1,475	3	47	2	0.0732	25
Mecosta	41,465	2,763	9	80	3	0.0724	26
Gratiot	42,365	1,872	4	68	3	0.0708	27
Van Buren	77,235	2,935	10	157	5	0.0647	28
Allegan	109,336	3,947	23	230	7	0.0640	29
Bay	109,672	3,894	9	262	7	0.0638	30
Clare	31,686	1,690	6	66	2	0.0631	31
Emmet	32,329	1,818	4	67	2	0.0619	32
Monroe	149,253	4,499	23	278	9	0.0603	33
Clinton	66,668	2,830	10	127	4	0.0600	34
Lapeer	90,776	3,819	21	166	5	0.0551	35
Delta	38,336	2,440	6	77	2	0.0522	36
Tuscola	58,249	2,267	13	128	3	0.0515	37
Lenawee	100,145	3,467	18	158	5	0.0499	38
St. Joseph	62,366	2,461	16	114	3	0.0481	39
St. Clair	167,712	5,199	24	258	8	0.0477	40
Midland	84,119	3,205	11	138	4	0.0476	41
Livingston	168,862	5,967	17	284	8	0.0474	42
Sanilac	44,535	1,966	6	84	2	0.0449	43
Kent	587,951	25,321	75	1,068	26	0.0442	44
Calhoun	138,375	6,871	17	244	6	0.0434	45

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

COUNTY	2002 Population Estimate	All Crashes	Fatal Crashes	HBD Crashes	HBD Fatal Crashes	HBD Fatal Crash Rate per 1,000 people	Rank
Saginaw	210,087	8,005	25	368	9	0.0428	46
Osceola	23,500	1,393	4	51	1	0.0426	47
Genesee	441,423	15,520	46	871	18	0.0408	48
Manistee	25,082	1,153	5	45	1	0.0399	49
Roscommon	25,818	1,221	4	57	1	0.0387	50
Eaton	105,590	4,452	16	144	4	0.0379	51
Jackson	160,972	6,900	19	297	6	0.0373	52
Kalamazoo	241,471	10,768	22	429	9	0.0373	53
Berrien	162,285	5,868	23	276	6	0.0370	54
Cheboygan	27,072	1,286	4	64	1	0.0369	55
Alpena	31,026	1,249	3	50	1	0.0322	56
Wayne	2,045,540	75,343	195	2,347	65	0.0318	57
Houghton	35,883	1,684	4	66	1	0.0279	58
Chippewa	38,898	1,615	2	57	1	0.0257	59
Grand Traverse	81,263	4,029	8	142	2	0.0246	60
Ottawa	245,913	8,057	26	366	6	0.0244	61
Newaygo	49,013	2,239	6	111	1	0.0204	62
Macomb	808,529	26,578	52	1,091	15	0.0186	63
Oakland	1,202,721	44,186	85	1,542	19	0.0158	64
Isabella	64,523	3,234	11	144	1	0.0155	65
Ingham	281,362	12,257	21	411	4	0.0142	66
Washtenaw	334,351	12,998	24	463	4	0.0120	67
Antrim	23,809	1,123	4	54	0	0.0000	68
Arenac	17,185	970	4	33	0	0.0000	69
Charlevoix	26,386	1,292	2	42	0	0.0000	70
Gladwin	26,745	1,148	1	57	0	0.0000	71
Gogebic	17,407	519	2	18	0	0.0000	72
Huron	35,422	1,822	9	44	0	0.0000	73
Iosco	26,979	1,140	3	56	0	0.0000	74
Keweenaw	2,204	115	0	10	0	0.0000	75
Lake	11,623	594	0	28	0	0.0000	76
Luce	7,027	314	2	10	0	0.0000	77
Mackinac	11,505	908	4	31	0	0.0000	78
Mason	28,879	1,721	3	67	0	0.0000	79
Missaukee	14,950	760	1	35	0	0.0000	80
Oscoda	9,449	457	2	21	0	0.0000	81
Otsego	24,155	1,070	4	36	0	0.0000	82
Schoolcraft	8,778	622	1	23	0	0.0000	83
Unknown	0	0	0	0	0		

State Totals	10,050,446	395,515	1,175	15,849	384	0.03821	

COUNTY RANKING
BY HBD FATAL CRASH RATE



State HBD Fatal Crash Rate
.0382

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 .0382.

MICHIGAN OHSP Office of Highway Safety Planning

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	26	1	11	14	0	3	3	20	1	16
Alger	34	1	20	13	0	0	10	24	1	27
Allegan	230	7	94	129	5	5	24	196	7	128
Alpena	50	1	21	28	0	6	8	36	3	31
Antrim	54	0	26	28	0	8	10	36	0	31
Arenac	33	0	15	18	1	5	2	25	0	15
Baraga	19	2	3	14	0	2	4	13	3	4
Barry	109	5	46	58	0	0	26	83	5	62
Bay	262	7	94	161	5	4	34	219	9	125
Benzie	33	2	13	18	0	7	3	23	2	14
Berrien	276	6	111	159	11	14	40	211	6	159
Branch	64	4	25	35	2	10	6	46	4	36
Calhoun	244	6	86	152	23	0	34	187	6	117
Cass	121	5	60	56	0	9	14	98	5	73
Charlevoix	42	0	20	22	0	5	3	34	0	24
Cheboygan	64	1	28	35	4	3	6	51	2	34
Chippewa	57	1	23	33	7	0	7	43	1	30
Clare	66	2	23	41	0	9	5	52	2	33
Clinton	127	4	56	67	12	4	7	104	4	79
Crawford	39	2	16	21	1	0	6	32	2	20
Delta	77	2	37	38	0	4	2	71	2	47
Dickinson	47	2	23	22	0	10	6	31	2	31
Eaton	144	4	63	77	6	0	39	99	4	83
Emmet	67	2	23	42	0	18	3	46	2	36
Genesee	871	18	368	485	38	12	116	705	20	560
Gladwin	57	0	24	33	0	0	10	47	0	32
Gogebic	18	0	7	11	0	2	1	15	0	7
Grand Traverse	142	2	56	84	0	27	20	95	2	83
Gratiot	68	3	33	32	0	10	5	53	5	48
Hillsdale	79	4	38	37	0	8	5	66	4	57
Houghton	66	1	32	33	0	5	9	52	1	39
Huron	44	0	16	28	0	0	11	33	0	20
Ingham	411	4	166	241	40	11	69	291	5	236
Ionia	123	8	44	71	4	0	19	100	8	61
Iosco	56	0	22	34	0	6	4	46	0	34
Iron	36	2	23	11	0	5	4	27	2	32
Isabella	144	1	60	83	0	9	12	123	1	82
Jackson	297	6	108	183	16	12	18	251	6	149
Kalamazoo	429	9	181	239	37	16	35	341	10	235
Kalkaska	39	2	16	21	0	4	2	33	2	21
Kent	1,068	26	373	669	48	49	115	856	30	538
Keweenaw	10	0	5	5	0	3	0	7	0	5
Lake	28	0	13	15	0	3	1	24	0	19
Lapeer	166	5	77	84	4	0	28	134	5	99
Leelanau	46	2	22	22	0	0	8	38	2	30
Lenawee	158	5	67	86	0	21	25	112	7	96

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	284	8	118	158	20	12	25	227	9	164
Luce	10	0	6	4	0	0	1	9	0	7
Mackinac	31	0	16	15	6	6	3	16	0	19
Macomb	1,091	15	433	643	57	0	195	839	18	657
Manistee	45	1	19	25	0	4	3	38	1	30
Marquette	106	5	44	57	0	21	7	78	5	57
Mason	67	0	29	38	0	21	0	46	0	37
Mecosta	80	3	39	38	0	4	30	46	3	64
Menominee	56	5	29	22	0	12	5	39	5	46
Midland	138	4	62	72	0	7	14	117	4	86
Missaukee	35	0	11	24	0	0	5	30	0	13
Monroe	278	9	117	152	15	27	18	218	9	167
Montcalm	156	6	75	75	0	3	36	117	6	110
Montmorency	34	2	18	14	0	0	4	30	2	26
Muskegon	257	14	120	123	2	24	21	210	16	195
Newaygo	111	1	50	60	0	0	22	89	1	68
Oakland	1,542	19	597	926	139	43	158	1,202	20	845
Oceana	98	4	46	48	0	6	8	84	6	63
Ogemaw	60	2	22	36	1	0	10	49	2	28
Ontonagon	23	2	9	12	0	2	2	19	2	15
Osceola	51	1	21	29	0	7	3	41	1	27
Oscoda	21	0	11	10	0	0	5	16	0	16
Otsego	36	0	18	18	0	0	3	33	0	26
Ottawa	366	6	143	217	18	33	19	296	6	211
Presque Isle	30	2	20	8	0	6	4	20	2	28
Roscommon	57	1	21	35	1	0	12	44	1	26
Saginaw	368	9	163	196	14	0	77	277	9	237
St. Clair	258	8	136	114	21	0	32	205	8	189
St. Joseph	114	3	59	52	0	20	17	77	3	95
Sanilac	84	2	43	39	0	0	24	60	2	63
Schoolcraft	23	0	14	9	0	4	4	15	0	20
Shiawassee	130	6	55	69	5	0	24	101	6	74
Tuscola	128	3	55	70	0	0	23	105	4	85
Van Buren	157	5	65	87	3	0	21	133	5	90
Washtenaw	463	4	208	251	30	47	21	365	4	285
Wayne	2,347	65	961	1,321	175	84	213	1,875	75	1,455
Wexford	73	4	34	35	0	7	16	50	4	52
UNKNOWN	0	0	0	0	0	0	0	0	0	0
Totals	15,849	384	6,575	8,890	771	729	1,904	12,445	422	9,414

Please see foreword regarding roadway type classification issue.

2002
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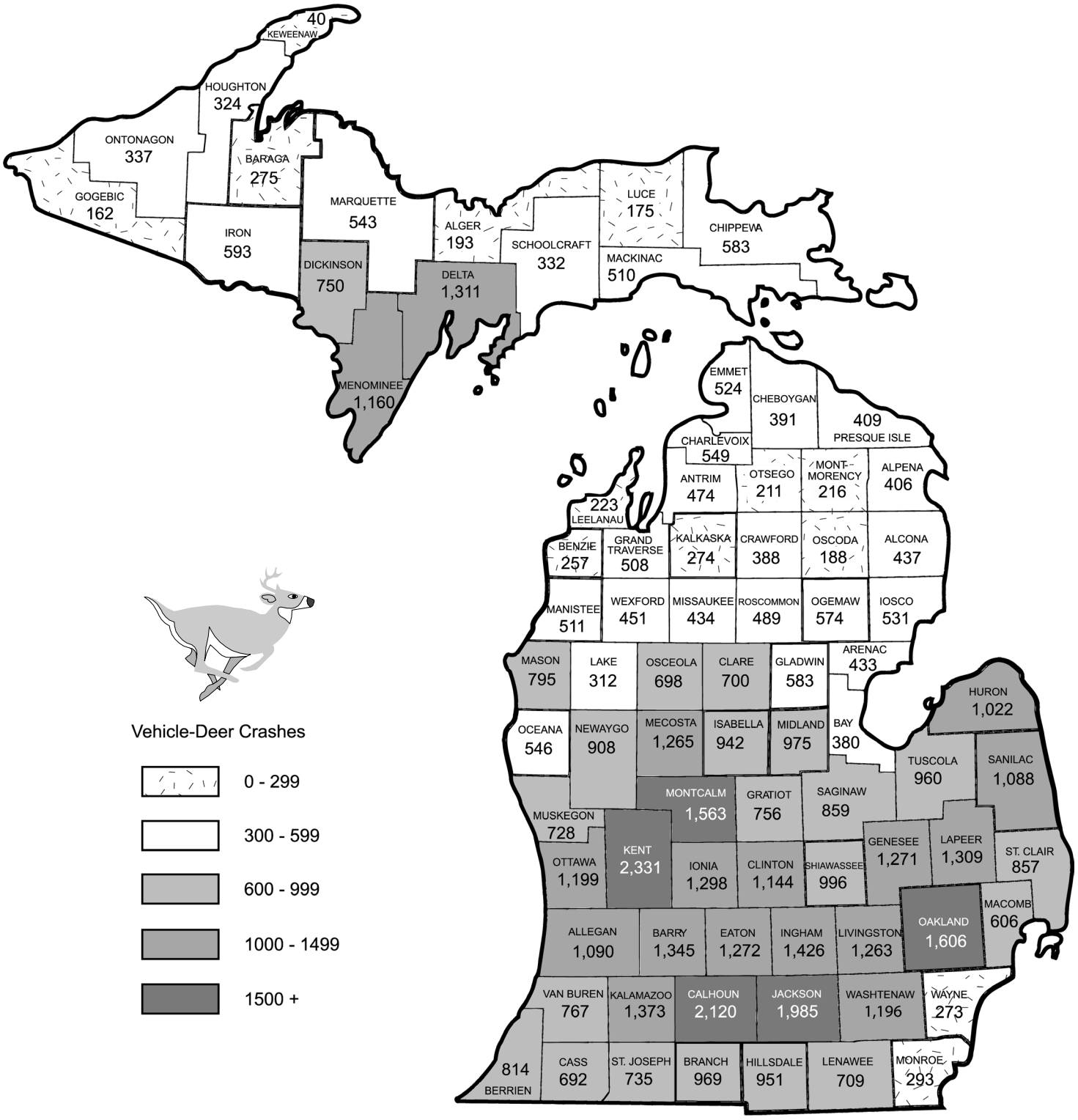
Deer

MICHIGAN MOTOR VEHICLE-DEER INVOLVED/ASSOCIATED CRASHES

Michigan had 63,136 reported motor vehicle-deer crashes during 2002. 2,220 people were injured and 5 people were killed as a result of those collisions. Of the 63,469 vehicles involved, 39,615 (62.4%) were passenger cars, 15,894 (25.0%) were pickups, and 5,094 (8.0%) were minivans, vans, motorhomes. All other vehicle types (including motorcycle, snowmobile, ORV/ATV, large trucks, moped) totaled 4.5 percent.

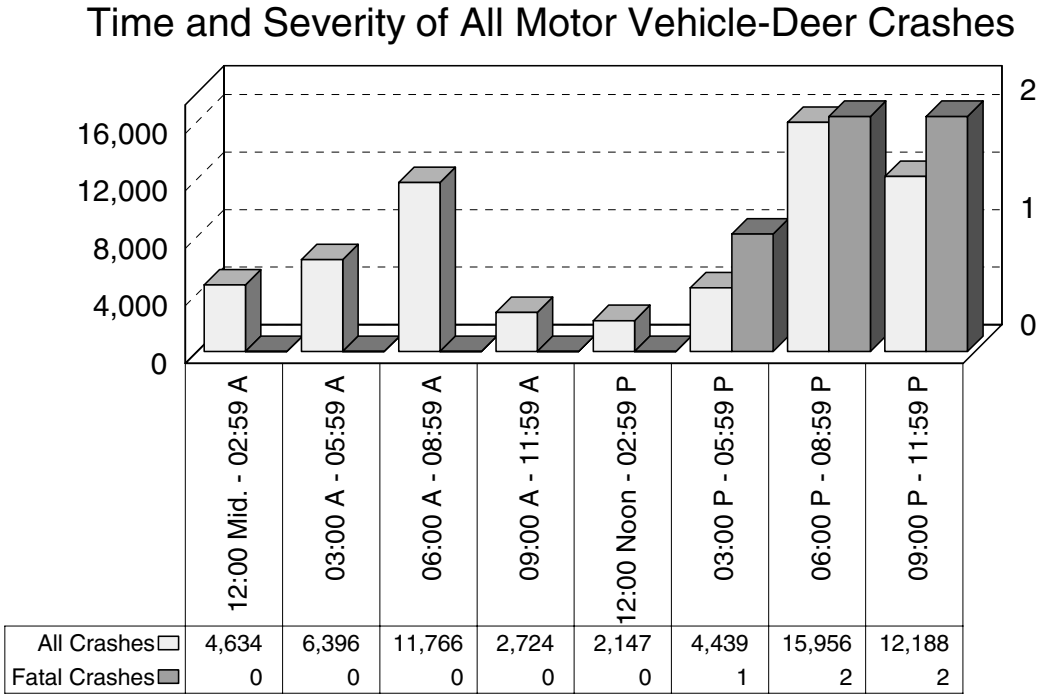
Contrary to common belief, motor vehicle-deer crashes are happening most often in Michigan's southern, heavily populated counties; Kent County had the highest number with 2,331 such crashes in 2002.



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

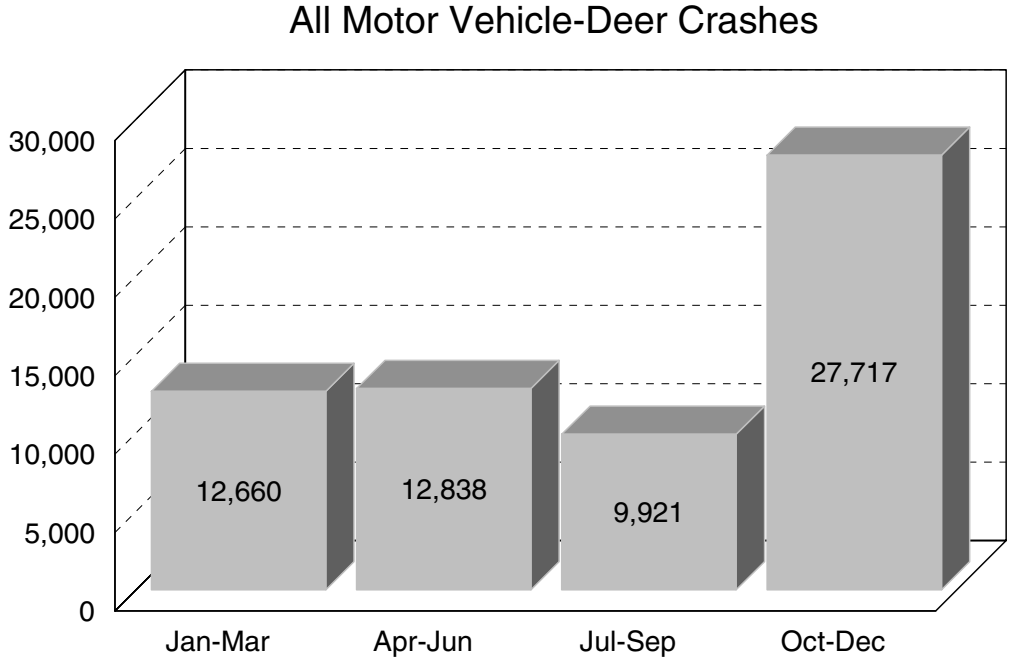
LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	12,412	19.7	3	60.0	41	219	278	11,871
Dawn	5,446	8.6	0	0.0	11	62	87	5,286
Dusk	3,375	5.3	0	0.0	6	45	53	3,271
Dark – Lighted	1,983	3.1	1	20.0	2	19	35	1,926
Dark – Unlighted	38,892	61.6	1	20.0	57	351	596	37,887
Other/Unknown	1,028	1.6	0	0.0	2	13	9	1,004
Totals	63,136	100.0	5	100.0	119	709	1,058	61,245

The five fatal deer crashes in Michigan in 2002 occurred in daylight, dark-lighted 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	5,739	9.1	0	0.0	3	49	79	5,608
February	3,247	5.1	0	0.0	3	37	47	3,160
March	3,674	5.8	0	0.0	2	42	49	3,581
April	3,449	5.5	0	0.0	3	70	65	3,311
May	4,697	7.4	0	0.0	9	96	105	4,487
June	4,692	7.4	1	20.0	15	76	100	4,500
July	3,195	5.1	0	0.0	19	50	72	3,054
August	2,492	3.9	0	0.0	15	52	55	2,370
September	4,234	6.7	1	20.0	13	60	77	4,083
October	8,877	14.1	1	20.0	22	79	139	8,636
November	11,679	18.5	1	20.0	11	69	186	11,412
December	7,161	11.3	1	20.0	4	29	84	7,043
Totals	63,136	100.0	5	100.0	119	709	1,058	61,245



27,717 (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	437	0	11	426	0	50	75	312	0	19
Alger	193	0	4	189	0	16	56	121	0	4
Allegan	1,090	1	33	1,056	36	39	174	841	1	37
Alpena	406	0	16	390	0	30	99	277	0	21
Antrim	474	0	11	463	0	78	62	334	0	13
Arenac	433	0	20	413	13	69	20	331	0	30
Baraga	275	0	5	270	0	65	49	161	0	5
Barry	1,345	0	40	1,305	0	0	481	864	0	48
Bay	380	0	14	366	19	17	75	269	0	18
Benzie	257	0	3	254	0	43	32	182	0	3
Berrien	814	0	29	785	32	96	76	610	0	35
Branch	969	0	28	941	36	81	53	799	0	33
Calhoun	2,120	0	40	2,080	182	0	338	1,600	0	50
Cass	692	0	23	669	0	47	172	473	0	25
Charlevoix	549	0	5	544	0	130	65	354	0	5
Cheboygan	391	0	17	374	35	20	71	265	0	19
Chippewa	583	0	22	561	21	0	235	327	0	30
Clare	700	0	19	681	0	86	107	507	0	28
Clinton	1,144	0	34	1,110	71	53	67	953	0	37
Crawford	388	0	14	374	15	5	135	233	0	18
Delta	1,311	0	24	1,287	0	157	177	977	0	29
Dickinson	750	0	24	726	0	163	149	438	0	27
Eaton	1,272	0	33	1,239	65	0	303	904	0	37
Emmet	524	0	14	510	0	97	44	383	0	16
Genesee	1,271	0	44	1,227	58	14	180	1,019	0	48
Gladwin	583	0	17	566	0	0	182	401	0	21
Gogebic	162	0	6	156	0	54	6	102	0	9
Grand Traverse	508	0	14	494	0	40	65	403	0	14
Gratiot	756	0	19	737	0	81	96	579	0	25
Hillsdale	951	0	21	930	0	72	176	703	0	25
Houghton	324	0	8	316	0	53	57	214	0	8
Huron	1,022	0	21	1,001	0	0	356	666	0	25
Ingham	1,426	1	38	1,387	66	63	156	1,141	1	40
Ionia	1,298	0	32	1,266	33	0	278	987	0	36
Iosco	531	0	12	519	0	57	153	321	0	18
Iron	593	0	14	579	0	190	72	331	0	20
Isabella	942	0	25	917	0	38	114	790	0	30
Jackson	1,985	0	44	1,941	82	76	301	1,526	0	50
Kalamazoo	1,373	0	52	1,321	36	40	106	1,191	0	57
Kalkaska	274	0	5	269	0	31	69	174	0	5
Kent	2,331	1	73	2,257	80	93	324	1,834	1	85
Keweenaw	40	0	2	38	0	7	2	31	0	3
Lake	312	0	10	302	0	56	40	216	0	13
Lapeer	1,309	0	39	1,270	52	0	177	1,080	0	42
Leelanau	223	0	7	216	0	0	59	164	0	8
Lenawee	709	0	33	676	0	124	151	434	0	40

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	1,263	0	45	1,218	61	34	124	1,044	0	48
Luce	175	0	1	174	0	0	93	82	0	2
Mackinac	510	0	18	492	35	101	116	258	0	24
Macomb	606	0	30	576	12	0	101	493	0	33
Manistee	511	0	8	503	0	95	95	321	0	10
Marquette	543	0	19	524	0	85	108	350	0	21
Mason	795	0	23	772	0	152	39	604	0	29
Mecosta	1,265	0	33	1,232	0	38	326	901	0	37
Menominee	1,160	0	30	1,130	0	280	103	777	0	38
Midland	975	0	30	945	0	62	100	813	0	33
Missaukee	434	0	8	426	0	0	116	318	0	11
Monroe	293	0	14	279	9	45	24	215	0	16
Montcalm	1,563	0	44	1,519	0	29	400	1,134	0	51
Montmorency	216	0	4	212	0	0	88	128	0	4
Muskegon	728	0	26	702	13	58	67	590	0	27
Newaygo	908	0	31	877	0	0	231	677	0	34
Oakland	1,606	0	78	1,528	79	11	129	1,387	0	85
Oceana	546	0	14	532	0	60	63	423	0	15
Ogemaw	574	0	29	545	24	0	163	387	0	43
Ontonagon	337	0	17	320	0	67	137	133	0	20
Osceola	698	0	20	678	0	82	106	510	0	26
Oscoda	188	0	5	183	0	0	55	133	0	6
Otsego	211	0	8	203	10	0	30	171	0	13
Ottawa	1,199	1	35	1,163	94	61	96	948	1	44
Presque Isle	409	0	9	400	0	45	101	263	0	9
Roscommon	489	0	19	470	24	21	73	371	0	21
Saginaw	859	1	26	832	14	0	186	659	1	32
St. Clair	857	0	32	825	46	0	113	698	0	35
St. Joseph	735	0	18	717	0	86	145	504	0	20
Sanilac	1,088	0	34	1,054	0	0	343	745	0	38
Schoolcraft	332	0	9	323	0	83	74	175	0	13
Shiawassee	996	0	24	972	29	0	202	765	0	25
Tuscola	960	0	27	933	0	0	274	686	0	33
Van Buren	767	0	25	742	43	0	149	575	0	30
Washtenaw	1,196	0	47	1,149	43	82	81	990	0	53
Wayne	273	0	15	258	23	5	25	220	0	19
Wexford	451	0	12	439	0	34	157	260	0	13
UNKNOWN	0	0	0	0	0	0	0	0	0	0
Totals	63,136	5	1,886	61,245	1,491	4,047	11,068	46,530	5	2,220

Please see foreword regarding roadway type classification issue.

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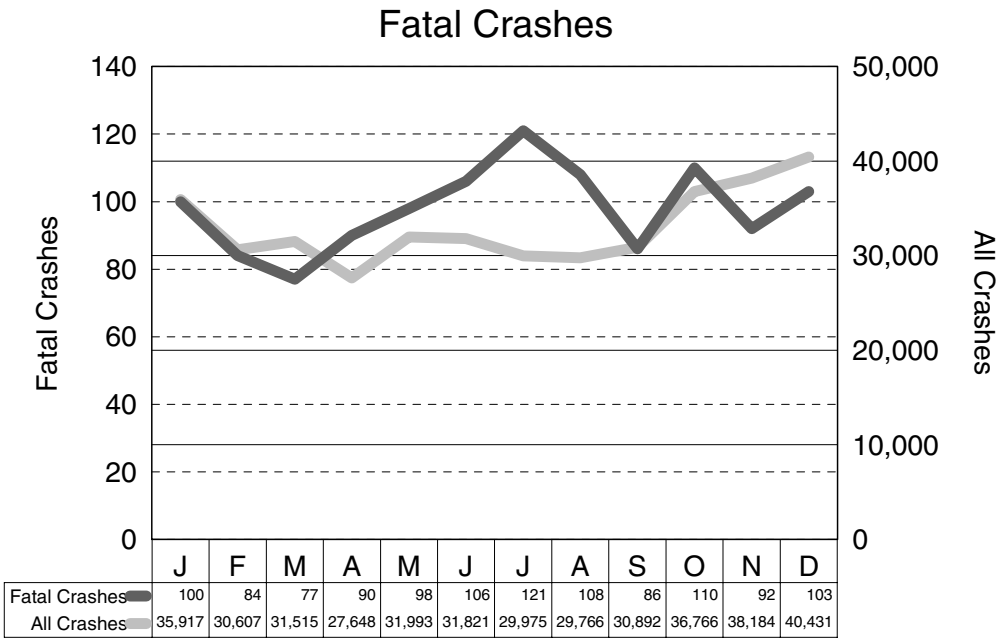
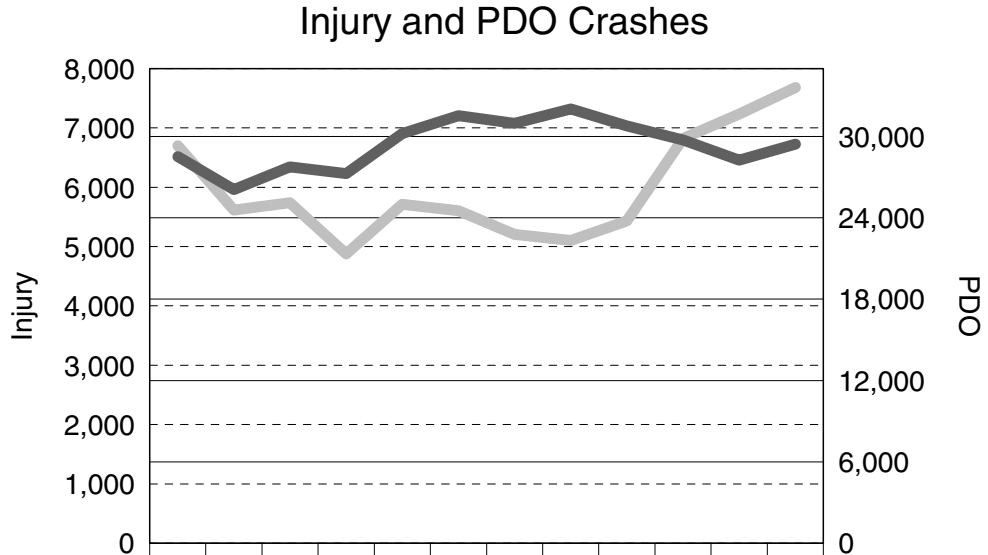
Crash

ALL CRASHES INJURY SEVERITY BY MONTH



	J	F	M	A	M	J	J	A	S	O	N	D
Fatal Crashes	100	84	77	90	98	106	121	108	86	110	92	103
All Crashes	35,917	30,607	31,515	27,648	31,993	31,821	29,975	29,766	30,892	36,766	38,184	40,431



	J	F	M	A	M	J	J	A	S	O	N	D
INJURY	6,515	5,960	6,340	6,229	6,905	7,207	7,074	7,320	7,035	6,798	6,458	6,726
PDO	29,302	24,563	25,098	21,329	24,990	24,508	22,780	22,338	23,771	29,858	31,634	33,602

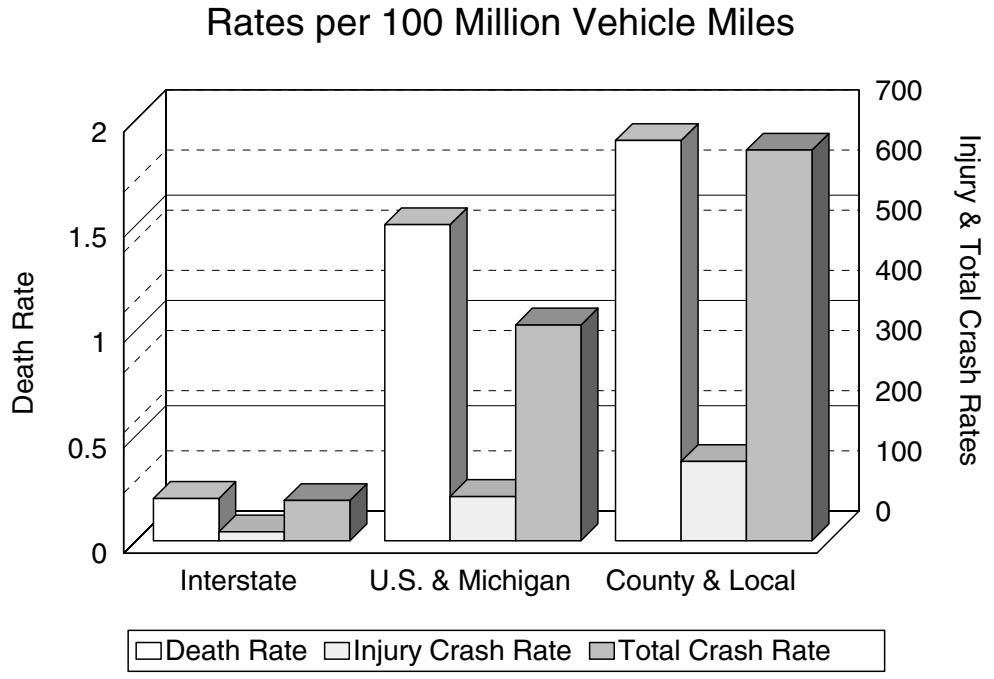
The charts on this page show that the months of April through September are peak months (21.9% or above) in terms of the percent of the number of crashes involving death or injury to the number of all crashes. That is, if a person was in a motor vehicle crash during one of these months there was a higher 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. 2002 estimated mileage figures were provided by the Michigan Department of Transportation [10].

STATEWIDE	Estimated Mileage (Billions)	All Crashes	Injury Crashes	Deaths	Total Crash Rate	Injury Crash Rate	Death Rate
Interstate Routes	30.3	**20,171**	**4,382**	**75**	**66.6**	**14.5**	**0.2**
U.S. & Michigan Roads	22.5	80,631	16,517	329	358.4	73.4	1.5
County & City Roads	45.4	294,713	59,668	875	649.1	131.4	1.9
Totals	98.2	395,515	80,567	1,279	402.8	82.0	1.3

Please see foreword regarding roadway type classification issue.



CRASH TYPE

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	129,928	32.9	538	45.8	3,189	7,711	10,028	108,462
Head On	6,892	1.7	174	14.8	593	791	1,114	4,220
Head On - Left Turn	11,154	2.8	46	3.9	506	1,333	2,592	6,677
Angle	74,321	18.8	276	23.5	2,106	5,594	13,080	53,265
Rear End	96,330	24.4	57	4.9	952	3,293	18,226	73,802
Rear End - Left Turn	4,164	1.1	5	0.4	80	250	814	3,015
Rear End - Right Turn	3,225	0.8	0	0.0	24	79	431	2,691
Sideswipe - Same Direction	33,944	8.6	13	1.1	205	753	2,048	30,925
Sideswipe - Opposite Direct	10,065	2.5	19	1.6	125	385	686	8,850
Other/Unknown	25,492	6.4	47	4.0	466	1,081	2,032	21,866
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

Single Vehicle, Head On, and Angle crash types produce the highest number of fatal crashes (84.1%). 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%).

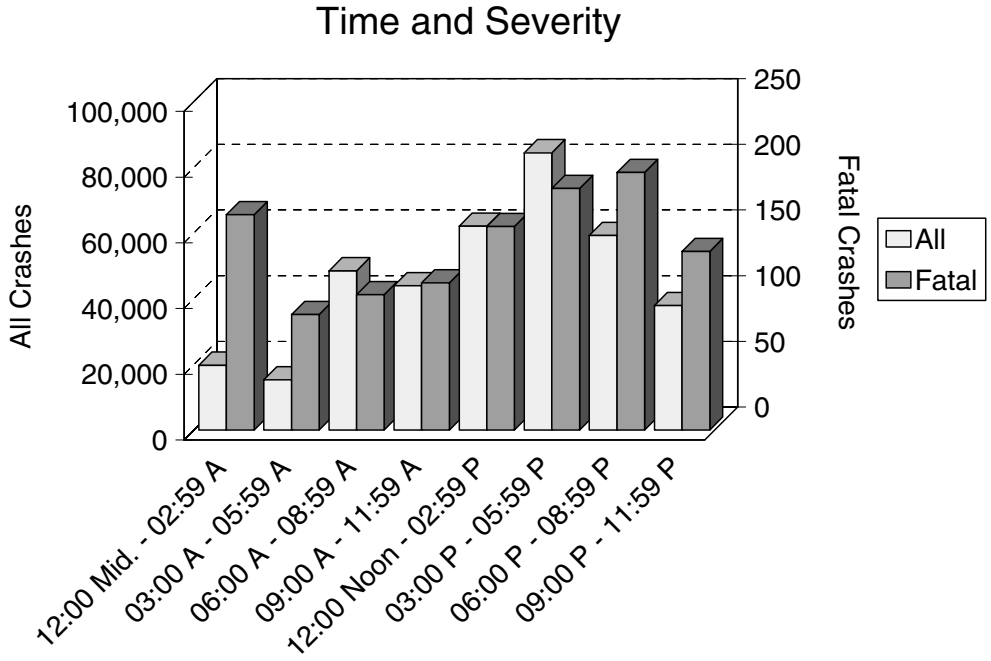
RELATIONSHIP TO ROADWAY

LOCATION OF FIRST IMPACT	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
On Road	332,159	84.0	799	68.0	5,723	15,471	43,070	267,096
Median	2,712	0.7	16	1.4	148	273	424	1,851
Shoulder	16,405	4.1	85	7.2	578	1,362	1,844	12,536
Outside of Shoulder/Curb	32,468	8.2	237	20.2	1,443	3,331	4,321	23,136
Gore	845	0.2	7	0.6	31	87	132	588
Other/Unknown	10,926	2.8	31	2.6	323	746	1,260	8,566
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

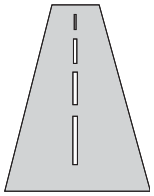
Crashes that happen outside of the normal driving lanes are overrepresented in the fatal count. Only 8.2 percent of crashes occur outside the shoulder of the road, but these crashes account for 20.2 percent of the fatal crashes.

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.	19,753	5.0	164	14.0	782	1,597	2,022	15,188
03:00 a.m. - 05:59 a.m.	15,301	3.9	88	7.5	384	830	1,215	12,784
06:00 a.m. - 08:59 a.m.	48,481	12.3	103	8.8	816	2,035	5,708	39,819
09:00 a.m. - 11:59 a.m.	43,935	11.1	112	9.5	894	2,335	6,271	34,323
12:00 noon - 02:59 p.m.	62,078	15.7	155	13.2	1,281	3,528	9,638	47,476
03:00 p.m. - 05:59 p.m.	84,431	21.3	184	15.7	1,619	4,585	12,708	65,335
06:00 p.m. - 08:59 p.m.	59,223	15.0	196	16.7	1,216	3,156	6,730	47,925
09:00 p.m. - 11:59 p.m.	37,946	9.6	136	11.6	890	2,095	3,889	30,936
Unknown	24,367	6.2	37	3.1	364	1,109	2,870	19,987
Total	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773



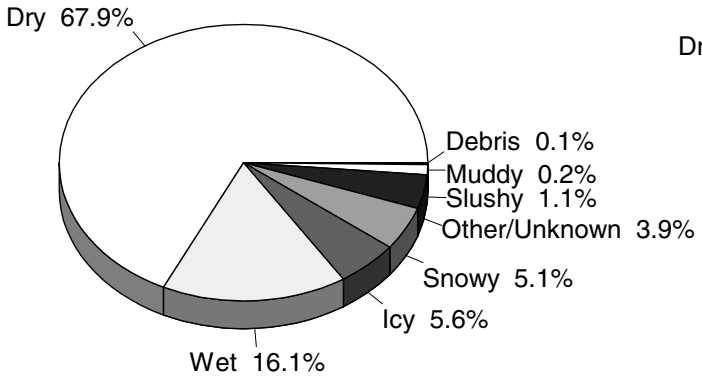
Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. There are proportionally more fatal crashes during the midnight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



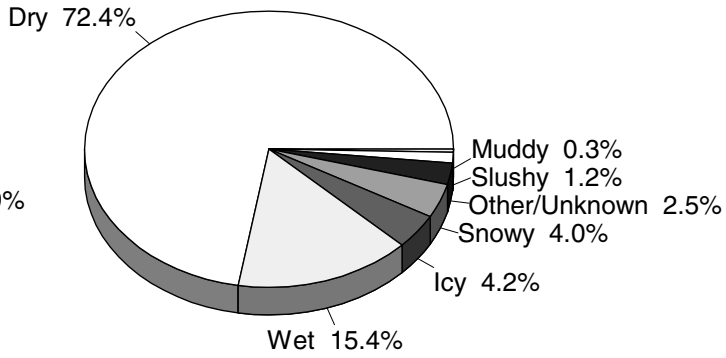
ROAD CONDITION

ROAD SURFACE CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Dry	268,710	67.9	851	72.4	5,999	15,039	34,460	212,361
Wet	63,560	16.1	181	15.4	1,111	3,187	9,605	49,476
Icy	22,092	5.6	49	4.2	408	1,158	2,673	17,804
Snowy	20,295	5.1	47	4.0	359	816	1,999	17,074
Muddy	650	0.2	4	0.3	27	55	61	503
Slushy	4,440	1.1	14	1.2	112	291	574	3,449
Debris	232	0.1	0	0.0	4	36	20	172
Other/Unknown	15,536	3.9	29	2.5	226	688	1,659	12,934
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

ALL CRASHES



FATAL CRASHES

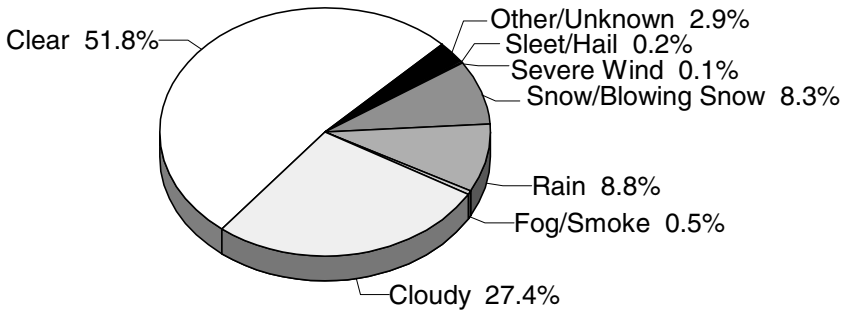


Most crashes (67.9%) and most fatal crashes (72.4%) occur on dry roads. This indicates that Michigan drivers do a good job of adjusting their driving behavior for bad road conditions.

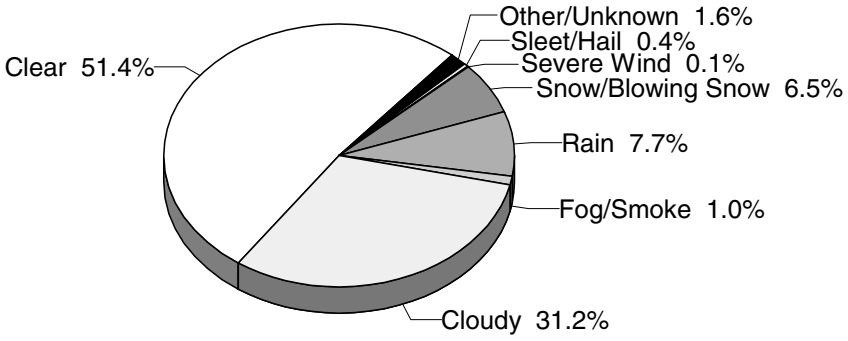
WEATHER CONDITION

WEATHER CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	204,975	51.8	604	51.4	4,683	11,817	26,399	161,472
Cloudy	108,317	27.4	367	31.2	2,163	5,544	13,980	86,263
Fog/Smoke	2,011	0.5	12	1.0	61	102	177	1,659
Rain	34,640	8.8	91	7.7	599	1,803	5,438	26,709
Snow/Blowing Snow	33,024	8.3	76	6.5	572	1,551	3,921	26,904
Severe Wind	384	0.1	1	0.1	10	21	36	316
Sleet/Hail	882	0.2	5	0.4	17	45	114	701
Other/Unknown	11,282	2.9	19	1.6	141	387	986	9,749
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

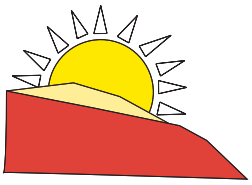
ALL CRASHES



FATAL CRASHES



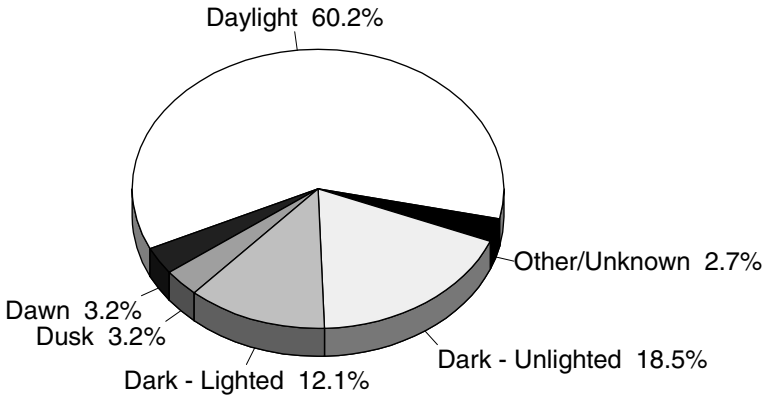
Half of all crashes occur in good weather (51.8%). Fog/smoke and sleet/hail are particularly deadly weather conditions as they are overrepresented in fatal crashes.



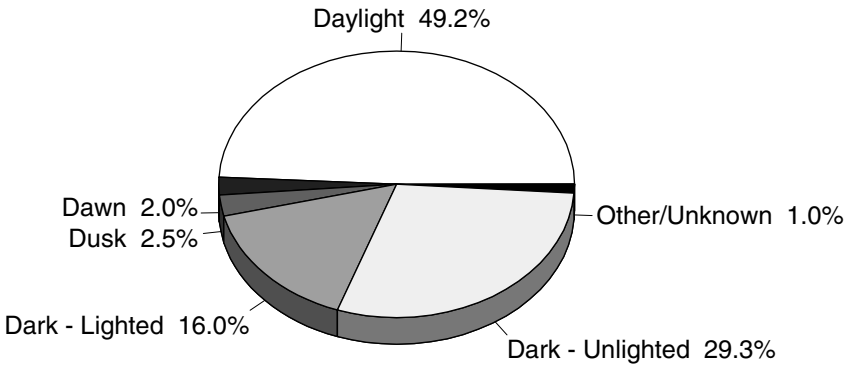
LIGHT CONDITION

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	238,285	60.2	578	49.2	4,903	13,442	35,622	183,740
Dawn	12,854	3.2	24	2.0	191	460	1,145	11,034
Dusk	12,764	3.2	29	2.5	253	638	1,426	10,418
Dark – Lighted	47,975	12.1	188	16.0	1,246	2,973	6,850	36,718
Dark – Unlighted	73,040	18.5	344	29.3	1,519	3,339	4,893	62,945
Other/Unknown	10,597	2.7	12	1.0	134	418	1,115	8,918
Totals	395,515	100.0	1,175	100.0	8,246	21,270	51,051	313,773

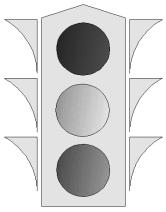
ALL CRASHES



FATAL CRASHES



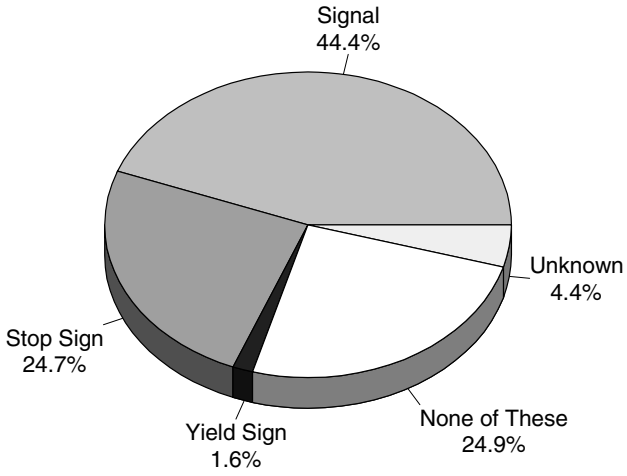
The majority (60.2%) of all crashes happen during daylight hours. Dark conditions create the greatest hazard, as they are overrepresented in fatal crashes. Areas without street lights have the higher fatality rate for dark conditions.



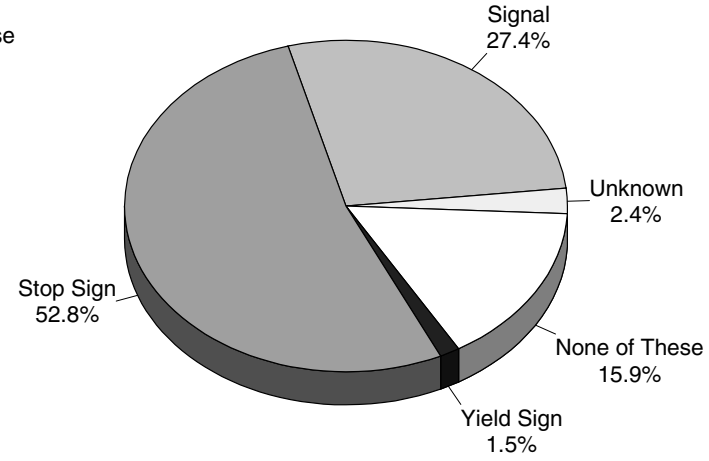
INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Signal	54,300	44.4	93	27.4	1,118	3,204	10,642	39,243
Stop Sign	30,256	24.7	179	52.8	909	2,269	5,138	21,761
Yield Sign	1,975	1.6	5	1.5	54	156	431	1,329
None of These	30,489	24.9	54	15.9	633	1,868	4,689	23,245
Unknown	5,341	4.4	8	2.4	100	293	835	4,105
Totals	122,361	100.0	339	100.0	2,814	7,790	21,735	89,683

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	3,096	49.5	6	37.5	48	110	443	2,489
Lane Open	853	13.6	1	6.3	16	38	115	683
Unknown Lane Closure	168	2.7	0	0.0	3	2	17	146
Activity - Off Road								
Lane Closed	346	5.5	1	6.3	6	13	47	279
Lane Open	393	6.3	1	6.3	9	16	57	310
Unknown Lane Closure	26	0.4	0	0.0	0	0	2	24
Activity - None								
Lane Closed	623	10.0	1	6.3	10	30	94	488
Lane Open	389	6.2	4	25.0	7	22	46	310
Unknown Lane Closure	24	0.4	0	0.0	2	3	4	15
Activity ñ Unknown								
Lane Closed	135	2.2	2	12.5	0	7	20	106
Lane Open	49	0.8	0	0.0	1	2	8	38
Unknown Lane Closure	158	2.5	0	0.0	0	1	22	135
Subtotal	6,260	100.0	16	100.0	102	244	875	5,023
Utility								
Activity - On Road								
Lane Closed	103	32.7	0	0.0	2	4	16	81
Lane Open	81	25.7	1	50.0	6	4	11	59
Unknown Lane Closure	7	2.2	0	0.0	0	0	0	7
Activity - Off Road								
Lane Closed	25	7.9	0	0.0	1	2	5	17
Lane Open	43	13.7	1	50.0	1	7	8	26
Unknown Lane Closure	3	1.0	0	0.0	0	0	0	3
Activity - None								
Lane Closed	4	1.3	0	0.0	0	0	1	3
Lane Open	33	10.5	0	0.0	0	0	5	28
Unknown Lane Closure	1	0.3	0	0.0	0	0	1	0
Activity - Unknown								
Lane Closed	2	0.6	0	0.0	1	0	0	1
Lane Open	1	0.3	0	0.0	0	0	0	1
Unknown Lane Closure	12	3.8	0	0.0	0	0	1	11
Subtotal	315	100.0	2	100.0	11	17	48	237
Unknown Type								
Subtotal	14,460		38		372	815	1,858	11,377
Total	21,035		56		485	1,076	2,781	16,637

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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	453,097	66.7	1,120	58.7	102,576	349,401	671	67.1	66,085	386,341
Van and Motorhome	49,746	7.3	135	7.1	11,147	38,464	52	5.2	6,245	43,449
Pickup	101,910	15.0	321	16.8	19,605	81,984	127	12.7	10,183	91,600
Small Truck (under 10,000 lbs.)	17,538	2.6	48	2.5	3,701	13,789	20	2.0	2,005	15,513
Motorcycle	3,030	0.4	81	4.2	2,224	725	80	8.0	2,182	768
Moped	229	0.0	3	0.2	141	85	3	0.3	133	93
Go Cart	21	0.0	2	0.1	13	6	2	0.2	12	7
Snowmobile	559	0.1	8	0.4	263	288	8	0.8	221	330
Off Road Vehicle	302	0.0	11	0.6	236	55	10	1.0	225	67
Other	1,963	0.3	7	0.4	499	1,457	4	0.4	288	1,671
Unkown	33,124	4.9	35	1.8	5,191	27,898	15	1.5	2,610	30,499
CDL Truck/Bus (breakdown below)	17,471	2.6	137	7.2	3,258	14,076	8	0.8	838	16,625
Total Number of Vehicles	678,990	100.0	1,908	100.0	148,854	528,228	1,000	100.0	91,027	586,963

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	7,354	42.1	90	65.7	1,419	5,845	5	62.5	311	7,038
Commercial Vehicle: Group B	3,391	19.4	28	20.4	637	2,726	1	12.5	227	3,163
Commercial Vehicle: Group C	493	2.8	2	1.5	87	404	0	0.0	21	472
Other Truck	790	4.5	3	2.2	164	623	1	12.5	46	743
Unknown Truck	5,443	31.2	14	10.2	951	4,478	1	12.5	233	5,209
Total Number of Vehicles	17,471	100.0	137	100.0	3,258	14,076	8	100.0	838	16,625

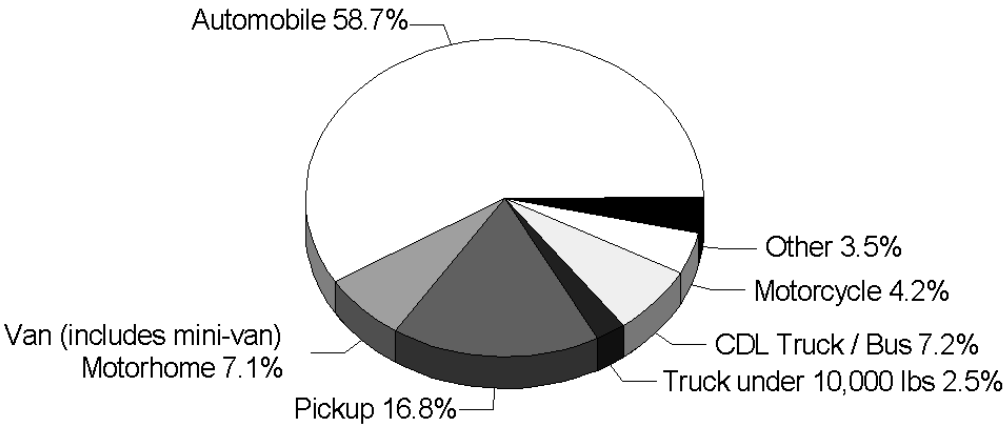
Group “A” is any vehicle that is towing a vehicle or trailer that has a gross vehicle weight rating (GVWR) over 10,000 lbs.

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.

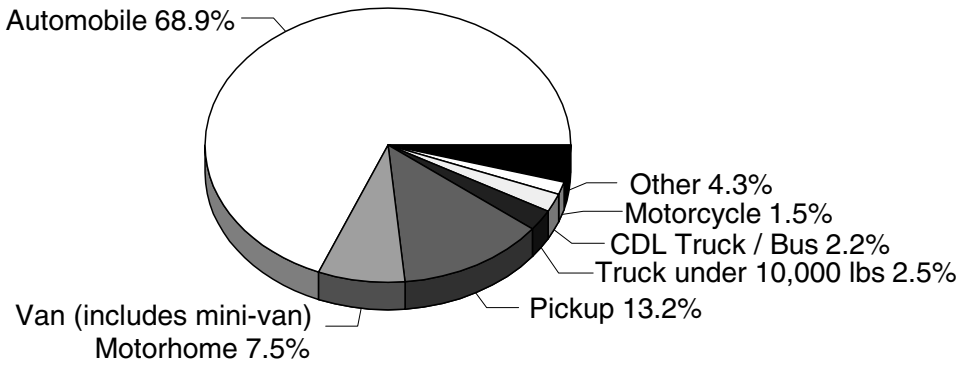
VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

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 7.1 percent.

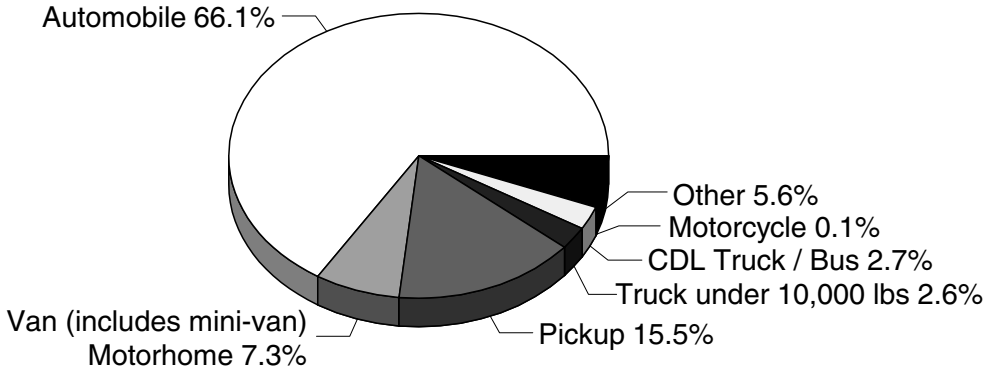
INJURY



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	326,142	48.0	1,384	8,354	20,020	46,469	249,915
Turning left	46,150	6.8	104	1,178	3,502	7,883	33,483
Turning right	17,371	2.6	22	214	706	1,754	14,675
Stopped on roadway	64,256	9.5	47	810	2,551	13,464	47,384
In prior crash	833	0.1	5	23	60	166	579
Changing lanes	15,170	2.2	31	175	483	1,383	13,098
Backing	16,365	2.4	8	80	198	527	15,552
Slowing/stopping on roadway	57,938	8.5	39	538	1,889	10,830	44,642
Slowing/stopping other	777	0.1	1	18	47	123	588
Starting up on roadway	11,977	1.8	34	231	633	2,121	8,958
Starting up other	366	0.1	1	8	22	46	289
Entering parking	858	0.1	0	9	20	58	771
Leaving parking	2,201	0.3	2	32	87	263	1,817
Entering roadway	9,580	1.4	26	202	629	1,380	7,343
Leaving roadway	1,198	0.2	16	62	135	131	854
Making U-turn	1,416	0.2	3	47	96	249	1,021
Overtaking or passing	5,193	0.8	34	156	301	522	4,180
Avoiding object	950	0.1	1	18	77	124	730
Avoiding animal	1,741	0.3	1	48	175	241	1,276
Avoiding pedestrian	188	0.0	7	25	34	33	89
Avoiding vehicle (front/back)	5,290	0.8	25	189	404	849	3,823
Avoiding vehicle (angle)	2,368	0.3	10	67	178	417	1,696
Driverless moving	407	0.1	0	6	17	25	359
Parked	27,639	4.1	40	301	813	1,127	25,358
Crossing at intersection	257	0.0	0	23	72	100	62
Crossing not at intersection	200	0.0	3	33	61	68	35
Getting on/off vehicle	13	0.0	0	3	1	5	4
In roadway with traffic	46	0.0	0	6	14	12	14
In roadway against traffic	20	0.0	0	3	4	6	7
Standing or lying in roadway	19	0.0	1	3	2	9	4
Pushing/working on vehicle	18	0.0	0	3	4	3	8
Other working in roadway	5	0.0	0	2	0	1	2
Playing in roadway	15	0.0	0	2	5	1	7
In roadway other reason	51	0.0	1	7	16	13	14
Not in roadway	44	0.0	1	3	15	13	12
Other	690	0.1	3	27	58	90	512
Unknown	61,238	9.0	58	986	3,003	8,124	49,067
TOTAL	678,990	100.0	1,908	13,892	36,332	98,630	528,228

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	1,906	62.9	2,121	62.5	70	482	712	430	393
Turning left	134	4.4	145	4.3	0	17	50	41	35
Turning right	92	3.0	103	3.0	0	13	34	33	22
Stopped on roadway	146	4.8	155	4.6	1	9	19	32	88
In prior crash	1	0.0	1	0.0	0	0	0	0	0
Changing lanes	42	1.4	47	1.4	1	12	14	9	11
Backing	4	0.1	5	0.1	0	0	1	2	1
Slowing/stopping on roadway	183	6.0	200	5.9	4	23	63	44	60
Slowing/stopping other	10	0.3	11	0.3	0	1	7	2	1
Starting up on roadway	41	1.4	47	1.4	0	7	18	5	17
Starting up other	2	0.1	2	0.1	0	1	1	0	0
Entering parking	2	0.1	3	0.1	0	0	2	1	0
Leaving parking	7	0.2	8	0.2	0	0	2	2	2
Entering roadway	28	0.9	35	1.0	0	9	11	6	8
Leaving roadway	12	0.4	12	0.4	1	1	4	1	5
Making U-turn	7	0.2	7	0.2	0	1	3	1	2
Overtaking or passing	60	2.0	68	2.0	4	15	19	18	11
Avoiding object	10	0.3	14	0.4	0	0	5	5	2
Avoiding animal	23	0.8	25	0.7	0	9	9	4	3
Avoiding pedestrian	4	0.1	4	0.1	0	0	3	1	0
Avoiding vehicle (front/back)	76	2.5	86	2.5	0	9	35	19	23
Avoiding vehicle (angle)	43	1.4	48	1.4	0	4	24	10	9
Driverless moving	1	0.0	1	0.0	0	0	0	0	0
Parked	40	1.3	41	1.2	0	0	0	1	7
Crossing at intersection	1	0.0	10	0.3	0	4	3	2	1
Crossing not at intersection	2	0.1	6	0.2	0	2	4	0	0
Getting on/off vehicle	0	0.0	0	0.0	0	0	0	0	0
In roadway with traffic	1	0.0	2	0.1	0	0	1	1	0
In roadway against traffic	0	0.0	1	0.0	0	1	0	0	0
Standing or lying in roadway	1	0.0	1	0.0	0	0	0	1	0
Pushing/working on vehicle	0	0.0	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0.0	0	0	0	0	0
Playing in roadway	0	0.0	0	0.0	0	0	0	0	0
In roadway other reason	0	0.0	1	0.0	0	1	0	0	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Other	6	0.2	9	0.3	0	2	3	2	2
Unknown	145	4.8	172	5.1	1	24	61	42	32
TOTAL	3,030	100.0	3,391*	100.0	82	647	1,108	715	735

* Includes 104 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	983	49.4	13	95	346	368	150
Turning left	42	2.1	1	5	19	14	3
Turning right	13	0.7	0	1	5	5	2
Stopped on roadway	18	0.9	0	1	1	8	8
In prior crash	1	0.1	0	0	0	0	1
Changing lanes	19	1.0	1	2	9	6	1
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	10	0.5	0	2	4	3	1
Slowing/stopping other	2	0.1	0	1	1	0	0
Starting up on roadway	16	0.8	0	0	6	8	2
Starting up other	0	0.0	0	0	0	0	0
Entering parking	0	0.0	0	0	0	0	0
Leaving parking	5	0.3	0	0	5	0	0
Entering roadway	102	5.1	1	22	32	30	14
Leaving roadway	6	0.3	0	0	2	2	1
Making U-turn	5	0.3	0	1	2	2	0
Overtaking or passing	3	0.2	0	1	1	0	1
Avoiding object	2	0.1	0	0	0	1	0
Avoiding animal	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	11	0.6	0	2	3	3	3
Avoiding vehicle (angle)	4	0.2	0	0	2	1	1
Driverless moving	1	0.1	0	0	0	0	1
Parked	1	0.1	0	0	1	0	0
Crossing at intersection	319	16.0	0	22	115	133	45
Crossing not at intersection	115	5.8	2	25	50	29	7
Getting on/off vehicle	2	0.1	0	1	0	1	0
In roadway with traffic	39	2.0	0	8	10	15	6
In roadway against traffic	23	1.2	0	5	6	10	2
Standing or lying in roadway	1	0.1	1	0	0	0	0
Pushing/working on vehicle	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0	0	0	0
Playing in roadway	15	0.8	0	2	6	4	3
In roadway other reason	17	0.9	1	5	2	6	3
Not in roadway	18	0.9	0	0	6	8	4
Other	54	2.7	0	7	16	22	9
Unknown	141	7.1	0	16	45	56	17
TOTAL	1,988*	100.0	20	224	695	735	285

* Includes 29 bicyclists with unknown injury severity

Due to data processing errors ~800 pedestrians and ~700 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	123	4.6	6	16	36	41	23
Turning left	10	0.4	0	2	0	2	5
Turning right	2	0.1	0	0	1	1	0
Stopped on roadway	6	0.2	0	0	1	3	2
In prior crash	2	0.1	0	1	0	0	1
Changing lanes	1	0.0	0	1	0	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	1	0.0	0	0	0	1	0
Slowing/stopping other	1	0.0	0	0	0	1	0
Starting up on roadway	3	0.1	0	0	0	1	2
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	0	0	0	1
Entering roadway	9	0.3	1	3	5	0	0
Leaving roadway	1	0.0	0	0	0	1	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	0	0.0	0	0	0	0	0
Avoiding object	1	0.0	0	0	1	0	0
Avoiding animal	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	0	0.0	0	0	0	0	0
Avoiding vehicle (angle)	1	0.0	0	1	0	0	0
Driverless moving	2	0.1	1	1	0	0	0
Parked	23	0.9	0	0	0	2	13
Crossing at intersection	606	22.8	10	113	194	232	47
Crossing not at intersection	727	27.3	67	170	228	219	28
Getting on/off vehicle	44	1.7	1	8	19	15	0
In roadway with traffic	162	6.1	19	27	47	58	9
In roadway against traffic	50	1.9	4	11	12	20	2
Standing or lying in roadway	104	3.9	13	23	29	29	6
Pushing/working on vehicle	28	1.1	3	11	8	6	0
Other working in roadway	35	1.3	0	8	5	17	4
Playing in roadway	45	1.7	1	8	18	15	2
In roadway other reason	166	6.2	16	35	51	50	12
Not in roadway	144	5.4	11	30	46	50	6
Other	102	3.8	4	24	25	40	8
Unknown	260	9.8	16	50	62	95	22
TOTAL	2,660*	100.0	173	543	788	899	193

* Includes 64 pedestrians with unknown injury severity

Due to data processing errors ~800 pedestrians and ~700 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	2,328	0.3	1	89	246	353	1,639
Cross center/median	499	0.1	1	27	49	73	349
Ran off road left	660	0.1	4	20	55	80	501
Ran off road right	1,166	0.2	0	31	80	143	912
Re-enter road	75	0.0	0	4	7	14	50
Overturn	8,363	1.2	104	705	1,665	1,765	4,124
Separation of units	927	0.1	3	14	33	122	755
Fire/explosion	686	0.1	9	15	19	60	583
Immersion	46	0.0	2	1	1	4	38
Jackknife	253	0.0	0	2	16	17	218
Downhill runaway	46	0.0	0	1	4	9	32
Cargo loss/shift	792	0.1	1	4	16	30	741
Individual fell off	444	0.1	18	123	145	65	93
Other noncollision	1,982	0.3	2	32	146	159	1,643
NONCOLLISION Subtotal	18,267	2.7	145	1,068	2,482	2,894	11,678

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	2,414	0.4	172	491	734	766	251
Pedalcycle	2,032	0.3	23	207	670	699	433
Motor vehicle in transport	428,751	63.1	1,182	8,364	21,974	72,517	324,714
Parked motor vehicle	18,558	2.7	13	173	497	722	17,153
Railway train	118	0.0	6	13	9	17	73
Animal	54,886	8.1	3	57	456	719	53,651
Other nonfixed objects	5,955	0.9	5	65	187	297	5,401
COLLISION NONFIXED Subtotal	512,714	75.5	1,404	9,370	24,527	75,737	401,676

MOST HARMFUL EVENT (continued)

HAD A COLLISION WITH FIXED OBJECT	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH: Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Bridge/pier/abutment	539	0.1	4	20	49	88	378
Bridge parapet end	255	0.0	0	3	6	18	228
Bridge rail	415	0.1	1	8	20	52	334
Guardrail face	2,867	0.4	5	55	153	361	2,293
Guardrail end	488	0.1	7	17	55	64	345
Median barrier	2,774	0.4	5	86	240	594	1,849
Highway traffic sign post	2,356	0.3	2	8	51	114	2,181
Signal post	228	0.0	0	5	10	17	196
Luminaire/light support	620	0.1	4	24	55	67	470
Utility pole	3,556	0.5	25	165	410	589	2,367
Other pole	1,011	0.1	3	15	54	102	837
Culvert	652	0.1	5	52	85	99	411
Curb	1,941	0.3	2	22	86	122	1,709
Ditch	7,773	1.1	16	258	729	998	5,772
Embankment	1,639	0.2	16	81	186	248	1,108
Fence	1,444	0.2	0	19	58	80	1,287
Mailbox	2,115	0.3	2	11	48	82	1,972
Tree	11,326	1.7	172	760	1,462	1,660	7,272
Rail crossing signal	92	0.0	0	3	9	3	77
Building	838	0.1	4	49	88	131	566
Traffic island	45	0.0	0	1	3	3	38
Fire hydrant	526	0.1	0	10	38	56	422
Impact attenuator	44	0.0	0	3	9	10	22
Other fixed object	3,252	0.5	14	78	270	302	2,588
COLLISION FIXED Subtotal	46,796	6.9	287	1,753	4,174	5,860	34,722

	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH: Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Unknown Event	101,213	14.9	72	1,701	5,149	14,139	80,152
TOTAL MOST HARMFUL EVENT	678,990	100.0	1,908	13,892	36,332	98,630	528,228

VEHICLE DEFECTS IN CRASH INVOLVEMENT

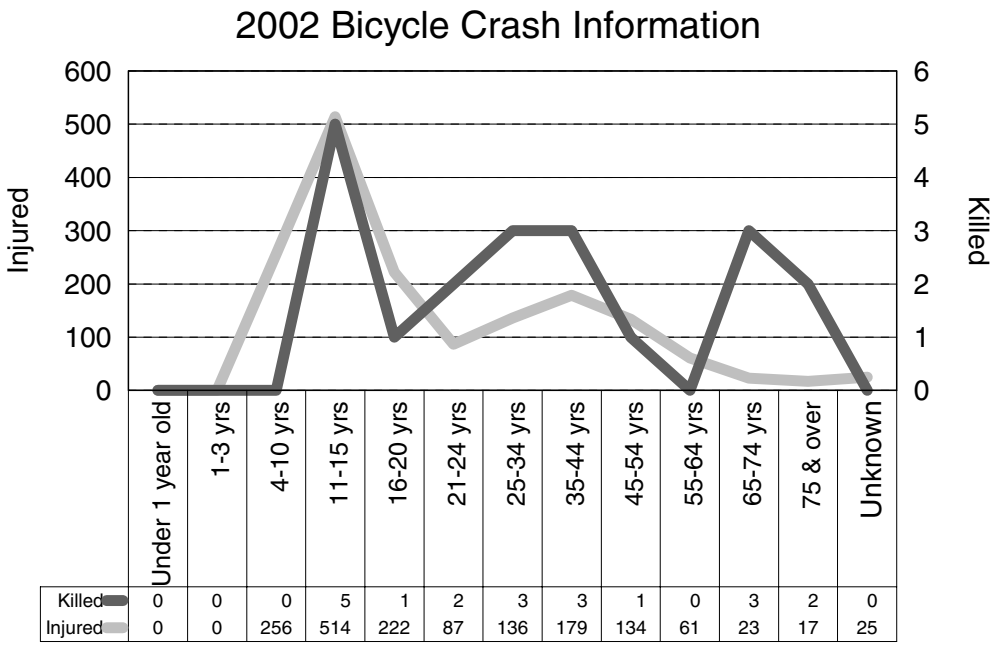
VEHICLE DEFECTS	Motor Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
Brakes	1,711	0.3	7	40	125	291	1,248
Lights/reflectors	286	0.0	3	12	14	30	227
Steering	264	0.0	1	10	27	44	182
Tires/wheels	831	0.1	3	26	68	76	658
Windows	62	0.0	0	1	1	9	51
Other	1,554	0.2	5	38	70	226	1,215
Unknown	674,282	99.3	1,889	13,765	36,027	97,954	524,647
TOTAL	678,990	100.0	1,908	13,892	36,332	98,630	528,228

DRIVER HAZARDOUS ACTION

HAZARDOUS ACTION	All Vehicles		MOST SEVERE OUTCOME IN CRASH				
			Fatal	Injury			PDO
	Number of Vehicles	% of Total		A	B	C	
None	331,605	48.8	751	5,764	15,584	46,225	263,281
Speed too fast	36,680	5.4	242	1,342	3,126	5,414	26,556
Speed too slow	770	0.1	2	15	46	142	565
Failed to yield	57,454	8.5	162	1,549	4,470	10,272	41,001
Disregard traffic control	14,263	2.1	101	683	1,592	3,552	8,335
Drove wrong way	461	0.1	6	25	48	72	310
Drove left of center	3,423	0.5	89	236	343	467	2,288
Improper passing	4,184	0.6	10	67	154	363	3,590
Improper lane use	14,116	2.1	12	130	384	1,105	12,485
Improper turn	7,396	1.1	5	103	322	809	6,157
Improper/no signal	796	0.1	0	9	33	82	672
Improper backing	12,373	1.8	3	25	94	303	11,948
Unable to stop in assured clear distance	88,424	13.0	41	836	3,139	17,191	67,217
Reckless driving	3,098	0.5	40	259	364	426	2,009
Careless/Negligent driving	13,681	2.0	102	860	1,713	2,015	8,991
Other	25,249	3.7	123	874	2,046	3,089	19,117
Unknown	65,017	9.6	219	1,115	2,874	7,103	53,706
TOTAL	678,990	100.0	1,908	13,892	36,332	98,630	528,228

MICHIGAN BICYCLE CRASHES

Due to data processing errors ~800 pedestrians and ~700 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.



In 2002, there were 1,988 bicyclists involved in motor vehicles crashes, with 20 bicyclists killed and 1,654 injured. The number of bicyclists killed represents a 23.1 percent decrease from 2001.

Children under 16 years of age accounted for 5 (25.0%) of the bicycle deaths in 2002.

BICYCLE HELMET USE AND INJURY SEVERITY

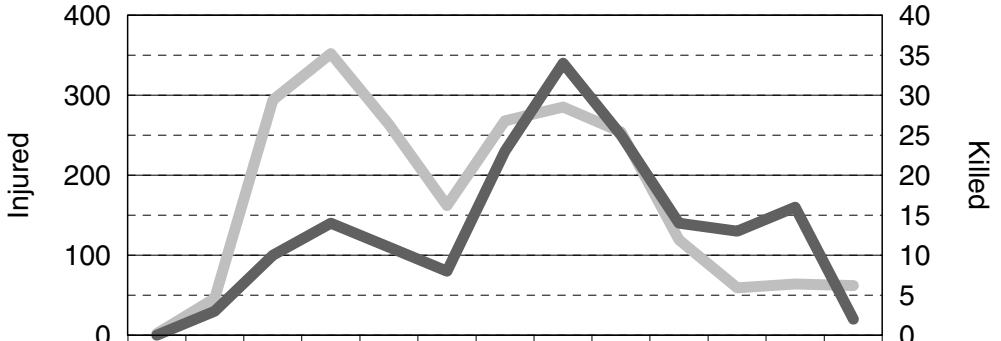
HELMET USE	Fatality	Injury			No Injury
		A	B	C	
Worn	0	16	39	31	14
Not Worn	4	77	254	250	82
Unknown	16	131	402	454	189
TOTALS	20	224	695	735	285

The National Center for Statistics and Analysis of the National Highway Traffic Safety Administration cites a study by the Centers for Disease Control [11] in giving us the following information: “Bicycle helmets are 85 to 88 percent effective in mitigating head and brain injuries in all types of bicycle accidents, making the use of helmets the **single most effective countermeasure** available to reduce head injuries and fatalities resulting from bicycle crashes.”

MICHIGAN PEDESTRIAN CRASHES

Due to data processing errors ~800 pedestrians and ~700 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

2002 Pedestrian Crash Information

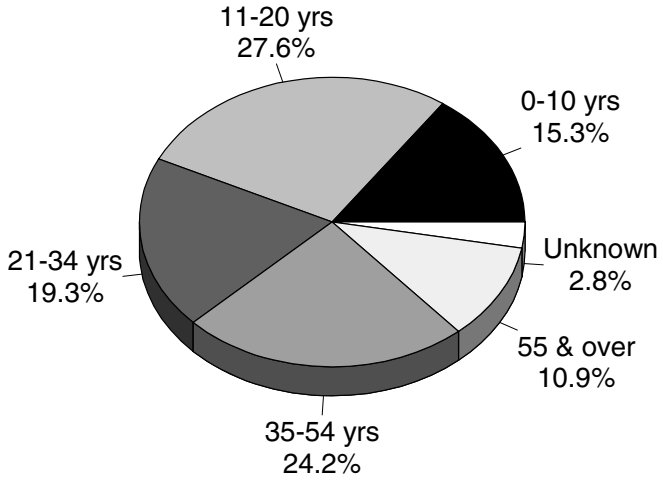


	Under 1 year old	1-3 yrs	4-10 yrs	11-15 yrs	16-20 yrs	21-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 & over	Unknown
Killed	0	3	10	14	11	8	23	34	25	14	13	16	2
Injured	2	46	294	352	263	162	268	285	254	119	59	64	62

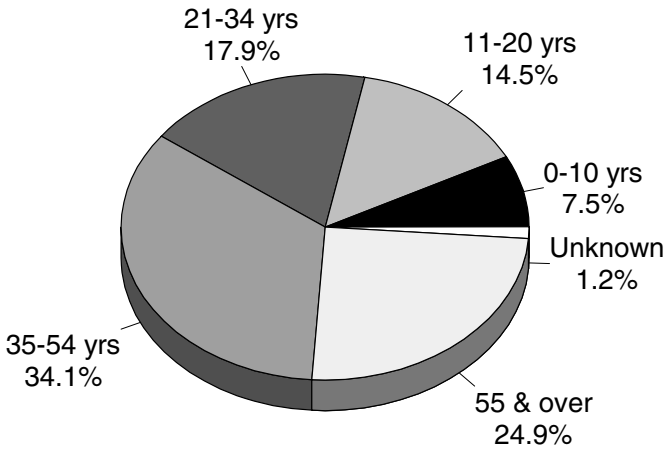
In 2002, there were 2,660 pedestrians involved in motor vehicles crashes, with 173 pedestrians killed and 2,230 injured. The number killed represents an 8.1 percent increase in fatalities from 2001.

Children under 16 years of age accounted for 27 (15.6%) of the pedestrian deaths in 2002. Adults over the age of 54 accounted for 43 (24.9%) of the pedestrian deaths in 2002.

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	3	0.5	0	0	1	0	2
Cross center/median	0	0.0	0	0	0	0	0
Ran off road left	2	0.4	0	1	0	0	1
Ran off road right	2	0.4	0	0	0	1	1
Re-enter road	0	0.0	0	0	0	0	0
Overturn	32	5.7	0	9	10	7	6
Separation of units	3	0.5	0	0	0	0	3
Fire/explosion	0	0.0	0	0	0	0	0
Immersion	1	0.2	0	0	0	0	1
Jackknife	0	0.0	0	0	0	0	0
Downhill runaway	0	0.0	0	0	0	0	0
Cargo loss/shift	4	0.7	0	0	0	1	3
Individual fell off	22	3.9	1	8	6	7	0
Other noncollision	5	0.9	0	1	0	1	3
NONCOLLISION Subtotal	74	13.2	1	19	17	17	20

MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH NONFIXED OBJECT	Snowmobiles		Fatal	Injury			PDO
	Number of Snowmobiles	% of Total		A	B	C	
Pedestrian	1	0.2	0	0	1	0	0
Pedalcycle	0	0.0	0	0	0	0	0
Motor vehicle in transport	218	39.0	1	21	29	27	140
Parked motor vehicle	16	2.9	0	3	1	1	11
Railway train	0	0.0	0	0	0	0	0
Animal	15	2.7	0	0	0	0	15
Other nonfixed objects	11	2.0	1	0	1	2	7
COLLISION NONFIXED Subtotal	261	46.7	2	24	32	30	173

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	1	0.2	0	0	0	0	1
Bridge parapet end	0	0.0	0	0	0	0	0
Bridge rail	1	0.2	0	0	0	1	0
Guardrail face	2	0.4	0	1	0	0	1
Guardrail end	0	0.0	0	0	0	0	0
Median barrier	0	0.0	0	0	0	0	0
Highway traffic sign post	3	0.5	0	0	0	1	2
Signal post	1	0.2	0	0	0	0	1
Luminaire/light support	1	0.2	0	0	0	0	1
Utility pole	4	0.7	0	0	0	0	4
Other pole	0	0.0	0	0	0	0	0
Culvert	3	0.5	0	0	0	1	2
Curb	0	0.0	0	0	0	0	0
Ditch	12	2.1	0	5	4	0	3
Embankment	9	1.6	0	5	2	2	0
Fence	3	0.5	0	0	1	1	1
Mailbox	3	0.5	0	0	1	0	2
Tree	55	9.8	5	20	12	12	6
Rail crossing signal	1	0.2	0	0	0	0	1
Building	1	0.2	0	0	0	0	1
Traffic island	0	0.0	0	0	0	0	0
Fire hydrant	0	0.0	0	0	0	0	0
Impact attenuator	0	0.0	0	0	0	0	0
Other fixed object	20	3.6	0	2	6	4	8
COLLISION FIXED Subtotal	120	21.5	5	33	26	22	34
Unknown Event	104	18.6	0	14	9	20	61
TOTAL MOST HARMFUL EVENT	559	100.0	8	90	84	89	288

A total of 559 snowmobiles were reported in crashes on Michigan public roadways during 2002. Of these snowmobiles, 8 were involved in fatal crashes with all of their drivers 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	7	2.3	0	3	2	2	0
Ran off road left	2	0.7	0	0	1	0	1
Overturn	41	13.6	1	18	12	7	3
Separation of unit	1	0.3	0	0	0	0	1
Individual fell off	43	14.2	0	19	14	9	1
Other noncollision	2	0.7	0	1	1	0	0
NONCOLLISION Subtotal	96	31.8	1	41	30	18	6
HAD A COLLISION WITH NONFIXED OBJECT							
Pedalcycle	1	0.3	0	0	0	1	0
Motor vehicle in transport	97	32.1	7	19	23	14	34
Parked motor vehicle	7	2.3	0	0	5	0	2
Railway Train	0	0.0	0	0	0	0	0
Animal	1	0.3	0	1	0	0	0
Other nonfixed objects	4	1.3	0	2	2	0	0
COLLISION NONFIXED Subtotal	110	36.4	7	22	30	15	36
HAD A COLLISION WITH FIXED OBJECT							
Bridge/pier/abutment	1	0.3	0	0	1	0	0
Guardrail face	1	0.3	0	1	0	0	0
Traffic sign post	1	0.3	0	0	1	0	0
Utility pole	1	0.3	0	0	0	0	1
Other pole	2	0.7	1	0	0	1	0
Culvert	1	0.3	0	0	0	1	0
Curb	1	0.3	0	0	1	0	0
Ditch	9	3.0	0	3	4	2	0
Embankment	5	1.7	0	2	3	0	0
Fence	1	0.3	0	0	1	0	0
Mailbox	3	1.0	0	1	2	0	0
Tree	19	6.3	0	10	6	2	1
Building	1	0.3	0	1	0	0	0
Other fixed object	14	4.6	2	3	4	4	1
COLLISION FIXED Subtotal	60	19.9	3	21	23	10	3
Unknown Event	36	11.9	0	9	9	8	10
TOTAL MOST HARMFUL EVENT	302	100.0	11	93	92	51	55

A total of 302 off road vehicles/all terrain vehicles were reported in crashes on Michigan public roadways during 2002. Of these ORV/ATVs, 11 were involved in fatal crashes with 8 ORV/ATV operators, 2 ORV/ATV passengers, and 1 motorcyclist killed. Three of the ORV/ATV operators had been drinking 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	148	26.5	0	6	22	22	98
Speed too fast	111	19.9	5	39	26	23	18
Speed too slow	1	0.2	0	0	0	0	1
Failed to yield	37	6.6	0	7	10	1	19
Disregard traffic control	7	1.3	1	0	0	4	2
Drove wrong way	3	0.5	0	2	0	0	1
Drove left of center	5	0.9	0	1	0	1	3
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	13	2.3	0	1	2	0	10
Improper turn	15	2.7	0	0	0	1	14
Improper/no signal	1	0.2	0	0	0	0	1
Improper backing	13	2.3	0	0	0	2	11
Unable to stop in assured clear distance	39	7.0	0	2	4	11	22
Reckless driving	7	1.3	0	3	1	1	2
Careless/Negligent driving	36	6.4	0	8	7	5	16
Other	59	10.6	0	17	5	9	28
Unknown	64	11.4	2	4	7	9	42
TOTAL	559	100.0	8	90	84	89	288

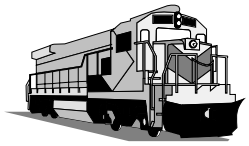
MICHIGAN ORV/ATV CRASHES ON PUBLIC ROADWAYS

MOST SEVERE OUTCOME IN CRASH

Driver Hazardous Action	ORV/ATV		Fatal	Injury			PDO
	Number of ORV/ATVs	% of Total		A	B	C	
None	64	21.2	1	12	23	14	14
Speed too fast	58	19.2	2	24	25	5	2
Speed too slow	1	0.3	1	0	0	0	0
Failed to yield	24	7.9	1	5	6	6	6
Disregard traffic control	2	0.7	1	1	0	0	0
Drove wrong way	0	0.0	0	0	0	0	0
Drove left of center	0	0.0	0	0	0	0	0
Improper passing	0	0.0	0	0	0	0	0
Improper lane use	3	1.0	0	0	0	0	3
Improper turn	6	2.0	0	0	2	1	3
Improper/no signal	1	0.3	0	0	0	0	1
Improper backing	0	0.0	0	0	0	0	0
Unable to stop in assured clear distance	13	4.3	0	6	2	2	3
Reckless driving	10	3.3	0	4	2	2	2
Careless/Negligent driving	35	11.6	1	16	8	6	4
Other	42	13.9	2	11	16	7	6
Unknown	43	14.2	2	14	8	8	11
TOTAL	302	100.0	11	93	92	51	55

MICHIGAN FARM EQUIPMENT CRASHES

A total of 190 crashes involving farm equipment were reported on Michigan roadways during 2002. Of these crashes, 2 were fatal with 1 operator of the equipment and 1 rider on a trailing unit killed.



MICHIGAN VEHICLE - TRAIN CRASHES

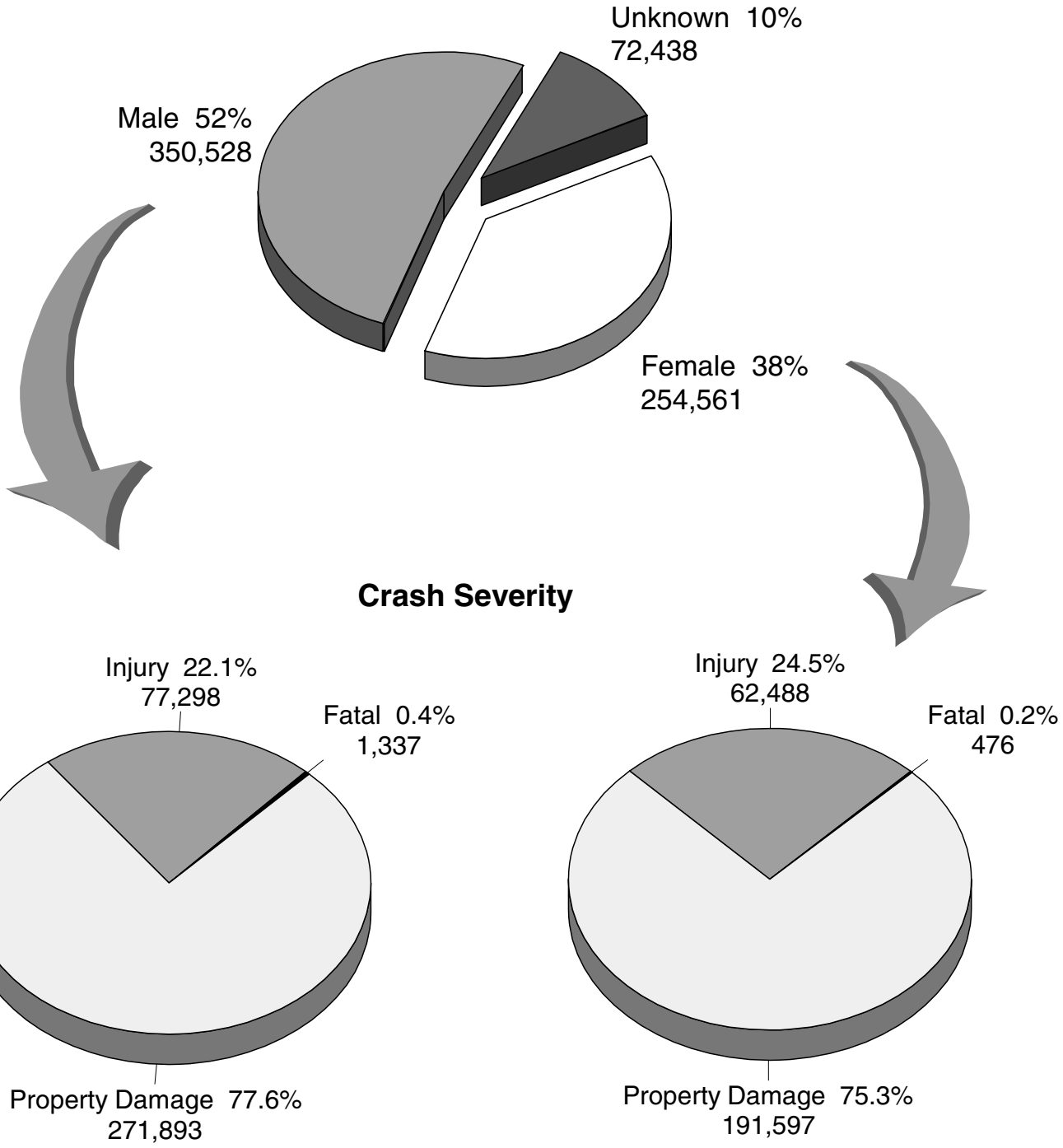
A total of 89 crashes involving trains were reported in Michigan during 2002. The National Highway Traffic Safety Administration's 2002 Fatality Analysis Reporting System [12] reported 7 fatal train crashes in Michigan, and 7 persons killed as a result of those collisions.

MICHIGAN MOTORCYCLE CRASHES

MOTORCYCLE DATA	2001	2002	% Change
Registrations	191,888.0	197,735	3.0
Crashes	3,228.0	3,030.0	-6.1
Deaths	90.0	82	-8.9
Persons Injured	2,593.0	2,470.0	-4.7
Death Rate based on 10,000 motorcycle registrations	4.7	4.1	-12.8
Estimated Mileage based on 3,000 miles per motorcycle	575,664,000.0	593,205,000.0	3.0
Death Rate based on deaths per 100 million vehicle miles traveled	15.6	13.8	-11.5

Motorcycles were involved in 0.77 percent of all traffic crashes in Michigan in 2002. Injuries were proportionately more severe to motorcyclists than to persons in motor vehicles. The 2002 death rate for motorcyclists was 13.8 per 100 million vehicle miles traveled compared to the overall 1.3 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 2002 chart was processed with numbers for all drivers (vehicle level).

PERSON AGE:
DEMOGRAPHICS AND CRASH INVOLVEMENTS

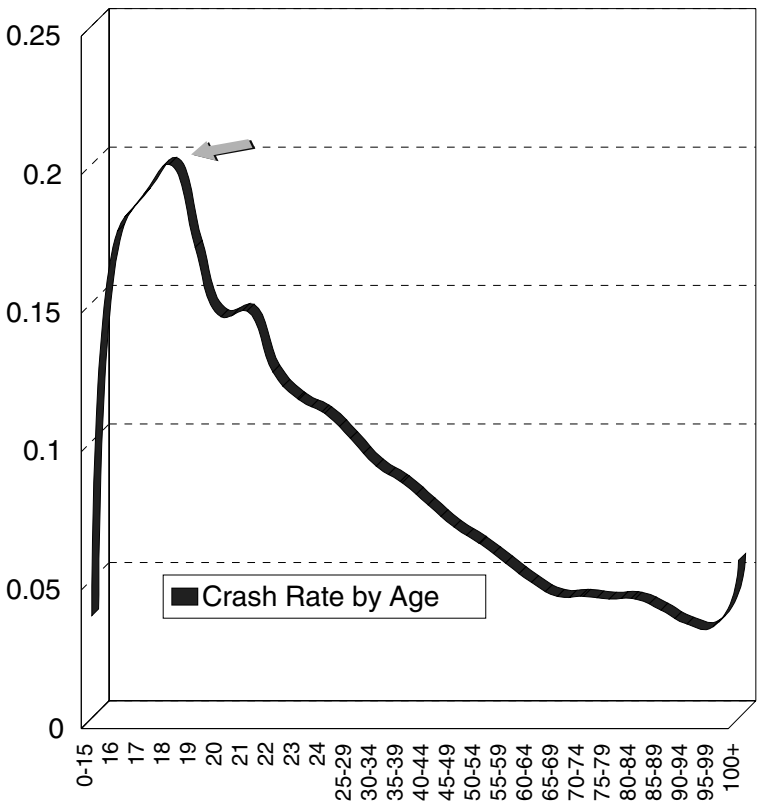
Age	Licensed Drivers	Michigan Population	Drivers in all crashes	Drivers in Fatal crashes	Occupants killed	Occupants injured	Bicyclist all crashes	Bicyclist fatal crashes	Pedestrian all crashes	Pedestrian fatal crashes
0-15	53,359	2,277,057	1,970	19	56	7,891	927	6	792	28
16	96,346	146,654	16,955	50	36	3,421	70	1	68	1
17	111,801	146,553	21,126	44	34	3,938	47	1	62	5
18	108,796	142,493	21,755	57	32	3,925	50	0	65	2
19	117,365	140,538	19,967	57	41	3,530	44	0	59	6
20	125,854	141,194	18,292	51	28	3,118	47	0	57	1
21	118,357	142,164	17,449	60	25	2,958	37	0	54	1
22	126,513	140,070	15,778	46	23	2,744	30	1	47	4
23	128,672	134,756	14,763	36	24	2,382	20	1	42	3
24	126,951	129,251	13,918	35	29	2,237	19	0	42	2
25-29	586,103	616,523	59,239	155	79	9,224	85	1	157	8
30-34	668,978	712,688	61,013	181	80	9,092	82	3	163	15
35-39	699,229	754,446	59,571	174	88	8,413	99	2	160	18
40-44	755,754	808,868	58,471	154	71	8,483	113	2	191	21
45-49	737,661	771,322	51,006	151	78	7,449	95	0	181	13
50-54	644,914	678,046	40,821	104	50	6,166	64	1	125	12
55-59	518,958	530,631	29,308	84	32	4,609	44	0	77	5
60-64	395,640	405,272	19,413	63	44	2,930	26	0	66	9
65-69	303,942	324,588	13,374	48	33	2,143	15	2	43	4
70-74	268,879	304,789	11,748	38	30	1,999	14	1	38	9
75-79	225,247	261,505	9,673	53	46	1,806	12	1	41	4
80-84	143,342	185,147	6,148	38	40	1,265	6	1	27	5
85-100+	79,222	155,891	2,980	35	34	666	1	0	21	7
Unknown	---	---	92,789	174	40	3,621	41	0	82	4
Totals	7,141,883	10,050,446	677,527	1,907	1,073	104,010	1,988	24	2,660	187

Due to data processing errors ~800 pedestrians and ~700 bicyclists are incorrectly identified as drivers. Comparison to prior years of pedestrian and bicyclist data must take this into account.

MICHIGAN OHSP Office of Highway Safety Planning

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

Age	Rate	Licensed Drivers	Drivers in all crashes
0-15	0.037	53,359	1,970
16	0.176	96,346	16,955
17	0.189	111,801	21,126
18	0.200	108,796	21,755
19	0.170	117,365	19,967
20	0.145	125,854	18,292
21	0.147	118,357	17,449
22	0.125	126,513	15,778
23	0.115	128,672	14,763
24	0.110	126,951	13,918
25-29	0.101	586,103	59,239
30-34	0.091	668,978	61,013
35-39	0.085	699,229	59,571
40-44	0.077	755,754	58,471
45-49	0.069	737,661	51,006
50-54	0.063	644,914	40,821
55-59	0.056	518,958	29,308
60-64	0.049	395,640	19,413
65-69	0.044	303,942	13,374
70-74	0.044	268,879	11,748
75-79	0.043	225,247	9,673
80-84	0.043	143,342	6,148
85-89	0.039	62,433	2410
90-94	0.034	14,954	507
95-99	0.033	1,747	58
100+	0.057	88	5
Total		7,141,883	677,527



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	788	3	101	52	113	174	140	99	50	21	35
Alger	645	3	82	54	96	92	110	63	33	23	89
Allegan	5,762	22	1,059	559	1,060	1,056	806	399	177	146	478
Alpena	1,822	7	336	147	265	312	281	152	120	87	115
Antrim	1,406	9	232	114	230	264	209	130	70	40	108
Arenac	1,204	4	164	118	224	219	194	100	75	33	73
Baraga	593	2	73	43	86	100	106	59	33	24	67
Barry	3,259	13	559	285	594	668	516	288	114	87	135
Bay	6,639	24	1,179	611	1,056	1,113	916	494	297	275	674
Benzie	805	2	130	49	120	181	121	77	33	17	75
Berrien	9,631	39	1,405	736	1,482	1,498	1,210	713	428	352	1,768
Branch	2,984	17	498	258	501	501	391	255	105	94	364
Calhoun	10,374	31	1,431	870	1,752	1,801	1,493	861	449	345	1,341
Cass	2,605	10	376	198	434	397	340	238	85	72	455
Charlevoix	1,692	3	278	141	260	308	276	153	86	39	148
Cheboygan	1,723	10	298	154	284	293	237	141	98	47	161
Chippewa	2,208	8	346	213	333	383	299	187	125	52	262
Clare	2,214	8	330	187	358	441	329	212	138	73	138
Clinton	3,790	10	619	385	633	752	601	311	129	80	270
Crawford	1,017	3	147	76	163	180	170	113	56	32	77
Delta	3,251	11	475	231	448	540	529	315	182	127	393
Dickinson	2,011	8	317	122	253	350	279	154	102	87	339
Eaton	7,034	23	1,208	675	1,185	1,291	1,048	555	261	193	595
Emmet	2,728	5	409	213	465	475	446	224	145	96	250
Genesee	27,392	94	4,067	2,510	4,888	4,850	3,677	1,990	1,174	789	3,353
Gladwin	1,387	5	195	100	272	271	206	149	99	45	45
Gogebic	779	2	95	41	110	87	72	52	30	45	245
Grand Traverse	6,945	17	1,287	642	1,159	1,235	1,014	565	284	242	500
Gratiot	2,532	5	419	279	433	441	367	227	110	109	142
Hillsdale	2,844	18	464	256	476	490	426	217	132	81	284
Houghton	2,791	11	463	321	416	419	329	204	113	95	420
Huron	2,262	9	345	206	357	416	391	212	107	96	123
Ingham	22,088	57	3,596	2,902	3,909	3,538	3,011	1,516	669	496	2,394
Ionia	3,952	24	666	391	742	731	594	280	143	108	273
Iosco	1,493	7	272	115	224	265	209	155	102	67	77
Iron	1,112	4	153	56	116	197	171	86	60	54	215
Isabella	4,928	9	1,054	810	837	751	589	328	156	119	275
Jackson	10,596	34	1,652	909	1,819	1,993	1,583	814	432	321	1,039
Kalamazoo	19,063	43	3,323	2,430	3,389	2,902	2,435	1,232	627	459	2,223
Kalkaska	1,085	5	154	95	186	220	186	108	43	24	64
Kent	46,839	127	7,288	5,300	9,317	8,008	5,998	2,960	1,424	1,050	5,367
Keweenaw	136	0	16	11	18	16	23	11	7	2	32
Lake	700	4	86	51	131	132	126	73	43	22	32
Lapeer	5,384	21	1,016	468	947	1,127	833	426	171	108	267
Leelanau	934	4	170	74	145	144	133	83	48	34	99

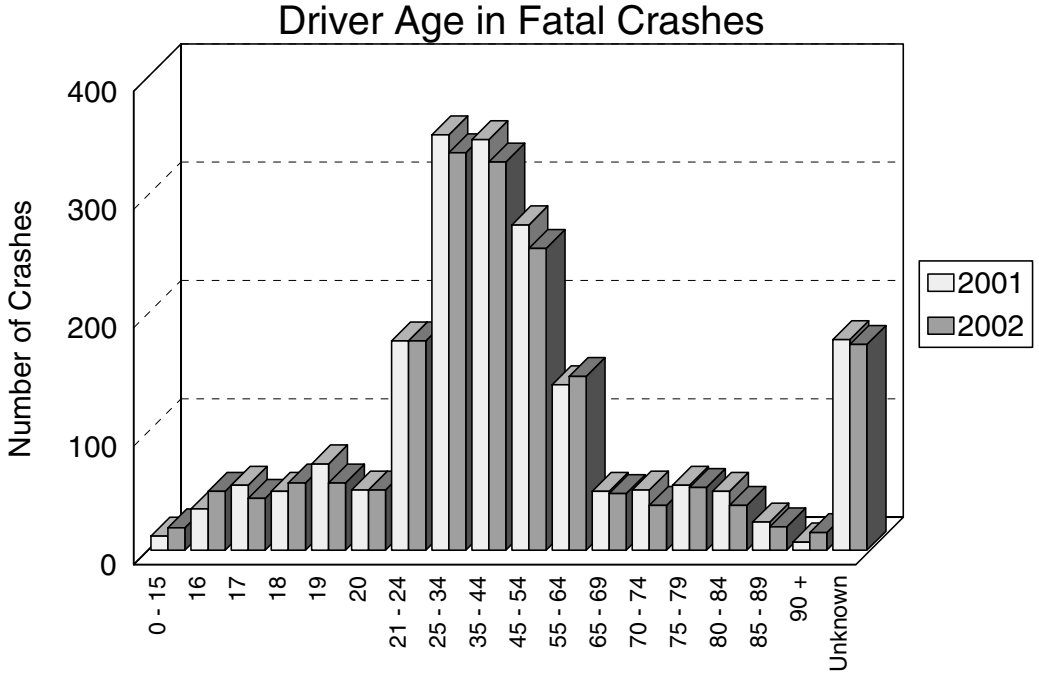
REPORTED AGE OF DRIVERS
INVOLVED IN ALL CRASHES (continued)

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	5,438	14	907	475	895	938	713	407	240	166	683
Livingston	9,404	23	1,909	789	1,694	2,016	1,291	657	250	191	584
Luce	385	1	38	38	66	60	58	48	20	16	40
Mackinac	1,088	4	131	72	155	201	186	113	57	30	139
Macomb	52,005	117	7,757	4,480	9,487	9,648	7,104	3,708	1,988	1,687	6,029
Manistee	1,554	4	210	91	232	263	247	157	92	76	182
Marquette	4,162	8	755	438	556	642	579	291	149	140	604
Mason	2,264	8	333	163	381	437	370	218	108	71	175
Mecosta	3,594	6	691	453	641	594	432	291	150	104	232
Menominee	2,354	6	259	151	289	395	363	182	106	70	533
Midland	4,832	22	913	479	789	911	727	373	203	152	263
Missaukee	918	6	145	107	137	190	145	88	43	24	33
Monroe	7,564	26	1,333	590	1,102	1,151	846	448	251	205	1,612
Montcalm	4,497	19	739	406	858	855	684	393	192	115	236
Montmorency	587	2	92	56	84	108	101	54	35	28	27
Muskegon	10,126	45	1,758	996	1,724	1,814	1,365	760	441	360	863
Newaygo	2,906	13	508	270	520	616	424	228	127	80	120
Oakland	85,733	181	11,781	7,561	16,815	16,958	12,777	6,519	3,000	2,251	7,890
Oceana	1,604	8	251	150	286	318	232	126	66	48	119
Ogemaw	1,484	6	230	137	249	277	243	138	85	51	68
Ontonagon	684	1	70	44	80	108	111	73	37	24	136
Osceola	1,690	2	267	176	301	323	250	159	81	42	89
Oscoda	588	1	80	63	86	103	103	53	44	16	39
Otsego	1,597	11	267	134	280	312	221	148	77	50	97
Ottawa	13,728	55	2,878	1,471	2,338	2,412	1,806	897	391	355	1,125
Presque Isle	789	3	124	61	126	139	138	89	43	32	34
Roscommon	1,605	4	243	136	235	266	270	172	109	72	98
Saginaw	13,761	59	2,223	1,276	2,484	2,401	1,905	1,103	601	454	1,255
St. Clair	8,567	27	1,549	787	1,447	1,516	1,133	675	281	296	856
St. Joseph	3,527	13	601	323	596	558	416	280	140	103	497
Sanilac	2,418	7	405	194	423	496	370	248	129	64	82
Schoolcraft	768	1	111	54	122	134	111	66	43	29	97
Shiawassee	4,009	9	717	390	726	722	573	328	162	111	271
Tuscola	2,888	16	541	271	531	590	424	212	109	85	109
Van Buren	4,176	17	701	405	696	704	560	313	159	108	513
Washtenaw	23,110	38	3,307	2,650	4,365	4,025	3,100	1514	633	488	2,990
Wayne	147,222	405	14,060	10,900	25,751	22,732	17,692	9,013	5,009	3,718	37,942
Wexford	2,474	7	378	213	419	487	337	198	106	81	248
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
Totals	677,527	1,970	98,095	61,908	120,252	118,042	91,827	48,721	25,122	18,801	92,789

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	2001	2002	% Change	% 2002 Fatal Crash Involvement	Percent Active Driving Population*
15 years and under	12	19	58.3	1.0	0.7
16 years	35	50	42.9	2.6	1.3
17 years	55	44	-20.0	2.3	1.6
18 years	50	57	14.0	3.0	1.5
19 years	73	57	-21.9	3.0	1.6
20 years	51	51	0.0	2.7	1.8
21 - 24 years	177	177	0.0	9.3	7.0
25 - 34 years	351	336	-4.3	17.6	17.6
35 - 44 years	347	328	-5.5	17.2	20.4
45 - 54 years	275	255	-7.3	13.4	19.4
55 - 64 years	140	147	5.0	7.7	12.8
65 - 69 years	50	48	-4.0	2.5	4.3
70 - 74 years	51	38	-25.5	2.0	3.8
75 - 79 years	55	53	-3.6	2.8	3.2
80 - 84 years	50	38	-24.0	2.0	2.0
85 - 89 years	24	20	-16.7	1.0	0.9
90 years and over	7	15	114.3	0.8	0.2
Unknown	178	174	-2.2	9.1	---
TOTALS	1,981	1,907	-3.7	100.0	100.0

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



DRIVER CONDITION

POSSIBLE CONDITIONS OF DRIVER*	Conditions Coded by Police	MOST SEVERE OUTCOME IN CRASH: Fatal	Injury			PDO
		Number	A	B	C	
Appeared Normal	518,703	883	9,670	27,868	80,710	399,572
Had Been Drinking	14,605	221	1,396	2,479	2,343	8,166
Illegal Drug Use	451	13	43	68	92	235
Sick	1,121	8	118	192	339	464
Fatigue	977	10	48	123	207	589
Asleep	1,440	11	126	217	304	782
Medication	743	4	46	84	186	423
Driver Distracted	3,953	16	153	383	862	2,539
Using Cellular Phone	870	3	26	78	191	572
Unknown	37,977	603	1,151	1,561	3,691	30,971

*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 condition, thus leading to possible under-reporting

DRIVER INJURY SEVERITY BY RESTRAINT, ALCOHOL, AND DRUG USE

	Drivers		Fatality		Injury			No Injury	Unknown
	Number	% of Total	Number	% of Total	A	B	C		
All Drivers									
Restraint Used	551,108	81.3	426	52.9	4,612	13,583	48,027	476,117	8,343
Restraint Not Used	9,202	1.4	252	31.3	1,206	1,780	1,482	4,346	136
Unknown	117,217	17.3	127	15.8	1,036	1,977	4,031	46,302	63,744
Total	677,527		805		6,854	17,340	53,540	526,765	72,223
Drinking Drivers									
Restraint Used	9,202	68.7	64	39.0	402	1025	943	6703	65
Restraint Not Used	1,575	11.8	72	43.9	316	426	204	545	12
Unknown	2,610	19.5	28	17.1	179	346	213	1784	60
Total	13,387		164		897	1,797	1,360	9,032	137
Drugged Drivers									
Restraint Used	363	68.9	12	46.2	15	44	66	224	2
Restraint Not Used	82	15.6	11	42.3	11	17	7	36	0
Unknown	82	68.9	3	11.5	14	8	9	48	0
Total	527		26		40	69	82	308	2
Drinking and Drugged Drivers									
Restraint Used	378	60.6	11	40.7	29	50	47	237	4
Restraint Not Used	125	20.0	11	40.7	33	21	18	42	0
Unknown	121	19.4	5	18.5	14	13	11	76	2
Total	624		27		76	84	76	355	6

NOTE: Restraint Used includes; shoulder belt only, lap belt only, both lap and shoulder belts used, restraint failed, and helmet worn.

REGISTRATION TRANSACTIONS

(Includes Original, Renewal, Correction, and Replacements)

Registration data courtesy of the Michigan Department of State [14]

	VEHICLE						OTHER		
COUNTY	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Alcona	7,450	4,078	3,474	313	15,315	968,216.86	2,641	989	60
Alger	5,089	3,203	1,929	261	10,482	663,652.22	1,797	1,659	27
Allegan	62,879	28,230	19,530	2,435	113,074	8,174,112.07	11,492	3,848	346
Alpena	18,823	10,255	7,500	688	37,266	2,587,902.27	4,595	2,653	69
Antrim	15,233	7,072	5,590	574	28,469	1,964,816.67	5,174	2,389	58
Arenac	9,853	5,666	4,139	477	20,135	1,376,124.05	3,907	1,555	70
Baraga	3,892	2,563	1,404	150	8,009	538,462.31	1,046	774	12
Barry	34,189	16,425	11,468	1,659	63,741	4,129,612.48	9,298	1,992	100
Bay	70,450	25,614	20,550	2,265	118,879	8,537,896.38	9,879	5,916	218
Benzie	11,144	5,068	4,012	435	20,659	1,347,093.09	3,940	1,476	64
Berrien	107,762	34,676	20,438	3,523	166,399	11,747,075.16	12,774	3,069	361
Branch	25,171	12,629	8,064	1,013	46,877	3,260,846.61	6,320	1,151	133
Calhoun	89,366	29,763	17,830	2,939	139,898	9,637,349.49	10,227	1,679	330
Cass	29,804	14,033	9,066	1,222	54,125	3,611,393.11	8,603	1,910	98
Charlevoix	17,362	8,229	5,935	757	32,283	2,318,446.89	5,007	2,900	76
Cheboygan	16,280	8,635	6,202	709	31,826	2,132,266.51	5,571	3,578	85
Chippewa	18,373	10,014	6,997	590	35,974	2,428,716.96	4,557	4,520	76
Clare	18,312	9,968	7,225	733	36,238	2,397,779.51	4,593	2,240	63
Clinton	40,995	17,933	13,076	1,336	73,340	5,550,109.62	6,869	2,956	159
Crawford	8,023	4,172	3,113	309	15,617	1,009,184.29	2,833	1,623	21
Delta	23,818	13,266	9,011	853	46,948	3,225,713.12	4,607	3,353	107
Dickinson	16,596	9,328	6,027	782	32,733	2,314,843.48	3,572	1,849	106
Eaton	65,300	24,182	16,465	2,239	108,186	9,239,779.19	8,769	2,689	195
Emmet	21,716	9,237	6,466	773	38,192	2,813,210.93	5,448	3,053	85
Genesee	278,855	86,709	50,278	8,832	424,674	31,509,990.26	31,650	13,232	547
Gladwin	15,765	8,565	6,345	669	31,344	2,056,319.44	4,872	1,857	66
Gogebic	9,173	5,111	2,705	373	17,362	1,101,286.81	2,334	1,522	66
Grand Traverse	57,369	19,786	16,391	1,885	95,431	7,482,981.94	13,120	5,540	135

REGISTRATION TRANSACTIONS (continued)

	VEHICLE						OTHER		
COUNTY	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Gratiot	23,512	11,719	8,470	816	44,517	3,250,697.22	3,462	1,749	116
Hillsdale	26,425	14,296	8,709	1,131	50,561	3,420,742.17	5,221	1,069	125
Houghton	18,757	8,573	4,518	721	32,569	2,124,773.50	3,809	2,570	89
Huron	22,979	12,928	8,017	812	44,736	3,277,039.36	3,150	2,530	212
Ingham	182,435	44,939	25,582	4,509	257,465	19,251,732.56	15,426	4,051	373
Ionia	33,986	15,845	10,193	1,265	61,289	4,043,691.92	5,266	1,752	180
Iosco	17,126	8,576	6,636	706	33,044	2,203,803.44	5,190	1,707	120
Iron	7,455	4,568	2,832	312	15,167	994,864.79	2,425	1,114	41
Isabella	30,154	14,300	9,525	1,031	55,010	4,319,955.47	4,852	2,075	77
Jackson	98,126	38,654	24,131	3,686	164,597	11,786,621.10	15,777	3,716	362
Kalamazoo	153,731	40,514	26,597	4,603	225,445	17,236,971.72	18,156	3,181	570
Kalkaska	9,802	6,122	4,270	425	20,619	1,708,750.89	2,665	1,993	25
Kent	387,131	106,179	77,999	10,187	581,496	52,314,203.54	44,936	10,618	872
Keweenaw	1,231	635	321	44	2,231	140,917.38	376	195	4
Lake	6,086	3,577	2,311	283	12,257	730,694.31	2,354	923	23
Lapeer	52,436	26,766	16,455	2,770	98,427	7,211,802.20	7,530	4,547	113
Leelanau	14,002	5,347	4,770	445	24,564	1,719,813.43	5,663	1,748	76
Lenawee	60,740	26,743	15,987	2,669	106,139	7,528,228.02	9,134	3,339	299
Livingston	104,066	38,697	26,723	4,885	174,371	13,924,605.83	18,879	6,535	222
Luce	3,338	2,358	1,670	115	7,481	527,389.44	1,311	1,292	16
Mackinac	6,726	4,035	2,678	240	13,679	929,045.20	2,976	2,379	37
Macomb	558,405	143,289	68,822	15,139	785,655	65,989,204.28	48,341	18,200	1,114
Manistee	15,442	7,503	5,534	588	29,067	1,963,313.35	3,744	1,656	86
Marquette	37,753	17,068	9,923	1,478	66,222	4,494,200.35	7,083	4,529	117
Mason	18,246	8,414	5,921	845	33,426	2,237,692.45	4,320	1,529	116
Mecosta	21,063	10,369	7,092	732	39,256	2,708,022.50	5,157	1,697	41
Menominee	13,717	7,433	5,102	551	26,803	1,817,904.29	2,645	1,559	272
Midland	57,049	19,118	16,457	2,101	94,725	6,546,583.77	9,361	3,278	178
Missaukee	7,658	5,347	3,541	365	16,911	1,188,900.41	2,071	1,375	33

REGISTRATION TRANSACTIONS (continued)

	VEHICLE						OTHER		
COUNTY	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Monroe	94,026	39,851	21,806	4,164	159,847	12,038,335.38	11,093	4,911	368
Montcalm	35,453	18,127	12,129	1,287	66,996	4,475,985.38	7,195	2,484	146
Montmorency	6,116	3,892	3,017	263	13,288	857,864.24	2,286	1,492	17
Muskegon	109,281	34,915	24,670	4,044	172,910	11,491,187.29	14,831	4,974	339
Newaygo	28,061	14,014	10,231	1,172	53,478	3,389,764.01	7,059	2,684	102
Oakland	900,297	183,916	100,101	24,041	1,208,355	107,726,998.40	82,603	24,238	1,519
Oceana	15,917	8,332	4,831	664	29,744	1,943,672.36	2,983	1,852	95
Ogemaw	13,004	7,891	5,579	777	27,251	1,905,852.00	3,436	1,924	33
Ontonagon	4,357	2,924	1,823	174	9,278	596,532.09	1,164	1,201	30
Osceola	13,186	7,752	4,970	502	26,410	1,845,899.73	2,737	1,752	39
Oscoda	5,458	3,246	2,250	268	11,222	732,913.34	2,062	977	23
Otsego	14,467	8,086	5,744	724	29,021	2,345,902.22	3,159	3,456	36
Ottawa	154,343	46,142	40,397	4,827	245,709	19,021,725.16	24,257	6,468	610
Presque Isle	8,532	5,607	3,578	287	18,004	1,199,921.57	2,947	1,850	47
Roscommon	16,773	8,043	6,653	670	32,139	2,149,918.63	6,190	3,677	151
Saginaw	133,943	42,400	30,367	3,685	210,395	16,142,740.71	15,840	7,746	350
St. Clair	103,826	42,118	24,671	4,164	174,779	12,763,120.27	15,314	6,627	299
St. Joseph	37,902	16,905	11,407	1,830	68,044	4,507,721.39	8,622	1,041	183
Sanilac	25,715	14,699	8,303	1,161	49,878	3,573,300.02	2,234	2,243	76
Schoolcraft	4,735	3,301	2,269	258	10,563	704,590.31	1,691	1,397	40
Shiawassee	44,533	21,220	13,190	1,771	80,714	5,706,859.82	6,126	3,443	172
Tuscola	35,041	19,064	12,644	1,544	68,293	4,589,887.39	4,755	3,590	211
Van Buren	45,867	19,522	11,768	1,922	79,079	5,345,521.61	8,401	2,316	184
Washtenaw	206,000	46,435	24,220	5,878	282,533	22,725,011.14	15,315	4,278	464
Wayne	1,236,650	267,085	103,933	28,092	1,635,760	137,237,261.38	66,856	16,706	1,958
Wexford	19,298	9,043	6,270	743	35,354	2,463,012.86	4,379	2,612	64
Non-Resident	60,817	30,204	14,653	575	106,249	57,634,134.72	32,413	5,679	119
Unknown County	0	0	0	0	0	0	11,737	55	1
Totals	6,462,217	2,013,056	1,213,490	197,735	9,886,498	$824,832,980.03	824,460	296,551	17,318

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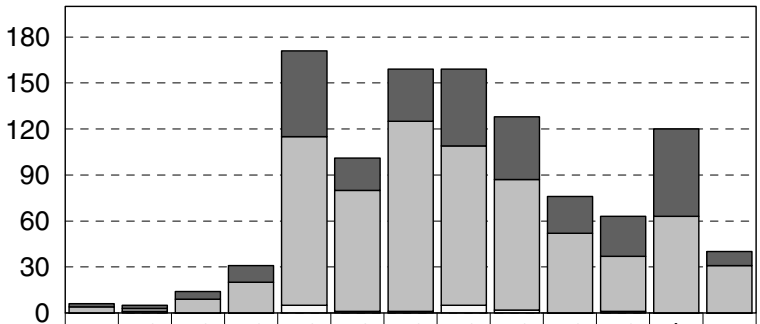
Occupant/ Person

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

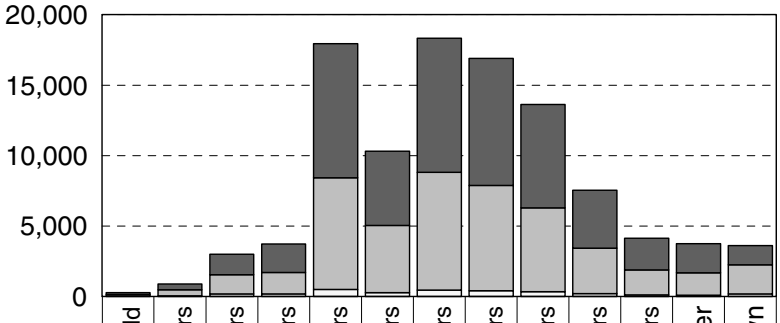
Occupants Killed



	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	2	2	5	11	56	21	34	50	41	24	26	57	9
Males killed	4	2	9	20	110	79	124	104	85	52	36	63	31
Unknown gender killed	0	1	0	0	5	1	1	5	2	0	1	0	0

There were 719 male occupants, 338 female occupants, and 16 occupants of unknown gender killed in motor vehicle crashes in 2002. The majority (67.0%) of occupants killed in traffic crashes in 2002 were male.

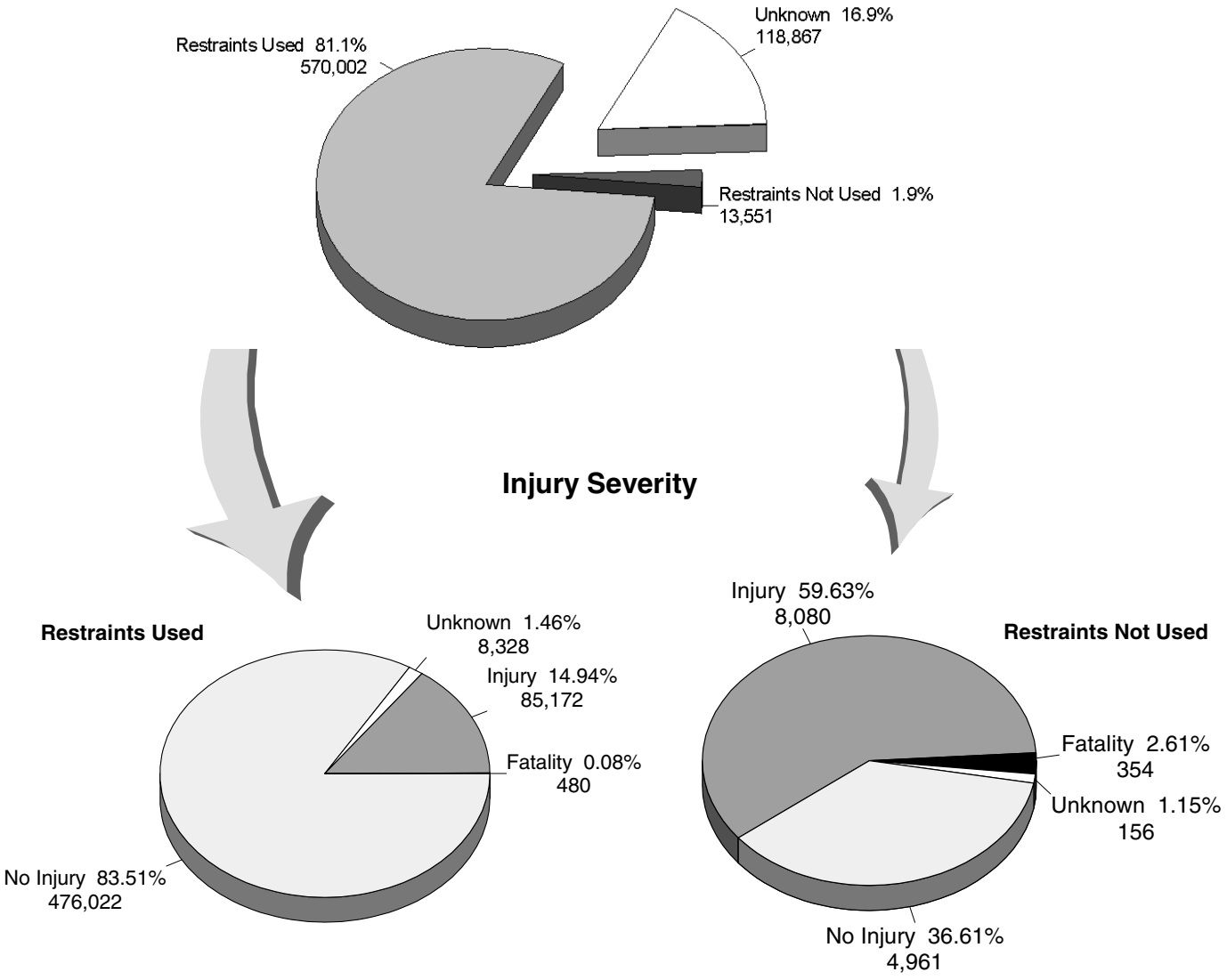
Occupants Injured



	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	122	412	1,456	2,021	9,503	5,271	9,499	9,007	7,324	4,109	2,266	2,063	1,364
Males injured	129	433	1,361	1,534	7,926	4,775	8,364	7,486	5,938	3,216	1,764	1,571	2,064
Unknown gender injured	15	45	186	177	503	275	453	403	353	214	112	103	193

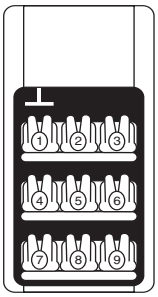
There were 46,561 male occupants, 54,417 female occupants, and 3,032 occupants of unknown gender injured in motor vehicle crashes in 2002. The majority (52.3%) of occupants injured in traffic crashes in 2002 were female.

REPORTED OCCUPANT RESTRAINT USAGE FOR ALL DRIVERS AND INJURED PASSENGERS



Of the 702,420 drivers and injured passengers involved in crashes, 570,002 (81.1%) were REPORTED to be using occupant restraints.

Occupants in crashes were thirty-three 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	540,884	96.5	357	4,155	12,919	47,889	475,564
Center Front	513	0.1	0	37	102	304	70
Right Front	14,342	2.6	94	1,144	3,037	9,902	165
Left Rear	1,788	0.3	5	110	368	1,202	103
Center Rear	514	0.1	1	42	135	331	5
Right Rear	1,799	0.3	10	141	389	1,254	5
Left Rear Third Seat	259	0.0	1	18	59	170	11
Center Rear Third Seat	113	0.0	0	5	22	85	1
Right Rear Third Seat	265	0.0	0	17	68	179	1
Unknown	82	0.0	1	2	5	26	48
TOTAL	560,559**	100.0	469	5,671	17,104	61,342	475,973

* 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.

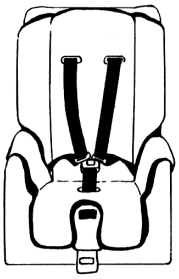
**This total does not include 8,327 occupants with unknown injury severity.

Seating Position	Belts Not Used*		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Left Front	8,927	67.3	247	1,166	1,723	1,488	4,303
Center Front	149	1.1	1	22	51	49	26
Right Front	1,660	12.5	54	389	605	554	58
Left Rear	1,032	7.8	13	105	178	278	458
Center Rear	248	1.9	9	57	69	107	6
Right Rear	593	4.5	13	110	201	267	2
Left Rear Third Seat	87	0.7	1	17	24	45	0
Center Rear Third Seat	60	0.5	0	11	21	24	4
Right Rear Third Seat	103	0.8	2	18	23	48	12
Unknown	400	3.0	12	62	71	194	61
TOTAL	13,259**	100.0	352	1,957	2,966	3,054	4,930

* 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 155 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 an approved Child Safety Seat (CSS)/Child Restraint Device (CRD).

Sitting in all seats excluding Left Front Seats:

Restraint Usage **Children Age 0**	Number	% of Total	Fatal	Injury			No Injury
				A	B	C	
Belts Used	28	10.4	0	0	3	25	0
No Belts Used	9	3.3	1	1	3	4	0
Child Restraint Used	213	78.9	4	9	45	155	0
Child Restraint Not Used	13	4.8	1	0	5	7	0
Restraint Failed	0	0.0	0	0	0	0	0
Unknown	7	2.6	0	1	3	3	0
Total Children Age 0	270	100.0	6	11	59	194	0
Restraint Usage **Children Age 1**							
Belts Used	41	16.1	0	0	10	31	0
No Belts Used	8	3.1	0	4	3	1	0
Child Restraint Used	185	72.5	2	10	81	92	0
Child Restraint Not Used	15	5.9	0	3	6	6	0
Restraint Failed	0	0.0	0	0	0	0	0
Unknown	6	2.4	0	0	1	5	0
Total Children Age 1	255	100.0	2	17	101	135	0
Restraint Usage **Children Age 2**							
Belts Used	64	23.4	1	7	17	39	0
No Belts Used	15	5.5	0	2	4	9	0
Child Restraint Used	171	62.4	0	15	54	102	0
Child Restraint Not Used	12	4.4	0	0	6	6	0
Restraint Failed	1	0.4	0	0	1	0	0
Unknown	11	4.0	0	2	1	8	0
Total Children Age 2	274	100.0	1	26	83	164	0
Restraint Usage **Children Age 3**							
Belts Used	125	36.0	1	5	31	88	0
No Belts Used	16	4.6	1	3	4	7	1
Child Restraint Used	169	48.7	0	10	43	116	0
Child Restraint Not Used	22	6.3	0	3	9	9	1
Restraint Failed	0	0.0	0	0	0	0	0
Unknown	15	4.3	0	3	3	9	0
Total Children Age 3	347	100.0	2	24	90	229	2

REPORTED RESTRAINT USE - CHILDREN (continued)

All children ages 4 through 15 must wear a properly adjusted and fastened 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	4,684	77.0	19	316	1,151	3,198	0
No Belts Used	787	12.9	12	117	283	374	1
Child Restraint Used	215	3.5	2	6	40	167	0
Child Restraint Not Used	27	0.4	0	6	8	13	0
Restraint Failed	3	0.0	0	1	1	1	0
Unknown	370	6.1	3	34	115	216	2
TOTAL	6,086	100.0	36	480	1,598	3,969	3

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

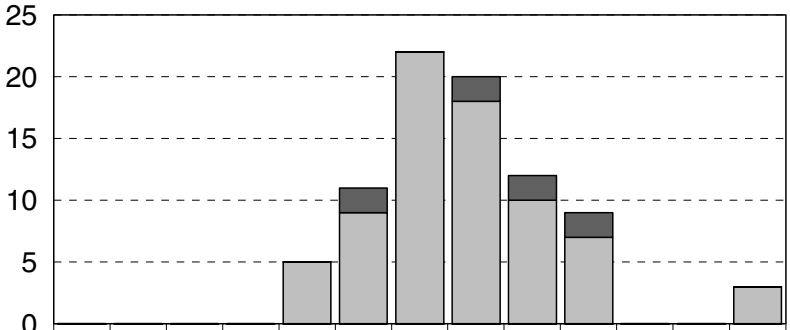
The driver of the vehicle can be stopped and will receive a citation for any child (under age 16) not restrained.

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.

It is recommended that all children age 12 and under ride in a rear seat with appropriate restraint.

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

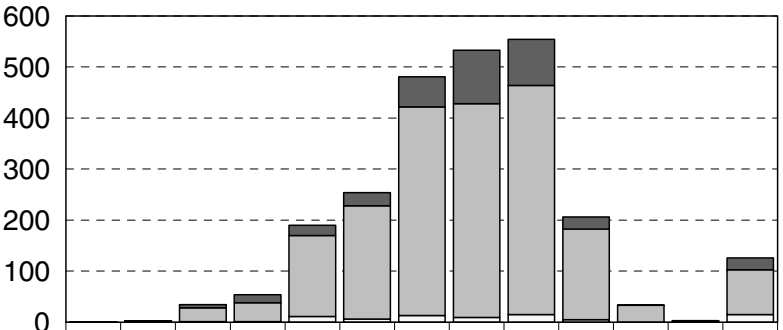
Motorcyclists Killed



	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	2	0	2	2	2	0	0	0
Males killed	0	0	0	0	5	9	22	18	10	7	0	0	3
Unknown gender killed	0	0	0	0	0	0	0	0	0	0	0	0	0

90.2 percent of the motorcyclists killed in traffic crashes in 2002 were male.
In comparison, 70.8 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	16	20	26	59	105	90	24	0	1	23
Males injured	0	2	27	37	159	222	409	419	449	177	33	2	88
Unknown gender injured	0	0	1	1	11	6	13	9	15	5	0	0	15

81.9 percent of the motorcyclists injured in traffic crashes in 2002 were male.
In comparison, 49.7 percent of all persons injured in crashes were male.

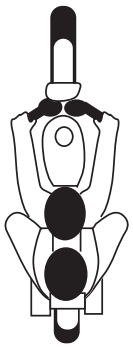
MOTORCYCLE HELMET USE AND INJURY SEVERITY

Helmet Worn Age of Motorcyclist	Fatality	Injury			No Injury
		A	B	C	
3 years and under	0	0	2	0	0
4 - 10 years	0	3	3	5	0
11 - 15 years	0	4	17	4	1
16 - 20 years	4	20	61	43	39
21 - 24 years	8	47	87	48	45
25 - 34 years	17	99	135	87	95
35 - 44 years	19	99	166	106	112
45 - 54 years	11	100	170	119	89
55 - 64 years	7	57	68	38	41
65 - 74 years	0	6	10	8	12
75 years and over	0	1	1	0	0
Unknown	0	1	0	1	0
Subtotal	66	437	720	459	434

Drivers killed 59

Passengers killed 7

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	3	1	1
11 - 15 years	0	4	1	3	2
16 - 20 years	0	3	7	1	1
21 - 24 years	0	4	3	1	1
25 - 34 years	0	1	5	1	2
35 - 44 years	0	5	7	2	0
45 - 54 years	0	3	4	2	1
55 - 64 years	0	0	3	0	0
65 - 74 years	0	0	0	0	0
75 years and over	0	1	0	0	0
Unknown	0	0	0	0	0
Subtotal	0	21	33	11	8



Drivers killed 0

Passengers killed 0

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	0	10	9	3
11 - 15 years	0	3	6	12	4
16 - 20 years	1	8	31	16	8
21 - 24 years	3	16	29	19	23
25 - 34 years	5	37	72	44	71
35 - 44 years	1	45	53	50	66
45 - 54 years	1	45	63	48	56
55 - 64 years	2	9	15	16	11
65 - 74 years	0	2	4	3	0
75 years and over	0	0	0	0	0
Unknown	3	24	72	28	51
Subtotal	16	189	355	245	293
TOTAL	82	647	1,108	715	735

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 [18], 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	727	6,391	16,411	52,956	76,485	72.8
Van (Minivan) and Motorhome	55	632	1,575	5,364	7,626	7.3
Pickup	135	1,122	2,989	7,185	11,431	10.9
Small Truck (under 10,000 lbs.)	23	207	550	1,593	2,373	2.3
Motorcycle	82	628	1,060	674	2,444	2.3
Moped	3	29	62	50	144	0.1
Go Cart	2	4	4	3	13	0.0
Snowmobile	8	86	73	72	239	0.2
Off Road Vehicle	10	97	97	60	264	0.3
Other	4	50	98	162	314	0.3
Unknown	16	241	612	1,899	2,768	2.6
CDL Truck/Bus (breakdown below)	8	92	213	669	982	0.9
Total Number of Occupants	1,073	9,579	23,744	70,687	105,083	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	5	54	97	197	353	35.9
Commercial Vehicle: Group B	1	16	63	228	308	31.4
Commercial Vehicle: Group C	0	2	7	12	21	2.1
Other Truck	1	4	9	45	59	6.0
Unknown Truck	1	16	37	187	241	24.5
Total Number of Occupants	8	92	213	669	982	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] Estimated Population of Michigan Counties: April 2000 to July 2002. 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, 2001. Michigan Department of Community Health, Vital Records and Health Data Development Section, PO Box 30691, Lansing, MI 48909-8191.

[3] INJURY FACTS 2003 Edition. National Safety Council, 1121 Spring Lake Drive, Itasca, IL 60143, 2001.

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

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

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

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[9] 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.

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[11] Traffic Safety Facts 2002 - 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).

[12] 2002 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.

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

[14] Summary of Fees Collected and Number of Transactions October 1, 2001 through September 30, 2002. Michigan Department of State, Bureau of Research and Management Systems, Finance Division, Lansing, MI 48918.

[15] 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.michigantrafficcrashfacts.org 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

www.michigan.gov/ohsp 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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