1993

Michigan Traffic Crash Facts

EXECUTIVE SUMMARY

The 1993 traffic fatality count was 1,414, up 8.8% from the 1992 figure of 1,300. Compared with 1992, injuries were up 13.3% and total crashes were up 5.4%. These figures translated into a death rate of 1.6 per 100 million miles of travel, up from the 1992 death rate of 1.5.

Exposure factors in 1993 showed increases in vehicle registrations and travel mileage and a decrease in the number of licensed drivers. They included motor vehicle registrations up 1.1% to 7.5 million; vehicle travel mileage up 2.0% to 85.7 billion; and the number of licensed drivers down 1.8% to 7.64 million.

Lack of occupant restraint use and use of alcohol continue to be major factors. While the direct observation study reports a 64.4% usage rate, the usage rate recorded by investigating officers on Traffic Crash Reports (UD-10) was 79.0%. Alcohol involvement, especially in fatal crashes, still takes an unacceptably high toll.

Data on crashes in this report were obtained from 1993 Michigan Traffic Crash Report forms submitted by local police departments, Sheriff departments, and the Department of State Police. Other related information was obtained from the Michigan departments of Public Health, State, and Transportation.

This publication was produced for the Office of Highway Safety Planning by the University of Michigan Transportation Research Institute (UMTRI) with data on file at the Michigan Department of State Police as of September 19, 1994. We acknowledge, with great appreciation, all involved agencies for their assistance.

COL. MICHAEL D. ROBINSON
Director
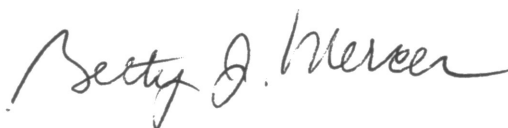Michigan Department of State Police

INTRODUCTION

The data contained in this report was submitted by Michigan's 660+ law enforcement agencies on Michigan's Traffic Crash Report (UD-10) for crashes occurring in 1993. We believe the overall quality and reliability of 1993 data has improved from the "transition" year of 1992. Changes to the UD-10 form, enhancements to the computer processing software, and increased levels of accuracy in data submitted by officers in the field have contributed to this improvement.

Michigan's crash processing system allows corrections and updates to the data long after the crash is initially reported to the Criminal Justice Data Center. This results in a "dynamic" crash file, changing as new information about crashes is received. The percentage of alcohol involvement, for example, may differ several months after the data was analyzed by UMTRI and revealed in the form of this report.

Concern about disproportionate increases in 1993 data over 1992 data should be tempered with the knowledge that 1992 numbers may have been artificially low. An estimated 6-10% of the UD-10 forms submitted for 1992 could not be processed due to physical damage to the form or technical problems with the data recorded on the form.

It has been a challenging conversion from a manually processed traffic crash report to one processed electronically using an optical scanner and conventional keypunch operators, but we believe the days of major transition are behind us. The Office of Highway Safety Planning, in Collaboration with its state and local agency partners, will continue to refine and enhance the crash system at every opportunity. We expect to see continued improvementas everyonebecomes more familiar with the scannable form and related software.

If you have any questions or comments, please contact our office.

BETTY J. MERCER
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Office of Highway Safety Planning
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1993 QUICK FACTS

- Some exposure factor comparisons between 1993 and 1992 show motor vehicle registrations rose **1.1** percent, vehicle mileage rose **2.0** percent, and licensed drivers decreased **1.8** percent.

- The 1993 death rate rose to **1.6** deaths per 100 million miles of travel. Although it is an increase over the 1992 death rate of **1.5**, it is well below the five-year average of **1.9** (1988-1992) and ten-year average of **2.0** (1983-1992), and **33.3%** less than the ten-year peak of **2.4** in 1984.

  Please note that the *1992 Michigan Traffic Crash Facts* inaccurately reported a 1992 death rate of 1.6. It should have been 1.5, singularly "the lowest in our reporting history".

- There were **363,636** reported crashes of which **1,269** were fatal type, **91,728** were personal injury type, and **270,639** were property damage only type crashes.

- A traffic crash was reported every **1** minute, **27** seconds.

- Of all fatal crashes, **31.2** percent occurred at intersections.

- Of those fatal crashes where the drinking condition was determined, **32.9** percent indicated that alcohol was a factor.

- In the last five years, **7,332** persons have been killed in Michigan traffic crashes. This is an average of **1,466** per year. During the previous five-year period, **7,622** persons were killed for an average of **1,524** per year.

- Of the **9,478,000** persons living in Michigan [1] one out of every **6,703** was killed in a traffic crash; one out of every **70** persons was injured.

- There were **1,414** persons killed and **134,548** persons injured in **363,636** reported motor vehicle traffic crashes in Michigan during 1993. Compared with 1992 experience, deaths increased **8.8** percent, injuries increased **13.3** percent, and total reported crashes showed a **5.4** percent increase.

- This year's death toll of **1,414** was up **8.8** percent from the 1992 figure of **1300**.

- The **1,414** persons killed were the result of **1,269** fatal crashes for an average of **1.11** deaths per fatal crash.

- One person was killed every **6** hours, **12** minutes as a result of a traffic crash.

- For each person killed there were **95.2** persons injured.

- There were **134,548** persons injured, crippled, or maimed in crashes.

- One person was injured every **3** minutes, **55** seconds in a traffic crash in Michigan in 1993.

- Excessive speed was indicated as the hazardous action by **15.7** percent of the drivers involved in fatal crashes.

- Of the **1,989** drivers involved in fatal crashes, **11.2** percent were under 20 years of age and **24.6** percent of all drivers involved in fatal crashes were under 25 years of age.

3

- The pedestrian death toll for Michigan stands at **171** persons. This represents an increase of **1** death over the 1992 figure.

- For each pedestrian killed, there were **16.6** pedestrians injured.

- Of the pedestrians killed, **31.6** percent were killed while crossing streets other than at intersections.

- Of all pedestrians killed, **15.8** percent were under the age of 20 years and **22.2** percent were 55 and older.

- During the past five years, a total of **937** pedestrians have been killed, an average of **187** per year.

- Of the **633,687** drivers and injured passengers involved in crashes, **500,341** or **79** percent were *reported* to have been using occupant restraints. Restraint usage among fatal victims was reported to be **33.6** percent in 1993.

- Children under the age of **15** accounted for **62.1** percent of the bicycle deaths.

- The economic loss in Michigan traffic crashes amounted to **$12,096,733,393**.

1993

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1993

1993

Historical
Information

VEHICLE REGISTRATIONS

Millions of Motor Vehicles

[Bar chart showing vehicle registrations in millions from 1984 to 1993, with values increasing from about 6.5 to 7.5. Y-axis: 0, 2, 4, 6, 8. X-axis years: 84, 85, 86, 87, 88, 89, 90, 91, 92, 93]

10
YEAR
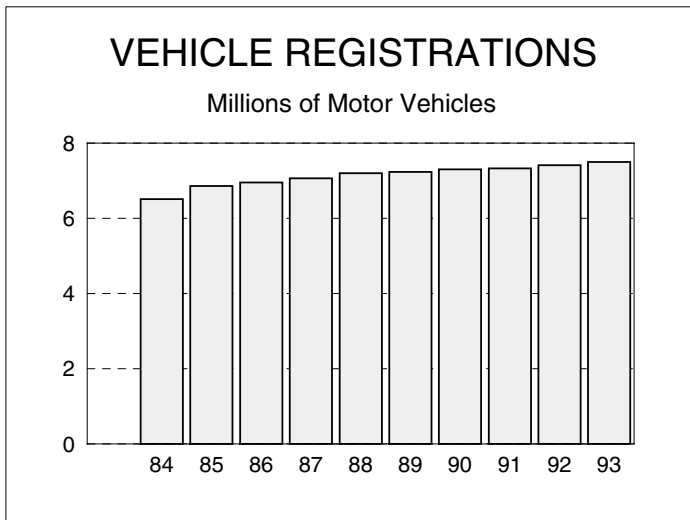
Vehicle Registrations have been increasing steadily since 1984, reaching 7,495,904 in 1993.

VEHICLES MILES TRAVELED

Billions of Miles

[Bar chart showing vehicle miles traveled in billions from 1984 to 1993, with values increasing from about 66 to 86. Y-axis: 0, 20, 40, 60, 80, 100. X-axis years: 84, 85, 86, 87, 88, 89, 90, 91, 92, 93]
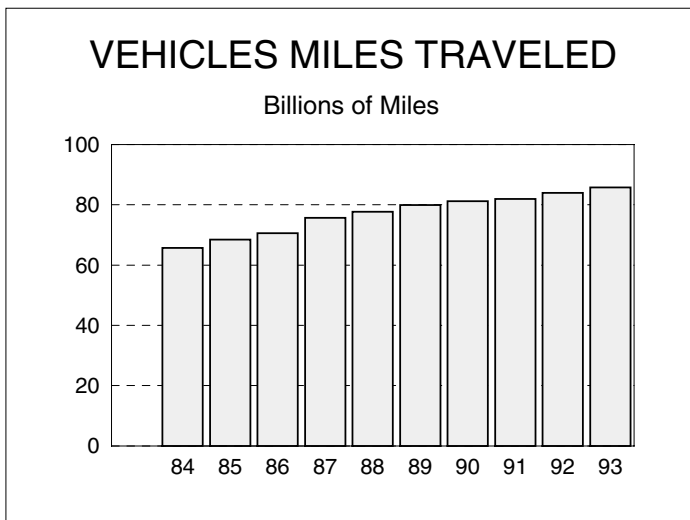
Vehicle miles of travel have increased about 30.4% since 1984, reaching 85.7 billion miles in 1993.

CRASHES

Thousands of Crashes

[Bar chart showing crashes in thousands from 1984 to 1993, peaking in 1989 at about 415, declining afterward. Y-axis: 0, 100, 200, 300, 400, 500. X-axis years: 84, 85, 86, 87, 88, 89, 90, 91, 92, 93]
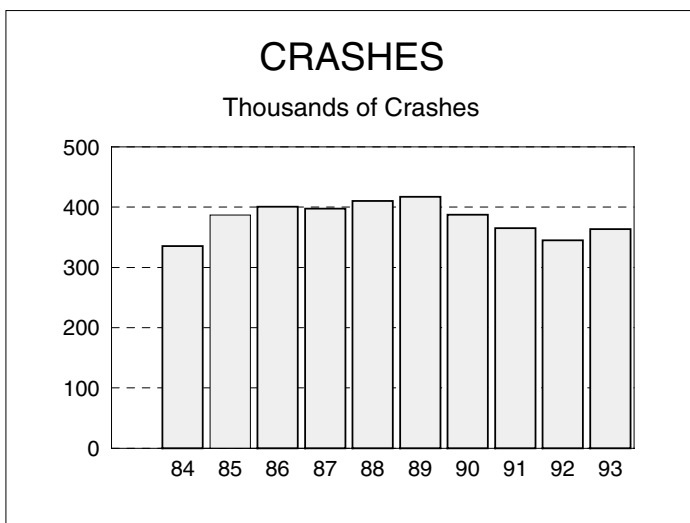
Total crashes increased from 1984, peaking in 1989. Since 1989, total number of crashes has decreased. In 1993, there were 363,636 total crashes statewide.

DEATHS
Number of Deaths
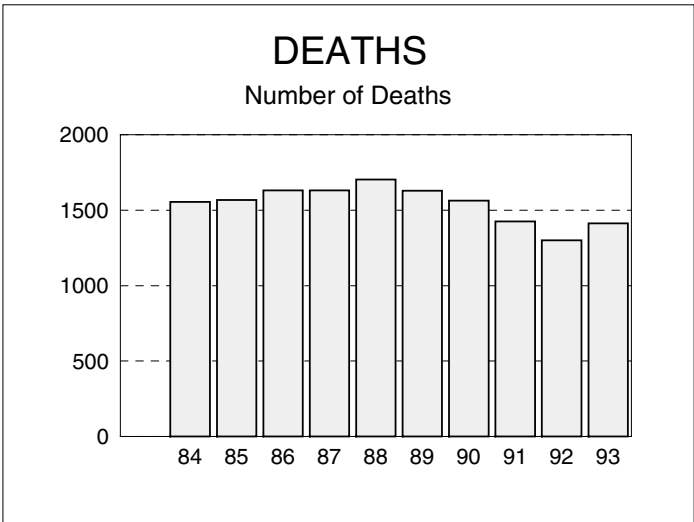
Deaths in motor vehicle crashes increased for the first time in five years in 1993 after a steady decline from 1988 to a low of 1,300 in 1992. In 1993, 1,414 people died in motor vehicle crashes.

INJURIES
Thousands of Injuries
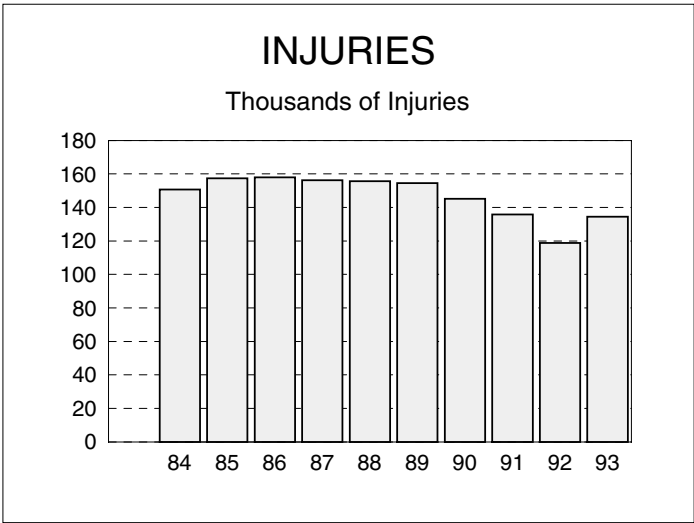
Mirroring the trend in deaths, nonfatal injuries had declined since 1986, to a low in 1992. 134,548 people received nonfatal injuries in Michigan motor vehicle crashes in 1993, up 13.3% from 1992.

FATAL CRASHES
Number of Fatal Crashes
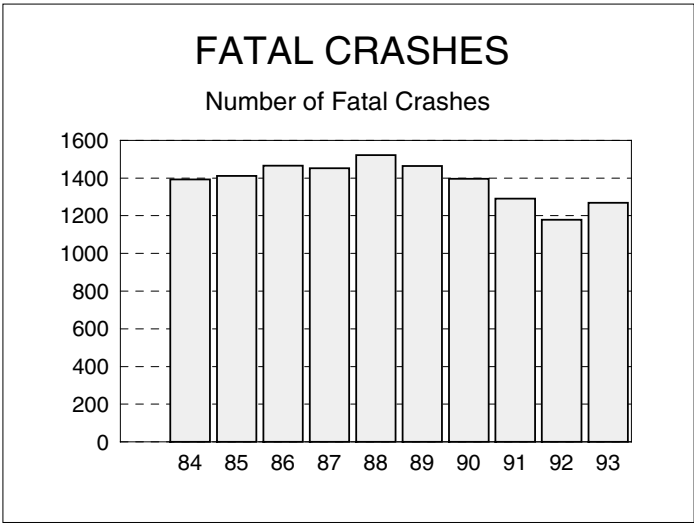
After reaching a peak in 1988, fatal crashes declined to 29.1% in 1992. In 1993, there were 1,269 fatal crashes, up 7.6% from 1992.

RESTRAINT USAGE

Annual Average Percentage of Occupants

10 YEAR
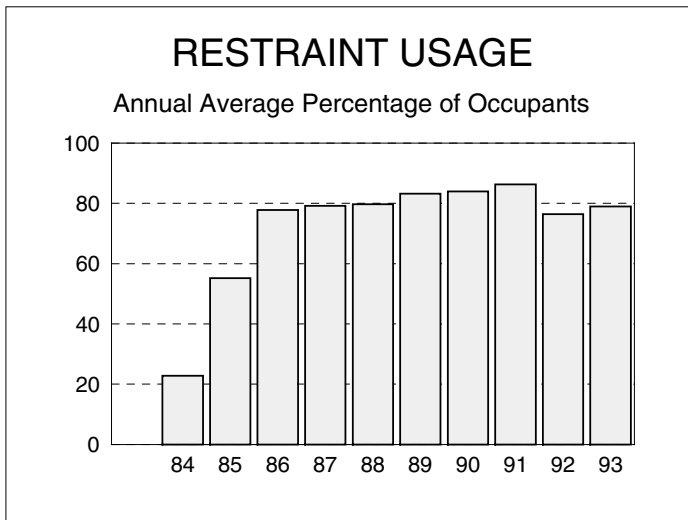
The percentage of motor vehicle occupants using restraints as reported by police in traffic crashes increased dramatically following implementation of Michigan's safety belt use law. It continued to increase slowly until declining for the first time in 1992.

TOTAL DRIVERS

Millions of Drivers
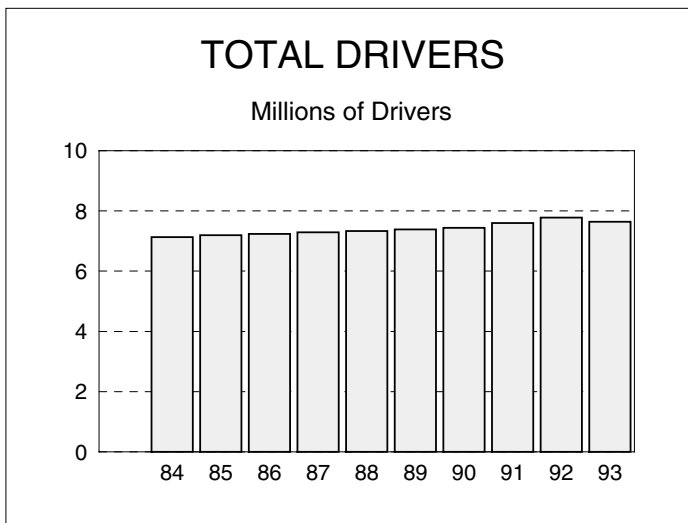
The number of drivers in Michigan declined for the first time in 10 years. Down 1.8% to 7.64 million drivers in 1993.

MILEAGE DEATH RATE

Deaths Per 100 Million Vehicle Miles
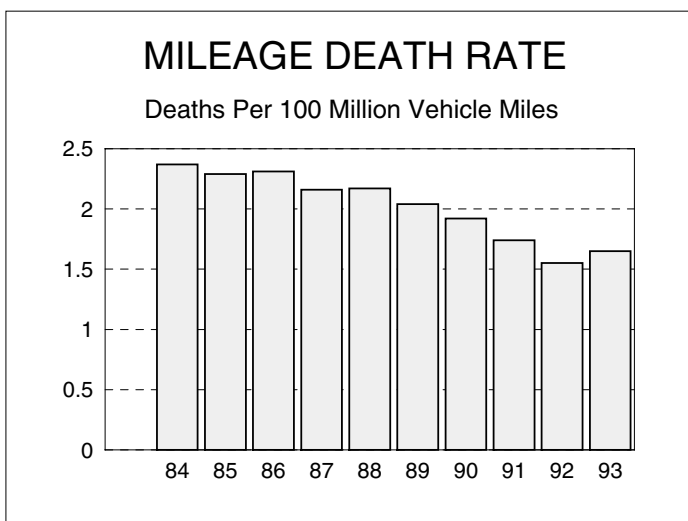
After a 10 year high of 2.4 deaths per 100 million vehicle miles in 1984, the death rate per mile driven has declined dramatically. The 1.6 death rate in 1993, is a 33.3% decrease from the 1984 peak.

VEHICLE-TRAIN CRASHES

Number of Crashes
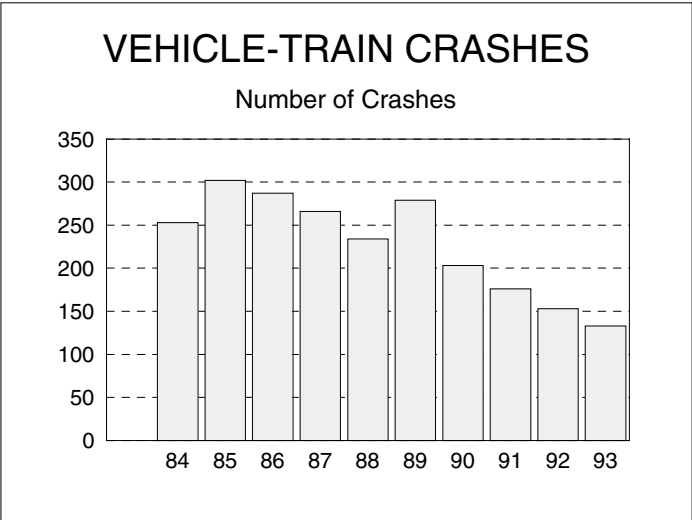
133 vehicle-train crashes occurred in 1993, continuing a pattern of decline since 1989. Train data is provided by the Michigan Department of Transportation.

VEHICLE-DEER CRASHES
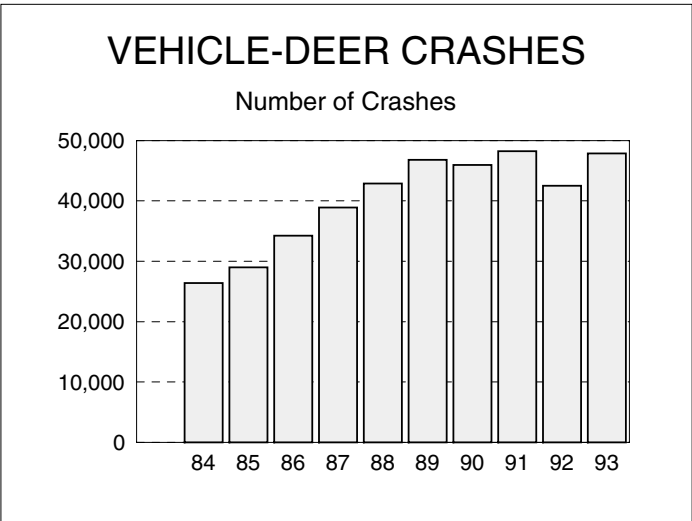
Number of Crashes

There has been an 81.2% rise from 26,420 vehicle-deer crashes in 1984 to 47,879 in 1993.

FARM EQUIPMENT CRASHES
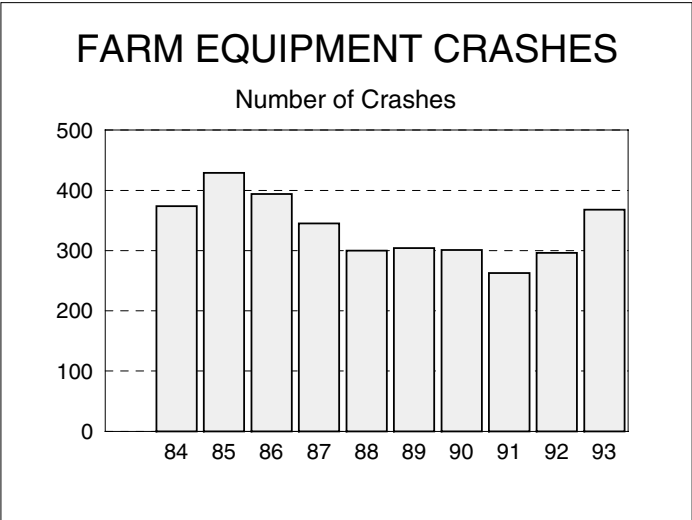
Number of Crashes

In 1993, there were 368 farm equipment crashes, up 24.3% from the 1992 figure of 296.

DEATH & INJURY PER CRASH INVOLVED OCCUPANT

	84	85	86	87	88	89	90	91	92	93
All Occupants ▢	791,126	908,645	936,201	931,337	949,954	948,593	883,611	830,089	793,055	838,445
C - Injured ▪	74,489	84,771	90,256	90,135	88,106	90,053	91,010	84,793	69,542	78,563
B - Injured ▢	41,785	44,717	45,907	44,728	44,560	43,095	41,666	39,010	28,798	30,226
A - Injured ▢	19,537	21,252	22,064	23,169	23,652	22,565	21,861	21,376	16,043	15,940
K - Killed ▪	1,331	1,556	1,569	1,632	1,632	1,704	1,630	1,563	1,105	1,186
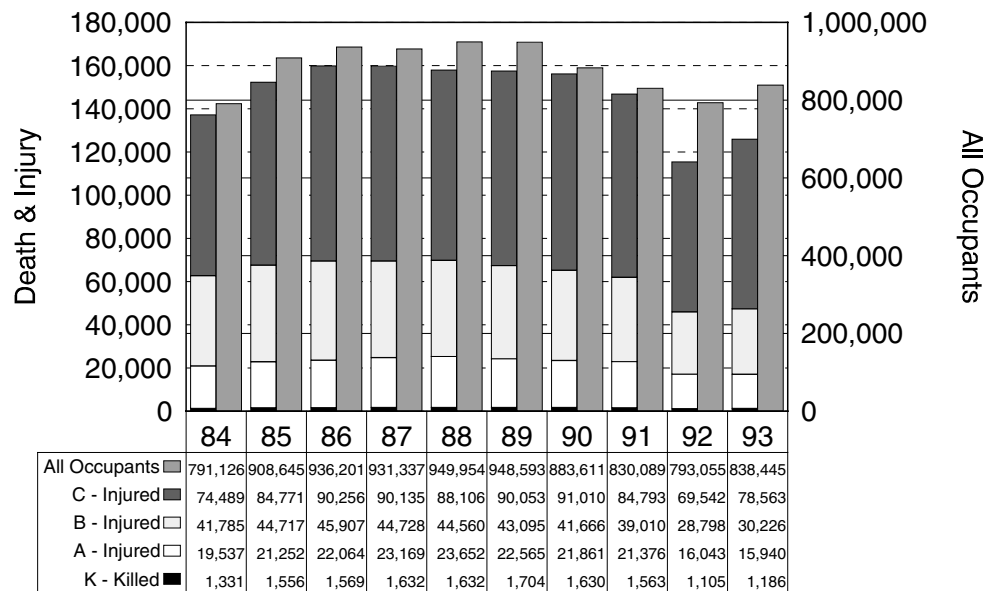
The number of deaths and injuries on Michigan roads has remained significantly lower than the peak number in 1988. However, 1,186 occupants of motor vehicles were fatally injured, 15,940 suffered an A (incapacitating) injury, 30,226 sustained a B (nonincapacitating) injury, and 78,563 sustained a C (apparently minor) injury.

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TREND DATA FOR FATALITIES

TREND DATA FOR FATALITIES	1989	1990	1991	1992	1993
Age of Persons Killed, Total					
0 - 4 years	43	27	32	32	20
5 - 9 years	42	36	29	39	34
10 - 14 years	44	34	45	48	37
15 - 19 years	241	186	186	141	154
20 - 24 years	213	238	180	167	185
25 - 34 years	359	302	285	241	257
35 - 44 years	199	224	209	155	204
45 - 54 years	129	142	128	105	132
55 - 64 years	92	123	80	84	81
65 - 74 years	128	116	98	91	100
75 years and over	140	126	151	114	130
Not Stated	0	9	2	83	80
Totals	1,630	1,563	1,425	1,300	1,414

Age of Persons Killed, Total
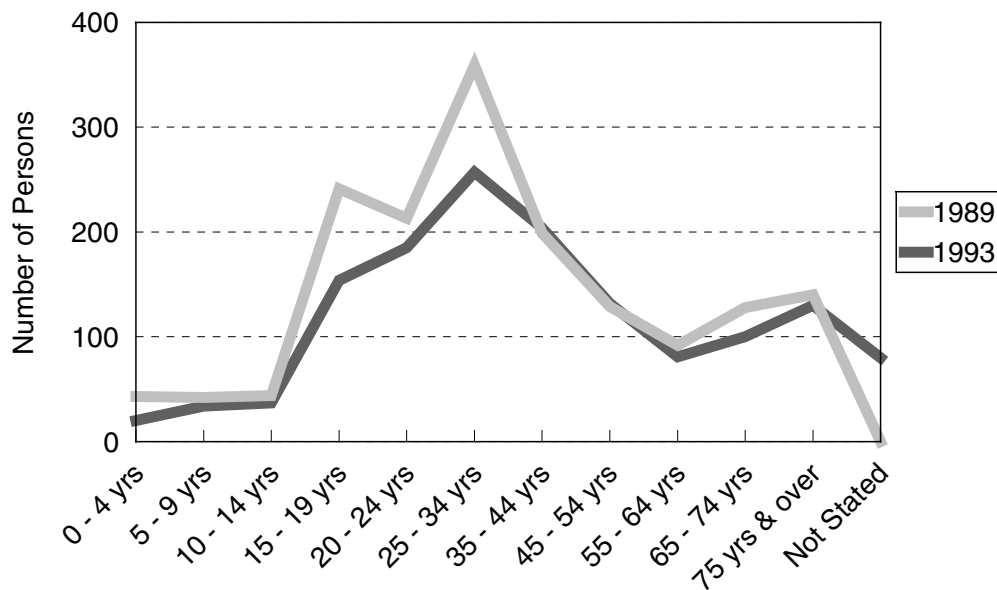
The chart above shows the total number of deaths in motor vehicle crashes in Michigan by age, comparing 1989 with 1993.

TREND DATA FOR FATALITIES	1989	1990	1991	1992	1993

Age of Persons Killed, Pedestrians

	1989	1990	1991	1992	1993
0 - 4 years	10	12	9	9	2
5 - 9 years	16	14	5	14	9
10 - 14 years	9	15	12	7	7
15 - 19 years	15	9	13	10	9
20 - 24 years	17	18	13	11	12
25 - 34 years	29	37	30	22	33
35 - 44 years	27	37	30	18	35
45 - 54 years	16	16	14	14	20
55 - 64 years	15	19	17	13	6
65 - 74 years	8	19	12	13	17
75 years and over	28	28	24	20	15
Not Stated	0	2	1	19	6
Totals	190	226	180	170	171

Age of Drivers Involved

	1989	1990	1991	1992	1993
15 years and under	16	14	10	13	13
16 years	52	46	54	46	49
17 years	69	52	38	49	53
18 - 19 years	180	128	127	111	108
20 - 24 years	347	358	300	253	267
25 - 34 years	607	566	496	430	421
35 - 44 years	381	351	362	289	340
45 - 54 years	205	245	203	166	203
55 - 64 years	138	165	119	124	115
65 years and over	254	210	233	185	203
Not Stated	54	51	41	178	217
Totals	2,303	2,186	1,983	1,844	1,989

Pedestrian Action

	1989	1990	1991	1992	1993
Crossing at intersection	38	54	55	10	21
Cross not at intersection	86	77	56	46	54
Getting on/off vehicle				5	1
In road with traffic	19	13	15	10	14
In road against traffic	2	8	1	4	3
Standing or lying in road	17	28	12	13	15
Pushing/working on vehicle	1	0	2	4	3
Other working in road	2	0	1	2	0
Playing in road	0	0	0	2	0
In road for other reason	12	13	16	5	7
Not in road	7	24	17	5	8
Other / Unknown	6	9	5	64	45
Totals	190	226	180	170	171

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YEAR

FATAL CRASHES AND PERSONS KILLED
FOR SELECTED HOLIDAY PERIODS IN MICHIGAN

HOLIDAY PERIOD	Fatal Crashes	Persons Killed	Summary for 1993
Memorial Day			
1993 (3)	18	23	
1992 (3)	16	18	
1991 (3)	16	20	
1990 (3)	15	16	
1989 (3)	12	15	
Fourth of July			
1993 (3)	11	14	
1992 (3)	17	20	This table shows traffic
1991 (4)	18	20	death tolls in Michigan for
1990 (1)	9	10	the past five years for the
1989 (4)	22	23	major holiday periods.
Labor Day			
1993 (3)	7	7	Based on the total 1993 experience,
1992 (3)	15	20	deaths averaged 3.9 per day.
1991 (3)	20	23	
1990 (3)	15	16	Based on the 1993 Holiday Period
1989 (3)	23	29	experience, deaths averaged
Thanksgiving			5.3 per day.
1993 (4)	21	29	
1992 (4)	18	19	
1991 (4)	13	16	
1990 (4)	18	19	
1989 (4)	14	14	
Christmas			
1993 (3)	9	9	
1992 (4)	14	20	
1991 (2)	6	6	
1990 (4)	15	18	
1989 (3)	22	27	
New Years			
1993 (3)	18	19	
1992 (4)	21	22	
1991 (2)	7	7	
1990 (4)	15	15	
1989 (3)	3	3	

Figures in parentheses show number of full days in each holiday period.
Deaths are for these days plus six hours of the preceding day.

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YEAR

MOTOR VEHICLE DEATHS AND MILEAGE BY MONTH

| Month | TRAFFIC DEATHS | | | | | 1993 PERCENTAGES | |
	1989	1990	1991	1992	1993	Percent Deaths	Percent Miles Driven
January	138	99	103	83	123	8.7	7.2
February	102	84	79	81	91	6.4	7.4
March	94	122	115	83	89	6.3	7.5
April	96	94	106	86	72	5.1	7.7
May	123	135	129	100	127	9.0	8.6
June	156	151	145	122	103	7.3	8.9
July	156	165	130	134	149	10.5	9.5
August	177	170	141	119	140	9.9	9.3
September	155	141	125	123	131	9.3	8.9
October	146	147	129	129	146	10.3	8.8
November	123	130	104	120	134	9.5	8.3
December	164	125	119	120	109	7.7	8.1
Totals	1,630	1,563	1,425	1,300	1,414	100.0	100.0

Percent Deaths & Percent Miles Driven
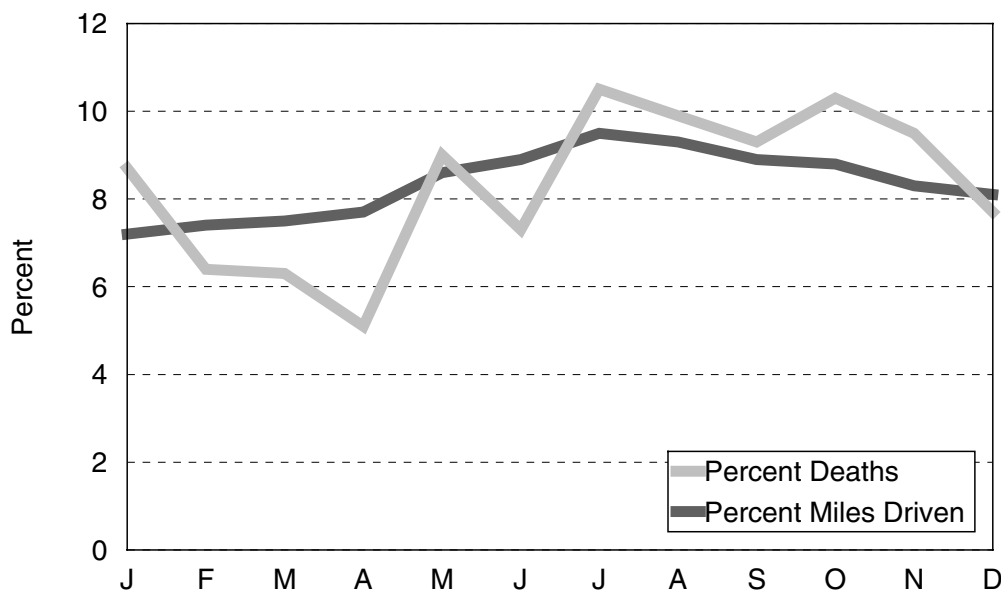
The above chart shows that *deaths per miles driven* were lower for the months of February through April, than for the months of May through December in 1993.

1
YEAR

1992 - 1993 SUMMARY TRENDS

- Deaths among vehicle occupants (drivers and passengers) increased 11.4%.

- Alcohol was a factor in 32.9% of all fatal crashes where the drinking condition was reported, an increase of 5.6%.

- Persons sustaining "A" level injuries (the most serious) increased 5.6%.

	1992	1993	% CHANGE
NUMBER OF CRASHES			
Property Damage Crashes	262,673	270,639	3.0
Fatal Crashes	1,179	1,269	7.6
Personal Injury Crashes	81,090	91,728	13.1
Total	**344,942**	**363,636**	**5.4**
ALCOHOL IN FATAL CRASHES			
Had Been Drinking (HBD)	396(33.6%)	418(32.9%)	5.6
Had Not (HNBD)/Not Known If Drinking ...	783(66.4%)	851(67.1%)	8.7
PERSONS IN CRASHES			
Killed and Injured	120,027	135,962	13.3
Not Injured	444,695	481,618	8.3
Total	**638,716**	**682,099**	**6.8**
PERSONS INJURED			
"A" Injury	17,076	18,028	5.6
"B" Injury	30,554	33,576	9.9
"C" Injury	71,097	82,944	16.7
Total	**118,727**	**134,548**	**13.3**
PERSONS KILLED			
Male	874	928	6.2
Female	426	486	14.1
Total	**1,300**	**1,414**	**8.8**
Drivers	680	771	13.4
Passengers	312	334	7.1
Pedestrians	170	171	0.6
Bicyclists	31	29	-6.5
Motorcyclist	48	58	20.8
Farm Equipment	3	7	133.3
Train Engineer	0	0	
Snowmobile	13	14	7.7
Other/Unknown	43	30	-30.2
Total	**1,300**	**1,414**	**8.8**

MORE MICHIGAN CRASH FACTS

CRASH FACTS	1992	1993	% Change
Deaths	1,300	1,414	8.8
Injuries	118,727	134,548	13.3
Crashes	344,942	363,636	5.4
Drivers Involved	536,972	612,248	14.0
Vehicles Involved	588,095	613,992	4.4
Fatal Crashes	1,179	1,269	7.6
Estimated MV Mileage Traveled (billions)	84.0	85.7	2.0
Death Rate Per 100-Million-Vehicle-Miles	1.5	1.6	6.7
Fatal Crash Rate Per 100-Million-Veh-Miles	1.4	1.5	7.1

Michigan experienced an 8.8% increase in traffic fatalities, as well as a 13.3% increase in injuries and a 5.4% increase in crashes. A 2.0% increase in vehicle mileage contributed to a 7.1% increase in the fatality rate per mile.

The National Safety Council [2] estimated a national increase in traffic fatalities of 3.0% between 1992 and 1993.

1993 COST OF CRASHES IN MICHIGAN

The cost estimate for Michigan crashes in 1993 is **$12,096,733,393**. This figure is based on cost estimating procedures specific to Michigan and produced by the University of Michigan Transportation Research Institute for the Office of Highway Safety Planning. [3] Average comprehensive costs are based on the following figures:

Comprehensive Costs, 1993
Death $3,056,530
Incapacitating injury $201,825
Nonincapacitating evident injury $45,865
Possible injury $22,326
No injury $2,751

The procedures used by UMTRI were extensively revised in 1994, and are not intended for comparisons to prior year's cost estimates.

1
YEAR

Where
Traffic Fatalities
Occurred

A
One-Year
Comparison

1993=1,414 / 1992=1,300

| | same or decrease |
| | increase |

KEWEE-NAW **1**/0

HOUGHTON **7**/9

ONTONAGON **2**/3

BARAGA **3**/6

GOGEBIC **1**/1

IRON **5**/1

MARQUETTE **20**/7

DICKINSON **8**/4

DELTA **7**/3

ALGER **5**/0

SCHOOLCRAFT **3**/2

LUCE **2**/0

MACKINAC **10**/3

CHIPPEWA **5**/9

MENOMINEE **5**/6

EMMET **6**/3

CHEBOYGAN **1**/3

PRESQUE ISLE **3**/2

CHARLEVOIX **2**/6

ANTRIM **11**/10

OTSEGO **6**/6

MONT-MORENCY **6**/1

ALPENA **5**/2

4/3 LEELANAU

BENZIE **1**/2

GRAND TRAVERSE **9**/16

KALKASKA **9**/4

CRAWFORD **5**/4

OSCODA **7**/1

ALCONA **5**/5

MANISTEE **8**/1

WEXFORD **10**/11

MISSAUKEE **2**/4

ROSCOMMON **7**/2

OGEMAW **7**/13

IOSCO **10**/7

MASON **6**/9

LAKE **2**/3

OSCEOLA **2**/5

CLARE **8**/3

GLADWIN **2**/3

ARENAC **10**/6

HURON **5**/18

OCEANA **3**/3

NEWAYGO **9**/13

MECOSTA **3**/5

ISABELLA **17**/14

MIDLAND **8**/5

BAY **25**/20

TUSCOLA **19**/17

SANILAC **8**/15

MUSKEGON **20**/17

MONTCALM **19**/12

GRATIOT **7**/10

SAGINAW **35**/27

KENT **52**/61

IONIA **8**/9

CLINTON **13**/12

SHIAWASSEE **21**/15

GENESEE **67**/54

LAPEER **10**/15

ST. CLAIR **26**/21

MACOMB **41**/59

OTTAWA **27**/27

ALLEGAN **28**/24

BARRY **17**/5

EATON **23**/15

INGHAM **22**/25

LIVINGSTON **15**/16

OAKLAND **97**/86

VAN BUREN **25**/17

KALAMAZOO **54**/31

CALHOUN **28**/29

JACKSON **26**/35

WASHTENAW **42**/32

232/224 WAYNE

BERRIEN **34**/13

CASS **15**/24

ST. JOSEPH **9**/13

BRANCH **6**/8

HILLSDALE **12**/16

LENAWEE **20**/29

MONROE **28**/20

1993

1993

1993

1993

1993

1993

1993

Highlights

ALL CRASHES BY INJURY SEVERITY

INJURY (C) 13.5

INJURY (B) 6.4

INJURY (A) 3.6
FATAL (K) 0.3

PDO 76.1

HBD CRASHES BY INJURY SEVERITY

INJURY (B) 18.5%

INJURY (C) 16.9%

INJURY (A) 12.7%

FATAL (K) 1.8%

PDO 50.2%
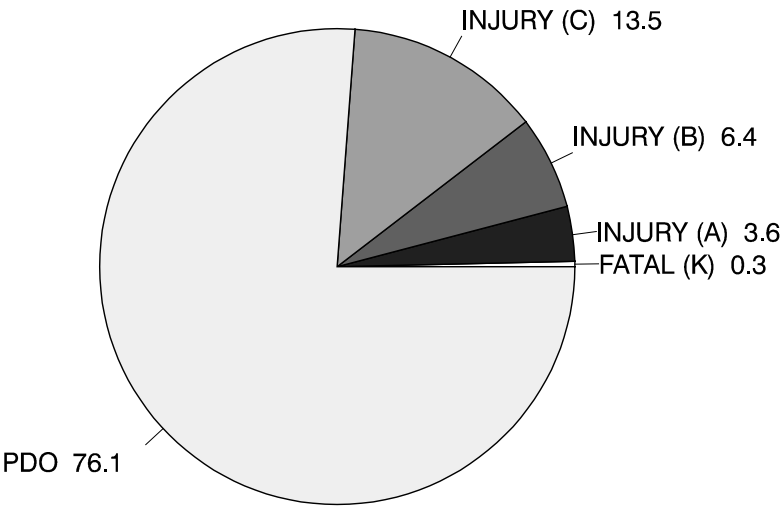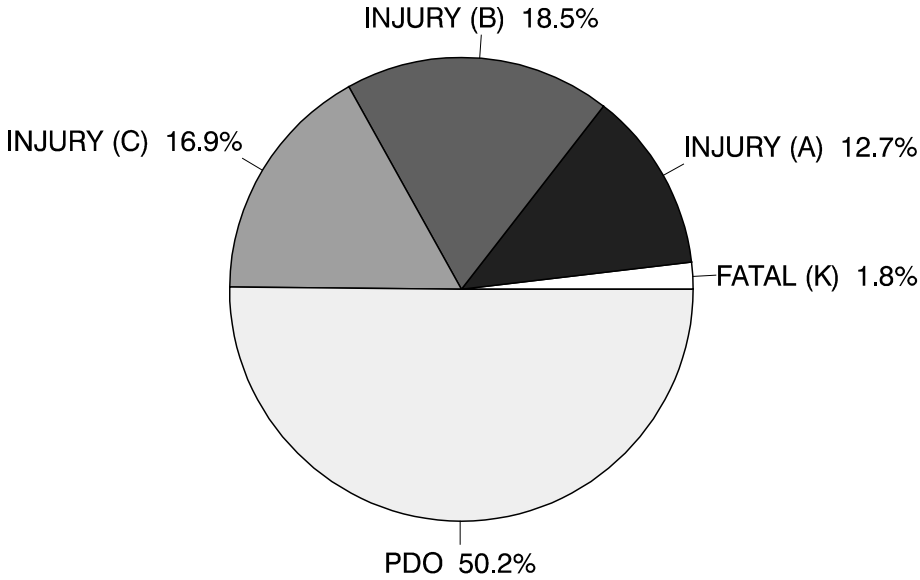
The problem of the drinking driver, pedestrian, and/or cyclist is seen when one compares the two charts on this page. A fatality in the crash is six times more likely when one of the crash-involved operators is reported as had been drinking.

DEATH & INJURY PER CRASH INVOLVED OCCUPANT

Occupants in Crashes

NO INJURY 79.1%

INJURY (C) 13.0%

INJURY (B) 5.0%

INJURY (A) 2.6%

FATAL (K) 0.2%
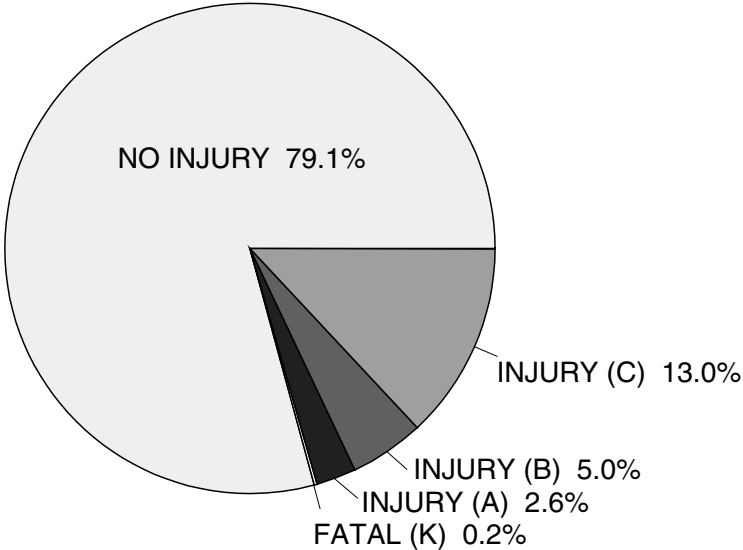
The majority of people involved in crashes (79.1%) are not injured. More than half of those who are injured receive only minor (C) injuries. Increased use of occupant restraints and airbags can reduce the number of killed and injured even further.

Occupants in HBD Crashes

NO INJURY 57.0%

FATAL (K) 1.0%

INJURY (A) 9.7%

INJURY (B) 15.0%

INJURY (C) 17.2%
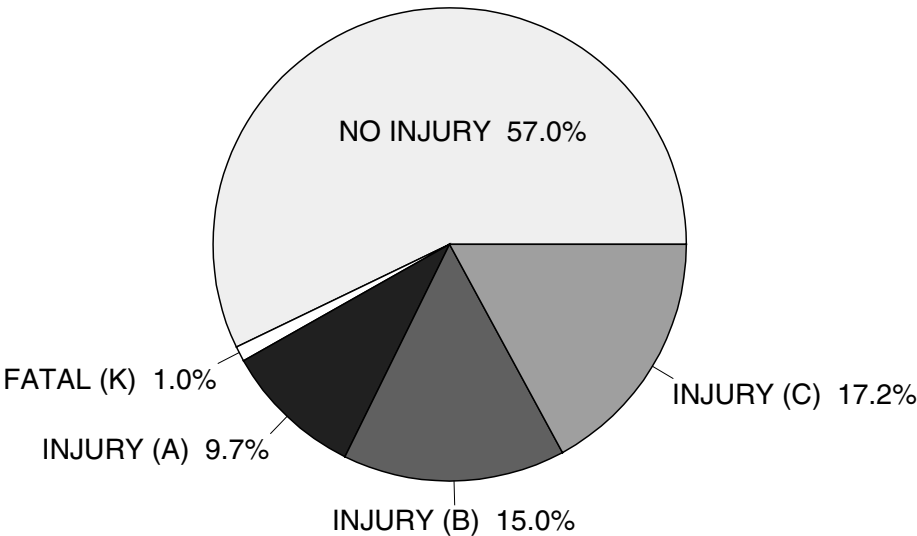
Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of fatalities is five times higher than in all crashes and the more serious injury levels are three to four times higher.

ALCOHOL INVOLVEMENT IN FATAL CRASHES

Fatal crashes were lowest in number during February, March, and April. The number of fatal crashes then increased, peaking in July. These numbers follow the increase in travel during the summer months. The number of HBD fatal crashes by month does not show a discernible trend. Total persons killed in fatal crashes closely follows the number of crashes, as would be expected.

Fatal Crashes by Month

	J	F	M	A	M	J	J	A	S	O	N	D
Non-HBD Fatal Crashes	68	50	61	44	69	57	91	85	85	88	87	66
HBD Fatal Crashes	46	30	25	26	39	36	42	33	35	39	32	35
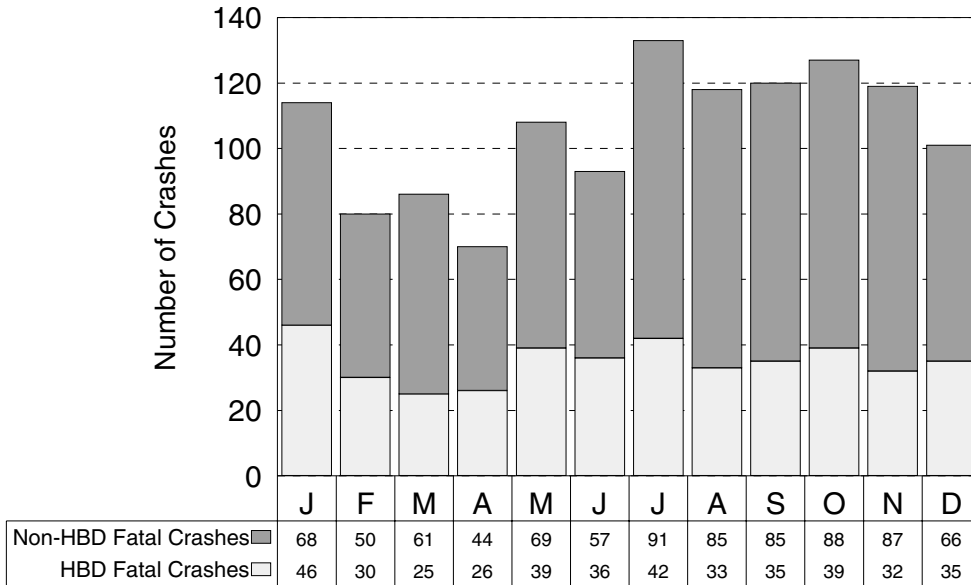
Total Persons Killed by Month

	J	F	M	A	M	J	J	A	S	O	N	D
Non-Alcohol Related Fatalities	73	57	62	45	79	64	102	105	92	101	99	69
Alcohol Related Fatalities	50	34	27	27	48	39	47	35	39	45	35	40
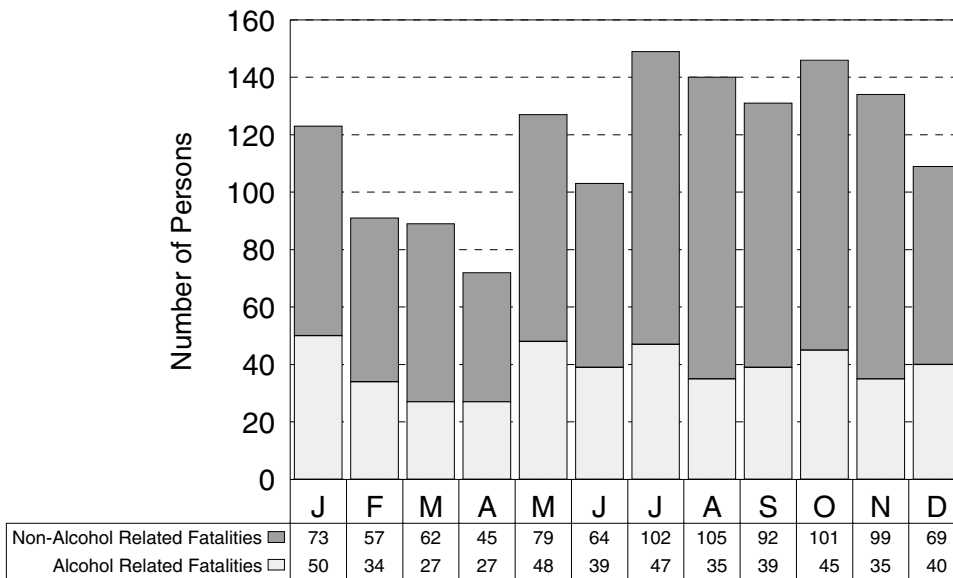
HBD Fatal Crashes by Day of Week

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
HBD Fatal Crashes ☐	45	35	36	48	72	95	87
All Fatal Crashes ▨	152	140	162	168	230	219	198
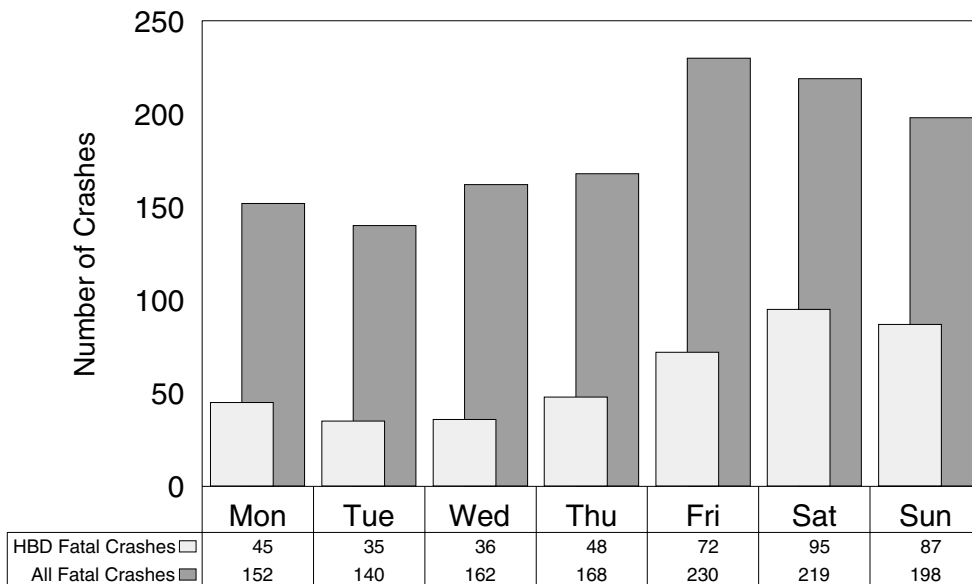
Friday has the most fatal crashes in 1993. Saturday and Sunday have the highest proportions of drinking related fatal crashes. Almost half of weekend fatal crashes involved drinking, while only 22.2% of fatal crashes on Wednesday involved drinking.

HBD Fatal Crashes by Time of Day

	12:00-2:59 A	3:00-5:59 A	6:00-8:59 A	9:00-11:59 A	12:00-2:59 P	3:00-5:59 P	6:00-8:59 P	9:00-11:59 P
HBD Fatal Crashes ☐	121	54	7	4	15	44	7	97
All Fatal Crashes ▨	191	86	107	123	149	219	205	174
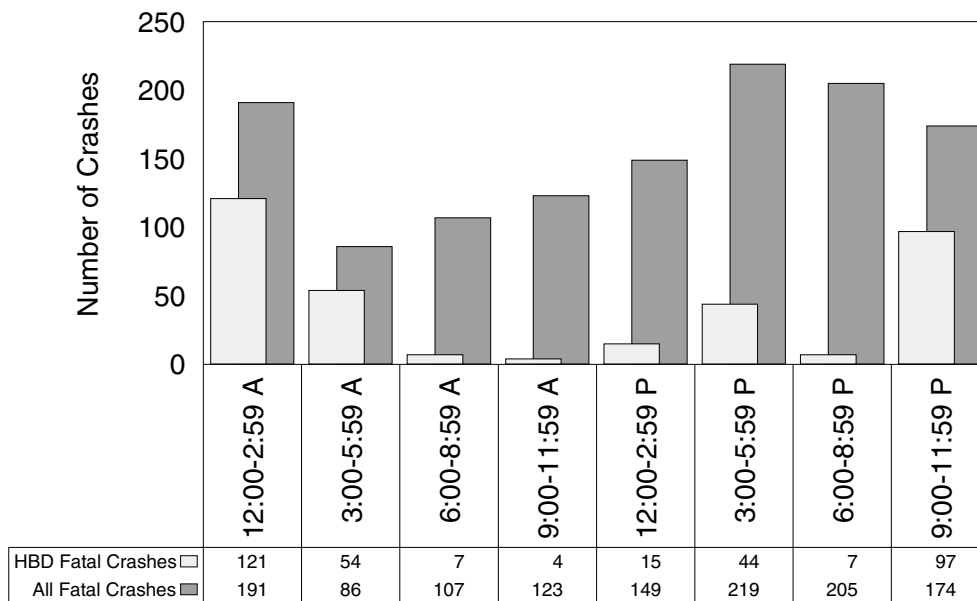
Not surprisingly, the midnight to 3:00 AM time period has the highest rate of drinking involvement (63.4%), while the late morning hours are the lowest (3.3%).

They were 15 fatal crashes, where the time of day was unknown. Of these 15 fatal crashes, 9 were HBD.

ALCOHOL INVOLVEMENT IN INJURY CRASHES

Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 1993, HBD Injury crashes were highest in July, August, and October, with over 1,000 HBD Injury crashes in each of those months. The highest proportion of HBD Injury crashes occurred in October with 12.7% of the injury crashes involving alcohol.

HBD Injury Crashes by Month

	J	F	M	A	M	J	J	A	S	O	N	D
Total Injury Crashes	7,115	6,527	7,056	6,906	7,925	8,278	8,096	8,284	8,113	8,523	7,696	7,209
A Injury - HBD Crashes	225	220	203	218	287	261	287	291	268	268	232	206
B Injury - HBD Crashes	340	322	289	331	371	364	424	398	332	438	366	328
C Injury - HBD Crashes	332	256	330	290	323	345	313	355	327	376	318	370
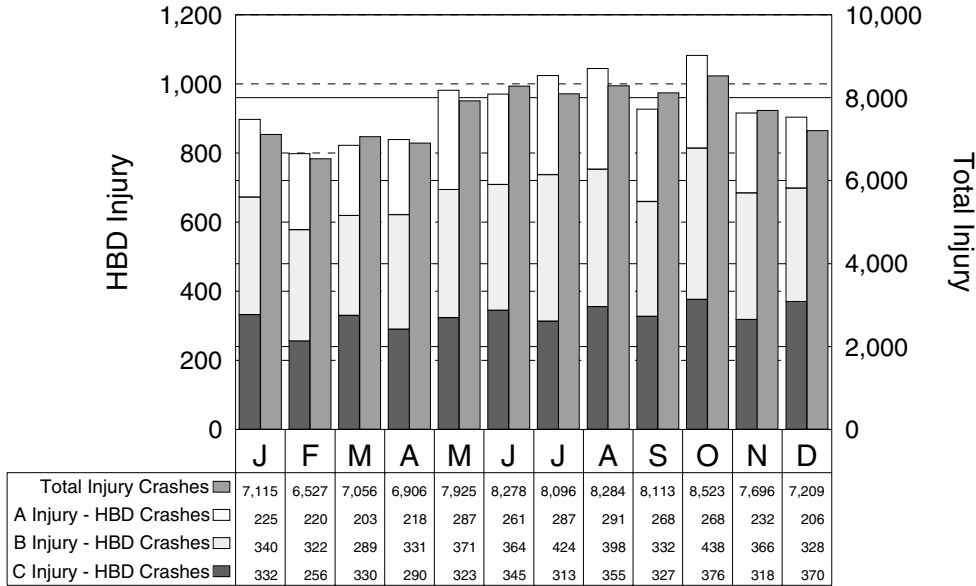
Total Persons Injured by Month

	J	F	M	A	M	J	J	A	S	O	N	D
Total Persons Injured	10,079	9,413	10,112	10,285	11,585	12,256	12,113	12,238	12,083	12,609	11,192	10,583
Alcohol Related A Injury	300	288	281	306	381	374	392	380	357	361	339	288
Alcohol Related B Injury	453	441	393	485	515	508	648	547	495	615	494	460
Alcohol Related C Injury	569	448	548	508	584	600	587	630	594	666	544	632

25
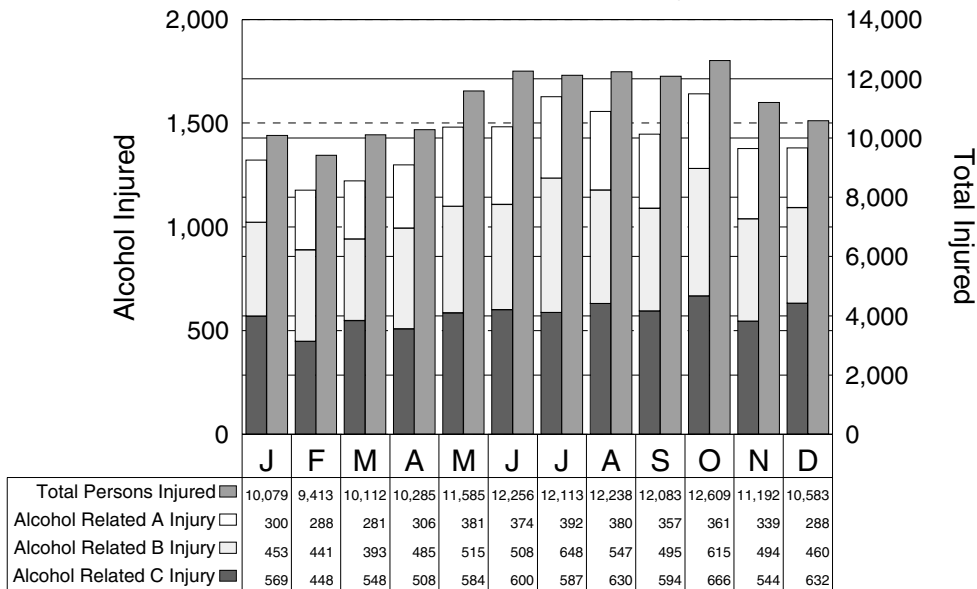
HBD Injury crashes follow the same basic trends as total crashes seen in the following charts. Crash frequency peaks on Friday, Saturday, and Sunday, and in the hours between 6:00 PM and 3:00 AM (12:00 AM - 3:00 AM is a particularly hazardous travel period).

HBD Injury Crashes by Day of Week

Number of Crashes

	Mon	Tue	Wed	Thu	Fri	Sat	Sun
A Injury - HBD ☐	248	237	263	334	546	754	584
B Injury - HBD ☐	355	357	432	486	763	1,056	854
C Injury - HBD ■	368	330	384	488	765	880	720
Total HBD Injury Crashes ▧	971	924	1,079	1,308	2,074	2,690	2,158
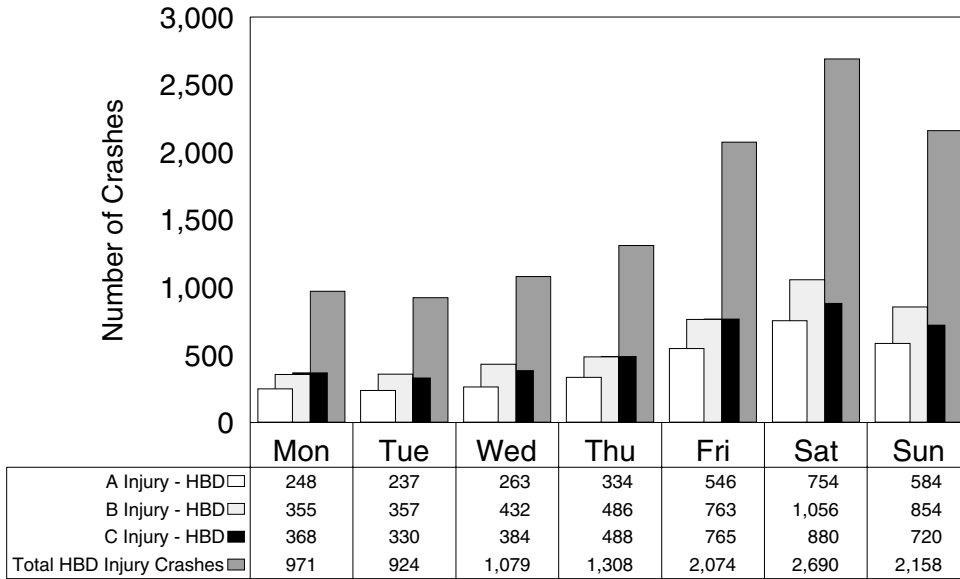
HBD Injury Crashes by Time of Day

Number of Crashes

	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 ☐	906	304	84	52	109	250	504	733
B Injury - HBD ☐	1,405	452	96	74	161	405	705	964
C Injury - HBD ■	1,037	296	80	80	186	514	740	957
Total HBD Injury Crashes ▧	3,348	1,052	260	206	456	1,169	1,949	2,654
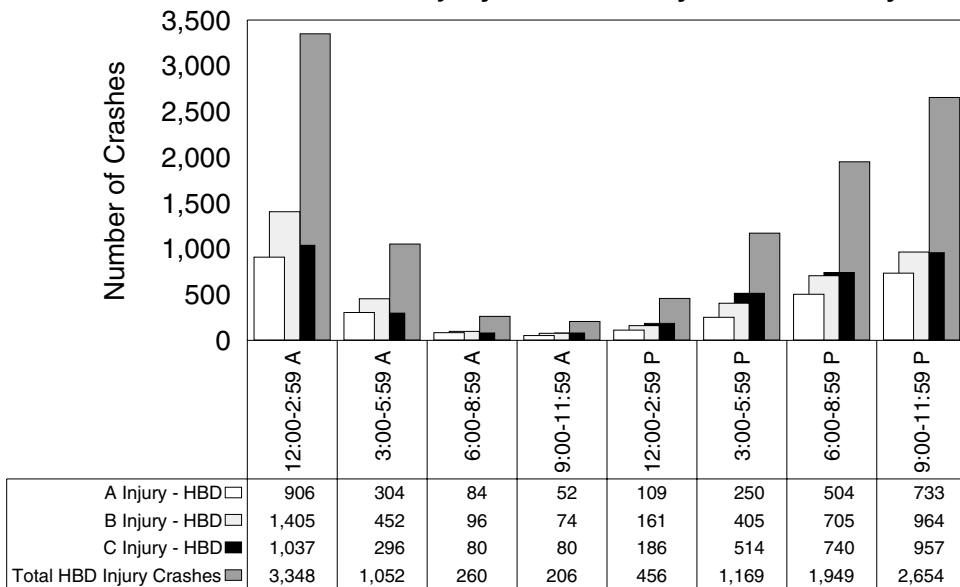
ALL CRASHES INJURY SEVERITY BY MONTH

Fatal Crashes

	J	F	M	A	M	J	J	A	S	O	N	D
Fatal Crashes	114	80	86	70	108	93	133	118	120	127	119	101
All Crashes	31,632	28,305	30,466	26,078	28,352	29,841	27,871	28,039	29,935	35,283	37,253	30,577

Injury and PDO Crashes

	J	F	M	A	M	J	J	A	S	O	N	D
INJURY	7,115	6,527	7,056	6,906	7,925	8,278	8,096	8,284	8,113	8,523	7,696	7,209
PDO	24,403	21,698	23,324	19,102	20,319	21,470	19,642	19,637	21,702	26,633	29,438	23,267
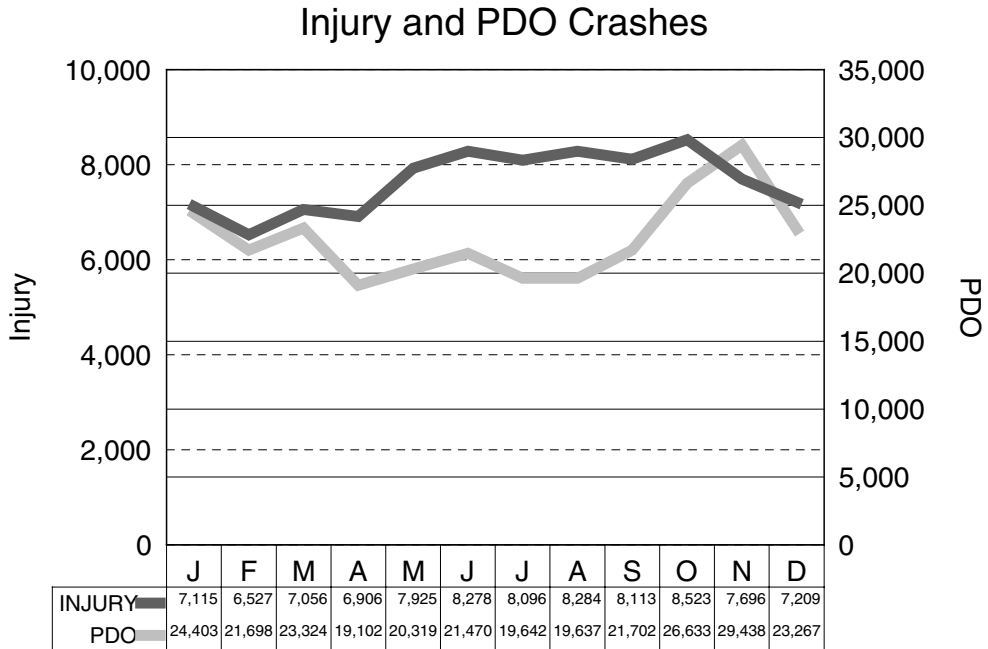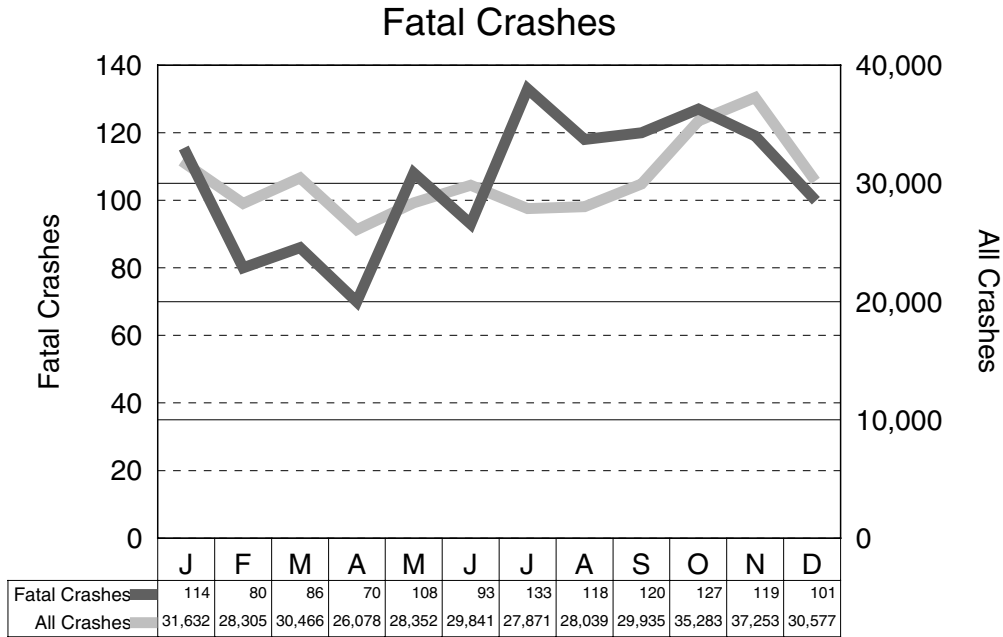
The charts on this page show that the months of June, July, August, September, and October are peak months in terms of the ratio of the number of crashes involving death or injury to the number of non-injury crashes. That is, if a person was involved in a crash in June - October, there was a higher chance 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.

VEHICLE TYPES IN CRASHES BY CRASH SEVERITY

FATAL

Automobile
66.8%

Other **2.3%**
Motorcycle **2.6%**
CDL Truck/Bus **6.2%**
Truck under 10,000 lbs **0.7%**
Pickup **14.6%**
Van (includes Mini-van),
Motorhome **6.9%**
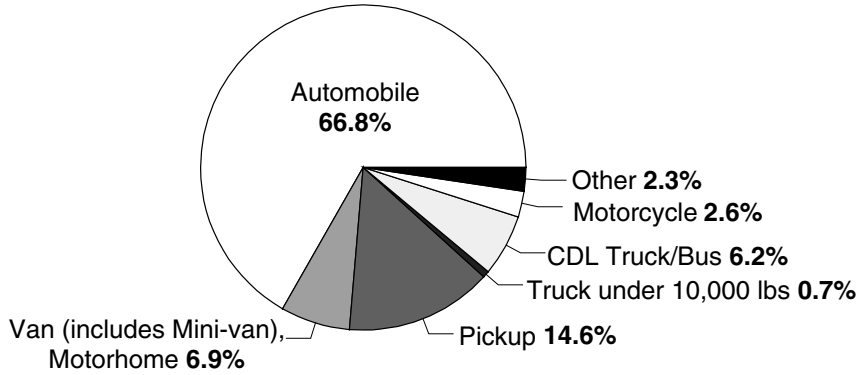
The top chart shows that 4 out of 5 vehicles involved in fatal crashes are automobiles or pickups. Van, Motorhome, the vehicle type that includes the popular Mini-van, has a fatal crash involvement of 6.9%.

INJURY

Automobile
77.1%

Other **1.0%**
Motorcycle **1.3%**
CDL Truck/Bus **2.2%**
Truck under 10,000 lbs **1.0%**
Pickup **11.3%**
Van (includes Mini-van),
Motothome **6.1%**
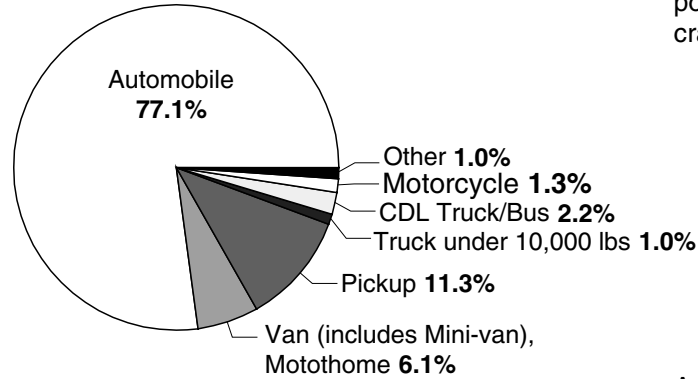
As with fatal crashes, Injury and PDO crashes are predominated by cars and pickups. One should also note the decline in proportional representation for motorcycles and heavy trucks compared to their levels in fatal crashes.

PROPERTY DAMAGE ONLY

Automobile
75.2%

Other **0.4%**
Motorcycle **0.1%**
CDL Truck/Bus **2.8%**
Truck under 10,000 lbs **1.2%**
Pickup **13.7%**
Van (includes Mini-van),
Motorhome **6.7%**
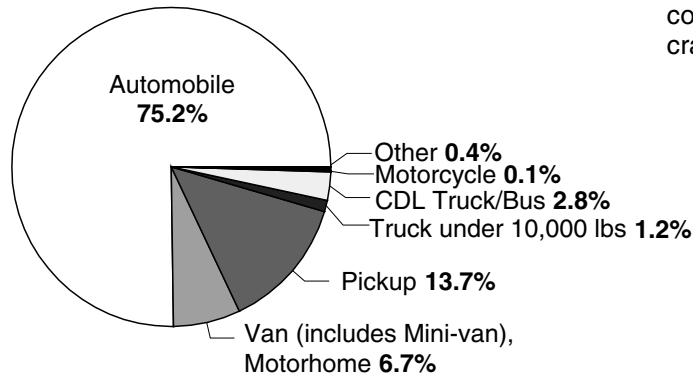
DRIVER GENDER INFORMATION - ALL CRASHES

Male 60%
340,915

Female 40%
226,428

Crash Severity

Injury
27.04%

Fatal
0.40%

Male

Property Damage
72.56%

Injury
29.47%

Fatal
0.24%

Female

Property Damage
70.29%
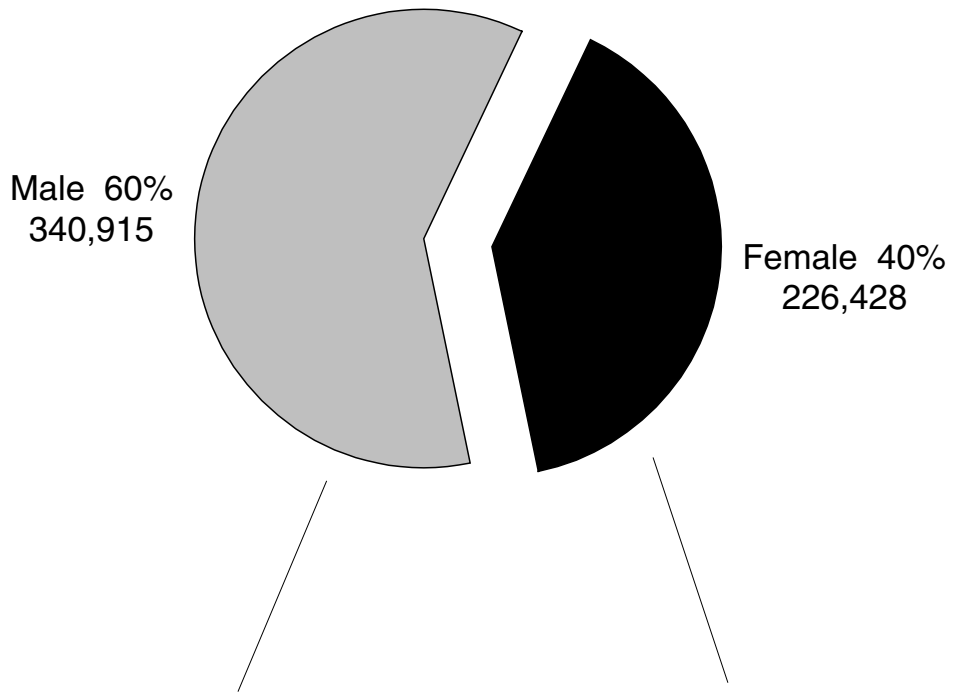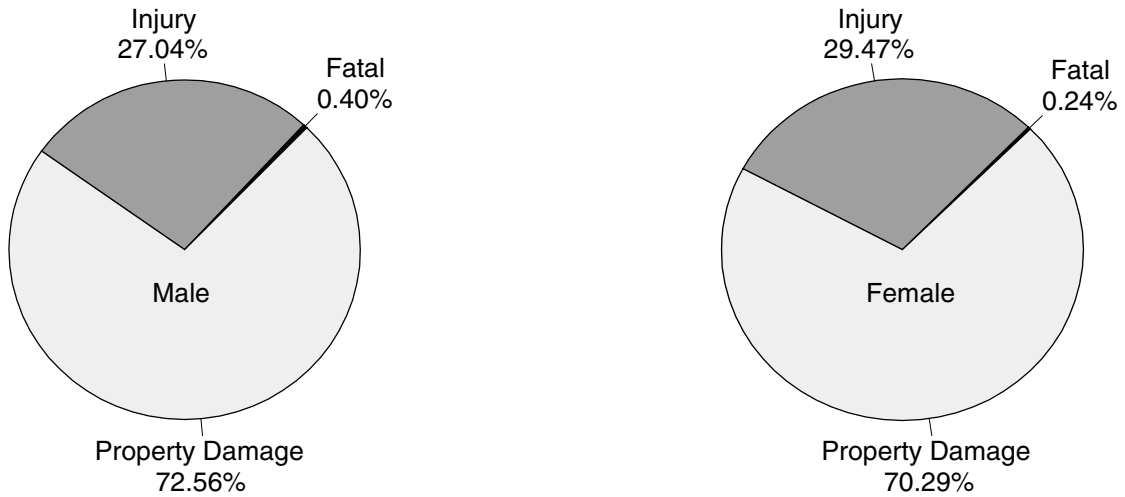
A higher proportion of crashes involve male drivers than female drivers. When we examine the severity of crashes involving drivers of each gender, we see that fatal crashes are twice as prevalent among male drivers than female drivers (0.4% vs. 0.2%).

This year's chart was processed with numbers for all drivers (vehicle level). The 1992 numbers reflect the drivers of vehicle one only (crash level).

1993

1993

1993

1993

Crash

1993

1993

1993

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 limited access highways. 1993 estimated mileage figures were provided by the Michigan Department of Transportation [4].

STATEWIDE	Estimated Mileage (Billions)	All Crashes	Injury Crashes	Deaths	Total Crash Rate	Injury Crash Rate	Death Rate
Limited Access Roadways	25.4	29,377	7,921	139	115.7	31.2	0.5
U.S. & Michigan Roads	20.1	94,858	24,260	444	471.9	120.7	2.2
County & Local Roads	40.2	239,401	59,547	831	595.5	148.1	2.1
Totals	85.7	363,636	91,728	1,414	424.3	107.0	1.6

Rates per 100 Million Vehicle Miles
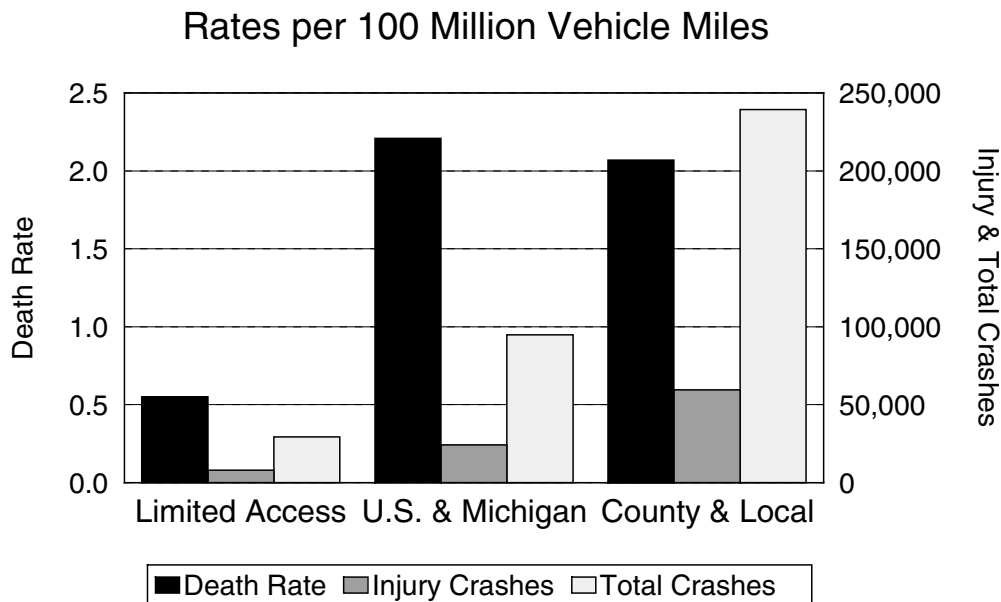
CRASH TYPE

CRASH TYPE	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	94,208	25.9	510	40.2	4,524	7,656	8,382	73,136
Head On	12,129	3.3	199	15.7	966	1,217	1,439	8,308
Head On - Left Turn	14,589	4.0	34	2.7	1,012	1,871	3,042	8,630
Angle	74,590	20.5	325	25.6	3,482	6,532	13,341	50,910
Rear End	86,111	23.7	79	6.2	1,739	4,149	20,155	59,989
Rear End - Left Turn	4,618	1.3	4	0.3	169	278	829	3,338
Rear End - Right Turn	3,093	0.9	1	0.1	38	99	459	2,496
Sideswipe - Same Direction	31,182	8.6	24	1.9	381	773	2,252	27,752
Sideswipe - Opposite Direct	12,395	3.4	14	1.1	250	431	1,044	10,656
Other	21,879	6.0	58	4.6	720	1,146	1,744	18,211
Unknown	8,842	2.4	21	1.7	276	418	914	7,213
Totals	363,636	100.0	1,269	100.0	13,557	24,570	53,601	270,639

Single Vehicle, Head On, and Angle crash types produce the highest number of fatal crashes (84.2%). Single Vehicle crashes include rollovers, which are particularly deadly crash types. Rear End and Sideswipe crashes produce the lowest number of fatal crashes (9.6%).

RELATION TO ROADWAY

LOCATION OF FIRST IMPACT	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
On Road	309,268	84.8	864	68.1	9,940	18,373	46,614	233,477
Median	2,264	0.6	25	2.0	174	275	325	1,465
Shoulder	15,630	4.3	99	7.8	835	1,546	1,885	11,265
Outside of Shoulder/Curb	28,038	7.7	258	20.3	2,106	3,662	3,871	18,141
Gore	584	0.2	4	0.3	38	51	103	388
Other/Unknown	7,852	2.2	19	1.5	464	663	803	5,903
Totals	363,636	100.0	1,269	100.0	13,557	24,570	53,601	270,639

Crashes that happen outside of the normal driving lanes are overrepresented in causing fatalities. Only 7.7% of crashes occur outside the shoulder of the road, but these crashes account for 20.3% of the fatal crashes.
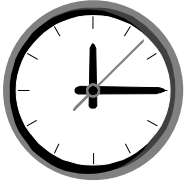
TIME AND SEVERITY

TIME OF DAY	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
12:00 mid. - 02:59 a.m.	22,849	6.3	191	15.1	1,369	2,282	2,668	16,339
03:00 a.m. - 05:59 a.m.	13,064	3.4	86	6.8	605	1,000	1,180	10,193
06:00 a.m. - 08:59 a.m.	41,507	10.6	107	8.4	1,177	2,191	5,573	32,459
09:00 a.m. - 11:59 a.m.	43,179	11.7	123	9.7	1,389	2,664	6,771	32,232
12:00 noon - 02:59 p.m.	62,428	17.1	149	11.7	2,250	4,165	10,710	45,154
03:00 p.m. - 05:59 p.m.	82,335	22.9	219	17.3	2,870	5,616	14,135	59,495
06:00 p.m. - 08:59 p.m.	55,598	15.6	205	16.2	2,080	3,721	7,574	42,018
09:00 p.m. - 11:59 p.m.	38,030	10.7	174	13.7	1,689	2,735	4,522	28,910
Unknown	4,646	1.8	15	1.2	128	196	468	3,839
Total	363,636	100.0	1,269	100.0	13,557	24,570	53,601	270,639
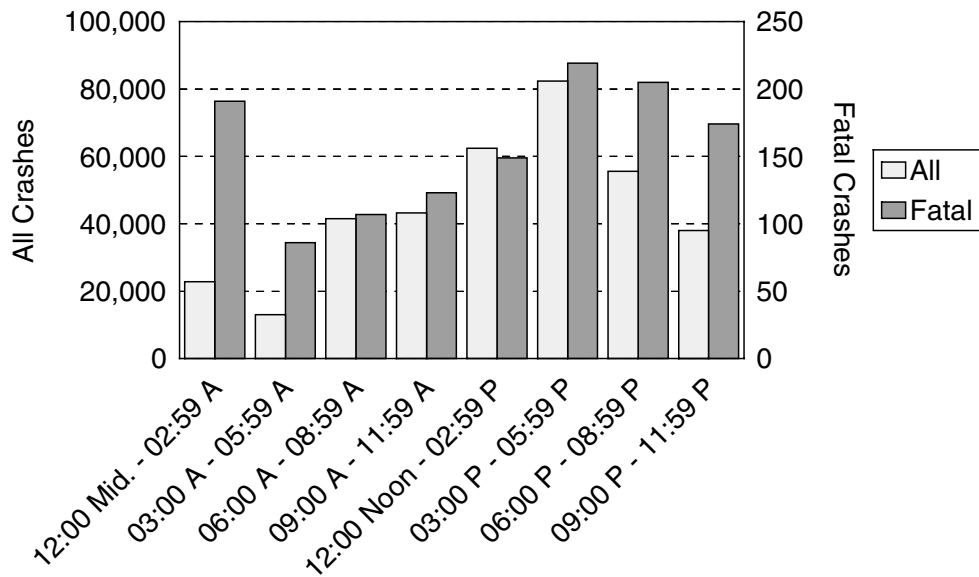
Crash frequencies peak in midafternoon and drop off by midnight, while fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. There are proportionally more fatal crashes during the midnight to 3:00 AM time period.
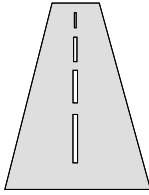
ROAD CONDITION

ROAD SURFACE CONDITION	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Dry	235,755	64.8	910	71.7	9,329	16,707	34,109	174,700
Wet	74,011	20.4	223	17.6	2,534	4,806	12,911	53,537
Icy	21,845	6.0	59	4.6	626	1,239	2,872	17,049
Snowy	19,454	5.3	35	2.8	539	968	2,158	15,754
Muddy	669	0.2	2	0.2	39	75	73	480
Slushy	3,965	1.1	18	1.4	139	254	533	3,021
Debris	193	0.1	0	0.0	8	21	18	146
Other/Unknown	7,744	2.1	22	1.7	343	500	927	5,952
Totals	363,636	100.0	1,269	100.0	13,557	24,570	53,601	270,639

ALL CRASHES

Dry 64.8%
Other/Unknown 2.1%
Debris 0.1%
Slushy 1.1%
Muddy 0.2%
Snowy 5.3%
Icy 6.0%
Wet 20.4%

FATAL CRASHES

Dry 71.7%
Other/Unknown 1.7%
Slushy 1.4%
Muddy 0.2%
Snowy 2.8%
Icy 4.6%
Wet 17.6%
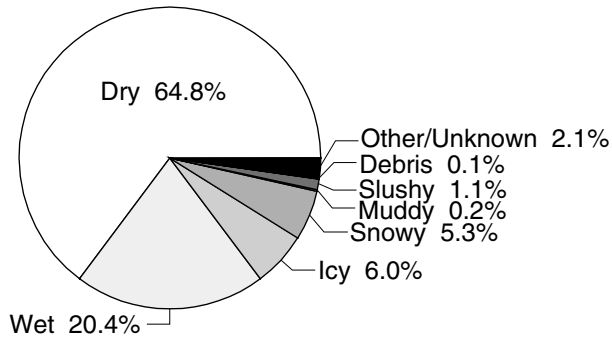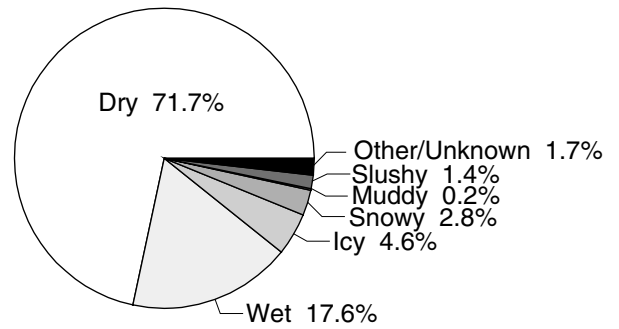
Most crashes (64.8%) and most fatal crashes (71.7%) occur on dry roads. This indicates that Michigan drivers do a good job of adjusting their driving behavior for bad road conditions.

WEATHER CONDITION

WEATHER CONDITION	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	169,996	46.7	596	47.0	6,936	12,098	24,248	126,118
Cloudy	111,470	30.7	430	33.9	3,990	7,467	16,728	82,855
Fog/Smoke	3,466	1.0	18	1.4	128	250	352	2,718
Rain	41,575	11.4	116	9.1	1,451	2,815	7,529	29,664
Snow/Blowing Snow	29,175	8.0	75	5.9	836	1,531	3,835	22,898
Severe Wind	158	0.0	0	0.0	5	7	29	117
Sleet/Hail	1,906	0.5	8	0.6	40	135	252	1,471
Other/Unknown	5,890	1.6	26	2.0	171	267	628	4,798
Totals	363,636	100.0	1,269	100.0	13,557	24,570	53,601	270,639

ALL CRASHES

Oth/Unk 1.6%
Sleet/Hail 0.5%
Severe Wind 0.0%
Snow/Blowing Snow 8.0%
Clear 46.7%
Rain 11.4%
Fog/Smoke 1.0%
Cloudy 30.7%

FATAL CRASHES

Oth/Unk 2.0%
Sleet/Hail 0.6%
Snow/Blowing Snow 5.9%
Clear 47.0%
Rain 9.1%
Fog/Smoke 1.4%
Cloudy 33.9%
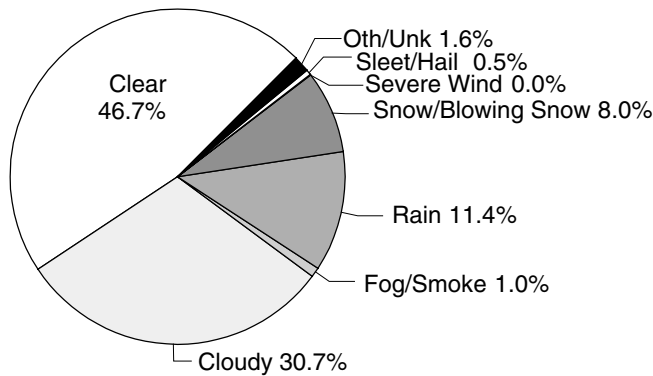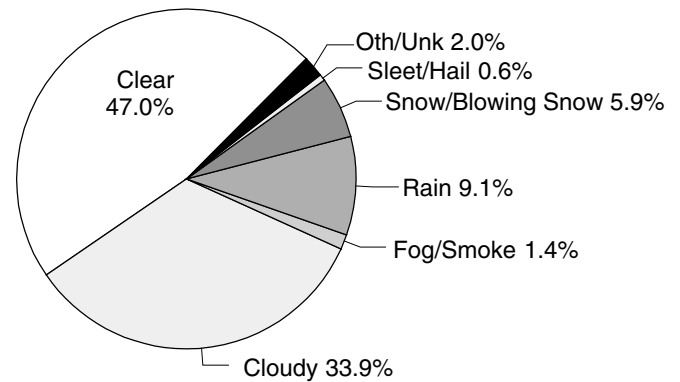
The majority of all crashes occur in good weather (46.7%) as do the majority of fatal crashes (47.0%). Of bad weather conditions, fog and smoke present the greatest hazard as they are overrepresented in fatal crashes.
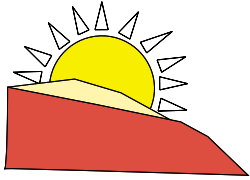
LIGHT CONDITION

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	225,499	62.0	619	48.8	8,135	15,318	37,695	163,732
Dawn	9,760	2.7	17	1.3	226	453	1,038	8,026
Dusk	12,460	3.4	37	2.9	413	762	1,654	9,594
Dark - Lighted	51,400	14.1	225	17.7	2,504	4,337	8,180	36,154
Dark - Unlighted	61,103	16.8	364	28.7	2,212	3,580	4,812	50,135
Other/Unknown	3,414	0.9	7	0.6	67	120	222	2,998
Totals	363,636	100.0	1,269	100.0	13,557	24,570	53,601	270,639

ALL CRASHES

Daylight 62.0%
Oth/Unk 0.9%
Dark - Unlighted 16.8%
Dawn 2.7%
Dusk 3.4%
Dark - Lighted 14.1%

FATAL CRASHES

Daylight 48.8%
Dawn 1.3%
Dusk 2.9%
Oth/Unk 0.6%
Dark - Lighted 17.7%
Dark - Unlighted 28.7%
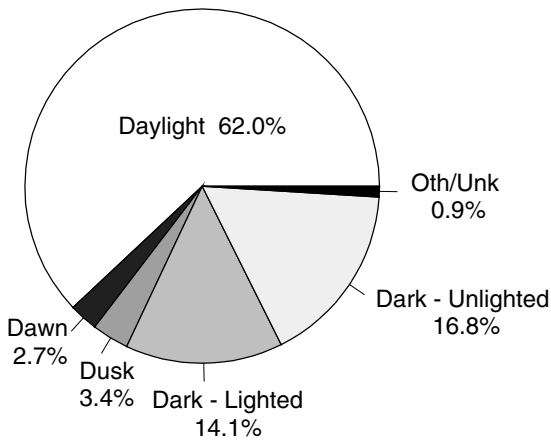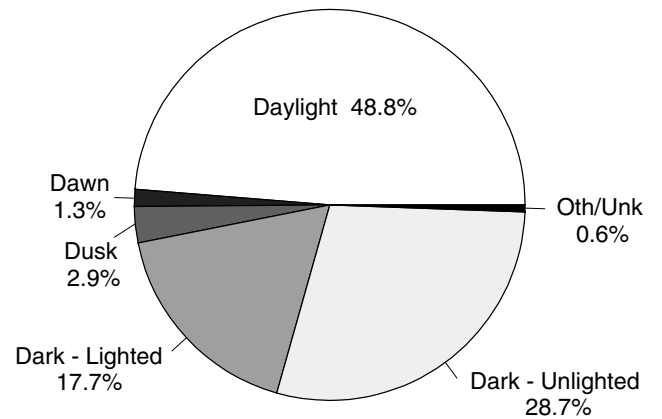
The majority of all crashes happen during the day, while the majority of fatal crashes happen during nondaylight hours. Areas without street lights have the highest fatality rate.

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**Vehicle/
Driver**

VEHICLE TYPE CRASH INVOLVEMENT

| | Motor Vehicles | | Fatal Crash | | Injury | PDO | Fatality in Veh | | Injury | PDO |
| | | | MOST SEVERE OUTCOME IN CRASH | | | | MOST SEVERE OUTCOME IN VEHICLE | | | |

Vehicle Types	Number	% of Total	Number	% of Total	Injury	PDO	Number	% of Total	Injury	PDO
Passenger Car and Station Wagon	464,616	75.7	1,334	66.8	128,238	335,044	799	73.5	82,350	343,821
Van and Motorhome	40,212	6.5	137	6.9	10,118	29,957	59	5.4	5,301	31,913
Pickup	79,980	13.0	291	14.6	18,813	60,876	127	11.7	10,094	64,569
Small Truck (under 10,000 lbs.)	6,925	1.1	14	0.7	1,725	5,186	4	0.4	851	5,615
Cycle	2,768	0.5	51	2.6	2,194	523	51	4.7	2,149	462
Moped	375	0.1	5	0.3	301	69	4	0.4	290	64
Go Cart	13	0.0	0	0.0	6	7	0	0.0	6	5
Snowmobile	673	0.1	15	0.8	494	164	14	1.3	439	184
Off Road Vehicle	417	0.1	11	0.6	340	66	9	0.8	318	73
Other	1,861	0.3	14	0.7	573	1,274	9	0.8	305	1,324
CDL Truck/Bus (breakdown below)	16,152	2.6	124	6.2	3,616	12,412	11	1.0	954	14,010
Totals	613,992∗	100.0	1,996	100.0	166,418	445,578	1,087	100.0	103,057	462,040

∗ Includes 47,808 with unknown injury severity for Most Severe Outcome in Vehicle

CDL Truck/Bus Sub-category Types	Motor Vehicles		Fatal Crash		Injury	PDO	Fatality in Veh		Injury	PDO
	Number	% of Total	Number	% of Total			Number	% of Total		
Uncoded Truck	1,547	9.6	2	0.0	303	1,242	0	0.0	63	1,070
Commercial Vehicle: Group A	7,574	46.9	78	0.8	1,679	5,817	6	54.5	394	6,886
Commercial Vehicle: Group B	4,101	25.4	25	0.6	918	3,158	1	9.1	307	3,636
Commercial Vehicle: Group C	532	3.3	1	0.7	118	413	0	0.0	48	463
Other Truck	831	5.1	6	6.2	217	608	3	27.3	53	734
Unknown Truck	1,567	9.7	12	6.2	381	1,174	1	9.1	89	1,221
Totals	16,152∗	100.0	124	100.0	3,616	12,412	11	100.0	954	14,010

∗ Includes 1,177 with unknown injury severity for Most Severe Outcome in Vehicle

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.

ACTION PRIOR TO CRASH

DRIVER ACTION	All Drivers		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Going straight ahead	314,229	51.2	1,472	13,908	24,262	51,769	222,818
Turning left	51,367	8.4	100	2,283	4,446	9,075	35,463
Turning right	18,224	3.0	14	386	875	2,328	14,621
Stopped on roadway	56,246	9.2	33	1,332	3,130	14,367	37,384
In prior crash	1,084	0.2	6	58	90	228	702
Changing lanes	12,971	2.1	41	297	508	1,503	10,622
Backing	15,836	2.6	4	127	244	690	14,771
Slowing/stopping on roadway	40,344	6.6	30	717	1,865	9,280	28,452
Slowing/stopping other	941	0.2	1	30	49	188	673
Starting up on roadway	9,553	1.6	28	303	610	1,976	6,636
Starting up other	467	0.1	4	27	37	70	329
Entering parking	1,123	0.2	2	13	43	92	973
Leaving parking	3,275	0.5	1	61	145	407	2,661
Entering roadway	9,303	1.5	23	340	660	1,450	6,830
Leaving roadway	2,027	0.3	19	224	297	252	1,235
Making U-turn	1,645	0.3	3	89	136	255	1,162
Overtaking or passing	7,177	1.2	41	318	433	931	5,454
Avoiding object	1,912	0.3	2	74	215	236	1,385
Avoiding pedestrian	226	0.0	10	42	39	36	99
Avoiding vehicle (front/back)	4,613	0.8	32	215	405	800	3,161
Avoiding vehicle (angle)	2,204	0.4	9	90	178	361	1,566
Driverless moving	659	0.1	2	14	25	38	580
Parked	27,143	4.4	43	467	978	1,241	24,414
Crossing at intersection	82	0.0	0	7	11	18	46
Crossing not at intersection	36	0.0	1	9	5	7	14
Getting on/off vehicle	21	0.0	1	5	4	3	8
In roadway with traffic	14	0.0	0	2	1	1	10
In roadway against traffic	13	0.0	0	0	1	5	7
Standing\lying in roadway	10	0.0	0	0	2	3	5
Pushing/working on vehicle	16	0.0	0	5	4	3	4
Other working in roadway	5	0.0	0	0	0	0	5
Playing in roadway	3	0.0	0	1	0	0	2
In roadway other reason	10	0.0	0	1	1	2	6
Not in roadway	13	0.0	0	1	4	1	7
Other	617	0.1	5	45	64	111	392
Unknown	30,583	5.0	69	1,066	1,748	4,619	23,081
TOTAL	613,992	100.0	1,996	22,557	41,515	102,346	445,578

ACTION PRIOR TO CRASH (continued)

MOTORCYCLIST - INJURY SEVERITY

MOTORCYCLIST ACTION	All Motorcycles		All Motorcyclists		Fatal	Injury			PDO
	Number	% of Total	Number	% of Total		A	B	C	
Going straight ahead	1,807	65.3	2,006	59.3	49	574	731	340	265
Turning left	128	4.6	139	4.2	0	32	43	30	32
Turning right	102	3.7	113	3.3	1	20	41	18	31
Stopped on roadway	100	3.6	106	3.3	0	7	19	26	53
In prior crash	0	0.0	0	0.0	0	0	0	0	0
Changing lanes	58	2.1	62	1.9	0	23	20	13	4
Backing	9	0.3	9	0.3	0	0	2	2	5
Slowing/stopping on roadway	108	3.9	115	3.5	0	16	39	28	28
Slowing/stopping other	5	0.2	5	0.2	0	2	1	2	0
Starting up on roadway	23	0.8	25	0.8	0	6	7	5	7
Starting up other	6	0.2	7	0.2	0	3	2	0	2
Entering parking	1	0.0	1	0.0	0	0	1	0	0
Leaving parking	1	0.0	1	0.0	0	0	0	0	0
Entering roadway	31	1.1	35	1.0	1	9	12	6	6
Leaving roadway	31	1.1	33	1.0	1	16	8	5	2
Making U-turn	9	0.3	10	0.3	0	3	3	1	3
Overtaking or passing	82	3.0	88	2.7	1	27	28	12	15
Avoiding object	22	0.8	24	0.7	0	2	9	5	7
Avoiding pedestrian	3	0.1	3	0.1	0	0	1	0	2
Avoiding vehicle (front/back)	57	2.1	66	1.9	0	9	36	17	4
Avoiding vehicle (angle)	28	1.0	30	0.9	1	4	15	7	3
Driverless moving	0	0.0	0	0.0	0	0	0	0	0
Parked	45	1.6	45	1.5	0	0	0	1	12
Crossing at intersection	2	0.1	2	0.1	0	1	0	1	0
Crossing not at intersection	4	0.1	4	0.1	0	1	1	2	0
Getting on/off vehicle	1	0.0	1	0.0	0	1	0	0	0
In roadway with traffic	0	0.0	0	0.0	0	0	0	0	0
In roadway against traffic	0	0.0	0	0.0	0	0	0	0	0
Standing\lying in roadway	0	0.0	0	0.0	0	0	0	0	0
Pushing/working on vehicle	0	0.0	0	0.0	0	0	0	0	0
Other working in roadway	0	0.0	0	0.0	0	0	0	0	0
Playing in roadway	0	0.0	0	0.0	0	0	0	0	0
In roadway other reason	0	0.0	1	0.0	0	1	0	0	0
Not in roadway	0	0.0	0	0.0	0	0	0	0	0
Other	14	0.5	14	0.5	0	4	7	2	1
Unknown	91	3.3	101	3.0	0	24	28	27	15
TOTAL	2,768	100.0	3,046*	100.0	54	785	1,054	550	497

∗ Includes 106 motorcyclists (drivers and passengers) with unknown injury severity

ACTION PRIOR TO CRASH (continued)

BICYCLIST - INJURY SEVERITY

BICYCLIST ACTION	All Bicycles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Going straight ahead	1,502	57.3	16	215	577	477	190
Turning left	86	3.3	1	22	37	20	4
Turning right	35	1.3	0	5	12	11	6
Stopped on roadway	28	1.1	0	3	11	7	6
In prior crash	1	0.0	1	0	0	0	0
Changing lanes	48	1.8	0	10	19	12	3
Backing	1	0.0	0	0	1	0	0
Slowing/stopping on roadway	5	0.2	0	1	3	0	1
Slowing/stopping other	4	0.2	0	0	2	2	0
Starting up on roadway	18	0.7	0	1	7	5	3
Starting up other	3	0.1	0	1	1	0	1
Entering parking	2	0.1	0	1	1	0	0
Leaving parking	7	0.3	0	1	4	2	0
Entering roadway	257	9.8	4	53	100	65	33
Leaving roadway	7	0.3	0	0	4	3	0
Making U-turn	12	0.5	1	2	4	1	3
Overtaking or passing	8	0.3	0	1	3	3	1
Avoiding object	1	0.0	0	1	0	0	0
Avoiding pedestrian	1	0.0	0	0	0	1	0
Avoiding vehicle (front/back)	16	0.6	0	0	8	5	2
Avoiding vehicle (angle)	11	0.4	0	2	6	1	1
Driverless moving	1	0.0	0	1	0	0	0
Parked	5	0.2	0	0	2	0	1
Crossing at intersection	188	7.2	1	22	60	67	33
Crossing not at intersection	72	2.7	1	11	31	25	2
Getting on/off vehicle	1	0.0	0	0	1	0	0
In roadway with traffic	24	0.9	0	7	6	9	2
In roadway against traffic	19	0.7	2	0	7	5	4
Standing\lying in roadway	1	0.0	0	0	0	1	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	8	0.3	1	2	4	0	0
In roadway other reason	12	0.5	0	4	4	3	1
Not in roadway	8	0.3	0	0	2	3	2
Other	40	1.5	0	1	24	10	5
Unknown	188	7.2	1	23	59	66	25
TOTAL	2,620*	100.0	29	390	1,000	804	329

∗ Includes 68 bicyclists with unknown injury severity

ACTION PRIOR TO CRASH (continued)

PEDESTRIAN ACTION	All Pedestrians		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Going straight ahead	100	3.1	4	20	42	24	6
Turning left	14	0.4	1	7	3	2	1
Turning right	1	0.0	0	0	0	1	0
Stopped on roadway	9	0.3	0	3	1	1	4
In prior crash	7	0.2	0	4	1	0	2
Changing lanes	1	0.0	0	0	1	0	0
Backing	0	0.0	0	0	0	0	0
Slowing/stopping on roadway	2	0.1	0	0	0	1	1
Slowing/stopping other	0	0.0	0	0	0	0	0
Starting up on roadway	0	0.0	0	0	0	0	0
Starting up other	0	0.0	0	0	0	0	0
Entering parking	1	0.0	0	0	1	0	0
Leaving parking	0	0.0	0	0	0	0	0
Entering roadway	21	0.6	0	5	7	5	4
Leaving roadway	8	0.2	1	2	3	2	0
Making U-turn	0	0.0	0	0	0	0	0
Overtaking or passing	1	0.0	0	0	1	0	0
Avoiding object	0	0.0	0	0	0	0	0
Avoiding pedestrian	0	0.0	0	0	0	0	0
Avoiding vehicle (front/back)	2	0.1	0	2	0	0	0
Avoiding vehicle (angle)	7	0.2	0	2	1	3	1
Driverless moving	4	0.1	0	0	1	1	2
Parked	39	1.2	0	6	6	6	16
Crossing at intersection	652	19.9	21	178	188	216	32
Crossing not at intersection	949	29.0	54	325	305	223	13
Getting on/off vehicle	52	1.6	1	12	19	17	2
In roadway with traffic	120	3.7	14	35	35	29	2
In roadway against traffic	53	1.6	3	20	13	13	2
Standing\lying in roadway	117	3.6	15	32	32	32	2
Pushing/working on vehicle	49	1.5	3	14	13	18	1
Other working in roadway	27	0.8	0	10	9	6	2
Playing in roadway	83	2.5	0	24	29	22	6
In roadway other reason	166	5.1	7	51	52	47	2
Not in roadway	158	4.8	8	46	47	46	3
Other	82	2.5	0	16	26	34	2
Unknown	550	16.8	39	156	153	130	17
TOTAL	3,275*	100.0	171	970	989	879	123

∗ Includes 143 pedestrians with unknown injury severity

MOST HARMFUL EVENT

NONCOLLISION	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Loss of control	5,801	0.9	20	345	525	938	3,973
Cross center/median	1,609	0.3	13	102	139	236	1,119
Ran off road left	1,170	0.2	1	57	98	167	847
Ran off road right	2,227	0.4	4	70	183	378	1,592
Re-enter road	236	0.0	5	8	26	40	157
Overturn	7,399	1.2	111	899	1,520	1,595	3,274
Separation of units	1,989	0.3	3	71	99	285	1,531
Fire/explosion	1,039	0.2	10	29	50	118	832
Immersion	102	0.0	2	8	6	11	75
Jackknife	462	0.1	0	13	16	53	380
Downhill runaway	111	0.0	0	6	8	12	85
Cargo loss/shift	666	0.1	2	11	21	37	595
Individual fell off	613	0.1	19	176	187	76	155
Other noncollision	3,181	0.5	9	135	193	424	2,420
NONCOLLISION Sub-Total	26,605	4.3	199	1,930	3,071	4,370	17,035

HAD A COLLISION WITH NONFIXED OBJECT	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Pedestrian	2,925	0.5	147	843	851	718	366
Pedalcycle	2,563	0.4	23	369	936	741	494
Motor vehicle in transport	393,913	64.2	1,139	13,549	26,125	76,096	277,004
Parked motor vehicle	17,249	2.8	24	338	744	1169	14,974
Railway train	170	0.0	13	27	23	27	80
Animal	42,202	6.9	1	51	255	558	41,337
Other nonfixed objects	5,133	0.8	11	125	213	439	4,345
COLLISION NONFIXED Sub-Total	464,155	75.6	1,358	15,302	29,147	79,748	338,600

MOST HARMFUL EVENT (continued)

MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH FIXED OBJECT	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Bridge/pier/abutment	775	0.1	7	66	89	111	502
Bridge parapet end	591	0.1	0	15	17	20	539
Bridge rail	404	0.1	1	22	49	78	254
Guardrail face	2,290	0.4	5	89	160	281	1,755
Guardrail end	450	0.1	3	28	61	76	282
Median barrier	1,926	0.3	3	132	287	393	1,111
Highway traffic sign post	2,384	0.4	2	30	66	133	2,153
Signal post	259	0.0	1	15	12	21	210
Luminaire/light support	580	0.1	3	32	73	75	397
Utility pole	3,802	0.6	33	327	657	646	2,139
Other pole	1,020	0.2	8	48	101	112	751
Culvert	720	0.1	5	69	125	101	420
Curb	1,723	0.3	1	40	84	155	1,443
Ditch	4,870	0.8	15	281	612	735	3,227
Embankment	1,514	0.2	12	143	237	241	881
Fence	1,432	0.2	3	41	86	106	1,196
Mailbox	1,898	0.3	3	21	49	102	1,723
Tree	9,520	1.6	165	1,053	1,568	1,457	5,277
Rail crossing signal	95	0.0	0	1	10	7	77
Building	936	0.2	8	70	130	128	600
Traffic island	65	0.0	1	3	5	3	53
Fire Hydrant	484	0.1	0	24	59	51	350
Impact attenuator	51	0.0	0	9	3	14	25
Other fixed object	2,691	0.4	8	127	262	254	2,040
COLLISION FIXED Sub-Total	40,480	6.6	287	2,686	4,802	5,300	27,405

MOST SEVERE OUTCOME IN CRASH

	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Unknown Event	82,752	13.5	152	2,639	4,495	12,928	62,538
TOTAL MOST HARMFUL EVENT	613,992	100.0	1,996	22,557	41,515	102,346	445,578

VEHICLE DEFECTS IN CRASH INVOLVEMENT

<div align="right">MOST SEVERE OUTCOME IN CRASH</div>

VEHICLE DEFECTS	Motor Vehicles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Brakes	3,634	0.6	7	140	297	687	2,503
Lights/reflectors	741	0.1	6	33	56	115	531
Steering	402	0.1	1	19	52	65	265
Tires/wheels	1,123	0.2	11	66	123	122	801
Windows	298	0.0	2	17	26	68	185
Other	2,031	0.3	7	87	185	253	1,499
Unknown/None	605,763	98.7	1,962	22,195	40,776	101,036	439,794
TOTAL	613,992	100.0	1,996	22,557	41,515	102,346	445,578

HAZARDOUS ACTION

<div align="right">MOST SEVERE OUTCOME IN CRASH</div>

HAZARDOUS ACTION	All Drivers		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
None	308,618	50.3	789	9,668	18,332	49,397	230,432
Speed too fast	36,566	6.0	313	2,474	4,215	5,790	23,774
Speed too slow	992	0.2	5	52	82	191	662
Failed to yield	57,437	9.4	143	2,574	5,175	10,618	38,927
Disregard traffic control	17,012	2.8	129	1,345	2,125	3,990	9,423
Drove wrong way	636	0.1	14	53	87	104	378
Drove left of center	4,975	0.8	142	567	595	693	2,978
Improper passing	5,278	0.9	12	143	246	563	4,314
Improper lane use	13,683	2.2	18	275	461	1,216	11,713
Improper turn	9,795	1.6	8	324	591	1,305	7,567
Improper/no signal	1,065	0.2	1	27	38	125	874
Improper backing	12,855	2.1	1	55	123	420	12,256
Unable to stop in clear distance	79,308	12.9	65	1,752	4,168	18,766	54,557
Other	32,367	5.3	172	2,024	3,374	4,656	22,141
Unknown	33,405	5.4	184	1,224	1,903	4,512	25,582
TOTAL	613,992	100.0	1,996	22,557	41,515	102,346	445,578

MICHIGAN BICYCLE CRASHES

1993 Bicycle Crash Information

	0-4 yrs	5-9 yrs	10-14 yrs	15-19 yrs	20-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 & over	Not Stated
Killed	1	7	10	4	1	0	3	0	0	1	1	1
Injured	27	322	695	312	191	256	170	73	33	25	15	75
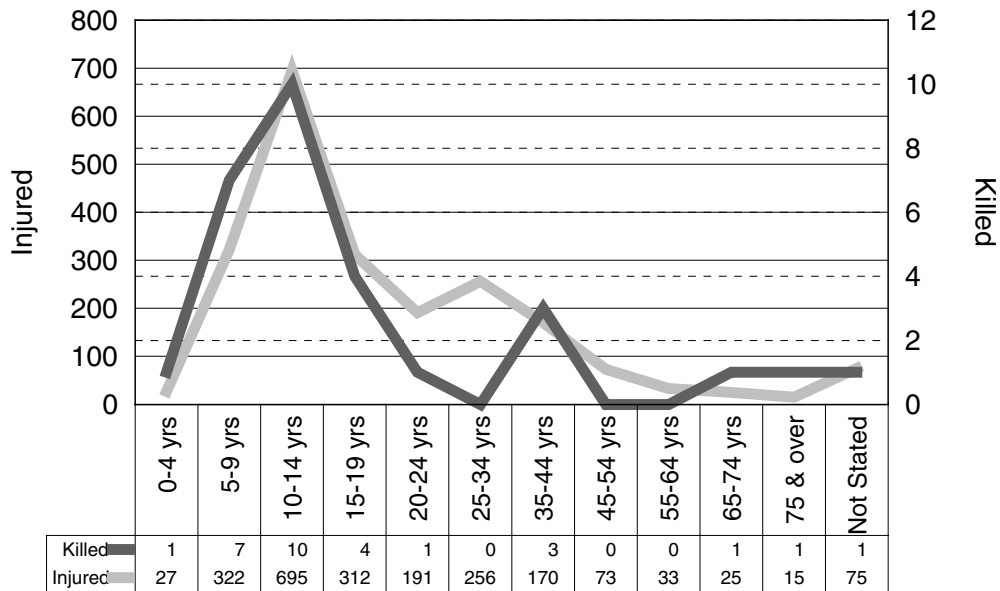
In 1993, there were 29 bicyclists killed and 2,194 injured in 2,620 total reported crashes involving bicyclists and motor vehicles. These numbers represent a 6.5% decrease in fatalities from 1992.

Of the 29 bicyclists killed in 1993, 5 were involved in a Had Been Drinking (HBD) crash and in 0 of these the bicyclist had been drinking. Of the 2,194 bicyclists injured, 111 were involved in a HBD crash and in 74 of these the bicyclist had been drinking. Of the 2,620 total reported crashes involving bicyclists and motor vehicles, 125 involved drinking and in 79 of these the bicyclist had been drinking.

Children under 15 years of age accounted for 18 (62.1%) of the bicycle deaths in 1993.

49

MICHIGAN PEDESTRIAN CRASHES

1993 Pedestrian Crash Information

	0-4 yrs	5-9 yrs	10-14 yrs	15-19 yrs	20-24 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-64 yrs	65-74 yrs	75 & over	Not Stated
Killed	2	9	7	9	12	33	35	20	6	17	15	6
Injured	149	381	456	315	224	385	319	192	109	94	64	150
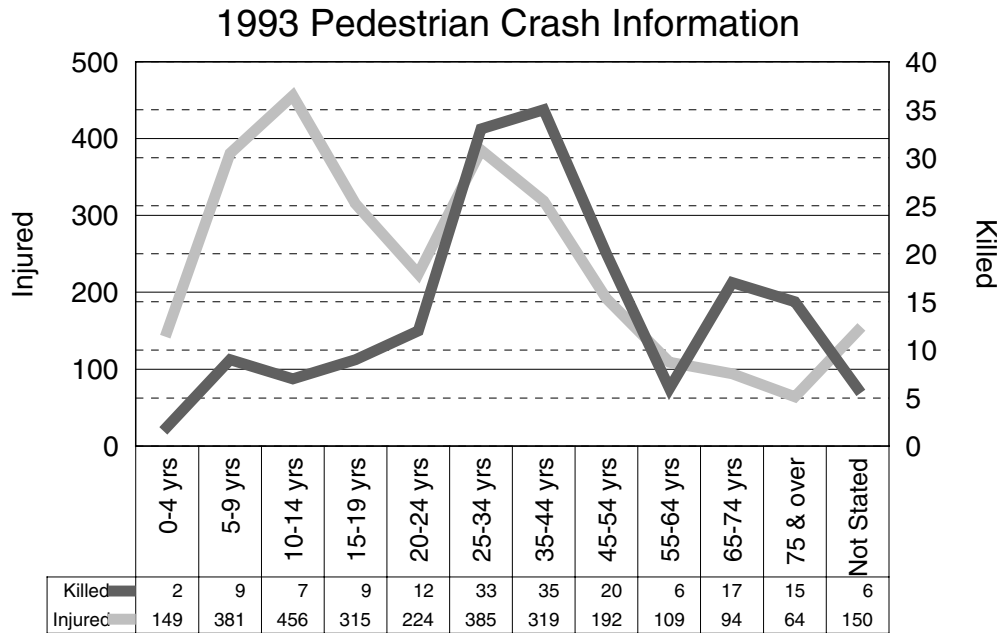
In 1993, there were 171 pedestrians killed and 2,838 injured in 3,275 total reported crashes involving pedestrians and motor vehicles. These numbers represent a 0.6% decrease in fatalities from 1992.

Of the 171 pedestrians killed in 1993, 51 were involved in a Had Been Drinking (HBD) crash and in 26 of these the pedestrian had been drinking. Of the 2,838 pedestrians injured, 347 were involved in a HBD crash and in 246 of these the pedestrian had been drinking. Of the 3,275 total reported crashes involving pedestrians and motor vehicles, 418 involved drinking and in 286 of these the pedestrian had been drinking.

Children under 15 years of age accounted for 18 (10.5%) of the pedestrian deaths in 1993.

MICHIGAN SNOWMOBILE CRASHES

Most Harmful Event

MOST SEVERE OUTCOME IN CRASH

NONCOLLISION	Snowmobiles Number	% of Total	Fatal	Injury A	B	C	PDO
Loss of control	23	4.2	0	10	7	4	2
Cross center/median	2	0.4	0	0	0	1	1
Ran off road left	3	0.5	0	0	1	2	0
Ran off road right	2	0.4	0	0	0	1	1
Overturn	41	7.4	0	20	10	9	2
Separation of units	1	0.2	0	0	0	0	1
Fire/explosion	2	0.4	0	2	0	0	0
Immersion	4	0.7	0	1	0	0	3
Jackknife	1	0.2	0	0	1	0	0
Downhill runaway	1	0.2	0	1	0	0	0
Cargo loss/shift	2	0.4	0	1	0	1	0
Individual fell off	44	7.9	0	19	14	9	2
Other noncollision	12	2.2	0	2	8	1	1
NONCOLLISION Subtotal	138	24.9	0	56	41	28	13

HAD A COLLISION WITH NONFIXED OBJECT

	Snowmobiles Number	% of Total	Fatal	Injury A	B	C	PDO
Pedestrian	12	2.2	1	8	2	0	1
Motor vehicle in transport	173	31.2	3	53	18	32	67
Parked motor vehicle	16	2.9	0	4	0	1	11
Railway train	1	0.2	0	0	0	0	1
Animal	11	2.0	0	0	2	3	6
Other nonfixed objects	15	2.7	0	6	7	1	1
COLLISION NONFIXED Subtotal	228	41.2	4	71	29	37	87

51

Most Harmful Event

MOST SEVERE OUTCOME IN CRASH

HAD A COLLISION WITH FIXED OBJECT	Snowmobiles		Fatal	Injury			PDO
	Number	% of Total		A	B	C	
Bridge/pier/abutment	2	0.4	0	0	2	0	0
Guardrail face	1	0.2	0	0	0	0	1
Traffic sign post	1	0.2	0	0	0	0	1
Signal post	1	0.2	0	1	0	0	0
Utility pole	1	0.2	0	1	0	0	0
Other pole	6	1.1	0	3	1	1	1
Culvert	3	0.5	0	0	0	0	3
Ditch	9	1.6	0	5	1	3	0
Embankment	11	2.0	1	4	4	1	1
Fence	7	1.3	1	2	2	1	1
Mailbox	3	0.5	0	2	1	0	0
Tree	97	17.5	6	40	27	12	12
Building	1	0.2	0	0	0	0	1
Traffic island	1	0.2	1	0	0	0	0
Fire hydrant	2	0.4	0	0	0	0	2
Other fixed object	28	5.1	1	13	8	3	3
COLLISION FIXED Subtotal	174	31.4	10	71	46	21	26

Unknown Event	15	2.5	1	9	2	2	1
TOTAL MOST HARMFUL EVENT	555	100.0	15	207	118	88	127

A total of 555 snowmobiles were reported in crashes in Michigan during 1993. Of these crashes, 15 were fatal with 15 people killed.

MICHIGAN MOTOR VEHICLE-DEER INVOLVED/ASSOCIATED CRASHES

Michigan had 47,879 reported motor vehicle-deer crashes during 1993. 5 people were killed as a result of those collisions.

Contrary to common belief, motor vehicle-deer crashes are happening in Michigan's southern, heavily populated counties; Kent County had the highest number with 1,706 such crashes in 1993.

KEWEE NAW 22

HOUGHTON 154

ONTONAGON 334

BARAGA 266

GOGEBIC 146

MARQUETTE 594

IRON 442

DICKINSON 606

DELTA 883

ALGER 206

SCHOOLCRAFT 236

LUCE 129

CHIPPEWA 411

MACKINAC 373

MENOMINEE 952

EMMET 406

CHEBOYGAN 282

PRESQUE ISLE 342

CHARLEVOIX 434

ANTRIM 426

OTSEGO 247

MONT-MORENCY 190

ALPENA 395

211 LEELANAU

GRAND TRAVERSE 401

KALKASKA 243

CRAWFORD 248

OSCODA 235

ALCONA 454

BENZIE 238

MANISTEE 284

WEXFORD 346

MISSAUKEE 290

ROSCOMMON 310

OGEMAW 504

IOSCO 473

ARENAC 401

MASON 533

LAKE 257

OSCEOLA 533

CLARE 518

GLADWIN 486

HURON 775

OCEANA 402

NEWAYGO 616

MECOSTA 923

ISABELLA 703

MIDLAND 682

BAY 184

TUSCOLA 695

SANILAC 776

MUSKEGON 586

MONTCALM 1099

GRATIOT 513

SAGINAW 658

GENESEE 783

LAPEER 930

ST. CLAIR 747

KENT 1706

IONIA 724

CLINTON 702

SHIAWASSEE 555

OTTAWA 829

ALLEGAN 863

BARRY 1038

EATON 972

INGHAM 900

LIVINGSTON 1048

OAKLAND 1068

MACOMB 507

VAN BUREN 637

KALAMAZOO 1126

CALHOUN 1452

JACKSON 1281

WASHTENAW 1130

264 WAYNE

BERRIEN 626

CASS 736

ST. JOSEPH 619

BRANCH 733

HILLSDALE 797

LENAWEE 691

MONROE 295

Vehicle-Deer Crashes

	0 - 299
	300 - 599
	600 - 999
	1000 - 1499
	1500 +

MICHIGAN FARM EQUIPMENT CRASHES

A total of 368 crashes involving farm equipment were reported on Michigan roadways during 1993. Of these crashes, 8 were fatal crashes with 6 drivers and 1 passenger of the farm equipment killed.

MICHIGAN VEHICLE - TRAIN CRASHES

According to Michigan Department of Transportation [5] figures, a total of 133 crashes involving trains were reported in Michigan during 1993. The National Highway Traffic Safety Administration's 1993 Fatal Accident Reporting System [6] reported 14 fatal train crashes in Michigan. 14 persons were killed as a result of those collisions.

MOTORCYCLE AND MOTOR SCOOTER DATA

MOTORCYCLE & MOTOR SCOOTER DATA	1992	1993	% Change
Registrations	120,335.0	119,845.0	-0.4
Deaths	48.0	58.0	20.8
Death Rate based on 10,000 cycle registrations	4.0	4.8	20.0
Estimated Mileage based on 3,000 miles per cycle (millions)	361,005.0	359,535.0	-0.4
Death Rate based on deaths per 100 million vehicle miles traveled	13.3	16.1	21.1

DRIVER AGE

AGE OF DRIVERS IN FATAL CRASHES	1992	1993	% Change	% 1993 Fatal Crash Involvement	Percent Driving Population∗
16 years and under	59	62	5.1	3.1	3.0
17 year	49	53	8.2	2.7	1.6
18 - 19 years	111	108	-2.7	5.4	3.4
20 - 24 years	253	267	5.5	13.4	10.6
25 - 34 years	430	421	-2.1	21.2	23.5
35 - 44 years	289	340	17.6	17.1	21.3
45 - 54 years	166	203	22.3	10.2	14.2
55 - 64 years	124	115	-7.3	5.8	9.9
65 - 74 years	98	97	-1.0	4.9	8.1
75 years and over	87	106	21.8	5.3	4.5
Not Stated	178	217	21.9	10.9	---
TOTALS	1,844	1,989	7.9	100.0	100.0

∗ Figures courtesy of the Michigan Department of State [7]

Driver Age in Fatal Crashes
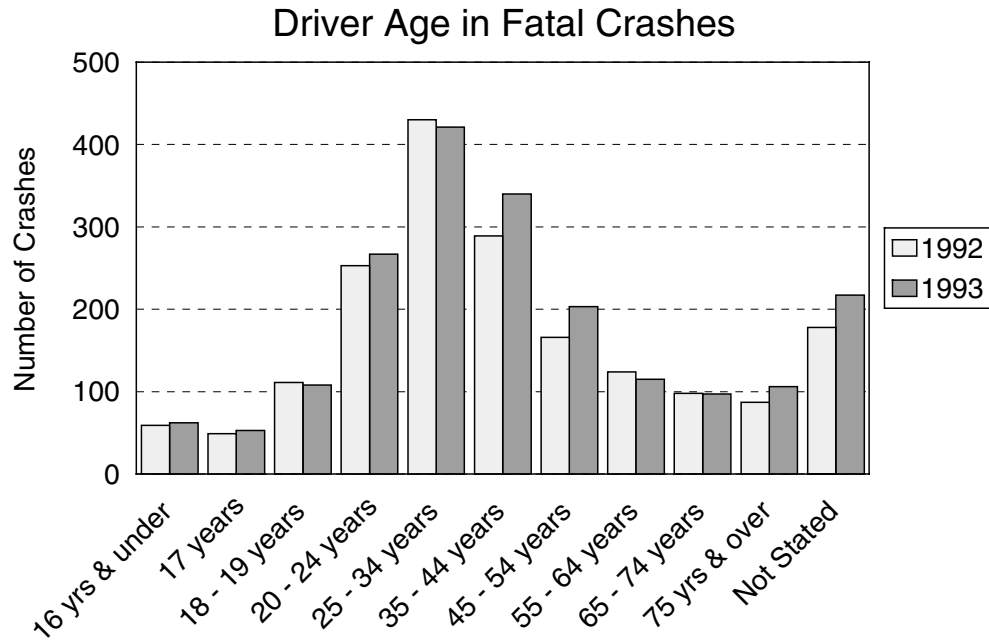
DRIVER - NOT EJECTED vs. EJECTED

Driver Injury Severity - Not Ejected

C Injury 9.89%

B Injury 3.63%

A Injury 1.86%

Killed 0.12%

No Injury 84.50%
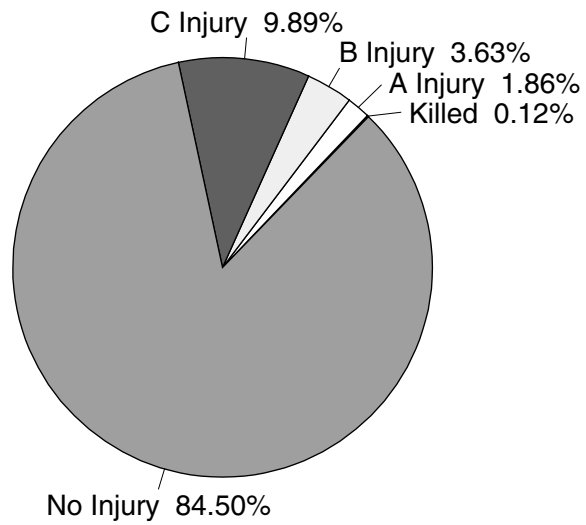
Driver Injury Severity - Ejected

A Injury
38.1%

Killed
9.9%

No Injury
21.1%

C Injury
11.1%
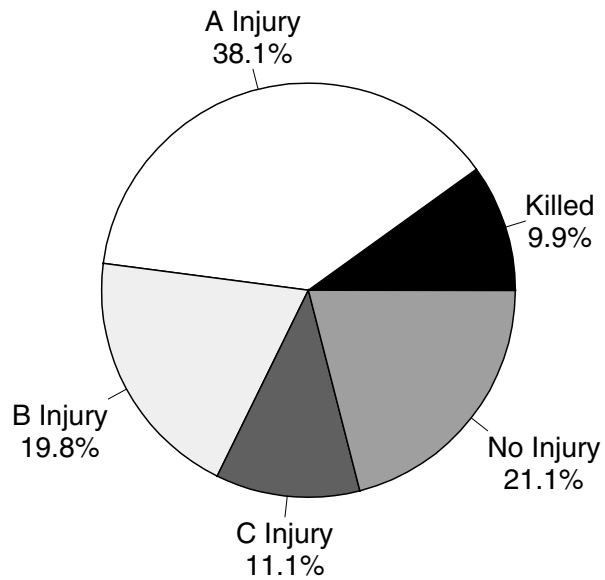
B Injury
19.8%

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

DRIVER HBD - NOT EJECTED vs. EJECTED

Driver HBD Injury Severity - Not Ejected
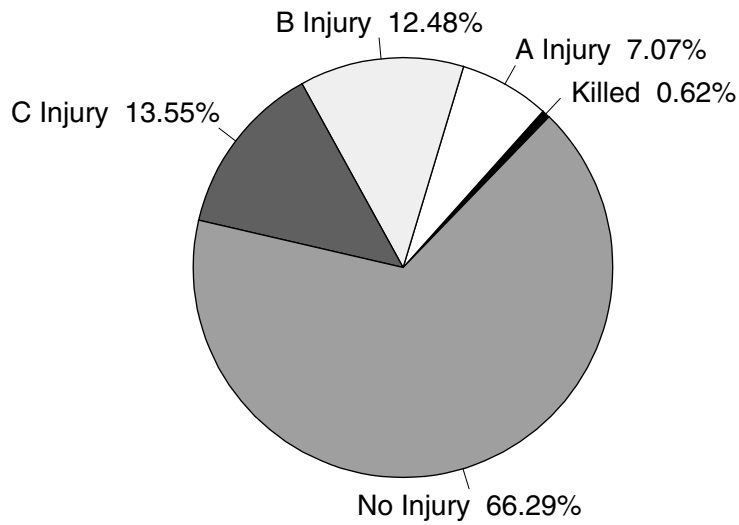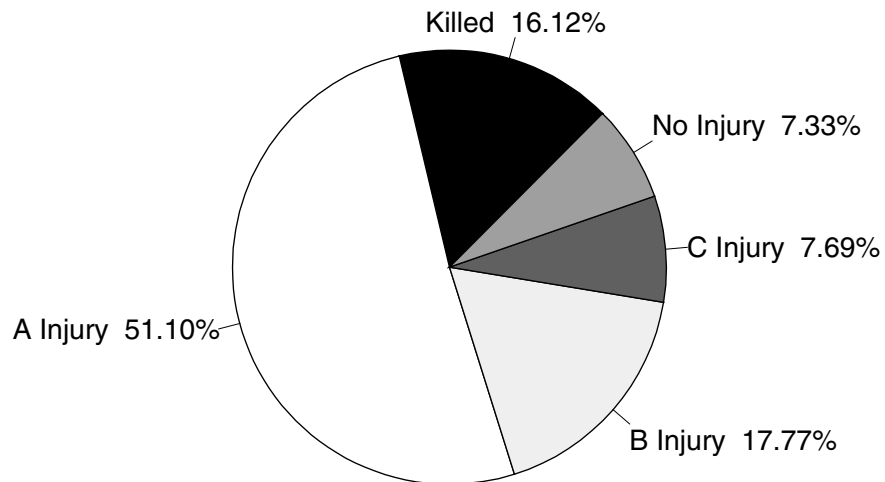
B Injury 12.48%

A Injury 7.07%

Killed 0.62%

C Injury 13.55%

No Injury 66.29%

Driver HBD Injury Severity - Ejected

Killed 16.12%

No Injury 7.33%

C Injury 7.69%

A Injury 51.10%

B Injury 17.77%

When compared to the previous page, these charts demonstrate that the injury severity is much worse for drivers who had been drinking in both ejected, and not ejected events.

INJURY SEVERITY & RESTRAINT USE FOR
CRASH INVOLVED KABC DRIVERS

ALL CRASHES

HBD CRASHES
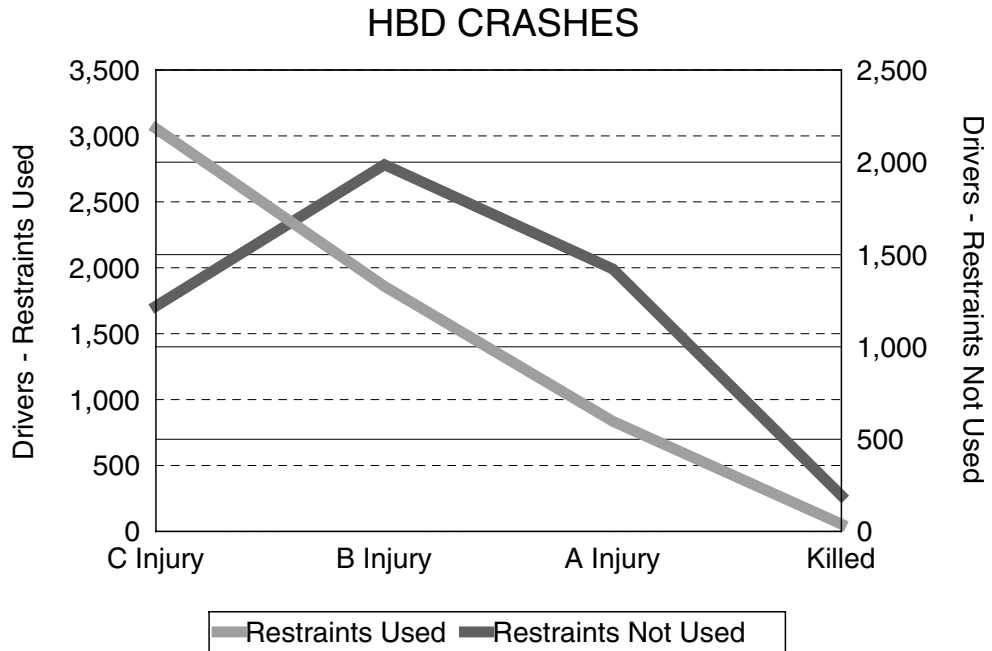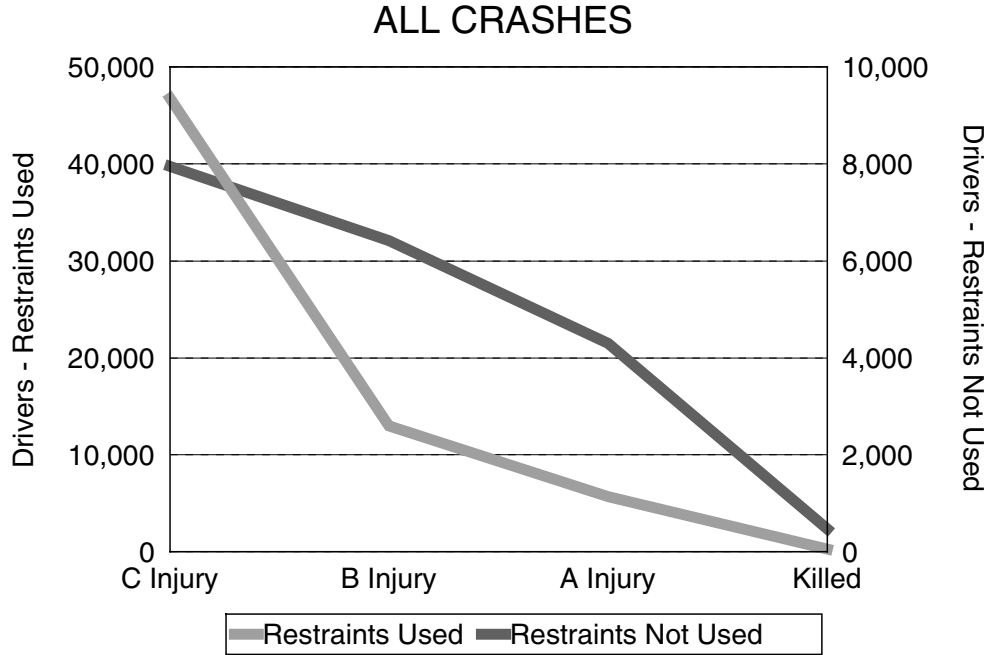
1993

1993

1993

1993

1993

1993

1993

Occupant/
Person

INJURY SEVERITY & RESTRAINT USE FOR
CRASH INVOLVED KABC OCCUPANTS

ALL CRASHES

HBD CRASHES
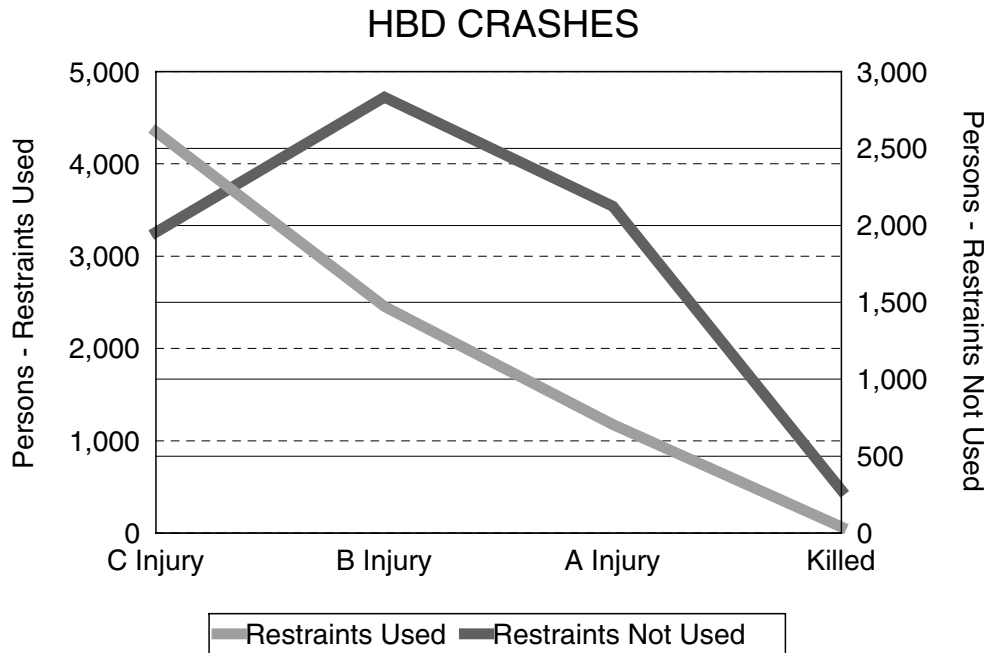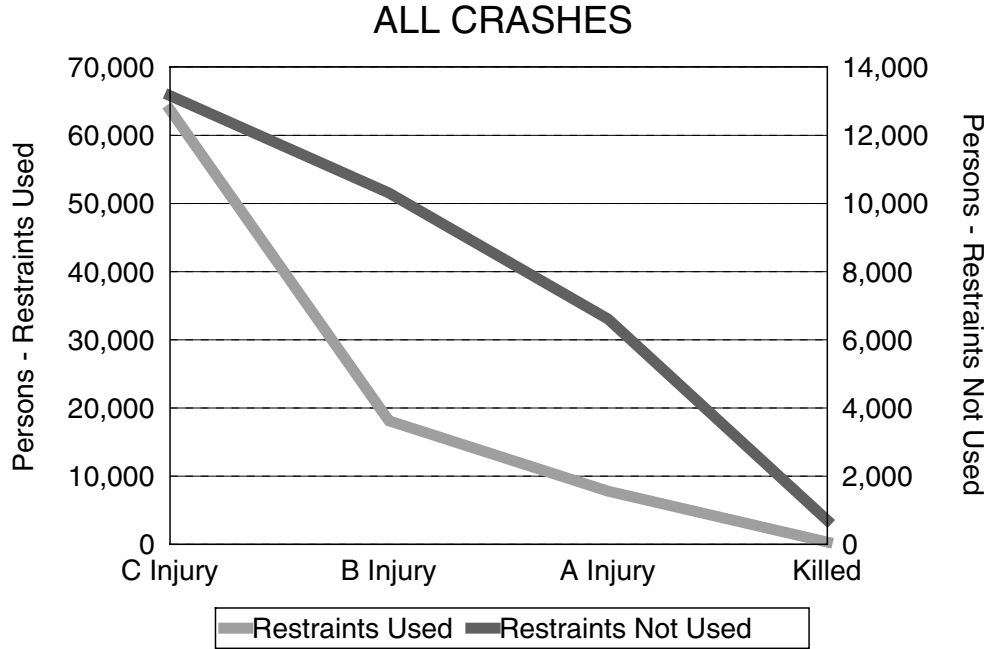
OCCUPANT - NOT EJECTED vs. EJECTED

Occupant Injury Severity - Not Ejected
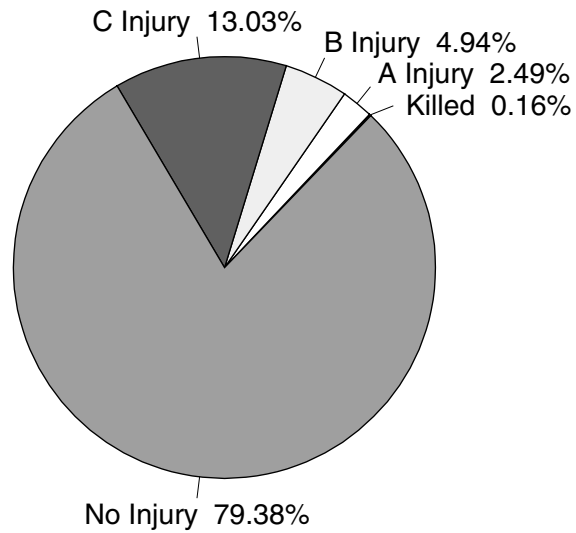
C Injury 13.03%
B Injury 4.94%
A Injury 2.49%
Killed 0.16%

No Injury 79.38%

Occupant Injury Severity - Ejected

Killed 10.36%

A Injury 40.20%

No Injury 15.39%

C Injury 11.27%

B Injury 22.78%
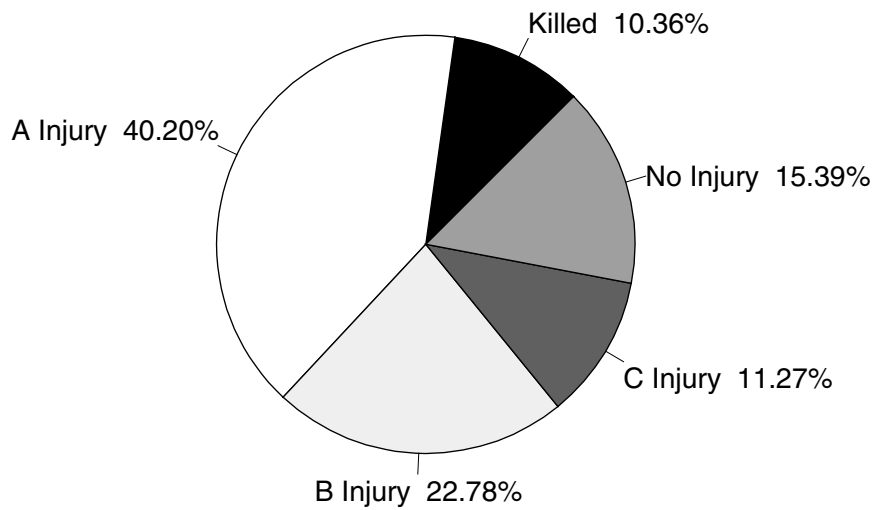
As can be seen in the two charts on this page, death and injury are much more likely when occupants are ejected from their vehicles.

OCCUPANT HBD - NOT EJECTED vs. EJECTED
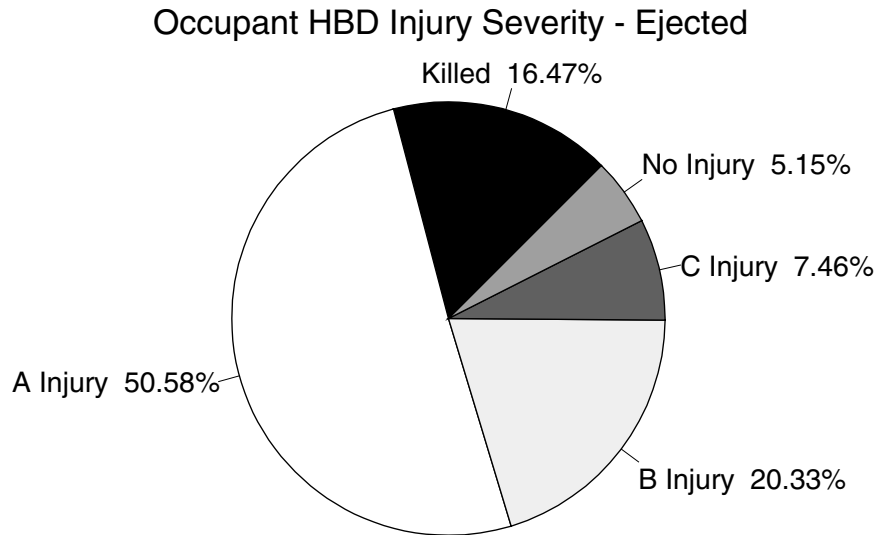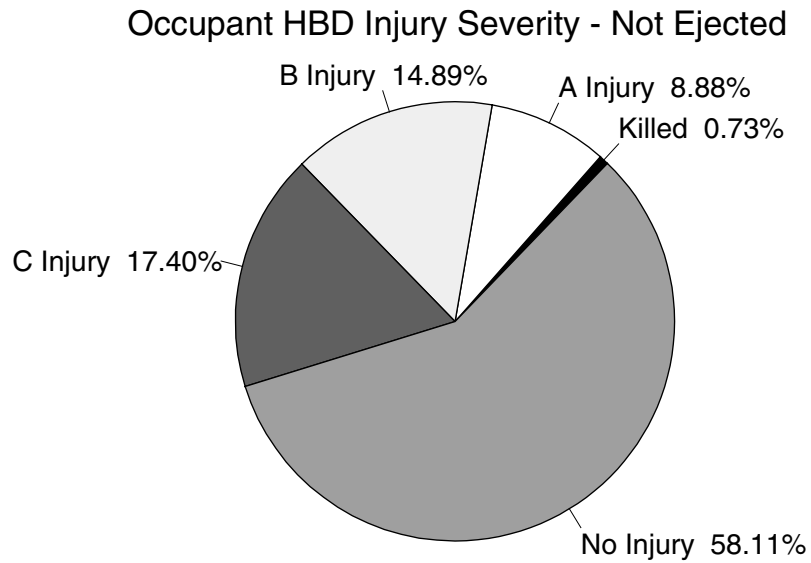
Occupant HBD Injury Severity - Not Ejected

B Injury 14.89%

A Injury 8.88%

Killed 0.73%

C Injury 17.40%

No Injury 58.11%

Occupant HBD Injury Severity - Ejected

Killed 16.47%

No Injury 5.15%

C Injury 7.46%

A Injury 50.58%

B Injury 20.33%

When compared to the previous page, these charts demonstrate that the injury severity is much worse for occupants who had been drinking in both ejected, and not ejected events.

OCCUPANT INJURY OUTCOME BY VEHICLE TYPE

VehicleTypes	Killed	A Injured	B Injured	C Injured	Total KABC	% of All Crash Involved KABC Occupants
Passenger Car and Station Wagon	885	12,311	23,985	66,149	103,330	79.8
Van and Motorhome	67	748	1,562	4,637	7,014	5.4
Pickup	137	1683	3,321	7,008	12,149	9.4
Small Truck (under 10,000 lbs)	7	143	272	641	1,063	0.8
Cycle	58	815	1,109	584	2,566	2.0
Moped	4	81	157	89	331	0.3
Go Cart	0	1	3	3	7	0.0
Snowmobile	14	223	139	111	487	0.4
Off Road Vehicle	10	131	150	77	368	0.3
Other	17	177	381	367	942	0.7
CDL Truck/Bus (breakdown below)	11	128	255	912	1,306	1.0
TOTAL	1,210	16,441	31,334	80,578	129,563	100.0

CDL Truck/Bus Sub-category Types	Killed	A Injured	B Injured	C Injured	Total KABC	% of All Crash Involved KABC Occupants
Uncoded Truck	0	7	16	62	85	6.5
Commercial Vehicle: Group A	6	58	109	257	430	32.9
Commercial Vehicle: Group B	1	39	79	396	515	39.4
Commercial Vehicle: Group C	0	5	15	51	71	5.4
Other Truck	3	9	18	43	73	5.6
Unknown Truck	1	10	18	103	132	10.1
TOTAL	11	128	255	912	1,306	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.

PRINCIPAL CLASSES OF MOTOR VEHICLE DEATHS

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                              DEATHS
                              1,414
```

DAWN 19	DAYLIGHT 690	DUSK 42	DARK UNLIGHTED 409	DARK LIGHTED 247

PEDESTRIAN 3	NONPEDESTRIAN 16	PEDESTRIAN 55	NONPEDESTRIAN 635	PEDESTRIAN 5	NONPEDESTRIAN 37	PEDESTRIAN 57	NONPEDESTRIAN 352	PEDESTRIAN 50	NONPEDESTRIAN 197
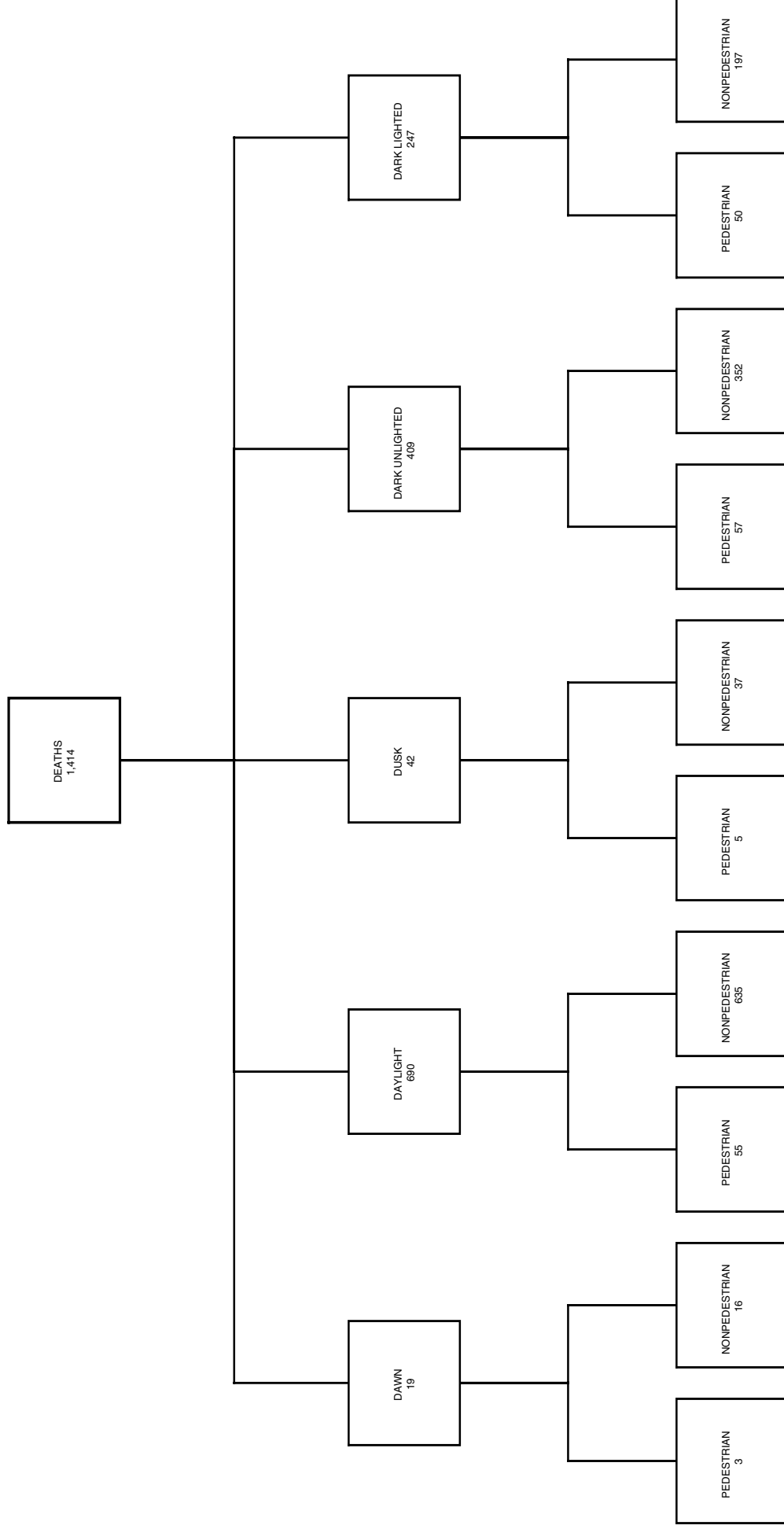
Of the 1,414 motor vehicle deaths in Michigan in 1993, more than half occurred in nondaylight crashes. Nonpedestrians (mostly occupants of motor vehicles) accounted for 87.9% of the deaths. 7 cases were lost in the first subset due to unknown lighting circumstances.

1993
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**Supplemental
Information**

GLOSSARY

- **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.

- **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 became a 30 day count.

- **Had Been Drinking (HBD) Crash** - Drinking prior to the crash by a driver, pedestrian, or cyclist as reported by the police or the coroner.

- **Injury Severity**

    K (Fatal) - Any injury which results in death.
    A (Incapacitating Injury) - Any injury other than fatal which prevents normal activities and generally requires hospitalization.
    B (Nonincapacitating Injury) - Any injury not incapacitating but evident to others at the scene.
    C (Possible Injury) - No visible injury but complaint of pain or momentary unconsciousness.
    O (No Injury) - No indication of injury.

- **In Transport** - Denotes a motor vehicle in motion or on a roadway.

- **Most Severe Outcome in Crash** - The most severe injury sustained by any person involved in the crash.

- **Most Severe Outcome in Vehicle** - The most severe injury sustained by any person in the vehicle.

- **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.
    NOTE: Snowmobile data includes crashes that occur in areas designated as Nontraffic (not on public roadways) with a value of $200.00 as a threshold for reporting.

- **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 person in or on a motor vehicle, this includes the driver.

- **Property Damage Only (PDO) Crash** - A crash that results in no fatalities or injuries, with a value of $400.00 as a threshold for reporting.

- **Transition Area** - Increase or decrease in the number or travel lanes.

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	673	5	86	582	0	89	144	440	5	128
Alger	494	4	96	394	0	47	230	217	5	142
Allegan	3,563	24	831	2,708	222	320	769	2,252	28	1,238
Alpena	1,161	4	237	920	0	291	184	686	5	345
Antrim	833	8	122	703	0	171	152	510	11	210
Arenac	923	6	175	742	100	256	109	458	10	257
Baraga	441	3	58	380	0	188	58	195	3	85
Barry	2,363	17	465	1,881	0	0	783	1,580	17	655
Bay	3,735	20	1,094	2,621	142	90	1,058	2,445	25	1,641
Benzie	542	1	105	436	0	136	101	305	1	154
Berrien	5,840	32	1,529	4,279	886	850	708	3,396	34	2,334
Branch	1,889	5	351	1,533	169	431	62	1,227	6	518
Calhoun	6,032	25	1,264	4,743	1,067	40	813	4,112	28	1,848
Cass	2,030	13	401	1,616	2	193	593	1,242	15	559
Charlevoix	1,005	2	163	840	0	299	169	537	2	248
Cheboygan	917	1	259	657	160	52	185	520	1	377
Chippewa	1,470	5	274	1,191	324	0	294	852	5	392
Clare	1,364	6	263	1,095	0	350	227	787	8	397
Clinton	2,156	13	431	1,712	266	436	138	1316	13	658
Crawford	638	4	128	506	153	19	153	313	5	205
Delta	2,065	6	351	1,708	0	517	379	1169	7	532
Dickinson	1,286	7	220	1,059	0	363	342	581	8	310
Eaton	3,506	19	781	2,706	478	124	1081	1823	23	1,177
Emmet	1,394	6	263	1,125	14	513	118	749	6	384
Genesee	14,083	59	4,137	9,887	1376	341	2472	9894	67	6,282
Gladwin	903	2	157	744	0	0	378	525	2	238
Gogebic	572	1	128	443	0	265	40	267	1	192
Grand Traverse	3,064	7	745	2,312	0	890	306	1868	9	1,106
Gratiot	1,593	6	349	1,238	0	420	267	906	7	522
Hillsdale	1,974	9	381	1,584	0	205	474	1295	12	558
Houghton	1,153	6	250	897	0	382	287	484	7	347
Huron	1,601	4	263	1,334	0	0	700	901	5	389
Ingham	10,260	20	2,565	7,675	1537	234	1737	6752	22	3,578
Ionia	2,159	7	434	1,718	216	0	683	1260	8	626
Iosco	1,113	8	222	883	0	283	237	593	10	343
Iron	746	3	79	664	0	191	194	361	5	107
Isabella	2,133	12	473	1,648	0	443	191	1499	17	705
Jackson	6,023	23	1,370	4,630	870	256	959	3938	26	1,979
Kalamazoo	9,709	46	2,042	7,621	841	632	1267	6969	54	2,931
Kalkaska	711	9	175	527	0	138	133	440	9	266
Kent	20,563	47	5,319	15,197	1223	1545	3893	13902	52	7,573
Keweenaw	86	1	29	56	0	25	15	46	1	43
Lake	501	2	102	397	0	82	91	328	2	138
Lapeer	2,934	9	660	2,265	175	0	982	1777	10	962
Leelanau	583	4	133	446	0	0	234	349	4	197
Lenawee	3,453	19	902	2,532	0	821	664	1968	20	1,349

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	4,808	14	1,152	3,642	917	341	536	3014	15	1,624
Luce	318	2	95	221	0	0	152	166	2	119
Mackinac	758	9	128	621	146	148	166	298	10	197
Macomb	24,161	40	7,021	17,100	1281	0	6628	16252	41	10,330
Manistee	850	8	175	667	0	232	141	477	8	255
Marquette	2,796	15	543	2,238	0	895	296	1605	20	743
Mason	1,331	5	248	1,078	0	452	25	854	6	361
Mecosta	2,049	2	319	1,728	0	531	340	1178	3	428
Menominee	1,658	4	257	1,397	0	579	151	928	5	378
Midland	2,725	8	543	2,174	0	352	377	1996	8	773
Missaukee	543	2	113	428	0	0	204	339	2	160
Monroe	4,176	28	1,231	2,917	341	728	655	2452	28	1,909
Montcalm	2,638	14	520	2,104	0	70	952	1616	19	772
Montmorency	435	6	95	334	0	0	167	268	6	134
Muskegon	5,593	18	1,491	4,084	50	940	701	3902	20	2,126
Newaygo	1,736	8	385	1,343	0	0	633	1103	9	602
Oakland	41,090	88	11,483	29,519	4524	2373	6069	28124	97	16,768
Oceana	971	2	184	785	0	226	77	668	3	284
Ogemaw	1,079	5	218	856	189	0	249	641	7	324
Ontonagon	554	2	75	477	0	134	236	184	2	97
Osceola	1,146	2	248	896	0	346	197	603	2	375
Oscoda	441	7	72	362	0	0	208	233	7	110
Otsego	975	6	224	745	234	0	225	516	6	351
Ottawa	6,619	26	1,544	5,049	308	1095	610	4606	27	2,318
Presque Isle	573	3	89	481	0	136	112	325	3	124
Roscommon	926	7	217	702	127	80	267	452	7	321
Saginaw	8,008	31	2,020	5,957	399	0	1969	5640	35	2,978
Sanilac	1,614	7	283	1,324	0	0	710	904	8	431
Schoolcraft	469	3	69	397	0	114	164	191	3	95
Shiawassee	2,167	16	539	1,612	164	0	701	1302	21	793
St. Clair	4,930	25	1,329	3,576	705	0	1123	3102	26	1972
St. Joseph	2,295	9	524	1,762	0	580	390	1325	9	771
Tuscola	1,843	18	384	1,441	0	0	638	1205	19	574
Van Buren	2,652	19	688	1,945	423	0	572	1657	25	1043
Washtenaw	10,850	39	2,491	8,320	1229	1384	889	7348	42	3585
Wayne	83,756	222	23,493	60,041	8119	5894	10875	58868	232	34555
Wexford	1,403	9	302	1,092	0	455	386	562	10	451
UNKNOWN	463	0	74	389	0	0	0	463	0	92
Totals	363,636	1,269	91,728	270,639	29,377	31,013	63,845	239,401	1,414	134,548

FATAL CRASHES AND FATALITIES BY COUNTY
WITH DRINKING INVOLVEMENT

	CRASHES			PERSONS		
COUNTY	All Fatal Crashes	HBD Fatal Crashes	Percent HBD	Total Fatalites	HBD Fatalities	Percent HBD
Alcona	5	4	80.0	5	4	80.0
Alger	4	4	100.0	5	5	100.0
Allegan	24	10	41.7	28	13	46.4
Alpena	4	2	50.0	5	2	40.0
Antrim	8	1	12.5	11	1	9.1
Arenac	6	0	0.0	10	0	0.0
Baraga	3	0	0.0	3	0	0.0
Barry	17	5	29.4	17	5	29.4
Bay	20	5	25.0	25	7	28.0
Benzie	1	1	100.0	1	1	100.0
Berrien	32	10	31.3	34	10	29.4
Branch	5	3	60.0	6	4	66.7
Calhoun	25	13	52.0	28	15	53.6
Cass	13	6	46.2	15	7	46.7
Charlevoix	2	2	100.0	2	2	100.0
Cheboygan	1	0	0.0	1	0	0.0
Chippewa	5	2	40.0	5	2	40.0
Clare	6	2	33.3	8	3	37.5
Clinton	13	3	23.1	13	3	23.1
Crawford	4	2	50.0	5	3	60.0
Delta	6	3	50.0	7	3	42.9
Dickinson	7	3	42.9	8	3	37.5
Eaton	19	7	36.8	23	8	34.8
Emmet	6	4	66.7	6	4	66.7
Genesee	59	15	25.4	67	16	23.9
Gladwin	2	1	50.0	2	1	50.0
Gogebic	1	1	100.0	1	1	100.0
Grand Traverse	7	5	71.4	9	7	77.8
Gratiot	6	2	33.3	7	2	28.6
Hillsdale	9	3	33.3	12	3	25.0
Houghton	6	1	16.7	7	2	28.6
Huron	4	1	25.0	5	1	20.0
Ingham	20	5	25.0	22	5	22.7
Ionia	7	3	42.9	8	3	37.5
Iosco	8	2	25.0	10	2	20.0
Iron	3	2	66.7	5	2	40.0
Isabella	12	4	33.3	17	5	29.4
Jackson	23	3	13.0	26	3	11.5
Kalamazoo	46	18	39.1	54	23	42.6
Kalkaska	9	3	33.3	9	3	33.3
Kent	47	17	36.2	52	19	36.5
Keweenaw	1	0	33.3	1	0	0.0
Lake	2	2	100.0	2	2	100.0
Lapeer	9	4	44.4	10	4	40.0

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

COUNTY	C R A S H E S			P E R S O N S		
	All Fatal Crashes	HBD Fatal Crashes	Percent HBD	Total Fatalites	HBD Fatalities	Percent HBD
Leelanau	4	2	50.0	4	2	50.0
Lenawee	19	3	15.8	20	3	15.0
Livingston	14	2	14.3	15	2	13.3
Luce	2	1	50.0	2	1	50.0
Mackinac	9	4	44.4	10	4	40.0
Macomb	40	15	37.5	41	15	36.6
Manistee	8	4	50.0	8	4	50.0
Marquette	15	2	13.3	20	2	10.0
Mason	5	1	20.0	6	1	16.7
Mecosta	2	2	100.0	3	3	100.0
Menominee	4	1	25.0	5	2	40.0
Midland	8	3	37.5	8	3	37.5
Missaukee	2	0	0.0	2	0	0.0
Monroe	28	12	42.9	28	12	42.9
Montcalm	14	5	35.7	19	5	26.3
Montmorency	6	1	16.7	6	1	16.7
Muskegon	18	8	44.4	20	10	50.0
Newaygo	8	5	62.5	9	5	55.6
Oakland	88	27	30.7	97	32	33.0
Oceana	2	1	50.0	3	1	33.3
Ogemaw	5	2	40.0	7	2	28.6
Ontonagon	2	2	100.0	2	2	100.0
Osceola	2	2	100.0	2	2	100.0
Oscoda	7	3	42.9	7	3	42.9
Otsego	6	3	50.0	6	3	50.0
Ottawa	26	11	42.3	27	12	44.4
Presque Isle	3	2	66.7	3	2	66.7
Roscommon	7	1	14.3	7	1	14.3
Saginaw	31	9	29.0	35	10	28.6
Sanilac	7	2	28.6	8	2	25.0
Schoolcraft	3	0	0.0	3	0	0.0
Shiawassee	16	7	43.8	21	10	47.6
St. Clair	25	10	40.0	26	11	42.3
St. Joseph	9	4	44.4	9	4	44.4
Tuscola	18	4	22.2	19	5	26.3
Van Buren	19	4	21.1	25	5	20.0
Washtenaw	39	16	41.0	42	18	42.9
Wayne	222	48	21.6	232	51	22.0
Wexford	9	5	55.6	10	6	60.0
Totals	1,269	418	32.9	1,414	466	33.0

TRAFFIC CRASH SUMMARY FOR CITIES 1993

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Alcona County						
Alcona Twp.	49	0	4	45	0	9
Caledonia Twp.	44	0	10	34	0	12
Curtis Twp.	71	2	12	57	2	17
Greenbush Twp.	43	0	8	35	0	13
Gustin Twp.	52	0	3	49	0	3
Harrisville Twp.	60	0	13	47	0	24
Hawes Twp.	68	1	3	64	1	5
Haynes Twp.	73	0	4	69	0	4
Mikado Twp.	67	1	10	56	1	15
Millen Twp.	57	0	6	51	0	7
Mitchell Twp.	63	1	8	54	1	9
Harrisville	14	0	4	10	0	6
Lincoln	12	0	1	11	0	4
Unknown City/Twp.	0	0	0	0	0	0
Alger County						
Au Train Twp.	70	1	18	51	1	22
Burt Twp.	23	0	3	20	0	3
Grand Island Twp.	18	0	3	15	0	10
Limestone Twp.	50	0	4	46	0	4
Mathias Twp.	46	1	6	39	2	11
Munising Twp.	129	1	38	90	1	58
Onota Twp.	33	1	7	25	1	9
Rock River Twp.	53	0	8	45	0	10
Chatham	3	0	0	3	0	0
Munising	64	0	9	55	0	15
Unknown City/Twp	5	0	0	5	0	0
Allegan County						
Allegan Twp.	175	2	31	142	3	47
Casco Twp.	141	1	34	106	1	54
Cheshire Twp.	73	2	11	60	2	18
Clyde Twp.	83	1	14	68	1	31
Dorr Twp.	168	1	46	121	1	60
Fillmore Twp.	186	3	57	126	3	90
Ganges Twp.	96	2	24	70	2	37
Gunplain Twp.	211	2	45	164	3	73
Heath Twp.	80	2	16	62	4	20
Hopkins Twp.	60	0	12	48	0	18
Laketown Twp.	112	0	29	83	0	40
Lee Twp.	74	0	22	52	0	32
Leighton Twp.	113	2	23	88	2	33
Manlius Twp.	78	1	20	57	1	29
Martin Twp.	121	1	24	96	1	28
Monterey Twp.	49	0	6	43	0	7
Otsego Twp.	221	2	68	151	2	98
Overisel Twp.	65	0	19	46	0	27
Salem Twp.	66	0	15	51	0	21
Saugatuck Twp.	113	0	32	81	0	56
Trowbridge Twp.	109	0	17	92	0	26
Valley Twp.	81	1	26	54	1	39
Watson Twp.	64	0	12	52	0	17
Wayland Twp.	166	1	27	138	1	50
Douglas	27	0	4	23	0	5
Fennville	27	0	5	22	0	10
Hopkins	3	0	1	2	0	1
Martin	5	0	3	2	0	4
Saugatuck	49	0	5	44	0	8
Wayland	63	0	13	50	0	17
Allegan	187	0	46	141	0	62
Otsego	87	0	24	63	0	33
Plainwell	193	0	38	155	0	50
Holland	213	0	61	152	0	96

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TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Unknown City/Twp.	4	0	1	3	0	1
Alpena County						
Alpena Twp.	339	3	92	244	4	147
Green Twp.	85	0	14	71	0	18
Long Rapids Twp.	47	0	2	45	0	2
Maple Ridge Twp.	57	0	9	48	0	13
Ossineke Twp.	59	0	11	48	0	15
Sanborn Twp.	71	0	13	58	0	23
Wellington Twp.	10	0	2	8	0	4
Wilson Twp.	146	1	10	135	1	14
Alpena	344	0	84	260	0	109
Unknown City/Twp.	3	0	0	3	0	0
Antrim County						
Banks Twp.	75	1	14	60	2	26
Central Lake Twp.	76	1	4	71	1	9
Chestonia Twp.	44	0	7	37	0	15
Custer Twp.	68	1	12	55	1	19
Echo Twp.	30	0	8	22	0	13
Elk Rapids Twp.	31	1	6	24	1	12
Forest Home Twp.	73	0	5	68	0	9
Helena Twp.	53	0	4	49	0	4
Jordan Twp.	23	0	3	20	0	3
Kearney Twp.	57	0	6	51	0	8
Mancelona Twp.	53	0	10	43	0	12
Milton Twp.	39	0	5	34	0	7
Star Twp.	26	1	8	17	1	13
Torch Lake Twp.	37	0	7	30	0	18
Warner Twp.	37	1	4	32	3	12
Bellaire	22	0	5	17	0	7
Central Lake	10	0	1	9	0	1
Ellsworth	7	0	1	6	0	1
Elk Rapids	35	0	5	30	0	7
Mancelona	34	2	7	25	2	14
Unknown City/Twp.	3	0	0	3	0	0
Arenac County						
Adams Twp.	38	1	10	27	3	14
Arenac Twp.	68	2	12	54	3	28
Au Gres Twp.	79	0	6	73	0	6
Clayton Twp.	21	0	7	14	0	8
Deep River Twp.	99	0	16	83	0	24
Lincoln Twp.	116	1	21	94	1	31
Mason Twp.	43	0	9	34	0	12
Moffat Twp.	94	2	24	68	3	47
Sims Twp.	53	0	7	46	0	8
Standish Twp.	80	0	21	59	0	28
Turner Twp.	39	0	4	35	0	4
Whitney Twp.	35	0	3	32	0	4
Au Gres	28	0	4	24	0	5
Omer	13	0	6	7	0	6
Sterling	8	0	2	6	0	2
Turner	0	0	0	0	0	0
Twining	6	0	1	5	0	2
Standish	100	0	22	78	0	28
Unknown City/Twp.	3	0	0	3	0	0
Baraga County						
Arvon Twp.	29	0	0	29	0	0
Baraga Twp.	117	1	14	102	1	27
Covington Twp.	91	0	11	80	0	13
Lanse Twp.	120	2	16	102	2	25
Spurr Twp.	18	0	3	15	0	5
Baraga	16	0	7	9	0	8

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Lanse	47	0	6	41	0	6
Unknown City/Twp.	3	0	1	2	0	1
Barry County						
Assyria Twp.	68	1	11	56	1	16
Baltimore Twp.	87	0	26	61	0	43
Barry Twp.	144	2	29	113	2	32
Carlton Twp.	125	1	16	108	1	23
Castleton Twp.	139	1	18	120	1	26
Hastings Twp.	151	1	32	118	1	42
Hope Twp.	114	1	27	86	1	43
Irving Twp.	107	0	21	86	0	29
Johnstown Twp.	123	2	21	100	2	31
Maple Grove Twp.	77	0	11	66	0	16
Orangeville Twp.	110	2	32	76	2	40
Prairieville Twp.	92	0	13	79	0	16
Rutland Twp.	186	0	41	145	0	55
Thornapple Twp.	167	2	29	136	2	43
Woodland Twp.	138	1	25	112	1	34
Yankee Springs Twp.	132	1	31	100	1	48
Freeport	4	0	0	4	0	0
Woodland	7	0	4	3	0	11
Middleville	41	0	11	30	0	15
Nashville	56	1	6	49	1	8
Hastings	294	1	61	232	1	84
Unknown City/Twp.	1	0	0	1	0	0
Bay County						
Bangor Twp.	565	2	160	403	3	243
Beaver Twp.	42	0	15	27	0	20
Frankenlust Twp.	163	2	52	109	2	88
Fraser Twp.	133	0	44	89	0	76
Garfield Twp.	43	0	13	30	0	25
Gibson Twp.	19	0	3	16	0	5
Hampton Twp.	231	3	82	146	5	143
Kawkawlin Twp.	187	2	75	110	2	130
Merritt Twp.	30	1	12	17	1	19
Monitor Twp.	471	3	174	294	3	241
Mt. Forest Twp.	37	0	14	23	0	18
Pinconning Twp.	125	2	37	86	3	80
Portsmouth Twp.	93	3	25	65	4	33
Williams Twp.	165	0	45	120	0	60
Auburn	42	0	14	28	0	22
Pinconning	50	1	10	39	1	14
Essexville	74	0	19	55	0	26
Sag Val State	1	0	0	1	0	0
Delta College	16	0	2	14	0	2
Bay City	1240	1	296	943	1	394
Midland	6	0	2	4	0	2
Unknown City/Twp.	2	0	0	2	0	0
Benzie County						
Almira Twp.	34	0	9	25	0	11
Benzonia Twp.	87	0	15	72	0	23
Blaine Twp.	14	0	4	10	0	5
Colfax Twp.	31	0	5	26	0	10
Crystal Lake Twp.	42	0	6	36	0	8
Gilmore Twp.	14	0	3	11	0	5
Homestead Twp.	81	0	14	67	0	21
Inland Twp.	61	0	15	46	0	24
Joyfield Twp.	25	0	5	20	0	9
Lake Twp.	23	1	2	20	1	2
Platte Twp.	18	0	2	16	0	2
Weldon Twp.	25	0	3	22	0	3
Benzonia	13	0	5	8	0	10

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Beulah	17	0	1	16	0	1
Elberta	7	0	0	7	0	0
Honor	8	0	2	6	0	4
Lake Ann	4	0	1	3	0	1
Thompsonville	6	0	2	4	0	2
Frankfort	30	0	10	20	0	11
Unknown City/Twp.	2	0	1	1	0	2
Berrien County						
Bainbridge Twp.	98	0	26	72	0	42
Baroda Twp.	64	1	25	38	1	38
Benton Twp.	873	6	265	602	6	427
Berrien Twp.	123	0	32	91	0	46
Bertrand Twp.	138	1	35	102	1	65
Buchanan Twp.	86	0	20	66	0	29
Chikaming Twp.	177	0	31	146	0	48
Coloma Twp.	142	0	38	104	0	55
Galien Twp.	56	2	9	45	2	16
Hagar Twp.	163	2	53	108	2	98
Lake Twp.	106	2	33	71	2	61
Lincoln Twp.	272	2	81	189	3	116
New Buffalo Twp.	116	2	20	94	2	25
Niles Twp.	431	2	108	321	2	168
Oronoko Twp.	175	1	48	126	1	67
Pipestone Twp.	75	1	23	51	1	38
Royalton Twp.	170	2	47	121	2	77
St. Joseph Twp.	295	2	84	209	2	150
Sodus Twp.	105	1	30	74	1	44
Three Oaks Twp.	38	0	12	26	0	20
Watervliet Twp.	122	1	31	90	1	51
Weesaw Twp.	27	0	5	22	0	8
Baroda	10	0	3	7	0	4
Eau Claire	9	0	1	8	0	4
Galien	4	0	0	4	0	0
Grand Beach	7	0	2	5	0	4
Michiana	2	0	1	1	0	1
Shoreham	6	0	0	6	0	0
Berrien Springs	99	0	28	71	0	37
Bridgman	68	0	18	50	0	20
Coloma	67	0	25	42	0	33
Stevensville	27	0	2	25	0	4
Three Oaks	29	0	4	25	0	8
Watervliet	48	0	10	38	0	12
Buchanan	111	0	18	93	0	26
New Buffalo	55	0	14	41	0	18
Benton Harbor	558	2	134	422	3	189
Niles	504	2	136	366	2	185
St. Joseph	382	0	77	305	0	100
Unknown City/Twp.	2	0	0	2	0	0
Branch County						
Algansee Twp.	69	2	10	57	2	19
Batavia Twp.	93	0	12	81	0	18
Bethel Twp.	67	0	12	55	0	15
Bronson Twp.	58	0	10	48	0	12
Butler Twp.	63	0	8	55	0	11
California Twp.	33	0	5	28	0	21
Coldwater Twp.	192	0	30	162	0	42
Gilead Twp.	15	0	0	15	0	0
Girard Twp.	126	0	22	104	0	27
Kinderhook Twp.	91	1	13	77	1	21
Mattison Twp.	65	0	10	55	0	18
Noble Twp.	18	0	1	17	0	1
Ovid Twp.	121	0	22	99	0	35

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Quincy Twp.	135	1	25	109	2	38
Sherwood Twp.	100	0	23	77	0	35
Union Twp.	74	0	16	58	0	18
Sherwood	0	0	0	0	0	0
Bronson	34	0	7	27	0	12
Quincy	32	0	7	25	0	9
Union City	34	0	9	25	0	9
Coldwater	468	1	109	358	1	157
Unknown City/Twp.	1	0	0	1	0	0
Calhoun County						
Albion Twp.	84	0	12	72	0	15
Athens Twp.	84	0	7	77	0	9
Battle Creek Twp.	1	0	0	1	0	0
Bedford Twp.	183	1	39	143	1	59
Burlington Twp.	91	0	26	65	0	36
Clarence Twp.	87	0	13	74	0	16
Clarendon Twp.	77	0	12	65	0	13
Convis Twp.	126	0	18	108	0	23
Eckford Twp.	76	1	11	64	2	20
Emmet Twp.	535	1	135	399	1	188
Fredonia Twp.	163	1	22	140	1	35
Homer Twp.	78	0	9	69	0	16
Lee Twp.	62	0	10	52	0	16
Leroy Twp.	153	1	26	126	2	38
Marengo Twp.	148	2	25	121	2	38
Marshall Twp.	285	2	44	239	2	67
Newton Twp.	97	2	14	81	2	32
Pennfield Twp.	292	1	43	248	1	56
Sheridan Twp.	176	3	27	146	4	40
Tekonsha Twp.	109	2	19	88	2	32
Athens	19	1	6	12	1	9
Burlington	1	0	1	0	0	2
Tekonsha	5	0	0	5	0	0
Homer	26	0	7	19	0	12
Union City	0	0	0	0	0	0
Springfield	242	2	74	166	2	112
Marshall	200	1	36	163	1	42
Albion	238	0	52	186	0	83
Battle Creek	2391	4	575	1812	4	838
Unknown City/Twp.	3	0	1	2	0	1
Cass County						
Calvin Twp.	91	1	16	74	2	24
Howard Twp.	132	2	35	95	2	48
Jefferson Twp.	125	0	27	98	0	35
LaGrange Twp.	144	0	23	121	0	27
Marcellus Twp.	77	1	9	67	1	11
Mason Twp.	104	0	19	85	0	28
Milton Twp.	114	0	27	87	0	36
Newberg Twp.	71	2	13	56	2	27
Ontwa Twp.	150	1	36	113	1	53
Penn Twp.	94	0	11	83	0	13
Pokagon Twp.	98	1	15	82	1	25
Porter Twp.	165	1	39	125	2	55
Silver Creek Twp.	184	1	34	149	1	45
Volinia Twp.	37	1	7	29	1	11
Wayne Twp.	121	0	20	101	0	26
Vandalia	6	0	0	6	0	0
Cassopolis	59	1	9	49	1	16
Edwardsburg	43	1	14	28	1	17
Marcellus	14	0	2	12	0	2
Dowagiac	198	0	44	154	0	59
Niles	0	0	0	0	0	0

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Unknown City/Twp.	3	0	1	2	0	1
Charlevoix County						
Bay Twp.	30	0	2	28	0	3
Boyne Valley Twp.	77	0	8	69	0	13
Chandler Twp.	11	0	4	7	0	4
Charlevoix Twp.	36	1	6	29	1	11
Evangeline Twp.	32	0	3	29	0	8
Eveline Twp.	51	0	11	40	0	15
Hayes Twp.	92	0	15	77	0	21
Hudson Twp.	34	0	8	26	0	10
Marion Twp.	73	0	9	64	0	15
Melrose Twp.	66	0	13	53	0	17
Norwood Twp.	63	0	4	59	0	11
Peaine Twp.	9	0	4	5	0	5
St. James Twp.	6	0	1	5	0	1
South Arm Twp.	62	0	13	49	0	23
Wilson Twp.	43	1	6	36	1	11
Boyne Falls	12	0	3	9	0	4
East Jordan	62	0	11	51	0	14
Boyne City	76	0	9	67	0	15
Charlevoix	168	0	33	135	0	47
Unknown City/Twp.	2	0	0	2	0	0
Cheboygan County					0	0
Aloha Twp.	32	0	6	26	0	6
Beaugrand Twp.	42	0	10	32	0	12
Benton Twp.	57	0	15	42	0	21
Burt Twp.	32	0	10	22	0	13
Ellis Twp.	25	0	6	19	0	14
Forest Twp.	30	0	12	18	0	18
Grant Twp.	27	0	7	20	0	9
Hebron Twp.	53	0	16	37	0	25
Inverness Twp.	87	0	20	67	0	32
Koehler Twp.	51	0	17	34	0	21
Mackinaw Twp.	30	0	10	20	0	14
Mentor Twp.	31	0	8	23	0	10
Mullet Twp.	24	0	10	14	0	20
Munro Twp.	42	0	12	30	0	17
Nunda Twp.	51	0	14	37	0	26
Tuscarora Twp.	136	1	34	101	1	47
Walker Twp.	10	0	3	7	0	5
Waverly Twp.	22	0	8	14	0	10
Wilmot Twp.	30	0	5	25	0	10
Mackinaw City	46	0	4	42	0	7
Wolverine	13	0	3	10	0	4
Cheboygan	43	0	28	15	0	34
Unknown City/Twp.	3	0	1	2	0	2
Chippewa County						
Bay Mills Twp.	17	0	9	8	0	11
Bruce Twp.	85	0	17	68	0	23
Chippewa Twp.	24	1	5	18	1	14
Dafter Twp.	77	0	17	60	0	23
Detour Twp.	22	0	0	22	0	0
Drummond Twp.	69	0	12	57	0	17
Hulbert Twp.	17	0	4	13	0	7
Kinross Twp.	103	0	13	90	0	15
Pickford Twp.	75	0	4	71	0	4
Raber Twp.	44	0	5	39	0	11
Rudyard Twp.	64	0	15	49	0	27
Soo Twp.	98	0	22	76	0	36
Sugar Island Twp.	12	1	6	5	1	13
Superior Twp.	66	0	12	54	0	15
Trout Twp.	16	0	2	14	0	3

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Whitefish Twp.	36	0	18	18	0	24
Detour	17	2	3	12	2	4
Sault Ste Marie	621	1	109	511	1	144
Unknown City/Twp.	7	0	1	6	0	1
Clare County						
Arthur Twp.	49	0	7	42	0	10
Franklin Twp.	37	0	7	30	0	10
Freeman Twp.	47	1	11	35	2	18
Frost Twp.	53	1	5	47	2	6
Garfield Twp.	66	0	19	47	0	34
Grant Twp.	214	0	22	192	0	34
Greenwood Twp.	35	0	5	30	0	7
Hamilton Twp.	60	1	11	48	1	16
Hatton Twp.	109	1	15	93	1	29
Hayes Twp.	159	1	46	112	1	65
Lincoln Twp.	60	0	13	47	0	16
Redding Twp.	22	0	2	20	0	2
Sheridan Twp.	31	0	10	21	0	13
Summerfield Twp.	21	0	5	16	0	6
Surrey Twp.	146	1	25	120	1	53
Winterfield Twp.	19	0	3	16	0	4
Farwell	31	0	9	22	0	16
Harrison	86	0	20	66	0	26
Clare	112	0	25	87	0	29
Unknown City/Twp.	7	0	3	4	0	3
Clinton County						
Bath Twp.	223	1	52	170	1	74
Bengal Twp.	29	0	8	21	0	9
Bingham Twp.	100	0	25	75	0	38
Dallas Twp.	54	2	12	40	2	19
Dewitt Twp.	420	3	91	326	3	149
Duplain Twp.	61	1	13	47	1	16
Eagle Twp.	139	0	42	97	0	63
Essex Twp.	41	0	7	34	0	14
Greenbush Twp.	113	1	19	93	1	33
Lebanon Twp.	38	0	6	32	0	12
Olive Twp.	125	0	23	102	0	35
Ovid Twp.	69	1	16	52	1	30
Riley Twp.	23	0	3	20	0	3
Victor Twp.	116	2	19	95	2	25
Watertown Twp.	191	2	33	156	2	47
Westphalia Twp.	45	0	8	37	0	14
Eagle	0	0	0	0	0	0
Elsie	20	0	1	19	0	1
Hubbardston	0	0	0	0	0	0
Maple Rapids	5	0	0	5	0	0
Westphalia	6	0	1	5	0	1
Capitol City Airport	3	0	1	2	0	2
Dewitt	48	0	7	41	0	8
Fowler	14	0	4	10	0	5
Ovid	19	0	4	15	0	4
St. Johns	253	0	36	217	0	56
Lansing	0	0	0	0	0	0
Unknown City/Twp.	1	0	0	1	0	0
Crawford County						
Beaver Creek Twp.	113	1	32	80	1	48
Frederic Twp.	48	0	10	38	0	13
Grayling Twp.	305	2	44	259	3	79
Lovells Twp.	39	0	8	31	0	15
Maple Forest Twp.	49	1	13	35	1	24
South Branch Twp.	46	0	13	33	0	18

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Camp Grayling	4	0	1	3	0	1
Grayling	30	0	5	25	0	5
Unknown City/Twp.	4	0	2	2	0	2
Delta County						
Baldwin Twp.	52	0	8	44	0	10
Bark River Twp.	153	0	10	143	0	13
Bay De Noc Twp.	25	0	3	22	0	3
Brampton Twp.	40	0	9	31	0	12
Cornell Twp.	75	0	7	68	0	11
Ensign Twp.	52	1	4	47	1	6
Escanaba Twp.	119	0	18	101	0	21
Fairbanks Twp.	10	0	2	8	0	2
Ford River Twp.	137	0	19	118	0	25
Garden Twp.	42	2	9	31	3	14
Maple Ridge Twp.	98	1	7	90	1	14
Masonville Twp.	164	0	19	145	0	25
Nahma Twp.	60	1	9	50	1	21
Wells Twp.	217	1	33	183	1	58
Garden	0	0	0	0	0	0
Gladstone	148	0	32	116	0	54
Escanaba	673	0	162	511	0	243
Unknown City/Twp.	0	0	0	0	0	0
Dickinson County						
Breen Twp.	39	0	5	34	0	5
Breitung Twp.	358	6	46	306	7	73
Felch Twp.	66	0	5	61	0	6
Norway Twp.	76	0	6	70	0	7
Sagola Twp.	159	1	15	143	1	19
Waucedah Twp.	92	0	9	83	0	10
West Branch Twp.	11	0	1	10	0	1
Norway	94	0	16	78	0	22
Iron Mountain	272	0	94	178	0	133
Kingsford	117	0	23	94	0	34
Unknown City/Twp.	2	0	0	2	0	0
Eaton County						
Bellevue Twp.	104	0	25	79	0	36
Benton Twp.	150	0	19	131	0	37
Brookfield Twp.	49	0	10	39	0	14
Carmel Twp.	73	1	11	61	2	16
Chester Twp.	75	0	14	61	0	19
Delta Twp.	1149	4	298	847	4	474
Eaton Twp.	177	1	32	144	1	45
Eaton Rapids Twp.	140	2	29	109	2	36
Hamlin Twp.	99	0	29	70	0	33
Kalamo Twp.	39	0	9	30	0	11
Oneida Twp.	114	1	21	92	2	32
Roxand Twp.	60	0	12	48	0	16
Sunfield Twp.	80	1	18	61	1	28
Vermontville Twp.	81	0	11	70	0	16
Walton Twp.	117	0	15	102	0	22
Windsor Twp.	273	8	63	202	10	92
Dimondale	4	0	0	4	0	0
Mulliken	1	0	0	1	0	0
Sunfield	4	0	1	3	0	1
Vermontville	4	0	2	2	0	2
Bellevue	7	0	2	5	0	5
Olivet	22	0	9	13	0	16
Potterville	25	0	8	17	0	14
Eaton Rapids	107	0	24	83	0	33
Charlotte	349	1	69	279	1	114
Grand Ledge	180	0	43	137	0	57
Lansing	20	0	7	13	0	8

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Unknown City/Twp.	3	0	0	3	0	0
Emmet County						
Bear Creek Twp.	356	0	72	284	0	110
Bliss Twp.	22	0	6	16	0	8
Carp Lake Twp.	30	0	12	18	0	17
Center Twp.	38	0	4	34	0	5
Cross Village Twp.	11	0	3	8	0	4
Friendship Twp.	28	0	6	22	0	9
Littlefield Twp.	56	0	9	47	0	12
Little Traverse Twp.	128	2	29	97	2	50
McKinley Twp.	39	0	8	31	0	9
Pleasant View Twp.	46	0	11	35	0	14
Maple River Twp.	41	0	1	40	0	1
Readmond Twp.	21	2	1	18	2	1
Resort Twp.	92	1	16	75	1	28
Springvale Twp.	47	0	2	45	0	2
Wawatam Twp.	9	0	1	8	0	2
West Traverse Twp.	31	0	10	21	0	16
Alanson	28	0	6	22	0	9
Mackinaw City	23	0	2	21	0	2
Pellston	9	0	2	7	0	3
Harbor Springs	31	0	5	26	0	6
Petoskey	307	1	56	250	1	75
Unknown City/Twp.	1	0	1	0	0	1
Genesee County						
Argentine Twp.	120	1	18	101	1	30
Atlas Twp.	94	0	22	72	0	26
Clayton Twp.	154	4	48	102	6	87
Davison Twp.	330	3	100	227	3	164
Fenton Twp.	317	1	74	242	1	96
Flint Twp.	1573	3	452	1118	3	665
Flushing Twp.	116	1	26	89	1	42
Forest Twp.	133	1	46	86	1	78
Gaines Twp.	102	0	32	70	0	49
Genesee Twp.	514	4	157	353	4	241
Grand Blanc Twp.	668	1	178	489	1	250
Montrose Twp.	101	0	28	73	0	50
Mt. Morris Twp.	760	8	240	512	11	376
Mundy Twp.	517	3	137	377	4	206
Richfield Twp.	198	2	54	142	2	100
Thetford Twp.	140	2	56	82	2	87
Vienna Twp.	485	1	125	359	1	194
Gaines	2	0	0	2	0	0
Goodrich	36	0	11	25	0	19
Otter Lake	1	0	1	0	0	1
Otisville	12	0	3	9	0	3
Lennon	0	0	0	0	0	0
Clio	103	0	28	75	0	37
Linden	20	0	4	16	0	7
Montrose	25	0	5	20	0	10
Mt. Morris	77	0	22	55	0	27
Swartz Creek	133	2	28	103	2	41
Davison	166	1	40	125	1	61
Fenton	419	0	110	309	0	190
Flushing	112	1	32	79	1	57
Grand Blanc	168	0	42	126	0	58
Burton	829	5	293	531	6	478
U of M Flint	0	0	0	0	0	0
Flint	5655	15	1725	3915	16	2552
Unknown City/Twp.	3	0	0	3	0	0

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Gladwin County						
Beaverton Twp.	103	0	16	87	0	26
Bentley Twp.	16	0	3	13	0	5
Billings Twp.	61	0	6	55	0	9
Bourret Twp.	18	0	2	16	0	5
Buckeye Twp.	74	0	15	59	0	20
Butman Twp.	38	0	6	32	0	6
Clement Twp.	25	0	5	20	0	5
Gladwin Twp.	57	0	8	49	0	16
Grim Twp.	16	0	3	13	0	5
Grout Twp.	103	0	7	96	0	12
Hay Twp.	46	0	11	35	0	14
Sage Twp.	64	1	12	51	1	21
Secord Twp.	28	0	6	22	0	9
Sherman Twp.	48	0	7	41	0	8
Tobacco Twp.	93	1	12	80	1	22
Beaverton	15	0	6	9	0	8
Gladwin	96	0	32	64	0	47
Unknown City/Twp.	2	0	0	2	0	0
Gogebic County						
Bessemer Twp.	45	0	10	35	0	16
Erwin Twp.	7	0	0	7	0	0
Ironwood Twp.	42	0	13	29	0	21
Marenisco Twp.	51	1	9	41	1	13
Wakefield Twp.	38	0	6	32	0	6
Watersmeet Twp.	51	0	8	43	0	16
Bessemer	52	0	7	45	0	11
Wakefield	48	0	14	34	0	18
Ironwood	237	0	61	176	0	91
Unknown City/Twp.	1	0	0	1	0	0
Grand Traverse County						
Acme Twp.	150	0	46	104	0	74
Blair Twp.	256	0	72	184	0	118
East Bay Twp.	354	1	98	255	1	162
Fife Lake Twp.	58	0	10	48	0	14
Garfield Twp.	635	0	158	477	0	229
Grant Twp.	37	0	9	28	0	11
Green Lake Twp.	78	1	21	56	1	29
Long Lake Twp.	111	0	35	76	0	61
Mayfield Twp.	52	0	9	43	0	11
Peninsula Twp.	54	1	22	31	3	34
Paradise Twp.	84	0	18	66	0	22
Union Twp.	37	2	9	26	2	12
White Water Twp.	77	0	15	62	0	21
Fife Lake	9	0	1	8	0	3
Kingsley	15	0	4	11	0	6
Traverse City	1057	2	218	837	2	299
Unknown City/Twp.	0	0	0	0	0	0
Gratiot County						
Arcadia Twp.	101	1	23	77	1	34
Bethany Twp.	53	0	17	36	0	24
Elba Twp.	62	1	11	50	1	21
Emerson Twp.	86	0	19	67	0	30
Fulton Twp.	73	0	16	57	0	26
Hamilton Twp.	30	0	4	26	0	4
Lafayette Twp.	21	0	6	15	0	10
Newark Twp.	44	0	10	34	0	14
New Haven Twp.	48	0	9	39	0	14
North Shade Twp.	33	0	6	27	0	11
North Star Twp.	66	1	9	56	2	24
Pine River Twp.	209	1	64	144	1	90

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Seville Twp.	108	0	18	90	0	25
Sumner Twp.	82	0	16	66	0	24
Washington Twp.	85	0	14	71	0	23
Wheeler Twp.	46	1	12	33	1	16
Ashley	4	0	1	3	0	1
Perrinton	6	0	1	5	0	1
Breckenridge	21	0	5	16	0	5
Ithaca	48	0	12	36	0	17
St. Louis	93	0	23	70	0	29
Alma	271	1	52	218	1	78
Unknown City/Twp.	3	0	1	2	0	1
Hillsdale County						
Adams Twp.	126	0	26	100	0	37
Allen Twp.	108	1	18	89	1	27
Amboy Twp.	33	0	8	25	0	11
Cambria Twp.	131	1	28	102	1	39
Camden Twp.	57	1	11	45	1	18
Fayette Twp.	123	0	19	104	0	28
Hillsdale Twp.	107	0	22	85	0	32
Jefferson Twp.	107	0	25	82	0	33
Litchfield Twp.	48	0	8	40	0	14
Moscow Twp.	86	0	16	70	0	18
Pittsford Twp.	86	0	18	68	0	28
Ransom Twp.	36	0	4	32	0	5
Reading Twp.	96	2	14	80	2	21
Scipio Twp.	69	0	18	51	0	30
Somerset Twp.	70	1	15	54	1	23
Wheatland Twp.	70	2	8	60	5	15
Woodbridge Twp.	40	0	9	31	0	13
Wright Twp.	46	0	8	38	0	12
Allen	1	0	0	1	0	0
Camden	5	0	1	4	0	1
Montgomery	2	0	0	2	0	0
North Adams	7	0	1	6	0	1
Waldron	3	0	0	3	0	0
Jonesville	96	0	16	80	0	20
Litchfield	29	1	3	25	1	6
Reading	6	0	0	6	0	0
Hillsdale	386	0	85	301	0	126
Unknown City/Twp.	0	0	0	0	0	0
Houghton County						
Adams Twp.	62	1	20	41	1	25
Calumet Twp.	65	1	18	46	1	26
Chassell Twp.	55	0	13	42	0	17
Duncan Twp.	32	0	4	28	0	5
Elm River Twp.	26	0	5	21	0	5
Franklin Twp.	53	1	21	31	1	30
Hancock Twp.	8	0	2	6	0	4
Laird Twp.	31	0	8	23	0	16
Osceola Twp.	44	0	11	33	0	13
Portage Twp.	112	2	25	85	3	40
Quincy Twp.	9	0	2	7	0	5
Stanton Twp.	21	0	10	11	0	17
Schoolcraft Twp.	17	0	4	13	0	4
Torch Lake Twp.	31	0	5	26	0	6
Copper City	2	0	2	0	0	2
South Range	8	0	1	7	0	1
Calumet	23	0	2	21	0	2
Lake Linden	26	0	5	21	0	5
Hancock	185	0	31	154	0	37
Laurium	25	0	4	21	0	4
Houghton	303	1	55	247	1	80

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TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Mich Technological Univ	15	0	2	13	0	3
Unknown City/Twp.	0	0	0	0	0	0
Huron County						
Bingham Twp.	68	0	9	59	0	11
Bloomfield Twp.	11	0	3	8	0	3
Brookfield Twp.	18	0	7	11	0	12
Caseville Twp.	39	0	5	34	0	5
Chandler Twp.	20	0	5	15	0	10
Colfax Twp.	119	0	21	98	0	27
Dwight Twp.	30	0	3	27	0	3
Fair Haven Twp.	37	0	3	34	0	6
Gore Twp.	12	0	2	10	0	4
Grant Twp.	64	0	3	61	0	4
Hume Twp.	51	0	7	44	0	7
Huron Twp.	44	0	6	38	0	7
Lake Twp.	35	0	8	27	0	11
Lincoln Twp.	33	1	3	29	1	5
McKinley Twp.	43	0	13	30	0	23
Meade Twp.	50	0	5	45	0	8
Oliver Twp.	45	0	9	36	0	17
Paris Twp.	40	0	6	34	0	10
Pte Aux Barques Twp.	0	0	0	0	0	0
Port Austin Twp.	35	1	4	30	1	5
Rubicon Twp.	34	0	5	29	0	5
Sand Beach Twp.	65	0	4	61	0	5
Sebewaing Twp.	51	1	21	29	1	30
Sheridan Twp.	59	1	8	50	2	13
Sherman Twp.	40	0	3	37	0	6
Sigel Twp.	36	0	8	28	0	10
Verona Twp.	173	0	30	143	0	49
Windsor Twp.	14	0	8	6	0	11
Caseville	33	0	6	27	0	9
Elkton	26	0	4	22	0	6
Kinde	2	0	0	2	0	0
Owendale	4	0	0	4	0	0
Port Austin	8	0	1	7	0	1
Port Hope	8	0	1	7	0	1
Ubly	8	0	1	7	0	1
Harbor Beach	46	0	5	41	0	8
Pigeon	17	0	2	15	0	2
Sebewaing	30	0	7	23	0	13
Bad Axe	152	0	27	125	0	41
Unknown City/Twp.	1	0	0	1	0	0
Ingham County						
Alaiedon Twp.	278	1	53	224	3	83
Aurelius Twp.	122	0	23	99	0	37
Bunker Hill Twp.	59	0	9	50	0	11
Delhi Twp.	521	1	121	399	1	174
Ingham Twp.	66	0	10	56	0	11
Lansing Twp.	659	1	118	540	1	170
Leroy Twp.	133	1	32	100	1	59
Leslie Twp.	97	1	16	80	1	22
Locke Twp.	57	0	5	52	0	5
Meridian Twp.	1113	3	318	792	3	431
Onondago Twp.	72	2	18	52	2	21
Stockbridge Twp.	69	0	11	58	0	12
Vevay Twp.	163	3	32	128	3	44
Wheatfield Twp.	124	0	26	98	0	37
White Oak Twp.	43	0	2	41	0	3
Williamston Twp.	160	1	25	134	1	35
Dansville	9	0	1	8	0	1
Leslie	26	0	9	17	0	11

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Stockbridge	25	0	6	19	0	11
Webberville	15	0	2	13	0	3
Williamston	51	0	12	39	0	12
Mason	170	0	41	129	0	58
East Lansing	1159	2	336	821	2	448
Michigan State Univ	389	0	83	306	0	103
Lansing	4670	4	1255	3411	4	1775
Unknown City/Twp.	10	0	1	9	0	1
Ionia County						
Berlin Twp.	170	0	28	142	0	47
Boston Twp.	150	1	38	111	1	52
Campbell Twp.	73	0	15	58	0	21
Danby Twp.	74	0	19	55	0	25
Easton Twp.	133	0	22	111	0	30
Ionia Twp.	198	1	51	146	1	75
Keene Twp.	39	0	8	31	0	15
Lyons Twp.	62	1	12	49	1	16
North Plains Twp.	45	0	4	41	0	5
Odessa Twp.	62	1	12	49	2	23
Orange Twp.	137	1	23	113	1	31
Orleans Twp.	126	0	25	101	0	38
Otisco Twp.	86	2	18	66	2	27
Portland Twp.	107	0	22	85	0	35
Ronald Twp.	66	0	12	54	0	20
Sebewa Twp.	46	0	12	34	0	14
Clarksville	3	0	0	3	0	0
Hubbardston	5	0	1	4	0	1
Lyons	14	0	1	13	0	1
Muir	10	0	4	6	0	5
Pewamo	8	0	1	7	0	1
Lake Odessa	47	0	13	34	0	19
Saranac	10	0	2	8	0	2
Portland	80	0	13	67	0	20
Belding	121	0	30	91	0	38
Ionia	285	0	47	238	0	63
Unknown City/Twp	2	0	1	1	0	2
Iosco County						
Alabaster Twp.	52	0	3	49	0	3
Au Sable Twp.	71	2	17	52	3	34
Baldwin Twp.	77	0	16	61	0	21
Burleigh Twp.	43	0	14	29	0	28
Grant Twp.	67	0	14	53	0	15
Oscoda Twp.	224	1	40	183	1	61
Plainfield Twp.	142	1	32	109	1	48
Reno Twp.	61	3	8	50	4	19
Sherman Twp.	38	0	9	29	0	14
Tawas Twp.	119	0	17	102	0	24
Wilber Twp.	40	0	10	30	0	10
Whittemore	12	0	5	7	0	9
East Tawas	95	0	24	71	0	38
Tawas City	72	1	13	58	1	19
Unknown City/Twp	0	0	0	0	0	0
Iron County						
Bates Twp.	66	0	5	61	0	7
Crystal Falls Twp.	160	0	13	147	0	16
Hematite Twp.	31	0	0	31	0	0
Iron River Twp.	81	2	6	73	2	7
Mansfield Twp.	38	0	2	36	0	2
Mastodon Twp.	72	1	5	66	3	5
Stambaugh Twp.	124	0	17	107	0	23
Alpha	2	0	0	2	0	0
Gaastra	4	0	1	3	0	1

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Mineral Hills	1	0	0	1	0	0
Caspian	14	0	0	14	0	0
Crystal Falls	34	0	4	30	0	5
Stambaugh	17	0	7	10	0	10
Iron River	101	0	19	82	0	31
Unknown City/Twp.	1	0	0	1	0	0
Isabella County						
Broomfield Twp.	58	0	7	51	0	10
Chippewa Twp.	172	1	51	120	3	85
Coe Twp.	80	1	15	64	1	23
Coldwater Twp.	38	0	5	33	0	7
Deerfield Twp.	137	0	19	118	0	29
Denver Twp.	45	0	12	33	0	18
Fremont Twp.	71	0	10	61	0	15
Gilmore Twp.	65	0	10	55	0	11
Isabella Twp.	84	2	17	65	2	26
Lincoln Twp.	69	2	6	61	3	12
Nottawa Twp.	63	1	15	47	1	26
Rolland Twp.	52	0	9	43	0	17
Sherman Twp.	75	0	8	67	0	12
Union Twp.	306	3	74	229	4	125
Vernon Twp.	97	0	21	76	0	24
Wise Twp.	52	1	11	40	1	19
Rosebush	1	0	0	1	0	0
Shepherd	19	0	2	17	0	2
Clare	0	0	0	0	0	0
Central Mich Univ	5	0	2	3	0	2
Mt. Pleasant	642	1	178	463	2	241
Unknown City/Twp.	2	0	1	1	0	1
Jackson County						
Blackman Twp.	833	5	202	626	6	310
Columbia Twp.	202	2	36	164	2	57
Concord Twp.	105	0	25	80	0	36
Grass Lake Twp.	173	3	37	133	4	53
Hanover Twp.	93	0	29	64	0	46
Henrietta Twp.	96	2	26	68	2	41
Leoni Twp.	594	3	160	431	3	221
Liberty Twp.	141	0	32	109	0	50
Napoleon Twp.	190	0	38	152	0	51
Norvell Twp.	77	0	21	56	0	26
Parma Twp.	177	1	40	136	2	66
Pulaski Twp.	52	0	14	38	0	19
Rives Twp.	145	0	32	113	0	42
Sandstone Twp.	188	2	41	145	2	63
Spring Arbor Twp.	265	1	58	206	1	95
Springport Twp.	82	0	9	73	0	10
Summit Twp.	533	3	112	418	3	143
Tomkins Twp.	72	1	20	51	1	30
Waterloo Twp.	90	0	16	74	0	25
Cement City	2	0	0	2	0	0
Concord	7	0	1	6	0	1
Hanover	4	0	2	2	0	2
Parma	16	0	6	10	0	8
Springport	10	0	2	8	0	2
Brooklyn	24	0	4	20	0	6
Grass Lake	4	0	0	4	0	0
Jackson	1847	0	407	1440	0	576
Unknown City/Twp.	1	0	0	1	0	0
Kalamazoo County						
Alamo Twp.	224	1	42	181	1	59
Brady Twp.	158	0	37	121	0	58
Charleston Twp.	185	4	34	147	5	64

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TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Climax Twp.	45	1	7	37	1	11
Comstock Twp.	714	5	170	539	7	266
Cooper Twp.	199	2	37	160	2	50
Kalamazoo Twp.	463	1	108	354	1	163
Oshtemo Twp.	714	5	167	542	5	239
Pavilion Twp.	114	0	26	88	0	33
Prairie Ronde Twp.	74	0	4	70	0	6
Richland Twp.	169	1	29	139	1	49
Ross Twp.	126	1	20	105	1	31
Schoolcraft Twp.	202	2	33	167	2	51
Texas Twp.	243	4	43	196	5	69
Wakeshma Twp.	42	0	6	36	0	7
Climax	1	0	1	0	0	1
Richland	35	0	11	24	0	13
Augusta	18	0	3	15	0	4
Galesburg	31	0	6	25	0	9
Parchment	35	0	3	32	0	4
Schoolcraft	63	0	11	52	0	19
Vicksburg	39	0	9	30	0	12
Western Mi Univ	100	0	15	85	0	17
Portage	1690	8	356	1326	8	518
Kalamazoo	4016	11	863	3142	15	1177
Unknown City/Twp.	9	0	1	8	0	1
Kalkaska County						
Blue Lake Twp.	10	1	4	5	1	4
Boardman Twp.	57	1	13	43	1	17
Clearwater Twp.	76	0	12	64	0	14
Cold Springs Twp.	41	2	10	29	2	22
Excelsior Twp.	67	1	14	52	1	26
Garfield Twp.	44	0	15	29	0	18
Kalkaska Twp.	136	1	24	111	1	38
Oliver Twp.	10	0	6	4	0	6
Orange Twp.	30	0	6	24	0	11
Rapid River Twp.	49	2	23	24	2	37
Springfield Twp.	32	1	9	22	1	14
Bear Lake Twp.	49	0	12	37	0	20
Kalkaska	108	0	27	81	0	39
Unknown City/Twp.	2	0	0	2	0	0
Kent County						
Ada Twp.	325	3	79	243	3	116
Algoma Twp.	266	1	64	201	2	90
Alpine Twp.	299	2	88	209	2	146
Bowne Twp.	108	1	17	90	2	24
Byron Twp.	467	2	131	334	2	189
Cannon Twp.	260	0	44	216	0	59
Caledonia Twp.	291	0	65	226	0	91
Cascade Twp.	617	3	148	466	4	238
Courtland Twp.	140	0	30	110	0	47
Gaines Twp.	353	1	90	262	1	143
Grand Rapids Twp.	502	3	126	373	3	177
Grattan Twp.	106	3	18	85	4	24
Lowell Twp.	227	1	58	168	1	84
Nelson Twp.	122	1	25	96	1	37
Oakfield Twp.	159	0	45	114	0	74
Plainfield Twp.	939	2	272	665	2	409
Solon Twp.	160	0	45	115	0	69
Sparta Twp.	183	0	61	122	0	110
Spencer Twp.	79	0	16	63	0	17
Tyrone Twp.	110	1	28	81	1	41
Vergennes Twp.	118	0	22	96	0	30
Caledonia	19	0	4	15	0	7
Casnovia	6	0	0	6	0	0

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TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Kent City	20	0	4	16	0	4
Sand Lake	14	0	3	11	0	6
Cedar Springs	59	0	14	45	0	19
Rockford	108	0	41	67	0	61
Lowell	188	0	40	148	0	58
Sparta	81	0	21	60	0	27
E Grand Rapids	174	0	29	145	0	34
Grandville	675	2	182	491	2	244
Kentwood	1604	2	429	1173	2	626
Walker	1057	1	257	799	1	358
Wyoming	2627	4	718	1905	4	993
Grand Rapids	8088	14	2103	5971	15	2918
Unknown City/Twp.	12	0	2	10	0	3
Keweenaw County						
Allouez Twp.	28	1	10	17	1	15
Eagle Harbor Twp.	17	0	9	8	0	13
Grant Twp.	25	0	3	22	0	3
Houghton Twp.	11	0	4	7	0	6
Sherman Twp.	5	0	3	2	0	6
Ahmeek	0	0	0	0	0	0
Unknown City/Twp.	0	0	0	0	0	0
Lake County						
Chase Twp.	55	0	9	46	0	11
Cherry Valley Twp.	10	0	1	9	0	2
Dover Twp.	21	1	3	17	1	6
Eden Twp.	22	0	4	18	0	4
Elk Twp.	32	0	4	28	0	4
Ellsworth Twp.	35	0	9	26	0	10
Lake Twp.	30	0	4	26	0	6
Newkirk Twp.	24	0	8	16	0	12
Peacock Twp.	30	0	6	24	0	8
Pinora Twp.	12	0	1	11	0	1
Pleasant Plains Twp.	71	0	20	51	0	31
Sauble Twp.	16	0	2	14	0	2
Sweetwater Twp.	23	1	3	19	1	4
Webber Twp.	41	0	11	30	0	13
Yates Twp.	34	0	6	28	0	9
Baldwin	38	0	9	29	0	13
Luther	4	0	1	3	0	1
Unknown City/Twp.	3	0	1	2	0	1
Lapeer County						
Almont Twp.	108	0	30	78	0	42
Arcadia Twp.	64	0	11	53	0	14
Attica Twp.	136	1	30	105	1	48
Burlington Twp.	41	0	11	30	0	12
Burnside Twp.	86	0	19	67	0	30
Deerfield Twp.	166	0	40	126	0	68
Dryden Twp.	124	0	21	103	0	32
Elba Twp.	205	2	46	157	2	52
Goodland Twp.	68	0	7	61	0	11
Hadley Twp.	94	0	15	79	0	19
Imlay Twp.	119	1	19	99	1	30
Lapeer Twp.	275	2	58	215	2	89
Marathon Twp.	93	0	21	72	0	31
Mayfield Twp.	243	0	53	190	0	77
Metamora Twp.	206	1	57	148	1	92
North Branch Twp.	64	0	7	57	0	9
Oregon Twp.	123	1	24	98	1	24
Rich Twp.	41	1	9	31	2	18
Clifford	10	0	4	6	0	6
Columbiaville	11	0	2	9	0	2
Dryden	1	0	1	0	0	1

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Metamora	6	0	3	3	0	4
North Branch	29	0	1	28	0	1
Otter Lake	3	0	0	3	0	0
Almont	30	0	9	21	0	12
Imlay City	163	0	44	119	0	72
Lapeer	423	0	118	305	0	166
Unknown City/Twp.	2	0	0	2	0	0
Leelanau County						
Bingham Twp.	57	0	19	38	0	27
Centerville Twp.	38	1	3	34	1	6
Cleveland Twp.	30	0	5	25	0	5
Elmwood Twp.	108	0	32	76	0	54
Empire Twp.	30	0	4	26	0	8
Glen Arbor Twp.	30	0	6	24	0	7
Kasson Twp.	39	1	8	30	1	10
Leelanau Twp.	48	1	10	37	1	17
Leland Twp.	64	0	11	53	0	18
Solon Twp.	62	1	15	46	1	19
Suttons Bay Twp.	44	0	12	32	0	14
Empire	12	0	2	10	0	2
Northport	9	0	2	7	0	5
Suttons Bay	10	0	4	6	0	5
Leland Village	0	0	0	0	0	0
Traverse City	0	0	0	0	0	0
Unknown City/Twp.	2	0	0	2	0	0
Lenawee County						
Adrian Twp.	206	1	61	144	1	95
Blissfield Twp.	31	0	12	19	0	16
Cambridge Twp.	168	1	45	122	1	75
Clinton Twp.	66	0	18	48	0	28
Deerfield Twp.	23	0	9	14	0	16
Dover Twp.	72	1	17	54	2	21
Fairfield Twp.	46	0	10	36	0	15
Franklin Twp.	161	0	29	132	0	37
Hudson Twp.	89	0	24	65	0	41
Macon Twp.	62	1	21	40	1	30
Madison Twp.	272	2	71	199	2	110
Medina Twp.	40	0	6	34	0	10
Ogden Twp.	27	0	12	15	0	18
Palmyra Twp.	128	3	35	90	3	50
Raisin Twp.	225	2	64	159	2	97
Ridgeway Twp.	56	0	22	34	0	43
Riga Twp.	56	1	19	36	1	28
Rollin Twp.	89	0	27	62	0	40
Rome Twp.	78	0	20	58	0	25
Seneca Twp.	46	2	14	30	2	19
Tecumseh Twp.	65	0	15	50	0	19
Woodstock Twp.	148	3	33	112	3	65
Addison	11	0	3	8	0	7
Britton	4	0	1	3	0	1
Cement City	2	0	2	0	0	2
Clayton	2	0	0	2	0	0
Deerfield	10	0	4	6	0	4
Onsted	7	0	2	5	0	4
Clinton	42	0	8	34	0	10
Morenci	38	0	7	31	0	7
Blissfield	68	0	18	50	0	28
Hudson	39	0	8	31	0	8
Tecumseh	184	0	49	135	0	76
Adrian	891	2	216	673	2	304
Unknown City/Twp.	1	0	0	1	0	0

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TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Livingston County						
Brighton Twp.	835	2	178	655	3	247
Cohoctah Twp.	82	1	20	61	1	29
Conway Twp.	55	0	16	39	0	28
Deerfield Twp.	85	0	31	54	0	42
Genoa Twp.	553	2	156	395	2	215
Green Oak Twp.	393	3	95	295	3	132
Hamburg Twp.	318	1	65	252	1	92
Handy Twp.	207	0	59	148	0	91
Hartland Twp.	364	1	89	274	1	129
Howell Twp.	261	0	63	198	0	82
Iosco Twp.	56	1	7	48	1	10
Marion Twp.	199	1	43	155	1	56
Osceola Twp.	165	1	41	123	1	61
Putnam Twp.	173	0	36	137	0	53
Tyrone Twp.	207	1	57	149	1	78
Unadilla Twp.	76	0	15	61	0	21
Pinckney	24	0	4	20	0	5
Brighton	307	0	66	241	0	86
Fowlerville	55	0	12	43	0	19
Howell	388	0	99	289	0	148
Unknown City/Twp.	5	0	0	5	0	0
Luce County						
Columbus Twp.	19	0	9	10	0	16
Lakefield Twp.	65	0	7	58	0	7
McMillan Twp.	86	1	42	43	1	47
Pentland Twp.	112	1	29	82	1	40
Newberry	35	0	8	27	0	9
Unknown City/Twp.	1	0	0	1	0	0
Mackinac County						
Bois Blanc Twp.	1	1	0	0	1	1
Brevort Twp.	39	0	8	31	0	11
Clark Twp.	129	1	11	117	1	16
Garfield Twp.	93	3	13	77	4	20
Hendricks Twp.	17	0	1	16	0	1
Hudson Twp.	27	0	5	22	0	9
Marquette Twp.	43	0	6	37	0	7
Moran Twp.	120	3	23	94	3	35
Newton Twp.	45	0	11	34	0	19
Portage Twp.	25	0	10	15	0	14
St. Ignace Twp.	145	1	24	120	1	44
Mackinac Island	8	0	3	5	0	3
St. Ignace	65	0	13	52	0	17
Unknown City/Twp.	1	0	0	1	0	0
Macomb County						
Armada Twp.	162	0	59	103	0	75
Bruce Twp.	199	1	51	147	1	75
Chesterfield Twp.	1027	3	309	715	3	465
Clinton Twp.	3021	4	923	2094	4	1386
Harrison Twp.	564	1	151	412	1	201
Lenox Twp.	156	1	46	109	1	68
Macomb Twp.	936	4	250	682	4	394
Ray Twp.	128	2	27	99	3	50
Richmond Twp.	87	1	23	63	1	36
Shelby Twp.	1443	2	421	1020	2	618
Washington Twp.	328	0	65	263	0	100
Lake Township	0	0	0	0	0	0
Macomb Co Comm	3	0	0	3	0	0
Stoney Creek	3	0	1	2	0	1
Armada	21	0	3	18	0	5
Memphis	22	0	4	18	0	4

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
New Haven	73	0	25	48	0	41
Grosse Pointe Shores	1	0	1	0	0	1
New Baltimore	225	0	72	153	0	113
Richmond	83	0	22	61	0	32
Romeo	134	1	26	107	1	33
Utica	561	0	155	406	0	226
Center Line	452	1	105	346	1	137
Fraser	644	3	183	458	3	272
Mt. Clemens	708	2	176	530	2	241
East Detroit	880	1	261	618	1	387
Roseville	2235	1	646	1588	1	903
St. Clair Shores	1621	1	484	1136	1	749
Sterling Heights	3516	5	994	2517	5	1476
Warren	4922	6	1537	3379	6	2240
Unknown City/Twp.	6	0	1	5	0	1
Manistee County						
Arcadia Twp.	13	1	1	11	1	1
Bear Lake Twp.	26	1	3	22	1	4
Brown Twp.	19	1	2	16	1	2
Cleon Twp.	38	0	7	31	0	11
Dickson Twp.	44	0	15	29	0	23
Filer Twp.	82	1	12	69	1	16
Manistee Twp.	131	1	24	106	1	35
Maple Grove Twp.	23	1	5	17	1	12
Marilla Twp.	20	0	2	18	0	6
Norman Twp.	76	0	17	59	0	23
Onekama Twp.	33	0	9	24	0	15
Pleasanton Twp.	32	0	3	29	0	3
Springdale Twp.	21	0	5	16	0	5
Stronach Twp.	45	1	8	36	1	8
Bear Lake	8	0	2	6	0	4
Copemish	5	0	0	5	0	0
East Lake	4	0	2	2	0	2
Kaleva	10	0	2	8	0	3
Onekama	5	0	1	4	0	1
Manistee	212	1	53	158	1	79
Unknown City/Twp.	3	0	2	1	0	2
Marquette County						
Champion Twp.	28	1	8	19	1	12
Chocolay Twp.	169	0	39	130	0	57
Ely Twp.	91	0	22	69	0	27
Ewing Twp.	7	0	0	7	0	0
Forsyth Twp.	211	1	35	175	1	46
Humboldt Twp.	55	1	10	44	2	13
Ishpeming Twp.	80	3	18	59	5	41
Marquette Twp.	233	1	49	183	1	57
Michigamme Twp.	33	0	7	26	0	10
Negaunee Twp.	162	2	29	131	3	46
Powell Twp.	55	0	12	43	0	13
Republic Twp.	53	1	8	44	1	10
Richmond Twp.	42	1	9	32	1	16
Sands Twp.	84	0	23	61	0	34
Skandia Twp.	68	0	14	54	0	26
Tilden Twp.	47	0	9	38	0	12
Turin Twp.	19	0	2	17	0	2
Wells Twp.	46	0	5	41	0	8
West Branch Twp.	40	0	5	35	0	5
Marquette Airport	0	0	0	0	0	0
Ishpeming	251	2	48	201	3	65
Negaunee	182	0	44	138	0	58
Northern Michigan Univ	13	0	1	12	0	1
Marquette	818	2	144	672	2	182

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Unknown City/Twp.	9	0	2	7	0	2
Mason County						
Amber Twp.	139	1	30	108	2	50
Branch Twp.	56	0	12	44	0	13
Custer Twp.	100	0	15	85	0	26
Eden Twp.	34	0	1	33	0	1
Freesoil Twp.	43	0	6	37	0	9
Grant Twp.	51	1	5	45	1	7
Logan Twp.	24	0	4	20	0	4
Hamlin Twp.	103	0	21	82	0	27
Meade Twp.	8	0	1	7	0	1
Pere Marquette Twp.	184	1	48	135	1	67
Riverton Twp.	45	0	8	37	0	14
Sheridan Twp.	36	0	5	31	0	6
Sherman Twp.	85	0	14	71	0	25
Summit Twp.	42	0	6	36	0	6
Victory Twp.	82	1	12	69	1	28
Custer	9	0	3	6	0	5
Fountain	6	0	1	5	0	1
Freesoil	4	0	1	3	0	1
Scottville	23	0	5	18	0	5
Ludington	254	1	49	204	1	64
Unknown City/Twp.	3	0	1	2	0	1
Mecosta County						
Aetna Twp.	84	1	15	68	1	27
Austin Twp.	55	0	9	46	0	14
Big Rapids Twp.	184	1	22	161	2	34
Chippewa Twp.	78	0	8	70	0	10
Colfax Twp.	121	0	13	108	0	17
Deerfield Twp.	55	0	5	50	0	5
Fork Twp.	64	0	7	57	0	12
Grant Twp.	40	0	4	36	0	6
Green Twp.	159	0	25	134	0	35
Hinton Twp.	102	0	10	92	0	16
Martiny Twp.	91	0	15	76	0	17
Mecosta Twp.	132	0	22	110	0	26
Millbrook Twp.	84	0	6	78	0	11
Morton Twp.	79	0	18	61	0	24
Sheridan Twp.	63	0	5	58	0	5
Wheatland Twp.	108	0	12	96	0	17
Barryton	7	0	2	5	0	3
Mecosta	6	0	2	4	0	2
Morley	3	0	1	2	0	1
Stanwood	11	0	1	10	0	1
Ferris College	6	0	0	6	0	0
Big Rapids	516	0	117	399	0	145
Unknown City/Twp.	1	0	0	1	0	0
Menominee County						
Cedarville Twp.	69	0	6	63	0	12
Daggett Twp.	76	0	2	74	0	3
Faithorn Twp.	13	0	1	12	0	1
Gourley Twp.	22	0	2	20	0	3
Harris Twp.	139	0	16	123	0	26
Holmes Twp.	32	0	8	24	0	10
Ingallston Twp.	77	0	11	66	0	14
Lake Twp.	49	0	7	42	0	8
Mellon Twp.	101	0	12	89	0	21
Menominee Twp.	260	3	38	219	4	55
Meyer Twp.	59	0	8	51	0	11
Nadeau Twp.	108	0	7	101	0	7
Spalding Twp.	128	1	20	107	1	31
Stephenson Twp.	89	0	8	81	0	14

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Daggett	7	0	0	7	0	0
Powers	12	0	1	11	0	1
Stephenson	19	0	5	14	0	7
Menominee	383	0	104	279	0	151
Unknown City/Twp.	15	0	1	14	0	3
Midland County						
Edenville Twp.	95	0	17	78	0	24
Geneva Twp.	45	0	6	39	0	10
Greendale Twp.	63	0	19	44	0	25
Homer Twp.	130	1	33	96	1	41
Hope Twp.	37	0	9	28	0	13
Ingersoll Twp.	99	0	15	84	0	17
Jasper Twp.	40	0	2	38	0	2
Jerome Twp.	144	2	39	103	2	53
Larkin Twp.	131	1	25	105	1	44
Lee Twp.	122	0	24	98	0	49
Lincoln Twp.	110	0	23	87	0	33
Midland Twp.	76	0	17	59	0	23
Mills Twp.	65	0	16	49	0	26
Mt. Haley Twp.	59	0	13	46	0	15
Porter Twp.	42	0	5	37	0	6
Warren Twp.	123	2	18	103	2	28
Sanford	4	0	1	3	0	1
Coleman	13	0	2	11	0	2
Saginaw Valley State	0	0	0	0	0	0
Midland	1324	2	258	1064	2	360
Unknown City/Twp.	3	0	1	2	0	1
Missaukee County						
Aetna Twp.	18	0	4	14	0	5
Bloomfield Twp.	6	0	3	3	0	3
Butterfield Twp.	21	0	5	16	0	6
Caldwell Twp.	49	0	15	34	0	18
Clam Union Twp.	20	0	3	17	0	3
Enterprise Twp.	18	0	4	14	0	9
Forest Twp.	43	1	9	33	1	12
Holland Twp.	8	0	2	6	0	3
Lake Twp.	92	1	14	77	1	26
Norwich Twp.	14	0	2	12	0	3
Pioneer Twp.	9	0	2	7	0	2
Reeder Twp.	42	0	6	36	0	12
Richland Twp.	38	0	7	31	0	9
Riverside Twp.	75	0	9	66	0	12
West Branch Twp.	38	0	8	30	0	12
Lake City	38	0	15	23	0	20
McBain	12	0	3	9	0	3
Unknown City/Twp.	2	0	2	0	0	2
Monroe County						
Ash Twp.	188	2	68	118	2	104
Bedford Twp.	523	6	141	376	6	244
Berlin Twp.	136	1	48	87	1	67
Dundee Twp.	119	1	32	86	1	57
Erie Twp.	191	0	67	124	0	110
Exeter Twp.	68	2	28	38	2	34
Frenchtown Twp.	757	5	251	501	5	402
Ida Twp.	93	0	21	72	0	33
Lasalle Twp.	132	1	38	93	1	56
London Twp.	74	0	31	43	0	45
Milan Twp.	101	0	24	772	0	32
Monroe Twp.	393	3	136	254	3	213
Raisinville Twp.	163	3	56	104	3	92
Summerfield Twp.	124	1	33	90	1	50
Whiteford Twp.	194	2	44	148	2	64

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Estral Beach	0	0	0	0	0	0
Maybee	6	0	1	5	0	1
Carleton	26	0	8	18	0	9
Dundee	49	0	12	37	0	15
Luna Pier	8	0	0	8	0	0
Petersburg	11	0	2	9	0	2
South Rockwood	31	0	8	23	0	11
Milan	7	0	1	6	0	3
Monroe	782	1	181	600	1	265
Unknown City/Twp.	0	0	0	0	0	0
Montcalm County						
Belvidere Twp.	147	1	26	120	1	31
Bloomer Twp.	92	0	16	76	0	22
Bushnell Twp.	88	0	10	78	0	19
Cato Twp.	132	1	20	111	1	33
Crystal Twp.	117	2	15	100	2	22
Day Twp.	70	0	12	58	0	14
Douglass Twp.	101	0	18	83	0	25
Eureka Twp.	154	0	45	109	0	69
Evergreen Twp.	109	2	17	90	2	31
Fairplain Twp.	98	1	16	81	1	24
Ferris Twp.	51	0	4	47	0	8
Home Twp.	104	1	19	84	5	31
Maple Valley Twp.	64	0	10	54	0	18
Montcalm Twp.	159	3	31	125	3	55
Pierson Twp.	128	2	35	91	2	49
Pine Twp.	64	0	13	51	0	14
Reynolds Twp.	112	0	31	81	0	53
Richland Twp.	105	0	22	83	0	34
Sidney Twp.	149	0	26	123	0	41
Winfield Twp.	55	1	10	44	2	16
McBride	1	0	0	1	0	0
Pierson	0	0	0	0	0	0
Sheridan	11	0	4	7	0	5
Carson City	10	0	1	9	0	1
Edmore	32	0	10	22	0	14
Howard City	26	0	7	19	0	10
Lakeview	13	0	2	11	0	2
Stanton	38	0	7	31	0	11
Greenville	407	0	93	314	0	120
Unknown City/Twp.	1	0	0	1	0	0
Montmorency County						
Albert Twp.	86	1	24	61	1	27
Avery Twp.	40	0	7	33	0	10
Briley Twp.	82	3	18	61	3	33
Hillman Twp.	68	1	16	51	1	24
Loud Twp.	44	0	3	41	0	3
Montmorency Twp.	31	1	8	22	1	12
Rust Twp.	18	0	0	18	0	0
Vienna Twp.	39	0	9	30	0	11
Hillman	21	0	8	13	0	12
Unknown City/Twp.	6	0	2	4	0	2
Muskegon County						
Blue Lake Twp.	63	1	12	50	1	19
Casnovia Twp.	88	1	18	69	1	23
Cedar Creek Twp.	79	1	20	58	1	30
Dalton Twp.	307	2	77	228	2	127
Eggleston Twp.	163	0	65	98	0	97
Fruitland Twp.	149	1	28	120	1	40
Fruitport Twp.	278	2	70	206	3	109
Holton Twp.	80	2	24	54	3	31
Laketon Twp.	117	1	29	87	1	46

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TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Montague Twp.	94	0	20	74	0	28
Moorland Twp.	73	1	15	57	1	25
Muskegon Twp.	669	0	214	455	0	286
Ravenna Twp.	74	0	15	59	0	23
Sullivan Twp.	74	0	12	62	0	22
Whitehall Twp.	92	0	29	63	0	42
White River Twp.	30	0	3	27	0	4
Casnovia	7	0	2	5	0	4
Lakewood Club	1	0	0	1	0	0
Fruitport	36	0	6	30	0	9
Montague	44	1	6	37	1	8
Ravenna	19	0	2	17	0	2
North Muskegon	68	0	22	46	0	23
Roosevelt Park	80	0	14	66	0	17
Whitehall	98	0	15	83	0	22
Muskegon Heights	538	1	160	377	1	227
Norton Shores	574	1	147	426	1	203
Muskegon	1696	3	464	1229	3	657
Unknown City/Twp.	2	0	2	0	0	2
Newaygo County						
Ashland Twp.	115	1	38	76	1	59
Barton Twp.	34	0	8	26	0	10
Beaver Twp.	31	0	6	25	0	7
Big Prairie Twp.	57	0	12	45	0	16
Bridgeton Twp.	65	0	20	45	0	35
Brooks Twp.	128	0	35	93	0	55
Croton Twp.	101	1	20	80	1	31
Dayton Twp.	79	1	20	58	1	33
Denver Twp.	45	0	14	31	0	22
Ensley Twp.	80	1	16	63	1	25
Everett Twp.	90	1	24	65	1	34
Garfield Twp.	82	0	9	73	0	17
Goodwell Twp.	40	0	5	35	0	5
Grant Twp.	77	1	20	56	2	45
Home Twp.	18	0	1	17	0	1
Lilley Twp.	29	0	5	24	0	8
Lincoln Twp.	40	0	10	30	0	12
Merrill Twp.	44	1	11	32	1	16
Monroe Twp.	12	0	1	11	0	1
Norwich Twp.	28	0	6	22	0	8
Sheridan Twp.	94	0	19	75	0	27
Sherman Twp.	78	0	13	65	0	26
Troy Twp.	6	0	0	6	0	0
Wilcox Twp.	59	1	12	46	1	17
Grant	23	0	5	18	0	10
Hesperia	6	0	2	4	0	3
Newaygo	17	0	3	14	0	5
White Cloud	37	0	3	34	0	4
Fremont	219	0	45	174	0	68
Unknown City/Twp.	2	0	2	0	0	2
Oakland County						
Addison Twp.	147	0	25	122	0	34
Bloomfield Twp.	1403	1	420	982	1	595
Brandon Twp.	272	2	72	198	3	116
Commerce Twp.	704	4	195	505	5	297
Groveland Twp.	224	2	82	140	2	123
Highland Twp.	413	2	96	315	2	156
Holly Twp.	259	0	88	171	0	162
Independence Twp.	807	2	211	594	4	313
Lyon Twp.	475	2	127	346	2	198
Milford Twp.	228	0	46	182	0	64
Novi Twp.	5	0	1	4	0	1

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Oakland Twp.	251	0	59	192	0	83
Orion Twp.	608	1	148	459	1	229
Oxford Twp.	302	2	76	224	2	121
Pontiac Twp.	2	0	0	2	0	0
Rose Twp.	141	2	38	101	3	53
Royal Oak Twp	169	0	47	122	0	73
Springfield Twp.	310	7	89	214	7	133
Waterford Twp.	3031	3	950	2078	3	1394
West Bloomfield Twp.	1478	1	352	1125	1	502
White Lake Twp.	621	4	163	454	4	263
Southfield Twp.	2	0	1	1	0	1
Bingham Farms	161	0	31	130	0	50
Lake Angelus	13	0	6	7	0	8
Leonard	1	0	0	1	0	0
Ortonville	18	0	4	14	0	5
Camp Dearborn	0	0	0	0	0	0
Stoney Creek	0	0	0	0	0	0
Clarkston	50	0	9	41	0	10
Orchard Lake	190	0	61	129	0	90
Sylvan Lake	70	0	23	47	0	37
Wixom	351	1	96	254	1	145
Bloomfield Hills	267	1	65	201	1	99
Franklin	56	1	8	47	1	9
Holly	120	0	34	86	0	58
Keego Harbor	139	0	36	103	0	49
Lake Orion	113	0	28	85	0	43
Lathrup Village	337	0	74	263	0	107
Milford	143	0	29	114	0	41
Oxford	104	0	27	77	0	42
Pleasant Ridge	199	0	48	151	0	63
South Lyon	73	1	15	57	1	20
Walled Lake	202	0	61	141	0	89
Wolverine Lake	55	0	21	34	0	29
Huntington Woods	132	0	31	101	0	43
Northville	71	0	21	50	0	37
Novi	1564	2	505	1057	3	747
Rochester	321	0	59	262	0	86
Berkley	455	0	116	339	0	158
Beverly Hills	236	0	68	168	0	103
Clawson	403	0	97	306	0	131
Farmington	372	0	96	276	0	126
Hazel Park	824	1	210	613	1	320
Kensington Park	1	0	0	1	0	0
Oakland Univ	27	0	8	19	0	9
Birmingham	1028	1	196	831	1	262
Ferndale	598	1	181	416	1	258
Madison Heights	1507	5	432	1070	7	581
Oak Park	1071	1	243	827	2	357
Troy	3479	7	1003	2469	7	1432
Farmington Hills	2719	7	811	1901	7	1199
Pontiac	2577	7	888	1682	7	1304
Royal Oak	2048	4	640	1404	4	871
Southfield	3872	5	1145	2722	5	1725
Rochester Hills	2095	4	492	1599	4	691
Auburn Hills	1113	4	260	849	4	391
Unknown City/Twp.	63	0	19	44	0	32
Oceana County						
Benona Twp.	45	0	10	35	0	14
Clay Banks Twp.	21	0	6	15	0	6
Colfax Twp.	28	0	5	23	0	7
Crystal Twp.	35	0	4	31	0	10
Elbridge Twp.	38	0	5	33	0	10
Ferry Twp.	47	1	7	39	1	14

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Golden Twp.	82	0	29	53	0	34
Grant Twp.	99	0	18	81	0	30
Greenwood Twp.	55	0	11	44	0	18
Hart Twp.	106	0	13	93	0	20
Leavitt Twp.	38	0	4	34	0	5
New Field Twp.	63	0	7	56	0	16
Otto Twp.	14	0	5	9	0	7
Pentwater Twp.	24	0	5	19	0	9
Shelby Twp.	93	1	21	71	2	34
Weare Twp.	67	0	13	54	0	18
Hesperia	6	0	2	4	0	3
New Era	4	0	1	3	0	1
Pentwater	20	0	4	16	0	6
Rothbury	7	0	3	4	0	3
Walkerville	4	0	0	4	0	0
Hart	48	0	5	43	0	13
Shelby	26	0	6	20	0	6
Unknown City/Twp.	1	0	0	1	0	0
Ogemaw County						
Churchill Twp.	66	0	12	54	0	17
Cummings Twp.	41	0	8	33	0	9
Edwards Twp.	50	0	5	45	0	6
Foster Twp.	33	0	6	27	0	7
Goodar Twp.	14	0	3	11	0	3
Hill Twp.	66	2	17	47	2	26
Horton Twp.	98	0	16	82	0	25
Klacking Twp.	39	0	10	29	0	19
Logan Twp.	42	1	2	39	1	4
Mills Twp.	114	0	32	82	0	41
Ogemaw Twp.	117	0	16	101	0	24
Richland Twp.	34	1	8	25	1	17
Rose Twp.	78	1	11	66	3	15
West Branch Twp.	176	0	46	130	0	76
Prescott	7	0	1	6	0	1
Rose City	29	0	3	26	0	5
West Branch	75	0	22	53	0	29
Unknown City/Twp.	0	0	0	0	0	0
Ontonagon County						
Bergland Twp.	32	0	5	27	0	8
Bohemia Twp.	18	0	5	13	0	7
Carp Lake Twp.	42	0	7	35	0	11
Greenland Twp.	51	1	10	40	1	14
Haight Twp.	41	1	3	37	1	5
Interior Twp.	50	0	6	44	0	6
Matchwood Twp.	25	0	3	22	0	5
McMillan Twp.	38	0	4	34	0	5
Ontonagon Twp.	65	0	7	58	0	10
Rockland Twp.	35	0	5	30	0	5
Stannard Twp.	110	0	13	97	0	13
Ontonagon	42	0	7	35	0	8
Unknown City/Twp.	5	0	0	5	0	0
Osceola County						
Burdell Twp.	94	1	24	69	1	38
Cedar Twp.	25	0	6	19	0	7
Evart Twp.	60	0	11	49	0	16
Harwick Twp.	32	0	8	24	0	11
Hersey Twp.	85	1	13	71	1	37
Highland Twp.	70	0	16	54	0	19
Leroy Twp.	64	0	10	54	0	15
Lincoln Twp.	71	0	10	61	0	17
Marion Twp.	54	0	15	39	0	22
Middle Branch Twp.	79	0	16	63	0	24

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Orient Twp.	28	0	4	24	0	6
Osceola Twp.	40	0	6	34	0	10
Richmond Twp.	147	0	37	110	0	64
Rose Lake Twp.	44	0	8	36	0	11
Sherman Twp.	51	0	8	43	0	11
Sylvan Twp.	43	0	10	33	0	13
Hersey	3	0	1	2	0	3
Leroy	1	0	0	1	0	0
Marion	13	0	4	9	0	5
Tustin	2	0	0	2	0	0
Evart	61	0	25	36	0	30
Reed City	77	0	14	63	0	14
Unknown City/Twp.	2	0	2	0	0	2
Oscoda County						
Big Creek Twp.	130	2	24	104	2	31
Clinton Twp.	27	0	3	24	0	4
Comins Twp.	97	1	11	85	1	17
Elmer Twp.	40	0	7	33	0	7
Greenwood Twp.	54	2	7	45	2	18
Mentor Twp.	92	2	19	71	2	32
Unknown City/Twp.	1	0	1	0	0	1
Otsego County						
Bagley Twp.	157	1	48	108	1	75
Charlton Twp.	78	1	13	64	1	16
Chester Twp.	46	2	5	39	2	9
Corwith Twp.	85	0	23	62	0	33
Dover Twp.	32	0	3	29	0	4
Elmira Twp.	47	0	11	36	0	17
Hayes Twp.	56	1	14	41	1	27
Livingston Twp.	106	0	26	80	0	40
Otsego Lake Twp.	104	1	31	72	1	57
Vanderbilt	12	0	4	8	0	6
Gaylord	248	0	45	203	0	66
Unknown City/Twp.	4	0	1	3	0	1
Ottawa County						
Allendale Twp.	217	0	44	173	0	67
Blandon Twp.	102	0	17	85	0	23
Chester Twp.	53	2	12	39	2	21
Crockery Twp.	170	1	40	129	1	50
Georgetown Twp.	735	3	174	558	3	264
Grand Haven Twp.	267	5	56	206	6	107
Holland Twp.	1176	5	302	869	5	452
Jamestown Twp.	141	0	37	104	0	57
Olive Twp.	155	1	43	111	1	63
Park Twp.	243	1	67	175	1	97
Polkton Twp.	154	1	25	128	1	39
Port Sheldon Twp.	71	1	16	54	1	31
Robinson Twp.	122	1	33	88	1	62
Spring Lake Twp.	143	0	43	100	0	62
Tallmadge Twp.	190	3	38	149	3	62
Wright Twp.	130	0	20	110	0	31
Zeeland Twp.	166	0	35	131	0	75
Hope College	0	0	0	0	0	0
Coopersville	46	0	10	36	0	20
Ferrysburg	97	0	20	77	0	25
Fruitport	0	0	0	0	0	0
Hudsonville	150	0	26	124	0	40
Spring Lake	136	0	27	109	0	36
Zeeland	157	0	36	121	0	49
Grand Valley State Univ	0	0	0	0	0	0
Grand Haven	775	2	161	612	2	215
Holland	1022	0	262	760	0	370

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Unknown City/Twp.	1	0	0	1	0	0
Presque Isle County						
Allis Twp.	29	0	4	25	0	4
Bearinger Twp.	14	0	3	11	0	3
Belknap Twp.	67	0	4	63	0	4
Bismark Twp.	35	0	5	30	0	9
Case Twp.	34	1	11	22	1	18
Krakow Twp.	28	0	2	26	0	2
Metz Twp.	23	0	0	23	0	0
Moltke Twp.	21	0	5	16	0	5
North Allis Twp.	26	0	4	22	0	4
Ocqueoc Twp.	31	0	7	24	0	11
Posen Twp.	37	0	3	34	0	5
Presque Isle Twp.	44	0	9	35	0	10
Pulaski Twp.	35	0	1	34	0	2
Rogers Twp.	61	0	7	54	0	12
Millersburg	6	0	1	5	0	1
Posen	6	0	1	5	0	1
Onaway	11	1	3	7	1	8
Rogers City	65	1	19	45	1	25
Unknown City/Twp.	0	0	0	0	0	0
Roscommon County						
Au Sable Twp.	16	0	1	15	0	1
Backus Twp.	45	1	15	29	1	23
Denton Twp.	194	0	54	140	0	79
Gerrish Twp.	109	0	28	81	0	40
Higgins Twp.	99	1	20	78	1	30
Lake Twp.	45	0	3	42	0	5
Lyon Twp.	57	0	14	43	0	15
Markey Twp.	65	1	12	52	1	20
Nester Twp.	16	0	4	12	0	6
Richfield Twp.	119	0	28	91	0	39
Roscommon Twp.	140	4	31	105	4	50
Roscommon	19	0	6	13	0	12
Unknown City/Twp.	2	0	1	1	0	1
Saginaw County						
Albee Twp.	67	1	23	43	1	46
Birch Run Twp.	264	2	81	181	2	126
Blumfield Twp.	75	3	27	45	3	41
Brady Twp.	45	0	11	34	0	17
Brant Twp.	48	2	9	37	2	17
Bridgeport Twp.	422	3	106	313	5	155
Buena Vista Twp.	430	1	131	298	1	197
Carrollton Twp.	146	0	31	115	0	36
Chapin Twp.	22	0	6	16	0	17
Chesaning Twp.	91	0	21	70	0	25
Frankenmuth Twp.	98	1	17	80	1	25
Fremont Twp.	67	0	17	50	0	27
James Twp.	67	0	15	52	0	24
Jonesfield Twp.	32	1	5	26	1	8
Kochville Twp.	238	0	62	176	0	102
Lakefield Twp.	25	0	7	18	0	9
Maple Grove Twp.	57	2	15	40	3	27
Marion Twp.	27	0	3	24	0	6
Richland Twp.	137	0	36	101	0	53
Saginaw Twp.	1403	4	323	1076	4	456
St. Charles Twp.	58	0	16	42	0	29
Spaulding Twp.	49	0	10	39	0	14
Swan Creek Twp.	91	1	11	79	1	21
Taymouth Twp.	105	0	33	72	0	53
Tittabawassee Twp.	187	1	34	152	1	45
Thomas Twp.	349	2	84	263	3	127

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Zilwaukee Twp.	21	0	3	18	0	6
Birch Run	54	0	14	40	0	20
Merrill	6	0	2	4	0	2
Oakley	4	0	1	3	0	2
Tri Cty Airport	0	0	0	0	0	0
St. Charles	64	0	11	53	0	15
Zilwaukee	20	0	7	13	0	9
Chesaning	67	0	7	60	0	9
Frankenmuth	111	0	25	86	0	36
Saginaw Valley St. Col.	11	0	4	7	0	4
Saginaw	3044	7	811	2226	7	1171
Unknown City/Twp.	6	0	1	5	0	1
Sanilac County						
Argyle Twp.	38	0	4	34	0	7
Austin Twp.	52	0	3	49	0	5
Bridgehampton Twp.	36	1	4	31	2	12
Buel Twp.	43	0	11	32	0	15
Custer Twp.	47	0	10	37	0	15
Delaware Twp.	42	1	5	36	1	10
Elk Twp.	36	0	9	27	0	9
Elmer Twp.	36	0	6	30	0	10
Evergreen Twp.	54	0	8	46	0	10
Flynn Twp.	36	1	5	30	1	7
Forester Twp.	52	0	7	45	0	12
Fremont Twp.	24	0	8	16	0	13
Greenleaf Twp.	104	0	8	96	0	8
Lamotte Twp.	63	1	5	57	1	11
Lexington Twp.	86	0	21	65	0	30
Maple Valley Twp.	28	0	6	22	0	11
Marion Twp.	51	1	6	44	1	10
Marlette Twp.	71	0	24	47	0	42
Minden Twp.	18	0	3	15	0	3
Moore Twp.	41	0	4	37	0	4
Sanilac Twp.	73	1	17	55	1	29
Speaker Twp.	48	0	11	37	0	14
Washington Twp.	62	1	13	48	1	22
Watertown Twp.	69	0	13	56	0	19
Wheatland Twp.	31	0	1	30	0	1
Worth Twp.	86	0	28	58	0	40
Applegate	3	0	1	2	0	1
Carsonville	14	0	0	14	0	0
Deckerville	8	0	1	7	0	1
Forestville	2	0	0	2	0	0
Lexington	3	0	1	2	0	3
Melvin	1	0	0	1	0	0
Minden City	2	0	0	2	0	0
Peck	12	0	2	10	0	3
Port Sanilac	16	0	1	15	0	1
Brown City	21	0	5	16	0	8
Croswell	49	0	10	39	0	15
Marlette	69	0	10	59	0	11
Sandusky	84	0	12	72	0	19
Unknown City/Twp.	3	0	0	3	0	0
Schoolcraft County						
Doyle Twp.	51	0	2	49	0	2
Germfask Twp.	27	0	6	21	0	7
Hiawatha Twp.	61	0	6	55	0	9
Inwood Twp.	55	0	5	50	0	6
Manistique Twp.	32	0	5	27	0	5
Mueller Twp.	46	0	9	37	0	11
Seney Twp.	57	1	7	49	1	11
Thompson Twp.	44	2	8	34	2	16

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TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Manistique	94	0	21	73	0	28
Unknown City/Twp.	2	0	0	2	0	0
Shiawassee County						
Antrim Twp.	61	1	11	49	1	21
Bennington Twp.	118	1	24	93	1	36
Burns Twp.	88	2	20	66	2	29
Caledonia Twp.	190	2	51	137	2	74
Fairfield Twp.	22	0	7	15	0	9
Hazelton Twp.	29	0	15	14	0	19
Middlebury Twp.	46	0	7	39	0	12
New Haven Twp.	39	0	11	28	0	17
Owosso Twp.	155	1	53	101	2	75
Perry Twp.	167	3	35	129	4	45
Rush Twp.	49	1	17	31	1	23
Sciota Twp.	40	0	7	33	0	11
Shiawassee Twp.	107	0	24	83	0	42
Venice Twp.	75	1	25	49	2	41
Vernon Twp.	162	1	45	116	1	70
Woodhull Twp.	106	0	24	82	0	40
Bancroft	2	1	1	0	1	2
Byron	3	0	2	1	0	2
Morrice	7	0	1	6	0	1
New Lothrop	2	0	0	2	0	0
Vernon	5	0	2	3	0	4
Lennon	2	0	1	1	0	2
Laingsburg	25	0	4	21	0	4
Perry	31	0	9	22	0	14
Corunna	75	1	18	56	3	29
Durand	69	0	13	56	0	19
Owosso	490	1	112	377	1	152
Unknown City/Twp.	2	0	0	2	0	0
St. Clair County						
Berlin Twp.	71	0	22	49	0	34
Brockway Twp.	66	3	22	41	3	36
Burtchville Twp.	97	2	19	76	2	27
Casco Twp.	141	0	38	103	0	56
China Twp.	102	2	34	66	2	62
Clay Twp.	176	3	67	106	4	103
Clyde Twp.	178	1	36	141	1	48
Columbus Twp.	97	0	27	70	0	36
Cottreville Twp.	99	2	39	58	2	58
East China Twp.	47	0	17	30	0	26
Emmett Twp.	58	0	11	47	0	21
Fort Gratiot Twp.	381	0	119	262	0	199
Grant Twp.	38	1	9	28	1	12
Greenwood Twp.	40	0	5	35	0	5
Ira Twp.	168	2	55	111	2	81
Kenockee Twp.	47	0	14	33	0	16
Kimball Twp.	279	1	78	200	1	108
Lynn Twp.	33	0	1	32	0	3
Mussey Twp.	78	0	19	59	0	31
Port Huron Twp.	407	0	119	288	0	177
Riley Twp.	62	0	16	46	0	26
St. Clair Twp.	207	2	45	160	2	76
Wales Twp.	80	1	26	53	1	34
Emmett	4	0	1	3	0	1
Capac	15	0	3	12	0	4
Memphis	10	0	2	8	0	2
Yale	46	0	11	35	0	14
Algonac	56	0	19	37	0	26
Marine City	117	1	31	85	1	54
St. Clair	113	0	14	99	0	25

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Marysville	194	2	63	129	2	91
Port Huron	1413	2	346	1065	2	479
Unknown City/Twp.	10	0	1	9	0	1
St. Joseph County						
Burr Oak Twp.	62	0	13	49	0	18
Colon Twp.	64	2	11	51	2	18
Constantine Twp.	85	0	18	67	0	24
Fabius Twp.	227	3	53	171	3	88
Fawn River Twp.	60	1	14	45	1	21
Florence Twp.	72	1	19	52	1	28
Flowerfield Twp.	67	0	9	58	0	10
Leondias Twp.	59	1	9	49	1	13
Lockport Twp.	137	0	34	103	0	58
Mendon Twp.	73	0	11	62	0	12
Mottville Twp.	74	0	24	50	0	31
Nottawa Twp.	96	0	24	72	0	29
Park Twp.	117	0	27	90	0	55
Sherman Twp.	162	0	25	137	0	37
Sturgis Twp.	116	0	29	87	0	44
White Pigeon Twp.	84	1	18	65	1	27
Burr Oak	13	0	3	10	0	3
Mendon	17	0	4	13	0	5
Centreville	18	0	4	14	0	6
Colon	30	0	10	20	0	11
Constantine	39	0	5	34	0	8
White Pigeon	30	0	11	19	0	17
Sturgis	331	0	90	241	0	132
Three Rivers	260	0	58	202	0	75
Unknown City/Twp.	2	0	1	1	0	1
Tuscola County						
Akron Twp.	31	0	12	19	0	15
Almer Twp.	67	1	10	56	1	13
Arbela Twp.	61	2	21	38	2	41
Columbia Twp.	26	0	9	17	0	11
Dayton Twp.	64	0	11	53	0	22
Denmark Twp.	64	2	14	48	2	21
Elkland Twp.	82	1	7	74	1	9
Ellington Twp.	50	0	5	45	0	8
Elmwood Twp.	42	0	9	33	0	16
Fairgrove Twp.	36	1	10	25	1	18
Fremont Twp.	96	0	14	82	0	21
Gilford Twp.	28	2	9	17	2	15
Indian Fields Twp.	158	1	31	126	1	49
Juniata Twp.	70	1	12	57	1	21
Kingston Twp.	48	0	9	39	0	10
Koylton Twp.	58	1	10	47	2	16
Millington Twp.	91	2	28	61	2	47
Novesta Twp.	62	0	5	57	0	5
Tuscola Twp.	75	1	25	49	1	31
Vassar Twp.	116	1	37	78	1	51
Watertown Twp.	38	0	10	28	0	15
Wells Twp.	92	0	9	83	0	18
Wisner Twp.	26	1	8	17	1	12
Akron	0	0	0	0	0	0
Fairgrove	1	0	1	0	0	1
Gagetown	2	0	0	2	0	0
Kingston	11	0	2	9	0	3
Mayville	14	0	2	12	0	4
Unionville	9	0	3	6	0	4
Cass City	42	0	8	34	0	10
Millington	36	0	5	31	0	5
Reese	10	0	1	9	0	1

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Caro	189	0	41	148	0	52
Vassar	46	1	5	40	1	8
Unknown City/Twp.	2	0	1	1	0	1
Van Buren County						
Almena Twp.	111	2	23	86	2	35
Antwerp Twp.	208	1	53	154	3	88
Arlington Twp.	77	0	21	56	0	33
Bangor Twp.	50	0	22	28	0	32
Bloomingdale Twp.	95	1	21	73	1	27
Columbia Twp.	91	0	27	64	0	37
Covert Twp.	121	3	34	84	3	58
Decatur Twp.	58	3	18	37	3	31
Geneva Twp.	114	1	34	79	1	47
Hamilton Twp.	79	0	25	54	0	39
Hartford Twp.	154	1	43	110	1	66
Keeler Twp.	79	0	27	52	0	40
Lawrence Twp.	106	0	22	84	0	34
Paw Paw Twp.	221	3	53	165	3	87
Pine Grove Twp.	87	1	29	57	4	39
Porter Twp.	49	1	12	36	1	18
South Haven Twp.	264	1	82	181	2	128
Waverly Twp.	125	0	29	96	0	43
Bloomingdale	4	0	1	3	0	2
Breedsville	2	0	0	2	0	0
Gobles	20	0	5	150	0	5
Lawrence	12	0	1	11	0	1
Bangor	41	0	7	34	0	11
Decatur	46	0	11	35	0	15
Lawton	35	0	8	27	0	9
Mattawan	47	0	5	42	0	10
Hartford	38	0	7	31	0	9
Paw Paw	139	0	29	110	0	41
South Haven	177	1	37	139	1	56
Unknown City/Twp.	2	0	2	0	0	2
Washtenaw County						
Ann Arbor Twp.	422	0	106	316	0	157
Augusta Twp.	109	1	34	74	1	56
Bridgewater Twp.	80	4	16	60	4	24
Dexter Twp.	171	0	37	134	0	46
Freedom Twp.	60	0	8	52	0	10
Lima Twp.	142	1	26	115	1	32
Lodi Twp.	150	4	36	110	4	55
Lyndon Twp.	98	1	22	75	1	32
Manchester Twp.	89	0	20	69	0	27
Northfield Twp.	319	1	59	259	1	77
Pittsfield Twp.	1038	4	260	774	4	398
Salem Twp.	142	3	34	105	3	58
Saline Twp.	83	3	19	61	3	36
Scio Twp.	496	1	110	385	1	171
Sharon Twp.	84	0	23	61	0	39
Superior Twp.	289	6	80	203	8	120
Sylvan Twp.	231	1	49	181	1	71
Webster Twp.	133	1	25	107	1	39
York Twp.	175	0	40	135	0	50
Ypsilanti Twp.	1321	2	354	965	2	520
Barton Hills	2	0	0	2	0	0
Dexter	42	0	10	32	0	14
Hudson Mills Park	0	0	0	0	0	0
Manchester	42	0	13	29	0	17
Chelsea	117	0	20	97	0	22
Milan	66	0	13	53	0	20
Saline	184	1	33	150	1	50

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Eastern Mich Univ	10	0	0	10	0	0
Ypsilanti	991	1	208	782	1	306
Ann Arbor	3753	4	835	2914	5	1137
Unknown City/Twp.	11	0	1	10	0	1
Wayne County					0	0
Brownstown Twp.	709	1	241	467	1	364
Canton Twp.	1483	5	393	1085	5	585
Grosse Ile Twp.	110	0	26	84	0	42
Grosse Pointe Twp.	0	0	0	0	0	0
Huron Twp.	304	3	72	229	3	107
Northville Twp.	353	4	86	263	4	144
Plymouth Twp.	894	0	189	705	0	268
Redford Twp.	1912	4	446	1462	4	636
Sumpter Twp.	131	1	49	81	1	85
Van Buren Twp.	765	4	249	512	4	373
Belleville	107	0	30	77	0	51
Gibralter	38	0	15	23	0	19
Grosse Pointe Shores	28	0	7	21	0	8
Rockwood	57	1	20	36	1	33
Wood Haven	409	0	81	328	0	115
Flat Rock	185	0	45	140	0	64
Grosse Pointe	138	0	11	127	0	15
Lower Huron Park	2	0	1	1	0	2
Northville	100	0	25	75	0	29
Ecorse	326	1	87	238	1	105
Grosse Pointe Farms	244	1	50	193	1	66
Grosse Pointe Park	212	0	40	172	0	46
Grosse Pointe Woods	208	2	61	145	2	83
Harper Woods	541	2	159	380	2	212
Melvindale	317	0	77	240	0	118
Plymouth	254	1	59	194	1	73
River Rouge	139	0	33	106	0	43
Riverview	249	2	63	184	2	94
Romulus	1286	11	364	911	13	541
Trenton	449	0	137	312	0	199
Wayne	673	3	173	497	3	251
Allen Park	1059	8	265	786	8	364
Garden City	920	1	306	613	1	460
Hamtramck	660	0	137	523	0	179
Highland Park	927	5	266	656	5	411
Inkster	835	4	196	635	4	295
Southgate	1166	4	330	832	4	479
Wyandotte	788	5	162	621	5	203
Detroit Metro Airport	210	0	37	173	0	56
Dearborn Heights	1860	3	512	1345	3	720
Lincoln Park	1432	2	403	1027	2	582
Taylor	2771	4	906	1861	5	1372
Westland	2073	5	758	1310	5	1138
Dearborn	5095	6	1461	3628	7	2114
Livonia	3904	11	1088	2805	11	1616
Detroit	47419	118	13375	33926	124	19793
Unknown City/Twp.	14	0	2	12	0	2
Wexford County						
Antioch Twp.	65	0	19	46	0	30
Boon Twp.	27	0	9	18	0	12
Cedar Creek Twp.	36	0	7	29	0	9
Cherry Grove Twp.	66	2	13	51	2	19
Clam Lake Twp.	139	1	29	109	1	52
Colfax Twp.	29	0	3	26	0	6
Greenwood Twp.	18	0	2	16	0	4
Haring Twp.	190	1	45	144	1	76
Hanover Twp.	11	0	6	5	0	6

TRAFFIC CRASH SUMMARY FOR CITIES 1993 (continued)

	Total Crashes	Fatal Crashes	Personal Injury Crashes	Property Damage Crashes	Persons Killed	Persons Injured
Henderson Twp.	24	1	10	13	1	11
Liberty Twp.	39	1	10	28	2	12
Selma Twp.	87	2	23	62	2	42
Slagle Twp.	18	0	7	11	0	7
South Branch Twp.	36	0	3	33	0	3
Springville Twp.	49	0	14	35	0	19
Wexford Twp.	19	0	3	16	0	6
Buckley	12	0	4	8	0	7
Harrietta	3	0	1	2	0	1
Mesick	19	0	4	15	0	4
Manton	29	1	8	20	1	13
Cadillac	478	0	79	399	0	108
Unknown City/Twp.	9	0	3	6	0	4
Unknown County						
Unknown City/Twp.	463	0	74	389	0	92

MOTOR VEHICLE TRAFFIC DEATHS IN MICHIGAN BY MONTH

Revised December 18, 2006

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1942	139	114	89	96	129	92	120	125	146	109	87	79	1,325
1943	59	51	79	44	75	89	82	67	110	118	96	122	922
1944	130	100	81	82	49	57	59	95	68	97	116	100	1,034
1945	71	60	85	78	74	71	94	88	118	160	131	120	1,150
1946	107	98	121	88	110	106	119	130	123	143	160	165	1,470
1947	86	86	85	113	124	114	134	149	134	142	145	135	1,447
1948	89	64	92	109	125	118	138	134	150	133	165	195	1,512
1949	101	82	160	91	110	99	116	138	169	144	149	136	1,441
1950	105	84	87	139	122	125	153	152	157	174	154	153	1,605
1951	131	103	103	117	119	137	170	163	158	146	160	133	1,640
1952	81	121	125	94	145	169	140	184	181	152	166	178	1,736
1953	139	116	136	132	134	173	176	183	187	187	167	175	1,905
1954	130	126	100	119	149	132	182	167	168	167	153	200	1,793
1955	134	117	116	160	157	192	169	209	160	204	208	190	2,016
1956	166	136	132	140	133	115	149	159	169	144	145	158	1,746
1957	121	98	118	118	130	122	127	152	123	143	135	161	1,548
1958	94	90	95	89	92	112	120	134	132	113	165	146	1,382
1959	76	69	91	126	126	124	148	128	155	125	144	161	1,473
1960	139	76	102	105	107	133	159	154	137	186	152	154	1,604
1961	105	99	113	138	133	114	141	166	128	139	148	143	1,567
1962	94	70	115	110	123	147	166	175	170	172	118	114	1,574
1963	107	95	124	142	148	173	188	177	163	179	196	195	1,887
1964	170	159	158	144	164	167	217	197	177	199	177	193	2,122
1965	153	113	135	143	156	181	211	220	193	214	172	245	2,136
1966	147	156	179	151	207	204	212	206	203	220	205	208	2,298
1967	130	105	141	162	187	140	210	189	223	230	216	204	2,137
1968	130	147	164	150	240	214	208	233	209	248	283	166	2,392
1969	137	158	173	169	239	236	218	254	230	236	219	218	2,487
1970	167	143	160	141	214	205	197	204	213	217	178	138	2,177
1971	137	124	155	144	187	212	222	227	155	209	202	178	2,152
1972	156	161	155	150	204	209	225	210	225	219	174	170	2,258
1973	187	156	173	140	180	230	225	201	204	209	171	137	2,213
1974	111	112	107	116	144	197	189	178	200	195	201	125	1,875
1975	120	97	112	93	149	169	195	203	190	162	161	160	1,811
1976	118	102	134	150	163	169	196	227	189	171	174	162	1,955
1977	126	87	122	143	184	179	223	194	164	189	181	158	1,950
1978	98	104	128	177	178	203	206	229	214	199	183	157	2,076
1979	102	103	129	152	146	155	190	171	174	187	171	169	1,849
1980	117	131	109	116	153	170	142	183	192	152	133	176	1,774
1981	99	100	108	116	116	155	159	171	149	155	113	148	1,589
1982	98	79	93	91	114	121	154	153	128	144	131	111	1,417
1983	113	94	83	91	91	127	121	117	131	153	115	95	1,331
1984	93	84	104	94	125	143	175	174	135	153	134	142	1,556
1985	108	91	77	133	137	167	146	136	131	135	161	147	1,569
1986	86	77	103	127	131	175	186	176	131	144	159	137	1,632
1987	91	104	99	106	138	165	151	176	149	164	161	128	1,632
1988	129	107	103	104	145	152	175	158	178	159	127	167	1,704
1989	138	102	94	96	123	156	156	177	155	146	123	164	1,630
1990	99	84	122	94	135	151	165	170	141	147	130	125	1,563
1991	103	79	115	106	129	145	130	141	125	129	104	119	1,425
1992	83	81	83	86	100	122	134	119	123	129	120	120	1,300
1993	123	91	89	72	127	103	149	140	131	146	134	109	1,414

MOTOR VEHICLE TRAFFIC CRASH AND RELATED DATA

Year	Deaths	Injuries	Crashes	Est. Mileage (Millions)	Motor Vehicle Registrations*	Death Rate Per 100 mil. miles of travel
1948	1,512	40,892	140,172	19,069.2	2,030,685	7.9
1949	1,441	41,197	143,197	19,990.4	2,203,375	7.2
1950	1,605	45,734	161,750	21,494.5	2,439,593	7.5
1951	1,640	48,418	176,587	22,668.1	2,560,652	7.2
1952	1,736	49,119	160,829	23,093.1	2,586,834	7.5
1953	1,905	57,834	184,174	25,346.9	2,808,921	7.5
1954	1,793	56,444	185,534	26,041.2	2,889,740	6.9
1955	2,016	62,234	196,812	28,282.5	3,149,323	7.1
1956	1,746	61,158	197,995	28,429.3	3,173,704	6.1
1957	1,548	60,067	191,915	29,252.2	3,256,150	5.3
1958	1,382	57,767	177,934	29,411.3	3,157,441	4.7
1959	1,473	64,873	198,771	30,679.0	3,252,492	4.8
1960	1,604	91,026	209,724	31,842.4	3,352,234	5.0
1961	1,567	93,350	199,973	32,101.5	3,395,736	4.9
1962	1,574	108,143	233,078	34,498.0	3,498,758	4.6
1963	1,887	126,896	261,794	36,452.2	3,646,080	5.2
1964	2,122	144,623	284,444	38,617.6	3,860,791	5.5
1965	2,136	155,258	310,598	40,857.4	4,066,826	5.2
1966	2,298	156,694	302,880	43,940.1	4,133,199	5.2
1967	2,137	151,297	299,004	45,053.6	4,161,573	4.7
1968	2,392	160,413	305,495	48,047.4	4,327,885	5.0
1969	2,487	175,400	331,223	50,904.9	4,560,097	4.9
1970	2,177	161,719	313,715	53,148.1	4,683,919	4.1
1971	2,152	157,664	314,015	55,539.7	4,835,146	3.9
1972	2,258	178,929	359,745	57,817.1	5,160,985	3.9
1973	2,213	169,485	350,864	58,478.4	5,442,233	3.8
1974	1,875	141,132	324,763	55,748.7	5,652,406	3.4
1975	1,811	147,299	333,560	56,260.5	5,744,441	3.2
1976	1,955	162,894	365,600	61,638.0	5,861,908	3.2
1977	1,950	166,389	374,751	64,853.0	6,138,732	3.0
1978	2,076	169,202	389,193	67,380.0	6,436,365	3.1
1979	1,849	162,571	366,435	64,882.3	6,536,246	2.8
1980	1,774	144,972	314,594	61,190.1	6,570,735	2.9
1981	1,589	136,455	302,831	62,000.0	6,140,286	2.6
1982	1,417	130,061	294,971	61,321.0	6,400,942	2.3
1983	1,331	135,811	300,797	63,560.1	6,443,499	2.1
1984	1,556	150,740	335,193	65,727.0	6,509,192	2.4
1985	1,569	157,417	386,904	68,413.0	6,857,364	2.3
1986	1,632	158,032	400,694	70,622.0	6,952,263	2.3
1987	1,632	156,318	397,224	75,715.0	7,061,339	2.2
1988	1,704	155,713	410,437	77,700.0	7,196,609	2.2
1989	1,630	154,537	417,252	79,900.0	7,233,823	2.0
1990	1,563	145,179	387,180	81,200.0	7,300,853	1.9
1991	1,425	135,830	364,847	81,900.0	7,329,789	1.7
1992	1,300	118,727	344,942	84,000.0	7,411,192	1.5
1993	1,414	134,548	363,636	85,700.0	7,495,904	1.6

*Excludes trailers and trailer coaches.

REGISTRATION TRANSACTIONS
(Includes Original, Renewal, Correction, and Replacements)
Registration data courtesy of the Michigan Department of State [8]

COUNTY	VEHICLE						OTHER		
	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Alcona	6,571	3,023	2,042	115	11,751	525,860.59	2,183	436	45
Alger	4,693	2,678	1,315	171	8,857	381,292.04	1,519	932	20
Allegan	51,440	20,968	11,854	1,521	85,783	4,264,376.49	9,320	1,556	347
Alpena	18,322	8,708	5,267	401	32,698	1,617,792.06	4,249	1,177	57
Antrim	12,238	4,894	3,405	313	20,850	964,248.05	4,470	961	90
Arenac	9,163	4,362	2,759	220	16,504	814,108.49	3,242	582	30
Baraga	3,831	2,236	1,016	103	7,186	357,864.86	874	439	14
Barry	28,717	12,018	7,426	937	49,098	2,191,293.63	7,649	937	175
Bay	69,128	21,342	15,742	1,616	107,828	5,456,364.20	9,682	2,883	441
Benzie	8,385	3,485	2,280	247	14,397	618,921.00	3,162	638	59
Berrien	99,049	30,701	16,008	2,483	148,241	7,224,477.39	12,496	1,720	743
Branch	22,750	10,185	5,843	675	39,453	1,975,770.51	5,752	495	167
Calhoun	82,552	24,471	13,565	2,042	122,630	5,871,438.46	9,950	913	618
Cass	25,977	10,930	5,910	742	43,559	2,018,997.53	7,646	1,119	168
Charlevoix	14,586	6,000	3,725	453	24,764	1,208,646.40	3,953	1,321	85
Cheboygan	13,508	6,424	3,927	354	24,213	1,150,208.10	4,554	1,778	97
Chippewa	16,575	8,237	4,837	428	30,077	1,475,213.91	4,338	2,651	130
Clare	15,679	7,325	4,434	362	27,800	1,246,399.22	3,856	859	74
Clinton	33,822	12,948	8,335	848	55,953	2,771,142.33	5,507	1,422	338
Crawford	6,693	3,112	2,068	161	12,034	559,874.89	2,453	756	27
Delta	22,405	10,864	6,726	620	40,615	1,945,388.92	4,350	1,808	181
Dickinson	15,554	7,667	4,758	564	28,543	1,438,987.67	3,193	1,331	176
Eaton	55,072	18,344	11,185	1,375	85,976	5,288,861.35	7,613	1,215	321
Emmet	17,495	6,803	4,026	474	28,798	1,431,156.84	4,387	1,492	164
Genesee	262,645	68,358	39,156	5,423	375,582	18,785,424.27	29,437	6,149	960
Gladwin	13,701	6,386	4,000	393	24,480	1,126,410.35	4,111	799	77
Gogebic	9,201	4,473	2,121	215	16,010	732,674.21	2,395	961	49
Grand Traverse	46,202	14,867	11,127	1,064	73,260	3,705,234.33	11,155	2,485	192

REGISTRATION TRANSACTIONS (continued)

COUNTY	VEHICLE						OTHER		
	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Gratiot	22,257	9,403	5,941	614	38,215	1,940,021.01	3,137	805	158
Hillsdale	23,923	10,817	5,738	707	41,185	2,006,257.06	4,238	487	192
Houghton	17,244	6,527	2,974	465	27,210	1,304,271.31	2,947	1,536	90
Huron	22,292	10,297	5,663	507	38,759	2,030,682.34	2,967	1,341	190
Ingham	175,842	38,779	20,728	3,448	238,797	12,473,214.84	15,527	2,126	1,084
Ionia	29,608	12,118	6,885	800	49,411	2,309,683.65	4,522	713	264
Iosco	16,570	6,879	4,777	393	28,619	1,335,451.52	4,833	800	96
Iron	7,157	4,004	2,233	189	13,583	639,173.52	2,338	700	46
Isabella	25,674	10,292	6,009	641	42,616	2,310,868.89	3,782	804	133
Jackson	88,111	28,795	16,050	2,391	135,347	6,741,103.41	14,114	1,806	534
Kalamazoo	141,269	34,115	20,154	3,222	198,760	10,001,259.70	17,361	1,793	777
Kalkaska	8,009	4,962	2,906	252	16,129	1,213,312.44	2,248	910	19
Kent	326,320	86,009	55,424	6,872	474,625	28,419,058.38	39,333	5,487	1,843
Keweenaw	880	379	215	16	1,490	65,230.10	311	86	7
Lake	4,948	2,504	1,391	126	8,969	391,108.56	1,897	421	15
Lapeer	46,004	19,437	10,051	1,388	76,880	3,739,123.76	5,730	1,673	169
Leelanau	11,077	4,169	3,101	250	18597	868,413.82	4,316	837	75
Lenawee	54,151	20,332	10,805	1,596	86,884	4,203,397.00	7,776	1,752	529
Livingston	82,243	26,654	15,909	2,276	127,082	7,041,521.83	13,471	2,727	272
Luce	2,995	1,898	1,301	66	6,260	333,879.47	1,242	642	20
Mackinac	5,992	3,180	1,788	146	11,106	522,561.49	2,727	1,509	35
Macomb	500,386	97,580	51,128	8,589	657,683	35,785,245.47	43,227	8,522	2,044
Manistee	13,831	6,028	3,664	361	23,884	1,117,474.08	3,214	687	109
Marquette	37,557	15,935	7,940	1,218	62,650	2,929,668.66	6,856	3,091	189
Mason	15,468	6,481	4,037	422	26,408	1,263,518.12	3,699	568	132
Mecosta	18,247	7,683	4,480	405	30,815	1,449,611.91	4,160	672	73
Menominee	13,005	5,996	3,965	391	23,357	1,128,147.04	2,392	1,012	297
Midland	51,743	14,408	11,098	1,355	78,604	3,702,835.19	8,285	1,195	245
Missaukee	6,512	3,902	2,295	151	12,860	611,940.34	1,867	648	46

REGISTRATION TRANSACTIONS (continued)

COUNTY	VEHICLE						OTHER		
	Passenger	Commercial	Trailer	Motorcycle	Total Plates	Total Revenue	Watercraft	Snowmobile	Moped
Monroe	81,063	28,429	14,119	2,331	125,942	6,191,988.22	9,354	2,328	536
Montcalm	30,067	13,384	7,887	756	52,094	2,438,801.99	5,930	911	324
Montmorency	5,357	2,960	1,762	123	10,202	471,866.57	1,926	820	18
Muskegon	96,697	27,683	18,142	2,755	145,277	6,650,723.63	13,217	1,858	719
Newaygo	22,653	10,317	6,403	633	40,006	1,801,398.16	5,672	969	170
Oakland	758,977	135,391	75,921	13,336	983,625	58,539,747.14	71,452	12,641	2,422
Oceana	12,942	6,260	3,010	345	22,557	1,061,301.15	2,446	600	128
Ogemaw	11,321	5,854	3,590	270	21,035	1,030,148.35	2,968	855	58
Ontonagon	4,639	2,645	1,460	127	8,871	413,362.63	1,096	805	12
Osceola	11,677	5,967	3,133	284	21,061	1,051,242.81	2,204	652	60
Oscoda	4,839	2,564	1,490	127	9,020	417,761.59	1,676	461	17
Otsego	11,743	5,556	3,268	293	20,860	1,186,509.90	2,596	1,383	39
Ottawa	120,220	34,154	26,879	2,772	184,025	9,525,246.44	19,021	3,114	1,152
Presque Isle	8,298	4,556	2,605	157	15,616	737,874.02	2,537	881	45
Roscommon	14,255	5,663	4,202	281	24,401	1,133,916.22	5,676	1,985	151
Saginaw	130,824	34,385	23,636	2,166	191,011	9,919,084.04	15,646	3,858	469
St. Clair	94,458	30,898	15,542	2,422	143,320	7,200,699.86	12,567	2,281	471
St. Joseph	33,998	13,362	7,752	1,217	56,329	2,601,025.86	7,640	574	318
Sanilac	24,137	10,896	5,223	660	40,916	2,059,137.39	2,006	791	75
Schoolcraft	4,526	2,652	1,704	118	9,000	434,650.06	1,792	740	30
Shiawassee	41,782	16,464	9,506	1,260	69,012	3,334,164.60	5,433	1,524	269
Tuscola	32,358	14,387	8,662	897	56,304	2,597,026.45	4,236	1,684	184
Van Buren	39,095	15,627	7,846	1,090	63,658	2,902,282.25	7,345	1,073	306
Washtenaw	170,641	36,688	17,123	3,795	228,247	11,567,445.69	13,997	2,286	648
Wayne	1,219,259	201,749	90,052	17,354	1,528,414	85,876,727.89	67,572	9,627	3,644
Wexford	16,552	6,823	4,421	434	28,230	1,381,372.02.	3,999	1,185	87
Non-Resident	57,002	16,719	11,444	265	85,430	23,938,669.97	33,422	2,829	118
Unknown County							800	48	7
Totals	5,814,649	1,533,405	870,289	119,845	8,338,188		726,239	143,928	28,005

REFERENCES AND REPORTING AGENCIES

[1]   Michigan Information Center, Michigan Department of Management and Budget,
       P.O. Box 30026, Lansing, MI 48909.

[2]   ACCIDENT FACTS 1994 Edition. National Safety Council, 1121 Spring Lake Drive,
       Itasca, IL 60143, 1994.

[3]   Streff, Fredrick M.; Molnar, Lisa J. Societal Costs of Traffic Crashes and
       Crime in Michigan: A Four-year Update. UMTRI-94-46, University of Michigan
       Transportation Research Institute, Ann Arbor, MI 48109-2150, December 1994.

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

[5]   Michigan Department of Transportation, Bureau of Urban and Public
       Transportation, Freight Services and Safety Division, Lansing, MI 48909.

[6]   1993 Fatal Accident Reporting System Version 235 data file. U.S. Department of
       Transportation, National Highway Traffic Safety Administration, National Center for
       Statistics and Analysis, Washington, D.C. 20590.

[7]   Michigan Department of State, Bureau of Driver Improvement, Program
       Development Section, Lansing, MI 48918.

[8]   Michigan Department of State, Bureau of Research and Management Systems,
       Finance Division, Lansing, MI 48918.

SUPPORT DOCUMENTATION FOR
THE STATE OF MICHIGAN TRAFFIC CRASH REPORT

1)   State of Michigan Traffic Crash System Office of Highway Safety Planning 1993
      Crash Data Tape Layout.

2)   State of Michigan UD-10 Traffic Crash Report Instruction Manual.