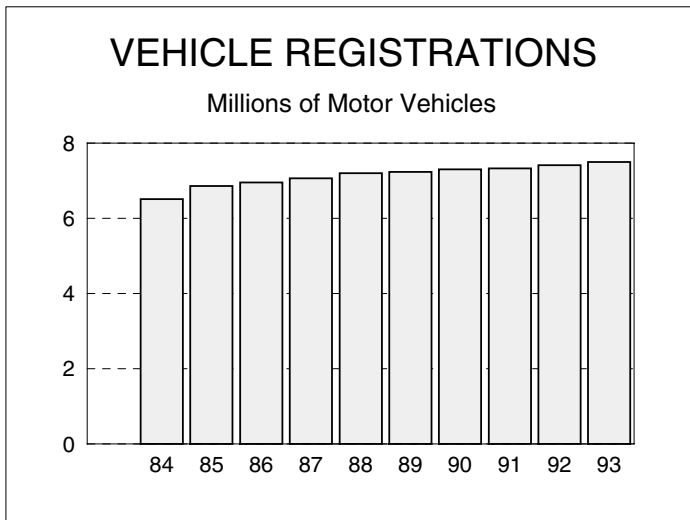
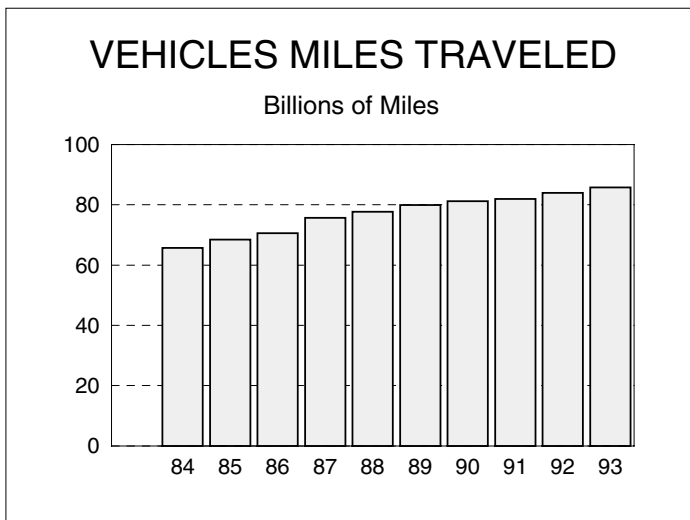


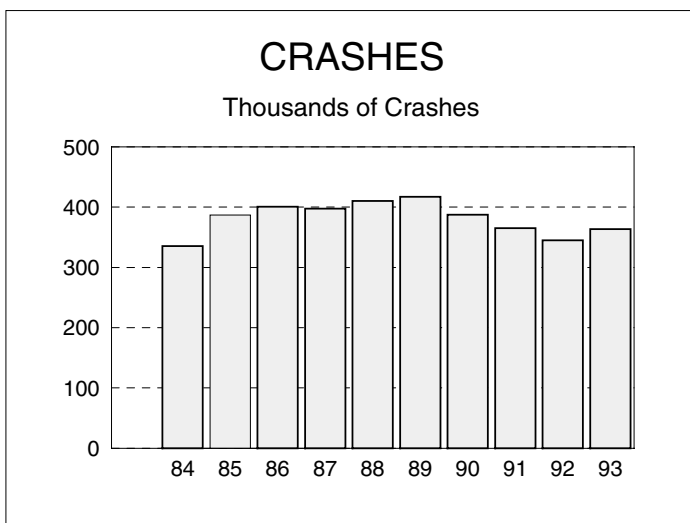
# 10 YEAR



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

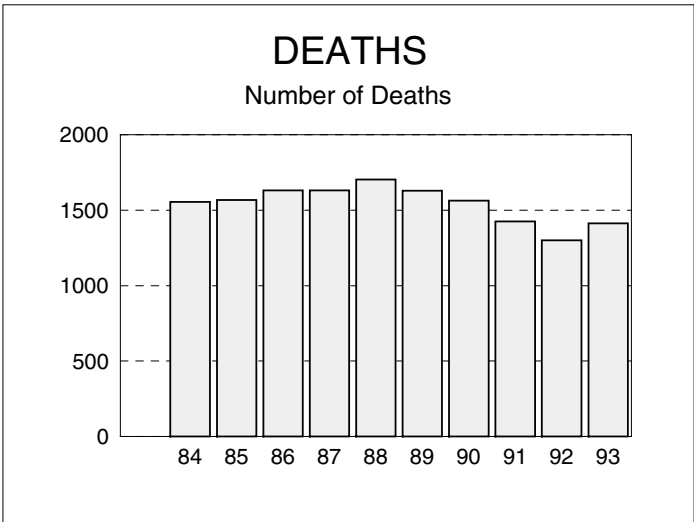


Vehicle miles of travel have increased about 30.4% since 1984, reaching 85.7 billion miles in 1993.

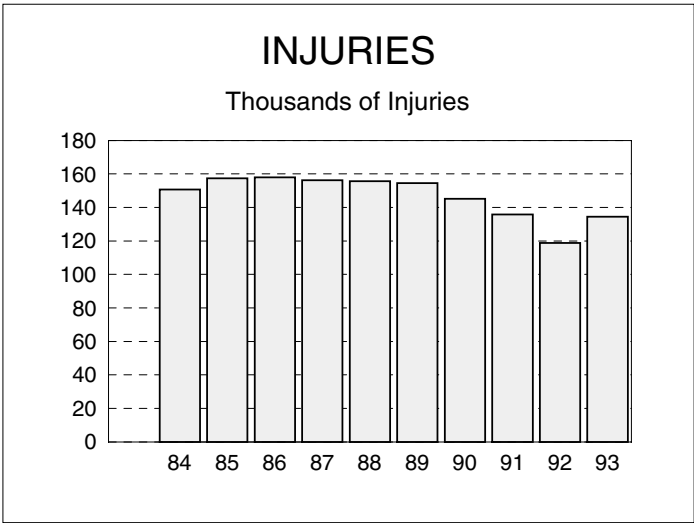


Total crashes increased from 1984, peaking in 1989. Since 1989, total number of crashes has decreased. In 1993, there were 363,636 total crashes statewide.

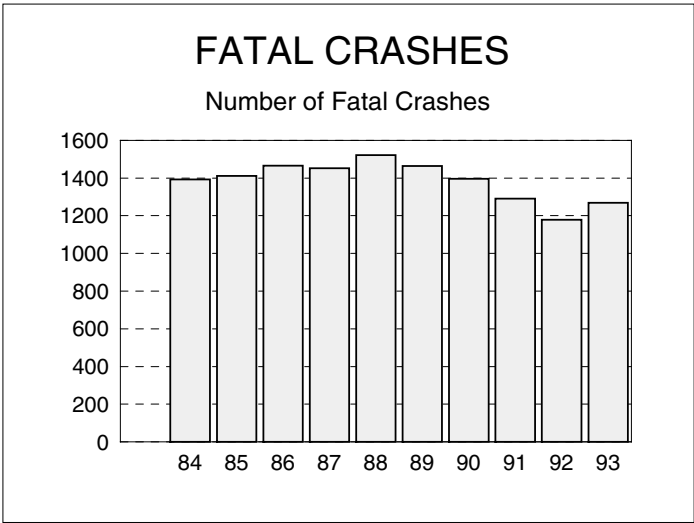
# 10 YEAR TRENDS (continued)



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.

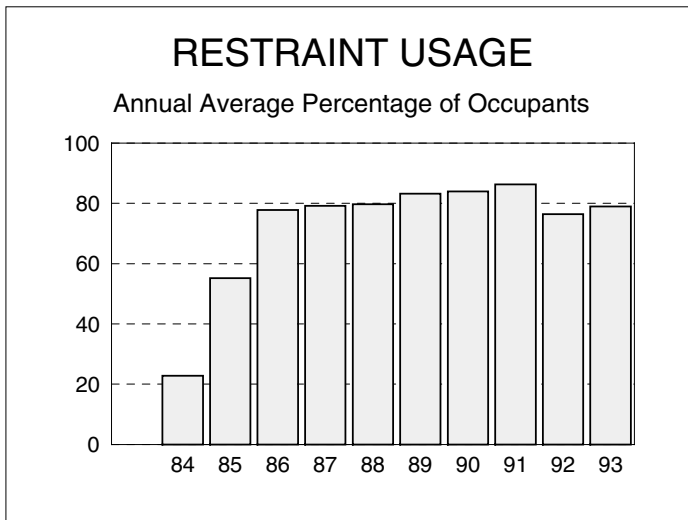


Mirroring the trend in deaths, nonfatal injuries had declined since 1986, to a low in 1992. 134,548 people received nonfatal injuries in Michigan motor vehicle crashes in 1993, up 13.3% from 1992.

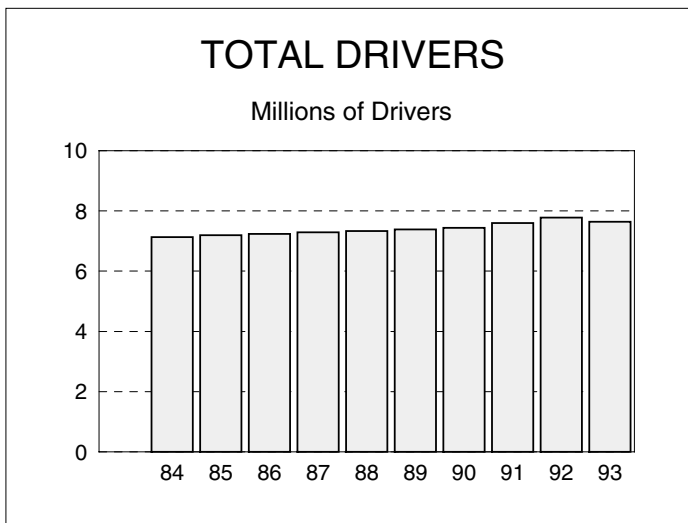


After reaching a peak in 1988, fatal crashes declined to 29.1% in 1992. In 1993, there were 1,269 fatal crashes, up 7.6% from 1992.

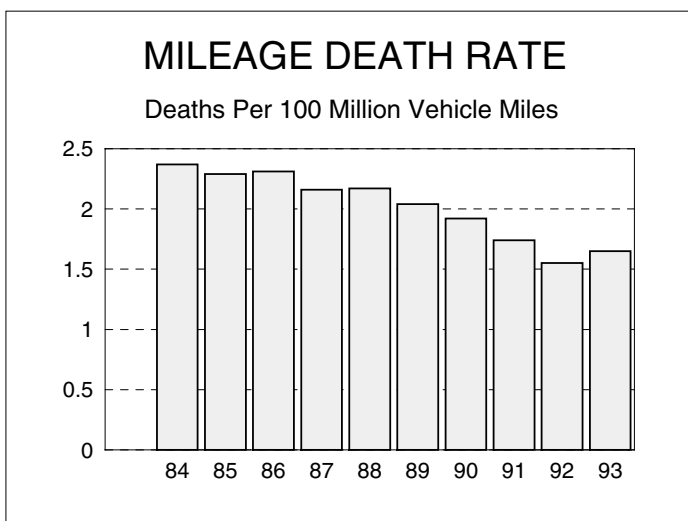
# 10 YEAR



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.

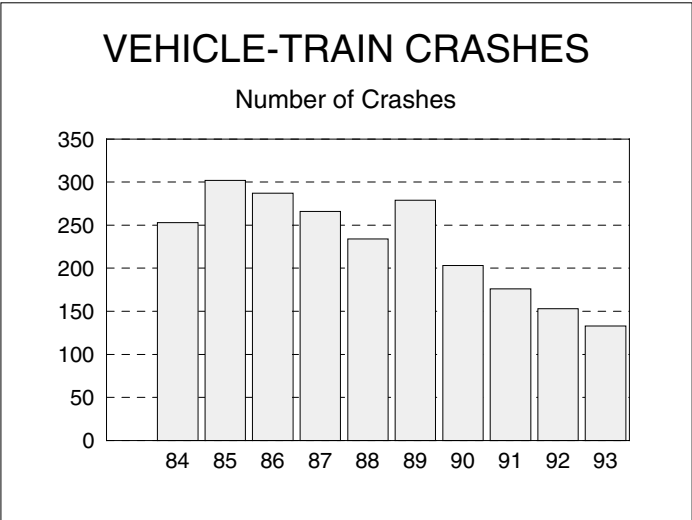


The number of drivers in Michigan declined for the first time in 10 years. Down 1.8% to 7.64 million drivers in 1993.

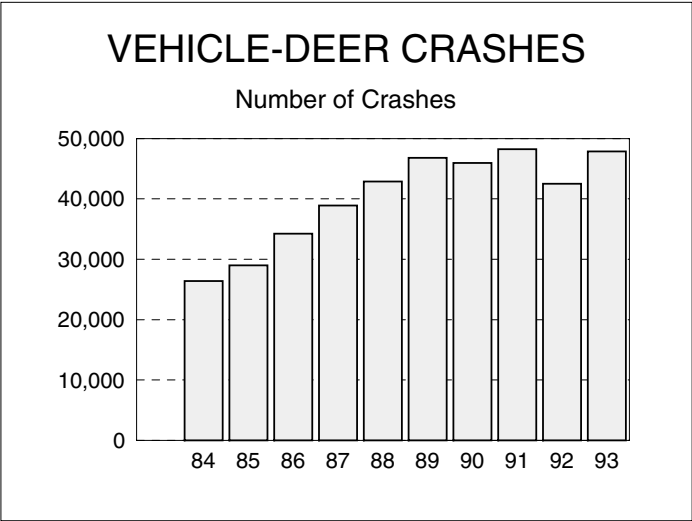


After a 10 year high of 2.4 deaths per 100 million vehicle miles in 1984, the death rate per mile driven has declined dramatically. The 1.6 death rate in 1993, is a 33.3% decrease from the 1984 peak.

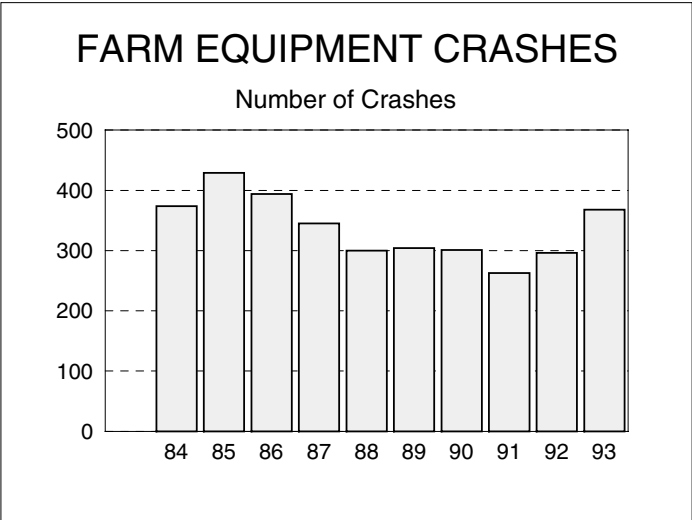
# 10 YEAR TRENDS (continued)



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

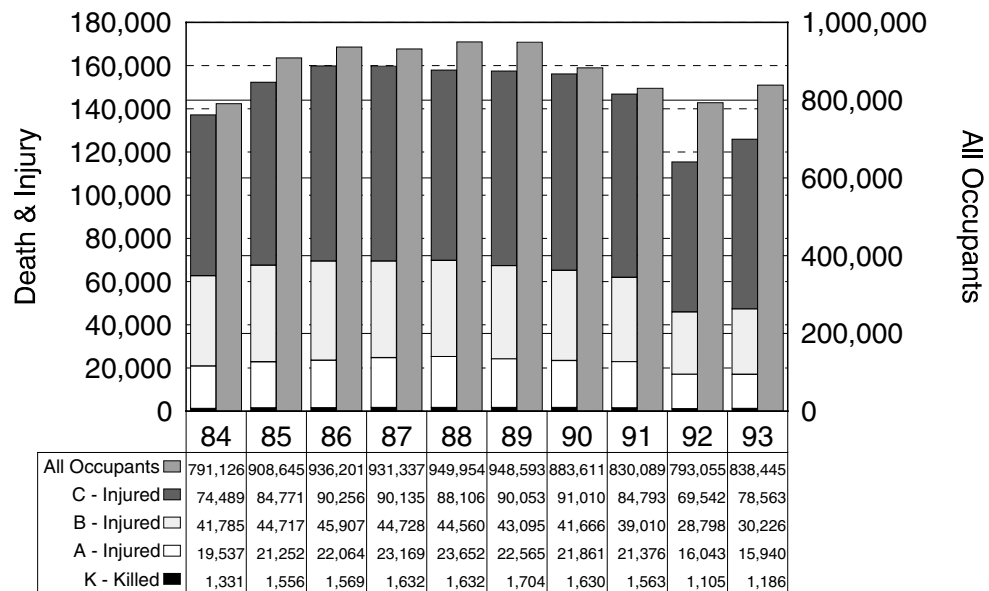


There has been an 81.2% rise from 26,420 vehicle-deer crashes in 1984 to 47,879 in 1993.



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

## DEATH & INJURY PER CRASH INVOLVED OCCUPANT



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.

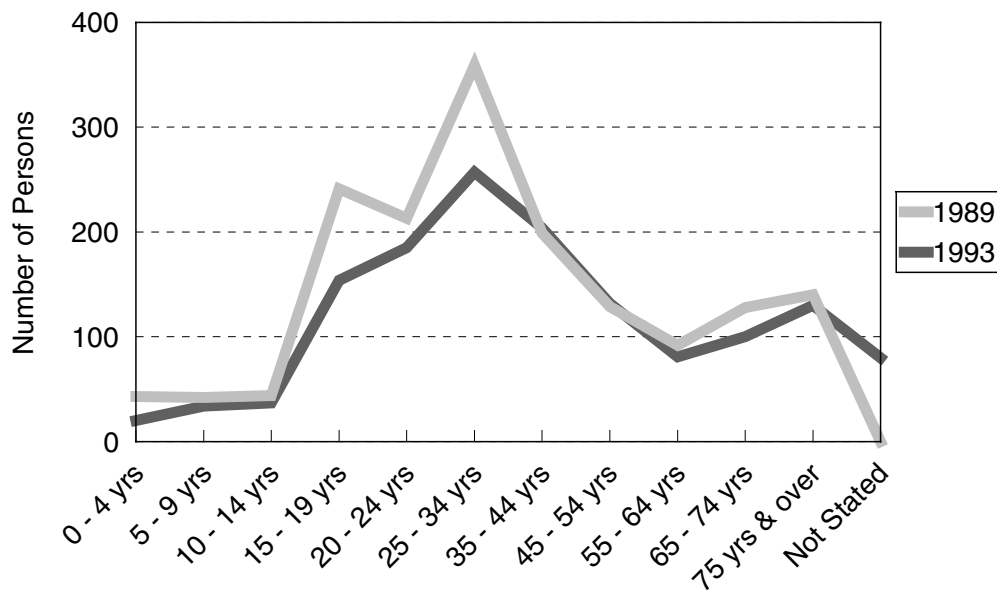
# 5

## YEAR

### 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.

# 5 YEAR

TREND DATA FOR FATALITIES	1989	1990	1991	1992	1993
---------------------------	------	------	------	------	------

## Age of Persons Killed, Pedestrians

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

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

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

# 5

## YEAR

### FATAL CRASHES AND PERSONS KILLED FOR SELECTED HOLIDAY PERIODS IN MICHIGAN

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

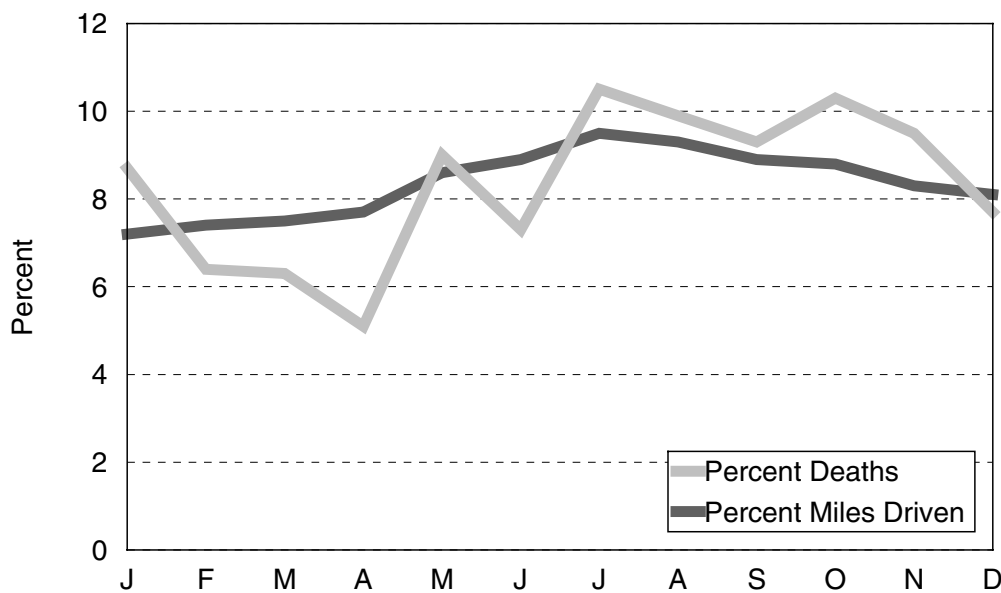
Figures in parentheses show number of full days in each holiday period. Deaths are for these days plus six hours of the preceding day.

# 5 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
<b>NUMBER OF CRASHES</b>			
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
<b>Total</b>	<b>344,942</b>	<b>363,636</b>	<b>5.4</b>
<b>ALCOHOL IN FATAL CRASHES</b>			
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
<b>PERSONS IN CRASHES</b>			
Killed and Injured .....	120,027	135,962	13.3
Not Injured .....	444,695	481,618	8.3
<b>Total</b>	<b>638,716</b>	<b>682,099</b>	<b>6.8</b>
<b>PERSONS INJURED</b>			
"A" Injury .....	17,076	18,028	5.6
"B" Injury .....	30,554	33,576	9.9
"C" Injury .....	71,097	82,944	16.7
<b>Total</b>	<b>118,727</b>	<b>134,548</b>	<b>13.3</b>
<b>PERSONS KILLED</b>			
Male .....	874	928	6.2
Female .....	426	486	14.1
<b>Total</b>	<b>1,300</b>	<b>1,414</b>	<b>8.8</b>
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
<b>Total</b>	<b>1,300</b>	<b>1,414</b>	<b>8.8</b>

## 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.

