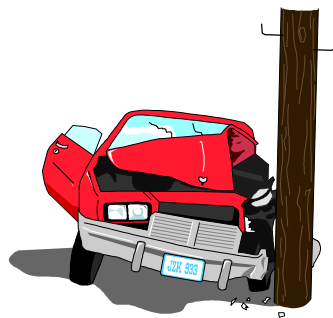


## SPECIAL FOCUS - AGE

### Drivers on Michigan Roads:

The following tables describe driver actions and crash characteristics for motor vehicle drivers age 16-24; 25-64; and 65-98. These tables are provided to demonstrate the differences in the nature of the crashes for these age groups.

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



### Nationally:

*According to the American Academy of Pediatrics [9], motor vehicle-related crashes remain the leading cause of death in youth from 16 through 20 years of age, resulting in more than 5,000 such deaths annually. This age group constitutes only 7 percent of the US population yet accounts for 14 percent of all motor vehicle-related deaths. Youth 16 through 19 years of age constitute 5 percent of all licensed drivers and 3 percent of all vehicle miles traveled, yet teenage drivers are involved in 15 percent of the crashes in which they or other occupants are killed. The motor vehicle fatality rate of teenagers is higher than that of any other age group; on a per-mile-driven basis, 16-year-old drivers are more than 20 times as likely to have a crash as is the general population of drivers, and 17-year-old drivers are more than 6 times as likely.*



## DRIVER AGE 16-24

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Going straight ahead	85,873	54.0	332	76.7	24,015	56.1
Turning left	14,666	9.2	18	4.2	4,503	10.5
Turning right	4,483	2.8	1	0.2	852	2.0
Stopped on roadway	13,200	8.3	10	2.3	3,783	8.8
In prior crash	236	0.1	0	0.0	78	0.2
Changing lanes	3,936	2.5	10	2.3	663	1.5
Backing	3,579	2.3	0	0.0	252	0.6
Slowing/stopping on roadway	14,995	9.4	13	3.0	3,796	8.9
Slowing/stopping other	187	0.1	0	0.0	49	0.1
Starting up on roadway	3,219	2.0	0	0.0	871	2.0
Starting up other	95	0.1	0	0.0	34	0.1
Entering parking	172	0.1	0	0.0	23	0.1
Leaving parking	668	0.4	0	0.0	144	0.3
Entering roadway	3,041	1.9	5	1.2	817	1.9
Leaving roadway	361	0.2	7	1.6	115	0.3
Making U-turn	351	0.2	3	0.7	101	0.2
Overtaking or passing	1,784	1.1	15	3.5	446	1.0
Avoiding object	723	0.5	2	0.5	248	0.6
Avoiding pedestrian	55	0.0	0	0.0	24	0.1
Avoiding vehicle (front/back)	1,574	1.0	6	1.4	470	1.1
Avoiding vehicle (angle)	639	0.4	1	0.2	203	0.5
Driverless moving	45	0.0	0	0.0	10	0.0
Parked	561	0.4	1	0.2	60	0.1
Crossing at intersection	16	0.0	0	0.0	7	0.0
Crossing not at intersection	7	0.0	0	0.0	5	0.0
Getting on/off vehicle	3	0.0	0	0.0	1	0.0
In roadway with traffic	2	0.0	0	0.0	2	0.0
In roadway against traffic	2	0.0	0	0.0	1	0.0
Standing/lying in roadway	1	0.0	0	0.0	1	0.0
Pushing/working on vehicle	1	0.0	0	0.0	0	0.0
Other working in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	1	0.0	0	0.0	0	0.0
Not in roadway	1	0.0	0	0.0	1	0.0
Other	136	0.1	1	0.2	48	0.1
Unknown	4,274	2.7	8	1.8	1,197	2.8
<b>Total Drivers</b>	<b>158,887</b>	<b>100.0</b>	<b>433</b>	<b>100.0</b>	<b>42,820</b>	<b>100.0</b>



## DRIVER AGE 16-24 (continued)

<b>MOST HARMFUL EVENT IN A NONCOLLISION</b>	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Loss of control	1,312	0.8	3	0.7	402	0.9
Cross center/median	233	0.1	0	0.0	70	0.2
Ran off road left	314	0.2	1	0.2	87	0.2
Ran off road right	420	0.3	1	0.2	111	0.3
Re-enter road	54	0.0	0	0.0	17	0.0
Overturn	2,992	1.9	39	9.0	1,621	3.8
Separation of units	635	0.4	1	0.2	159	0.4
Fire/explosion	270	0.2	0	0.0	36	0.1
Immersion	38	0.0	0	0.0	12	0.0
Jackknife	46	0.0	0	0.0	6	0.0
Downhill runaway	21	0.0	0	0.0	7	0.0
Cargo loss/shift	97	0.1	0	0.0	7	0.0
Individual fell off	119	0.1	7	1.6	99	0.2
Other noncollision	450	0.3	0	0.0	100	0.2
<b>NONCOLLISION Subtotal</b>	<b>7,001</b>	<b>4.4</b>	<b>52</b>	<b>12.0</b>	<b>2,734</b>	<b>6.4</b>

Teens and young adults have the highest incidence of overturn and "individual fell off" in fatal crashes when compared to the other two age groups (25-64 and 65-98).

<b>MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT</b>	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Pedestrian	628	0.4	36	8.3	544	1.3
Pedalcycle	565	0.4	6	1.4	472	1.1
Motor vehicle in transport	110,942	69.8	239	55.2	30,844	72.0
Parked motor vehicle	3,030	1.9	3	0.7	460	1.1
Railway train	39	0.0	2	0.5	18	0.0
Animal	10,939	6.9	0	0.0	262	0.6
Other nonfixed objects	1,176	0.7	2	0.5	152	0.4
<b>COLLISION NONFIXED Subtotal</b>	<b>127,319</b>	<b>80.1</b>	<b>288</b>	<b>66.5</b>	<b>32,752</b>	<b>76.5</b>

### DRIVER AGE 16-24 (continued)

MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Bridge/pier/abutment	150	0.1	2	0.5	59	0.1
Bridge parapet end	29	0.0	0	0.0	7	0.0
Bridge rail	131	0.1	0	0.0	40	0.1
Guardrail face	803	0.5	1	0.2	210	0.5
Guardrail end	140	0.1	0	0.0	43	0.1
Median barrier	829	0.5	3	0.7	309	0.7
Highway traffic sign post	780	0.5	1	0.2	67	0.2
Signal post	69	0.0	0	0.0	14	0.0
Luminaire/light support	163	0.1	2	0.5	42	0.1
Utility pole	1,194	0.8	7	1.6	521	1.2
Other pole	295	0.2	0	0.0	62	0.1
Culvert	294	0.2	1	0.2	129	0.3
Curb	711	0.4	0	0.0	88	0.2
Ditch	2,652	1.7	3	0.7	840	2.0
Embankment	585	0.4	1	0.2	230	0.5
Fence	444	0.3	0	0.0	63	0.1
Mailbox	736	0.5	2	0.5	57	0.1
Tree	3,877	2.4	58	13.4	1,651	3.9
Rail crossing signal	22	0.0	0	0.0	3	0.0
Building	220	0.1	0	0.0	80	0.2
Traffic island	14	0.0	0	0.0	3	0.0
Fire hydrant	171	0.1	0	0.0	51	0.1
Impact attenuator	19	0.0	0	0.0	5	0.0
Other fixed object	905	0.6	2	0.5	244	0.6
<b>COLLISION FIXED Subtotal</b>	<b>15,233</b>	<b>9.6</b>	<b>83</b>	<b>19.2</b>	<b>4,818</b>	<b>11.3</b>

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

	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Unknown Event	9,334	5.9	10	2.3	2,516	5.9
<b>TOTAL MOST HARMFUL EVENT</b>	<b>158,887</b>	<b>100.0</b>	<b>433</b>	<b>100.0</b>	<b>42,820</b>	<b>100.0</b>



## DRIVER AGE 16-24 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Single Vehicle	31,386	19.8	159	36.7	7,397	17.3
Head On	2,914	1.8	73	16.9	1,358	3.2
Head On - Left Turn	7,301	4.6	18	4.2	3,102	7.2
Angle	38,366	24.1	119	27.5	12,118	28.3
Rear End	50,378	31.7	26	6.0	14,024	32.8
Rear End - Left Turn	2,652	1.7	3	0.7	835	2.0
Rear End - Right Turn	1,502	0.9	0	0.0	266	0.6
Sideswipe - Same Direction	12,416	7.8	13	3.0	1,378	3.2
Sideswipe - Opposite Direct	4,168	2.6	8	1.8	737	1.7
Other	6,366	4.0	14	3.2	1,310	3.1
Unknown	1,438	0.9	0	0.0	295	0.7
<b>Total Drivers</b>	<b>158,887</b>	<b>100.0</b>	<b>433</b>	<b>100.0</b>	<b>42,820</b>	<b>100.0</b>

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

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number	% of Total	#	% of Fatal	#	% of Injury	#	% of Issued
None	68,288	43.0	136	31.4	16,165	37.8	219	0.5
Speed too fast	13,134	8.3	108	24.9	4,557	10.6	5,815	12.5
Speed too slow	392	0.2	0	0.0	120	0.3	177	0.4
Failed to yield	18,439	11.6	28	6.5	5,814	13.6	11,375	24.5
Disregard traffic control	4,235	2.7	29	6.7	1,958	4.6	2,765	6.0
Drove wrong way	108	0.1	0	0.0	35	0.1	47	0.1
Drove left of center	1,128	0.7	36	8.3	439	1.0	562	1.2
Improper passing	1,302	0.8	5	1.2	234	0.5	612	1.3
Improper lane use	3,231	2.0	5	1.2	467	1.1	1,684	3.6
Improper turn	2,028	1.3	1	0.2	476	1.1	991	2.1
Improper/no signal	249	0.2	0	0.0	53	0.1	86	0.2
Improper backing	2,673	1.7	0	0.0	130	0.3	1,003	2.2
Unable to stop in assured clear distance	29,182	18.4	15	3.5	7,981	18.6	16,701	35.9
Other	9,852	6.2	39	9.0	3,116	7.3	4,103	8.8
Unknown	4,646	2.9	31	7.2	1,275	3.0	325	0.7
<b>Total Drivers</b>	<b>158,887</b>	<b>100.0</b>	<b>433</b>	<b>100.0</b>	<b>42,820</b>	<b>100.0</b>	<b>46,465</b>	<b>100.0</b>

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

### DRIVER AGE 16-24 (continued)

LOCATION OF FIRST IMPACT IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
On Road	141,008	88.7	310	71.6	36,870	86.1
Median	752	0.5	4	0.9	278	0.6
Shoulder	5,020	3.2	28	6.5	1,411	3.3
Outside of Shoulder/Curb	9,974	6.3	83	19.2	3,606	8.4
Gore	248	0.2	0	0.0	94	0.2
Other/Unknown	1,885	1.2	8	1.8	561	1.3
<b>Total Drivers</b>	<b>158,887</b>	<b>100.0</b>	<b>433</b>	<b>100.0</b>	<b>42,820</b>	<b>100.0</b>

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

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
12:00 mid. - 02:59 a.m.	8,699	5.5	69	15.9	2,588	6.0
03:00 a.m. - 05:59 a.m.	3,924	2.5	36	8.3	1,131	2.6
06:00 a.m. - 08:59 a.m.	15,615	9.8	37	8.5	3,938	9.2
09:00 a.m. - 11:59 a.m.	15,242	9.6	24	5.5	4,127	9.6
12:00 noon - 02:59 p.m.	29,204	18.4	51	11.8	8,190	19.1
03:00 p.m. - 05:59 p.m.	42,422	26.7	63	14.5	11,491	26.8
06:00 p.m. - 08:59 p.m.	25,699	16.2	72	16.6	6,685	15.6
09:00 p.m. - 11:59 p.m.	17,123	10.8	78	18.0	4,443	10.4
Unknown	959	0.6	3	0.7	227	0.5
<b>Total Drivers</b>	<b>158,887</b>	<b>100.0</b>	<b>433</b>	<b>100.0</b>	<b>42,820</b>	<b>100.0</b>

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

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Limited Access Roadway	11,447	7.2	36	8.3	3,207	7.5
U.S. & Michigan Roads	38,880	24.5	117	27.0	10,624	24.8
County & City Roads	108,560	68.3	280	64.7	28,989	67.7
<b>Total Drivers</b>	<b>158,887</b>	<b>100.0</b>	<b>433</b>	<b>100.0</b>	<b>42,820</b>	<b>100.0</b>

Teen and young adult drivers have a higher rate of incidence in fatal crashes on County and City roads than the other two age groups.

## DRIVER AGE 16-24 (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Sunday	16,312	10.3	60	13.9	4,760	11.1
Monday	22,343	14.1	41	9.5	5,896	13.8
Tuesday	23,844	15.0	59	13.6	6,290	14.7
Wednesday	23,512	14.8	49	11.3	6,176	14.4
Thursday	23,678	14.9	62	14.3	6,273	14.6
Friday	27,894	17.6	77	17.8	7,463	17.4
Saturday	21,304	13.4	85	19.6	5,962	13.9
Total Drivers	158,887	100.0	433	100.0	42,820	100.0

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

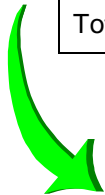
DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Male	91,213	57.4	312	72.1	23,296	54.4
Female	65,529	41.2	117	27.0	18,916	44.2
Unknown	2,145	1.4	4	0.9	608	1.4
Total Drivers	158,887	100.0	433	100.0	42,820	100.0

NUMBER OF OCCUPANTS IN CAR	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
1 occupant	101,542	63.9	223	51.5	24,965	58.3
2 occupants	37,322	23.5	130	30.0	11,239	26.2
3 occupants	10,993	6.9	48	11.1	3,657	8.5
4 occupants	4,227	2.7	19	4.4	1,547	3.6
5 occupants	1,267	0.8	5	1.2	490	1.1
6 + occupants	458	0.3	4	0.9	185	0.4
0 occupants	1,397	0.9	2	0.5	284	0.7
Unknown	1,681	1.1	2	0.5	453	1.1
Total Drivers	158,887	100.0	433	100.0	42,820	100.0

## DRIVER AGE 16-24 (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Passenger Car and Station Wagon	124,585	78.4	322	74.4	34,041	79.5
Van and Motorhome	5,922	3.7	16	3.7	1,555	3.6
Pickup	23,331	14.7	65	15.0	5,544	12.9
Small Truck (under 10,000 lbs.)	2,341	1.5	5	1.2	594	1.4
Motorcycle	646	0.4	8	1.8	507	1.2
Moped	43	0.0	1	0.2	37	0.1
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	83	0.1	6	1.4	49	0.1
Off Road Vehicle	57	0.0	0	0.0	49	0.1
Other	180	0.1	1	0.2	47	0.1
Unknown	688	0.4	1	0.2	191	0.4
CDL Truck/Bus (breakdown below)	1,011	0.6	8	1.8	206	0.5
<b>Total Drivers</b>	<b>158,887</b>	<b>100.0</b>	<b>433</b>	<b>100.0</b>	<b>42,820</b>	<b>100.0</b>

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



CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Commercial Vehicle: Group A	322	31.8	6	75.0	63	30.6
Commercial Vehicle: Group B	260	25.7	1	12.5	46	22.3
Commercial Vehicle: Group C	51	5.0	0	0.0	15	7.3
Other Truck	165	16.3	0	0.0	44	21.4
Unknown Truck	213	21.1	1	12.5	38	18.4
<b>Total Drivers</b>	<b>1,011</b>	<b>100.0</b>	<b>8</b>	<b>100.0</b>	<b>206</b>	<b>100.0</b>

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

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

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



## DRIVER AGE 25-64

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Going straight ahead	210,476	53.3	935	78.3	51,647	52.2
Turning left	28,885	7.3	47	3.9	8,522	8.6
Turning right	10,784	2.7	5	0.4	1,848	1.9
Stopped on roadway	48,657	12.3	49	4.1	14,721	14.9
In prior crash	487	0.1	3	0.3	183	0.2
Changing lanes	8,072	2.0	21	1.8	1,318	1.3
Backing	9,634	2.4	9	0.8	531	0.5
Slowing/stopping on roadway	37,216	9.4	24	2.0	10,194	10.3
Slowing/stopping other	525	0.1	3	0.3	155	0.2
Starting up on roadway	7,996	2.0	7	0.6	2,191	2.2
Starting up other	208	0.1	0	0.0	57	0.1
Entering parking	605	0.2	0	0.0	58	0.1
Leaving parking	1,406	0.4	2	0.2	294	0.3
Entering roadway	5,529	1.4	4	0.3	1,338	1.4
Leaving roadway	685	0.2	8	0.7	246	0.2
Making U-turn	837	0.2	1	0.1	227	0.2
Overtaking or passing	3,106	0.8	16	1.3	634	0.6
Avoiding object	986	0.2	2	0.2	272	0.3
Avoiding pedestrian	130	0.0	3	0.3	60	0.1
Avoiding vehicle (front/back)	3,306	0.8	26	2.2	968	1.0
Avoiding vehicle (angle)	1,530	0.4	6	0.5	419	0.4
Driverless moving	83	0.0	0	0.0	13	0.0
Parked	2,446	0.6	2	0.2	232	0.2
Crossing at intersection	17	0.0	0	0.0	8	0.0
Crossing not at intersection	11	0.0	0	0.0	8	0.0
Getting on/off vehicle	3	0.0	1	0.1	0	0.0
In roadway with traffic	2	0.0	0	0.0	2	0.0
In roadway against traffic	3	0.0	0	0.0	0	0.0
Standing/lying in roadway	3	0.0	0	0.0	2	0.0
Pushing/working on vehicle	8	0.0	0	0.0	2	0.0
Other working in roadway	1	0.0	0	0.0	1	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	2	0.0	0	0.0	1	0.0
Not in roadway	3	0.0	0	0.0	3	0.0
Other	250	0.1	3	0.3	87	0.1
Unknown	10,910	2.8	17	1.4	2,767	2.8
<b>Total Drivers</b>	<b>394,802</b>	<b>100.0</b>	<b>1,194</b>	<b>100.0</b>	<b>99,009</b>	<b>100.0</b>



## DRIVER AGE 25-64 (continued)

<b>MOST HARMFUL EVENT IN A NONCOLLISION</b>	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Loss of control	2,552	0.6	4	0.3	762	0.8
Cross center/median	510	0.1	0	0.0	105	0.1
Ran off road left	414	0.1	2	0.2	115	0.1
Ran off road right	856	0.2	0	0.0	224	0.2
Re-enter road	114	0.0	0	0.0	48	0.0
Overturn	3,907	1.0	80	6.7	2,132	2.2
Separation of units	1,649	0.4	9	0.8	390	0.4
Fire/explosion	546	0.1	9	0.8	86	0.1
Immersion	48	0.0	2	0.2	11	0.0
Jackknife	246	0.1	0	0.0	36	0.0
Downhill runaway	46	0.0	0	0.0	11	0.0
Cargo loss/shift	542	0.1	0	0.0	38	0.0
Individual fell off	237	0.1	3	0.3	198	0.2
Other noncollision	1,129	0.3	2	0.2	204	0.2
<b>NONCOLLISION Subtotal</b>	<b>12,796</b>	<b>3.2</b>	<b>111</b>	<b>9.3</b>	<b>4,360</b>	<b>4.4</b>

<b>MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT</b>	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Pedestrian	1,558	0.4	97	8.1	1,303	1.3
Pedalcycle	1,542	0.4	18	1.5	1,216	1.2
Motor vehicle in transport	272,474	69.0	770	64.5	76,314	77.1
Parked motor vehicle	6,873	1.7	6	0.5	811	0.8
Railway train	71	0.0	6	0.5	27	0.0
Animal	45,089	11.4	3	0.3	1,006	1.0
Other nonfixed objects	4,226	1.1	9	0.8	424	0.4
<b>COLLISION NONFIXED Subtotal</b>	<b>331,833</b>	<b>84.1</b>	<b>909</b>	<b>76.1</b>	<b>81,101</b>	<b>81.9</b>

### DRIVER AGE 25-64 (continued)

<b>MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT</b>	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Bridge/pier/abutment	424	0.1	5	0.4	128	0.1
Bridge parapet end	95	0.0	0	0.0	17	0.0
Bridge rail	242	0.1	2	0.2	63	0.1
Guardrail face	1,479	0.4	2	0.2	357	0.4
Guardrail end	226	0.1	1	0.1	83	0.1
Median barrier	1,548	0.4	3	0.3	618	0.6
Highway traffic sign post	1,283	0.3	0	0.0	136	0.1
Signal post	150	0.0	1	0.1	22	0.0
Luminaire/light support	299	0.1	2	0.2	91	0.1
Utility pole	1,818	0.5	24	2.0	764	0.8
Other pole	539	0.1	1	0.1	118	0.1
Culvert	346	0.1	7	0.6	131	0.1
Curb	1,049	0.3	1	0.1	144	0.1
Ditch	3,496	0.9	8	0.7	1,070	1.1
Embankment	854	0.2	5	0.4	329	0.3
Fence	610	0.2	0	0.0	99	0.1
Mailbox	933	0.2	0	0.0	68	0.1
Tree	5,044	1.3	86	7.2	1,932	2.0
Rail crossing signal	60	0.0	0	0.0	6	0.0
Building	394	0.1	6	0.5	165	0.2
Traffic island	23	0.0	0	0.0	6	0.0
Fire hydrant	254	0.1	0	0.0	70	0.1
Impact attenuator	32	0.0	0	0.0	13	0.0
Other fixed object	1,751	0.4	5	0.4	431	0.4
<b>COLLISION FIXED Subtotal</b>	<b>22,949</b>	<b>5.8</b>	<b>159</b>	<b>13.3</b>	<b>6,861</b>	<b>6.9</b>

	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Unknown Event	27,224	6.9	15	1.3	6,687	6.8
<b>TOTAL MOST HARMFUL EVENT</b>	<b>394,802</b>	<b>100.0</b>	<b>1,194</b>	<b>100.0</b>	<b>99,009</b>	<b>100.0</b>



## DRIVER AGE 25-64 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Single Vehicle	76,857	19.5	341	28.6	11,129	11.2
Head On	6,911	1.8	252	21.1	3,016	3.0
Head On - Left Turn	15,438	3.9	52	4.4	6,571	6.6
Angle	88,484	22.4	349	29.2	28,054	28.3
Rear End	128,858	32.6	102	8.5	38,128	38.5
Rear End - Left Turn	5,460	1.4	23	1.9	1,716	1.7
Rear End - Right Turn	4,115	1.0	2	0.2	745	0.8
Sideswipe - Same Direction	34,126	8.6	25	2.1	3,676	3.7
Sideswipe - Opposite Direct	11,080	2.8	8	0.7	1,744	1.8
Other	19,104	4.8	34	2.8	3,349	3.4
Unknown	4,369	1.1	6	0.5	881	0.9
<b>Total Drivers</b>	<b>394,802</b>	<b>100.0</b>	<b>1,194</b>	<b>100.0</b>	<b>99,009</b>	<b>100.0</b>

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number	% of Total	#	% of Fatal	#	% of Injury	#	% of Issued
None	231,814	58.7	549	46.0	53,960	54.5	417	0.6
Speed too fast	16,152	4.1	173	14.5	5,375	5.4	5,630	8.0
Speed too slow	698	0.2	0	0.0	208	0.2	240	0.3
Failed to yield	31,843	8.1	72	6.0	9,699	9.8	17,646	25.2
Disregard traffic control	7,632	1.9	62	5.2	3,439	3.5	4,470	6.4
Drove wrong way	262	0.1	9	0.8	92	0.1	101	0.1
Drove left of center	2,096	0.5	78	6.5	831	0.8	883	1.3
Improper passing	2,362	0.6	4	0.3	391	0.4	924	1.3
Improper lane use	7,448	1.9	8	0.7	1,072	1.1	3,268	4.7
Improper turn	4,455	1.1	4	0.3	929	0.9	1,830	2.6
Improper/no signal	519	0.1	1	0.1	75	0.1	142	0.2
Improper backing	7,573	1.9	4	0.3	291	0.3	2,223	3.2
Unable to stop in assured clear distance	50,315	12.7	33	2.8	14,103	14.2	25,225	36.0
Other	19,109	4.8	105	8.8	5,387	5.4	6,455	9.2
Unknown	12,524	3.2	92	7.7	3,157	3.2	533	0.8
<b>Total Drivers</b>	<b>394,802</b>	<b>100.0</b>	<b>1,194</b>	<b>100.0</b>	<b>99,009</b>	<b>100.0</b>	<b>69,987</b>	<b>100.0</b>

Compared to the other two age groups (16-24 and 65-98), drivers in this age group are cited less frequently for hazardous action.

### DRIVER AGE 25-64 (continued)

LOCATION OF FIRST IMPACT IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
On Road	367,330	93.0	955	80.0	90,601	91.5
Median	1,464	0.4	18	1.5	525	0.5
Shoulder	7,922	2.0	58	4.9	2,121	2.1
Outside of Shoulder/Curb	13,569	3.4	142	11.9	4,583	4.6
Gore	397	0.1	4	0.3	148	0.1
Other/Unknown	4,120	1.0	17	1.4	1,031	1.0
<b>Total Drivers</b>	<b>394,802</b>	<b>100.0</b>	<b>1,194</b>	<b>100.0</b>	<b>99,009</b>	<b>100.0</b>

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
12:00 mid. - 02:59 a.m.	13,652	3.5	145	12.1	3,860	3.9
03:00 a.m. - 05:59 a.m.	12,028	3.0	82	6.9	2,251	2.3
06:00 a.m. - 08:59 a.m.	53,829	13.6	142	11.9	11,911	12.0
09:00 a.m. - 11:59 a.m.	48,509	12.3	115	9.6	12,409	12.5
12:00 noon - 02:59 p.m.	72,414	18.3	172	14.4	19,967	20.2
03:00 p.m. - 05:59 p.m.	103,664	26.3	215	18.0	27,370	27.6
06:00 p.m. - 08:59 p.m.	58,751	14.9	198	16.6	13,652	13.8
09:00 p.m. - 11:59 p.m.	29,600	7.5	118	9.9	7,052	7.1
Unknown	2,355	0.6	7	0.6	537	0.5
<b>Total Drivers</b>	<b>394,802</b>	<b>100.0</b>	<b>1,194</b>	<b>100.0</b>	<b>99,009</b>	<b>100.0</b>

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Limited Access Roadway	35,251	8.9	108	9.0	9,451	9.5
U.S. & Michigan Roads	102,141	25.9	358	30.0	26,380	26.6
County & City Roads	257,410	65.2	728	61.0	63,178	63.8
<b>Total Drivers</b>	<b>394,802</b>	<b>100.0</b>	<b>1,194</b>	<b>100.0</b>	<b>99,009</b>	<b>100.0</b>

## DRIVER AGE 25-64 (continued)

DAY OF WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Sunday	34,104	8.6	145	12.1	8,981	9.1
Monday	59,263	15.0	166	13.9	14,414	14.6
Tuesday	63,092	16.0	170	14.2	15,600	15.8
Wednesday	61,206	15.5	146	12.2	15,189	15.3
Thursday	61,267	15.5	170	14.2	15,116	15.3
Friday	68,412	17.3	184	15.4	17,156	17.3
Saturday	47,458	12.0	213	17.8	12,553	12.7
Total Drivers	394,802	100.0	1,194	100.0	99,009	100.0

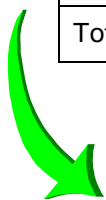
DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Male	225,886	57.2	851	71.3	53,965	54.5
Female	163,127	41.3	329	27.6	43,523	44.0
Unknown	5,789	1.5	14	1.2	1,521	1.5
Total Drivers	394,802	100.0	1,194	100.0	99,009	100.0

NUMBER OF OCCUPANTS IN CAR	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
1 occupant	284,666	72.1	801	67.1	66,844	67.5
2 occupants	66,051	16.7	261	21.9	19,250	19.4
3 occupants	20,381	5.2	71	5.9	6,276	6.3
4 occupants	9,043	2.3	32	2.7	2,795	2.8
5 occupants	3,046	0.8	11	0.9	1,061	1.1
6 + occupants	2,458	0.6	15	1.3	799	0.8
0 occupants	4,549	1.2	0	0.0	818	0.8
Unknown	4,608	1.2	3	0.3	1,166	1.2
Total Drivers	394,802	100.0	1,194	100.0	99,009	100.0

## DRIVER AGE 25-64 (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Passenger Car and Station Wagon	263,801	66.8	631	52.8	68,603	69.3
Van and Motorhome	38,390	9.7	118	9.9	9,294	9.4
Pickup	65,566	16.6	246	20.6	13,920	14.1
Small Truck (under 10,000 lbs.)	8,945	2.3	29	2.4	1,986	2.0
Motorcycle	1,930	0.5	42	3.5	1,478	1.5
Moped	105	0.0	1	0.1	75	0.1
Go Cart	1	0.0	0	0.0	0	0.0
Snowmobile	209	0.1	16	1.3	133	0.1
Off Road Vehicle	71	0.0	1	0.1	50	0.1
Other	1,123	0.3	5	0.4	239	0.2
Unknown	1,995	0.5	4	0.3	507	0.5
CDL Truck/Bus (breakdown below)	12,666	3.2	101	8.5	2,724	2.8
<b>Total Drivers</b>	<b>394,802</b>	<b>100.0</b>	<b>1,194</b>	<b>100.0</b>	<b>99,009</b>	<b>100.0</b>

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



CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Commercial Vehicle: Group A	5,827	46.0	71	70.3	1,316	48.3
Commercial Vehicle: Group B	3,493	27.6	17	16.8	746	27.4
Commercial Vehicle: Group C	417	3.3	0	0.0	83	3.0
Other Truck	799	6.3	6	5.9	170	6.2
Unknown Truck	2,130	16.8	7	6.9	409	15.0
<b>Total Drivers</b>	<b>12,666</b>	<b>100.0</b>	<b>101</b>	<b>100.0</b>	<b>2,724</b>	<b>100.0</b>

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

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

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



## DRIVER AGE 65-98

DRIVER ACTION PRIOR TO CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Going straight ahead	22,708	48.7	151	66.8	6,237	50.5
Turning left	6,032	12.9	32	14.2	1,845	14.9
Turning right	1,685	3.6	1	0.4	265	2.1
Stopped on roadway	4,416	9.5	6	2.7	1,370	11.1
In prior crash	41	0.1	0	0.0	16	0.1
Changing lanes	1,362	2.9	2	0.9	165	1.3
Backing	1,526	3.3	0	0.0	66	0.5
Slowing/stopping on roadway	3,212	6.9	1	0.4	984	8.0
Slowing/stopping other	52	0.1	0	0.0	11	0.1
Starting up on roadway	1,281	2.7	9	4.0	391	3.2
Starting up other	52	0.1	0	0.0	16	0.1
Entering parking	102	0.2	0	0.0	12	0.1
Leaving parking	304	0.7	3	1.3	50	0.4
Entering roadway	1,264	2.7	7	3.1	301	2.4
Leaving roadway	80	0.2	2	0.9	30	0.2
Making U-turn	186	0.4	1	0.4	53	0.4
Overtaking or passing	312	0.7	2	0.9	56	0.5
Avoiding object	41	0.1	0	0.0	12	0.1
Avoiding pedestrian	8	0.0	0	0.0	5	0.0
Avoiding vehicle (front/back)	222	0.5	2	0.9	55	0.4
Avoiding vehicle (angle)	107	0.2	1	0.4	32	0.3
Driverless moving	4	0.0	0	0.0	0	0.0
Parked	224	0.5	0	0.0	17	0.1
Crossing at intersection	4	0.0	0	0.0	3	0.0
Crossing not at intersection	2	0.0	0	0.0	1	0.0
Getting on/off vehicle	0	0.0	0	0.0	0	0.0
In roadway with traffic	0	0.0	0	0.0	0	0.0
In roadway against traffic	0	0.0	0	0.0	0	0.0
Standing/lying in roadway	0	0.0	0	0.0	0	0.0
Pushing/working on vehicle	0	0.0	0	0.0	0	0.0
Other working in roadway	0	0.0	0	0.0	0	0.0
Playing in roadway	0	0.0	0	0.0	0	0.0
In roadway other reason	0	0.0	0	0.0	0	0.0
Not in roadway	1	0.0	0	0.0	1	0.0
Other	33	0.1	0	0.0	8	0.1
Unknown	1,321	2.8	6	2.7	347	2.8
<b>Total Drivers</b>	<b>46,582</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>	<b>12,349</b>	<b>100.0</b>



## DRIVER AGE 65-98 (continued)

<b>MOST HARMFUL EVENT IN A NONCOLLISION</b>	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Loss of control	265	0.6	1	0.4	75	0.6
Cross center/median	90	0.2	0	0.0	22	0.2
Ran off road left	50	0.1	0	0.0	14	0.1
Ran off road right	68	0.1	0	0.0	23	0.2
Re-enter road	19	0.0	0	0.0	14	0.1
Overturn	208	0.4	10	4.4	128	1.0
Separation of units	184	0.4	1	0.4	45	0.4
Fire/explosion	30	0.1	0	0.0	5	0.0
Immersion	11	0.0	0	0.0	3	0.0
Jackknife	24	0.1	0	0.0	4	0.0
Downhill runaway	5	0.0	0	0.0	0	0.0
Cargo loss/shift	21	0.0	0	0.0	1	0.0
Individual fell off	13	0.0	2	0.9	4	0.0
Other noncollision	92	0.2	0	0.0	30	0.2
<b>NONCOLLISION Subtotal</b>	<b>1,080</b>	<b>2.3</b>	<b>14</b>	<b>6.2</b>	<b>368</b>	<b>3.0</b>

<b>MOST HARMFUL EVENT IN A COLLISION WITH A NONFIXED OBJECT</b>	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Pedestrian	219	0.5	12	5.3	194	1.6
Pedalcycle	233	0.5	1	0.4	185	1.5
Motor vehicle in transport	35,214	75.6	167	73.9	9,939	80.5
Parked motor vehicle	1,168	2.5	1	0.4	127	1.0
Railway train	11	0.0	1	0.4	3	0.0
Animal	3,196	6.9	0	0.0	63	0.5
Other nonfixed objects	325	0.7	0	0.0	47	0.4
<b>COLLISION NONFIXED Subtotal</b>	<b>40,366</b>	<b>86.7</b>	<b>182</b>	<b>80.5</b>	<b>10,558</b>	<b>85.5</b>

### DRIVER AGE 65-98 (continued)

<b>MOST HARMFUL EVENT IN A COLLISION WITH A FIXED OBJECT</b>	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Bridge/pier/abutment	31	0.1	0	0.0	10	0.1
Bridge parapet end	9	0.0	0	0.0	0	0.0
Bridge rail	11	0.0	1	0.4	4	0.0
Guardrail face	73	0.2	1	0.4	21	0.2
Guardrail end	15	0.0	1	0.4	8	0.1
Median barrier	60	0.1	0	0.0	33	0.3
Highway traffic sign post	129	0.3	0	0.0	16	0.1
Signal post	11	0.0	0	0.0	0	0.0
Luminaire/light support	44	0.1	0	0.0	14	0.1
Utility pole	172	0.4	3	1.3	87	0.7
Other pole	53	0.1	3	1.3	13	0.1
Culvert	36	0.1	0	0.0	13	0.1
Curb	98	0.2	1	0.4	8	0.1
Ditch	250	0.5	2	0.9	86	0.7
Embankment	60	0.1	1	0.4	23	0.2
Fence	66	0.1	0	0.0	17	0.1
Mailbox	86	0.2	0	0.0	13	0.1
Tree	425	0.9	11	4.9	197	1.6
Rail crossing signal	15	0.0	1	0.4	1	0.0
Building	79	0.2	1	0.4	31	0.3
Traffic island	2	0.0	0	0.0	1	0.0
Fire hydrant	45	0.1	0	0.0	11	0.1
Impact attenuator	1	0.0	0	0.0	0	0.0
Other fixed object	145	0.3	1	0.4	32	0.3
<b>COLLISION FIXED Subtotal</b>	<b>1,916</b>	<b>4.1</b>	<b>27</b>	<b>11.9</b>	<b>639</b>	<b>5.2</b>

	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Total	#	% of Total
Unknown Event	3,220	6.9	3	1.3	784	6.3
<b>TOTAL MOST HARMFUL EVENT</b>	<b>46,582</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>	<b>12,349</b>	<b>100.0</b>



## DRIVER AGE 65-98 (continued)

CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Single Vehicle	5,753	12.4	43	19.0	971	7.9
Head On	793	1.7	30	13.3	363	2.9
Head On - Left Turn	2,610	5.6	20	8.8	1,100	8.9
Angle	15,263	32.8	100	44.2	4,622	37.4
Rear End	11,934	25.6	21	9.3	3,874	31.4
Rear End - Left Turn	635	1.4	3	1.3	214	1.7
Rear End - Right Turn	428	0.9	0	0.0	78	0.6
Sideswipe - Same Direction	4,908	10.5	2	0.9	442	3.6
Sideswipe - Opposite Direct	1,431	3.1	0	0.0	190	1.5
Other	2,293	4.9	6	2.7	386	3.1
Unknown	534	1.1	1	0.4	109	0.9
<b>Total Drivers</b>	<b>46,582</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>	<b>12,349</b>	<b>100.0</b>

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

HAZARDOUS ACTION	All Crashes		Fatal Crashes		Injury Crashes		Hazardous Citation Issued	
	Number	% of Total	#	% of Fatal	#	% of Injury	#	% of Issued
None	21,969	47.2	65	28.8	5,365	43.4	44	0.4
Speed too fast	898	1.9	9	4.0	308	2.5	266	2.6
Speed too slow	88	0.2	0	0.0	22	0.2	32	0.3
Failed to yield	8,725	18.7	59	26.1	2,679	21.7	4,459	43.6
Disregard traffic control	1,752	3.8	23	10.2	753	6.1	1,023	10.0
Drove wrong way	53	0.1	1	0.4	18	0.1	22	0.2
Drove left of center	324	0.7	13	5.8	138	1.1	133	1.3
Improper passing	297	0.6	1	0.4	38	0.3	103	1.0
Improper lane use	1,464	3.1	3	1.3	161	1.3	580	5.7
Improper turn	1,007	2.2	4	1.8	201	1.6	419	4.1
Improper/no signal	70	0.2	0	0.0	9	0.1	14	0.1
Improper backing	1,220	2.6	0	0.0	34	0.3	275	2.7
Unable to stop in assured clear distance	4,922	10.6	12	5.3	1,631	13.2	2,252	22.0
Other	2,208	4.7	15	6.6	597	4.8	551	5.4
Unknown	1,585	3.4	21	9.3	395	3.2	52	0.5
<b>Total Drivers</b>	<b>46,582</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>	<b>12,349</b>	<b>100.0</b>	<b>10,225</b>	<b>100.0</b>

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

### DRIVER AGE 65-98 (continued)<sup>4</sup>

LOCATION OF FIRST IMPACT IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
On Road	44,049	94.6	190	84.1	11,576	93.7
Median	102	0.2	3	1.3	30	0.2
Shoulder	745	1.6	10	4.4	189	1.5
Outside of Shoulder/Curb	1,183	2.5	22	9.7	418	3.4
Gore	29	0.1	0	0.0	11	0.1
Other/Unknown	474	1.0	1	0.4	125	1.0
<b>Total Drivers</b>	<b>46,582</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>	<b>12,349</b>	<b>100.0</b>

TIME OF DAY IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
12:00 mid. - 02:59 a.m.	446	1.0	5	2.2	102	0.8
03:00 a.m. - 05:59 a.m.	337	0.7	2	0.9	69	0.6
06:00 a.m. - 08:59 a.m.	3,230	6.9	15	6.6	775	6.3
09:00 a.m. - 11:59 a.m.	9,825	21.1	50	22.1	2,630	21.3
12:00 noon - 02:59 p.m.	12,808	27.5	57	25.2	3,684	29.8
03:00 p.m. - 05:59 p.m.	12,224	26.2	60	26.5	3,279	26.6
06:00 p.m. - 08:59 p.m.	5,468	11.7	19	8.4	1,326	10.7
09:00 p.m. - 11:59 p.m.	1,972	4.2	17	7.5	418	3.4
Unknown	272	0.6	1	0.4	66	0.5
<b>Total Drivers</b>	<b>46,582</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>	<b>12,349</b>	<b>100.0</b>

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

ROADWAY TYPE IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Limited Access Roadway	2,422	5.2	10	4.4	612	5.0
U.S. & Michigan Roads	12,483	26.8	82	36.3	3,412	27.6
County & City Roads	31,677	68.0	134	59.3	8,325	67.4
<b>Total Drivers</b>	<b>46,582</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>	<b>12,349</b>	<b>100.0</b>

Elderly drivers have a higher rate of incidence in fatal crashes on U.S. and Michigan roads than the other two age groups.

## DRIVER AGE 65-98 (continued)

DAY of WEEK IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Sunday	4,083	8.8	24	10.6	1,133	9.2
Monday	6,953	14.9	40	17.7	1,815	14.7
Tuesday	7,505	16.1	38	16.8	1,990	16.1
Wednesday	7,451	16.0	36	15.9	1,951	15.8
Thursday	7,236	15.5	31	13.7	1,920	15.5
Friday	7,989	17.2	33	14.6	2,141	17.3
Saturday	5,365	11.5	24	10.6	1,399	11.3
Total Drivers	46,582	100.0	226	100.0	12,349	100.0

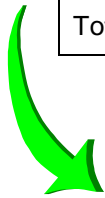
DRIVER GENDER IN CRASH	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Male	27,228	58.5	142	62.8	6,897	55.9
Female	18,665	40.1	81	35.8	5,246	42.5
Unknown	689	1.5	3	1.3	206	1.7
Total Drivers	46,582	100.0	226	100.0	12,349	100.0

NUMBER OF OCCUPANTS IN CAR	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
1 occupant	33,369	71.6	150	66.4	8,429	68.3
2 occupants	10,384	22.3	63	27.9	3,112	25.2
3 occupants	1,187	2.5	8	3.5	389	3.2
4 occupants	419	0.9	0	0.0	126	1.0
5 occupants	116	0.2	2	0.9	47	0.4
6 + occupants	120	0.3	2	0.9	36	0.3
0 occupants	515	1.1	0	0.0	93	0.8
Unknown	472	1.0	1	0.4	117	0.9
Total Drivers	46,582	100.0	226	100.0	12,349	100.0

## DRIVER AGE 65-98 (continued)

VEHICLE TYPE CRASH INVOLVEMENT	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Passenger Car and Station Wagon	37,888	81.3	181	80.1	10,231	82.8
Van and Motorhome	3,148	6.8	12	5.3	781	6.3
Pickup	4,412	9.5	22	9.7	1,036	8.4
Small Truck (under 10,000 lbs.)	502	1.1	3	1.3	111	0.9
Motorcycle	29	0.1	0	0.0	25	0.2
Moped	14	0.0	0	0.0	9	0.1
Go Cart	0	0.0	0	0.0	0	0.0
Snowmobile	5	0.0	0	0.0	5	0.0
Off Road Vehicle	5	0.0	1	0.4	3	0.0
Other	61	0.1	2	0.9	18	0.1
Unknown	217	0.5	1	0.4	60	0.5
CDL Truck/Bus (breakdown below)	301	0.6	4	1.8	70	0.6
<b>Total Drivers</b>	<b>46,582</b>	<b>100.0</b>	<b>226</b>	<b>100.0</b>	<b>12,349</b>	<b>100.0</b>

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



CDL Truck/Bus Sub-category Types	All Crashes		Fatal Crashes		Injury Crashes	
	Number	% of Total	#	% of Fatal	#	% of Injury
Commercial Vehicle: Group A	108	35.9	0	0.0	26	37.1
Commercial Vehicle: Group B	87	28.9	3	75.0	19	27.1
Commercial Vehicle: Group C	21	7.0	0	0.0	6	8.6
Other Truck	24	8.0	1	25.0	5	7.1
Unknown Truck	61	20.3	0	0.0	14	20.0
<b>Total Drivers</b>	<b>301</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>	<b>70</b>	<b>100.0</b>

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.



## INJURY EXPERIENCE FOR PERSONS WHO HAD BEEN DRINKING

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

<b>BICYCLIST</b>	Total	Drinking in Crash	Drinking Bicyclist
Bicyclists Killed	27	8	5
Bicyclists Injured	2,510	119	78
Bicyclists in Crashes	3,097	140	94



<b>PEDESTRIAN</b>	Total	Drinking in Crash	Drinking Pedestrian
Pedestrians Killed	172	66	59
Pedestrians Injured	3,314	322	217
Pedestrians in Crashes	3,891	406	286



<b>MOTORCYCLIST</b>	Total	Drinking in Crash	Drinking Motorcyclist
Motorcyclists Killed	53	22	21
Motorcyclists Injured	2,456	326	290
Motorcyclists in Crashes	3,320	396	339



<b>SNOWMOBILER *</b>	Total	Drinking in Crash	Drinking Snowmobiler
Snowmobilers Killed	21	18	18
Snowmobilers Injured	216	57	55
Snowmobilers in Crashes	419	97	90

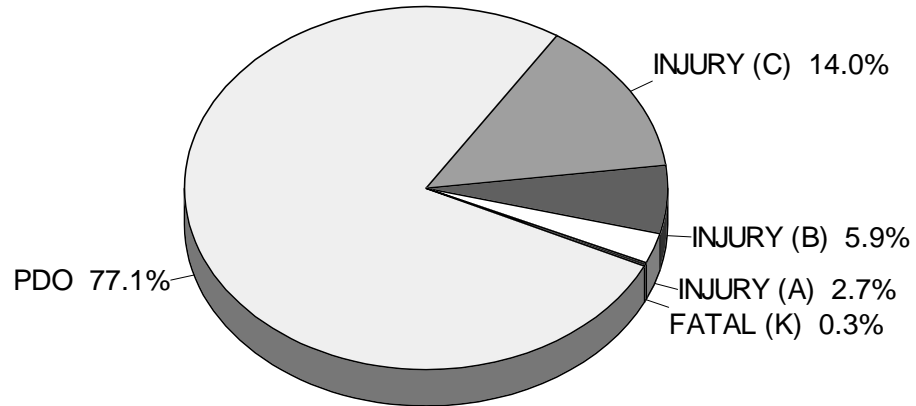


<b>ORV/ATV RIDER *</b>	Total	Drinking in Crash	Drinking ORV/ATV Rider
ORV/ATV Rider Killed	4	1	1
ORV/ATV Rider Injured	155	24	24
ORV/ATV Rider in Crashes	225	29	29

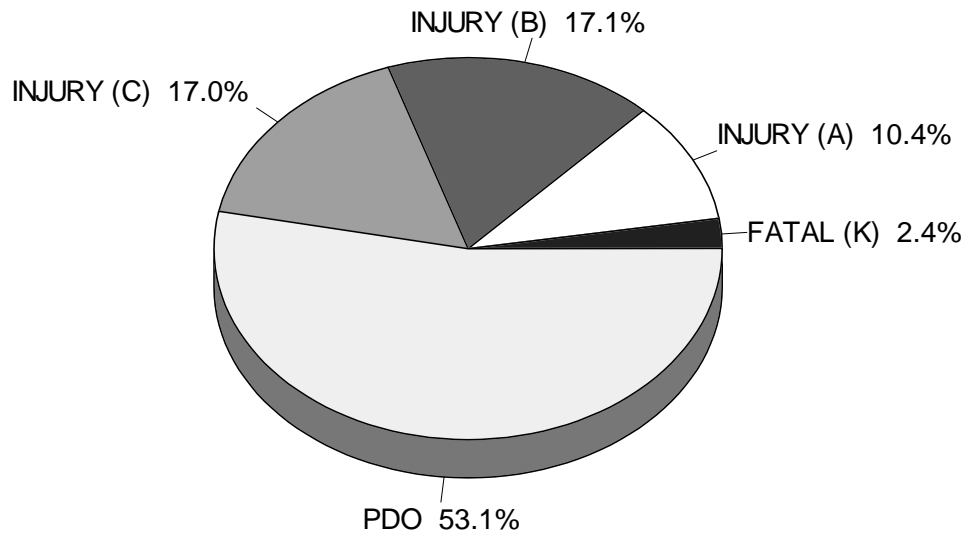


\* on Michigan public roadways

## ALL CRASHES BY INJURY SEVERITY



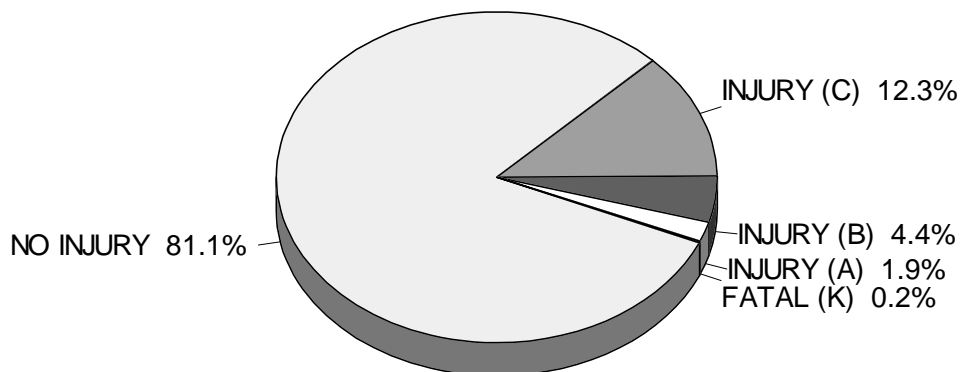
## HBD CRASHES BY INJURY SEVERITY



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

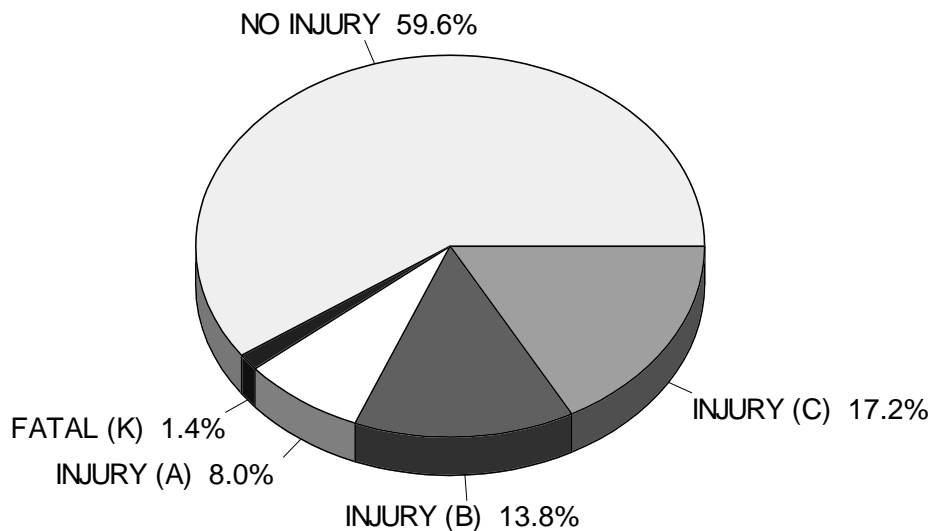
## DEATH & INJURY PER CRASH INVOLVED OCCUPANT

### Occupants in Crashes



The majority of occupants involved in crashes are not injured (81.1%). Two thirds of those who are injured receive only minor (C) injuries. Increased use of occupant restraints and airbags can reduce the number of killed and injured even further.

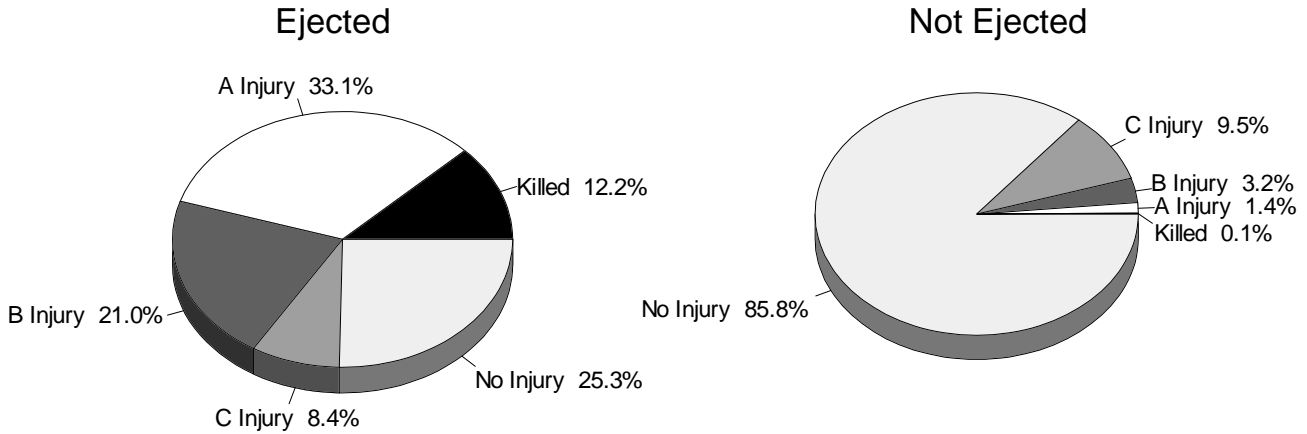
### Occupants in HBD Crashes



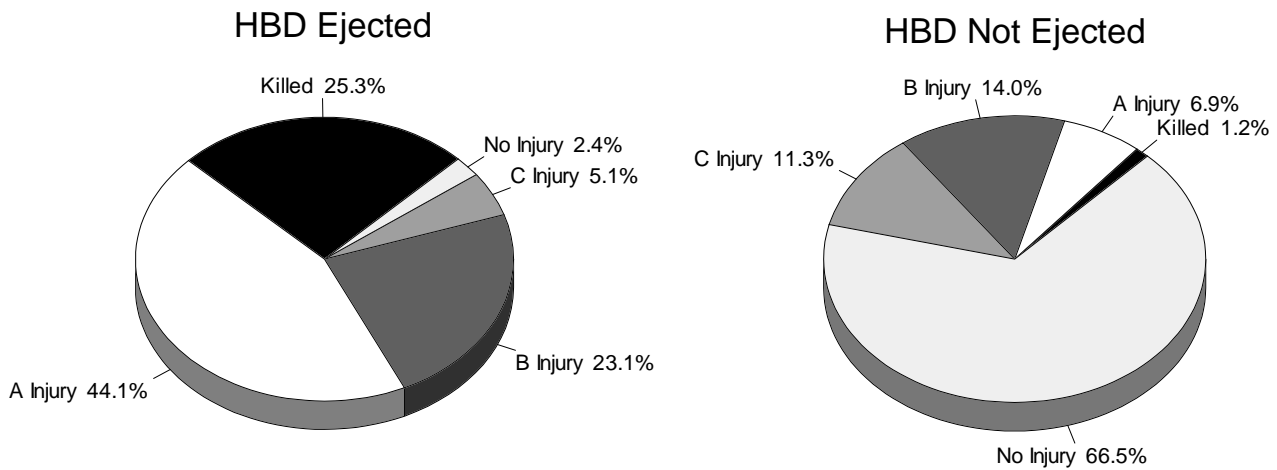
Crashes involving drinking tend to be more serious than nondrinking crashes. The percentage of fatalities is seven times higher than in all crashes and the more serious injury levels are three to four times higher.

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

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

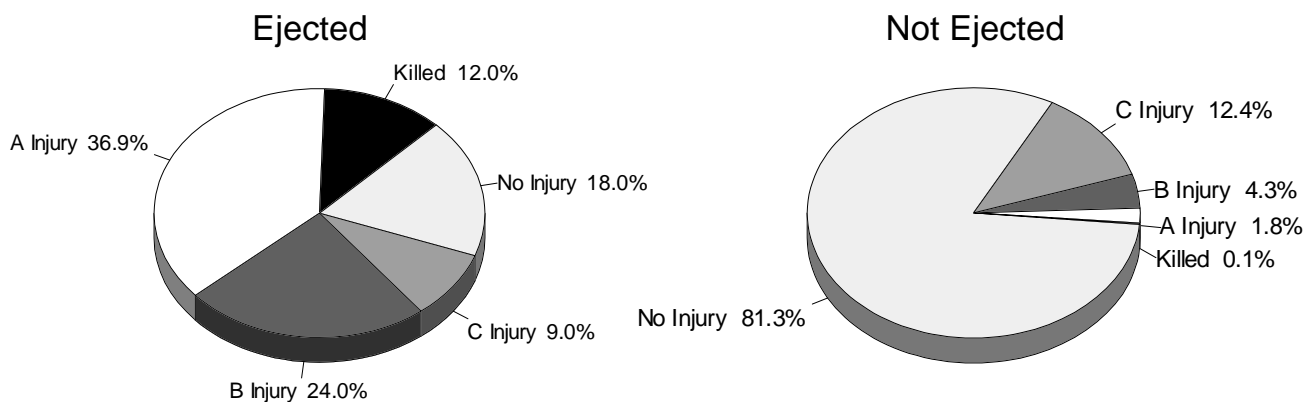


When compared to the charts above, the charts below demonstrate that the injury severity is much worse for drivers who had been drinking in both ejected, and nonejected events.

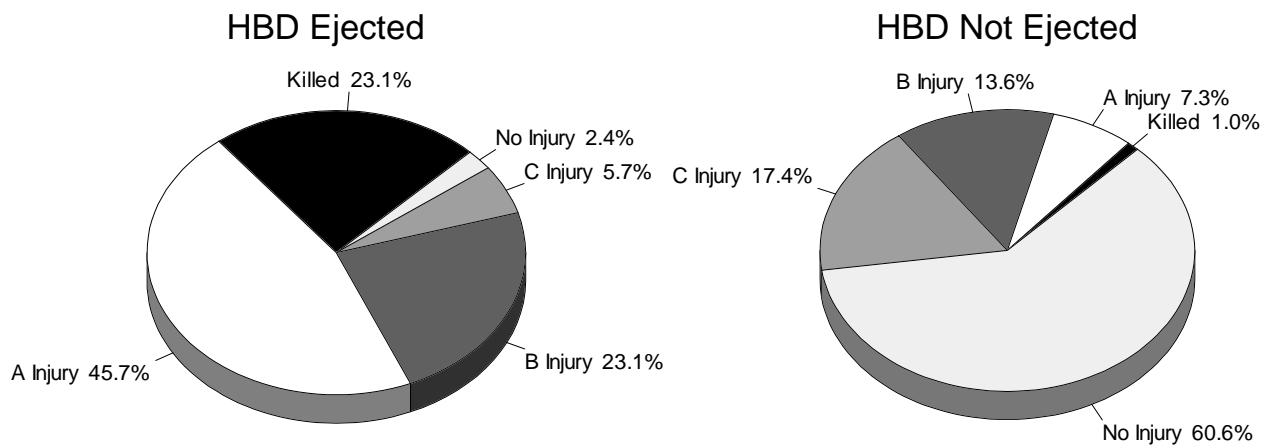


## ALL OCCUPANTS and OCCUPANTS of HBD CRASHES INJURY SEVERITY - EJECTED vs. NOT EJECTED

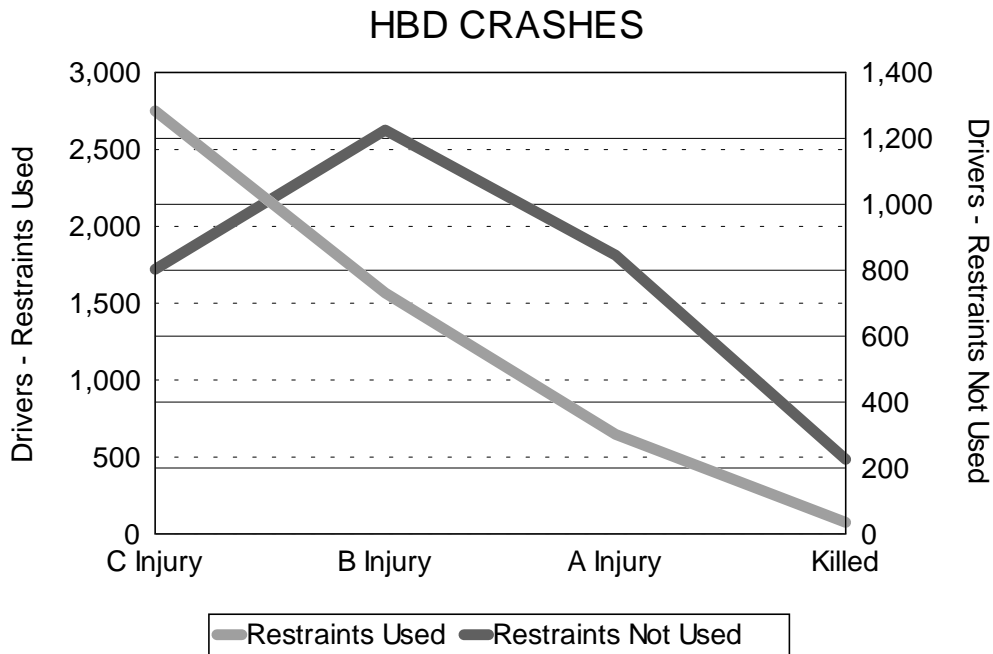
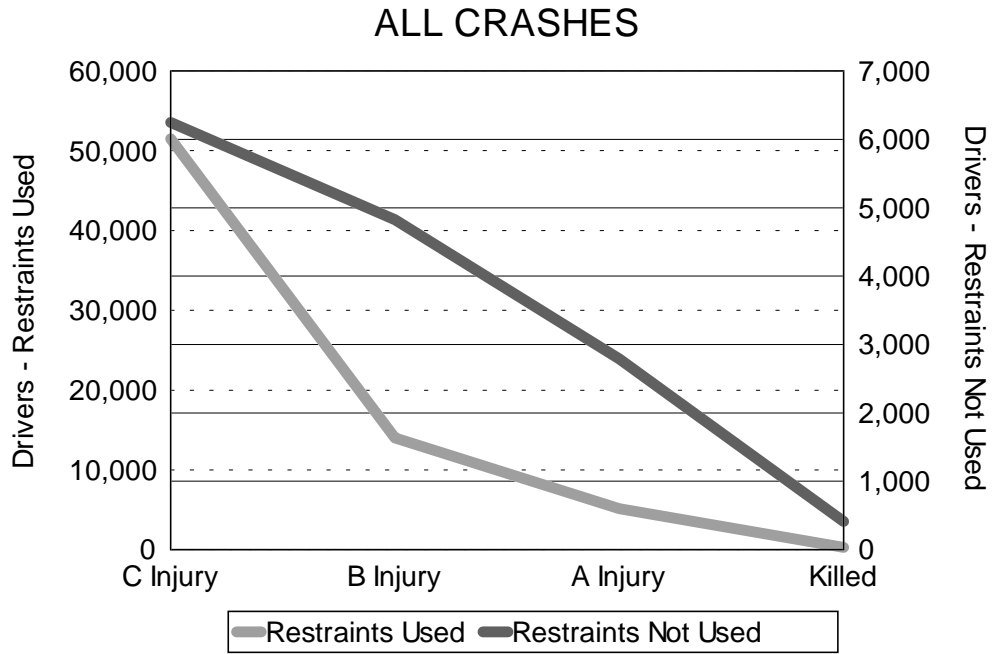
As can be seen in the two charts below, death and injury are much more likely when occupants are ejected from their vehicles.



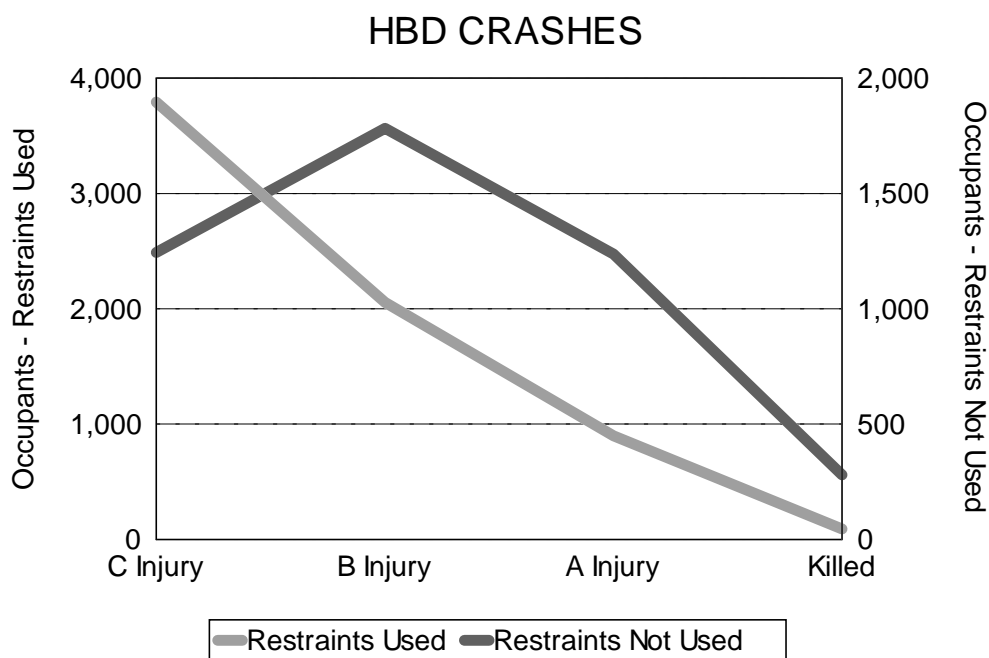
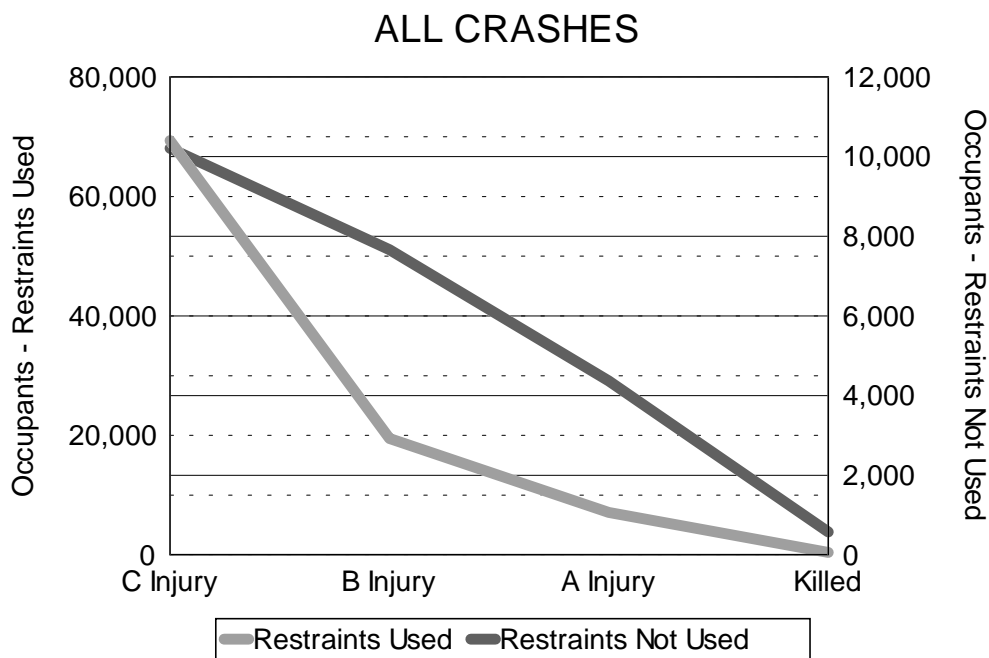
When compared to the charts above, the charts below demonstrate that the injury severity is much worse for occupants in a crash where drinking is reported in both ejected, and nonejected events.



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



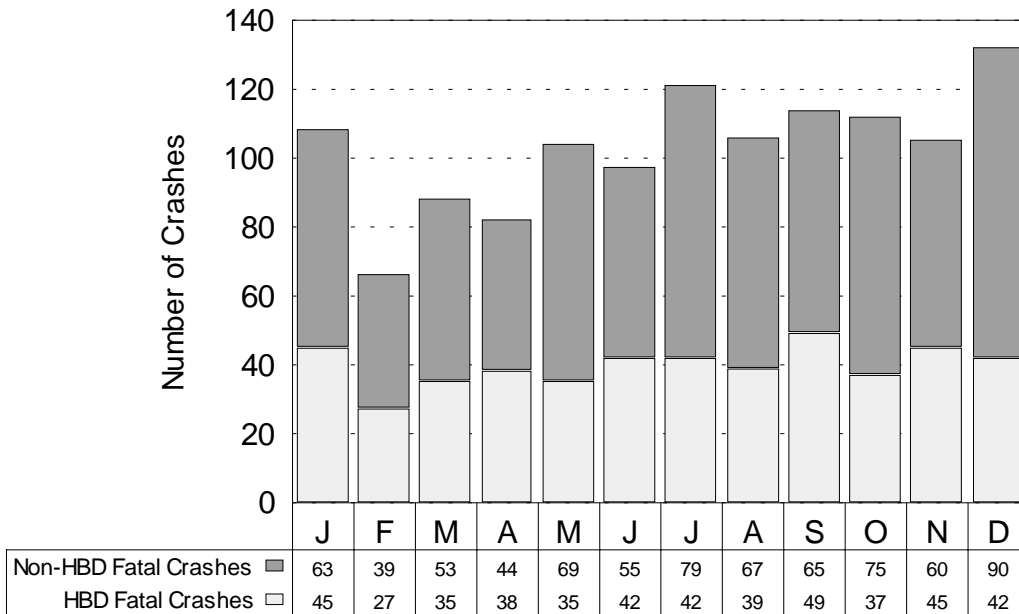
## INJURY SEVERITY & RESTRAINT USE FOR CRASH INVOLVED KABC OCCUPANTS



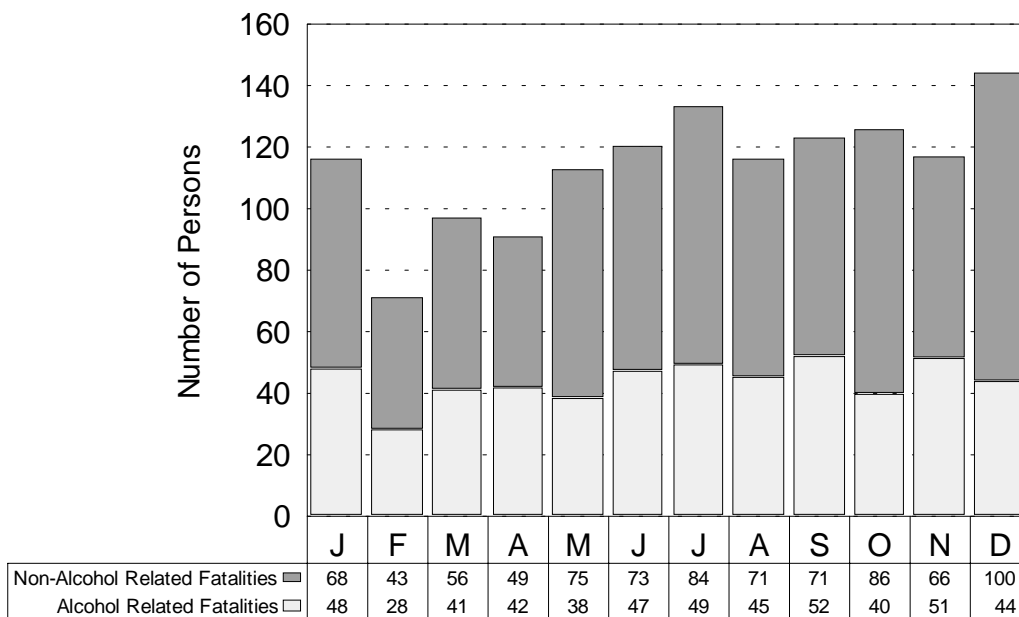
## ALCOHOL INVOLVEMENT IN FATAL CRASHES

Fatal crashes were lowest in number during February, March and April. The number of fatal crashes then increased, hitting a high in July and again in December. The number of HBD fatal crashes does not show a discernable trend. Total persons killed in fatal crashes closely follows the number of crashes, as would be expected.

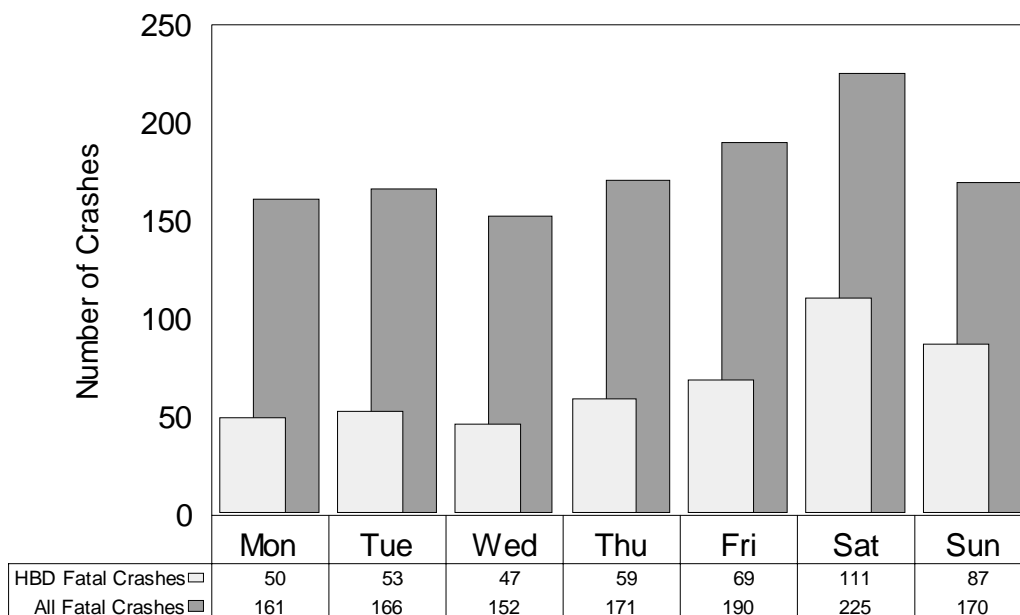
### HBD Fatal Crashes by Month



### Alcohol Related Fatalities by Month

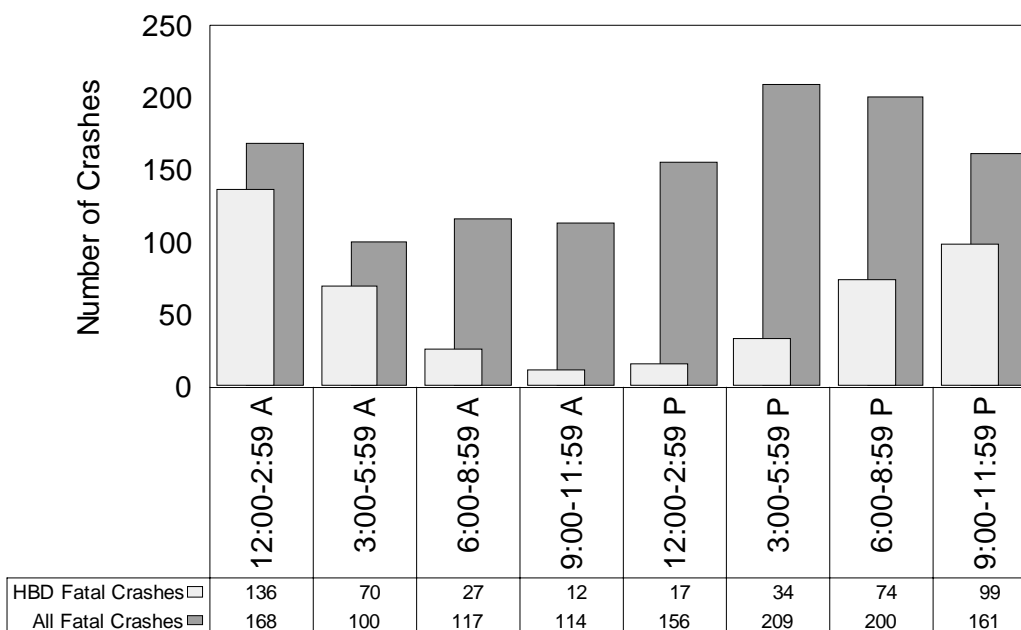


## HBD Fatal Crashes by Day of Week



Saturday had the most fatal crashes in 1998. Saturday and Sunday had the highest proportions of drinking related fatal crashes. Half of the weekend fatal crashes involved drinking, while only 30.9 percent of fatal crashes on Wednesday involved drinking.

## HBD Fatal Crashes by Time of Day



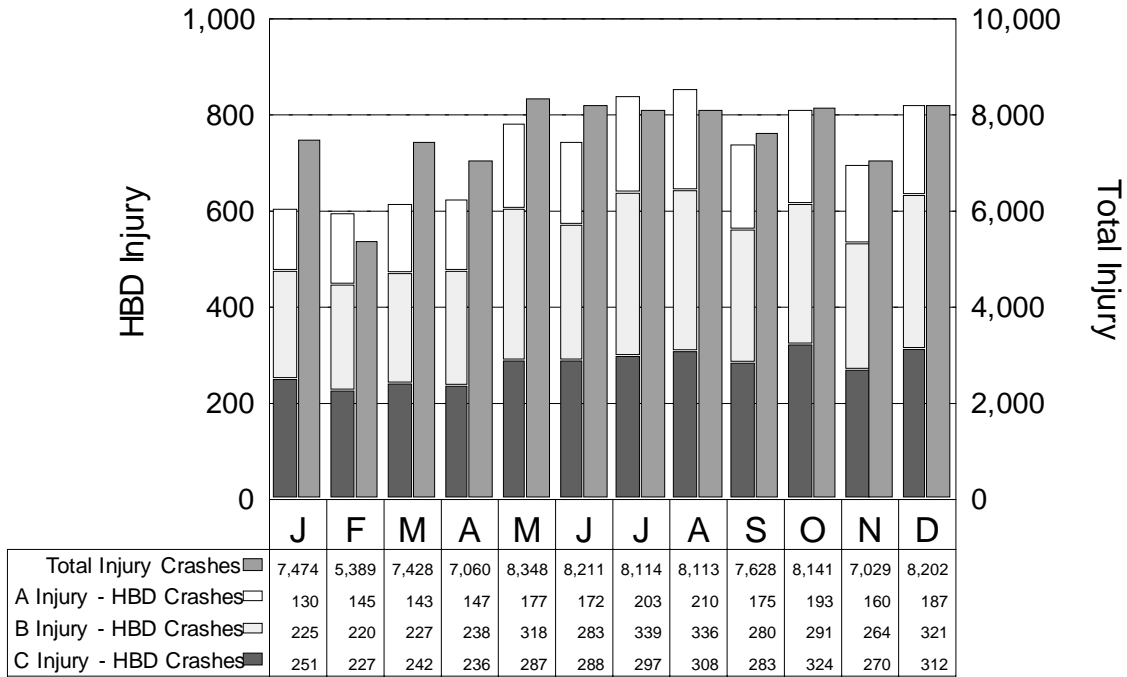
Not surprisingly, the midnight to 2:59 AM time period had the highest rate of drinking involvement (81.0%), while the late morning hours had the lowest (10.5%).

There were 10 fatal crashes where the time of day was unknown. Of these 10 fatal crashes, 7 were HBD.

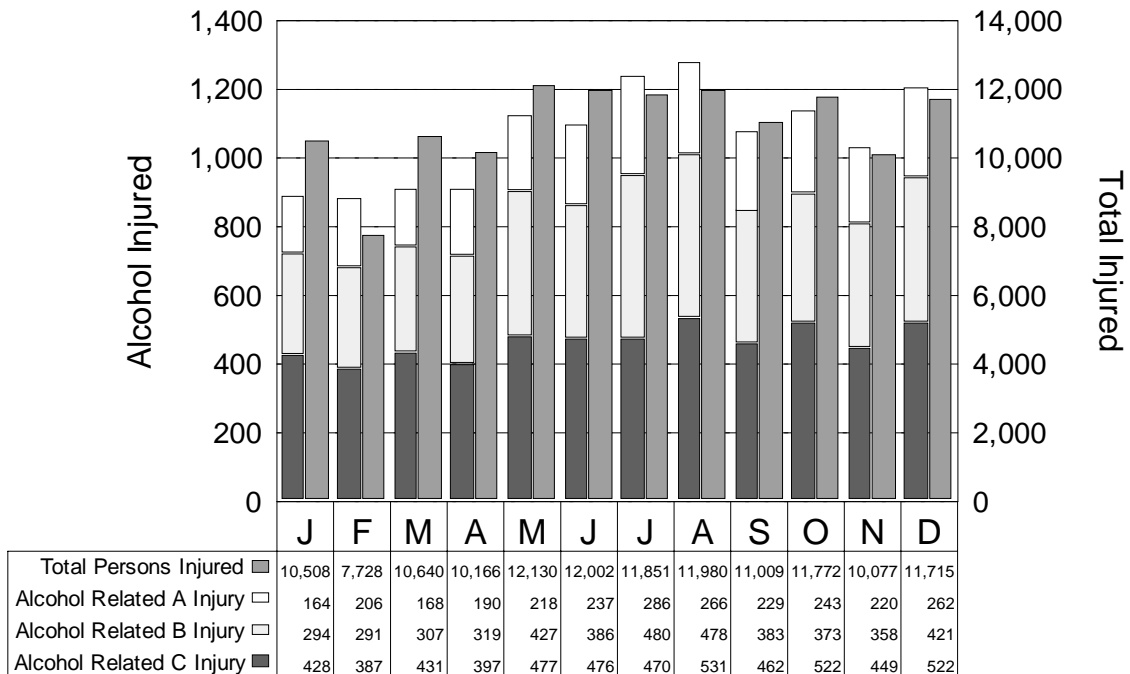
## ALCOHOL INVOLVEMENT IN INJURY CRASHES

Alcohol involvement in injury crashes is an important indicator of the alcohol impaired driving problem. In 1998, the highest number of HBD injury crashes occurred in August with 854. The highest proportion of HBD injury crashes occurred in February with 10.99 percent of the injury crashes in that month involving alcohol.

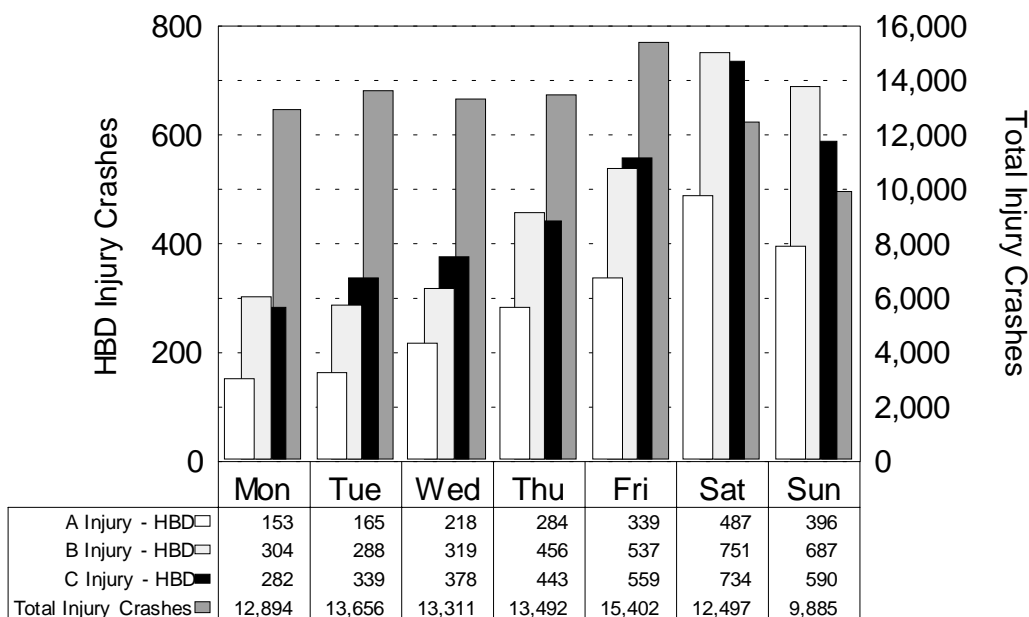
### HBD Injury Crashes by Month



### Alcohol Related Injuries by Month

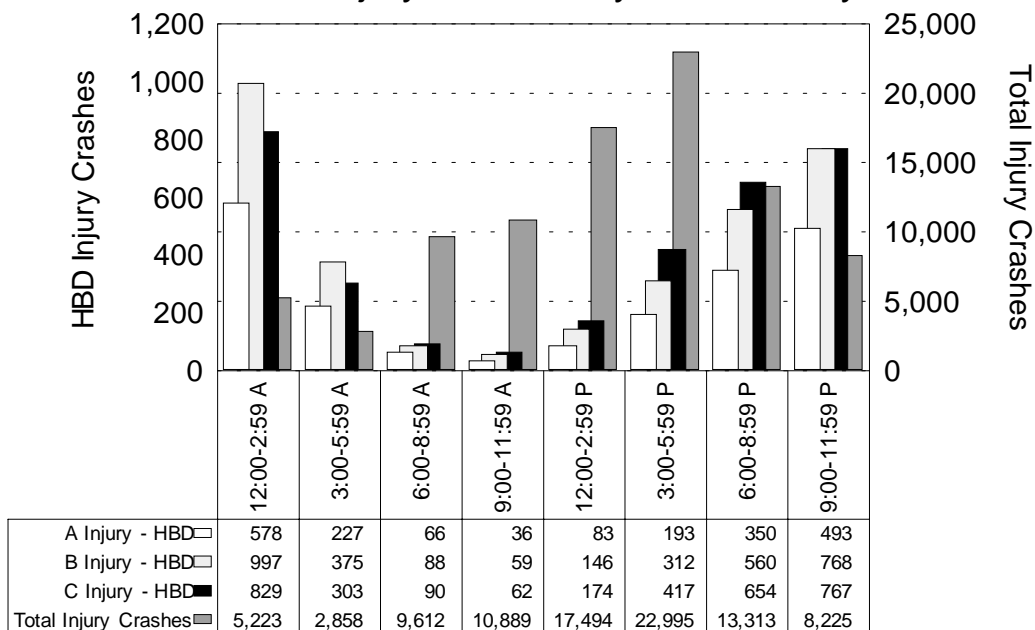


## HBD Injury Crashes by Day of Week



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

## HBD Injury Crashes by Time of Day



Total injury crash frequencies peak in the hours between 12:00 PM and 5:59 PM, while HBD injury crash frequencies peak between 9:00 PM and 2:59 AM. A particularly hazardous travel period is 12:00 AM to 2:59 AM.

## REPORTED AGE OF DRINKING DRIVERS INVOLVED IN CRASHES

COUNTY	All ages	0-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 yrs & over	DOB unk
Alcona	32	0	4	3	12	5	6	0	2	0	0
Alger	31	0	4	5	7	10	2	0	2	0	1
Allegan	267	0	29	46	79	70	14	9	2	2	16
Alpena	80	0	8	15	20	17	8	3	3	1	5
Antrim	59	0	6	12	13	17	3	2	2	0	4
Arenac	57	0	11	2	16	15	8	1	2	0	2
Baraga	34	1	5	7	9	7	3	1	0	0	1
Barry	140	0	12	20	46	31	19	5	2	2	3
Bay	336	0	34	60	83	98	23	18	7	5	8
Benzie	45	0	4	9	9	13	7	2	0	0	1
Berrien	328	0	27	41	77	70	32	11	11	7	52
Branch	92	0	17	20	24	13	7	3	2	0	6
Calhoun	318	2	27	47	107	58	35	18	4	5	15
Cass	130	0	10	14	33	29	9	2	2	0	31
Charlevoix	59	0	3	13	17	13	6	1	3	1	2
Cheboygan	64	0	9	7	15	19	8	2	2	0	2
Chippewa	87	1	9	13	21	19	8	4	2	0	10
Clare	70	0	3	7	19	16	13	8	1	2	1
Clinton	142	0	30	29	40	19	12	7	1	2	2
Crawford	38	0	7	7	4	14	1	0	3	1	1
Delta	80	0	7	10	30	19	2	5	2	1	4
Dickinson	49	0	6	5	13	6	0	2	2	1	14
Eaton	201	0	22	36	66	42	18	8	2	0	7
Emmet	75	0	8	17	21	14	10	0	1	2	2
Genesee	1,329	4	112	160	307	324	174	59	26	7	156
Gladwin	78	0	6	11	22	25	5	5	2	0	2
Gogebic	42	0	1	4	11	3	7	3	1	1	11
Grand Traverse	169	0	11	19	60	40	18	12	0	2	7
Gratiot	70	0	11	9	20	15	7	3	2	0	3
Hillsdale	93	0	9	16	22	27	9	3	0	1	6
Houghton	69	0	14	12	14	10	9	1	2	1	6
Huron	62	0	9	11	17	11	6	3	1	2	2
Ingham	437	1	55	74	124	105	40	15	6	0	17
Ionia	132	0	22	22	47	25	10	2	2	1	1
Iosco	83	0	9	5	32	25	4	3	1	2	2
Iron	42	0	6	3	9	9	4	2	2	0	7
Isabella	94	0	16	21	25	16	10	1	2	1	2
Jackson	382	3	40	55	99	97	47	7	9	5	20
Kalamazoo	520	1	66	98	150	114	47	17	5	2	20
Kalkaska	47	0	6	8	15	15	2	0	0	0	1
Kent	1,098	4	152	178	332	233	123	34	4	5	33
Keweenaw	10	0	2	0	2	3	1	0	0	0	2
Lake	37	1	4	3	11	8	5	2	1	0	2
Lapeer	207	1	20	31	63	53	22	9	2	1	5
Leelanau	55	0	9	8	15	12	6	0	1	0	4

## REPORTED AGE OF DRINKING DRIVERS INVOLVED IN CRASHES (continued)

COUNTY	All ages	0-15 years	16-20 years	21-24 years	25-34 years	35-44 years	45-54 years	55-64 years	65-74 years	75 yrs & over	DOB unk
Lenawee	187	2	25	30	53	40	15	3	2	0	17
Livingston	343	2	41	56	100	96	30	8	0	2	8
Luce	16	0	4	2	4	0	2	2	1	0	1
Mackinac	54	0	5	7	11	16	9	6	0	0	0
Macomb	1,508	3	146	194	424	421	166	70	28	11	45
Manistee	63	2	6	10	16	19	6	2	0	0	2
Marquette	136	0	22	25	29	32	13	4	2	2	7
Mason	44	0	2	5	16	6	7	1	4	1	2
Mecosta	98	0	16	18	26	20	10	5	1	1	1
Menominee	73	0	10	7	14	14	5	3	1	0	19
Midland	134	1	16	22	38	35	13	3	4	1	1
Missaukee	35	0	5	4	9	9	5	1	2	0	0
Monroe	309	1	35	38	78	60	33	8	5	5	46
Montcalm	158	0	22	35	49	34	9	4	2	0	3
Montmorency	29	0	3	6	8	9	2	0	1	0	0
Muskegon	326	1	31	51	91	83	45	9	5	2	8
Newaygo	117	3	18	13	34	28	11	4	2	0	4
Oakland	1,958	7	167	248	567	513	265	79	33	13	66
Oceana	73	1	11	15	20	15	6	0	1	0	4
Ogemaw	52	0	7	5	15	14	4	5	1	0	1
Ontonagon	29	0	3	4	8	8	2	0	0	0	4
Osceola	62	1	7	11	11	22	4	3	1	1	1
Oscoda	26	0	2	4	3	8	7	1	1	0	0
Otsego	50	0	4	4	21	13	5	2	0	0	1
Ottawa	347	0	54	63	98	67	33	10	6	2	14
Presque Isle	29	0	4	4	4	8	3	2	1	0	3
Roscommon	73	0	7	7	23	17	9	4	4	0	2
Saginaw	446	2	47	65	121	112	53	21	8	4	13
St. Clair	360	0	47	53	105	91	35	11	6	6	6
St. Joseph	148	0	19	24	39	34	11	5	1	0	15
Sanilac	80	0	13	14	15	24	7	2	3	0	2
Schoolcraft	20	0	3	2	5	4	1	2	1	0	2
Shiawassee	202	1	27	29	62	50	18	8	5	0	2
Tuscola	121	0	10	23	37	27	11	8	0	0	5
Van Buren	205	0	24	33	67	38	19	8	2	1	13
Washtenaw	512	0	65	81	117	132	61	22	7	2	25
Wayne	3,101	9	242	336	813	835	431	194	77	27	137
Wexford	89	0	10	9	31	21	11	2	2	0	3
UNKNOWN	0	0	0	0	0	0	0	0	0	0	0
Totals	19,483	55	2,062	2,750	5,360	4,779	2,187	815	349	144	982



## MALE DRIVERS & INJURY SEVERITY IN CRASH

### MOST SEVERE OUTCOME IN CRASH

AGE OF DRIVER IN CRASH	Male Drivers		Fatal		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	395	0.1	1	0.1	42	46	66	240
14 years	190	0.1	2	0.1	24	23	27	114
15 years	680	0.2	5	0.4	39	90	112	434
16 years	9,251	2.5	27	1.9	249	723	1,395	6,857
17 years	12,274	3.3	31	2.2	392	899	1,895	9,057
18 years	13,286	3.5	33	2.4	435	938	2,012	9,868
19 years	11,746	3.1	40	2.9	346	854	1,840	8,666
20 years	10,266	2.7	44	3.2	331	743	1,590	7,558
21 - 24 years	34,390	9.2	137	9.8	1,097	2,351	5,206	25,599
25 - 34 years	78,971	21.1	309	22.2	2,423	4,875	11,971	59,393
35 - 44 years	71,420	19.1	261	18.8	2,067	4,156	10,763	54,173
45 - 54 years	48,814	13.0	177	12.7	1,340	2,683	7,437	37,177
55 - 64 years	26,681	7.1	104	7.5	715	1,469	4,066	20,327
65 - 69 years	9,114	2.4	43	3.1	250	516	1,398	6,907
70 - 74 years	7,773	2.1	32	2.3	210	494	1,261	5,776
75 - 79 years	5,511	1.5	28	2.0	182	380	895	4,026
80 - 84 years	3,238	0.9	21	1.5	99	249	529	2,340
85 - 89 years	1,218	0.3	12	0.9	55	95	194	862
90 years and over	374	0.1	6	0.4	14	27	49	278
Not Stated	28,913	7.7	78	5.6	689	1,372	3,981	22,793
<b>TOTAL</b>	<b>374,505</b>	<b>100.0</b>	<b>1,391</b>	<b>100.0</b>	<b>10,999</b>	<b>22,983</b>	<b>56,687</b>	<b>282,445</b>

NOTE: The tables on this page and page 86 exclude 66,708 drivers of unknown gender.

The crash involvement for male drivers is down 5.0 percent from 1997.

The fatal crash involvement for male drivers is down 2.7 percent from 1997.



**MALE DRINKING DRIVERS & INJURY SEVERITY IN CRASH**

AGE OF DRINKING DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							PDO
	Male Drivers		Fatal		Injury			
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	15	0.1	0	0.0	1	2	5	7
14 years	9	0.1	0	0.0	1	2	1	5
15 years	20	0.1	1	0.3	1	4	3	11
16 years	101	0.7	0	0.0	8	19	18	56
17 years	219	1.4	5	1.3	26	46	29	113
18 years	389	2.5	5	1.3	42	66	62	214
19 years	467	3.1	17	4.5	50	88	60	252
20 years	494	3.2	14	3.7	56	107	64	253
21 - 24 years	2,274	14.9	61	16.2	237	401	338	1,237
25 - 34 years	4,147	27.1	107	28.4	466	752	651	2,171
35 - 44 years	3,568	23.4	86	22.8	366	572	632	1,912
45 - 54 years	1,745	11.4	45	11.9	163	262	335	940
55 - 64 years	700	4.6	15	4.0	49	114	127	395
65 - 69 years	176	1.2	6	1.6	25	16	26	103
70 - 74 years	115	0.8	5	1.3	11	13	21	65
75 - 79 years	68	0.4	1	0.3	4	5	16	42
80 - 84 years	46	0.3	1	0.3	2	7	3	33
85 - 89 years	3	0.0	0	0.0	1	1	1	0
90 years and over	4	0.0	1	0.3	0	1	0	2
Not Stated	720	4.7	7	1.9	64	100	113	436
<b>TOTAL</b>	<b>15,280</b>	<b>100.0</b>	<b>377</b>	<b>100.0</b>	<b>1,573</b>	<b>2,578</b>	<b>2,505</b>	<b>8,247</b>

NOTE: The tables on this page and page 87 exclude 370 drinking drivers of unknown gender.

The crash involvement for male drinking drivers is down 3.9 percent from 1997.

The fatal crash involvement for male drinking drivers is up 1.3 percent from 1997.



## FEMALE DRIVERS & INJURY SEVERITY IN CRASH

AGE OF DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							PDO
	Female Drivers		Fatal		Injury			
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	214	0.1	1	0.2	7	21	53	132
14 years	110	0.0	0	0.0	5	10	24	71
15 years	516	0.2	5	0.9	25	60	90	336
16 years	7,433	2.9	15	2.8	238	561	1,433	5,186
17 years	9,206	3.5	21	3.9	275	663	1,749	6,498
18 years	9,067	3.5	18	3.3	263	671	1,715	6,400
19 years	8,065	3.1	20	3.7	206	579	1,533	5,727
20 years	7,286	2.8	10	1.8	192	502	1,388	5,194
21 - 24 years	24,472	9.4	33	6.1	675	1,630	4,643	17,491
25 - 34 years	57,263	22.0	97	17.8	1,449	3,304	10,869	41,544
35 - 44 years	53,407	20.6	107	19.6	1,333	3,034	9,670	39,263
45 - 54 years	35,309	13.6	82	15.0	876	1,859	6,495	25,997
55 - 64 years	17,148	6.6	43	7.9	434	985	3,215	12,471
65 - 69 years	5,680	2.2	14	2.6	144	300	1,082	4,140
70 - 74 years	5,170	2.0	18	3.3	146	320	962	3,724
75 - 79 years	4,201	1.6	27	5.0	138	314	788	2,934
80 - 84 years	2,506	1.0	18	3.3	108	179	453	1,748
85 - 89 years	898	0.3	4	0.7	33	74	147	640
90 years and over	210	0.1	0	0.0	15	12	31	152
Not Stated	11,682	4.5	12	2.2	233	547	1,783	9,107
<b>TOTAL</b>	<b>259,843</b>	<b>100.0</b>	<b>545</b>	<b>100.0</b>	<b>6,795</b>	<b>15,625</b>	<b>48,123</b>	<b>188,755</b>

The crash involvement for female drivers is down 4.2 percent from 1997.

The fatal crash involvement for female drivers is down 6.0 percent from 1997.



**FEMALE DRINKING DRIVERS & INJURY SEVERITY IN CRASH**

AGE OF DRINKING DRIVER IN CRASH	MOST SEVERE OUTCOME IN CRASH							PDO
	Female Drivers		Fatal		Injury			
	Number	% of Total	Number	% of Fatal	A	B	C	
13 years and under	2	0.1	0	0.0	0	0	1	1
14 years	3	0.1	0	0.0	0	1	0	2
15 years	6	0.2	1	1.4	0	0	2	3
16 years	29	0.8	1	1.4	2	9	5	12
17 years	60	1.6	2	2.9	10	12	15	21
18 years	91	2.4	7	10.1	12	11	9	52
19 years	92	2.4	0	0.0	8	17	26	41
20 years	96	2.5	1	1.4	12	27	12	44
21 - 24 years	454	11.8	5	7.2	49	95	74	231
25 - 34 years	1,142	29.8	16	23.2	129	181	224	592
35 - 44 years	1,160	30.3	22	31.9	114	199	232	593
45 - 54 years	407	10.6	8	11.6	35	65	74	225
55 - 64 years	104	2.7	2	2.9	6	15	23	58
65 - 69 years	25	0.7	0	0.0	3	3	3	16
70 - 74 years	27	0.7	1	1.4	2	5	8	11
75 - 79 years	16	0.4	2	2.9	2	2	2	8
80 - 84 years	2	0.1	0	0.0	1	0	0	1
85 - 89 years	2	0.1	0	0.0	0	1	0	1
90 years and over	0	0.0	0	0.0	0	0	0	0
Not Stated	115	3.0	1	1.4	11	19	16	68
<b>TOTAL</b>	<b>3,833</b>	<b>100.0</b>	<b>69</b>	<b>100.0</b>	<b>396</b>	<b>662</b>	<b>726</b>	<b>1,980</b>

The crash involvement for female drivers is down 0.2 percent from 1997.

The fatal crash involvement for female drinking drivers is up 3.0 percent from 1997.

## FATAL CRASHES AND FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY

COUNTY	C R A S H E S			P E R S O N S		
	All Fatal Crashes	HBD Fatal Crashes	Percent HBD	Total Fatalities	HBD Fatalities	Percent HBD
Alcona	2	0	0.0	2	0	0.0
Alger	3	0	0.0	3	0	0.0
Allegan	18	7	38.9	23	7	30.4
Alpena	2	2	100.0	2	2	100.0
Antrim	4	2	50.0	4	2	50.0
Arenac	5	4	80.0	6	5	83.3
Baraga	1	0	0.0	1	0	0.0
Barry	8	3	37.5	8	3	37.5
Bay	16	4	25.0	17	5	29.4
Benzie	2	1	50.0	2	1	50.0
Berrien	35	14	40.0	39	17	43.6
Branch	11	4	36.4	12	5	41.7
Calhoun	20	8	40.0	23	8	34.8
Cass	7	0	0.0	9	0	0.0
Charlevoix	8	1	12.5	8	1	12.5
Cheboygan	8	3	37.5	10	3	30.0
Chippewa	8	3	37.5	8	3	37.5
Clare	5	4	80.0	5	4	80.0
Clinton	8	2	25.0	8	2	25.0
Crawford	5	3	60.0	5	3	60.0
Delta	8	2	25.0	12	4	33.3
Dickinson	2	0	0.0	3	0	0.0
Eaton	18	7	38.9	19	7	36.8
Emmet	6	3	50.0	7	4	57.1
Genesee	57	34	59.6	62	36	58.1
Gladwin	4	2	50.0	8	2	25.0
Gogebic	2	0	0.0	3	0	0.0
Grand Traverse	13	4	30.8	14	4	28.6
Gratiot	10	1	10.0	12	1	8.3
Hillsdale	9	1	11.1	10	1	10.0
Houghton	5	2	40.0	6	2	33.3
Huron	5	2	40.0	5	2	40.0
Ingham	18	8	44.4	20	9	45.0
Ionia	9	5	55.6	10	5	50.0
Iosco	7	5	71.4	7	5	71.4
Iron	3	1	33.3	3	1	33.3
Isabella	16	8	50.0	17	8	47.1
Jackson	28	17	60.7	29	18	62.1
Kalamazoo	21	4	19.0	23	4	17.4
Kalkaska	6	3	50.0	6	3	50.0
Kent	45	14	31.1	56	17	30.4
Keweenaw	1	1	100.0	1	1	100.0
Lake	5	2	40.0	7	2	28.6
Lapeer	14	4	28.6	16	5	31.3

## FATAL CRASHES AND FATALITIES WITH DRINKING INVOLVEMENT BY COUNTY (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 Fatalities	HBD Fatalities	Percent HBD
Leelanau	3	0	0.0	3	0	0.0
Lenawee	19	7	36.8	22	9	40.9
Livingston	14	4	28.6	17	5	29.4
Luce	0	0	0.0	0	0	0.0
Mackinac	2	1	50.0	2	1	50.0
Macomb	52	26	50.0	55	29	52.7
Manistee	2	1	50.0	2	1	50.0
Marquette	6	2	33.3	10	4	40.0
Mason	4	0	0.0	4	0	0.0
Mecosta	8	4	50.0	9	4	44.4
Menominee	4	1	25.0	4	1	25.0
Midland	13	4	30.8	14	4	28.6
Missaukee	2	1	50.0	2	1	50.0
Monroe	21	10	47.6	23	12	52.2
Montcalm	16	6	37.5	20	7	35.0
Montmorency	0	0	0.0	0	0	0.0
Muskegon	31	15	48.4	34	15	44.1
Newaygo	9	4	44.4	11	6	54.5
Oakland	86	32	37.2	92	35	38.0
Oceana	5	2	40.0	5	2	40.0
Ogemaw	7	3	42.9	7	3	42.9
Ontonagon	2	0	0.0	2	0	0.0
Osceola	8	3	37.5	9	3	33.3
Oscoda	3	1	33.3	3	1	33.3
Otsego	4	3	75.0	4	3	75.0
Ottawa	31	11	35.5	31	11	35.5
Presque Isle	3	2	66.7	4	3	75.0
Roscommon	8	4	50.0	8	4	50.0
Saginaw	24	7	29.2	26	8	30.8
St. Clair	20	10	50.0	22	11	50.0
St. Joseph	10	2	20.0	13	2	15.4
Sanilac	4	0	0.0	5	0	0.0
Schoolcraft	3	1	33.3	4	1	25.0
Shiawassee	10	2	20.0	11	2	18.2
Tuscola	17	5	29.4	21	6	28.6
Van Buren	17	7	41.2	18	7	38.9
Washtenaw	32	5	15.6	34	7	20.6
Wayne	238	91	38.2	255	101	39.6
Wexford	9	4	44.4	10	4	40.0
Totals	1,235	476	38.5	1,367	525	38.4



## MOST SEVERE OUTCOME IN HBD CRASHES BY COUNTY

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

### MOST SEVERE OUTCOME IN HBD CRASH

COUNTY	All HBD Crashes	Fatal	Injury			PDO
			A	B	C	
Alcona	31	0	5	7	1	18
Alger	31	0	1	6	2	22
Allegan	261	7	32	50	37	135
Alpena	82	2	11	15	14	40
Antrim	59	2	3	12	9	33
Arenac	56	4	8	11	11	22
Baraga	35	0	8	6	4	17
Barry	140	3	18	31	15	73
Bay	334	4	44	69	41	176
Benzie	44	1	5	14	2	22
Berrien	328	14	28	54	60	172
Branch	92	4	12	13	12	51
Calhoun	321	8	34	46	46	187
Cass	128	0	22	29	11	66
Charlevoix	60	1	8	14	7	30
Cheboygan	65	3	5	17	6	34
Chippewa	88	3	13	17	7	48
Clare	70	4	11	11	7	37
Clinton	139	2	16	39	19	63
Crawford	38	3	5	7	2	21
Delta	80	2	6	16	14	42
Dickinson	49	0	9	6	7	27
Eaton	200	7	22	36	33	102
Emmet	73	3	5	16	10	39
Genesee	1,328	34	66	253	270	705
Gladwin	77	2	13	19	8	35
Gogebic	42	0	5	9	2	26
Grand Traverse	176	4	17	19	35	101
Gratiot	71	1	9	10	12	39
Hillsdale	94	1	8	21	13	51
Houghton	69	2	15	14	6	32
Huron	61	2	14	6	2	37
Ingham	450	8	54	66	67	255
Ionia	135	5	24	21	27	58
Iosco	84	5	15	23	4	37
Iron	42	1	4	9	6	22
Isabella	91	8	10	17	9	47
Jackson	387	17	32	65	72	201
Kalamazoo	523	4	54	91	73	301
Kalkaska	46	3	7	9	2	25
Kent	1,110	14	91	176	187	642
Keweenaw	10	1	2	2	2	3

## MOST SEVERE OUTCOME IN HBD CRASHES BY COUNTY (continued)

### MOST SEVERE OUTCOME IN HBD CRASH

COUNTY	All HBD Crashes	Fatal	Injury			PDO
			A	B	C	
Lake	36	2	5	6	4	19
Lapeer	205	4	25	44	29	103
Leelanau	54	0	9	15	2	28
Lenawee	190	7	22	35	23	103
Livingston	343	4	40	60	35	204
Luce	15	0	1	3	2	9
Mackinac	53	1	9	8	3	32
Macomb	1,516	26	127	210	299	854
Manistee	58	1	14	9	5	29
Marquette	134	2	18	26	15	73
Mason	44	0	5	6	9	24
Mecosta	96	4	16	16	17	43
Menominee	73	1	10	14	7	41
Midland	139	4	14	33	28	60
Missaukee	35	1	4	8	3	19
Monroe	308	10	33	61	54	150
Montcalm	160	6	25	28	18	83
Montmorency	28	0	5	8	0	15
Muskegon	326	15	46	55	39	171
Newaygo	117	4	16	26	9	62
Oakland	1,962	32	182	309	399	1040
Oceana	75	2	14	14	10	35
Ogemaw	52	3	13	4	11	21
Ontonagon	27	0	3	5	2	17
Osceola	61	3	9	10	6	33
Oscoda	27	1	5	8	3	10
Otsego	51	3	5	9	10	24
Ottawa	345	11	32	56	54	192
Presque Isle	28	2	5	5	5	11
Roscommon	72	4	10	16	8	34
Saginaw	448	7	61	61	82	237
St. Clair	360	10	33	61	55	201
St. Joseph	144	2	11	31	32	68
Sanilac	79	0	12	12	23	32
Schoolcraft	20	1	3	9	2	5
Shiawassee	199	2	36	46	26	89
Tuscola	122	5	15	23	15	64
Van Buren	208	7	35	38	36	92
Washtenaw	514	5	44	98	103	264
Wayne	3,150	91	285	469	663	1642
Wexford	90	4	14	15	5	52
Unknown	0	0	0	0	0	0
Totals	19,564	476	2,042	3,342	3,325	10,379

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

COUNTY	1998 Population Estimate	All Crashes	Fatal Crashes	HBD Crashes	HBD Fatal Crashes	HBD Fatal Crash Rate per 1,000 people	Rank
Keweenaw	2,077	94	1	10	1	0.4815	1
Arenac	16,413	1,093	5	56	4	0.2437	2
Crawford	14,150	910	5	38	3	0.2120	3
Iosco	25,111	1,374	7	84	5	0.1991	4
Kalkaska	15,568	769	6	46	3	0.1927	5
Lake	10,475	684	5	36	2	0.1909	6
Roscommon	23,467	1,254	8	72	4	0.1705	7
Ogemaw	21,193	1,281	7	52	3	0.1416	8
Presque Isle	14,424	701	3	28	2	0.1387	9
Isabella	58,026	2,286	16	91	8	0.1379	10
Wexford	29,185	1,840	9	90	4	0.1371	11
Osceola	22,106	1,604	8	61	3	0.1357	12
Otsego	22,129	1,095	4	51	3	0.1356	13
Clare	29,578	1,697	5	70	4	0.1352	14
Cheboygan	23,738	1,018	8	65	3	0.1264	15
Schoolcraft	8,805	518	3	20	1	0.1136	16
Oscoda	8,882	563	3	27	1	0.1126	17
Jackson	156,157	6,906	28	387	17	0.1089	18
Emmet	28,677	1,567	6	73	3	0.1046	19
Mecosta	40,006	2,701	8	96	4	0.1000	20
Montcalm	60,559	3,270	16	160	6	0.0991	21
Antrim	21,522	1,043	4	59	2	0.0929	22
Van Buren	75,666	2,889	17	208	7	0.0925	23
Branch	43,634	2,126	11	92	4	0.0917	24
Mackinac	11,097	784	2	53	1	0.0901	25
Muskegon	166,748	6,004	31	326	15	0.0900	26
Berrien	160,245	5,770	35	328	14	0.0874	27
Newaygo	45,784	2,108	9	117	4	0.0874	28
Tuscola	58,181	2,151	17	122	5	0.0859	29
Ionia	61,700	2,803	9	135	5	0.0810	30
Oceana	24,833	1,232	5	75	2	0.0805	31
Chippewa	37,968	1,398	8	88	3	0.0790	32
Gladwin	25,333	1,166	4	77	2	0.0789	33
Genesee	436,084	16,280	57	1,328	34	0.0780	34
Iron	12,883	1,006	3	42	1	0.0776	35
Missaukee	13,892	842	2	35	1	0.0720	36
Lenawee	98,412	3,594	19	190	7	0.0711	37
Monroe	143,499	4,301	21	308	10	0.0697	38
Eaton	101,090	4,265	18	200	7	0.0692	39
Allegan	101,662	3,748	18	261	7	0.0689	40
Benzie	14,678	682	2	44	1	0.0681	41
Alpena	30,405	1,392	2	82	2	0.0658	42
St. Clair	159,769	5,372	20	360	10	0.0626	43
Calhoun	141,005	6,346	20	321	8	0.0567	44
Huron	35,303	2,076	5	61	2	0.0567	45
Houghton	35,719	1,256	5	69	2	0.0560	46

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

COUNTY	1998 Population Estimate	All Crashes	Fatal Crashes	HBD Crashes	HBD Fatal Crashes	HBD Fatal Crash Rate per 1,000 people	Rank
Barry	54,535	2,518	8	140	3	0.0550	47
Grand Traverse	74,134	3,778	13	176	4	0.0540	48
Delta	38,947	2,252	8	80	2	0.0514	49
Ottawa	224,357	7,742	31	345	11	0.0490	50
Midland	81,842	3,268	13	139	4	0.0489	51
Lapeer	88,270	3,843	14	205	4	0.0453	52
Wayne	2,118,129	85,378	238	3,150	91	0.0430	53
Manistee	23,330	1,114	2	58	1	0.0429	54
Charlevoix	24,436	1,246	8	60	1	0.0409	55
Menominee	24,468	1,858	4	73	1	0.0409	56
Bay	110,048	4,094	16	334	4	0.0363	57
Saginaw	210,101	8,392	24	448	7	0.0333	58
Macomb	787,698	26,669	52	1,516	26	0.0330	59
St. Joseph	61,226	2,367	10	144	2	0.0327	60
Marquette	61,565	2,446	6	134	2	0.0325	61
Clinton	63,379	2,692	8	139	2	0.0316	62
Ingham	285,214	11,710	18	450	8	0.0280	63
Shiawassee	72,569	2,555	10	199	2	0.0276	64
Livingston	146,165	5,301	14	343	4	0.0274	65
Oakland	1,176,488	47,445	86	1,962	32	0.0272	66
Kent	545,166	25,181	45	1,110	14	0.0257	67
Gratiot	40,126	1,840	10	71	1	0.0249	68
Hillsdale	46,614	2,320	9	94	1	0.0215	69
Kalamazoo	229,660	10,023	21	523	4	0.0174	70
Washtenaw	303,069	12,227	32	514	5	0.0165	71
Alcona	11,108	923	2	31	0	0.0000	72
Alger	9,887	403	3	31	0	0.0000	73
Baraga	8,413	510	1	35	0	0.0000	74
Cass	49,693	2,053	7	128	0	0.0000	75
Dickinson	27,074	1,494	2	49	0	0.0000	76
Gogebic	17,097	612	2	42	0	0.0000	77
Leelanau	19,142	621	3	54	0	0.0000	78
Luce	6,640	266	0	15	0	0.0000	79
Mason	27,950	1,681	4	44	0	0.0000	80
Montmorency	10,011	505	0	28	0	0.0000	81
Ontonagon	7,878	576	2	27	0	0.0000	82
Sanilac	42,975	1,951	4	79	0	0.0000	83
Unknown		53	0	0	0		
<b>State Totals</b>	<b>9,817,242</b>	<b>403,766</b>	<b>1,235</b>	<b>19,564</b>	<b>476</b>	<b>0.04849</b>	



# ALCOHOL

## REPORTED STATEWIDE ALCOHOL INVOLVED TRAFFIC CRASHES BY COUNTY IN MICHIGAN

COUNTY	All	Fatal	Injury	Property Damage	Inter- state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Alcona	31	0	13	18	0	1	1	29	0	16
Alger	31	0	9	22	0	0	10	21	0	12
Allegan	261	7	119	135	10	19	20	212	7	168
Alpena	82	2	40	40	0	14	8	60	2	50
Antrim	59	2	24	33	0	4	4	51	2	33
Arenac	56	4	30	22	6	11	2	37	5	39
Baraga	35	0	18	17	0	5	4	26	0	27
Barry	140	3	64	73	0	0	25	115	3	98
Bay	334	4	154	176	16	9	68	241	5	199
Benzie	44	1	21	22	0	5	7	32	1	25
Berrien	328	14	142	172	31	32	37	228	17	211
Branch	92	4	37	51	2	12	3	75	5	53
Calhoun	321	8	126	187	44	3	34	240	8	162
Cass	128	0	62	66	0	14	30	84	0	80
Charlevoix	60	1	29	30	0	3	10	47	1	37
Cheboygan	65	3	28	34	5	2	8	50	3	43
Chippewa	88	3	37	48	16	0	9	63	3	54
Clare	70	4	29	37	0	5	10	55	4	49
Clinton	139	2	74	63	16	19	7	97	2	103
Crawford	38	3	14	21	5	1	5	27	3	21
Delta	80	2	36	42	0	15	8	57	4	52
Dickinson	49	0	22	27	0	9	8	32	0	31
Eaton	200	7	91	102	19	6	29	146	7	132
Emmet	73	3	31	39	0	14	4	55	4	45
Genesee	1,328	34	589	705	97	35	160	1,036	36	894
Gladwin	77	2	40	35	0	0	16	61	2	53
Gogebic	42	0	16	26	0	11	1	30	0	18
Grand Traverse	176	4	71	101	0	26	15	135	4	106
Gratiot	71	1	31	39	0	13	5	53	1	38
Hillsdale	94	1	42	51	0	10	9	75	1	51
Houghton	69	2	35	32	0	15	9	45	2	49
Huron	61	2	22	37	0	0	14	47	2	34
Ingham	450	8	187	255	58	13	66	313	9	263
Ionia	135	5	72	58	12	0	19	104	5	89
Iosco	84	5	42	37	0	16	9	59	5	62
Iron	42	1	19	22	0	6	7	29	1	29
Isabella	91	8	36	47	0	5	13	73	8	56
Jackson	387	17	169	201	37	19	28	303	18	243
Kalamazoo	523	4	218	301	36	33	50	404	4	319
Kalkaska	46	3	18	25	0	3	5	38	3	28
Kent	1,110	14	454	642	55	99	127	829	17	620
Keweenaw	10	1	6	3	0	2	0	8	1	8
Lake	36	2	15	19	0	7	2	27	2	22
Lapeer	205	4	98	103	15	0	35	155	5	141
Leelanau	54	0	26	28	0	0	18	36	0	40
Lenawee	190	7	80	103	0	40	11	139	9	111

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

COUNTY	All	Fatal	Injury	Property Damage	Inter- state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Livingston	343	4	135	204	45	24	24	250	5	183
Luce	15	0	6	9	0	0	3	12	0	8
Mackinac	53	1	20	32	7	6	4	36	1	28
Macomb	1,516	26	636	854	106	0	338	1,072	29	931
Manistee	58	1	28	29	0	6	7	45	1	34
Marquette	134	2	59	73	0	27	12	95	4	90
Mason	44	0	20	24	0	12	0	32	0	27
Mecosta	96	4	49	43	0	23	8	65	4	75
Menominee	73	1	31	41	0	17	3	53	1	39
Midland	139	4	75	60	0	13	19	107	4	108
Missaukee	35	1	15	19	0	0	5	30	1	19
Monroe	308	10	148	150	30	38	25	215	12	237
Montcalm	160	6	71	83	0	8	30	122	7	107
Montmorency	28	0	13	15	0	0	7	21	0	19
Muskegon	326	15	140	171	3	42	37	244	15	228
Newaygo	117	4	51	62	0	0	21	96	6	73
Oakland	1,962	32	890	1,040	279	81	234	1,368	35	1,391
Oceana	75	2	38	35	0	11	3	61	2	58
Ogemaw	52	3	28	21	7	0	4	41	3	43
Ontonagon	27	0	10	17	0	3	6	18	0	14
Osceola	61	3	25	33	0	11	6	44	3	31
Oscoda	27	1	16	10	0	0	9	18	1	27
Otsego	51	3	24	24	8	0	11	32	3	35
Ottawa	345	11	142	192	14	28	22	281	11	212
Presque Isle	28	2	15	11	0	3	0	25	3	35
Roscommon	72	4	34	34	5	5	14	48	4	51
Saginaw	448	7	204	237	24	0	92	332	8	287
St. Clair	360	10	149	201	33	0	64	263	11	208
St. Joseph	144	2	74	68	0	21	19	104	2	101
Sanilac	79	0	47	32	0	0	18	61	0	67
Schoolcraft	20	1	14	5	0	2	2	16	1	20
Shiawassee	199	2	108	89	15	0	48	136	2	161
Tuscola	122	5	53	64	0	0	22	100	6	71
Van Buren	208	7	109	92	15	0	42	151	7	164
Washtenaw	514	5	245	264	50	68	30	366	7	331
Wayne	3,150	91	1,417	1,642	493	164	359	2,134	101	2,175
Wexford	90	4	34	52	0	12	18	60	4	56
UNKNOWN	0	0	0	0	0	0	0	0	0	0
Totals	19,564	476	8,709	10,379	1,614	1,181	2,536	14,233	525	12,758



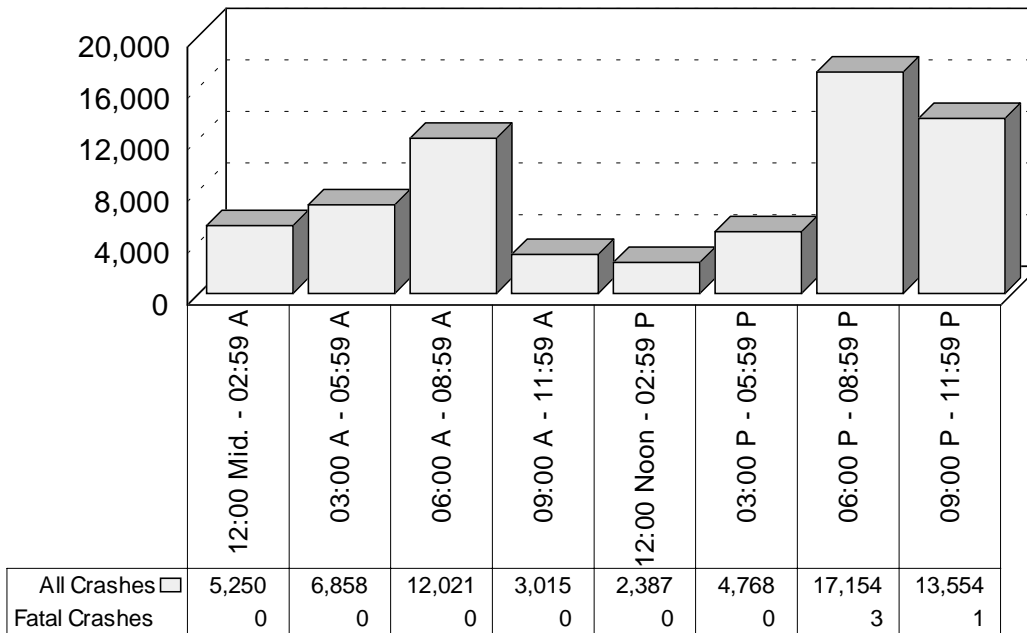


## LIGHT CONDITION AND TIME OF DAY IN MOTOR VEHICLE-DEER CRASHES

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	12,837	19.6	0	0.0	56	238	310	12,233
Dawn	5,250	8.0	0	0.0	7	37	88	5,118
Dusk	3,554	5.4	1	25.0	9	43	72	3,429
Dark - Lighted	2,003	3.1	0	0.0	3	15	42	1,943
Dark - Unlighted	41,169	63.0	3	75.0	86	306	686	40,088
Other/Unknown	584	0.9	0	0.0	3	7	12	562
<b>Totals</b>	<b>65,397</b>	<b>100.0</b>	<b>4</b>	<b>100.0</b>	<b>164</b>	<b>646</b>	<b>1,210</b>	<b>63,373</b>

Three of the four fatal deer crashes in Michigan in 1998 occurred in dark-unlighted conditions. All motor vehicle-deer involved/associated crashes peaked during the 6:00 - 8:59 PM time period. There were 3 fatal deer crashes during this time period.

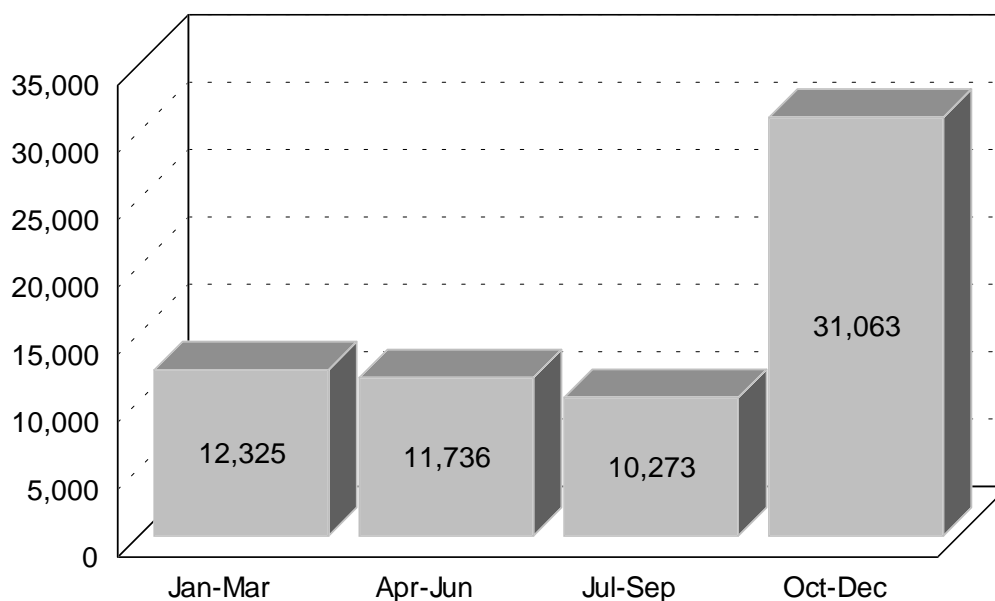
### Time and Severity of All Motor Vehicle-Deer Crashes



## MONTHLY AND SEASONAL RATES FOR MOTOR VEHICLE-DEER CRASHES

MONTH	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
January	5,354	8.2	0	0.0	5	24	57	5,268
February	3,926	6.0	1	25.0	2	22	41	3,860
March	3,045	4.7	0	0.0	3	23	46	2,973
April	3,403	5.2	0	0.0	8	31	72	3,292
May	4,318	6.6	0	0.0	18	68	114	4,118
June	4,015	6.1	0	0.0	10	62	113	3,830
July	3,269	5.0	0	0.0	12	64	89	3,104
August	2,682	4.1	1	25.0	20	51	63	2,547
September	4,322	6.6	0	0.0	27	56	96	4,143
October	10,334	15.8	2	50.0	21	92	183	10,036
November	13,731	21.0	0	0.0	28	114	245	13,344
December	6,998	10.7	0	0.0	10	39	91	6,858
Totals	65,397	100.0	4	100.0	164	646	1,210	63,373

### All Motor Vehicle-Deer Crashes



Crashes involving deer occurred most frequently during the first quarter (18.8%) and the fourth quarter (47.5%) of the year for a total of 66 percent of all reported motor vehicle-deer collisions.



## REPORTED STATEWIDE MOTOR VEHICLE-DEER CRASHES BY COUNTY IN MICHIGAN

COUNTY	All	Fatal	Injury	Property Damage	Inter- state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Alcona	670	0	15	655	0	111	120	439	0	16
Alger	160	0	2	158	0	16	69	75	0	3
Allegan	1,058	0	37	1,021	59	86	164	749	0	41
Alpena	562	0	24	538	0	70	131	361	0	30
Antrim	522	0	8	514	0	120	92	310	0	11
Arenac	545	0	12	533	49	119	36	341	0	15
Baraga	280	0	11	269	0	113	46	121	0	14
Barry	1,266	0	43	1,223	0	0	401	865	0	48
Bay	386	0	15	371	12	20	63	291	0	18
Benzie	312	0	4	308	0	76	61	175	0	4
Berrien	732	0	26	706	102	134	73	423	0	30
Branch	956	0	25	931	101	79	54	722	0	29
Calhoun	1,766	0	39	1,727	235	0	263	1,268	0	46
Cass	839	0	29	810	1	51	263	524	0	34
Charlevoix	554	0	13	541	0	150	100	304	0	17
Cheboygan	387	0	22	365	77	18	93	199	0	25
Chippewa	516	0	20	496	59	0	197	260	0	22
Clare	770	0	23	747	0	152	136	482	0	28
Clinton	1,130	0	30	1,100	117	193	61	759	0	36
Crawford	392	0	6	386	47	9	104	232	0	7
Delta	1,051	0	21	1,030	0	216	195	640	0	22
Dickinson	809	0	17	792	0	245	211	353	0	19
Eaton	1,430	0	49	1,381	160	35	372	863	0	55
Emmet	464	0	16	448	1	104	32	327	0	17
Genesee	1,193	0	40	1,153	111	20	151	911	0	48
Gladwin	661	0	11	650	0	0	217	444	0	12
Gogebic	242	0	14	228	0	100	12	130	0	14
Grand Traverse	611	0	11	600	0	68	97	446	0	12
Gratiot	809	0	30	779	0	139	120	550	0	46
Hillsdale	1,030	0	33	997	0	64	183	783	0	36
Houghton	346	0	13	333	0	87	94	165	0	18
Huron	1,215	0	16	1,199	0	0	440	775	0	19
Ingham	1,345	0	40	1,305	117	113	157	958	0	44
Ionia	1,203	0	34	1,169	84	0	298	821	0	38
Iosco	676	0	16	660	0	87	202	387	0	23
Iron	692	0	23	669	0	170	216	306	0	27
Isabella	1,157	0	31	1,126	0	138	84	935	0	35
Jackson	1,925	1	46	1,878	97	111	235	1,482	1	57
Kalamazoo	1,319	0	48	1,271	53	69	84	1,113	0	68
Kalkaska	302	0	9	293	0	33	79	190	0	10
Kent	2,108	0	78	2,030	111	91	292	1,614	0	87
Keweenaw	41	0	2	39	0	18	5	18	0	2
Lake	426	0	13	413	0	72	69	285	0	15
Lapeer	1,439	0	38	1,401	93	0	256	1,090	0	41
Leelanau	214	0	4	210	0	0	83	131	0	4
Lenawee	810	0	29	781	0	141	143	526	0	40

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

COUNTY	All	Fatal	Injury	Property Damage	Inter- state	US Route	State Route	Local Street	Persons Killed	Persons Injured
Livingston	1,089	0	43	1,046	83	54	104	848	0	46
Luce	145	0	4	141	0	0	76	69	0	6
Mackinac	410	0	10	400	52	92	121	145	0	15
Macomb	668	0	36	632	30	0	112	526	0	38
Manistee	508	0	9	499	0	79	108	321	0	10
Marquette	584	0	29	555	0	153	100	331	0	33
Mason	823	0	25	798	0	308	7	508	0	30
Mecosta	1,470	0	26	1,444	0	299	264	907	0	33
Menominee	1,098	0	32	1,066	0	325	87	686	0	41
Midland	1,038	1	27	1,010	0	68	122	848	1	33
Missaukee	548	0	15	533	0	0	173	375	0	16
Monroe	350	0	21	329	38	51	15	246	0	27
Montcalm	1,623	0	53	1,570	0	45	447	1,131	0	62
Montmorency	285	0	4	281	0	0	106	179	0	5
Muskegon	811	0	20	791	14	103	73	621	0	25
Newaygo	896	0	24	872	0	0	235	661	0	28
Oakland	1,668	1	79	1,588	116	9	157	1,386	1	89
Oceana	532	0	19	513	0	148	31	353	0	25
Ogemaw	710	0	18	692	74	0	163	473	0	21
Ontonagon	411	0	8	403	0	81	210	120	0	10
Osceola	932	0	35	897	0	227	124	581	0	44
Oscoda	330	0	7	323	0	0	87	243	0	8
Otsego	248	0	10	238	46	0	27	175	0	13
Ottawa	1,026	0	41	985	77	55	76	818	0	47
Presque Isle	439	0	16	423	0	74	104	261	0	16
Roscommon	567	0	28	539	73	44	104	346	0	31
Saginaw	980	0	21	959	36	0	221	723	0	24
St. Clair	948	0	43	905	102	0	152	694	0	49
St. Joseph	733	1	20	712	0	89	159	485	1	23
Sanilac	1,158	0	33	1,125	0	0	347	811	0	41
Schoolcraft	221	0	5	216	0	75	75	71	0	5
Shiawassee	823	0	18	805	107	0	157	559	0	23
Tuscola	929	0	28	901	0	0	262	667	0	32
Van Buren	795	0	27	768	98	0	168	529	0	32
Washtenaw	1,308	0	73	1,235	73	126	124	985	0	86
Wayne	349	0	16	333	64	12	23	250	0	18
Wexford	607	0	11	596	0	67	246	294	0	13
UNKNOWN	16	0	0	16	0	0	0	16	0	0
<b>Totals</b>	<b>65,397</b>	<b>4</b>	<b>2,020</b>	<b>63,373</b>	<b>2,769</b>	<b>6,222</b>	<b>12,021</b>	<b>44,385</b>	<b>4</b>	<b>2,381</b>