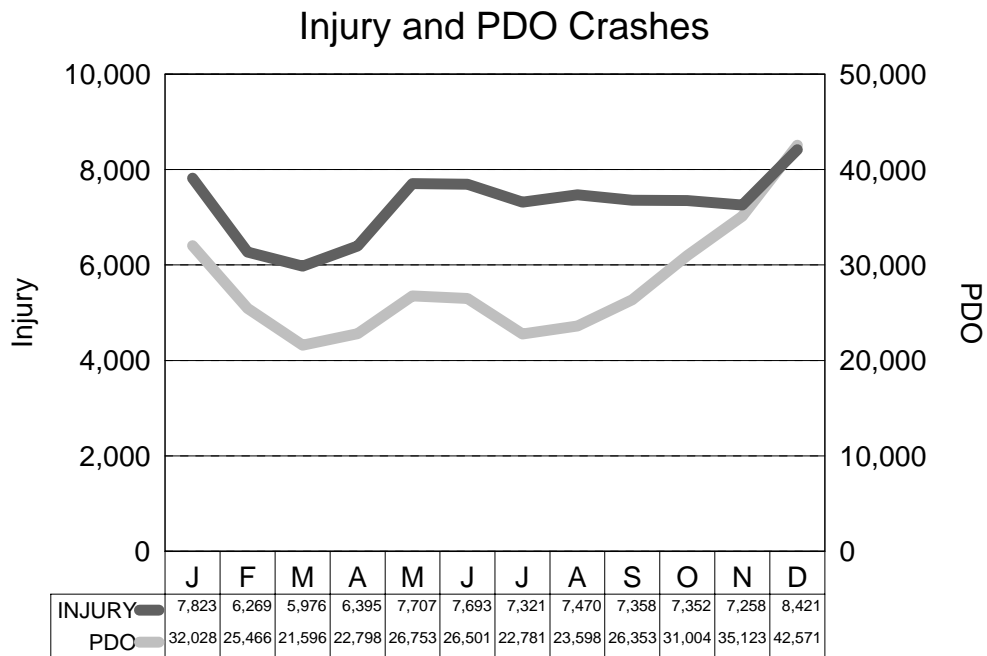
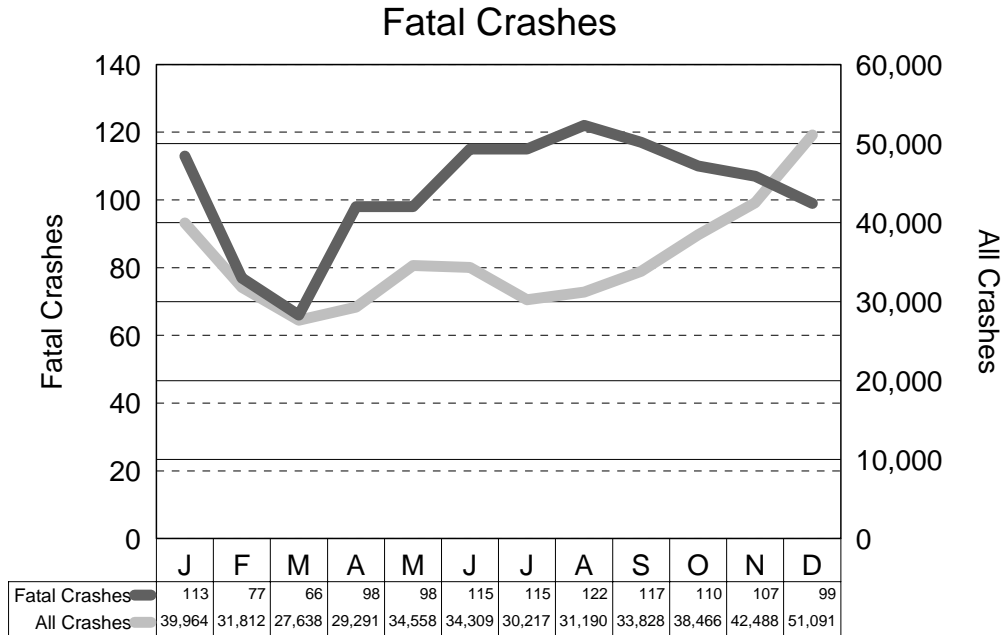


## ALL CRASHES INJURY SEVERITY BY MONTH



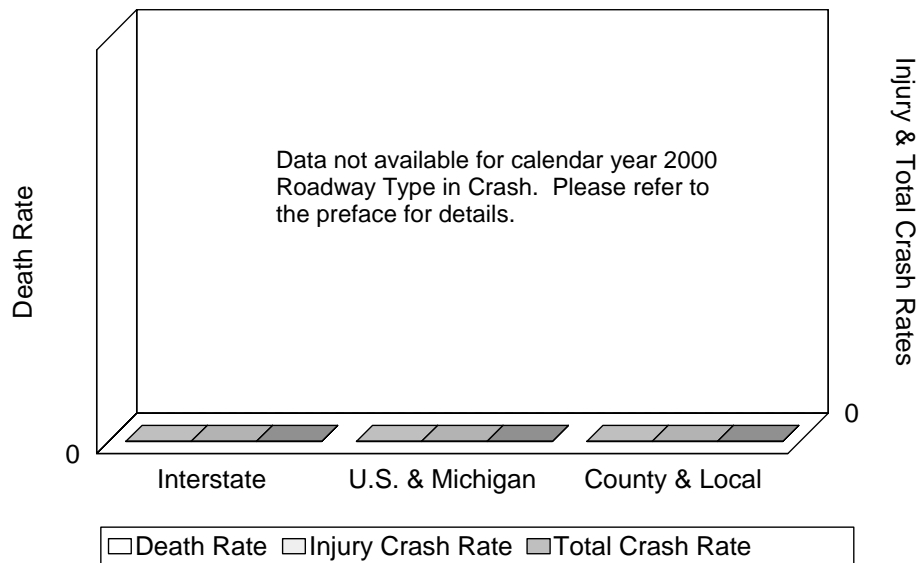
The charts on this page show that the months of July and August are peak months (24% or above) in terms of the percent of the number of crashes involving death or injury to the number of all crashes. That is, if a person was in a motor vehicle crash during one of these months there was a higher chance of that crash resulting in death or injury to one of the involved persons than if that crash happened during one of the other months.

## CRASH EXPERIENCE BY ROADWAY TYPE

The table below provides a detailed breakdown of estimated vehicle mileage, crashes, death rates (deaths per 100 million vehicle miles), and crash rates (crashes per 100 million vehicle miles) for the major roadway types in Michigan. All rates are lowest on interstate routes. 2000 estimated mileage figures were provided by the Michigan Department of Transportation [10].

STATEWIDE	Estimated Mileage (Billions)	All Crashes	Injury Crashes	Deaths	Total Crash Rate	Injury Crash Rate	Death Rate
Interstate Routes	29.3	Data not available for calendar year 2000 Roadway Type in Crash. Please refer to the preface for details.					
U.S. & Michigan Roads	21.9						
County & City Roads	43.7						
Totals	94.9	424,852	87,043	1,382	447.7	91.7	1.5

Rates per 100 Million Vehicle Miles



## CRASH TYPE

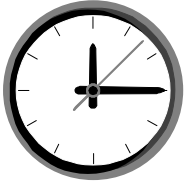
CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	132,160	31.1	560	45.3	3,317	7,818	10,346	110,119
Head On	8,266	1.9	198	16.0	627	935	1,244	5,262
Head On - Left Turn	12,893	3.0	50	4.0	551	1,515	2,881	7,896
Angle	83,640	19.7	286	23.1	2,492	6,145	14,198	60,519
Rear End	104,407	24.6	64	5.2	1,156	3,546	20,286	79,355
Rear End - Left Turn	4,659	1.1	10	0.8	86	231	928	3,404
Rear End - Right Turn	3,592	0.8	0	0.0	18	68	494	3,012
Sideswipe - Same Direction	37,336	8.8	22	1.8	258	734	2,219	34,103
Sideswipe - Opposite Direct	12,002	2.8	15	1.2	141	387	906	10,553
Other/Unknown	25,897	6.1	32	2.6	555	1,071	1,890	22,349
<b>Totals</b>	<b>424,852</b>	<b>100.0</b>	<b>1,237</b>	<b>100.0</b>	<b>9,201</b>	<b>22,450</b>	<b>55,392</b>	<b>336,572</b>

Single Vehicle, Head On, and Angle crash types produce the highest number of fatal crashes (84.4%). Single Vehicle crashes include rollovers, which are particularly deadly crash types. Rear End-Turning and Sideswipe crashes produce the lowest number of fatal crashes (3.8%).

## RELATIONSHIP TO ROADWAY

LOCATION OF FIRST IMPACT	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
On Road	363,545	85.6	868	70.2	6,671	16,731	47,534	291,741
Median	3,209	0.8	19	1.5	146	315	542	2,187
Shoulder	17,462	4.1	89	7.2	644	1,407	2,053	13,269
Outside of Shoulder/Curb	32,016	7.5	230	18.6	1,466	3,331	4,266	22,723
Gore	885	0.2	3	0.2	39	99	122	622
Other/Unknown	7,735	1.8	28	2.3	235	567	875	6,030
<b>Totals</b>	<b>424,852</b>	<b>100.0</b>	<b>1,237</b>	<b>100.0</b>	<b>9,201</b>	<b>22,450</b>	<b>55,392</b>	<b>336,572</b>

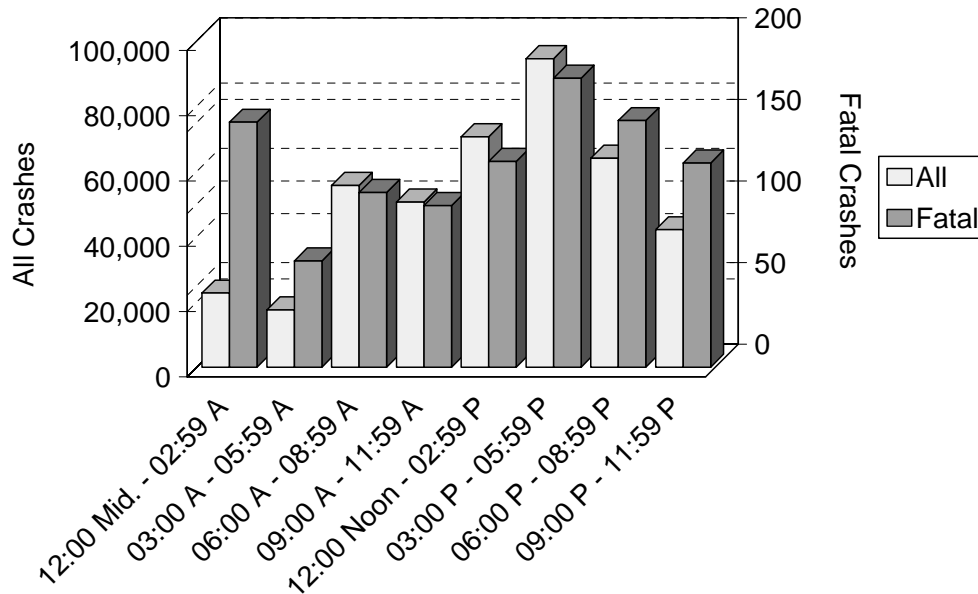
Crashes that happen outside of the normal driving lanes are overrepresented in the fatal count. Only 7.5 percent of crashes occur outside the shoulder of the road, but these crashes account for 18.6 percent of the fatal crashes.



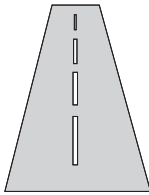
## TIME AND SEVERITY

TIME OF DAY	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
12:00 mid. - 02:59 a.m.	22,654	5.3	150	12.1	870	1,718	2,265	17,651
03:00 a.m. - 05:59 a.m.	17,525	4.1	65	5.3	408	954	1,390	14,708
06:00 a.m. - 08:59 a.m.	55,673	13.1	107	8.6	907	2,347	6,713	45,599
09:00 a.m. - 11:59 a.m.	50,530	11.9	99	8.0	1,034	2,573	7,176	39,648
12:00 noon - 02:59 p.m.	70,521	16.6	126	10.2	1,540	3,810	10,978	54,067
03:00 p.m. - 05:59 p.m.	94,472	22.2	177	14.3	1,836	4,933	14,115	73,411
06:00 p.m. - 08:59 p.m.	63,978	15.1	151	12.2	1,355	3,326	7,255	51,891
09:00 p.m. - 11:59 p.m.	42,077	9.9	125	10.1	1,037	2,357	4,275	34,283
Unknown	7,422	1.7	237	19.2	214	432	1,225	5,314
<b>Total</b>	<b>424,852</b>	<b>100.0</b>	<b>1,237</b>	<b>100.0</b>	<b>9,201</b>	<b>22,450</b>	<b>55,392</b>	<b>336,572</b>

Time and Severity



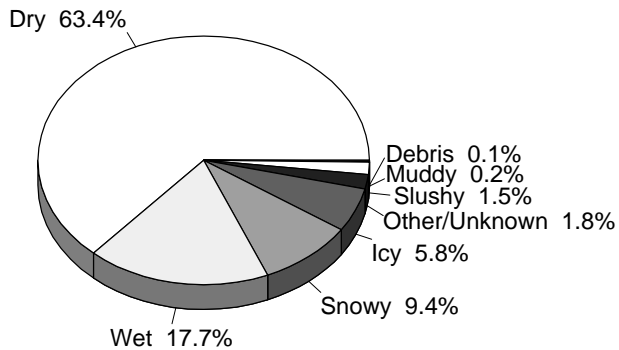
Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. There are proportionally more fatal crashes during the midnight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



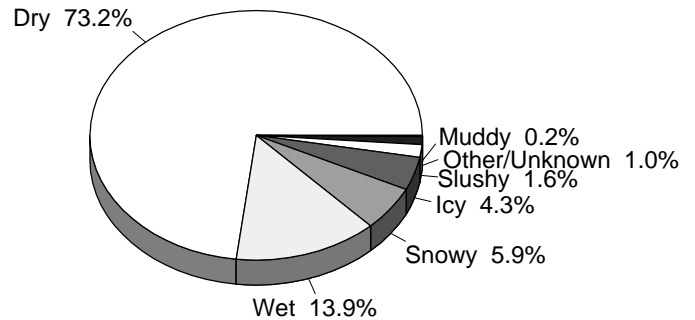
## ROAD CONDITION

ROAD SURFACE CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Dry	269,529	63.4	905	73.2	6,408	15,296	35,483	211,437
Wet	75,381	17.7	172	13.9	1,470	3,804	11,238	58,697
Icy	24,606	5.8	53	4.3	451	1,174	3,022	19,906
Snowy	40,066	9.4	73	5.9	609	1,443	3,982	33,959
Muddy	702	0.2	2	0.2	17	49	84	550
Slushy	6,514	1.5	20	1.6	130	376	855	5,133
Debris	259	0.1	0	0.0	4	27	37	191
Other/Unknown	7,795	1.8	12	1.0	112	281	691	6,699
Totals	424,852	100.0	1,237	100.0	9,201	22,450	55,392	336,572

### ALL CRASHES



### FATAL CRASHES



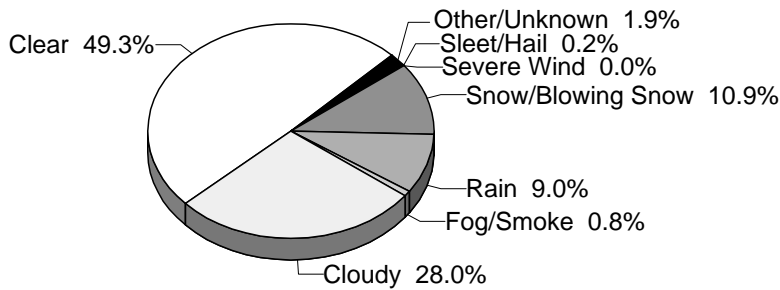
Most crashes (63.4%) and most fatal crashes (73.2%) occur on dry roads. This indicates that Michigan drivers do a good job of adjusting their driving behavior for bad road conditions.



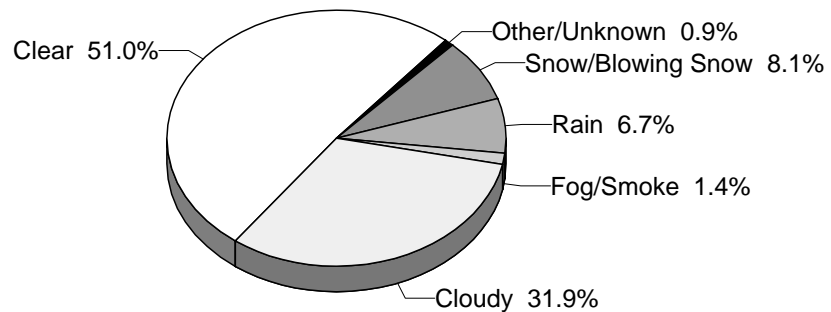
## WEATHER CONDITION

WEATHER CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	209,304	49.3	631	51.0	4,979	11,806	27,184	164,704
Cloudy	118,800	28.0	395	31.9	2,543	6,173	15,797	93,892
Fog/Smoke	3,495	0.8	17	1.4	72	185	339	2,882
Rain	38,167	9.0	83	6.7	762	2,041	5,923	29,358
Snow/Blowing Snow	46,179	10.9	100	8.1	738	1,940	5,333	38,068
Severe Wind	152	0.0	0	0.0	3	10	27	112
Sleet/Hail	662	0.2	0	0.0	18	48	84	512
Other/Unknown	8,093	1.9	11	0.9	86	247	705	7,044
<b>Totals</b>	<b>424,852</b>	<b>100.0</b>	<b>1,237</b>	<b>100.0</b>	<b>9,201</b>	<b>22,450</b>	<b>55,392</b>	<b>336,572</b>

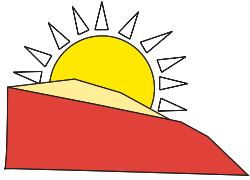
### ALL CRASHES



### FATAL CRASHES



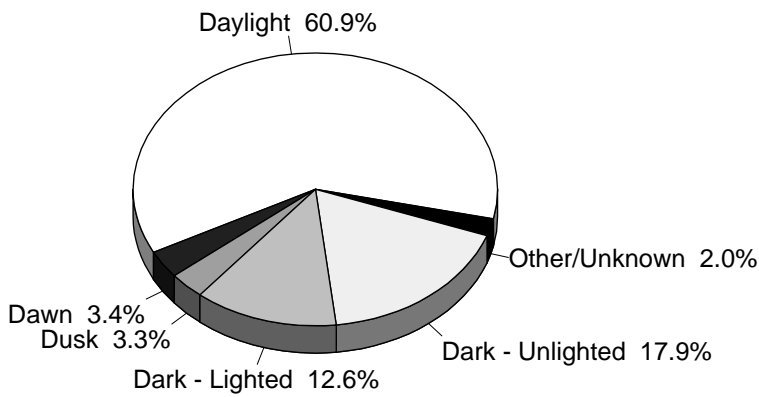
The majority of all crashes occur in good weather (49.3%) as do the majority of fatal crashes (51.0%). Fog/smoke is a particularly deadly weather condition as it is overrepresented in fatal crashes.



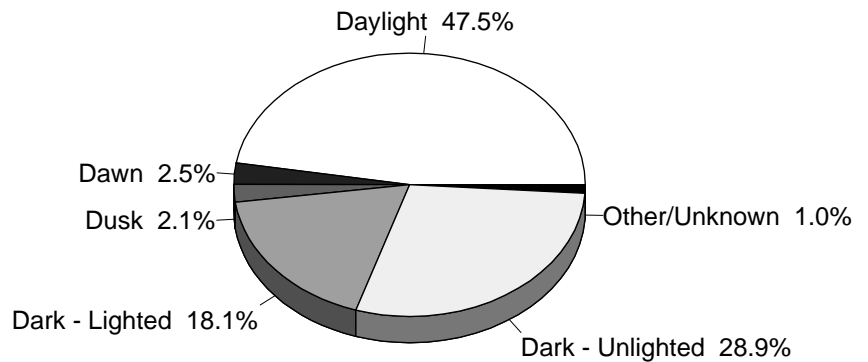
## LIGHT CONDITION

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	258,626	60.9	587	47.5	5,541	14,217	39,056	199,225
Dawn	14,312	3.4	31	2.5	177	500	1,366	12,238
Dusk	13,855	3.3	26	2.1	253	673	1,460	11,443
Dark – Lighted	53,612	12.6	224	18.1	1,525	3,383	7,482	40,998
Dark – Unlighted	75,932	17.9	357	28.9	1,594	3,394	5,182	65,405
Other/Unknown	8,515	2.0	12	1.0	111	283	846	7,263
Totals	424,852	100.0	1,237	100.0	9,201	22,450	55,392	336,572

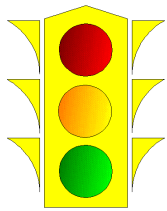
### ALL CRASHES



### FATAL CRASHES



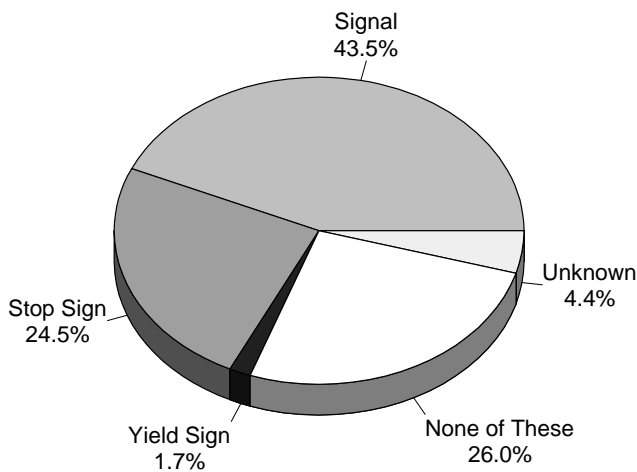
The majority (60.9%) of all crashes happen during daylight hours. Dark conditions create the greatest hazard, as they are overrepresented in fatal crashes. Areas without street lights have the highest fatality rate.



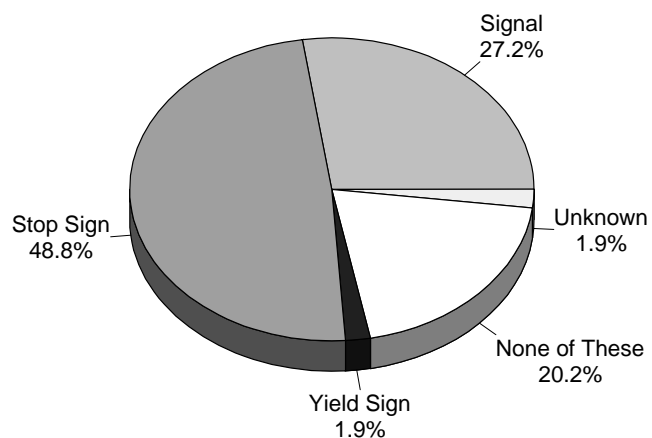
## INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Signal	61,144	43.5	100	27.2	1,393	3,732	11,777	44,142
Stop Sign	34,414	24.5	179	48.8	1,052	2,605	5,790	24,788
Yield Sign	2,394	1.7	7	1.9	57	148	446	1,736
None of These	36,570	26.0	74	20.2	779	2,081	5,392	28,244
Unknown	6,132	4.4	7	1.9	142	317	901	4,765
<b>Totals</b>	<b>140,654</b>	<b>100.0</b>	<b>367</b>	<b>100.0</b>	<b>3,423</b>	<b>8,883</b>	<b>24,306</b>	<b>103,675</b>

**ALL CRASHES**



**FATAL CRASHES**



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



## CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Subtotal	Number	% of Subtotal	A	B	C	
<b>Construction/Maintenance</b>								
<b>Activity - On Road</b>								
Lane Closed	3,012	48.5	2	28.6	47	100	468	2,395
Lane Open	963	15.5	0	0.0	18	39	154	752
Unknown Lane Closure	151	2.4	0	0.0	1	7	13	130
<b>Activity - Off Road</b>								
Lane Closed	303	4.9	0	0.0	6	19	50	228
Lane Open	401	6.5	2	28.6	8	18	71	302
Unknown Lane Closure	46	0.7	0	0.0	1	2	5	38
<b>Activity - None</b>								
Lane Closed	592	9.5	1	14.3	12	32	100	447
Lane Open	418	6.7	2	28.6	13	27	71	305
Unknown Lane Closure	29	0.5	0	0.0	0	2	3	24
<b>Activity - Unknown</b>								
Lane Closed	130	2.1	0	0.0	3	3	20	104
Lane Open	41	0.7	0	0.0	0	1	7	33
Unknown Lane Closure	122	2.0	0	0.0	0	5	20	97
Subtotal	6,208	100.0	7	100.0	109	255	982	4,855
<b>Utility</b>								
<b>Activity - On Road</b>								
Lane Closed	104	30.0	1	50.0	2	4	15	82
Lane Open	48	13.8	1	50.0	1	4	3	39
Unknown Lane Closure	9	2.6	0	0.0	0	0	3	6
<b>Activity - Off Road</b>								
Lane Closed	35	10.1	0	0.0	1	1	2	31
Lane Open	67	19.3	0	0.0	2	3	15	47
Unknown Lane Closure	5	1.4	0	0.0	1	0	0	4
<b>Activity - None</b>								
Lane Closed	7	2.0	0	0.0	0	2	0	5
Lane Open	38	11.0	0	0.0	1	2	2	33
Unknown Lane Closure	2	0.6	0	0.0	0	0	1	1
<b>Activity - Unknown</b>								
Lane Closed	3	0.9	0	0.0	0	0	3	0
Lane Open	2	0.6	0	0.0	0	0	0	2
Unknown Lane Closure	27	7.8	0	0.0	1	3	1	22
Subtotal	347	100.0	2	100.0	9	19	45	272
<b>Unknown Type</b>								
Subtotal	15,558		29		316	741	1,851	12,621
Total	22,113		38		434	1,015	2,878	17,748

## 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	798	1	79	718					1	113
Alger	570	2	101	467					3	142
Allegan	4,269	16	932	3,321					16	1,277
Alpena	1,404	6	253	1,145					7	333
Antrim	1,187	6	153	1,028					7	211
Arenac	1,160	2	167	991					2	244
Baraga	650	3	89	558					4	126
Barry	2,827	13	433	2,381					14	613
Bay	4,211	17	969	3,225					19	1,372
Benzie	631	7	112	512					8	170
Berrien	6,056	24	1,383	4,649					27	1,952
Branch	2,437	4	414	2,019					4	565
Calhoun	7,074	22	1,176	5,876					24	1,652
Cass	2,062	14	400	1,648					14	577
Charlevoix	1,333	2	184	1,147					2	260
Cheboygan	1,264	3	271	990					4	375
Chippewa	1,639	6	223	1,410					8	305
Clare	1,845	3	304	1,538					5	424
Clinton	2,707	10	466	2,231					12	673
Crawford	910	3	142	765					6	188
Delta	2,502	7	275	2,220					8	374
Dickinson	1,535	0	215	1,320					0	296
Eaton	4,446	11	789	3,646					11	1,105
Emmet	1,830	11	264	1,555					11	356
Genesee	16,172	70	4,002	12,100					79	5,814
Gladwin	1,152	2	161	989					2	212
Gogebic	642	0	105	537					0	144
Grand Traverse	4,107	12	741	3,354					13	1,052
Gratiot	1,916	6	341	1,569					7	484
Hillsdale	2,298	7	347	1,944					8	518
Houghton	1,439	4	222	1,213					5	306
Huron	1,783	7	253	1,523					7	369
Ingham	12,326	17	2,510	9,799					17	3,389
Ionia	2,985	8	486	2,491					8	645
Iosco	1,287	3	194	1,090					3	270
Iron	1,007	3	107	897					3	143
Isabella	3,087	10	484	2,593					12	675
Jackson	6,947	21	1,161	5,765					25	1,632
Kalamazoo	10,368	33	1,981	8,354					36	2,691
Kalkaska	922	3	161	758					4	230
Kent	27,980	64	5,960	21,956					66	8,239
Keweenaw	96	0	20	76					0	25
Lake	742	6	97	639					8	134
Lapeer	3,784	22	695	3,067					28	1,003
Leelanau	697	6	105	586					9	146
Lenawee	3,570	10	713	2,847					11	1,022

Data not available for calendar year  
2000 Roadway Type in Crash. Please  
refer to the preface for details.

## 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	6,059	17	1,336	4,706					18	1,892
Luce	346	2	55	289					2	75
Mackinac	991	2	132	857					2	195
Macomb	27,398	46	6,435	20,917					46	9,065
Manistee	1,341	8	159	1,174	Data not available for calendar year 2000 Roadway Type in Crash. Please refer to the preface for details.				8	234
Marquette	2,734	6	460	2,268					7	624
Mason	1,872	5	290	1,577					5	428
Mecosta	2,801	12	395	2,394					17	559
Menominee	2,118	5	275	1,838					5	426
Midland	3,178	7	592	2,579					7	848
Missaukee	818	3	94	721					3	124
Monroe	4,928	30	1,231	3,667					31	1,798
Montcalm	3,306	21	529	2,756					25	797
Montmorency	482	1	88	393					1	113
Muskegon	6,416	22	1,412	4,982					24	2,015
Newaygo	2,120	16	386	1,718					20	596
Oakland	49,837	93	11,431	38,313					97	15,602
Oceana	1,200	7	230	963					10	329
Ogemaw	1,321	6	208	1,107					7	329
Ontonagon	775	1	62	712					1	88
Osceola	1,658	5	231	1,422					5	317
Oscoda	477	3	86	388					3	137
Otsego	1,167	6	218	943					8	297
Ottawa	8,380	35	1,728	6,617					39	2,405
Presque Isle	654	3	81	570					8	108
Roscommon	1,466	4	229	1,233					4	321
Saginaw	8,623	31	1,860	6,732					35	2,618
St. Clair	5,739	17	1,343	4,379					20	2,012
St. Joseph	2,539	17	459	2,063					22	652
Sanilac	1,722	10	221	1,491					11	298
Schoolcraft	713	3	74	636					3	110
Shiawassee	2,791	8	563	2,220					10	763
Tuscola	2,237	8	393	1,836					9	576
Van Buren	3,119	17	652	2,450					21	906
Washtenaw	13,488	35	2,927	10,526					43	3,918
Wayne	86,506	212	19,064	67,230					230	26,712
Wexford	2,024	6	336	1,682					7	507
UNKNOWN	854	0	138	716					0	186
<b>Totals</b>	<b>424,852</b>	<b>1,237</b>	<b>87,043</b>	<b>336,572</b>					<b>1,382</b>	<b>121,826</b>