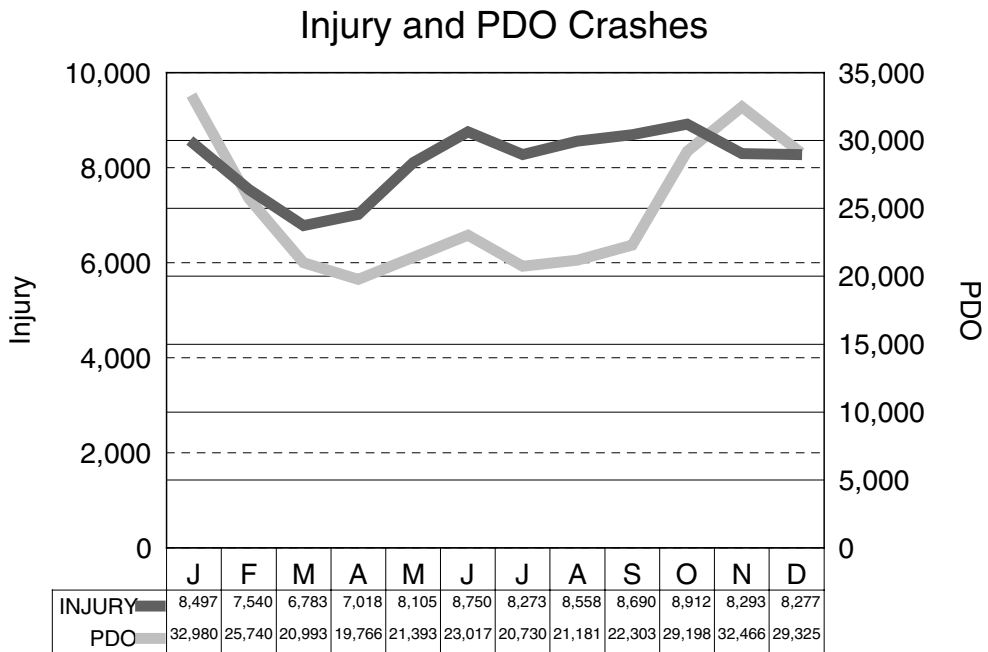
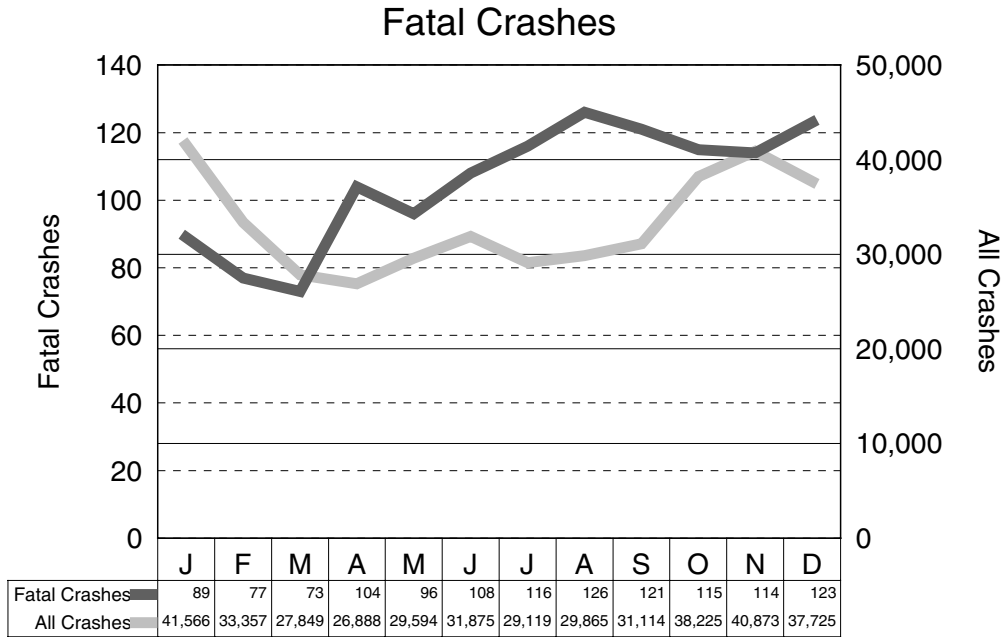


ALL CRASHES INJURY SEVERITY BY MONTH

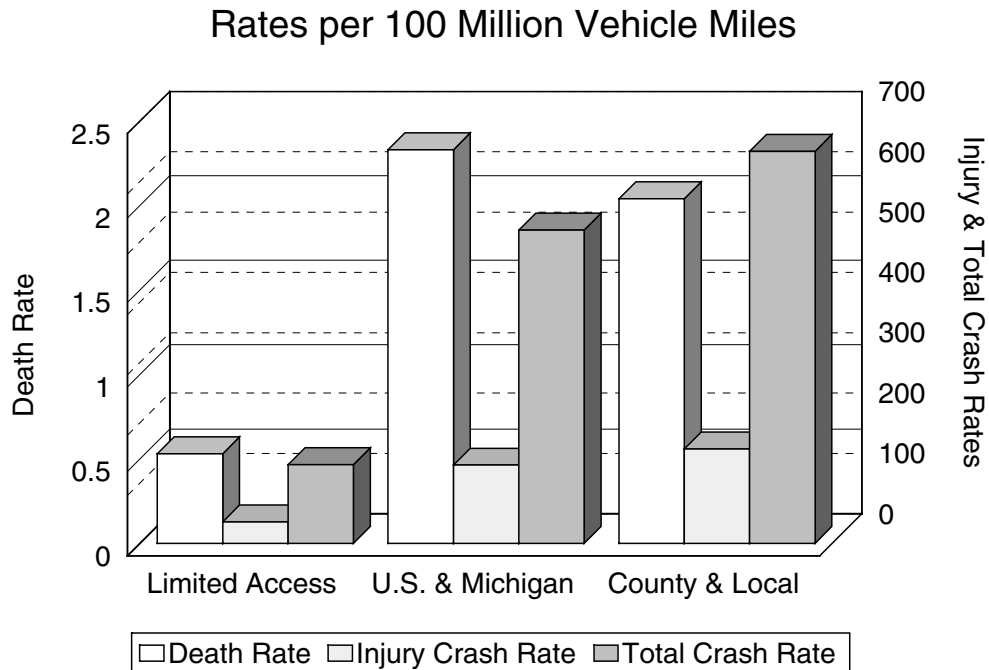


The charts on this page show that the months of April, May, June, July, August, September, October, and December are peak months in terms of the ratio of the number of crashes involving death or injury to the number of noninjury crashes. That is, if a person was in a motor vehicle crash during one of 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 limited access highways. 1994 estimated mileage figures were provided by the Michigan Department of Transportation [11].

STATEWIDE	Estimated Mileage (Billions)	All Crashes	Injury Crashes	Deaths	Total Crash Rate	Injury Crash Rate	Death Rate
Limited Access Roadways	25.4	33,133	8,971	134	130.4	35.3	0.5
U.S. & Michigan Roads	20.1	104,348	26,028	468	519.1	129.5	2.3
County & Local Roads	40.1	260,569	62,697	817	649.8	156.4	2.0
Totals	85.6	398,050	97,696	1,419	465.0	114.1	1.7



CRASH TYPE

CRASH TYPE	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	109,680	27.6	491	38.9	4,373	8,127	9,430	87,259
Head On	10,789	2.7	188	14.9	991	1,178	1,420	7,012
Head On - Left Turn	13,787	3.5	50	4.0	967	1,734	3,088	7,948
Angle	83,754	21.0	312	24.7	3,650	6,959	14,781	58,052
Rear End	94,843	23.8	92	7.3	1,875	4,379	21,888	66,609
Rear End - Left Turn	4,716	1.2	4	0.3	109	299	972	3,332
Rear End - Right Turn	3,081	0.8	1	0.1	24	90	504	2,462
Sideswipe - Same Direction	33,592	8.4	24	1.9	396	801	2,487	29,884
Sideswipe - Opposite Direct	13,012	3.3	17	1.3	223	463	1,115	11,194
Other	23,072	5.8	73	5.8	684	1,191	2,009	19,115
Unknown	7,724	1.9	10	0.8	208	391	890	6,225
Totals	398,050	100.0	1,262	100.0	13,500	25,612	58,584	299,092

Single Vehicle, Head On, and Angle crash types produce the highest number of fatal crashes (78.5%). Single Vehicle crashes include rollovers, which are particularly deadly crash types. Rear End - Turning and Sideswipe crashes produce the lowest number of fatal crashes (3.6%).

RELATION TO ROADWAY

LOCATION OF FIRST IMPACT	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
On Road	342,592	86.1	887	70.3	10,102	19,329	51,089	261,185
Median	2,363	0.6	17	1.3	179	272	413	1,482
Shoulder	16,420	4.1	89	7.1	773	1,573	2,072	11,913
Outside of Shoulder/Curb	28,358	7.1	239	18.9	2,028	3,741	4,006	18,344
Gore	629	0.2	4	0.3	38	78	96	413
Other/Unknown	7,688	1.9	26	2.1	380	619	908	5,755
Totals	398,050	100.0	1,262	100.0	13,500	25,612	58,584	299,092

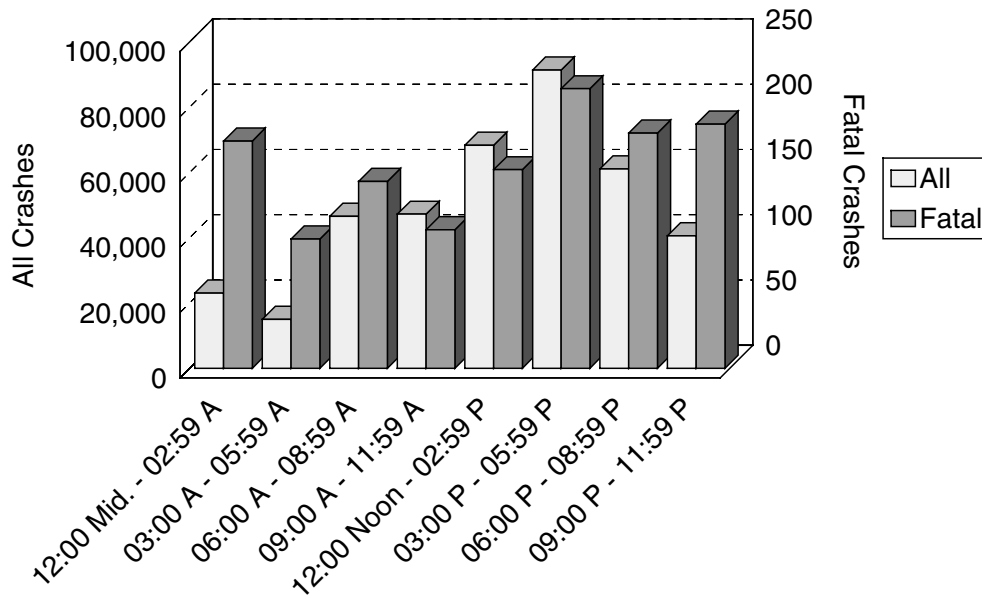
Crashes that happen outside of the normal driving lanes are overrepresented in the fatal count. Only 7.1 percent of crashes occur outside the shoulder of the road, but these crashes account for 18.9 percent of the fatal crashes.



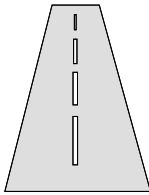
TIME AND SEVERITY

TIME OF DAY	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
12:00 mid. - 02:59 a.m.	23,019	5.8	174	13.8	1,314	2,235	2,622	16,674
03:00 a.m. - 05:59 a.m.	14,983	3.8	99	7.8	605	1,102	1,346	11,831
06:00 a.m. - 08:59 a.m.	46,553	11.7	143	11.3	1,221	2,313	6,402	36,474
09:00 a.m. - 11:59 a.m.	47,178	11.9	106	8.4	1,447	2,766	7,391	35,468
12:00 noon - 02:59 p.m.	68,273	17.2	152	12.0	2,181	4,335	11,716	49,889
03:00 p.m. - 05:59 p.m.	91,348	22.9	214	17.0	2,866	5,915	15,527	66,826
06:00 p.m. - 08:59 p.m.	61,064	15.3	180	14.3	2,116	3,905	8,291	46,572
09:00 p.m. - 11:59 p.m.	40,527	10.2	187	14.8	1,637	2,841	4,762	31,100
Unknown	5,105	1.3	7	0.6	113	200	527	4,258
Total	398,050	100.0	1,262	100.0	13,500	25,612	58,584	299,092

Time and Severity



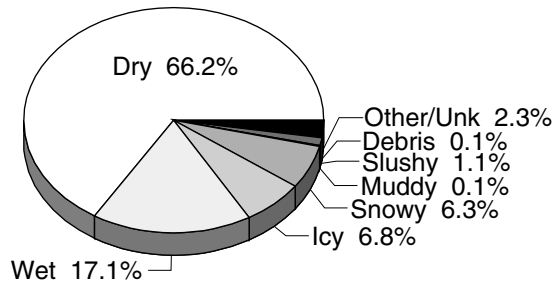
Crash frequencies peak in midafternoon and drop off by midnight, while fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. There are proportionally more fatal crashes during the midnight to 2:59 AM time period.



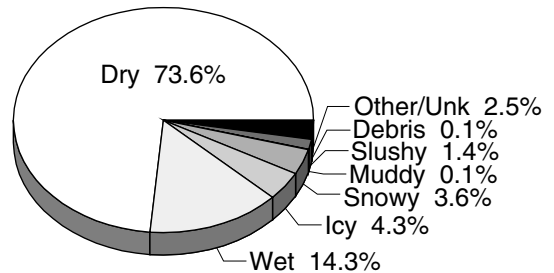
ROAD CONDITION

ROAD SURFACE CONDITION	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Dry	263,565	66.2	929	73.6	9,607	18,011	38,275	196,743
Wet	68,003	17.1	181	14.3	2,161	4,313	11,680	49,668
Icy	27,004	6.8	54	4.3	685	1,318	3,685	21,262
Snowy	25,020	6.3	46	3.6	578	1,139	2,920	20,337
Muddy	588	0.1	1	0.1	32	56	73	426
Slushy	4,285	1.1	18	1.4	127	239	690	3,211
Debris	237	0.1	1	0.1	13	20	41	162
Other/Unknown	9,348	2.3	32	2.5	297	516	1,220	7,283
Totals	398,050	100.0	1,262	100.0	13,500	25,612	58,584	299,092

ALL CRASHES



FATAL CRASHES



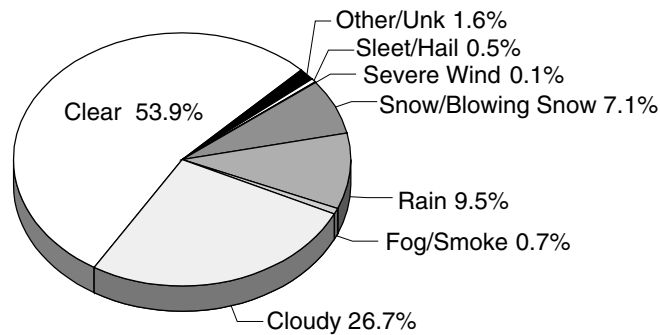
Most crashes (66.2%) and most fatal crashes (73.6%) occur on dry roads. This indicates that Michigan drivers do a good job of adjusting their driving behavior for bad road conditions.



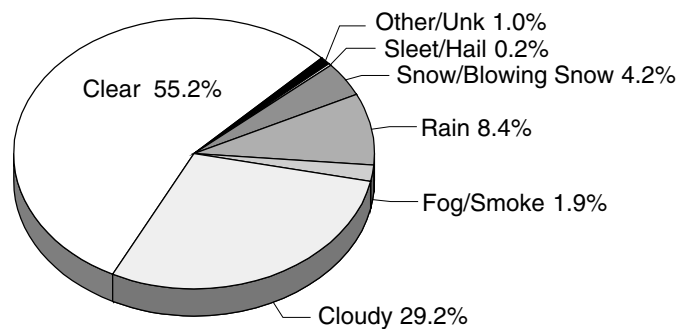
WEATHER CONDITION

WEATHER CONDITION	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	214,443	53.9	696	55.2	7,825	14,460	31,265	160,197
Cloudy	106,186	26.7	368	29.2	3,442	6,805	15,729	79,842
Fog/Smoke	2,961	0.7	24	1.9	107	196	308	2,326
Rain	37,671	9.5	106	8.4	1,237	2,445	6,583	27,300
Snow/Blowing Snow	28,383	7.1	53	4.2	682	1,362	3,753	22,533
Severe Wind	329	0.1	0	0.0	12	22	42	253
Sleet/Hail	1,903	0.5	3	0.2	58	92	272	1,478
Other/Unknown	6,174	1.6	12	1.0	137	230	632	5,163
Totals	398,050	100.0	1,262	100.0	13,500	25,612	58,584	299,092

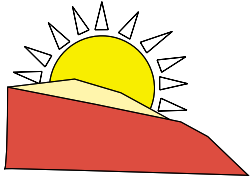
ALL CRASHES



FATAL CRASHES



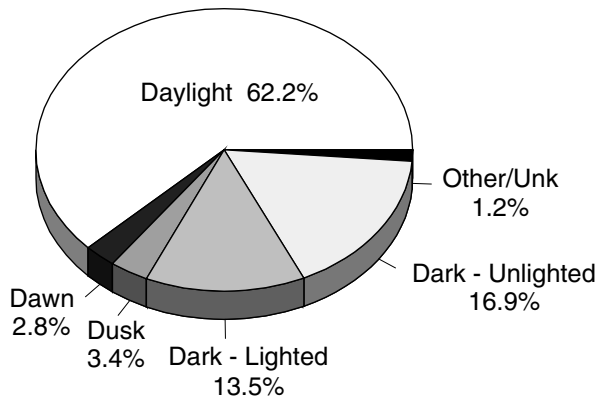
The majority of all crashes occur in good weather (53.9%) as do the majority of fatal crashes (55.2%). Of bad weather conditions, fog and smoke present the greatest hazard as they are overrepresented in fatal crashes.



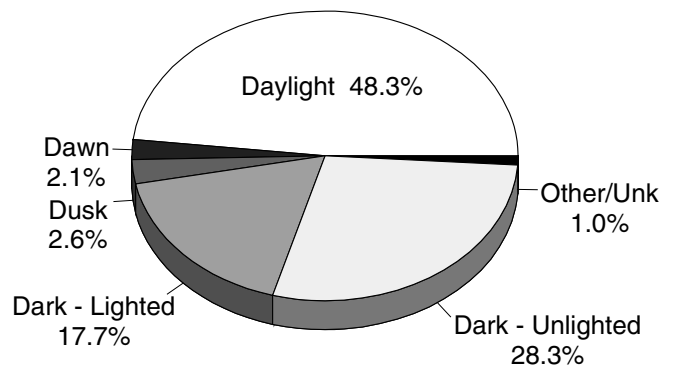
LIGHT CONDITION

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	247,391	62.2	609	48.3	8,136	16,140	41,490	181,016
Dawn	11,183	2.8	27	2.1	256	505	1,182	9,213
Dusk	13,502	3.4	33	2.6	436	776	1,823	10,434
Dark - Lighted	53,686	13.5	224	17.7	2,402	4,391	8,510	38,159
Dark - Unlighted	67,413	16.9	357	28.3	2,166	3,621	5,140	56,129
Other/Unknown	4,875	1.2	12	1.0	104	179	439	4,141
Totals	398,050	100.0	1,262	100.0	13,500	25,612	58,584	299,092

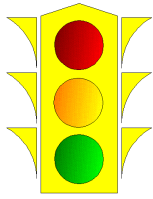
ALL CRASHES



FATAL CRASHES



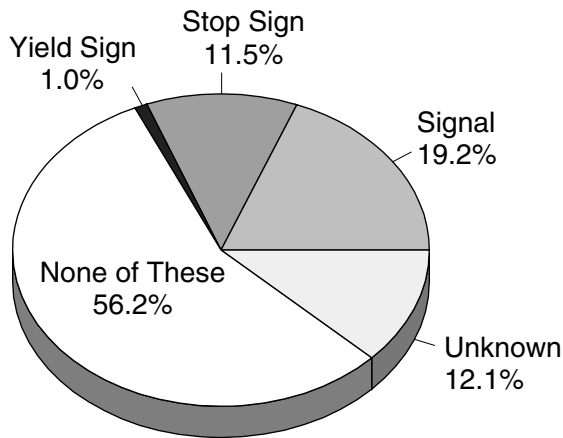
The majority of all crashes happen during the day, while the majority of fatal crashes happen during nondaylight hours. Areas without street lights have the highest fatality rate.



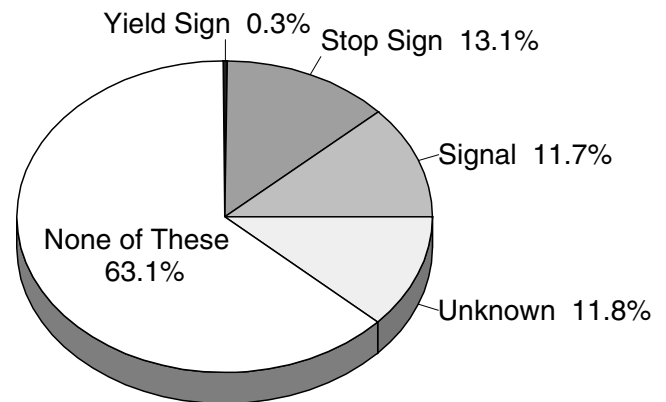
CRASH RATES AT INTERSECTIONS BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Signal	76,393	19.2	148	11.7	2,545	5,275	16,298	52,127
Stop Sign	45,791	11.5	165	13.1	1,940	3,737	7,786	32,163
Yield Sign	3,904	1.0	4	0.3	173	278	746	2,703
None of These	223,767	56.2	796	63.1	7,410	13,808	28,400	173,353
Unknown	48,195	12.1	149	11.8	1,432	2,514	5,354	38,746
Totals	398,050	100.0	1,262	100.0	13,500	25,612	58,584	299,092

ALL CRASHES



FATAL CRASHES





CONSTRUCTION ZONE CRASHES

CONSTRUCTION ZONE TYPE	All Crashes		Fatal Crashes		Injury			PDO
	Number	% of Total	Number	% of Fatal	A	B	C	
Construction/Maintenance								
Activity - On Road								
Lane Closed	2,195	40.7	4	19.0	68	102	367	1,654
Lane Open	752	13.9	3	14.3	28	39	131	551
Unk Lane Closure	108	2.0	1	4.8	4	11	21	71
Activity - Off Road								
Lane Closed	269	5.0	0	0.0	3	12	50	204
Lane Open	534	9.9	0	0.0	20	34	98	382
Unk Lane Closure	33	0.6	0	0.0	1	3	8	21
Activity - None								
Lane Closed	569	10.6	5	23.8	18	41	112	393
Lane Open	667	12.4	6	28.6	30	59	111	461
Unk Lane Closure	51	0.9	0	0.0	3	3	13	32
Activity - Unknown								
Lane Closed	86	1.6	2	9.5	0	4	15	65
Lane Open	38	0.7	0	0.0	1	3	7	27
Unk Lane Closure	90	1.7	0	0.0	3	2	13	72
Sub-Total	5,392	100.0	21	100.0	179	313	946	3,933

Utility								
Activity - On Road								
Lane Closed	157	26.2	1	14.3	3	10	19	124
Lane Open	103	17.2	0	0.0	7	9	17	70
Unk Lane Closure	14	2.3	0	0.0	3	1	3	7
Activity - Off Road								
Lane Closed	37	6.2	1	14.3	0	3	5	28
Lane Open	78	13.0	1	14.3	3	9	14	51
Unk Lane Closure	5	0.8	0	0.0	0	0	0	5
Activity - None								
Lane Closed	16	2.7	0	0.0	0	5	5	6
Lane Open	53	8.8	1	14.3	2	4	7	39
Unk Lane Closure	1	0.2	0	0.0	0	0	0	1
Activity - Unknown								
Lane Closed	6	1.0	0	0.0	0	2	0	4
Lane Open	10	1.7	1	14.3	0	0	2	7
Unk Lane Closure	120	20.0	2	28.6	2	8	20	88
Sub-Total	600	100.0	7	100.0	20	51	92	430
Total	5,992	100.0	28	100.0	199	364	1,038	4,363

