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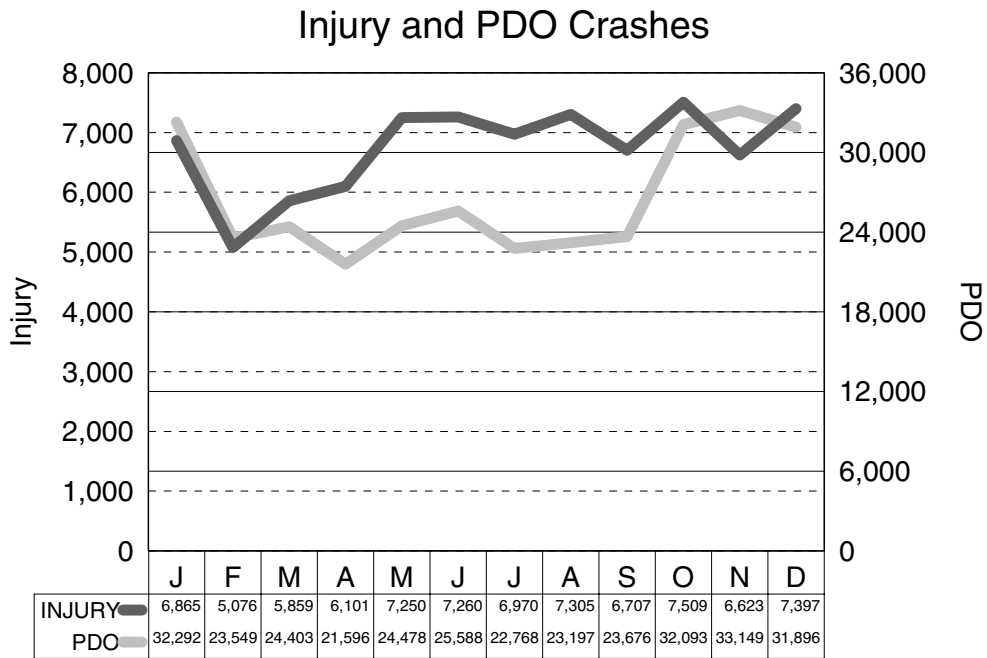
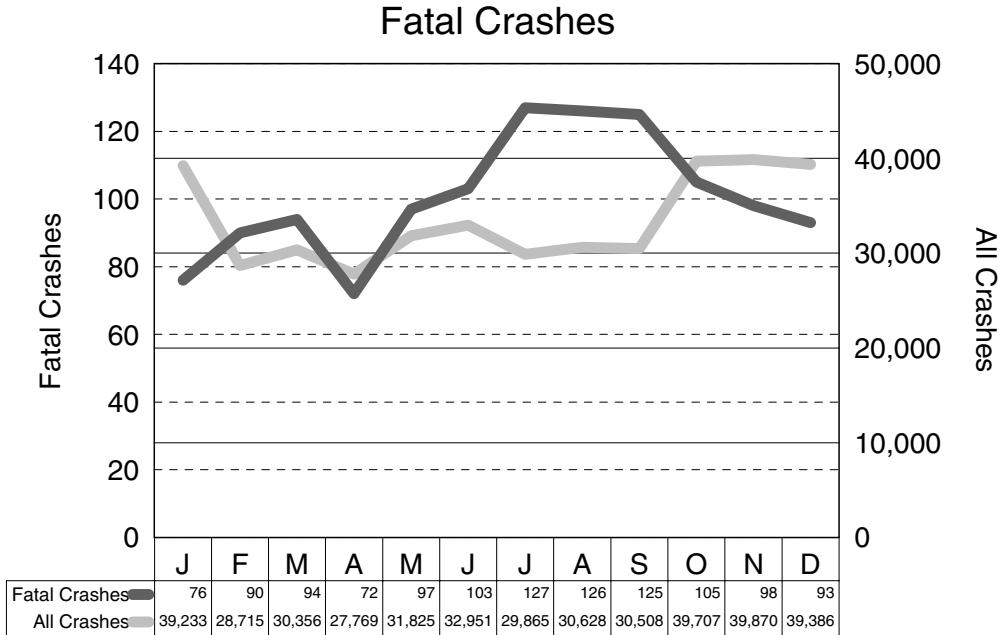
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Crash

ALL CRASHES INJURY SEVERITY BY MONTH

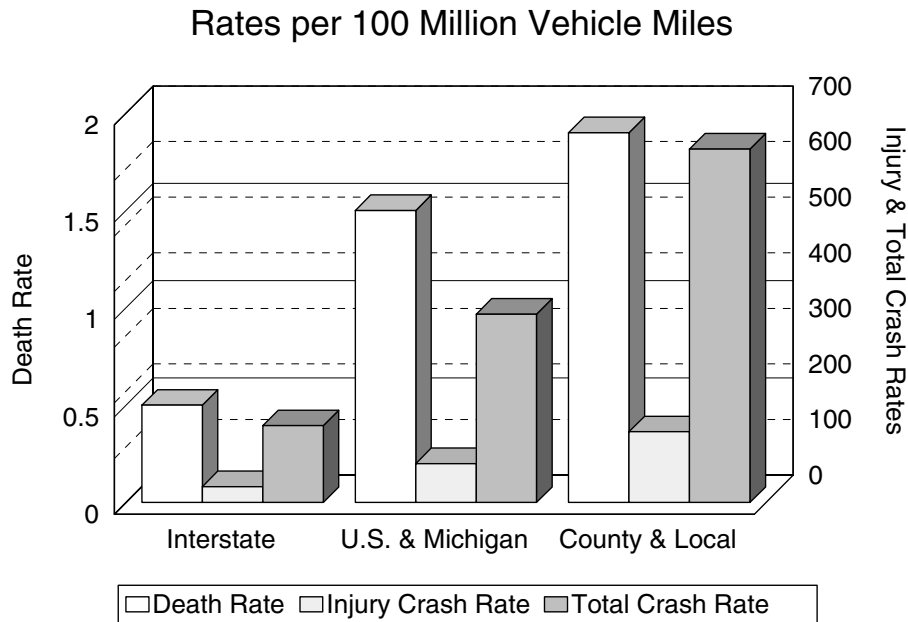


The charts on this page show that the months of April through September are peak months (22% or above) in terms of the percent of the number of crashes involving death or injury to the number of all crashes. That is, if a person was in a motor vehicle crash during one of these months there was a higher 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. 2001 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
Interstate Routes	29.4	40,590	8,354	141	138.1	28.4	0.5
U.S. & Michigan Roads	22.1	74,836	15,435	340	338.6	69.8	1.5
County & City Roads	44.9	285,387	57,133	847	635.6	127.2	1.9
Totals	96.43	400,813	80,922	1,328	415.7	83.9	1.4



CRASH TYPE

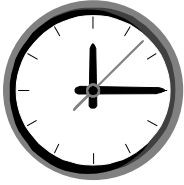
CRASH TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Single Vehicle	128,040	31.9	582	48.3	3,129	7,240	9,518	107,571
Head On	7,049	1.8	158	13.1	521	870	1,144	4,356
Head On - Left Turn	11,294	2.8	40	3.3	492	1,351	2,630	6,781
Angle	77,295	19.3	274	22.7	2,199	5,510	13,722	55,590
Rear End	97,273	24.3	67	5.6	926	3,056	19,048	74,176
Rear End - Left Turn	4,299	1.1	9	0.7	79	215	867	3,129
Rear End - Right Turn	3,298	0.8	1	0.1	7	74	464	2,752
Sideswipe - Same Direction	33,753	8.4	16	1.3	194	640	1,998	30,905
Sideswipe - Opposite Direct	10,782	2.7	12	1.0	131	307	800	9,532
Other/Unknown	27,730	6.9	47	3.9	504	1,064	2,222	23,893
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

Single Vehicle, Head On, Head On-Left Turn, and Angle crash types produce the highest number of fatal crashes (87.4%). Single Vehicle crashes include rollovers, which are particularly deadly crash types. Rear End-Turning and Sideswipe crashes produce the lowest number of fatal crashes (3.1%).

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	342,089	85.3	800	66.3	5,810	14,962	44,895	275,622
Median	2,757	0.7	25	2.1	100	317	501	1,814
Shoulder	15,719	3.9	103	8.5	537	1,245	1,863	11,971
Outside of Shoulder/Curb	27,727	6.9	232	19.2	1,371	2,973	3,781	19,370
Gore	822	0.2	6	0.5	42	85	126	563
Other/Unknown	11,699	2.9	40	3.3	322	745	1,247	9,345
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

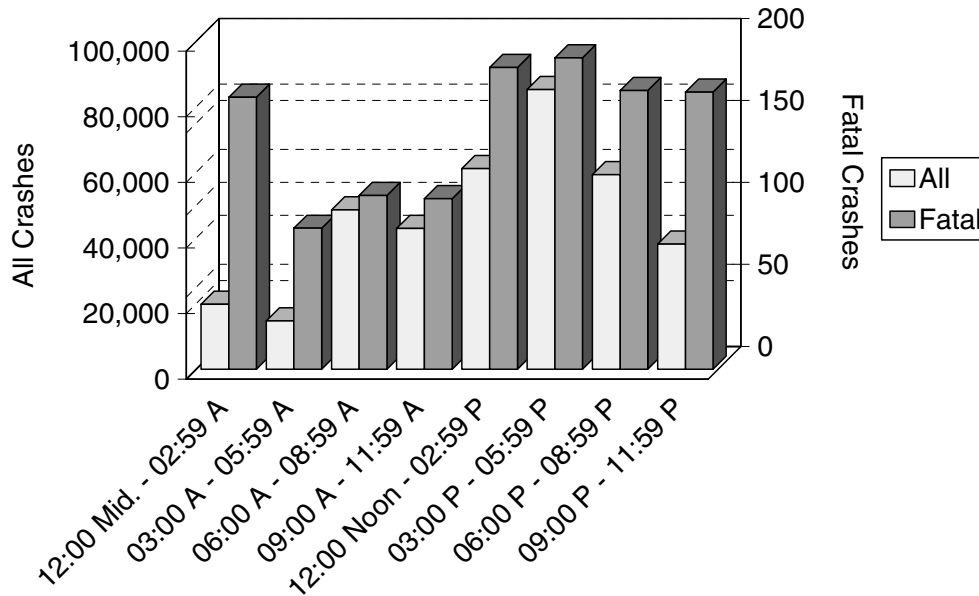
Crashes that happen outside of the normal driving lanes are overrepresented in the fatal count. Only 6.9 percent of crashes occur outside the shoulder of the road, but these crashes account for 19.2 percent of the fatal crashes.



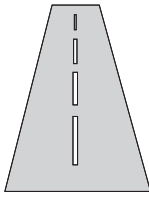
TIME AND SEVERITY

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.	19,823	4.9	166	13.8	744	1,493	1,996	15,424
03:00 a.m. - 05:59 a.m.	14,782	3.7	86	7.1	398	824	1,182	12,292
06:00 a.m. - 08:59 a.m.	48,625	12.1	106	8.8	785	1,974	5,937	39,823
09:00 a.m. - 11:59 a.m.	42,920	10.7	104	8.6	795	2,105	6,330	33,586
12:00 noon - 02:59 p.m.	61,203	15.3	184	15.3	1,219	3,283	9,626	46,891
03:00 p.m. - 05:59 p.m.	85,277	21.3	190	15.8	1,669	4,422	13,034	65,962
06:00 p.m. - 08:59 p.m.	59,315	14.8	170	14.1	1,165	2,942	6,877	48,161
09:00 p.m. - 11:59 p.m.	38,161	9.5	169	14.0	886	1,997	3,847	31,262
Unknown	30,707	7.7	31	2.6	521	1,287	3,584	25,284
Total	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

Time and Severity



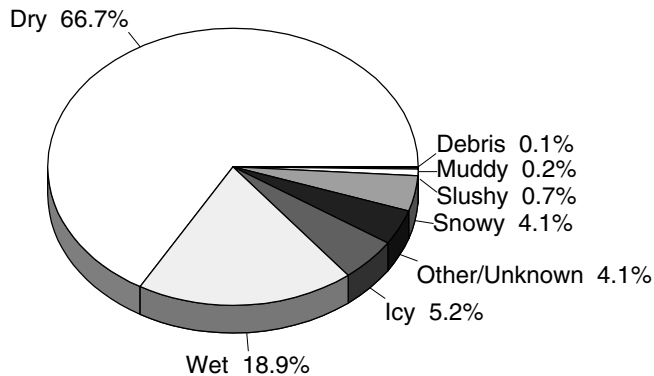
Crash frequencies peak in the late afternoon, then drop off steadily until 6:00 AM (the morning rush hour). Fatal crash frequencies rise with the frequency of other crashes, but continue at a high rate well into the early morning hours. There are proportionally more fatal crashes during the midnight 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	267,396	66.7	896	74.3	5,858	14,268	34,695	211,679
Wet	75,801	18.9	195	16.2	1,345	3,541	11,335	59,385
Icy	20,715	5.2	41	3.4	372	972	2,662	16,668
Snowy	16,422	4.1	28	2.3	285	655	1,585	13,869
Muddy	777	0.2	4	0.3	33	54	100	586
Slushy	2,847	0.7	15	1.2	54	159	374	2,245
Debris	265	0.1	0	0.0	12	24	26	203
Other/Unknown	16,590	4.1	27	2.2	223	654	1,636	14,050
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

ALL CRASHES



FATAL CRASHES



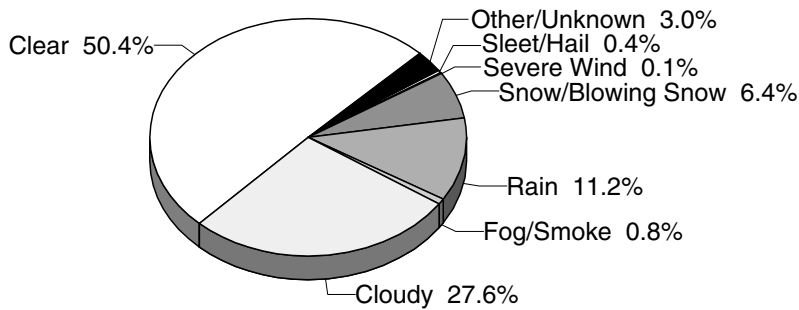
Most crashes (66.7%) and most fatal crashes (74.3%) occur on dry roads. This indicates that Michigan drivers do a good job of adjusting their driving behavior for bad road conditions.



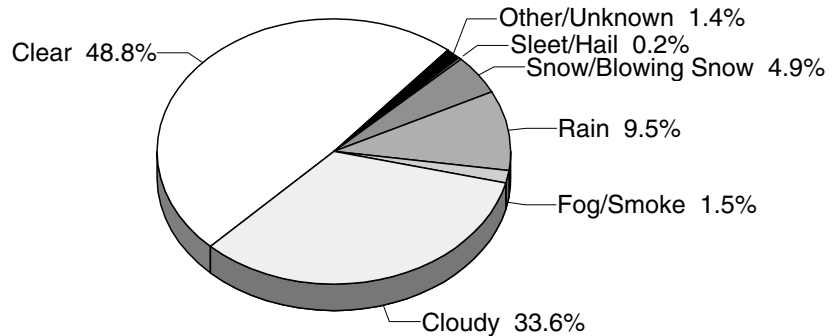
WEATHER CONDITION

WEATHER CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Clear	202,177	50.4	589	48.8	4,496	10,793	26,093	160,206
Cloudy	110,809	27.6	405	33.6	2,171	5,537	14,612	88,084
Fog/Smoke	3,080	0.8	18	1.5	72	161	288	2,541
Rain	44,902	11.2	115	9.5	843	2,153	6,987	34,804
Snow/Blowing Snow	25,667	6.4	59	4.9	450	1,167	3,106	20,885
Severe Wind	510	0.1	0	0.0	12	28	48	422
Sleet/Hail	1,469	0.4	3	0.2	27	80	208	1,151
Other/Unknown	12,199	3.0	17	1.4	111	408	1,071	10,592
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

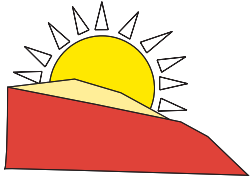
ALL CRASHES



FATAL CRASHES



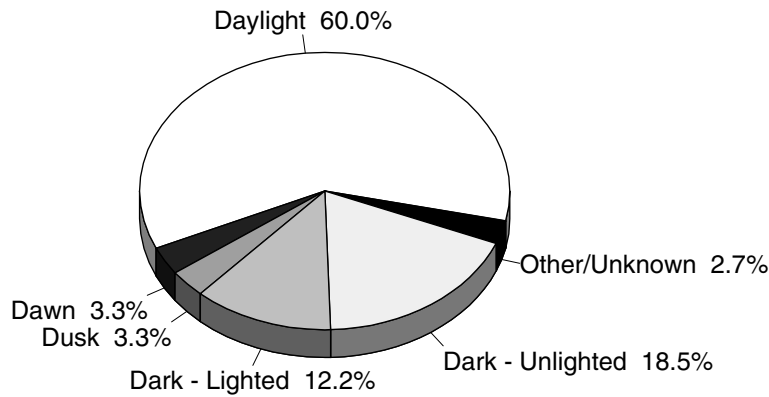
Half of all crashes occur in good weather (50.4%). Fog/smoke is a particularly deadly weather condition as it is overrepresented in fatal crashes.



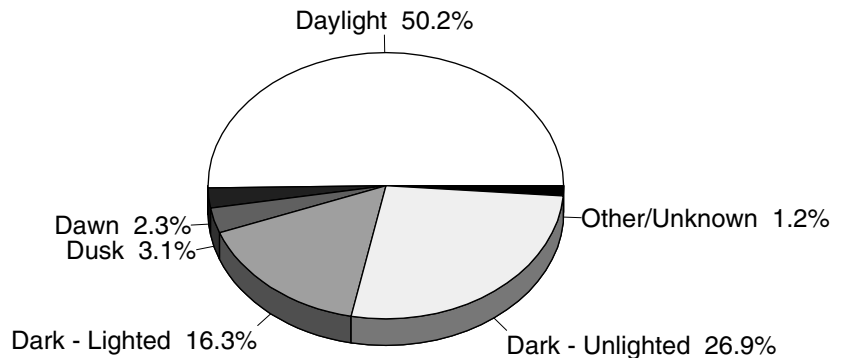
LIGHT CONDITION

LIGHT CONDITION	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Daylight	240,504	60.0	606	50.2	4,848	12,770	36,625	185,655
Dawn	13,273	3.3	28	2.3	190	473	1,229	11,353
Dusk	13,358	3.3	37	3.1	202	618	1,486	11,015
Dark – Lighted	48,761	12.2	197	16.3	1,349	2,980	7,212	37,023
Dark – Unlighted	74,070	18.5	324	26.9	1,467	3,118	4,866	64,295
Other/Unknown	10,847	2.7	14	1.2	126	368	995	9,344
Totals	400,813	100.0	1,206	100.0	8,182	20,327	52,413	318,685

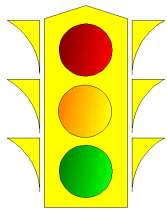
ALL CRASHES



FATAL CRASHES



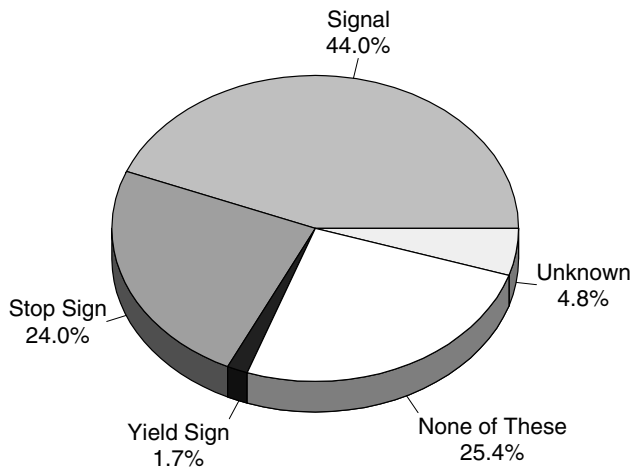
The majority (60.0%) of all crashes happen during daylight hours. Dark conditions create the greatest hazard, as they are overrepresented in fatal crashes. Areas without street lights have the highest fatality rate.



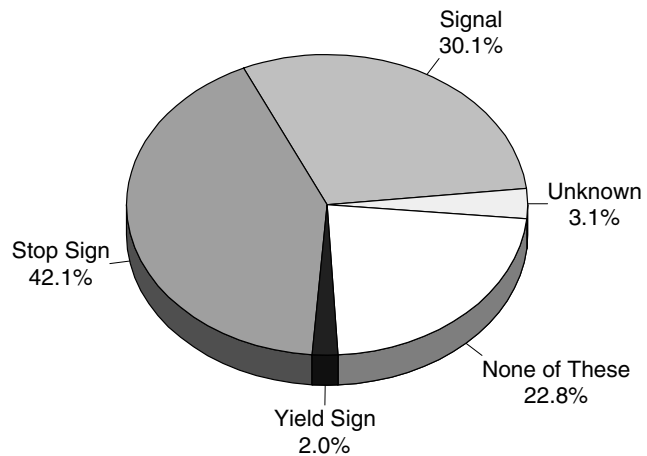
INTERSECTION CRASHES BY TRAFFIC CONTROL TYPE

TRAFFIC CONTROL TYPE	All Crashes		Fatal Crashes		Injury Crashes			PDO Crashes
	Number	% of Total	Number	% of Fatal	A	B	C	
Signal	55,866	44.0	107	30.1	1,131	3,182	11,261	40,185
Stop Sign	30,468	24.0	150	42.1	966	2,301	5,267	21,784
Yield Sign	2,115	1.7	7	2.0	52	162	429	1,465
None of These	32,289	25.4	81	22.8	721	1,789	5,016	24,682
Unknown	6,154	4.8	11	3.1	123	299	911	4,810
Totals	126,892	100.0	356	100.0	2,993	7,733	22,884	92,926

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	
Construction/Maintenance								
Activity - On Road								
Lane Closed	3,027	47.8	5	29.4	44	122	463	2,393
Lane Open	857	13.5	4	23.5	14	39	117	683
Unknown Lane Closure	153	2.4	0	0.0	0	5	26	122
Activity - Off Road								
Lane Closed	315	5.0	0	0.0	3	17	64	231
Lane Open	472	7.5	1	5.9	8	17	75	371
Unknown Lane Closure	45	0.7	0	0.0	1	3	6	35
Activity - None								
Lane Closed	693	10.9	1	5.9	11	29	120	532
Lane Open	397	6.3	5	29.4	14	19	52	307
Unknown Lane Closure	36	0.6	1	5.9	0	2	5	28
Activity - Unknown								
Lane Closed	144	2.3	0	0.0	0	9	29	106
Lane Open	54	0.9	0	0.0	1	6	12	35
Unknown Lane Closure	138	2.2	0	0.0	3	6	10	119
Subtotal	6,331	100.0	17	100.0	99	274	979	4,962
Utility								
Activity - On Road								
Lane Closed	97	35.3	1	100.0	2	4	10	80
Lane Open	42	15.3	0	0.0	0	2	4	36
Unknown Lane Closure	4	1.5	0	0.0	0	0	0	4
Activity - Off Road								
Lane Closed	33	12.0	0	0.0	0	3	8	22
Lane Open	46	16.7	0	0.0	3	6	10	27
Unknown Lane Closure	4	1.5	0	0.0	0	1	1	2
Activity - None								
Lane Closed	1	0.4	0	0.0	0	0	0	1
Lane Open	31	11.3	0	0.0	1	0	3	27
Unknown Lane Closure	0	0.0	0	0.0	0	0	0	0
Activity - Unknown								
Lane Closed	5	1.8	0	0.0	0	0	0	5
Lane Open	1	0.4	0	0.0	0	1	0	0
Unknown Lane Closure	11	4.0	0	0.0	0	0	1	10
Subtotal	275	100.0	1	100.0	6	17	37	214
Unknown Type								
Subtotal	14,684		30		301	649	1,919	11,785
Total	21,290		48		406	940	2,935	16,961

