

Speed



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Section 4: Speed

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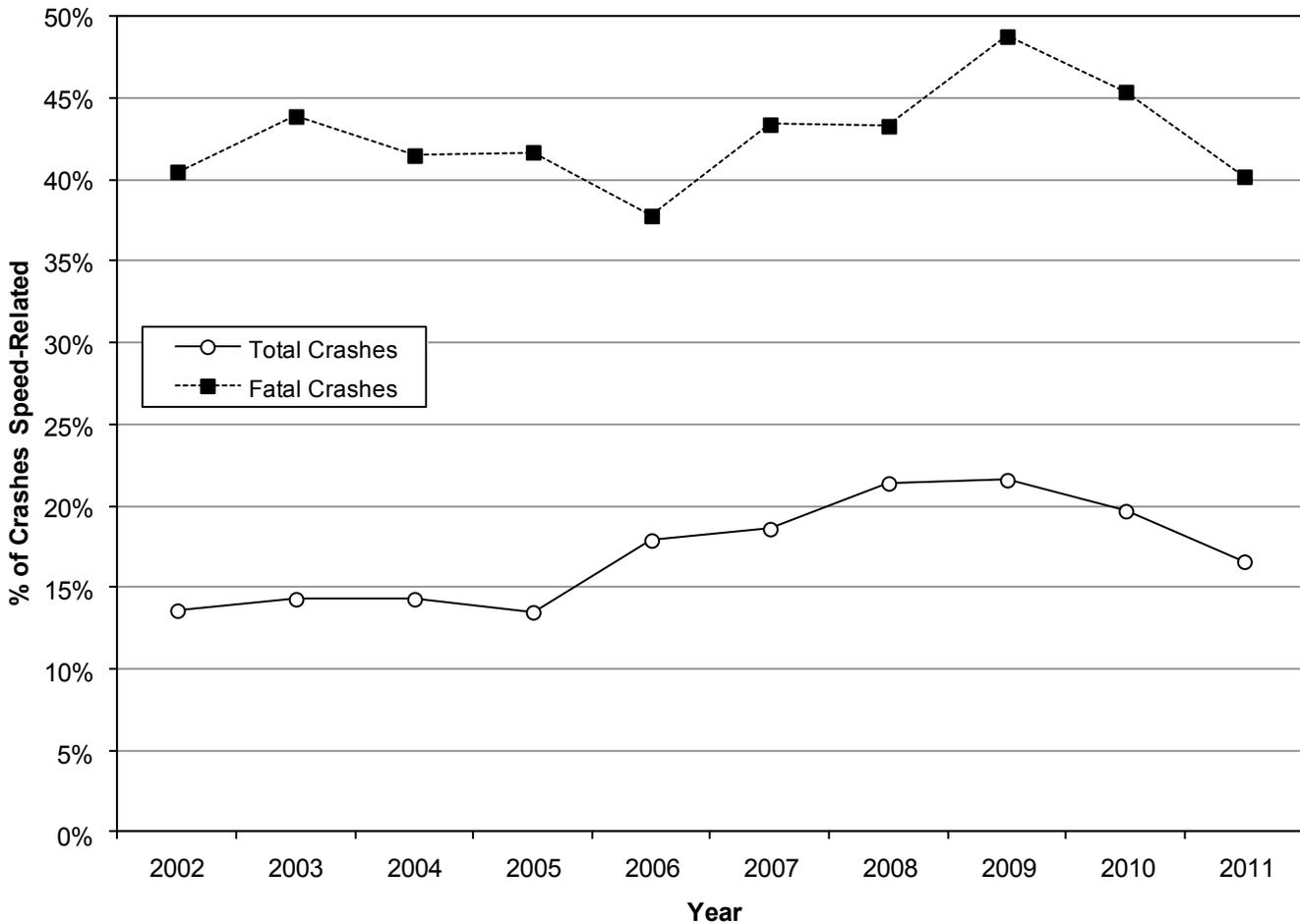
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Trends

Speed-Related Crashes (Utah 2002-2011)

Speed-Related Crashes												
Year	Property Damage Only			Injury			Fatal			Total		
	All	Speed		All	Speed		All	Speed		All	Speed	
	#	#	%	#	#	%	#	#	%	#	#	%
2002	33,542	4,379	13.1%	19,552	2,770	14.2%	274	111	40.5%	53,368	7,260	13.6%
2003	31,842	4,498	14.1%	18,285	2,604	14.2%	262	115	43.9%	50,389	7,217	14.3%
2004	34,222	4,836	14.1%	19,423	2,764	14.2%	260	108	41.5%	53,905	7,708	14.3%
2005	35,158	4,676	13.3%	19,545	2,653	13.6%	235	98	41.7%	54,938	7,427	13.5%
2006	37,674	6,450	17.1%	18,264	3,539	19.4%	249	94	37.8%	56,187	10,083	17.9%
2007	42,368	7,612	18.0%	18,619	3,687	19.8%	258	112	43.4%	61,245	11,411	18.6%
2008	38,997	8,311	21.3%	17,125	3,622	21.2%	245	106	43.3%	56,367	12,039	21.4%
2009	35,398	7,607	21.5%	15,752	3,379	21.5%	217	106	48.8%	51,367	11,092	21.6%
2010	34,155	6,591	19.3%	14,995	3,026	20.2%	218	99	45.4%	49,368	9,716	19.7%
2011	36,418	5,724	15.7%	15,645	2,885	18.4%	224	90	40.2%	52,287	8,699	16.6%
Total	359,774	60,684	16.9%	177,205	30,929	17.5%	2,442	1,039	42.5%	539,421	92,652	17.2%



- Speed-related crashes are a concern because of the increased potential for severe injury and death.
- The 10-year trend shows that 17.2% of total crashes and 42.5% of fatal crashes in Utah are speed-related.
- The percent of crashes that were speed-related has decreased two straight years.
- Speed was a factor in 43.9% of fatal crashes in 2011 where speed was known.

Speed-Related Crashes by County (Utah 2011)

Speed-Related Crashes								
County	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT
Wasatch	117	35.8	69	21.1	1	0.31	187	57.2
Utah	995	26.4	572	15.2	5	0.13	1,572	41.7
Sevier	90	28.1	41	12.8	2	0.63	133	41.6
Rich	7	15.2	12	26.0	0	0.00	19	41.2
Duchesne	67	28.1	26	10.9	3	1.26	96	40.3
Summit	215	29.7	61	8.4	4	0.55	280	38.7
Beaver	65	25.8	31	12.3	1	0.40	97	38.5
Morgan	31	24.1	16	12.5	2	1.56	49	38.2
Salt Lake	2,279	26.1	991	11.4	23	0.26	3,293	37.8
Piute	7	25.0	3	10.7	0	0.00	10	35.6
Cache	183	21.3	92	10.7	3	0.35	278	32.4
Iron	130	18.9	86	12.5	4	0.58	220	31.9
Millard	81	17.8	55	12.1	3	0.66	139	30.5
Weber	302	18.8	168	10.5	8	0.50	478	29.8
Uintah	74	18.8	36	9.1	2	0.51	112	28.4
Kane	18	13.1	20	14.6	1	0.73	39	28.4
Box Elder	168	19.1	79	9.0	2	0.23	249	28.2
Sanpete	31	15.7	21	10.6	0	0.00	52	26.3
Tooele	113	13.9	88	10.8	5	0.61	206	25.3
Garfield	13	12.1	12	11.2	1	0.93	26	24.2
Davis	403	16.1	193	7.7	6	0.24	602	24.0
Carbon	45	15.0	22	7.3	5	1.66	72	24.0
Juab	56	14.4	30	7.7	1	0.26	87	22.4
Wayne	6	13.0	4	8.7	0	0.00	10	21.7
Emery	40	12.7	22	7.0	1	0.32	63	20.1
Washington	133	9.7	101	7.4	3	0.22	237	17.3
Daggett	3	9.4	2	6.3	0	0.00	5	15.7
San Juan	24	8.4	17	5.9	3	1.04	44	15.3
Grand	28	8.7	15	4.7	1	0.31	44	13.7
Statewide	5,724	21.8	2,885	11.0	90	0.34	8,699	33.1

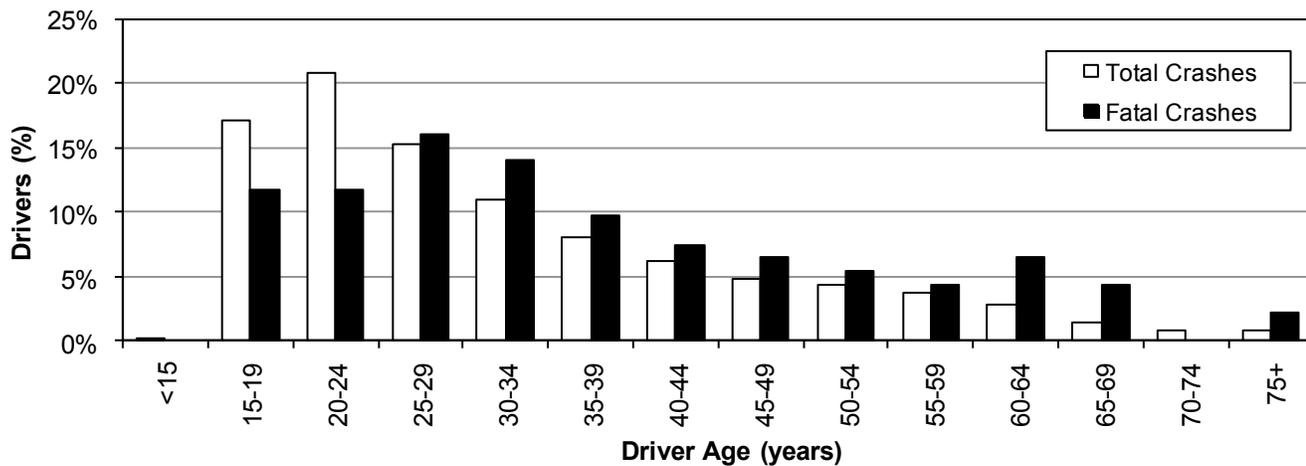
- Wasatch (57.2), Utah (41.7), Sevier (41.6), and Rich (41.2) counties had the highest rates of speed-related total crashes per 100 million vehicle miles traveled.
- Carbon (1.66), Morgan (1.56), and Duchesne (1.26) counties had the highest rates of fatal speed-related crashes per 100 million vehicle miles traveled.
- Grand (13.7), San Juan (15.3), and Daggett (15.7) counties had the lowest rates of speed-related total crashes per 100 million vehicle miles traveled.

Stop speeding before it stops you

Drivers

Age of Drivers in Speed-Related Crashes (Utah 2011)

Speed-Related Drivers								
Age	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
<15	6	0.1%	14	0.5%	0	0.0%	20	0.2%
15-19	1,063	17.6%	502	16.2%	11	11.8%	1,576	17.1%
20-24	1,261	20.9%	646	20.9%	11	11.8%	1,918	20.8%
25-29	934	15.5%	457	14.8%	15	16.1%	1,406	15.3%
30-34	670	11.1%	329	10.6%	13	14.0%	1,012	11.0%
35-39	485	8.0%	239	7.7%	9	9.7%	733	8.0%
40-44	343	5.7%	217	7.0%	7	7.5%	567	6.2%
45-49	306	5.1%	141	4.6%	6	6.5%	453	4.9%
50-54	265	4.4%	135	4.4%	5	5.4%	405	4.4%
55-59	217	3.6%	126	4.1%	4	4.3%	347	3.8%
60-64	160	2.7%	89	2.9%	6	6.5%	255	2.8%
65-69	85	1.4%	53	1.7%	4	4.3%	142	1.5%
70-74	43	0.7%	36	1.2%	0	0.0%	79	0.9%
75+	46	0.8%	38	1.2%	2	2.2%	86	0.9%
Unknown	142	2.4%	69	2.2%	0	0.0%	211	2.3%
Total	6,026	100.0%	3,091	100.0%	93	100.0%	9,210	100.0%



- Younger drivers had the highest percentage of total speed-related crashes and fatal crashes.

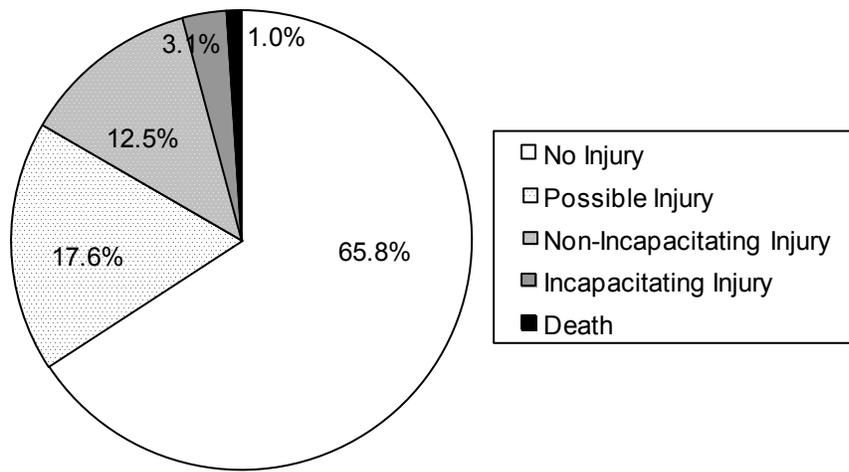
Gender of Drivers in Speed-Related Crashes (Utah 2011)

Speed-Related Drivers								
Gender	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Male	3,723	61.8%	1,870	60.5%	75	80.6%	5,668	61.5%
Female	2,166	35.9%	1,172	37.9%	18	19.4%	3,356	36.4%
Unknown	137	2.3%	49	1.6%	0	0.0%	186	2.0%
Total	6,026	100.0%	3,091	100.0%	93	100.0%	9,210	100.0%

- Male drivers represented 61.5% of the drivers in speed-related total crashes and 80.6% of the drivers in speed-related fatal crashes.

Crash Conditions

Speed-Related Crash Severity (Utah 2011)

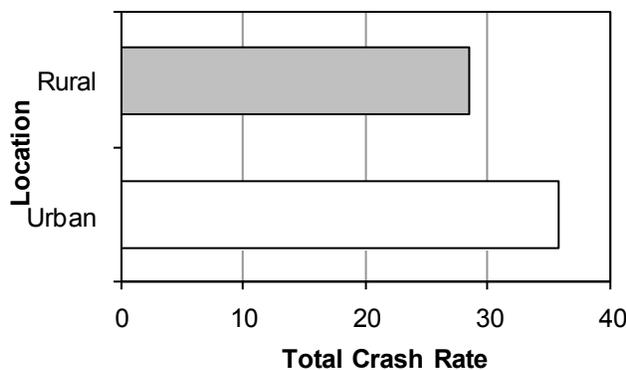


- A higher percentage of speed-related crashes were fatal (1.0%) compared to all motor vehicle crashes (0.4%).
- Speed-related crashes were 3.4 times more likely to be fatal than other motor vehicle crashes.
- The risk of death and severe injury is a direct exponential function of speed.

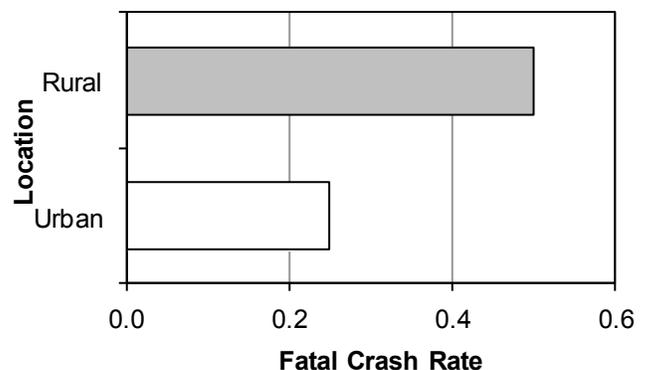
Speed-Related Crashes by Urban/Rural Location (Utah 2011)

Speed-Related Crashes								
Location	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT	#	Rate per 100 Million VMT
Urban	3,979	24.0	1,924	11.6	42	0.25	5,945	35.8
Rural	1,745	18.1	961	10.0	48	0.50	2,754	28.5
Total	5,724	21.8	2,885	11.0	90	0.34	8,699	33.1

Total Crash Rates (Utah 2011)



Fatal Crash Rates (Utah 2011)



- While urban areas had a higher rate of total speed-related crashes per vehicle mile traveled, rural areas had a higher rate of fatal speed-related crashes per vehicle mile traveled.
- Speed-related crashes occurring in rural areas were 2.5 times more likely to result in a death than speed-related crashes in urban areas.

Crash Conditions

Speed-Related Crashes by Month (Utah 2011)

Speed-Related Crashes								
Month	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	Rate per Day	#	Rate per Day	#	Rate per Day	#	Rate per Day
January	827	26.7	308	9.9	7	0.23	1,142	36.8
February	716	25.6	249	8.9	1	0.04	966	34.5
March	492	15.9	261	8.4	9	0.29	762	24.6
April	512	17.1	266	8.9	4	0.13	782	26.1
May	382	12.3	242	7.8	4	0.13	628	20.3
June	250	8.3	172	5.7	6	0.20	428	14.3
July	267	8.6	213	6.9	13	0.42	493	15.9
August	303	9.8	219	7.1	17	0.55	539	17.4
September	323	10.8	202	6.7	12	0.40	537	17.9
October	397	12.8	207	6.7	4	0.13	608	19.6
November	473	15.8	215	7.2	5	0.17	693	23.1
December	782	25.2	331	10.7	8	0.26	1,121	36.2
Total	5,724	15.7	2,885	7.9	90	0.25	8,699	23.8

- Overall, January (36.8), December (36.2), and February (34.5) had the highest rates of speed-related crashes per day.
- August (0.55) and July (0.42) had the highest rates per day of fatal speed-related crashes.

Speed-Related Crashes by Day of Week (Utah 2011)

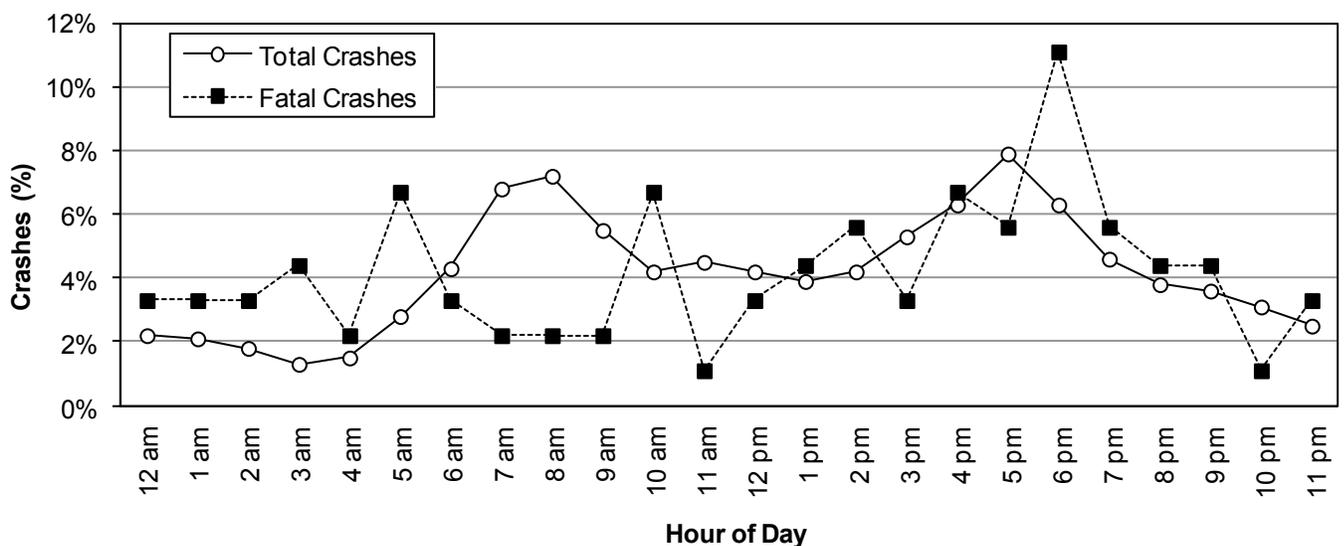
Speed-Related Crashes								
Day of Week	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Sunday	692	12.1%	310	10.7%	14	15.6%	1,016	11.7%
Monday	800	14.0%	417	14.5%	8	8.9%	1,225	14.1%
Tuesday	1,016	17.7%	471	16.3%	12	13.3%	1,499	17.2%
Wednesday	677	11.8%	357	12.4%	14	15.6%	1,048	12.0%
Thursday	777	13.6%	411	14.2%	9	10.0%	1,197	13.8%
Friday	835	14.6%	407	14.1%	16	17.8%	1,258	14.5%
Saturday	927	16.2%	512	17.7%	17	18.9%	1,456	16.7%
Total	5,724	100.0%	2,885	100.0%	90	100.0%	8,699	100.0%

- The highest percentage of speed-related total crashes occurred on Tuesday (17.2%) while the highest percentage of fatal crashes occurred on Saturday (18.9%).
- The lowest percentage of speed-related total crashes occurred on Sunday (11.7%) while the lowest percentage of fatal crashes occurred on Monday (8.9%).

Crash Conditions

Speed-Related Crashes by Hour (Utah 2011)

Speed-Related Crashes								
Hour	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Midnight	141	2.5%	51	1.8%	3	3.3%	195	2.2%
1 a.m.	114	2.0%	64	2.2%	3	3.3%	181	2.1%
2 a.m.	107	1.9%	49	1.7%	3	3.3%	159	1.8%
3 a.m.	72	1.3%	35	1.2%	4	4.4%	111	1.3%
4 a.m.	87	1.5%	41	1.4%	2	2.2%	130	1.5%
5 a.m.	176	3.1%	64	2.2%	6	6.7%	246	2.8%
6 a.m.	273	4.8%	101	3.5%	3	3.3%	377	4.3%
7 a.m.	429	7.5%	163	5.6%	2	2.2%	594	6.8%
8 a.m.	435	7.6%	192	6.7%	2	2.2%	629	7.2%
9 a.m.	339	5.9%	139	4.8%	2	2.2%	480	5.5%
10 a.m.	244	4.3%	112	3.9%	6	6.7%	362	4.2%
11 a.m.	261	4.6%	128	4.4%	1	1.1%	390	4.5%
Noon	230	4.0%	133	4.6%	3	3.3%	366	4.2%
1 p.m.	212	3.7%	121	4.2%	4	4.4%	337	3.9%
2 p.m.	211	3.7%	149	5.2%	5	5.6%	365	4.2%
3 p.m.	277	4.8%	177	6.1%	3	3.3%	457	5.3%
4 p.m.	344	6.0%	197	6.8%	6	6.7%	547	6.3%
5 p.m.	434	7.6%	252	8.7%	5	5.6%	691	7.9%
6 p.m.	362	6.3%	176	6.1%	10	11.1%	548	6.3%
7 p.m.	246	4.3%	147	5.1%	5	5.6%	398	4.6%
8 p.m.	200	3.5%	123	4.3%	4	4.4%	327	3.8%
9 p.m.	215	3.8%	98	3.4%	4	4.4%	317	3.6%
10 p.m.	171	3.0%	102	3.5%	1	1.1%	274	3.1%
11 p.m.	144	2.5%	71	2.5%	3	3.3%	218	2.5%
Total	5,724	100.0%	2,885	100.0%	90	100.0%	8,699	100.0%



- Total speed-related crashes peaked in the morning (7:00 a.m. to 9:59 a.m.), with another peak in the late afternoon/evening (3:00 p.m. to 6:59 p.m.).
- Fatal speed-related crashes varied by hour and were highest during the 6:00 p.m. hour.

Crash Conditions

Speed-Related Crashes by Vehicle Type (Utah 2011)

Speed-Related Vehicles								
Vehicle Type	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Passenger Car	3,478	57.7%	1,620	52.4%	33	35.5%	5,131	55.7%
SUV	1,050	17.4%	551	17.8%	16	17.2%	1,617	17.6%
Pickup Truck	1,014	16.8%	454	14.7%	22	23.7%	1,490	16.2%
Van	265	4.4%	112	3.6%	4	4.3%	381	4.1%
Semi/Large Truck	172	2.9%	93	3.0%	6	6.5%	271	2.9%
Motorcycle	12	0.2%	201	6.5%	12	12.9%	225	2.4%
Bus	2	0.0%	2	0.1%	0	0.0%	4	0.0%
Other	3	0.0%	51	1.6%	0	0.0%	54	0.6%
Unknown	30	0.5%	7	0.2%	0	0.0%	37	0.4%
Total	6,026	100.0%	3,091	100.0%	93	100.0%	9,210	100.0%

- For total speed-related crashes, passenger car and SUV were the leading vehicle types.
- For fatal speed-related crashes, passenger car and pickup truck were the leading vehicle types.
- Motorcycle was overrepresented in speed-related crashes compared to other vehicle types in all crashes.
- Van was underrepresented in speed-related crashes compared to other vehicle types in all crashes.

Speed-Related Crashes by Speed Limit (Utah 2011)

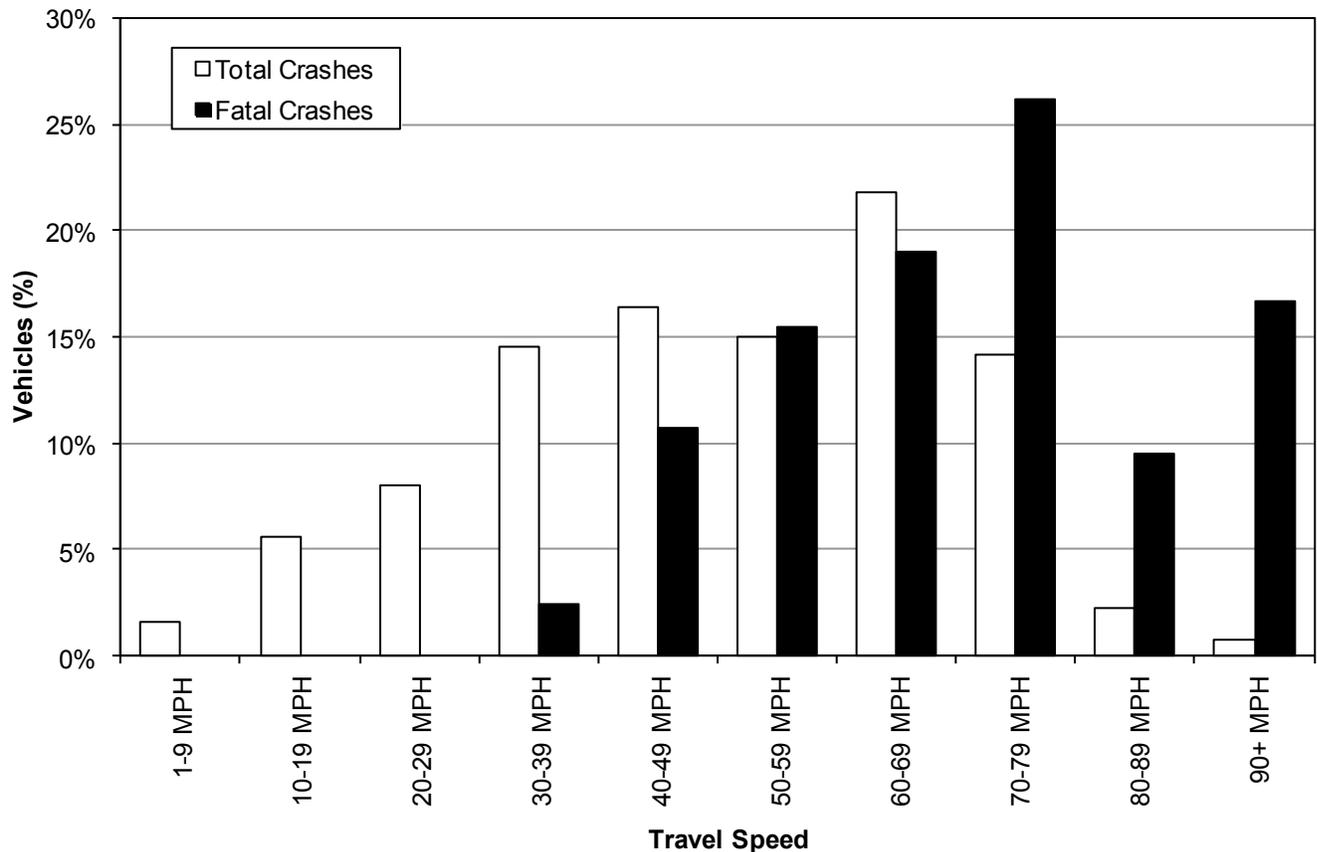
Speed-Related Vehicles								
Speed Limit	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
5-15 MPH	141	2.3%	41	1.3%	0	0.0%	182	2.0%
20-25 MPH	647	10.7%	363	11.7%	5	5.4%	1,015	11.0%
30-35 MPH	619	10.3%	406	13.1%	16	17.2%	1,041	11.3%
40-45 MPH	571	9.5%	387	12.5%	19	20.4%	977	10.6%
50-55 MPH	935	15.5%	478	15.5%	14	15.1%	1,427	15.5%
60-65 MPH	2,215	36.8%	938	30.3%	19	20.4%	3,172	34.4%
70-75 MPH	526	8.7%	249	8.1%	14	15.1%	789	8.6%
80 MPH	46	0.8%	33	1.1%	2	2.2%	81	0.9%
Unknown	326	5.4%	196	6.3%	4	4.3%	526	5.7%
Total	6,026	100.0%	3,091	100.0%	93	100.0%	9,210	100.0%

- Nearly one-half (46.5% of known) of total speed-related crashes occurred where the speed limit was 60 MPH or higher.
- Fatal speed-related crashes were more likely to occur where there were higher speed limits. Over one-half (55.1% of known) of fatal speed-related crashes occurred where the speed limit was 50 MPH or higher.
- When compared to all crashes, speed-related crashes were more likely to occur on roads with higher speed limits.
- Studies show that a 5% increase in average speed leads to a 10% increase in injury crashes and a 20% increase in fatal crashes. A 5% decrease in speed leads to a 10% decrease in injury crashes and a 20% decrease in fatal crashes.

Crash Conditions

Speed-Related Crashes by Travel Speed (Utah 2011)

Speed-Related Vehicles								
Travel Speed	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
1-9 MPH	106	1.8%	27	0.9%	0	0.0%	133	1.4%
10-19 MPH	371	6.2%	97	3.1%	0	0.0%	468	5.1%
20-29 MPH	497	8.2%	175	5.7%	0	0.0%	672	7.3%
30-39 MPH	785	13.0%	438	14.2%	2	2.2%	1,225	13.3%
40-49 MPH	837	13.9%	535	17.3%	9	9.7%	1,381	15.0%
50-59 MPH	832	13.8%	422	13.7%	13	14.0%	1,267	13.8%
60-69 MPH	1,217	20.2%	605	19.6%	16	17.2%	1,838	20.0%
70-79 MPH	766	12.7%	407	13.2%	22	23.7%	1,195	13.0%
80-89 MPH	91	1.5%	88	2.8%	8	8.6%	187	2.0%
90+ MPH	18	0.3%	29	0.9%	14	15.1%	61	0.7%
Unknown	506	8.4%	268	8.7%	9	9.7%	783	8.5%
Total	6,026	100.0%	3,091	100.0%	93	100.0%	9,210	100.0%

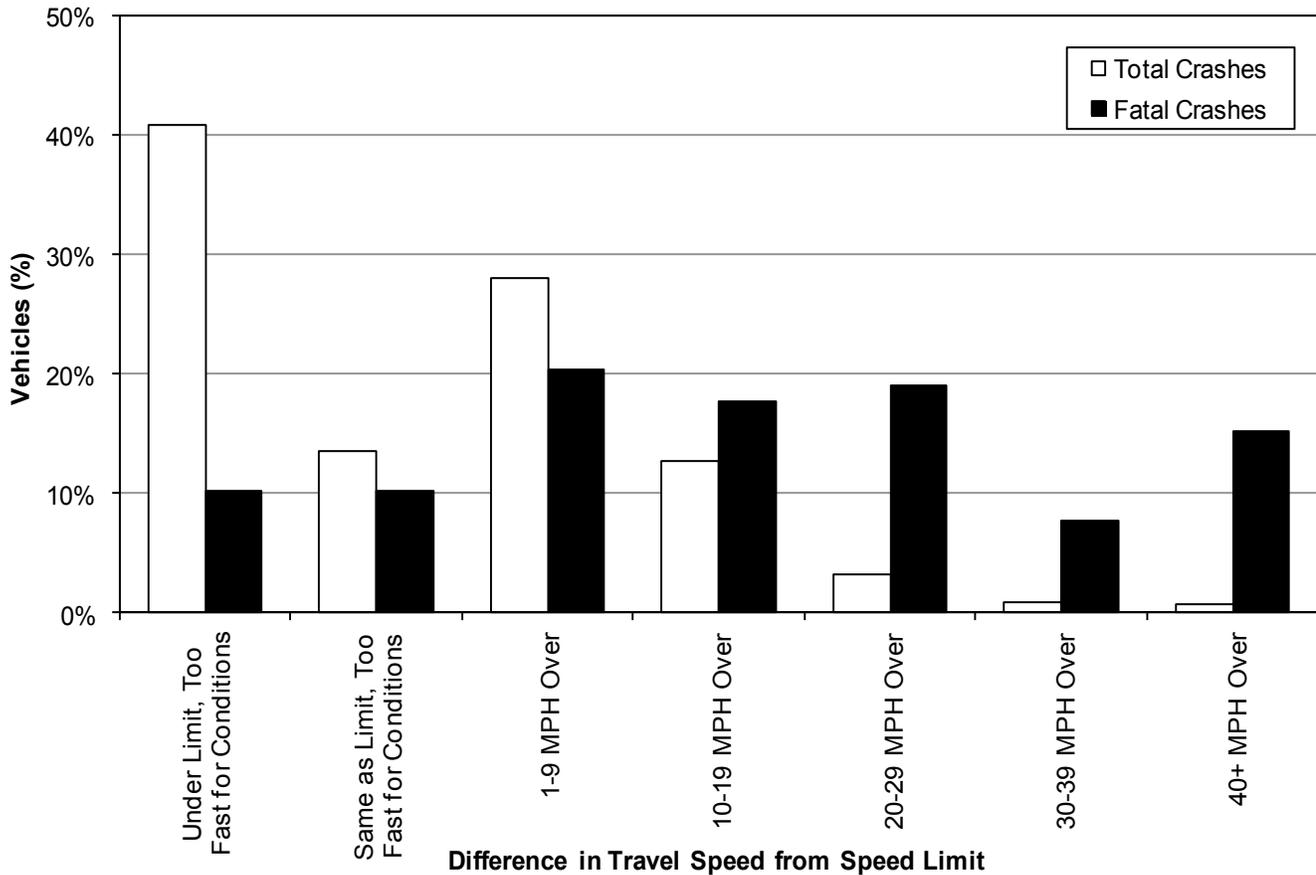


- 60-69 MPH (21.8% of known) and 40-49 MPH (16.4% of known) were the leading travel speeds of vehicles in total speed-related crashes.
- Nearly three-fourths (71.4% of known) of vehicles in fatal speed-related crashes were traveling 60+ MPH.
- Speed-related vehicles in fatal crashes were more likely to be traveling at higher speeds. The higher the speed the greater the amount of energy that must be absorbed in a crash, hence there is more likelihood of serious injury and death.
- Drivers become increased risks to themselves and other people on the highway due to higher speeds.

Crash Conditions

Speed-Related Crashes by Difference in Travel Speed From Speed Limit (Utah 2011)

Speed-Related Vehicles								
Travel Speed vs. Speed Limit	PDO Crashes		Injury Crashes		Fatal Crashes		Total	
	#	%	#	%	#	%	#	%
Under Limit, Too Fast for Conditions	2,480	41.2%	894	28.9%	8	8.6%	3,382	36.7%
Same as Limit, Too Fast for Conditions	739	12.3%	366	11.8%	8	8.6%	1,113	12.1%
1-9 MPH Over Speed Limit	1,447	24.0%	862	27.9%	16	17.2%	2,325	25.2%
10-19 MPH Over Speed Limit	612	10.2%	425	13.7%	14	15.1%	1,051	11.4%
20-29 MPH Over Speed Limit	112	1.9%	134	4.3%	15	16.1%	261	2.8%
30-39 MPH Over Speed Limit	23	0.4%	46	1.5%	6	6.5%	75	0.8%
40+ MPH Over Speed Limit	24	0.4%	22	0.7%	12	12.9%	58	0.6%
Unknown	589	9.8%	342	11.1%	14	15.1%	945	10.3%
Total	6,026	100.0%	3,091	100.0%	93	100.0%	9,210	100.0%



- It is troubling to see that 3,770 vehicles in crashes were known to be traveling over the posted speed limit.
- Speed-related vehicles in fatal crashes were more likely to be exceeding the posted speed limit by greater amounts.
- Speed-related vehicles in total crashes were more likely to be traveling too fast for conditions.
- Three out of every four speed-related vehicles (79.7% where speed was known) in fatal crashes were traveling over the posted speed limit.
- Speed increases the crash energy by the square of the speeds. When impact speed increases from 40 to 60 MPH (a 50% increase), the energy that needs to be managed increases by 125%.

2011 Utah Crash Facts

Speed is the leading unsafe driving behavior that contributes to deaths.

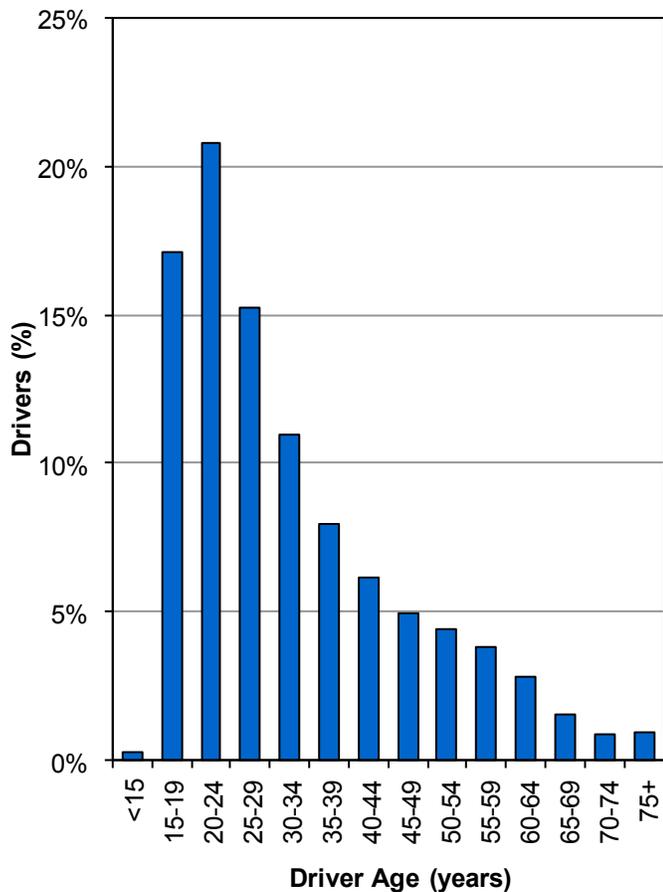
Speed



Did you know in 2011:

- 8,699 speed-related crashes occurred in Utah which resulted in 4,333 injured persons and 101 deaths.
- Speed was a factor in 43% of fatal crashes in 2011.
- Speed-related crashes were 3.4 times more likely to be fatal than other motor vehicle crashes.

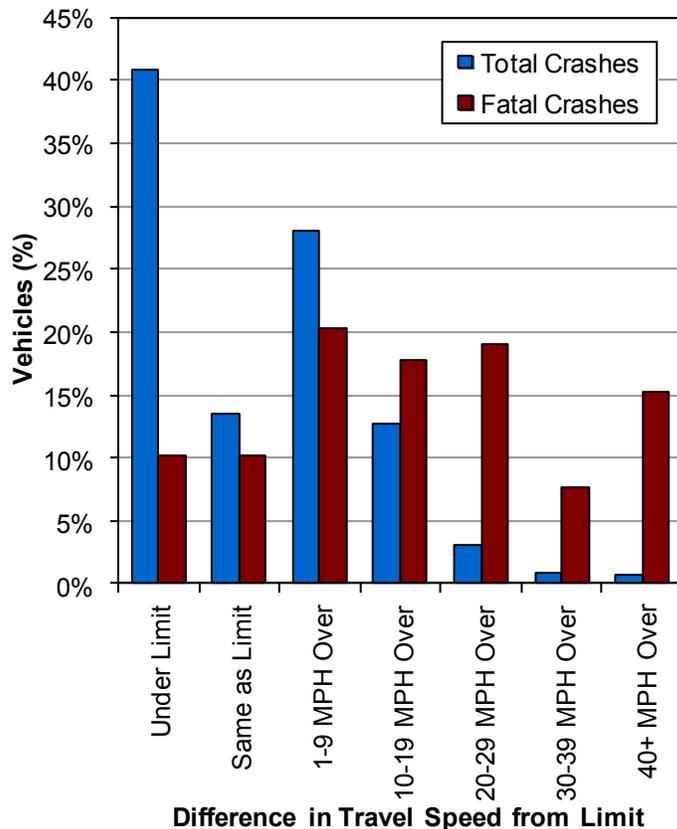
Age of Drivers in Speed-Related Crashes (Utah 2011)



- Drivers aged 15-29 years had the highest percentage of total speed-related crashes.

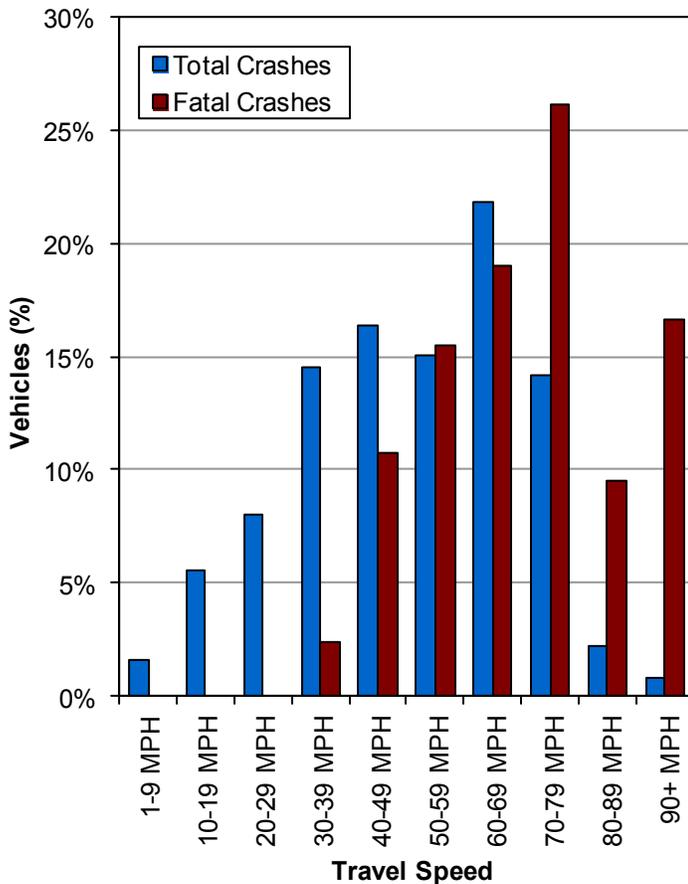


Speed-Related Crashes by Difference in Travel Speed From Speed Limit (Utah 2011)



- Speed-related vehicles in fatal crashes were more likely to be exceeding the posted speed limit by greater amounts.
- Drivers become increased risks to themselves and other people on the roadway due to higher speeds.

Speed-Related Crashes by Travel Speed (Utah 2011)

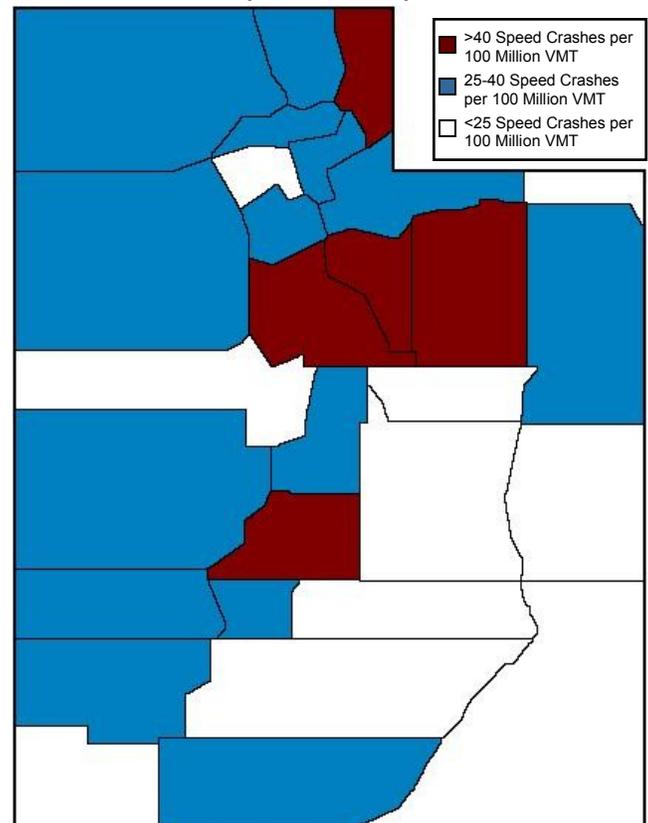


- Speed-related vehicles in fatal crashes were more likely to be traveling at higher speeds.
- The higher the speed the greater the amount of energy that must be absorbed in a crash, hence there is more chance of serious injury or death.

Speed



Speed-Related Crash Rates by County (Utah 2011)



- Wasatch, Utah, and Sevier Counties had the highest speed-related crash rates per miles traveled.

Speeding is one of the leading factors contributing to traffic crashes. Speeding is dangerous because it:

- Magnifies drivers' errors;
- Extends the distance necessary to stop a vehicle;
- Increases the distance a vehicle travels while the driver reacts to a situation;
- Reduces a driver's ability to steer safely around curves or objects in the road;
- Decreases the effectiveness of vehicle design features, such as seat belts;
- Reduces the stability of the vehicle structure;
- Increases the number of crashes;
- Increases the severity of crashes. For every 10 MPH over 50 MPH, the risk of death in a crash is doubled.



Drivers need to remember there is a reason for speed limits. The roadways are a dangerous place and the speed limits are designed to protect everyone—drivers, passengers, and pedestrians. The posted speed limit is the law. Slow down and obey speed limits.