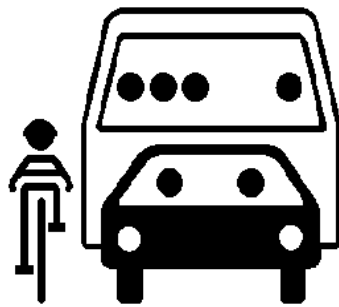


# 2008 TRAFFIC CRASH REPORT



**DECEMBER 2009**

**WASHTENAW AREA TRANSPORTATION STUDY**

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**DECEMBER 2009**

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## **EXECUTIVE SUMMARY**

Police Agencies in Washtenaw County recorded 10,283 crashes in 2008, a decline of 3.9% from 2007. Agencies with the highest numbers of crashes include the Ann Arbor Police Department, the Washtenaw County Sherriff, and the Michigan State Police, making up 76.9% of crashes in the county. Detail on the crashes in Washtenaw County both by police agency and community is available in this report.

## **WASHTENAW COUNTY DEMOGRAPHICS**

- The Southeast Michigan Council of Governments (SEMCOG) estimated the Washtenaw County population to be 348,407, a 7.9% increase since 2000. ( SEMCOG July 2009 estimates)
- Vehicle Miles Traveled (VMT) estimates totaled 4.6 million in 2005, a 25% increase in VMT from 2000. (2005 WATS model)
- Washtenaw County has 1,260 miles of streets and roads in the urbanized area and 1,090 miles of rural roads.
- The WATS model identifies 157 miles (14%) of the 1,056 miles of federal aid eligible roads in the county as congested.

## **2008 CRASH FACTS**

- In 2008, the single motor vehicle crash occurred most frequently in Washtenaw County. There were 3,666 crashes involving only one motor vehicle, representing 35.7% of all crashes.
- Injuries, which include fatalities, incapacitating injuries, non-incapacitating injuries, and possible injuries, have the highest percent of occurrence in head-on crashes: 38.0% of the head-on crashes caused an injury, and the head-on- left turn crash type had the second highest occurrence of injury at 33.5%.
- Rear end and angle crashes occurred most frequently within urban areas while single motor vehicle crashes occurred more frequently in rural areas.
- There were 29 fatal crashes reported in Washtenaw County in 2008 compared to 31 in 2007. This includes nine alcohol related fatalities, two pedestrian fatalities, and one bicyclist fatality.
- Only 3.4% of all crashes in Washtenaw County involved drivers under the influence of alcohol. However, 7.6% crashes that caused injury and 31% of fatal crashes involved drivers under the influence (9 fatalities).
- Most reported bicycle and pedestrian crashes resulted in injury. Of 92 crashes involving bicycles, 78 resulted in injury (84.8%), one of which was fatal. Of 82 crashes involving pedestrians, 76 resulted in injury (92.7%), two of which were fatal.
- Deer were involved in 1,167 crashes, totaling 31.8% of single vehicle crashes and 11.3% of all crashes in the county. The months of October and November have the highest number of deer crashes.

## DATA COLLECTION

WATS produces monthly reports for the WATS website, which show the number of crashes by type and by law enforcement agency or community. WATS obtains crash data for municipalities and agencies from the Michigan State Police and cause of crashes from Michigan Traffic Crash Facts. Crash totals may vary slightly when comparing agencies, municipalities, and cause of crashes. Each table is marked with its source and WATS calculates percentages based on the respective source data.

For more information:

- WATS updates aggregate data on area crashes on the WATS website at: <http://www.miwats.org/WATS/leftside/transdata/crashes/crash09.html>
- The Crash Facts website at <http://www.michigantrafficcrashfacts.org/> provides information on specific crashes, maps, and data from throughout Michigan. Use the Data Query tool for maps and crash reports.
- SEMCOG also maintains an easily searchable database of crashes in Southeastern Michigan: <http://www.semco.org/Data/Apps/crash.cfm>

## GENERAL TRENDS

In 2008, Washtenaw County recorded 10,283 crashes, a decline of 3.9% from 2007. Agencies with the highest numbers of crashes include the Ann Arbor Police Department, the Washtenaw County Sherriff, and the Michigan State Police, making up 76.9% of crashes in the county. Refer to Table 1 for the crash totals for the year.

Many agencies experienced a decline in crash rates in 2008 from 2007. The Northfield Township Police Department reported a drop of 11.8%, while the Saline Police Department's crash rate dropped 9.9% and the Michigan State Police 8.8%.

Crash rates rose most notably in the university areas. Eastern Michigan University Department of Public Safety experienced a 30.0% rise in reported crashes (from 10 in 2007 to 13 in 2008) and the University of Michigan Department of Public Safety saw a rise of 15.8%. In addition, the Ypsilanti Police Department reported a rise of 8.9%.



**Table 1: Total Crashes by Agency**

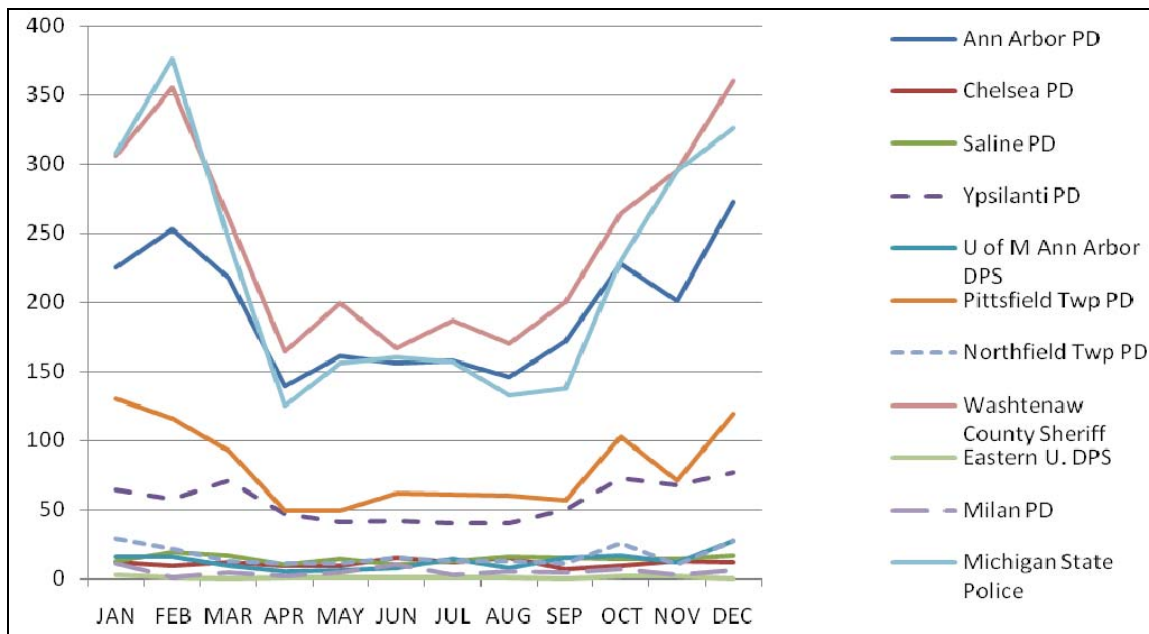
	2007	2008	Amount	Change
Ann Arbor PD	2,489	<b>2,330</b>	-159	-6.4%
Chelsea PD	143	<b>134</b>	-9	-6.3%
Saline PD	191	<b>172</b>	-19	-9.9%
Ypsilanti PD	616	<b>671</b>	55	8.9%
U of M DPS	133	<b>154</b>	21	15.8%
Pittsfield Twp PD	953	<b>970</b>	17	1.8%
Northfield Twp PD	229	<b>202</b>	-27	-11.8%
Washtenaw County Sheriff	2,967	<b>2,928</b>	-39	-1.3%
EMU DPS	10	<b>13</b>	3	30.0%
Milan PD	59	<b>60</b>	1	1.7%
Michigan State Police	2,906	<b>2,649</b>	-257	-8.8%
<b>Total</b>	<b>10,696</b>	<b>10,283</b>	<b>-413</b>	<b>-3.9%</b>

Source: Michigan State Police

## SEASONAL VARIATION

Crashes tend to increase in the winter months, from October to March and to lull in summer months, April to September. January, February and December had the highest crash rates in 2008. April and August had the lowest. Please refer to Chart 1 and Table 2 for 2008 data. Table 3 lists all crashes by month and compares them to months in 2007.

**Chart 1: Crashes by Month by Agency**



Source: Michigan State Police

Table 2: Crashes by Month by Agency

	Ann Arbor PD	Chelsea PD	Saline PD	Ypsilanti PD	U of M DPS	Pittsfield Twp PD	Northfield Twp PD	Wash.Co. Sheriff	EMU DPS	Milan PD	MI State Police	Total
<b>JAN</b>	225	12	13	64	16	130	29	306	3	11	308	1,117
<b>FEB</b>	253	9	19	58	16	116	22	355	1	1	376	1,226
<b>MAR</b>	218	12	17	71	9	93	13	261	0	4	245	943
<b>APR</b>	139	9	10	47	5	49	11	164	1	2	125	562
<b>MAY</b>	161	9	14	41	6	49	11	199	1	4	156	651
<b>JUN</b>	156	15	10	42	8	62	15	167	1	10	160	646
<b>JUL</b>	158	12	13	40	14	61	13	187	1	3	157	659
<b>AUG</b>	146	15	16	40	8	60	13	170	1	5	133	607
<b>SEP</b>	172	7	15	50	15	57	11	200	0	4	138	669
<b>OCT</b>	228	9	14	73	17	103	26	264	2	7	230	973
<b>NOV</b>	201	13	14	68	12	71	10	295	2	3	295	984
<b>DEC</b>	273	12	17	77	28	119	28	360	0	6	326	1,246
<b>Total</b>	<b>2,330</b>	<b>134</b>	<b>172</b>	<b>671</b>	<b>154</b>	<b>970</b>	<b>202</b>	<b>2,928</b>	<b>13</b>	<b>60</b>	<b>2,649</b>	<b>10,283</b>

Source: Michigan State Police

Table 3: Total Crashes by Agency and Month

	January			
	2007	2008	Amount	Change
Ann Arbor PD	216	<b>225</b>	9	4.2%
Chelsea PD	16	<b>12</b>	(4)	-25.0%
Saline PD	18	<b>13</b>	(5)	-27.8%
Ypsilanti PD	54	<b>64</b>	10	18.5%
U of M DPS	11	<b>16</b>	5	45.5%
Pittsfield Twp PD	104	<b>130</b>	26	25.0%
Northfield Twp PD	20	<b>29</b>	9	45.0%
Washtenaw Co. Sheriff	308	<b>306</b>	(2)	-0.6%
Eastern U DPS	1	<b>3</b>	2	200.0%
Milan PD	6	<b>11</b>	5	83.3%
Michigan State Police	316	<b>308</b>	(8)	-2.5%
<b>Total</b>	<b>1070</b>	<b>1117</b>	<b>47</b>	<b>4.4%</b>

	February			
	2007	2008	Amount	Change
Ann Arbor PD	228	<b>253</b>	25	11.0%
Chelsea PD	9	<b>9</b>	0	0.0%
Saline PD	16	<b>19</b>	3	18.8%
Ypsilanti PD	59	<b>58</b>	(1)	-1.7%
U of M DPS	21	<b>16</b>	(5)	-23.8%
Pittsfield Twp PD	75	<b>116</b>	41	54.7%
Northfield Twp PD	24	<b>22</b>	(2)	-8.3%
Washtenaw Co. Sheriff	284	<b>355</b>	71	25.0%
Eastern U DPS	0	<b>1</b>	1	100.0%
Milan PD	8	<b>1</b>	(7)	-87.5%
Michigan State Police	288	<b>376</b>	88	30.6%
<b>Total</b>	<b>1012</b>	<b>1226</b>	<b>214</b>	<b>21.1%</b>

	March			
	2007	2008	Amount	Change
Ann Arbor PD	199	<b>218</b>	19	9.5%
Chelsea PD	14	<b>12</b>	(2)	-14.3%
Saline PD	15	<b>17</b>	2	13.3%
Ypsilanti PD	58	<b>71</b>	13	22.4%
U of M DPS	16	<b>9</b>	(7)	-43.8%
Pittsfield Twp PD	81	<b>93</b>	12	14.8%
Northfield Twp PD	41	<b>13</b>	(28)	-68.3%
Washtenaw Co. Sheriff	218	<b>261</b>	43	19.7%
Eastern U DPS	1	<b>0</b>	(1)	-100.0%
Milan PD	5	<b>4</b>	(1)	-20.0%
Michigan State Police	246	<b>245</b>	(1)	-0.4%
<b>Total</b>	<b>894</b>	<b>943</b>	<b>49</b>	<b>5.5%</b>

	April			
	2007	2008	Amount	Change
Ann Arbor PD	171	<b>139</b>	(32)	-18.7%
Chelsea PD	13	<b>9</b>	(4)	-30.8%
Saline PD	7	<b>10</b>	3	42.9%
Ypsilanti PD	14	<b>47</b>	33	235.7%
U of M DPS	7	<b>5</b>	(2)	-28.6%
Pittsfield Twp PD	52	<b>49</b>	(3)	-5.8%
Northfield Twp PD	14	<b>11</b>	(3)	-21.4%
Washtenaw Co. Sheriff	181	<b>164</b>	(17)	-9.4%
Eastern U DPS	2	<b>1</b>	(1)	-50.0%
Milan PD	4	<b>2</b>	(2)	-50.0%
Michigan State Police	196	<b>125</b>	(71)	-36.2%
<b>Total</b>	<b>661</b>	<b>562</b>	<b>(99)</b>	<b>-15.0%</b>

	May			
	2007	2008	Amount	Change
Ann Arbor PD	192	<b>161</b>	(31)	-16.1%
Chelsea PD	6	<b>9</b>	3	50.0%
Saline PD	18	<b>14</b>	(4)	-22.2%
Ypsilanti PD	9	<b>41</b>	32	355.6%
U of M DPS	8	<b>6</b>	(2)	-25.0%
Pittsfield Twp PD	72	<b>49</b>	(23)	-31.9%
Northfield Twp PD	24	<b>11</b>	(13)	-54.2%
Washtenaw Co. Sheriff	225	<b>199</b>	(26)	-11.6%
Eastern U DPS	0	<b>1</b>	1	100.0%
Milan PD	4	<b>4</b>	0	0.0%
Michigan State Police	205	<b>156</b>	(49)	-23.9%
<b>Total</b>	<b>763</b>	<b>651</b>	<b>(112)</b>	<b>-14.7%</b>

	June			
	2007	2008	Amount	Change
Ann Arbor PD	187	<b>156</b>	(31)	-16.6%
Chelsea PD	13	<b>15</b>	2	15.4%
Saline PD	19	<b>10</b>	(9)	-47.4%
Ypsilanti PD	31	<b>42</b>	11	35.5%
U of M DPS	8	<b>8</b>	0	0.0%
Pittsfield Twp PD	63	<b>62</b>	(1)	-1.6%
Northfield Twp PD	10	<b>15</b>	5	50.0%
Washtenaw Co. Sheriff	211	<b>167</b>	(44)	-20.9%
Eastern U DPS	0	<b>1</b>	1	100.0%
Milan PD	2	<b>10</b>	8	400.0%
Michigan State Police	199	<b>160</b>	(39)	-19.6%
<b>Total</b>	<b>743</b>	<b>646</b>	<b>(97)</b>	<b>-13.1%</b>

	July			
	2007	2008	Amount	Change
Ann Arbor PD	182	<b>158</b>	(24)	-13.2%
Chelsea PD	10	<b>12</b>	2	20.0%
Saline PD	16	<b>13</b>	(3)	-18.8%
Ypsilanti PD	50	<b>40</b>	(10)	-20.0%
U of M DPS	8	<b>14</b>	6	75.0%
Pittsfield Twp PD	66	<b>61</b>	(5)	-7.6%
Northfield Twp PD	16	<b>13</b>	(3)	-18.8%
Washtenaw Co. Sheriff	171	<b>187</b>	16	9.4%
Eastern U DPS	0	<b>1</b>	1	100.0%
Milan PD	2	<b>3</b>	1	50.0%
Michigan State Police	180	<b>157</b>	(23)	-12.8%
<b>Total</b>	<b>701</b>	<b>659</b>	<b>(42)</b>	<b>-6.0%</b>

	August			
	2007	2008	Amount	Change
Ann Arbor PD	217	<b>146</b>	(71)	-32.7%
Chelsea PD	12	<b>15</b>	3	25.0%
Saline PD	10	<b>16</b>	6	60.0%
Ypsilanti PD	54	<b>40</b>	(14)	-25.9%
U of M DPS	7	<b>8</b>	1	14.3%
Pittsfield Twp PD	77	<b>60</b>	(17)	-22.1%
Northfield Twp PD	10	<b>13</b>	3	30.0%
Washtenaw Co. Sheriff	214	<b>170</b>	(44)	-20.6%
Eastern U DPS	1	<b>1</b>	0	0.0%
Milan PD	2	<b>5</b>	3	150.0%
Michigan State Police	178	<b>133</b>	(45)	-25.3%
<b>Total</b>	<b>782</b>	<b>607</b>	<b>(175)</b>	<b>-22.4%</b>

	September			
	2007	2008	Amount	Change
Ann Arbor PD	179	<b>172</b>	(7)	-3.9%
Chelsea PD	16	<b>7</b>	(9)	-56.3%
Saline PD	21	<b>15</b>	(6)	-28.6%
Ypsilanti PD	86	<b>50</b>	(36)	-41.9%
U of M DPS	15	<b>15</b>	0	0.0%
Pittsfield Twp PD	71	<b>57</b>	(14)	-19.7%
Northfield Twp PD	14	<b>11</b>	(3)	-21.4%
Washtenaw Co. Sheriff	227	<b>200</b>	(27)	-11.9%
Eastern U DPS	2	<b>0</b>	(2)	-100.0%
Milan PD	7	<b>4</b>	(3)	-42.9%
Michigan State Police	188	<b>138</b>	(50)	-26.6%
<b>Total</b>	<b>826</b>	<b>669</b>	<b>(157)</b>	<b>-19.0%</b>

	October			
	2007	2008	Amount	Change
Ann Arbor PD	224	<b>228</b>	4	1.8%
Chelsea PD	10	<b>9</b>	(1)	-10.0%
Saline PD	20	<b>14</b>	(6)	-30.0%
Ypsilanti PD	79	<b>73</b>	(6)	-7.6%
U of M DPS	8	<b>17</b>	9	112.5%
Pittsfield Twp PD	92	<b>103</b>	11	12.0%
Northfield Twp PD	16	<b>26</b>	10	62.5%
Washtenaw Co. Sheriff	306	<b>264</b>	(42)	-13.7%
Eastern U DPS	2	<b>2</b>	0	0.0%
Milan PD	6	<b>7</b>	1	16.7%
Michigan State Police	251	<b>230</b>	(21)	-8.4%
<b>Total</b>	<b>1014</b>	<b>973</b>	<b>(41)</b>	<b>-4.0%</b>

	November			
	2007	2008	Amount	Change
Ann Arbor PD	243	<b>201</b>	(42)	-17.3%
Chelsea PD	10	<b>13</b>	3	30.0%
Saline PD	9	<b>14</b>	5	55.6%
Ypsilanti PD	62	<b>68</b>	6	9.7%
U of M DPS	9	<b>12</b>	3	33.3%
Pittsfield Twp PD	97	<b>71</b>	(26)	-26.8%
Northfield Twp PD	19	<b>10</b>	(9)	-47.4%
Washtenaw Co. Sheriff	285	<b>295</b>	10	3.5%
Eastern U DPS	1	<b>2</b>	1	100.0%
Milan PD	4	<b>3</b>	(1)	-25.0%
Michigan State Police	318	<b>295</b>	(23)	-7.2%
<b>Total</b>	<b>1057</b>	<b>984</b>	<b>(73)</b>	<b>-6.9%</b>

	December			
	2007	2008	Amount	Change
Ann Arbor PD	251	<b>273</b>	22	8.8%
Chelsea PD	14	<b>12</b>	(2)	-14.3%
Saline PD	22	<b>17</b>	(5)	-22.7%
Ypsilanti PD	60	<b>77</b>	17	28.3%
U of M DPS	15	<b>28</b>	13	86.7%
Pittsfield Twp PD	103	<b>119</b>	16	15.5%
Northfield Twp PD	21	<b>28</b>	7	33.3%
Washtenaw Co. Sheriff	337	<b>360</b>	23	6.8%
Eastern U DPS	0	<b>0</b>	0	0.0%
Milan PD	9	<b>6</b>	(3)	-33.3%
Michigan State Police	341	<b>326</b>	(15)	-4.4%
<b>Total</b>	<b>1173</b>	<b>1246</b>	<b>73</b>	<b>6.2%</b>

Source:  
Michigan State Police



## CRASH TYPES

When reporting a crash, the responding officer indicates the type of crash of the first impact. The Michigan crash report uses ten crash types:

**Single Motor Vehicle Crash:** involves only one vehicle and is not caused by another vehicle. Includes collisions with pedestrians, bicycles, animals, trains, and fixed objects.

**Head On Crash:** when two vehicles coming from opposite directions collide while facing each other.

**Head On Crash- Left Turn:** when two vehicles coming from opposite directions collide while facing each other and when one or both vehicles were attempting to turn left.

**Angle Crash:** when one vehicle hits the side of the other vehicle at a perpendicular angle (approximately 90 degrees). May be strong enough to stop the forward motion of the vehicles.

**Rear End Crash:** when one vehicle hits the rear of another vehicle while going the same direction. Usually when stopping or accelerating.

**Rear End Crash- Left Turn:** when one vehicle hits the side or rear of another vehicle while going the same direction and when the vehicle that was hit was attempting to turn left. Usually when stopping or accelerating.

**Rear End Crash- Right Turn:** when one vehicle hits the side or rear of another vehicle while going the same direction and when the vehicle that was hit was attempting to turn right. Usually when stopping or accelerating.

**Sideswipe Crash- Same:** when a vehicle hits the side of another vehicle, makes contact at a glancing angle, and when the two vehicles are travelling in the same direction. Not strong enough of an impact to stop the forward motion of the vehicles.

**Sideswipe Crash- Opposite:** when a vehicle hits the side of another vehicle, makes contact at a glancing angle, and when two vehicles are travelling in opposite directions. Not strong enough of an impact to stop the forward motion of the vehicles.

**Other/Unknown Crash:** Crash does not fit into any of the above categories (i.e. when a vehicle backs into another vehicle) or officer cannot indicate the type of crash.

**Not Reported:** Officer did not indicate the type of crash.

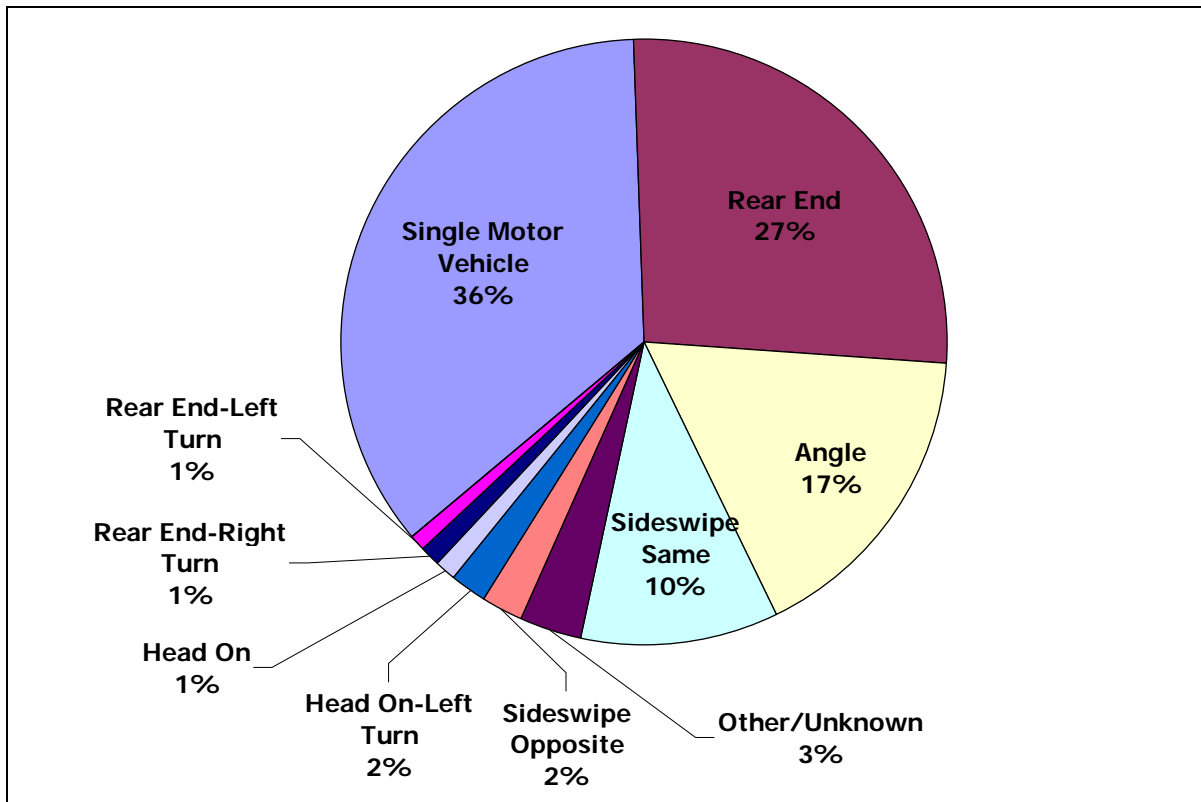
Table 4 lists the crash types as well as the total and percent of Washtenaw County crashes in 2008. Chart 2 shows types of crashes as a percentage of total crashes. Table 5 lists crash types by municipality. The Single Motor Vehicle crash is the most common crash type occurring in over one third of Washtenaw County's accidents at 35.7%. Rear End crashes are the next most common at 26.6% of all crashes.

**Table 4: Total Crash Type by Percent of Crashes**

<b>Crash Type</b>	<b>Percent</b>	<b>Total</b>
Single Motor Vehicle	35.7 %	3,666
Head On	1.3 %	129
Head On-Left Turn	1.9 %	199
Angle	16.7 %	1,718
Rear End	26.6 %	2,734
Rear End-Left turn	0.9 %	88
Rear End-Right turn	0.9 %	97
Sideswipe-Same	10.5 %	1,079
Sideswipe-Opposite	2.1 %	213
Other/Unknown	3.4 %	352
Not Reported	0.1 %	8
<b>Total</b>	<b>100.0 %</b>	<b>10,283</b>

Source: Michigan State Police

**Chart 2: Crashes by Type**



Source: Michigan State Police

Table 5: Crash Types by Municipality

	Single Motor Vehicle	Head On	Head On-Left Turn	Angle	Rear End	Rear End-Left Turn	Rear End-Right Turn	Sideswipe-Same	Sideswipe-Opposite	Other/Unknown	Not Reported	Total
<b>Cities and Villages</b>												
Ann Arbor	460	24	41	586	982	24	29	412	55	110	0	2,723
Barton Hills	0	0	0	0	0	0	0	0	0	0	0	0
Chelsea	23	1	7	22	42	2	1	12	5	9	0	124
Dexter	10	0	0	19	22	5	0	6	4	2	0	68
Manchester	8	0	0	4	3	1	0	0	1	3	0	20
Milan (part)	11	2	1	7	5	0	0	9	3	7	1	46
Saline	28	1	6	44	48	4	2	25	2	11	0	171
Ypsilanti	103	7	14	213	196	12	5	140	21	34	0	745
<b>Total</b>	<b>643</b>	<b>35</b>	<b>69</b>	<b>895</b>	<b>1,298</b>	<b>48</b>	<b>37</b>	<b>604</b>	<b>91</b>	<b>176</b>	<b>1</b>	<b>3,897</b>
<b>Townships</b>												
Ann Arbor	273	9	9	54	179	4	5	65	7	8	1	614
Augusta	68	1	1	10	14	1	1	2	2	2	0	102
Bridgewater	77	1	0	4	4	0	0	1	0	1	0	88
Dexter	95	1	5	10	12	0	2	1	4	4	0	134
Freedom	41	1	0	4	0	0	0	0	0	1	0	47
Lima	123	2	1	13	30	0	0	12	0	11	0	192
Lodi	97	3	0	18	24	2	1	2	4	0	0	151
Lyndon	93	1	1	4	6	0	0	0	0	2	0	107
Manchester	81	0	0	3	2	1	0	1	2	1	0	91
Northfield	173	5	2	19	83	2	2	17	5	9	2	319
Pittsfield	402	8	42	260	454	8	11	123	19	33	2	1,362
Salem	131	7	1	26	14	0	1	10	6	2	1	199
Saline	59	2	0	4	7	0	0	1	3	1	0	77
Scio	320	4	13	61	84	11	15	53	13	11	1	586
Sharon	58	3	1	4	3	0	0	1	1	1	0	72
Superior	160	7	5	40	99	4	2	13	10	9	0	349
Sylvan	182	2	0	16	35	1	0	16	3	10	0	265
Webster	123	2	0	8	14	0	0	1	3	5	0	156
York charter	160	4	0	27	28	0	6	9	2	3	0	239
Ypsilanti	334	31	50	246	350	7	14	147	37	63	0	1,279
<b>Total</b>	<b>3,050</b>	<b>94</b>	<b>131</b>	<b>831</b>	<b>1,442</b>	<b>41</b>	<b>60</b>	<b>475</b>	<b>121</b>	<b>177</b>	<b>7</b>	<b>6,429</b>
<b>Washtenaw County</b>	<b>3,693</b>	<b>129</b>	<b>200</b>	<b>1,726</b>	<b>2,740</b>	<b>89</b>	<b>97</b>	<b>1,079</b>	<b>212</b>	<b>353</b>	<b>8</b>	<b>10,326</b>

Source: MichiganTrafficCrashFacts.org

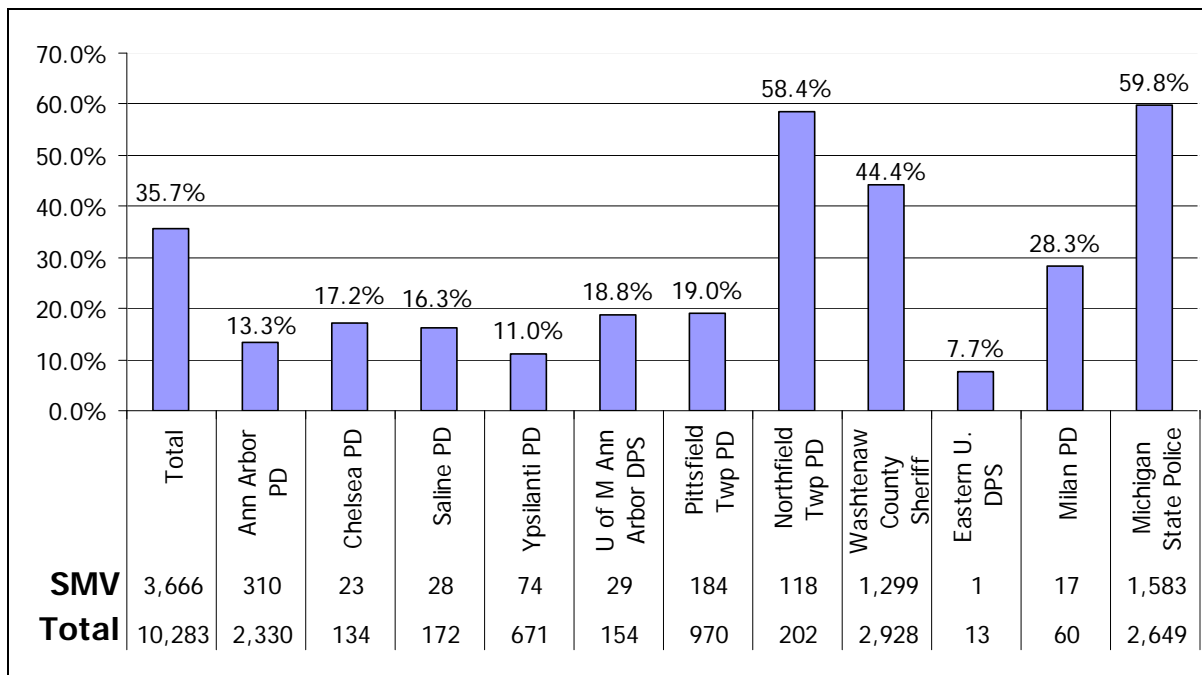
## SINGLE MOTOR VEHICLE CRASHES

The Michigan State Police and other reporting agencies define a single motor vehicle crash as involving only one vehicle and not caused by another vehicle. In a single motor vehicle crash, the vehicle typically leaves the road or hits a fixed object such as a tree, wall, or other object. Slightly more than one third of the crashes in Washtenaw County, 35.7%, were single motor vehicle crashes, making it the most common occurring crash type.

Single motor vehicle crashes occur more frequently in rural areas. Urbanized areas generally have much lower percentages of single vehicle crashes. The variation between rural and urban areas for single vehicle crashes spans from 59.8% of all crashes reported by the Michigan State Police to only 7.7% (1 of 13 accidents) reported by the Eastern Michigan University DPS.

The Northfield Township Police Department, which also covers a largely rural area, coded 58.4% of their total crashes as single vehicle. The Washtenaw County Sheriff's Department had the third highest percentage at 44.4%. Chart 3 shows the percentage of single motor vehicle crashes submitted by each agency.

**Chart 3: Single Motor Vehicle Crashes By Agency , Percentages**



Source: Michigan State Police



## REAR END CRASHES

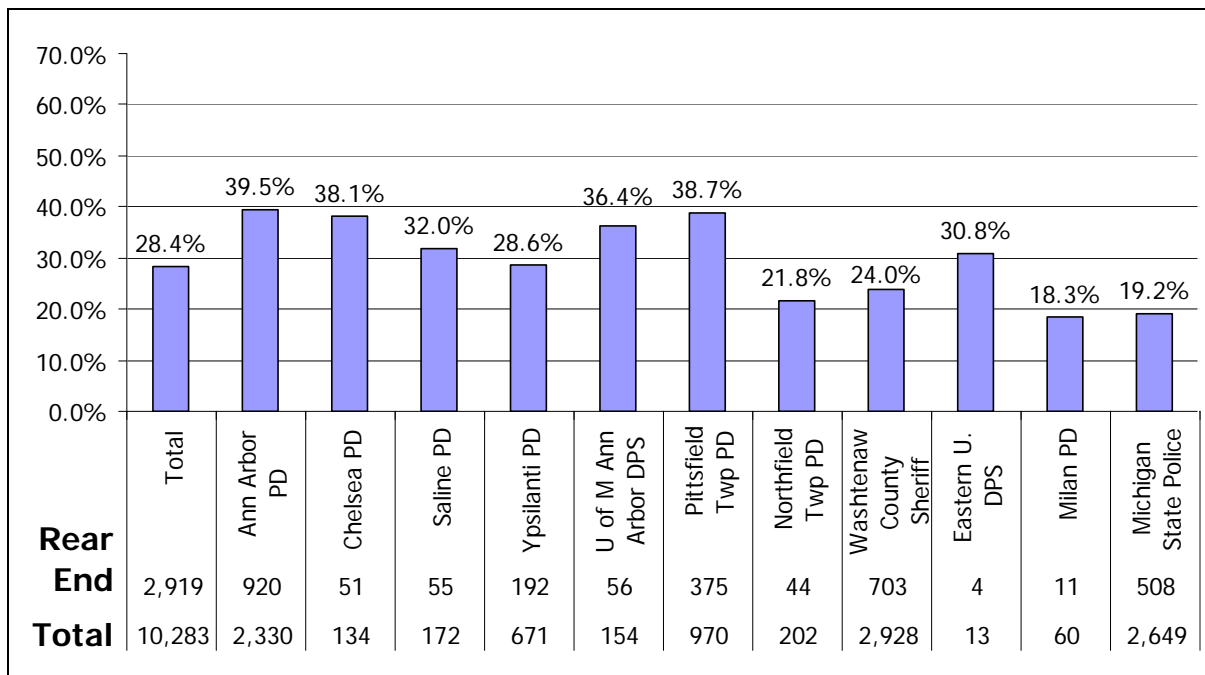
A rear end crash occurs when one vehicle hits the rear of another vehicle while stopping or accelerating. The State of Michigan differentiates between rear end crashes, rear end crashes during a left-hand turn, and rear end crashes during a right-hand turn. This report combines these crashes in the data below. Chart 4 shows the percentage and total rear end crashes by agency.

Agencies that cover primarily urban areas report a higher percentage of rear-end crashes; likely a result of the higher number of traffic signals, stop signs, business driveways, and higher levels of congestion in urban areas. The data shows lower percentages of rear-end crashes occurring in rural areas where there is less stopping and congestion. However, the variation in rear-end crashes between rural and urban areas is much lower than for single vehicle crashes—ranging from 18% from the Milan Police Department to 40% from the Ann Arbor Police Department.

The Ann Arbor Police Department reported the highest percentages of rear-end crashes (39.5%), followed by the Pittsfield Township (38.7%), and Chelsea (38.1%) police departments.

The Milan Police Department had the lowest percentage of rear-end crashes at 18.3% (11 out of 60 accidents). The Michigan State Police serves mostly rural areas and had the second lowest percentage of rear-end collisions at 19.2%.

**Chart 4: Rear-End Crashes By Agency, Percentages**



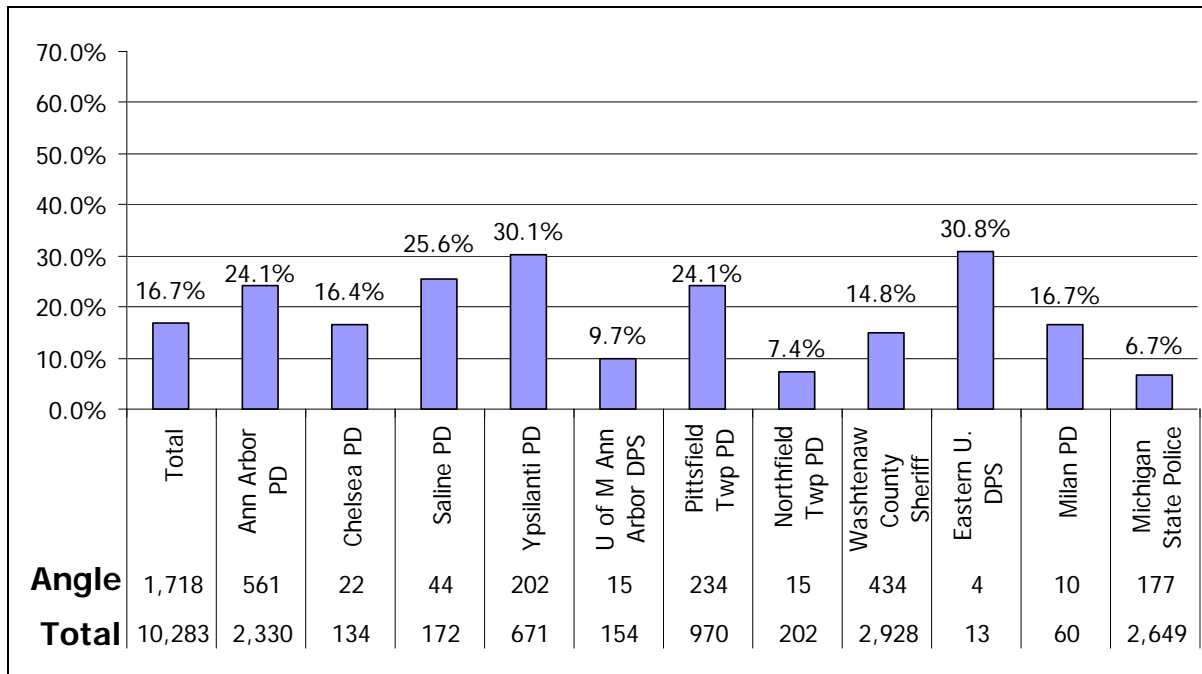
Source: Michigan State Police

## ANGLE CRASHES

An angle crash occurs when the intended direction of travel between two drivers is perpendicular and there is a side impact of approximately 90 degrees. Angle crashes are often the most severe multi-vehicle crash in injuries and property damage. Of the 10,283 crashes in Washtenaw County, 1,718 (16.7%) were angle crashes. Chart 5 shows the percent of angle crashes of each agency's total crashes.

Similar to the case of rear-end crashes; urban areas generally experience a higher percentage of angle crashes than the rural areas. The EMU Department of Public Safety and the Ypsilanti Police Department reported the highest percentages of angle crashes at 30.8% and 30.1% respectively, whereas the next highest: Saline, Ann Arbor, and Pittsfield Township reported only 25.6%, 24.1%, and 24.1%. Rural jurisdictions reported relatively few angle crashes.

**Chart 5: Angle Crashes By Agency, Percentages**



Source: Michigan State Police

## INJURY SEVERITY

WATS also produced monthly reports detailing the injury severity of crashes by law enforcement agency and community; and posts them on the WATS website. There are five levels of injury severity reported: K- a fatal crash; A- an incapacitating injury; B- a non-incapacitating injury; C- possible injury (no visible injury, but complaint of pain or momentary unconsciousness) and O- no injury.

It is important to note that injury severity is coded based on the most severe injury of anyone in the crash. For instance, if a crash includes a fatality as well as other injuries, the Police agencies code the crash as a fatality. Additionally, the police agencies code a single fatal crash regardless of the number of persons killed.

Washtenaw County police agencies reported 80.8% of crashes in the county had no injury. Agencies reported 1,979 crashes that involved injury or possibility of injury, 19.2% of all crashes. Fatal crashes represented 0.3% of total crashes at 29 fatal crashes and 129 incapacitating crashes (1.2%). Table 6 displays the number and percent by injury severity for the county.

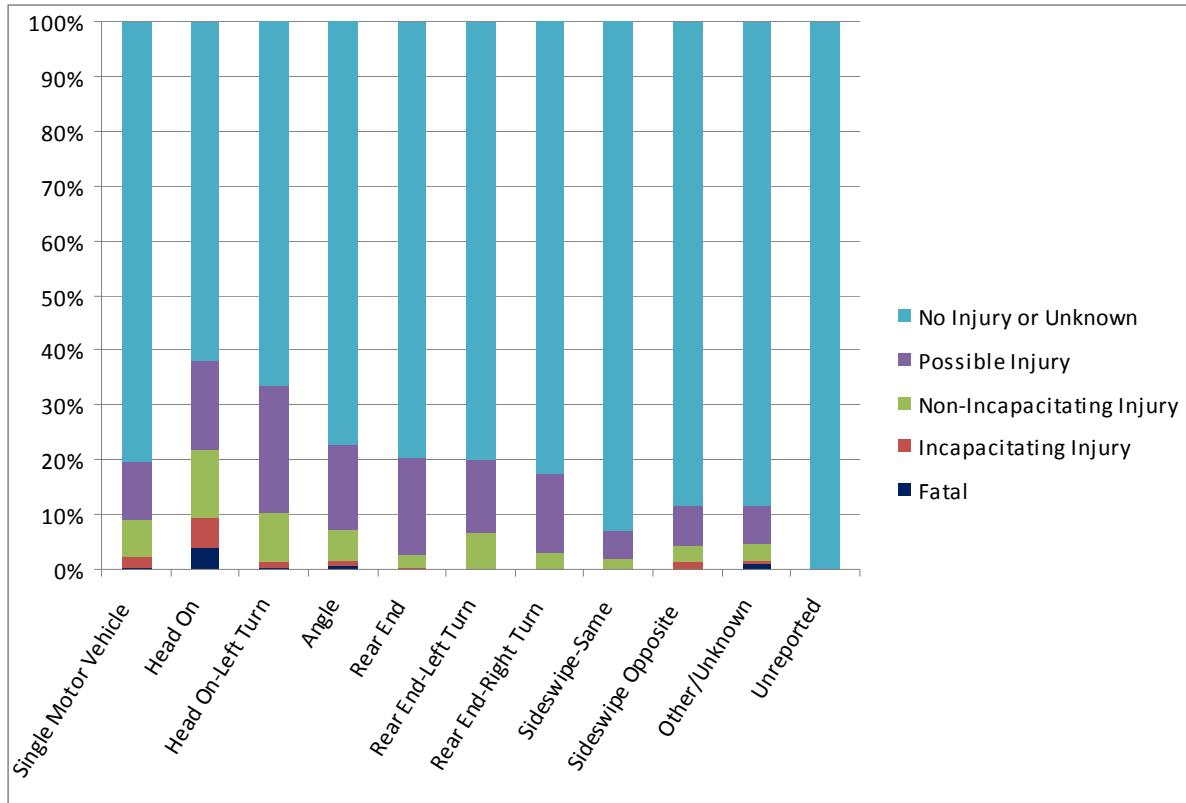
**Table 6: Total Injury Severity by Percent of Crashes**

<b>Injury Severity</b>	<b>Total</b>	<b>Percent</b>
Fatal Injury	29	0.3 %
Incapacitating Injury	129	1.2 %
Non-Incapacitating Injury	481	4.7 %
Possible Injury	1,340	13.0 %
No Injury or Unknown	8,347	80.8 %
<b>Total Injury Crashes</b>	<b>1,979</b>	<b>19.2 %</b>
<b>Total Crashes</b>	<b>10,326</b>	<b>100.0 %</b>

Source: MichiganTrafficCrashFacts.org

WATS also examined crash type by injury. Chart 6 shows the injury severity breakdown of the 10,326 crashes based on crash type in 2008. Head-on and head-on left-turn crashes were the most likely crashes to result in injury. Of the head-on crashes 38.0% were reported as possible, non-incapacitating, incapacitating, or fatal injuries. Fatalities occurred in six head-on or head-on left-turn crashes. Angle crashes had a 22.7% injury rate and nine fatalities. Finally, 20.5% of rear-end crashes (one fatality) and 19.9% of single motor vehicle crashes (ten fatalities) resulted in injury or death.

**Chart 6: Crash Type by Injury Severity of Crash**



Source: Michigan State Police

Table 7: Injuries by Municipality

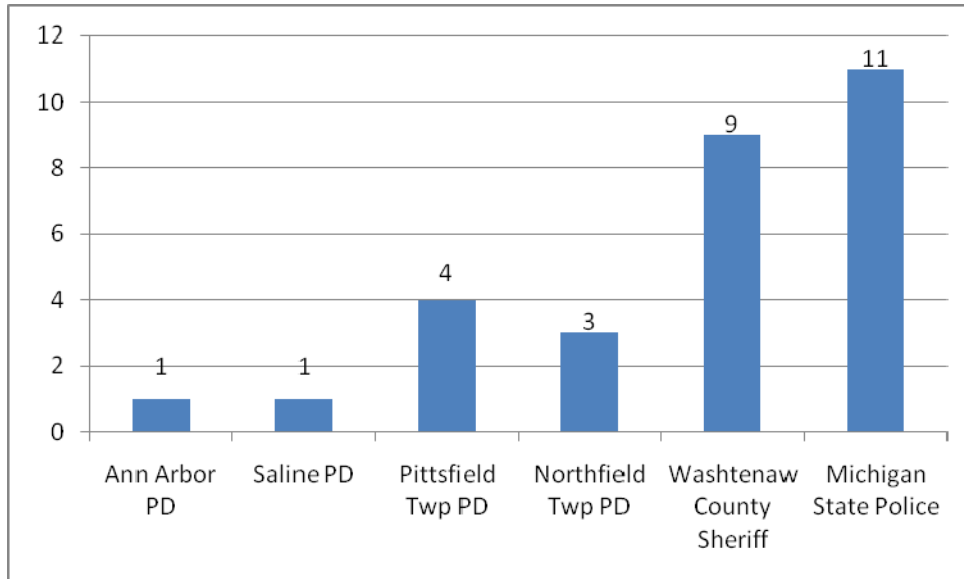
	Fatal (K)	Incap. (A)	Non- Incap. (B)	Possible (C)	No Injury	Total
<b>Cities and Villages</b>						
Ann Arbor	1	30	135	400	2,157	2,723
Barton Hills	0	0	0	0	0	0
Chelsea	0	0	5	20	99	124
Dexter	0	0	1	11	56	68
Manchester	0	0	0	0	20	20
Milan (part)	1	0	1	7	37	46
Saline	1	1	7	22	140	171
Ypsilanti	0	6	23	83	633	745
<b>Total</b>	3	37	172	543	3,142	3,897
<b>Townships</b>						
Ann Arbor	1	4	27	88	494	614
Augusta	0	2	5	22	73	102
Bridgewater	0	1	1	8	78	88
Dexter	0	4	15	8	107	134
Freedom	0	2	1	4	40	47
Lima	2	2	7	20	161	192
Lodi	0	5	4	16	126	151
Lyndon	0	3	3	9	92	107
Manchester	0	1	2	5	83	91
Northfield	3	4	11	37	264	319
Pittsfield	5	13	43	169	1,132	1,362
Salem	0	5	10	29	155	199
Saline	1	3	6	9	58	77
Scio	0	8	41	50	487	586
Sharon	2	2	5	3	60	72
Superior	1	6	20	51	271	349
Sylvan	3	2	13	27	220	265
Webster	0	4	10	12	130	156
York	1	3	15	29	191	239
Ypsilanti	7	18	70	201	983	1,279
<b>Total</b>	26	92	309	797	5,205	6,429
<b>Washtenaw County</b>	29	129	481	1,340	8,347	10,326

Source: MichiganTrafficCrashFacts.org

## FATAL CRASHES

In 2008, 29 total fatal crashes occurred in Washtenaw County. Included in the 29 fatal crashes were two crashes that involved a pedestrian and one crash which involved a bicyclist. The Michigan State Police reported the highest number of fatal crashes with 11, followed by the Washtenaw County Sheriff with nine fatal crashes. Of the 29 total fatal crashes, ten were single motor vehicle crashes, five were head-on collisions, one was head on-left turn, nine were angle, and three were unknown or not reported. Chart 7 displays fatalities by reporting agency. Table 7 lists injuries by municipality.

**Chart 7: Fatal Crashes by Agency**



Source: Michigan State Police

## ALCOHOL RELATED CRASHES

Police officers indicate if alcohol was a factor for each driver involved in a crash. In 2003, the State of Michigan revised its drunken driving laws from Driving Under the Influence of Liquor (DUIL) to the new violation of Operating While Intoxicated (OWI). With the name change there was a Blood Alcohol Concentration (BAC) reduction from 0.10 to 0.08. Included in the new law is a “zero-tolerance” restriction for those under the age of 21. This means that a BAC level at or above 0.02 is illegal for those under 21 years of age. Commercial operators are in violation of the OWI law with a BAC of 0.04.

Table 8 shows the number of crashes by alcohol use of the driver. WATS removed data that is missing passenger alcohol use for statistical crash analysis. The alcohol use data identifies that 3.5% of drivers involved in Washtenaw County crashes used alcohol.

The data from Table 9 reveals the injury impact of alcohol use while driving. In the crashes with a fatality, 31.0% of the drivers had used alcohol. For crashes where injuries occurred, 7.6% of drivers had used alcohol. The injury severity increases significantly when alcohol is involved.

**Table 8: Personal Level Alcohol Use in Crashes**

<b>Alcohol Use</b>	<b>Driver Condition</b>	<b>Percent</b>
Sober	9,960	96.5 %
Intoxicated (BAC > 0.08)	357	3.5 %
<b>Total Crashes</b>	<b>10,317</b>	<b>100.0 %</b>

Source: MichiganTrafficCrashFacts.org

**Table 9: Personal Level Alcohol Use in Crashes by Injury Severity**

<b>Injury Severity</b>	<b>Sober</b>	<b>Intoxicated</b>	<b>Percent Intoxicated</b>
Fatal Injury	20	9	31.0 %
Incapacitating Injury	103	26	20.2 %
Non-Incapacitating Injury	427	53	11.0 %
Possible Injury	1,287	52	3.9 %
No Injury	8,123	217	2.6 %
<b>Total Injury Crashes</b>	<b>1,837</b>	<b>140</b>	<b>7.6 %</b>
<b>Totals</b>	<b>9,960</b>	<b>357</b>	<b>3.5 %</b>

Source: MichiganTrafficCrashFacts.org

## PEDESTRIAN AND BICYCLE RELATED CRASHES

As the use of non-motorized transportation increases throughout the county, it is important to document bicycle and pedestrian safety, particularly in relation to vehicular crashes. Below, Table 10 and Table 11 provide bicycle and pedestrian crashes by injury, respectively. Table 12 identifies vehicular crashes involving a bicycle or pedestrian by municipality. Both bicycle and pedestrian crashes occurred more frequently in more urbanized communities.

The data show that most reported bicycle and pedestrian crashes resulted in injury. Of 92 crashes involving bicycles, 78 resulted in injury (84.8%), one of which was fatal. Of 82 crashes involving pedestrians, 76 resulted in injury (92.7%), two of which were fatal.

**Table 10: Bicycle Crash Injuries**

	<b>Bicyclist Injuries</b>	<b>% of Bicycle Crashes</b>
Fatal	1	1.1
Incapacitating injury	10	10.9
Non incapacitating injury	41	44.6
Possible injury	26	28.3
No injury	14	15.2
<b>Total Bicyclist Injury Crashes</b>	<b>78</b>	<b>84.8</b>
<b>Total Bicycle Crashes</b>	<b>92</b>	<b>100.0</b>

Source: Michigan State Police

**Table 11: Pedestrian Crash Injuries**

	<b>Pedestrian Injuries</b>	<b>% of Pedestrian Crashes</b>
Fatal	2	2.4
Incapacitating injury	16	19.5
Non incapacitating injury	30	36.6
Possible injury	28	34.1
No injury	6	7.3
<b>Total Pedestrian Injury Crashes</b>	<b>76</b>	<b>92.7</b>
<b>Total Pedestrian Crashes</b>	<b>82</b>	<b>100.0</b>

Source: Michigan State Police



**Table 12: Crashes Involving Bicycles or Pedestrians by Municipality**

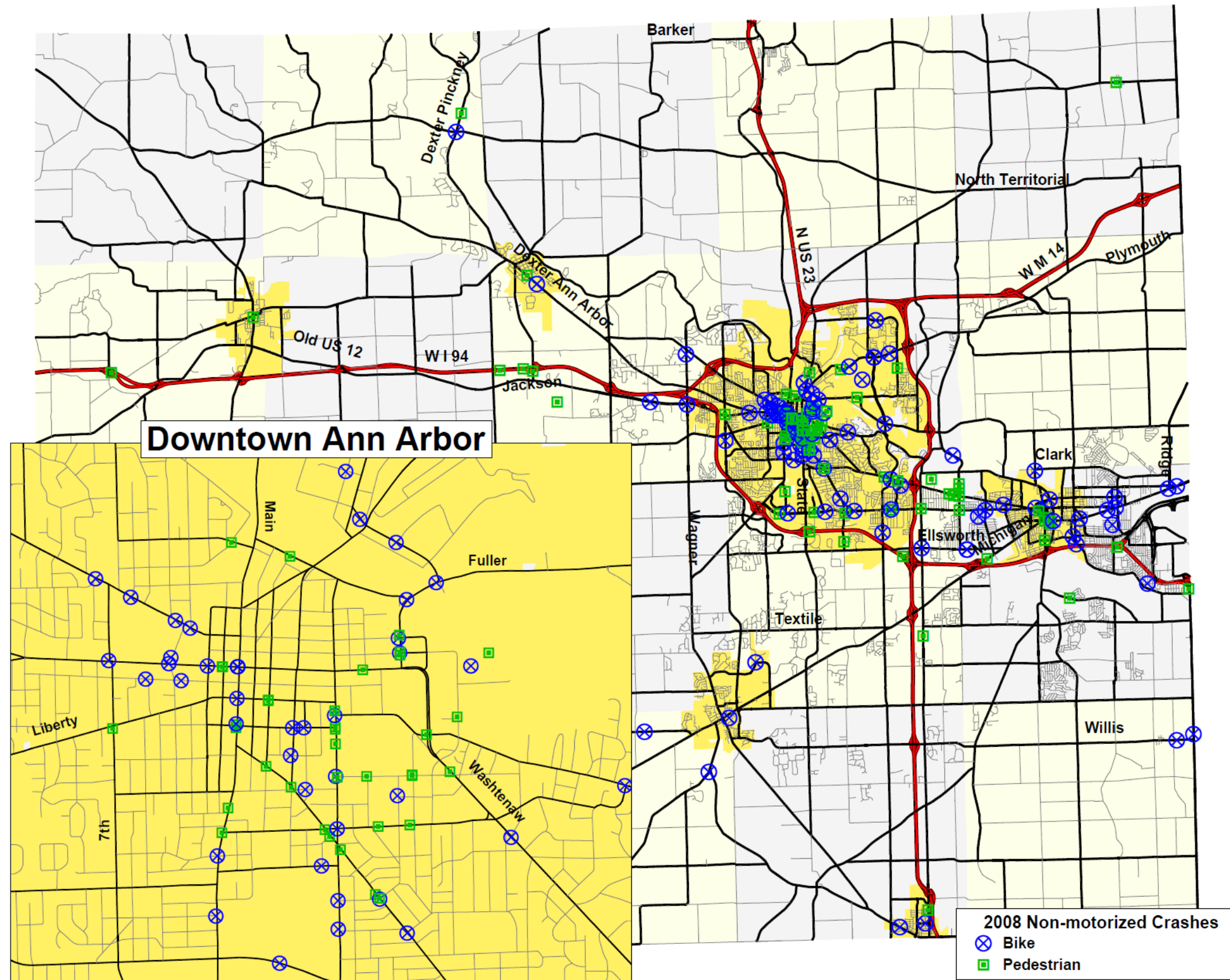
	<b>Bicycle</b>	<b>Pedestrian</b>	<b>Total</b>
<b>Cities and Villages</b>			
Ann Arbor	58	52	110
Barton Hills	0	0	0
Chelsea	0	0	0
Dexter	1	1	2
Manchester	0	0	0
Milan (part)	2	1	3
Saline	2	0	2
Ypsilanti	8	6	14
<b>Total</b>	<b>71</b>	<b>60</b>	<b>131</b>
<b>Townships</b>			
Ann Arbor	1	0	1
Augusta	2	0	2
Bridgewater	0	0	0
Dexter	1	1	2
Freedom	0	0	0
Lima	0	0	0
Lodi	0	0	0
Lyndon	0	0	0
Manchester	0	0	0
Northfield	0	0	0
Pittsfield	1	9	10
Salem	0	1	1
Saline	2	0	2
Scio	3	4	7
Sharon	0	0	0
Superior	0	0	0
Sylvan	0	2	2
Webster	0	0	0
York Charter	0	0	0
Ypsilanti	11	5	16
<b>Total</b>	<b>21</b>	<b>22</b>	<b>43</b>
<b>Washtenaw County</b>	<b>92</b>	<b>82</b>	<b>174</b>

Source: MichiganTrafficCrashFacts.org

On the next page, Map 1 locates the 2008 bicycle and pedestrian crashes in Washtenaw County. The map illustrates that most crashes involving bicycles and pedestrians take place within the urban area.



Map 1: Bicycle and Pedestrian Crash Locations



Source: Roadsoft GIS



## DEER RELATED CRASHES

Collisions with deer make up a significant number of Washtenaw County’s crashes and usually involve a single vehicle. Agencies recorded 1,167 crashes that involved deer, totaling 31.8% of single vehicle crashes and 11.3% of all crashes in the county in 2008. See Table 13 below.

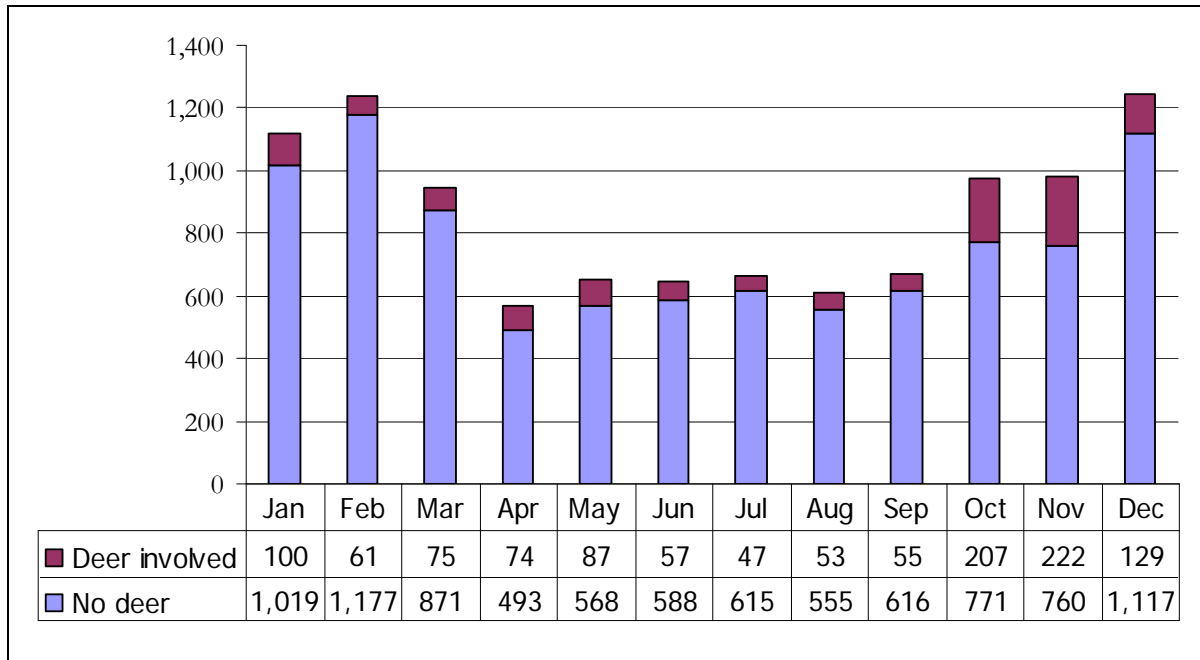
The distribution of deer crashes does not occur evenly throughout the year. The rate of crashes with deer rises significantly in the months of October and November. Nearly 38% of annual deer crashes occur during these two months. Chart 8 details deer crashes by month.

**Table 13: Crashes Involving Deer, Total**

		<b>% Deer Involvement</b>
<b>Crashes involving Deer</b>	<b>1,167</b>	
Total Single Vehicle Crashes	3,666	<b>31.8 %</b>
Total Crashes	10,317	<b>11.3 %</b>

Source: MichiganTrafficCrashFacts.org

**Chart 8: Crashes Involving Deer by Month**



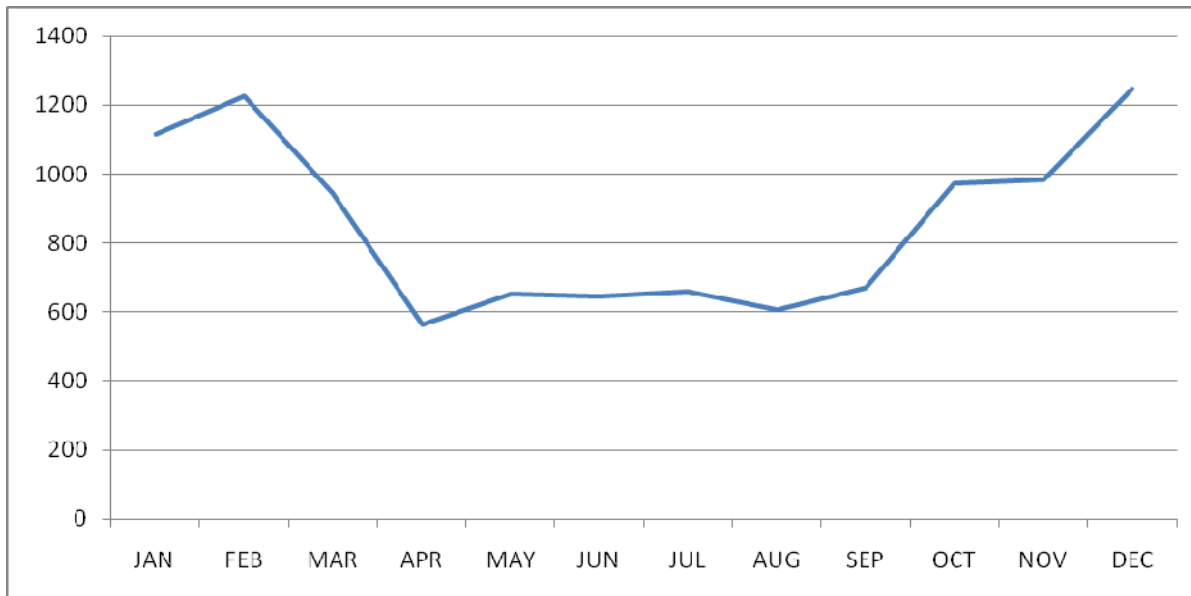
Source: MichiganTrafficCrashFacts.org

## WEATHER RELATED CRASHES

Traffic distribution of crashes does not occur evenly throughout the year. In Michigan and other states that experience snow, sleet and ice tend to have a higher number of crashes taking place during the winter months and fewer crashes during the summer months. As expected in 2008, the number of crashes in October, November, December, January and February were substantially higher, making the difference between the winter and summer months more distinct.

Table 14 shows an increase in the number of crashes during the winter months of 2008, but there also was a reduction of crashes in the summer months.

**Table 14: Crashes by Month**



Source: Michigan State Police

## CONCLUSION

This report is meant to be a resource for Washtenaw County citizens, communities, and agencies seeking to make our roads safer. Good data is key to making choices about our roads, our safety, and how we allocate our funds. For instance, municipalities use this data to identify unsafe road conditions and to obtain federal safety funds. Law enforcement officers may draw on this report in selecting where to direct their monitoring and enforcement. Last, but not least, citizens may use information on driving under the influence, deer-related crashes, or other factors to call for changes in policy.

This report offers only aggregate data themed by agency, community, crash type, or other factors, but more detailed information is available upon request. As mentioned in the Data Collection section, p. 4, there are other key resources:

For the most up-to-date aggregate crash information, WATS produces monthly reports published on the website:

- For 2008: <http://www.miwats.org/WATS/leftside/transdata/crashes/2008/crash08.html>
- For 2009: <http://www.miwats.org/WATS/leftside/transdata/crashes/2009/crash09.html>

For information on specific crash factors or locations, refer to the Crash Facts website at <http://www.michigantrafficcrashfacts.org>. Use the Data Query tool for maps and crash reports. This website has information on every municipality and county in Michigan.

SEMCOG also maintains an easily searchable database of crashes in Southeastern Michigan with location and factor data at <http://www.semcog.org/Data/Apps/crash.cfm>.

WATS provides assistance upon request to answer your questions or help you find the data you need. Please contact Eric Bomberly, Transportation Planner at [bomberly@miwats.org](mailto:bomberly@miwats.org) or (734) 994-3127. Written requests may also be sent to the WATS office at 705 N. Zeeb, Ann Arbor, MI 48103.





## **TECHNICAL ADVISORY SUBCOMMITTEE**

Chair: David Miller, University of Michigan Saline

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2<sup>nd</sup> Vice-Chair: Brett Lenart, Washtenaw County Office of Strategic Planning

Chris White	Ann Arbor Transportation Authority
Homayoon Pirooz	City of Ann Arbor Engineering
Chris Linfield	City of Chelsea
Rhett Gronewelt	Village of Dexter
Patrick Sloan	Dexter Township
Dieter Otto	Eastern Michigan University
Ola Williams	Michigan Department of Transportation - Lansing Planning
Kari Martin	Michigan Department of Transportation - University Region
Paul Montagno	Pittsfield Township
Gary Roubal	City of Saline
Roy Townsend	Washtenaw County Road Commission Engineering
Stan Kirton	City of Ypsilanti
Joe Lawson	Ypsilanti Charter Township

Ex officio Members:

Chris Dingman	Federal Highway Administration
Jeff Tumidanski	Southeast Michigan Council of Government

