



COLLISION STATISTICS 2013



2013 Red Deer Annual Motor Vehicle Collision Report

October 2015

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Glossary of Terms

Collisions	<p>RCMP-reported collisions occurring on public roadways, alleys and public parking lots within the City of Red Deer’s jurisdiction. Only those collisions are reported by public which result in a minimum of \$2,000 property damage or which result in injury or fatality. The collision must include at least one (1) motor vehicle. This report includes all collision data received by the City of Red Deer Engineering Services Department from Alberta Transportation E-Collision as of August 1, 2015.</p> <p>Non-vehicular collisions are not included in this report.</p>
Injury	Injuries noted by police on the collision report form. Injuries are classified as minor (scrapes, bruises, complaint of pain) or major (result in admission to hospital).
Fatality	On-scene fatalities, as well as those fatalities occurring within 30 days and which are related to the collision.
Automobile	Cars, trucks, and vans under 4,500 kilograms.
Truck	Tractor-trailers, trucks, and vans 4,500 kilograms and over.
Intersection	Defined as extending 10 metres past the legally defined limits of the outer crosswalk lines of an intersecting roadway.
Midblock	A section of roadway between two intersections.

Introduction

Engineering Services Department maintains a database of motor vehicle collisions that occur on public roads, alleys, and public parking lots within the City of Red Deer's jurisdiction. The information contained in the database for collisions that occurred prior to January 1, 2012 were obtained from the provincial Collision Report Forms completed by members of The Red Deer RCMP Detachment, and reflects reported collisions that result in property damage as well as any collision resulting in a minor, major, or fatal injury. All reported collisions that occurred from January 1, 2012 onward are received digitally in XML format from the Province of Alberta and stored in the Engineering Services database of motor vehicle collisions,

This report presents summary data on collisions that occurred from January 1, 2013 to December 31, 2013. It also provides the historical collisions and general statistics of 2010 and 2011 for comparison purposes. Collision Data from 2012 is not included in this report as the 2012 E-Collision data received from Alberta Transportation is incomplete. The collision data includes a variety of collision characteristics such as the 10 locations with the most collisions, date and time, age, driver condition and safety equipment used, etc.

Significance of Collisions Statistics

The collision data is used to develop, establish, and implement systems for managing road safety. There are many major road safety-related tasks which cannot be initiated without collision data, such as:

- Developing road safety projects and programs such as education, enforcement, and communication campaigns;
- Identifying and investigating hazardous road safety situations and establishing counter-measures and priorities to correct the identified hazards or potential hazards;
- Identifying safety needs of special user groups, such as older drivers, pedestrians, bicyclists, motorcyclists, and commercial vehicles; and
- Facilitating budget planning.

Overview of Collision Statistics

Total Collisions: In 2013, there were 3,719 reported motor vehicle collisions on public streets and public parking lots in Red Deer. This figure is higher than 2011 which has 3,629 reported collisions.

While 2013 saw a population increase of 5.69 percent over 2011, collisions per 1,000 population decreased from 40 to 38.

In 2013, approximately 31 percent of total collisions occurred in public parking lots in the city which is down from 2010 and up from 2011. Most of the parking lot collisions occurred due to struck object of parked vehicles.

Approximately 39.8 percent of the total collisions occurred at intersections in 2013 which is slightly lower than the percentage of collisions that occurred at intersections in 2010 and 2011.

Public Roadway Collisions: After excluding the parking lot collisions from the total collisions, public roadway collisions (Intersection and Midblock) have decreased by 10.46 percent compared to 2011 figure.

In 2013, public roadway collisions per 1,000 population and per 1,000 registered vehicles have decreased from 30 to 26 and from 35 to 29 respectively in comparison to 2011.

Injuries: In 2013 there were a total of 400 reported minor and major injuries; this is an approximate decrease of 20.4 percent over the 503 injury collisions reported in 2011. The 400 reported injuries in 2013 is an approximate decrease of 8.5 percent when compared to the 437 reported injuries reported in 2010.

Fatalities: There were two road fatalities in 2013, compared to three in 2011 and four in 2010.

Pedestrians: In 2013 there were 32 reported pedestrian collisions resulting in 27 injuries. This is a decrease from 2011 where there were 33 pedestrian collisions resulting in 27 injuries. In 2010 there were 38 reported pedestrian collisions resulting in 35 injuries. Of the 32 pedestrian collisions in 2013, 17 pedestrians were recorded as crossing the road with the right of way, and 3 pedestrians were recorded as crossing the road without the right of way.

Bicyclists: In 2013, bicyclist collisions decreased by three, and bicyclist injuries increased by one. There were 26, 23, and 20 cyclists' collisions in 2010, 2011 and 2013 respectively. These collisions resulted in 15, 13 and 14 bicyclist injuries recorded in 2010, 2011 and 2013 respectively.

Month: In 2013, December was the leading month with approximately 12.3 percent (456 in total) of total collisions; while July experienced the least number approximately 6.35 percent (235 in total).

Day: In 2013, Friday had the highest percentage of collisions with approximately 18.5 percent, while Sunday was the lowest with about 8.4 percent. The same trend was seen in 2011.

Hour: The hour from 1601 to 1700 accounted for about 7.9 percent of all collisions, while the hour from 0501 to 0600 accounted for less than one half percent. The period of time with the highest number of collisions was 1601 to 1700 on weekdays and 1301 to 1400 on weekends.

Types of Collisions: The most common collision type in 2013 was “Rear-End” seen in approximately 25 percent of all collisions. “Struck Object” was the second most common types with approximately 22 percent. The two most common collision types in 2011 were “Rear-End” and “Struck Object”. The most frequently recorded improper driver action in collisions occurring on public roadways was “Followed Too Closely” and in parking lots was “Backed Unsafely”.

Road Surface: Approximately 32 percent of collisions occurred when the road surface was covered with “Slush/Snow/Ice” and almost 60 percent collisions occurred when the road surface was dry.

Age: The age group with the highest number of collisions was “25-34” accounting for 22.29% of all 2013 collisions. The same age group accounted for the highest percentage of collisions in 2010 and 2011. The second highest age group involved in a collision was “35-44” accounting for 17.86% in 2013. The “35-44” age group was the second highest age group involved in collisions in 2011. This is a change from 2010 when the “19-24” age group was second highest.

Alcohol: In 2013, 62 drivers/pedestrians involved in collisions were impaired by alcohol while 75 drivers/pedestrians involved in collisions were impaired by alcohol in 2011. There were 7 injuries and one fatality due to alcohol-related collisions in 2013.

Restraint Usage: In 2013, there were 30 drivers and 23 passengers involved in collisions recorded without wearing restraining devices which resulted in six injuries and one fatality.

Motor Vehicle Types: Passenger cars were involved in over 33 percent of total collisions in 2013 while pick-up trucks represented about 26 percent and minivans about 22 percent. Involvement of pick-up trucks and minivans in collisions is increasing each year.

Historical Collisions Statistics 2010-2013* (2012 Excluded)

	2010	2011	2013
Total Collisions	3897	3629	3719
Injury Collisions	351	399	303
Injuries	437	503	400
Fatal Collisions	3	3	2
Fatalities	4	3	2
Pedestrian Collisions	38	33	32
Pedestrian Injured	35	27	27
Pedestrian Killed	0	0	0
Bicycle Collisions	26	23	20
Bicyclists Injured	15	13	14
Bicyclists Killed	0	0	0
Population	90,084	91,877	97,109
Motor vehicle registered in Red Deer	78,839	79,679	86,641
Collision/1000 Population	43	40	38
Collision/1000 Registered Vehicles	49	45	43

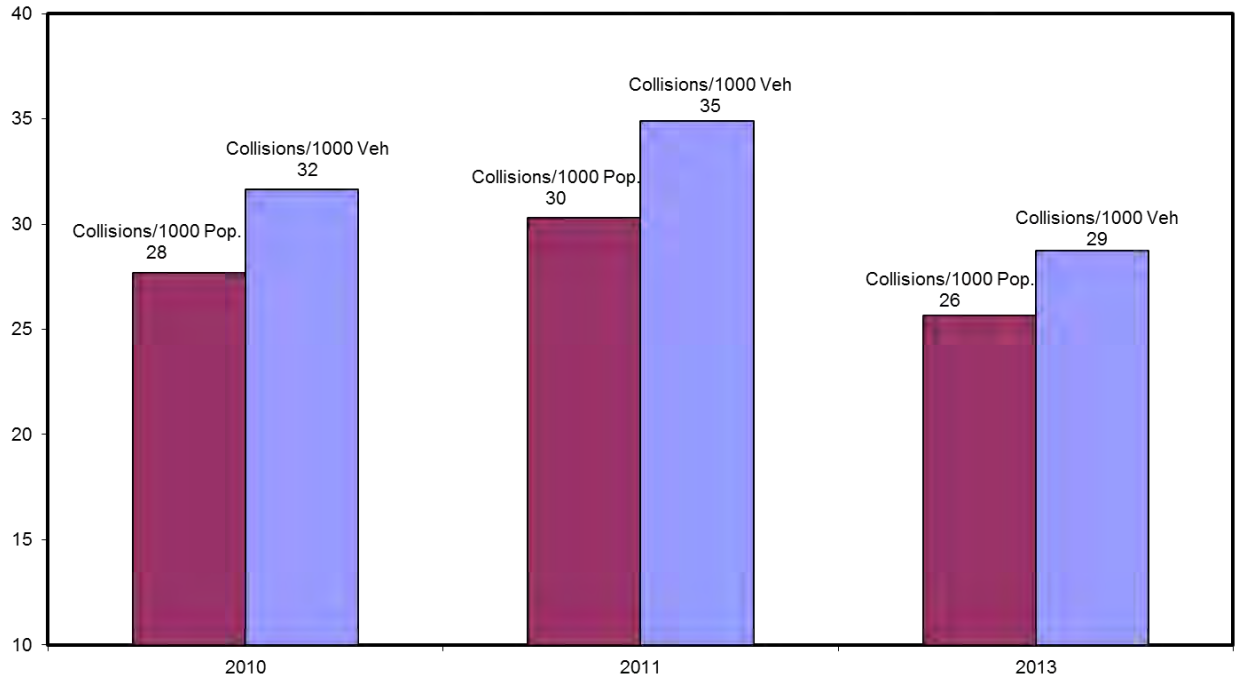
*Statistics include all reported collisions that occurred on public roadways, alleys, and public parking lots.

Collisions Trend on Public Roadways 2010-2013* (2012 Excluded)

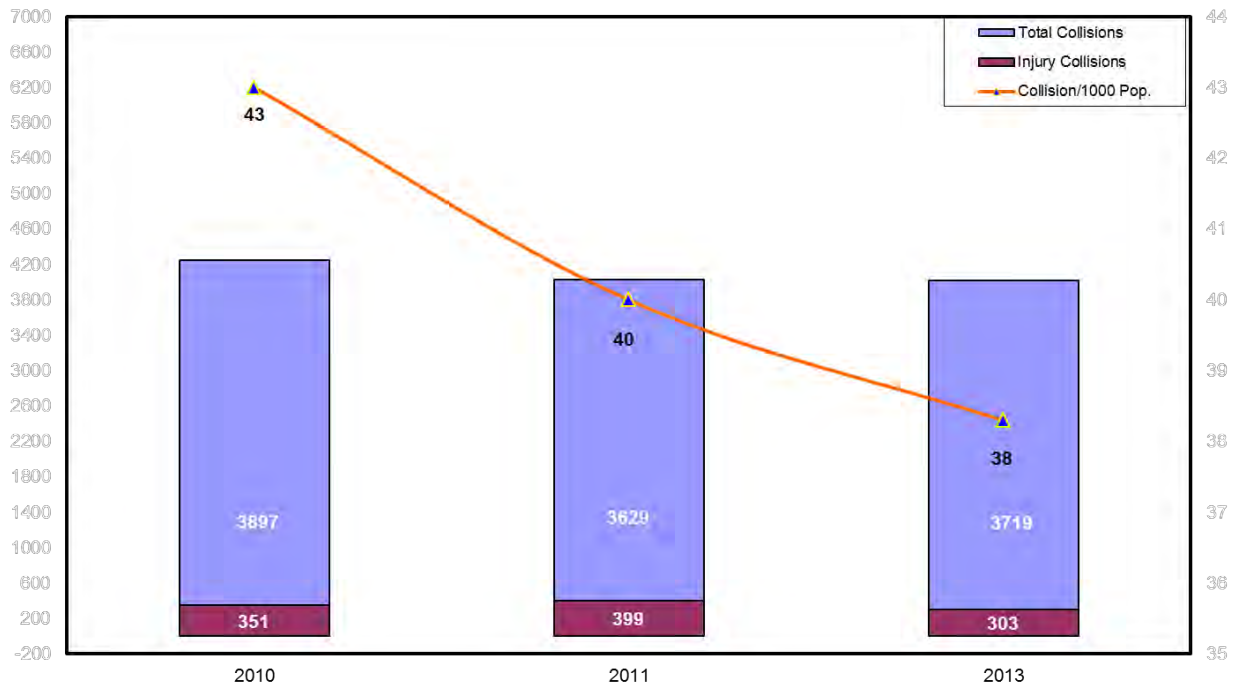
	2010	2011	2013
Collisions on Public Roadways (Not including Parking Lot Collisions)	2494	2782	2491
Percentage Increase / Decrease	-9.51%	11.55%	-10.46%
Population	90,084	91,877	97,109
Motor Vehicles registered in Red Deer	78,839	79,679	86,641
Collisions/1000 Population	28	30	26
Collisions/1000 Registered Vehicles	32	35	29

*Statistics **do not** include collisions that occurred in public parking lots.

**Collisions on Public Roadways
2010-2013 (2012 Collisions and Parking Lots Excluded)**

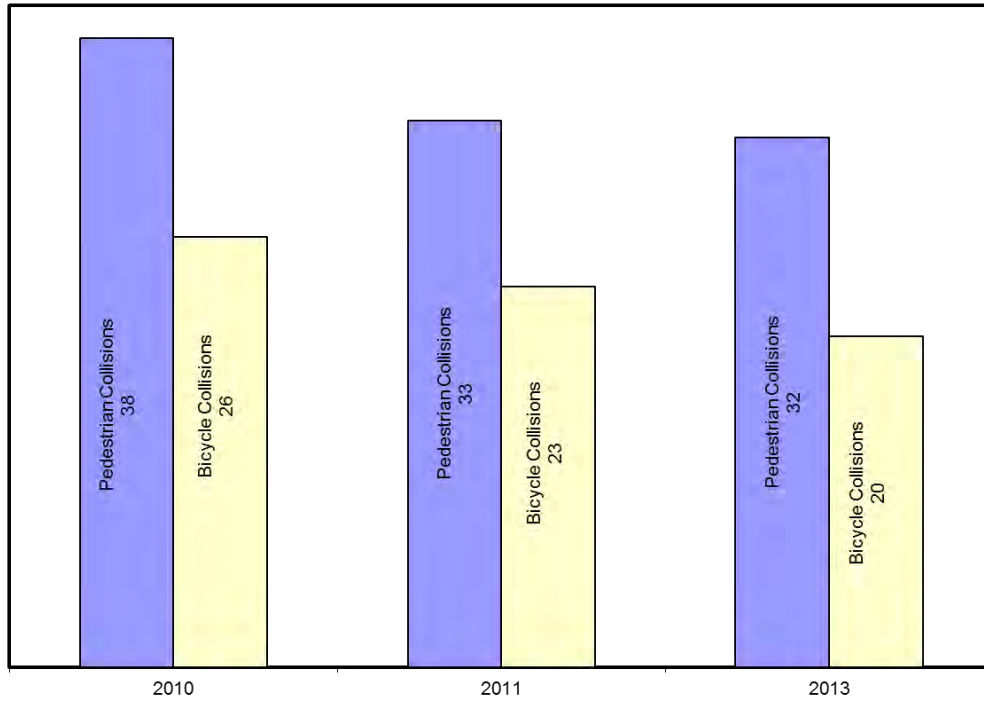


Profile of Red Deer Collisions 2010-2013 (2012 Excluded)*

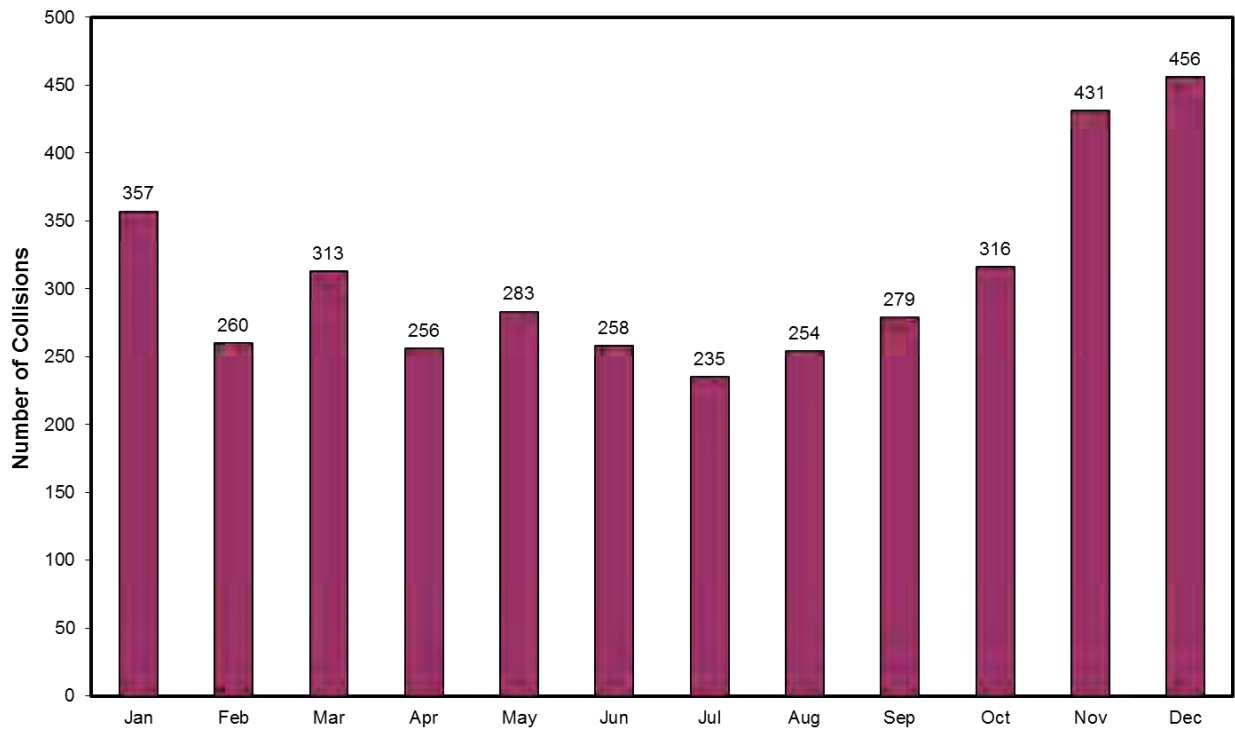


* Statistics include all reported collisions that occurred on public roadways, alleys, and public parking lots

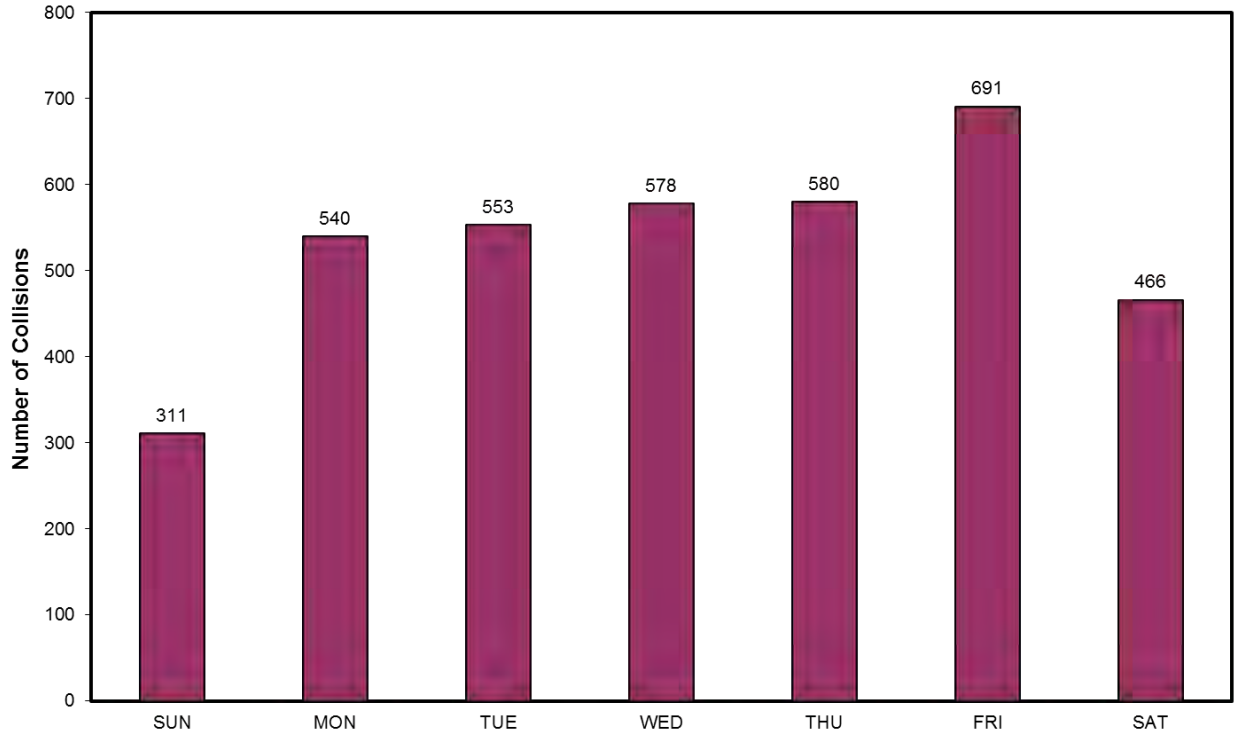
Pedestrian and Bicycle Collisions 2010-2013 (2012 Excluded)



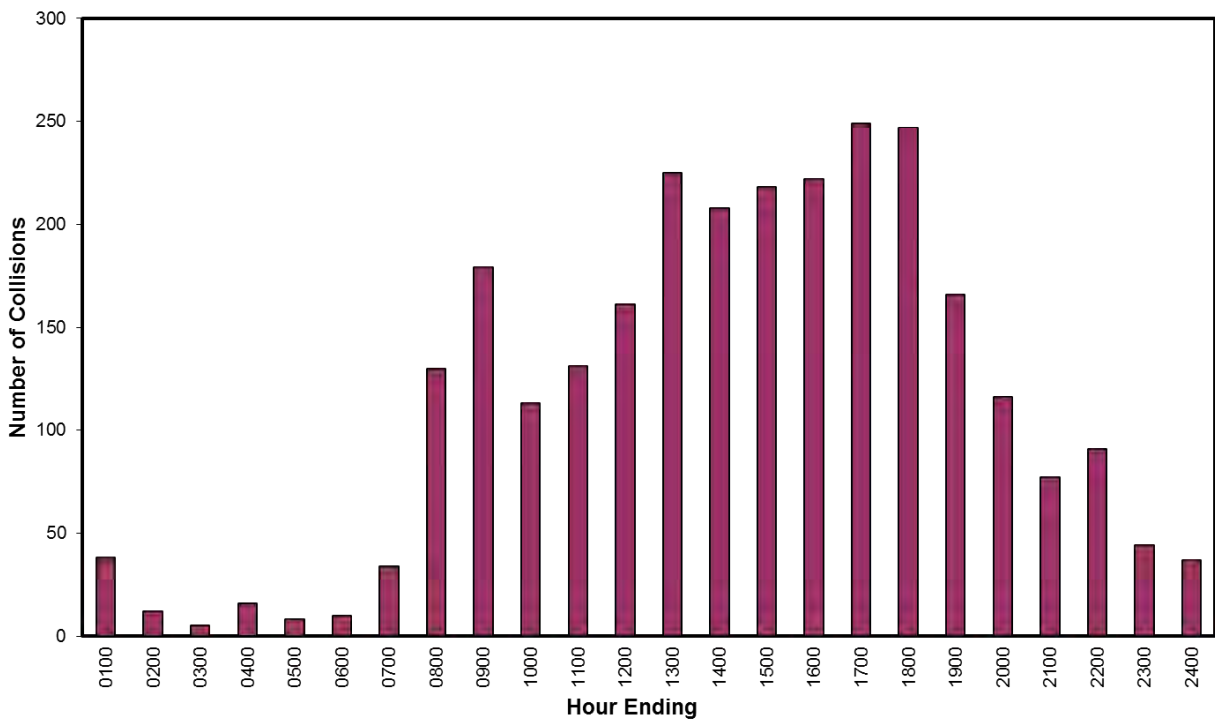
Collisions by Month 2013



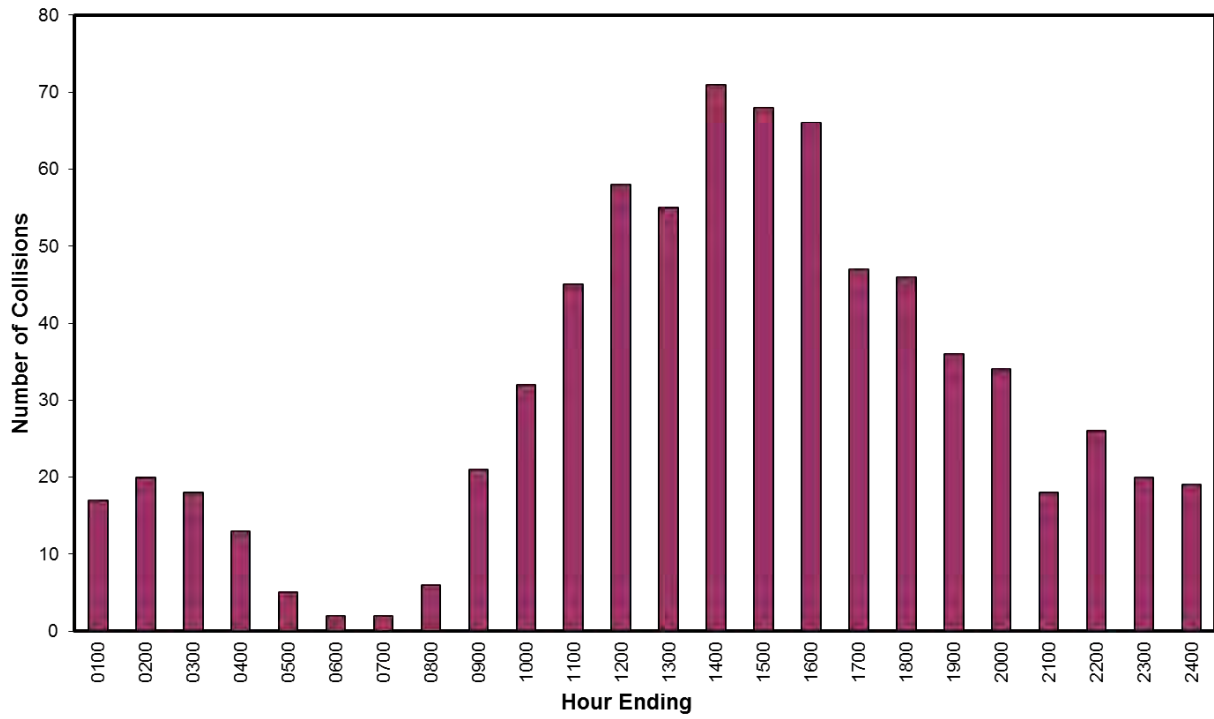
Collisions by Day of The Week 2013



Profile of Collisions by Hour of The Day 2013 (Weekdays)



Profile of Collisions by Hour of The Day 2013 (Weekends)



Total Collisions Summary

2013/01/01 TO 2013/12/31

Total Collisions 2013	
Motor Vehicle Collisions	3719
Motor Vehicles Involved	7214
Collisions Causing Fatalities	2
Fatalities Resulting	2
Collisions Causing Injury	303
Injuries Resulting	400
Property Damage Only Collisions	3414

Fatalities and Injuries 2013				
Travel Mode	Minor Injuries	Major Injuries	Fatalities	Total
Vehicle Driver	226	17	0	243
Vehicle Passenger	94	11	1	106
Motorcyclist	4	7	1	12
Bicyclist	14	0	0	14
Pedestrian	26	1	0	27
Other, Unknown	0	0	0	0
Total	364	36	2	400

Note: Statistics include all reported collisions that occurred on public roadways, alleys, and public parking lots.

Roadway Summary

2013/01/01 TO 2013/12/31

Top 10 Locations with the Most Collisions 2013			
Rank	Intersection Location	Number of Collisions	Control Type
1	50 AV 67 ST GAETZ AV	46	Signalized
2	ORR DR 67 ST JOHNSTONE DR	43	Signalized
3	TAYLOR DR 67 ST	43	Signalized
4	32 ST TAYLOR DR	41	Signalized
5	22 ST BOYCE ST 50 AV GAETZ AV	34	Signalized
6	22 ST TAYLOR DR	30	Signalized
7	50 AV 19 ST GAETZ AV	30	Signalized
8	50 ST 30 AV ROSS ST	28	Signalized
9	28 ST 50 AV MOLLY BANISTER DR GAETZ AV	28	Signalized
10	50 AV 32 ST GAETZ AV	26	Signalized

Collisions By Roadway Portion 2013					
Cause	Intersection	Midblock	Parking Lot	Unknown	Total
Rear End	651	223	58	3	935
Backing	34	134	358	4	530
Right Angle	269	60	45		374
Struck Object	92	185	544	5	826
Sideswipe - Same Direction	147	163	93	2	405
Left Turn- Across Path	182	25	5		212
Sideswipe - Opposite Direction	20	40	29		89
Off Road Right	13	17	1		31
Other		3	2	5	10
Head On	8	15	8		31
Passing-Left Turn	18	11	1	1	31
Passing-Right Turn	6	7	5		18
Off Road Left	8	26			34
Unknown	33	154		6	193
Total	1481	1063	1149	26	3719

Collisions by Month and Road Surface Condition 2013						
Month	Dry	Wet	Slush/Snow/Ice	Loose surface Material	Other/Unknown	Total
Jan	86	12	256		3	357
Feb	142	9	100		9	260
Mar	161	23	115	2	12	313
Apr	209	14	23	3	7	256
May	250	23	1		9	283
Jun	214	34			10	258
Jul	217	12			6	235
Aug	242	1			11	254
Sep	255	12	1		11	279
Oct	286	17	5	3	5	316
Nov	110	10	306	1	4	431
Dec	43	2	400		11	456
Unknown					21	21
Total	2215	169	1207	9	119	3719

Day/Time Summary

2013/01/01 TO 2013/12/31

Collisions by Hour of Day and Day of Week 2013								
Hour Ending	SUN	MON	TUE	WED	THU	FRI	SAT	Total
0100	5	5	9	7	6	11	12	55
0200	9	2	3	2	4	1	11	32
0300	9	1	0	0	2	2	9	23
0400	4	2	2	3	5	4	9	29
0500	2	2	1	0	4	1	3	13
0600	1	1	2	2	4	1	1	12
0700	2	9	11	7	2	5	0	36
0800	2	32	32	20	22	24	4	136
0900	9	29	36	31	40	43	12	200
1000	13	27	26	16	17	27	19	145
1100	22	31	28	25	24	23	23	176
1200	31	32	36	25	27	41	27	219
1300	23	43	46	50	39	47	32	280
1400	25	32	35	50	44	47	46	279
1500	27	41	39	46	43	49	41	286
1600	24	38	47	52	37	48	42	288
1700	16	50	49	45	47	58	31	296
1800	20	43	46	50	56	52	26	293
1900	15	31	26	35	33	41	21	202
2000	19	14	18	26	24	34	15	150
2100	6	12	16	15	11	23	12	95
2200	7	18	13	15	23	22	19	117
2300	6	4	5	11	5	19	14	64
2400	5	5	6	4	7	15	14	56
Unknown	9	36	21	41	54	53	23	237
Total	311	540	553	578	580	691	466	3719

Object Type Summary

2013/01/01 TO 2013/12/31

Objects involved in Motor Vehicle Collisions 2013		
Object Type	# Objects	Percentage
Passenger Car	2,643	33.48
Pick-Up/Van <450kg	2055	26.03
Mini-Van/MPV	1743	22.08
Truck >4500kg	104	1.32
Fixed Object	313	3.96
Truck Tractor	31	0.39
Motorcycle/Scooter	25	0.32
Pedestrian	33	0.42
Animal	100	1.27
Transit Bus	26	0.33
Bicycle	20	0.25
School Bus	15	0.19
Emergency Vehicle	8	0.10
Other Bus	4	0.05
Motor home	10	0.13
Construction Equipment	2	0.03
Intercity Bus	0	0.00
Farm Equipment	0	0.00
Train	0	0.00
Off-Highway Vehicle	1	0.01
Motorized Snow Vehicle	0	0.00
Moped	0	0.00
Unknown	762	9.65
Total	7895	100.00

Drivers Summary

2013/01/01 TO 2013/12/31

Age and Action of Drivers involved by Driver Action 2013												
Driver Action	12-15	16-18	19-24	25-34	35-44	45-54	55-64	65-74	75+	Unknown	Total	% of Action
A	1	134	364	577	489	421	321	114	67	28	2516	46.62
B	2	79	145	168	138	113	67	29	10	33	784	14.53
C		28	59	98	78	88	80	35	21	48	535	9.91
D											0	0.00
E	1	33	35	43	29	27	15	9	14	5	211	3.91
F		14	23	29	19	20	13	14	7	11	150	2.78
G		12	28	36	14	17	11	8	7	5	138	2.56
H	1	19	24	34	31	23	16	15	6	17	186	3.45
I		7	14	17	19	11	6	11	6	2	93	1.72
J		16	28	26	18	21	6	3	4	17	139	2.58
K		3	4	6	2	1	4	1		1	22	0.41
L		1	5	5	7	4	4		2	3	31	0.57
M		3	8	1	1	2		1	1		17	0.31
N			5	5	4			1	1	6	22	0.41
O				4	1	1	1		2	4	13	0.24
P	3	29	64	117	84	53	39	27	24	758	1198	22.20
Total	8	378	806	1166	934	802	583	268	172	938	6055	100
% of Age	0.15	7.23	15.41	22.29	17.86	15.33	11.15	5.12	3.29	17.93	100.00	

Driver Action

- A Driving Properly
- B Followed Too Closely
- C Backed Unsafely
- D Parked Vehicle
- E Left Turn Across Path
- F Improper Lane Change
- G Disobey Traffic Signal
- H Improper Turn
- I Stop Sign Violation
- J Ran Off Road
- K Fail To Yield Right of Way at Uncontrolled Intersection
- L Left of Centre
- M Yield Sign Violation
- N Improper Passing
- O Fail To Yield Right of Way to Pedestrian
- P Other, Unknown

Condition/Safety Summary

2013/01/01 TO 2013/12/31

Driver/Pedestrian Condition 2013				
	# Drivers/ # Pedestrians	Fatal Collisions	Injury Collisions	Property Damage Collisions
Had Been Drinking	27	0	4	23
Impaired by Alcohol	35	1	3	31
Impaired by Drugs	4	0	1	3
Fatigued/Asleep	6	0	0	6
Medical Defect	15	0	6	9
Unsafe Speed	121	0	12	109

Safety Equipment Used 2013										
	Drivers					Passengers				
	# Drivers	Severity				# Passengers	Severity			
		None	Minor	Major	Fatal		None	Minor	Major	Fatal
Lap belt only	86	79	7	0	0	29	25	4	0	0
Lap/Shoulder belt assembly	4249	4079	161	9	0	964	901	55	8	0
Shoulder belt only	17	13	4	0	0	7	4	3	0	0
Lap /Shoulder with Air Bag	214	187	27	0	0	63	54	8	1	0
Airbag	11	7	3	0	0	1	0	1	0	0
Child Safety /booster seat	0	0	0	0	0	235	222	13	0	0
None	30	23	5	1	1	23	19	4	0	0
Other/Specify	9	9	0	0	0	2	2	0	0	0
Unknown	1151	1125	19	6	0	91	80	7	3	1

Pedestrian Collisions

2013/01/01 TO 2013/12/31

Pedestrian Collisions Summary 2013	
Collisions Involving Pedestrian	32
Pedestrians Involved	32
Collisions resulting in Pedestrian Injury or Fatality	27
Pedestrian Injuries	27
Pedestrian Fatalities	0

Age and Action of Pedestrians Involved 2013

Pedestrian Action	0-5	6-11	12-15	16-18	19-24	25-34	35-44	45-54	55-64	65-74	75+	Unknown	Total	% of Action
A			2		1	3	1	2	5	1		2	17	53.13
B					1	1		1					3	9.38
C								1					1	3.13
D						2				1			3	9.38
E		1				3		3	1				8	25.00
Total	0	1	2	0	2	9	1	7	6	2	0	2	32	100.00
% of Age	0.00	3.13	6.25	0.00	6.25	28.13	3.13	21.88	18.75	6.25	0.00	6.25	100.00	

Pedestrian Action

- A Crossing with Right of Way
- B Walking/Working on Roadway
- C Getting on/off vehicle
- D Crossing without Right of Way
- E Other, Unknown

Bicycle Collisions

2013/01/01 TO 2013/12/31

Bicycle Collisions Summary 2013	
Bicycle Collisions	20
Bicyclists Involved	20
Collisions Causing Bicyclist Injury or Fatality	14
Bicyclist Injuries	14
Bicyclist Fatalities	0

Age and Action of Bicyclists Involved 2013														
	0-5	6-11	12-15	16-18	19-24	25-34	35-44	45-54	55-64	65-74	75+	Unknown	Total	% of Action
A				1	1	1	0	3		1		1	8	40.00
B													0	0.00
C													0	0.00
D												1	1	5.00
E													0	0.00
F												1	1	5.00
G								1					1	5.00
H													0	0.00
I													0	0.00
J													0	0.00
K													0	0.00
L		1	3		1	1	1	1				1	9	45.00
Total	0	1	3	1	2	2	1	5	0	1	0	4	20	100.00
% of Age	0.00	5.00	15.00	5.00	10.00	10.00	5.00	25.00	0.00	5.00	0.00	20.00	100.00	

Bicyclist Action

- | | | | |
|---|-----------------------|---|------------------------|
| A | Driving Properly | G | Disobey Traffic Signal |
| B | Followed Too Closely | H | Ran Off Road |
| C | Parked Vehicle | I | Improper Turn |
| D | Yield Sign Violation | J | Left of Centre |
| E | Left Turn Across Path | K | Improper Passing |
| F | Improper Lane Change | L | Other, Unknown |