

**Alberta
Traffic Collisions Involving
Motorized Snow Vehicles**

1997 - 2006

Alberta Infrastructure and Transportation
Office of Traffic Safety
July 2007

**ALBERTA
TRAFFIC COLLISIONS INVOLVING
MOTORIZED SNOW VEHICLES
1997 - 2006**

SUMMARY

The Alberta Collision Information System (ACIS) captures information on motorized snow vehicles involved in reportable traffic collisions. That is, collisions that occur on a roadway and result in death, injury and/or total property damage exceeding \$1,000. For the purpose of collision reporting, a roadway means any primary highway, secondary highway, rural road, street, avenue, parkway, lane, alley, bridge (privately or publicly owned) where the public is ordinarily permitted to drive or park vehicles. This would include sidewalks, boulevards and ditches adjacent to and parallel with the roadway. **(Information does not include collisions which occurred on private property.)**

Over the 10-year period, 1997 - 2006, there were 345 collisions involving 378 motorized snow vehicles. 207 (60.0%) of the collisions resulted in either death or an injury. Eleven people were killed and 237 were injured in collisions involving a motorized snow vehicle over the 10 years (Table 1).

The afternoon hours of 3 p.m. to 6:59 p.m. experienced one-third (34.5%) of all collisions involving a motorized snow vehicle. The majority (62.9%) of the collisions occurred during hours of reduced winter light or darkness (3 p.m. to 7 a.m.) (Table 2).

From 1997 - 2006, the majority (76.3%) of the snow vehicle operators involved in collisions were between 15 and 44 years of age. Fifteen of the 227 operators (6.6%) involved in casualty producing collisions were between 10 and 14 years of age and 37 were between 15 and 19 years of age (16.3%) (Table 3).

Forty-two (42) of the snow vehicle operators involved in casualty collisions from 1997 - 2006 had consumed alcohol prior to the collision. Eight of the 12 operators involved in fatal collisions had been drinking prior to the collision (Table 4).

Individuals involved in motorized snow vehicle collisions sustained 109 minor, 128 major and 11 fatal injuries over the 10 years (Table 5). For those snow vehicle operators and passengers where helmet use was specified, approximately 40% of those who sustained an injury as a result of the collision were not wearing a helmet at the time of the crash (Table 6).

Environmental conditions over the ten year period are reflected in the number of reported collisions involving motorized snow vehicles. The years which reported the highest total number of collisions occurring in snow, also reported the higher number of motorized snow vehicle collisions.

Table 1

**ALBERTA
COLLISIONS INVOLVING MOTORIZED SNOW VEHICLES
1997 - 2006**

Severity of Collisions	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	TOTAL COLLISIONS
Fatal Collisions	1	1	--	2	1	1	1	1	1	1	10
Injury Collisions	20	21	22	21	30	20	17	20	17	9	197
Property Damage Collisions	11	6	13	11	19	12	12	16	27	11	138
Total Number of Collisions	32	28	35	34	50	33	30	37	45	21	345
											TOTAL CASUALTIES
Casualties*											
Number Killed	1	1	--	2	1	1	1	1	2	1	11
Number Injured	21	24	25	24	38	26	24	23	22	10	237
Total Casualties in Collisions Involving Motorized Snow Vehicles	22	25	25	26	39	27	25	24	24	11	248

* This refers to the total number of people killed and injured in collisions in which a motorized snow vehicle was involved. It does not refer to only snow vehicle operators and passengers.

Number of Motorized Snow Vehicles	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	TOTAL SNOW VEHICLES
# Motorized Snow Vehicles in Fatal Collisions	1	1	--	3	1	1	1	1	2	1	12
# Motorized Snow Vehicles in Injury Collisions	20	21	24	23	37	21	19	23	20	9	217
# Motorized Snow Vehicles in Property Damage Collisions	11	6	14	12	22	12	14	17	29	12	149
Total # Motorized Snow Vehicles in Collisions	32	28	38	38	60	34	34	41	51	22	378

Table 2

**ALBERTA
COLLISIONS INVOLVING MOTORIZED SNOW VEHICLES
TIME PERIOD OF OCCURRENCE
1997 - 2006**

	Fatal Collisions	Injury Collisions	Property Damage Collisions	Total Collisions
11:00 p.m. - 2:59 a.m.	3	16	10	29
3:00 a.m. - 6:59 a.m.	--	6	1	7
7:00 a.m. - 10:59 a.m.	--	7	9	16
11:00 a.m. - 2:59 p.m.	3	59	42	104
3:00 p.m. - 6:59 p.m.	1	64	54	119
7:00 p.m. - 10:59 p.m.	2	43	17	62
Unspecified	1	2	5	8
Total Number of Collisions	10	197	138	345

Table 3

**ALBERTA
COLLISIONS INVOLVING MOTORIZED SNOW VEHICLES
AGE OF OPERATORS*
1997 - 2006**

	Fatal Collisions	Injury Collisions	Property Damage Collisions	Total Operators
5 – 9	--	--	--	0
10 – 14	--	15	8	23
15 – 19	1	36	18	55
20 – 24	2	34	20	56
25 – 29	3	25	13	41
30 – 34	3	22	20	45
35 – 39	2	28	14	44
40 – 44	--	27	12	39
45 – 49	--	7	8	15
50 – 54	--	8	5	13
55 – 59	--	6	1	7
60 – 64	--	1	1	2
65 +	1	1	--	2
Unspecified	--	5	20	25
Total Operators of Motorized Snow Vehicles	12	215	140	367

*Does not include 11 parked snow vehicles involved in collisions.

Table 4

**ALBERTA
CASUALTY COLLISIONS INVOLVING MOTORIZED SNOW VEHICLES
HUMAN CONDITION OF OPERATOR*
1997 - 2006**

	Fatal Collisions	Injury Collisions	Total Operators
Apparently Normal	1	124	125
Had Been Drinking	6	27	33
Alcohol Impaired	2	7	9
Total Alcohol Involvement	8	34	42
Unspecified	3	57	60
Total Operators of Motorized Snow Vehicles	12	215	227

* Does not include 2 parked snow vehicles involved in a casualty collision.

Table 5

**ALBERTA
COLLISIONS INVOLVING MOTORIZED SNOW VEHICLES
INJURY SEVERITY OF CASUALTIES*
1997 - 2006**

Minor	109
Major	128
Fatal	11
Total Number of Casualties	248

* This refers to the **total number** of people killed and injured in collisions in which a motorized snow vehicle was involved. It **does not** refer to only snow vehicle operators and passengers.

Table 6

**ALBERTA
COLLISIONS INVOLVING MOTORIZED SNOW VEHICLES
INJURY SEVERITY
HELMET USE OF CASUALTIES*
1997 - 2006**

Injury Severity	Helmet Used	Helmet Not Used	Unspecified	Total Operators & Passengers of Motorized Snow Vehicles
Minor	65	35	1	101
Major	68	47	8	123
Fatal	6	5	--	11
Total	139	87	9	235

* Includes only those cases where helmet use and injury severity were specified on the collision report form. Does not include the 13 other persons who were injured as a result of the collision but who were not operators or passengers of snow vehicles.