

# briefing notes road safety issues

## Ruapehu District

This report details aspects of Ruapehu District’s traffic crash data. We begin by looking at how the district measures up regarding those areas of high concern prioritised in Safer Journeys (NZ’s Road Safety Strategy 2020) as compared to similar authorities and against the national picture. This is followed by an overview of crashes in Ruapehu District for 2009. Then we present more detailed analysis of local road safety issues based upon reported crash data and trends for the 2005–2009 period.

Included are graphs, charts and tabulations addressing crash movement, crash factors, road users, location and the social cost of crashes. Trends are determined by looking at the annual data for injury crashes and those injured over the last five year period. The information in this report covers both local roads and state highways.

The issues chosen for this report are drawn from the most common crash types, those that appear over-represented when Ruapehu District is compared to similar authorities and those crashes with a high social cost (relating mainly to high numbers of fatal and serious crashes).

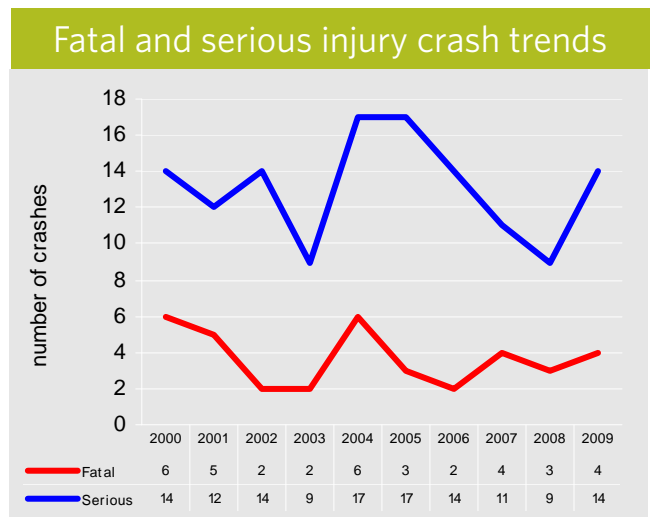
2009 road trauma	
Casualties	Ruapehu District
Death	4
Serious injury	27
Minor injury	60
<b>Total casualties</b>	<b>91</b>

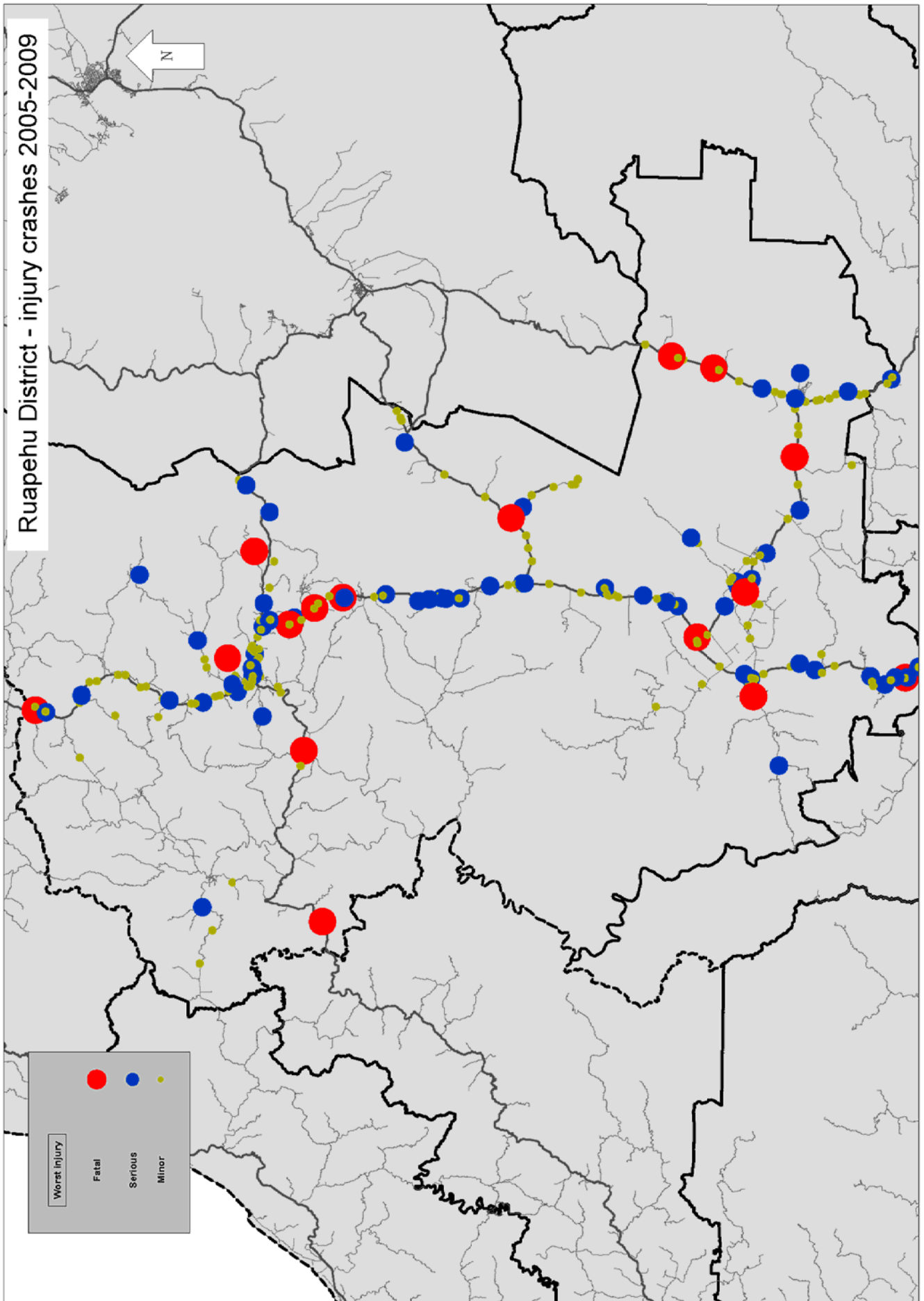
Crashes	Ruapehu District
Fatal crashes	4
Serious injury crashes	14
Minor injury crashes	28
<b>Total injury crashes</b>	<b>46</b>
Non-injury crashes	95 reported

2009 - social cost of crashes	
Local roads	\$ 14.77M
State highways	\$ 17.16M
<b>Total</b>	<b>\$ 31.93M</b>

NOTE: The estimated social cost includes loss of life or quality of life, loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage.

Local road safety issues	
Ruapehu District	
Loss of control at bends	
Speed too fast	
Alcohol	
Fatigue	
Young drivers	





## 2020 Safer Journeys

“A safe road system increasingly free of death and serious injury”

Safer Journeys is New Zealand’s Road Safety Strategy for 2010-2020. It identifies actions and interventions to reduce trauma on our roads.

Please take time to visit the Safer Journeys website and study the documents found there:

<http://www.transport.govt.nz/saferjourneys/>

Areas of high concern have been identified. These are the areas where we need to make the most improvement in road safety or maximise efforts towards a safe system approach. Focusing on these areas could make the largest contribution toward reducing costs imposed on the economy by road deaths and injuries.

### Areas of high concern are:

- Reducing alcohol/drug impaired driving
- Increasing the safety of young drivers
- Safe roads and roadsides
- Safe driving speeds
- Increasing the safety of motorcyclists

### Areas of medium concern are:

- Improving the safety of the light vehicle fleet
- Safe walking and cycling
- Improving the safety of heavy vehicles
- Reducing the impact of driver fatigue
- Addressing driver distraction
- Reducing the impact of high risk drivers

### Areas of continued and emerging focus:

- Increasing the level of restraint use
- Increasing the safety of older New Zealanders

## Ruapehu District

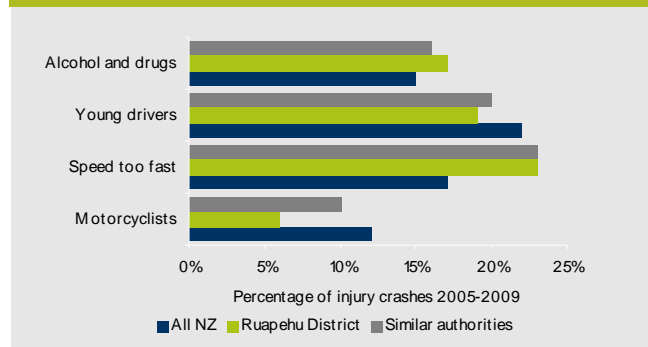
Presented below is a brief look at Ruapehu District’s position on Safer Journeys’ areas of high concern compared to similar authorities’ averages and the all-NZ averages (sample period 2005-2009).

### Restraints

According to 2009 survey results, restraint use rate in Ruapehu District are 89 and 95 percent for front seat and rear seat respectively; while corresponding national rates are 95 and 87 percent.

<http://www.transport.govt.nz/research/safetybeltstatistics/>

## Safer Journeys’ areas of high concern



### Alcohol and drugs

In Ruapehu District, alcohol was recorded in 17 percent of injury crashes in the last five years, resulting in 4 deaths, 15 serious injuries and 41 minor injuries. Alcohol related crashes were higher proportionally as compared to that of similar authorities.

### Young drivers

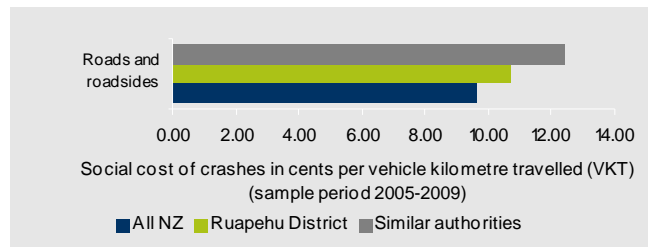
In Ruapehu District, young drivers aged 15-19 years were involved in 19 percent of all injury crashes during the last five year period, resulting in 2 deaths, 14 serious injuries and 73 minor injuries. This was proportionally lower when compared to that in similar authorities.

### Speed too fast

Speed too fast was recorded in 23 percent of injury crashes in Ruapehu District in the last five years, resulting in 7 deaths, 23 serious injuries and 73 minor injuries. Speed as a factor in crashes was similar proportionally when compared to similar authorities.

### Motorcyclists

In Ruapehu District, motorcyclists were involved in 6 percent of all injury crashes during the last five year period, resulting in 3 deaths, 11 serious injuries and 7 minor injuries. It was proportionally significantly lower than similar authorities.



### Roads and roadsides

In Ruapehu District, there were on average 21 injury crashes per 100 million VKT over the last five years. The social cost per VKT of these crashes is 14 percent lower than the similar authority average (see the graph above).

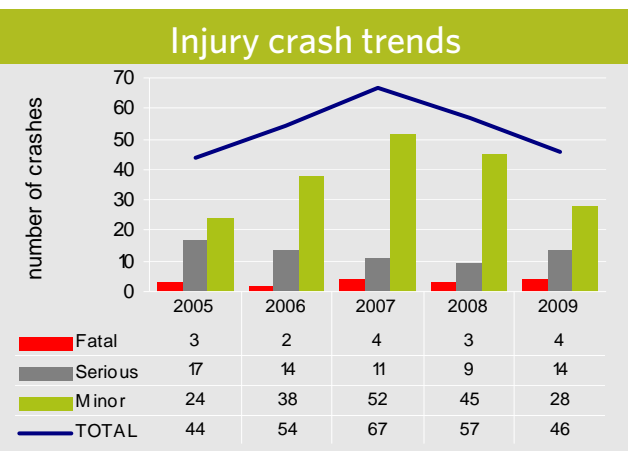
## Overview 2009

In 2009 in Ruapehu District, 46 injury crashes resulting in 90 casualties and 95 non-injury crashes were reported by the New Zealand Police. Seventy-six percent of all injury crashes in the district were on state highways. The table below shows the number of injuries resulting from these crashes in the district.

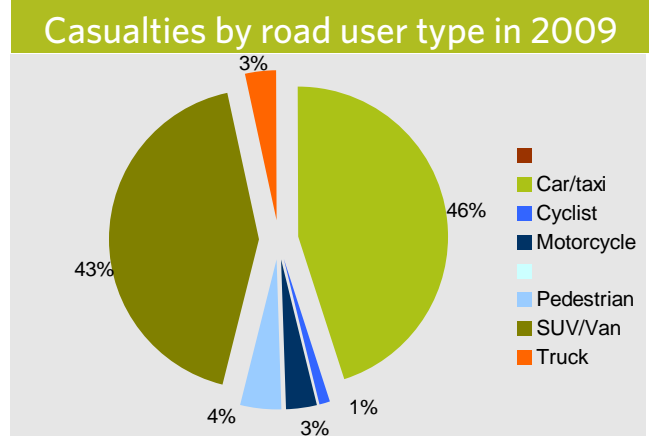
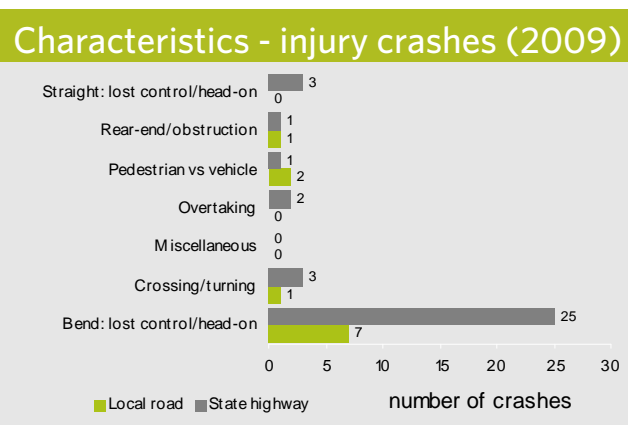
Casualties by injury type in 2009				
	Fatalities	Serious injuries	Minor injuries	Total
Total	4	27	60	91
Local roads vs state highways				
Local roads	3	5	11	19
State highways	1	22	49	72
Rural vs urban roads				
Rural <sup>1</sup>	3	23	50	76
Urban	1	4	10	15

<sup>1</sup> Rural- an area with a speed limit of 80km/h or more

The latest five year data shows a level trend in the total number of injury crashes, although downwards in the last three years, it also shows the serious injury crashes trend to be upwards over this recent three year period.



In 2009 Three-quarters of injury crashes involved a driver losing control of their vehicle, and nearly all these occurred at bends.



Nearly half the casualties were drivers or passengers of cars, slightly less again were those of sports utility vehicles or vans and a twelfth were vulnerable road users (pedestrians, cyclists and motorcyclists).

In 2009 in Ruapehu District, young drivers aged 15 to 19 years inclusive were at fault drivers in 16 percent of injury crashes and older drivers, 70 years of age and over, in 6 percent.

Further information about injury crashes in the district during 2009 on:

### Local roads

- Total number of injury crashes: 11
- Worst month: May (27 percent)
- Worst day of week: Saturday (36 percent)
- Wet road crashes: 27 percent
- Night time crashes: 45 percent
- Alcohol over limit: 45 percent
- Too fast for conditions: 18 percent
- Failed to give way/stop: 9 percent
- Pedestrian factors : 18 percent
- Crashes at intersection: 9 percent
- Road factors: 9 percent
- At fault male driver: 90 percent
- At fault driver held full NZ licence: 30 percent

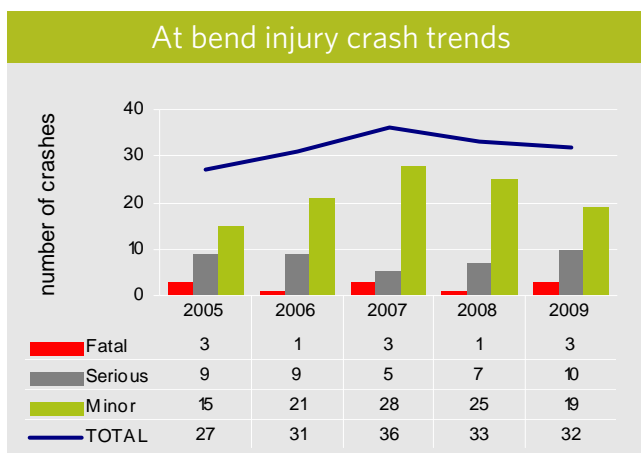
### State highways

- Total number of injury crashes: 35
- Worst months: February, March, May and July (11 percent each)
- Worst day of week: Saturday (26 percent)
- Wet road crashes: 34 percent
- Night time crashes: 26 percent
- Alcohol over limit: 11 percent
- Too fast for conditions: 23 percent
- Failed to give way/stop: 11 percent
- Fatigue: 26 percent
- Crashes at intersection: 14 percent
- Road factors: 40 percent
- At fault male driver: 66 percent
- At fault driver held full NZ licence: 60 percent

## Loss of control at bends

During the most recent five year period (2005-2009) 59 percent of all injury crashes in Ruapehu District occurred due to loss of control at bends. These crashes resulted in 12 deaths, 57 serious injuries and 196 minor injuries. There were a further 294 non-injury crashes reported involving loss of control at bends.

The latest five year data shows an upward trend in the total number of injury crashes due to loss of control at bends.



Three-quarters of these loss of control crashes at bends involved a driver running off the road and hitting a roadside object (76 percent) and a quarter colliding with another vehicle (27 percent).

The three most common roadside hazards struck in loss of control at bend crashes were cliff or banks (21 percent) followed by fences (19 percent) and over embankments (17 percent). There were a total of 480 reported objects struck. Hitting these objects can result in more serious injuries than would otherwise be sustained.

The following table shows the general environment of loss of control at bend crashes (453 crashes) on local roads and state highways, split to show urban and rural speed limits.

Loss of control	Local urban	Local rural	SH urban	SH rural
At bends	11%	20%	3%	66%

Just under two-thirds of the at fault drivers in these crashes were aged under 25 years of age (62 percent), over two thirds were males (69 percent) and over a quarter held either a learner licence or a restricted licence (27 percent).

The following table shows that most of these crashes were single vehicle crashes and occurred on rural roads. Speed too fast was a contributory factor in just under a third of the injury crashes and alcohol in a fifth. Road factors contributed to a third of all loss of control crashes, half of which were in wet conditions.

Loss of control crashes at bends	
Crash characteristics	Percentage of crashes
Single vehicle	83%
Alcohol (injury crashes)	19%
Too fast for the conditions (injury crashes)	30%
Road factors	32%
Poor handling (injury crashes)	32%
Rural road	86%
Wet road	49%
Night time	36%

Further information about loss of control crashes at bends in Ruapehu District 2005-2009 on:

### Local roads

- 2 deaths, 11 serious injuries and 60 minor injuries
- Worst month: March and August (19 crashes each)
- Worst day of week: Sunday (29 crashes)
- Wet road crashes: 32 percent
- Night time crashes: 37 percent
- Alcohol over limit (injury crashes): 31 percent
- Most common injury crash factors: too fast (37 percent), poor handling (29 percent) and failed to keep left (27 percent)
- At fault male driver (injury crashes): 90 percent
- At fault driver held full NZ licence (injury crashes): 50 percent
- Most common at fault driver's age group (injury crashes): 15-19 years (29 percent) followed by 20-24 years (17 percent)

### State highways

- 10 deaths, 46 serious injuries and 136 minor injuries
- Worst month: June (32 crashes)
- Worst day of week: Friday (55 crashes)
- Wet road crashes: 42 percent
- Night time crashes: 36 percent
- Alcohol over limit (injury crashes): 12 percent
- Most common injury crash factors: poor handling (34 percent), fatigue (29 percent) and too fast for conditions (26 percent)
- At fault male driver (injury crashes): 59 percent
- At fault driver held full NZ licence (injury crashes): 64 percent
- Most common at fault driver's age group (injury crashes): 20-24 years (22 percent) followed by 15-19 years (17 percent), also notable is the group 30-39 years (24 percent)

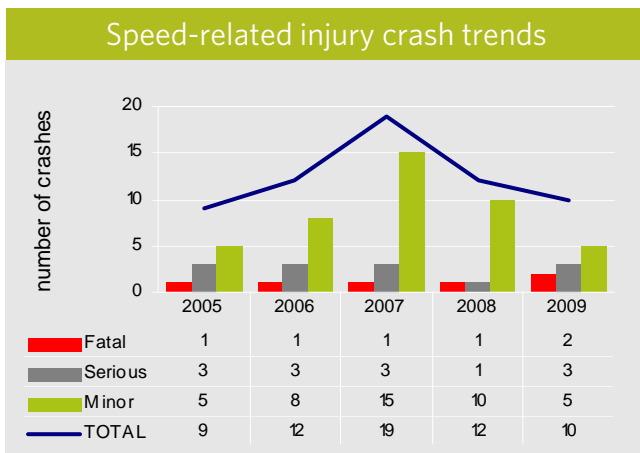
## Speed

Speed is a major contributing factor involved in road crashes. In 2009, excessive speed contributed to 31 percent of all fatal crashes and 17 percent of all injury crashes in New Zealand. These crashes resulted in 118 deaths, 553 serious injuries and 2067 minor injuries.

In Ruapehu District, speed too fast for conditions was a factor in 23 percent of all injury crashes in 2009, this is equal to the last five year average (23 percent).

During the last five year period (2005-2009) there were 62 speed-related injury crashes resulting in 7 deaths, 23 serious injuries and 74 minor injuries. There were also 101 non-injury crashes reported during this period.

The latest five year data shows a slight upward trend in the total number of speed-related injury crashes over this period.



Just over three-quarters of the speed-related crashes occurred in rural areas (77 percent). The following table shows the general environ of speed-related crashes, split to show urban and rural speed limits.

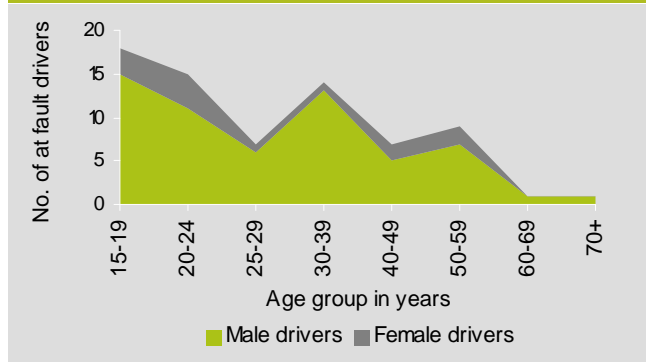
Speed-related crashes					
	2005	2006	2007	2008	2009
Urban	5	11	11	6	4
Rural	26	28	36	16	20
<b>Total</b>	<b>31</b>	<b>39</b>	<b>47</b>	<b>22</b>	<b>24</b>

Note: Rural roads are roads with a speed limit of 80km/hr or more.

Just under half of all speed-related crashes occurred on weekends, between 6pm Friday and 6am Monday (47 percent). A similar proportion occurred in dry conditions (48 percent). Just over half of the speed-related crashes occurred during the day time (52 percent).

Alcohol was a factor in 21 percent of speed-related injury crashes. Eight percent of the injury crashes record that vehicle factors contributed to the crash.

## Age & gender of at fault drivers 2005-2009



Forty-five percent of the at fault drivers in speed-related injury crashes were less than 25 years old. Thirty percent of the at fault drivers on these crashes held either a learner licence or a restricted licence. Eighty percent of the at fault drivers in speed-related injury crashes were male.

Further information about speed-related crashes in Ruapehu District 2005-2009 on:

### Local roads

- 2 death, 9 serious injuries and 28 minor injuries
- Worst day of week: Sunday (14 crashes)
- Wet road crashes: 28 percent
- Night time crashes: 53 percent
- Alcohol over limit (injury crashes): 40 percent
- Most common injury crash factor: poor handling (24 percent)
- Most common crash movement: bend-loss of control (79 percent)
- At fault driver held full NZ licence (injury crashes): 29 percent
- At fault driver held learner or restricted licence (injury crashes): 54 percent
- At fault male driver (injury crashes): 92 percent
- Most common at fault driver's age group (injury crashes): 15-19 years (57 percent)

### State highways

- 5 deaths, 14 serious injuries and 46 minor injuries
- Worst day of week: Thursday (21crashes)
- Wet road crashes: 55 percent
- Night time crashes: 45 percent
- Alcohol over limit (injury crashes): 8 percent
- Most common injury crash factor: poor handling (32 percent)
- Most common crash movement: bend-loss of control (84 percent)
- At fault driver held full NZ licence (injury crashes): 68 percent
- At fault driver held learner or restricted licence (injury crashes): 14 percent
- At fault male driver (injury crashes): 73 percent
- Most common at fault driver's age group (injury crashes): 15-24 years (30 percent)



# Alcohol

Alcohol affects the way people drive. Studies show that the risk of being involved in a crash increases rapidly as a driver's blood alcohol level rises. A driver over the NZ legal limit (80mg of alcohol per 100ml of blood) is three times more likely to be involved in a crash than a sober driver.

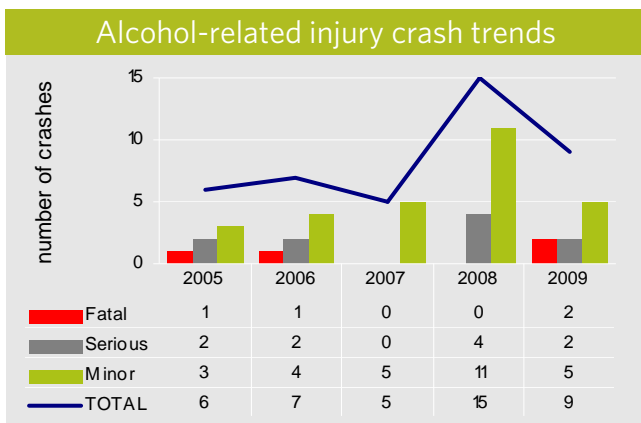
During 2009, alcohol-affected drivers contributed to 31 percent of all fatal crashes and 15 percent of all injury crashes in New Zealand.

## Ruapehu District

During the last five year period (2005-2009) 17 percent of all injury crashes in Ruapehu District were alcohol-related which is slightly higher than both the latest five year average for similar authorities (16 percent) and national average (15 percent). Last year 20 percent of all injury crashes in the district recorded alcohol as a factor.

There were 42 injury and 51 non-injury alcohol-related crashes reported in the last five years. These crashes have resulted in 4 deaths, 15 serious and 41 minor injuries.

The latest five year data shows an upward trend in the total number of alcohol-related injury crashes.



Just under half of alcohol-related crashes occurred on state highways (48 percent) these resulted in an equal proportion of total fatal and serious injuries in alcohol related crashes (47 percent).

Fatigue was recorded as a factor in 33 percent of the state highway alcohol-related injury crashes. A major driver factor for alcohol-related crashes occurring on local roads was speed too fast for conditions, a factor in 55 percent of these injury crashes.

Thirty-three percent of at fault drivers involved in alcohol-related crashes held a full NZ driver's licence. Forty-three percent held either learner or restricted licence. Thirty-six percent of the at fault drivers were in the age group 15-19 years and 24 percent were in the group aged 20-24 years.

## Alcohol and speed

Speed too fast for conditions was a contributing factor in 31 percent of the 42 alcohol related injury crashes in the district for the period 2005-2009. The combination of speed and alcohol resulted in 3 deaths, 5 serious injuries and 15 minor injuries. Speed itself has been a factor in 23 percent of all injury crashes in the district in the last five years.

Eighty-one percent of the crashes where alcohol and speed were both contributing factors occurred on local roads mostly in dark conditions (78 percent). Seventy-eight percent of these involved a loss of control at bends. Sixty-two percent of at fault drivers in these injury crashes were males under 24 years of age.

Further information about alcohol-related crashes in Ruapehu District 2005-2009 on:

### Local roads

- 2 death, 8 serious injuries and 23 minor injuries
- Worst month: February, August, September and November (6 crashes each)
- Worst day of week: Saturday (13 crashes)
- Wet road crashes: 29 percent
- Night time crashes: 73 percent
- Crashes at intersection: 21 percent
- Too fast for conditions (injury crashes): 48 percent
- Most common injury crash factors: poor handling (33 percent) and failure to keep left (10 percent)
- Road factors: 4 percent
- Vehicle factors (injury crashes): 10 percent
- At fault male driver (injury crashes): 90 percent
- At fault drivers held full NZ licence (injury crashes): 19 percent
- At fault drivers held learner or restricted licence (injury crashes): 62 percent
- Most common at fault driver's age group (injury crashes): 15-19 years (48 percent)

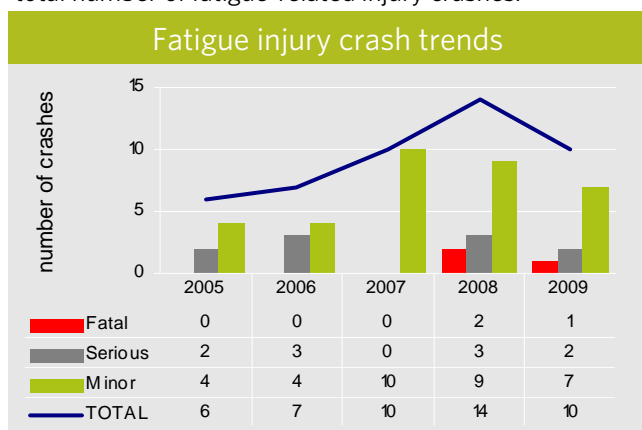
### State highways

- 2 deaths, 7 serious injuries and 18 minor injuries
- Worst month: July (7crashes)
- Worst day of week: Friday (11 crashes)
- Wet road crashes: 49 percent
- Night time crashes: 73 percent
- Crashes at intersection: 18 percent
- Too fast for conditions (injury crashes): 14 percent
- Most common injury crash factors: fatigue (33 percent) and poor handling (19 percent)
- Road factors: 7 percent
- Vehicle factors (injury crashes): 5 percent
- At fault male driver (injury crashes): 67 percent
- At fault drivers held full NZ licence (injury crashes): 48 percent
- At fault drivers held learner or restricted licence (injury crashes): 24 percent
- Most common at fault driver's age group (injury crashes): 15-24 years (52 percent)

## Fatigue

In Ruapehu District during the last five year period (2005-2009) fatigue was reported as a factor contributing to 18 percent of all injury crashes (47 injury crashes). These crashes resulted in 3 deaths, 20 serious injuries and 57 minor injuries. There were a further 34 non-injury crashes reported.

The latest five year data shows an upward trend in the total number of fatigue-related injury crashes.



Most of the fatigue related crashes occurred on state highways in the rural areas (85 percent). During 2005-2009 there were 42 fatigue-related injury crashes on state highways in the district:

- SH 4 had 30 fatigue-related injury crashes
- SH 1N had 4 fatigue-related injury crashes
- SH 47 had 3 fatigue-related injury crashes
- SH 48 had 2 fatigue-related injury crashes
- SH 49 had 2 fatigue-related injury crashes
- SH 43 had 1 fatigue-related injury crashes

Nearly half of all the fatigue-related crashes occurred on a weekend, between 6pm Friday and 6am Monday (44 percent). Just over half all fatigue-related crashes occurred during the hours of darkness (57 percent).

The most common contributory factor in the fatigue-related injury crashes was poor handling (19 percent) and alcohol (17 percent).

Nearly all crashes associated with fatigue show a driver losing of control of their vehicle ( 99 percent):

- loss of control at bends: 67 percent
- loss of control on straight road: 32 percent

The largest represented age group in fatigue-related injury crashes of at fault drivers were aged 15-24 years (34 percent) followed by those in the group 30-39 years (24 percent). Fifty-three percent of at fault drivers were male.

Forty-nine percent of drivers at fault in fatigue-related injury crashes held a full NZ driver's licence. A third of at fault drivers held either a restricted licence or a learner licence (34 percent).

### Fatigue 2005-2009

Fatigue causes	Percentage of injury crashes	
	Ruapehu District	New Zealand
General (drowsy, tired, fell asleep)	16.0%	4.7 %
Long trip	nil	0.2 %
Lack of sleep	10.7%	0.8 %
Worked long hours before driving	nil	0.3 %

The above table shows the recorded causes of fatigue and their contribution to injury crashes in Ruapehu District 2005-2009.

Further information about all fatigue related crashes in Ruapehu District 2005-2009 on:

#### Local roads

- 5 minor injuries
- Worst months: May and November (2 crashes each)
- Worst day of week: Sunday and Monday (3 crashes each)
- Wet road crashes: 10 percent
- Night time crashes: 70 percent
- Alcohol over limit (injury crashes): 20 percent
- Most common injury crash movement: loss of control at bends (80 percent)
- Road factors: nil
- At fault male driver (injury crashes): 80 percent
- At fault driver held full NZ licence (injury crashes): 40 percent
- Most common at fault drivers' age group (injury crashes): 15-24 years and 50-59 years (40 percent each)

#### State highways

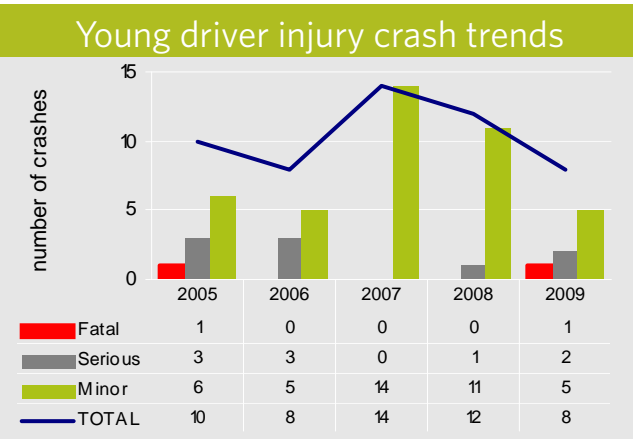
- 3 deaths, 20 serious injuries and 52 minor injuries
- Worst month: February (9 crashes)
- Worst day of week: Sunday (16 percent)
- Wet road crashes: 32 percent
- Night time crashes: 55 percent
- Alcohol over limit (injury crashes): 17 percent
- Most common injury crash factors: poor handling (19 percent) followed by too fast (7 percent)
- Road factors: 6 percent
- At fault male driver (injury crashes): 50 percent
- At fault driver held full NZ licence (injury crashes): 50 percent



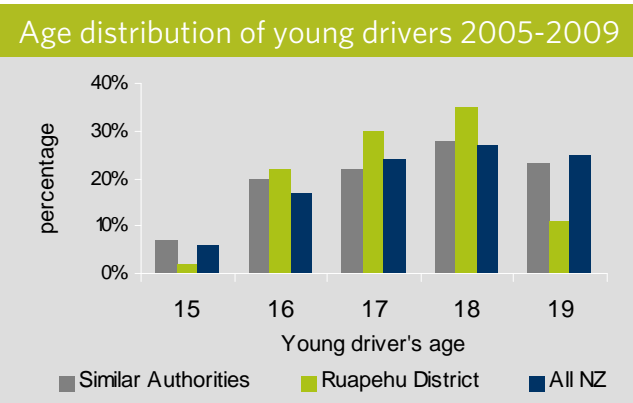
## Young drivers

During the most recent five year period (2005-2009) in Ruapehu District, 19 percent of all injury crashes involved young drivers, aged 15-19 years. These crashes resulted in 2 deaths, 14 serious injuries and 73 minor injuries.

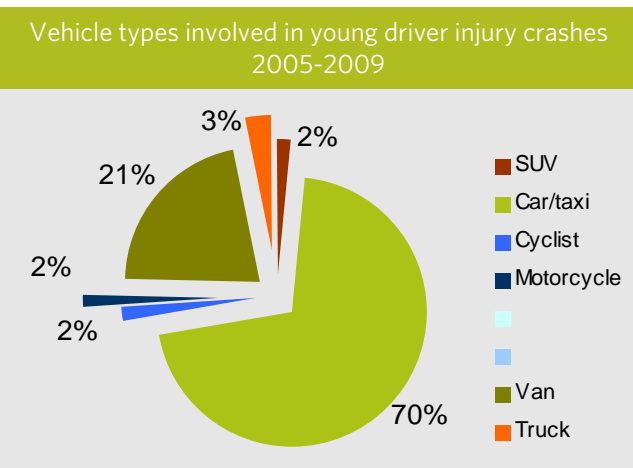
The latest five year data shows a level trend in the total number of these crashes, however the trend in the number of casualties is slightly upwards..



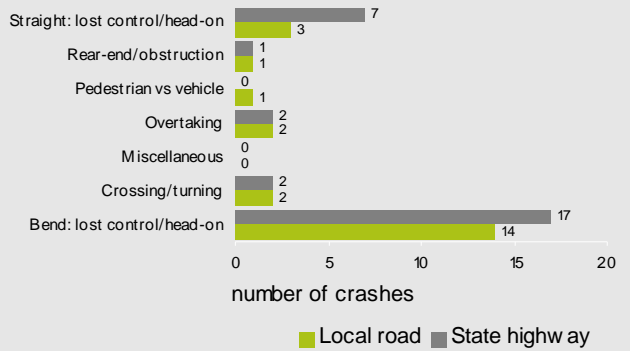
The age distribution of young drivers involved in injury crashes is shown below. Ninety-four percent of these injury crashes show young drivers were at fault or part-fault.



The types of vehicles involved in injury crashes involving young drivers are shown below.



### Characteristics of young driver injury crashes



The chart above shows the general characteristics of injury crashes involving young drivers. The most common general crash movement involves a driver losing control of their vehicle (79 percent):

- loss of control at bends: 54 percent
- loss of control on a straight road: 17 percent
- loss of control head-on collision: 2 percent
- loss of control overtaking: 6 percent

Further information about injury crashes involving young drivers in Ruapehu District 2005-2009 on:

#### Local roads

- 1 death, 6 serious injuries and 27 minor injuries
- Worst month: May (5 crashes)
- Worst day of week: Saturday (6 crashes)
- Wet road crashes: 35 percent
- Night time crashes: 48 percent
- Alcohol over limit (injury crashes): 43 percent
- Speed too fast: 61 percent
- Most common injury crash factors: poor handling (35 percent) followed by poor judgement (26 percent)
- At fault driver held learner NZ licence (injury crashes): 26 percent
- At fault driver held restricted NZ licence (injury crashes): 48 percent

#### State highways

- 1 death, 8 serious injuries and 46 minor injuries
- Worst month: June (5 crashes)
- Worst day of week: Friday (6 crashes)
- Wet road crashes: 34 percent
- Night time crashes: 48 percent
- Alcohol over limit (injury crashes): 21 percent
- Speed too fast: 7 percent
- Most common injury crash factors: poor handling (28 percent) followed by fatigue and poor judgement (24 percent each)
- At fault driver held learner NZ licence (injury crashes): 40 percent
- At fault driver held restricted NZ licence (injury crashes): 20 percent

## Further information

This report has been prepared by the Performance Information team at NZ Transport Agency. It is the eleventh such annual road safety issues report. The intent of this report is to highlight local road safety issues and assist in identifying possible ways to reduce the number of road deaths and injuries. It has been prepared using data from the Ministry of Transport's Crash Analysis System (CAS) database. This report forms a part of the Briefing Notes series of reports. The Briefing Notes present information derived from pertinent statistics to be used for decision support.

More detailed information may be obtained from either Ruapehu District Council (local roads) or NZ Transport Agency.

NZ Transport Agency encourages local bodies, regional councils and NZ Police to study the briefing notes series of reports along with the road safety data reports and the road safety black-spot report. There will be road safety issues beyond those covered in this Road Safety Issues Report and we encourage our partners to use their access to the Crash Analysis System to identify and examine these further.

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