

briefing notes - road safety issues

South Waikato and Taupo

New Zealand Transport Agency has prepared this road safety issues report. It is based on reported crash data and trends for the 2004-2008 period.

The intent of the report is to highlight the key road safety issues and be a resource to identify possible ways to reduce the number of road deaths and injuries in the South Waikato and Taupo districts.

This report is the tenth road safety report for the South Waikato and Taupo area. All the material unless otherwise stated in this report applies to both local roads and state highways.

In each new report one year's data is added to a five year block and the oldest dropped so it is unlikely that the core issues would change radically from report to report.

The issues chosen for this report are drawn from either the most common crash types, those that appear over-represented when the South Waikato and Taupo area is compared to similar local bodies or those with high social cost (high numbers of fatal and serious crashes mainly).

We have included a brief overview of crashes in the two districts.

We encourage the South Waikato and Taupo District Councils to use their free access to the Ministry of Transport's Crash Analysis System (CAS) to delve deeper into the highlighted issues. All data in this note is from CAS.

| Major road safety issues * | | 2008 road trauma | |
|----------------------------|--|------------------------|-------------------------|
| South Waikato and Taupo | | Casualties | South Waikato and Taupo |
| Alcohol | | Deaths | 27 |
| Speed | | Serious casualties | 74 |
| Loss of Control | | Minor casualties | 204 |
| Intersections | | | |
| Nationally | | Crashes | South Waikato and Taupo |
| Speed | | Fatal crashes | 22 |
| Alcohol | | Serious injury crashes | 52 |
| Failure to give way | | Minor injury crashes | 130 |
| Restraints | | Non-injury crashes | 357 |

* Issues are not in any specific order of importance

Overview

In 2008 on local roads in the South Waikato and Taupo districts there were 84 injury crashes and 150 non-injury crashes. In addition there were 120 injury crashes and 207 non-injury crashes on state highways both as reported by the New Zealand Police.

The table below shows the number of injuries resulting from the 204 injury crashes on local roads and state highways.

Casualties by urban / rural 2008

| | Fatalities | Serious injuries | Minor injuries | Total |
|-------|------------|------------------|----------------|-------|
| Rural | 24 | 60 | 136 | 220 |
| Urban | 3 | 14 | 68 | 85 |
| Total | 27 | 74 | 204 | 305 |

| | Fatalities | Serious injuries | Minor injuries | Total |
|----------------|------------|------------------|----------------|-------|
| Local roads | 5 | 26 | 83 | 114 |
| State highways | 22 | 48 | 121 | 191 |
| Total | 27 | 74 | 204 | 305 |

Crash trends in the South Waikato and Taupo districts

| Year | Fatal Crashes | Serious Crashes | Minor Crashes | Total Injury Crashes |
|------|---------------|-----------------|---------------|----------------------|
| 1999 | 13 | 44 | 88 | 145 |
| 2000 | 18 | 39 | 64 | 121 |
| 2001 | 19 | 57 | 100 | 176 |
| 2002 | 16 | 50 | 138 | 204 |
| 2003 | 20 | 51 | 135 | 206 |
| 2004 | 22 | 37 | 130 | 189 |
| 2005 | 16 | 43 | 142 | 201 |
| 2006 | 10 | 31 | 163 | 204 |
| 2007 | 26 | 45 | 151 | 222 |
| 2008 | 22 | 52 | 130 | 204 |

Local road injury crashes

| Crash type or contributory cause 2004 to 2008 | Percentage fatal and serious crashes of this type or contributory cause | Percentage all injury crashes of this type or contributory cause |
|---|---|--|
| Alcohol | 27 | 20 |
| Too fast | 25 | 25 |
| At bends | 42 | 35 |
| At intersections | 22 | 36 |
| Pedestrians | 4 | 5 |
| Cyclists | 8 | 3 |
| Motorcyclists | 17 | 4 |
| Road factors | 17 | 14 |
| Night time | 28 | 30 |

Further information about injury and non-injury crashes on **local roads** in the South Waikato and Taupo districts 2004 to 2008:

- Worst month June, best September
- Worst day Friday, best Monday
- 27 percent on wet roads
- 33 percent at night
- 43 percent at intersections
- 708 roadside objects struck
- Social cost of crashes in 2008 \$45m

Further information about injury and non-injury crashes on **state highways** in the South Waikato and Taupo districts 2004 to 2008:

- Worst month January, best August
- Worst day Friday, best Wednesday
- 32 percent on wet roads
- 30 percent at night
- 25 percent at intersections
- 1135 roadside objects struck
- Social cost of crashes in 2008 \$109m

Speed

Nationally, speed is one of the major contributing factors to road crashes. Reducing speeds is an important road safety goal. Excessive speed increases the likelihood of a crash occurring by reducing the time available for drivers to respond to situations and it leads to more serious injuries. Research has shown that a 1 km/h reduction in mean speed can produce a 3 percent reduction in injury crashes.

Between 2004 and 2008 25 percent of injury crashes in the South Waikato and Taupo districts involved travelling too fast for the conditions. These crashes resulted in 42 fatalities, 80 serious injuries and 287 minor injuries.

Crash numbers have fluctuated over the last 5 years in both urban and rural areas.

| Speed related crashes | | | | | |
|-----------------------|------|------|------|------|------|
| Speed related crashes | 2004 | 2005 | 2006 | 2007 | 2008 |
| Rural | 33 | 39 | 44 | 40 | 49 |
| Urban | 10 | 18 | 10 | 9 | 8 |
| Total | 43 | 57 | 64 | 49 | 57 |

The other main causes contributing to speed related crashes were:

- Handling errors
- Alcohol
- General errors of judgement

| Speed related crashes by location | |
|---|----------------------------------|
| Road (road lengths may differ) | Social cost of crashes 2004-2008 |
| SH 1—800m south of Oturere Bridge | \$1,910,000 |
| SH 1 / SH 5 intersection (Tirau) | \$1,910,000 |
| SH 1 / SH 5 intersection (Wairakei) | \$6,350,000 |
| SH 1 - 500m south of Frethey Rd | \$1,011,000 |
| SH 1 - 1000m north of Tree Trunk Gorge Rd | \$373,000 |

Age and sex of at fault drivers in speed related injury crashes

| Drivers age * | Male | Female | Total |
|---------------|------------|-----------|------------|
| 2004 - 2008 | | | |
| 15-19 years | 40 | 14 | 54 |
| 20 - 24 | 31 | 14 | 45 |
| 25 - 29 | 20 | 9 | 29 |
| 30 - 39 | 37 | 13 | 50 |
| 40 - 49 | 41 | 10 | 51 |
| 50 - 59 | 13 | 4 | 17 |
| 60 - 69 | 8 | 2 | 10 |
| 70+ | 2 | - | 2 |
| Total | 192 | 66 | 258 |

* note age ranges are not equal

Further information about the 93 speed related injury crashes on **local roads** in the South Waikato and Taupo districts 2004 to 2008:

- 10 deaths, 23 serious injuries and 100 minor injuries
- Most common crash type 'Lost control on a bend'
- 77 percent mid-block
- 29 percent wet road
- 46 percent night time
- Worst month January, best September
- Worst day of week Saturday, best Wednesday
- Worst three hour time period 9pm to midnight

Further information about speed related injury crashes on **state highways** in the South Waikato and Taupo districts 2004 to 2008:

- 32 deaths, 57 serious injuries and 187 minor injuries
- Most common crash type 'Lost control on bend'
- 89 percent mid-block
- 40 percent wet road
- 37 percent night time
- Worst month February, best October
- Worst day of week Sunday, best Thursday
- Worst three hour time period 3pm to 6pm

Intersections

During the five year period 2004 to 2008 within South Waikato and Taupo districts there were a total of 948 crashes at intersections, 273 of these were injury crashes and 675 non-injury.

69 percent of these were in urban areas and 16 people were killed, 71 received serious injuries and 311 received minor injuries.

| Crashes at Intersections | | | | | |
|--------------------------|------|------|------|------|------|
| | 2004 | 2005 | 2006 | 2007 | 2008 |
| Injury crash | 43 | 63 | 51 | 56 | 60 |
| Non-injury crash | 122 | 135 | 154 | 129 | 135 |
| Total | 165 | 198 | 205 | 185 | 195 |

| Locations with the most injury crashes 2004 to 2008 | | |
|---|-------------------------------|------------------------------------|
| Intersection name (Within a radius of 50m) | Injury crashes 2004 - 2008 | total Injury crashes 2008 |
| SH 1 / Poihipi Rd | 16 | 5 |
| SH 1 / SH 5 (Tirau) | 16 | 4 |
| SH 1 / SH 5 (Wairakei) | 10 | 3 |
| SH 1 / SH 29 | 8 | - |
| SH 5 / Arrowsmith Ave | 8 | 1 |

| Junction control Injury and non-injury crashes | | | | |
|--|-----------------|-----|----------|------|
| Junction control | Traffic signals | Nil | Give Way | Stop |
| Number of crashes | 15 | 220 | 483 | 227 |

The most common crash type at intersections is when a driver turns right and is hit by a vehicle approaching from the right.

The main causes contributing to crashes described in Police reports were:

- Failure to stop and give way
- Not checking properly
- Too fast

| Junction type Injury and Non-injury crashes | | |
|---|------|-------|
| Junction Type | Open | Urban |
| Roundabout | 1 | 57 |
| Tee | 226 | 356 |
| Cross (X) | 51 | 215 |
| Y | 9 | 7 |
| Other (includes driveways) | 7 | 19 |

Further information about the 134 injury crashes at intersections on **local roads** in the South Waikato and Taupo districts 2004 to 2008:

- 6 deaths, 20 serious injuries and 140 minor injuries
- 29 percent wet roads
- 25 percent night time
- Worst month June, best April, July & October (equal)
- Worst days of week Friday & Saturday (equal), best Wednesday
- Worst three hour time period 3pm to 6pm

Further information about the 139 injury crashes at intersections on **state highways** in the South Waikato and Taupo districts 2004 to 2008:

- 10 deaths, 51 serious injuries and 171 minor injuries
- 18 percent wet roads
- 20 percent night time
- Worst month February, best July
- Worst day of week Saturday, best Tuesday & Thursday (equal)
- Worst three hour time period 9am to midday

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 legal limit (80mg of alcohol per 100ml of blood) is three times more likely to be involved in a crash than a sober driver.

Contrary to popular opinion, people with high blood alcohol levels are more likely to be injured or killed in a crash than a sober driver in the same crash, and if injured, they are also more likely to encounter complications in their recovery.

In New Zealand for the 12 months to December 2008, alcohol-affected drivers contributed to 34 percent of all fatal crashes (the same as 2007) and 15 percent of all injury crashes (the same as 2007).

In South Waikato and Taupo districts alcohol was a factor in 15 percent of injury crashes in 2008.

Number of alcohol related injury crashes

| Crash year | Open road | Urban road | Total |
|------------|-----------|------------|-------|
| 2004 | 17 | 9 | 26 |
| 2005 | 14 | 16 | 30 |
| 2006 | 24 | 4 | 28 |
| 2007 | 27 | 8 | 35 |
| 2008 | 22 | 15 | 37 |
| Total | 104 | 52 | 156 |

(Open road is classified as any area with a speed limit of 80km/hr or more)

From the beginning of 2007 New Zealand Transport Agency (formally Land Transport NZ) has been adding driver factor codes to all non-injury crashes for the South Waikato and Taupo districts.

This will allow the Police and other agencies to target alcohol related crashes more quickly and with even more geographic accuracy than ever before.

In 2008 there were 34 non-injury alcohol related crashes reported by the Police in the South Waikato and Taupo districts.

Alcohol related injury crashes by location

| Road (road lengths may differ) | Social cost of crashes 2004-2008 |
|--|----------------------------------|
| SH 1—250m west of Oturere Bridge | \$286,000 |
| SH 1—250m south of Horahora Rd | \$191,000 |
| SH 1/ Poihipi Rd intersection | \$187,000 |
| SH 1—980m north of Tree Trunk Gorge Rd | \$188,000 |
| SH 27—400m south of Lake Rd | \$4,722,000 |

Further information about the 76 alcohol related injury crashes on **local roads** in the South Waikato and Taupo districts 2004 to 2008:

- 8 deaths, 26 serious injuries and 70 minor injuries
- 81 percent of at fault drivers were male
- Most common crash type 'Lost control on bend'
- 30 percent at intersections
- 57 percent urban
- 32 percent wet road
- 75 percent night time
- Worst three hour time period 9pm to midnight
- Worst months February, May & August (equal), best July
- Worst day of week Friday, best Thursday

Further information about the 80 alcohol related injury crashes on **state highways** in the South Waikato and Taupo districts 2004 to 2008:

- 25 deaths, 36 serious injuries and 64 minor injuries
- 70 percent of at fault drivers were male
- Most common crash type 'Lost control on bend'
- 16 percent at intersections
- 11 percent urban
- 30 percent wet road
- 60 percent night time
- Worst three hour time period 3pm to 6pm and midnight to 3am (equal)
- Worst month February, best July

Bends – loss of control or head on

Between 2004 and 2008 43 percent of all injury crashes in the South Waikato and Taupo districts were loss of control or head on bends. These crashes resulted in 59 fatalities, 160 serious injuries and 457 minor injuries.

Crash numbers have fluctuated over the last 5 years.

| Crashes at bends 2004 to 2008 | | | | |
|-------------------------------|---------------|-----------------|---------------|-------|
| Crash year | Fatal crashes | Serious crashes | Minor crashes | Total |
| 2004 | 15 | 17 | 53 | 85 |
| 2005 | 7 | 20 | 61 | 88 |
| 2006 | 4 | 15 | 65 | 84 |
| 2007 | 10 | 17 | 62 | 89 |
| 2008 | 13 | 25 | 53 | 91 |
| Total | 49 | 94 | 294 | 437 |

After drivers lose control their vehicles often crash into roadside hazards such as ditches, banks, poles or trees. Hitting these objects can result in a relatively minor off-road event turning into something far more serious.

The most common roadside hazards struck in injury loss of control or head on crashes on bends in the South Waikato and Taupo districts were cliffs or banks (110), fences (61), trees (61) and ditches (29) from a total of 410 objects struck.

Main characteristics of injury lost control or head on crashes at bends

| Crash characteristic | Percentage of crashes |
|------------------------------------|-----------------------|
| Single vehicle | 72 |
| Alcohol | 23 |
| Excessive speed for the conditions | 44 |
| Road factors | 24 |
| Poor handling | 41 |
| Rural road | 87 |
| Wet road | 36 |
| Night time | 37 |

Further information about the 129 injury loss of control or head on crashes on bends on **local roads** in the South Waikato and Taupo districts 2004 to 2008:

- 14 deaths, 42 serious injuries and 129 minor injuries
- 70 percent of at fault drivers were male
- Most common at fault driver age group was 15 to 19 years (26 percent of at fault drivers)
- 38 percent of crashes involved alcohol
- 53 percent of crashes involved 'too fast for the conditions'
- Worst month January, best July
- Worst days of week Friday & Saturday (equal), best Monday & Thursday (equal)
- Worst three hour time period 9pm to midnight

Further information about the 308 injury loss of control or head on crashes on bends on **state high-ways** in the South Waikato and Taupo districts 2004 to 2008:

- 45 deaths, 118 serious injuries and 328 minor injuries
- 70 percent of at fault drivers were male
- Most common at fault driver age group was 40 to 49 years (23 percent of at fault drivers)
- 17 percent of crashes involved alcohol
- 40 percent of crashes involved 'too fast for the conditions'
- Worst month February, best May
- Worst day of week Saturday, best Tuesday
- Worst three hour time period 3pm to 6pm

Straight road – loss of control or head on

Between 2004 and 2008 17 percent of all injury crashes in the South Waikato and Taupo districts involved loss of control or head on crashes on straight roads.

16 percent of fatal and serious crashes in the district were of this type.

These 170 crashes resulted in 18 fatalities 49 serious injuries and 196 minor injuries.

Loss of control — straight roads injury crashes 2004 to 2008

| Crash year | Fatal crashes | Serious crashes | Minor crashes |
|------------|---------------|-----------------|---------------|
| 2004 | 2 | 7 | 20 |
| 2005 | 3 | 7 | 27 |
| 2006 | 5 | 4 | 36 |
| 2007 | 5 | 7 | 20 |
| 2008 | 2 | 6 | 19 |
| Total | 17 | 31 | 122 |

Most of these crashes occurred when a driver loses control of their vehicle and either runs off the road or collides with another vehicle.

After drivers lose control their vehicles often crash into roadside hazards such as ditches, banks, poles or trees. Hitting these objects can result in a relatively minor off-road event turning into something far more serious.

The most common roadside hazards struck in injury crashes in the South Waikato and Taupo districts were cliffs and banks (43), fences (30), trees (25) and ditches (14) from a total of 158 objects struck.

Main characteristics of injury loss of control crashes— straight roads 2004 to 2008

| Crash characteristic | Percentage of crashes |
|------------------------------------|-----------------------|
| Single vehicle | 80 |
| Alcohol | 15 |
| Excessive speed for the conditions | 15 |
| Road factors | 16 |
| Poor handling | 21 |
| Rural road | 85 |
| Wet road | 21 |
| Night time | 45 |

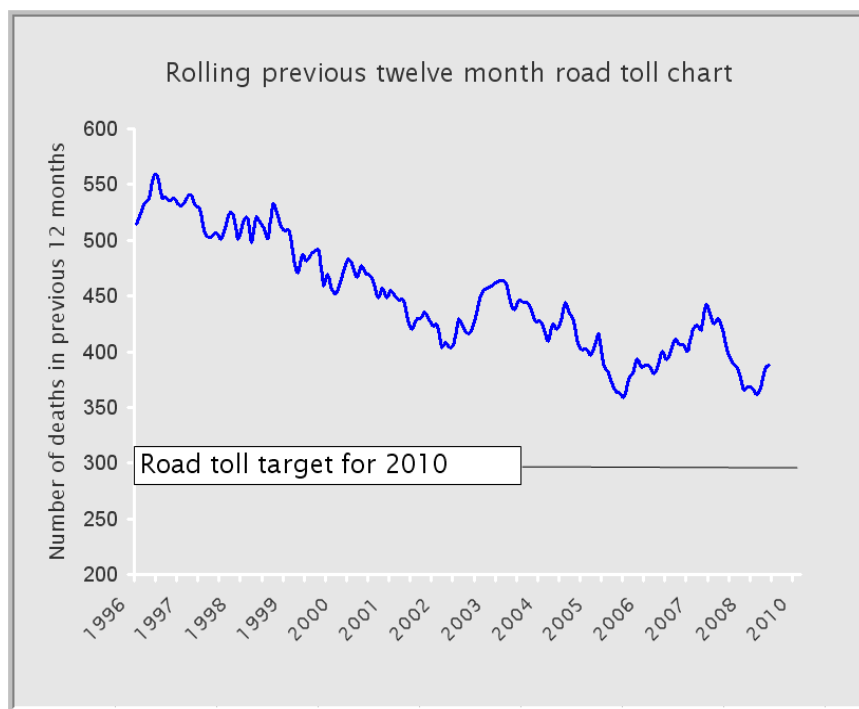
Further information about the 44 injury loss of control crashes on straights on **local roads** in the South Waikato and Taupo districts 2004 to 2008:

- 1 death, 12 serious injuries and 41 minor injuries
- 65 percent of at fault drivers were male
- Most common crash type 'off road to left'
- Most common at fault driver age group was 30 to 39 years
- 30 percent of crashes involved alcohol
- 25 percent of crashes involved 'too fast for the conditions'
- 18 percent involved 'road factors'
- 11 percent involved fatigue
- 27 percent involved cliffs and banks as a struck object
- 20 percent in the wet
- 50 percent at night
- Worst month April, best March
- Worst day of week Friday, best Tuesday & Saturday (equal)
- Worst three hour time period 3pm to 6pm

Further information about the 126 injury loss of control crashes on straights on **state highways** in the South Waikato and Taupo districts 2004 to 2008:

- 17 deaths, 37 serious injuries and 155 minor injuries
- 60 percent of at fault drivers were male
- Most common crash type 'off road to left'
- Most common at fault driver age group was 40 to 49 years
- 10 percent of crashes involved alcohol
- 11 percent of crashes involved 'too fast for the conditions'
- 16 percent involved 'road factors'
- 39 percent involved fatigue
- 25 percent involved cliffs and banks as a struck object
- 21 percent in the wet
- 43 percent at night
- Worst month February, best October
- Worst day of week Friday, best Thursday
- Worst three hour time period 3pm to 6pm

The next ten years—moving beyond Road Safety 2010



In August this year the Ministry of Transport will embark on a nationwide road safety consultation programme as it moves to formulate priorities for the next ten years.

Information will be published on their web site and we would encourage any person or group with an interest in road safety to watch the site carefully for developments. Follow this link :

<http://www.transport.govt.nz/ourwork/Land/landsafety/SaferJourneys-RoadSafetyStrategyto2020/>

The chart on the left illustrates the progress made during the life of the Road Safety 2010 strategy and although progress has been made it would seem highly unlikely that the target of 300 or fewer fatalities will be met.

Restraints

The Ministry of Transport (MoT) conducts surveys of restraint use. Results are available for front, rear and child restraints although not all at a local authority level.

See the MoT website : <http://www.transport.govt.nz/research/safetybeltstatistics/>

Contacts

New Zealand Transport Agency

Regional Director (Waikato / Bay of Plenty)
Harry Wilson

Programme and Funding Manager
Andrew McKillop

Area Engineer State Highways
Alan Burkett

Regional Communications Advisor
Julie Hannam

Private Bag 3081, Hamilton
Phone 07 958 7840

www.nzta.govt.nz

Local Authority

Taupo District Council
Road Safety Co-ordinator
Christine Hutchison

South Waikato District Council
Road Safety Co-ordinator
Robert Cathie

Taupo District Council
Transportation Manager
Dennis Lewis

South Waikato District Council
Roothing Manager
Gordon Naidoo

New Zealand Police

Kevin Taylor
Road Policing Manager
New Zealand Police
Bay of Plenty
PO Box 741
Rotorua

Phone 07 858 6200
www.police.govt.nz