

briefing notes - road safety issues

Western Bay of Plenty and Tauranga

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 Western Bay of Plenty and Tauranga area. In this report the Western Bay of Plenty and Tauranga area includes Western Bay of Plenty District Council and Tauranga City Council.

This report is the tenth road safety report for the Western Bay of Plenty and Tauranga 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 Western Bay of Plenty and Tauranga 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 Western Bay of Plenty and Tauranga area.

We encourage Western Bay of Plenty District Council and Tauranga City Council 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 report is from CAS.

Major road safety issues *

Western Bay of Plenty and Tauranga

Alcohol
Speed
Bend / Loss of Control
Intersections

Nationally

Speed
Alcohol
Failure to give way
Restraints

2008 road trauma

Casualties

Deaths 11
Serious casualties 93
Minor casualties 281

Western Bay of Plenty and Tauranga

Crashes

Fatal crashes 9
Serious injury crashes 73
Minor injury crashes 202
Non-injury crashes 912

* Issues are not in any specific order of importance

Overview

In 2008 on local roads in Western Bay of Plenty and Tauranga there were 181 injury crashes and 602 non-injury crashes. In addition there were 103 injury crashes and 310 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 284 injury crashes on local roads and state highways.

Casualties by urban / rural 2008

	Fatalities	Serious injuries	Minor injuries	Total
Rural	6	51	128	185
Urban	5	42	153	200
Total	11	93	281	385

	Fatalities	Serious injuries	Minor injuries	Total
Local roads	4	54	169	227
State highways	7	39	112	158
Total	11	93	281	385

Crash trends in Western Bay of Plenty and Tauranga

Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Injury Crashes
1999	19	48	151	218
2000	18	52	135	205
2001	18	47	150	215
2002	9	75	229	313
2003	23	54	200	277
2004	13	66	182	261
2005	9	58	190	257
2006	11	75	192	278
2007	10	87	229	326
2008	9	73	202	294

Local road 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	29	20
Too fast	22	20
At bends	29	26
At intersections	40	39
Pedestrians	9	11
Cyclists	14	13
Motorcyclists	23	16
Road factors	8	9
Night time	38	30

Further information about injury and non-injury crashes on **local roads** in Western Bay of Plenty and Tauranga 2004 to 2008:

- Worst month May, best February
- Worst day Friday, best Sunday
- 21 percent on wet roads
- 30 percent at night
- 43 percent at intersections
- 1807 roadside objects struck
- Social cost of crashes in 2008 \$85m

Further information about injury and non-injury crashes on **state highways** in Western Bay of Plenty and Tauranga 2004 to 2008:

- Worst month May, best September
- Worst day Friday, best Monday
- 23 percent on wet roads
- 30 percent at night
- 42 percent at intersections
- 954 roadside objects struck
- Social cost of crashes in 2008 \$61m

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 one km/h reduction in mean speed can produce a three percent reduction in injury crashes.

Between 2004 and 2008 18 percent of injury crashes in Western Bay of Plenty and Tauranga involved travelling too fast for the conditions. These crashes resulted in 18 fatalities, 102 serious injuries and 299 minor injuries.

Crash numbers have fluctuated over the last 5 years, however the number of injury crashes in 2008 was higher than any of the past 4 years.

Speed related crashes					
Speed related crashes	2004	2005	2006	2007	2008
Rural	32	14	29	27	33
Urban	24	26	21	20	28
Total	56	40	50	47	61

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)	2004-2008
SH 27 / Tasman Quay intersection	\$1,200,000
SH 29 at Omanawa Stream Bridge	\$11,500,000
SH 29—2000m south of Maclaren Falls Rd	\$1,300,000
SH 36 - 100m south of Taumata Rd	\$1,300,000
Bellevue Rd / Windsor Rd intersection	\$980,000

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

Drivers age *	Male	Female	Total
2004 - 2008			
15-19 years	58	35	93
20 - 24	44	14	58
25 - 29	21	2	23
30 - 39	26	9	35
40 - 49	20	7	27
50 - 59	8	5	13
60 - 69	2	2	4
70+	0	1	1
Total	179	75	254

* note age ranges are not equal

Further information about the 161 speed related injury crashes on **local roads** in Western Bay of Plenty and Tauranga 2004 to 2008:

- 7 deaths, 49 serious injuries and 189 minor injuries
- Most common crash type 'Lost control on bend'
- 66 percent midblock
- 29 percent wet road
- 54 percent night time
- Worst month February, best May
- Worst day of week Saturday, best Tuesday
- Worst three hour time period 3pm to 6pm and 6pm to 9pm (equal)

Further information about the 93 speed related injury crashes on **state highways** in Western Bay of Plenty and Tauranga 2004 to 2008:

- 11 deaths, 53 serious injuries and 110 minor injuries
- Most common crash type 'Lost control on bend'
- 81 percent midblock
- 38 percent wet road
- 55 percent night time
- Worst month April, best May
- Worst day of week Saturday, best Monday
- Worst three hour time period 6pm to 9pm

Intersections

During the five year period 2004 to 2008 within the Western Bay of Plenty and Tauranga there were a total of 2600 crashes at intersections, 510 of these were injury crashes and 2090 non-injury.

84 percent of these were in urban areas and 7 people were killed, 139 received serious injuries and 527 received minor injuries.

Crashes at Intersections					
	2004	2005	2006	2007	2008
Injury crash	96	104	101	110	99
Non-injury crash	454	426	414	416	380
Total	550	530	515	526	479

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 29 / Totara St	52	1
SH 2 / Domain Rd	44	1
SH 29 / Girven Rd	40	9
SH 2 / Fraser St	32	7
Welcome Bay Rd / Ohauti Rd	31	5

Junction control Injury and non-injury crashes				
Junction control	Traffic signals	Nil	Give Way	Stop
Number of crashes	261	612	1307	397

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
- General errors of judgement

Junction type Injury and Non-injury crashes		
Junction Type	Open	Urban
Roundabout	51	551
Tee	273	972
Cross (X)	56	552
Y	17	28
Other (includes driveways)	20	79

Further information about the 326 injury crashes at intersections on **local roads** in Western Bay of Plenty and Tauranga 2004 to 2008:

- 3 deaths, 91 serious injuries and 316 minor injuries
- 19 percent wet roads
- 29 percent night time
- Worst month June, best July
- Worst day of week Friday, best Tuesday
- Worst three hour time period 3pm to 6pm

Further information about the 184 injury crashes at intersections on **state highways** in Western Bay of Plenty and Tauranga 2004 to 2008:

- 4 deaths, 38 serious injuries and 211 minor injuries
- 17 percent wet roads
- 24 percent night time
- Worst months May & October (equal), best March
- Worst day of week Friday, best Sunday
- Worst three hour time period 3pm to 6pm

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 Western Bay of Plenty and Tauranga alcohol was a factor in 23 percent of injury crashes in 2008.

Number of alcohol related injury crashes

Crash year	Open road	Urban road	Total
2004	25	29	54
2005	14	30	44
2006	33	34	67
2007	35	25	60
2008	28	36	64
Total	135	154	289

(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 Western Bay of Plenty and Tauranga.

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 107 non-injury alcohol related crashes reported by the Police in Western Bay of Plenty and Tauranga.

Alcohol related injury crashes by location

Road (road lengths may differ)	Crash social costs 2004-2008
SH 29 at Omanawa Stream Bridge	\$10,700,000
Bellvue Rd / Windsor Rd intersection	\$1,000,000
SH 2 / Barrett Rd intersection	\$310,000
SH 2 / Gulliver Rd intersection	\$190,000
SH 33—9000m south of Allport Rd	\$5,800,000

Further information about the 170 alcohol related injury crashes in Western Bay of Plenty and Tauranga on **local roads** 2004 to 2008:

- 8 deaths, 65 serious injuries and 173 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type 'Lost control on bend'
- 39 percent at intersections
- 71 percent urban
- 22 percent wet road
- 85 percent night time
- Worst three hour time period 9pm to midnight
- Worst months February & July (equal) best May
- Worst day of week Saturday, best Tuesday

Further information about the 84 alcohol related injury crashes in Western Bay of Plenty and Tauranga on **state highways** 2004 to 2008:

- 18 deaths, 56 serious injuries and 123 minor injuries
- 76 percent of at fault drivers were male
- Most common crash type 'Lost control on bend'
- 20 percent at intersections
- 28 percent urban
- 26 percent wet road
- 71 percent night time
- Worst three hour time period 6pm to 9pm
- Worst months January & April (equal), best May,
- Worst day of week Sunday, best Monday

Bends – loss of control or head on

Between 2004 and 2008 29 percent of all injury crashes in Western Bay of Plenty and Tauranga were loss of control or head on bends. These crashes resulted in 30 fatalities, 155 serious injuries and 427 minor injuries.

Total crash numbers rose between 2005 and 2007 and fell again in 2008.

Crashes at bends 2004 to 2008				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2004	7	18	53	78
2005	5	15	50	70
2006	5	20	55	80
2007	4	29	57	90
2008	3	32	52	87
Total	24	114	267	405

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 Western Bay of Plenty and Tauranga were cliffs or banks (80), fences (64), trees (51) and posts or poles (42) from a total of 396 objects struck.

Main characteristics of injury lost control or head on crashes at bends	
Crash characteristic	Percentage of crashes
Single vehicle	72
Alcohol	39
Excessive speed for the conditions	43
Road factors	21
Poor handling	36
Rural road	66
Wet road	31
Night time	48

Further information about the 219 injury loss of control or head on crashes on bends on **local roads** in Western Bay of Plenty and Tauranga 2004 to 2008:

- 4 deaths, 70 serious injuries and 240 minor injuries
- 70 percent of at fault drivers were male
- Most common at fault driver age group was 15—19 years (33 percent of all at fault drivers)
- 41 percent of crashes involved alcohol
- 52 percent of crashes involved 'too fast for the conditions'
- Worst month February, best January
- Worst day of week Saturday, best Tuesday
- Worst time period 3pm to 6pm

Further information about the 186 injury loss of control or head on crashes on bends on **state highways** in the Western Bay of Plenty and Tauranga 2004 to 2008:

- 26 deaths, 117 serious injuries and 187 minor injuries
- 75 percent of at fault drivers were male
- Most common at fault driver age group was 15 to 19 years (21 percent of at fault drivers)
- 35 percent of crashes involved alcohol
- 32 percent of crashes involved 'too fast for the conditions'
- Worst month January, best May
- Worst day of week Saturday, best Monday
- Worst time period 6pm to 9pm

Rear End Crashes

Between 2004 and 2008, 24 percent of all injury crashes in Western Bay of Plenty and Tauranga involved rear end collisions.

These crashes resulted in 1 fatality, 51 serious injuries and 314 minor injuries.

There were also 1821 non-injury rear end crashes and these numbers have fluctuated over the last 5 years.

Rear End collisions 2004 to 2008				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2004	-	7	33	40
2005	-	10	46	56
2006	1	12	41	54
2007	-	10	50	60
2008	-	8	52	60
Total	1	47	222	270

Most rear end crashes involve a driver failing to see a car slowing with 18 percent of all injury rear end crashes including this factor. 12 percent involve a driver following too closely.

Locations with the most injury rear end crashes 2004 to 2008	
Location name (Within a radius of 100m)	Total Injury crashes
SH 29 / Aerodrome Rd intersection	3
Papamoa Beach Rd—300m west of Bermuda Dr	3
SH 29—20m north of Spur Ave	3
Girven Rd / Gloucester Rd intersection	3
Cameron Rd—20m south of Arundel St	2

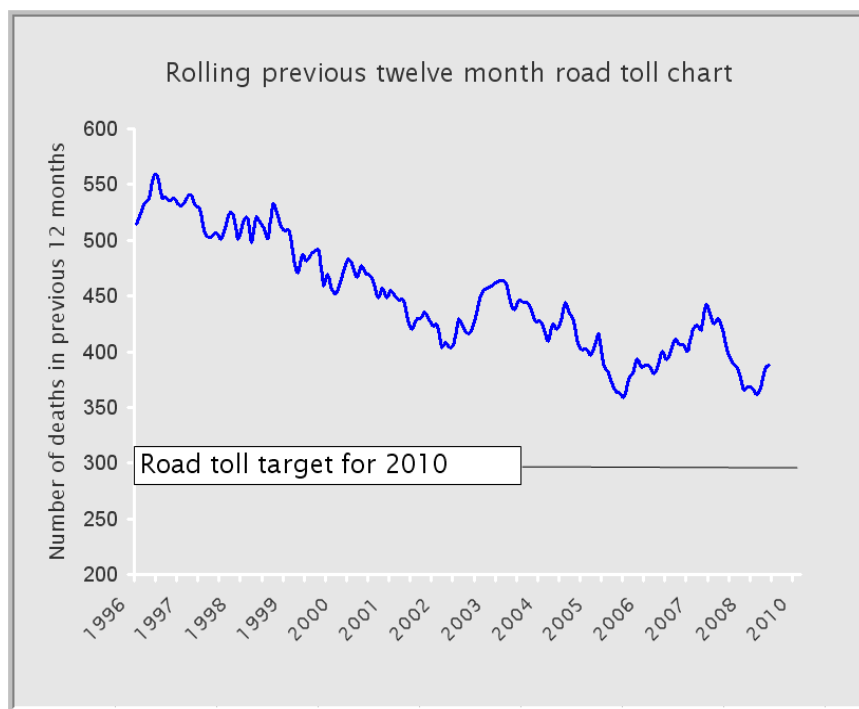
Age and gender of at fault drivers (note—age ranges are not equal)

Ages of drivers at fault in injury crashes (2004 to 2008)	Male	Female	Total
15- 19	31	23	54
20 - 24	26	15	41
25 - 29	19	13	32
30 - 39	23	25	48
40 - 49	23	14	37
50 - 59	23	18	41
60 - 69	12	4	16
70+	10	6	16
Total	167	118	285

Further information about rear end injury crashes on **local roads** and **state highways** in Western Bay of Plenty and Tauranga 2004 to 2008:

- 1 death, 34 serious injuries and 182 minor injuries on **local roads**
- 17 serious injuries and 132 minor injuries on **state highways**
- 13 percent involved alcohol
- 76 percent involved 'poor observation'
- 18 percent at night
- 18 percent in the wet
- 62 percent of drivers with a 'full' licence
- 59 percent of at fault drivers were male
- Most common cause of crashes, 'failed to see vehicle slowing'
- Worst month January, best August
- Worst day of week Friday, best Sunday
- 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/>

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