



briefing notes - road safety issues

Whangarei District

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 Whangarei District.

This report is the tenth road safety report for Whangarei District. All the material unless otherwise stated in this report applies to both local roads and to 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 Whangarei District 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 district.

We encourage Whangarei District to use its free access to the Ministry of Transport's Crash Analysis System (CAS) to delve deeper into the highlighted issues. All data and maps in this note are from CAS.

Major road safety issues *

Whangarei District

Bends

Alcohol

Road factors and roadside hazards

Wet Roads

Nationally *

Speed

Alcohol

Failure to give way

Restraints

2008 road trauma

Casualties

Whangarei District

Deaths 15

Serious casualties 51

Minor casualties 246

Crashes

Whangarei District

Fatal crashes 15

Serious injury crashes 41

Minor injury crashes 173

Non-injury crashes 566

* not in any specific order of priority

Overview

In 2008 on local roads in Whangarei District there were 154 injury crashes and 413 non-injury crashes. In addition there were 75 injury crashes and 153 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 229 injury crashes by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by urban / rural 2008				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	15	32	127	174
Urban	0	19	118	137
Total	15	51	246	311

In the last decade fatal crashes in Whangarei have fluctuated but the trend over the last five years is upwards. Serious crashes remain constant while minor injury crashes rose in 2003, perhaps reflecting an improvement in the report of the lower severity crashes. Alcohol remains a problem in the district with little sign of diminishing as a crash problem.

Crashes in the wet present themselves at much higher rates than peer authorities, potentially just because Whangarei is wetter. However the differences between Whangarei District and it peers was large enough to be considered worthy of flagging in this years briefing note.

Crash trends in Whangarei District				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
1999	8	40	77	125
2000	14	27	58	99
2001	12	34	71	117
2002	14	32	99	145
2003	20	33	150	203
2004	6	56	154	216
2005	6	42	179	227
2006	12	40	156	208
2007	11	36	152	199
2008	15	41	173	229

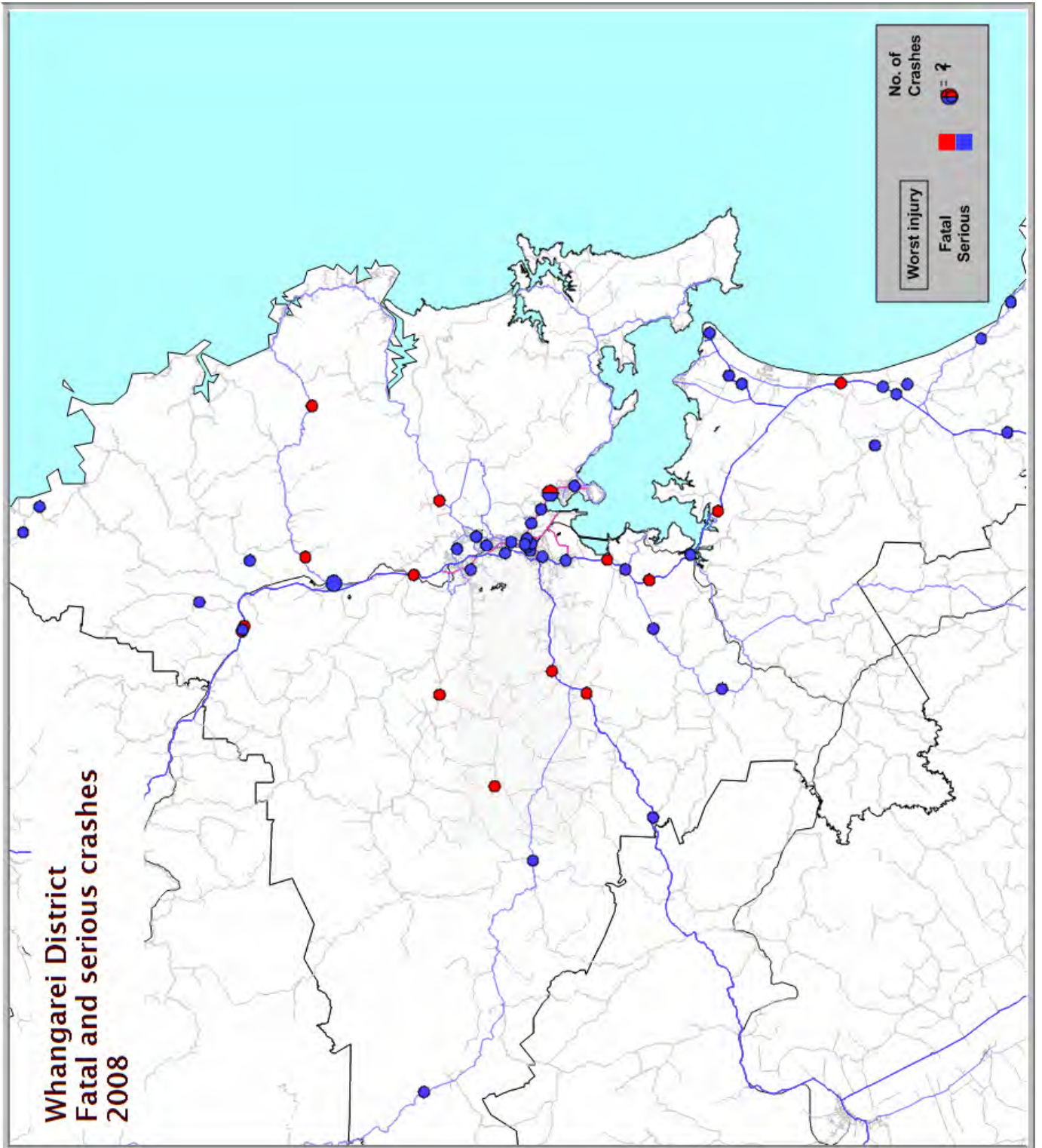
Crash types or contributory causes		
Crash type or contributory cause 2004 to 2008	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Alcohol	28	17
Too fast	28	22
At bends	46	40
At intersections	23	30
Wet roads	28	30
Roadside object struck	51	48
Road factors	15	17
Night time	38	32

Further information about injury and non-injury crashes on **local** roads in Whangarei District 2004 to 2008:

- Worst month December, best January
- Worst day Friday, best Sunday
- 28 percent on wet roads
- 29 percent at night
- 39 percent at intersections
- 1488 roadside objects struck
- Social cost of crashes in 2008 \$74.7m

Further information about injury and non-injury crashes on **State Highways** in Whangarei District 2004 to 2008:

- Worst month January, best August
- Worst day Friday, best Monday
- 32 percent on wet roads
- 29 percent at night
- 33 percent at intersections
- 620 roadside objects struck
- Social cost of crashes in 2008 \$53.8m



Whangarei District
Fatal and serious crashes
2008

Bend - loss of control or head on

Between 2004 and 2008 forty percent of all injury crashes in Whangarei District were loss of control or head on bends.

These crashes resulted in 24 fatalities, 122 serious injuries and 451 minor injuries.

Crashes at bends 2004 to 2008

Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2004	2	27	59	88
2005	3	22	55	80
2006	6	18	74	98
2007	5	12	61	78
2008	8	18	66	87
Total	24	97	310	431

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 Whangarei District were cliffs or banks (100), trees (63), fences (81), posts or poles (41) and ditches (95) from a total of 473 objects struck.

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

Crash characteristic	Percentage of crashes
Single vehicle	78
Alcohol	29
Excessive speed for the conditions	43
Road factors	26
Poor handling	42
Rural road	77
Wet road	41
Night time	40

Further information about the 305 injury loss of control or head on crashes on bends on **local** roads in Whangarei District 2004 to 2008:

- 14 deaths, 84 serious injuries and 309 minor injuries
- 71 percent of at fault drivers were male
- Most common crash type “loss of control turning right” (140 crashes)
- Most common at fault driver age group 15 to 19 years (29 percent of all at fault drivers)
- 34 percent of crashes involved alcohol
- 47 percent of crashes involved speed too fast for the conditions
- Worst month October, best March
- Worst day Saturday, best Thursday
- Worst three hour time period 3pm to 6pm
- 23 percent involved a road factor

Further information about the 126 injury loss of control or head on crashes on bends on **State Highways** in Whangarei District 2004 to 2008:

- 10 deaths, 38 serious injuries and 142 minor injuries
- 61 percent of at fault drivers were male
- Most common crash type “loss of control turning right” (50 crashes)
- Most common at fault driver age group 15 to 19 years (23 percent of at fault drivers)
- 15 percent of crashes involved alcohol
- 35 percent of crashes involved speed too fast for the conditions
- Worst month December, best March and June (equal)
- Worst day Sunday, best Monday
- Worst three hour time period 3pm to 6pm
- 36 percent involved a road factor

Road Factors - including roadside hazards

A safe road environment includes appropriate geometric design standards, good delineation, adequate surface skid resistance and a roadside free of unforgiving hazards.

In 2008 in Whangarei District, "road factors" were a contributing factor in 15 percent of fatal and serious crashes and 17 percent of injury crashes.

Additionally in Whangarei District between 2004 and 2008 51 percent of all fatal and serious crashes and 48 percent of injury crashes involved roadside hazards being struck.

Road factor related injury crashes

Road type	2004	2005	2006	2007	2008
Urban	22	17	30	28	32
Rural	11	7	7	14	14
Total	33	24	37	42	46

Roadside hazards normally contribute to the overall crash outcome by increasing injury severity but can in themselves be a contributory factor in a crash.

For example occupants in an errant vehicle striking a large tree close to the road edge are likely to sustain worse injuries than if the tree was not present. If the same tree had low branches and was located at an intersection it could also contribute to a lack of visibility.

In the injury crashes in Whangarei District where a roadside hazard was struck 23 people died, 131 received serious injuries and 526 minor injuries.

The most commonly struck objects are shown in the table below.

Most common types of hazards struck (all injury crashes in Whangarei District)

Type of hazard 2004 to 2008	Number of times hazard struck
Ditch	156
Fence	119
Cliff or bank	118
Tree	80
Post or pole	61

Types of road factors in injury crashes

Road factor type 2004 to 2008	Local roads	State Highways
Slippery road *	65	57
Road surface in poor condition	28	18
Road obstructed	1	0
Visibility limited	20	6
Signs or signals (needed or faulty)	2	1
Markings (needed or faulty)	2	0
Street lighting	2	0

* note that NZTA does not assume that a road that is "wet" is necessarily "slippery". This factor is only added to CAS if the attending Police Officer specifically mentions a "slippery road".

Further information about the 107 road factor related injury crashes in Whangarei District on **local roads** 2004 to 2008:

- 5 deaths, 22 serious injuries and 105 minor injuries
- Most common crash type, loss of control at bends (69 crashes)
- 20 percent at intersections
- 42 percent urban
- 58 percent wet road
- 26 percent night time
- Worst month June, best September

Further information about the 75 road factor related injury crashes in Whangarei District on **State Highways** 2004 to 2008:

- 3 deaths, 15 serious injuries and 87 minor injuries
- Most common crash type, loss of control at bends (45 crashes)
- 5 percent at intersections
- 11 percent urban
- 75 percent wet road
- 29 percent night time
- Worst month January, best November and May (equal)

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 sixteen times more likely to be involved in a fatal 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 Whangarei District, alcohol was a factor in 17 percent of injury crashes in 2008.

Number of alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2004	23	11	34
2005	23	18	41
2006	21	17	38
2007	18	19	37
2008	18	16	34
Total	103	81	184

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

From the beginning of 2007 NZTA has been adding driver factor codes to all non-injury crashes for the northern district.

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 48 non-injury alcohol related crashes reported by the Police in the Whangarei District.

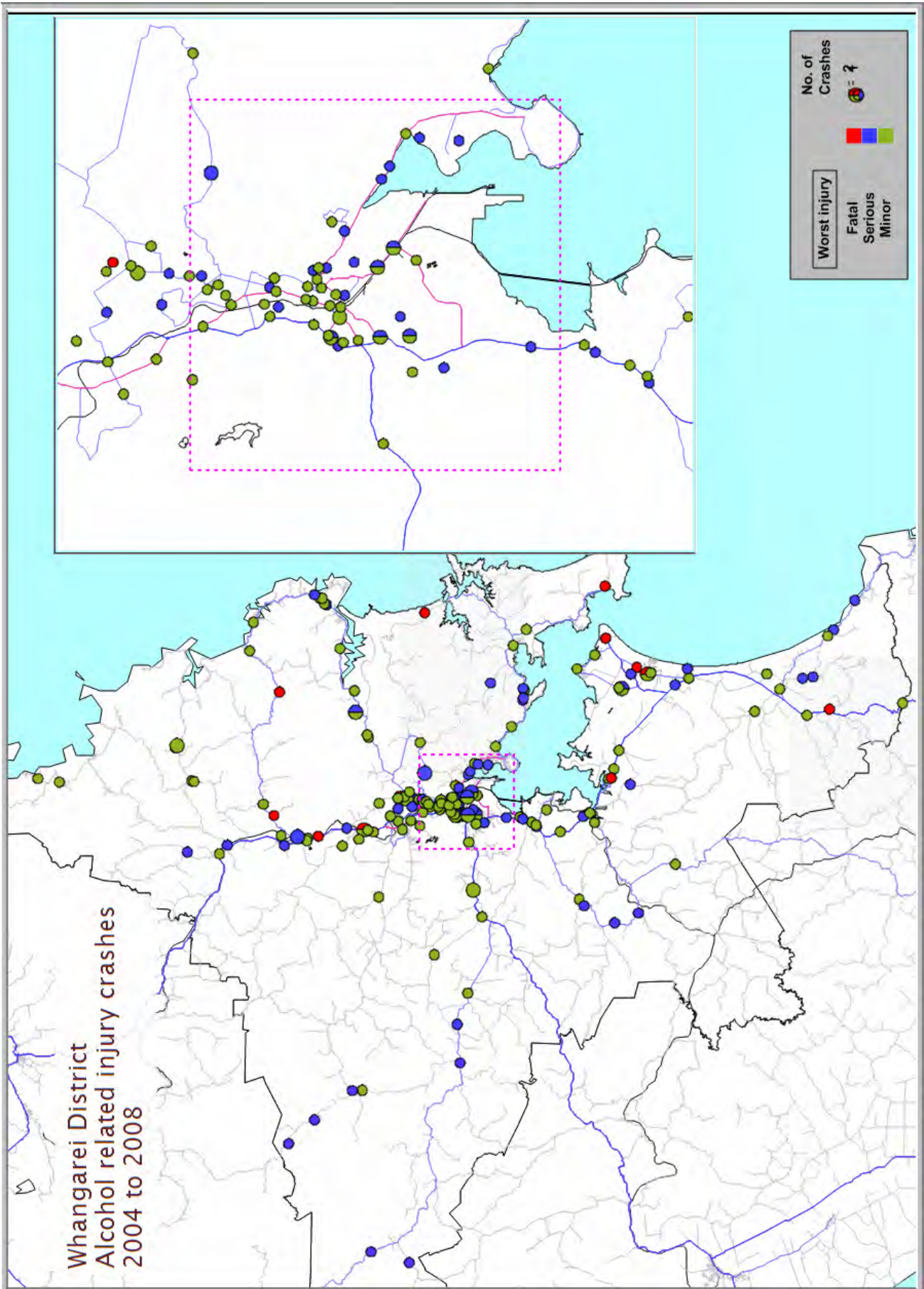
The map on the following page shows the locations of alcohol related injury crashes.

Further information about the 146 alcohol related injury crashes in Whangarei District on **local** roads 2004 to 2008:

- 8 deaths, 60 serious injuries and 139 minor injuries
- 79 percent of at fault drivers were male
- Most common crash type “loss of control at a bend” (105 crashes)
- 23 percent at intersections
- 50 percent urban
- 27 percent wet road
- 69 percent night time
- Worst three hour time period midnight till 3am
- Worst month February, best April
- Worst day Saturday, best Tuesday
- Most common at fault driver age group 15 to 19 years

Further information about the 38 alcohol related injury crashes in Whangarei District on **State Highways** 2004 to 2008:

- 4 deaths, 12 serious injuries and 34 minor injuries
- 76 percent of at fault drivers were male
- Most common crash type “loss of control at a bend (19 crashes)
- 21 percent at intersections
- 32 percent wet road
- 74 percent night time
- Worst three hour time period 6pm till 9pm
- Worst month February, best September
- Worst day Sunday, best Monday
- Most common at fault driver age group 15 to 19 years



Crashes in the wet

The proportion of fatal and serious injury crashes occurring on wet roads in Whangarei District is higher than the New Zealand average for similar local bodies.

Between 2004 and 2008 there were a total of 326 wet road injury crashes on roads in Whangarei District. These resulted in 12 fatalities, 74 serious injuries and 353 minor injuries.

It is worth noting that NZTA does not assume in CAS that a wet road is a slippery one.

It may be that Whangarei is simply on average wetter than its peers. Never-the-less higher than expected numbers of crashes in the wet can be an indicator of issues with road drainage and surface texture; both of which offering lower than anticipated skid resistance to drivers.

Other complicating factors can be loss of visibility of road markings through poor drainage, additional glare from street lighting and oncoming vehicles as well as aquaplaning.

There is some considerable overlap between this subject and the “Road Factor” issue in this briefing note.

Wet road injury crashes					
Road type	2004	2005	2006	2007	2008
Local roads	39	40	37	38	49
State Highways	23	27	19	29	25
Total	62	67	56	67	74

The map on the following page illustrates the locations of injury wet road crashes in Whangarei District.

Wet road injury crashes by month and road type 2004 to 2008

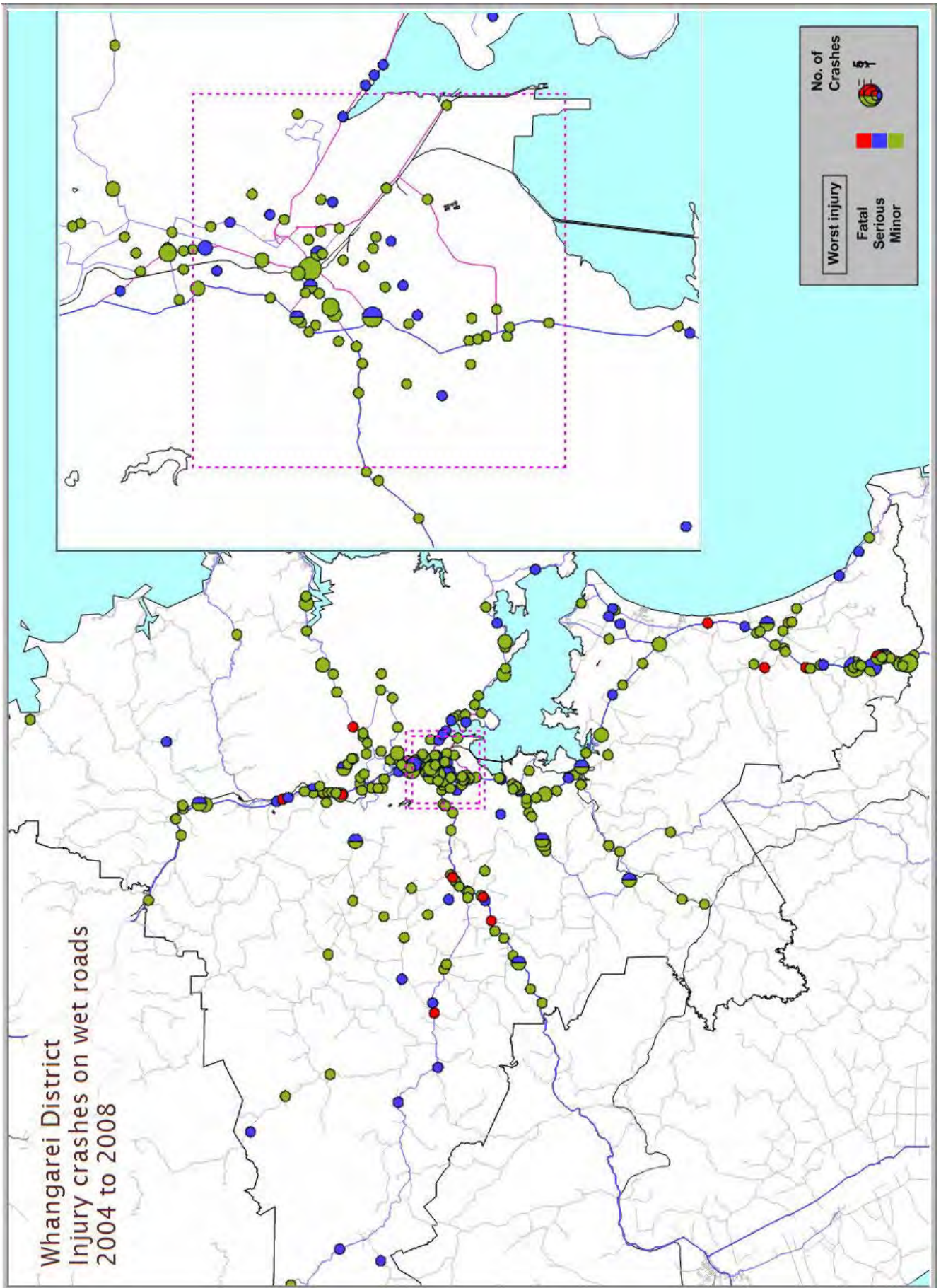
Month	Local roads	State Highways
January	11	16
February	12	13
March	4	5
April	10	9
May	27	10
June	33	12
July	27	10
August	20	8
September	12	11
October	16	8
November	10	5
December	21	16
TOTAL	203	123

Further information about the 203 injury wet road crashes in Whangarei District on **local** roads 2004 to 2008:

- Most common crash type was loss of control at a bend (119 crashes)
- 38 percent at night
- 20 percent injury crashes include alcohol
- 34 percent injury crashes speed related
- Worst month June, best March (these do not necessarily match with months with the most or least rainfall)
- 50 percent urban

Further information about the 123 injury wet road injury crashes in Whangarei District on **State Highways** 2004 to 2008:

- Most common crash type was loss of control at a bend (56 crashes)
- 36 percent at night
- 10 percent injury crashes include alcohol
- 28 percent injury crashes speed related
- Worst month January, best December (these do not necessarily match with months with the most or least rainfall)
- 14 percent urban



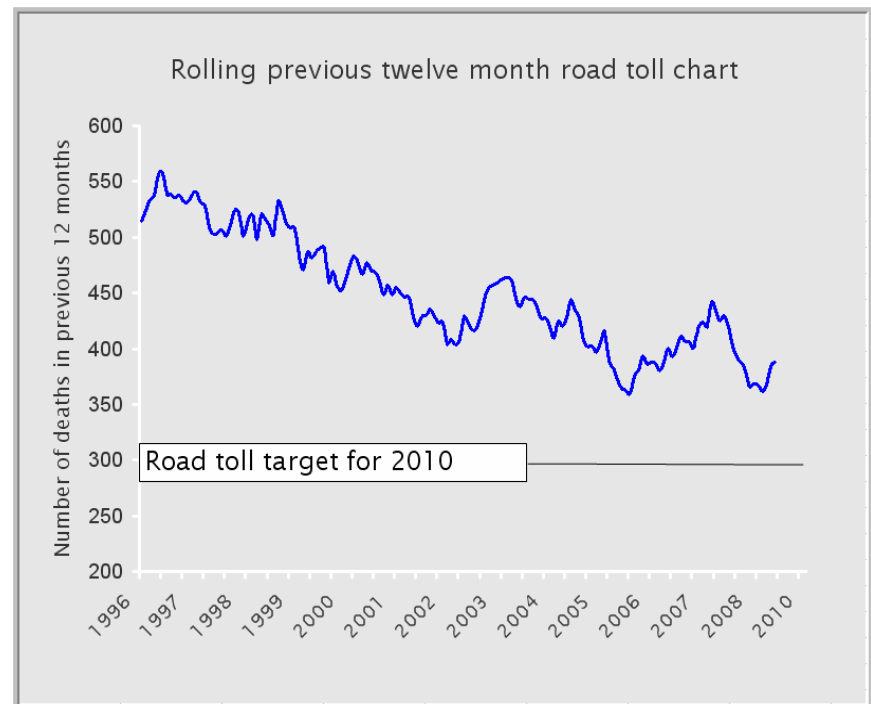
The next ten years—moving beyond Road Safety 2010

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 right illustrates the progress made during the life of the Road Safety 2010 strategy. 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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