



New Zealand Government

briefing notes - road safety issues

Waikato District

New Zealand Transport Agency has prepared this eleventh road safety issues report. It is based on reported crash data and trends for the 2005-2009 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 Waikato District.

All the material unless otherwise stated in this report applies to both local roads and state highways. Local roads are all non state highway roads in Waikato District.

In March the Government released Safer Journeys the road safety strategy for the next ten years. The two following pages contain a brief introduction to the strategy and a link to find more information.

The issues chosen for this report are drawn from either the most common crash types, those that appear over-represented when Waikato 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 Waikato District and we encourage safety engaged staff at Waikato District 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 and maps in this note are from CAS.

Major road safety issues

Waikato District

Straight road crashes

Fatigue

Wet road crashes

2009 road trauma

Casualties

Waikato District

Deaths 13

Serious casualties 53

Minor casualties 235

National priorities from Road Safety 2020— Safer Journeys

Speed

Alcohol / drugs

Young drivers

Roads and roadsides

Motorcyclists

Crashes

Waikato District

Fatal crashes 13

Serious injury crashes 38

Minor injury crashes 151

Non-injury crashes 299

Safer Journeys

For the past decade road safety in New Zealand has been directed by the Road Safety 2010 strategy.

This strategy was introduced in 2003 and aimed to reduce deaths and casualties from road crashes.

In March 2010 the Government released a new strategy, "Safer Journeys", to build on the gains made under the Road Safety to 2010.

Under the new strategy, road safety will be looked at from a system wide approach rather than focusing so strongly on the road user.

The emphasis will be on improving all the parts of the road transport system that impact on safety; the road, the vehicle, travel speeds and the road user.

Under the 2020 strategy a number of priority areas have been chosen as the areas of focus.

These areas were assigned a priority, based on research that shows five major areas of concern, six areas of lesser concern, and two areas where continued focus is needed, or concern is emerging.

These divisions are shown in "Table 3" opposite. This table is a direct extract from page 12 of the Safer Journeys document which can be found at: <http://www.transport.govt.nz/saferjourneys/Documents/SaferJourneyStrategy.pdf>

To reflect the new strategy, changes to the wording and the way data is presented in these briefing notes to reflect and emphasise the connections to the new strategy. In particular, we have included more tables showing age distribution as problems with the safety of young drivers as a particular focus of Safer Journeys.

However, as these reports are based on crash data, particularly fatal and serious crashes, the actual "issues" identified by our analysis remain as before, fact based. It would be irresponsible of us to ignore an area of high social cost in a particular local body or region just because it wasn't a national priority.

We have prepared a table on the following page which shows the areas of "high concern" under Safer Journeys 2020 strategy.

This table allows some relative comparison of Safer Journeys priorities across the local bodies in the area covered by the Hamilton NZTA Office.

Table 3 – Safer Journeys’ areas of concern and the Safe System

AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM			
	SAFE ROADS AND ROAD-SIDES	SAFE SPEEDS	SAFE VEHICLES	SAFE ROAD USE
Areas of high concern				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe speeds	✓	✓	✓	
Increasing the safety of motorcycling	✓	✓	✓	✓
Areas of medium concern				
Improving the safety of the light vehicle fleet			✓	✓
Safe walking and cycling	✓	✓	✓	✓
Improving the safety of heavy vehicles	✓	✓	✓	✓
Reducing the impact of fatigue	✓	✓	✓	✓
Addressing 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	✓	✓	✓	✓

For some priorities (eg motorcycling), complementary action will be taken across all four areas of the Safe System. For others (eg reducing the impact of drink driving or safe roads), more effort would be focussed on one or two of the four Safe System areas.

Table source: Ministry of Transport 2020 Safer Journeys

Status of the areas of “high concern” from Safer Journeys 2020 for the Waikato Region

(table below refers only to fatal and serious crashes on both local roads and state highways for the years 2005—2009 except for the “intersection” columns which also include minor crashes for reasons of sample size)

Safer Journeys area of concern	Reducing alcohol and drug impaired driving	Increase the safety of young drivers	Safer roads and roadsides			Safe speeds	Increasing the safety of motorcycling
	Measure	Percentage of fatal and serious crashes with this factor	Percentage of fatal and serious crashes with at fault drivers aged 24 years or less	Percentage of fatal and serious crashes with an object struck	Number of urban intersections with three or more injury crashes in the last five years	Number of rural intersections with three or more injury crashes in the last five years	Percentage of fatal and serious crashes where speed was a factor
Thames Coromandel District	31	27	52	5	0	30	29
Hauraki District	25	24	51	3	2	29	18
Matamata Piako District	25	31	46	2	6	28	17
Waikato District	25	25	53	5	15	25	18
Hamilton City	23	35	30	97	8	19	17
Waikato District	17	40	47	5	8	26	15
Otorohanga District	29	25	50	2	0	15	23
Waitomo District	21	29	65	1	0	32	14
South Waikato District	21	27	42	1	3	28	15
Taupo District	25	31	47	15	6	26	21
Waikato Region	24	30	46	136	47	26	18
New Zealand	23	34	45	1938	320	23	18

Waikato District overview

In 2009 on local roads in Waikato District there were 92 injury crashes and 126 non-injury crashes. In addition on state highways in Waikato District there were 110 injury crashes and 173 non-injury crashes. The tables below show the number of injuries resulting from the 203 injury crashes by rural or urban areas for local roads and state highways (rural is defined as an area with a speed limit of 80km/h or more).

Casualties by urban / rural 2009				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	12	43	194	249
Urban	1	10	41	52
Total	13	53	235	301

Casualties by state highway / local road 2009				
	Fatalities	Serious injuries	Minor injuries	Total
Local road	6	29	93	128
State highway	7	24	142	173
Total	13	53	235	301

Crash trends in Waikato District				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
2000	18	37	119	174
2001	13	30	126	169
2002	16	37	134	187
2003	19	41	136	196
2004	10	44	156	210
2005	15	29	150	194
2006	12	51	135	198
2007	15	49	157	221
2008	7	39	144	190
2009	13	38	151	202

Local road crash characteristics		
Crash type or contributory cause 2005 to 2009	Percentage fatal and serious crashes of this type or contributory cause	Percentage all injury crashes of this type or contributory cause
Alcohol	26	17
Speed	25	20
Wet roads	26	30
Night	39	39
Fatigue	14	11

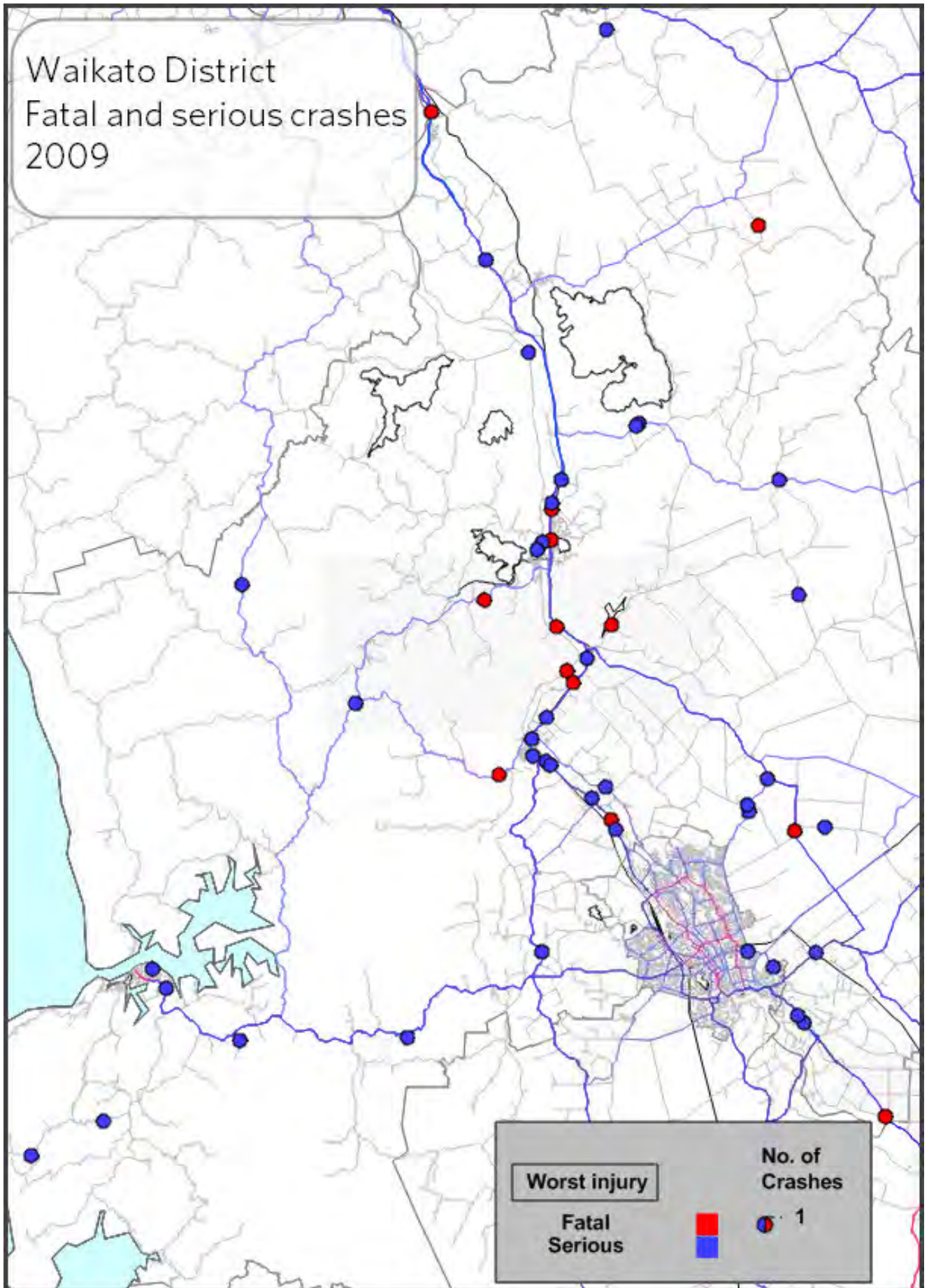
Further information about the 452 injury and 660 non-injury crashes on **local roads** in Waikato District 2005 to 2009:

- 28 deaths, 118 serious and 451 minor injuries
- Worst month May, best October
- Worst day Saturday, best Tuesday
- 32 percent on wet roads
- 42 percent at night
- 23 percent at intersections
- 714 roadside objects struck *
- Most represented five year age block in 'at fault' drivers in injury crashes: 15 to 19 years (19 percent of at fault drivers)
- Social cost of crashes in 2009 \$52.0m

Further information about the 553 injury and 974 non-injury crashes on **state highways** in Waikato District 2005 to 2009:

- 46 deaths, 148 serious and 658 minor injuries
- Worst month June, best September
- Worst day Friday, best Wednesday
- 31 percent on wet roads
- 34 percent at night
- 25 percent at intersections
- 871 roadside objects struck *
- Most represented five year age block in 'at fault' drivers in injury crashes: 15 to 19 years (13 percent of at fault drivers)
- Social cost of crashes in 2009 \$57.5m

* It needs to be noted that if a vehicle hits the same type of object more than once it is only counted in CAS once.



Fatigue

Fatigue is a condition that is present long before a driver falls asleep. It has negative impacts on reaction time, the ability to concentrate, and a driver's understanding of the prevailing road and traffic conditions.

In New Zealand in 2009 fatigued drivers were reported as contributing to 8 percent of all fatal and serious crashes and 6 percent of all injury crashes.

In Waikato District between 2005 and 2009, fatigue was reported as a factor in 16 percent of fatal and serious crashes and 11 percent of injury crashes.

Injury fatigue related crashes Waikato District (2005 - 2009)				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	3	9	17	29
2006	2	5	15	22
2007	1	3	12	16
2008	1	7	10	18
2009	3	4	17	24
Total	10	28	71	109

The table below shows the 30—39 age bracket having relatively high representation of fatigue related crashes at 22 percent of injury crashes in Waikato District.

Age and gender of at fault drivers in injury fatigue related crashes (2009 - 2009) (note : age ranges are not equal)			
Drivers age	Male	Female	Total
15-19 years	14	2	16
20 - 24	12	2	14
25 - 29	9	7	16
30 - 39	21	3	24
40 - 49	13	3	16
50 - 59	5	4	9
60 - 69	5	4	9
70+	6	0	6
Total	85	25	110

A significant proportion of at fault drivers in fatigue related injury crashes live in or relatively close to Waikato District. This is illustrated in the table below.

Home locations of at fault drivers in fatigue related injury crashes in Waikato District (2005 - 2009)

Town of residence	No. of at fault drivers
Hamilton	27
Auckland	14
Huntly	13
Ngaruawahia	5
Taupiri	4

Further information about the 26 fatigue related injury crashes in Waikato District on **local roads** 2005 to 2009:

- 2 deaths, 10 serious and 17 minor injuries
- 73 percent of at fault drivers were male
- 4 percent at intersections
- 8 percent urban
- 15 percent wet road
- 73 percent night time
- Worst time period midnight to 3am
- Worst month March, best January & April
- Worst day of week Saturday, best Friday & Thursday

Further information about the 83 fatigue related injury crashes in Waikato District on **state highways** 2005 to 2009:

- 9 deaths, 23 serious and 87 minor injuries
- 79 percent of at fault drivers were male
- 4 percent at intersections
- 7 percent urban
- 19 percent wet road
- 46 percent night time
- Worst time period 3pm to 6pm
- Worst month December, best August
- Worst day of week Sunday, best Tuesday

Crashes in the wet

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

Between 2005 and 2009 there were a total of 299 wet road injury crashes on roads in Waikato District. These resulted in 24 fatalities, 72 serious injuries and 335 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 Waikato District 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 offer 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.

The tables below show the number of injury crashes by rural or urban areas and for local roads and state highways (rural is defined as an area with a speed limit of 80km/h or more).

Wet road injury crashes by urban / rural roads 2005 to 2009

	Fatal	Serious	Minor	Total
Rural	14	48	197	259
Urban	3	6	31	40
Total	17	54	228	299

Wet road injury crashes by year and road type

Road type	2005	2006	2007	2008	2009
Local roads	31	25	24	27	21
State highways	29	35	49	25	33
Total	60	60	73	52	54

Wet road injury crashes by month and road type 2005 to 2009

Month	Local roads	State highways	Total
January	4	6	10
February	2	10	12
March	7	16	23
April	14	8	22
May	16	22	38
June	12	23	35
July	19	19	38
August	12	13	25
September	12	14	26
October	11	18	29
November	8	8	16
December	11	14	25
TOTAL	128	171	299

Further information about the 128 injury wet road crashes in Waikato District on **local roads** 2005 to 2009:

- Most common crash type was "loss of control at a bend" (76 crashes)
- 47 percent at night
- 17 percent injury crashes include alcohol
- 35 percent injury crashes speed related
- Worst month July, best February (these do not necessarily match with months with the most or least rainfall)
- 19 percent urban

Further information about the 171 injury wet road injury crashes in Waikato District on **state highways** 2005 to 2009:

- Most common crash type was "loss of control at a bend" (88 crashes)
- 38 percent at night
- 13 percent injury crashes include alcohol
- 22 percent injury crashes speed related
- Worst month June, best January (these do not necessarily match with months with the most or least rainfall)
- 9 percent urban

Straight road – loss of control or head on

Between 2005 and 2009, 20 percent of all fatal and injury crashes in Waikato District were straight road - loss of control or head on crashes.

Straight road - loss of control or head on crashes 2005 to 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	4	10	33	47
2006	4	13	25	42
2007	3	8	35	47
2008	2	6	15	22
2009	3	7	34	44
Total	16	44	142	202

These crashes occur when a driver has lost control and either runs off the road or collides with another vehicle.

When drivers lose control, they may crash into roadside hazards such as ditches, banks, poles or trees.

Hitting roadside objects can result in a minor off-road event becoming far more serious.

Ages of at fault drivers in straight road related crashes 2005 to 2009			
Age group	Female	Male	Total
15-19	14	22	36
20-24	8	12	20
25-29	13	14	27
30-34	8	10	18
35-39	3	13	16
40-44	7	11	18
45-49	5	10	15
50-54	8	6	14
55-59	3	5	8
60-64	3	8	11
65-69	3	4	7
70-74	1	4	5
75+	1	7	8

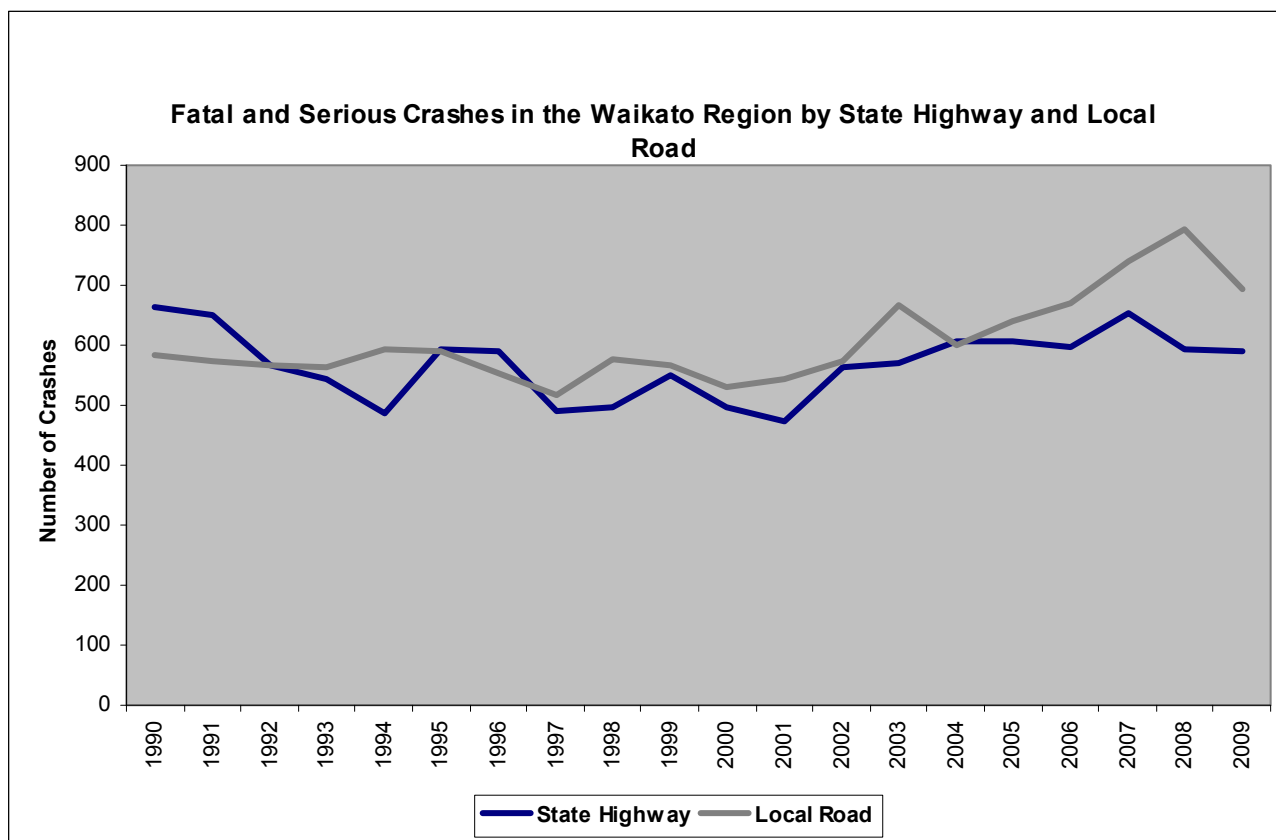
Further information about the 82 injury straight road - loss of control or head on crashes on **local roads** in Waikato District 2005 to 2009:

- 8 deaths, 21 serious injuries and 82 minor injuries
- Most common crash type “off road to left”
- 23 percent of crashes involved alcohol
- 20 percent of crashes involved speed
- 16 percent involved “road factors”
- 17 percent involved fatigue
- 79 percent resulted in a roadside hazard being struck
- Other commonly struck objects were fences, posts or poles and ditches
- 23 percent on wet roads
- 51 percent at night
- Worst month March, best January
- Worst day of week Sunday , best Thursday
- Worst three hour time period 6pm to 9pm

Further information about the 120 injury straight road - loss of control or head on crashes on **state highways** in Waikato District 2005 to 2009:

- 12 deaths, 36 serious injuries and 151 minor injuries
- Most common crash type “off road to left”
- 15 percent of crashes involved alcohol
- 7 percent of crashes involved speed
- 16 percent involved “road factors”
- 40 percent involved fatigue
- 76 percent resulted in a roadside hazard being struck
- Other commonly struck objects were fences, posts or poles and ditches
- 24 percent on wet or icy roads
- 35 percent at night
- Worst month March, best January
- Worst day of week Thursday, best Tuesday
- Worst three hour time period 3pm to 6pm

Looking back—the last two decades ...



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