



briefing notes - road safety issues

Bay of Plenty Region

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 the Bay of Plenty Region. In this report the Bay of Plenty region includes Western Bay of Plenty, Rotorua, Whakatane, Opotiki and Kawerau District Councils and Tauranga City Council.

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 the Bay of Plenty Region.

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 based on crashes with the highest numbers of fatal and serious injuries, those that may be over-represented and also to reflect issues identified in the three local bodies in the region.

We have included a brief overview of crashes in Bay of Plenty Region and we encourage safety engaged staff in the Bay of Plenty Region 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

Bay of Plenty Region

Alcohol
Speed
Crashes on bends

2009 road trauma

Casualties

Bay of Plenty Region

Deaths	29
Serious casualties	173
Minor casualties	622

National priorities from Road Safety 2020— Safer Journeys

Speed
Alcohol / drugs
Young drivers
Roads and roadsides
Motorcyclists

Crashes

Bay of Plenty Region

Fatal crashes	26
Serious injury crashes	139
Minor injury crashes	436
Non-injury crashes	1650

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 Bay of Plenty Region

(table 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	Percentage of fatal and serious crashes involving a motorcyclist
Western BOP District	32	31	48	1*	9	25	15*
Tauranga City	25	28	29	36	1*	20	26
Rotorua District	27	31	42	24	4	33	14
Whakatane District	32	36	49	2	3	32	17*
Opotiki District	37*	37*	68	0**	0***	41*	19**
Kawerau District	56***	56***	89***	0***	0****	33***	22***
BOP Region	29	32	43	63	16	28	18
New Zealand	23	34	45	1938	320	23	18

Note:

* Sample size of 30 crashes or less

** Sample size of 20 crashes or less

*** Sample size of 10 crashes or less

**** No crashes in sample

Bay of Plenty Region overview

In 2009 on local roads in Bay of Plenty Region there were 331 injury crashes and 975 non-injury crashes. In addition on state highways in Bay of Plenty Region there were 270 injury crashes and 675 non-injury crashes.

The tables below show the number of injuries resulting from the 601 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	22	88	328	438
Urban	7	85	294	386
Total	29	173	622	824

Casualties by state highway / local road 2009				
	Fatalities	Serious injuries	Minor injuries	Total
Local road	11	82	312	405
State highway	18	91	310	419
Total	29	173	622	824

Crash trends in Bay of Plenty Region				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
2000	32	98	230	360
2001	35	100	279	414
2002	29	135	427	591
2003	40	109	435	584
2004	32	129	424	585
2005	24	128	385	537
2006	29	150	388	567
2007	27	172	442	641
2008	26	142	434	602
2009	26	139	436	601

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	29	20
Speed	28	23
Bends	39	35
Fatigue	8	7
Youth	32	36

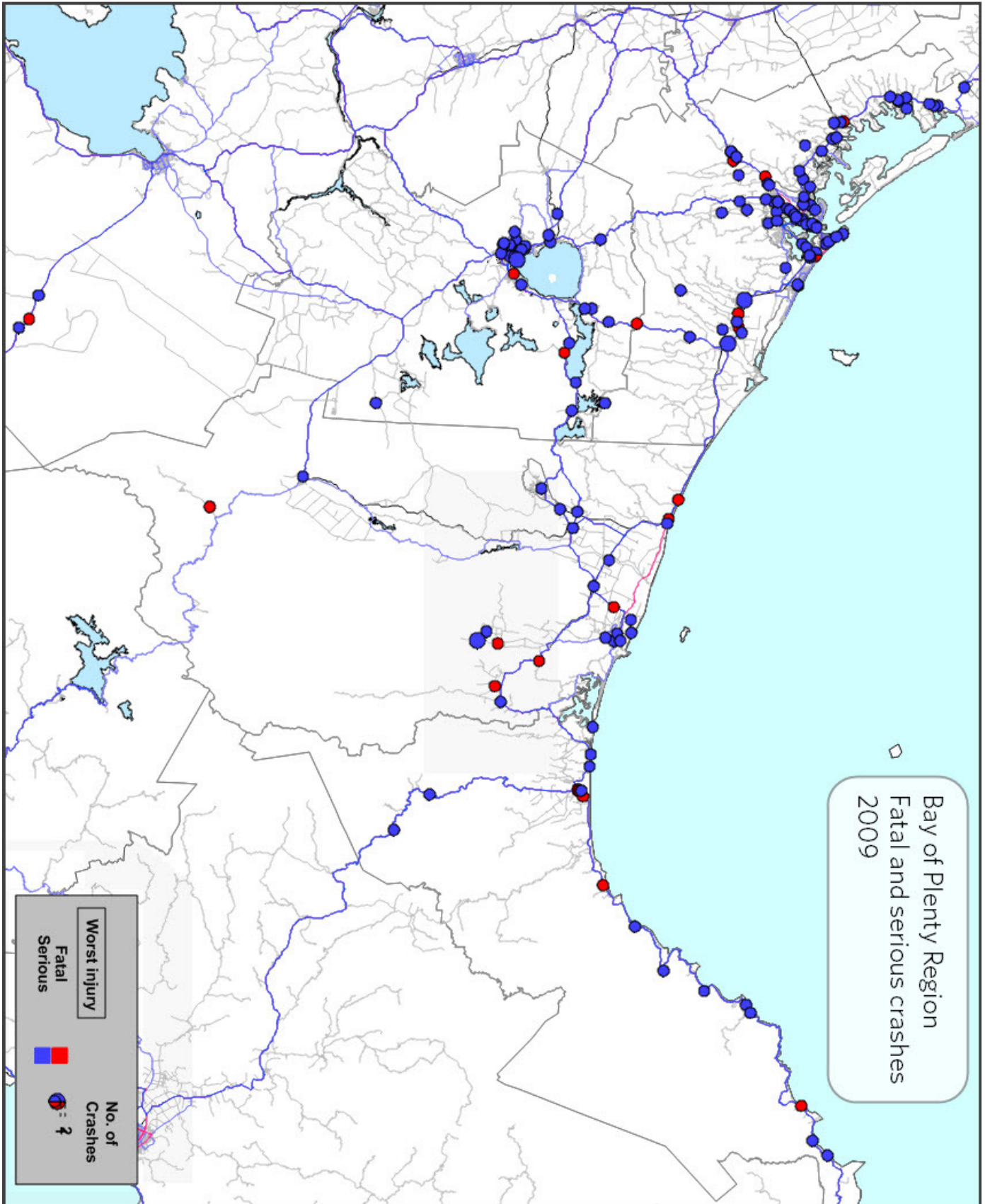
Further information about the 1613 injury and 5279 non-injury crashes on **local roads** in Bay of Plenty Region 2005 to 2009:

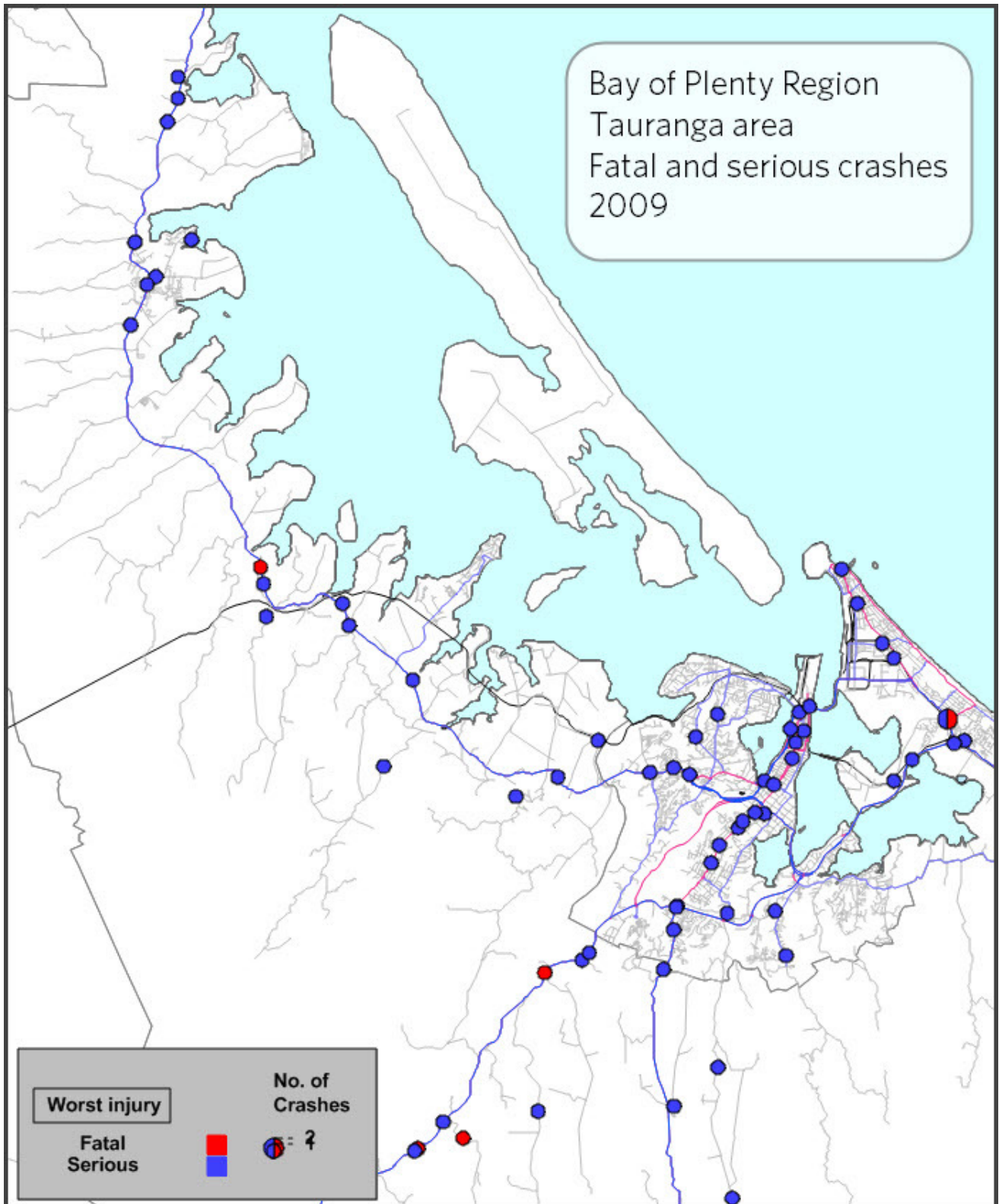
- 48 deaths, 443 serious injuries and 1618 minor injuries
- Worst month June, best October
- Worst day Friday, best Sunday
- 23 percent on wet roads
- 31 percent at night
- 41 percent at intersections
- 2788 roadside objects struck *
- Most represented five year age block in 'at fault' drivers in injury crashes: 15 to 19 years (24 percent of at fault drivers)
- Social cost of crashes in 2009 \$159.0m

Further information about the 1335 injury and 3237 non-injury crashes on **state highways** in Bay of Plenty Region 2005 to 2009:

- 104 deaths, 471 serious injuries and 1497 minor injuries
- Worst month May, best September
- Worst day Friday, best Sunday
- 26 percent on wet roads
- 31 percent at night
- 38 percent at intersections
- 1762 roadside objects struck *
- Most represented five year age block in 'at fault' drivers in injury crashes: 15 to 19 years (18 percent of at fault drivers)
- Social cost of crashes in 2009 \$182.0m

* 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.





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 16 times more likely to be involved in a fatal crash than a sober driver.

In Bay of Plenty Region, alcohol was a factor in 29 percent of fatal and serious crashes and 20 percent of injury crashes.

Number of alcohol related injury crashes			
Crash year	Open road	Urban road	Total
2005	53	53	106
2006	57	72	129
2007	67	57	124
2008	60	62	122
2009	60	57	117
Total	297	301	598

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

Ages of at fault drivers in alcohol related crashes 2005 to 2009 and 25 years ago (prior to lowering the drinking age)		
Age group	Percentage drivers in this age band 2005 to 2009	Percentage drivers in this age band 1980 to 1984
15-19	21	26
20-24	22	30
25-29	12	14
30-34	12	8
35-39	10	6
40-44	6	4
45-49	6	3
50-54	3	3
55-59	2	2
60-64	2	1
65-69	1	1
70-74	1	1
75+	2	1

It is interesting to note the changing age patterns of those choosing to drink and crash.

In Bay of Plenty Region there has been a shift from being weighted to young drivers to a broader age spread.

25 years ago 70 percent of at fault drivers were aged under 30, today this is 55 percent.

It would appear then that while very young people are targeted for their binge drinking culture, which may manifest in other health and law issues, in the city this has not translated into an increased proportion in youth alcohol related crashes.

In addition it does need to be noted that despite a population increase in the Bay of Plenty Region the number of alcohol related injury crashes has fallen from 759 in five years 25 years ago to the 598 in the last five years.

Further information about the 331 alcohol related injury crashes on **local roads** in Bay of Plenty Region 2005 to 2009:

- 25 deaths, 145 serious injuries and 314 minor injuries
- 80 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (191 crashes)
- 33 percent at intersections
- 73 percent night time
- Worst three hour time period 9pm to midnight
- Worst month January, best May
- Worst day Saturday, best Monday
- Number of roadside objects struck, 225
- Most common object struck, fences

Further information about the 267 alcohol related injury crashes on **state highways** in Bay of Plenty Region 2005 to 2009:

- 37 deaths, 119 serious injuries and 275 minor injuries
- 78 percent of at fault drivers were male
- Most common crash type "lost control at a bend" (143 crashes)
- 18 percent at intersections
- 7 percent night time
- Worst three hour time periods 6pm to 9pm and 9pm to midnight
- Worst month April, best May
- Worst day Saturday, best Monday
- Number of roadside objects struck, 177
- Most common object struck, cliff bank

Speed

Nationally, speed is one of the major contributing factors to road crashes. Appropriate speeds are an important road safety goal for the road safety strategy 2020 as it was for 2010.

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.

Between 2005 and 2009 23 percent of injury crashes in Bay of Plenty Region involved travelling too fast for the conditions.

Speed related crashes					
Speed related crashes	2005	2006	2007	2008	2009
Rural	60	79	83	90	100
Urban	49	62	44	53	67
Total	109	141	127	143	167

The other main causes contributing to speed related crashes were:

- Handling errors
- Alcohol
- General errors of judgement

Speed related crashes in CAS are not necessarily crashes where the driver was exceeding the posted speed limit (although that may also be the case) but are crashes where in the opinion of the reporting Police Officer the driver was travelling too fast for the prevailing conditions.

Certainly getting the message through that the posted speed limit is a maximum, but not necessarily a safe speed for every bend, crest, dip or isolated development (or driver) is the key to lowering the injury rate.

Local authorities and highway managers can do their part by ensuring speed limits, including temporary speed limits at road work sites are appropriate, comply with the Speed Limits Rule and are adequately signposted. When inappropriate speed limits are used there is a poor level of speed compliance by motorists and require a higher level of police enforcement.

Age and gender of at fault drivers in speed related injury crashes 2005 to 2009

* note age ranges are not equal

Drivers age	Male	Female	Total
15-19 years *	159	64	223
20 - 24	120	39	159
25 - 29	62	13	75
30 - 39	76	34	110
40 - 49	45	14	59
50 - 59	22	9	31
60 - 69	7	5	12
70+	4	4	8
Total	495	182	677

Further information about the 399 speed related injury crashes on **local roads** in Bay of Plenty Region 2005 to 2009:

- 22 deaths, 138 serious injuries and 441 minor injuries
- Most common crash type "lost control on a bend" (300 crashes)
- 32 percent wet road
- 49 percent night time
- 38 percent include alcohol as a factor
- Worst day Saturday, best Tuesday
- Worst three hour time period 3pm to 6pm

Further information about the 288 speed related injury crashes on **state highways** in Bay of Plenty Region 2005 to 2009:

- 36 deaths, 136 serious injuries and 331 minor injuries
- Most common crash type "lost control on a bend" (208 crashes)
- 43 percent wet road
- 53 percent night time
- 33 percent include alcohol as a factor
- Worst day Sunday, best Monday
- Worst three hour time period 6pm to 9pm

Crashes at bends

Between 2005 and 2009 39 percent of fatal and serious crashes and 35 percent of all injury crashes in Bay of Plenty Region were loss of control or head on at bends.

Crashes at bends 2005 to 2009				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	15	40	116	171
2006	14	54	141	209
2007	12	66	133	211
2008	14	58	154	226
2009	13	56	149	218
Total	68	274	693	1035

Fifty five percent of 'at fault' drivers involved in crashes at bends were aged under 30 and 25 percent were aged under 20.

Drivers fuelled by alcohol and travelling too fast for their own abilities and those appropriate to the conditions especially in the wet are all too common themes in bend related crashes in rural areas. (see bullet points).

Ages of at fault drivers in bend related injury crashes 2005 to 2009			
Ages	Female	Male	Total
15 to 19	69	150	219
20 to 24	56	124	180
25 to 29	30	69	99
30 to 34	22	55	77
35 to 39	28	59	87
40 to 44	25	50	75
45 to 49	23	53	76
50 to 54	18	36	54
55 to 59	15	18	33
60 to 64	12	17	29
65 to 69	7	11	18
70 to 74	1	9	10
75+	11	29	40
Total	317	680	997

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. Appropriate clear zones and roadside management will continue to help improve road safety.

The most common roadside hazards struck in injury loss of control or head on crashes on bends in Bay of Plenty Region were cliffs and banks (227), ditches (95), fences (177), trees (128) and posts and poles (90) from a total of 1072 objects struck.

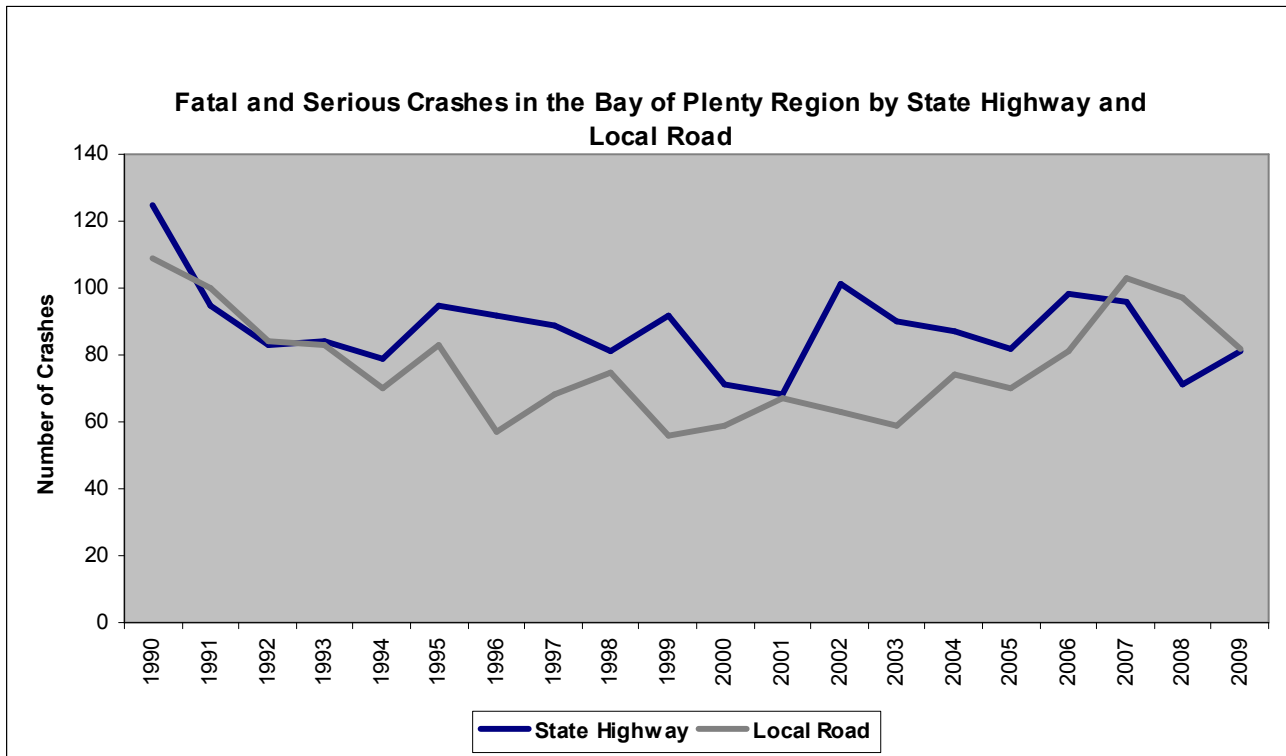
Further information about the 535 injury loss of control or head on crashes on bends on **local roads** in Bay of Plenty Region 2005 to 2009:

- 25 deaths, 178 serious injuries and 591 minor injuries
- 71 percent of at fault drivers were male
- Most common crash type "loss of control turning right" (261 crashes)
- 36 percent of crashes involved alcohol
- 28 percent in the wet
- 56 percent of crashes involved speed too fast for the conditions
- Worst month December, best May
- Worst day Saturday, best Tuesday
- Worst three hour time period 3pm to 6pm
- Number of objects struck 400

Further information about the 500 injury loss of control or head on crashes on bends on **state highways** in Bay of Plenty Region 2005 to 2009:

- 51 deaths, 190 serious injuries and 552 minor injuries
- 70 percent of at fault drivers were male
- Most common crash type "loss of control turning right" (222 crashes)
- 29 percent of crashes involved alcohol
- 38 percent in the wet
- 42 percent of crashes involved speed too fast for the conditions
- Worst month December, best September
- Worst day Sunday, best Monday
- Worst three hour time period 6pm to 9pm
- Number of objects struck 367

Looking back—the last two decades ...



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