

briefing notes - road safety issues

West Coast State Highways

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 on State Highways in the West Coast Network Management Area.

The issues chosen for this report are drawn from either the most common crash types, those that appear over-represented or those with high social cost (high numbers of fatal and serious crashes mainly).

We have included a brief overview of crashes on State highways in the network management area.

We encourage Network Managers and operational staff to use their access to the Ministry of Transport's Crash Analysis System (CAS) to delve deeper into the highlighted issues. Also the NZTA Christchurch Performance Information team is available to provide further information if required. All data and maps in this note are from CAS.

Major road safety issues

West Coast State Highways

Bend - loss of control or head-on

Speed

Road factors including roadside hazards

Overseas drivers

2008 road trauma

Casualties

West Coast State Highways

Deaths 5

Serious casualties 33

Minor casualties 101

Nationally

Speed

Alcohol

Failure to give way

Restraints

Crashes

West Coast State Highways

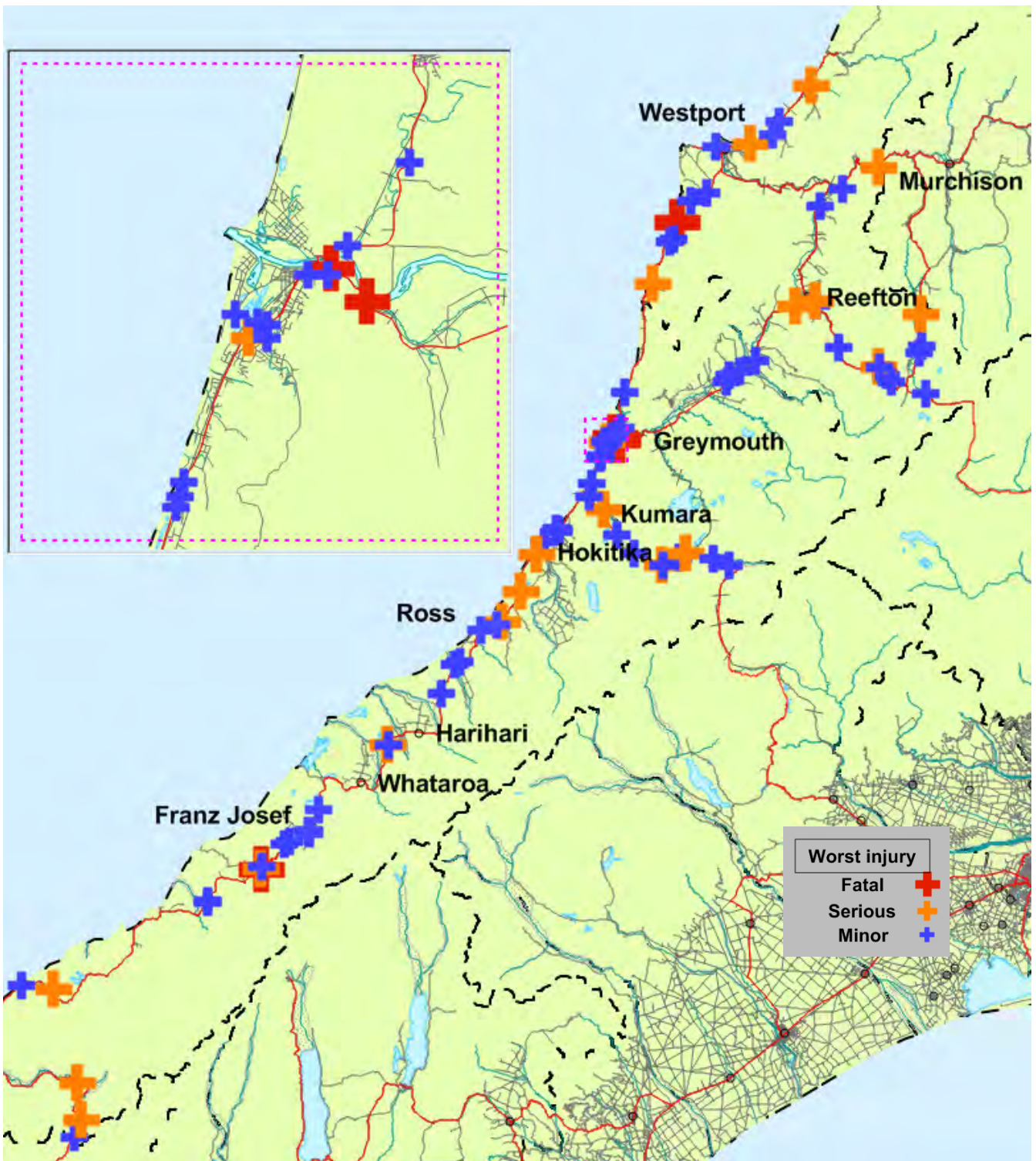
Fatal crashes 4

Serious injury crashes 20

Minor injury crashes 63

Non-injury crashes 114

Fatal and injury crashes
West Coast State Highways
2008



Overview

In 2008 on State highways in West Coast there were 87 injury crashes and 114 reported non-injury crashes.

The table below shows the number of casualties resulting from the 87 injury crashes by rural or urban areas for West Coast State highways (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	5	24	84	113
Urban	0	9	17	26
Total	5	33	101	139

All fatalities, over seven of every ten serious casualties and over eight from every ten minor casualties from crashes on West Coast State Highways were from crashes on rural highways.

The number of deaths in 2003 was about double the average for the other nine years. For serious and minor crashes the number in 2007 were higher than in other years.

Crash trends in West Coast State Highways				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
1999	6	15	35	56
2000	4	23	33	60
2001	12	17	50	79
2002	8	12	40	60
2003	3	17	57	77
2004	9	16	44	69
2005	3	21	53	77
2006	2	23	59	84
2007	6	24	61	91
2008	4	20	63	87

Injury crashes 2004 to 2008

Crash type or contributory cause 2004 to 2008	Percentage of all injury crashes
Alcohol	11
Too fast	28
At bends	58
Road factors	19
Overseas drivers (% all drivers)	22

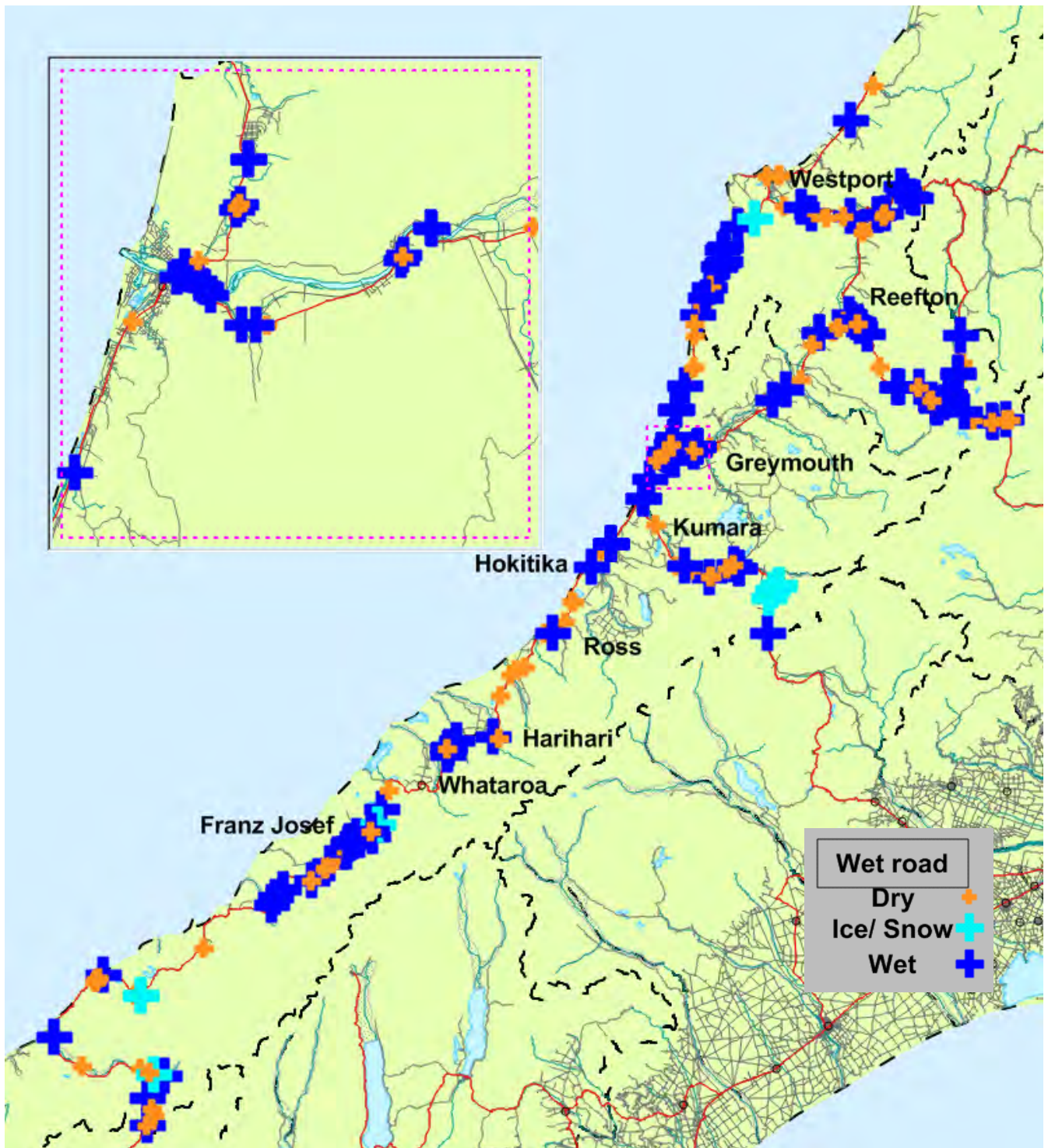
Social cost by State Highway Injury crashes 2004 to 2008

State Highway	Number of injury crashes	Social cost (m)
SH 6	234	\$125.7
SH 65	11	\$6.0
SH 67	18	\$12.2
SH 67A	3	\$1.8
SH 69	10	\$4.1
SH 7	99	\$37.3
SH 73	33	10.5

Further information about 2004 to 2008 injury crashes on West Coast State Highways :

- Worst month February
- Worst day Friday
- 45 percent on wet or icy roads
- 26 percent at night
- 12 percent at intersections
- 319 roadside objects struck
- Social cost of crashes in 2008 \$36.8 m

Injury Bend - loss of control or head on crashes
West Coast State Highways
2004 - 2008



Bend - loss of control or head on

Between 2004 and 2008 fifty eight percent of all injury crashes on West Coast State Highways were loss of control or head on bends. These crashes resulted in 15 fatalities, 79 serious casualties and 252 minor casualties.

Injury bend - loss of control or head on crashes 2004 to 2008

Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2004	5	9	24	38
2005	1	12	33	46
2006	2	11	32	45
2007	3	18	39	60
2008	3	12	32	47
Total	14	62	160	236

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 on West Coast State Highways were cliffs or banks (57), ditch (33), over bank (33), tree (32) and fence (28) from a total of 226 objects struck.

Main characteristics of injury bend - loss of control or head on crashes 2004 to 2008

Crash characteristic	Percentage of crashes
Single vehicle	81
Alcohol	11
Excessive speed for the conditions	42
Road factors	24
Poor handling	64
Rural road	94
Wet or icy road	53
Night time	27

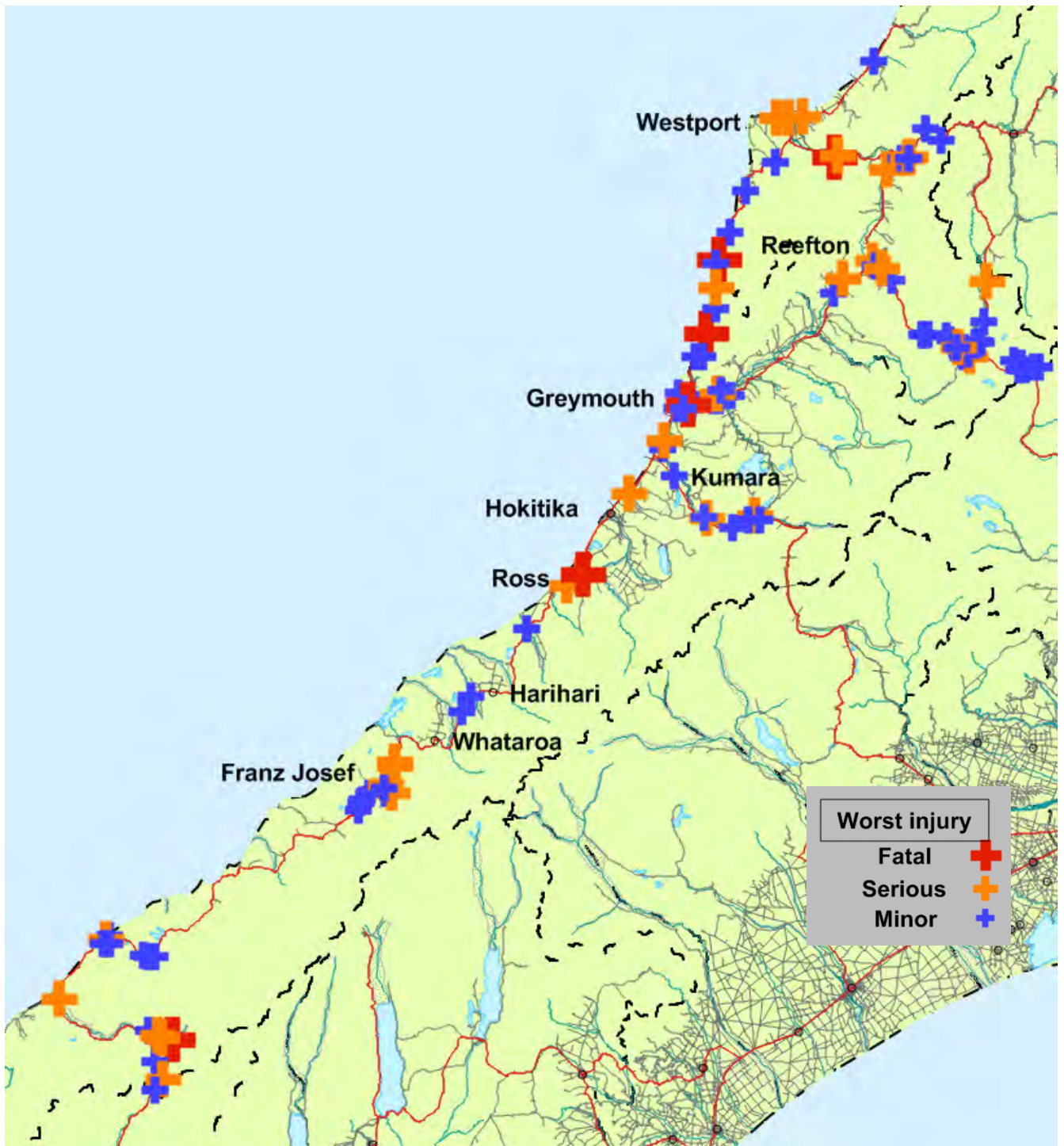
Injury bend - loss of control or head on crashes by State Highway 2004 to 2008

	2004	2005	2006	2007	2008
SH 6	21	35	25	24	27
SH 65	2	0	2	3	2
SH 67	0	0	2	2	0
SH 67A	0	1	0	0	0
SH 69	3	0	0	0	1
SH 7	6	9	14	27	12
SH 73	6	1	2	4	5

Further information about the 236 injury loss of control or head on crashes on bends on State Highways in West Coast 2004 to 2008:

- 70 percent of at fault drivers were male
- Most common at fault driver age group 20 to 24 years (18 percent of at fault drivers)
- Worst month February
- Worst day Saturday
- Worst time midday to 3 pm and 3 pm to 6 pm

Speed related injury crashes
West Coast State Highways
2004 - 2008



Speed

Nationally, speed is one of the major contributing factors to road crashes. Reducing speeds is a key 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 twenty-eight percent of injury crashes on West Coast State Highways involved travelling too fast for the conditions. These 114 crashes resulted in 6 fatalities, 37 serious injuries and 121 minor injuries.

Speed related injury crashes

Speed related crashes	2004	2005	2006	2007	2008
Rural	15	18	18	37	14
Urban	2	1	5	3	1
Total	47	19	23	40	15

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

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

State Highway managers can do their part by ensuring a "no surprise" environment with well delineated highways, safe roadsides and appropriate speed limits.

Temporary speed limits at road works in particular need to be monitored to make sure that they are reasonable and only in place when hazards exist.

The main the causes contributing to speed related crashes on State Highways in West Coast were:

- Handling errors (64 percent of crashes)
- Errors of judgement (17 percent of crashes)
- Alcohol (15 percent of crashes)
- Poor observation (11 percent of crashes)
- Road factors (25 percent of crashes)

Age and gender of at fault drivers in speed related injury crashes 2004 to 2008

Ages*	Male	Female	Total
15-19 years *	16	4	20
20 - 24	17	7	24
25 - 29	11	2	13
30 - 39	13	8	21
40 - 49	14	2	16
50 - 59	8	2	10
60 - 69	4	3	7
70+	5	1	6
Total	88	29	117

* note age ranges are not equal

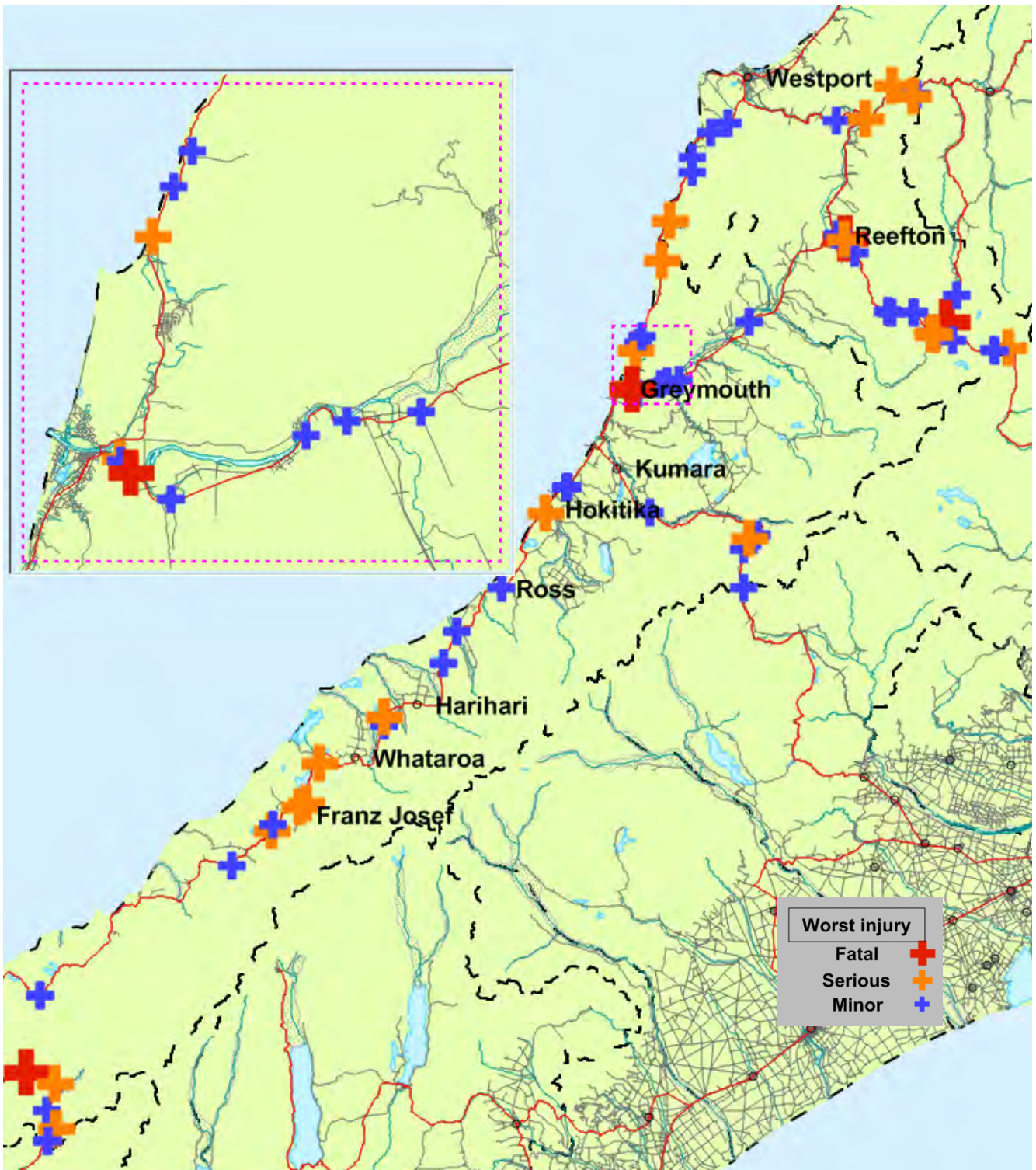
Speed related injury crashes by State Highway

	2004	2005	2006	2007	2008
SH 6	11	13	11	15	7
SH 65	0	0	1	3	1
SH 67	0	0	2	0	0
SH 67A	0	1	0	1	0
SH 67	2	0	0	0	0
SH 7	4	4	8	19	4
SH 73	0	1	1	2	3

Further information about speed related injury crashes on West Coast State Highways 2004 to 2008:

- Most common crash type "Lost control on bend" (88 percent of speed crashes)
- 59 percent wet or icy road
- 30 percent night time
- Worst month June
- Worst day Wednesday,
- Worst time 3 pm to 6 pm
- 75 percent of at fault drivers were male
- 52 percent of at fault drivers held a full licence
- Most common at fault driver age group 20 to 24 years (20 percent of at fault drivers)

Injury crashes with a road factor
West Coast State Highways
2004 - 2008



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.

From 2004 to 2008 on West Coast State highways, "road factors" were a contributing factor in 19 percent of fatal and injury crashes. These 78 crashes resulted in 4 deaths, 29 people with serious injury and 77 with minor injury.

Additionally on State highways in West Coast network area between 2004 and 2008 sixty three percent of all fatal and injury crashes involved a roadside hazard being struck.

Road factor related injury crashes					
Road type	2004	2005	2006	2007	2008
Rural	10	9	13	22	21
Urban	0	0	0	3	0
Total	10	9	13	25	21

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 246 injury crashes on State Highways in the West Coast network area where a roadside hazard was struck 12 people died, 81 received serious injuries and 262 minor injuries.

Most common types of hazard struck (Injury crashes on West Coast State Highways 2004 - 2008)

Type of hazard	Number of times hazard struck
Cliff or bank	66
Ditch	51
Tree	46
Over bank	39
Fence	38

Types of road factors in injury crashes

CAS factors 2004 to 2008	Number of occasions reported
Slippery (Rain) *	23
Slippery (Ice, frost)	11
Loose material on seal	12
Slippery (Other)	11
Road surface in poor condition	15
Road obstructed	1
Visibility limited	10
Signs or signals (needed or faulty)	2
Street lighting	1

* Note: 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".

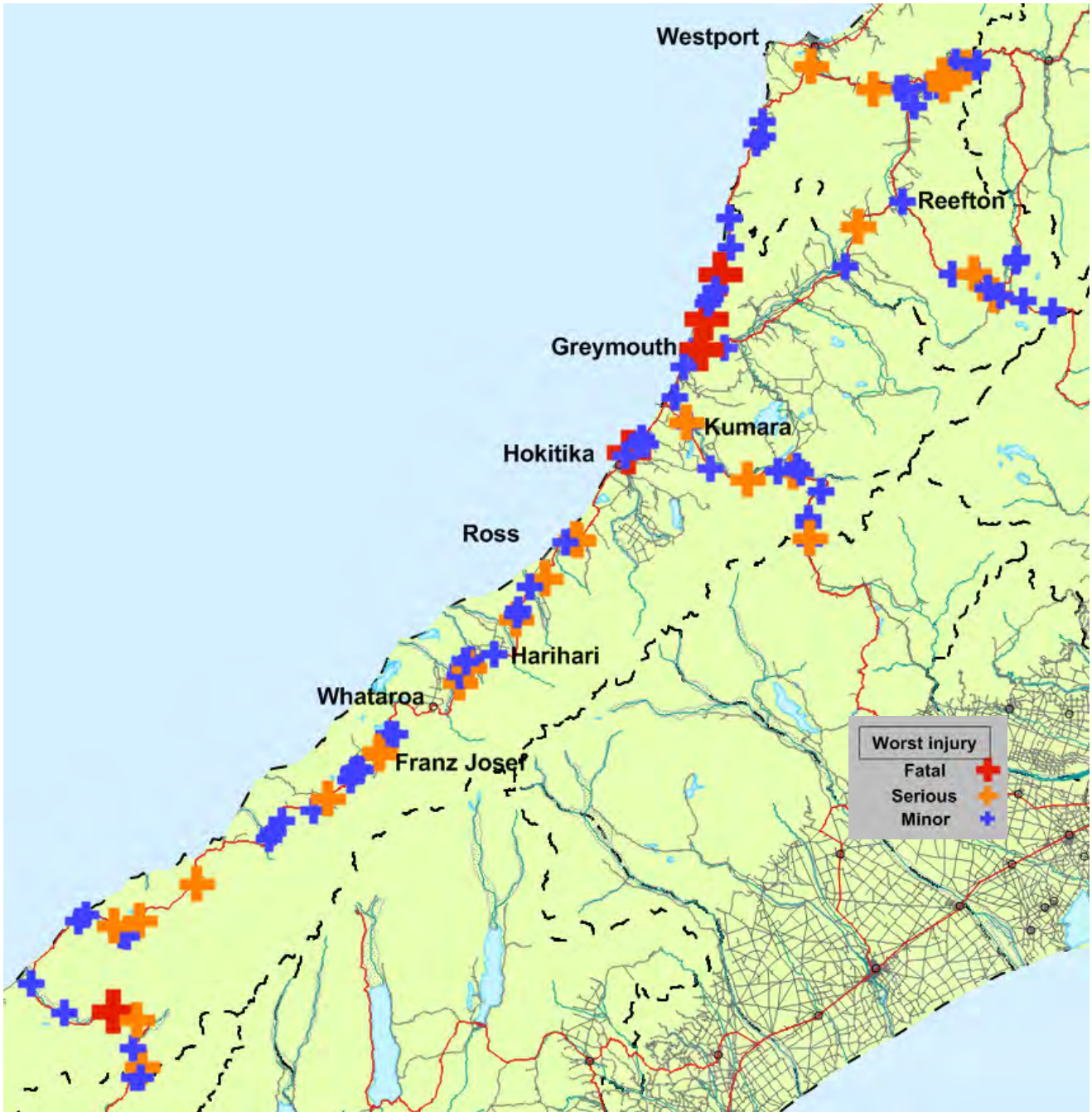
Object and road factor crashes by State Highway number 2004 to 2008

Highway number	Number of road factor crashes	Number of crashes with roadside hazard struck
SH 6	40	128
SH 65	2	9
SH 67	0	10
SH 67A	0	2
SH 69	1	6
SH 7	29	69
SH 73	6	22

Further information about the 78 road factor related injury crashes on West Coast State Highways (2004 to 2008):

- Most common crash type, bend - loss of control or head on
- 4 percent at intersections
- 71 percent wet or icy road
- 23 percent night time
- Worst month June
- Worst day, Friday
- Worst time midday to 3 pm
- Most common at fault driver age 20 to 24 and 30 to 39 (each represent 19 percent of at fault drivers)

Injury crashes involving overseas drivers
West Coast State Highways
2004 - 2008



Overseas drivers

On West Coast State highways between 2004 and 2008 twenty six percent of injury crashes involved overseas drivers. These 105 crashes resulted in 5 deaths, 44 serious injuries and 136 minor injuries.

These drivers may include both tourists and New Zealand residents driving on an overseas licence.

Casualties from crashes on West Coast State highways, involving overseas drivers

	2004	2005	2006	2007	2008
Fatal	3	1	0	0	1
Serious	5	9	9	5	16
Minor	19	40	25	28	24
Total	27	50	34	33	41

The number of casualties from crashes involving overseas drivers has fluctuated between a high of 50 in 2005 and a low of 27 in 2004. There is no apparent long term trend.

Injury crashes on West Coast State highways involving overseas drivers 2004-2008

	2004	2005	2006	2007	2008
Rural	12	25	18	20	21
Urban	1	4	2	1	1
Total	13	29	20	21	22

More than nine in every ten crashes on West Coast State highways that involved an overseas driver were on rural roads.

On West Coast State highways, 63 of all crashes involving overseas drivers were Bend - loss of control or head on crashes. Straight road - loss of control or head on crashes accounted a further 14 percent of injury crashes.

Male drivers of all ages made up 67 percent of at-fault drivers.

Ages of drivers at fault in crashes involving overseas drivers

Ages	Male	Female	Total
15 to 19	3	4	7
20 to 24	12	6	18
25 to 29	10	6	16
30 to 39	12	10	22
40 to 49	13	3	16
50 to 59	6	3	9
60 to 69	11	1	12
70 +	3	1	4

The common home locations of the overseas drivers were:

Europe	28
United Kingdom	21
Australia-	14
Asia	15
North America	16

Further information about the 105 injury crashes involving overseas drivers on West Coast State highways 2004 to 2008:

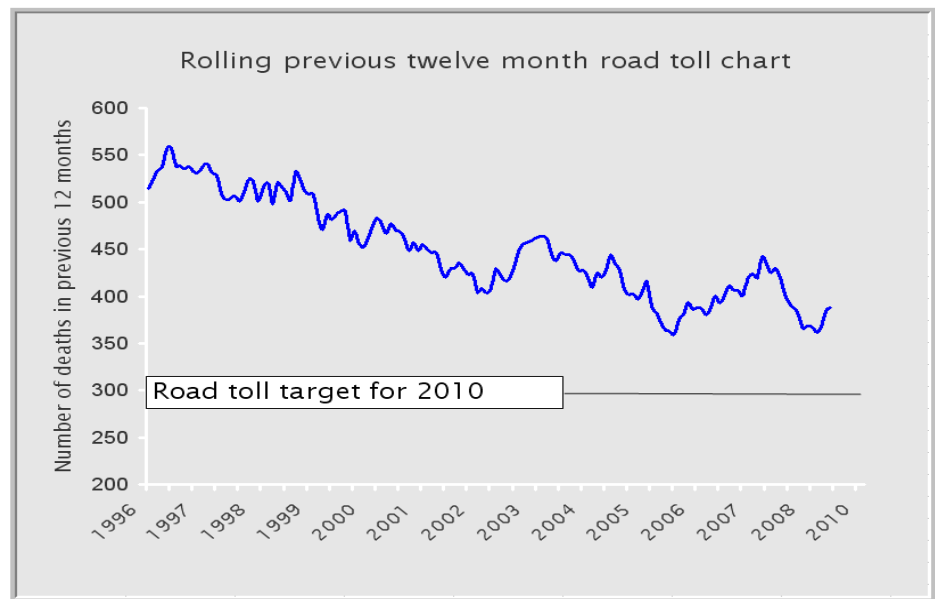
- Most common crash factors were:- Poor handling, Poor observation, Poor judgement and too fast.
- 6 percent of crashes were at intersections
- 6 percent of crashes at night
- 43 percent in of crashes in wet or icy conditions
- Worst month February
- Worst day of week Tuesday
- Worst times midday to 3 pm and 3 pm to 6 pm

The next ten years—moving beyond Road Safety 2010

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

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

Information will be published on the Ministry of Transport 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/>

Restraints

The Ministry of Transport conducts surveys of restraint use. Results are available for front, rear and child restraints although not all at a local authority level. The results of these surveys are available at the MoT website: <http://www.transport.govt.nz/research/safetybeltstatistics/>

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