



briefing notes - road safety issues

Southland highways

New Zealand Transport Agency, (NZTA), has prepared this road safety issues report. It is based on reported crash data for the 2005–2009 period. The intent of the report is to highlight the key road safety issues to help identify possible ways to reduce the number of road deaths and injuries on Southland highways.

In March 2010 the Government released a new strategy, "Safer Journeys", to build on the gains made under the Road Safety to 2010 Strategy. The focus of these Issues Reports has changed to reflect the new strategy. Many of the issues reported on in the past fit neatly into the new strategy. An explanation of where things fit is included in this report.

The issues chosen for this report are drawn from: the most common crash types, those that appear over-represented when Southland highways is compared to similar local bodies, those with high social cost, (high numbers of fatal and serious crashes), or those that are a priority under Safer Journeys.

We have included a brief overview of crashes on highways in the Southland Network Management Area (NMA).

We encourage Southland highway managers to use their free access to the Ministry of Transport's Crash Analysis System (CAS), to delve deeper into the highlighted issues and other road safety issues in the district. Also the NZTA Southern Performance Information Team in Christchurch is available to provide further information or assistance if required.

Major road safety issues		2009 road trauma	
	Note Issues are not in any order	Casualties	Southland NMA highways
Southland highways			
Young drivers		Deaths	4
Bend - loss of control or head-on		Serious casualties	39
Intersections		Minor casualties	190
Road factors and roadside hazards			
Nationally		Crashes	Southland NMA highways
Speed		Fatal crashes	4
Alcohol / Drugs		Serious injury crashes	27
Young Drivers		Minor injury crashes	117
Roads and Roadsides		Non-injury crashes	681
Motorcyclists			

Safer Journeys

For the past few years road safety in New Zealand has been directed by the Road Safety to 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 strategy.

Under this new strategy, road safety will be looked at from a system wide approach rather than focusing on the road user. The emphasis will be on improving all the parts road transport system that impact on safety; the road, the vehicle, travel speeds and the road user.

A number of areas were chosen as the areas of focus under the strategy. These areas were assigned a priority, based on research that shows five major areas of concern, five areas of lesser concern, and three areas where continued focus is needed, or concern is emerging.

These divisions are shown in the table 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>

In this year's Road Safety Issues Briefing Notes changes have been made to the wording, and to the data presented, to better reflect and emphasise the connections to the new strategy.

On the following page we present a table that shows the areas of "high concern" under the Safer Journeys strategy. This table allows some relative comparison of the Safer Journeys priorities across the local bodies and regional authorities in the Otago / Southland Region of the New Zealand Transport Agency.

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

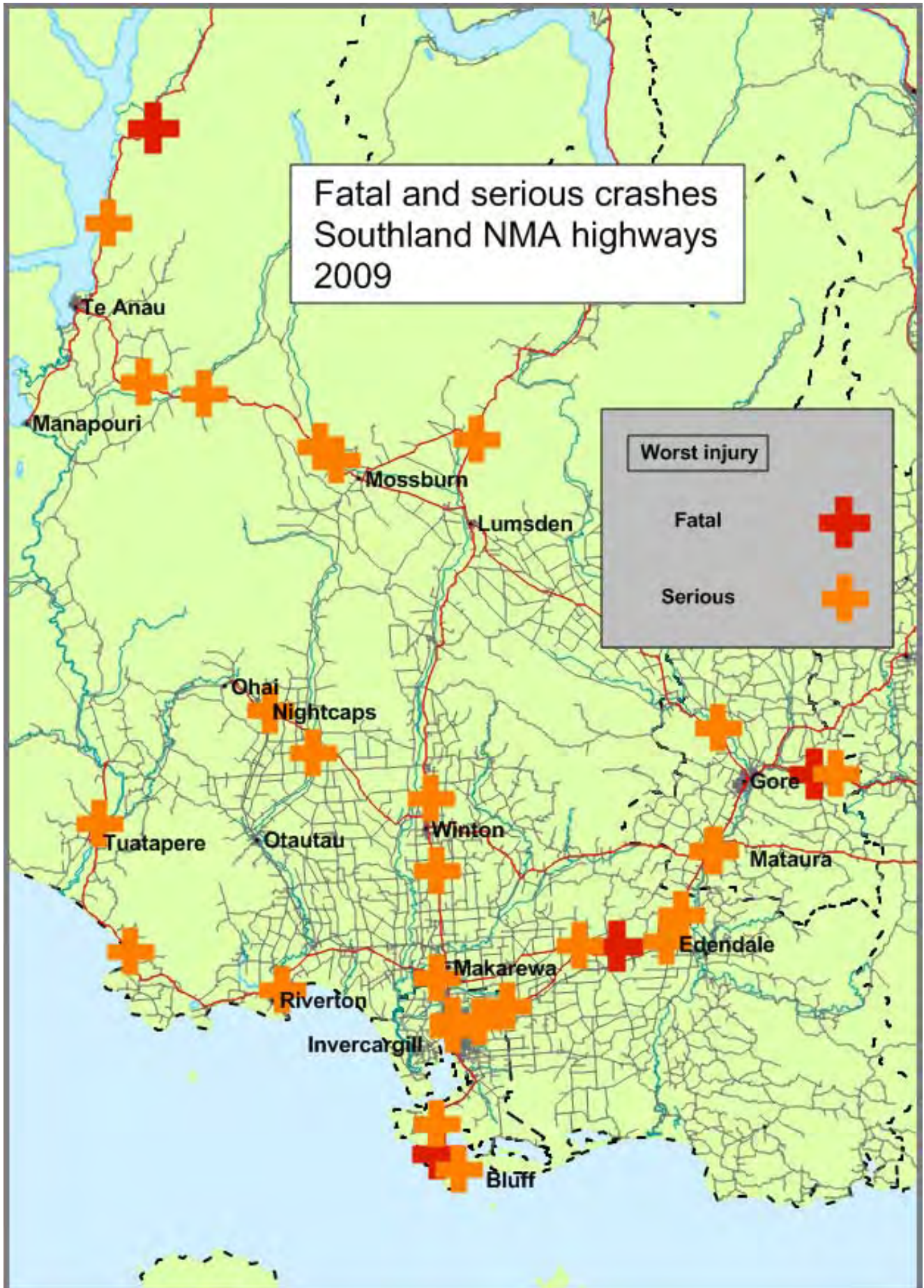
AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM			
	SAFE ROADS AND ROAD-SIDES	SAFE SPEEDS	SAFE VEHICLES	SAFE ROAD USE
Areas of high concern				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe 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.

Source
Safer Journeys, Road Safety Strategy 2010-2020
Ministry of Transport
March 2010

Status of the areas of "high concern" from Safer Journeys 2020 - Otago / Southland Region
(table is based on 2005 to 2009 fatal and serious crashes - local roads as well as State Highways)

Area of concern	Reducing alcohol and drug impaired driving	Increase the Safety of young drivers	Safer roads and roadsides		Reducing speed related crashes	Increasing the safety of motorcycling
Measure	Percentage of crashes with this factor	Percentage of at fault drivers 24 years or less	Percentage of crashes with an object struck	Number of intersections with two or more fatal or serious casualties in the last five years	Percentage of crashes with this factor	Percentage of crashes involving a motorcyclist
Waitaki District	19	35	52	0	19	16
Central Otago District	18	35	59	3	16	18
Queenstown-Lakes District	20	41	51	2	20	19
Dunedin City	17	44	46	21	21	13
Clutha District	14	36	61	1	22	15
Southland District	20	38	61	1	24	21
Gore District	16	53	46	1	20	18
Invercargill District	15	49	49	19	21	17
Otago Region	17	41	50	27	20	15
Southland Region	18	44	49	21	21	19
New Zealand	23	34	45	446	23	18



Overview

In 2009 on State Highways in Southland NMA, there were 149 reported injury crashes of which 31 were fatal or serious.

The table below shows the number of casualties resulting from the injury crashes by rural or urban areas (rural is defined as an area with a speed limit of 80km/h or more).

Casualties 2009 Southland highways				
	Fatalities	Serious injuries	Minor injuries	Total
Rural	4	31	135	170
Urban	0	8	57	65
Total	4	39	192	235

All fatalities, almost 80 percent of serious casualties, and 70 percent of minor injuries were sustained in crashes on highways in rural areas of the region

Annual crash numbers in all severity classes fluctuate but the numbers of serious and minor injury crashes have reduced each year since 2006.

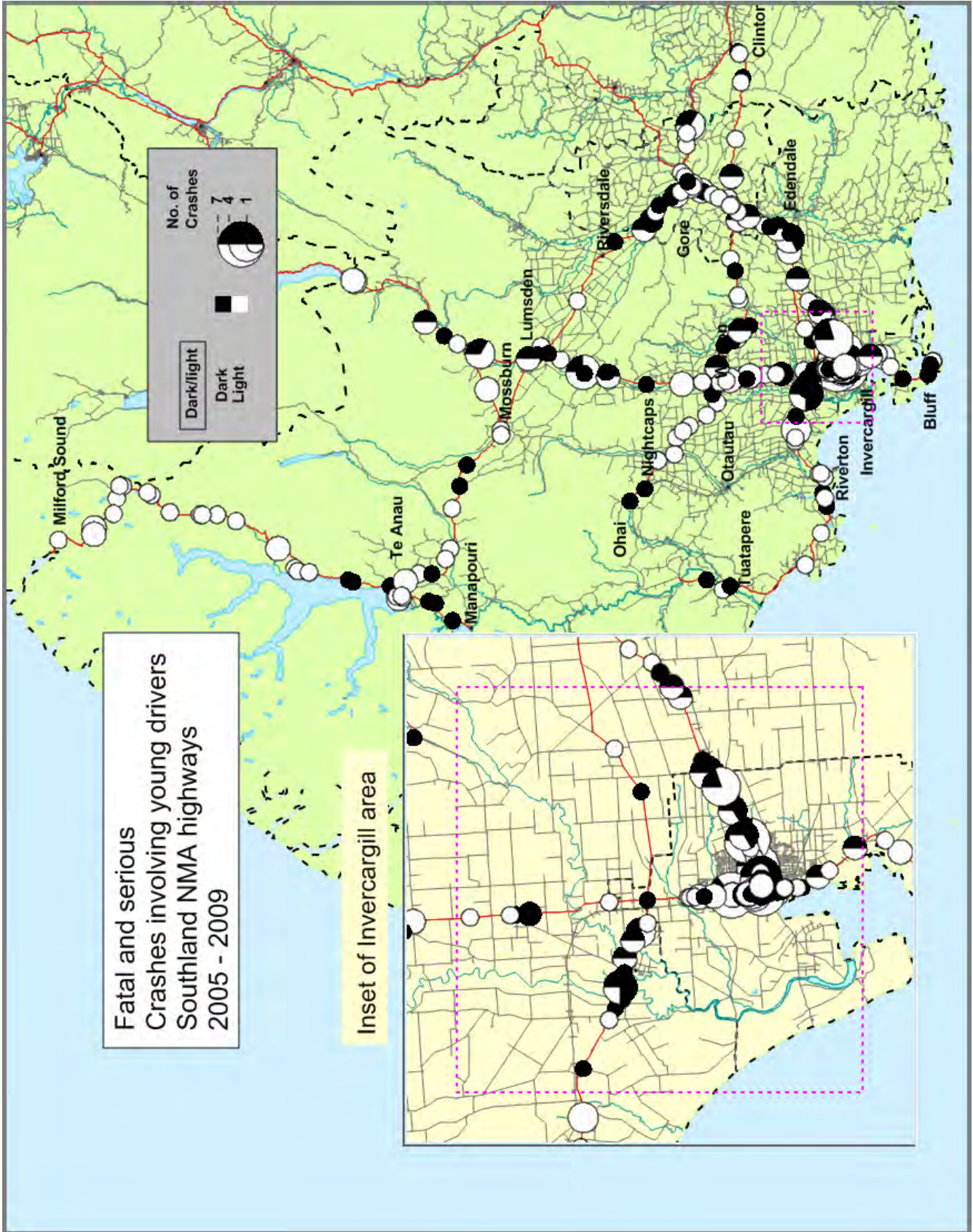
Crash trends in Southland highways				
Year	Fatal Crashes	Serious Crashes	Minor Crashes	Total Crashes
2000	7	29	65	101
2001	8	52	144	204
2002	7	48	150	205
2003	4	47	131	182
2004	4	38	123	165
2005	4	40	147	191
2006	5	43	150	198
2007	7	37	138	182
2008	7	31	133	171
2009	4	27	118	149

The following table illustrates where the issues considered for this report fit within the Safer Journeys priority. The numbers and percentages give an indication of how they fit in the priorities for Southland Region.

Crash characteristics (2005 to 2009) Southland highways				
Crash type or contributory cause	Percent fatal and serious crashes	Percent all injury crashes	No. of injury crashes	Safer Journeys priority
Alcohol	18	11	96	1
Too fast	19	17	152	1
At bends	37	36	317	1
On straights	25	23	203	1
Intersections	25	30	263	1
Road factors	22	25	220	1
Motorcycling	11	5	43	1
Young drivers	42	40	361	1
Fatigue	11	9	84	2
Distraction	15	7	132	2
Pedestrians	4	3	26	2
Cycling	2	2	19	2
Heavy vehicles	12	9	78	2
Older road users	5	5	42	3
Overseas drivers	14	15	136	-

Further information about the 891 injury crashes on State Highways in Southland NMA, 2005 to 2009:

- 28 deaths, 237 serious injuries and 1102 minor casualties
- Five year age group with most at fault drivers in injury crashes: 15 to 19 years (23 percent of at fault drivers)
- Social cost of crashes in 2009 \$45.68 m



Young drivers

Young drivers are those aged less than 25 years. This analysis is based on injury crashes only as driver age is not recorded in non-injury crashes.

On Southland highways between 2005 and 2009, 42 percent of injury crashes involved young drivers. These crashes resulted in 12 deaths, 109 serious injuries and 487 minor injuries.

The total number of casualties from injury crashes involving young drivers reduced each year in the last five years.

Casualties from crashes involving young drivers Southland highways

	Fatal	Serious	Minor	Total
2005	3	28	117	148
2006	2	26	109	137
2007	2	23	102	127
2008	4	14	87	105
2009	1	18	72	91
Total	12	109	487	608

Almost half of the 447 young drivers in these crashes had a learner or restricted licence. Over 40 percent were.

Nearly all the young drivers were local residents.

Young drivers at fault in injury crashes Southland highways (2005 - 2009)

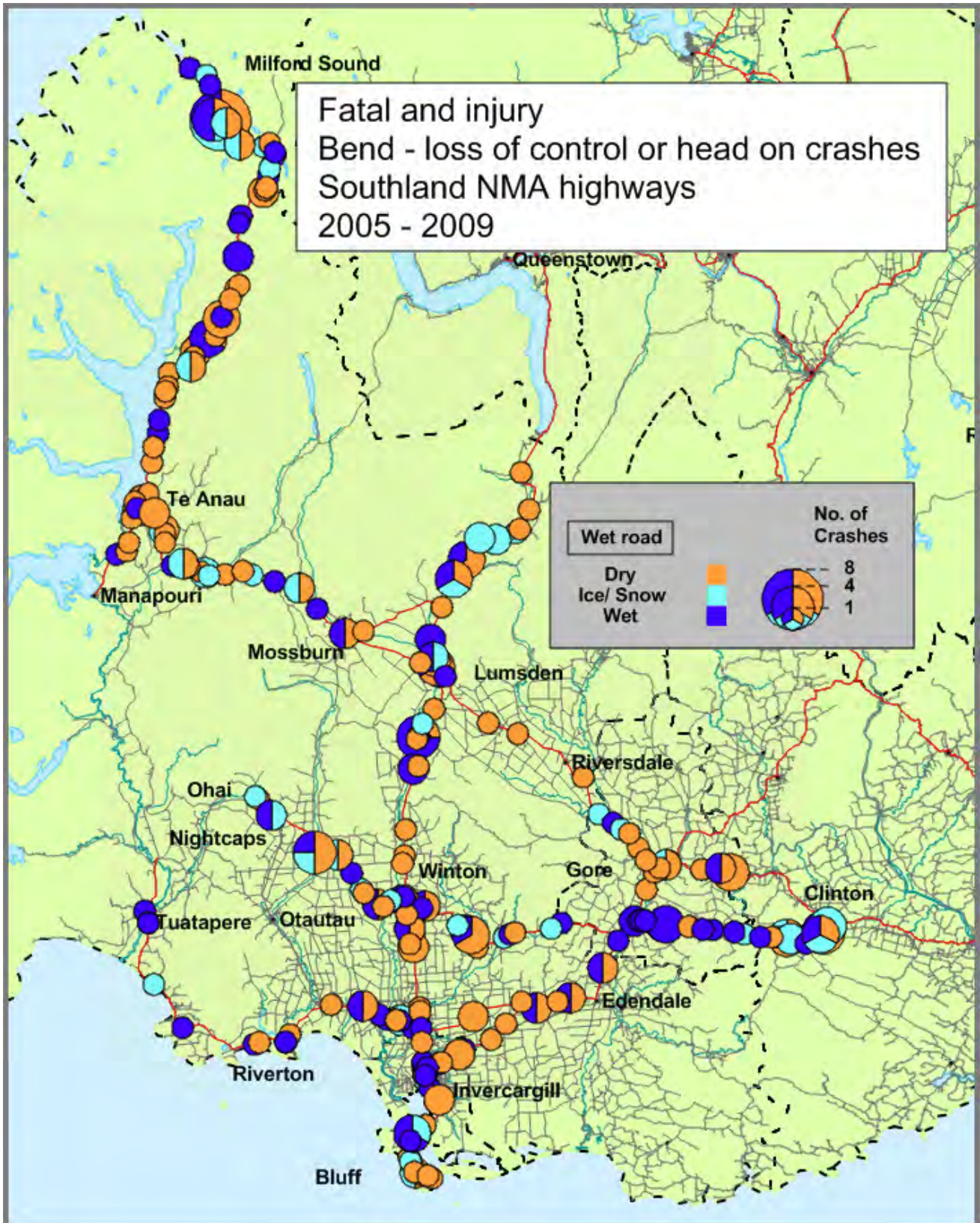
Licence type	Female	Male	Total
Full	55	100	155
Learner	26	32	58
Restricted	82	79	161
Overseas	16	22	38
Never licensed	9	5	14
Disqualified	0	8	8
Other (unknown, wrong class)	3	10	13
Total	191	256	447

Injury crashes involving young drivers Southland highways (2005 - 2009)

Crash type or contributory cause	Urban roads	Rural roads
Alcohol	13	36
Speed	29	54
Failed to stop/Give way	65	18
Poor handling	35	103
Poor observation	130	82
Poor judgement	40	62
Lost control - straight	11	71
Lost control - bend	24	105
Rear end / obstruction	53	24
Crossing / turning	62	22

Further information about the 398 injury crashes involving young drivers on State highways in Southland NMA 2005 to 2009:

- 46 percent were single vehicle crashes
- 40 percent were on urban roads
- 33 percent at intersections
- 38 percent at night
- 36 percent on wet or icy roads
- Worst month May
- Worst day of week Friday
- Worst time 3 pm to 6 pm



Bend - loss of control or head on

Between 2005 and 2009, 36 percent of all injury crashes on Southland highways were bend - loss of control or head on crashes. These crashes resulted in 10 deaths, 98 serious injuries and 423 minor injuries. Total crash numbers have generally dropped in the last five years, and in 2009 the number was the lowest in the period.

Bend - loss of control or head on crashes Southland highways (2005 - 2009)				
Crash year	Fatal crashes	Serious crashes	Minor crashes	Total
2005	3	17	49	69
2006	1	18	53	72
2007	1	14	43	58
2008	4	9	56	69
2009	1	8	40	49
Total	10	66	241	317

Drivers aged 15 to 24 years made up 41 percent of at fault drivers. Within this age group males represented almost 60 percent of at fault drivers. Overall males made up almost 70 percent of at fault drivers.

At fault drivers in Bend - loss of control or head on crashes 2005 to 2009			
Ages	Male	Female	Total
15 to 19	40	32	72
20 to 24	36	19	55
25 to 29	36	5	41
30 to 39	41	18	59
40 to 49	24	6	30
50 to 59	22	11	33
60 to 69	11	4	15
70 and over	6	3	9
Total	216	98	314

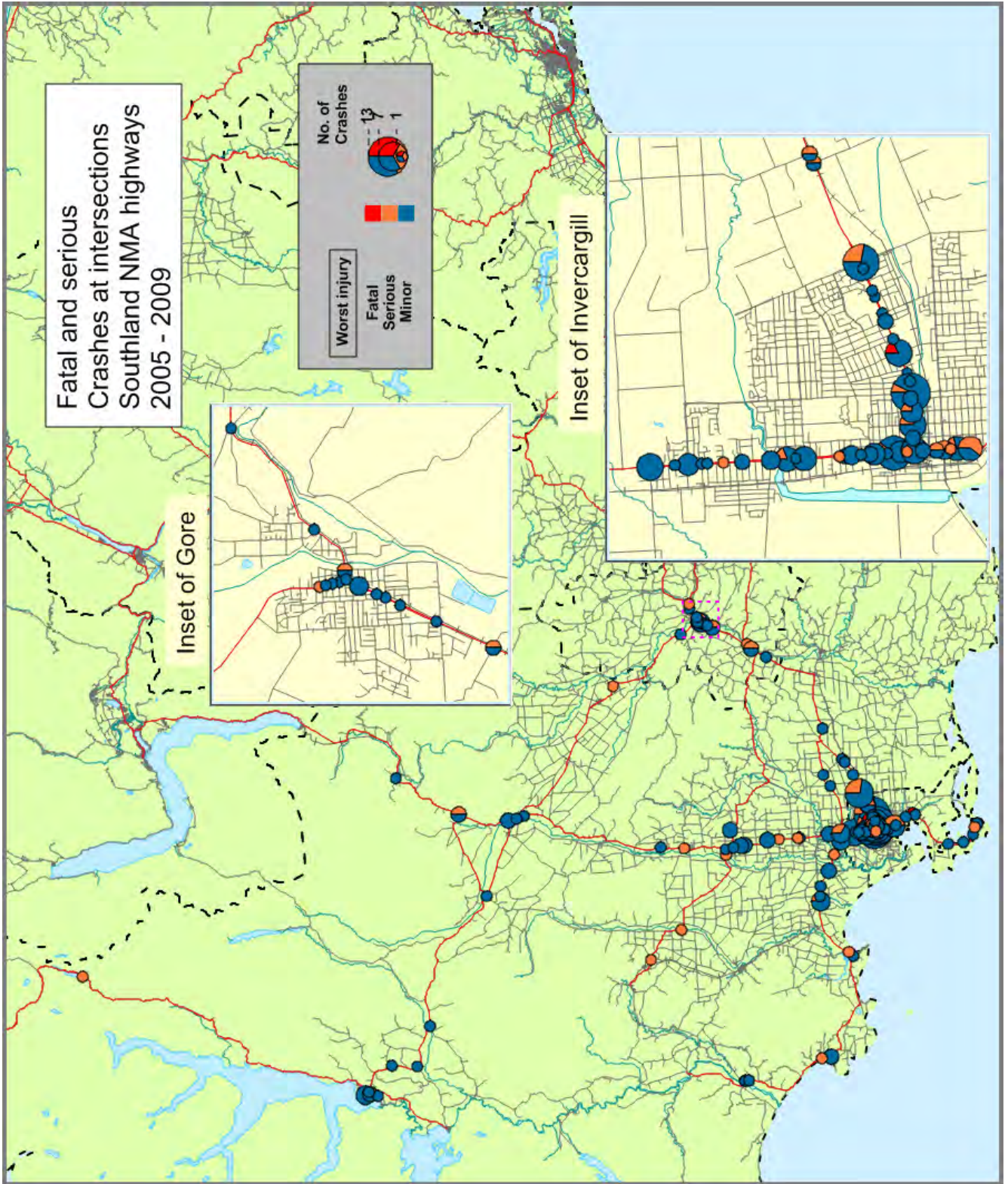
If drivers lose control, their vehicles may crash into roadside hazards such as ditches, banks, poles or trees. Hitting roadside objects can result in a minor off-road event becoming more serious.

The most common roadside hazards struck in injury bend - loss of control or head on crashes in Southland highways were fence (78), cliff bank (61), ditch (58), over bank (37) and tree (36) from a total of 357 objects struck.

A roadside hazard was struck in 82 percent of these bend - loss of control or head on crashes on State highways in Southland NMA.

Further information about the 317 injury bend - loss of control or head on crashes on State Highways in Southland NMA, (2005 to 2009):

- 10 deaths, 98 serious injuries and 423 minor injuries
- 14 percent of crashes involved alcohol
- 36 percent of crashes involved speed too fast for the conditions
- 40 percent involved road factors
- 59 percent involved poor handling
- 91 percent were on rural roads
- 52 percent were on wet or icy roads
- 35 percent were at night
- Worst month July
- Worst day of week Saturday
- Worst time period 3 pm till 6 pm



Intersections

During the five year period 2005 to 2009, on highways in Southland NMA there were a total of 263 fatal and injury crashes at intersections.

Casualties in crashes at Intersections Southland highways (2005 - 2009)					
	2005	2006	2007	2008	2009
Deaths	0	1	0	1	0
Serious injury	15	9	12	12	8
Minor injury	61	65	68	65	62
Total	76	75	80	78	70

Seventy percent of crashes at intersections were at intersections in urban areas of the district.

The number of injury crashes at intersections has not changed much from year to year, but in 2009, the numbers of both serious and minor crashes were the lowest in the last five years.

Young drivers made up 42 percent of at fault drivers in crashes at intersections. Overall males represented 60 percent of at fault drivers in crashes at intersections.

At fault drivers in Bend - loss of control or head on crashes 2005 to 2009

Ages	Male	Female	Total
15 to 19	47	24	71
20 to 24	21	18	39
25 to 29	18	9	27
30 to 39	20	15	35
40 to 49	18	11	29
50 to 59	12	12	24
60 to 69	12	6	18
70 and over	11	9	20
Total	159	104	265

Main characteristics of injury Intersection crashes Southland highways (2005-2009)

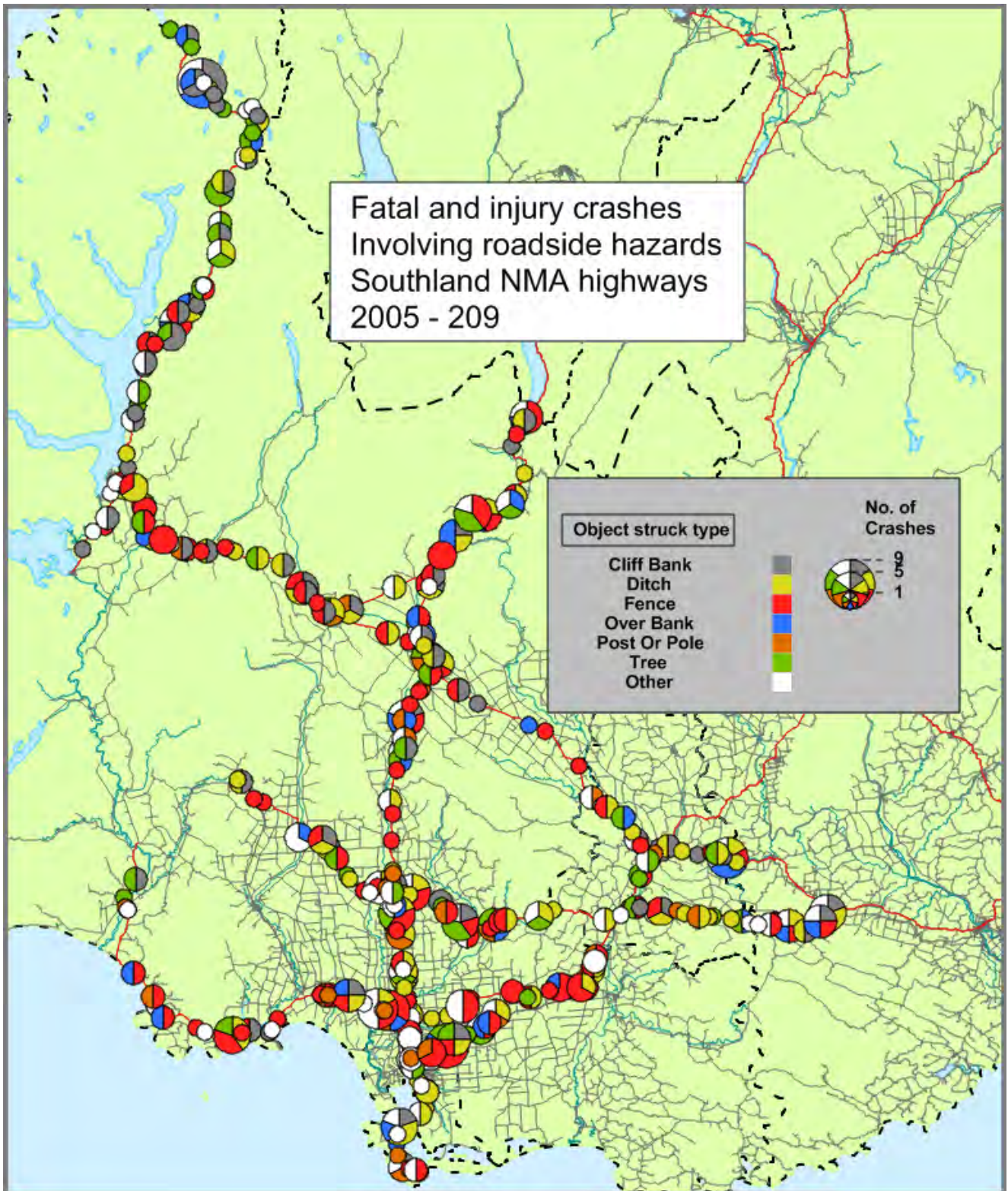
Crash characteristic	Percentage of crashes
Single vehicle	16%
Alcohol	7%
Excessive speed for the conditions	12%
Failed to stop or give way	58%
Poor observation	67%
Poor judgement	17%

The most common crash type at intersections was when a driver travelling straight through is struck on the right by another vehicle travelling straight through from his right, (a right angle crash). Other common crash types were a right turning vehicle being struck on the right by a through vehicle from the right, and a vehicle turning right being struck by a through vehicle approaching from the opposite direction.

On Southland NMA highways there are 25 intersection sites which have had 3 or more injury crashes in the last five years, including 8 sites with 6 or more injury crashes in the past five years.

Further information about the 263 injury crashes at intersections on State Highways in Southland NMA 2005 to 2009:

- 2 deaths, 56 serious injuries and 321 minor injuries
- 26 percent wet or icy roads
- 30 percent night time
- Worst month April
- Worst day of week Friday
- Worst time 3 pm till 6 pm



Road Factors - including roadside hazards

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

In 2009 on Southland NMA highways, "road factors" were a contributing factor in 25 percent of fatal and injury crashes.

Road factor related injury crashes Southland highways					
Road type	2005	2006	2007	2008	2009
Urban	5	6	6	9	4
Rural	36	50	49	23	32
Total					

Types of road factors in injury crashes Southland highways (2005-2009)	
Road factor type 2005 to 2009	Number reported
Slippery road *	219
Road surface in poor condition	21
Road obstructed	4
Visibility limited	16
Signs or signals (needed or faulty)	3
Markings (needed or faulty)	4

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

Between 2005 and 2009, in Southland highways, 55 percent of all fatal and injury crashes involved a roadside hazards being struck.

Roadside hazards may contribute to the overall crash outcome by increasing injury severity, but can in themselves be a contributory factor in a crash. Occupants in an errant vehicle striking a large tree close to the road edge are likely to sustain worse injuries than if the tree were not present. If a similar tree had low branches and was located close to an intersection it could contribute to a lack of visibility.

In the injury crashes in Southland highways where a roadside hazard was struck 11 people died, 127 received serious injuries and 623 minor injuries.

The objects most commonly struck in injury crashes in Southland highways from 2005 to 2009 are shown below.

Most common types of hazard struck (Injury crashes in Southland highways 2005 - 2009)

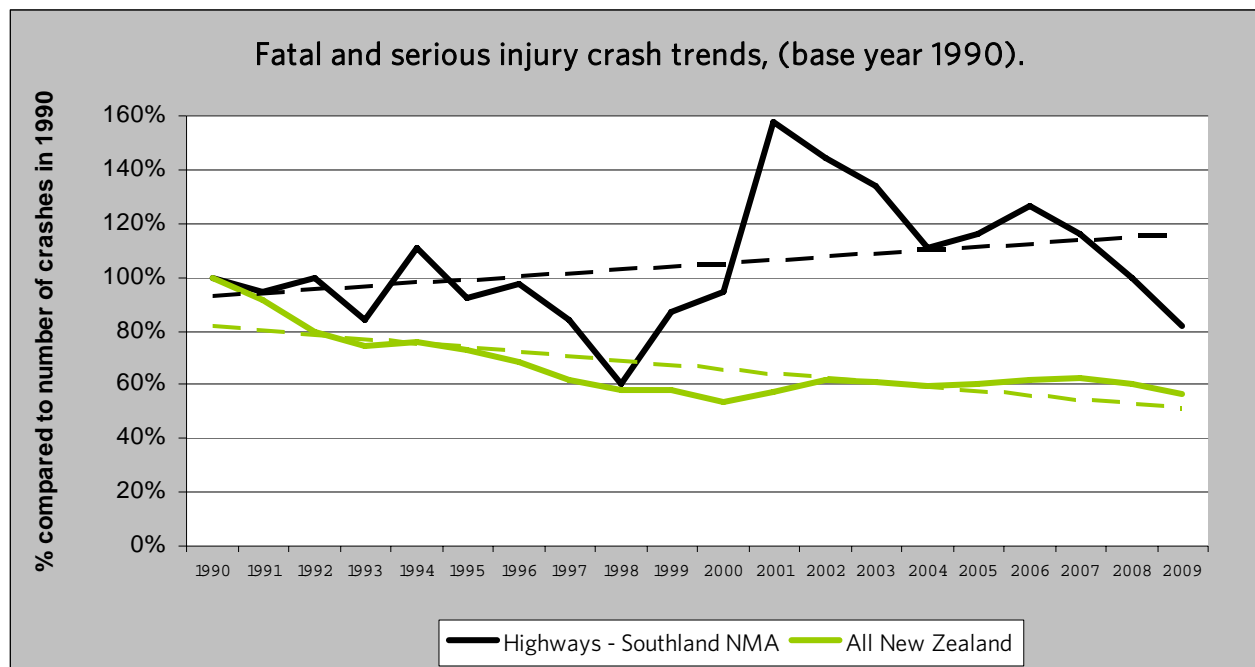
Type of hazard	Number of times hazard struck
fence	152
ditch	103
cliff/bank	95
tree	66
post or pole	48
over bank	46

Further information about the 220 road factor related injury crashes in on State Highways in Southland NMA (2005 to 2009):

- 10 deaths, 54 serious injuries and 302 minor injuries
- Most common crash type, bend - loss of control or head on
- 14 percent at intersections
- 14 percent urban
- 84 percent wet or icy road
- 40 percent night time
- Worst month July

Looking back - the last two decades.

The vision of the Government's "Safer Journeys" road safety strategy is "A safe road system that is increasingly free of road deaths and serious injuries". The chart below illustrates the progress made in reducing fatal and serious casualties since 1990, for both Southland highways and for the country as a whole.



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