



briefing notes - road safety issues

Southland Region

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 in Southland Region.

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 Region 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 in the region.

We encourage Southland Region to delve deeper into the highlighted issues and other road safety issues in the district. Contact the NZTA Southern Performance Information Team in Christchurch for additional information from the Ministry of Transport’s Crash Analysis System (CAS).

Major road safety issues

Note
Issues are not in
any order

Southland Region

Intersections

Young drivers

Bend - loss of control or head-on

Road factors and roadside hazards

Nationally

Speed

Alcohol / Drugs

Young Drivers

Roads and Roadsides

Motorcyclists

2009 road trauma

Casualties

Southland Region

Deaths

16

Serious casualties

95

Minor casualties

429

Crashes

Southland Region

Fatal crashes

13

Serious injury crashes

72

Minor injury crashes

281

Non-injury crashes

686

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

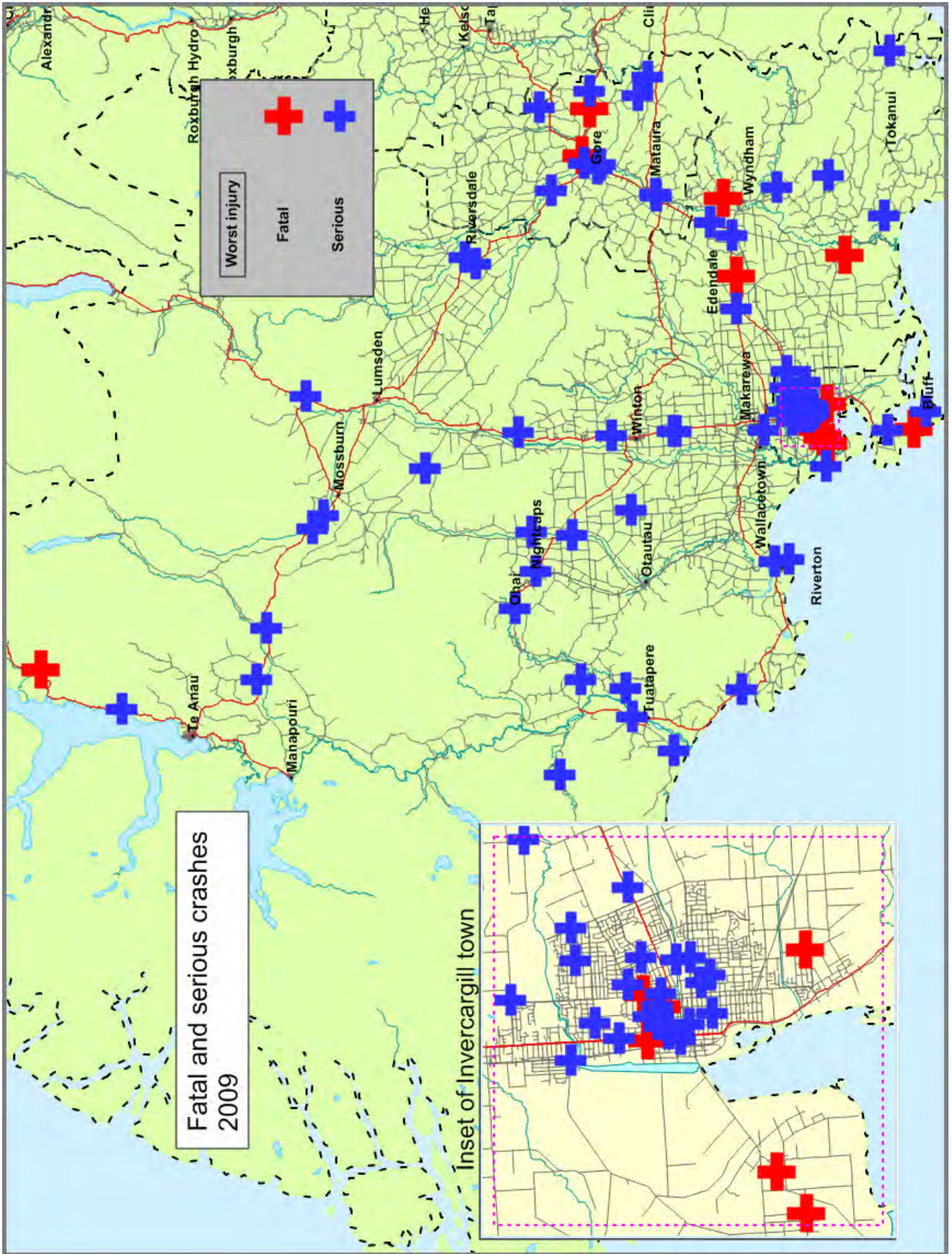
| AREAS OF CONCERN WE WILL ADDRESS | WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM | | | |
|---|--|-------------|---------------|---------------|
| | SAFE ROADS AND ROAD-SIDES | SAFE SPEEDS | SAFE VEHICLES | SAFE ROAD USE |
| Areas of high concern | | | | |
| Reducing alcohol/drug impaired driving | | | ✓ | ✓ |
| 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 local roads in Southland Region there were 219 reported injury crashes, of which 54 were fatal or serious. In addition, on State Highways there were 148 reported injury crashes of which 31 were fatal or serious.

The table below shows the number of casualties resulting from the 367 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 Region | | | | |
|-------------------------------------|------------|------------------|----------------|-------|
| | Fatalities | Serious injuries | Minor injuries | Total |
| Rural | 8 | 54 | 219 | 281 |
| Urban | 8 | 41 | 212 | 261 |
| Total | 16 | 95 | 431 | 542 |

Within the Region there is a reasonably even distribution of crashes of different severities between the urban and rural areas.

Over the last ten years, the number of fatal crashes may have reduced slightly. For serious and minor injury crashes, the number reported last years was the lowest since 2000.

| Crash trends in Southland Region | | | | |
|----------------------------------|---------------|-----------------|---------------|---------------|
| Year | Fatal Crashes | Serious Crashes | Minor Crashes | Total Crashes |
| 2000 | 12 | 62 | 138 | 212 |
| 2001 | 15 | 100 | 289 | 404 |
| 2002 | 18 | 112 | 333 | 463 |
| 2003 | 12 | 118 | 304 | 434 |
| 2004 | 8 | 93 | 279 | 380 |
| 2005 | 6 | 123 | 311 | 440 |
| 2006 | 10 | 128 | 347 | 485 |
| 2007 | 10 | 101 | 308 | 419 |
| 2008 | 11 | 74 | 316 | 401 |
| 2009 | 13 | 72 | 282 | 367 |

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.

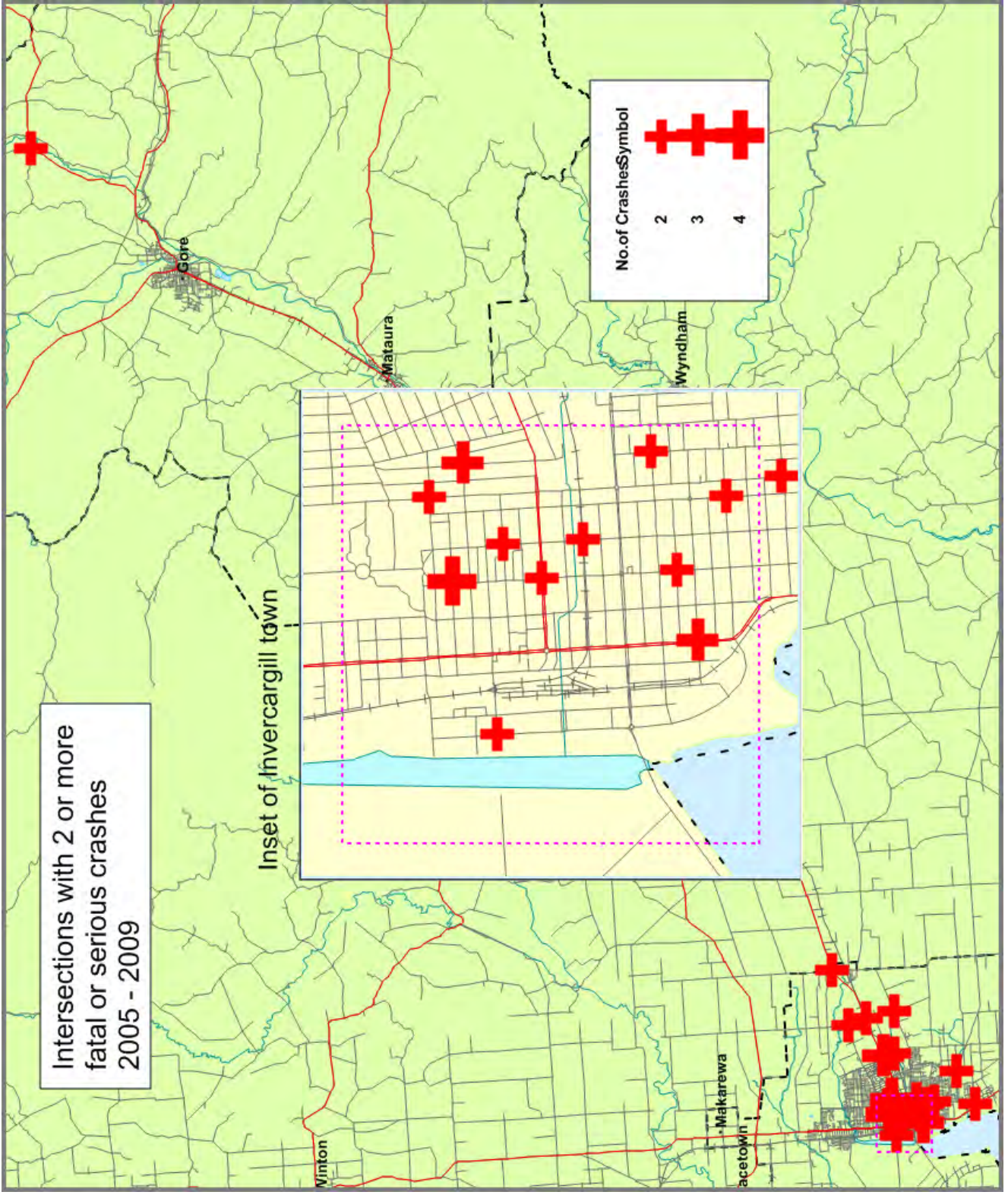
| Crash characteristics (2005 to 2009) Southland Region | | | | |
|--|-----------------------------------|----------------------------|-----------------------|-------------------------|
| Crash type or contributory cause | Percent fatal and serious crashes | Percent all injury crashes | No. of injury crashes | Safer Journeys priority |
| Alcohol | 18 | 11 | 236 | 1 |
| Too fast | 21 | 18 | 381 | 1 |
| At bends | 34 | 29 | 622 | 1 |
| On straights | 19 | 19 | 391 | 1 |
| Intersections | 33 | 39 | 815 | 1 |
| Road factors | 20 | 22 | 461 | 1 |
| Motorcycling | 19 | 9 | 186 | 1 |
| Young drivers | 44 | 42 | 868 | 1 |
| Fatigue | 6 | 6 | 117 | 2 |
| Distraction | 14 | 7 | 315 | 2 |
| Pedestrians | 6 | 4 | 94 | 2 |
| Cycling | 5 | 5 | 103 | 2 |
| Heavy vehicles | 9 | 6 | 148 | 2 |
| Older road users | 6 | 6 | 135 | 3 |
| Overseas drivers | 9 | 10 | 203 | - |

Further information about the 1233 injury crashes on local roads in Southland Region, 2005 to 2009:

- 26 deaths, 378 serious injuries and 1434 minor casualties
- Five year age group with most at fault drivers in injury crashes: 15 to 19 years (27 per cent of at fault drivers)
- Social cost of crashes in 2009 \$79.25 m

Further information about the 879 injury crashes on State Highways in Southland Region, 2005 to 2009:

- 29 deaths, 235 serious injuries and 1088 minor casualties
- Five year age group with most at fault drivers in injury crashes: 15 to 19 years (23 per cent of at fault drivers)
- Social cost of crashes in 2009 \$45.59 m



Intersections

During the five year period 2005 to 2009, on roads in Southland Region, there were a total of 815 fatal and injury crashes at intersections.

| Casualties in crashes at Intersections Southland Region (2005 - 2009) | | | | | |
|---|------|------|------|------|------|
| | 2005 | 2006 | 2007 | 2008 | 2009 |
| Deaths | 0 | 2 | 3 | 3 | 3 |
| Serious injury | 50 | 49 | 41 | 25 | 36 |
| Minor injury | 188 | 232 | 185 | 207 | 192 |
| Total | 238 | 283 | 229 | 235 | 231 |

Fifty percent of all injury crashes at intersections were at intersections in urban areas of the district. Of these, 73 percent were on local roads. In rural areas 56 percent of crashes were on state highways.

Male drivers represent 57 percent of drivers at fault in crashes at intersections. However for drivers aged 15 years to 24 years males accounted for 67 percent of drivers at fault. For drivers aged over 50 males represented just over half of at-fault drivers.

| Ages of at fault drivers in intersection related crashes 2005 to 2009 | | | |
|---|------|--------|-------|
| Ages | Male | Female | Total |
| 15 to 19 | 142 | 55 | 197 |
| 20 to 24 | 63 | 48 | 111 |
| 25-29 | 41 | 28 | 69 |
| 30-39 | 49 | 58 | 107 |
| 40-49 | 47 | 49 | 96 |
| 50-59 | 34 | 35 | 69 |
| 60-69 | 42 | 30 | 72 |
| 70+ | 42 | 49 | 91 |
| Total | 460 | 352 | 812 |

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

| Crash characteristic | Percentage of crashes |
|-------------------------------|-----------------------|
| Alcohol | 8% |
| Too fast | 14% |
| Failed to stop or give way | 65% |
| Poor observation | 71% |
| Poor judgment | 17% |
| Crashes involving pedestrians | 2% |

The most common crash type at intersections was when a driver travelling straight through is hit by a vehicle approaching from the right, followed by a vehicle turning right across the path on a vehicle approaching from the opposite direction.

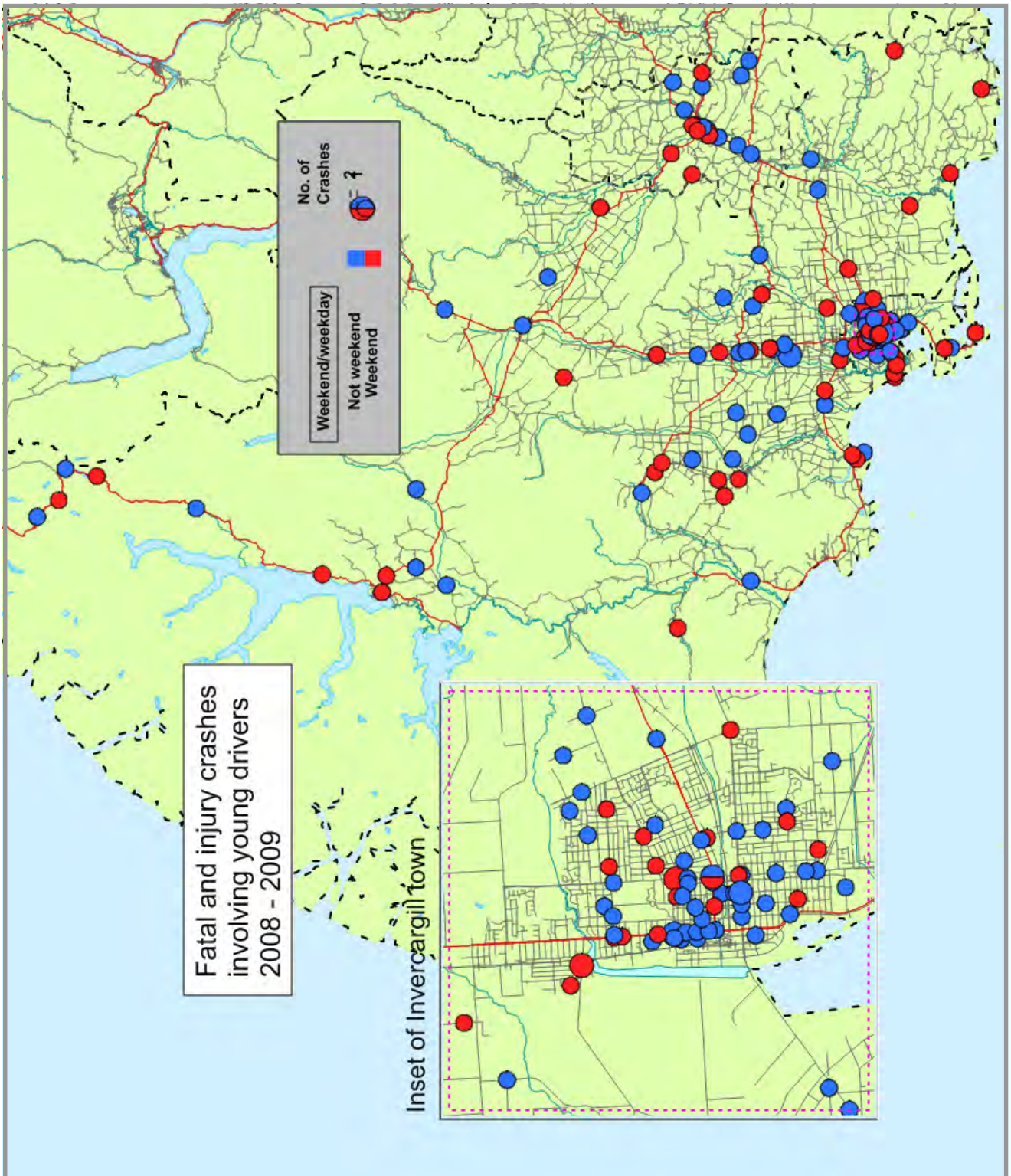
In Southland Region there are 79 intersection sites which have had 3 or more injury crashes in the last five years, including 5 sites with 10 or more injury crashes in the past five years.

Further information about the 1233 injury crashes at intersections on local roads in Southland Region 2005 to 2009:

- 26 deaths, 378 serious injuries and 1434 minor injuries
- 28 percent wet or icy roads
- 30 percent night time
- Worst months February, June
- Worst day of week Friday
- Worst time 3 pm till 6 pm

Further information about the 879 injury crashes at intersections on State Highways in Southland Region 2005 to 2009:

- 29 deaths, 235 serious injuries and 1088 minor injuries
- 27 percent wet or icy roads
- 32 percent night time
- Worst month July
- Worst day of week Friday
- Worst time 3 pm till 6 pm



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.

In Southland Region between 2005 and 2009, 47 percent of injury crashes involved young drivers. These crashes resulted in 32 deaths, 286 serious injuries and 1240 minor injuries.

The number of injury crashes involving young drivers reduced in 2008 from a high of 375 in 2006. There was small increase in 2009, but in that year the number of deaths from crashes involving young drivers was almost twice the average of the previous four years.

| Casualties from crashes involving young drivers Southland Region | | | | |
|--|-------|---------|-------|-------|
| | Fatal | Serious | Minor | Total |
| 2005 | 5 | 73 | 283 | 361 |
| 2006 | 5 | 75 | 295 | 375 |
| 2007 | 5 | 58 | 245 | 308 |
| 2008 | 6 | 35 | 209 | 250 |
| 2009 | 11 | 45 | 208 | 264 |
| Total | 32 | 286 | 1240 | 1558 |

Nearly half of the 1034 young drivers in these crashes had a learner or restricted licence. Nearly two thirds of them were males and 51 percent were 15-19 year olds.

Nearly all the young drivers were local residents.

| Young drivers at fault in injury crashes Southland Region (2005 - 2009) | | | |
|---|------|--------|-------|
| Licence type | Male | Female | Total |
| Full | 274 | 137 | 411 |
| Learner | 79 | 53 | 132 |
| Restricted | 185 | 142 | 327 |
| Overseas | 32 | 25 | 57 |
| Never licensed | 15 | 10 | 25 |
| Disqualified | 33 | 3 | 36 |
| Other (unknown, wrong class) | 36 | 9 | 45 |
| Total | 655 | 379 | 1034 |

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

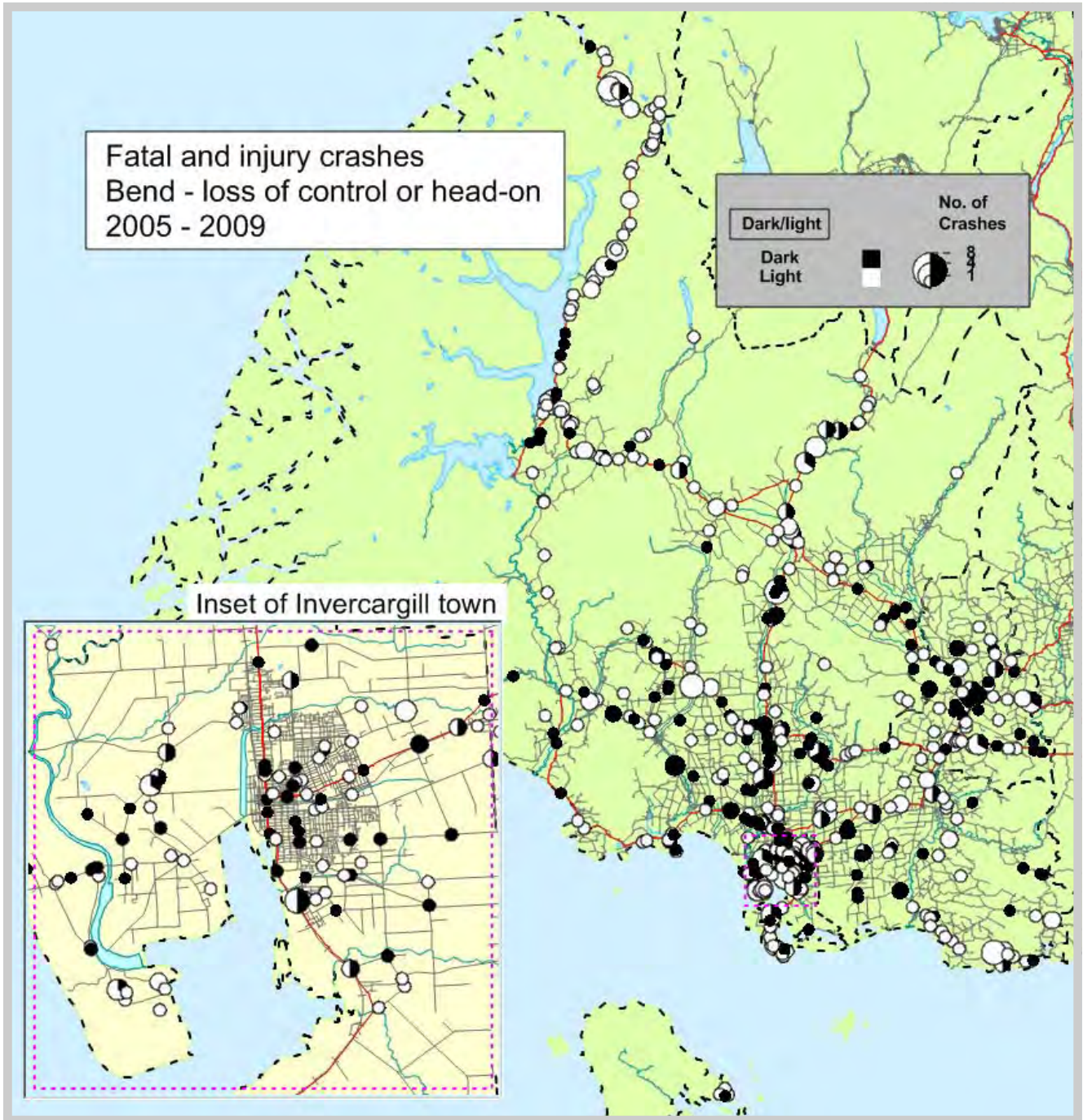
| Crash type or contributory cause | Rural roads | Urban roads |
|----------------------------------|-------------|-------------|
| Alcohol | 77 | 60 |
| Speed | 139 | 128 |
| Failed to stop/Give way | 42 | 216 |
| Poor handling | 240 | 103 |
| Poor observation | 156 | 395 |
| Lost control - straight | 127 | 55 |
| Lost control - bend | 220 | 70 |
| Rear end / obstruction | 48 | 123 |
| Crossing / turning | 46 | 211 |

Further information about the 587 injury crashes involving young drivers on local roads in Southland Region 2005 to 2009:

- 20 deaths, 176 serious injuries 755 minor injuries
- 45 percent were single vehicle crashes
- 60 percent were on urban roads
- 42 percent at intersections
- 37 percent at night
- 29 percent wet or icy roads
- Worst month February
- Worst day of week Sunday
- Worst time 3 pm to 6 pm

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

- 12 deaths, 110 serious injuries 485 minor injuries
- 46 percent were single vehicle crashes
- 40 percent were on urban roads
- 33 percent at intersections
- 39 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, 29 percent of all injury crashes in Southland Region were bend - loss of control or head on crashes. These crashes resulted in 17 deaths, 218 serious injuries and 786 minor injuries.

Overall crash numbers, but not fatal crashes, have reduced each year since 2006.

| Bend - loss of control or head on crashes Southland Region (2005 - 2009) | | | | |
|--|---------------|-----------------|---------------|-------|
| Crash year | Fatal crashes | Serious crashes | Minor crashes | Total |
| 2005 | 3 | 44 | 85 | 132 |
| 2006 | 2 | 41 | 94 | 137 |
| 2007 | 2 | 40 | 80 | 122 |
| 2008 | 4 | 24 | 96 | 124 |
| 2009 | 4 | 23 | 80 | 107 |
| Total | 15 | 172 | 435 | 622 |

Young drivers, (those aged 15-24), make up almost half of the at-fault drivers in bend-loss of control or head on crashes. Within this age group, male drivers represented 82 percent of the 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 | 109 | 58 | 167 |
| 20 to 24 | 79 | 37 | 116 |
| 25 to 29 | 56 | 15 | 71 |
| 30 to 39 | 63 | 36 | 99 |
| 40 to 49 | 45 | 17 | 62 |
| 50 to 59 | 38 | 17 | 55 |
| 60 to 69 | 19 | 7 | 26 |
| 70 and over | 9 | 7 | 16 |
| Total | 418 | 194 | 612 |

If drivers lose control, their vehicles 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 more serious.

The most common roadside hazards struck in injury bend - loss of control or head on crashes in Southland Region were, fences (166), upright banks (99), ditch (99), trees (72) and poles (65) from a total of 668 objects struck.

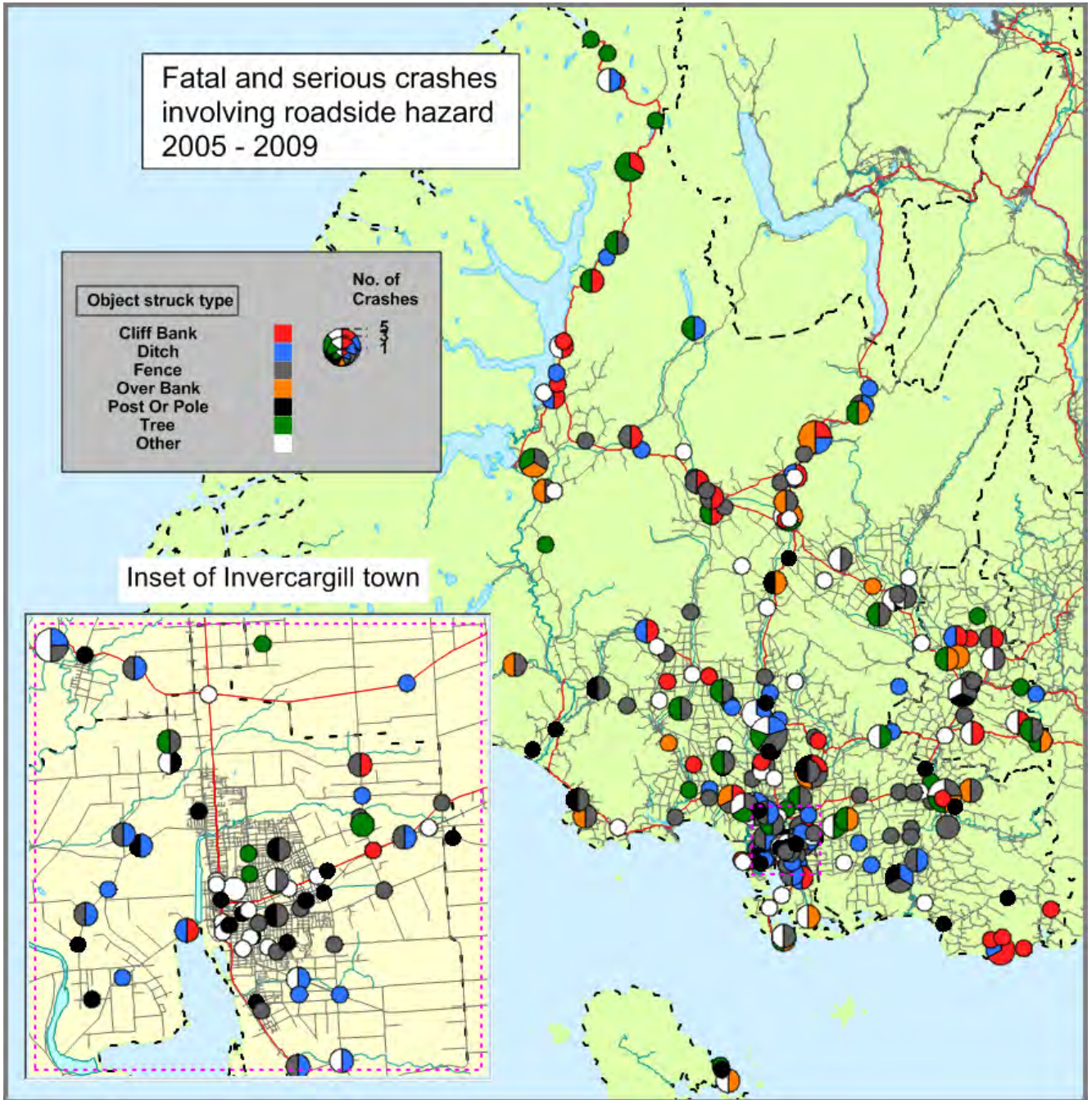
A roadside hazard was struck in 78 percent of bend - loss of control crashes in the Region.

Further information about the 318 injury bend - loss of control or head on crashes on local roads in Southland Region, (2005 to 2009):

- 7 deaths, 121 serious injuries and 380 minor injuries
- 20 percent of crashes involved alcohol
- 38 percent of crashes involved speed too fast for the conditions
- 31 percent involved road factors
- 64 percent involved poor handling
- 71 percent were on rural roads
- 32 percent were on wet or icy roads
- 40 percent were at night
- Worst months January, February, April
- Worst day of week Sunday
- Worst time period 3 pm till 6 pm

Further information about the 304 injury bend - loss of control or head on crashes on State Highways in Southland Region, (2005 to 2009):

- 10 deaths, 97 serious injuries and 406 minor injuries
- 15 percent of crashes involved alcohol
- 37 percent of crashes involved speed too fast for the conditions
- 38 percent involved road factors
- 61 percent involved poor handling
- 90 percent were on rural roads
- 51 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



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 in Southland Region, "road factors" were a contributing factor in 22 percent of fatal and injury crashes.

| Road factor related injury crashes Southland Region | | | | | |
|--|------|------|------|------|------|
| Road type | 2005 | 2006 | 2007 | 2008 | 2009 |
| Urban | 20 | 43 | 32 | 38 | 22 |
| Rural | 60 | 79 | 77 | 40 | 50 |
| Total | 80 | 122 | 109 | 78 | 72 |

| Types of road factors in injury crashes Southland Region (2005-2009) | |
|---|--------------------|
| Road factor type 2005 to 2009 | Number reported |
| Slippery road * | 350 |
| Road surface in poor condition | 85 |
| Road obstructed | 6 |
| Visibility limited | 78 |
| Signs or signals (needed or faulty) | 17 |
| Markings (needed or faulty) | 15 |
| Street lighting | 3 |

* 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 Region, 47 percent of all fatal and injury crashes involved a roadside hazard 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 intersection it could contribute to a lack of visibility.

In the injury crashes in Southland Region where a roadside hazard was struck 25 people died, 309 received serious injuries and 1196 minor injuries.

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

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

| Type of hazard | Number of times hazard struck |
|----------------|----------------------------------|
| Fence | 317 |
| Ditch | 177 |
| Upright bank | 152 |
| Tree | 138 |
| Pole | 134 |
| Over bank | 85 |

Further information about the 254 road factor related injury crashes in Southland Region on local roads (2005 to 2009):

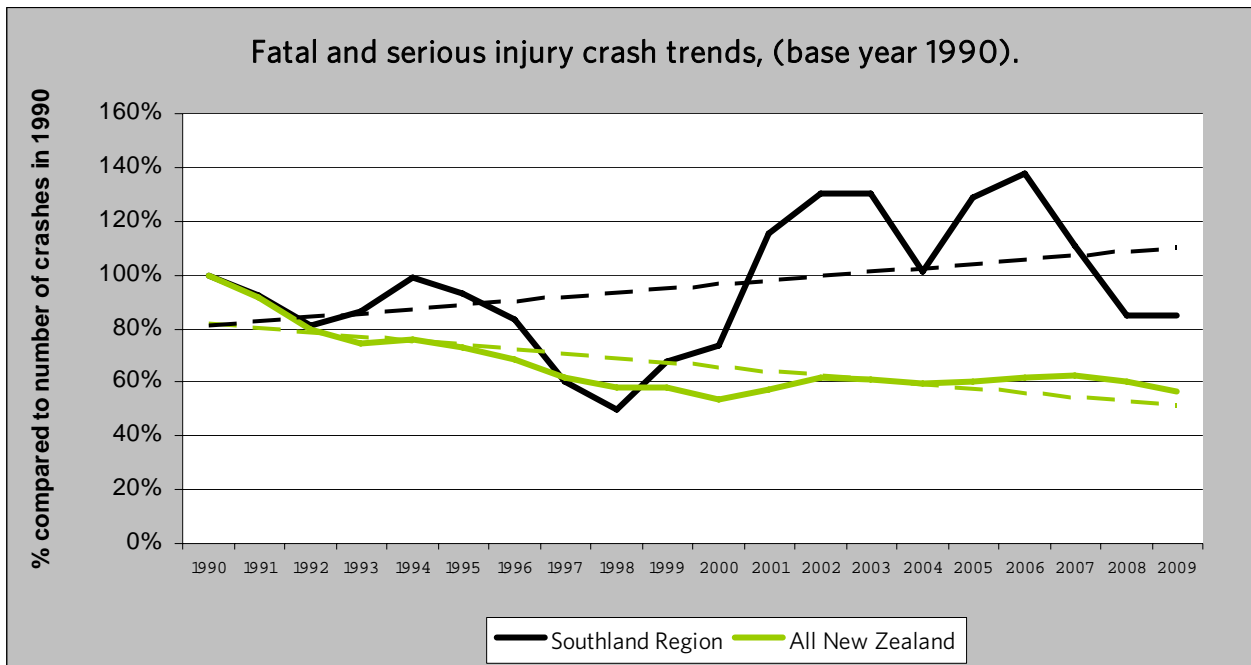
- 2 deaths, 77 serious injuries and 305 minor injuries
- Most common crash type, Bend - loss of control or head-on
- 37 percent at intersections
- 49 percent urban
- 56 percent wet or icy road
- 29 percent night time
- Worst month June
- Worst day of week Friday

Further information about the 207 road factor related injury crashes in Southland Region on State Highways (2005 to 2009):

- 10 deaths, 53 serious injuries and 288 minor injuries
- Most common crash type, bend - loss of control or head-on
- 15 percent at intersections
- 14 percent urban
- 85 percent wet or icy road
- 40 percent night time
- Worst month July
- Worst day of week Friday

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 Region and for the country as a whole.



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