

road safety issues

July 2003

The Land Transport Safety Authority (LTSA) has prepared this road safety issues report. It is based on reported crash data and trends for the 1998–2002 period. The intent of the report is to highlight the key road safety issues and to identify possible ways to reduce the number of road deaths and injuries in Transit New Zealand (TNZ) Region Two.

This report covers all TNZ (Auckland) roads not covered by the separate Auckland motorways issues report. In effect this means SH 1 (north of Lonely Track Road), SH 1A, SH 16 (excluding the north-western motorway), SH 17, SH 18, and SH 22. The area is identical to that policed by the North Shore/Waitakere State Highway Patrol with the addition of SH 22 and Stanley Street/The Strand in Auckland City.

Unless otherwise stated, all charts and crash statistics quoted are for injury crashes that occurred from 1998 to 2002 for which traffic crash reports were received – a total of 739 crashes in the five years.

SH 17 continues to benefit from the construction of ALPURT (Albany to Puhoi realignment) with six of the eight crashes last year being minor injury. Crashes on SH 18 increased significantly last year – two were fatalities and 10 serious injury crashes. SH 22 had a superb year with no fatal or serious crashes reported. SH 1A has only had two reported injury crashes since opening. Both were minor. SH 16 (Grafton Road/St Stanley Street), which is in the midst of construction activity, experienced 11 minor-injury crashes last year (which is a better than average result).

Refer to the tables under Overview of crashes for a breakdown by highway number and injury.

Major road safety issues

TNZ Region Two

Loss of control on bends/head-on

Alcohol

Human factors

Nationally

Speed

Alcohol

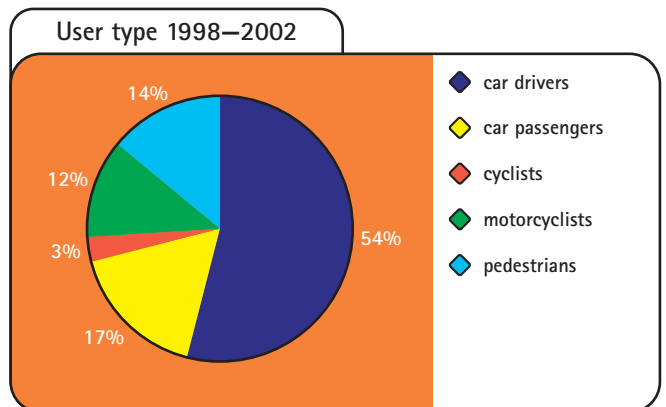
Failure to give way

Restraints

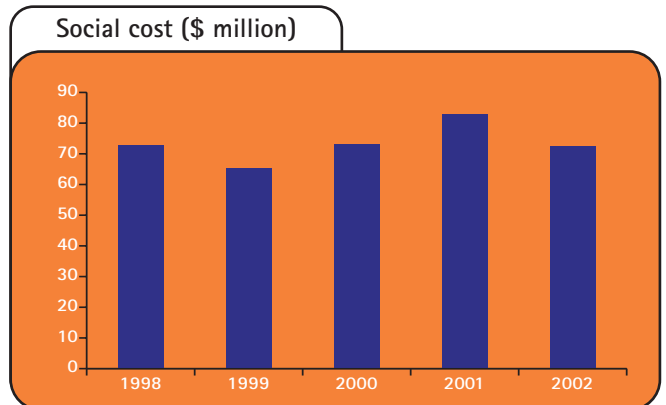
2002 road trauma for TNZ Region Two

♀	Deaths	8
	Serious casualties	61
	Minor casualties	165
🚗	Fatal crashes	8
	Serious injury crashes	46
	Minor-injury crashes	99
	Non-injury crashes	1,565

Road deaths 1998–2002



Estimated social cost of crashes*



* The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are expressed at June 2002 prices.

Overview of crashes

The following tables show that the number of fatal crashes dropped in 2002, but serious injury crashes were at their highest level in five years, and minor crashes were steady. Fatal and serious crash numbers combined came to 54 in 2002, just ahead of 1999 when there were 52.

State highways – number of injury crashes

SH	1998	1999	2000	2001	2002	Total
16	45	50	39	42	44	220
17	26	25	12	4	8	75
18	25	21	17	20	30	113
22	16	10	8	15	7	56
1A			1	1		2
1N	38	53	51	66	63	271
Total	150	159	129	148	153	739

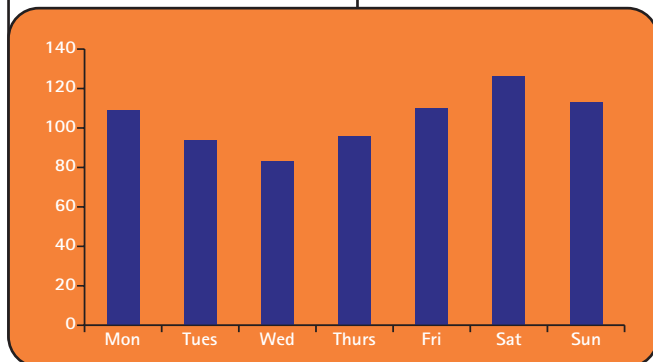
State highways – number of fatal crashes

SH	1998	1999	2000	2001	2002	Total
16	5	2	3	1	2	13
17	3		1	2		6
18	2			3	2	7
22	1	1				2
1N	2	5	7	7	4	25
Total	13	8	11	13	8	53

State highways – number of serious injury crashes

SH	1998	1999	2000	2001	2002	Total
16	7	15	6	8	12	48
17	3	5	5		2	15
18	5	3	4	1	10	23
22	5	5	1	5		16
1N	14	16	17	19	22	88
Total	34	44	33	33	46	190

Day of week for crashes

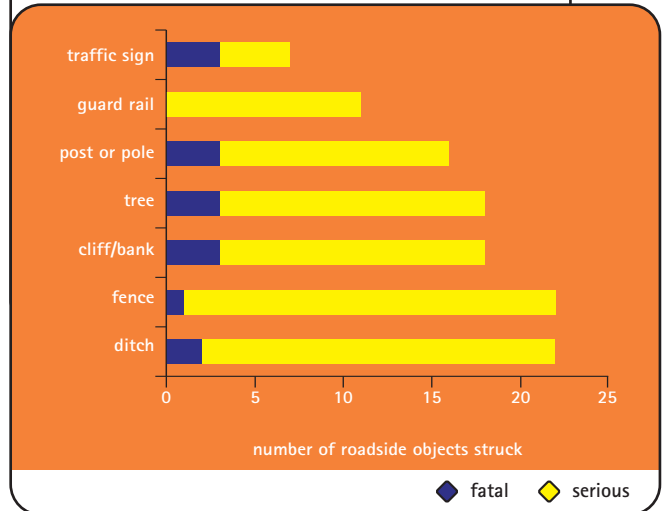


The peak day for crashes is Saturday, with a mid-week trough on Wednesday.

Alcohol and/or speed were thought to be factors in 26 percent of injury crashes. The reported number of speed-related crashes declined in 2002 after three years of increases (see also the alcohol issue below).

The most commonly struck roadside hazards in fatal and serious crashes are indicated below.

Roadside objects struck in fatal and serious injury crashes



Failure to give way or stop has declined as a crash factor from 42 crashes in 1998 and 1999 to 23 crashes last year. The majority of crashes in this category are minor injury.

The table below shows proportions of crashes in different conditions.

Wet	29%	Dry	71%
Dark	35%	Light	65%
Intersection	31%	Mid-block	69%
Urban	35%	Open	65%

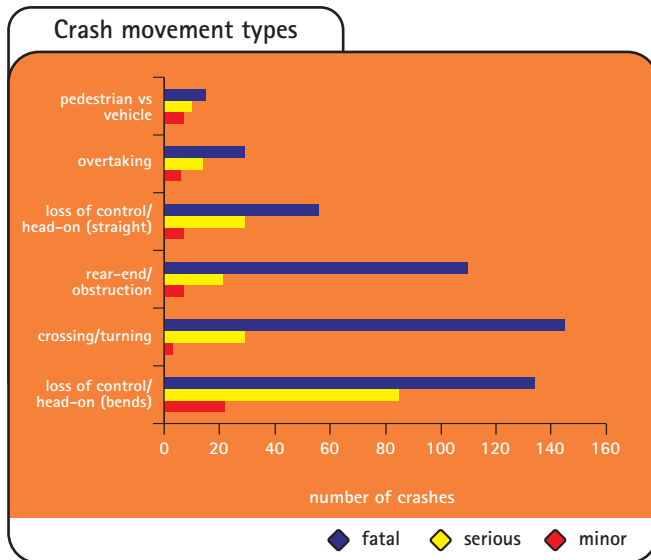
Recommended actions

- Encourage the State Highway Patrol to allocate resources among highways in proportion to the amount of risk.
- Examine reasons why there were so few incidents on SH 22 compared with the dramatic increase in crashes on SH 18.



Loss of control on bends/head-on

Loss of control and head-on crashes on bends was the most common crash movement and also accounted for the most serious injury and fatal crashes.



The combined number of fatal and serious crashes on bends last year was the highest in five years. At 27 crashes, it is well above the average of the previous four years (20 crashes).

Often crashes on bends result in collisions with roadside hazards. The chart in the Overview of crashes section includes the roadside objects that featured in these collisions.

Some common factors recorded for these crashes were:


- speed too fast for the conditions (68)
- alcohol (53)
- road slippery (44) – mainly due to rain (31) and oil/fuel/diesel (8)
- fatigue (39)
- inattentive or attention diverted (24)
- inexperience (22)
- loss of control returning to seal from unsealed shoulder (13)
- worn tyre (7).

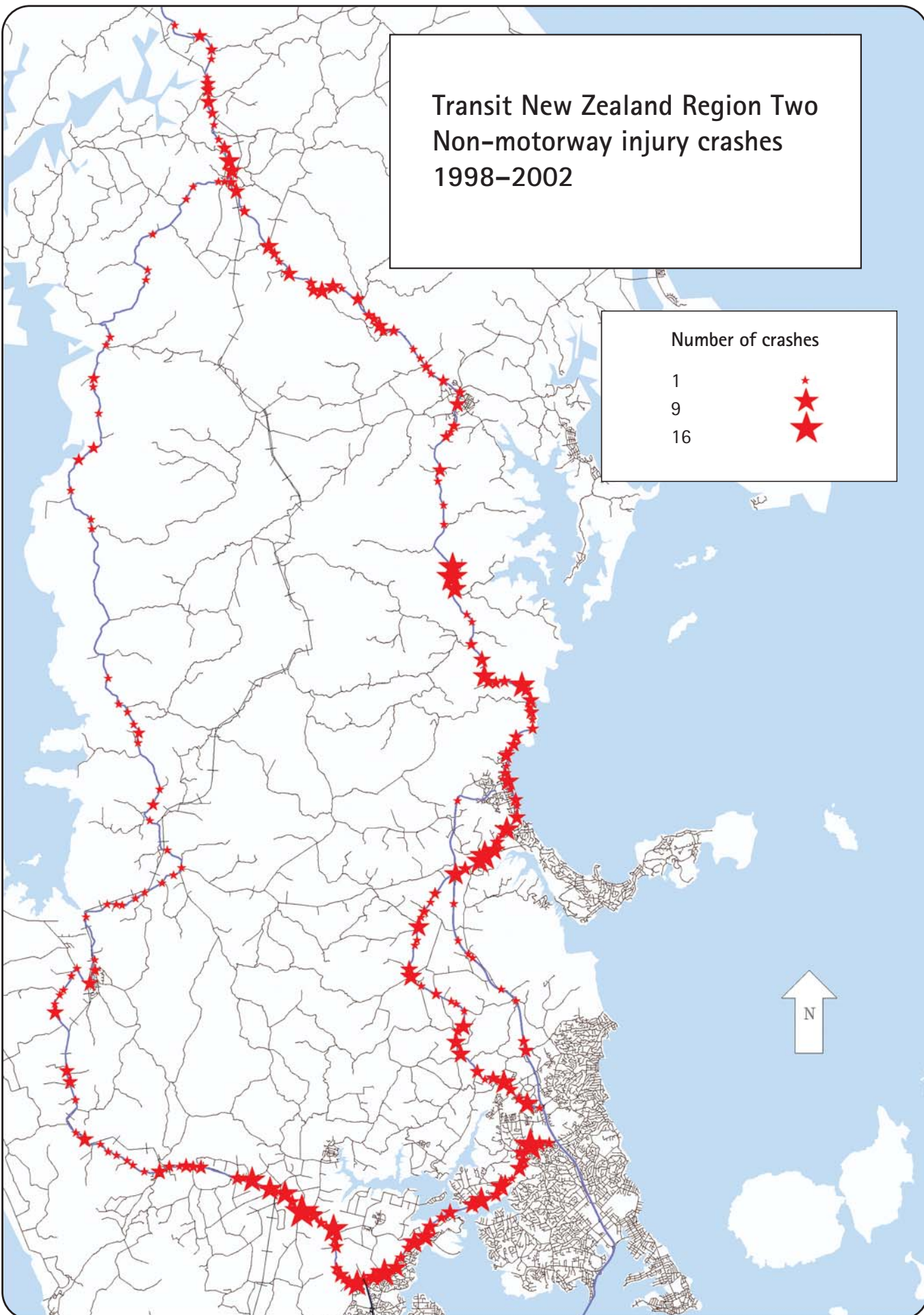
Recommended actions

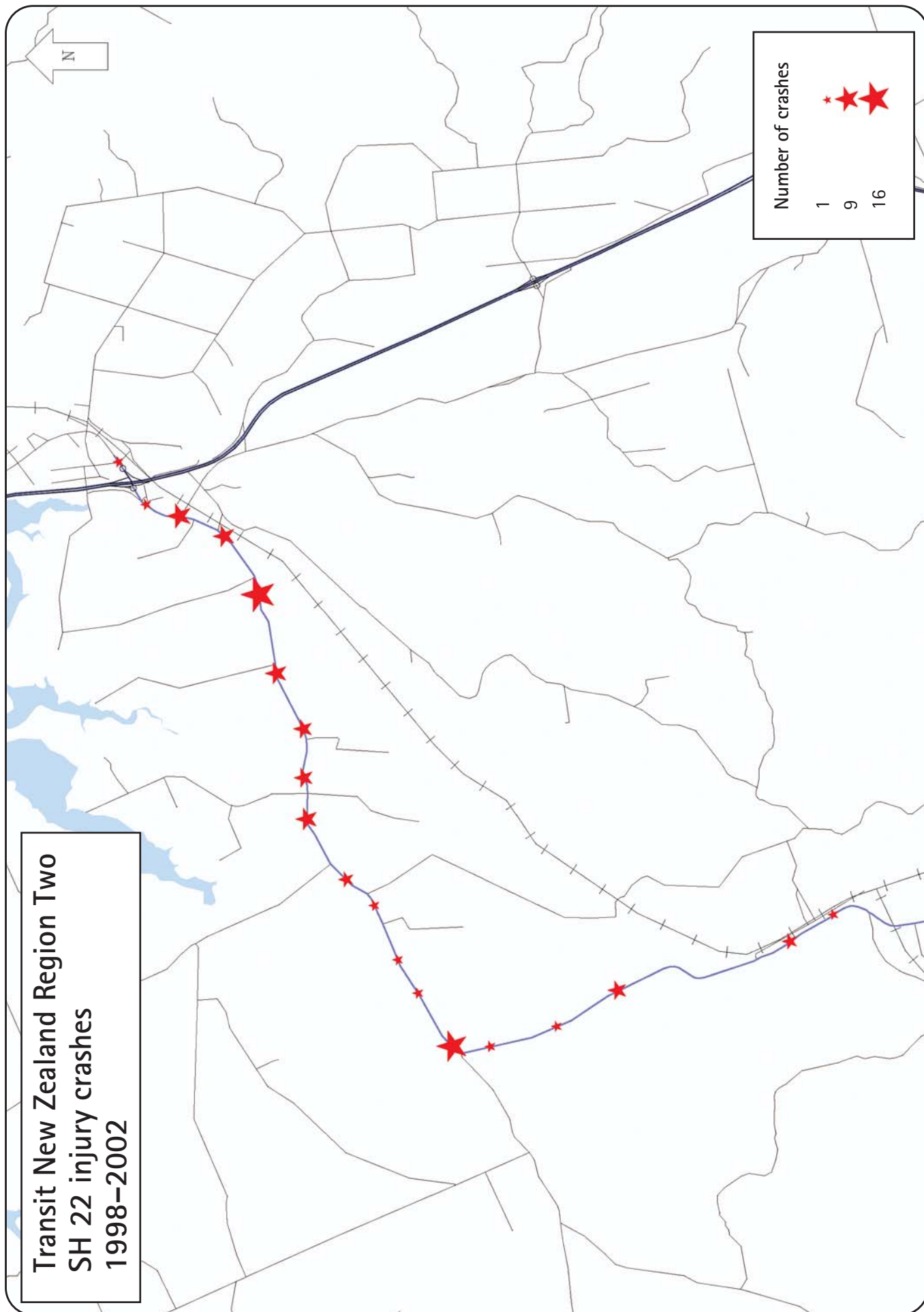
- Support strategic enforcement campaigns targeting speed and alcohol.
- Continue to monitor skid resistance and review intervention levels for skid resistance on bends.
- Continue road realignment projects where appropriate.
- Set and enforce reasonable speed limits at reseals to avoid chip loss and damage to road surface.
- Continue to improve lane markings around curves, by providing edge lines and centre lines where they are lacking or deficient.
- Encourage shoulder widening to ensure roads are the appropriate width.

Transit New Zealand Region Two
Non-motorway injury crashes
1998–2002

Number of crashes

- 1 
- 9 
- 16 







Alcohol

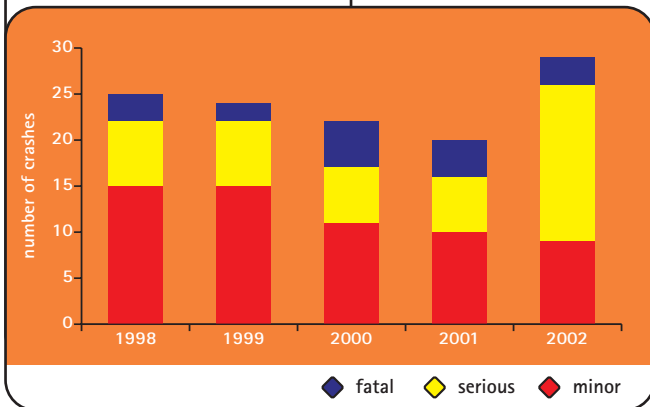
There has been a proportionately large rise in the number of serious injury crashes involving alcohol in 2002 (17 crashes compared with six or seven for each of the previous four years).

Fifty-three percent of these occurred during the weekend and 73 percent during the hours of darkness.

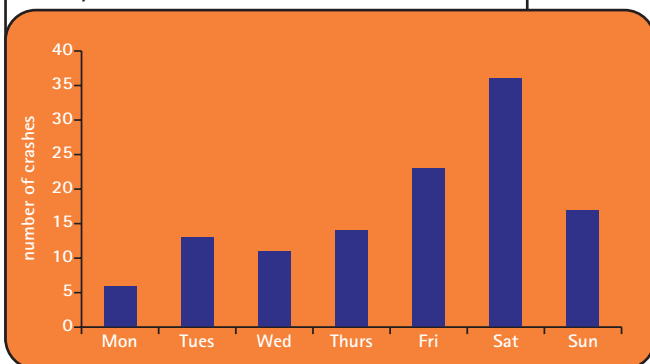
Recommended actions

- Investigate reasons for the increased incidence of alcohol-related crashes on SH 18 and consider increasing enforcement in identified problem areas.
- Consider increasing the current standard of road marking, including the possible use of Vibraline edge and centre lines, and high standard reflective signage.

Alcohol-related crashes



Day of week for alcohol-related crashes

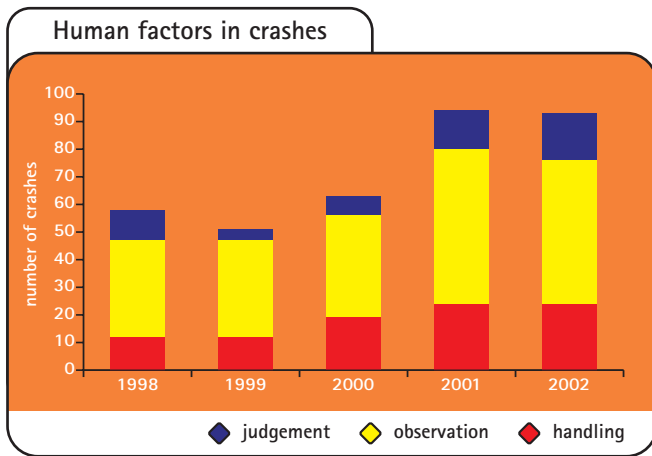


Alcohol-related crashes were dispersed across the state highways as shown in the table below. From the table it appears that SHs 18 and 1N were responsible for the increase in alcohol-related crashes.

SH	1998	1999	2000	2001	2002	Total
16	8	4	3	10	7	32
17	5	5	3	1		14
18	3	4	2	1	7	17
22	4	2	1	2	1	10
1A			1			1
1N	5	9	11	6	14	45

Human factors

Poor handling, poor observation and poor judgement have each increased as crash factors over the last two years.



Poor handling featured predominantly in loss of control and head-on type crashes. Poor observation featured strongly in all crash types but especially in crossing/turning and rear-end type crashes, which is to be expected.

Crashes by movement type

	Handling	Observation	Judgement
Bend-loss of control/head-on	65	26	19
Crossing/turning	3	72	14
Overtaking	6	14	7
Pedestrian versus vehicle		4	
Rear-end/obstruction	2	90	2
Straight-loss of control/head-on	15	9	11
Total	91	215	53

The three most common causes of crashes with these human factors were:

- failed to notice car slowing
- didn't check when required to give way to traffic from another direction
- didn't check behind when changing lane position or direction.

Males outnumbered females 224 to 130 (63:37) in these statistics. Younger drivers are the most prone to these errors with the 15 to 19 and 20 to 24 year age groups standing out (59 and 58 crashes respectively). However, there is a secondary peak among 40 to 44-year old males (40 crashes).

Recommended actions

- Encourage education campaigns aimed at improving cornering skills.
- Support campaigns on adjusting speed for different driving conditions.
- Encourage campaigns on the need to be fully alert when driving.
- Consider focusing enforcement on crash-promoting offences such as tailgating, failing to stop at Stop signs and aggressive or careless lane-changing behaviour.
- Use speed trailers with down-stream enforcement.

New Zealand Road Safety Programme

Reducing road trauma involves a multi-pronged approach, which includes education, engineering and enforcement. The New Zealand Road Safety Programme (NZRSP) is the primary planning and funding programme for road safety activity undertaken by the New Zealand Police, LTSA and community groups. Transfund New Zealand provides funding to Transit New Zealand and local authorities for roading projects through its National Land Transport Programme.

Community projects

Through the Community Road Safety Programme (CRSP) the NZRSP provides funding for community development and community programmes to support road safety and to bring about positive and sustainable changes in community attitudes and behaviours. CRSP funding of community initiatives aims to encourage local involvement and ownership of road safety issues, and to target local resources and effort to local risks. This year's review of the programme initiates a re-focus of effort and funding into community development. This involves working with and within different communities of people to assist them in becoming aware of their own local road safety issues and developing solutions to achieve better road safety outcomes.

Road policing

In 2003/2004 the North Shore/Waitakere Police District State Highway Patrol is funded to deliver 25,000 hours of road policing in Transit New Zealand Region Two. Counties-Manukau State Highway Patrol is responsible for SH 22 and other areas not covered in this report.

Road environment

The LTSA's crash reduction monitoring database shows that works implemented as a result of crash reduction studies have reduced crashes at the study sites by 34 percent in Transit New Zealand Region Two (this figure includes sites covered by the motorways report).

Recommendations from recent studies should be implemented and further studies undertaken to consider mass action or local area traffic management to reduce crash numbers and severity.

References

Transit New Zealand Region Two Road Safety Report 1998–2002
LTSA Crash Analysis System

Where to get more information

For more specific information relating to road crashes in Transit New Zealand Region Two, including highway-by-highway analysis, please refer to the Land Transport Safety Authority Crash Analysis System, or contact the people or organisations listed below:

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