road safety issues

The Land Transport Safety Authority (LTSA) has prepared this road safety issues report. It is based on reported crash data and trends for the 1999–2003 period. The intent of the report is to highlight the key road safety issues in the Hurunui District.

Crash numbers have slowly increased during this period. Urban casualty numbers were higher in 2003 than at any time in the previous 10 years. Although rural casualty numbers remained fairly steady between 1999 and 2003, there were more fatalities in 2003 than in the previous four years.

- The most common crash type was loss of control both on straight roads and on bends.
- The main causes of crashes were excessive speed, poor handling, poor observation and fatigue.
- Approximately 80 percent of injury crashes occurred on state highways.
- Just over 10 percent of injury crashes occurred on urban roads.
- The most common days for crashes were Fridays and Sundays.
- More crashes happened in December than in any other month of the year.
- Nearly 70 percent of crashes only involved one vehicle.
- Just under half of all state highway crashes occurred on State Highway 1, and a further third on State Highway 7.
- The most highly represented group of casualties was 15 to 19 year olds.

Major road safety issues

Hurunui District

Loss of control on bends

Fatigue

State highways

Restraints

Nationally

Speed

Alcohol

Failure to give way

Restraints

ISSN 1175-897X

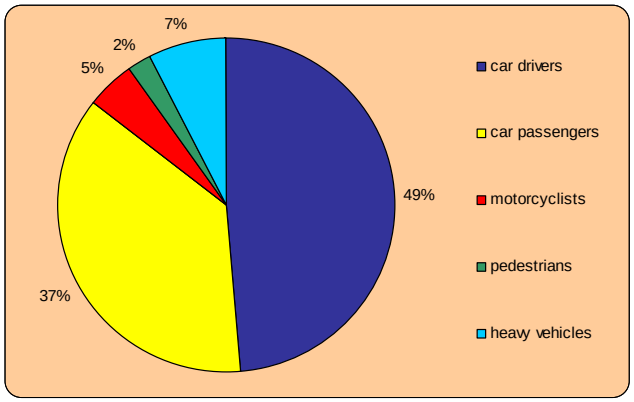
2003 road trauma for Hurunui District

Deaths	10
Serious casualties	19
Minor casualties	69

Fatal crashes	7
Serious injury crashes	10
Minor injury crashes	41
Non-injury crashes	59

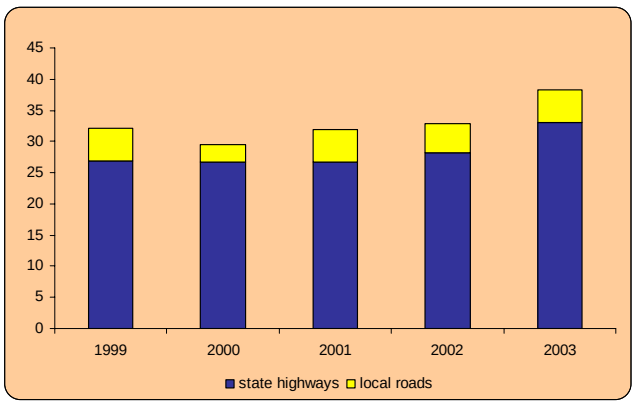
Road casualties 1999–2003

User type 1999–2003



Estimated social cost of crashes*

Social cost ($ million)

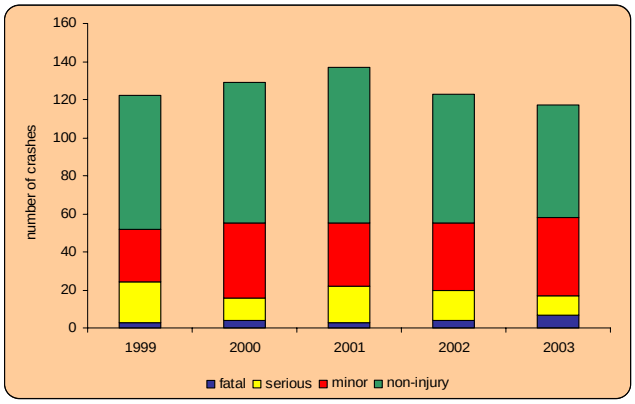


*The estimated social cost includes loss of life or life quality (estimated by the amount New Zealanders are prepared to pay to reduce their risk of fatal or non-fatal injury), loss of output due to injuries, medical and rehabilitation costs, legal and court costs, and property damage. These costs are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

land transport safety authority

The maps in this report show the location and severity of crashes and the location of loss of control on bend crashes.

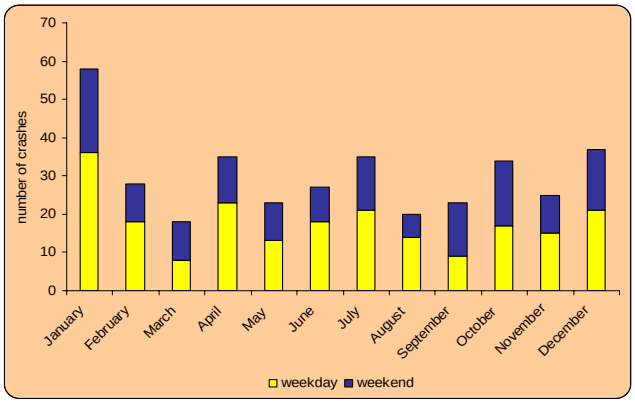
Crashes by severity



Loss of control on bends

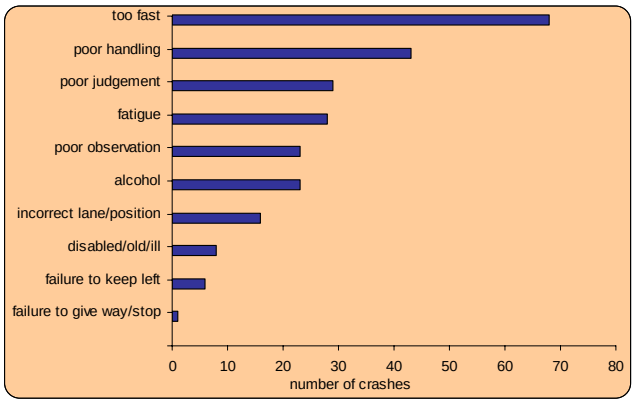
Loss of control crashes on bends were the biggest problem on Hurunui roads between 1999 and 2003. During this period nearly 60 percent of all crashes in Hurunui involved loss of control, often resulting in collision with an object or another vehicle. The Police work at maintaining a visible presence, but ensuring that signage and road surfaces are in optimum condition assists the motorist who misjudges the conditions or the road environment.

Loss of control on bend crashes by month



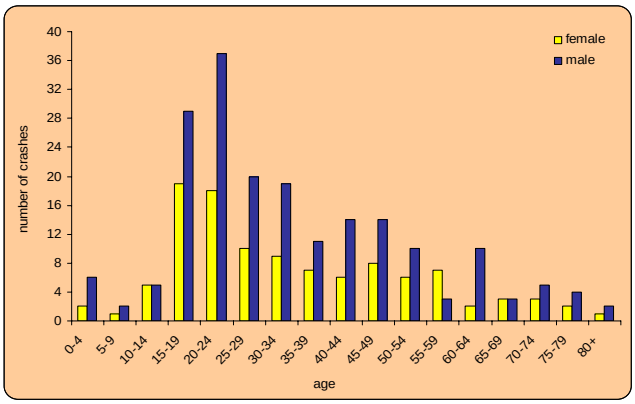
The majority of crashes occurred in January, and approximately 40 percent of crashes occurred at the weekend. Although holiday weekends were very heavily trafficked, they accounted for fewer than eight percent of all crashes. Generally, weather does not seem to be a factor except for Easter, when approximately 60 percent of crashes occurred on wet road surfaces.

Factors in loss of control on bend crashes 1999–2003



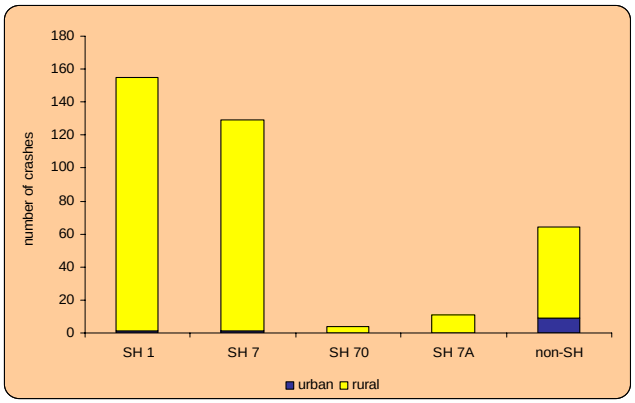
The most common cause of crashes was excessive speed for the conditions, followed by poor handling.

Age and gender of drivers in loss of control on bend crashes

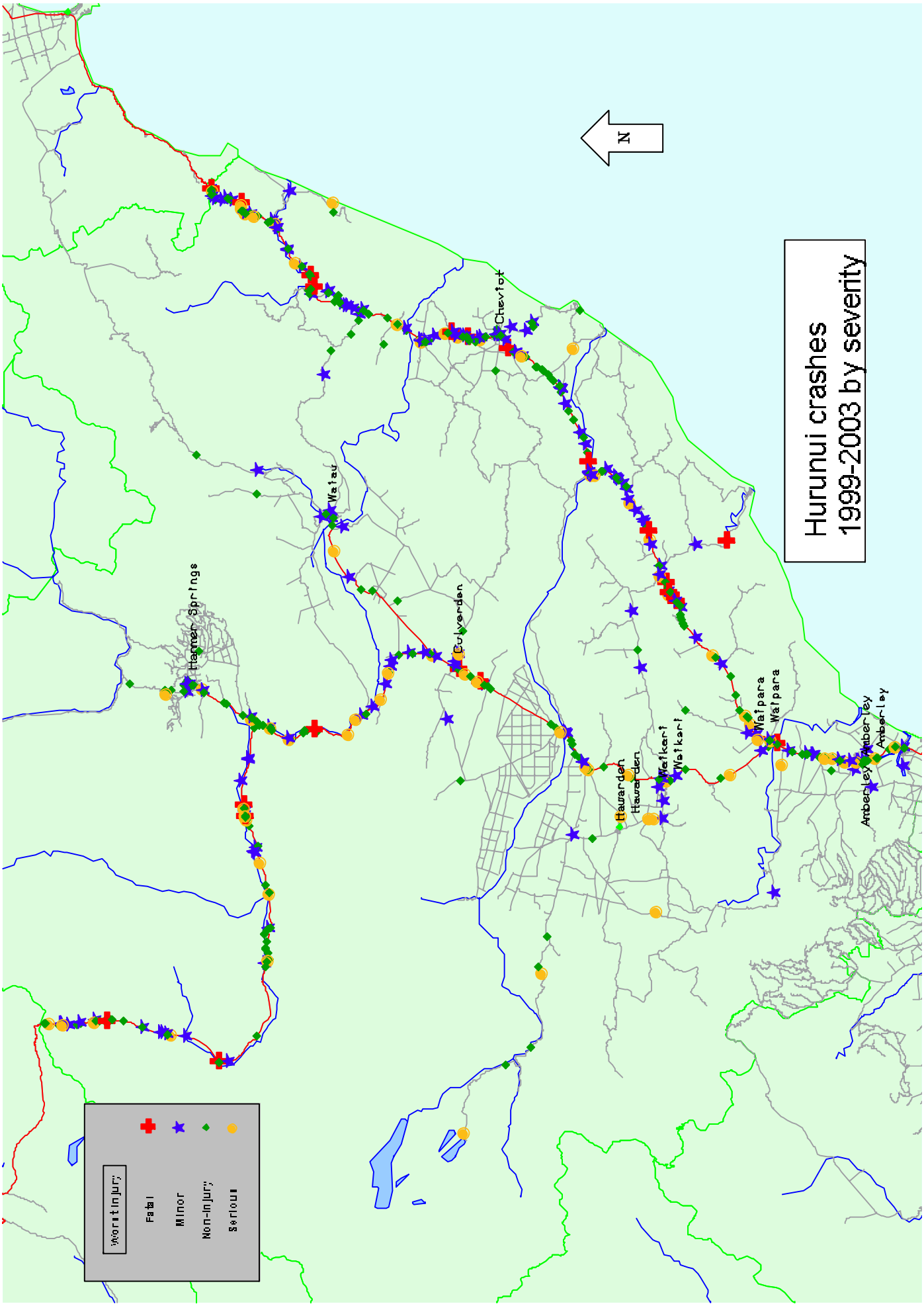


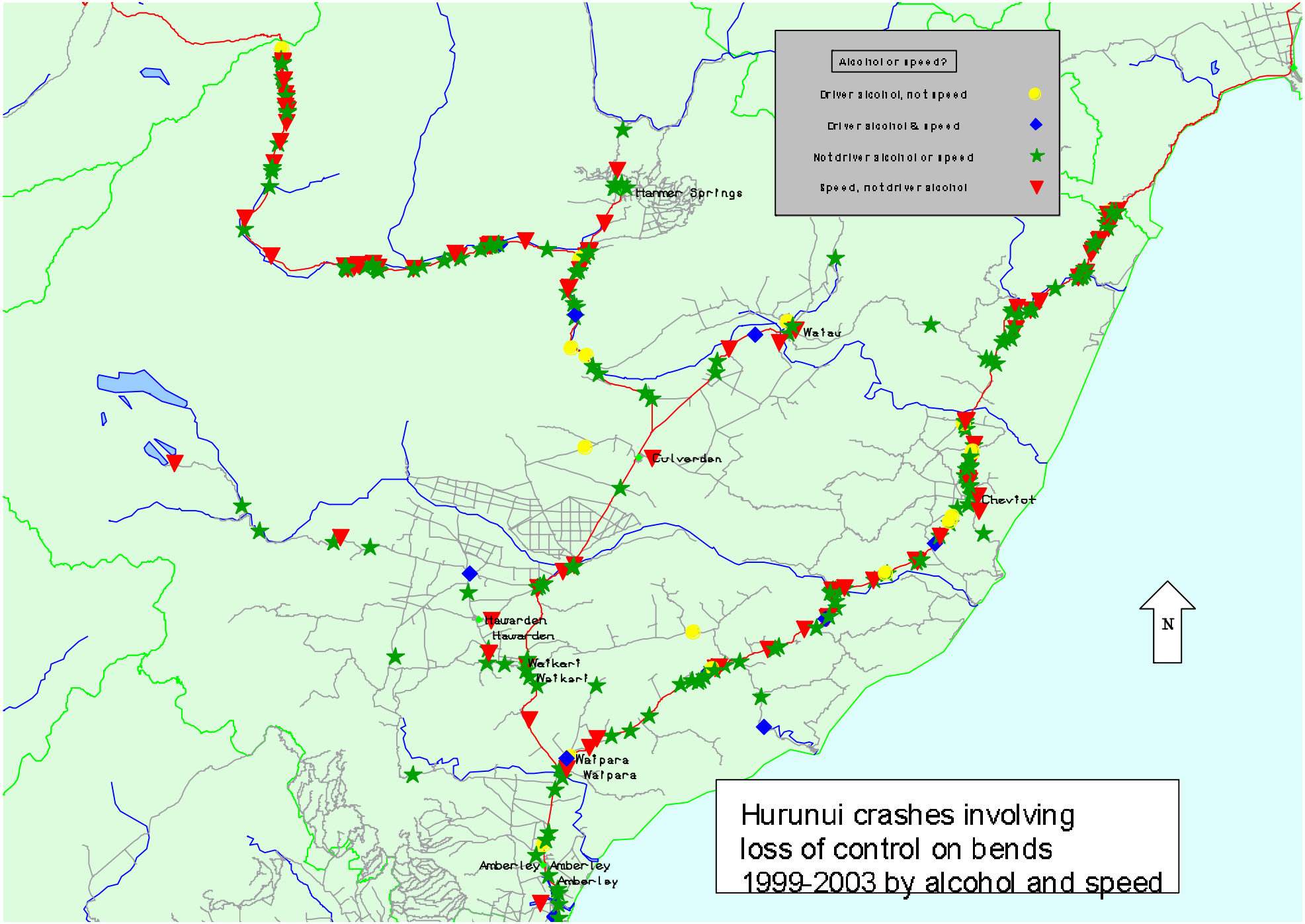
The age group most frequently involved in injury crashes in the Hurunui District was 20 to 24 year olds, followed by 30 to 34 year olds. Just 55 of the 149 drivers involved in crashes were female.

Loss of control on bend crashes by crash location 1999–2003



Just three percent of crashes took place in urban areas, and just under 20 percent were on local roads.


Hurunui crashes
1999-2003 by severity
N
Worst Injury
Fatal
Minor
Non-Injury
Serious
Hanmer Springs
Waiau
Culverden
Chevtot
Hawarden
Waikari
Waipara
Amberley


Alcohol or speed?
Driver alcohol, not speed
Driver alcohol & speed
Not driver alcohol or speed
Speed, not driver alcohol
Hanmer Springs
Waiau
Culverden
Cheviot
Hawarden
Hawarden
Waikari
Waikari
Waipara
Waipara
Amberley
Amberley
Amberley
N
Hurunui crashes involving
loss of control on bends
1999-2003 by alcohol and speed

Fatigue

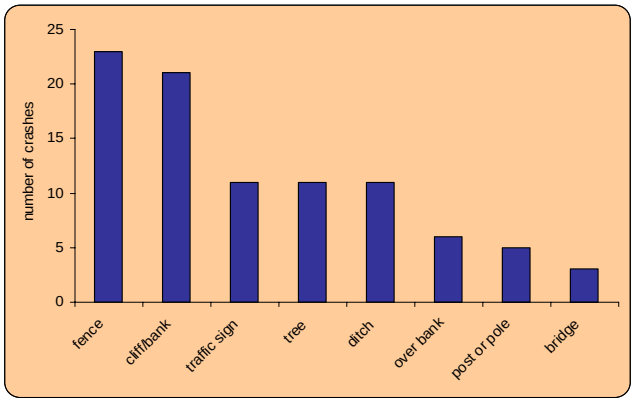
Fatigue is still an extremely difficult problem to deal with for road safety professionals, particularly as it is almost certainly under-reported. Little can be done in the way of engineering except to make the roadside more forgiving. Enforcement is restricted as fatigue is extremely difficult to prove. Therefore, the most important area of work is education. Much work is already being carried out in the area, but to be effective as much as possible needs to be known about who is falling asleep, when and where.

Three times more males than females fell asleep when driving and are more likely to be between the ages of 15 and 24 years, with 25 to 34 year olds crashing at approximately half the rate of the younger age group.

Crashes were most likely to occur on a Saturday or Sunday, particularly between 4 am and 8 am, and most commonly in the months of December and January. These two months accounted for over a third of injury fatigue-related crashes. Around 10 percent occurred in the Christmas/New Year holiday period.

Alcohol was also a factor in fatigue crashes with 60 percent occurring on bends. Many crashes involved a collision with an object, as shown below.

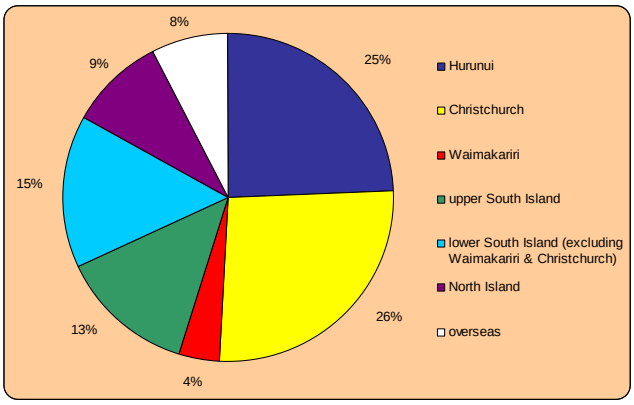
Objects struck in fatigue-related crashes



Just five percent of the crashes involved more than one vehicle. Less than 25 percent occurred on State Highway 7 and around 70 percent happened on State Highway 1.

Just one quarter of drivers involved in crashes were Hurunui residents, while a further quarter were from Christchurch.

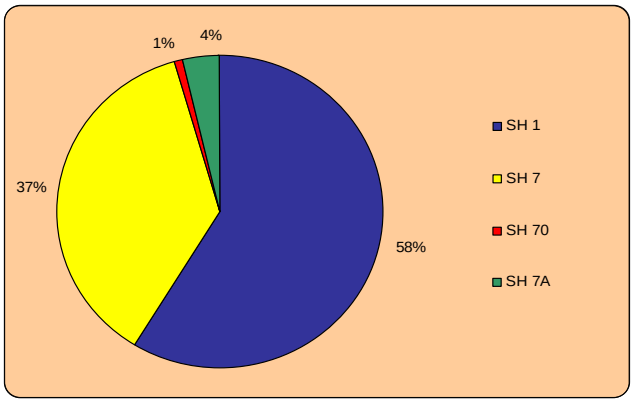
Home address of drivers in fatigue-related crashes



State highways

The majority of crashes in the Hurunui District (approximately 80 percent) occurred on state highways. This is also where the most engineering and enforcement activity should occur, and it is important to ensure this activity is properly targeted. This report gives some preliminary indication of key target areas. However, more in-depth investigation should be carried out to accurately direct this activity.

State highway crashes by highway number



Thirty-two crashes occurred at bridges and five at rail crossings.

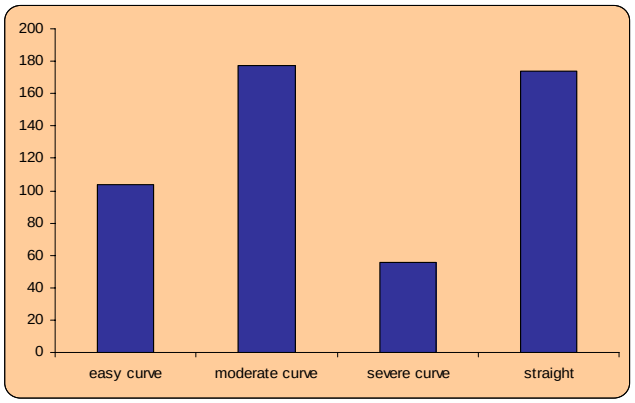
Nearly 80 percent of all crashes on state highways involved loss of control, with 75 percent of those occurring on bends. Nearly 75 percent of state highway crashes (376 crashes) involved only one vehicle, two crashes involved cyclists and six crashes involved pedestrians.

Around 30 percent of state highway crashes occurred at night and the same percentage took place on wet roads.

When recording details of crashes on bends, attempts are made to distinguish the severity of the bend. Even allowing for some categorising errors, evidence suggests

that crashes are more likely to occur on easy to moderate curves rather than moderate to severe curves. Although this is partly to be expected as there are far fewer severe than easy curves, the graph demonstrates that attention also needs to be paid to ensuring easy curves are correctly engineered.

State highway curvature at crash sites



Restraints

Safety belt wearing surveys were carried out in Hurunui in March and April of 2004 with the following results:

Amberley	79%
Hawarden	69%
Cheviot	81%

These results indicate vehicles where all occupants were wearing a restraint, ie in 21 percent of vehicles surveyed in Amberley, at least one occupant was not wearing a safety belt.

Back issues

Issues reports have been produced since 2000. In the previous reports some issues keep recurring while others disappear, occasionally to resurface. The following is a summary of issues in the Hurunui District since 2000 along with commentary on their significance:

2001	Loss of control on bends
	Speed
	Motorcyclists
	Weekends
2002	Loss of control on bends
	Speed
	Weekends
	Under-reporting
2003	Loss of control on bends
	Weekends/Summer
	Local roads

Of these issues, loss of control on bends continues to be Hurunui District's greatest problem. A proportion of these problems are driver-related. Some of these issues remain problems year after year and are often a reflection of the physical limitations of the area. However, attempts must still be made to minimise the effects. Others disappear for a year or two only to reappear, either because of statistical variations or because an effective programme has been discontinued and the effects have worn off. It is important to examine past engineering, enforcement or education programmes to determine whether they are still meeting current needs.

Contacts

Land Transport Safety Authority
Regional Manager
Dennis Robertson
See LTSA staff contact details at bottom of page

Road Safety Co-ordinator
Tony Francis
Francis & Cambridge
PO Box 12255
Christchurch
Phone 03 332 2722

Hurunui District Council
Frank Ledingham
PO Box 13
Amberley
Phone 03 314 8816

New Zealand Police
Road Policing Manager
PO Box 2109
Christchurch
Phone 03 363 7417

Christchurch Regional Office
Level 5, BNZ House, 129 Hereford Street
PO Box 13364, Christchurch
Phone 03 964 2866, Fax 03 964 2855
www.ltsa.govt.nz

LAND transport safety AUTHORITY