Ministry of Transport
TE MANATŪ WAKA

Quarterly road toll report

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QUARTERLY REPORT

The road toll: quarterly report

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The road toll: July-September 2011

Quarters	
July-September 2011	69
July-September 2010	79
January-March 2011	70
April-June 2011	69

12 months to date	
October 2010- September 2011	305
October 2009- September 2010	357
October 2008- September 2009	408

Year to date

January - September 2011	208
January - September 2010	278

The July-September 2011 road toll of 69 is the second lowest that has been recorded for the third quarter since quarterly records began in 1965. The previous low for the third quarter was 67 in 2008, and the total ranged between 67 and 99 from 2006 to 2010.

The January to September 2011 toll of 208 is the lowest recorded January-September road toll (the previous low was 264 in 2008).

The 12 month road toll was 305 at the end of September 2011, which is the lowest recorded quarter end toll. The previous lowest 12 months were 315 at the end of the second quarter of 2011, 345 at the end of the first quarter of 2011, 357 at the end of the third quarter of 2010 and 363 at the end of the first quarter of 2009.

The decline in road deaths is accompanied by drops in hospital admissions and ACC entitlement claims (see page 13).

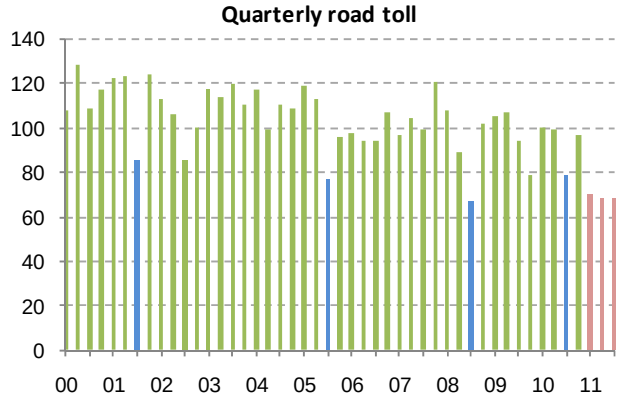
Features of the July-September 2011 road toll

Some of the notable trends in the July-September 2011 road toll are:

- day time deaths continue to be substantially reduced (down 28% in 2011 on Jan-Sept 2010, see page 8)
- urban road deaths were very low this quarter (11 deaths which is half the typical level, see page 8)
- the drop in driver deaths seen last quarter did not continue (they increased from 29 to 41, see page 6)
- much of the reduction in 2011 has been in motorcyclists and passengers (down 46 during 2011 on the first three quarters of 2010, drivers, pedestrians and cyclists down 24) and that continued this quarter (see page 6)

History of the road toll

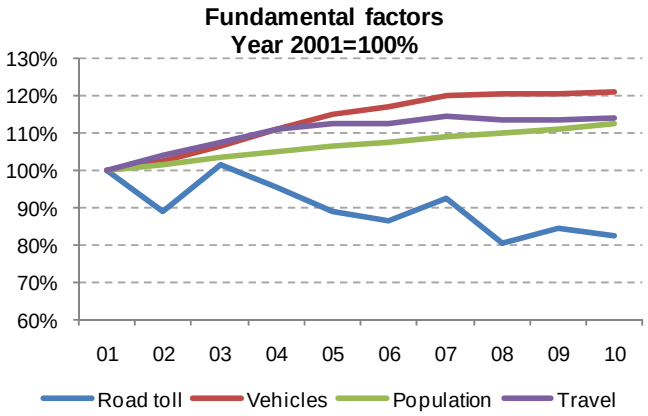
There were four major drops (20 percent or greater drop from the previous quarter) in the quarterly road toll in the last decade, but none of those drops were sustained in the next quarter. Those drops are shown in blue in the graph below. The 2011 road toll (shown in red below) continues to be different– it has been historically low for three successive quarters.



The drop in 2008 coincided with the 2008 fuel price spike and was right at the beginning of the economic downturn. The 2010 reduction was during a period of economic weakness and coincided with the aftermath of the first Christchurch earthquake.

The road toll has been trending down over time, despite increases in the population, vehicle fleet and travel.

	Road toll	Vehicles (million)	Population (million)	Travel (billion km)
2000	462	2.61	3.86	
2001	455	2.66	3.89	35.0
2002	405	2.73	3.95	36.4
2003	461	2.84	4.03	37.7
2004	435	2.95	4.09	38.9
2005	405	3.06	4.14	39.4
2006	393	3.12	4.19	39.4
2007	421	3.19	4.23	40.2
2008	366	3.21	4.27	39.7
2009	385	3.20	4.32	39.8
2010	375	3.23	4.37	40.0

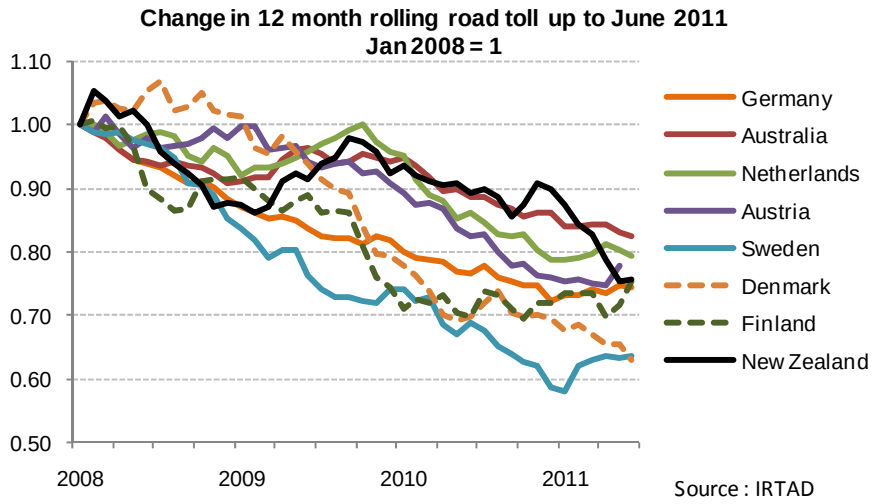


The drop in the road toll in 2011 has resulted in record low rolling 12 month road tolls. The toll is now significantly below the 370-390 rolling 12 month totals typical of mid-2008 to 2010 (also see the road toll graph on page 10).

Period	12 month rolling toll	Period	12 month rolling toll	Period	12 month rolling toll	Period	12 month rolling toll
2000Q1	487	2003Q3	451	2007Q1	392	2010Q3	357
2000Q2	490	2003Q4	461	2007Q2	402	2010Q4	375
2000Q3	470	2004Q1	461	2007Q3	407	2011Q1	345
2000Q4	462	2004Q2	446	2007Q4	421	2011Q2	315
2001Q1	476	2004Q3	436	2008Q1	432	2001Q3	305
2001Q2	471	2004Q4	435	2008Q2	417		
2001Q3	448	2005Q1	437	2008Q3	385		
2001Q4	455	2005Q2	451	2008Q4	366		
2002Q1	446	2005Q3	418	2009Q1	363		
2002Q2	429	2005Q4	405	2009Q2	381		
2002Q3	429	2006Q1	384	2009Q3	408		
2002Q4	405	2006Q2	365	2009Q4	385		
2003Q1	409	2006Q3	382	2010Q1	380		
2003Q2	417	2006Q4	393	2010Q2	372		

International comparisons

Many other countries also have significantly reduced road tolls. New Zealand did not have an overall pattern in 2009, but has made marked progress since then. All the countries shown below have also made progress since 2009. The improvement in the New Zealand 12 month road toll during the first half of 2011 has been greater than that observed in other countries. The lack of international data precludes comparing July-September 2011 at this time.



Comment on the New Zealand road toll

None of the previous major drops in the road toll were sustained. They did not last more than a quarter. The sustained drop in the road toll over the first 9 months of 2011 has resulted in a record low 12 month quarter end road toll.

It is likely that economic factors, fuel prices, legislation, safety improvements and road policing have all been influences on the toll.

There have also been less three day holiday weekends this year, as Waitangi day and Anzac day fell on weekends.

Road safety has also had a high profile in recent times. Public debate around various road safety initiatives has resulted in heightened media interest, and the potential of increased public awareness of road safety.

Fuel and Travel trends

Average petrol prices for the first quarter of 2011 reached the record levels of 2008 (just over $2/litre, see page 15), continued to an all time high in the second quarter, and eased back only slightly in the third quarter. However the effect on travel volumes has been limited. State highway traffic (see page 14) in the July-September quarter of 2011 was down 0.2 percent compared to the July-September quarter of 2010, down 1.7% in the April-June quarter, and down 0.6% in the January-March quarter.

How non-State highway travel has been affected is not yet known, although non-State highway travel follows the same trend as State highway travel (see page 14). Estimates of all traffic are made using WoF/CoF (warrant of fitness and certificate of fitness) odometer readings, and the April-June 2011 WoF/CoF figures will not be available until late January 2012. The WoF/CoF analysis showed a travel drop in 2008 during the fuel price spike. The drop was similar to that on the State highways.

Given the level of fuel prices in 2011, it is possible that a decline in discretionary travel may have contributed to the improvement in weekend deaths during 2011.

There was a drop in the road toll, hospital admissions and ACC claims around the time of the 2008 fuel price spike, even though overall travel volumes did not decline substantially. The same pattern has been seen again in 2011.

Safety interventions and technology improvements

A number of safety interventions and technology improvements have taken place in recent times. We expect they have influenced the decline in the road toll, but this paper does not attempt to isolate or analyse their total or individual effect.

Roads

The safety of the State highway system has been improved in a number of ways. Some significant sections have been replaced with barrier separated roads (the Waikato Expressway, State Highway 2 Northern Waikato, and Albany to Puhoi are examples). Among other initiatives are the addition of passing lanes, highway re-alignment projects, audible edge markings and other highway safety retrofits.

Vehicles

The safety of the vehicle stock has continued to improve over the last decade. The typical vehicle being imported now has improved occupant protection and electronic stability control (ESC), and older technologies like ABS (anti-lock braking system) are now prevalent. On the other hand, increased motorcycle registrations have been accompanied by increased rider and pillion passenger deaths.

Legislation

Legislative changes have also occurred recently. They include the ban on handheld cell phone use while driving (2009), measures targeting recidivist drunk (2011) and drugged drivers (2010), illegal street racing offences (2009), the Accident Compensation Corporation (ACC) Motorcycle Safety Levy (2010), youth alcohol limit of zero for under 20 year olds (2011) and the increased minimum driving age of 16 years (2011). More flexibility was allowed in speed limit setting (2003).

Road policing

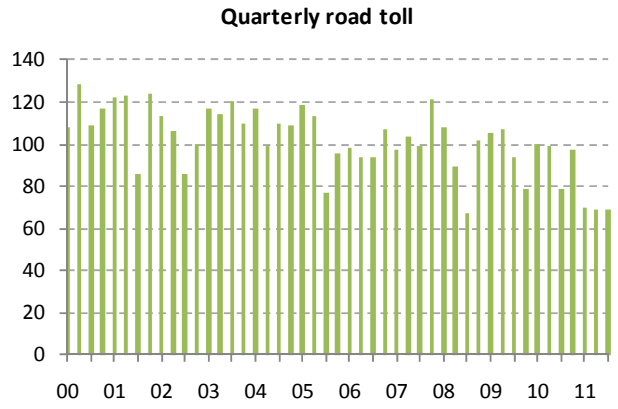
There has been a significant investment in Police road safety efforts over the last decade. Road policing numbers have increased, and specialist highway patrol, alcohol, crash investigation and traffic intelligence units have been established. Investment has continued with the recent rollout of improved, more efficient speed camera and alcohol test equipment. The impact of road policing has been reinforced by safety advertising.

Road policing has operated at a higher level of intensity during holiday weekends, and there has been less tolerance of speeding during those periods. The Police have also lifted their level of mobile and compulsory breath testing in recent years.

Road toll for the quarter ended 30 September 2011

The July-September 2011 road toll of 69 is the second lowest that has been recorded for the third quarter (the lowest third quarter was 67 in 2008).

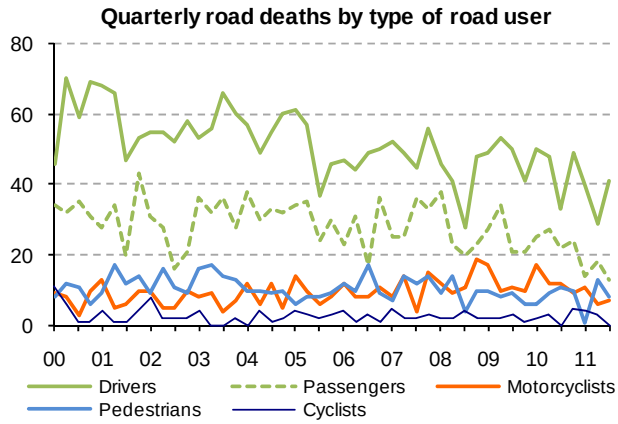
The January to September 2011 toll of 208 is also the lowest recorded (the previous low was 264 in 2008).



Road users

The largest reduction during 2011, compared with the same period in 2010, is in passengers and motorcyclists. Driver deaths were down in the second quarter, but increased in the third quarter. They have not improved as much as the overall reduction (drivers down 16%, overall toll down 25% in 2011 compared with the same period in 2010).

	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2011Q2	2011Q3	2010 Q1-Q3	2011 Q1-Q3	2010 vs 2011
Drivers	50	48	33	49	40	29	41	131	110	-16%
Passengers	25	27	22	24	14	18	13	74	45	-39%
Motorcyclists	17	12	12	9	11	6	7	41	24	-41%
Pedestrians	6	9	11	10	1	13	8	26	22	-15%
Cyclists	2	3	0	5	4	3	0	5	7	40%
Other	0	0	1	0	0	0	0	1	0	
Overall	100	99	79	97	70	69	69	278	208	-25%



Road user age

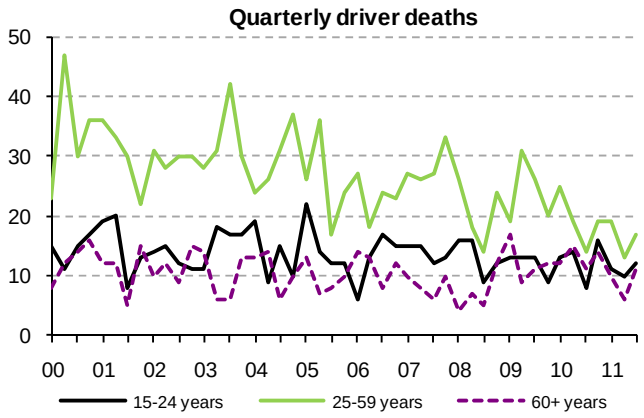
Young driver deaths have improved very little relative in 2011 compared with the same period in 2010, and passengers (39%) are down far more than drivers (16%).

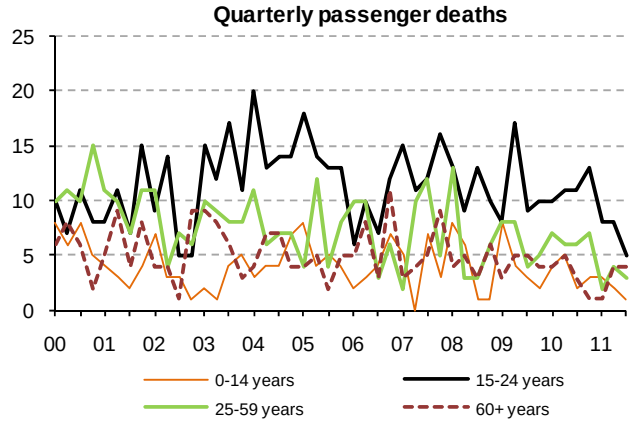
Driver deaths

	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2011Q2	2011Q3	2010 Q1-Q3	2011 Q1-Q3	2010 vs 2011
Unknown	0	0	0	0	0	0	1	0	1	
15-24 yrs	13	14	8	16	11	11	12	35	34	-3%
25-59 yrs	25	19	14	19	19	12	17	58	48	-17%
60+ yrs	12	15	11	14	10	6	11	38	27	-29%
Total	50	48	33	49	40	29	41	131	110	-16%

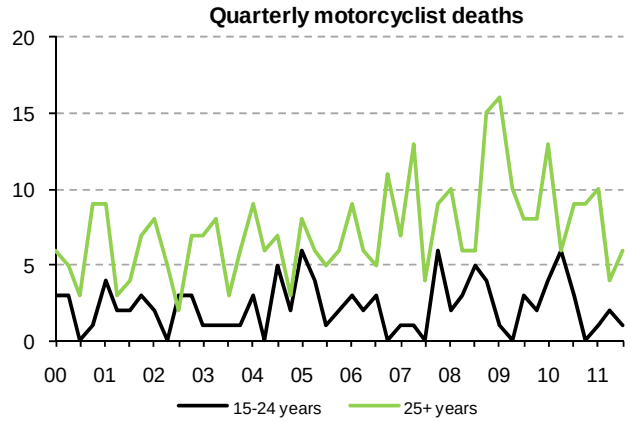
Passenger deaths

	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2011Q2	2011Q3	2010 Q1-Q3	2011 Q1-Q3	2010 vs 2011
0-14 yrs	4	5	2	3	3	2	1	11	6	-45%
15-24 yrs	10	11	11	13	8	8	5	32	21	-34%
25-59 yrs	7	6	6	7	2	4	3	19	9	-53%
60+ yrs	4	5	3	1	1	4	4	12	9	-25%
Total	25	27	22	24	14	18	13	74	45	-39%





Motorcyclist deaths show a different picture. Deaths in the 25 and over age group have increased markedly in recent years. Quarterly motorcycle trends should be treated with caution, as deaths are typically lower in the colder months (from 2006-2011 the average annual motorcyclist deaths in January-March were 12.8, 9.8 in April-June, 8.8 in July-September).

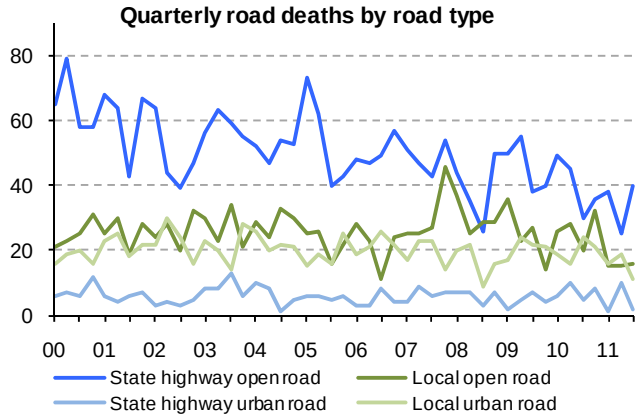


Quarterly pedestrian by age numbers are too low to be presented clearly in a graph –see page 11

Road type

The reduction over the last decade have been largely in open road State highway deaths. The rate of improvement in 2011, compared with the same period of 2010, has been the same on open and urban roads. Urban road deaths were extremely low in the July-September quarter (half the typical level).

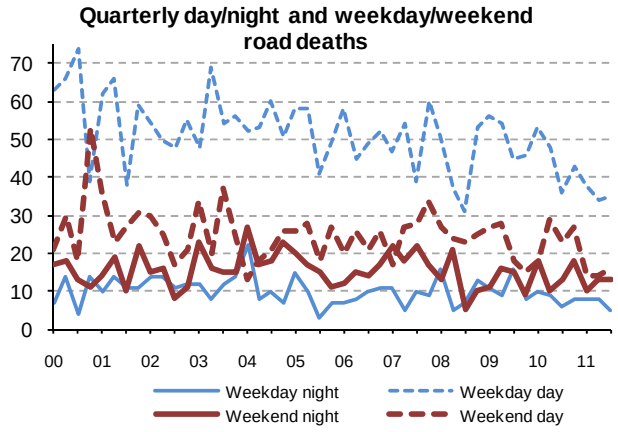
	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2011Q2	2011Q3	2010 Q1-Q3	2011 Q1-Q3	2010 vs 2011
Open road	75	73	50	68	53	40	56	198	149	-25%
Urban road	25	26	29	29	17	29	13	80	59	-26%
Total	100	99	79	97	70	69	69	278	208	-25%

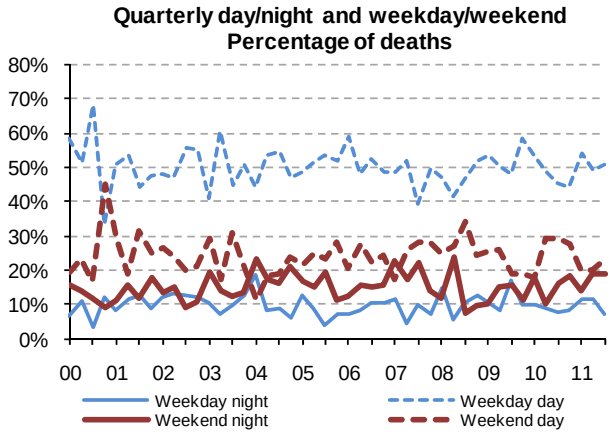


Day/night and weekday/weekend

The improvement in the road toll in 2011 has occurred largely during the day (0600–2159). Day time crashes have dropped 28% compared with the same period of 2010, while night time crashes have only dropped 14%.

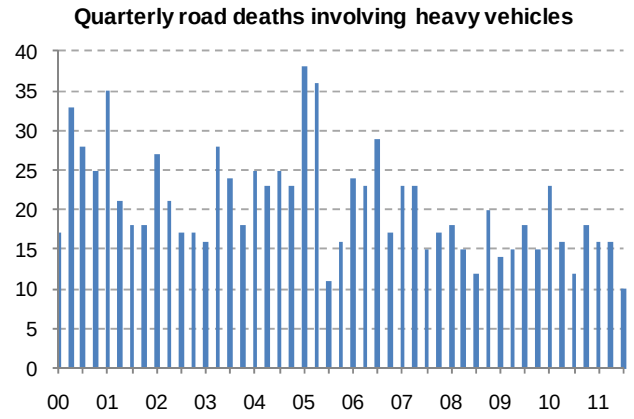
	2010Q1	2010Q2	2010Q3	2010Q4	2011Q1	2011Q2	2011Q3	2010 Q1-Q3	2011 Q1-Q3	2010 vs 2011
Unknown	1	0	1	0	0	0	0	2	0	
Day	71	80	59	70	52	48	51	210	151	-28%
Night	28	19	19	27	18	21	18	66	57	-14%
Overall	100	99	79	97	70	69	69	278	208	-25%





Deaths involving heavy vehicles

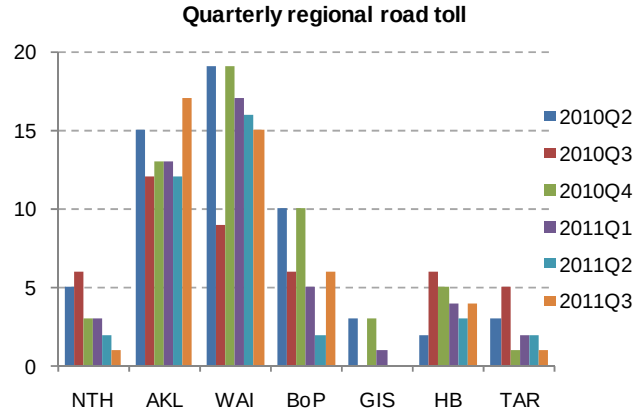
Road deaths in crashes involving heavy motor vehicles have dropped substantially since the mid-2000s (122 deaths in the year to June 2005, 60 in the year to September 2011). Truck travel was increasing until 2007 but has dropped a little since then (see page 14).

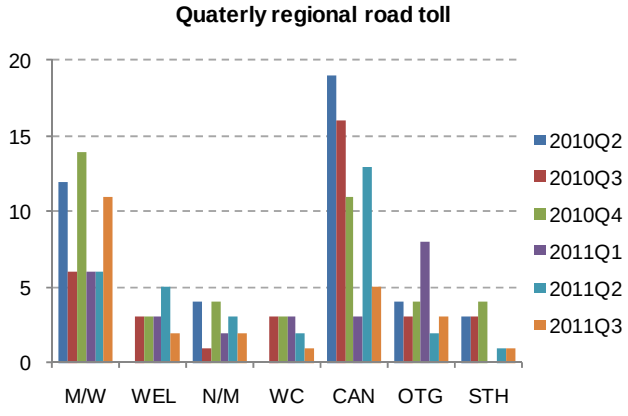


Also see page 12 for the rolling 12 month trend in heavy vehicle involved crashes

Regional trends

Regional trends demonstrate the quarter on quarter variability of road deaths.



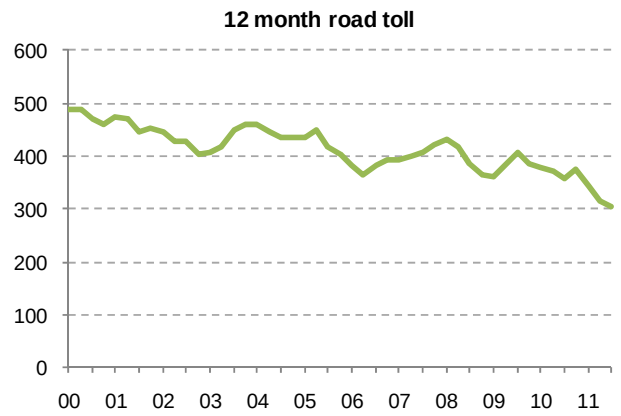


Key				
	NTH	Northland	M/W	Manawatu/Wanganui
	AKL	Auckland	WEL	Wellington
	WAI	Waikato	N/M	Nelson/Marlborough
	BoP	Bay of Plenty	WC	West Coast
	GIS	Gisborne	CAN	Canterbury
	HB	Hawke's Bay	OTG	Otago
	TAR	Taranaki	STH	Southland

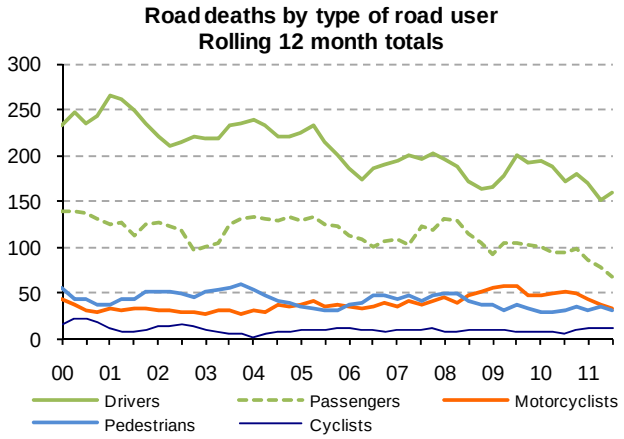
Road toll for the year ended 30 September 2011

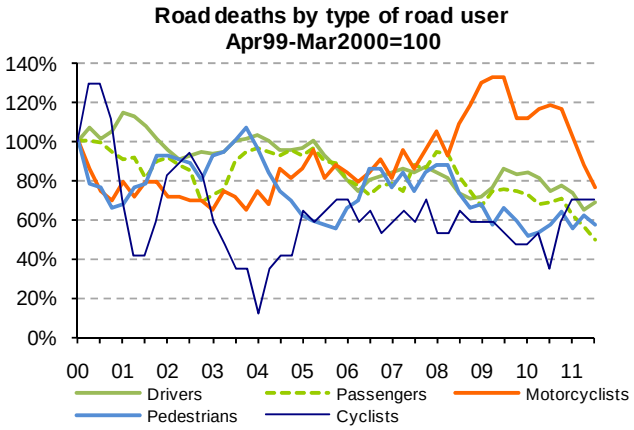
The October 2010-September 2011 quarter end road toll of 305 is the lowest ever recorded, since monthly records became available in 1965.

The following graphs show the rolling 12 month road toll (which is the total for the month plus the preceding 11 months).

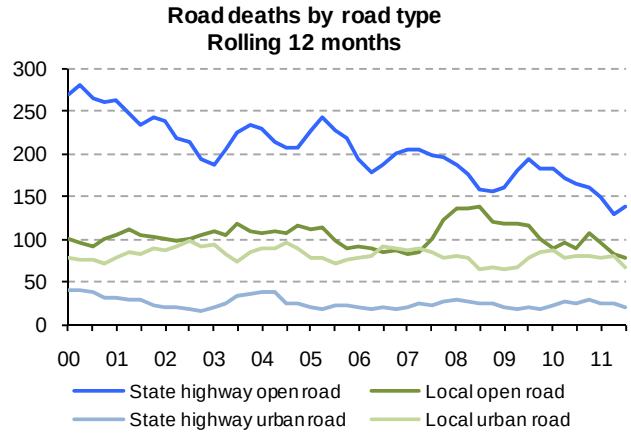


Road users

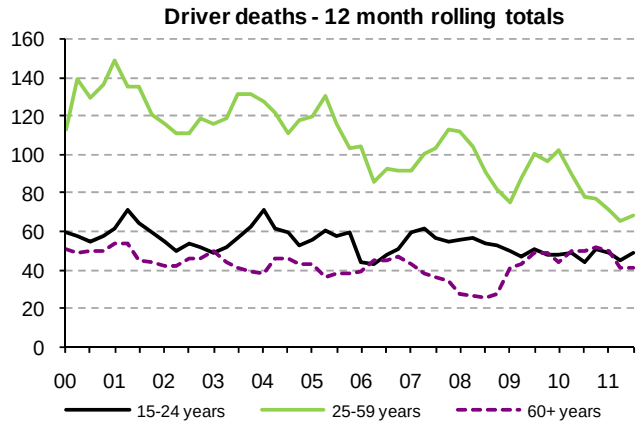


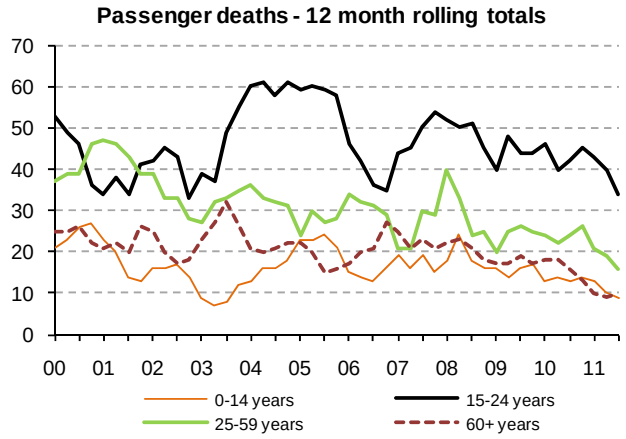


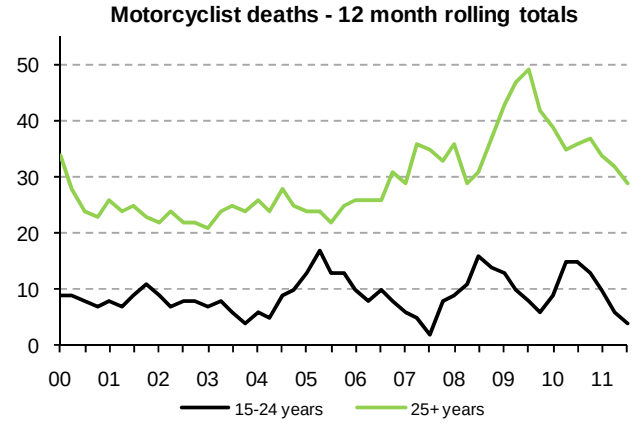
Road type

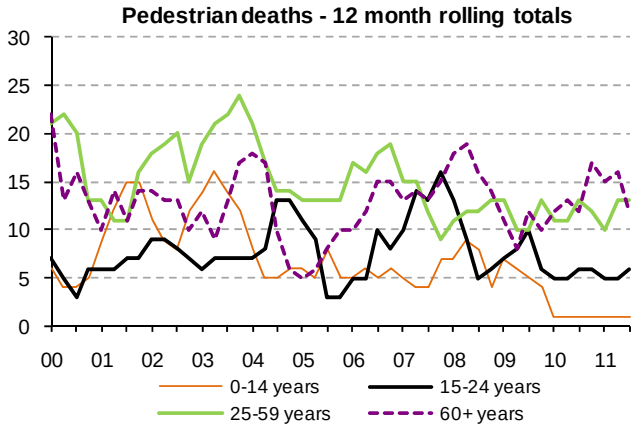


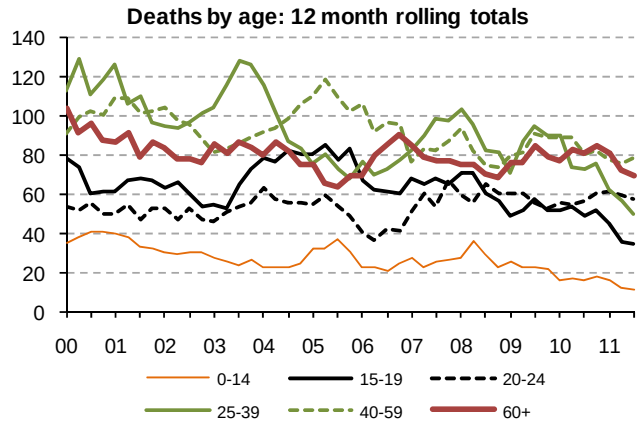
Road user age





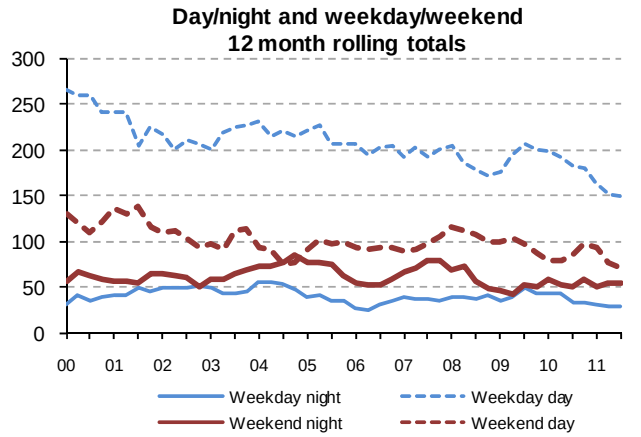


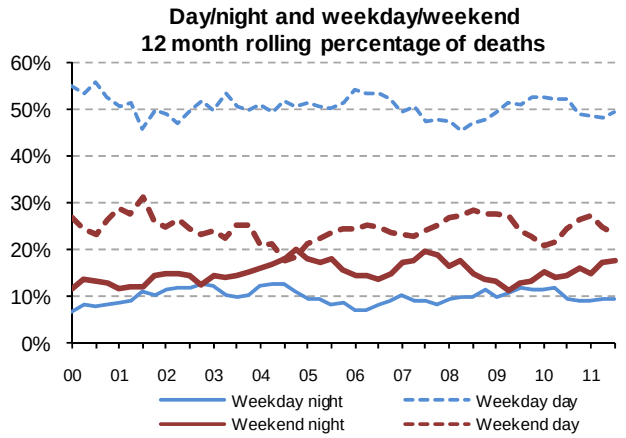




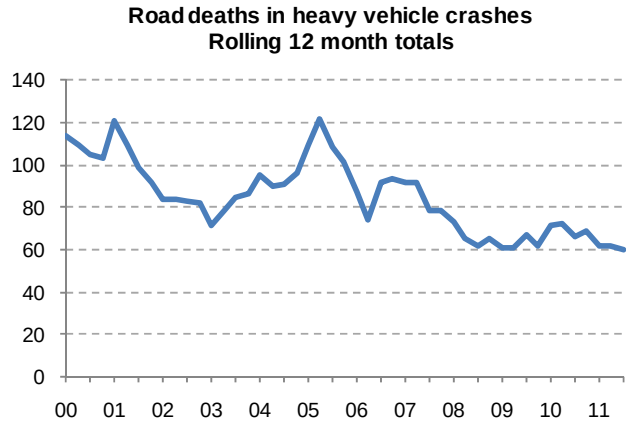
The graph on the left provides a more detailed age breakdown. There have been sizable reductions in four age brackets in 2011 (0-14 down 43%, 15-19 down 39%, 25-39 down 48% and 60+ down 24%) but not in the 20-24 and 40-59 brackets (both down 7%).

Day/night and weekday/weekend

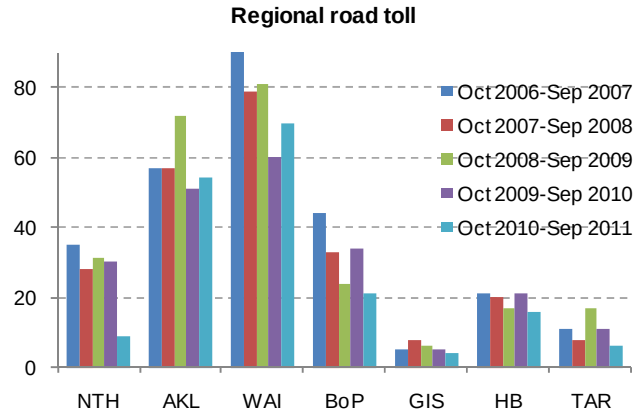


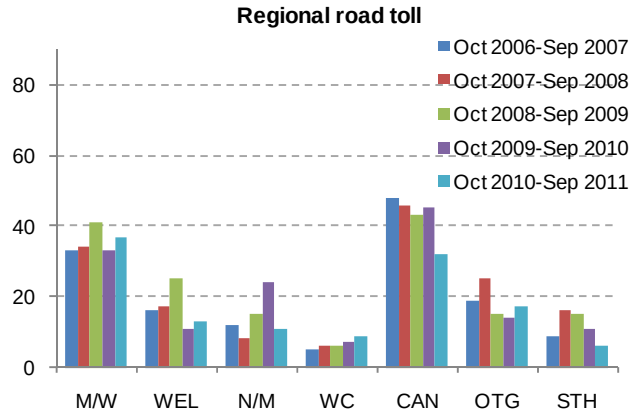


Deaths involving heavy vehicles



Regional trends





Key		
	NTH	Northland
	AKL	Auckland
	WAI	Waikato
	BoP	Bay of Plenty
	GIS	Gisborne
	HB	Hawke's Bay
	TAR	Taranaki
	M/W	Manawatu/Wanganui
	WEL	Wellington
	N/M	Nelson/Marlborough
	WC	West Coast
	CAN	Canterbury
	OTG	Otago
	STH	Southland

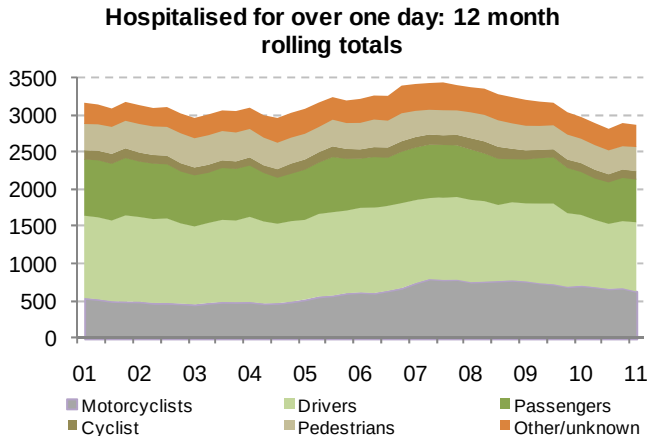
Serious crashes — ACC claims and hospitalisations

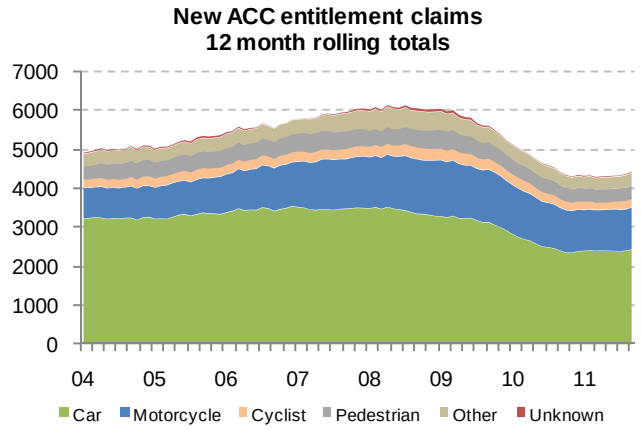
There is a lag of four to five months before the serious crash data is complete in the crash analysis system. The most up-to-date view of serious crash trends is provided by ACC entitlement claims, and the next most up-to-date view is provided by hospital admissions.

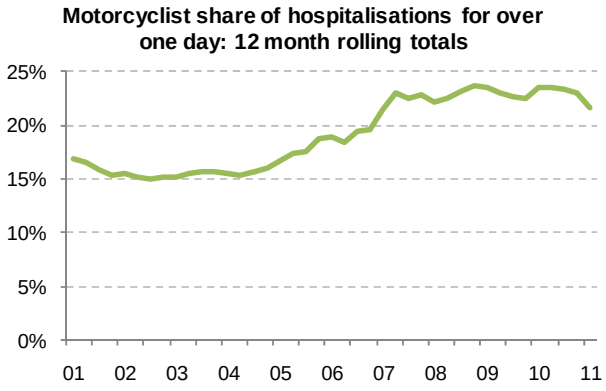
ACC entitlement claims and hospitalisations for over one day have both declined markedly. Hospitalisations over one day are used as changes to hospital admission practices have made the data on hospital admissions for shorter periods inconsistent.

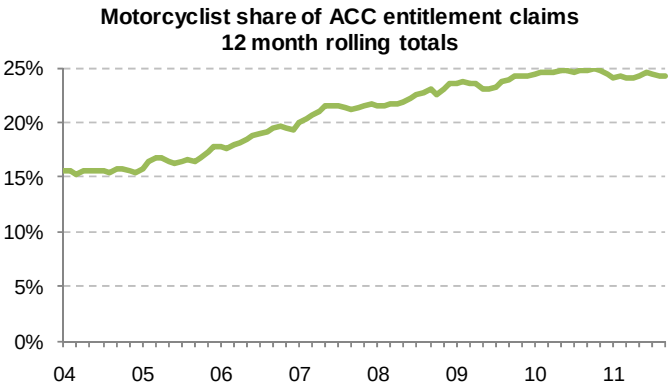
Hospitalisations of road users other than motorcyclists were close to constant from 2000–2007 (ranging between 2519 and 2733, see graph below). The growth in hospitalisations over that period was due to motorcycle admissions. Motorcycle admissions had grown to 23 percent of admissions by 2007 and have remained at that level since. Hospitalisations over one day have declined at the same rate for motorcyclists and other road users since then. That is demonstrated by the graph below showing motorcyclist admissions at 23 percent of admissions.

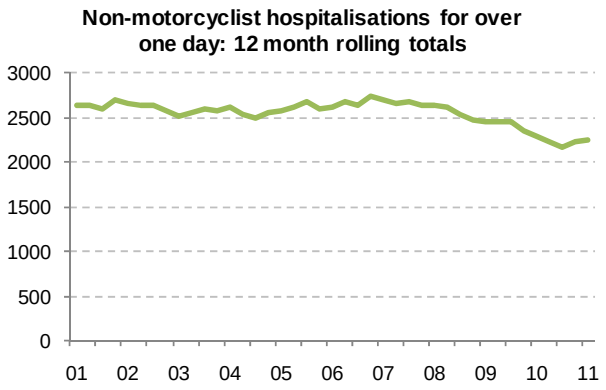
ACC entitlement claims for road users other than motorcyclists grew by 900 between 2001 and 2008 (from 3800 to 4700 entitlement claims a year). Motorcycle claims grew relatively far more. There were 620 a year at the start of 2001, 850 a year at the start of 2005, and 1400 a year at the start of 2009. ACC entitlement claims had increased more than hospitalisations over one day, but have dropped more in the last two years than hospitalisations.









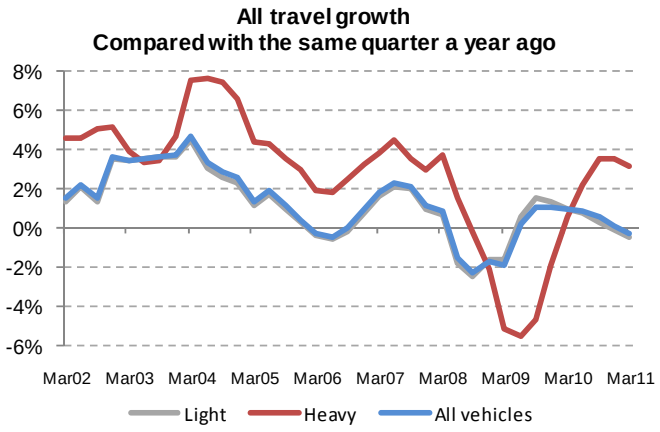


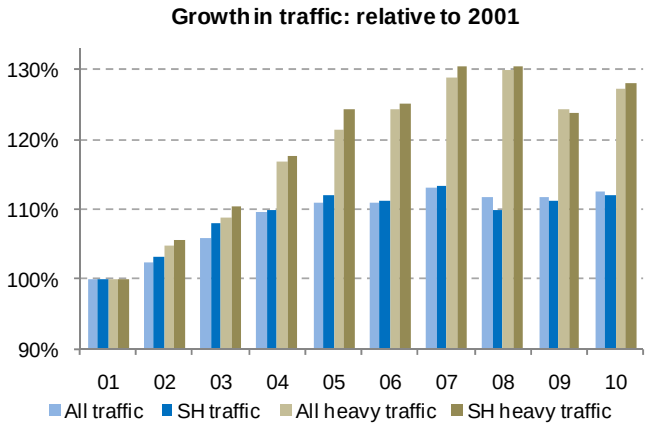
Underlying trends

All road travel

This travel data is derived from WoF and CoF vehicle inspection odometer readings. There is a lag of 6 months before estimates are available, as odometer readings are needed after the end of the analysis period.

Travel dropped slightly in response to the 2006 fuel price spike, and dropped a little more during the 2008 spike. Travel overall has been close to static for the last 5 years (39.4 to 40.2 billion km of travel).





State highway travel

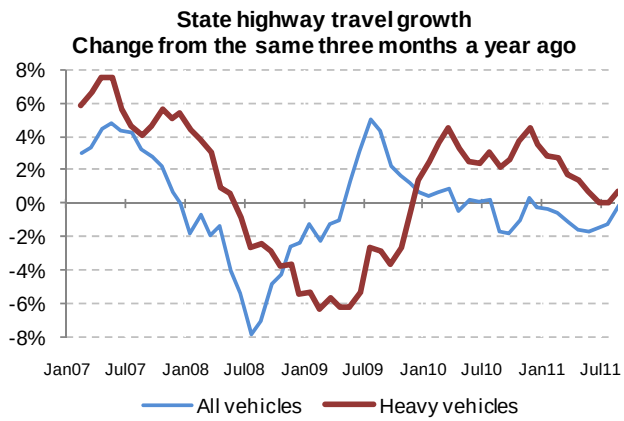
State highway travel comprises slightly less than half of road travel in New Zealand. The graph above on the right shows that the trend in State highway traffic is similar to the trend in all traffic (local road plus State highway).

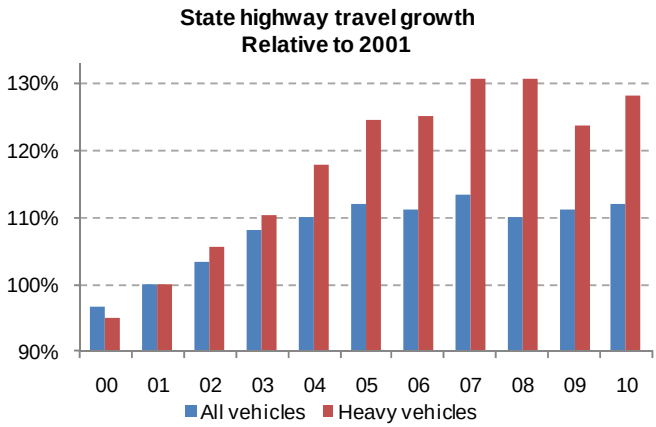
That means that the State highway travel growth series shown below is a indicator of travel on all roads, and it has the advantage of being complete to September 2011.

The graph on the left below shows travel growth compared with the same 3 months one year earlier. The final point shows growth from July-Sept 2010 to July-Sept 2011. Heavy travel was up 0.8 percent and all State highway travel was down 0.2 percent on the same quarter a year earlier.

State highway travel is only down slightly on the same period in 2010. It was already been noted that the State highway and all traffic trend are similar, so the implication is that travel across the entire network has only dropped slightly in 2011.

Therefore travel reduction is not a major contributor to the drop in the road toll.

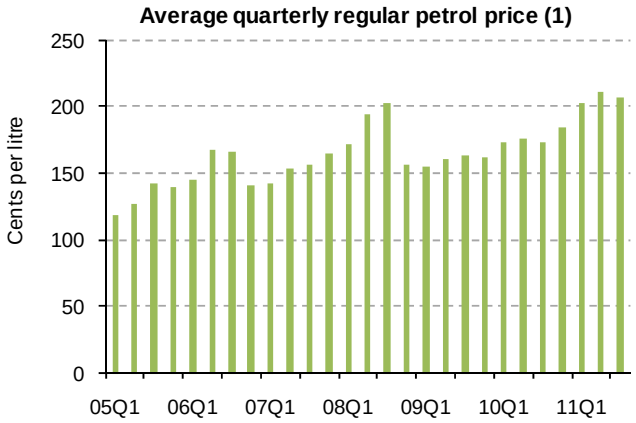


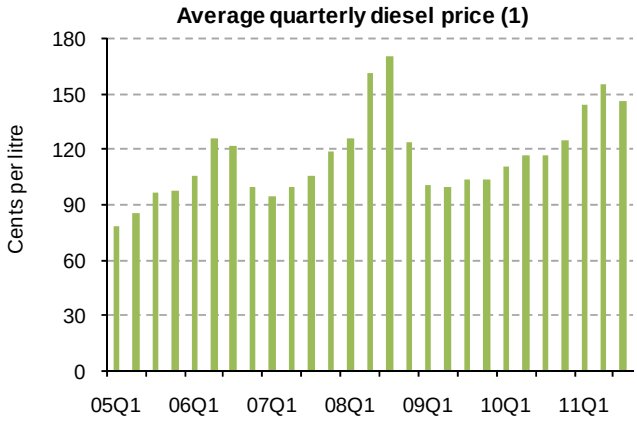


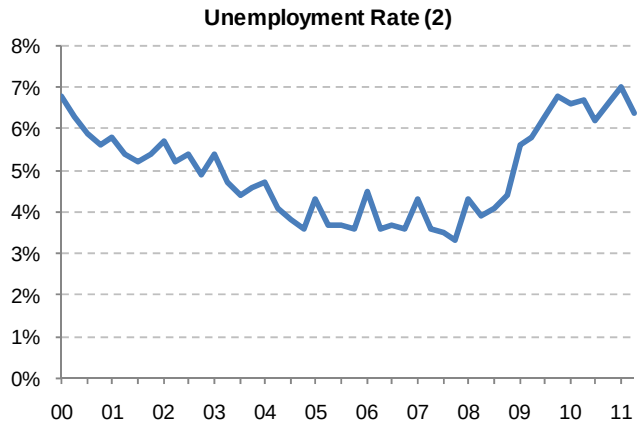
Fuel prices and other economic indicators

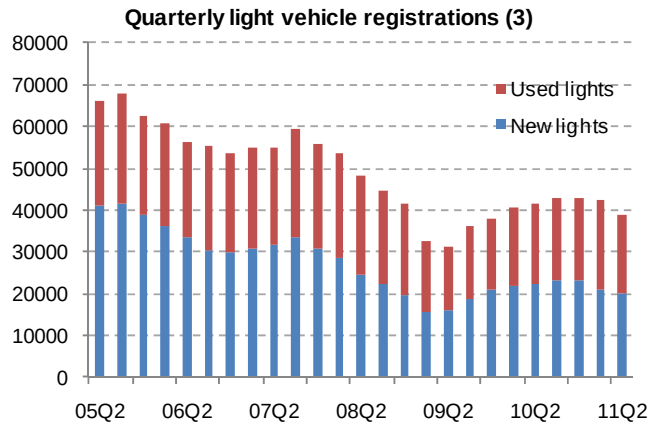
Petrol pump prices in the second quarter of 2011 reached a level higher than the previous peak in 2008, but eased a little in the third quarter. The previous travel section shows the effect of this level of fuel price on travel was slight in 2006 and 2008.

The two economic indicators show that unemployment has increased and vehicle registrations have dropped, which may have been a response to the economic situation and changes in the finance industry.









Notes

(1) fuel prices for 2011Q3 are derived from MED data, and will be replaced by the slightly different Statistics NZ CPI (consumer price index) prices when they become available. The difference is due to the garages sampled.

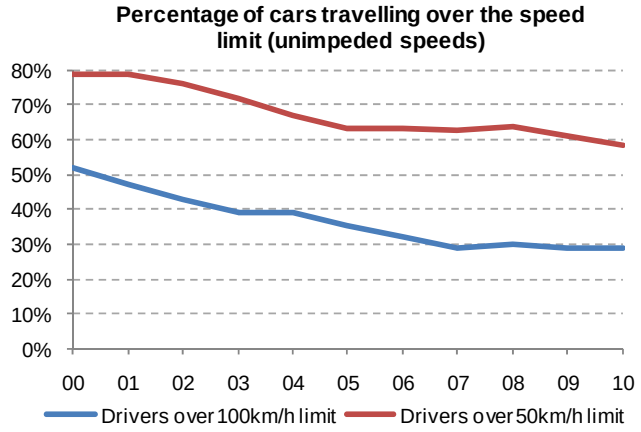
(2) the employment data is up to June 2011.

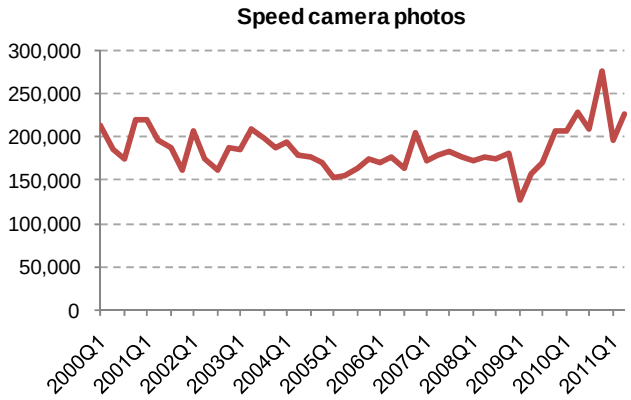
(3) registrations are up to June 2011

Open road speeds and speed enforcement

The percentage of free-running (*) drivers travelling above the speed limit has dropped over the last decade (the 2011 survey results are not yet available).

The number of speed camera photos taken increased after the original film based speed cameras were replaced with digital cameras during 2009.





(*) free running speeds are those of either vehicles travelling alone, or those at the front of cohorts of vehicles. Other vehicles within the cohort are not measured, as it is not certain what the driver's preferred speed would be.

Driving age population

A breakdown of the driving age population has been included to demonstrate that it has not been driving the change in the road toll. There has been a slight growth in the proportion of the 15–24 and 60+ year old age groups, and a slight drop in the proportion in the 25–59 year old age group over the decade.