

Perth Bunbury Highway

Infrastructure upgrades were undertaken on the Preston Beach to Bunbury section of the Perth-Bunbury Highway as part of a larger project to build a new section of highway from Pinjarra Road to Old Coast Road. This project opened on the 20th September 2009 and therefore could not be rated for the period 2005-09. The old section of Perth Bunbury Highway from Dawesville to Preston Beach, whilst still open, ceased to be a part of the National Highway Network.

Great Eastern Highway

In September 2006 MRWA completed the upgrading of GEH to a dual carriageway between Sawyers Valley and The Lakes. Only the data subsequent to this improvement has been used for the current ratings.

It was also upgraded between Northam and Southern Cross, but a combination of lower traffic flows and higher crash numbers still affected the ratings adversely.

Coolgardie Esperance Highway

Changes in risk ratings on the Coolgardie Esperance Highway appear to be due to an increase in casualty figures (25%) and slightly lower traffic flows (-8%).

Eyre Highway

Risk reductions between Caiguna and the SA Border coincided with upgrades between Caiguna East and Balladonia West (2006), and Balladonia West and Heartbreak Ridge (2008). Both sections have seen a significant reduction in crashes since the previous period, coupled with increased traffic volumes

Great Northern Highway

The most significant factor in the improvement of Individual Risk ratings for these links would appear to be the large percentage increases in traffic flows. One upgrade was opened between Walebing and Bindi Bindi in March 2009, but this would have had little effect on the results, coming at the end of the rating period

Victoria Highway

In the 2000-04 rating exercise, the highway between Halls Creek and the NT Border was treated as a single link, despite including sections of both the Great Northern and Victoria Highways. It has therefore been split into two links for 2005-09

More information

For detailed information on the risk ratings for Western Australia's network, including maps and the best and worst roads, see pages 28 to 31 of the *How Safe Are Our Roads? Rating Australia's National Network for Risk*, published in 2011.

TABLE 3: WESTERN AUSTRALIA'S MOST IMPROVED HIGHWAY SECTIONS

Highway	From - to	Type	Casualty crashes	Individual risk rating	Casualty crashes	Individual risk rating	Change in casualty crashes (%)
			2000-2004		2005-2009		
Great Northern/Victoria Highway	NW Coastal T/Off to Sandfire Roadhouse	Single	35	Medium-high	15	Low	-57.1%
Perth-Bunbury Highway	Preston Beach to Bunbury	Dual	198	High	132	Medium	-33.3%

Western Australia does not have any additional lengths of highway which rate as Most Improved.

Ranked by percentage reduction in the number of casualty crashes between 2000-2004 and 2005-2009; significant reduction in the number of casualty crashes between data periods at the 98% confidence level; section lengths are greater than 7km; AusRAP Risk Rating based on the number of casualty crashes per 100 million vehicle km travelled: black (high risk), red (medium-high risk), orange (medium risk), yellow (low-medium risk), green (low risk).

TABLE 4: WESTERN AUSTRALIA'S PERSISTENTLY HIGH RISK HIGHWAY SECTIONS

Highway	From - to	Type	Casualty crashes	Individual risk rating	Casualty crashes	Individual risk rating	Change in casualty crashes
			2000-2004		2005-2009		
Great Northern/Victoria Highway	Fitzroy Crossing to Halls Creek	Single	29	High	29	Medium-high	0%
Great Eastern/Coolgardie Esperance/Eyre Highway	Mundaring to The Lakes	Single	32	Medium-high	28	Medium-high	-12.5%
Great Eastern/Coolgardie Esperance/Eyre Highway	The Lakes to Northam	Single	49	Medium-high	47	Medium-high	-4.1%

Ranked by AusRAP Risk Rating 2005-2009; no significant reduction in the number of casualty crashes between data periods; section lengths are greater than 7km; AusRAP Risk Rating above average of the medium-high (red) category or high risk (black) category in both data periods; AusRAP Risk Rating based on the number of fatal or serious crashes per 100 million vehicle km travelled: black (high risk), red (medium-high risk), orange (medium risk), yellow (low-medium risk), green (low risk); percentages may not sum due to rounding. Some of the roads listed may have had measures implemented since 2009.



How Safe Are Our Roads?

Rating Western Australia's Highway Network for Risk

Benchmarking the performance of Western Australia's roads in the Decade of Action

2011

Why Road Safety is Important

Many road crashes involve sudden loss, untold suffering and financial hardship, and they change the lives of people forever. Safe personal travel should be a key feature of modern society but unless road tragedy personally touches us or our loved ones, we sometimes don't reflect on how big a problem it is.

Across Australia around 1,400 people are killed each year and more than 32,500 are hospitalised. This averages four deaths and nearly 90 serious injuries on Australian roads and costs our community \$74 million each and every day.

Most crashes occur when ordinary people make everyday human mistakes. It has been estimated that around 1 in 500 driving decisions can be wrong, involving a mistake, an error of judgement, a missed signal or the like. Sober, drug-free, responsible drivers obeying the speed limit and wearing seatbelts frequently die on our roads. Safe roads minimise the chances of these crashes happening, and if they do occur, they minimise the severity of the crash. Engineering measures to improve safety don't have to be high cost and best of all, they last decades.

We need to create a genuinely safe road system, in which improving the safety of drivers, vehicles and roads is of mutual importance. A road system where we have five star drivers, in five star cars on five star roads should involve no deaths.

It is estimated that of all road fatalities which can be avoided through improved safety, half of these would be

avoided through road upgrades including investment in new road construction and expenditure on safety-related works. Australia's National Road Safety Strategy 2011-2020 recognises the critical need to improve road infrastructure, particularly those road features which are designed to reduce run-off-road, intersection and head-on crashes.

Making this happen requires the commitment of politicians, based on support from the public, funding from treasury, road authority action, and the design and construction skills of road engineers.

AusRAP is here to help all of these stakeholders, and aspires to help Australia become a nation free of high risk roads.

About AusRAP

The Australian Road Assessment Program (AusRAP) is a program run by the Australian Automobile Association and State and Territory automobile clubs, dedicated to saving lives through advocating for safer road infrastructure.

AusRAP's objectives are to:

- reduce deaths and injuries on Australia's roads by systematically assessing risk and identifying safety shortcomings that can be addressed with practical road-improvement measures; and
- put risk assessment at the heart of strategic decisions on road improvements, crash protection and standards of road management.



AusRAP works in partnership with government and non-government organisations to:

- inspect national and state highways and develop Star Ratings and Safer Roads Investment Plans;
- track road safety performance through risk maps so that funding agencies can assess the benefits of their investments; and
- explain the benefits of safer road infrastructure to the community by describing why some roads are safer than others.

Rating Australia's Network for Risk

In total, we have analysed more than 20,000km of the highways which represents less than three per cent of the total road network in Australia, yet carries some 15 per cent of the nation's road traffic. This network experienced 1,170 road crash deaths, equating to 15 per cent of all road deaths in Australia during 2005-2009.

The AusRAP analysis focuses on casualty crashes that occurred between 2005 and 2009 on rural sections of the National Land Transport Network and significant connecting roads. These are generally defined as being those with a speed limit of 90km/h or more, though some lower speed limit sections are included where they form an integral part of an otherwise higher speed route.

For the results of risk across Australia's network see the companion report *How Safe Are Our Roads? Rating Australia's National Network for Risk*, available from www.ausrap.org.

Rating Western Australia's Network for Risk

This brochure is a companion report to *How Safe Are Our Roads? Rating Australia's National Network for Risk* available from www.ausrap.org, and provides detailed results for the

most improved and persistently higher risk roads in Western Australia. This brochure complements the broader national picture and provides an extra level of detail for Western Australia's roads.

Six highways on the rural network in Western Australia were assessed, totalling 4,682km. The length of each highway and number of casualty crashes and deaths that occurred during 2005-2009 are shown in Table 1.

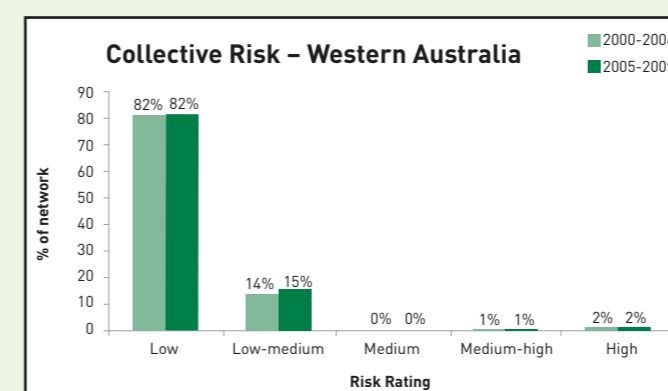
Whereas the 4,682km included in Western Australia represents 23 per cent of the network analysed nationally, the 87 fatalities that occurred on these WA roads during 2005-2009 represents only eight per cent of the total deaths.

Change in Network Crash Risk

The collective risk graph for Western Australia's Network (over) which measures the density, or total number of casualty crashes over a given length of road, shows that there has been no change between the two assessment periods.

The graph for individual risk on Western Australia's Network (over), which measures the casualty crash rates per vehicle kilometre travelled – and so effectively represents the risk faced by an individual driver shows that the percentage of low risk links has increased by 22 percent. A corresponding decrease is apparent for the medium-high and high categories. Forty-three per cent of the network is now rated as low or low-medium risk versus only 21 per cent in the period 2000-2004. Twenty-four per cent of the network is now rated as medium-high or high risk versus 58 per cent in the period 2000-2004.

It must be noted, however, that of the 18 links assessed, 15 have actually changed individual crash risk category.



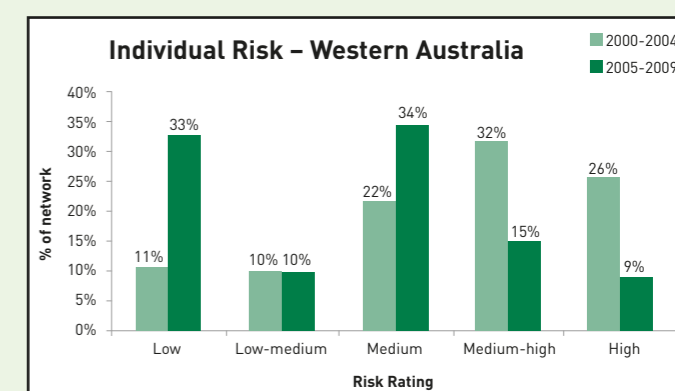
Performance Tracking

Performance Tracking uses the data compiled for each risk map to assess how the risk has changed over time on the network as a whole, and on individual road sections. It is a way of measuring the success and effectiveness of investment in safer roads.

Since 2005, AAA and the State and Territory Motoring Clubs have been mapping the rate of death and serious injury on Australia's main highways. This year, for the first time, and to coincide with the start of the Decade of Action, we have also tracked the risk rates across Australia. For this report, crash and traffic data for the period 2005-2009 has been compared with 2000-2004, and we have identified the most improved and persistently high risk sections of highway.

During 2005-2009 there were a total of 776 casualty crashes, compared to 827 in the period 2000-2004, a reduction of 51 (6%). However, road deaths increased from 82 to 87 (6%), with five additional fatalities during the latter period.

It is often difficult to be definitive about the cause of a change in casualty crashes on any given section of road, whether for the better or for worse. Frequently, any changes are the result of a combination of factors which can include fluctuations in



traffic volumes, road upgrades or deterioration, improvements in vehicle safety, changed driver behaviour and changes in police enforcement levels.

Of the 18 road links assessed in this study, 10 had a reduction in crashes between the two periods 2000-2004 and 2005-2009. Seven links showed an increase in crashes and one recorded no change.

It can be seen from Table 2, below, that there is little pattern to changes in crash and fatality outcomes between the two periods. This may be attributable to the very long lengths of highway, combined with low traffic volumes and primarily remote rural locations. Many of the crashes, and indeed the fatalities in these areas, are attributable more often to driver behavior than to characteristics of the road infrastructure with speed, alcohol and/or fatigue as potential factors. This means that such crashes are likely to be randomly spread, rather than uniformly distributed against either time or geography.

The Most Improved highway sections in Western Australia are presented in Table 3 (over). Unfortunately the analysis has also identified a number of sections of highway where crash numbers have not decreased. Table 4, over, shows those links where the individual crash risk rating has remained persistently high over the two periods.

TABLE 1: HIGHWAYS RATED IN WESTERN AUSTRALIA

Highway	From - to	Length		Casualty crashes		Deaths	
		km	%	2005-09	%	2005-09	%
National network highways							
Great Eastern Highway [1]	Mundaring to Coolgardie	522	11%	213	28%	10	11%
Coolgardie - Esperance Highway	Coolgardie to Norseman	164	4%	25	3%	1	1%
Eyre Highway	Norseman to SA Border	721	15%	41	5%	6	7%
Great Northern Highway	Muchea to Kununurra T/off	3,100	66%	282	36%	42	48%
Victoria Highway	Wyndham T/off to NT border	88	2%	23	3%	3	4%
Perth - Bunbury Highway	Dawesville to Bunbury	87	2%	192	25%	25	29%
Total		4,682	100%	776	100%	87	100%

[1] The section from Mundaring to The Lakes uses data for a three-year period only (2007-2009) due to a road realignment carried out in September 2006.

TABLE 2: CASUALTY CRASHES AND DEATHS 2000-04, 2005-09

Highway	From - to	Casualty crashes				Deaths			
		2000-04	2005-09	Ch	%	2000-04	2005-09	Ch	%
Great Eastern Highway [1]	Mundaring to Coolgardie	193	213	20	10%	22	10	-12	-55%
Coolgardie - Esperance Highway	Coolgardie to Norseman	20	25	5	25%	1	1	0	0%
Eyre Highway	Norseman to SA Border	57	41	-16	-28%	3	6	3	100%
Great Northern Highway / Victoria Highway	Muchea to Kununurra T/off and Wyndham T/off to NT border	307	305	-2	-1%	45	45	0	0%
Perth - Bunbury Highway	Dawesville to Bunbury	250	192	-58	-23%	11	25	14	127%
Total		827	776	-51		82	87	5	

[1] The section from Mundaring to The Lakes uses data for a three-year period only (2007-2009) due to a road realignment carried out in September 2006.