



Traffic Volumes Monthly Report December 2015

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Quality Assurance Statement

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Revision Schedule

Rev. No	Date	Description	Prepared by	Reviewed by	Approved by
1	15/1/2016	Draft	Gerald Wen		
		Final	Gerald Wen	Pradeep Ranasinghe	Emma Harris

Overview

Summary

The purpose of this report is to provide information about changes and trends of Monthly Average Daily Traffic (MADT) on state highways at a national and regional level.

NZTA Region Number	NZTA Region
1	Northland and Auckland
2	Waikato and Bay of Plenty
3	Taranaki, Manawatu-Wanganui, Hawkes Bay and Gisborne
4	Wellington, Nelson, Marlborough and Tasman
5	Canterbury and West Coast
6	Otago and Southland

December 2015 State Highway Traffic Highlights

Light Vehicles

Nationally, the MADT for light vehicles was up 8%, when compared to the same period last year. The average monthly growth rate for the first eleven months of 2015 was 5.2%. All regions had an increase with a range of 4.3% to 12.1%. Region 6 was leading the growth.

Heavy Vehicles

Nationally, the MADT for heavy vehicles was up 7.4%, when compared to the same period last year. The average monthly growth rate for the first eleven months of 2015 was 3.1%. All regions had an increase with a range of 3.1% to 17.1%. Region 6 was leading the growth.

What's behind this move?

There was a strong increase for both the light and heavy MADT in December, the second strongest growth rates recorded for the year; region 6 leading the growth. The strongest growth rate was recorded in September 2015. The probable reasons could be attributed to the following factors, based on the information available to the date.

- Fuel prices remained low. *"Oil prices have fallen to levels not seen for 13 years."* – Westpac NZ
- *"Businesses confidence has all the trimmings, rising to an 8-month high"* – ANZ Bank
- *"Retail spending using electronic cards reached \$6.0 billion in December 2015, up \$304 million (5.3 percent) from December 2014. This is the highest-ever monthly figure.."* – Statistics NZ
- *"Visitor arrivals to New Zealand numbered 300,500 in November 2015, up 11 percent from November 2014."* - Statistics NZ
- The strong increase of tourist activity observed in region 6 in recent months. As reported by Auckland Airport, *"Queenstown Airport's international passenger numbers grew by 46.5% in November 2015 compared to November 2014 due to strong growth on the Sydney and Melbourne routes. Domestic passengers were up by 15.4% on the previous period."*

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Technical Notes

What is MADT? Monthly Average Daily Traffic (MADT) is the average daily traffic volume in a given month. At each monitored location (count site), MADT is reported for light vehicles, all vehicles and heavy vehicles¹. MADT is the statistical term used throughout this report.

A more commonly reported statistical term is Annual Average Daily Traffic (AADT), which measures the average daily traffic volume over a given calendar year.

How is MADT change reported each month? We report MADT change for light, heavy and all vehicles, at a national and regional level. We first calculate the percentage change in MADT (light, heavy and all vehicles separately) of each site for the current month compared to the same month in the previous year. We then calculate the median of those percentage changes across all sites and report it as the national MADT change for the current month. To report each regional MADT change, we calculate the median of percent changes of the sample sites in each region.

Purpose Monthly Average Daily Traffic (MADT) reporting enables us to provide a month-by-month indication of traffic trends, and to allow the effects of specific events (e.g. Storms, fuel price shifts, economy, etc.) to be monitored.

Site coverage The table below shows the number of traffic counting sites in each NZ Transport Agency region. These numbers represent the sample sizes that are used to report the National and regional MADT changes in this report.

NZ Transport Agency Region	Number of Sites
Northland and Auckland	17
Waikato and Bay of Plenty	27
Taranaki, Manawatu-Wanganui, Hawkes Bay and Gisborne	19
Wellington, Nelson, Marlborough and Tasman	17
Canterbury and West Coast	15
Otago and Southland	19
Total	114

The sites used in the report are mostly NZTA's national telemetry sites, but also including a few continuous sites managed by NZTA's regional offices.

Report should be used with caution, because of the limited sample sizes.

Sources of variation in MADT The number of weekends in a specific month can affect the MADT comparability between years. Also, public holidays that occur in different months can affect comparisons between years. This report does not attempt to compensate for these variations.

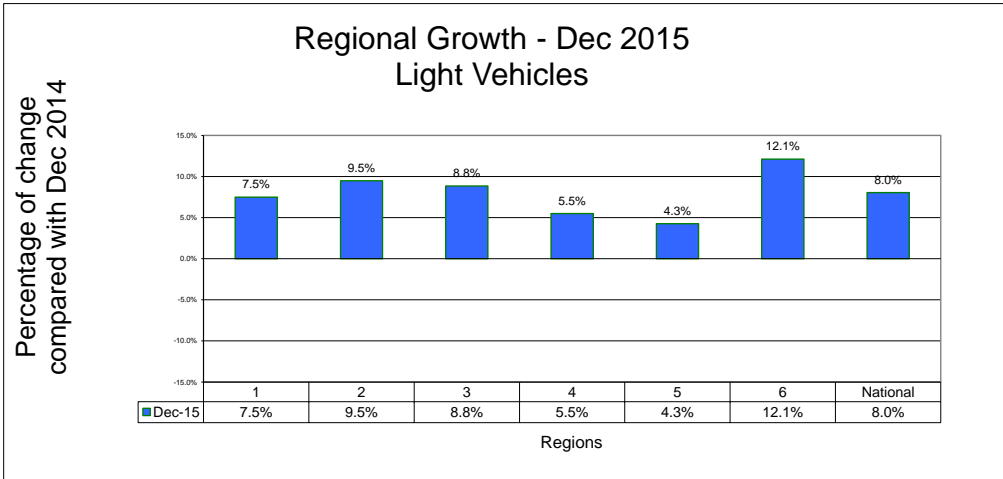
¹ Heavy vehicles are those with a gross vehicle mass exceeding 3.5 tonnes.

Results: Light Vehicles

Regions

Comparisons across the NZ Transport Agency regions have also been carried out.

The graph below shows the MADT change compared with the same month last year. The MADT values here represent light vehicle types.



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5	Canterbury and West Coast
6	Otago and Southland

All sites

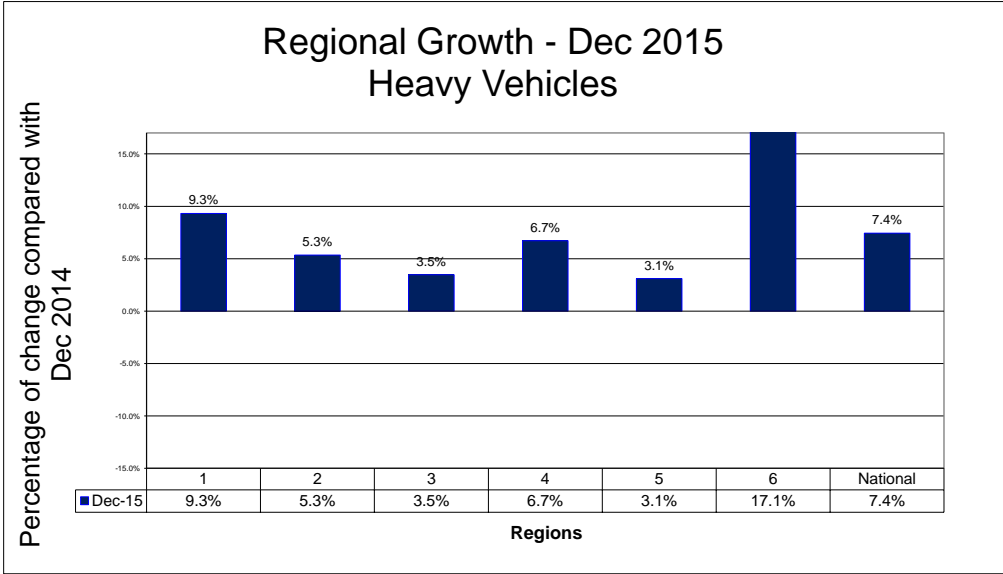
An Excel table of MADT (light vehicles) values for the past thirteen months is released with this report.

Results: Heavy Vehicles

Regions

Comparisons of heavy vehicle traffic across NZ Transport Agency regions as detailed below.

The graph shows the MADT change compared with the same month last year. The MADT values here represent heavy vehicles only.



NZTA Region Number	NZTA Region
1	Northland and Auckland
2	Waikato and Bay of Plenty
3	Taranaki, Manawatu-Wanganui, Hawkes Bay and Gisborne
4	Wellington, Nelson, Marlborough and Tasman
5	Canterbury and West Coast
6	Otago and Southland

All sites

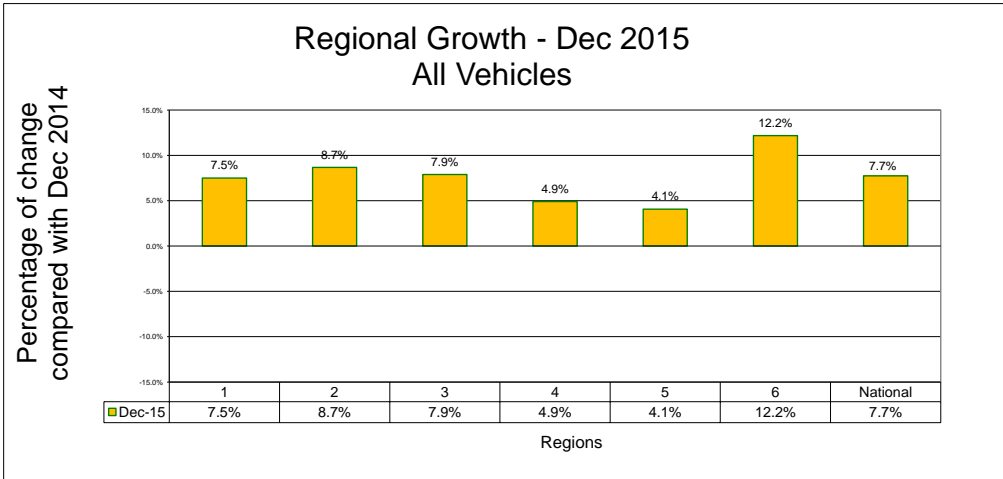
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Results: All Vehicles

Regions

Comparisons across the NZ Transport Agency regions have also been carried out.

The graph below shows the MADT change compared with the same month last year. The MADT values here represent all vehicle types.



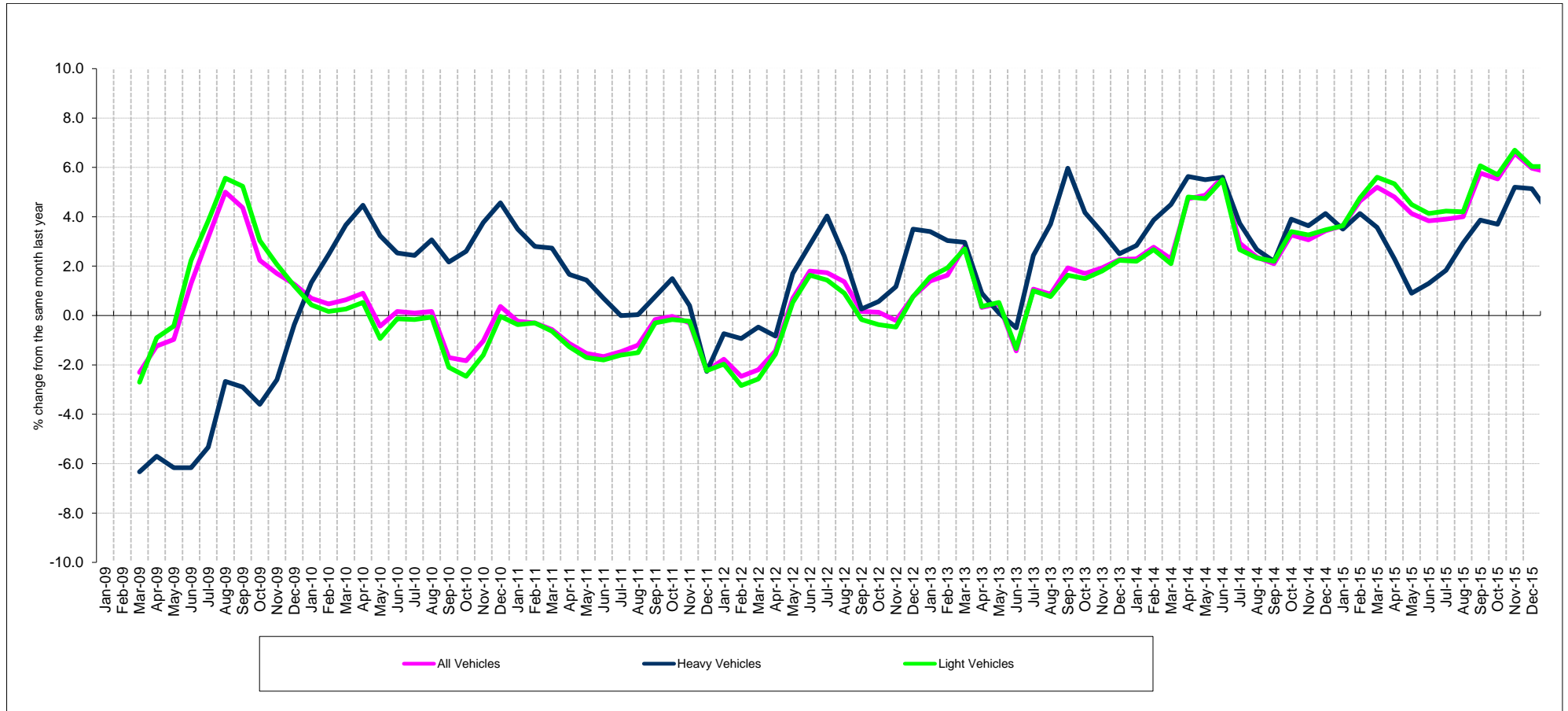
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All sites

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Nationwide State Highway Traffic Growth

Moving three months average of % change from the same month last year



Nationwide State Highway Traffic Growth

MADT percentage change from the same month a year ago

Year	2009			2010			2011			2012			2013			2014			2015		
Month	All Vehicles	Light Vehicles	Heavy Vehicles	All Vehicles	Light Vehicles	Heavy Vehicles	All Vehicles	Light Vehicles	Heavy Vehicles	All Vehicles	Light Vehicles	Heavy Vehicles	All Vehicles	Light Vehicles	Heavy Vehicles	All Vehicles	Light Vehicles	Heavy Vehicles	All Vehicles	Light Vehicles	Heavy Vehicles
January	-0.8	-1.5	-6.4	-0.1	-0.2	1.0	-1.7	-1.6	1.2	-1.0	-1.7	2.7	2.9	2.5	5.7	2.4	2.0	3.9	5.8	5.7	4.9
February	-2.4	-1.6	-8.9	1.6	1.3	4.1	0.0	0.0	3.7	-3.3	-3.8	-0.8	1.7	1.7	2.6	3.6	3.8	4.7	4.7	5.6	2.2
March	-3.7	-5.0	-3.7	0.4	-0.3	5.9	0.0	-0.3	3.3	-2.3	-2.2	-3.3	3.8	3.9	0.6	0.9	0.5	4.9	5.1	5.5	3.6
April	2.4	3.9	-4.5	0.7	0.6	3.4	-3.4	-3.5	-2.0	1.3	1.3	1.6	-4.5	-4.5	-0.5	9.7	10.1	7.3	4.6	4.9	1.1
May	-1.6	-0.2	-10.3	-2.4	-3.1	0.4	-1.2	-1.3	3	3.1	2.5	6.8	2.1	2.2	0.2	4.0	3.6	4.3	2.7	3.1	-2.0
June	3.1	3.0	-3.7	2.2	2.1	3.8	-0.4	-0.6	1.1	1	1.1	0.2	-1.9	-1.7	-1.2	3.1	2.8	5.2	4.2	4.4	4.8
July	8.0	8.7	-2.0	0.5	0.5	3.1	-2.8	-2.9	-4.1	1.1	0.7	5.1	3.0	2.5	8.3	1.7	1.6	1.7	4.8	5.2	2.7
August	3.9	5.0	-2.3	-2.2	-2.8	2.3	-0.4	-1.0	3.1	2.0	0.9	1.9	1.5	1.5	4.0	2.3	2.6	1.1	3.0	3.0	1.3
September	1.2	2.0	-4.4	-3.4	-4.0	1.1	2.7	3.0	3.3	-2.6	-2.1	-6.2	1.3	0.9	5.6	2.3	2.4	3.8	9.5	10.0	7.6
October	1.6	2.1	-4.1	0.1	-0.6	4.4	-2.4	-2.5	-1.9	1.0	0.1	6.0	2.3	2.1	2.9	5.2	5.2	6.8	4.1	4.1	2.2
November	2.3	2.1	0.7	0.2	-0.2	5.8	-1.2	-1.2	-0.2	1.0	0.6	3.7	2.2	2.4	1.6	1.7	2.2	0.3	6.1	6.0	5.8
December	-0.1	-0.6	2.3	0.8	0.7	3.5	-3.1	-3	-4.7	0.3	1.6	0.8	2.3	2.2	3	3.4	3.0	5.3	7.7	8.0	7.4

Appendices

MADTs of the sample sites for the past thirteen months in Excel format

- Light Vehicles
- Heavy Vehicles
- All Vehicles