District 07
Mobility Performance Report
2012

I-5 & I-605 Interchange Los Angeles County. Photo by Thomas Ritter

California Department of Transportation
Division of Traffic of Operations
Office of Performance

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1. SUMMARY ANALYSIS

Caltrans District 7 (D7) contains two counties located in coastal southern California: Los Angeles and Ventura. Both counties are urban counties, with Los Angeles as the most populous county in the United States at almost 10 million residents and Ventura County with 800,000 residents. Although these are urban counties, they do contain a large amount of sparsely populated National Forest and National Recreation Area land. Together, these two counties make up 28.4 percent of California's population and grew 0.7 percent from 2011 to 2012.The economy improved significantly over the period of 2011-12. Total employment in District 7 increased from 4.71 million to 4.75 million people employed, an increase of 0.7 percent. There was a corresponding drop in the unemployment rate-from 12.1 percent to 10.8 percent-a significant drop over one year that matched the statewide decline.

Total Vehicle Miles Traveled (VMT), a measure of how much travel there was over the period, increased from 34.78 billion VMT to 34.94 billion VMT, an absolute increase of 162 million or 0.5 percent, the lowest percentage increase in California. Part of this increase is explained by the pre-existing high level of detection coverage in D7 and expansion of detection coverage in several other districts. Further, with such a high VMT already, even a small percentage increase represents a high absolute amount of VMT.

Congestion increased significantly over the period from 2011-12. The most severe form of congestion, Vehicle Hours of Delay (VHD) at 35 mph, increased by 7.3 percent during 2012 (from 38.0 million VHD in 2011 to 40.8 million VHD in 2012). This amount represented 43.6 percent of VHD at 35 in the State in 2012. The lesser form of congestion, VHD at 60 mph also increased by 8.0 percent over the period (from 88.7 million VHD in 2011 to 95.8 VHD in 2012).

There are several factors that affect congestion in D7. Construction can cause significant amounts of delay. Exceptional changes in traffic patterns occur during major construction projects, especially those that require several years to complete. An example of a major construction project causing exceptional changes in traffic patterns would be the "Sepulveda Pass Project" on northbound I-405 between the I-10 and the US 101. This project significantly impacts the traffic pattern on I-405 in both northbound and southbound directions, both inside and outside its 10-mile project limits.

Others factors affecting traffic trends are numerous and cause significant fluctuation in vehicle hours of delay. These factors include changing roadway cross-sections by adding high occupancy and toll lanes, seasonal changes such as the beginning and end of the school year, the tourism season, and major development near freeways. An example of this fluctuation is the 8.0 percent increase in VHD from 2011 to 2012.

Non-recurrent events, such as incidents, special events, lane reductions, construction and maintenance closures, can also cause congestion. Examples of this congestion are the 17 percent increase in VHD at 60 mph on the I-10 (Beach route/construction to add High Occupancy Toll lanes) and the 10 percent increase on I-405 in VHD at 60 mph (mainly due to construction closures).

2. DESCRIPTIVE STATISTICS

District Headquarters: Los Angeles
Counties: Los Angeles and Ventura
Counties without Detection: N/A
Population: 10,793,527, 0.7% increase over 2011
Population as a Percentage of Statewide: 28.4%

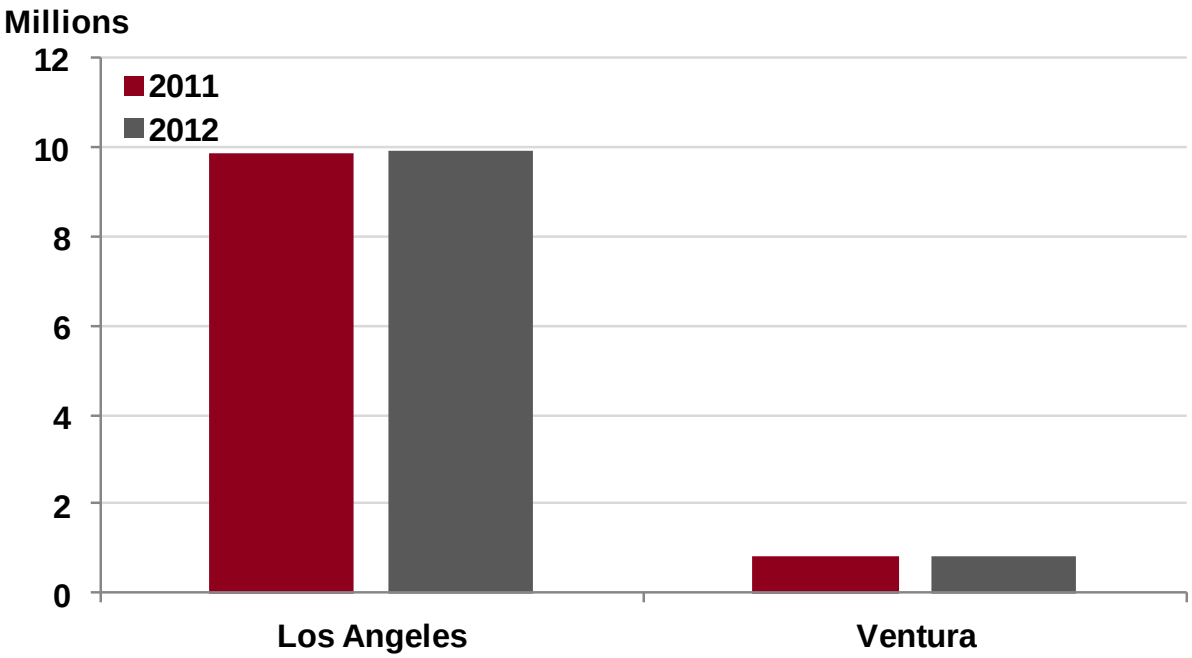
Table 1. POPULATION ESTIMATES AND ABSOLUTE AND PERCENT CHANGE, 2011–2012

County	2011 Population	2012 Population	Difference (2012 - 2011) Absolute	Difference (2012 - 2011) Percent
Los Angeles	9,889,520	9,958,091	68,571	0.7%
Ventura	829,065	835,436	6,371	0.8%
Total	**10,718,585**	**10,793,527**	**74,942**	**0.7%**

Source: State of California, Department of Finance, *E-1 Population Estimates for Cities, Counties, and the State—January 1, 2012 and 2013*. Sacramento, California, May 2013.
Numbers may not sum to total due to rounding

FIGURE 1

POPULATION, BY COUNTY, 2011–2012



Employment, 2012 Monthly Average: 4,746,525
Unemployment Rate, 2012 Monthly Average: 10.8%, 1.3% decrease over 2011

Table 2. EMPLOYMENT, UNEMPLOYMENT, AND PERCENT CHANGE, BY COUNTY, 2011–2012

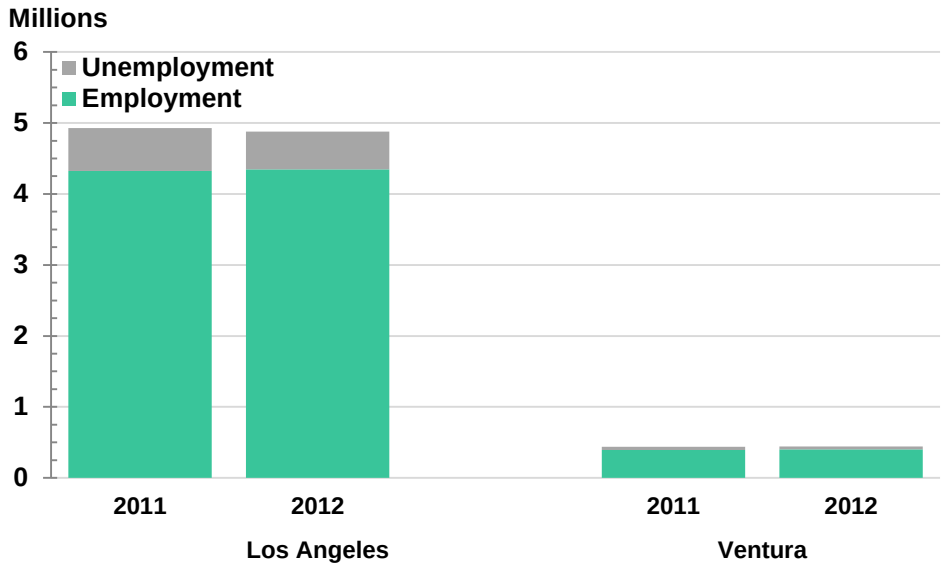
County	Unemployment Rate, 2011	Unemployment Rate, 2012	Percent Change in Rate of Unemployment (2012 - 2011)
Los Angeles	12.3%	10.9%	-1.3%
Ventura	10.1%	9.0%	-1.1%
District Total	**12.1%**	**10.8%**	**-1.3%**

Data not seasonally adjusted.
Source: State of California, Employment Development Department (EDD), Labor Market Information Division; data downloaded September 9, 2013.

Numbers may not sum to total due to rounding

FIGURE 2

EMPLOYMENT AND UNEMPLOYMENT, BY COUNTY, 2011–2012



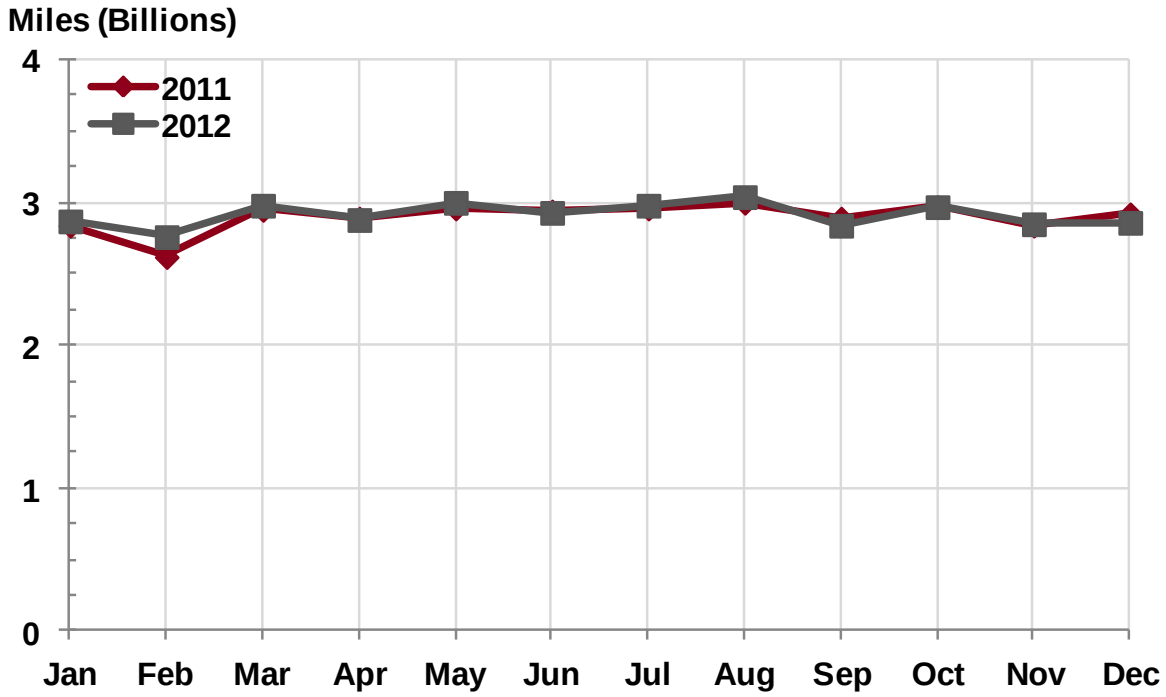
3. TRAVEL DEMAND

Vehicle Miles of Travel, 2012: 34.9 billion miles
Absolute and Percentage Change over 2011: 161.7 million VMT increase, 0.5% increase over 2011
Peak Travel Month, Percentage Change over 2011: August, 3 billion miles, 1.2% increase over 2011

Monthly Trend

FIGURE 3 (A)

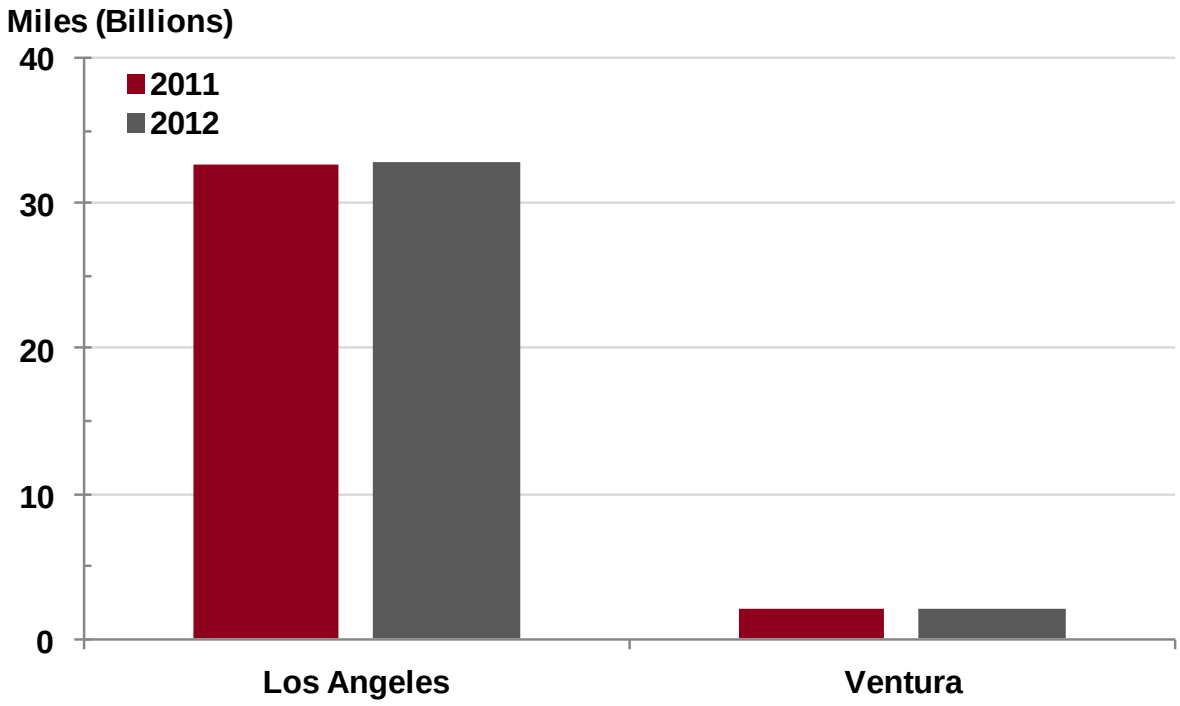
TOTAL VEHICLE MILES OF TRAVEL, BY MONTH, 2011–2012



County Trend

Figure 3 (B)

TOTAL VEHICLE MILES OF TRAVEL, BY COUNTY, 2011–2012



4. TRAFFIC CONGESTION

4.1. Total and Average Vehicle Hours of Delay at 35 and 60 Miles per Hour

4.1.1 Delay at 35 Miles per Hour

Vehicle Hours of Delay, 35 mph: 40.8 million hours, 7.3% increase over 2011
Average Non-Holiday Weekday Delay, 35 mph: 145,132 hours, 7.9% increase over 2011
Percentage of Statewide VHD at 35 mph: 43.6%, 0.4% decrease over 2011

FIGURE 4

TOTAL VEHICLE HOURS OF DELAY AT 35 MILES PER HOUR, BY MONTH, 2011–2012

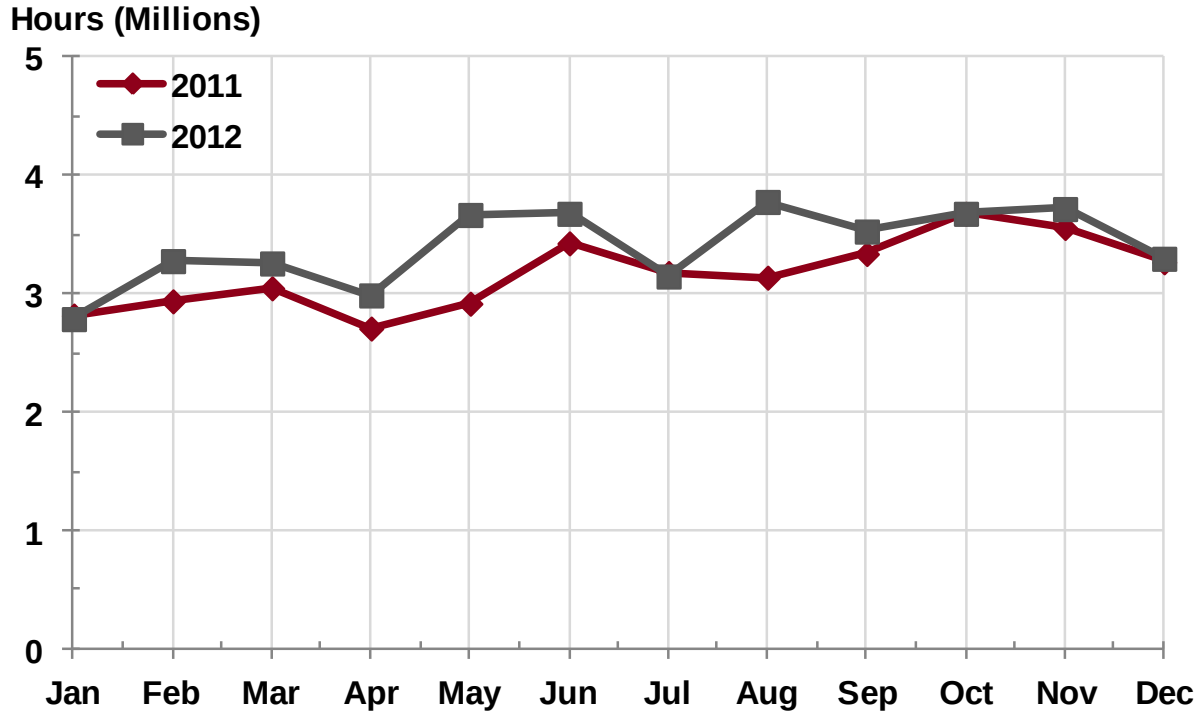
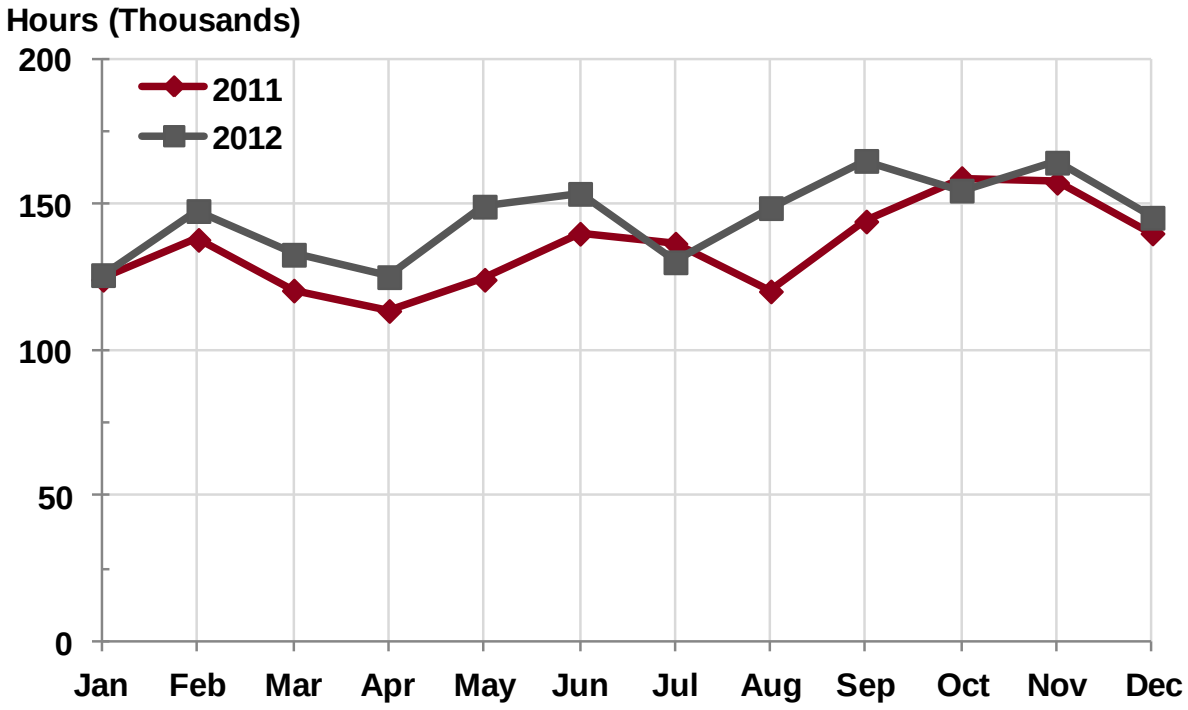


FIGURE 5

AVERAGE NON-HOLIDAY WEEKDAY VEHICLE HOURS OF DELAY AT 35 MILES PER HOUR, BY MONTH, 2011–2012



4.1.2 Delay at 60 Miles per Hour

Vehicle Hours of Delay, 60 mph: 95.8 million hours, 8% increase over 2011
Average Non-Holiday Weekday Delay, 60 mph: 335,283 hours, 7.9% increase over 2011
Percentage of Statewide VHD at 60 mph: 43.2%, 0.3% decrease over 2011

FIGURE 6

TOTAL VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY MONTH, 2011–2012

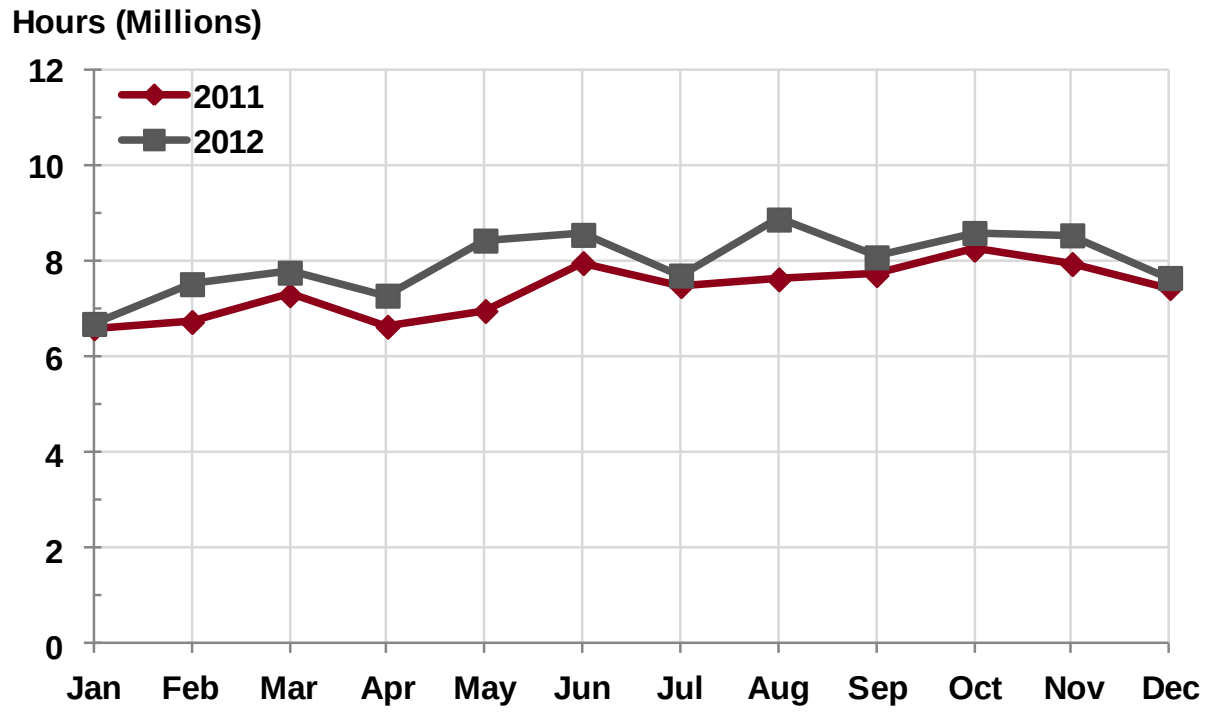
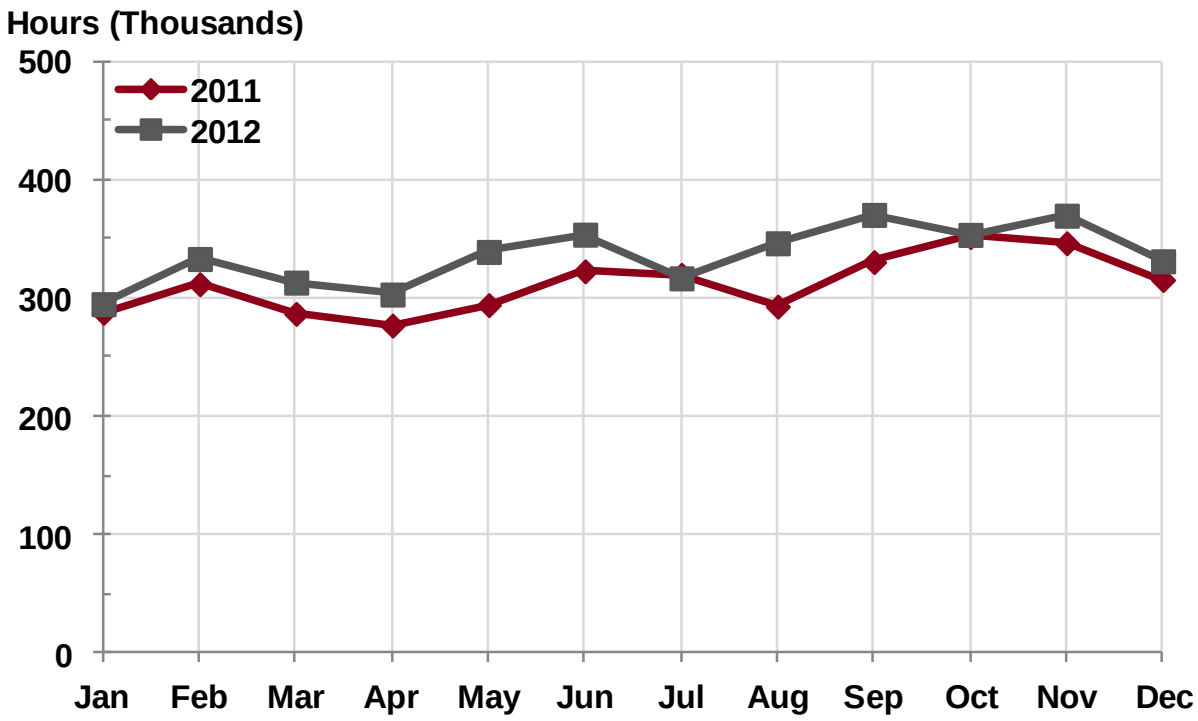


FIGURE 7

AVERAGE NON-HOLIDAY WEEKDAY VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY MONTH, 2011–2012



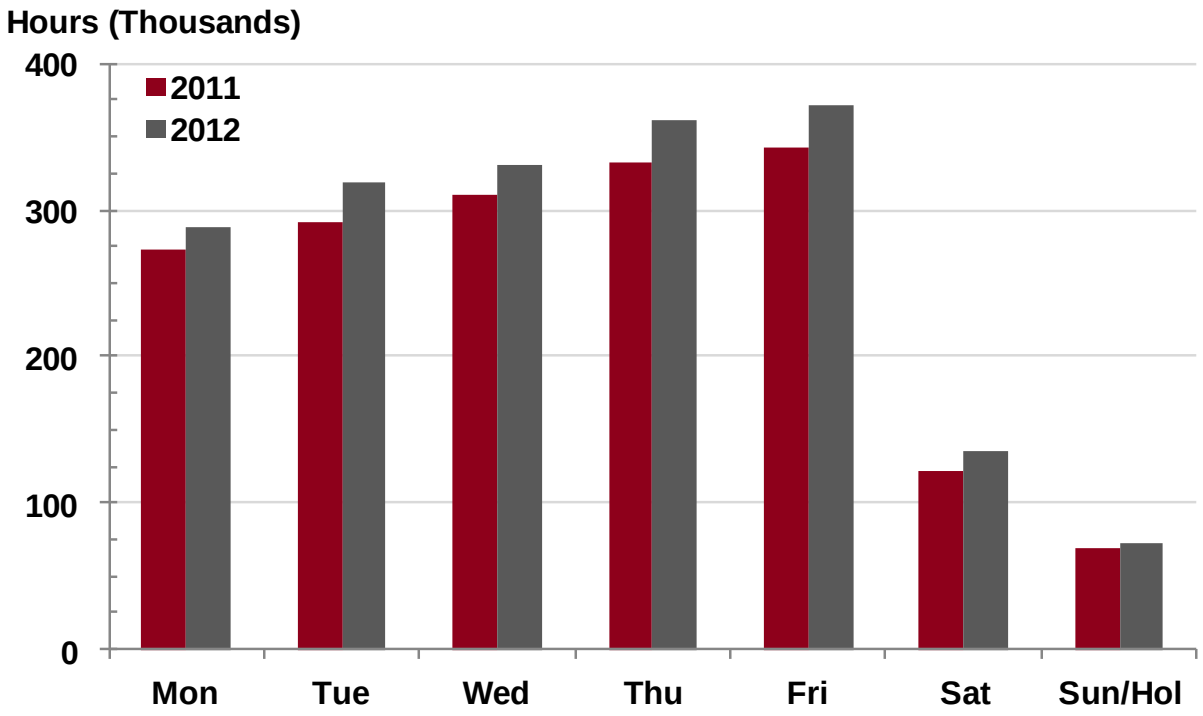
4.2. Average Vehicle Hours of Delay by Day of Week

Most Congested Day of the Week, 60 mph:	Friday, 371,347 hours, 9% increase over 2011
Highest Absolute Change in Delay, 60 mph:	Friday, 29,383 VHD increase, 9% increase over 2011
Highest Percentage Change in Delay:	Saturday, 13,517 VHD increase, 11% increase over 2011

Delay at 60 miles per hour

FIGURE 8

AVERAGE VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY DAY OF WEEK, 2011–2012



4.3. Average Vehicle Hours of Delay by Hour of Day

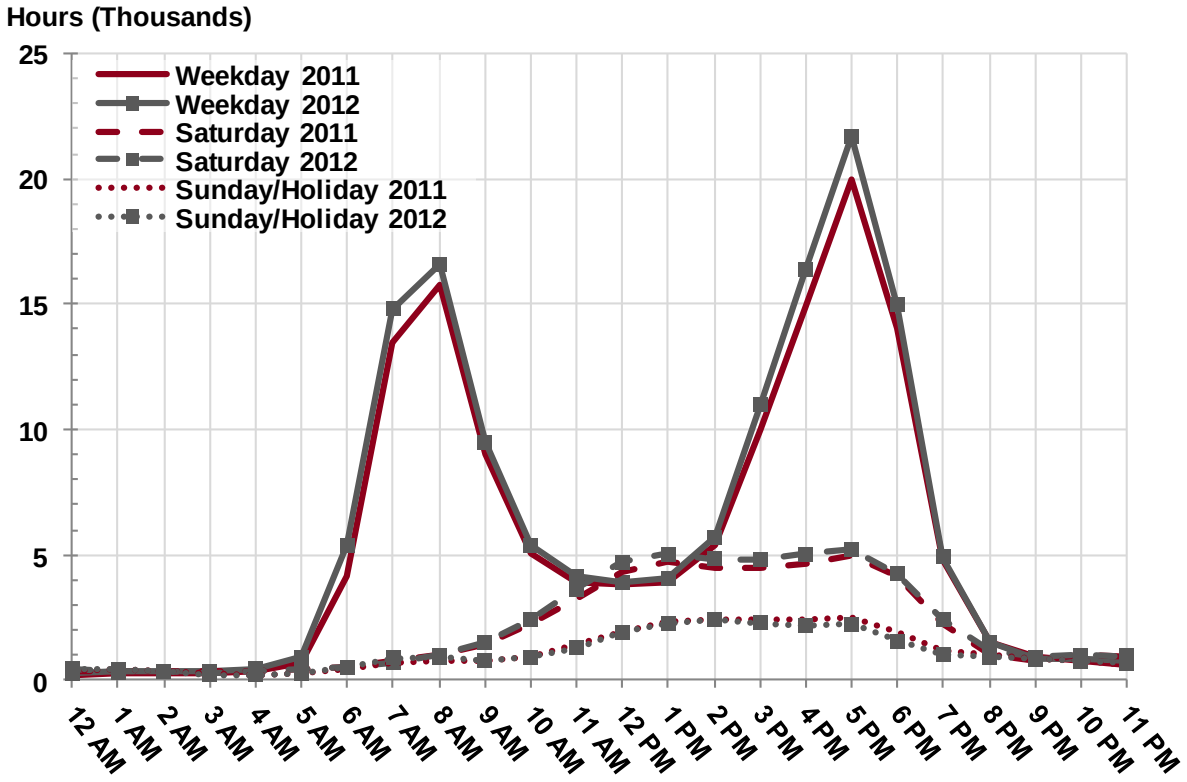
4.3.1 Delay at 35 Miles per Hour

Weekday PM Peak Hour, 35 mph: 5 PM, 21,670 hours, 8% increase over 2011
Weekday AM Peak Hour, 35 mph: 8 AM, 16,566 hours, 5% increase over 2011
Saturday Peak Hour, 35 mph: 5 PM, 5,225 hours, 5% increase over 2011
Sunday/Holiday Peak Hour, 35 mph: 2 PM, 2,412 hours, 2% decrease over 2011

Delay at 35 miles per hour

FIGURE 9

AVERAGE VEHICLE HOURS OF DELAY AT 35 MILES PER HOUR, BY HOUR OF DAY, 2011–2012



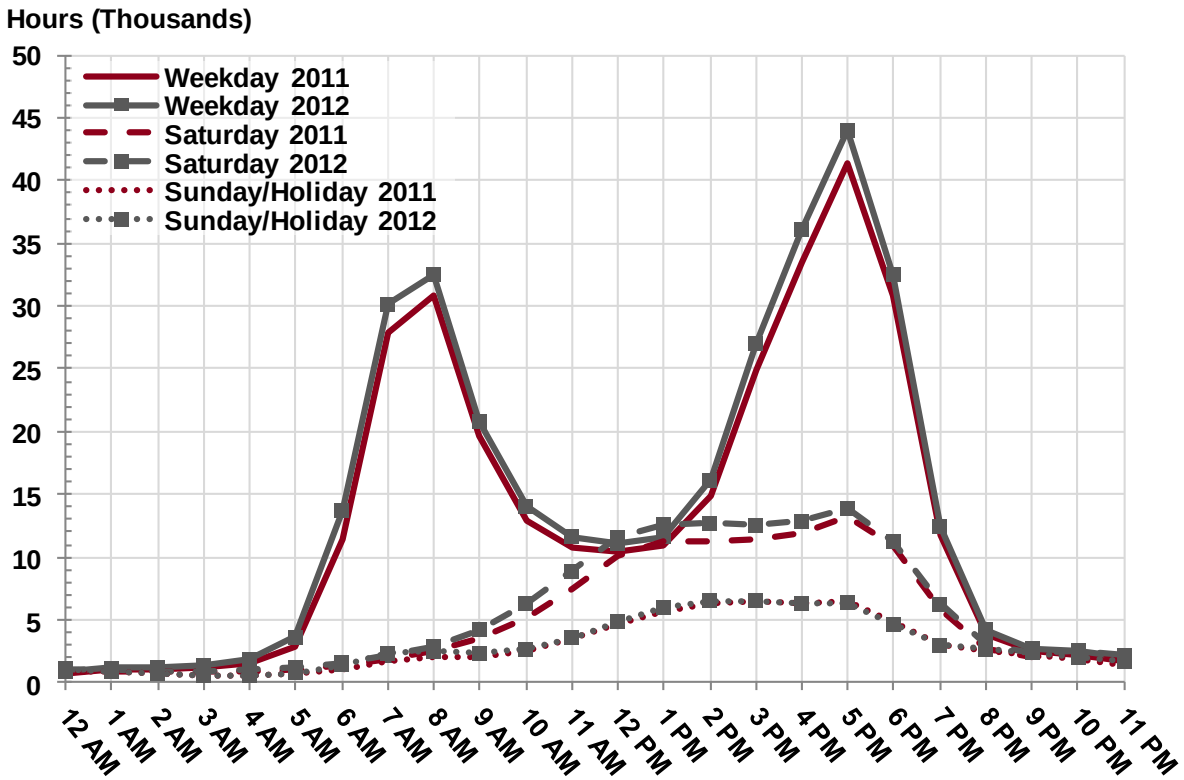
4.3.2 Delay at 60 Miles per Hour

Weekday PM Peak Hour, 60 mph: 5 PM, 44,005 hours, 6% increase over 2011
Weekday AM Peak Hour, 60 mph: 8 AM, 32,504 hours, 5% increase over 2011
Saturday Peak Hour, 60 mph: 5 PM, 13,844 hours, 5% increase over 2011
Sunday/Holiday Peak Hour, 60 mph: 2 PM, 6,557 hours, 2% increase over 2011

Delay at 60 miles per hour

FIGURE 10

AVERAGE VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY HOUR OF DAY, 2011–2012



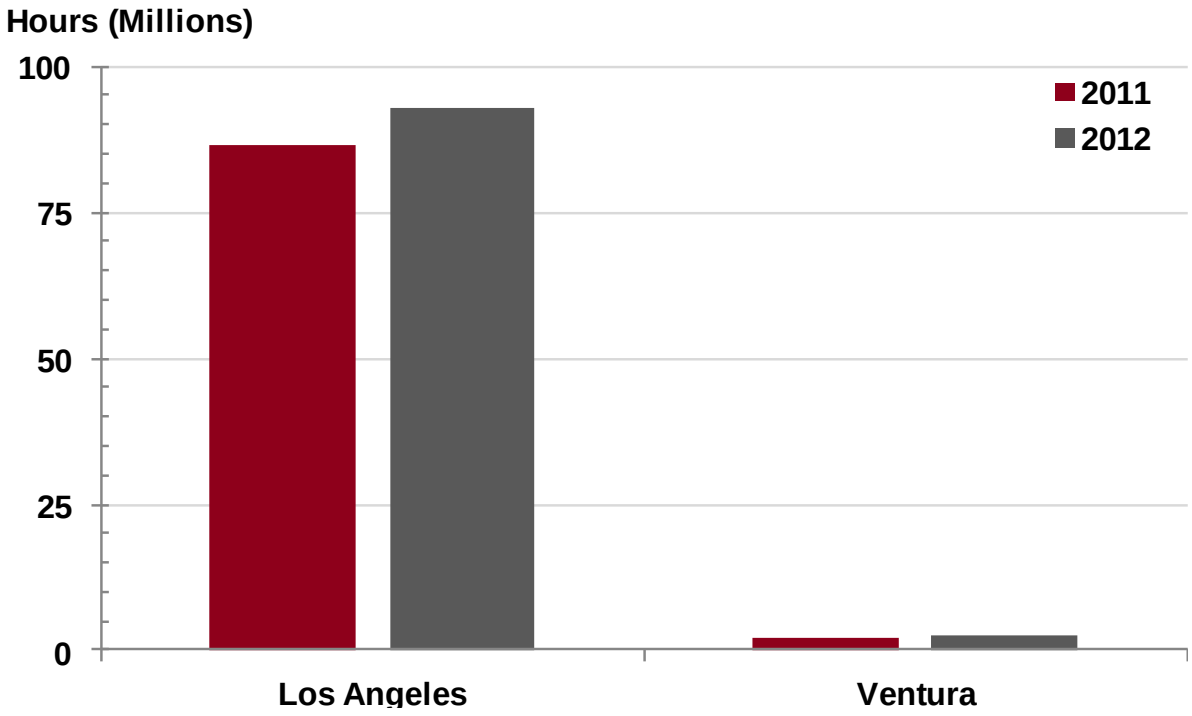
4.4. Total Vehicle Hours of Delay by County

County with Largest Delay, 60 mph:	Los Angeles, 93 million hours, 7.5% increase over 2011 VHD, 97% of District total VHD
County with 2nd Largest Delay, 60 mph:	Ventura, 2.7 million hours, 25.4% increase over 2011 VHD, 3% of District total VHD
County with Largest Increase in Delay, 60 mph:	Los Angeles, 6.5 million hours, 7.5% increase over 2011
County with Largest Decrease in Delay, 60 mph:	N/A

Delay at 60 miles per hour

FIGURE 11

TOTAL ANNUAL VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR, BY COUNTY, 2011–2012



4.5. Lost Productivity

AM Peak: 153 miles, 5.5% increase over 2011

Off-Peak Day: 58 miles, 0.6% decrease over 2011

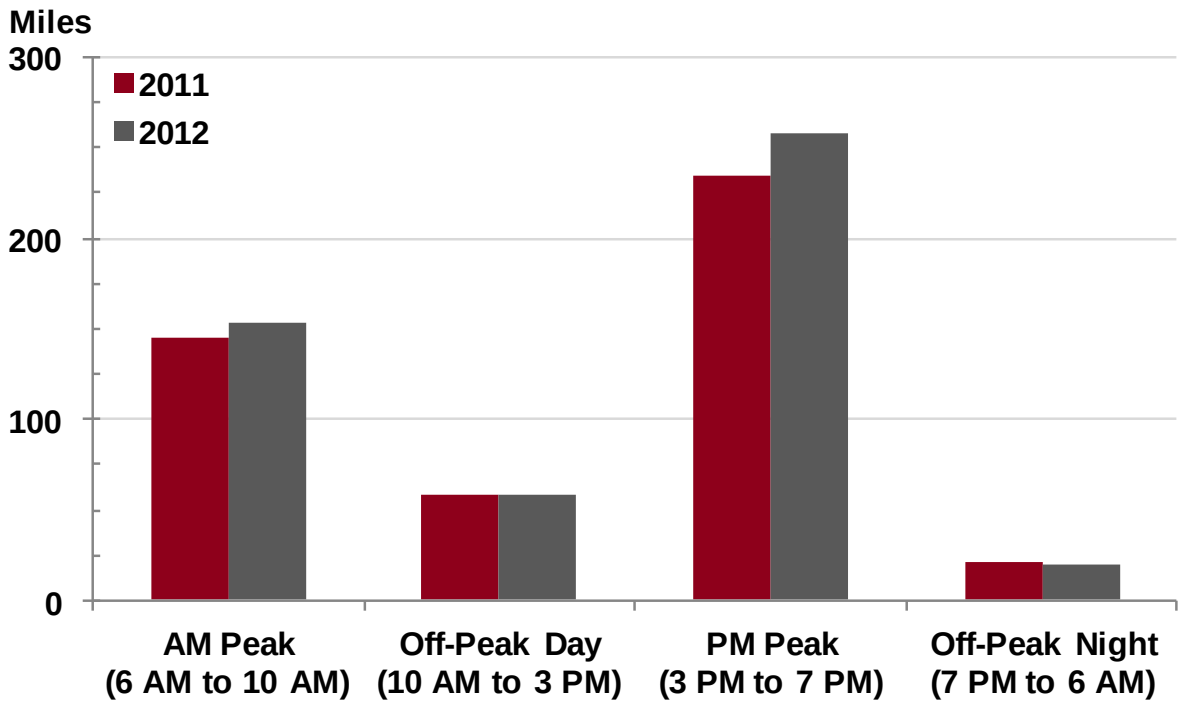
PM Peak: 258 miles, 9.6% increase over 2011

Off-Peak Night: 20 miles, 6.3% decrease over 2011

Lost Lane Miles at 35 miles per hour

FIGURE 12

AVERAGE NON-HOLIDAY WEEKDAY EQUIVALENT LOST LANE MILES

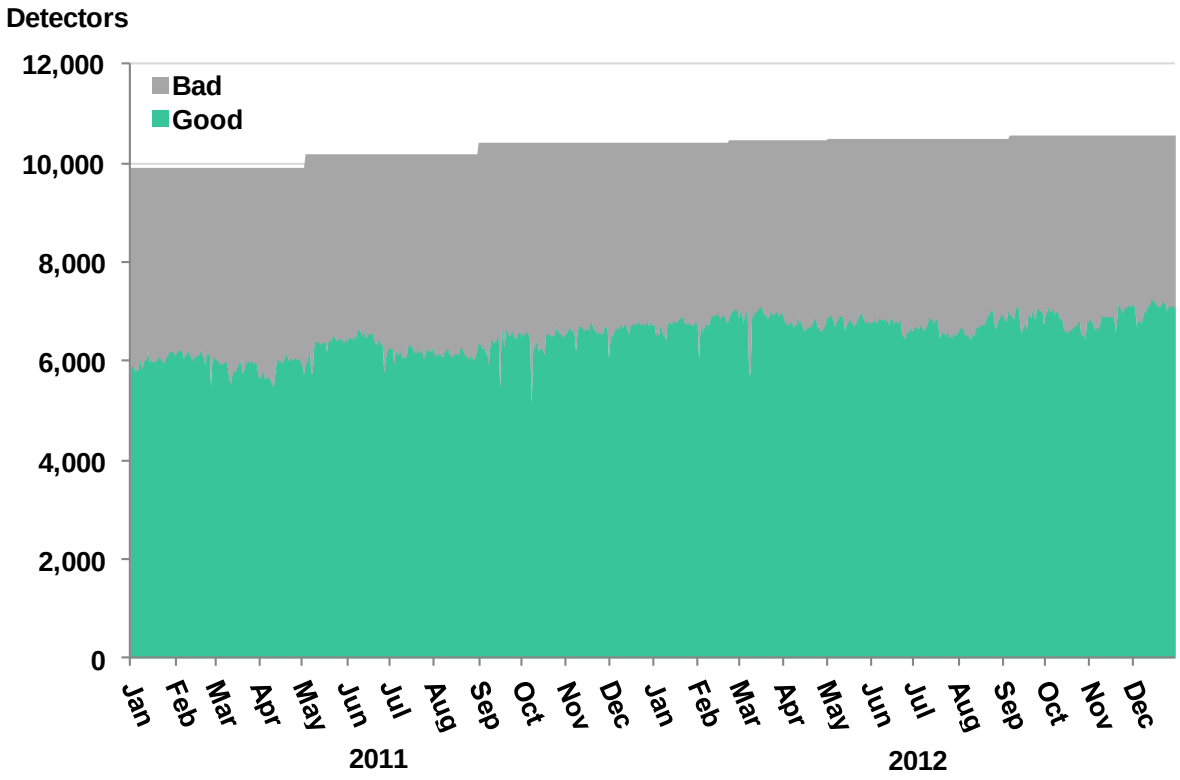


5. DETECTOR HEALTH AND DATA QUALITY

Directional Mainline Miles:	2,318 miles
Directional Mainline Miles with Detection:	1,096 miles
Number of Detectors at End of 2012:	10,554, 1% increase over 2011
Average Percentage of Good and Bad Detection:	65% good, 9% increase over 2011; 35% bad, 5.9% decrease over 2011
Number of Days Reporting less Than 50% Working Detection:	0

FIGURE 13

DETECTOR HEALTH BY DAY, 2011–2012



6. FREEWAY CONGESTION AND BOTTLENECK LOCATIONS

6.1. Congestion by Freeway

Congestion Contributed by Top Congested Freeways: 82,418,630 hours,
86% of total VHD in 2012

Table 3. TOP CONGESTED FREEWAYS, 2011–2012

Route	County	Vehicle Hours of Delay at 60 mph		Difference (2012 - 2011)		Rank	
		2011	2012	Absolute	Percent	2011	2012
I–5	Los Angeles	14,860,558	15,720,370	859,812	6%	1	1
I–405	Los Angeles	11,519,515	12,627,567	1,108,053	10%	2	2
US–101	Los Angeles	9,918,324	10,567,013	648,689	7%	3	3
SR–60	Los Angeles	9,428,050	10,102,098	674,047	7%	4	4
I–10	Los Angeles	7,082,866	8,258,162	1,175,296	17%	5	5
I–210	Los Angeles	6,962,310	7,933,128	970,818	14%	6	6
I–110	Los Angeles	5,478,239	5,935,385	457,146	8%	7	7
I–605	Los Angeles	4,156,413	4,476,068	319,655	8%	8	8
I–105	Los Angeles	3,796,836	3,413,272	-383,564	-10%	9	9
SR–91	Los Angeles	3,154,442	3,385,568	231,126	7%	10	10
TOTALS		**76,357,552**	**82,418,630**	**6,061,078**	**7.9%**		

6.2. Bottleneck Locations

Total Delay, All AM Bottlenecks, 2012: 11,357,435 hours
Top Bottleneck Delay, AM, 2012: 3,386,699 hours
Percentage Top Bottleneck Delay of Total Bottleneck Delay, AM, 2012: 30%

Table 4 (a). TOP BOTTLENECKS, AM PEAK PERIOD, 2012

Rank	County	City	Freeway	CA Postmile	Approximate Location	Average Extent (miles)	Total Delay (hours)	Average Daily Delay (hours)	Average Duration (hours)	Percent of Days Active
1	Los Angeles	Los Angeles	SR170-S	R15.26	Magnolia Blvd	3.78	647,419	2,779	3.1	93%
2	Los Angeles	Los Angeles	I405-S	33.04	Sunset Blvd	9.34	447,117	2,247	1.8	79%
3	Los Angeles	Los Angeles	I405-N	29.16	National	5.48	410,166	1,695	2.2	96%
4	Los Angeles	Los Angeles	I110-N	21.36	Washington Blvd	3.32	369,966	1,474	3.2	100%
5	Los Angeles	Los Angeles	US101-S	9.31	Barham Blvd	3.82	287,498	1,208	2.0	95%
6	Los Angeles	Baldwin Park	I10-W	32.81	Francisquito Ave	3.41	266,467	1,149	2.6	92%
7	Los Angeles	South Elmonte	SR60-W	12.1	Workman Mill Rd Mg. 41 & 16	4.47	265,333	1,228	1.7	86%
8	Los Angeles	Los Angeles	I10-W	R7.22	Manning Mg. 80 and 11	4.21	236,611	986	1.6	96%
9	Los Angeles	Los Angeles	SR60-W	0.45	Soto St	2.22	230,453	1,048	2.7	88%
10	Los Angeles	Los Angeles	I110-S	23.05	Third St	4.20	225,669	1,600	3.3	56%

Total Delay, All PM Bottlenecks, 2012: 17,407,412 hours
Top Bottleneck Delay, PM, 2012: 3,738,402 hours
Percentage Top Bottleneck Delay of Total Bottleneck Delay, PM, 2012: 21%

Table 4 (b). TOP BOTTLENECKS, PM PEAK PERIOD, 2012

Rank	County	City	Freeway	CA Postmile	Approximate Location	Average Extent (miles)	Total Delay (hours)	Average Daily Delay (hours)	Average Duration (hours)	Percent of Days Active
1	Los Angeles	Commerce	I5-S	11.3	Malt Ave	6.32	645,723	2,604	2.8	99%
2	Los Angeles	Diamond Bar	SR57-N	R3.4	Pathfinder Rd	3.31	428,508	1,756	4.0	97%
3	Los Angeles	Los Angeles	I405-N	32.96	Sunset Ave	3.24	427,354	1,997	4.3	85%
4	Los Angeles	Walnut	SR60-E	R23.7	SR–57 North To SR–60 East Connector	3.76	351,185	1,626	3.3	86%
5	Los Angeles	Los Angeles	I5-N	38.55	Van Nuys Blvd	4.00	331,573	1,610	3.1	82%
6	Los Angeles	Carson	I405-S	11.82	South of Del Amo Blvd	3.35	324,305	1,374	2.4	94%
7	Los Angeles	Los Angeles	US101-N	7.21	Argyle	2.67	314,748	1,279	3.3	98%
8	Los Angeles	Los Angeles	I110-S	17.36	West Gage Ave	5.22	306,524	1,316	2.3	93%
9	Los Angeles	Los Angeles	I110-N	23.2	West 3rd St	4.29	304,959	1,495	2.8	81%
10	Los Angeles	Downey	I605-S	R9.75	North of I–5	2.70	303,523	1,214	3.6	100%

FIGURE 14 (A)(1)

BOTTLENECKS AND CONGESTED SEGMENTS, AM PEAK PERIOD, 2012

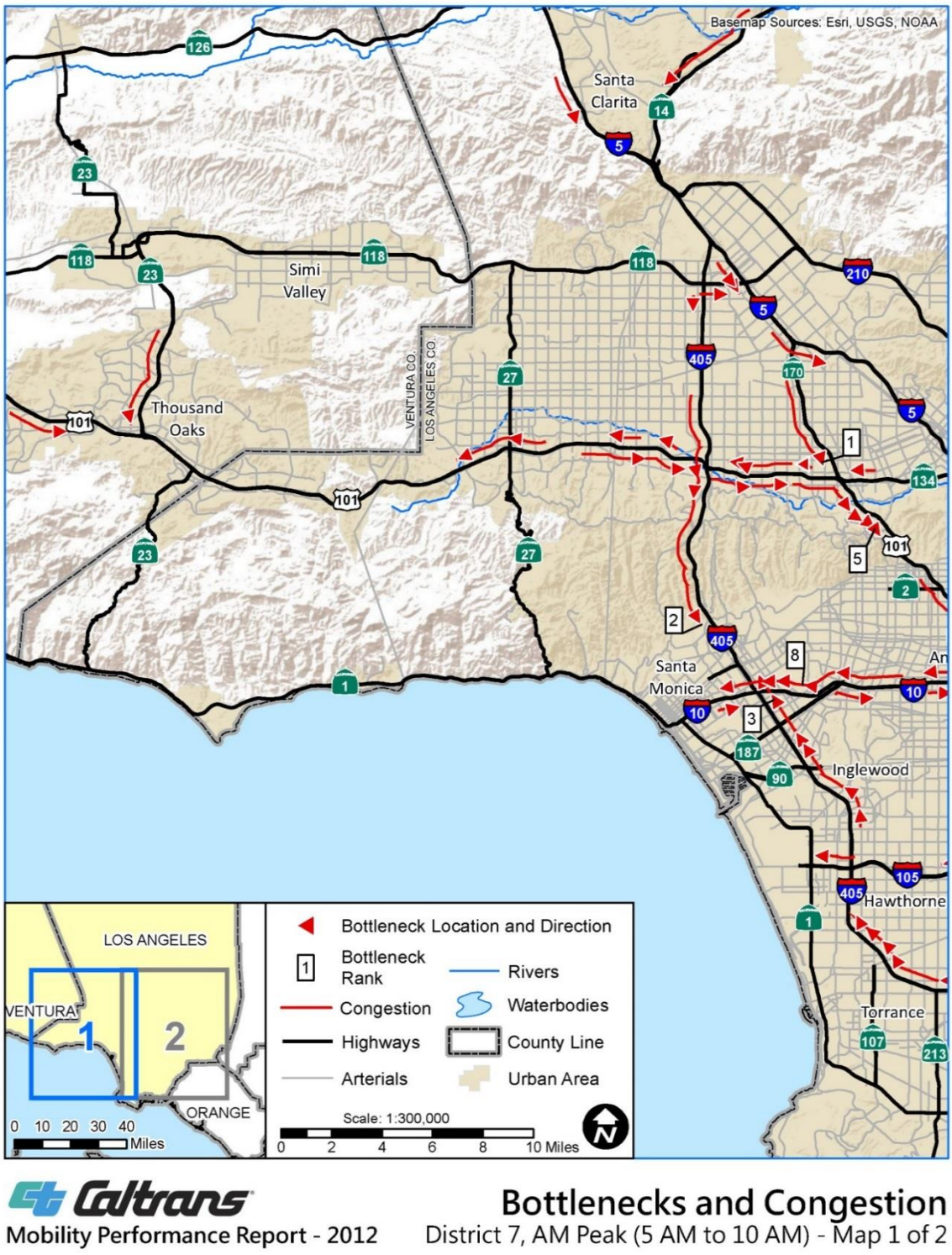


Figure 14 (A)(2)

BOTTLENECKS AND CONGESTED SEGMENTS, AM PEAK PERIOD, 2012

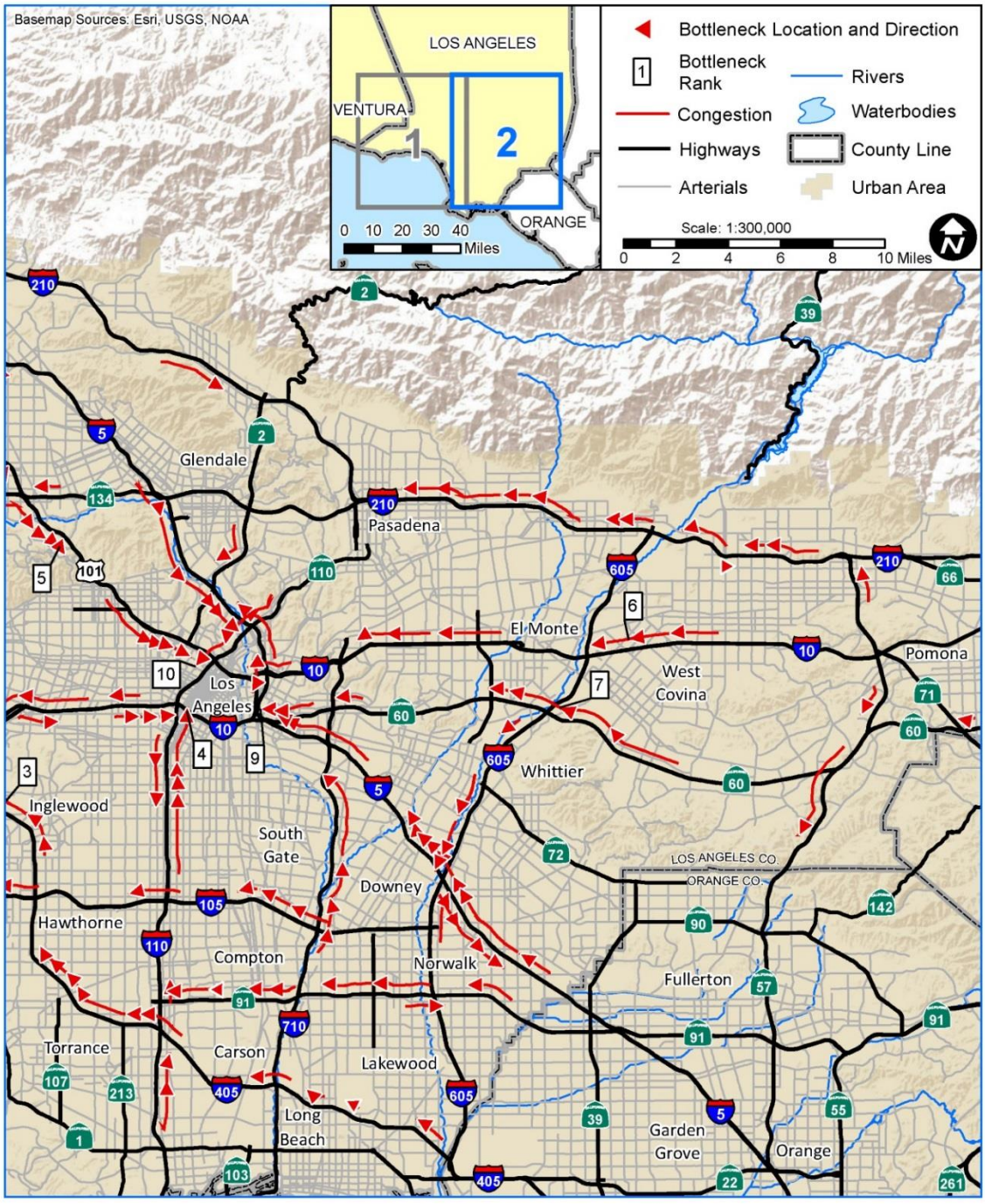


Figure 14 (B)(1)

BOTTLENECKS AND CONGESTED SEGMENTS, PM PEAK PERIOD, 2012

Figure 14 (B)(2)

BOTTLENECKS AND CONGESTED SEGMENTS, PM PEAK PERIOD, 2012