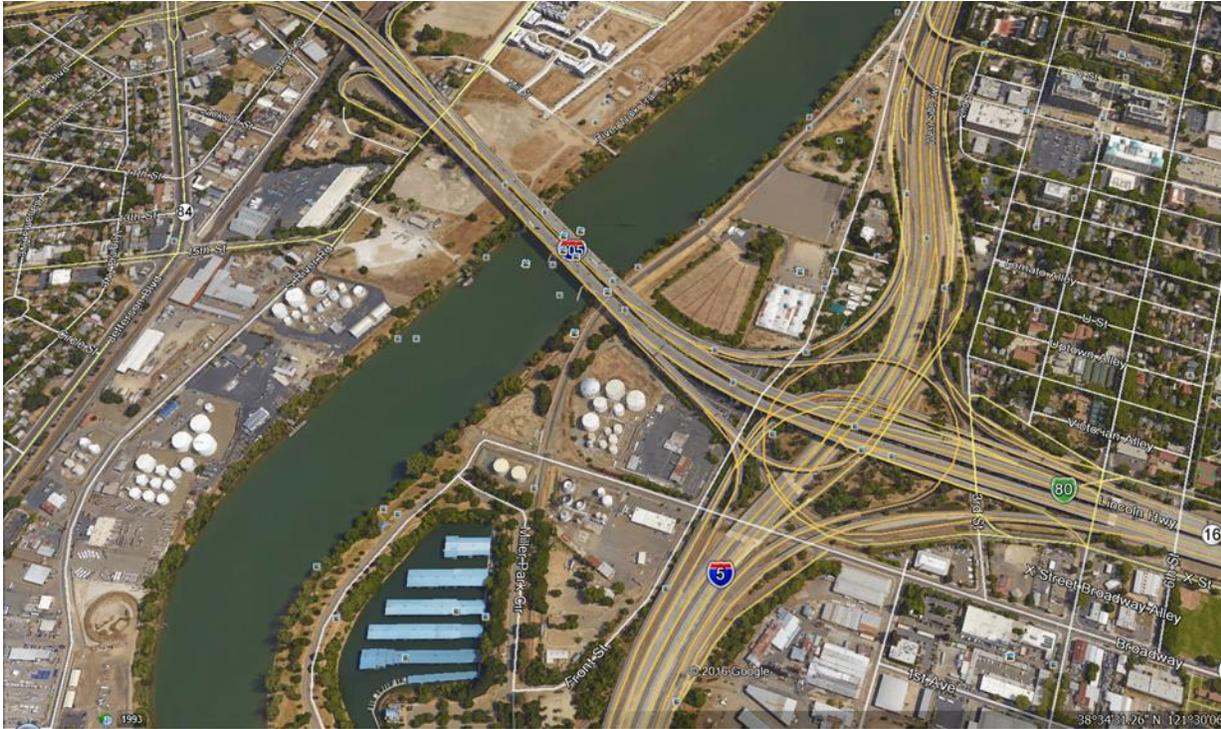


District 3

Mobility Performance Report

2012



The I-5 – US 50 Freeway to Freeway Connector, Sacramento River Area. Image from Google Maps



California Department of Transportation
Division of Traffic Operations
Office of Performance

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1. SUMMARY ANALYSIS

District 3 contains eleven counties located in central and northern California. They are Butte, Colusa, El Dorado, Glenn, Nevada, Placer, Sacramento, Sierra, Sutter, Yolo, and Yuba Counties. Most of these counties could be considered rural and did not experience reportable congestion. The urban counties in District 3 contain the mobility statistics in this summary. Those counties are El Dorado, Placer, Sacramento, Yolo, and Yuba. Total population for all counties in the District in 2012 was 2,732,537. This figure represents 7.2 percent of the total State population. The most populous county was Sacramento County. District 3 saw a population increase of 0.7 percent from 2011 to 2012. This growth rate was lower than a typical historical annual growth rate. The urban counties were responsible for much of this slight increase, due to a combination of business and residential growth.

District 3 operated and maintained 3005 directional rural and urban mainline miles in 2012, including miles on four major corridors: I-5, I-80, US-50 and SR-99. A total of 629 directional mainline miles contained vehicle detection reported to the Performance Measurement System (PeMS). As is typical in many districts, District 3 has a combination of rural and urban counties, which account for the fact that much of the district's mainline miles do not have reportable congestion that can be sent to PeMS. The number of detectors reported to PeMS increased 7 percent from the previous year. Detector health increased and the number considered "good" were 1,681 in 2012, which was a 2.7 percent increase from the previous year.

Congestion performance measures, such as Vehicle Miles of Travel (VMT) and Vehicle Hours of Delay (VHD) were taken from PeMS to compare annual trends in freeway conditions. PeMS reported a total of 8.1 billion annual VMT in 2012. This was a 0.7 percent increase from 2011. August was identified as the peak travel month with 731 million VMT in 2012.

PeMS reported an annual district wide total of 2.5 million VHD at 35 mph and 7.9 million VHD at 60 mph in 2012. This was a 15.7 percent decrease at 35 mph and a 1.3 percent decrease at 60 mph from 2011. The largest monthly total was the month of August, with 247,000 VHD at 35 mph and with 752,000 VHD at 60 mph. The average annual non-holiday weekday VHD was 8,251 at 35 mph and 25,723 at 60 mph, a decrease of 16.5 percent and 1.6 percent, respectively from the previous year. Friday contained the highest delay with 28,358 VHD at 60 mph, which was a reduction of 0.1 percent from the previous year.



Identifying the location, direction, duration, and VHD for freeway bottlenecks was an important tool to manage congestion and initiate projects for District 3. There were eight mainline freeway bottlenecks reported during the AM commute hours in 2012. Northbound SR-99 contained two bottlenecks, including the top AM bottleneck. AM bottlenecks accounted for 93,226 VHD at 60 mph annually. There were 10 bottleneck locations reported on various freeway segments during the PM commute period. The top four PM bottlenecks were located on SR-51. PM bottlenecks accounted for 428,232 VHD at 60 mph annually. The 35 mph VHD threshold for bottlenecks was not reported in PeMS.

2. DESCRIPTIVE STATISTICS

District Headquarters: Marysville
Counties: Butte, El Dorado, Nevada, Placer, Sacramento, Sierra, Sutter, Yolo, Yuba
Counties without Detection: Glenn, Colusa
Population: 2,732,537, 0.7% increase from 2011
Population as a Percentage of Statewide: 7.2%

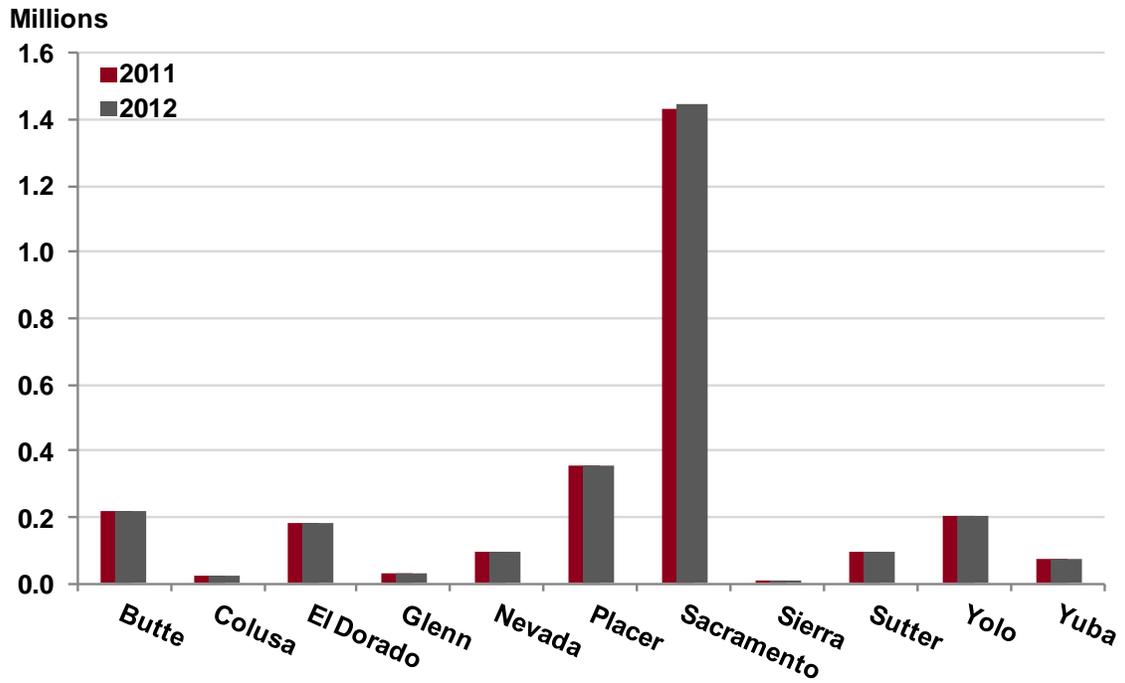
Table 1. POPULATION ESTIMATES AND ABSOLUTE AND PERCENT CHANGE, 2011–2012

County	2011	2012	Difference (2012 - 2011)	
	Population	Population	Absolute	Percent
Butte	220,263	221,485	1,222	0.6%
Colusa	21,598	21,674	76	0.4%
El Dorado	181,711	182,286	575	0.3%
Glenn	28,226	28,349	123	0.4%
Nevada	97,366	97,019	-347	-0.4%
Placer	355,455	357,463	2,008	0.6%
Sacramento	1,433,525	1,445,806	12,281	0.9%
Sierra	3,178	3,166	-12	-0.4%
Sutter	95,119	95,851	732	0.8%
Yolo	204,349	205,999	1,650	0.8%
Yuba	72,642	73,439	797	1.1%
Total	2,713,432	2,732,537	19,105	0.7%

Colusa and Glenn Counties do not participate in mobility performance reporting.
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: 1,154,287
Unemployment Rate, 2012 Monthly Average: 11.0%, 1.4% decrease from 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)
Butte	13.6%	12.2%	-1.4%
Colusa	20.5%	20.0%	-0.5%
El Dorado	11.9%	10.4%	-1.6%
Glenn	15.9%	14.7%	-1.2%
Nevada	10.6%	9.4%	-1.2%
Placer	10.8%	9.4%	-1.3%
Sacramento	12.1%	10.6%	-1.5%
Sierra	14.8%	14.3%	-0.5%
Sutter	19.0%	17.6%	-1.4%
Yolo	12.5%	11.5%	-1.1%
Yuba	18.4%	16.9%	-1.4%
District Total	12.5%	11.0%	-1.4%

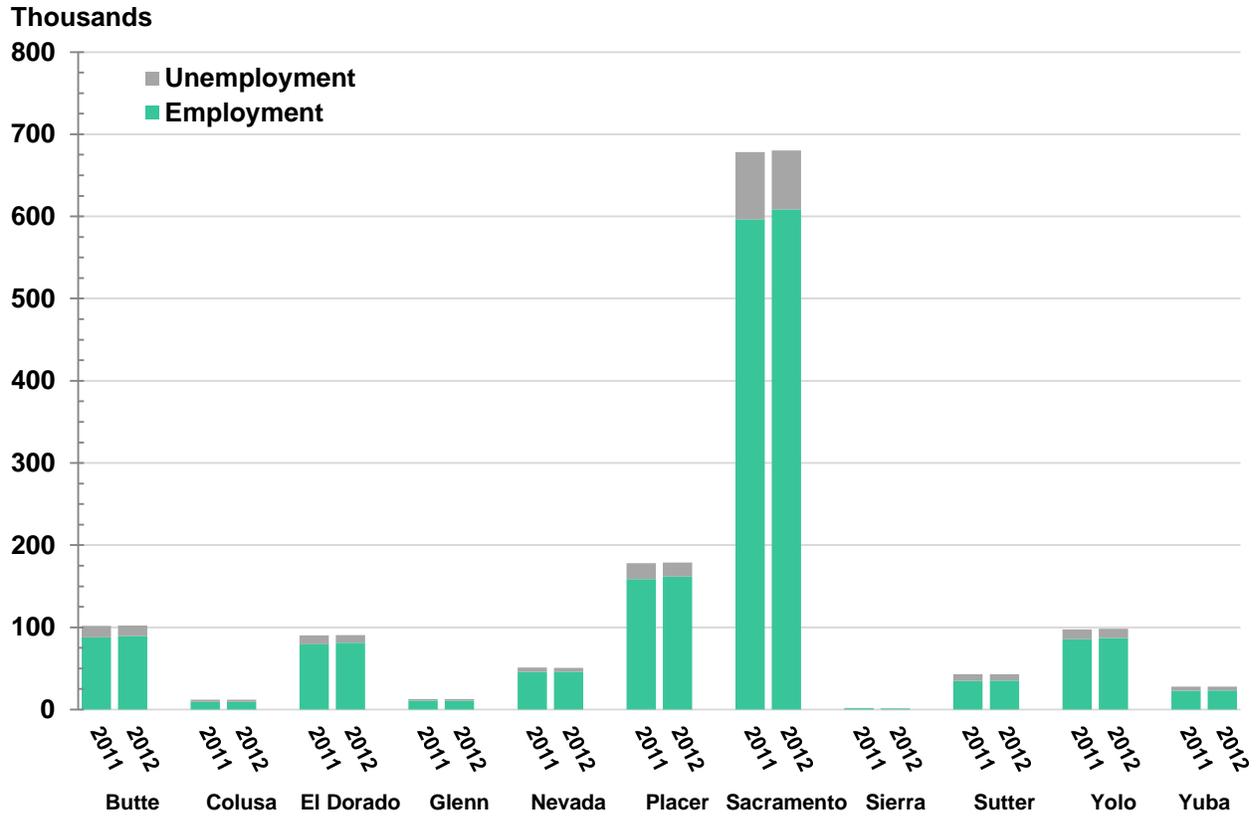
Colusa and Glenn Counties do not participate in mobility performance reporting.

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

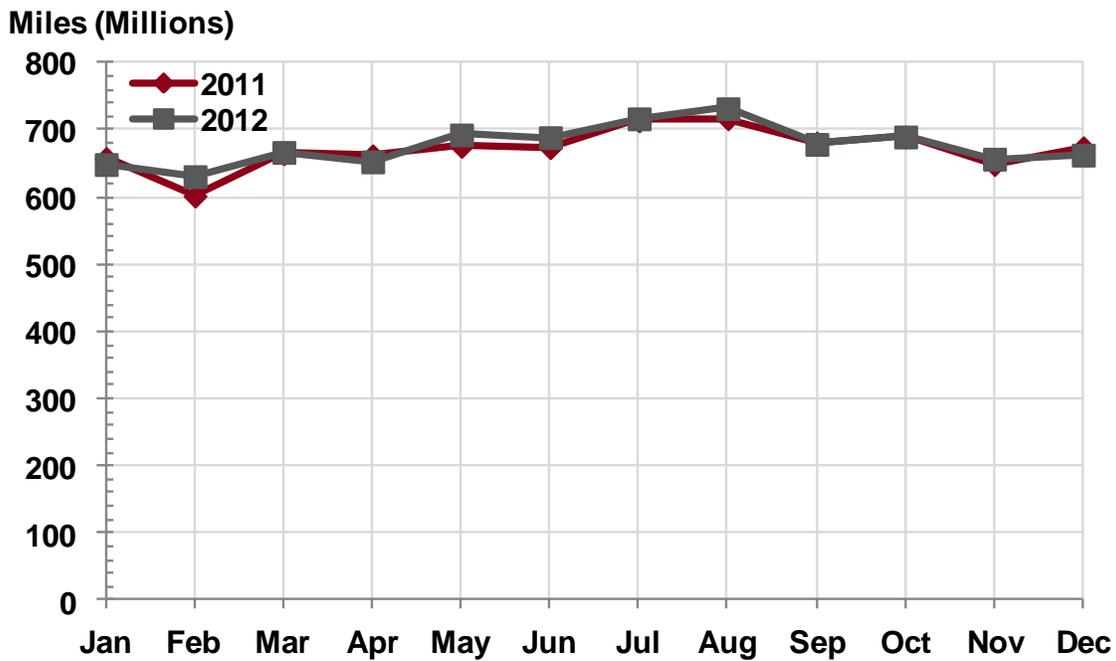


3. TRAVEL DEMAND

Vehicle Miles of Travel, 2012: 8.1 billion miles
Absolute and Percentage Change over 2011: 57.1 million VMT increase, 0.7% increase over 2011
Peak Travel Month, Percentage Change over 2011: August, 731.7 million miles, 2.1% increase over 2011

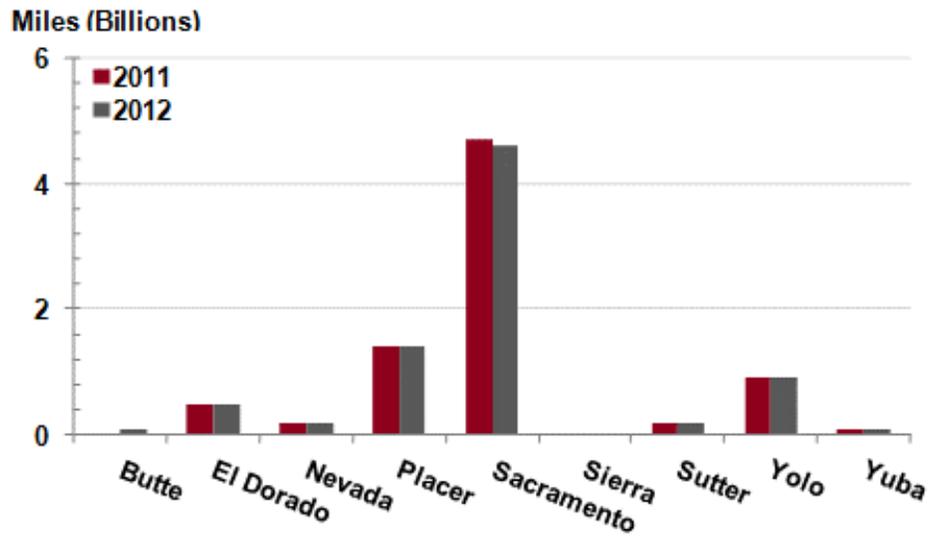
Monthly Trend

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: 2.5 million hours, 15.7% decrease over 2011
Average Non-Holiday Weekday Delay, 35 mph: 8,251 hours, 16.5% decrease over 2011
Percentage of Statewide VHD at 35 mph: 2.7%, 0.8% decrease over 2011

FIGURE 4

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

Hours (Thousands)

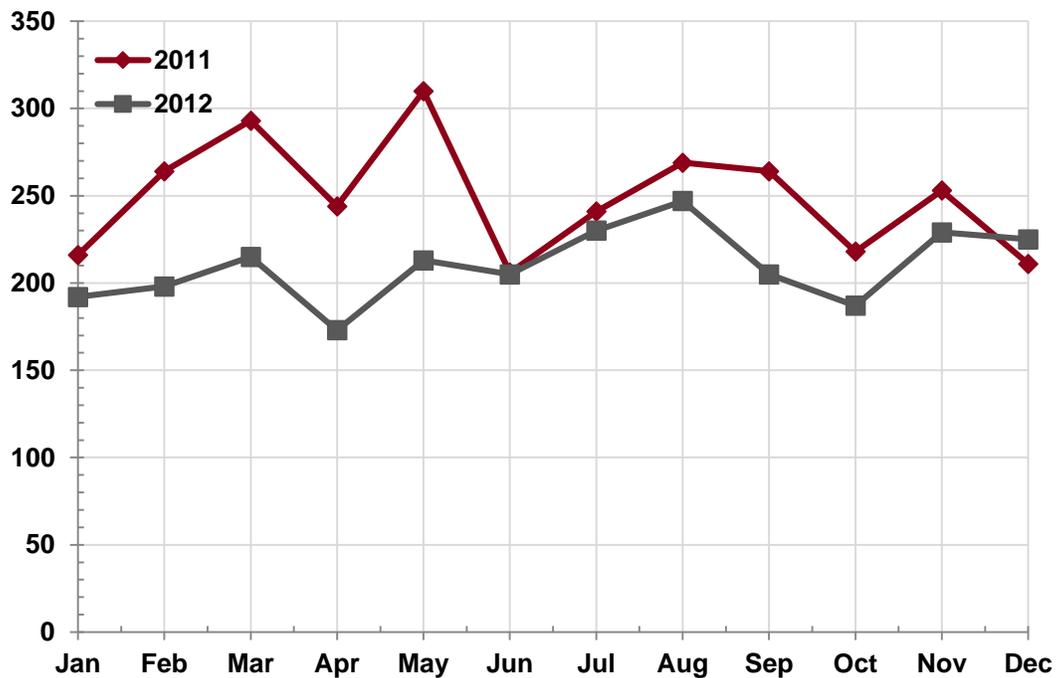
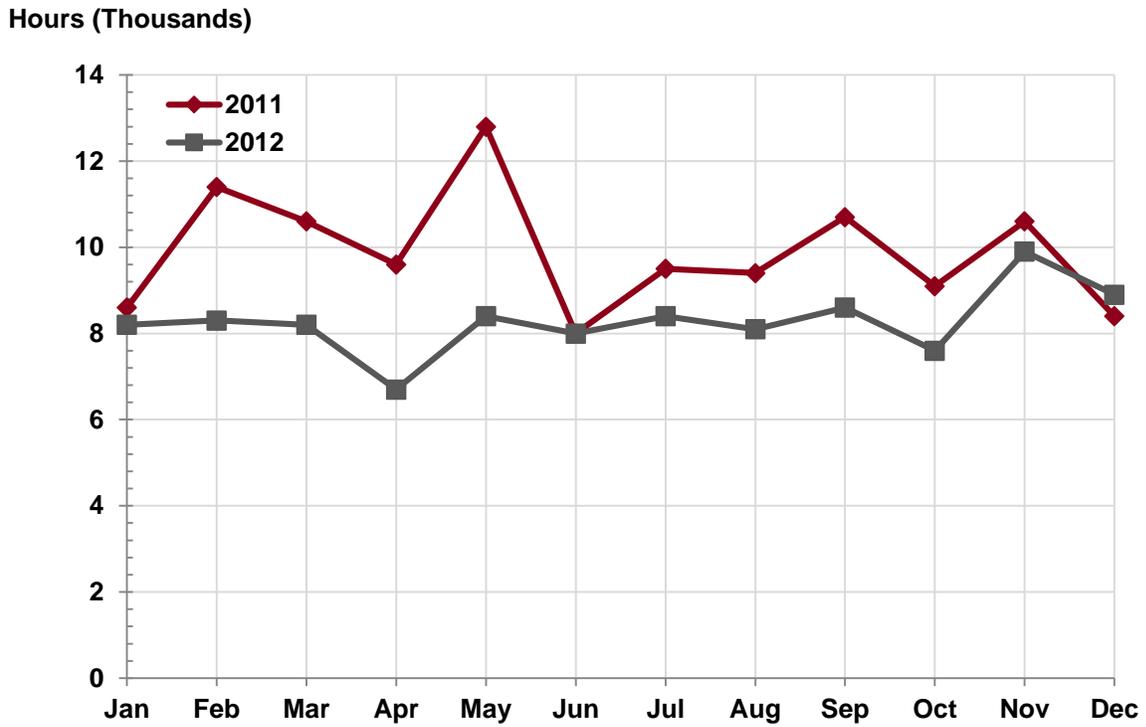


FIGURE 5
AVERAGE NON-HOLIDAY WEEKDAY VEHICLE HOURS OF DELAY AT 35 MILES PER HOUR,
BY MONTH, 2011-2012



4.1.2 Delay at 60 Miles per Hour

Vehicle Hours of Delay, 60 mph: 7.9 million hours, 1.3% decrease over 2011
Average Non-Holiday Weekday Delay, 60 mph: 25,723 hours, 1.6% decrease over 2011
Percentage of Statewide VHD at 60 mph: 3.5%, 0.4% decrease over 2011

FIGURE 6

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

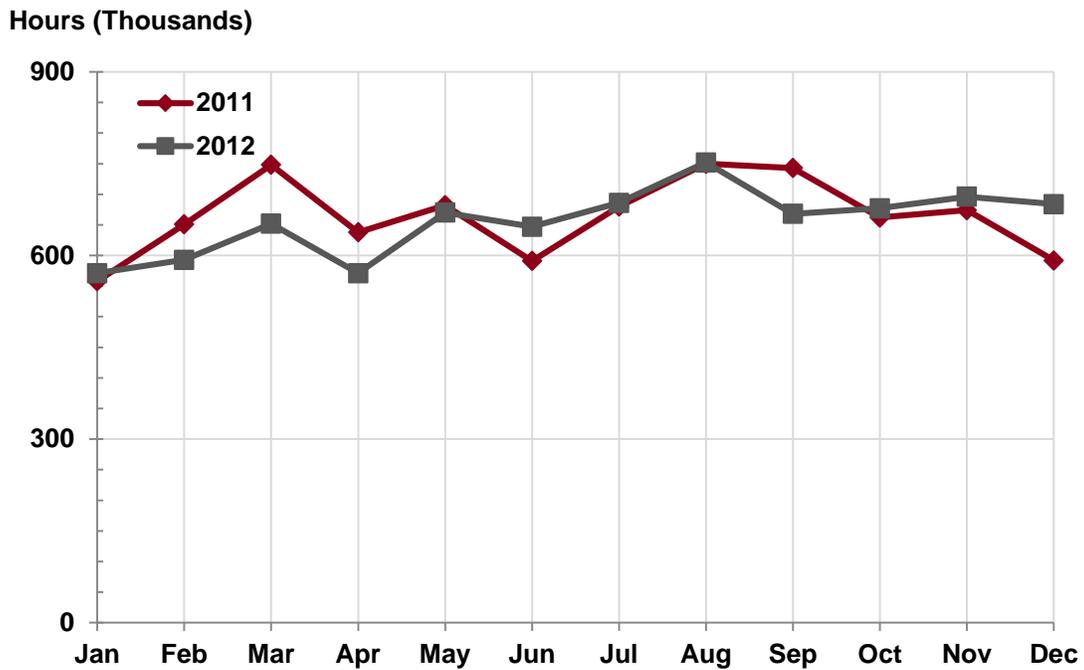
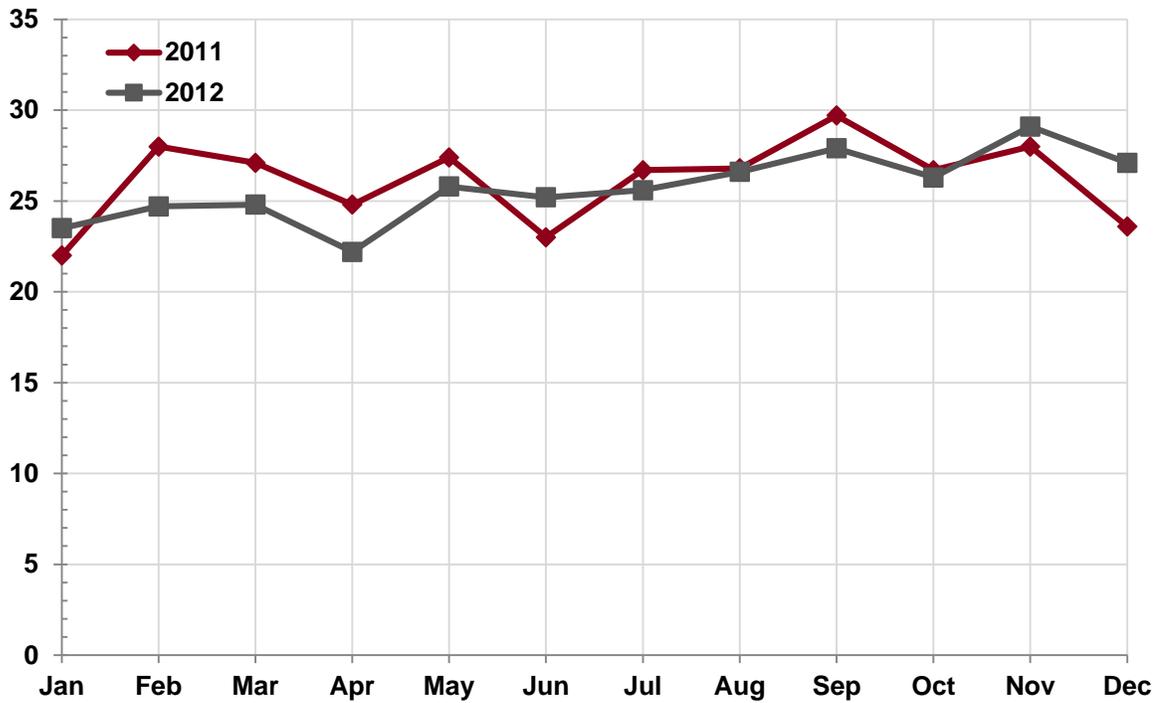


FIGURE 7
AVERAGE NON-HOLIDAY WEEKDAY VEHICLE HOURS OF DELAY AT 60 MILES PER HOUR,
BY MONTH, 2011-2012

Hours (Thousands)



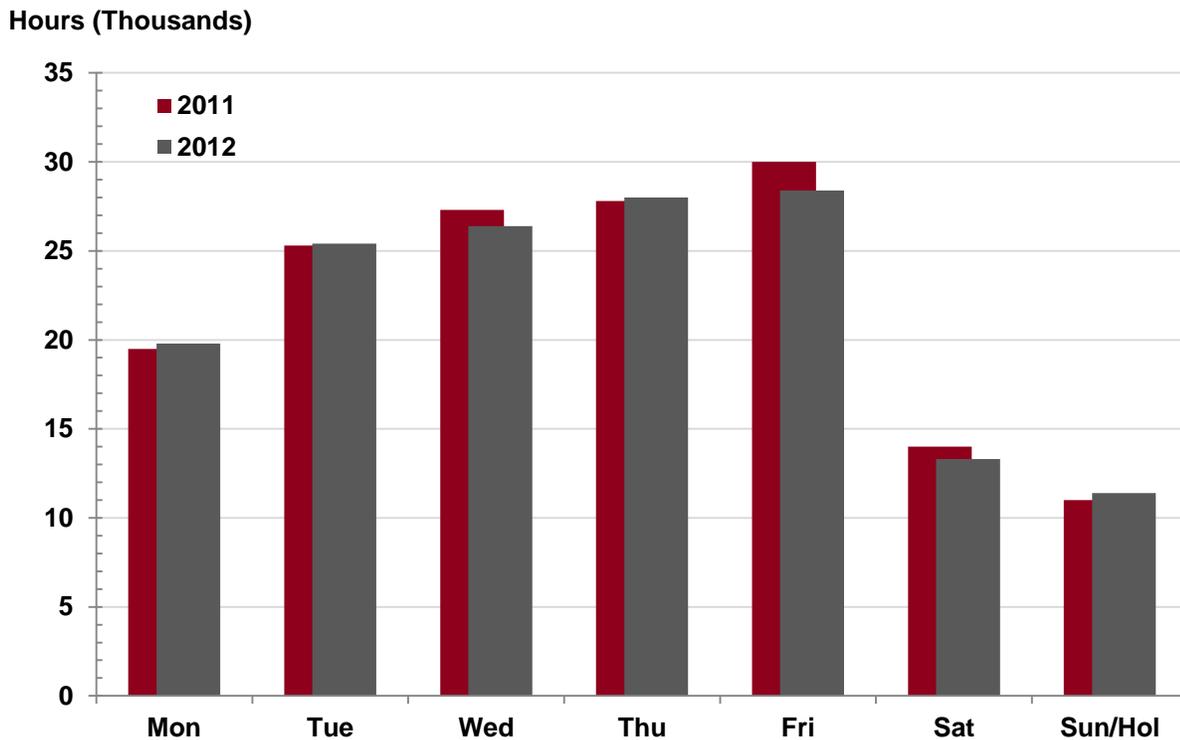
4.2. Average Vehicle Hours of Delay by Day of Week

- Most Congested Day of the Week, 60 mph:** Friday, 28,358 hours, 5% decrease over 2011
- Highest Absolute Change in Delay, 60 mph:** Friday, 1,599 VHD decrease, 5% decrease over 2011
- Highest Percentage Change in Delay:** Friday, 1,599 VHD decrease, 5% decrease 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

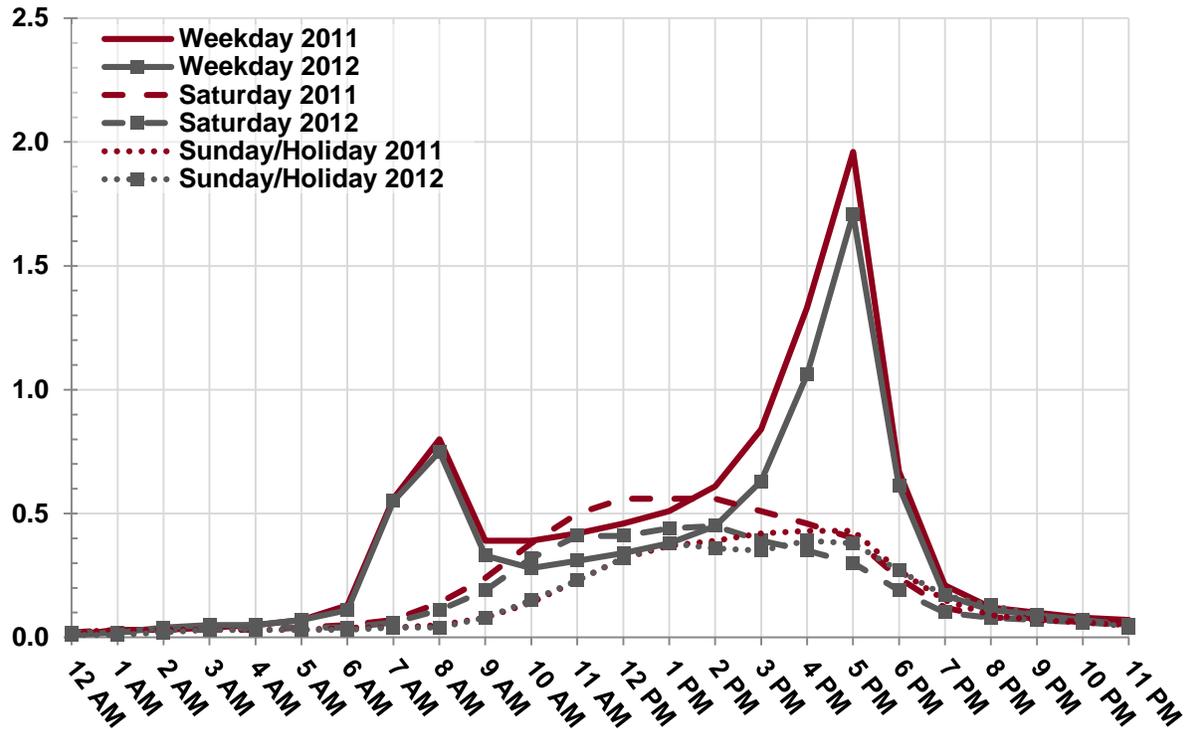
Weekday PM Peak Hour, 35 mph: 5 PM, 1715 hours, 12% decrease over 2011
Weekday AM Peak Hour, 35 mph: 8 AM, 753 hours, 6% decrease over 2011
Saturday Peak Hour, 35 mph: 2 PM, 453 hours, 18% decrease over 2011
Sunday/Holiday Peak Hour, 35 mph: 4 PM, 393 hours, 8% decrease over 2011

Delay at 35 miles per hour

FIGURE 9

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

Hours (Thousands)



4.3.2 Delay at 60 Miles per Hour

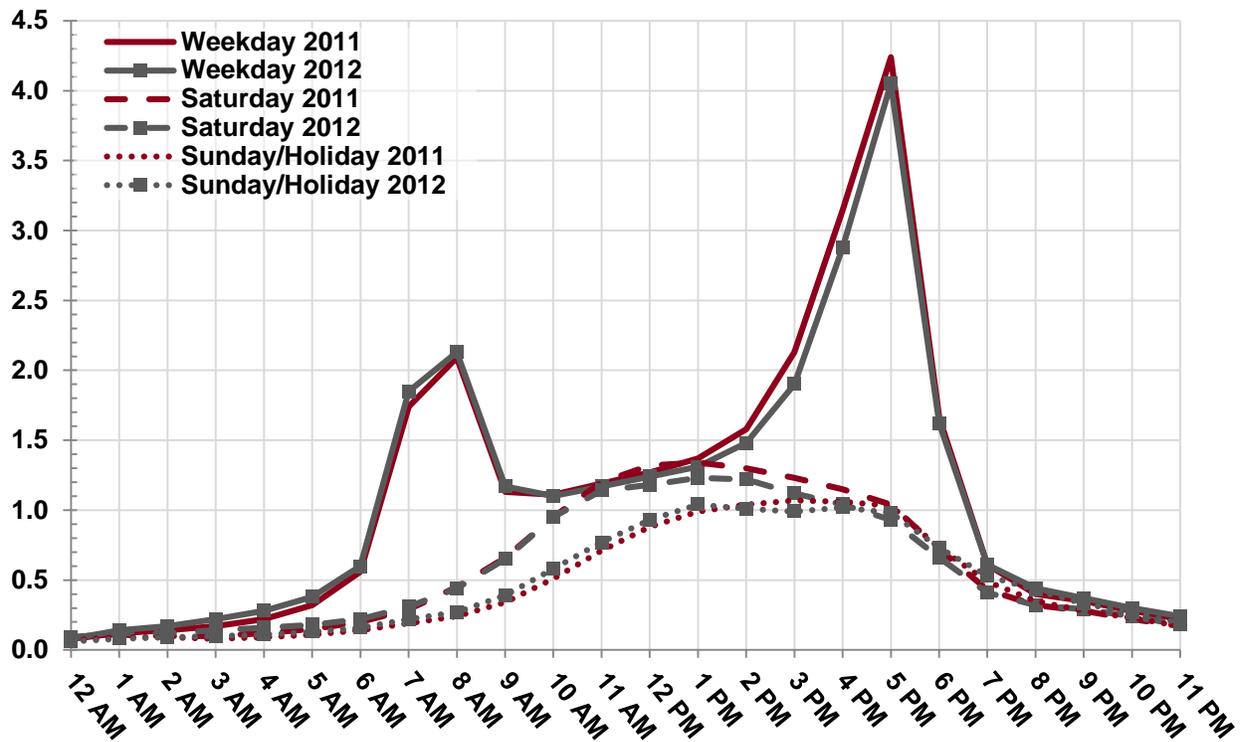
Weekday PM Peak Hour, 60 mph: 5 PM, 4,053 hours, 4% decrease over 2011
Weekday AM Peak Hour, 60 mph: 8 AM, 2,131 hours, 2% increase over 2011
Saturday Peak Hour, 60 mph: 1 PM, 1,232 hours, 8% increase over 2011
Sunday/Holiday Peak Hour, 60 mph: 1 PM, 1,036 hours, 5% increase over 2011

Delay at 60 miles per hour

FIGURE 10

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

Hours (Thousands)



4.4. Total Vehicle Hours of Delay by County

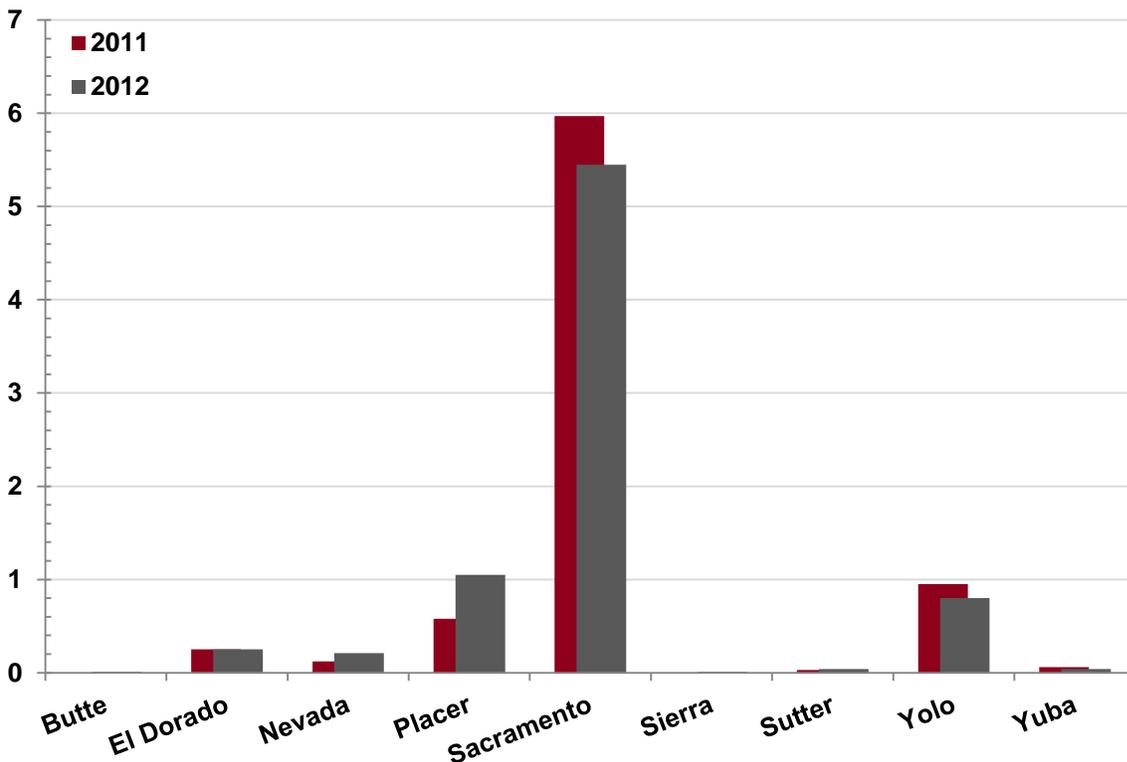
County with Largest Delay, 60 mph:	Sacramento, 5.5 million hours, 8.7 % decrease over 2011 VHD, 69% of District total VHD
County with 2nd Largest Delay, 60 mph:	Placer, 1 million hours, 78.8% increase over 2011 VHD, 13% of District total VHD
County with Largest Increase in Delay, 60 mph:	Placer, 460,866 hours, 78.8% increase over 2011
County with Largest Decrease in Delay, 60 mph:	Sacramento, -520,932 hours, 8.7% decrease over 2011

Delay at 60 miles per hour

FIGURE 11

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

Hours (Millions)



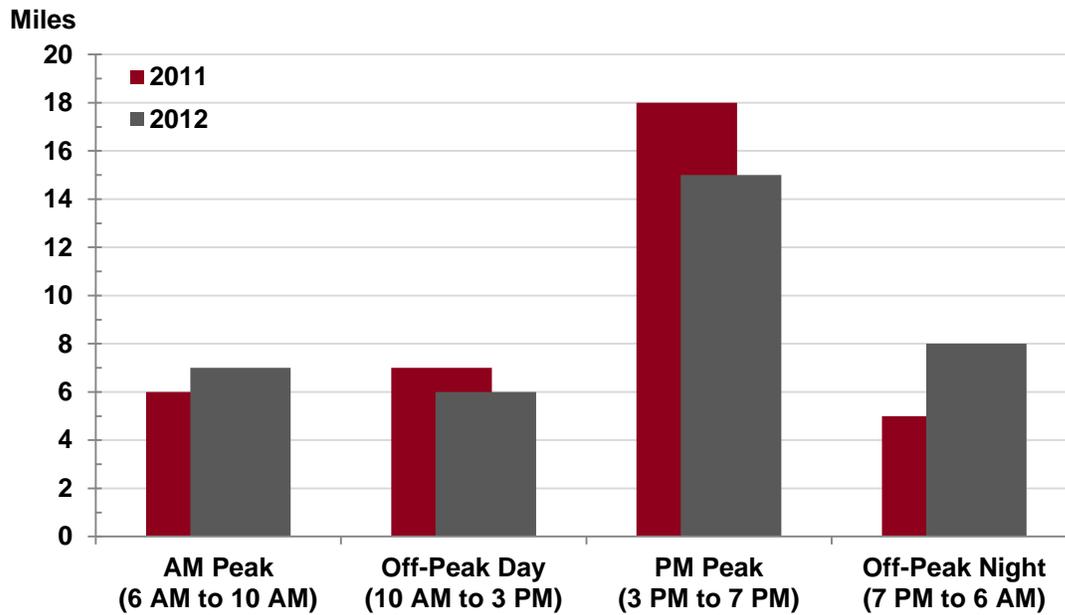
4.5. Lost Productivity

AM Peak:	7 miles, 15.3% increase over 2011
Off-Peak Day:	6 miles, 18.3% decrease over 2011
PM Peak:	15 miles, 12.6% decrease over 2011
Off-Peak Night:	8 miles, 54.3% increase over 2011

Lost Lane Miles at 35 miles per hour

FIGURE 12

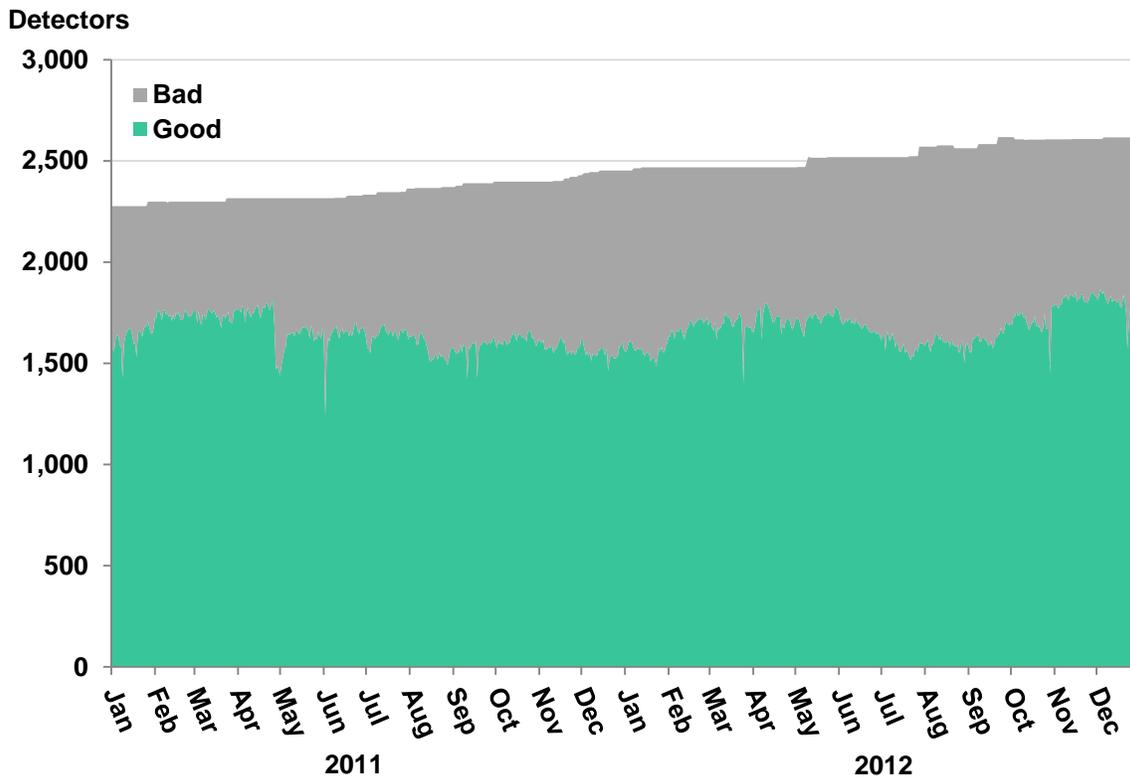
AVERAGE NON-HOLIDAY WEEKDAY EQUIVALENT LOST LANE MILES



5. DETECTOR HEALTH AND DATA QUALITY

Directional Mainline Miles: 3,005 miles
Directional Mainline Miles with Detection: 629 miles
Number of Detectors at End of 2012: 2,616, 7% increase over 2011
Average Percentage of Good and Bad Detection: 66.3% good, 2.7% decrease over 2011;
 33.7% bad, 19.7% increase 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: 7,363,595 hours,
94% 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
SR-99	Sacramento	1,710,595	1,670,474	-40,121	-2%	1	1
US-50	Sacramento	1,121,970	1,294,019	172,048	15%	3	2
I-5	Sacramento	1,131,991	927,010	-204,981	-18%	2	3
SR-51	Sacramento	959,693	881,426	-78,267	-8%	5	4
I-80	Placer	446,213	782,839	336,627	75%	7	5
I-80	Sacramento	1,042,897	667,158	-375,739	-36%	4	6
I-80	Yolo	550,135	507,292	-42,842	-8%	6	7
US-50	El Dorado	247,159	254,511	7,353	3%	8	8
I-80	Nevada	117,917	213,378	95,460	81%	10	9
I-5	Yolo	240,054	165,489	-74,565	-31%	9	10
TOTALS		7,568,622	7,363,595	-205,027	-2.7%		

6.2. Bottleneck Locations

Total Delay, All AM Bottlenecks, 2012: 93,226 hours
Top Ten Bottleneck Delay, AM, 2012: 93,226 hours
Percentage Top Bottleneck Delay of Total Bottleneck Delay, AM, 2012: 100%

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	Sacramento	Sacramento	SR99-N	23.42	8th Ave. Pedestrian Overcrossing	0.80	21,488	112	1.3	76%
2	Sacramento	Sacramento	SR99-N	19.8	Florin Rd.	1.15	18,852	135	1.3	56%
3	Sacramento	Sacramento	I80-W	16	Truck Weigh Station	1.35	11,377	163	0.8	28%
4	Sacramento	Sacramento	I80-W	12.35	Madison Ave.	1.04	11,201	135	1.0	33%
5	Sacramento	Sacramento	US50-W	R4.5	Occidental Drive	1.21	9,251	125	0.8	29%
6	Sacramento	Sacramento	I5-N	18.705	43rd Ave.	1.75	7,842	126	0.6	25%
7	Sacramento	Sacramento	I5-S	25.378	Garden Highway	1.52	7,000	119	0.8	24%
8	Sacramento	Sacramento	US50-W	R3.8	Howe Ave.	1.46	6,217	122	0.8	20%

Total Delay, All PM Bottlenecks, 2012: 567,032 hours
Top Ten Bottleneck Delay, PM, 2012: 428,232 hours
Percentage Top Bottleneck Delay of Total Bottleneck Delay, PM, 2012: 76%

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	Sacramento	Sacramento	SR51-N	2	North of A St.	1.47	70,548	295	1.4	95%
2	Sacramento	Sacramento	SR51-N	5.1	Glenrose Ave.	1.32	61,445	260	1.8	94%
3	Sacramento	Sacramento	SR51-N	3.478	Exposition Blvd.	2.28	58,457	377	1.3	62%
4	Sacramento	Sacramento	SR51-S	3.32	Exposition Blvd.	1.06	42,433	205	2.1	82%
5	Sacramento	Sacramento	US50-W	L1.351	15th St.	2.20	39,310	291	1.0	54%
6	Sacramento	Sacramento	US50-E	L1.567	16th St.	0.44	37,071	151	2.1	98%
7	Sacramento	Sacramento	SR51-N	1.5	30th & E St.	1.04	31,291	139	0.9	90%
8	Sacramento	Elk Grove	SR99-S	16.198	Consumnes River	1.04	30,623	167	2.6	73%
9	Sacramento	Sacramento	I80-E	M5	Northgate Blvd.	1.26	30,280	170	1.8	71%
10	Yolo	West Sacramento	I80-E	5.704	West of Webster Undercrossing	2.23	26,772	388	1.8	27%

FIGURE 14 (A)
BOTTLENECKS AND CONGESTED SEGMENTS, AM PEAK PERIOD, 2012



FIGURE 14 (B)
BOTTLENECKS AND CONGESTED SEGMENTS, PM PEAK PERIOD, 2012

