District 03 Mobility Performance Report

2017 Second Quarter

DEPARTMENT OF TRANSPORTATION

July 1, 2017
Office of Freeway Operations

District 03 Mobility Performance Report

2017 Second Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 3 contains eleven counties that are located in northern California. Most of the congestion and delay takes place in the urbanized Sacramento, Yolo and Placer counties.

The Mobility Performance Report quarterly analysis compares information with the past year and the previous quarter using the following performance measures:

- Bottleneck Locations
- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (equivalent lost productivity)
- Detector Health

This information is based on data collected every day of the quarter, twenty–four hours a day, by automated vehicle detector stations deployed on urban-area freeways where congestion is regularly experienced. The Mobility Performance Report (MPR) presents congestion information for two speed thresholds: delay from vehicles traveling below 35 miles per hour (mph), and delay from vehicles traveling below 60 mph. The delay at the 35 mph threshold represents severe congestion while delay at 60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon engineering experience and District 3 Office of Freeway Operations input.

FINDINGS

In the 2017 Second Quarter, total delay equaled 1.0 million vehicle hours of delay (VHD) at the 35 mph speed threshold, and 2.9 million VHD at the 60 mph threshold. The average weekday delay experienced in this quarter was approximately 13,000 VHD at 35 mph, and 39,000 VHD at 60 mph.

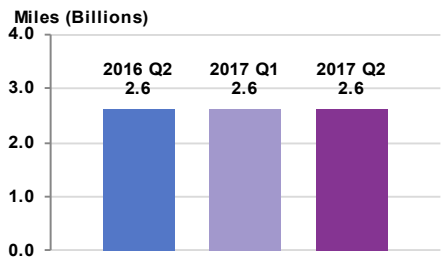
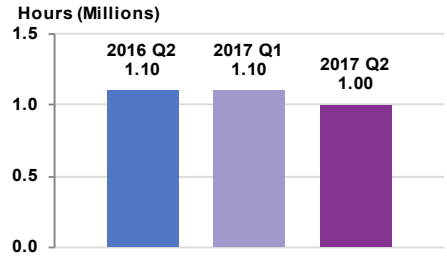
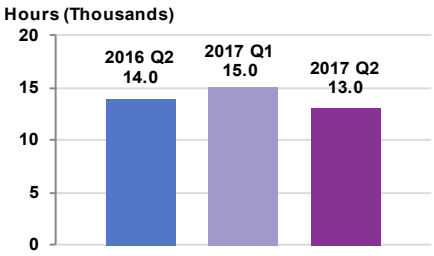
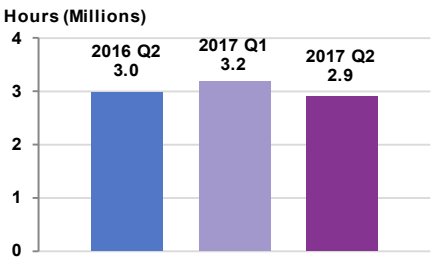
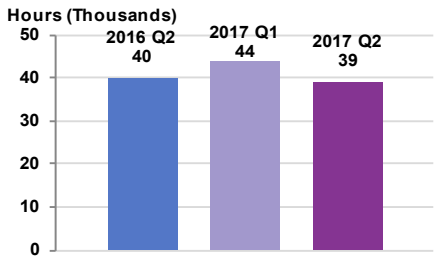
Top Ten Bottlenecks for 2017 First Quarter

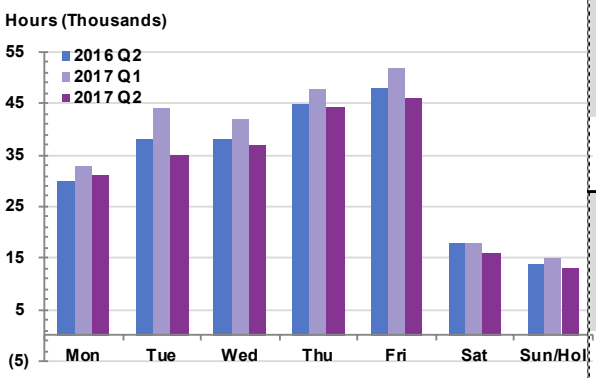
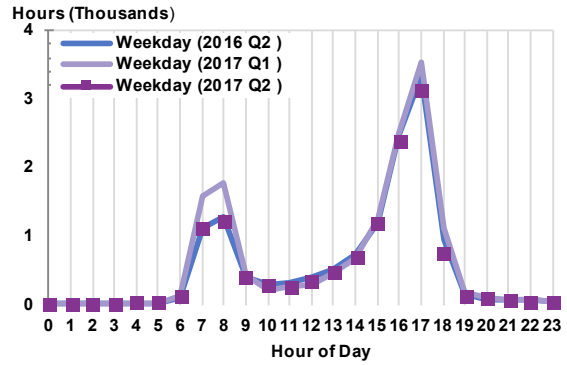
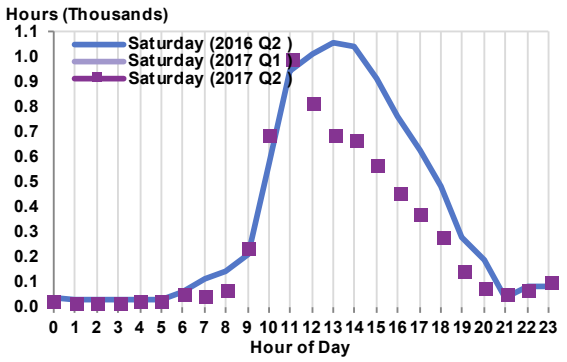
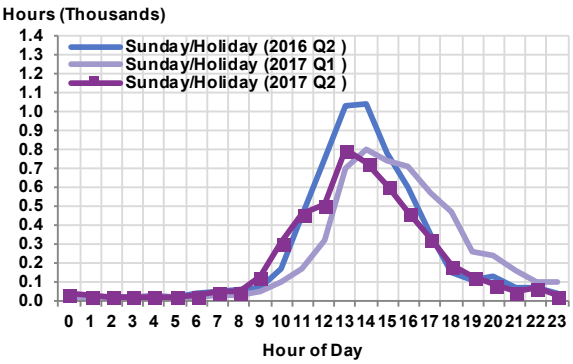
Fwy	Location	Shift	Abs PM	CA PM	# Days Active	Average Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
US50-E	Stockton Blvd.	PM	6.345	R.711	60	2.2	44,440	8,010
I5-S	L St.	PM	518.824	23.531	60	2.1	29,809	6,220
I80-E	W of Webster UC	PM	77.891	5.704	40	3.3	26,851	4,665
SR51-N	SB Watt Ave.	PM	7.85	7.85	59	2.8	26,000	6,385
SR51-N	North of A St.	PM	2	2	63	1.4	25,851	6,800
I5-S	S Land Park Dr.	PM	512.073	16.78	60	1.8	24,111	7,485
SR51-S	EB Exposition Bl.	PM	3.32	3.32	63	0.8	21,944	12,545
I5-N	L St.	PM	518.864	23.571	64	0.7	17,641	9,235
SR51-S	Auburn Blvd	AM	7.551	7.569	62	1.4	17,194	6,610
SR65-S	Pleasant Grove Blvd	PM	66.643	R6.925	63	1.1	17,172	11,610

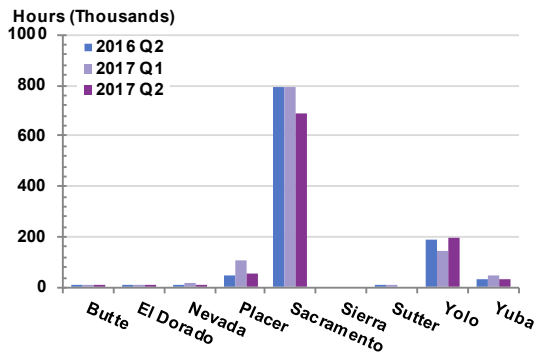
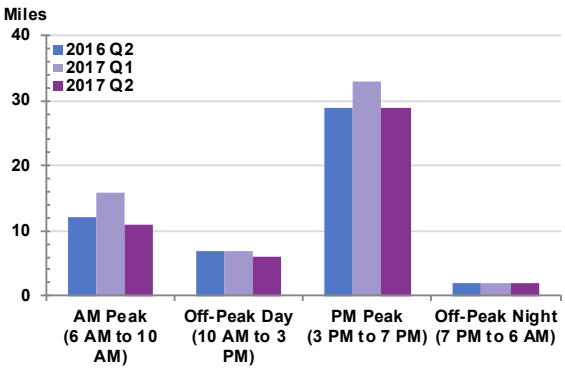
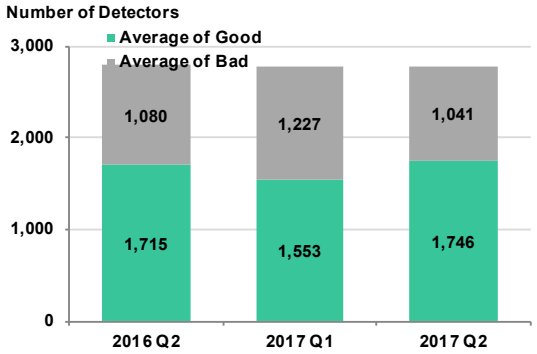
Note:

1. For the table above, the quarterly delay calculation was based upon a 60 mph threshold, for the a.m. or p.m. weekday peak period.
2. Caltrans District 3, has plans to construct High Occupancy Vehicle (HOV) lanes on I-5, US-50, and SR-51 near downtown Sacramento. These projects are expected to reduce delay at nearby bottlenecks identified above. However, these HOV lane projects are funded for Plans Specifications and Estimate (PS&E) only; construction funds are not available at this time.

Quarterly Mobility Statistics

Measure	Graph	Percentage Change	
		Over one year ago	Over last quarter
Vehicle Miles of Travel (VMT)		-1.1%	0%
Total Vehicle Hours of Delay (VHD) at 35 mph		-9.1%	-12.2%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		-6.5%	-13.8%
Total Vehicle Hours of Delay (VHD) at 60 mph		-3.8%	-10.1%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		-2.9%	-12.1%

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago Tuesday -6.8% Largest Magnitude Increase over one year ago Monday 1.3%	Largest Magnitude Decrease over last quarter Tuesday -19.3% Largest Magnitude Increase over last quarter –
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 5 PM -7% Largest Magnitude Weekday Increase over one year ago 6 AM 16.2%	Largest Magnitude Weekday Decrease over last quarter 8 AM -31.4% Largest Magnitude Weekday Increase over last quarter 10 AM 27%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 2 PM -35.6% Largest Magnitude Saturday Increase over one year ago 10 AM 22.2%	Largest Magnitude Saturday Decrease over last quarter 5 PM -54.6% Largest Magnitude Saturday Increase over last quarter 11 AM 52.6%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago 2 PM -30.1% Largest Magnitude Sun./Holiday Increase over one year ago 10 AM 81.9%	Largest Magnitude Sun./Holiday Decrease over last quarter 6 PM -58.7% Largest Magnitude Sun./Holiday Increase over last quarter 11 AM 166.8%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago Sacramento -13.8%	Largest Magnitude Decrease over last quarter Sacramento -13.5%
		Largest Magnitude Increase over one year ago Placer 9.7%	Largest Magnitude Increase over last quarter Yolo 31.7%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago Off-Peak Day -14.1%	Largest Magnitude Decrease over last quarter AM Peak -29.2%
		Largest Magnitude Increase over one year ago –	Largest Magnitude Increase over last quarter –
Average Number of Good and Bad Detectors		Change in Good over one year ago 2%	Change in Good over last quarter 12%
		Change in Bad over one year ago -4%	Change in Bad over last quarter -15%

Note: As is identified by the detector health graph above, the District's detector health is generally deteriorating. Caltrans has a Traffic Monitoring Station project (EA: 3F840) under construction to help improve detector health. Two other projects, in the programing phase, will cover locations that were missed by previous projects.

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2017 Q2-2016 Q2		Difference 2017 Q2-2017 Q1		Rank		
Route	County	2016 Q2	2017 Q1	2017 Q2	Absolute	Percentage	Absolute	Percentage	2016 Q2	2017 Q1	2017 Q2
SR51	Sacramento	289,734	238,531	214,627	-75,107	-25.9%	-23,903	-10.0%	1	1	1
US50	Sacramento	175,009	144,049	147,706	-27,303	-15.6%	3,657	2.5%	2	4	2
SR99	Sacramento	155,609	180,424	145,848	-9,760	-6.3%	-34,576	-19.2%	3	3	3
I80	Yolo	109,724	110,575	141,612	31,888	29.1%	31,037	28.1%	4	5	4
I5	Sacramento	107,199	184,111	139,650	32,450	30.3%	-44,461	-24.1%	5	2	5
US50	Yolo	41,566	30,713	37,276	-4,291	-10.3%	6,563	21.4%	6	9	6
SR70	Yuba	33,845	46,560	35,416	1,571	4.6%	-11,144	-23.9%	9	7	7
SR65	Placer	21,026	32,692	33,198	12,172	57.9%	506	1.5%	12	8	8
I80	Sacramento	40,692	30,623	24,342	-16,350	-40.2%	-6,281	-20.5%	7	10	9
I80	Placer	27,535	73,020	20,076	-7,458	-27.1%	-52,944	-72.5%	11	6	10
SR160	Sacramento	27,724	15,401	13,846	-13,878	-50.1%	-1,555	-10.1%	10	12	11
SR113	Yolo	39,833	2,891	12,468	-27,365	-68.7%	9,578	331.3%	8	14	12
I80	Nevada	4,025	20,567	5,279	1,253	31.1%	-15,288	-74.3%	13	11	13
I5	Yolo	1,758	4,267	4,132	2,374	135.0%	-136	-3.2%	14	13	14
US50	El Dorado	1,356	327	3,383	2,027	149.5%	3,056	933.8%	16	16	15
SR99	Butte	1,729	2,082	1,526	-202	-11.7%	-555	-26.7%	15	15	16
SR99	Sutter	78	98	4	-74	-95.4%	-94	-96.3%	17	17	17
I80	Sierra	0	0	1	1		1				18
SR12	Sacramento	0	0	0	0		0				
SR275	Yolo	1	0	0	-1	-100.0%	0		18		
TOTALS		**1,078,443**	**1,116,929**	**980,390**	**-98,054**	**-9.1%**	**-136,540**	**-12.2%**			

US-50 in El Dorado County had the highest rate of increase in delay at 933.8%, when compared with the previous quarter. The increase in delay was caused by a repair of the detection system, which was brought back into operation after it was out of service for months. The repaired detection system recorded a significant increase in delay when compared with previous quarters. I-80 in Placer County had the greatest absolute decrease in delay at 52,944 VHD, when compared with the previous quarter. The decrease in delay was due to the seasonal reduction of recreational ski season traffic.

As identified by the congestion table above, there was a 9.1% decrease in overall delay in comparison to the same quarter of the previous year although the VMT was only 1.1% lower. The majority of this decreased delay was on I-5, SR-99 and I-80. The greatest decrease in congestion occurred on weekends.

Based upon total delay by route, SR-51 has been continually the worst performing freeway in District 3 although congestion has improved by 25.9% over Q2 2016 and 10.0% over Q1 2017.

This improvement is attributed to decreased diversion now that the SAC-80 HOV lane construction project has been completed. The District continues to explore best possible ways to reduce the delay in the impacted areas.