District 03
Mobility Performance Report

2024 First Quarter

DEPARTMENT OF TRANSPORTATION

April 29, 2024
Office of Freeway Operations

2024 First Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 3 is comprised of eleven counties located in Northern California. Most of the congestion and delay on the state highway system takes place in the urbanized areas of Sacramento, Yolo and Placer counties.

The Mobility Performance Report (MPR) quarterly analysis compares information from the current quarter, previous quarter, and the prior year. The following performance measures were used to quantify freeway congestion in District 3 as well as to compare the different quarters:

- 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 by automated vehicle detector stations deployed on urban freeways through the Caltrans Performance Measurement System (PeMS). Where congestion is regularly experienced, PeMS continuously gathers data 24 hours a day, every day of the quarter. The 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 the delay at 60 mph represents all congestion (both light and heavy). These thresholds are set by Caltrans District 3 Office of Freeway Operations and prior traffic engineering experience.

FINDINGS

In the first quarter of 2024, there was a minor decrease in delay due to seasonal fluctuation. The delay profile of this quarter is closely matched with the first quarter of 2023 during weekdays. See the graphs on page 5 for reference. The total delay on District 3 freeways equaled *0.88* million Vehicle Hours of Delay (VHD) below the 35-mph speed threshold and *2.7* million VHD below the 60-mph threshold. The average delay experienced on weekdays in this quarter was approximately *11* thousand VHD below 35 mph, and *36* thousand VHD below 60 mph.

Vehicle Miles of Travel (VMT) remained the same as previous quarter with a total of *2.69* billion miles. The VHD below the 60-mph speed threshold has decreased by 2.1% during this quarter. At 60-mph threshold, District 3 Average Weekday Delay was 35,533 vph. When using Average Vehicle Occupancy (AVO) of 1.73 as directed by guideline, the District 3 Daily Person Hours of Delay (DPHD) was 61,472 hours for this quarter.

Delay is more concentrated in the PM commute hours for weekdays and weekends.

Top Ten Bottlenecks for Quarter 1

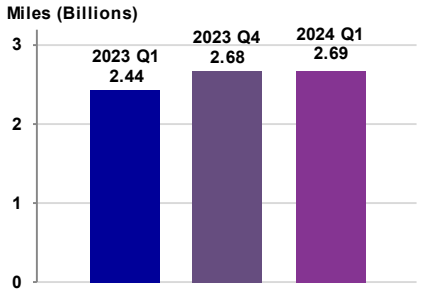
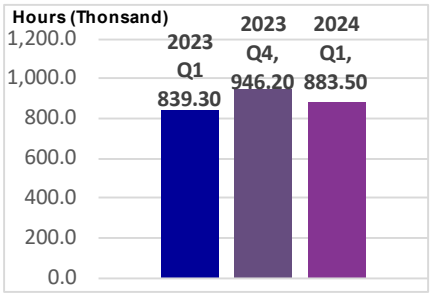
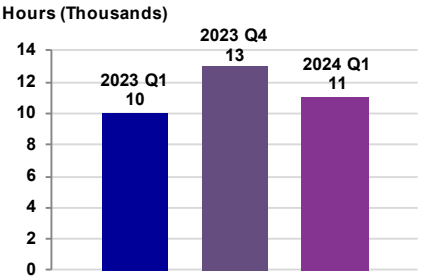
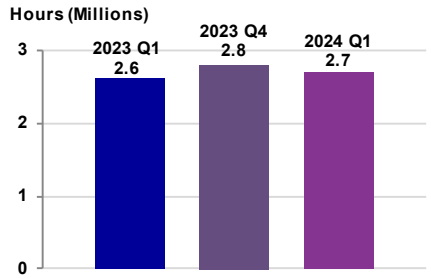
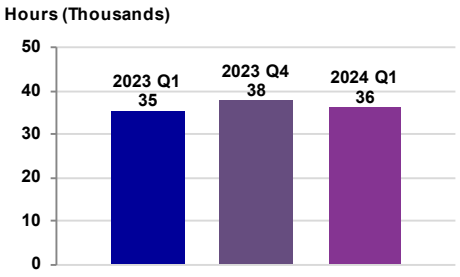
County	Fwy	Name	Type	Shift	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
YUBE	SR70-E	70EB Yuba River Br	ML	PM	20.15	13.524	39.13	-121.58	62	2.55	48,854	10,290
SAC	SR51-S	EB Exposition Bl	ML	PM	3.33	3.326	38.60	-121.44	62	1.67	48,088	13,310
PLA	SR65-N	Galleria Blvd-NB RMS	ML	PM	65.79	R6.062	38.78	-121.27	58	1.94	22,027	7,155
SAC	SR99-S	99SB at Cosumnes	ML	PM	290.68	16.23	38.46	-121.41	61	1.57	20,960	9,610
YOLO	I80-W	80WB at E Chiles Rd	ML	AM	77.95	5.762	38.56	-121.64	30	5.00	20,938	3,205
YOLO	I80-E	W of CR 105d	ML	PM	76.17	3.985	38.56	-121.67	36	3.14	19,043	3,745
PLA	I80-W	EB Douglas Blvd	ML	PM	103.38	1.876	38.74	-121.27	54	1.66	18,993	7,430
YOLO	I80-E	80EB at Mace Blvd	ML	PM	74.90	2.714	38.55	-121.69	56	2.22	17,931	5,325
PLA	SR65-S	Pleasant Grove Blvd	ML	PM	66.91	R7.189	38.79	-121.29	62	1.46	16,859	9,005
ED	US50-E	Midway Rd	ML	PM	107.96	79.801	38.95	-119.95	62	3.94	16,120	18,600

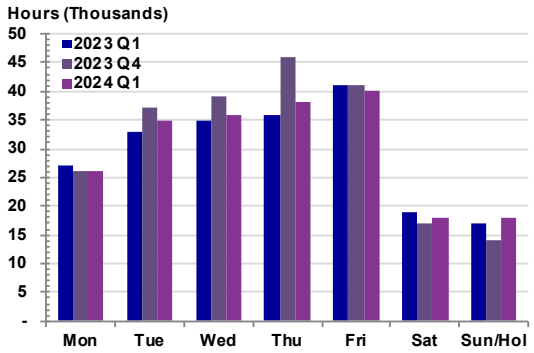
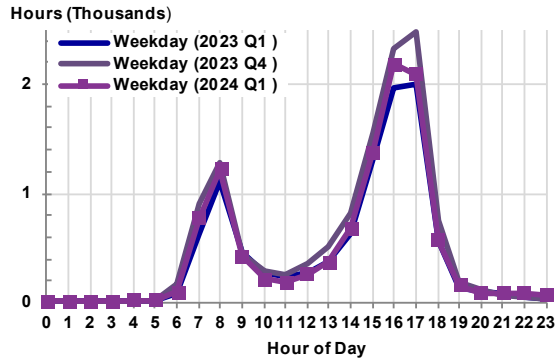
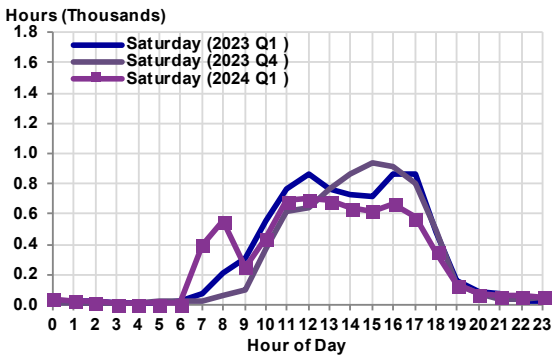
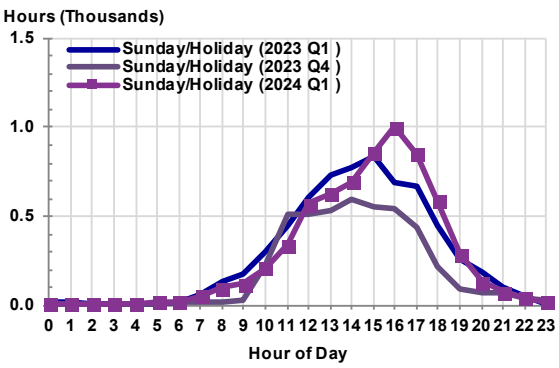
Notes:

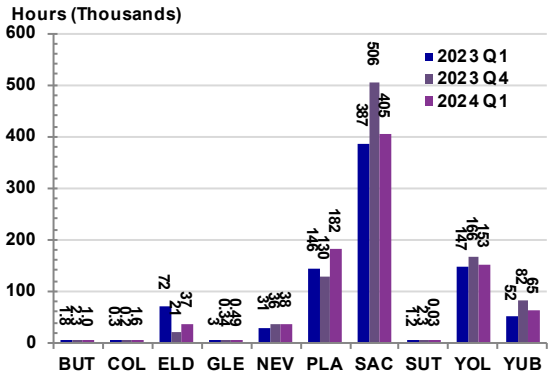
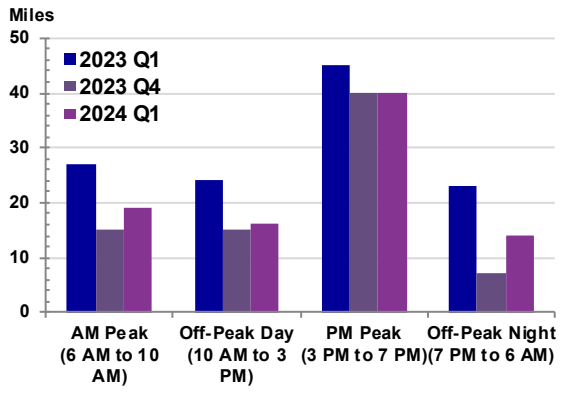
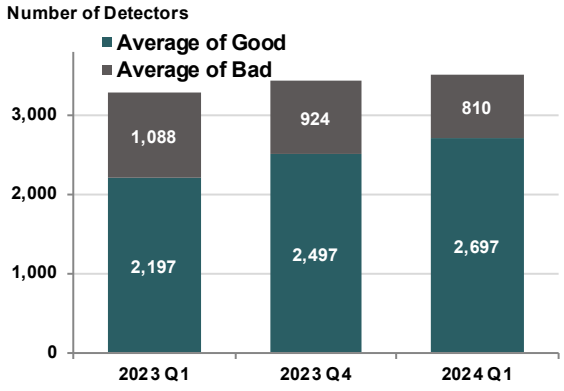
- For the table above, the quarterly delay calculation was based upon a 60-mph threshold, for the AM or PM weekday peak period.
- As shown in the table above, Yolo-80 has 3 of the top 10 bottlenecks. Some of these delays are caused by the construction activities (EA 03-4F650) at the median. It is anticipated these delays are not going to decrease until the project is completed.
- 2 of the top 10 bottlenecks are located on SR-65, which indicates that traffic demand to the City of Roseville is growing.

- In continued efforts to help relieve congestion and allow safe merging during high traffic demand periods, the California Department of Transportation (Caltrans) has updated the ramp metering operating hours on all major freeways in the Sacramento region. The metering hours will be based on traffic demand and will be activated 24/7, including holidays when minimum traffic thresholds are met. The ramp meters will be active every day including weekends and holidays.
- Caltrans District 3 has plans to construct High Occupancy Vehicle (HOV) lanes on SR-51 in Sacramento County, I-80 in Yolo County, and SR-65 in Placer County. These projects are expected to reduce delay at some of the nearby bottlenecks identified above.
- The HOV lanes on US-50 are under construction right now, and HOV lanes on I-5 have been completed and are operational.
- Phase 1 of improvements at the SR 65/I-80 interchange have been completed. This phase included reconstructing the WB I-80 connector to NB SR-65 to increase capacity and includes reconstructing the Stanford Ranch/Galleria interchange improvements. The remainder of the SR-65 project is not currently funded. The planned HOV project on SR-51 is currently funding for PA&ED.
- Our District is preparing to use the information in this report to prioritize funding for projects in the SHOPP mobility programs.

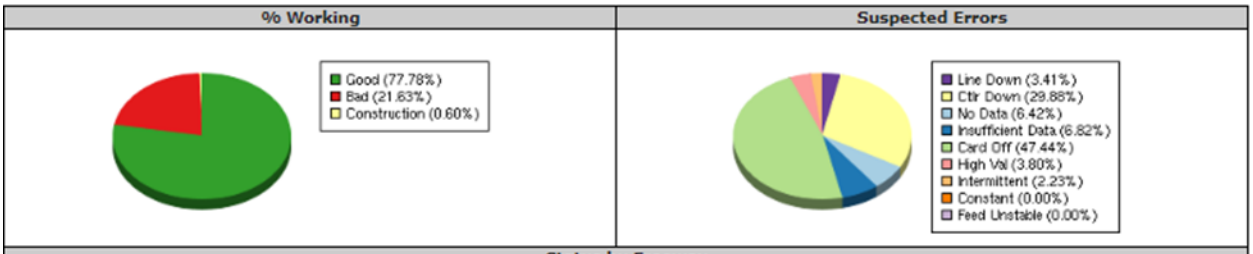
Quarterly Mobility Statistics

Measure	Graph	Percentage Change	
Vehicle Miles of Travel (VMT)		Over one year ago	Over last quarter
		10%	0.1%
		↑	↑
Total Vehicle Hours of Delay (VHD) at 35 mph		Over one year ago	Over last quarter
		5.3%	-6.6%
		↑	↓
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		Over one year ago	Over last quarter
		6.1%	-12.8%
		↑	↓
Total Vehicle Hours of Delay (VHD) at 60 mph		Over one year ago	Over last quarter
		3.2%	-2.1%
		↑	↓
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		Over one year ago	Over last quarter
		2.4%	-5.8%
		↑	↓

Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago Saturday -8.5%	Largest Magnitude Decrease over last quarter Thursday -16.1%
		Largest Magnitude Increase over one year ago Thursday 5.3%	Largest Magnitude Increase over last quarter Sun/Hol 28.1%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 11 AM -22.9%	Largest Magnitude Weekday Decrease over last quarter 5 PM -16.3%
		Largest Magnitude Weekday Increase over one year ago 4 PM 11.2%	Largest Magnitude Weekday Increase over last quarter 10 PM 95.4%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 5 PM -32.5%	Largest Magnitude Saturday Decrease over last quarter 3 PM -34.1%
		Largest Magnitude Saturday Increase over one year ago 8 AM 167.3%	Largest Magnitude Saturday Increase over last quarter 8 AM 845.3%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago 11 AM -24.6%	Largest Magnitude Sun./Holiday Decrease over last quarter 11 AM -34.6%
		Largest Magnitude Sun./Holiday Increase over one year ago 4 PM 43.7%	Largest Magnitude Sun./Holiday Increase over last quarter 4 PM 85.1%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago ELD -48%	Largest Magnitude Decrease over last quarter SAC -20%
		Largest Magnitude Increase over one year ago PLA 25.2%	Largest Magnitude Increase over last quarter PLA 40.1%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago Off-Peak Day -36.5%	Largest Magnitude Decrease over last quarter PM Peak -1%
		Largest Magnitude Increase over one year ago –	Largest Magnitude Increase over last quarter Off-Peak Night 99.7%
Average Number of Good and Bad Detectors		Change in Good over one year ago 23%	Change in Good over last quarter 8%
		Change in Bad over one year ago -26%	Change in Bad over last quarter -12%

The figure below displays detector health data taken on January 1st, 2024. This figure illustrates the percentage of detector health per route to indicate which detectors are measuring the performance of State highways in District 3. About 22% of detectors are out of service. The number of good detectors had increased by 23% when compared with Q1/2023.



Status by Freeway

Freeway	# Det	% Good	% Bad	% Construction	Suspected Error								
					Line Down	Ctlr Down	No Data	Insufficient Data	Card Off	High Val	Intermittent	Constant	Feed Unstable
I5-N	248	77.4	22.6	0.0	0.0	7.3	2.0	0.0	12.5	0.4	0.4	0.0	0.0
I5-S	248	82.7	17.3	0.0	0.0	4.8	2.0	0.0	7.3	2.0	1.2	0.0	0.0
SR12-E	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR12-W	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR16-E	1	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
SR16-W	2	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
SR20-E	17	58.8	41.2	0.0	0.0	5.9	0.0	0.0	29.4	0.0	5.9	0.0	0.0
SR20-W	20	80.0	20.0	0.0	0.0	5.0	0.0	0.0	10.0	0.0	5.0	0.0	0.0
SR28-E	3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR28-W	3	66.7	33.3	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0
SR45-N	3	33.3	66.7	0.0	0.0	0.0	0.0	0.0	33.3	0.0	33.3	0.0	0.0
SR45-S	3	66.7	33.3	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0
SR49-N	4	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR49-S	4	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
US50-E	495	74.3	25.7	0.0	2.4	10.7	0.0	0.4	11.1	1.0	0.0	0.0	0.0
US50-W	466	76.2	23.8	0.0	3.0	5.6	0.0	0.6	12.7	1.9	0.0	0.0	0.0
SR51-N	107	68.2	31.8	0.0	0.0	6.5	0.0	11.2	13.1	0.0	0.9	0.0	0.0
SR51-S	89	75.3	24.7	0.0	0.0	11.2	0.0	5.6	6.7	0.0	1.1	0.0	0.0
SR65-N	53	94.3	5.7	0.0	0.0	0.0	5.7	0.0	0.0	0.0	0.0	0.0	0.0
SR65-S	69	95.7	4.3	0.0	0.0	0.0	1.4	0.0	0.0	2.9	0.0	0.0	0.0
SR70-E	20	70.0	30.0	0.0	0.0	0.0	0.0	0.0	30.0	0.0	0.0	0.0	0.0
SR70-W	16	81.3	18.8	0.0	0.0	0.0	0.0	0.0	18.8	0.0	0.0	0.0	0.0
I80-E	482	78.8	21.2	0.4	0.0	9.8	1.0	0.0	8.7	1.2	0.4	0.0	0.0
I80-W	465	78.1	21.9	2.8	0.0	8.0	1.5	0.0	12.0	0.0	0.4	0.0	0.0
SR89-N	10	70.0	30.0	0.0	0.0	0.0	0.0	10.0	20.0	0.0	0.0	0.0	0.0
SR89-S	11	63.6	36.4	0.0	0.0	0.0	0.0	9.1	18.2	0.0	9.1	0.0	0.0
SR99-N	282	85.1	14.9	0.0	0.0	0.0	3.5	6.0	4.3	0.4	0.7	0.0	0.0
SR99-S	295	76.9	23.1	2.0	0.0	5.4	4.4	3.1	10.2	0.0	0.0	0.0	0.0
SR113-N	13	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR113-S	15	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR149-N	2	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
SR149-S	3	66.7	33.3	0.0	0.0	0.0	0.0	0.0	33.3	0.0	0.0	0.0	0.0
SR160-N	8	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR160-S	5	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR162-E	6	0.0	100.0	0.0	0.0	0.0	0.0	16.7	83.3	0.0	0.0	0.0	0.0
SR162-W	4	50.0	50.0	0.0	0.0	0.0	0.0	25.0	0.0	0.0	25.0	0.0	0.0
SR193-E	2	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0
SR193-W	1	0.0	100.0	0.0	0.0	0.0	0.0	0.0	100.0	0.0	0.0	0.0	0.0
SR244-E	3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR244-W	6	83.3	16.7	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	0.0	0.0
SR267-E	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR267-W	2	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR275-W	3	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I505-N	7	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
I505-S	5	60.0	40.0	0.0	0.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
Totals	**3,507**	**78.2**	**21.8**	**0.6**	**0.7**	**6.5**	**1.4**	**1.5**	**10.3**	**0.8**	**0.5**	**0.0**	**0.0**

Based on the Congestion by Route table below, SR-51 in Sacramento County was the worst performing freeway in District 3 followed by Yolo-80. The delay on SAC-51 has decreased due to seasonal fluctuation. Yolo-80 is significantly impacted by the ongoing construction activities. It is anticipated that the performance will not improve until the construction is completed.

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2024 Q1-2023 Q1		Difference 2024 Q1-2023 Q4		Rank		
Route	County	2023 Q1	2023 Q4	2024 Q1	Absolute	Percentage	Absolute	Percentage	2023 Q1	2023 Q4	2024 Q1
SR51	Sacramento	150,298	186,119	155,319	5,021	3.3%	-30,800	-16.5%	1	1	1
I80	Yolo	122,390	132,026	123,884	1,494	1.2%	-8,142	-6.2%	2	2	2
SR99	Sacramento	83,901	78,832	76,601	-7,300	-8.7%	-2,231	-2.8%	3	5	3
I80	Placer	64,163	50,891	74,134	9,971	15.5%	23,243	45.7%	5	9	4
I5	Sacramento	58,889	129,773	72,314	13,425	22.8%	-57,459	-44.3%	8	3	5
SR65	Placer	61,252	76,342	69,558	8,305	13.6%	-6,785	-8.9%	6	6	6
SR70	Yuba	51,749	82,310	64,578	12,829	24.8%	-17,732	-21.5%	9	4	7
US50	Sacramento	59,316	52,646	63,302	3,986	6.7%	10,656	20.2%	7	8	8
SR89	Placer	17,508	2,095	38,045	20,538	117.3%	35,950	1715.8%	12	17	9
US50	El Dorado	71,006	20,457	37,056	-33,951	-47.8%	16,599	81.1%	4	12	10
I80	Sacramento	33,574	56,871	35,635	2,061	6.1%	-21,236	-37.3%	10	7	11
I80	Nevada	27,769	33,122	35,467	7,698	27.7%	2,345	7.1%	11	10	12
US50	Yolo	13,132	28,629	24,749	62,547	476.3%	-3,880	-13.6%	13	11	13
I5	Yolo	11,259	2,909	4,585	-6,674	-59.3%	1,676	57.6%	14	13	14
SR89	Nevada	0	1,554	2,030	2,030		476	30.7%		18	15
I5	Colusa	32	76	1,563	1,532	4831.2%	1,487	1956.8%	28	29	16
SR99	Butte	1,841	2,339	863	-978	-53.1%	-1,476	-63.1%	18	15	17
SR20	Nevada	120	985	741	620	515.1%	-244	-24.8%	26	20	18
SR160	Sacramento	200	1,292	730	530	264.2%	-562	-43.5%	25	19	19
SR28	Placer	2,459	833	586	-1,873	-76.2%	-247	-29.7%	17	21	20
SR244	Sacramento	0	252	480	480		228	90.6%		24	21
SR162	Glenn	2,558	252	373	-2,186	-85.4%	121	48.2%	16	24	22
SR12	Sacramento	402	429	241	-161	-40.0%	-188	-43.9%	22	22	23
SR89	El Dorado	721	293	225	-496	-68.8%	-68	-23.1%	20	23	24
SR113	Yolo	36	2,374	103	67	185.3%	-2,271	-95.7%	27	14	25
SR149	Butte	0	0	69	69		69				26
SR45	Glenn	0	7	67	67	66900.0%	60	900.0%	36	33	27
I5	Glenn	440	85	50	-390	-88.6%	-34	-40.6%	21	28	28
SR16	Yolo	0	0	48	48		48				29
SR20	Colusa	230	110	38	-192	-83.5%	-73	-65.7%	23	26	30
SR267	Placer	216	13	33	-184	-84.8%	20	161.1%	24	31	31
SR99	Sutter	1,182	2,279	31	-1,150	-97.4%	-2,248	-98.6%	19	16	32
SR70	Butte	0	0	12	12		12				33
SR162	Butte	0	3	2	2	1000.0%	-1	-31.3%	34	34	34
SR275	Yolo	0	1	2	2		1	70.0%		37	35
SR113	Sutter	1	2	1	0	42.9%	-1	-33.3%	32	35	36
SR20	Sutter	1	33	1	0	0.0%	-32	-97.0%	31	30	36
SR70	Sutter	16	0	0	-16	-98.8%	0	0.0%	29	38	38
I505	Yolo	0	1	0	0	-100.0%	-1	-100.0%	33	36	
SR20	Yuba	0	0	0	0	-100.0%	0	-100.0%	34	39	
SR45	Colusa	5	11	0	-5	-100.0%	-11	-100.0%	30	32	
SR49	Nevada	2,651	101	0	-2,651	-100.0%	-101	-100.0%	15	27	
TOTALS		**839,316**	**946,348**	**883,515**	**44,199**	**5.3%**	**-62,832**	**-6.6%**			

As indicated by the table above, the Total Delay for all monitored routes has decreased to *883,515* hours, a decrease of *6.6%* when compared with the previous quarter. Overall, congestion and delay have decreased, and travel demand (VMT) was about the same when compared to the previous quarter.

Most of the congested routes in the Sacramento region are serving traffic to Downtown Sacramento, which is due to its travel demand associated with Sacramento Regional high

population, employment, and educational centers. As identified on pages 2 and 3 of this report, Caltrans is continuing the process of implementing HOV lanes and 24/7 ramp meter operations for Sacramento's freeway system. HOV lane projects on SR-51, I-5, I-80, and US-50 are planned or under construction to mitigate congestion on these routes. Further congestion mitigation can be achieved by ***Work at Home*** and increasing mode shift away from single occupancy vehicles to higher occupancy vehicles such as carpooling, vanpooling, and higher utilization of mass transit options. District 3 will continue to explore the best possible ways to reduce delay in the impacted freeways and highways.