District 03
Mobility Performance Report

2023 Third Quarter

DEPARTMENT OF TRANSPORTATION

October 28, 2023
Office of Freeway Operations

2023 Third 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 this quarter with information from the 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 area freeways from the Caltrans Performance Measurement System (PeMS) every day of the quarter, twenty–four hours a day, where congestion is regularly experienced. 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 delay at 60 mph represents all congestion, both light and heavy. These thresholds are set by Caltrans and are based upon traffic engineering experience and District 3 Office of Freeway Operations input.

FINDINGS

In the third quarter of 2023, there is a significant increase in delay due to the resumption of normal economic activities. The total delay on the freeways in District 3 equaled *1.3* million vehicle hours of delay (VHD) below the 35-mph speed threshold and *3.4* million VHD below 60-mph threshold. The average delay experienced on weekdays in this quarter was approximately *16 thousand* of VHD below 35-mph, and *44 thousand* of VHD below 60-mph.

Vehicle Miles of Travel (VMT) increased by 5.6% with a total of *2.77* billion miles when compared to the previous quarter with *2.63* billion miles. The VHD below the 60-mph speed threshold has increased by 18.6% during the same quarter. See graphs on page 4 and 5 for details. Travel demand is more concentrated in the commute hours. The AM peak hour delay has increased by 60% at 8 AM, and PM peak hour delay has increased by 35.7% at 3 PM when is comparing with Quarter 3 of previous year.

Top Ten Bottlenecks for Quarter 3

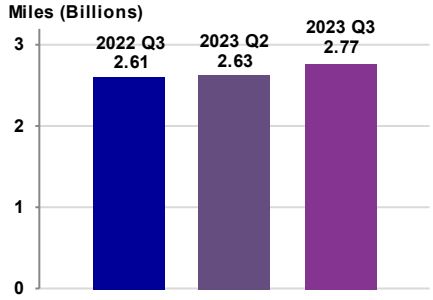
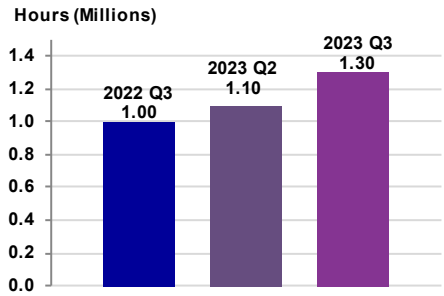
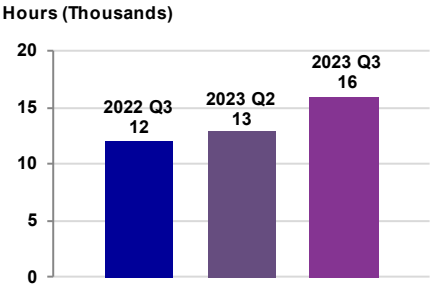
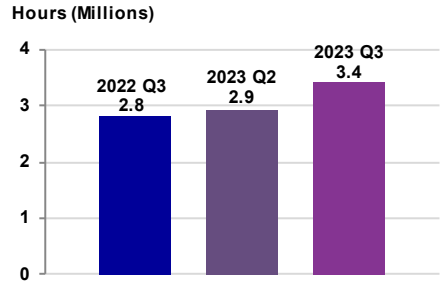
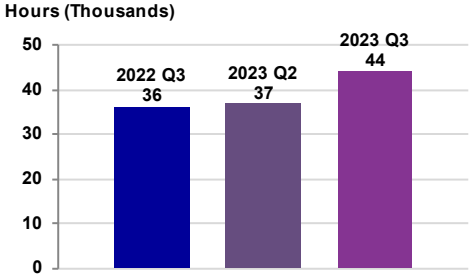
County	Fwy	Name	Type	Shift	Abs PM	CA PM	Lat.	Long.	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
Yolo	I80-W	E. of Webster UC	ML	AM	79.13	6.943	38.567	-121.618	52	4.32	55,428	8,180
Yolo	I80-E	W of CR 105d	ML	PM	76.17	3.985	38.558	-121.671	51	3.82	41,284	7,050
SAC	SR51-S	EB Exposition Bl	ML	PM	3.33	3.326	38.597	-121.444	64	1.46	33,831	11,760
YUB	SR70-E	EB-70 Yuba River Br	ML	PM	20.15	13.524	39.129	-121.585	54	2.21	30,156	7,425
Yolo	I80-E	EB-80 at Chiles Rd	ML	PM	77.73	5.543	38.563	-121.643	37	3.29	26,753	4,990
El D.	US50-E	Midway Rd (Pionner Trail)	ML	PM	107.96	79.801	38.952	-119.949	65	2.49	26,314	19,500
PLA	I80-W	EB Douglas Blvd	ML	PM	103.38	1.876	38.743	-121.272	63	1.38	21,838	9,660
SAC	I5-S	SB-5 at Metro Air Pkwy	ML	PM	526.80	31.511	38.671	-121.568	61	3.31	21,579	7,305
Yolo	I80-W	E. of Webster UC	ML	PM	79.13	6.943	38.567	-121.618	21	3.88	16,719	2,625
SAC	SR99-S	SB-99 at Cosumnes	ML	PM	290.68	16.23	38.456	-121.410	45	1.52	16,262	8,035

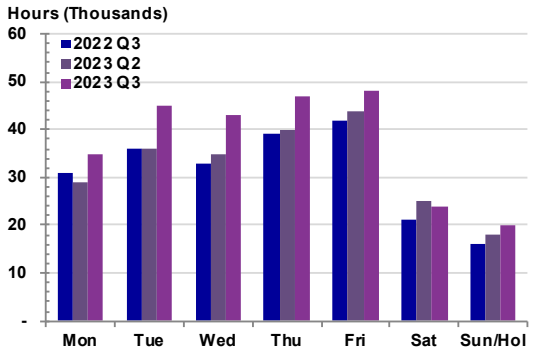
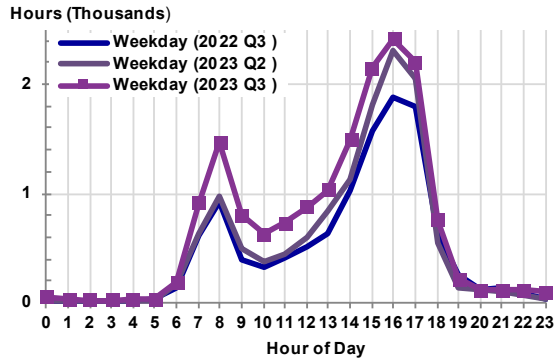
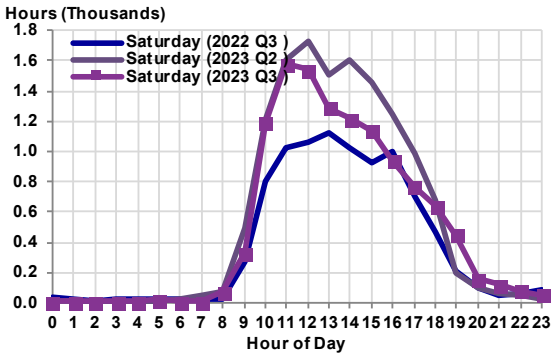
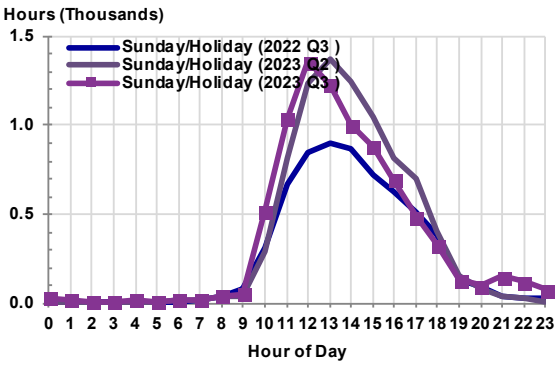
Notes:

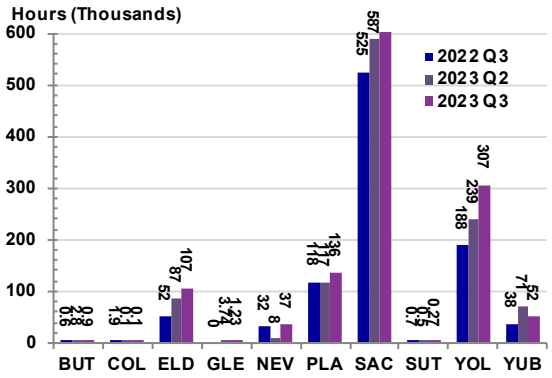
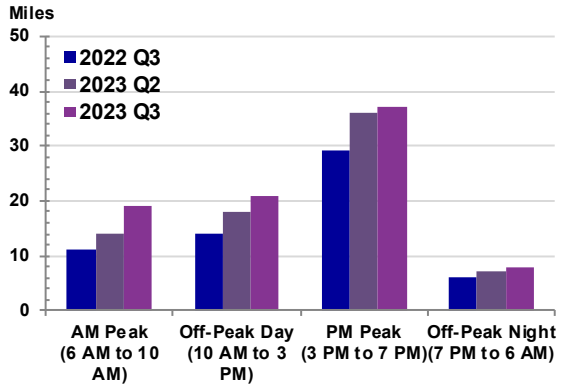
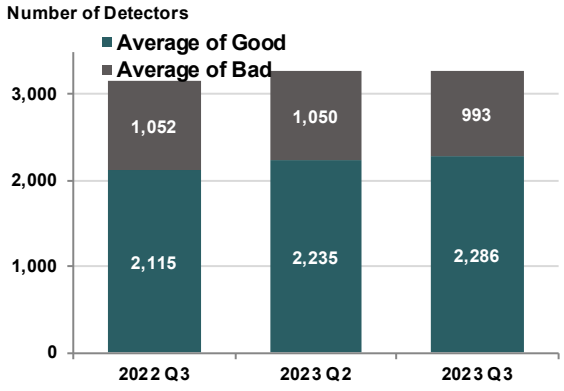
- For the table above, the quarterly delay calculation was based upon a 60-mph threshold, for the AM or PM weekday peak period.
- As identified by Table above, Yolo-80 has 4 of the top 10 bottlenecks. Most of these delays are caused by the construction activities (EA 03-4F650) at the median. It is anticipated these delays are not going to decrease until the project is completed.
- The ongoing I-5 auxiliary project (EA 03-4H581) has caused significant delay near Metro Air Pkwy. It is anticipated the situation will not improve until this project is completed.

- 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 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 open, only electrical work remains.
- 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
		6.4%	5.6%
		↑	↑
Total Vehicle Hours of Delay (VHD) at 35 mph		Over one year ago	Over last quarter
		38.8%	18.9%
		↑	↑
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		Over one year ago	Over last quarter
		42.1%	27.5%
		↑	↑
Total Vehicle Hours of Delay (VHD) at 60 mph		Over one year ago	Over last quarter
		20%	15.3%
		↑	↑
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		Over one year ago	Over last quarter
		20.8%	18.6%
		↑	↑

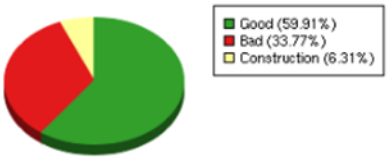
Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		–	Saturday -4.6%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Wednesday 29.6%	Tuesday 26%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago	Largest Magnitude Weekday Decrease over last quarter
		9 PM -20.6%	8 PM -9.8%
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		3 PM 35.7%	8 AM 49.8%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago	Largest Magnitude Saturday Decrease over last quarter
		4 PM -5.5%	2 PM -24.4%
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		11 AM 53.9%	7 PM 124.2%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/ Holidays		Largest Magnitude Sun./Holiday Decrease over one year ago	Largest Magnitude Sun./Holiday Decrease over last quarter
		6 PM -14.4%	2 PM -20.1%
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		12 PM 60%	10 AM 81.3%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		COL -96.7%	YUB -27.2%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		SAC 30.6%	SAC 16.9%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago	Largest Magnitude Decrease over last quarter
		–	–
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		PM Peak 27.8%	AM Peak 36.9%
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		8%	2%
		Change in Bad over one year ago	Change in Bad over last quarter
		-6%	-5%

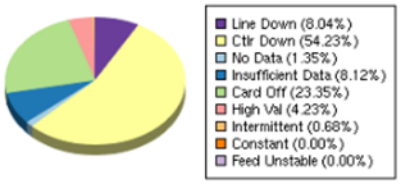
The Figure below is a screenshot displaying detector health data taken on 07/01/2023, at the beginning of Q3 2023. This Figure illustrates the percentage of detector health per route to determine which detectors are measuring the performance of State highways in District 3. Due to construction projects on I-5 (HOV lane is under construction from US 50 connector to City of Elk Grove), I-80 (RHMA Pavement Rehabilitation Project), US-50 (Multimodal Corridor Enhancement and Rehabilitation Project), and SR-99 (RHMA Overlay), about 40% of detectors

are out of service. Caltrans will not be able to see much improvement of detectors health until construction is completed on the main corridors within the Sacramento region.

% Working



Suspected Errors



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	189	38.1	61.9	0.0	2.1	39.7	1.1	1.1	14.8	3.2	0.0	0.0	0.0
I5-S	198	46.0	54.0	2.0	2.0	34.8	2.5	1.5	12.1	1.0	0.0	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
SR20-E	19	89.5	10.5	0.0	0.0	5.3	0.0	0.0	5.3	0.0	0.0	0.0	0.0
SR20-W	24	83.3	16.7	0.0	0.0	4.2	0.0	0.0	12.5	0.0	0.0	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	100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR45-S	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
SR49-N	4	75.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	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	467	43.7	56.3	20.3	8.8	35.5	0.0	0.9	6.6	4.1	0.4	0.0	0.0
US50-W	444	46.4	53.6	22.7	9.5	28.6	0.2	0.9	11.7	2.7	0.0	0.0	0.0
SR51-N	112	81.3	18.8	0.0	0.0	0.0	2.7	0.0	11.6	4.5	0.0	0.0	0.0
SR51-S	96	92.7	7.3	0.0	0.0	0.0	0.0	0.0	6.3	0.0	1.0	0.0	0.0
SR65-N	53	71.7	28.3	0.0	0.0	3.8	5.7	18.9	0.0	0.0	0.0	0.0	0.0
SR65-S	69	82.6	17.4	0.0	0.0	2.9	1.4	13.0	0.0	0.0	0.0	0.0	0.0
SR70-E	16	87.5	12.5	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0
SR70-W	13	76.9	23.1	0.0	0.0	0.0	0.0	0.0	23.1	0.0	0.0	0.0	0.0
I80-E	484	75.2	24.8	0.0	0.0	14.3	0.0	2.9	7.2	0.2	0.2	0.0	0.0
I80-W	440	77.0	23.0	0.0	0.0	12.3	0.0	1.4	9.3	0.0	0.0	0.0	0.0
SR89-N	5	60.0	40.0	0.0	0.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0
SR89-S	5	60.0	40.0	0.0	0.0	0.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0
SR99-N	273	84.2	15.8	1.8	0.7	6.2	0.0	5.1	2.2	0.4	1.1	0.0	0.0
SR99-S	278	62.9	37.1	4.0	0.7	17.3	0.0	10.1	7.6	1.4	0.0	0.0	0.0
SR113-N	13	61.5	38.5	0.0	0.0	38.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR113-S	15	60.0	40.0	0.0	0.0	33.3	0.0	0.0	6.7	0.0	0.0	0.0	0.0
SR160-N	6	100.0	0.0	33.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR160-S	7	100.0	0.0	42.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SR162-E	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
SR162-W	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
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	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-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
SR267-W	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
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	8	50.0	50.0	0.0	0.0	0.0	0.0	0.0	50.0	0.0	0.0	0.0	0.0
I505-S	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
Totals	**3,279**	**64.0**	**36.0**	**6.7**	**2.9**	**19.5**	**0.5**	**2.9**	**8.4**	**1.5**	**0.2**	**0.0**	**0.0**

Based on the table of Congestion by Route below, I-5 in Sacramento County was the worst performing freeway in District 3 and Yolo-80 was the second. Both routes are significantly impacted by the ongoing construction activities. It is anticipated the situation will not improve until the construction is completed.

Congestion by Route

		Vehicle Hours of Delay at 35 mph			Difference 2023 Q3-2022 Q3		Difference 2023 Q3-2023 Q2		Rank		
Route	County	2022 Q3	2023 Q2	2023 Q3	Absolute	Percentage	Absolute	Percentage	2022 Q3	2023 Q2	2023 Q3
I5	Sacramento	172,103	257,307	349,579	177,476	103.1%	92,271	35.9%	1	1	1
I80	Yolo	161,660	192,490	254,815	93,155	57.6%	62,325	32.4%	2	2	2
SR51	Sacramento	116,612	168,704	153,077	36,465	31.3%	-15,627	-9.3%	4	3	3
US50	El Dorado	45,263	86,335	106,726	61,463	135.8%	20,391	23.6%	9	5	4
SR99	Sacramento	119,910	94,164	76,208	-43,702	-36.4%	-17,956	-19.1%	3	4	5
I80	Placer	50,936	51,106	71,492	20,556	40.4%	20,385	39.9%	8	8	6
I80	Sacramento	51,182	32,540	70,565	19,383	37.9%	38,026	116.9%	7	10	7
SR65	Placer	62,293	64,491	58,462	-3,830	-6.1%	-6,028	-9.3%	6	7	8
SR70	Yuba	37,479	71,382	51,986	14,507	38.7%	-19,396	-27.2%	10	6	9
US50	Yolo	20,460	42,173	47,490	27,030	132.1%	5,317	12.6%	12	9	10
I80	Nevada	31,505	5,070	33,113	1,608	5.1%	28,043	553.1%	11	12	11
US50	Sacramento	63,260	31,751	32,647	-30,612	-48.4%	896	2.8%	5	11	12
I5	Yolo	5,777	3,726	4,134	-1,643	-28.4%	408	10.9%	14	13	13
SR89	Placer	1,134	168	3,155	2,021	178.2%	2,987	1774.6%	17	24	14
SR160	Sacramento	726	1,782	3,107	2,381	328.1%	1,325	74.3%	20	17	15
SR28	Placer	3,816	1,368	2,602	-1,214	-31.8%	1,234	90.2%	15	18	16
SR49	Nevada	31	373	2,412	2,381	7731.2%	2,039	547.2%	27	21	17
SR162	Glenn	4	3,520	1,205	1,202	34328.6%	-2,315	-65.8%	31	14	18
SR20	Nevada	0	2,223	901	901		-1,322	-59.5%		16	19
SR99	Butte	618	2,780	854	236	38.2%	-1,927	-69.3%	21	15	20
SR12	Sacramento	1,763	878	817	-946	-53.6%	-60	-6.9%	16	19	21
SR89	El Dorado	6,329	284	383	-5,946	-94.0%	99	35.0%	13	22	22
SR113	Yolo	486	136	353	-133	-27.4%	217	159.1%	22	25	23
SR99	Sutter	384	447	260	-124	-32.3%	-187	-41.9%	23	20	24
SR89	Nevada	0	0	241	241		241				25
SR267	Placer	68	56	84	16	23.5%	28	50.6%	26	27	26
I505	Yolo	27	0	39	12	43.4%	39	39200.0%	28	37	27
I5	Colusa	762	10	24	-738	-96.8%	15	156.8%	19	29	28
SR20	Colusa	1,111	60	19	-1,092	-98.3%	-41	-68.8%	18	26	29
SR45	Colusa	21	7	19	-2	-9.2%	12	159.7%	29	31	30
I5	Glenn	0	217	18	18		-199	-91.7%		23	31
SR45	Glenn	0	1	11	11	5450.0%	10	1485.7%	34	34	32
SR70	Sutter	4	8	9	5	115.0%	0	4.9%	30	30	33
SR20	Sutter	311	47	4	-307	-98.6%	-43	-90.8%	24	28	34
SR275	Yolo	0	0	4	4	3900.0%	4	1900.0%	35	36	35
SR113	Sutter	1	1	2	1	128.6%	1	166.7%	33	35	36
SR162	Butte	3	2	1	-2	-76.9%	-2	-75.0%	32	33	37
I505	Yuba	0	0	0	0		0				
SR20	Yuba	110	4	0	-110	-100.0%	-4	-100.0%	25	32	
TOTALS		**956,145**	**1,115,610**	**1,326,817**	**370,672**	**38.8%**	**211,207**	**18.9%**			

As indicated by the table above, the Total Delay for all monitored routes has increased to *1,326,817* hours, an increase of *18.9%* when compared with previous quarter. Overall, congestion and delay have increased significantly, and travel demand (VMT) was also up for 5.6% when compared to the previous quarter.

Most of the congested routes in 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.