District 03
Mobility Performance Report

2022 Second Quarter

DEPARTMENT OF TRANSPORTATION

July 28, 2022
: Office of Freeway Operations

2022 Second 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 second quarter of 2022, there is an increase in delay due to the beginning of the summer season. The total delay on the freeways in District 3 equaled *0.67* million vehicle hours of delay (VHD) below the 35-mph speed threshold and *2.4* million VHD below 60-mph threshold. The average delay experienced on weekdays in this quarter was approximately *8,498* of VHD below 35-mph, and *32,000* of VHD below 60-mph.

Vehicle Miles of Travel (VMT) increased by 2.4% with a total of *2.69* billion miles when compared to that of the previous quarter (*2.63* billion miles). The VHD below the 60-mph speed threshold increased by 10.1% during the same quarter. See graphs on page 4 for details.

Top Ten Bottlenecks for Quarter 2

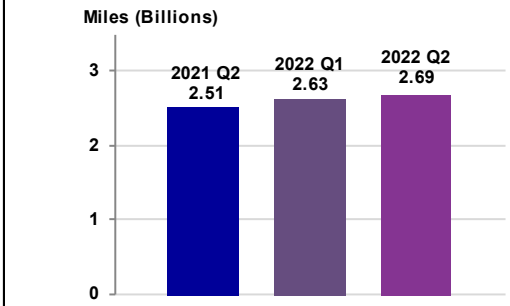
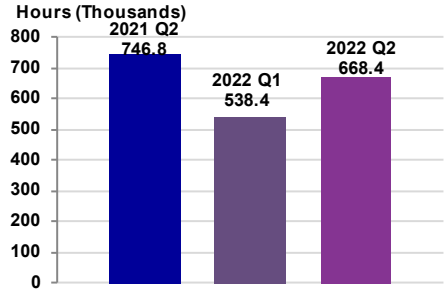
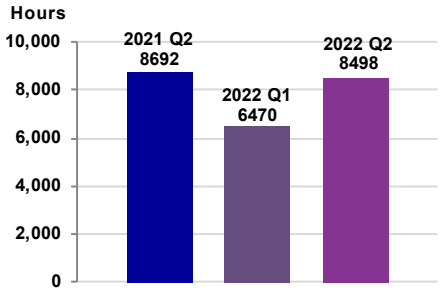
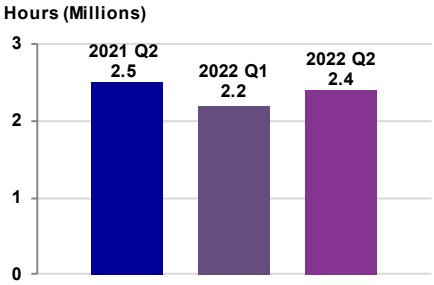
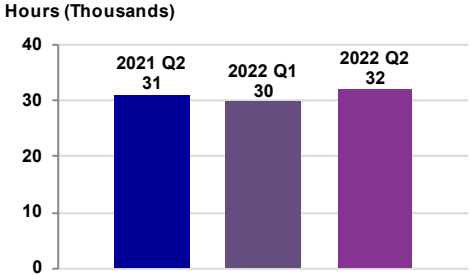
County	Fwy	Name	Type	Shift	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
YOLO	I80-W	E. of Webster UC	ML	AM	79.13	6.943	38.57	-121.62	49	4.74	42,512	6,685
SAC	SR51-S	EB Exposition Bl	ML	PM	3.33	3.326	38.60	-121.44	55	1.82	25,358	8,630
YOLO	I80-E	80EB at Mace Blvd	ML	PM	74.90	2.714	38.55	-121.69	63	2.08	23,197	8,330
SAC	US50-E	16th St	ML	PM	4.72	L1.566	38.56	-121.49	64	0.90	21,156	9,000
PLA	SR65-S	Pleasant Grove Blvd	ML	PM	66.91	R7.189	38.79	-121.29	64	1.43	20,467	9,770
SAC	SR99-S	99SB at Cosumnes	ML	PM	290.68	16.23	38.46	-121.41	63	1.49	15,747	9,110
YUBA	SR70-E	Feather River Blvd	ML	PM	19.31	R11.064	39.12	-121.57	19	4.74	13,189	1,920
SAC	SR51-N	30 & E St	ML	PM	1.50	1.50	38.58	-121.46	64	1.01	13,144	6,480
SAC	US50-W	15th St	ML	PM	4.50	L1.345	38.56	-121.49	47	1.31	11,990	4,665
YOLO	I80-E	W of Webster UC	ML	PM	77.97	5.779	38.56	-121.64	44	1.36	10,637	5,845

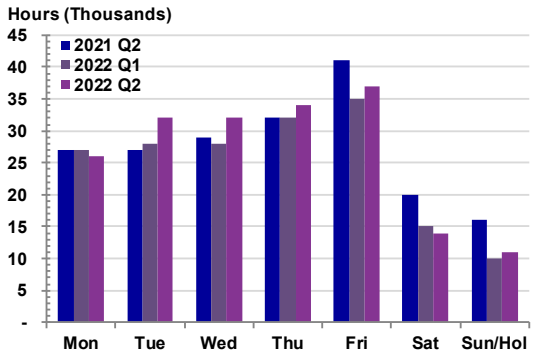
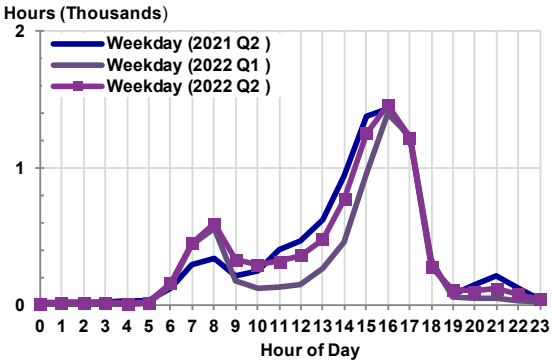
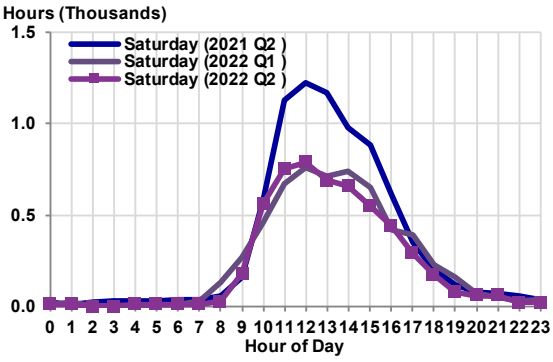
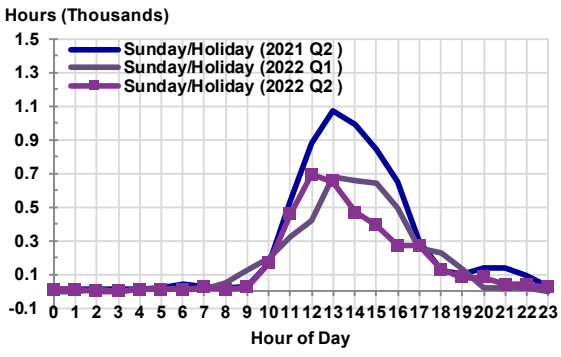
Notes:

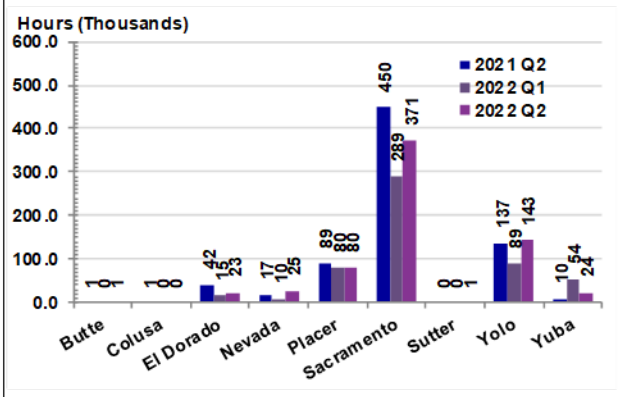
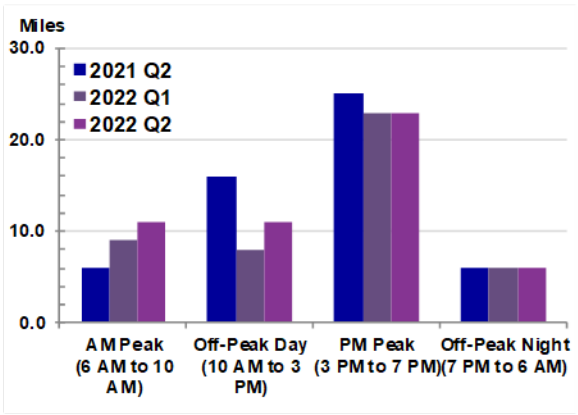
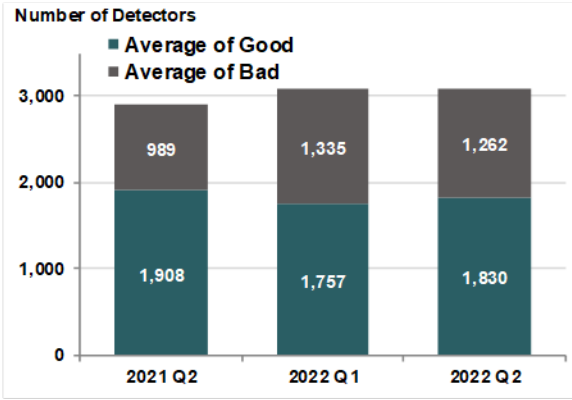
- For the table above, the quarterly delay calculation was based upon a 60-mph threshold, for the a.m. or p.m. weekday peak period.
- Three of the top ten bottlenecks are located on I 80/Yolo Causeway, it is the most congested corridor in Sacramento region.
- In continued efforts to help relieve congestion and allow safe merging during high traffic demand periods, the California Department of Transportation (Caltrans) has updated the ramp metering operation 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 lane projects on I-5 and US-50 are under construction right now.
- The project on SR 65/I-80 interchange is completed for Phase 1. This phase included reconstructing the WB I-80 connector to NB SR-65 to increase capacity and includes reconstructing the Stanford Ranch/Galleria IC 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
		7.3%	2.4%
Total Vehicle Hours of Delay (VHD) at 35 mph		Over one year ago	Over last quarter
		-10.5%	24.1%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph		Over one year ago	Over last quarter
		-2.2%	31.4%
Total Vehicle Hours of Delay (VHD) at 60 mph		Over one year ago	Over last quarter
		-3.1%	10.1%
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph		Over one year ago	Over last quarter
		3.1%	7.4%

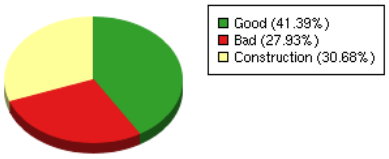
Measure	Graph	Percentage Change	
Average Vehicle Hours of Delay by Day of Week at 60 mph		Largest Magnitude Decrease over one year ago Saturday -29.2%	Largest Magnitude Decrease over last quarter Monday -5.6%
		Largest Magnitude Increase over one year ago Tuesday 16.7%	Largest Magnitude Increase over last quarter Wednesday 15%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays		Largest Magnitude Weekday Decrease over one year ago 2 PM -18.8%	Largest Magnitude Weekday Decrease over last quarter 6 PM -14.6%
		Largest Magnitude Weekday Increase over one year ago 8 AM 73.8%	Largest Magnitude Weekday Increase over last quarter 2 PM 66.9%
Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays		Largest Magnitude Saturday Decrease over one year ago 1 PM -40.7%	Largest Magnitude Saturday Decrease over last quarter 8 AM -80%
		Largest Magnitude Saturday Increase over one year ago 9 AM 11.7%	Largest Magnitude Saturday Increase over last quarter 10 AM 22.4%
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 -52.3%	Largest Magnitude Sun./Holiday Decrease over last quarter 3 PM -38.8%
		Largest Magnitude Sun./Holiday Increase over one year ago 6 PM 10.9%	Largest Magnitude Sun./Holiday Increase over last quarter 12 PM 64.2%

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph		Largest Magnitude Decrease over one year ago Sacramento -17.5%	Largest Magnitude Decrease over last quarter Yuba -55.7%
		Largest Magnitude Increase over one year ago Yuba 133.1%	Largest Magnitude Increase over last quarter Sacramento 28.3%
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph		Largest Magnitude Decrease over one year ago Off-Peak Day -26.8%	Largest Magnitude Decrease over last quarter _
		Largest Magnitude Increase over one year ago AM Peak 66.6%	Largest Magnitude Increase over last quarter Off-Peak Day 42.8%
Average Number of Good and Bad Detectors		Change in Good over one year ago -4%	Change in Good over last quarter 4%
		Change in Bad over one year ago 28%	Change in Bad over last quarter -5%

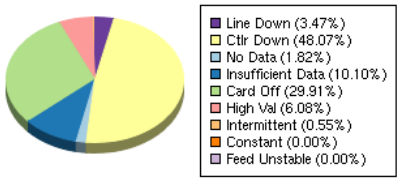
The Figure below is a screenshot displaying detector health data taken on 04/01/2022, at the beginning of Q2 2022. This Figure illustrates the percentage of detector health per route to determine which detectors are measuring the performance of our state highways in District 3. Due to construction projects 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 one third 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 Metro area.

% 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	211	45.5	54.5	60.2	4.3	16.6	0.0	2.8	28.0	2.8	0.0	0.0	0.0
I5-S	200	50.0	50.0	52.0	4.5	24.0	0.0	1.5	17.0	3.0	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	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
SR20-W	8	87.5	12.5	0.0	0.0	0.0	0.0	0.0	12.5	0.0	0.0	0.0	0.0
SR28-E	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
SR28-W	3	66.7	33.3	0.0	0.0	0.0	33.3	0.0	0.0	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	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
SR49-S	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
US50-E	428	51.4	48.6	45.3	2.8	23.6	0.0	6.8	9.1	6.1	0.2	0.0	0.0
US50-W	420	44.3	55.7	50.0	3.3	24.5	0.0	7.4	14.8	5.0	0.7	0.0	0.0
SR51-N	105	74.3	25.7	5.7	0.0	17.1	0.0	0.0	5.7	2.9	0.0	0.0	0.0
SR51-S	92	85.9	14.1	6.5	0.0	3.3	0.0	0.0	5.4	5.4	0.0	0.0	0.0
SR65-N	55	72.7	27.3	38.2	0.0	12.7	0.0	12.7	1.8	0.0	0.0	0.0	0.0
SR65-S	68	67.6	32.4	50.0	0.0	10.3	0.0	5.9	13.2	1.5	1.5	0.0	0.0
SR70-E	13	84.6	15.4	0.0	0.0	0.0	0.0	0.0	15.4	0.0	0.0	0.0	0.0
SR70-W	18	38.9	61.1	22.2	0.0	0.0	0.0	0.0	61.1	0.0	0.0	0.0	0.0
I80-E	456	61.6	38.4	33.8	0.0	27.0	1.8	1.3	8.1	0.2	0.0	0.0	0.0
I80-W	426	59.6	40.4	34.0	0.0	21.6	1.6	3.3	13.1	0.7	0.0	0.0	0.0
SR89-N	5	60.0	40.0	40.0	0.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0	0.0
SR89-S	5	60.0	40.0	40.0	0.0	20.0	0.0	0.0	20.0	0.0	0.0	0.0	0.0
SR99-N	278	81.7	18.3	67.3	0.0	4.3	1.1	6.1	5.4	0.7	0.7	0.0	0.0
SR99-S	266	68.0	32.0	63.9	0.0	15.8	0.8	4.1	10.5	0.8	0.0	0.0	0.0
SR113-N	10	90.0	10.0	50.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0
SR113-S	20	35.0	65.0	75.0	0.0	50.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0
SR160-N	9	88.9	11.1	0.0	0.0	0.0	0.0	0.0	11.1	0.0	0.0	0.0	0.0
SR160-S	8	37.5	62.5	0.0	0.0	0.0	0.0	0.0	50.0	12.5	0.0	0.0	0.0
SR162-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
SR162-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
SR267-E	2	0.0	100.0	0.0	0.0	0.0	50.0	0.0	50.0	0.0	0.0	0.0	0.0
SR267-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
I505-N	8	25.0	75.0	75.0	0.0	75.0	0.0	0.0	0.0	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	**3,145**	**59.7**	**40.3**	**44.3**	**1.4**	**19.4**	**0.7**	**4.1**	**12.1**	**2.4**	**0.2**	**0.0**	**0.0**

Overall, congestion and delay have increased due to the beginning of the summer season. Travel demand was increased by 2.4% and delay was increased by 10% when compared to the previous quarter. See table below for reference.

Congestion by Route											
		Vehicle Hours of Delay at 35 mph			Difference 2022 Q2-2021 Q2		Difference 2022 Q2-2022 Q1		Rank		
Route	County	2021 Q2	2022 Q1	2022 Q2	Absolute	Percentage	Absolute	Percentage	2021 Q2	2022 Q1	2022 Q2
I80	Yolo	121,611	83,060	118,900	-2,711	-2.2%	35,841	43.2%	3	2	1
SR51	Sacramento	122,828	103,302	116,397	-6,431	-5.2%	13,096	12.7%	2	1	2
SR99	Sacramento	110,358	72,675	108,532	-1,826	-1.7%	35,857	49.3%	4	4	3
I5	Sacramento	141,550	73,034	67,319	-74,231	-52.4%	-5,715	-7.8%	1	3	4
SR65	Placer	53,844	32,754	57,738	3,895	7.2%	24,984	76.3%	6	8	5
US50	Sacramento	62,912	31,611	53,854	-9,058	-14.4%	22,243	70.4%	5	9	6
I80	Nevada	16,626	9,566	25,312	8,686	52.2%	15,746	164.6%	9	10	7
SR70	Yuba	10,219	53,809	23,710	13,491	132.0%	-30,100	-55.9%	10	6	8
I80	Sacramento	9,542	6,955	22,429	12,887	135.0%	15,474	222.5%	11	11	9
US50	El Dorado	38,763	67,111	22,301	-16,462	-42.5%	-44,810	-66.8%	7	5	10
I80	Placer	32,735	41,468	20,712	-12,023	-36.7%	-20,756	-50.1%	8	7	11
US50	Yolo	9,504	3,438	19,780	10,276	108.1%	16,342	475.3%	12	13	12
I5	Yolo	5,598	2,699	4,127	-1,471	-26.3%	1,428	52.9%	13	14	13
SR12	Sacramento	3,467	2,005	3,046	-422	-12.2%	1,041	51.9%	14	15	14
SR99	Sutter	137	246	1,033	896	651.7%	787	319.4%	21	21	15
SR99	Butte	459	492	848	390	85.0%	357	72.5%	20	17	16
SR89	Placer	1,078	5,036	834	-244	-22.6%	-4,201	-83.4%	17	12	17
SR89	El Dorado	3,382	1,045	818	-2,564	-75.8%	-227	-21.7%	15	16	18
SR28	Placer	463	394	440	-23	-4.9%	46	11.8%	19	19	19
SR20	Yuba	0	0	85	85		85				20
SR113	Yolo	36	102	72	36	98.6%	-31	-30.0%	24	23	21
SR267	Placer	756	47	57	-699	-92.5%	10	20.4%	18	26	22
SR20	Sutter	0	56	54	54		-2	-3.0%		25	23
SR70	Sutter	4	4	39	35	1000.0%	34	839.0%	28	29	24
SR20	Colusa	1,354	97	37	-1,318	-97.3%	-60	-62.3%	16	24	25
SR160	Sacramento	21	269	35	14	63.7%	-234	-87.1%	25	20	26
I505	Yolo	13	27	27	15	118.4%	0	-0.4%	27	27	27
SR20	Nevada	42	398	24	-18	-43.3%	-374	-94.1%	23	18	28
SR45	Colusa	1	0	2	1	150.0%	2		30		29
SR49	Nevada	1	109	2	1	66.7%	-107	-98.2%	29	22	29
SR162	Butte	124	1	1	-123	-99.0%	0	18.2%	22	31	31
SR113	Sutter	0	14	1	1		-13	-92.3%		28	32
I5	Colusa	16	3	0	-16	-100.0%	-3	-100.0%	26	30	
I505	Yuba	0	0	0	0		0				
SR275	Yolo	0	0	0	0		0				
TOTALS		**747,444**	**591,827**	**668,565**	**-78,879**	**-10.6%**	**76,738**	**13.0%**			

As indicated by the table above, the Total Delay for all monitored routes has increased to *76,738* hours, an increase of *13.0%* when compared with previous quarter.

Based on the total delay by route, Yolo I-80 was the worst performing freeway in District 3 due to its bottleneck locations. Five out of the ten most congested routes are in Sacramento County, 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. The District will continue to explore the best possible ways to reduce delay in the impacted areas of District 3.