

District 10 Mobility Performance Report

2021 Second Quarter

DEPARTMENT OF TRANSPORTATION

August 13, 2021
: Jaime Q. Quesada

District 10 Mobility Performance Report

2021 Second Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 10 contains eight counties located within the Central Valley (San Joaquin / Stanislaus / Merced) and the Sierra Nevada (Amador / Calaveras / Tuolumne / Mariposa / Alpine). Over the years detection in Alpine and Calaveras Counties has been sparse, so the District 10 Mobility Performance Report (MPR) no longer includes these two counties in the quarterly report.

The MPR quarterly analysis compares information in the current quarter to that of the previous quarter and the quarter one year prior. The following are the performance measures reported in the MPR:

- Vehicle Miles Traveled (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- Detector Health (DH)

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 MPR presents congestion information at 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 input.

FINDINGS

In the second quarter, total delay equaled 586 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 2 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was an 120 percent total delay increase in 35 mph quarterly delay and 78 percent

total delay increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 8,051 VHD at 35 mph and 27,162 VHD at 60 mph. Compared to the same quarter the year before, there was a 112 percent increase in 35 mph average weekday quarterly delay and 70 percent increase in 60 mph average weekday quarterly delay. The increased delay numbers at 35 mph and 60 mph can mainly be attributed to the fact that the COVID-19 lockdown restrictions were rolled back during the second quarter of 2021. It is expected that the third quarter of 2021 will show an additional increased delay across the board if COVID-19 lockdown restriction continue to be rolled back.

Top Ten Bottlenecks for Quarter 2

County	Shift	Fwy	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
SJ	AM	I205-W	1.69	0.761	37.74	-121.54	61	2.46	82,745	12,050
STA	PM	SR132-E	9.42	1.556	37.64	-121.25	64	5.40	43,622	10,060
SJ	PM	SR4-E	66.43	R18.9	37.96	-121.25	55	3.02	30,875	6,205
SJ	PM	SR99-S	236.56	0.776	37.74	-121.12	61	2.31	30,408	9,135
SJ	PM	SR99-S	240.43	4.64	37.77	-121.18	63	0.94	17,061	9,985
SJ	PM	SR99-S	238.76	2.971	37.76	-121.15	56	1.40	17,006	7,295
SJ	PM	I205-E	9.44	R8.51	37.76	-121.41	60	1.37	14,879	8,565
STA	PM	SR99-S	227.83	R16.799	37.65	-121.02	51	2.03	12,859	4,410
SJ	PM	I205-E	12.87	R11.94	37.77	-121.34	53	1.80	12,391	5,000
SJ	PM	I205-E	10.22	R9.29	37.76	-121.39	35	2.34	10,625	2,625

SUMMARY TABLE FOR THE 2021 Q2 REPORT

The following District 10 projects are currently being constructed or are scheduled for construction effective August 2021. These current and future (planned) projects will further relieve congestion in District 10:

MERCED COUNTY

MER 99 NB LIVINGSTON MEDIAN WIDENING; EA 10-0Q121

Lane widening from 2 to 3 lanes

Approve Construction Contract Date – 08/01/2021

End Project – 10/02/2023

MER 99 SB LIVINGSTON MEDIAN WIDENING; EA 10-0Q122

Lane widening from 2 to 3 lanes
Approve Construction Contract Date – 01/19/2019
End Project – 10/01/2021

MER 152 – LOS BANOS BYPASS SEGMENT I; EA 10-41911

Convert 4 lane expressway to 6 lane freeway
Approve Construction Contract Date – 05/15/2018
End Project – 11/01/2022

SAN JOAQUIN COUNTY

SJ 4 RAMP METERING IMPROVEMENTS; EA 10-1F180

Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PRS/PDS; PA&ED Scheduled for mid-2016
End Project – Estimated to be mid 2022

SJ 120 RAMP METERING IMPROVEMENTS; EA 10-1F040

Install ramp meters along SR 4 between the I-5 and SR 99 Connectors
Currently in PS&E
End Project – Estimated to be 2023

I-205 SMART CORRIDOR PHASE 2; EA 10-1C330

Install ramp meters and ITS elements along I205 from MacArthur to Grant Line Road
Currently in PS&E
End Project – Estimated to be 2022

I-205 – MOUNTAIN HOUSE PARKWAY INTERCHANGE PROJECT; EA 10-1E210

Improve the I-205 – Mountain House Parkway Interchange to accommodate planned future growth in and around the City of Tracy
Currently in PS&E
End Project – Estimated to be 2025

I-580 – PATTERSON PASS ROAD INTERCHANGE PROJECT; EA 10-1E220

Improve the I-205 – Patterson Pass Road Interchange to accommodate planned future growth in and around the City of Tracy
Currently in PS&E
End Project – Estimated to be 2025

I-205 – LAMMERS ROAD / 11TH STREET INTERCHANGE PROJECT; EA 10-0H910

Construct the I-205 – Lammers Road / 11th Street Interchange to accommodate planned future growth in and around the City of Tracy
Currently in PS&E
End Project – Estimated to be 2025

STANISLAUS COUNTY

STA 99 / SJ 99 RAMP METERING & MAINLINE IMPROVEMENTS; EA 10-1C300

Improve Mainline and Ramp Operations; Standardize Structure Clearance; Add Auxiliary Lane
Project Complete

The above capacity increasing, ramp metering, interchange improvement, and interchange construction projects are located on the routes, in the cities, and in the counties that experience the most congestion in District 10. It is expected that the projects will help increase the Vehicle Miles Traveled while reducing congestion and delay as the population and demand in District 10 grows over the next 10 years.

The next section of this report summarizes the District 10 2021 Q2 Quarterly Mobility Statistics.

2021 Q2 Quarterly Mobility Statistics District 10

Data may change in coming months due to on-going reconciliation process

Measure	Graph	Percentage Change							
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2020</td><td>1.5</td></tr> <tr><td>2021</td><td>1.9</td></tr> </table>	Year	Q2	2020	1.5	2021	1.9	Over one year ago	Over last quarter
		Year	Q2						
		2020	1.5						
2021	1.9								
30.7%	14.4%								
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2020</td><td>266</td></tr> <tr><td>2021</td><td>586</td></tr> </table>	Year	Q2	2020	266	2021	586	Over one year ago	Over last quarter
		Year	Q2						
		2020	266						
2021	586								
120.2%	30.4%								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2020</td><td>3,795</td></tr> <tr><td>2021</td><td>8,051</td></tr> </table>	Year	Q2	2020	3,795	2021	8,051	Over one year ago	Over last quarter
		Year	Q2						
		2020	3,795						
2021	8,051								
112.1%	20.6%								
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2020</td><td>1.1</td></tr> <tr><td>2021</td><td>2</td></tr> </table>	Year	Q2	2020	1.1	2021	2	Over one year ago	Over last quarter
		Year	Q2						
		2020	1.1						
2021	2								
78.3%	25.9%								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2020</td><td>16</td></tr> <tr><td>2021</td><td>27</td></tr> </table>	Year	Q2	2020	16	2021	27	Over one year ago	Over last quarter
		Year	Q2						
		2020	16						
2021	27								
69.5%	14.8%								

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2021 Q2 Quarterly Mobility Statistics District 10

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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
		-	Wednesday -10.7%
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 AM -18.7%	7 PM -48.3%
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
		-	10 AM -24.8%
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
		7 AM -49%	6 PM -31.4%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Friday 85.6%	Tuesday 29.1%
		4 PM 148.6%	3 PM 43.8%
		3 PM 465.9%	12 PM 110.6%
		1 PM 296.2%	1 PM 535.7%

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2021 Q2 Quarterly Mobility Statistics District 10

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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
		-	Tuolumne -66.1%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		San Joaquin 181.4%	San Joaquin 24.4%
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 183.4%	PM Peak 39.7%
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		-8%	-7%
		Change in Bad over one year ago	Change in Bad over last quarter
		30%	22%

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**2021 Q2 Quarterly Mobility Statistics
District 10**

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Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2021 Q2-2020 Q2		Difference 2021 Q2-2021 Q1		Rank		
		2020 Q2	2021 Q1	2021 Q2	Absolute	Percentage	Absolute	Percentage	2020 Q2	2021 Q1	2021 Q2
I205	San Joaquin	80751	159310	286010.1	205259.1	254%	126,700	80%	1	1	1
SR99	San Joaquin	33279.5	62868.4	98244.9	64965.4	195%	35,377	56%	3	3	2
I5	San Joaquin	22286	120662.4	86580.4	64294.4	288%	(34,082)	-28%	6	2	3
SR99	Stanislaus	64980.1	50255.9	77326.3	12346.2	19%	27,070	54%	2	4	4
SR4	San Joaquin	5127.2	15973.5	35375.1	30247.9	590%	19,402	121%	10	8	5
SR132	Stanislaus	8926.5	22599.3	31448.7	22522.2	252%	8,849	39%	9	5	6
SR120	San Joaquin	10864.8	21020.8	27870.7	17005.9	157%	6,850	33%	7	6	7
SR99	Merced	24865.5	13927.5	27461.5	2596	10%	13,534	97%	4	9	8
I580	San Joaquin	23374.3	19510.9	14829.4	-8544.9	-37%	(4,682)	-24%	5	7	9
I5	Stanislaus	9486.3	1818	5846.1	-3640.2	-38%	4,028	222%	8	14	10
SR132	San Joaquin	3102.3	4792.9	4964.2	1861.9	60%	171	4%	12	11	11
SR12	San Joaquin	4051.8	3097.2	3857.3	-194.5	-5%	760	25%	11	12	12
I5	Merced	534	963.4	2298.1	1764.1	330%	1,335	139%	15	15	13
SR108	Tuolumne	1246.6	7844	2250.9	1004.3	81%	(5,593)	-71%	13	10	14
SR165	Merced	55	409.1	1695	1640	2982%	1,286	314%	18	17	15
SR219	Stanislaus	1190.9	1881.1	1547.3	356.4	30%	(334)	-18%	14	13	16
SR16	Amador	261.6	447.3	889.1	627.5	240%	442	99%	16	16	17
SR120	Tuolumne	9.6	0	388.6	379	3948%	389		23		18
SR88	Amador	130.8	236.2	335	204.2	156%	99	42%	17	18	19
SR49	Mariposa	33.1	45.6	131.5	98.4	297%	86	188%	19	19	20
SR152	Merced	12.1	4.9	46.9	34.8	288%	42	857%	20	21	21
SR49	Tuolumne	11	7.4	25.5	14.5	132%	18	245%	22	20	22
SR104	Amador	11.3	4.8	4.8	-6.5	-58%	(0)	0%	21	22	23
SR124	Amador	1.7	0.2	0	-1.7	-100%	(0)	-100%	24	23	
TOTALS		294,593	507,681	709,427	414,834	140.8%	201,747	39.7%			

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