

District 10 Mobility Performance Report

2022 First Quarter

DEPARTMENT OF TRANSPORTATION

May 9, 2022
: Jaime Q. Quesada

District 10 Mobility Performance Report

2022 First 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 first quarter, total delay equaled 493 thousand vehicle hours of delay (VHD) at the 35 mph speed threshold and 1.8 million VHD at the 60 mph threshold. Compared to the same quarter the year before, there was an 9.7 percent total delay increase in 35 mph quarterly delay and 12 percent

total delay increase in 60 mph quarterly delay. The average weekday delay experienced in this quarter was approximately 7,321 VHD at 35 mph and 26,133 VHD at 60 mph. Compared to the same quarter the year before, there was a 9.7 percent increase in 35 mph average weekday quarterly delay and 10.4 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 began mid-March and ran through the first quarter of 2021. It is expected that the second quarter of 2022 will continue the same trend of increased delay across the board with COVID-19 cases decreasing and businesses returning to pre-COVID-19 operations.

Top Ten Bottlenecks for Quarter 1

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	58	3.15	90,794	10,990
STA	PM	SR99-S	227.83	16.799	37.65	-121.02	51	1.94	21,898	6,060
SJ	PM	SR99-S	240.43	4.64	37.77	-121.18	57	1.09	21,835	10,535
SJ	PM	SR99-S	238.76	2.971	37.76	-121.15	56	1.50	19,559	8,275
SJ	PM	SR99-S	236.56	0.776	37.74	-121.12	60	1.36	19,385	9,335
SJ	PM	SR4-E	66.43	18.9	37.96	-121.25	40	3.13	18,344	3,575
SJ	PM	I205-E	9.44	8.51	37.76	-121.41	62	1.19	12,334	8,070
STA	PM	SR132-E	9.42	1.556	37.64	-121.25	22	4.23	10,994	2,890
SJ	PM	SR99-S	237.87	2.081	37.75	-121.14	55	0.59	10,700	9,310
SJ	PM	SR120-E	0.42	0.914	37.79	-121.30	53	1.29	6,262	6,120

SUMMARY TABLE FOR THE 2022 Q1 REPORT

The following District 10 projects are currently being constructed or are scheduled for construction effective April 2022. 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 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 2023

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 2023

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 2027

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 2027

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 2027

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 2022 Q1 Quarterly Mobility Statistics.

2022 Q1 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)	Miles (Billions) <table><thead><tr><th>Period</th><th>VMT (Billions)</th></tr></thead><tbody><tr><td>2021 Q1</td><td>1.67</td></tr><tr><td>2021 Q4</td><td>1.92</td></tr><tr><td>2022 Q1</td><td>1.85</td></tr></tbody></table>	Period	VMT (Billions)	2021 Q1	1.67	2021 Q4	1.92	2022 Q1	1.85	Over one year ago	Over last quarter
		Period	VMT (Billions)								
		2021 Q1	1.67								
		2021 Q4	1.92								
2022 Q1	1.85										
10.8%	-3.8%										
Total Vehicle Hours of Delay (VHD) at 35 mph	Hours (Thousands) <table><thead><tr><th>Period</th><th>VHD (Thousands)</th></tr></thead><tbody><tr><td>2021 Q1</td><td>449.6</td></tr><tr><td>2021 Q4</td><td>645.9</td></tr><tr><td>2022 Q1</td><td>493.1</td></tr></tbody></table>	Period	VHD (Thousands)	2021 Q1	449.6	2021 Q4	645.9	2022 Q1	493.1	Over one year ago	Over last quarter
		Period	VHD (Thousands)								
		2021 Q1	449.6								
		2021 Q4	645.9								
2022 Q1	493.1										
9.7%	-23.7%										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	Hours <table><thead><tr><th>Period</th><th>VHD (Thousands)</th></tr></thead><tbody><tr><td>2021 Q1</td><td>6,676</td></tr><tr><td>2021 Q4</td><td>8,919</td></tr><tr><td>2022 Q1</td><td>7,321</td></tr></tbody></table>	Period	VHD (Thousands)	2021 Q1	6,676	2021 Q4	8,919	2022 Q1	7,321	Over one year ago	Over last quarter
		Period	VHD (Thousands)								
		2021 Q1	6,676								
		2021 Q4	8,919								
2022 Q1	7,321										
9.7%	-17.9%										
Total Vehicle Hours of Delay (VHD) at 60 mph	Hours (Millions) <table><thead><tr><th>Period</th><th>VHD (Millions)</th></tr></thead><tbody><tr><td>2021 Q1</td><td>1.6</td></tr><tr><td>2021 Q4</td><td>2.1</td></tr><tr><td>2022 Q1</td><td>1.8</td></tr></tbody></table>	Period	VHD (Millions)	2021 Q1	1.6	2021 Q4	2.1	2022 Q1	1.8	Over one year ago	Over last quarter
		Period	VHD (Millions)								
		2021 Q1	1.6								
		2021 Q4	2.1								
2022 Q1	1.8										
12%	-14.5%										
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	Hours (Thousands) <table><thead><tr><th>Period</th><th>VHD (Thousands)</th></tr></thead><tbody><tr><td>2021 Q1</td><td>24</td></tr><tr><td>2021 Q4</td><td>29</td></tr><tr><td>2022 Q1</td><td>26</td></tr></tbody></table>	Period	VHD (Thousands)	2021 Q1	24	2021 Q4	29	2022 Q1	26	Over one year ago	Over last quarter
		Period	VHD (Thousands)								
		2021 Q1	24								
		2021 Q4	29								
2022 Q1	26										
10.4%	-9.8%										

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2022 Q1 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 -13.9%	Thursday -21.9%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Thursday 25.4%	Monday 1.8%
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
		7 PM -48.2%	5 PM -22.8%
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		7 AM 47.7%	11 AM 20%
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
		7 PM -48.6%	4 PM -62.1%
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		12 PM 82.5%	5 AM 38.8%
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
		4 PM -34.2%	2 PM -67.9%
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		1 PM 115.1%	2 AM 24.4%

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2022 Q1 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
		San Joaquin -8.3%	San Joaquin -30.3%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Stanislaus 84.8%	Tuolumne 76%
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
		—	PM Peak -21.2%
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		PM Peak 14.3%	—
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		-7%	2%
		Change in Bad over one year ago	Change in Bad over last quarter
		26%	-3%

2022 Q1 Quarterly Mobility Statistics District 10

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Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2022 Q1-2021 Q1		Difference 2022 Q1-2021 Q4		Rank		
		2021 Q1	2021 Q4	2022 Q1	Absolute	Percentage	Absolute	Percentage	2021 Q1	2021 Q4	2022 Q1
I205	San Joaquin	159,310	328,591	226,539	67,229	42.2%	-102,053	-31.1%	1	1	1
SR99	Stanislaus	50,256	121,584	100,972	50,716	100.9%	-20,612	-17.0%	4	2	2
SR99	San Joaquin	62,868	99,891	72,124	9,256	14.7%	-27,767	-27.8%	3	3	3
I5	San Joaquin	120,662	68,029	50,135	-70,528	-58.5%	-17,894	-26.3%	2	4	4
SR132	Stanislaus	22,599	31,110	33,782	11,183	49.5%	2,672	8.6%	5	7	5
SR4	San Joaquin	15,974	32,575	27,266	11,292	70.7%	-5,309	-16.3%	8	6	6
SR120	San Joaquin	21,021	57,636	26,605	5,584	26.6%	-31,031	-53.8%	6	5	7
SR99	Merced	13,928	19,893	15,432	1,505	10.8%	-4,461	-22.4%	9	9	8
I580	San Joaquin	19,511	27,297	11,497	-8,014	-41.1%	-15,800	-57.9%	7	8	9
SR152	Merced	5	5,696	8,954	8,949	182632.7%	3,258	57.2%	21	11	10
I5	Stanislaus	1,818	2,229	4,787	2,969	163.3%	2,559	114.8%	14	14	11
SR12	San Joaquin	3,097	3,947	3,686	588	19.0%	-262	-6.6%	12	12	12
SR132	San Joaquin	4,793	5,822	3,146	-1,647	-34.4%	-2,676	-46.0%	11	10	13
SR108	Tuolumne	7,844	1,602	2,754	-5,090	-64.9%	1,152	71.9%	10	15	14
SR165	Merced	409	951	2,418	2,009	491.0%	1,467	154.1%	17	16	15
SR219	Stanislaus	1,881	2,311	1,914	33	1.8%	-397	-17.2%	13	13	16
SR16	Amador	447	200	838	390	87.3%	638	319.4%	16	18	17
SR120	Tuolumne	0	166	504	504		337	202.7%		19	18
SR88	Amador	236	16	226	-10	-4.1%	210	1315.0%	18	22	19
I5	Merced	963	545	163	-801	-83.1%	-382	-70.1%	15	17	20
SR88	San Joaquin	0	0	140	140		140				21
SR49	Mariposa	46	90	71	25	55.7%	-19	-21.3%	19	20	22
SR49	Tuolumne	7	88	9	1	16.2%	-79	-90.2%	20	21	23
SR104	Amador	5	0	0	-5	-100.0%	0		22		
SR124	Amador	0	0	0	0	-100.0%	0		23		
SR140	Merced	0	0	0	0		0				
TOTALS		507,681	810,270	593,961	86,280	17.0%	-216,308	-26.7%			

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