

District 05 Mobility Performance Report

2020 First Quarter

DEPARTMENT OF TRANSPORTATION

April 28, 2020
: Nicholas Zangl

2020 First Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 5 contains five counties located along the central coast of California: Santa Barbara, San Luis Obispo, Monterey, Santa Cruz and San Benito Counties. All counties are in urban settings within city limits and rural settings outside city limits. Santa Cruz and Santa Barbara are the top two most congested counties in the 1st quarter.

The Mobility Performance quarterly analysis compares information with over a year ago and over last quarter in the following performance measures:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD), Bottleneck Locations
- Lost Lane Miles (equivalent lost productivity)
- Detector Health

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 260,200 vehicle hours of delay (VHD) at the 35 mph speed threshold, and 587,700 VHD at the 60 mph threshold. The average weekday delay experienced in this quarter was approximately 3,517 thousand VHD at 35 mph, and 8,000 thousand VHD at 60 mph.

Top Ten Bottlenecks for Quarter 1

County	Fwy	Location	Type	Shift	Abs PM	CA PM	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
SCR	SR1-S	BAY AVE - PORTER ST AT HWY 1 SB	ML	PM	364.577	13.279	50	1.18	13126.1	10480
MON	SR1-N	CANYON DEL REY BLVD AT HWY 1 NB	ML	PM	330.075	79.54	47	2.58936	10487	4820
SCR	SR1-N	PARK AVE AT HWY 1 SB VDS MLNB NB	ML	AM	363.679	12.338	45	3.28	9342	4495
SCR	SR1-N	BAY AVE - PORTER ST AT HWY 1 NB	ML	PM	364.373	13.032	50	0.5	7203.3	10735
SB	US101-N	CASSITAS PASS RD 101 NB VDS MLNB	ML	AM	85.408	2.485	32	1.95	4494.3	2300
SCR	SR1-N	RIO DEL MAR BLVD AT HWY 1 SB VDS	ML	AM	360.894	9.553	46	2.71522	4212.1	2680
SB	US101-S	CABRILLO BLVD SB 101 PM 94.57 VD	ML	PM	94.55	11.662	62	0.3	3939.3	13595
SBT	SR156-E	WEST OF MITCHELL RD ON HWY 156 W	ML	PM	13.287	6.918	57	2.41053	3245.3	9070
SCR	SR1-S	700' N of 001 NB Overcrossing	ML	AM	368.508	17.21	35	5.77714	2883.3	1690
MON	SR1-S	SOUTH OF FREMONT BLVD AT HWY 1 N	ML	AM	330.929	80.46	46	2.70435	2865.6	3535

Quarterly Mobility Statistics

Measure	Graph	Percentage Change									
Vehicle Miles of Travel (VMT)	<p>Miles (Millions)</p> <table border="1"> <caption>Vehicle Miles of Travel (VMT) Data</caption> <thead> <tr> <th>Quarter</th> <th>Miles (Millions)</th> </tr> </thead> <tbody> <tr> <td>2019 Q1</td> <td>844.8</td> </tr> <tr> <td>2019 Q4</td> <td>946.1</td> </tr> <tr> <td>2020 Q1</td> <td>829.2</td> </tr> </tbody> </table>	Quarter	Miles (Millions)	2019 Q1	844.8	2019 Q4	946.1	2020 Q1	829.2	Over one year ago	Over last quarter
Quarter	Miles (Millions)										
2019 Q1	844.8										
2019 Q4	946.1										
2020 Q1	829.2										
		-1.8%	-12.4%								
		↓	↓								
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <caption>Total Vehicle Hours of Delay (VHD) at 35 mph Data</caption> <thead> <tr> <th>Quarter</th> <th>Hours (Thousands)</th> </tr> </thead> <tbody> <tr> <td>2019 Q1</td> <td>288.7</td> </tr> <tr> <td>2019 Q4</td> <td>453.1</td> </tr> <tr> <td>2020 Q1</td> <td>260.2</td> </tr> </tbody> </table>	Quarter	Hours (Thousands)	2019 Q1	288.7	2019 Q4	453.1	2020 Q1	260.2	Over one year ago	Over last quarter
Quarter	Hours (Thousands)										
2019 Q1	288.7										
2019 Q4	453.1										
2020 Q1	260.2										
		-9.9%	-42.6%								
		↓	↓								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours</p> <table border="1"> <caption>Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph Data</caption> <thead> <tr> <th>Quarter</th> <th>Hours</th> </tr> </thead> <tbody> <tr> <td>2019 Q1</td> <td>4051</td> </tr> <tr> <td>2019 Q4</td> <td>6646</td> </tr> <tr> <td>2020 Q1</td> <td>3517</td> </tr> </tbody> </table>	Quarter	Hours	2019 Q1	4051	2019 Q4	6646	2020 Q1	3517	Over one year ago	Over last quarter
Quarter	Hours										
2019 Q1	4051										
2019 Q4	6646										
2020 Q1	3517										
		-13.2%	-47.1%								
		↓	↓								
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <caption>Total Vehicle Hours of Delay (VHD) at 60 mph Data</caption> <thead> <tr> <th>Quarter</th> <th>Hours (Thousands)</th> </tr> </thead> <tbody> <tr> <td>2019 Q1</td> <td>654.2</td> </tr> <tr> <td>2019 Q4</td> <td>968.9</td> </tr> <tr> <td>2020 Q1</td> <td>587.7</td> </tr> </tbody> </table>	Quarter	Hours (Thousands)	2019 Q1	654.2	2019 Q4	968.9	2020 Q1	587.7	Over one year ago	Over last quarter
Quarter	Hours (Thousands)										
2019 Q1	654.2										
2019 Q4	968.9										
2020 Q1	587.7										
		-10.2%	-39.3%								
		↓	↓								
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <caption>Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph Data</caption> <thead> <tr> <th>Quarter</th> <th>Hours (Thousands)</th> </tr> </thead> <tbody> <tr> <td>2019 Q1</td> <td>9</td> </tr> <tr> <td>2019 Q4</td> <td>14</td> </tr> <tr> <td>2020 Q1</td> <td>8</td> </tr> </tbody> </table>	Quarter	Hours (Thousands)	2019 Q1	9	2019 Q4	14	2020 Q1	8	Over one year ago	Over last quarter
Quarter	Hours (Thousands)										
2019 Q1	9										
2019 Q4	14										
2020 Q1	8										
		-11.9%	-42%								
		↓	↓								

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
		Monday -17% ↓	Friday -49.5% ↓
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
		4 PM -14% ↓	5 PM -40.6% ↓
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 AM -76.9% ↓	12 PM -23.3% ↓
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
		12 PM -24.5% ↓	9 AM -93.1% ↓
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		8 AM 17.5% ↑	-
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		1 PM 59% ↑	1 PM 11.8% ↑
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		3 PM 139.7% ↑	1 PM 20.5% ↑

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 Luis Obispo -67.6% ↓	Santa Cruz -36.4% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Monterey 58.1% ↑	-
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
		Off-Peak Day -23.4% ↓	PM Peak -44.8% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		AM Peak 10.3% ↑	-
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		62% ↑	9% ↓
		Change in Bad over one year ago	Change in Bad over last quarter
		-30% ↑	-24% ↑

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2020 Q1-2019 Q1		Difference 2020 Q1-2019 Q4		Rank		
		2019 Q1	2019 Q4	2020 Q1	Absolute	Percentage	Absolute	Percentage	2019 Q1	2019 Q4	2020 Q1
		SR1	Santa Cruz	125,771	197,966	129,394	3,623	2.9%	-68,572	-34.6%	1
US101	Santa Barbara	56,039	101,355	44,473	-11,566	-20.6%	-56,882	-56.1%	2	2	2
SR1	Monterey	32,143	50,635	36,858	4,716	14.7%	-13,777	-27.2%	3	3	3
SR17	Santa Cruz	22,797	32,082	17,006	-5,790	-25.4%	-15,076	-47.0%	5	5	4
SR68	Monterey	0	18,090	12,808	12,808		-5,283	-29.2%		6	5
US101	Monterey	3,243	11,022	6,270	3,027	93.3%	-4,753	-43.1%	7	7	7
SR156	San Benito	311	5,829	4,385	4,074	1311.2%	-1,444	-24.8%	8	8	8
SR25	San Benito	20,501	0	0	-20,501	-100.0%	0		6		
TOTALS		288,651	453,065	260,204	-28,447	-9.9%	-192,861	-42.6%			

In previous quarters, the two detectors on SR25 were included in District 5 data but located in Santa Clara County in District 4. As of 2019 Q4, detection on SR25 was transferred from District 5 to District 4 in PeMS, eliminating the need for reconciliation of those two detectors moving forward. SR25 congestion will be part of the table above for the remainder of 2020 until the one year prior data is equal to the current quarter showing 0 congestion due to the detectors no longer existing in District 5.