

District 12 Mobility Performance Report

2018 1st Quarter

DEPARTMENT OF TRANSPORTATION

April 25, 2018
District 12 TMC

DISTRICT 12 MOBILITY PERFORMANCE REPORT

2018 1st Quarter

EXECUTIVE SUMMARY

Overview

Caltrans District 12 (Orange County) is located in southern California and is neighbors with District 7 (Los Angeles), District 8 (San Bernardino), and District 11 (San Diego). As of July 2016 the total population in Orange County was 3,172,532. The jurisdictional boundaries of Orange County encompass a metropolitan area of 794 square miles, including 34 cities, and 17 state highway routes. The county has 1,059 lane miles of general purpose lanes and 226 lane miles of High-Occupancy Vehicle (HOV) lanes, which is one of California's largest HOV lane networks. Orange County is the third most populous county in California, the sixth-most populous in the United States, and more populous than twenty-one U.S. states. Its county seat is Santa Ana. It is the second most densely populated county in the state.

The Mobility Performance quarterly analysis compares information from the most recent quarter and the previous 4 quarters, involving the following performance measures:

- Vehicle Miles of Travel (VMT)
- Vehicle Hours of Delay (VHD)
- Lost Lane Miles (LLM)
- 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 uses congestion at two speed thresholds: delay from vehicles traveling below 35 mph and delay from vehicles traveling below 60 mph. The 35 MPH limit

represents severe congestion while the 60 mph limit represents light and heavy congestion. These thresholds/limits are set by Caltrans and are based upon engineering experience and District input.

FINDINGS

In the first quarter, total delay equaled to 2.1 million vehicle hours of delay (VHD) at the 35 mph threshold, about 22.9 percent less than the previous quarter and 5.8 million VHD at the 60 mph threshold, about 14.8 percent less than the previous quarter.

The average weekday VHD in the first quarter was 29 thousand hours of delay at the 35 mph threshold, about 21.6 percent less than the previous quarter and 80 thousand hours of delay at the 60 mph, about 14.1 percent less than the previous quarter

Top 10 Bottlenecks for the 1st Quarter

Abs PM	CA PM	# Days Active	Avg Extent (Miles)	Total Delay (veh-hrs)	Total Duration (mins)
16.53	16.76	61	4.665574	129288.9	11720
14.49	14.72	62	3.75	50000.7	9210
13.74	13.97	60	3.8	48810.4	6995
11.602	11.62	62	1.391935	43586.1	12745
5.98	6.21	55	1.621818	33825.7	10085
7.85	R7.85	62	1.790323	27446.7	6435
8.6	8.6	51	2.3	24652.3	5765
105.988	33.8	62	1.087097	24268.7	10955
14.31	14.54	48	4.645833	23443.4	7105
9.41	R9.41	51	2.780392	20485.5	5190

Quarterly Mobility Statistics

2018 Q1 Quarterly Mobility Statistics District 12

Measure	Graph	Percentage Change													
		Over one year ago	Over last quarter												
Vehicle Miles of Travel (VMT)	<p>Miles (Billions)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>3.3</td><td>3.6</td><td></td></tr> <tr><td>2018</td><td>3.5</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2017	3.3	3.6		2018	3.5			1.2%	-1.6%
Year	Q1	Q4	Q1												
2017	3.3	3.6													
2018	3.5														
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>2.7</td><td>2.7</td><td></td></tr> <tr><td>2018</td><td>2.1</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2017	2.7	2.7		2018	2.1			-24.2%	-22.9%
Year	Q1	Q4	Q1												
2017	2.7	2.7													
2018	2.1														
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>40</td><td>37</td><td></td></tr> <tr><td>2018</td><td>29</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2017	40	37		2018	29			-26.6%	-21.6%
Year	Q1	Q4	Q1												
2017	40	37													
2018	29														
Total Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>6.9</td><td>6.8</td><td></td></tr> <tr><td>2018</td><td>5.8</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2017	6.9	6.8		2018	5.8			-15.4%	-14.8%
Year	Q1	Q4	Q1												
2017	6.9	6.8													
2018	5.8														
Average Non-Holiday Weekday Vehicle Hours of Delay (VHD) at 60 mph	<p>Hours (Thousands)</p> <table border="1"> <tr><th>Year</th><th>Q1</th><th>Q4</th><th>Q1</th></tr> <tr><td>2017</td><td>98</td><td>94</td><td></td></tr> <tr><td>2018</td><td>80</td><td></td><td></td></tr> </table>	Year	Q1	Q4	Q1	2017	98	94		2018	80			-18%	-14.1%
Year	Q1	Q4	Q1												
2017	98	94													
2018	80														

2018 Q1
Quarterly Mobility Statistics
District 12

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
		Thursday -21.2% ↓	Wednesday -23.2% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
		Sun/Hol 16.5% ↑	-
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
		5 PM -21.9% ↓	6 PM -22.3% ↓
		Largest Magnitude Weekday Increase over one year ago	Largest Magnitude Weekday Increase over last quarter
		8 PM 18% ↑	4 AM 22.9% ↑
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
		12 PM -33.9% ↓	5 PM -47.1% ↓
		Largest Magnitude Saturday Increase over one year ago	Largest Magnitude Saturday Increase over last quarter
		9 PM 183.5% ↑	9 PM 146.9% ↑
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
		10 PM -11.2% ↓	5 PM -41.1% ↓
		Largest Magnitude Sun./Holiday Increase over one year ago	Largest Magnitude Sun./Holiday Increase over last quarter
		5 PM 44.9% ↑	10 AM 13.1% ↑

**2018 Q1
Quarterly Mobility Statistics
District 12**

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
		Orange -24.2% ↓	Orange -22.9% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
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 -23.9% ↓	PM Peak -19.4% ↓
		Largest Magnitude Increase over one year ago	Largest Magnitude Increase over last quarter
Average Number of Good and Bad Detectors		Change in Good over one year ago	Change in Good over last quarter
		-2% ↓	-2% ↓
		Change in Bad over one year ago	Change in Bad over last quarter
		16% ↑	6% ↑

**2018 Q1
Quarterly Mobility Statistics
District 12**

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2018 Q1-2017 Q1		Difference 2018 Q1-2017 Q4		Rank		
		2017 Q1	2017 Q4	2018 Q1	Absolute	Percentage	Absolute	Percentage	2017 Q1	2017 Q4	2018 Q1
I405	Orange	674,078	731,993	663,832	-10,247	-1.5%	-68,161	-9.3%	1	1	1
I5	Orange	563,409	543,515	451,761	-111,649	-19.8%	-91,755	-16.9%	2	2	2
SR55	Orange	510,173	381,052	283,897	-226,275	-44.4%	-97,155	-25.5%	3	3	3
SR91	Orange	373,886	374,128	217,284	-156,602	-41.9%	-156,844	-41.9%	4	4	4
SR57	Orange	303,469	303,981	172,825	-130,644	-43.1%	-131,156	-43.1%	5	5	5
SR22	Orange	142,866	169,251	124,910	-17,956	-12.6%	-44,342	-26.2%	6	6	6
SR73	Orange	112,539	85,869	86,005	-26,534	-23.6%	136	0.2%	7	7	7
SR241	Orange	31,774	52,639	28,783	-2,991	-9.4%	-23,857	-45.3%	8	8	8
I605	Orange	13,954	30,944	18,430	4,477	32.1%	-12,514	-40.4%	9	9	9
SR133	Orange	2,216	7,798	18,199	15,983	721.2%	10,402	133.4%	10	10	10
SR142	Orange	0	0	2,036	2,036		2,036				11
SR261	Orange	992	1,509	1,015	23	2.4%	-494	-32.7%	11	11	12
SR74	Orange	0	0	119	119		119				13
SR1	Orange	0	51	7	7		-44	-86.0%		12	14