

District 12 Mobility Performance Report

2022 2nd Quarter

DEPARTMENT OF TRANSPORTATION

July 31, 2022

District 12 Traffic Operations Northwest

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 April 1, 2020, the total population in Orange County was 3,010,232. 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 Mobility Performance Report 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 2nd quarter of 2022, total delay equaled to 1.4 million vehicle hours of delay (VHD) at the 35 MPH speed threshold and 4.9 million VHD at 60 MPH threshold. Compared to the previous quarter, there was a 22.2 percent increase in 35 MPH VHD and 14.6 percent increase in 60 MPH VHD.

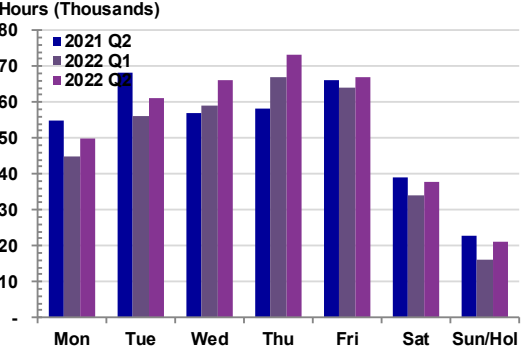



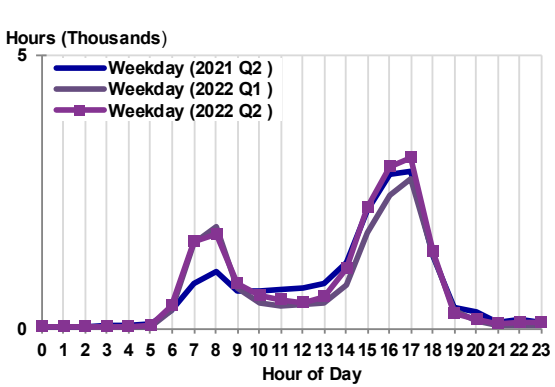




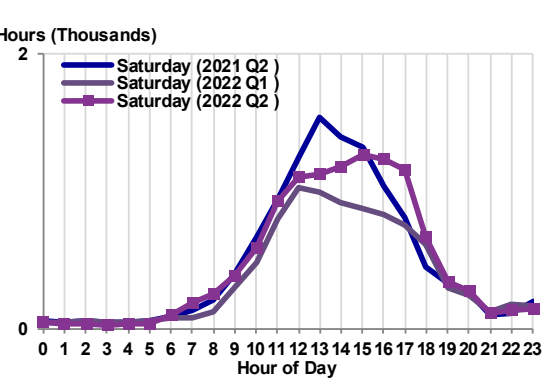




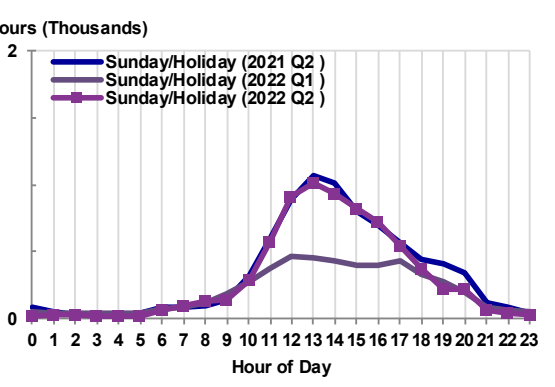




The average weekday VHD experienced in this quarter was approximately 18 thousand VHD at 35 MPH and 64 thousand VHD at 60 MPH. Compared to the previous quarter, there was 15.1 percent increase in 35 MPH VHD and 9 percent increase in 60 mph VHD.

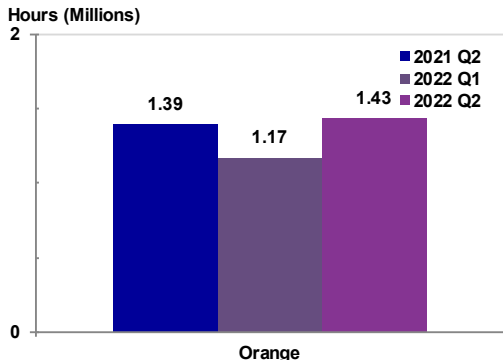
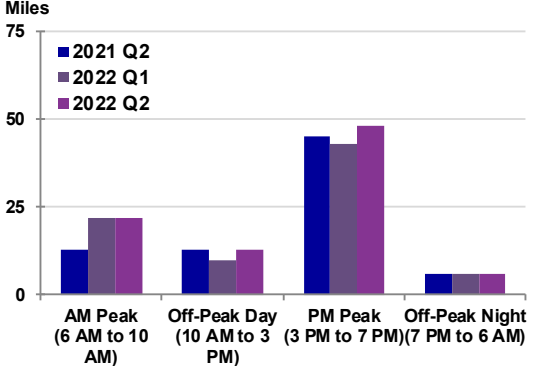
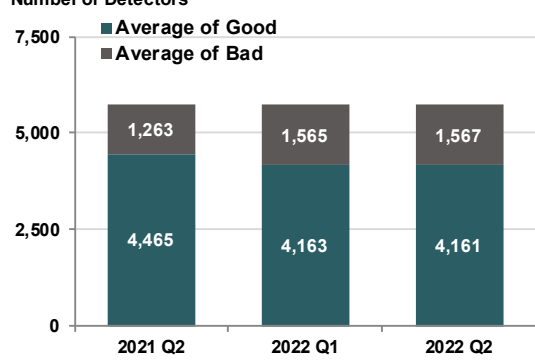
Top 10 Bottlenecks for the 2nd Quarter of 2022

Co	Shift	Fwy	Dir	Name	Abs PM	CA PM	Latitude	Longitude	# Days Active	Avg Extent (miles)	Total Delay (veh-hrs)	Total Duration (mins)
Ora	PM	I405	N	LOCATION 5013 NB	12.89	13.122	33.70	-117.94	62	2.54	63,476.8	6,980
Ora	AM	I405	S	BROOKHURST2	13.58	13.81	33.71	-117.95	50	3.70	37,815.8	5,765
Ora	PM	I405	N	BROOKHUR1	13.51	13.74	33.70	-117.95	40	3.08	32,300.5	3,515
Ora	PM	SR57	N	TONNER	11.27	22	33.94	-117.88	52	1.30	32,113.3	9,510
Ora	PM	SR91	E	LAKEVIEW1	28.45	R10.08	33.85	-117.81	63	2.81	25,955.8	9,945
Ora	PM	I5	N	TUSTIN RANCH	100.35	28.1	33.72	-117.80	64	1.97	24,821.0	15,370
Ora	AM	I5	S	MAIN 1	105.19	33	33.77	-117.87	63	0.60	23,508.7	10,980
Ora	PM	SR91	E	W OF SCALES	31.72	R13.349	33.87	-117.76	51	3.27	23,102.6	7,245
Ora	PM	I405	N	MAGNOLIA2	15.16	15.39	33.72	-117.97	29	1.93	19,588.7	4,205
Ora	PM	I405	N	BEACH 2	16.53	16.76	33.73	-117.99	63	0.93	18,167.6	10,155

2022 Q2 Quarterly Mobility Statistics

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>2021</td><td>3.17</td></tr> <tr><td>2022</td><td>3.11</td></tr> <tr><td>2022</td><td>3.28</td></tr> </table>	Year	Q2	2021	3.17	2022	3.11	2022	3.28	Over one year ago	Over last quarter
		Year	Q2								
		2021	3.17								
2022	3.11										
2022	3.28										
3.5%	5.5%										
Total Vehicle Hours of Delay (VHD) at 35 mph	<p>Hours (Millions)</p> <table border="1"> <tr><th>Year</th><th>Q2</th></tr> <tr><td>2021</td><td>1.4</td></tr> <tr><td>2022</td><td>1.2</td></tr> <tr><td>2022</td><td>1.4</td></tr> </table>	Year	Q2	2021	1.4	2022	1.2	2022	1.4	Over one year ago	Over last quarter
		Year	Q2								
		2021	1.4								
2022	1.2										
2022	1.4										
2.9%	22.2%										
Average Non-Holiday Weekday 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>2021</td><td>18</td></tr> <tr><td>2022</td><td>16</td></tr> <tr><td>2022</td><td>18</td></tr> </table>	Year	Q2	2021	18	2022	16	2022	18	Over one year ago	Over last quarter
		Year	Q2								
		2021	18								
2022	16										
2022	18										
4.7%	15.1%										
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>2021</td><td>4.7</td></tr> <tr><td>2022</td><td>4.2</td></tr> <tr><td>2022</td><td>4.9</td></tr> </table>	Year	Q2	2021	4.7	2022	4.2	2022	4.9	Over one year ago	Over last quarter
		Year	Q2								
		2021	4.7								
2022	4.2										
2022	4.9										
2.4%	14.6%										
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>2021</td><td>61</td></tr> <tr><td>2022</td><td>58</td></tr> <tr><td>2022</td><td>64</td></tr> </table>	Year	Q2	2021	61	2022	58	2022	64	Over one year ago	Over last quarter
		Year	Q2								
		2021	61								
2022	58										
2022	64										
4.2%	9%										

Measure	Graph	Percentage Change	
<p>Average Vehicle Hours of Delay by Day of Week at 60 mph</p>		<p>Largest Magnitude Decrease over one year ago</p>	<p>Largest Magnitude Decrease over last quarter</p>
		<p>Tuesday -10.5% </p>	<p>-</p>
		<p>Largest Magnitude Increase over one year ago</p>	<p>Largest Magnitude Increase over last quarter</p>
		<p>Thursday 26.4% </p>	<p>Wednesday 12.1% </p>
<p>Average Vehicle Hours of Delay by Hour of Day at 35 mph, Weekdays</p>		<p>Largest Magnitude Weekday Decrease over one year ago</p>	<p>Largest Magnitude Weekday Decrease over last quarter</p>
		<p>12 PM -34% </p>	<p>8 AM -6.6% </p>
		<p>Largest Magnitude Weekday Increase over one year ago</p>	<p>Largest Magnitude Weekday Increase over last quarter</p>
		<p>7 AM 91.8% </p>	<p>4 PM 20.8% </p>
<p>Average Vehicle Hours of Delay by Hour of Day at 35 mph, Saturdays</p>		<p>Largest Magnitude Saturday Decrease over one year ago</p>	<p>Largest Magnitude Saturday Decrease over last quarter</p>
		<p>1 PM -26.8% </p>	<p>10 PM -29.1% </p>
		<p>Largest Magnitude Saturday Increase over one year ago</p>	<p>Largest Magnitude Saturday Increase over last quarter</p>
		<p>5 PM 42.2% </p>	<p>5 PM 53.3% </p>
<p>Average Vehicle Hours of Delay by Hour of Day at 35 mph, Sundays/Holidays</p>		<p>Largest Magnitude Sun./Holiday Decrease over one year ago</p>	<p>Largest Magnitude Sun./Holiday Decrease over last quarter</p>
		<p>7 PM -45.5% </p>	<p>7 PM -16.3% </p>
		<p>Largest Magnitude Sun./Holiday Increase over one year ago</p>	<p>Largest Magnitude Sun./Holiday Increase over last quarter</p>
		<p>8 AM 29.7% </p>	<p>1 PM 123.1% </p>

Measure	Graph	Percentage Change	
Total Vehicle Hours of Delay (VHD) by County at 35 mph	 <p>Hours (Millions)</p> <p>■ 2021 Q2 ■ 2022 Q1 ■ 2022 Q2</p> <p>Orange</p>	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 -
		Orange 2.9% ↑	Orange 22.2% ↑
Average Non-Holiday Weekday Equivalent Lost Lane Mile Hours at 35 mph	 <p>Miles</p> <p>■ 2021 Q2 ■ 2022 Q1 ■ 2022 Q2</p> <p>AM Peak (6 AM to 10 AM) Off-Peak Day (10 AM to 3 PM) PM Peak (3 PM to 7 PM) Off-Peak Night (7 PM to 6 AM)</p>	Largest Magnitude Decrease over one year ago -	Largest Magnitude Decrease over last quarter -
		Off-Peak Night -2.4% ↓	-
		Largest Magnitude Increase over one year ago -	Largest Magnitude Increase over last quarter -
		AM Peak 69.8% ↑	PM Peak 12.9% ↑
Average Number of Good and Bad Detectors	 <p>Number of Detectors</p> <p>■ Average of Good ■ Average of Bad</p> <p>2021 Q2 2022 Q1 2022 Q2</p>	Change in Good over one year ago -7% ↓	Change in Good over last quarter 0%
		Change in Bad over one year ago 24% ↑	Change in Bad over last quarter 0%

Congestion by Route											
Route	County	Vehicle Hours of Delay at 35 mph			Difference 2022 Q2-2021 Q2		Difference 2022 Q2-2022 Q1		Rank		
		2021 Q2	2022 Q1	2022 Q2	Absolute	Percentage	Absolute	Percentage	2021 Q2	2022 Q1	2022 Q2
I5	Orange	503,334	384,020	456,073	-47,260	-9.4%	72,053	18.8%	1	1	1
SR91	Orange	338,140	217,771	292,077	-46,063	-13.6%	74,306	34.1%	2	2	2
I405	Orange	171,286	202,954	236,682	65,396	38.2%	33,729	16.6%	3	3	3
SR55	Orange	148,668	128,411	181,798	33,130	22.3%	53,387	41.6%	4	4	4
SR57	Orange	103,760	111,983	151,408	47,648	45.9%	39,425	35.2%	5	5	5
SR22	Orange	39,523	87,896	70,513	30,991	78.4%	-17,382	-19.8%	7	6	6
SR241	Orange	11,257	14,040	16,936	5,679	50.5%	2,896	20.6%	8	8	7
SR73	Orange	54,629	14,763	12,807	-41,822	-76.6%	-1,956	-13.2%	6	7	8
I605	Orange	5,457	3,753	5,311	-146	-2.7%	1,558	41.5%	10	9	9
SR133	Orange	8,145	795	2,163	-5,982	-73.4%	1,368	172.1%	9	11	10
SR142	Orange	975	1,063	722	-254	-26.0%	-342	-32.2%	12	10	11
SR74	Orange	1,579	457	298	-1,281	-81.1%	-159	-34.8%	11	12	12
SR261	Orange	22	51	28	6	25.0%	-23	-45.4%	13	13	13
SR1	Orange	0	0	0	0		0				
TOTALS		1,386,774	1,167,957	1,426,816	40,042	2.9%	258,858	22.2%			