LOS ANGELES WORLD AIRPORTS

LAX SPECIFIC PLAN AVIATION ACTIVITY ANALYSIS REPORT

CY 2021

Prepared June 2022

Los Angeles International Airport (LAX)
Specific Plan Compliance Review
Aviation Activity Analysis
January - December 2021

A. Purpose of this Report

Per Appendix A, Subsection 1(b) of the Los Angeles International Airport (LAX) Specific Plan,[1] Los Angeles World Airports (LAWA) is required to prepare and submit an annual Aviation Activity Analysis Report to the Board of Airport Commissioners, the Department of City Planning, the Los Angeles Department of Transportation, and the Los Angeles City Council. The purpose of this report is: 1) to provide an analysis that identifies the current number of passengers, volume of air cargo and aircraft operations served at LAX; and 2) to compile aviation activity statistics for other airports in the Los Angeles region for monitoring and reporting purposes. This Aviation Activity Analysis Report has been updated for the calendar year 2021.

B. Summary and Conclusions

The COVID-19 pandemic severely impacted the aviation and travel industry with 2021 showing strong signs of recovery. Below is an overview of this report's analysis of LAX and regional air traffic for January through December of that calendar year:

- Preliminary data reported by individual airports indicates that LAX is the fifth busiest airport in the world by passenger volume and the fifth busiest in the United States.
- Passenger volume at LAX totaled approximately 48.01 million annual passengers (MAP) in 2021, a 66.81% increase compared to the previous year.
- Load factor for *departures* from LAX was 79.66% for domestic flights and 46.44% for international[2] flights. This represents an increase in load factor of 18.80% for domestic flights and a decrease of 10.68% for international flights when compared to 2020.
- Load factor for *arrivals* at LAX was 79.31% for domestic flights and 49.17% for international[3] flights. This represents an increase in load factor of 18.69% for domestic flights and a decrease in 6.56% for international flights when compared to 2020.
- Cargo volume at LAX totaled approximately 2.97 million tons in 2021, a 20.64% increase over 2020.
- Commercial aircraft operations (landings and takeoffs) at LAX increased by 33.58% in 2021 to 506,769. This is up from 379,364 operations in 2020.
- LAX handled approximately 70.46% of passenger traffic among the six major commercial Southern California Association of Governments (SCAG) region airports in 2021, a 2.58% decrease from 2020.

[1] City of Los Angeles, Department of City Planning, LAX Specific Plan, adopted January 20, 2005, last amended September 8, 2017.
[2] International passenger load factor numbers are based on available data through November 2021.
[3] Ibid

C. LAX Global and National Ranking

Table 1. Top 10 World Airports Ranked by Passenger Volume
(preliminary rankings as reported by individual airports, April 2022)

U.S. Rank	Global Rank	Airport	Location	Total Passengers
1	1	Hartsfield–Jackson Atlanta International	Atlanta, Georgia, U.S.A.	75,704,760
2	2	Dallas Fort Worth International	Dallas-Fort Worth, Texas, U.S.A.	62,465,756
3	3	Denver International	Denver, Colorado, U.S.A.	58,828,552
4	4	O'Hare International	Chicago, Illinois, U.S.A.	54,020,399
5	5	Los Angeles International	Los Angeles, California, U.S.A	48,007,284
6	6	Charlotte Douglas International	Charlotte, North Carolina, U.S.A	43,302,230
7	7	Orlando International	Orlando, Florida, U.S.A.	40,351,068
	8	Guangzhou Baiyun International	Guangzhou, China	40,259,401
	9	Chengdu Shuangliu International	Chengdu, China	40,741,509
8	10	Harry Reid International	Las Vegas, Nevada, U.S.A.	39,754,366

Data Sources: Airports Council International (ACI) – World

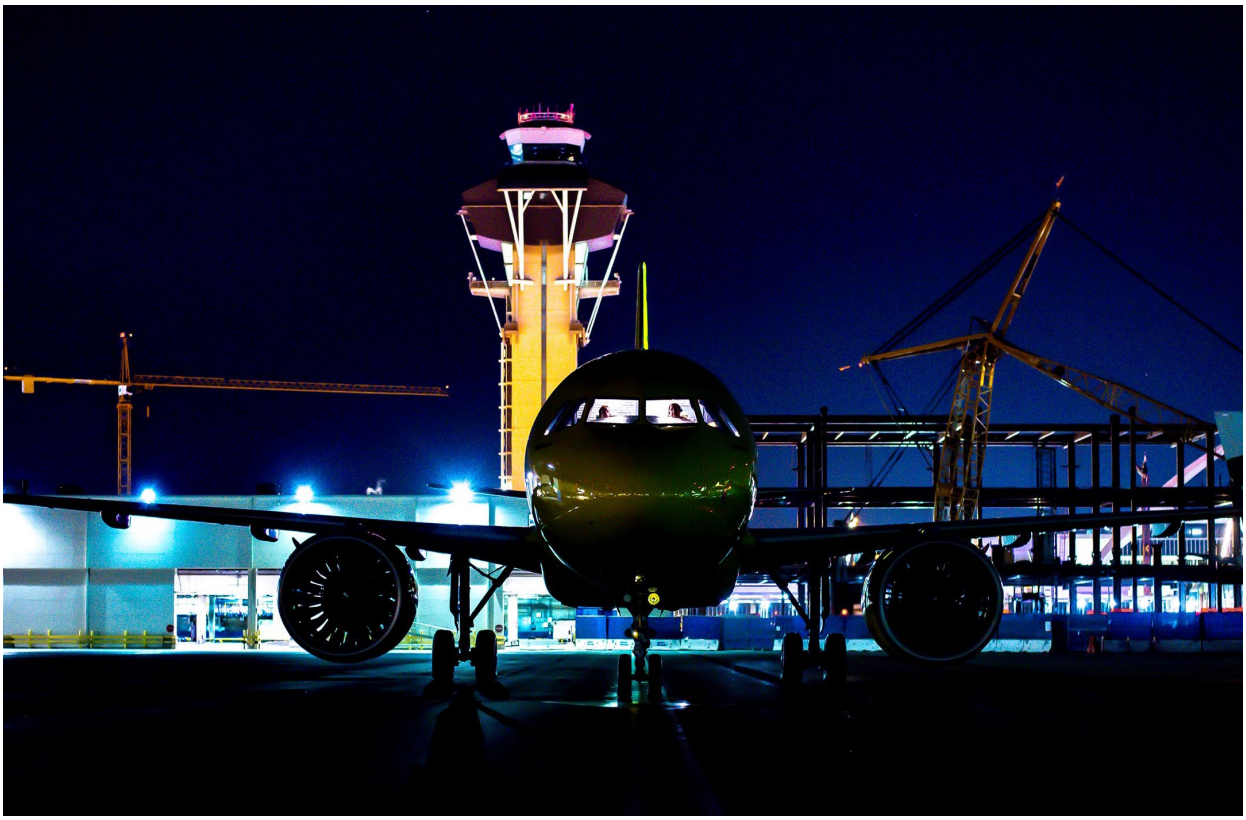


Image Credit: Jacob Brosseau, Los Angeles World Airports (LAWA).

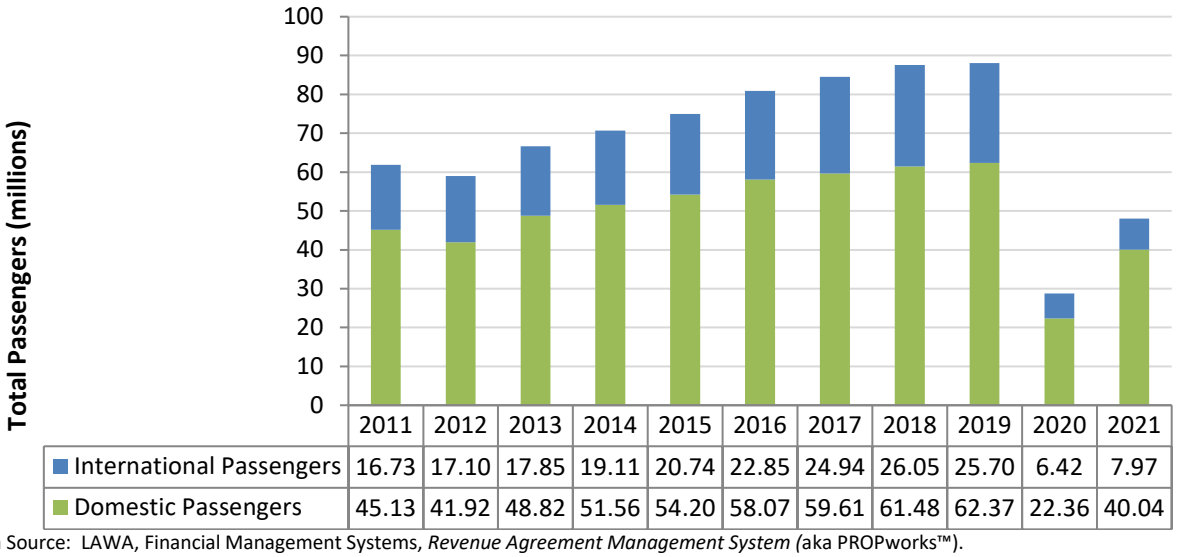
D. LAX Air Traffic Activity

LAWA reports air traffic activity on a monthly basis, and keeps an archive of this activity online at https://www.lawa.org/en/lawa-investor-relations/statistics-for-lax. The subpages entitled "Air Traffic Ten Year Summary" and "Volume of Air Traffic" provides air passenger, air cargo and aircraft operations activity statistics for LAX for the calendar year 2021.

E. LAX Passenger Volume

As shown below in Figure 1, LAX passenger volume totaled approximately 48.01 million annual passengers (MAP) in 2021, a 66.81% increase compared to 2020. International passenger volume was approximately 7.97 MAP in 2021, a 24.04% increase compared to 6.42 MAP in 2020. Domestic passenger volume is up 79.10% compared to 2020, from approximately 22.36 MAP in 2020 to 40.04 MAP in 2021.

Figure 1. LAX Annual Passengers 2011-2021



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
International Passengers	16.73	17.10	17.85	19.11	20.74	22.85	24.94	26.05	25.70	6.42	7.97
Domestic Passengers	45.13	41.92	48.82	51.56	54.20	58.07	59.61	61.48	62.37	22.36	40.04

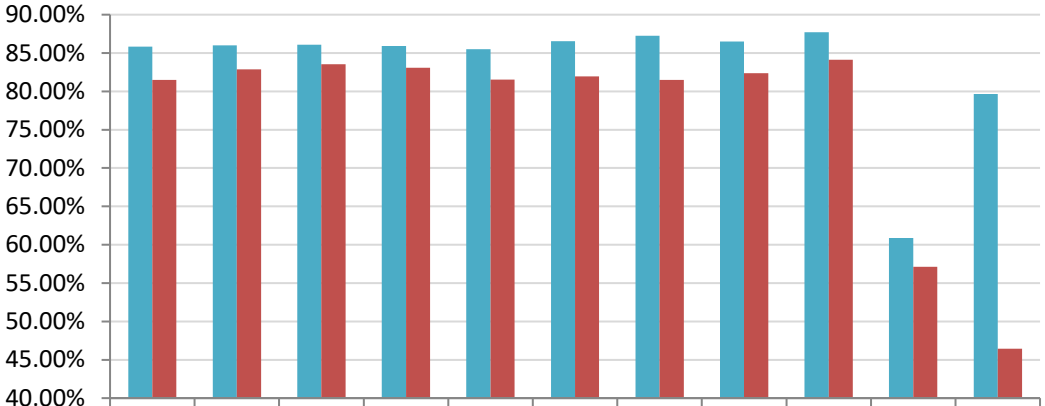
Data Source: LAWA, Financial Management Systems, *Revenue Agreement Management System (*aka PROPworks™).

Image Credit: Jacob Brosseau, Los Angeles World Airports (LAWA).

F. Load Factor

Load factor is the proportion of available seats filled per aircraft that measures how much passenger carrying capacity is used. Load factor is calculated by dividing Revenue Passenger Miles[4] by the Available Seat Miles.[5] Figure 2a below shows the change in load factor for aircraft departing LAX for the past decade, while Figure 2b shows the change in load factor for aircraft arriving at LAX for the same timeframe. In 2021, load factor for departures from LAX decreased by 10.68% for international* flights and increased by 18.80% for domestic flights. For arrivals at LAX, load factor decreased by 6.56% for international* flights and increased by 18.69% for domestic flights when compared to 2020.

Figure 2a. Load Factor for *Departures* from LAX 2011-2021

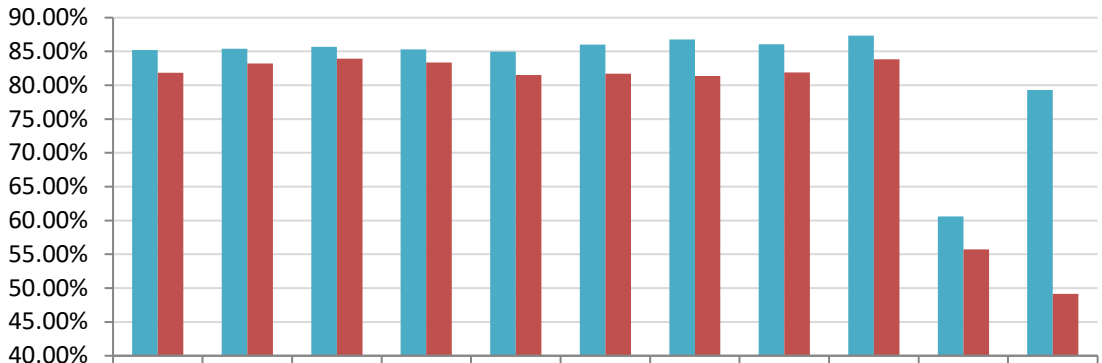


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021*
Domestic	85.85%	86.01%	86.07%	85.91%	85.51%	86.53%	87.27%	86.50%	87.73%	60.86%	79.66%
International	81.48%	82.86%	83.54%	83.07%	81.52%	81.97%	81.50%	82.35%	84.13%	57.12%	46.44%

Data Source: Bureau of Transportation Statistics T-100 Segment Data

*International passenger load factor based on available data through November 2021

Figure 2b. Load Factor for *Arrivals* to LAX 2011-2021



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021*
Domestic	85.19%	85.38%	85.70%	85.31%	84.97%	86.03%	86.79%	86.04%	87.35%	60.62%	79.31%
International	81.84%	83.23%	83.94%	83.38%	81.54%	81.72%	81.39%	81.92%	83.83%	55.73%	49.17%

Data Source: Bureau of Transportation Statistics T-100 Segment Data

*International passenger load factor based on available data through November 2021

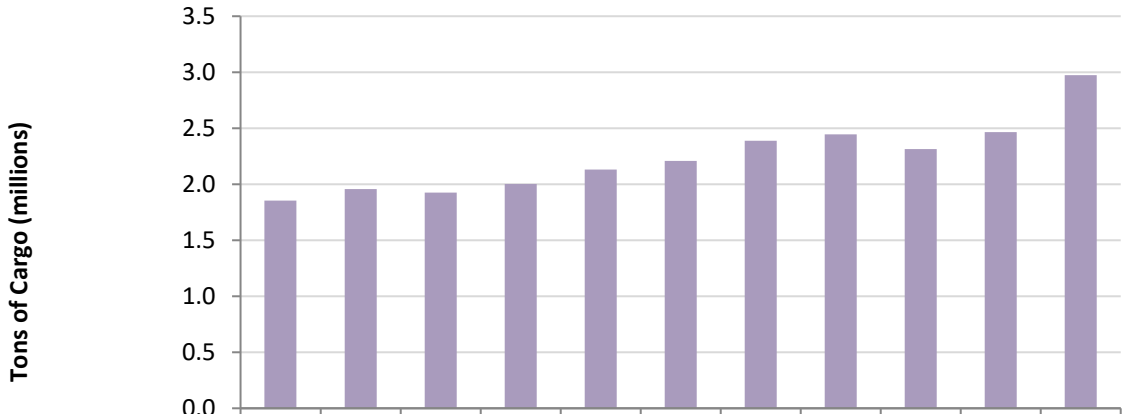
[4] Revenue Passenger Miles show the number of miles traveled by paying passengers. It is calculated as the number of paying passengers multiplied on a flight by the total distance traveled.

[5] Available Seat Miles is the total passenger capacity of an airline in miles and is captured by multiplying the total number of seats available on a flight and the total number of miles in which those seats were flown during scheduled flights.

G. LAX Cargo Volume

Cargo volume in 2021 totaled approximately 2.97 million tons, a 20.64% increase compared to 2020. Figure 3 below shows historical cargo volumes for LAX over the past ten years.

Figure 3. LAX Annual Cargo Tonnage 2011-2021



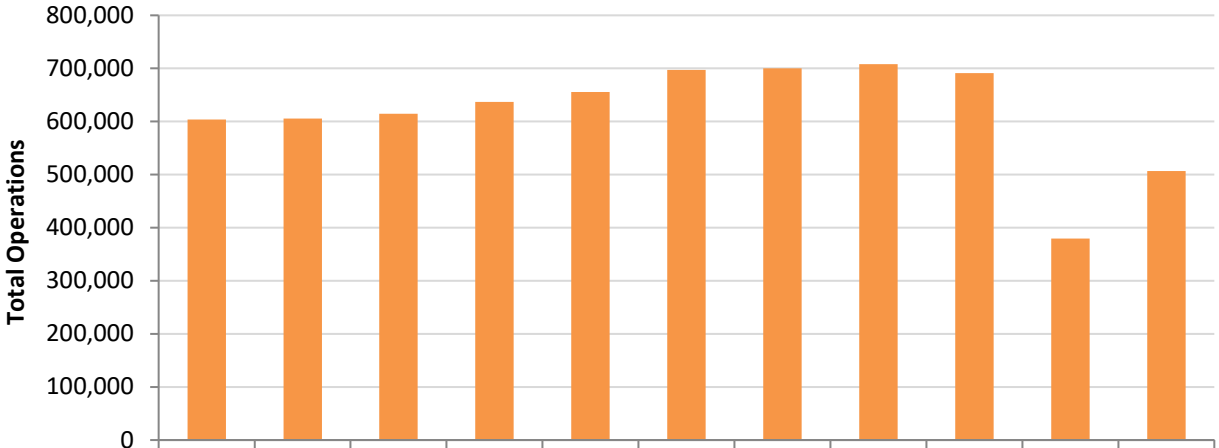
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Cargo Tonnage	1.85	1.96	1.93	2.00	2.13	2.21	2.39	2.45	2.31	2.46	2.97

Data Source: LAWA, Financial Management Systems, *Revenue Agreement Management System (*aka PROPworks™).

H. LAX Aircraft Operations

Figure 4 below shows the change in aircraft operations activity at LAX for the past decade. The number of aircraft operations (landings and takeoffs) totaled 506,769 in 2021, up 33.58% from 379,364 commercial operations in 2020.

Figure 4. LAX Annual Operations 2011-2021



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total Operations	603,912	605,480	614,917	636,706	655,564	697,138	700,362	707,833	691,257	379,364	506,769

Data Source: LAWA, Financial Management Systems, *Revenue Agreement Management System (*aka PROPworks™).

I. Aviation Activity in the SCAG Metropolitan Planning Region

There are six major commercial airports in the Southern California Association of Governments (SCAG) metropolitan planning region:[6]

1) Hollywood Burbank Airport (BUR)
2) Los Angeles International Airport (LAX)
3) Long Beach Airport (LGB)
4) Ontario International Airport (ONT)
5) Palm Springs International Airport (PSP)
6) John Wayne Airport (SNA)

These airports served approximately 68.13 million annual passengers in 2021 (up approximately 79.91% from 39.40 million annual passengers in 2020) and approximately 3.95 million tons of cargo/mail in 2021. The six major SCAG region airports had about 1.44 million aircraft operations in 2021. LAX handled approximately 70.46% of regional passenger volume among the six airports in 2021.

The tables below summarize 2021 and 2020 air passengers, cargo/mail tonnage, and aircraft operations totals by airport in absolute numbers (Table 2) and the percentage of total (Table 3). An aircraft operation is defined as an arrival or departure of one aircraft at an airport.

Table 2. 2020 and 2021 Aviation Activity at the Six Major SCAG Region Airports

Airport	2021			2020		
	Passengers	Cargo/Mail (Tons)	Total Operations	Passengers	Cargo/Mail (Tons)	Total Operations
BUR	3,732,971	53,935	125,429	1,995,348	56,566	105,357
LAX	48,007,284	2,974,073	506,769	28,779,527	2,464,845	379,364
LGB	2,104,696	16,401	334,767	1,043,773	17,319	273,986
ONT	4,496,592	890,383	103,167	2,538,482	924,160	92,138
PSP	2,092,943	209	58,137	1,252,094	155	43,368
SNA	7,700,489	18,312	311,684	3,794,850	18,467	238,340
Total	**68,134,975**	**3,953,313**	**1,439,953**	**39,404,074**	**3,481,513**	**1,132,553**

Data Source: Individual airport's statistical reports, Federal Aviation Administration (FAA) Air Traffic Activity Data System (ATADS), and SCAG.

Table 3. 2020 and 2021 Aviation Activity at the Six Major SCAG Region Airports (by percentage of total)

Airport	2021			2020		
	Passengers	Cargo/Mail (Tons)	Total Operations	Passengers	Cargo/Mail (Tons)	Total Operations
BUR	5.48%	1.36%	8.71%	5.06%	1.62%	9.30%
LAX	70.46%	75.23%	35.19%	73.04%	70.80%	33.50%
LGB	3.09%	0.41%	23.25%	2.65%	0.50%	24.19%
ONT	6.60%	22.52%	7.16%	6.44%	26.54%	8.14%
PSP	3.07%	0.01%	4.04%	3.18%	0.00%	3.83%
SNA	11.30%	0.46%	21.65%	9.63%	0.53%	21.04%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Data Source: Individual airport's statistical reports, FAA ATADS, and SCAG.

[6] The SCAG region encompasses Los Angeles, Orange, Ventura, San Bernardino, Riverside, and Imperial Counties.

Table 4 below shows each airport's share of regional air passenger traffic from 2001 to 2021.

Table 4. Share of Passenger Activity at the Six Major SCAG Region Airports from 2001-2021 (by percentage of total)[7]

Year	LAX	ONT	LGB	SNA	BUR	PSP	Regional Total
2001	75.2%	8.2%	0.7%	8.9%	5.5%	1.4%	100.0%
2002	72.2%	8.4%	1.9%	10.2%	5.9%	1.4%	100.0%
2003	69.7%	8.3%	3.6%	10.8%	6.0%	1.6%	100.0%
2004	70.5%	8.1%	3.4%	10.8%	5.7%	1.6%	100.0%
2005	69.6%	8.2%	3.4%	10.9%	6.2%	1.6%	100.0%
2006	69.6%	8.0%	3.1%	11.0%	6.5%	1.7%	100.0%
2007	69.3%	8.0%	3.2%	11.1%	6.6%	1.8%	100.0%
2008	70.5%	7.3%	3.4%	10.6%	6.3%	1.8%	100.0%
2009	71.5%	6.2%	3.7%	11.0%	5.8%	1.9%	100.0%
2010	72.5%	5.9%	3.7%	10.6%	5.5%	1.8%	100.0%
2011	73.7%	5.4%	3.7%	10.3%	5.1%	1.8%	100.0%
2012	74.2%	5.0%	3.7%	10.3%	4.7%	2.0%	100.0%
2013	75.4%	4.5%	3.3%	10.4%	4.3%	2.0%	100.0%
2014	76.2%	4.4%	3.0%	10.1%	4.2%	2.1%	100.0%
2015	76.7%	4.3%	2.6%	10.4%	4.0%	1.9%	100.0%
2016	77.3%	4.1%	2.7%	10.0%	4.0%	1.9%	100.0%
2017	76.8%	4.1%	3.4%	9.5%	4.3%	1.9%	100.0%
2018	76.3%	4.5%	3.4%	9.3%	4.6%	2.0%	100.0%
2019	75.6%	4.8%	3.1%	9.2%	5.1%	2.2%	100.0%
2020	73.0%	6.4%	2.7%	9.6%	5.0%	3.2%	100.0%
2021	70.5%	6.6%	3.1%	11.3%	5.5%	3.1%	100.0%

Data Source: Individual airport's statistical reports and correspondence, FAA ATADS, and SCAG.

Image Credit: Los Angeles World Airports (LAWA).

[7] Percentages are rounded to the nearest tenth and may not add to 100% due to rounding.