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**ATTACHMENT 5**

**2017 AVIATION ACTIVITY ANALYSIS REPORT**



*Los Angeles  
World Airports*

ENVIRONMENTAL PROGRAMS GROUP



# **LAX SPECIFIC PLAN AVIATION ACTIVITY ANALYSIS REPORT CY 2017**

**Prepared May 2018**

**Los Angeles International Airport (LAX)  
Specific Plan Compliance Review  
Aviation Activity Analysis  
January - December 2017**

**A. Purpose of this Report**

Per Appendix A, Subsection 1 (b) of the Los Angeles International Airport Specific Plan,<sup>[1]</sup> 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 to provide an “analysis that identifies the current number of passengers, volume of air cargo and aircraft operations served at LAX [and] ...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 2017.

**B. Summary and Conclusions**

An analysis of LAX and regional air traffic activity for January through December 2017 led to the following conclusions:

- Passenger volume at LAX totaled approximately 84.56 million annual passengers (MAP) in 2017, a 4.49% increase compared to the previous year.
- Cargo volume at LAX totaled approximately 2.39 million tons in 2017, an 8.20% increase over 2016.
- Commercial aircraft operations (landings and takeoffs) at LAX increased by 0.46% in 2017 to 700,362 from 697,138 operations in 2016.
- LAX handled 76.76% of passenger traffic among the six major Southern California Association of Governments (SCAG) region airports in 2017, a 0.56% decrease from 2016.
- Preliminary data reported by individual airports indicates that LAX is the fifth busiest airport in the world by passenger volume and second busiest U.S. airport.

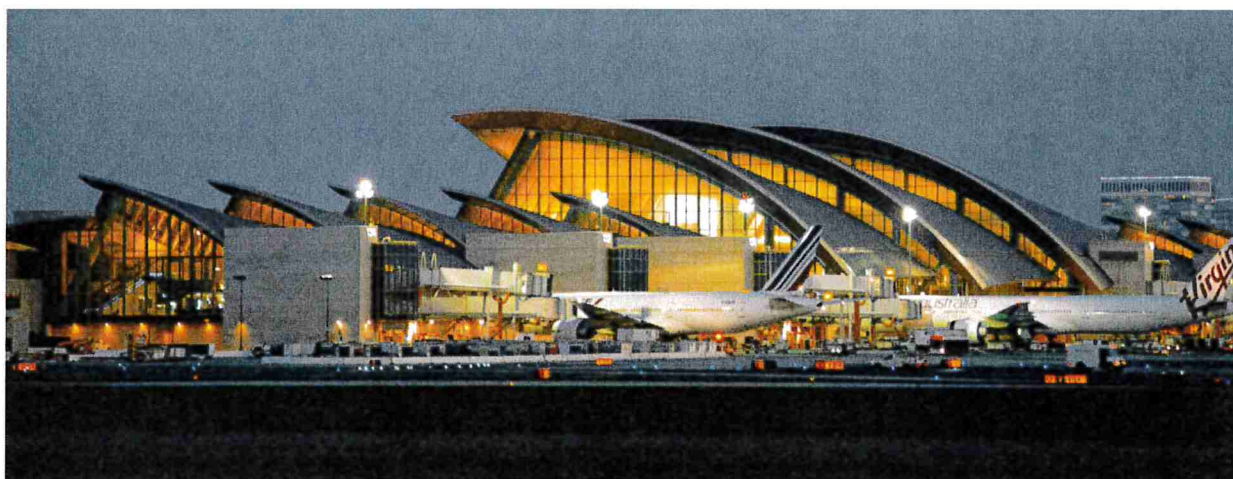


Photo Credit: Jay Berkowitz, LAWA

<sup>[1]</sup> City of Los Angeles, Department of City Planning, LAX Specific Plan, adopted January 20, 2005, last amended September 8, 2017.

### C. LAX Global and National Ranking

**Table 1. Top 20 World Airports Ranked by Passenger Volume**  
(preliminary rankings as reported by individual airports, April 9, 2018)

U.S. Rank	Global Rank	Airport	Location	Total Passengers
1	1	Hartsfield–Jackson Atlanta International	Atlanta, Georgia, U.S.A.	103,902,992
	2	Beijing Capital International	Beijing, China	95,786,442
	3	Dubai International	Dubai, U.A.E.	88,242,099
	4	Tokyo Haneda International	Tokyo, Japan	85,408,975
2	5	Los Angeles International	Los Angeles, California, U.S.A.	84,557,968
3	6	O'Hare International	Chicago, Illinois, U.S.A.	79,828,183
	7	London Heathrow	London, United Kingdom	78,014,598
	8	Hong Kong International	Hong Kong, China	72,663,955
	9	Shanghai Pudong International	Shanghai, China	70,001,237
	10	Paris-Charles de Gaulle	Paris, France	69,471,442
	11	Amsterdam Schiphol	Amsterdam, Netherlands	68,515,425
4	12	Dallas/Fort Worth International	Dallas-Fort Worth, Texas, U.S.A.	67,092,194
	13	Guangzhou Bai Yun International	Guangzhou, China	65,887,473
	14	Frankfurt Airport	Frankfurt, Germany	64,500,386
	15	Istanbul Atatürk	Istanbul, Turkey	63,872,283
	16	Indira Gandhi International	New Delhi, India	63,451,503
	17	Soekarno-Hatta International	Jakarta, Indonesia	63,015,620
	18	Singapore Changi Airport	Singapore	62,220,000
	19	Seoul Incheon International	Incheon, Republic of Korea	62,157,834
5	20	Denver International	Denver, Colorado, U.S.A.	61,379,396

Data Source: Airports Council International (ACI) – World

**Table 2. Top 15 U.S. Airports Ranked by Passenger Volume**  
(preliminary rankings as reported by individual airports, April 9, 2018)

U.S. Rank	Global Rank	Airport	Location	Total Passengers
1	1	Hartsfield–Jackson Atlanta International	Atlanta, Georgia	103,902,992
2	5	Los Angeles International	Los Angeles, California	84,557,968
3	6	O'Hare International	Chicago, Illinois	79,828,183
4	12	Dallas/Fort Worth International	Dallas-Fort Worth, Texas	67,092,194
5	20	Denver International	Denver, Colorado	61,379,396
6	22	John F. Kennedy International	Queens, New York	59,392,500
7	24	San Francisco International	San Francisco, California	55,822,129
8	27	McCarran International	Las Vegas, Nevada	48,566,803
9	31	Seattle-Tacoma International	SeaTac, Washington	46,934,194
10	32	Charlotte Douglas International	Charlotte, North Carolina	45,909,899
11	39	Orlando International	Orlando, Florida	44,511,265
12	40	Miami International	Miami, Florida	44,071,313
13	41	Phoenix Sky Harbor International	Phoenix, Arizona	43,921,670
14	43	Newark Liberty International	Newark, New Jersey	43,234,161
15	48	George Bush Intercontinental	Houston, Texas	40,696,189

Data Source: Airports Council International (ACI) – World



## D. LAX Air Traffic Activity

Los Angeles World Airports (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 reports titled “Traffic Comparison Report (TCOM)” and “Volume of Air Traffic (VOAT)” provides air passenger, air cargo and aircraft operations activity statistics for Los Angeles International Airport for the calendar year 2017.

## E. LAX Passenger Volume

As shown below in Figure 1, LAX passenger volume totaled approximately 84.56 million annual passengers (MAP) in 2017, a 4.49% increase over 2016.

International passenger volume was approximately 24.83 MAP for 2017, an 8.66% increase over the previous record high of 22.85 MAP in 2016. Domestic passenger volume is up 2.85% over 2016, from approximately 58.07 MAP in 2016 to 59.73 MAP in 2017.

**Figure 1. LAX Annual Passengers 2007-2017**



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

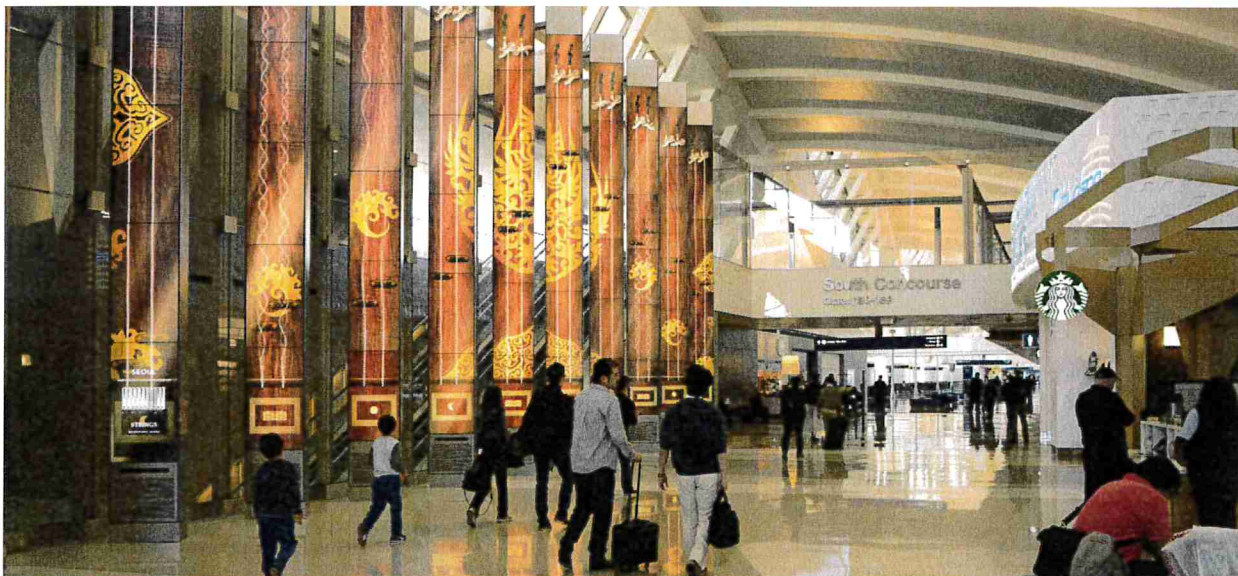
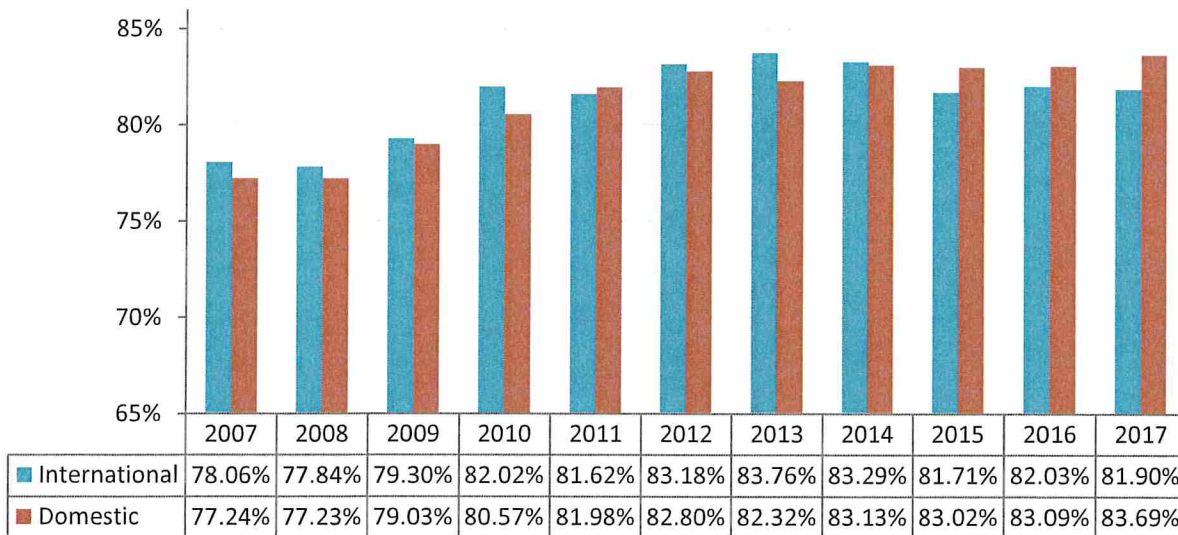


Photo Credit: Jay Berkowitz, LAWA

## F. LAX Average Load Factor

Load factor is the percentage of seats filled per aircraft. Average Load Factor is a calculation of the total number of air passengers at LAX divided by the total number of seats provided for all aircraft operations at LAX for the calendar year. Figure 2 below shows the change in Average Load Factor at LAX over the past decade.<sup>[2]</sup>

**Figure 2. LAX Load Factors 2007-2017**

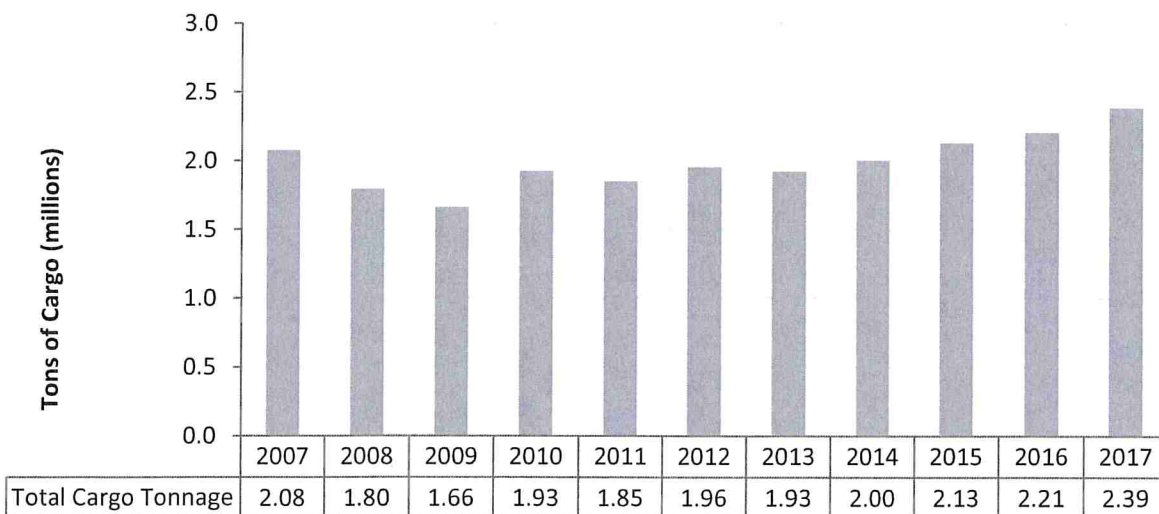


Data Source: USDOT T-100 Reports; initial calculations prepared by Ricondo & Associates, Inc., April 2018.

## G. LAX Cargo Volume

Cargo volume in 2017 totaled approximately 2.39 million tons, a 8.20% increase over 2016.<sup>[3]</sup> Figure 3 below shows historical cargo volumes for LAX over the past ten years.

**Figure 3. LAX Annual Cargo Tonnage 2007-2017**



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

<sup>[2]</sup> Does not include non-revenue passengers; the 2016 data has been updated to reflect the entire year; 2017 percentages are based on available data through September 2017.

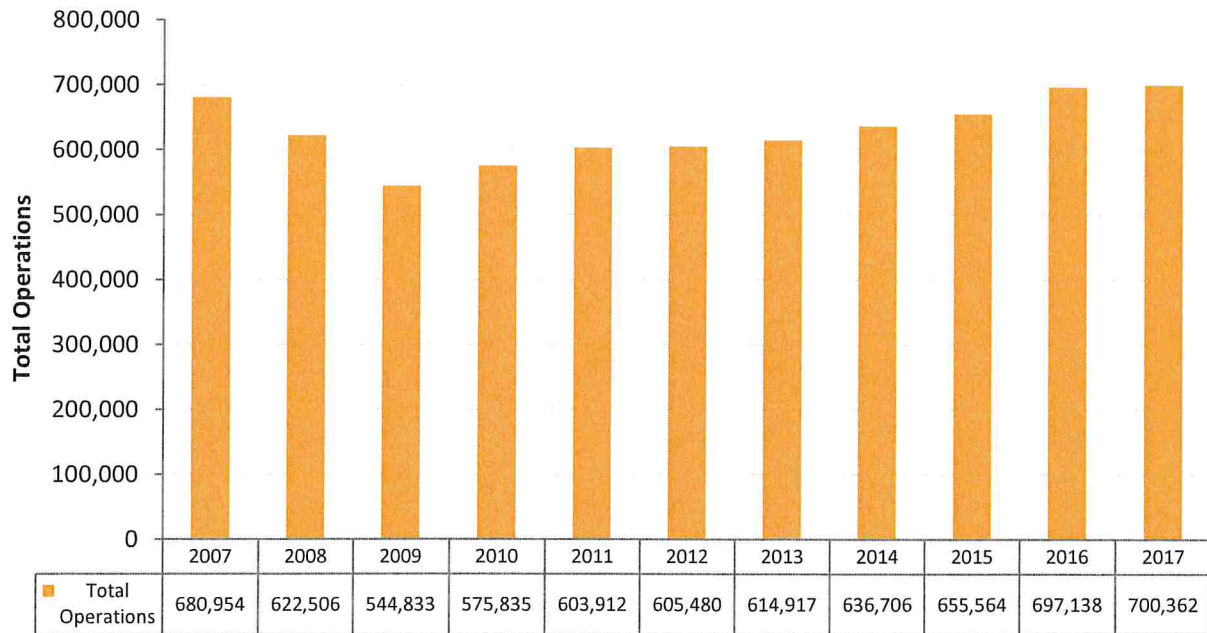
<sup>[3]</sup> The 2016 LAX cargo tonnage numbers were revised by Los Angeles World Airports.



## H. LAX Commercial 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 700,362 in 2017, up 0.46% from 697,138 commercial operations in 2016.

Figure 4. LAX Annual Operations 2007-2017



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



Photo Credit: Tim Ihle, LAWA

## 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<sup>[4]</sup>:

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

These airports served approximately 110.16 million annual passengers in 2017 (up 5.26% from 104.65 million annual passengers in 2016) and approximately 3.14 million tons of cargo/mail in 2017. The six major SCAG region airports generated about 1.57 million commercial and private aircraft operations in 2017. LAX handled 76.76% of regional passenger volume among the six airports in 2017.

The tables below summarize 2016 and 2017 air passengers, cargo/mail tonnage, and aircraft operations totals by airport in absolute numbers (Table 3) and the percentage of total (Table 4). An aircraft operation is defined as an arrival or departure of one aircraft at an airport.

**Table 3. 2016 and 2017 Aviation Activity at the Six Major SCAG Region Airports**

Airport	2017			2016 <sup>[5]</sup>		
	Passengers	Cargo/Mail (Tons)	Total Operations	Passengers	Cargo/Mail (Tons)	Total Operations
BUR	4,739,466	54,453	131,661	4,142,943	53,386	132,407
LAX	84,557,968	2,389,474	700,362	80,921,651	2,208,415	697,138
LGB	3,783,805	25,335	302,350	2,841,144	27,800	294,886
ONT	4,552,225	654,378	97,439	4,251,903	509,810	91,712
PSP	2,100,072	173	48,625	1,998,206	244	51,091
SNA	10,423,578	18,888	293,649	10,496,511	17,955	284,246
<b>Total</b>	<b>110,157,114</b>	<b>3,142,701</b>	<b>1,574,086</b>	<b>104,652,358</b>	<b>2,817,610</b>	<b>1,551,480</b>

Data Source: Individual airport's statistical reports and correspondence

**Table 4. 2016 and 2017 Aviation Activity at the Six Major SCAG Region Airports (by percentage of total)**

Airport	2017			2016 <sup>[6]</sup>		
	Passengers	Cargo/Mail (Tons)	Total Operations	Passengers	Cargo/Mail (Tons)	Total Operations
BUR	4.30%	1.73%	8.36%	3.96%	1.89%	8.53%
LAX	76.76%	76.03%	44.49%	77.32%	78.38%	44.93%
LGB	3.43%	0.81%	19.21%	2.71%	0.99%	19.01%
ONT	4.13%	20.82%	6.19%	4.06%	18.09%	5.91%
PSP	1.91%	0.01%	3.09%	1.91%	0.01%	3.29%
SNA	9.46%	0.60%	18.66%	10.03%	0.64%	18.32%
<b>Total</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>	<b>100.00%</b>

Data Source: Individual airport's statistical reports and correspondence

<sup>[4]</sup> The SCAG region encompasses Los Angeles, Orange, Ventura, San Bernardino, Riverside, and Imperial Counties.

<sup>[5]</sup> The 2016 passenger, cargo, and operations numbers in Table 3 were revised to reflect updated data published and/or provided by each airport.

<sup>[6]</sup> The 2016 percentages in Table 4 were recalculated with the updated 2016 numbers in Table 3.



Table 5 below shows each airport's share of regional air passenger traffic from 1997 to 2017.

**Table 5. Share of Passenger Activity at the Six Major SCAG Region Airports from 1997-2017 (by percentage of total)<sup>[7]</sup>**

Year	LAX	ONT	LGB	SNA	BUR	PSP	Regional Total
1997	74.6%	7.8%	0.8%	9.6%	5.8%	1.5%	100%
1998	74.9%	7.9%	0.8%	9.1%	5.8%	1.5%	100%
1999	75.4%	7.7%	1.0%	8.8%	5.6%	1.5%	100%
2000	76.1%	7.6%	0.7%	8.8%	5.3%	1.4%	100%
2001	75.2%	8.2%	0.7%	8.9%	5.5%	1.4%	100%
2002	72.2%	8.4%	1.9%	10.2%	5.9%	1.4%	100%
2003	69.7%	8.3%	3.6%	10.8%	6.0%	1.6%	100%
2004	70.5%	8.1%	3.4%	10.8%	5.7%	1.6%	100%
2005	69.6%	8.2%	3.4%	10.9%	6.2%	1.6%	100%
2006	69.6%	8.0%	3.1%	11.0%	6.5%	1.7%	100%
2007	69.3%	8.0%	3.2%	11.1%	6.6%	1.8%	100%
2008	70.5%	7.3%	3.4%	10.6%	6.3%	1.8%	100%
2009	71.5%	6.2%	3.7%	11.0%	5.8%	1.9%	100%
2010	72.5%	5.9%	3.7%	10.6%	5.5%	1.8%	100%
2011	73.7%	5.4%	3.7%	10.3%	5.1%	1.8%	100%
2012	74.2%	5.0%	3.7%	10.3%	4.7%	2.0%	100%
2013	75.4%	4.5%	3.3%	10.4%	4.3%	2.0%	100%
2014	76.2%	4.4%	3.0%	10.1%	4.2%	2.1%	100%
2015	76.7%	4.3%	2.6%	10.4%	4.0%	1.9%	100%
2016 <sup>[8]</sup>	77.3%	4.1%	2.7%	10.0%	4.0%	1.9%	100%
2017	76.8%	4.1%	3.4%	9.5%	4.3%	1.9%	100%

Data Source: Individual airport's statistical reports and correspondence



Photo Credit: Juan Francisco, LAWA

<sup>[7]</sup> Percentages are rounded to the nearest tenth.

<sup>[8]</sup> The 2016 percentages were recalculated with the updated passenger numbers in Table 3.