
APPENDIX D

INTERIM YEAR ACTIVITY ANALYSIS

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Appendix D

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Activity profiles were developed for Alternative D for three interim years in order to provide data for various technical tasks for the Supplement to the Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR), and was later integrated into the Final EIS/EIR. The year 2005 was defined as the most appropriate interim year for noise analysis because Runway 7R/25L would be closed in 2005. The year 2008 was determined to be the peak traffic year for construction and airport traffic. The year 2013 was defined as the peak emissions year for air quality analyses in the Draft EIS/EIR and was later integrated into the Final EIS/EIR.

As with the 2015 activity profiles, there would be facility constraints for Alternative D in each of the interim years that would preclude the airport from serving the unconstrained market demand at Los Angeles International Airport (LAX). The sections below describe these facility constraints and the resulting activity profiles for the interim years. **Table D-1** summarizes the Alternative D activity profiles for the interim years. Appendix F contains the passenger and operations hourly profiles for each interim year activity profile.

Table D-1
2015 Activity Comparison

	Commercial Passenger Operations								
	Domestic				Intl.	Total Commercial	Cargo	GA and MI	Total
	Air Carrier	Commuter	Hawaii	Total					
Design Day Operations									
2005 Alternative D	1,113	435	51	1,599	380	1,979	117	82	2,178
2008 Alternative D	1,075	516	52	1,643	415	2,058	117	104	2,279
2013 Alternative D	975	532	53	1,560	498	2,058	117	104	2,279
Design Day Passengers									
2005 Alternative D	140,819	7,476	14,491	162,786	74,567	237,353			
2008 Alternative D	137,942	9,822	14,726	162,490	82,647	245,137			
2013 Alternative D	134,982	11,937	14,702	161,621	101,137	262,758			
Design Day Enplanements/Departure									
2005 Alternative D	126.52	17.19	284.14	101.80	196.23	119.94			
2008 Alternative D	128.32	19.03	283.19	98.90	199.15	119.11			
2013 Alternative D	138.44	22.44	277.40	103.60	203.09	127.68			
Annual Operations									
2005 Alternative D	379,900	148,300	17,000	545,200	136,300	681,500	36,100	27,400	745,000
2008 Alternative D	367,000	176,300	17,400	560,700	149,200	709,900	36,100	35,000	781,000
2013 Alternative D	333,200	182,800	17,600	533,600	179,600	713,100	36,000	35,000	784,100
Annual Passengers									
2005 Alternative D	41,978,500	2,276,000	4,284,200	48,538,700	22,272,500	70,811,200			
2008 Alternative D	41,118,900	2,995,900	4,469,200	48,584,000	24,694,300	73,278,300			
2013 Alternative D	40,334,500	3,664,900	4,598,200	48,597,600	30,266,500	78,864,100			

Note: Canadian passengers and operations are included in the international totals.

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D.1 2005

A 2005 activity profile for Alternative D was developed for use in the airside simulations. The output of the 2005 Alternative D airside simulations was used to provide input to the Supplement to the Draft EIS/EIR noise analysis and was later integrated into the Final EIS/EIR.

The Alternative D activity profile was developed based on the capacity of the alternative in 2005. Runway 25L would be closed for construction in 2005 and LAX would consist of a three-runway airfield. No new gate facilities would be constructed by 2005 with Alternative D and the available gate facilities would be the same as the No Action/No Project Alternative.

If Alternative D had four runways in 2005, its capacity and resulting activity profile would be equivalent to the No Action/No Project Alternative. The No Action/No Project Alternative would have the ability to accommodate 71.2 MAP and 779,500 annual operations.

With only three runways available, airfield capacity would be reduced. It is assumed that the airlines would choose to not schedule a portion of the commuter activity in response to the constraint. In addition, it is assumed that general aviation activity would be reduced from the 2005 No Action/No Project Alternative levels in response to the delays and congestion that would result from the closure of Runway 25L/7R.

The capacity of a three-runway airfield was determined through an iterative process that involved testing the 2005 No Action/No Project activity profile against the three-runway airfield using the FAA's Airport and Airspace Simulation Model (SIMMOD). This testing process determined the hourly profile of activity that could be accommodated on a three-runway airfield at reasonable delay levels. Delays were permitted to increase beyond the maximum range of 10 to 15 minutes per operation (the range used in the development of the 2015 activity profiles for Alternative D and the other Master Plan alternatives) because the runway closure would be a temporary condition. It is assumed that the airlines would accept higher delays on a temporary basis in order to serve demand. See Appendix E for a discussion on the airside simulation assumptions for 2005.

Based on the capacity of a three-runway airfield, Alternative D in 2005 would have the ability to accommodate 70.8 MAP and 745,000 annual operations.

D.2 2008

A 2008 interim year activity profile was developed for Alternative D to assist in the landside modeling for the Supplement to the Draft EIS/EIR and was later integrated into the Final EIS/EIR. The following sections present the capacity constraints associated with Alternative D in 2008 and the expected impact on air service.

D.2.1 AIRCRAFT OPERATIONS CAPACITY CONSTRAINTS

Alternative D consists of a four-runway airfield in 2008. Similar to the 2015 case, the 2008 Alternative D peak hour aircraft operations activity was defined based on the capacity of the existing four-runway system at LAX in visual operating conditions. Peak hour operations in the 2008 activity scenario were assumed not to exceed the levels observed in 1996 and operations were permitted to increase in other hours as warranted by market demand.

D.2.2 PASSENGER CAPACITY CONSTRAINTS

There would be no new gate or landside facilities constructed by 2008 with Alternative D. The level of passengers that could be expected in 2008 with Alternative D was therefore determined based on the ability of the existing ramp to accommodate larger aircraft and the ability of the existing landside facilities to accommodate a higher level of origin and destination (O&D) passengers. Alternative D in 2008 would have the ability to accommodate the 2008 unconstrained forecast fleet size by making use of the remote west pad for aircraft parking. The existing landside facilities would have the capacity to process the activity generated by the runways and gates.

D.2.3 CARGO CAPACITY CONSTRAINTS

The cargo facilities available in 2008 for Alternative D would be equivalent to the those available in 2015. Therefore, cargo activity for Alternative D in 2008 was assumed to be equivalent to 2015 Alternative D cargo levels (3.1 million annual tons).

D.2.4 AIR SERVICE IMPLICATIONS

The air service impacts of the above constraints for Alternative D in 2008 are summarized below:

- ◆ High priority was given to accommodating O&D activity. By limiting the amount of connecting activity, Alternative D would be

able to accommodate 100 percent of the 2008 unconstrained forecast O&D demand.

- ◆ Commuter operations were reduced (from 1996 levels) consistent with the No Action/No Project Alternative and Alternative C. In order to maximize the number of passengers that could be served with a limited number of operations, it was assumed that some commuter service would be replaced by air carrier service. It was also assumed that commuter connecting service through LAX would decrease in order to meet 100 percent of forecast O&D demand. This results in 38 percent of forecast commuter connecting passengers not being served at LAX in 2008.
- ◆ Air carrier connecting activity was decreased from 2015 forecast levels to reflect the loss of connecting passengers from commuter flights.
- ◆ The domestic air carrier hourly profile was de-peaked and service was reduced from 2015 forecast levels in the Central, Eastern, and Pacific regions to reflect the response from the airlines to the airfield constraints. It is assumed the airlines would adjust their schedules to allow for more profitable international operations to be scheduled at peak periods.
- ◆ It is assumed that the percentage of domestic and international air carrier O&D passengers would increase as the airlines attempt to serve the unconstrained forecast O&D demand with fewer operations. As a result the percentage of connecting passengers would decrease.
- ◆ The average aircraft size was increased from existing levels without significantly exceeding the 2008 unconstrained forecast seats per departure for each air service component.
- ◆ General aviation activity was maintained at 1996 and 2000 levels, although activity was moved out of peak hours.

Alternative D would have the ability to serve 73.3 MAP and 781,000 annual operations in 2008. Alternative D would meet 100 percent of the unconstrained 2008 forecast O&D passenger demand and 90 percent of the 2008 forecast international passenger demand in 2008. Cargo facility constraints would prevent Alternative D from reaching the forecast 2005 annual cargo tonnage demand level in 2008.

D.3 2013

A 2013 activity profile was needed for Alternative D in order to estimate its airside performance. The airside performance data was needed for the air quality modeling for the Supplement to the Draft EIS/EIR and was later integrated into the Final EIS/EIR.

The facilities that would be available with Alternative D in 2013 are similar to those available in 2015. There would be four runways open in both years. Alternative D in 2013 would have fewer gates available as compared to 2015 (nine gates on the new linear concourse would be unavailable in 2013). It was assumed that the airlines would make use of the remote west pad gates in 2013 in order to maximize the level of activity that could be served by the LAX facilities while the final gates are constructed. Therefore, the capacity of Alternative D in 2013 would be similar to its capacity in 2015 and its activity profile would also be similar to 2015. In an effort to be conservative in the air quality analysis, it was assumed that the 2015 activity was representative of the 2013 interim year.