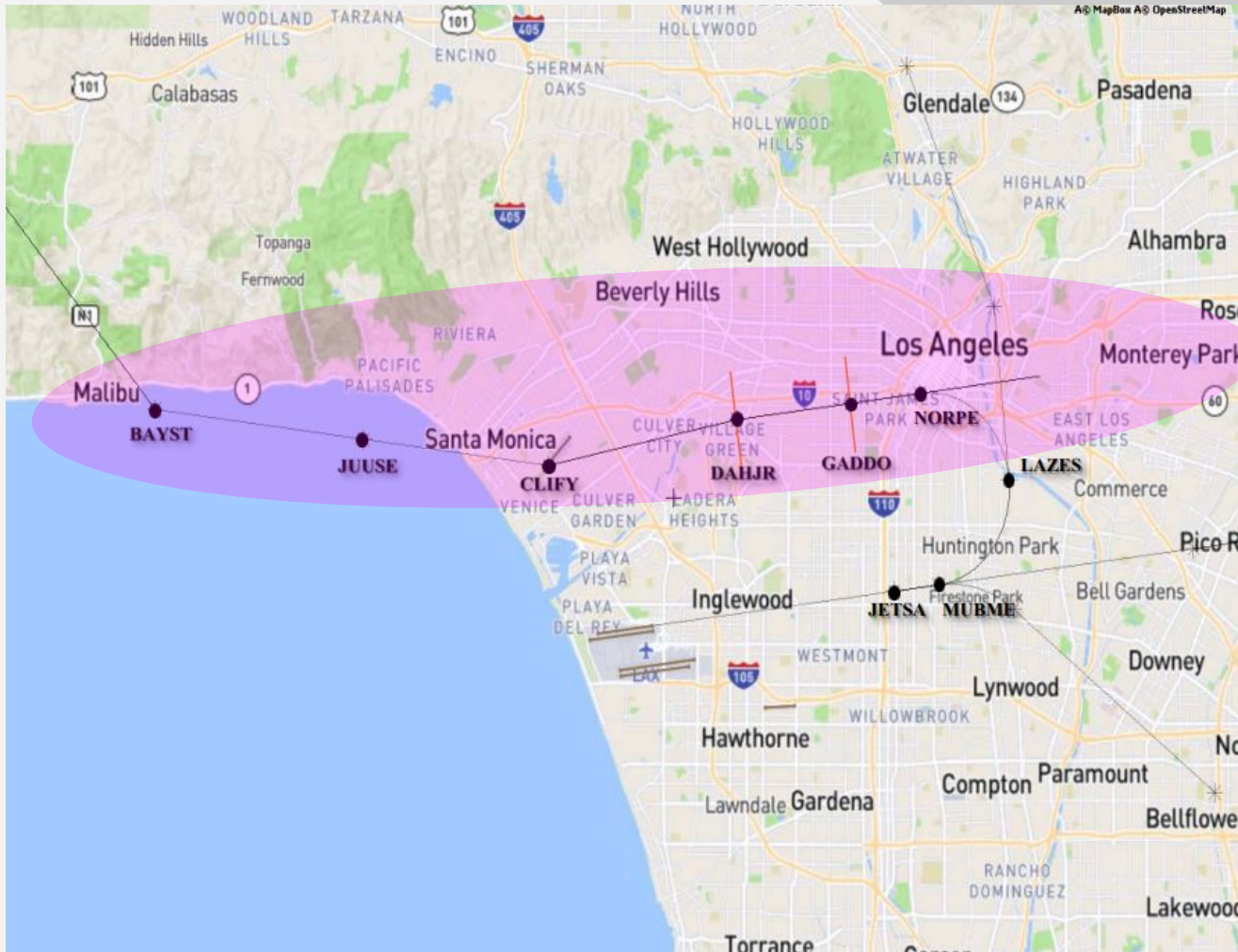




LAX Metroplex / Wide Area Ad Hoc Committee

LAX Community Noise Roundtable
July 2020

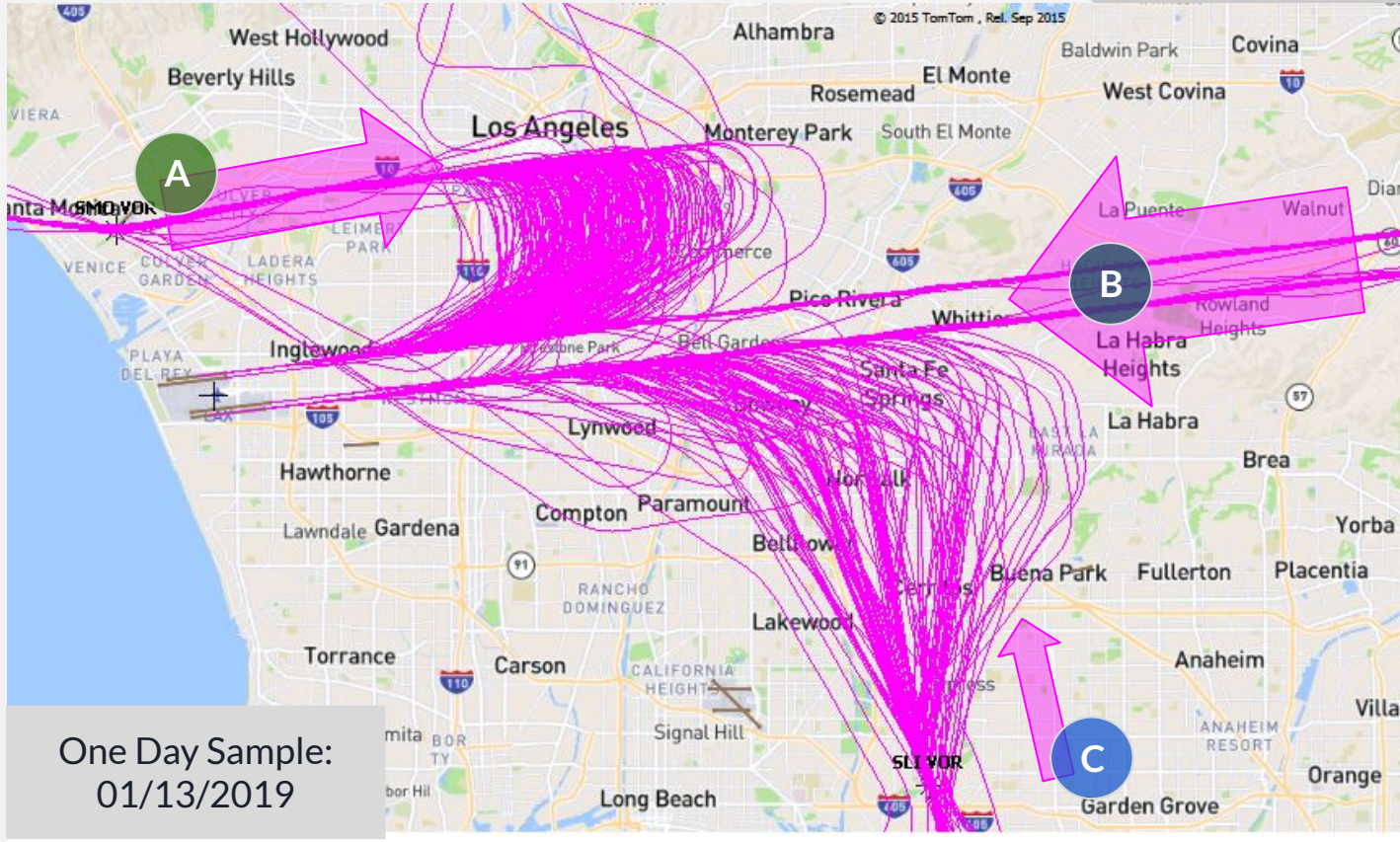
- 
1. North Downwind Arrival Flight Paths
 2. LAX and Other Airports
 3. DАHJR Flight Data - 24 hours
 4. DАHJR - 0100 to 0500 hours
 5. GADDO Flight Data - 24 hours
 6. Follow Up: Quiet Skies LA - CSDA Option A, B Study



1. North Downwind Arrival Flight Paths

Area in pink affected by North Downwind Arrival and has been studied more extensively in prior and current initiatives undertaken by the Metroplex Ad Hoc Committee of the LAX Community Noise Roundtable

1. North Downwind Arrival Flight Paths - Merges



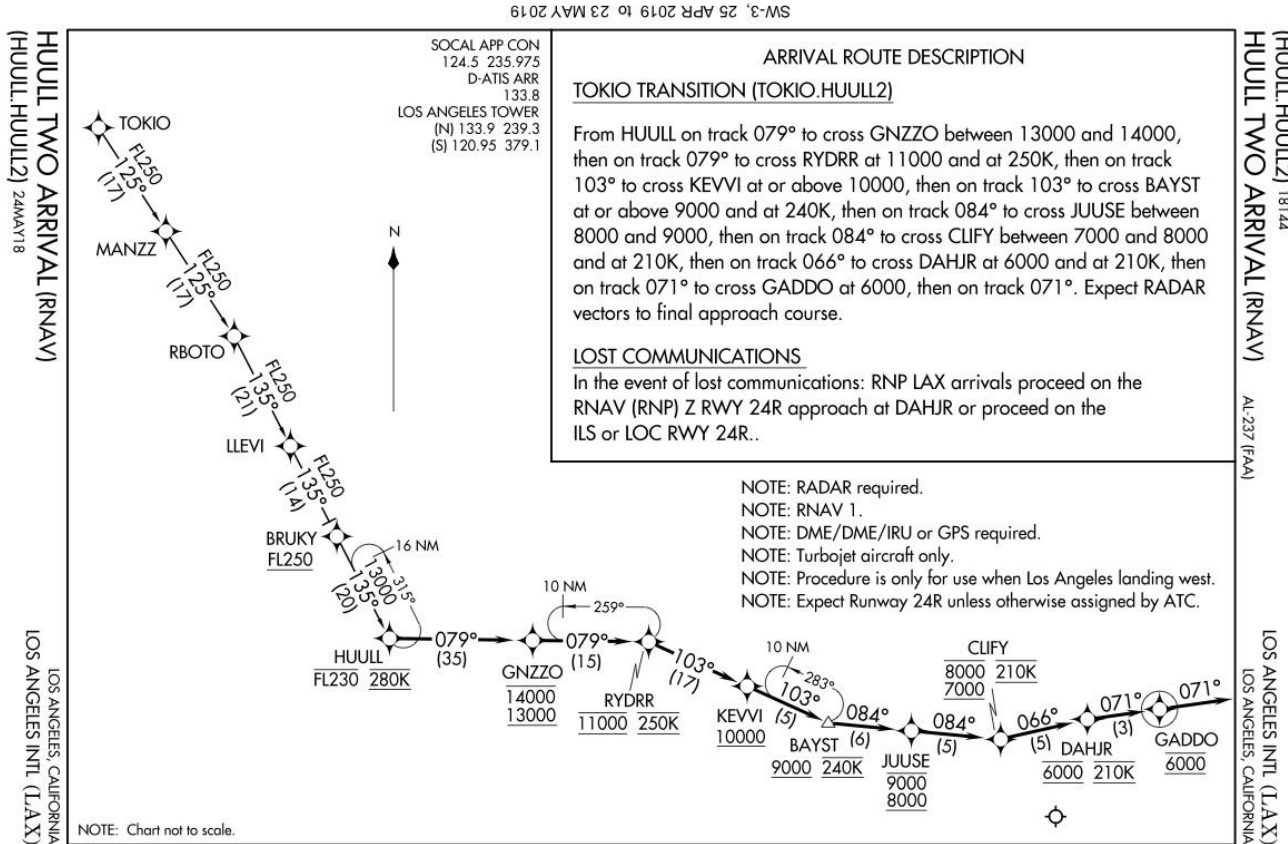
Percentage breakout of flights landing including their origin paths from one day at LAX

A North Arrivals
36% of inbound air traffic

B East Arrivals
52% of inbound air traffic

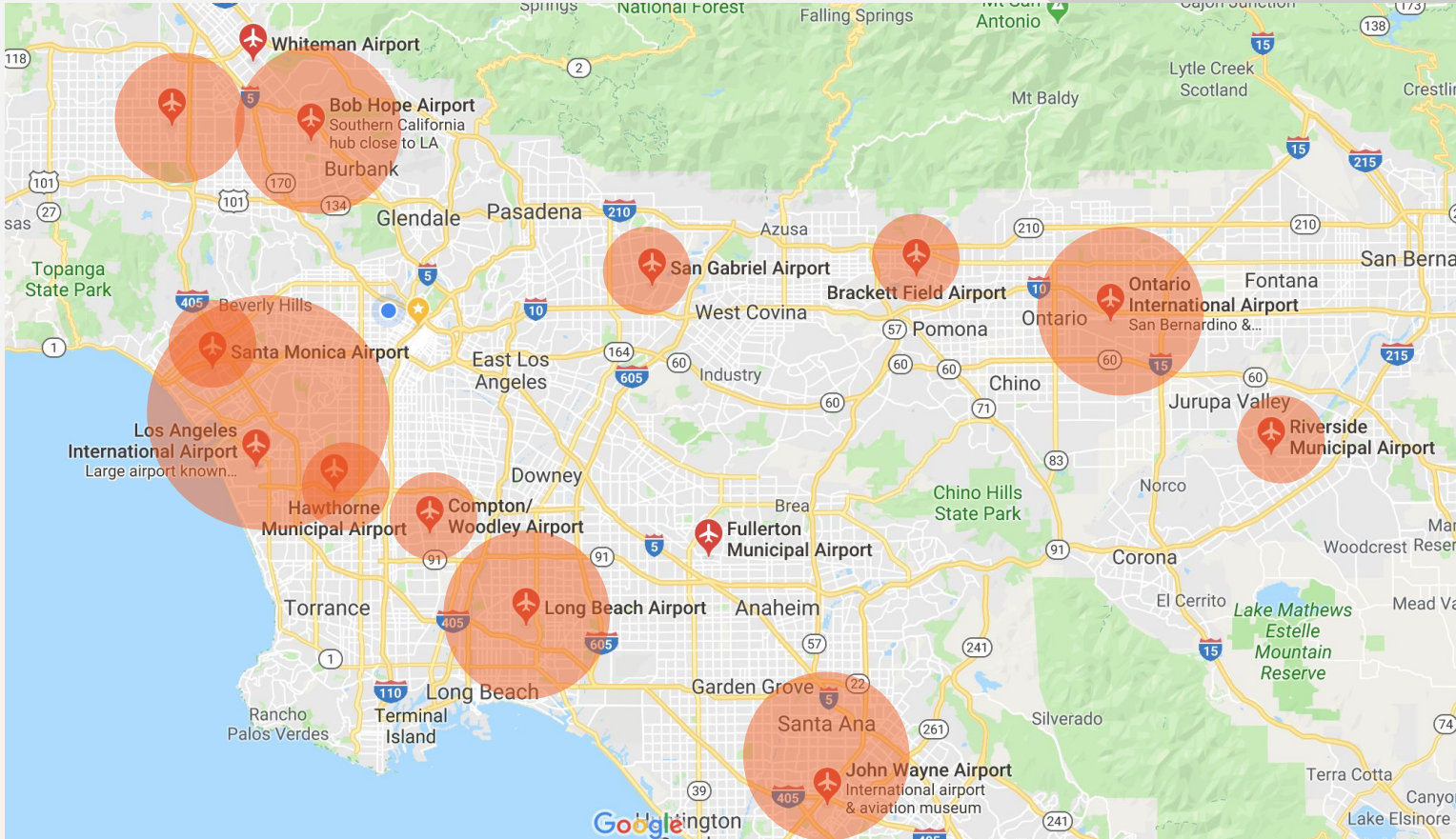
C South Arrivals
12% of inbound air traffic

1. North Downwind Arrival Flight Paths - HUULL



HUULL, IRNMN, & DAHJR are the three North Downwind Arrival Flight Paths into LAX

2. LAX and Other Airports



3. 6000 Foot Alt +/- 300 at DAHJR - 24 hours

ANOMS Gate Penetration - DAHJR
January 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	552	7.6%		
6000-6299	1636	22.5%		
5700-5999	1958	26.9%	56.9%	
5500-5699	979	13.4%	43.1%	
5000-5499	1423	19.5%		89.9%
4500-4999	522	7.2%		99.2%
4000-4499	156	2.1%		
3500-3999	50	0.7%		100.0%
3000-3499	10	0.1%		
2500-2999	1	0.0%		
<2500	0	0.0%		100.0%
Grand Total	7287	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR
February 1-28, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	765	9.9%		
6000-6299	1996	25.9%		
5700-5999	2214	28.7%	64.6%	
5500-5699	968	12.6%	35.4%	
5000-5499	1251	16.2%		93.4%
4500-4999	368	4.8%		99.4%
4000-4499	98	1.3%		
3500-3999	34	0.4%		99.9%
3000-3499	8	0.1%		
2500-2999	4	0.1%		
<2500	0	0.0%		100.0%
Grand Total	7706	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR
March 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	713	8.0%		
6000-6299	2220	24.9%		
5700-5999	2595	29.1%	62.0%	
5500-5699	1113	12.5%	38.0%	
5000-5499	1574	17.7%		92.1%
4500-4999	524	5.9%		99.5%
4000-4499	136	1.5%		
3500-3999	33	0.4%		100.0%
3000-3499	7	0.1%		
2500-2999	1	0.0%		
<2500	0	0.0%		100.0%
Grand Total	8916	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR
April 1-30, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	679	7.5%		
6000-6299	2368	26.1%		
5700-5999	2677	29.5%	63.1%	
5500-5699	1155	12.7%	36.9%	
5000-5499	1566	17.3%		93.2%
4500-4999	463	5.1%		99.6%
4000-4499	120	1.3%		
3500-3999	27	0.3%		100.0%
3000-3499	6	0.1%		
2500-2999	3	0.0%		
<2500	1	0.0%		100.0%
Grand Total	9065	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

3. 6000 Foot Alt +/- 300 at DAHJR - 24 hours

ANOMS Gate Penetration - DAHJR

May 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	660	7.1%		
6000-6299	2381	25.7%		
5700-5999	2669	28.9%	61.7%	
5500-5699	1209	13.1%	38.3%	
5000-5499	1630	17.6%		92.4%
4500-4999	517	5.6%		
4000-4499	141	1.5%		99.5%
3500-3999	29	0.3%		99.9%
3000-3499	10	0.1%		100.0%
2500-2999	4	0.0%		
<2500	1	0.0%		
Grand Total	9251	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR

July 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	784	7.9%		
6000-6299	2699	27.3%		
5700-5999	3129	31.6%	66.8%	
5500-5699	1313	13.3%	33.2%	
5000-5499	1508	15.2%		95.4%
4500-4999	359	3.6%		99.7%
4000-4499	75	0.8%		100.0%
3500-3999	21	0.2%		
3000-3499	4	0.0%		
2500-2999	0	0.0%		
<2500	0	0.0%		
Grand Total	9892	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR

June 1-30, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	642	6.8%		
6000-6299	2759	29.2%		
5700-5999	2985	31.6%	67.6%	
5500-5699	1138	12.1%	32.4%	
5000-5499	1398	14.8%		94.5%
4500-4999	420	4.4%		99.7%
4000-4499	74	0.8%		100.0%
3500-3999	14	0.1%		
3000-3499	9	0.1%		
2500-2999	1	0.0%		
<2500	0	0.0%		
Grand Total	9440	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR

August 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	698	7.1%		
6000-6299	2627	26.9%		
5700-5999	3108	31.8%	65.8%	
5500-5699	1275	13.0%	34.2%	
5000-5499	1551	15.9%		94.7%
4500-4999	417	4.3%		99.8%
4000-4499	88	0.9%		100.0%
3500-3999	14	0.1%		
3000-3499	1	0.0%		
2500-2999	0	0.0%		
<2500	1	0.0%		
Grand Total	9780	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

3. 6000 Foot Alt +/- 300 at DAHJR - 24 hours

ANOMS Gate Penetration - DAHJR
September 1-30, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	675	7.7%		
6000-6299	2178	25.0%		
5700-5999	2570	29.5%	62.2%	
5500-5699	1129	12.9%	37.8%	
5000-5499	1574	18.0%		93.1%
4500-4999	465	5.3%		
4000-4499	95	1.1%		99.6%
3500-3999	29	0.3%		
3000-3499	8	0.1%		100.0%
2500-2999	1	0.0%		
<2500	0	0.0%		100.0%
Grand Total	8724	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR
November 1-30, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	493	6.1%		
6000-6299	1780	22.0%		
5700-5999	2371	29.3%	57.3%	
5500-5699	1102	13.6%	42.7%	
5000-5499	1662	20.5%		91.5%
4500-4999	512	6.3%		
4000-4499	144	1.8%		99.6%
3500-3999	26	0.3%		
3000-3499	8	0.1%		100.0%
2500-2999	1	0.0%		
<2500	0	0.0%		100.0%
Grand Total	8099	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR
October 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	633	7.0%		
6000-6299	2070	23.0%		
5700-5999	2728	30.3%	60.3%	
5500-5699	1146	12.7%	39.7%	
5000-5499	1729	19.2%		92.3%
4500-4999	533	5.9%		
4000-4499	125	1.4%		99.6%
3500-3999	29	0.3%		
3000-3499	6	0.1%		100.0%
2500-2999	1	0.0%		
<2500	0	0.0%		100.0%
Grand Total	9000	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR
December 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	584	7.6%		
6000-6299	1752	22.9%		
5700-5999	2288	29.9%	60.5%	
5500-5699	995	13.0%	39.5%	
5000-5499	1325	17.3%		90.9%
4500-4999	509	6.7%		
4000-4499	131	1.7%		99.3%
3500-3999	39	0.5%		
3000-3499	15	0.2%		100.0%
2500-2999	2	0.0%		
<2500	1	0.0%		100.0%
Grand Total	7641	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

3. 6000 Foot Alt +/- 300 at DAHJR - 24 hours

ANOMS Gate Penetration - DAHJR

January 1-31, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	664	7.6%		
6000-6299	2141	24.5%		
5700-5999	2550	29.1%	61.2%	
5500-5699	1117	12.8%	38.8%	
5000-5499	1574	18.0%		92.0%
4500-4999	504	5.8%		
4000-4499	148	1.7%		99.4%
3500-3999	40	0.5%		
3000-3499	8	0.1%		100.0%
2500-2999	2	0.0%		
<2500	0	0.0%		100.0%
Grand Total	8748	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR

February 1-29, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	447	5.9%		
6000-6299	1535	20.2%		
5700-5999	2149	28.3%	54.4%	
5500-5699	1009	13.3%	45.6%	
5000-5499	1632	21.5%		89.2%
4500-4999	580	7.6%		
4000-4499	173	2.3%		99.1%
3500-3999	54	0.7%		
3000-3499	11	0.1%		100.0%
2500-2999	3	0.0%		
<2500	0	0.0%		100.0%
Grand Total	7593	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR

March 1-31, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	394	6.0%		
6000-6299	1313	19.9%		
5700-5999	1814	27.6%	53.5%	
5500-5699	848	12.9%	46.5%	
5000-5499	1363	20.7%		87.1%
4500-4999	549	8.3%		
4000-4499	213	3.2%		98.6%
3500-3999	58	0.9%		
3000-3499	22	0.3%		99.9%
2500-2999	6	0.1%		
<2500	3	0.0%		100.0%
Grand Total	6583	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - DAHJR

April 1-30, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	140	6.2%		
6000-6299	545	24.2%		
5700-5999	527	23.4%	53.8%	
5500-5699	289	12.8%	46.2%	
5000-5499	454	20.2%		86.8%
4500-4999	169	7.5%		
4000-4499	79	3.5%		97.8%
3500-3999	34	1.5%		
3000-3499	11	0.5%		99.8%
2500-2999	4	0.2%		
<2500	0	0.0%		100.0%
Grand Total	2252	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

3. 6000 Foot Alt +/- 300 at DAHJR - 24 hours

ANOMS Gate Penetration - DAHJR May 1-31, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes			
>6300	212	7.7%	58.5%	100.0%	99.2%	89.8%	
6000-6299	740	26.9%					
5700-5999	657	23.9%	41.5%	100.0%			
5500-5699	335	12.2%					
5000-5499	527	19.2%					
4500-4999	200	7.3%					
4000-4499	59	2.1%					
3500-3999	12	0.4%					
3000-3499	8	0.3%					
2500-2999	1	0.0%					
<2500	0	0.0%					
Grand Total	2751	100%					

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

3. 6000 Foot Alt +/- 300 at DAHJR - 24 hours

ANOMS Gate Penetration - DAHJR June 1-30, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes	
>6300	244	7.7%	58.8%	100.0%	90.2%
6000-6299	775	24.5%			
5700-5999	845	26.7%	41.2%	100.0%	99.4%
5500-5699	400	12.6%			
5000-5499	595	18.8%			
4500-4999	214	6.8%			
4000-4499	76	2.4%			
3500-3999	17	0.5%			
3000-3499	1	0.0%			
2500-2999	1	0.0%			
<2500	0	0.0%			
Grand Total	3168	100%			

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

3. 6000 Foot Alt +/- 300 at DAHJR - 24 hours

- In prior meetings of the Metroplex Ad Hoc Committee over the past several years, FAA representatives have cited the high volume of flights landing at LAX coming from the east and the need to safely merge these with North Downwind flights, as one of the primary reasons planes flying prescribed HUULL, IRNMN, & DAHJR North Downwind procedures regularly fail to fly at the heights called for in those procedures
- Does this reasoning still apply when aircraft operations during a pandemic fall by over 50%?

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	15	5	2	5	14	36	77
5750-6000	18	2	1	7	7	10	45
5500-5749	6	1	1	2	1	7	18
5250-5499	2	1	2	2	0	4	11
5000-5249	5	0	2	2	1	4	14
4750-4999	1	1	0	0	0	0	2
<4750	1	1	0	0	2	2	6
Total of All Flights	48	11	8	18	25	63	173
	1 to 5 Total		19				

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	24	13	11	9	58	72	187
5750-6000	13	4	3	0	9	19	48
5500-5749	6	0	1	1	2	6	16
5250-5499	3	2	1	1	2	8	17
5000-5249	2	1	1	1	1	3	9
4750-4999	3	0	0	0	0	0	3
<4750	6	1	0	0	2	6	15
Total of All Flights	57	21	17	12	74	114	295
	1 to 5 Total		17				

Oct 2018
19 flights

Nov 2018
17 flights

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	27	10	8	6	28	48	127
5750-6000	13	1	2	1	15	32	64
5500-5749	11	1	0	1	7	10	30
5250-5499	6	0	2	0	8	3	19
5000-5249	6	0	1	0	3	4	14
4750-4999	0	0	0	0	1	2	3
<4750	2	0	0	1	0	3	6
Total of All Flights	65	12	13	9	62	102	263
	1 to 5 Total		25				

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	10	6	6	4	3	13	42
5750-6000	6	2	0	0	5	6	19
5500-5749	9	0	1	1	2	3	16
5250-5499	2	0	1	0	3	4	10
5000-5249	2	0	0	1	0	0	3
4750-4999	1	0	0	1	0	1	3
<4750	2	0	0	2	0	1	5
Total of All Flights	32	8	8	9	13	28	98
	1 to 5 Total		12				

Dec 2018
25 flights

Jan 2019
12 flights

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	10	4	3	1	7	9	34
5750-6000	5	0	0	4	1	2	12
5500-5749	3	0	0	0	3	2	8
5250-5499	2	1	0	0	1	0	4
5000-5249	1	0	0	1	0	2	4
4750-4999	24	6	11	2	26	40	109
<4750	1	0	0	0	0	3	4
Total of All Flights	46	11	14	8	38	58	175
	1 to 5 Total		51				

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	15	5	2	4	10	11	47
5750-6000	38	12	2	17	45	52	166
5500-5749	7	0	0	0	3	0	10
5250-5499	1	0	1	0	3	5	10
5000-5249	1	0	0	0	2	3	6
4750-4999	1	1	0	0	1	0	3
<4750	2	0	0	0	1	0	3
Total of All Flights	65	18	5	21	65	71	245
	1 to 5 Total		12				

Feb 2019
51 flights

Mar 2019
12 flights

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	26	20	10	22	58	56	192
5750-6000	23	3	2	7	6	25	66
5500-5749	5	2	0	1	1	3	12
5250-5499	1	0	0	0	0	1	2
5000-5249	1	0	0	0	1	2	4
4750-4999	0	0	0	0	0	0	0
<4750	2	0	1	0	0	0	3
Total of All Flights	58	25	13	30	66	87	279
	1 to 5 Total		6				

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	41	10	5	15	47	49	167
5750-6000	17	5	0	1	15	17	55
5500-5749	6	2	0	1	1	2	12
5250-5499	2	0	0	0	1	0	3
5000-5249	6	0	0	0	0	2	8
4750-4999	2	0	0	0	0	1	3
<4750	4	0	0	1	0	0	5
Total of All Flights	78	17	5	18	64	71	253
	1 to 5 Total		6				

Apr 2019
6 flights

May 2019
6 flights

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	44	5	3	19	63	91	225
5750-6000	21	5	2	5	15	31	79
5500-5749	11	0	0	2	1	3	17
5250-5499	4	0	0	0	0	2	6
5000-5249	4	0	0	1	0	0	5
4750-4999	4	1	0	0	0	1	6
<4750	4	1	0	1	1	1	8
Total of All Flights	92	12	5	28	80	129	346
		1 to 5 Total		8			

Jun 2019
8 flights

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	56	8	7	15	39	55	180
5750-6000	29	1	2	3	14	25	74
5500-5749	9	0	1	0	2	1	13
5250-5499	3	0	0	0	0	2	5
5000-5249	3	0	0	0	0	1	4
4750-4999	1	0	0	0	0	0	1
<4750	2	0	0	0	0	0	2
Total of All Flights	103	9	10	18	55	84	279
		1 to 5 Total		3			

Jul 2019
3 flights

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	35	3	13	9	43	61	164
5750-6000	26	4	1	0	15	22	68
5500-5749	9	4	1	0	0	1	15
5250-5499	2	0	0	0	0	2	4
5000-5249	5	0	1	0	0	0	6
4750-4999	2	0	0	0	0	1	3
<4750	1	0	0	0	0	1	2
Total of All Flights	80	11	16	9	58	88	262
	1 to 5 Total		6				

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	27	4	1	0	4	25	61
5750-6000	10	0	0	1	3	11	25
5500-5749	6	0	0	0	1	1	8
5250-5499	5	0	0	0	0	0	5
5000-5249	3	0	0	0	0	1	4
4750-4999	1	0	0	0	0	0	1
<4750	1	0	0	0	0	0	1
Total of All Flights	53	4	1	1	8	38	105
	1 to 5 Total		1				

Aug 2019
6 flights

Sep 2019
1 flight

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	21	2	2	3	3	24	55
5750-6000	6	0	0	1	0	6	13
5500-5749	6	0	0	0	0	3	9
5250-5499	1	0	0	0	1	0	2
5000-5249	1	0	0	0	0	1	2
4750-4999	0	0	0	0	0	3	3
<4750	3	0	0	0	0	0	3
Total of All Flights	38	2	2	4	4	37	87
		1 to 5 Total		1			

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	14	1	2	5	12	37	71
5750-6000	6	1	0	1	4	21	33
5500-5749	4	0	1	0	0	4	9
5250-5499	2	0	0	0	2	3	7
5000-5249	1	0	0	0	0	2	3
4750-4999	2	0	0	0	0	1	3
<4750	1	0	0	0	1	0	2
Total of All Flights	30	2	3	6	19	68	128
		1 to 5 Total		4			

Oct 2019
1 flight

Nov 2019
4 flights

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	6	0	0	0	0	0	6
5750-6000	6	1	0	0	0	0	7
5500-5749	3	0	0	0	0	0	3
5250-5499	0	0	0	0	0	0	0
5000-5249	2	0	0	0	0	0	2
4750-4999	1	0	0	0	1	0	2
<4750	0	0	0	0	0	0	0
Total of All Flights	18	1	0	0	1	0	20
1 to 5 Total				1			

Dec 2019
1 flight

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	11	2	11	10	25	54	113
5750-6000	7	0	2	3	5	32	49
5500-5749	4	3	1	1	1	8	18
5250-5499	1	0	0	1	2	0	4
5000-5249	1	0	0	0	1	4	6
4750-4999	0	1	1	0	0	2	4
<4750	3	1	0	0	0	1	5
Total of All Flights	27	7	15	15	34	101	199
1 to 5 Total				13			

Jan 2020
13 flights

4. DAHJR - 0100 to 0500 totals

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	8	1	0	2	6	33	50
5750-6000	6	0	3	1	4	7	21
5500-5749	0	0	0	0	1	5	6
5250-5499	1	0	1	0	2	1	5
5000-5249	1	0	0	0	0	2	3
4750-4999	1	0	0	0	1	2	4
<4750	0	0	0	1	0	2	3
Total of All Flights	17	1	4	4	14	52	92
		1 to 5 Total		6			

Feb 2020
6 flights

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	9	1	0	2	2	12	26
5750-6000	7	1	0	0	1	5	14
5500-5749	0	0	2	0	1	2	5
5250-5499	0	0	0	0	0	2	2
5000-5249	1	0	0	1	0	0	2
4750-4999	1	0	1	0	0	0	2
<4750	1	0	0	0	0	2	3
Total of All Flights	19	2	3	3	4	23	54
		1 to 5 Total		5			

Mar 2020
5 flights

4. DAHJR - 0100 to 0500 totals

Apr 2020
4 flights

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	3	0	1	3	6	1	14
5750-6000	0	1	0	0	1	0	2
5500-5749	2	0	0	0	2	0	4
5250-5499	0	0	1	0	0	0	1
5000-5249	0	1	0	0	0	0	1
4750-4999	0	0	0	0	0	0	0
<4750	0	0	0	0	0	0	0
Total of All Flights	5	2	2	3	9	1	22
		1 to 5 Total		4			

May 2020
7 flights

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	3	9	5	6	6	4	33
5750-6000	0	5	1	1	1	0	8
5500-5749	0	0	0	0	2	3	5
5250-5499	0	1	1	1	0	0	3
5000-5249	0	1	0	0	0	0	1
4750-4999	0	0	0	0	0	0	0
<4750	0	1	0	0	0	0	1
Total of All Flights	3	17	7	8	9	7	51
		1 to 5 Total		7			

4. DAHJR - 0100 to 0500 totals

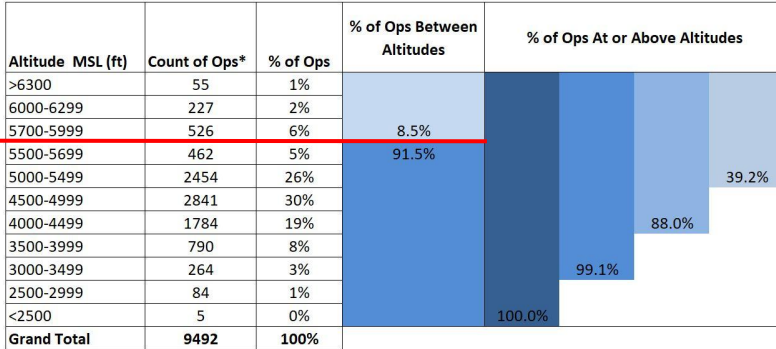
Jun 2020
0 flights

Altitude MSL (ft)	Time of Night						Totals by Height
	12:00 to 12:59 AM	1:00 to 1:59 AM	2:00 to 2:59 AM	3:00 to 3:59 AM	4:00 to 4:59 AM	5:00 to 5:59 AM	
>6000	1	0	0	0	0	3	4
5750-6000	2	0	0	0	0	0	2
5500-5749	2	0	0	0	0	0	2
5250-5499	0	0	0	0	0	1	1
5000-5249	0	0	0	0	0	0	0
4750-4999	0	0	0	0	0	0	0
<4750	0	0	0	0	0	0	0
Total of All Flights	5	0	0	0	0	4	9
		1 to 5 Total		0			

5. 6000 Foot Alt +/- 300 at GADDO - 24 hours

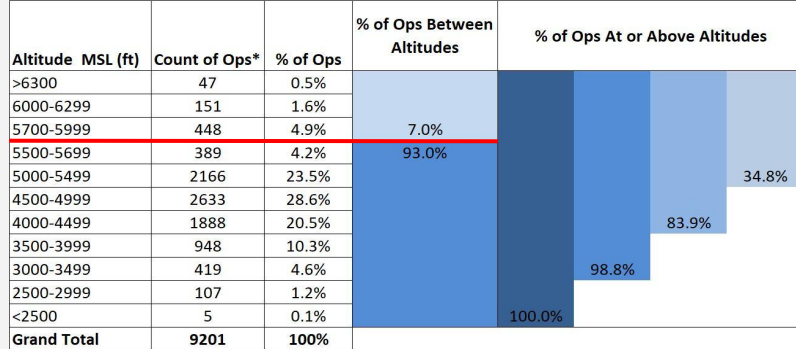
ANOMS Gate Penetration - GADDO

September 1-30, 2018



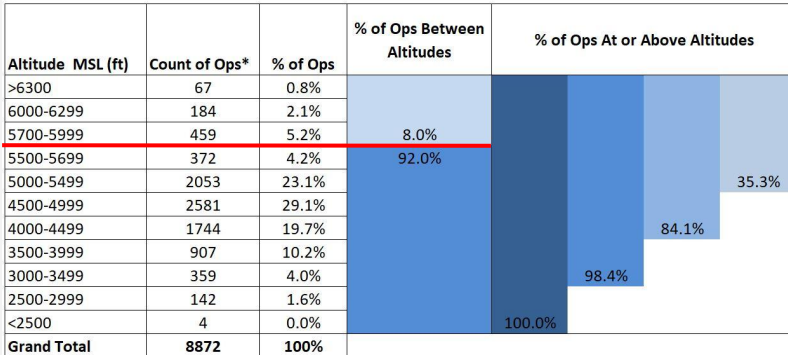
ANOMS Gate Penetration - GADDO

October 1-31, 2018



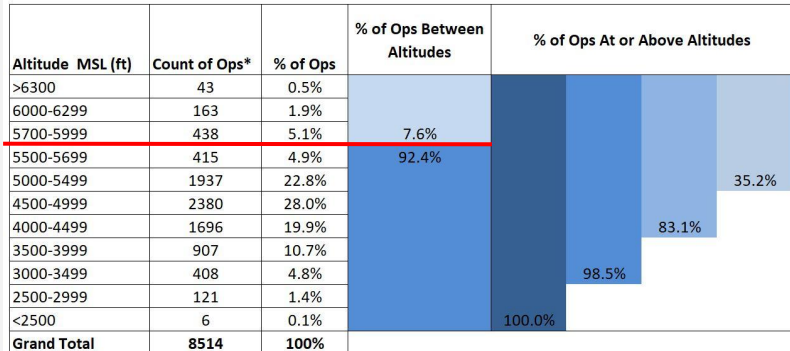
ANOMS Gate Penetration - GADDO

November 1-30, 2018



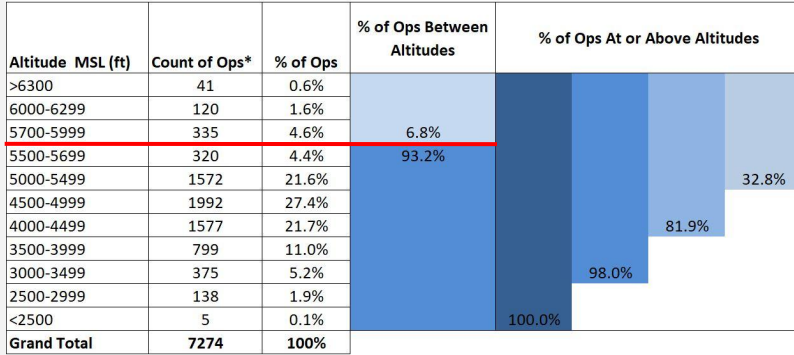
ANOMS Gate Penetration - GADDO

December 1-31, 2018

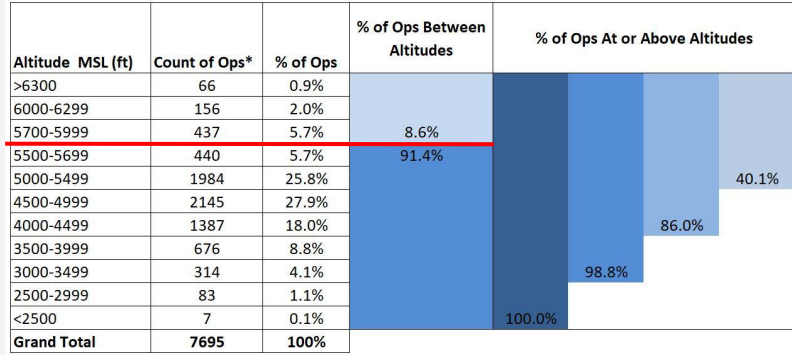


5. 6000 Foot Alt +/- 300 at GADDO - 24 hours

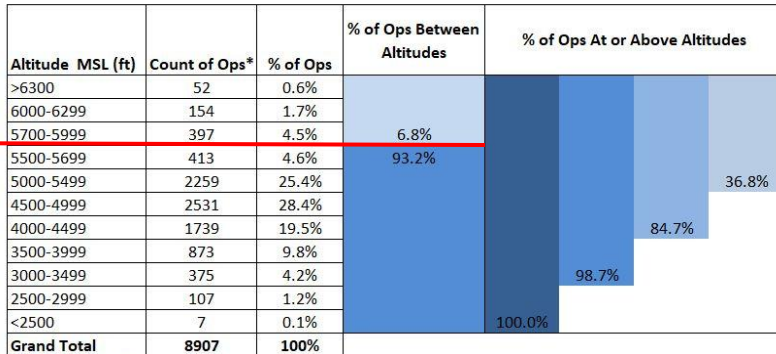
ANOMS Gate Penetration - GADDO
January 1-31, 2019



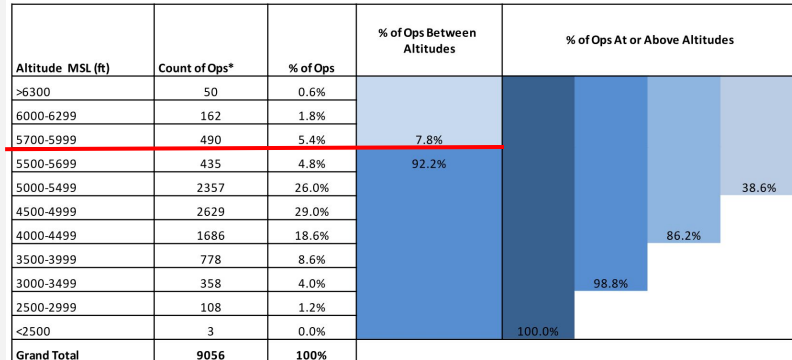
ANOMS Gate Penetration - GADDO
February 1-28, 2019



ANOMS Gate Penetration - GADDO
March 1-31, 2019



ANOMS Gate Penetration - GADDO
April 1-30, 2019



5. 6000 Foot Alt +/- 300 at GADDO - 24 hours

ANOMS Gate Penetration - GADDO
May 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	52	0.6%		
6000-6299	162	1.8%		
5700-5999	477	5.2%	7.5%	
5500-5699	463	5.0%	92.5%	
5000-5499	2306	25.0%		37.4%
4500-4999	2752	29.8%		
4000-4499	1703	18.4%		85.7%
3500-3999	820	8.9%		
3000-3499	350	3.8%		98.3%
2500-2999	143	1.5%		
<2500	11	0.1%		100.0%
Grand Total	9239	100%		

Prepared by: LAWA Noise Management
 *Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO
July 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	43	0.4%		
6000-6299	159	1.6%		
5700-5999	536	5.4%	7.5%	
5500-5699	511	5.2%	92.5%	
5000-5499	2886	29.2%		41.8%
4500-4999	3051	30.8%		
4000-4499	1741	17.6%		90.3%
3500-3999	678	6.9%		
3000-3499	231	2.3%		99.4%
2500-2999	55	0.6%		
<2500	0	0.0%		100.0%
Grand Total	9891	100%		

Prepared by: LAWA Noise Management
 *Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO
June 1-30, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	41	0.4%		
6000-6299	186	2.0%		
5700-5999	522	5.5%	7.9%	
5500-5699	457	4.8%	92.1%	
5000-5499	2734	29.0%		41.8%
4500-4999	2832	30.0%		
4000-4499	1651	17.5%		89.3%
3500-3999	698	7.4%		
3000-3499	238	2.5%		99.2%
2500-2999	73	0.8%		
<2500	5	0.1%		100.0%
Grand Total	9437	100%		

Prepared by: LAWA Noise Management
 *Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO
August 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	37	0.4%		
6000-6299	154	1.6%		
5700-5999	471	4.8%	6.8%	
5500-5699	472	4.8%	93.2%	
5000-5499	2731	27.9%		39.5%
4500-4999	3086	31.6%		
4000-4499	1782	18.2%		89.4%
3500-3999	737	7.5%		
3000-3499	252	2.6%		99.5%
2500-2999	49	0.5%		
<2500	2	0.0%		100.0%
Grand Total	9773	100%		

Prepared by: LAWA Noise Management
 *Data source: LAX ANOMS

5. 6000 Foot Alt +/- 300 at GADDO - 24 hours

ANOMS Gate Penetration - GADDO
September 1-30, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	44	0.5%		
6000-6299	156	1.8%		
5700-5999	461	5.3%	7.6%	
5500-5699	466	5.3%	92.4%	
5000-5499	2232	25.6%		38.5%
4500-4999	2507	28.8%		
4000-4499	1682	19.3%		86.6%
3500-3999	781	9.0%		
3000-3499	310	3.6%		99.1%
2500-2999	74	0.8%		
<2500	7	0.1%		100.0%
Grand Total	8720	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO
October 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	49	0.5%		
6000-6299	125	1.4%		
5700-5999	438	4.9%	6.8%	
5500-5699	370	4.1%	93.2%	
5000-5499	2041	22.7%		33.6%
4500-4999	2635	29.3%		
4000-4499	1881	20.9%		83.8%
3500-3999	917	10.2%		
3000-3499	435	4.8%		98.9%
2500-2999	96	1.1%		
<2500	7	0.1%		100.0%
Grand Total	8994	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO
November 1-30, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	27	0.3%		
6000-6299	120	1.5%		
5700-5999	350	4.3%	6.1%	
5500-5699	308	3.8%	93.9%	
5000-5499	1759	21.7%		31.7%
4500-4999	2394	29.6%		
4000-4499	1721	21.3%		82.5%
3500-3999	919	11.4%		
3000-3499	394	4.9%		98.7%
2500-2999	98	1.2%		
<2500	5	0.1%		100.0%
Grand Total	8095	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO
December 1-31, 2019

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	37	0.5%		
6000-6299	90	1.2%		
5700-5999	326	4.3%	5.9%	
5500-5699	323	4.2%	94.1%	
5000-5499	1878	24.6%		34.8%
4500-4999	2189	28.7%		
4000-4499	1513	19.8%		83.2%
3500-3999	768	10.1%		
3000-3499	383	5.0%		98.3%
2500-2999	118	1.5%		
<2500	11	0.1%		100.0%
Grand Total	7636	100%		

Prepared by: LAWA Noise Management
*Data source: LAX ANOMS

5. 6000 Foot Alt +/- 300 at GADDO - 24 hours

ANOMS Gate Penetration - GADDO

January 1-31, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	50	0.6%	93.4%	35.5%
6000-6299	133	1.5%		
5700-5999	396	4.5%		
5500-5699	399	4.6%		
5000-5499	2124	24.3%		
4500-4999	2482	28.4%		
4000-4499	1771	20.3%		
3500-3999	874	10.0%		
3000-3499	385	4.4%		
2500-2999	121	1.4%		
<2500	8	0.1%	100.0%	84.1%
Grand Total	8743	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO

February 1-29, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	35	0.5%	94.6%	29.4%
6000-6299	88	1.2%		
5700-5999	287	3.8%		
5500-5699	276	3.6%		
5000-5499	1546	20.3%		
4500-4999	2175	28.6%		
4000-4499	1678	22.1%		
3500-3999	936	12.3%		
3000-3499	441	5.8%		
2500-2999	132	1.7%		
<2500	10	0.1%	100.0%	80.0%
Grand Total	7604	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO

March 1-31, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	18	0.3%	94.8%	27.8%
6000-6299	86	1.3%		
5700-5999	235	3.6%		
5500-5699	224	3.4%		
5000-5499	1261	19.2%		
4500-4999	1699	25.9%		
4000-4499	1439	21.9%		
3500-3999	873	13.3%		
3000-3499	534	8.1%		
2500-2999	180	2.7%		
<2500	22	0.3%	100.0%	75.5%
Grand Total	6571	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

ANOMS Gate Penetration - GADDO

April 1-30, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes
>6300	13	0.6%	92.6%	33.8%
6000-6299	37	1.7%		
5700-5999	116	5.2%		
5500-5699	98	4.4%		
5000-5499	492	22.0%		
4500-4999	512	22.9%		
4000-4499	462	20.6%		
3500-3999	279	12.5%		
3000-3499	152	6.8%		
2500-2999	67	3.0%		
<2500	11	0.5%	100.0%	77.3%
Grand Total	2239	100%		

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

5. 6000 Foot Alt +/- 300 at GADDO - 24 hours

ANOMS Gate Penetration - GADDO May 1-31, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes		
>6300	24	0.9%	7.9%	100.0%		
6000-6299	56	2.0%				
5700-5999	137	5.0%				
5500-5699	145	5.3%				
5000-5499	687	25.1%	92.1%	98.5%		
4500-4999	656	23.9%				
4000-4499	548	20.0%				
3500-3999	309	11.3%				
3000-3499	138	5.0%				
2500-2999	39	1.4%				
<2500	3	0.1%				
Grand Total	2742	100%				82.2%
						38.3%

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

5. 6000 Foot Alt +/- 300 at GADDO - 24 hours

ANOMS Gate Penetration - GADDO June 1-30, 2020

Altitude MSL (ft)	Count of Ops*	% of Ops	% of Ops Between Altitudes	% of Ops At or Above Altitudes	
>6300	27	0.9%	8.3%		
6000-6299	59	1.9%			
5700-5999	175	5.5%	91.7%		
5500-5699	137	4.3%			
5000-5499	725	23.0%			35.6%
4500-4999	823	26.1%			
4000-4499	650	20.6%			82.3%
3500-3999	362	11.5%			
3000-3499	154	4.9%			98.6%
2500-2999	43	1.4%			
<2500	1	0.0%		100.0%	
Grand Total	3156	100%			

Prepared by: LAWA Noise Management

*Data source: LAX ANOMS

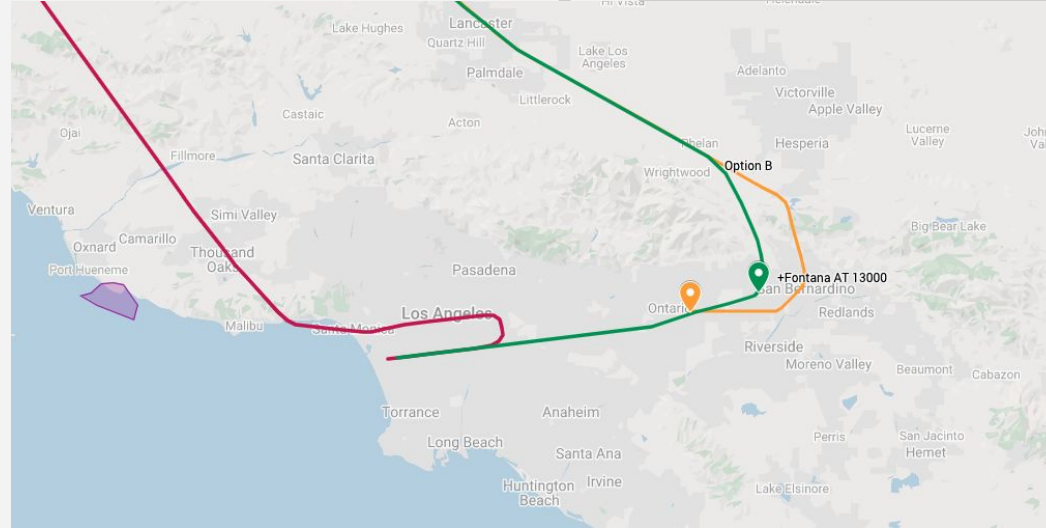
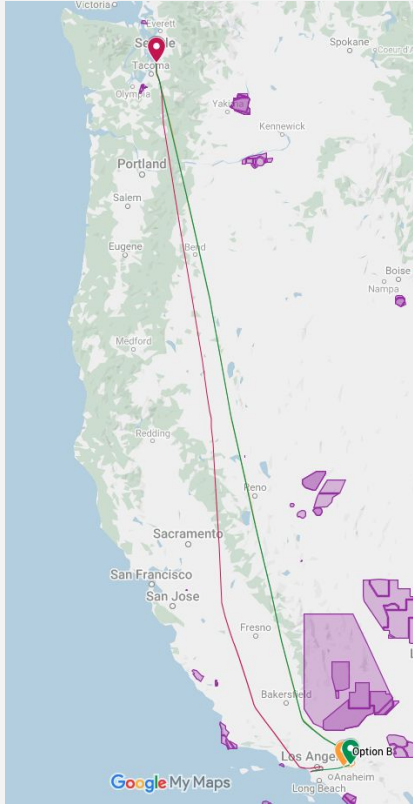
6. Follow Up: Quiet Skies LA - CSDA Option A, B Study

- At the March Roundtable we all discussed what the next steps were regarding Options A & B that Quiet Skies LA proposed as alternate flight procedures (in height and path) to reduce low-flying North Downwind flights over City of LA, Culver City, etc.
- One of the discussion points was the potential need to modify Noise Roundtable bylaws before asking the FAA to analyze whether Option A or B would be viable for implementation
- The Ad Hoc Bylaws Committee met, agreed to a modification of the bylaws that got passed out of committee and will be voted on tonight

6. Follow Up: Quiet Skies LA - CSDA Option A, B Study

- If the full Roundtable approves the aforementioned modified bylaw language the RT can then engage the FAA (via formal correspondence) to analyze Quiet Skies LA Options A & B

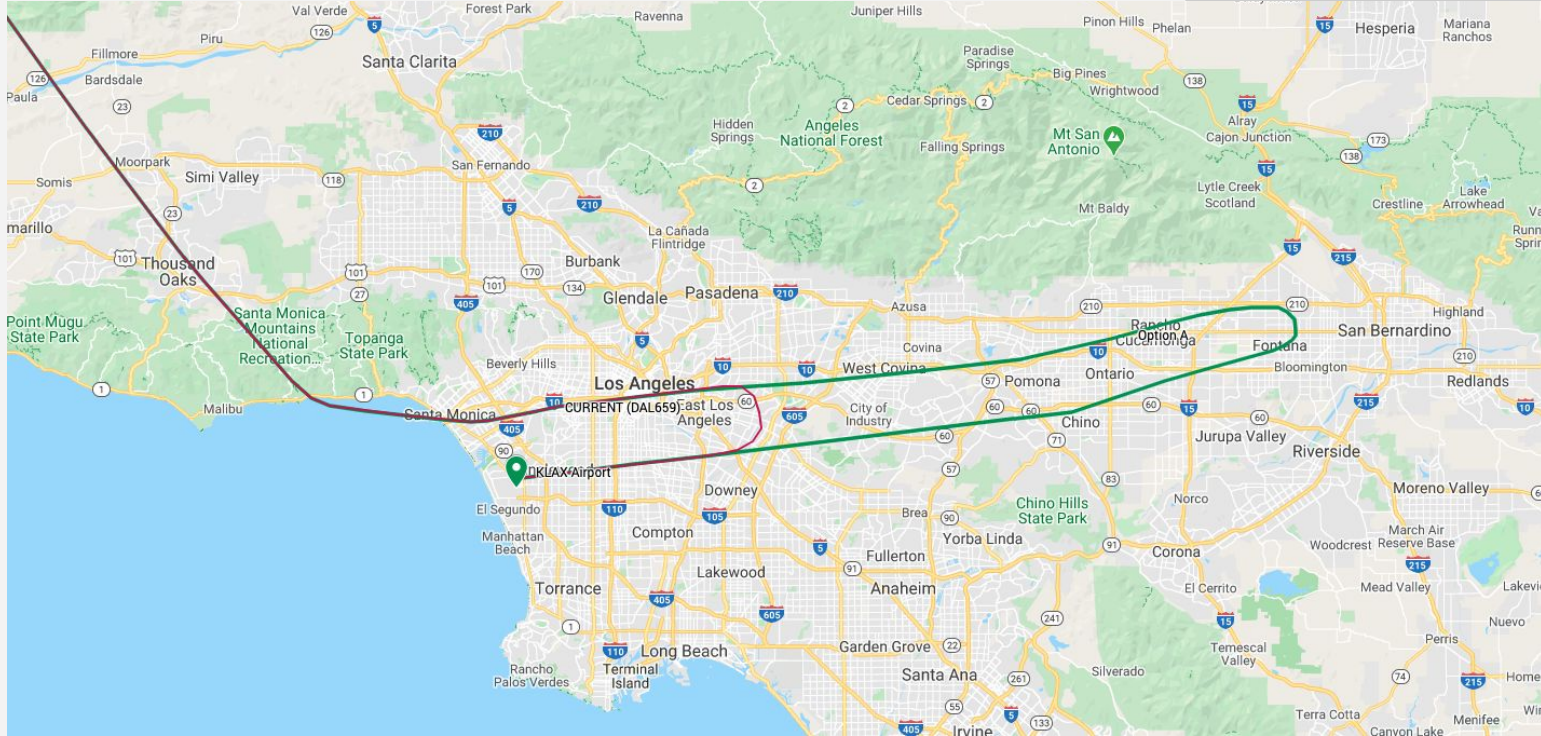
6. Option B, Proposed Route Example



- Option B
- ASA620 Seattle to Ontario
- Delta Airlines DAL659 Seattle to LAX
- Option B: 1,035 mi
Current : 1,016 mi
- +19 mi (+1.9%)**

- Rerouting existing North Downwind Flights along existing flight paths could pull traffic off the North Downwind, thus reducing noise exposure, without creating excessive additional time in the air or fuel burn
- This does not appear to require large-scale redesign of existing airspace since we can rely on existing flight paths to Ontario and join up with ANJLL FOUR arrivals similar to Option A

6. Option A, Refined



- Option A
- Delta Airlines flight [DAL659](#) [KSEA-LAX](#) [01-09-2020](#)
- Option A: 1,113 mi
- DAL 569: 1,035 mi
- +78 mi (+7.5%)

Option A Google Maps screenshot - precise path and waypoint location can be made available on request



THANK YOU