Reince Tyler

Subject: FW: Questions

-----Original Message-----
From: Gary Wonacott <gwonacott@hotmail.com>
Sent: Sunday, January 8, 2023 5:48 AM
To: SDCRAA clerk <clerk@san.org>
Subject: Questions

Please deliver to the ANAC members prior to the next meeting.

1. The FAA apparently approved the relocation of the JETTI waypoint by one mile to the west. Presumably AEDT studies were used to quantify a reduced noise in Ocean Beach, or Mission Beach, or possibly Pt. Loma. And yet, when Ms. Knack tried to confirm the benefit using the noise monitor system, she could not do it. She explained that the noise from the aircraft was already at or below ambient noise levels at the original JETTI location. Assuming Ms. Knack's assessment is correct for the moment, does this not suggest a flaw in the AEDT model?
2. Boeing and Airbus represent the majority of aircraft producing noise coming and going from SDIA. Both aircraft use similar noise reduction approaches in the engines; however, while Airbus has advanced their airframe quieting technology, Boeing, particularly in the 737, continues to rely on 1950's airframe technology, resulting in substantially greater noise, most noticeable during arrivals. Given that this is the case, why is there no curfew for arrivals? While it seems unfair to punish Airbus, it seems like giving up the curfew on the arrivals has taken away a strong motivator on Boeing.
3. Boeing commercial division prioritized safety and engineering over all else for decades, but with the merging of McDonnell Douglas, a company driven by profit, there have been numerous issues on Boeing aircraft with the 737Max being the latest catastrophe. In the meantime, the FAA has become increasingly toothless with the OEMs being increasingly dictating terms. Given the arrow margins at SDIA, what is being done to enhance safety ad protection for the residents living around the airport?

Gary Wonacott
Missio Beach

Sent from my iPad

Reince Tyler

Subject: FW: Letter to ANAC November 2022
Attachments: Letter to ANAC November 2022.pdf

From: Gary Wonacott <wildcatwonacott@gmail.com>
Sent: Wednesday, January 18, 2023 11:29 PM
To: Gary Wonacott <gwonacott@hotmail.com>
Cc: Larry Clark <lctravel@san.rr.com>; John Williams <jtw@american-design.net>; Debbie Watkins <dkwatkns@aol.com>; Knack Sjohnna <sknack@san.org>; Reed, Brendan <breed@san.org>
Subject: Letter to ANAC November 2022

Please distribute to ANAC members before the next meeting.

Gary Wonacott
Mission Beach

3 November 2022

To: ANAC members for December 2022 Meeting

It is not clear what the mission of the ANAC members is every three months in 2022. What do the members learn at these meetings they could not learn by reviewing the material provided by the Airport Authority at home. It just seems that the original objective(s) of this group has been lost. I would like to think that the materials in this paper might benefit Mission Beach, but Ms. Henson, the MB representative is hand picked and completely controlled by Debbie Watkins.

So, my main objective is to put some ideas out there for your consideration, review and comment. This is not my area of expertise, so any feedback will help me to learn more about this subject. In this paper I raised an issue about the CNEL as a measure of impact on resident quality of life and health, identified a different impact from the 11 new Terminal 1 gates, and assessed the need for adding new fixed noise monitors in Mission Beach. This latter objective can be evaluated by adding portable noise monitors around Mission Beach determining if there is a substantial drop-off in the Lmax values compared to NM#23.

LARSON DAVIS LxT PORTABLE NOISE MONITOR REVEALS INTERESTING CNEL INSIGHTS

When you operate the Larson Davis portable noise monitor yourself, you have access to the raw data as well as the approach used to calculate the Community Equivalent Noise Levels CNEL). Casey Schnoor some time ago raised his objections to the sole use of the 65 dB CNEL, and I along with many others think for good reason.

I did some calculations and found that averaging the total noise over 17 hours instead of 24 not surprisingly made an important difference. But there is another aspect of this averaging calculation that is even more important. Instead of summing the weighted numbers for the entire 24 hours and then adjusting it for 17 hours, I should have taken each of the cumulative measurements for 7 am to 7 pm and divide by 12 hours, then the measurement for evening with the 3 dB added, divide by 3 hours, and lastly, the nighttime measurement with the 10 dB penalty added and divided by 8.5 hours. The last step is to add the logarithms for the three time periods together. As it turns out, dividing the cumulative noise for the two hours of nighttime by 8.5 hours effectively negates the penalty. Perhaps the airport authority could run some examples for the ANAC members quantifying this effect. Clearly, the CNEL does not reflect the disruption in sleep and quality of life that residents experience.

The plotted values in Figure 1 are the approximated area in square miles contributed by one departure to the 65 dB CNEL using the FAA AEM tool. While there is a substantial range of noise levels from aircraft to aircraft, there is even more sensitivity of the noise level to the altitude of the aircraft at flyover. This effect is shown in Figure 2 for NM#23(jetty at South Mission Beach). Suffice it to say, we would be a lot better off if quieter aircraft departed at higher altitudes. Another factor that is not considered is the aircraft thrust level, which is considered in the NADP assessment. The bottom line to all of this is that the Community Noise Equivalent Level is severely lacking as a measure of the health and quality of life impact on the residents. My personal favorite would be to establish limits on number of single event thresholds exceedances for health and quality of life.

IMPACT OF TERMINAL 1 NEW GATES

A second point that I would like to make relates to the potential impact of the new T1 gates on the level of resident disruption. If anyone has seen a picture from Flightradar24 at 6:15 in the morning, not at London Heathrow, but at SDIA, you will see a substantial traffic jam on the taxi-way. Beginning at 6:30 am, there is a constant stream of aircraft departures about one and a half minutes apart that is limited by the number of aircraft stored overnight. The aircraft that come into SAN that are stored overnight is limited by the number of gates. Eleven more gates allows 11 more aircraft to be stored, and the next morning increases the continuous stream of aircraft departures that much longer and

later into the morning. This problem is I believe exacerbated by the type of aircraft stored overnight based on their noise levels.

Figure 1 Relative noise levels of aircraft departing between 6:30 and 7 am

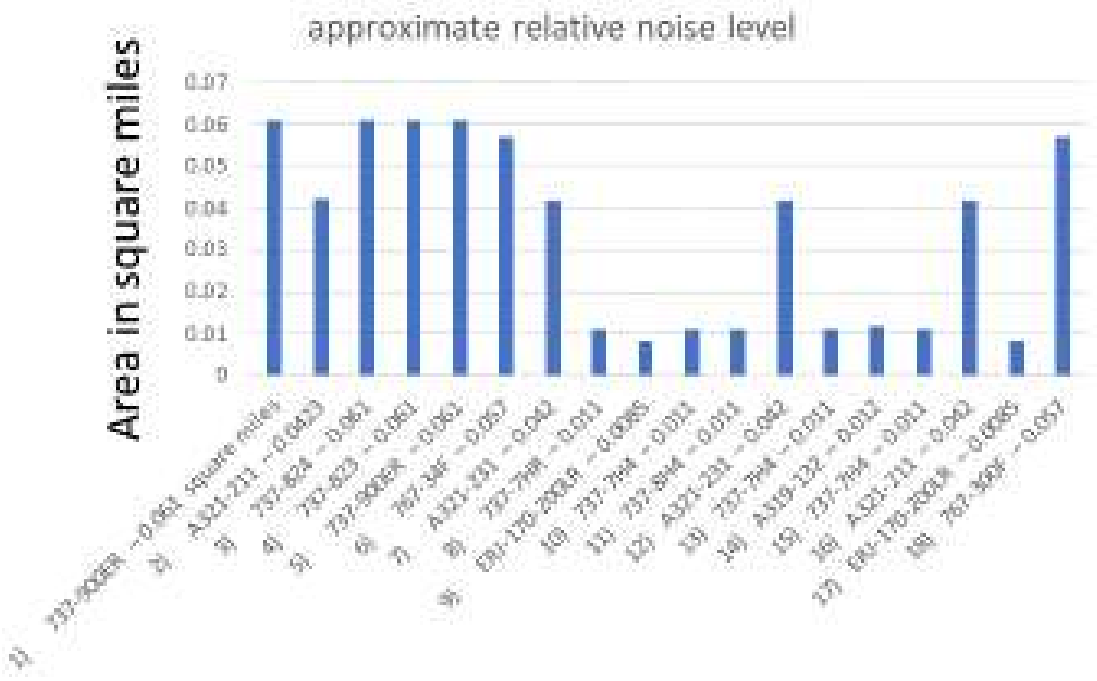
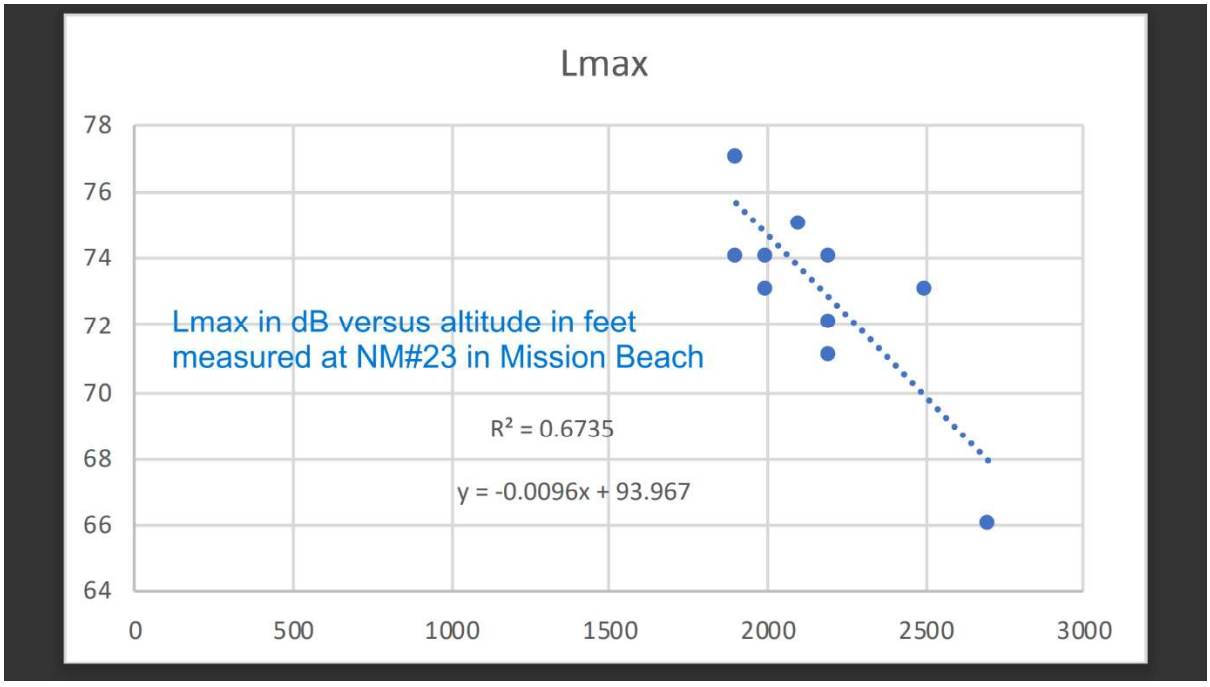


Figure 2 Sensitivity of noise level to altitude at NM#23



ASSESSED THE NEED FOR ADDING FIXED NOISE MONITORS IN MISSION BEACH

There is currently and for some time one fixed noise monitor in Mission Beach, after the Airport Authority removed several others based on the explanation by the Airport Authority Noise Abatement Office that they were removed because the aircraft noise could not be differentiated from the ambient noise levels. I don't completely disagree, but they could begin by moving NM#23 at the jetty that is currently exposed to large numbers of loud trucks and motor-cycles. I am fairly sure that with the implementation of the FAA satellite navigation system, the concentration of noise justifies more than one noise monitor in South Mission Beach.

To demonstrate that the Aircraft Authority explanation for removal of all but one monitor is flawed, the LxT portable noise monitor will be used to measure the noise levels at multiple locations in South Mission Beach each time moving the noise monitor further north. The objective is to prove that indeed the noise levels are loud enough to differentiate from ambient noise, suggesting the need to add fixed noise monitors. It is believed that this could have an impact on the size of the penetration of the 65 dB CNEL into South Mission Beach. The majority of the runs focused were initiated at about 4 pm and data was collected until about 10 the next day. The measure of merit is the single event Lmax value.

So far, two locations have been measured and analyzed (see Figure 3), Avalon Court and Brighton Court. An issue specific to Mission Beach is the addition of more noise monitors promised by Ms. Knack to the previous ANAC representative from Mission Beach. The picture in Figure 3 shows the Airport Authority fixed NM#23 at the south end of Mission Blvd. The red line, 1064 feet north of the NM#23, is the Avalon Court measurement location. The blue line is 1333 feet north of NM#23 to a location on Brighton Court. These two locations coincide with the noise data plotted in Figures.

Figure 4 is an output from the Larson Davis portable noise monitor located on Avalon Court covering the time period from 6:30 am to 7 am on October 16. There are 18 departures with six on ZZOOO and the rest on PADRZ. Note that the departures on PADRZ are all very loud with a number of the peaks exceeding 70 dB (Lasmax only). But in any case, there is little to no respite, except when there is/are arrival(s).

The Lasmax data between the LxT and Webtrax NM#23 is directly compared in Table 1. As can be seen, the LxT measurements consistently exceed the NM#23 for the PADRZ departures, but are less than NM#23 for the ZZOOO departures. There are two possible explanations for the lower values for the ZZOOO departures. The LxT monitor is between 900 and 1,000 feet farther from the aircraft compared to the NM#23 for the ZZOOO departures, but it is also possible that the third story structure partially blocked sound for the LxT monitor.

The information included in the table include the event number, the time when the Lmax occurred, the Webtrax and LxT maximum values, the time difference between departures when the Lmax values are measured, and the delta noise level between the NM#23 and the LxT measurement.

On average there is about 1.67 minutes separating the flights when the peak measurement are made. But some of the departures are as short as 30 seconds apart. Given the lines of aircraft on the taxiway at 6:30 am, there is clearly pressure on the FAA/ATC to launch as many aircraft as fast as possible on runway 27. I mean, if this was an aircraft carrier trying to launch aircraft as fast as possible, then there would be no question, but these are commercial departures. Typically, pilots are very conservative, so it begs the question whether launching aircraft does not raise some safety concerns. This is not an Airport Authority issue, so I will forward the data to the FAA safety office.

Figure 3 (a) Red line is 1065 feet and 314 degrees heading; (b) Blue line is 1,337 feet and 337 degrees heading and c) green line is 1,766 feet and 345 degrees from NM#23

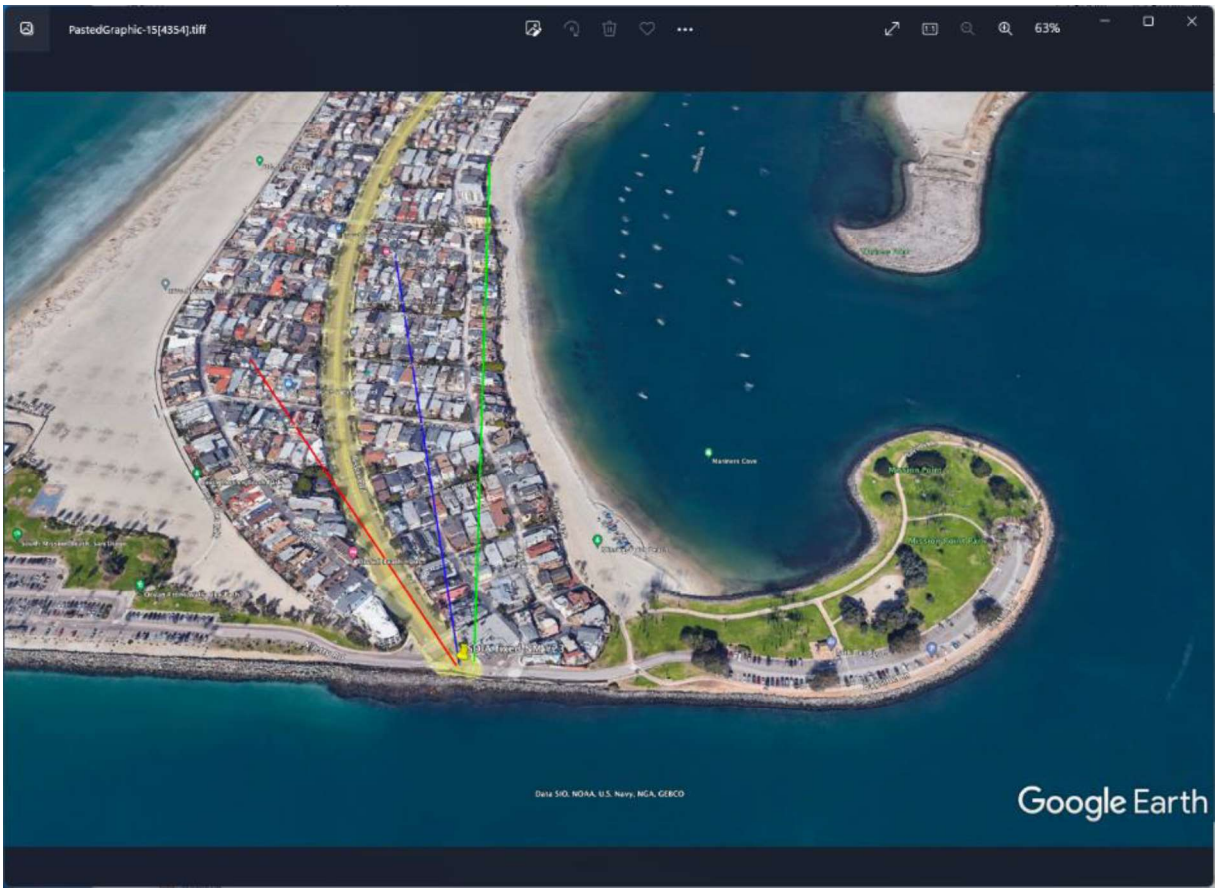


Figure 4 Early morning data (6:30 to 7 am) collected on Avalon Court on 10/16/2022

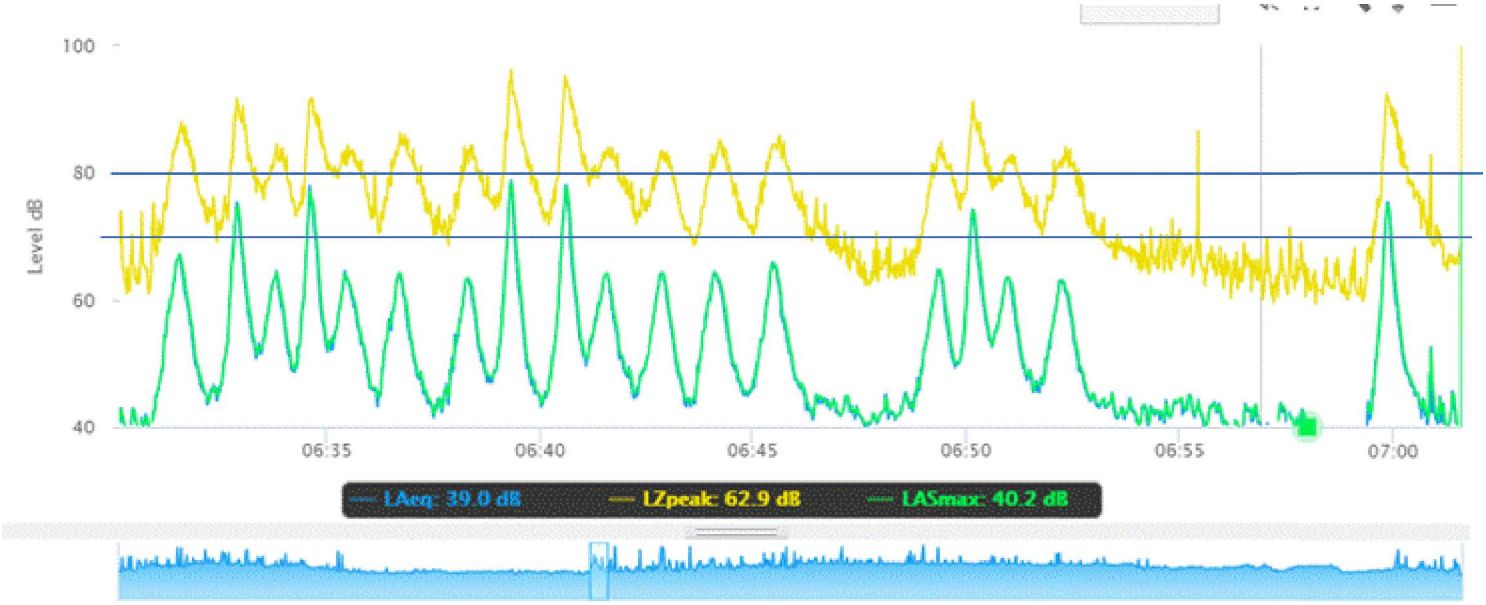


Table 1 Comparison on 10/16 of LXT measured values at Avalon Court and NM#23 Lmax values

October 16, 2022 Avalon Court					
Event	Time	Lmax dB			
		Webtrax #23	LxT Avalon	Time between measure ments	Delta Noise level in dB
1	6:31:33	71	67.2		3.8
2	6:32:55	74	75.2	0:01:22	-1.2
3	6:34:06	69	64.5	0:01:11	4.5
4	6:34:36	75	77.4	0:00:30	-2.4
5	6:35:25	67	65	0:00:49	2
6	6:36	68	64.4	0:01:17	3.6
7	6:38:19	68	63.5	0:01:37	4.5
8	6:39:19	77	78.7	0:01:00	-1.7
9	6:40:37	76	78	0:01:18	-2
10	6:41:34	68	64.3	0:00:57	3.7
11	6:42:54	67	64.3	0:01:20	2.7
12	6:44:06	68	64.4	0:01:12	3.6
13	6:45:29	69	65.9	0:01:23	3.1
14	6:49:22	69	64.9	0:03:53	4.1
15	6:50:10	73	74.3	0:00:48	-1.3
16	6:51:01	67	63.6	0:00:51	3.4
17	6:52:17	68	63.1	0:01:16	4.9
18	6:59:53	74	75.2	0:07:36	-1.2
				Average	1.894444
AVERAGE VALUES		70.44444	68.55		2.661815
AVERAGE PADRZ VALUES		74.83333	76.46667		-1.56

A similar assessment was performed for the LxT located on Brighton Court. The picture in Figure 5 shows time history data for the LxT data from the Larson Davis portable noise monitor for, 6:30 to 7 am and 10 to 11:30 pm, the first one on October 16th at Avalon location and the second one on October 31 at Brighton. Mission Beach has one noise monitor located at the jetty at the most southern end of Mission Blvd. At one point, Mission Beach had four monitors, but as the 65 dB CNEL receded, monitors were removed on the pretext that the noise levels could not be distinguished from ambient noise. So, I am making a series of noise measurements to observe the noise levels as the portable monitor is moved north to determine at what point the aircraft noise is the same as other environmental noise. For the two locations measured north of the jetty, the noise levels are very comparable to the fixed NM#23.

It is fair to conclude from the data presented and the analysis comparisons that the noise levels on Avalon Court and Brighton Court are at least as loud as at the jetty. Noise monitors are omni-directional; that is they do not differentiate between noise north or south of the monitor. Given that the noise levels are at least as loud at the two locations where measurements were made by the LxT, then I would conclude that the NM#23 is not adequate by itself in the calculation of the 65 dB CNEL. We can therefore conclude that additional noise monitors are required to the north of NM#23 to more accurately characterize the noise in SMB.

Figure 5 Comparison of 11/2 early morning departures at Brighton Court (green line) and NM#23 Lmax noise values; time history is from LxT

The annotations in red are PADRZ SID and the ones in blue are ZZOOO SID departures

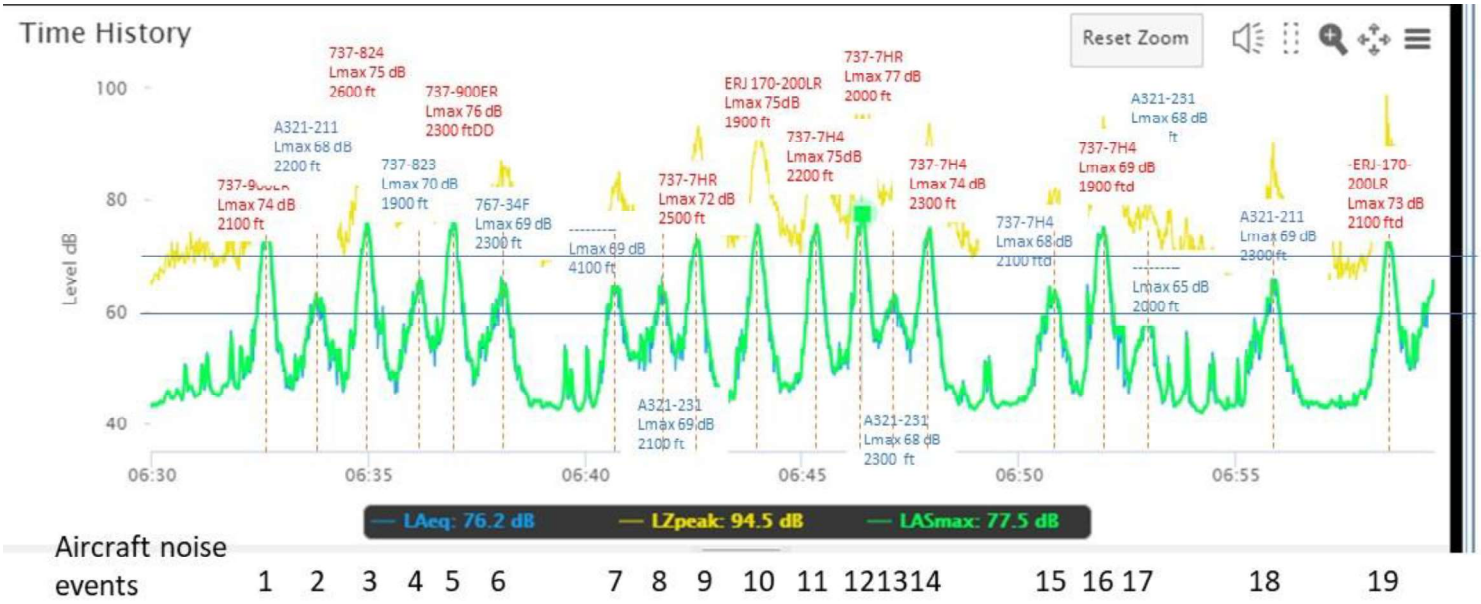


Table 2 Comparison 11/2 of LXT measured values at Brighton Court and NM#23 Lmax values

November 1 2022 Brighton Court					
Event	Time	Lmax dB			
		Webtrax #23	LxT Brighton Ct	Time between measurements	Delta Noise level in dB
1	6:32:39	74	74.2		-0.2
2	6:33:47	68	63.3	0:01:08	4.7
3	6:34:58	75	75.8	0:01:11	-0.8
4	6:36:01	70	62.8	0:01:03	7.2
5	6:36:57	76	77.2	0:00:56	-1.2
6	6:38:03	64	65.6	0:01:06	-1.6
7	6:40:44	69	64.7	0:02:41	4.3
8	6:42:34	72	72.9	0:01:50	-0.9
9	6:43:57	75	75.4	0:01:23	-0.4
10	6:45:20	75	75.5	0:01:23	-0.5
11	6:46:23	77	77.5	0:01:03	-0.5
12	6:47:07	68	63	0:00:44	5
13	6:47:56	74	75	0:00:49	-1
14	6:50:49	68	63.4	0:02:53	4.6
15	6:51:35	68	63.3	0:00:46	4.7
16	6:51:58	69	75	0:00:23	-6
17	6:55:51	69	65.8	0:03:53	3.2
18	6:58:32	73	73.3	0:02:41	-0.3
				Average	1.127778
AVERAGE VALUES		71.33333	70.20556		3.354156
AVERAGE PADRZ VALUES		74	75.18		-0.725

Figure 6 Comparison of 10/16 nighttime departures at Avalon Court (red line) and NM#23 Lmax noise values; time history is from LxT

Table 3 Comparison 10/16 of LXT measured values at Avalon Court and NM#23 Lmax values

October 16, 2022 Avalon Court					
Event	Time	Lmax dB			
		Webtrax #23	LxT Brighton Ct	Time between measurements	Delta Noise level in dB
1		73	73.5		-0.5
2		74	72.8		1.2
3		72	72.9		-0.9
4		71	72.2		-1.2
5		73	72.2		0.8
6		74	71.9		2.1
7		72	72.8		-0.8
8		74	72.7		1.3
9		77	75.7		1.3
10		69	70		-1
11		75	74.1		0.9
12		74	72.5		1.5
13		73	73.7		-0.7
14		72	70.3		1.7
15		-	74.4		
16		73	74.7		-1.7
17		76	75.9		0.1
18		71	73		-2
19		-	58		
AVERAGE VALUES		73.11765	72.27895		
AVERAGE PADRZ		71.66667	72.63333		

Figure 7 Comparison of 10/31 nighttime departures at Brighton Court (green line) and NM#23 Lmax noise values; time history is from LxT

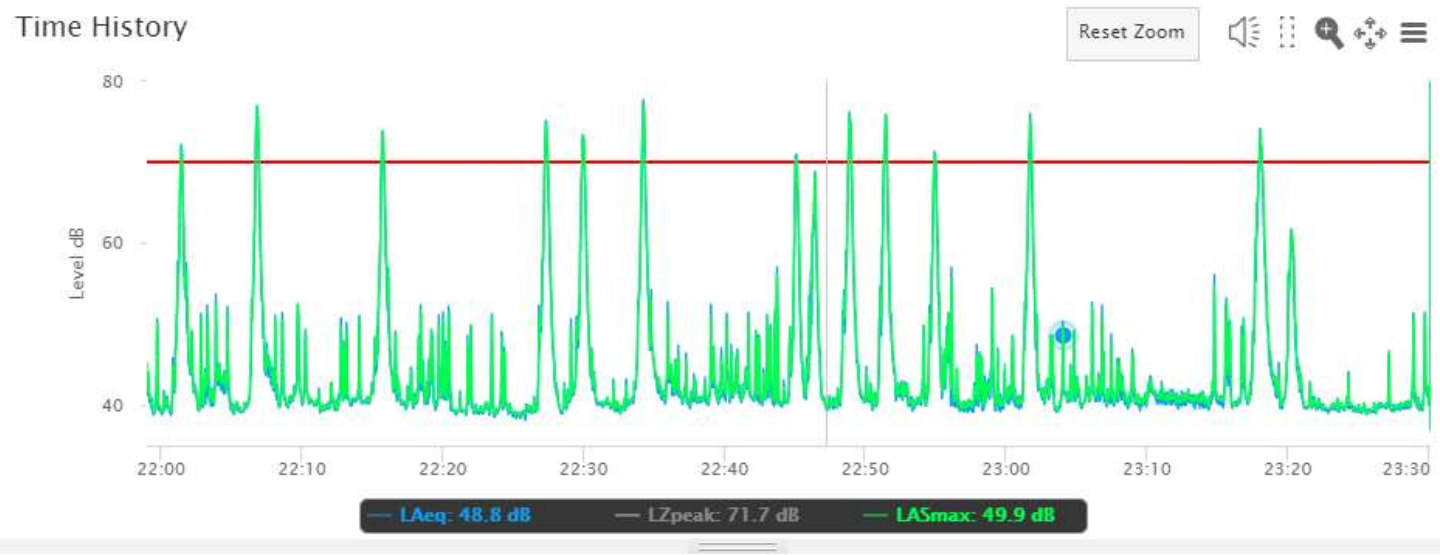


Table 4 Comparison 10/31 of LXT measured values at Brighton Court and NM#23 Lmax values

OCTOBER 31 NIGHTTIME DEPARTURES						
Time	Altitude	Acrft	Departure	Leq	Lmax	Lmax LxT
10:00:00	2200		P	71.5	72	72
10:06:00	1900		NA	76.9	77	76.9
10:26:00	2200		NA	73.4	74	74.6
10:29	1900		NA	73.1	74	75
10:33	1900		NA	77	77	77.3
10:44	2200		NA	70.4	71	70.3
10:45	2700		P	66.4	66	68.8
10:48	2100		NA	74.8	75	75.8
10:54	2000		NA	72.3	73	71.2
11:01	2000		NA	73.3	74	75.4
22:17	2500		NA	72.9	73	74.1

Reince Tyler

Subject: FW: To be distributed to ANAC members prior to next quarterly meeting
Attachments: PastedGraphic-51.pdf

Importance: High

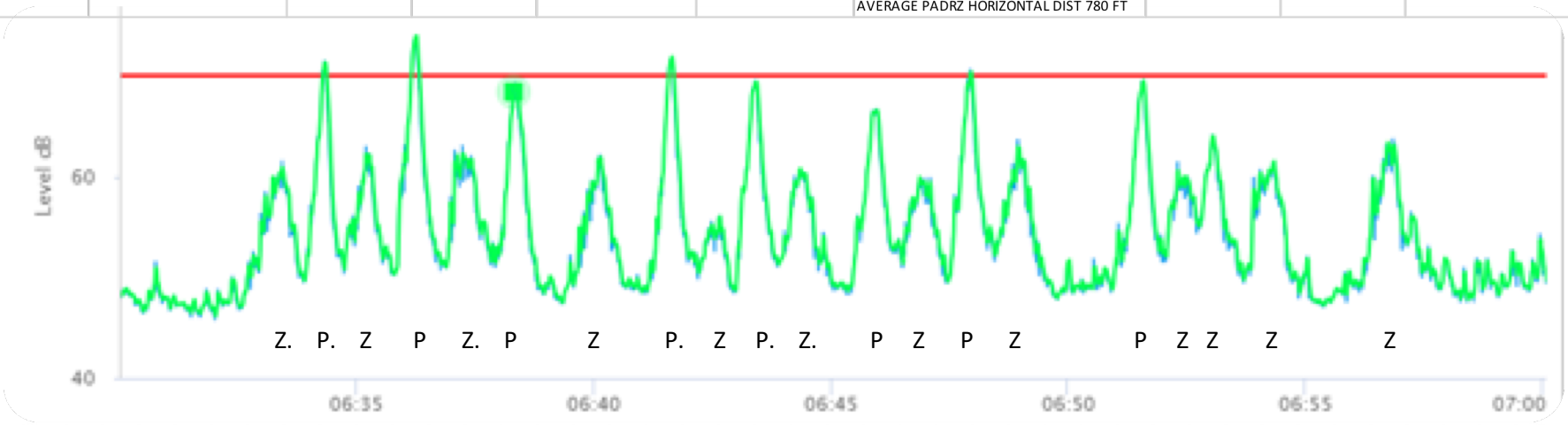
-----Original Message-----
From: Gary Wonacott <wildcatwonacott@gmail.com>
Sent: Saturday, February 4, 2023 6:18 AM
To: Russell Tony <trussell@san.org>
Subject: To be distributed to ANAC members prior to next quarterly meeting

Below, I show a chart put together from data collected from 6:30 to 7 am from a Larson Miller LxT portable noise system. A total of 20 departures were identified from the LxT and Webtrax. The monitor was position over 2,000 feet north of the NM#23, and yet still measuring significant levels for the PADRZ departures, which will be addressed in a different input to ANAC. In this input, I want to bring attention to what I believe is a change in operational procedures by the FAA/ATAC. Previously, I believe that the minimum time between departures was about 90 seconds, or a minute and a half. But, on this morning, February 1, the time between departures was down as low as 38 seconds. Is this not a safety issue? What are the increased risks that come with reducing the time between departures? Clearly, this represents increased noise annoyance. Was this discussed at ANAC prior to implementation?

Gary Wonacott
731 Avalon Court
San Diego CA 92109
858 610-0181

COMPARISON OF NM#23 AND LARSON DAVIS AT PROPERTY ON DEAL COURT OCEANSIDE 0630 TO 0700

NUMBER	DEPARTURE TRACK	TIME	DELTA TIME	AIRCRAFT TYPE	DESTINATION	HORIZONTAL DIST TO NM FT	ALTITUDE FT	LMAX NM#23	LMAX LARSON DAVIS
1	ZZOOO	6:33:06	N/A	A321-214	SALT LAKE CITY	5808	2400	66	60.8
2	PADRZ	6:34:10	0:01:04	737-800	PORTLAND	901	2200	73	71.2
3	ZZOOO	6:35:13	0:01:03	A321-211	MINN-ST PAUL	5808	1900	67	62.1
4	PADRZ	6:36:03	0:00:50	737-924	SAN FRANCISCO	1276	2300	77	73.9
5	ZZOOO	6:37:14	0:01:11	737-8H4	CHICAGO	5808	2000	70	62.2
6	PADRZ	6:38:12	0:00:58	ERJ 170-200LR	SAN FRANCISCO	909	2600	71	69.1
7	ZZOOO	6:39:51	0:01:39	A321-211	DETROIT	5808	2200	67	61.8
8	PADRZ	6:41:30	0:01:39	737-7H4	LAS VEGAS	944	2400	73	71.8
9	ZZOOO	6:42:20	0:00:50	A320-251N	DENVER	5808	2700	61	55.2
10	PADRZ	6:43:16	0:00:56	737-7H4	SAN JOSE	710	2500	71	69.3
11	ZZOOO	6:44:12	0:00:56	A321-231	PHOENIX	5808	2000	66	60.7
12	PADRZ	6:45:48	0:01:36	737-7H4	SACRAMENTO	449	3600	68	66.5
13	ZZOOO	6:46:43	0:00:55	A321-231	CHARLOTTE	5808	2200	67	59.5
14	PADRZ	6:47:47	0:01:04	737-7H4	OAKLAND	758	2600	72	70.3
15	ZZOOO	6:48:43	0:00:56	A321-211	ATLANTA	5808	2100	67	62.9
16	PADRZ	6:51:23	0:02:40	ERJ 170-200LR	LAX	915	2500	71	69.4
17	ZZOOO	6:52:11	0:00:48	737-7H4	DENVER	5808	1900	66	60.5
18	PADRZ	6:52:49	0:00:38	BLANK	VAN NUYS	389	53--	65	64
19	ZZOOO	6:53:58	0:01:09	767-34AF	LOUISVILLE	5808	2100	67	60.3
20	ZZOOO	6:56:34	0:02:36	737-924ER	CHICAGO	5808	1800	70	63.3
21	ZZOOO	7:01:08	0:04:34	ERJ 170-200LR	SAN JOSE	553	2700	70	68
						AVERAGE PADRZ HORIZONTAL DIST 780 FT			



Reince Tyler

Subject: FW: Please distribute to ANAC members before next meeting

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From: Gary Wonacott <gwonacott@hotmail.com>
Sent: Tuesday, February 7, 2023 7:00 AM
To: SDCRAA clerk <clerk@san.org>
Subject: Please distribute to ANAC members before next meeting

While we sit on our hands at SDIA, other airports are moving forward testing different departure scenarios, e.g., from John Wayne Airport. They have accumulated a lot of data based on aircraft equipment (Boeing 737-7 and -8's, MAX, NEO, A220's, B757's, etc.). They have learned with all of this equipment which has different performance profiles combined with each operator (airline) that uses their own internal procedures on takeoff. By way of example, they are working now with Airline X, which takes off using an extreme NADP-1 departure and cuts back the throttle to about 60% power at 800 feet. For the regular Boeing equipment, they are the quietest up to 3000 feet, but their national takeoff procedure policy requires the crew to engage auto throttle at 1500', and "nationally" the FMC/auto throttle increases throttle to normal climb settings at 3000 feet, while still over populated neighborhoods, but past the last noise monitor. This very audible change in engine noise tone as it powers up at 3000, and then the higher engine power post that makes them one of the noisiest past 3000'. Hence and effort is on-going to try to get the AT throttle increase set for 4000 feet instead of 3000. AEDT modeling is being used for each of the scenarios, BUT based on exactly how Airline X flies, versus a generic takeoff model in the AEDT Boeing 737 database.

If we translate this information to our situation in SDIA, AEDT may not be at fault in the differences with the noise monitors as it is only a depiction of what the model is flying in the software, whereas the airlines fly the equipment in many different ways and varies with weather, winds, and gross takeoff weight. The point is that there are solutions, but it requires the San Diego Noise Abatement Office to work with the airlines and the residents conducting tests so we might apply what has been learned at JWA.

Gary Wonacott

Mission Beach

Sent from Mail for Windows