CERTIFICATION

Specific dates of summary: January 1, 2018 - December 31, 2018 I certify that the information contained in the following pages is correct to the best of my knowledge. PREPARED BY: DATE: February 22, 2019 Paul H. Dunholter President **BridgeNet International** APPROVED BY: DATE: Robert Lockhart **Deputy Director of Aviation** Norman Y. Mineta San Jose International Airport **SUMMARY OF CALTRANS STATISTICAL INFORMATION** 4th QUARTER 2018 (Form DOA 617 10/89) Annualized Noise Impact Data (January 1, 2018 – December 31, 2018): Noise Impact Area (statue miles-squared)

0 Includes land parcels only: Does not include streets (Estimated, based on 3.09 people per dwelling unit.) Quarterly Aircraft Operations Data (October 1, 2018 – December 30, 2018): Total operations by this aircraft24

BACKGROUND INFORMATION

"Noise Problem" Airports in California

The California Airport Noise Standards (California Code of Regulations, Title 21, Section 5000 et seq.) apply to any airport that is determined to have a noise problem by the local County Board of Supervisors in accordance with the provisions in the regulation. Norman Y. Mineta San Jose International Airport (SJIA) is one of ten airports in California that have been determined to have a noise problem by local County governments.

How is aircraft noise measured?

California uses the Community Noise Equivalent Level (CNEL) as the primary measure for determining exposure of individuals to airport noise. CNEL is the annual, 24-hour average sound level, in decibels, obtained from the accumulation of all noise events, with the addition of 4.77 decibels to weight sound levels from 7 P.M. to 10 P.M. and 10 decibels to weight sound levels from 10 P.M. to 7 A.M. In effect, this weighting means that each evening operation is counted as it is five daytime operations and each nighttime operation counts as the same as ten daytime operations. The weighing of evening and nighttime events accounts for the fact that noise events during these hours are more intrusive when ambient levels are lower and people are trying to sleep. The 24-hour CNEL is annualized to reflect noise generated by aircraft operations for an entire year and is identified by "noise contours" showing levels of aircraft noise.

CNEL is a widely accepted descriptor for aviation noise because of the following characteristics: CNEL is a measurable quantity; CNEL can be used by airport planners and the general public who are not familiar with acoustics or acoustical theory; CNEL provides a simple method to compare the effectiveness of alternative airport scenarios; and CNEL is based on a substantial body of scientific survey data regarding the reactions people have to noise.

What are Noise Contours (noise Exposure Maps – NEMs) and how are they used?

Noise contours are computer generated lines that are modeled to reflect both current noise conditions near airports, as well as to predict what the future noise conditions will be. Technically, a noise contour represents the average annual noise levels (CNEL) summarized by lines connecting points of equal noise exposure.

Norman Y. Mineta San Jose International Airport uses the 65 CNEL contour to identify non-compatible land uses and determine eligibility for federal funds for noise mitigation. Any noise sensitive uses (such as residences, schools, churches, etc.) within the 65 CNEL and greater contour are considered to be non-compatible with aircraft noise.

A variety of information is gathered each quarter to create an accurate noise contour including: the number of flights, flight paths, type of aircraft, type of aircraft engines, time of day, weather conditions, and runway use. Actual on-site noise measurements specific to aircraft operating at SJIA are used to verify predicted individual aircraft noise levels contained in the computer model.

These data are used to generate noise contours that are overlaid onto base maps to create a Noise Exposure Map (NEM), which is used to identify where specific levels of aircraft noise occur. The Noise Exposure Maps developed for SJIA will be used in the following ways:

- Defining where areas of roughly equal noise exist in the communities surrounding the Airport
- Assessing various alternative solutions to reduce the effect of noise

What is the Integrated Noise Model?

The Integrated Noise Model (INM) is the model developed by the Federal Aviation Administration (FAA) for evaluating aircraft noise impacts in the communities surrounding airports. The INM uses inputs such as number of operations, aircraft fleet mix (aircraft types), aircraft flight tracks, and flight profiles, time of day of operations and terrain to evaluate aircraft noise. The INM has been used by the FAA since 1978, but has been updated many times since then to include improved metrics and the most current aircraft information.

What is considered a non-compatible land use?

California uses the 65 CNEL and greater contour to represent non-compatible land uses and determine eligibility for noise mitigation. Noise sensitive uses (such as residences, schools, hospitals, nursing homes, and churches) within the 65 CNEL and greater contour are considered to be non-compatible land uses. The date of original construction, the presence of an exterior habitable area, and the presence of acoustic insulation may convert certain uses to a compatible use.

What is the purpose of noise monitoring?

The purpose of noise monitoring is to provide a method to confirm the outputs in the Integrated Noise Model from different aircraft types. The monitoring measures how loud individual aircraft are at certain points. This is then compared to the prediction based on the model and helps determine if any adjustments need to be made to the model inputs to accurately portray the unique noise environment at SJIA. Said another way, these measurements are used to validate the FAA INM. Measurements are taken of the actual noise levels an aircraft makes at a particular airport under particular conditions to compare them to predicted noise levels from the FAA INM using the exact same conditions.

ANNUALIZED COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) VALUES

		Year/Quarter									
Remote Monitoring Terminal (RMT)	2018/4 th	2018/3 rd	2018/2 nd	2018/1 st							
101	63.5	63.5	63.3	62.7							
102	66.6	65.9	65.3	64.5							
104	58.2	58.2	58.0	58.0							
105	60.5	61.2	61.9	62.5							
106	66.2	66.2	66.1	65.8							
107	63.3	63.4	63.4	63.6							
108	65.3	65.3	65.3	65.1							
109	62.1	61.9	61.6	61.3							
110	65.8	65.7	65.6	65.4							
111	63.3	63.2	62.9	62.8							
112	59.8	59.8	60.0	60.5							
114	60.4	60.5	60.6	60.4							
115	58.7	58.7	58.6	58.7							

TOTAL AIRCRAFT OPERATIONS

	Year/Quarter									
Operations	2018/4 th	2018/3 rd	2018/2 nd	2018/1 st						
Total	49,506	51,189	50,222	44,710						
Air Carrier/Cargo	35,244	35,995	34,395	30,594						
General Aviation	8,778	9,609	9,969	8,060						
Military	52	56	93	44						
Taxi/Commuter	5,432	5,529	5,765	6,010						

REMOTE MONITORING TERMINAL (RMT) LOCATIONS

Remote Monitoring Terminal (RMT)	Location	Latitude	Longitude		
101	Oak Street San Jose, CA	37.321292	-121.881981		
102	Center for Performing Arts San Jose, CA	37.329572	-121.892365		
104	Bellarmine Prep School San Jose, CA	37.340997	-121.917993		
105	Rosemary Garden San Jose, CA	37.3624	-121.91475		
106	St. John/Autumn San Jose, CA	37.33424	-121.899946		
107	Fire Station 6 Santa Clara, CA	37.39516	-121.949916		
108	MacGregor Lane Santa Clara, CA	37.386895	-121.946527		
109	Lake Santa Clara Santa Clara, CA	37.392133	-121.967717		
110	Chestnut St. Santa Clara, CA	37.390153	-121.959598		
111	Fuller Street Park Santa Clara, CA	37.397987	-121.965516		
112	Mnt. View/Alviso Santa Clara, CA	37.40969	-121.97944		
114	Fairway Glen Park Santa Clara, CA	37.405623	-121.961404		
115	3 rd /Reed San Jose, CA	37.328608	-121.882987		

MONTHLY COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) VALUES January 1, 2018 - December 31, 2018

		Remote Monitoring Terminal (RMT)											
	101	102	104	105	106	107	108	109	110	111	112	114	115
Jan 2018	63.1	65.7	58.9	61.6	66.3	63.4	65.1	61.5	65.9	63.3	60.6	60.5	59.9
# Days	31	31	31	31	31	31	31	31	31	31	31	31	31
Feb 2018	63.3	66.6	59.4	62.5	65.9	63.4	64.9	61.1	64.7	62.1	59.3	60.3	58.4
# Days	28	28	28	28	28	28	28	28	28	28	28	28	28
Mar 2018	63.5	67.2	59.0	63.0	66.6	64.2	65.1	61.9	66.2	63.7	61.3	60.4	61.6
# Days	31	31	31	31	31	31	31	31	31	31	31	31	31
1st Qtr.	63.3	66.5	59.1	62.4	66.3	63.7	65.1	61.5	65.7	63.1	60.5	60.4	60.2
# Days	90	90	90	90	90	90	90	90	90	90	90	90	90
Apr 2018	64.0	66.9	57.3	60.5	67.2	64.0	66.0	62.5	66.0	63.4	59.9	61.4	58.1
# Days	30	30	30	30	30	30	30	30	30	30	30	30	30
May 2018	64.1	67.1	55.5	59.0	67.1	64.0	65.8	62.3	65.9	63.4	59.7	61.3	58.7
# Days	28	31	31	31	31	31	31	31	31	31	31	31	31
Jun 2018	63.7	66.6	55.8	58.5	66.1	63.4	65.6	62.5	66.2	63.8	60.0	60.7	58.3
# Days	30	30	30	30	22	30	30	30	30	30	30	30	30
2nd Qtr.	63.9	66.9	56.2	59.4	66.9	63.8	65.8	62.4	66.0	63.5	59.8	61.1	58.4
# Days	88	91	91	91	83	91	91	91	91	91	91	91	91
Jul 2018	63.8	66.5	54.6	56.7	66.0	63.1	64.5	62.0	66.0	63.4	59.2	60.3	57.1
# Days	31	31	31	31	22	30	11	31	31	31	31	31	31
Aug 2018	63.7	66.5	55.6	56.6	65.7	62.8		62.1	65.8	63.5	59.3	60.3	57.8
# Days	31	31	31	31	31	31	0	31	31	31	31	31	31
Sep 2018	63.1	65.4	57.6	58.1	65.6	62.7	65.4	62.5	65.6	63.2	59.3	60.0	57.0
# Days	30	10	30	30	30	30	30	23	30	30	30	30	30
3rd Qtr.	63.5	66.4	56.1	57.2	65.7	62.9	65.2	62.2	65.8	63.4	59.3	60.2	57.3
# Days	92	72	92	92	83	92	41	83	91	91	91	91	91
Oct 2018	63.3		58.9	59.8	65.6	63.3	65.6	62.5	65.6	63.1	59.1	60.2	57.0
# Days	31	0	31	31	31	31	31	26	31	31	31	31	31
Nov 2018	63.0		60.9	62.1	65.6	62.4	64.5	61.7	65.3	62.7	59.6	59.1	59.0
# Days	30	0	30	30	30	30	30	30	30	30	30	30	30
Dec 2018	63.4	66.3	60.1	61.6	66.1	62.3	65.1	62.4	65.7	63.3	60.0	60.1	59.1
# Days	31	11	31	31	31	31	31	31	31	31	31	31	31
4th Qtr.	63.2	66.3	60.0	61.3	65.8	62.7	65.1	62.2	65.5	63.0	59.6	59.8	58.5
# Days	92	11	92	92	92	92	92	83	91	91	91	91	91
12 Mo.	63.5	66.6	58.2	60.5	66.2	63.3	65.3	62.1	65.8	63.3	59.8	60.4	58.7
# Days	362	264	365	365	348	365	314	347	365	365	365	365	365
On-Line	99.2%	72.3%	100%	100%	95.3%	100%	86.0%	95.1%	100%	100%	100%	100%	100%

DAILY AIRCRAFT COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) VALUES OCTOBER 2018

	Remote Monitoring Terminal (RMT)												
Day	101	102	104	105	106	107	108	109	110	111	112	114	115
1	62.7		53.5	56	65.6	63.6	66.8	65.7	66.8	64.5	60.4	61.2	55.5
2	62.9		52.4	53.5	65.1	63.6	66	62.3	65.8	63.2	59.6	60.5	54.9
3	63.1		48.3	60	65.5	63.4	66.4	62.9	66.3	63.5	59.5	60.7	55.5
4	63.9		56.8	59.5	66.4	66.1	67.5	64.1	67.3	65.1	60.8	62	56.2
5	63.8		53.8	60.5	65.9	64.2	66.8	63.9	66.9	64.8	60.6	61.9	57.2
6	61.9		61.9	57.3	63.8	61.6	64.8	61.4	64.6	61.8	57.6	59.5	55
7	62.9		59	60.8	65.2	60.7	64.4	61.9	64.4	61.8	58.9	58.8	54.8
8	63.5		62	62.2	65.4	62.5	65.5	62	65.3	63	59	59.9	55.8
9	64.8		59.4	60.5	66.6	67.6	62.8	60.8	65.3	62.3	59.9	56.5	63.2
10	64.5		59	62.5	66	62.8	64	60.9	65	62.1	59.1	58.3	62
11	65.2		59.2	59.4	67.1	62.1	63.7	61.3	64.6	62.2	58.9	58.6	61.8
12	63		61.8	59.5	65.9	65.4	66.7	63.6	66.6	64.2	60.2	61	55.5
13	60.6		53	57	64.8	59.8	64	60.5	63.8	61.4	57.2	58.5	54.4
14	63.7		53.7	56	66	64.3	65.2		64.7	61.9	58	58.6	57.1
15	62.8		62.5	64.4	65.3	62.1	65.4		65	62.2	58.2	59.8	54.2
16	62.9		55.3	61.4	65.5	62.4	64.9		64.2	61.1	57	58.9	55.3
17	62.8		60.1	61	65.1	63.1	65.9		66.1	63.6	59.5	60.4	55
18	63.4		55.9	54.7	65.7	62.8	67.1		66.3	64.2	59.6	60.9	55.7
19	63.1		55.7	62	65.7	63.3	66.8	63.4	67	64.7	60.6	61.1	57.6
20	60.5		61.1	57.1	65	60.4	64.4	61.6	65	62.7	58.7	59	53.2
21	63.1		53.9	53	66	61.4	65.2	61.8	65.5	63.1	58.7	59.7	54.9
22	63.7		56	54.1	66	63	66.2	62.6	66.1	64.1	59.2	60.7	55.6
23	64		55	57.3	65.7	63.5	66.2	62.7	65.8	63.7	58.9	61.1	55.8
24	63.6		57.1	60.3	66	64.2	66.2	63.2	66	63.5	59.4	61.5	56
25	63.9		55.9	54.8	66.2	63.4	65.8	62.2	65.6	63.2	58.9	60.1	55.8
26	63.7		62	60.3	66	63.3	66.5	63.6	66.7	64.1	59.8	61.4	57
27	61.5		56.5	56.1	64.2	61.2	64.7	61.5	64.8	62.5	58.2	59.6	53.2
28	64.4		57.1	57	66.4	61.9	65.1	62	64.9	62.4	58.1	60.3	57.2
29	63.9		61.4	62.9	65.7	63.1	65.8	62.9	65.4	63.1	59.5	60.9	57.3
30	63.7		63.4	62.4	65.7	63.2	65.3	62.3	64.8	62.3	58.6	59.9	55.9
31	60.7		61.2	61.6	62.9	60.8	63.1	60.6	63.2	60.3	56.8	59.6	54.9
Avg.	63.3		58.9	59.8	65.6	63.3	65.6	62.5	65.6	63.1	59.1	60.2	57.0
# Days	31	0	31	31	21	31	31	26	31	31	31	31	31

DAILY AIRCRAFT COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) VALUES NOVEMBER 2018

	Remote Monitoring Terminal (RMT)												
Day	101	102	104	105	106	107	108	109	110	111	112	114	115
1	63.5		63.3	64.6	65.3	63	65.7	63.2	66	63.9	63.1	62.9	55.6
2	63.2		58.5	59.9	66.3	62.5	65.7	62.8	65.8	63.3	59.5	60.6	59.6
3	60.8		59.6	59.2	63.6	59.9	63.7	60.7	63.7	60.9	57.4	57.4	57.7
4	62.8		61.5	58.4	65.3	61.4	64.9	61.5	64.7	62	57.5	59.4	54
5	63.9		61.7	56	66.2	62.7	65.1	62.1	65	62.4	58.3	61.2	56
6	63.4		60.3	63.1	65	60.3	63.8	61.8	63.5	59.9	56.3	56.2	56.4
7	62.3		56.9	63.9	64.4	61	64.2	59.1	63.5	60.6	56.1	57.5	54.2
8	62		58.5	58.6	65	60.7	63.3	60.8	63.7	61.3	58	57.6	51.4
9	64.5		59.9	63.2	66.3	64.1	62.5	59.4	62.8	59.9	55.5	55.7	61.1
10	59.8		56.4	59.9	63	59.6	63.1	59.7	63.6	60.5	55.7	57	56.1
11	61.5		59.8	62.3	64.2	59.9	63.5	59.5	63	60.3	56.1	57.6	53.5
12	61.3		63.4	64.2	64.3	62.6	64	61.7	65.6	62.7	59.6	58	58.5
13	63.4		62.6	62.4	66.1	62.2	64.8	61.3	64.9	62.4	58.3	59.2	55.2
14	62.3		63.9	63.6	65	67.8	65.2	61.2	65.1	61.8	57.4	58.2	55
15	63.3		63.6	64.7	65.9	62.8	65.6	62.3	65.8	63.1	58.6	59.5	55.6
16	64.5		62.5	63.8	67	63.5	66.2	63.2	66.5	64	59.9	60.3	57.5
17	61.9		60	62.8	65.1	62	65.3	62.4	65.6	63.4	59.4	60.2	56.3
18	63.3		55	58.9	65.9	61.8	65	62	65.4	63	58.8	59.8	56.7
19	63.1		65.4	63.2	65.9	63.2	66	63	66.2	63.7	59.8	60.7	56.4
20	62.1		60.9	62.4	65.1	62.3	65.9	63.5	67.7	65.1	62.4	60	59.3
21	64.7		61.4	62.7	67.7	60.1	60.7	60.7	66.1	63.1	61.3	55.6	65.2
22	61.2		59.2	59.5	64.5	53	56.1	58.8	64	61.2	59.5	52.7	61.7
23	62.2		59.6	60	64.9	52.1	50.2	58.1	64	60.8	59.6	35.5	63.5
24	62.7		57.5	58.3	65.7	61.3	64.5	60.3	64.2	61.8	57.8	59.6	56
25	64.6		61.9	60.4	67.2	64.5	67	63.8	66.7	64.4	60.9	61.4	58.4
26	63.5		54.4	61.6	66.3	63.4	66	63	66.1	63.8	59.9	61.3	58
27	61.9		59.3	62.7	64.6	61.4	62.8	62.4	67.6	64.6	63.5	57.9	61.7
28	58.1		57	57.2	60.3	62.3	54.8	60.3	66.1	63.5	62.1	51.3	58.8
29	65.9		61.1	65.1	68.4	63.1	64.2	61.3	64.9	62.9	60.2	59.7	63.9
30	64.4		60.1	62.1	66.7	64.3	67	63.2	66	63.4	59.5	62	57.4
Avg.	63.0		60.9	62.1	65.6	62.4	64.5	61.7	65.3	62.7	59.6	59.1	59.0
# Days	30	0	30	30	30	30	30	30	30	30	30	30	30

DAILY AIRCRAFT COMMUNITY NOISE EQUIVALENT LEVEL (CNEL) VALUES DECEMBER 2018

	Remote Monitoring Terminal (RMT)												
Day	101	102	104	105	106	107	108	109	110	111	112	114	115
1	64.2		58.8	61	66	58.3	60.8	57.2	60.7	58	55.1	55.5	63
2	63.1		58.5	61.7	65.8	62.7	65.2	61.5	64.4	62	58.1	60	56
3	60.2		59.1	61.8	63.2	61.5	63.8	63	67	64.9	62.4	58.5	58.8
4	61.2		60.9	62.6	64	55	54.6	60.5	66	63.5	62.3	45.9	62.1
5	64.5		59.9	63.7	67.1	61.7	64.3	61.5	64.4	62	59.1	58.9	60.9
6	63.8		57.3	62.3	66	64.3	66.7	63.7	66.6	64.4	60.8	62.1	58.2
7	63.3		64.8	61.2	66	63.7	66.6	63.3	66.3	63.9	60.3	61.5	56.6
8	60.4		57.7	61.4	63.4	60.9	64.7	61.7	64.9	62.6	59.1	59.6	54.5
9	63.3		55	59.4	66.1	63.3	65.7	62.4	65.4	63.1	59.4	60.7	57.5
10	63.7		60.6	61.4	67.3	63.1	65.9	63.1	65.6	63.4	59.8	61.2	56.6
11	63.3		57.8	57.4	65.7	62.7	64.4	62.1	64.2	61.9	58.5	59.1	55.5
12	63.7		60.3	62.3	66.6	63.6	65.6	63	65.2	62.7	58.9	60.2	56.4
13	63.1		59	62.6	65.8	62.9	66.3	63.1	66.2	63.9	59.5	61	57.2
14	65.2		61.1	64.1	67.7	56.5	56.1	57.7	66.6	63.8	62.3	46.8	64.8
15	61.3		60.3	60	65.3	53.4	51		63.4	60.6	59.3	42.5	62.2
16	61.9		60.6	61.7	66.3	60.2	56.6		68.5	64.7	63.6	49.2	64.5
17	62.8		59.3	60.1	65.9	64	66.5		66.2	64.4	60.3	61.6	56.5
18	63.5	68.4	59.1	62.2	67	63.7	66.6		66	63.8	59.8	61.5	57.2
19	64.2	66.7	60.7	64.9	66.8	63.6	66.2	63.5	66.2	64.1	60.2	60.6	57.3
20	64.1	67.1	53.5	55.7	67.1	63.6	66.7	63.8	67.1	65	61	62.6	58.8
21	65	67.6	57.9	62.2	67.4	63.9	67.1	63.8	67.1	64.8	60.8	62.3	58
22	63.7	65.9	59.9	64.7	66	63	66.6	63.1	66.3	64	60.1	61.4	57.1
23	63.2	66.4	55.6	56.5	65.9	63.4	66.4	63.1	66	63.8	59.6	61.3	56
24	61.9	64.3	55.9	58.4	64.4	61.1	64.7	61.1	64.6	62.2	58.8	59.3	59.9
25	63	65.4	57.4	58.5	65.1	61.4	64.8	62	64.4	62.2	58.7	60.1	56.5
26	64.1	66.6	61.9	63.7	66.6	63.4	66.8	63.1	66	63.7	59.2	62.1	58.2
27	64.4	67.1	61.2	61.3	67.3	63.3	66	62.8	65.5	62.8	59.5	60.9	57.4
28	65.2	54.6	63.3	61.7	66	61.5	65.1	62.6	64.7	62.4	59	59.7	56.3
29	63.1		59	60.8	65.5	60.8	64.7	61.5	63.8	61.5	57.8	58.8	57.7
30	64.1		65.2	60.5	67.1	63.5	66.7	63.1	65.9	63.4	58.7	62.4	57.1
31	61.2		59.4	57.7	64.5	60.8	63.9	61.4	63.3	61	57.6	58.5	54
Avg.	63.4	66.3	60.1	61.6	66.1	62.3	65.1	62.4	65.7	63.3	60.0	60.1	59.1
# Days	31	11	31	31	31	31	31	27	31	31	31	31	31