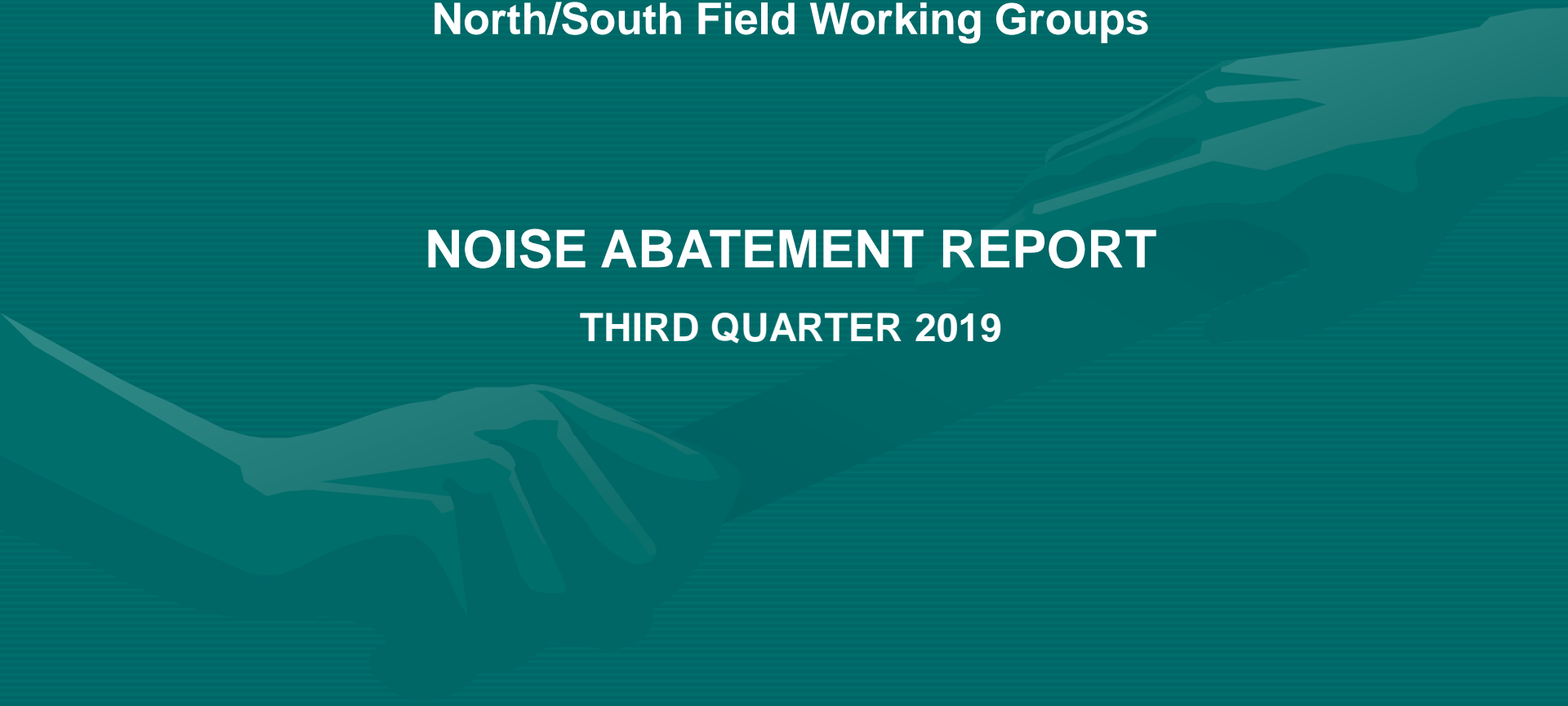


NOISE FORUM SUMMARY

North/South Field Working Groups

NOISE ABATEMENT REPORT

THIRD QUARTER 2019



**Compliance Monitoring Quarterly Summary Comparison
Third Quarter 2019**

	2018Q3		2019Q3	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	94%	6%	95%	5%
Total Airport-wide Corporate Jet Departures	2,635	167	2,917	141
Runway 10R/L Jet Landing Compliance	44%	56%	100%	0%
Total Southeast Plan Corporate Jet Landings	4	5	0	0
North Field VFR Departure Compliance	93%	7%	96%	4%
Total Runways 28R/L & 33 Departures	375	30	325	14
North Field Quiet Hours Compliance	69%	31%	75%	25%
Total North Field Quiet Hours Departures	221	97	219	72
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	20,436	4	21,252	5
Night Time Departure Compliance	98%	2%	93%	7%
Total Runway 30 Night Turbojet Departures	3,814	78	3,748	266
Runway 12 Night Departure Compliance	100%	0%	100%	0%
Total Runway 12 Night Turbojet Departures	0	0	0	0
Runway 30 East Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 East Turn Departures	6,647	3	5,981	13
100 Degree Radial Turbojet Landing Compliance	99%	1%	99%	1%
Total 100 Degree Radial Turbojet Landings	1,294	9	1,381	14
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	26	0	11	0

Note: N/C means non-compliant. Percentage values are rounded out.

Operation Details
Beacon Code: 3373
AC Type: H25C
Operation Type: Departure
Runway: 28L
Date/Time: 12/13/2016 8:26:14 AM

© 2004 GDT, Inc. and its licensors, Rel: 07/2004
© MapBox © OpenStreetMap

Runway 28R/L Jet Departure NAP

2019Q3
95% Compliance
(3,058 total departures)
(141 non-compliant)

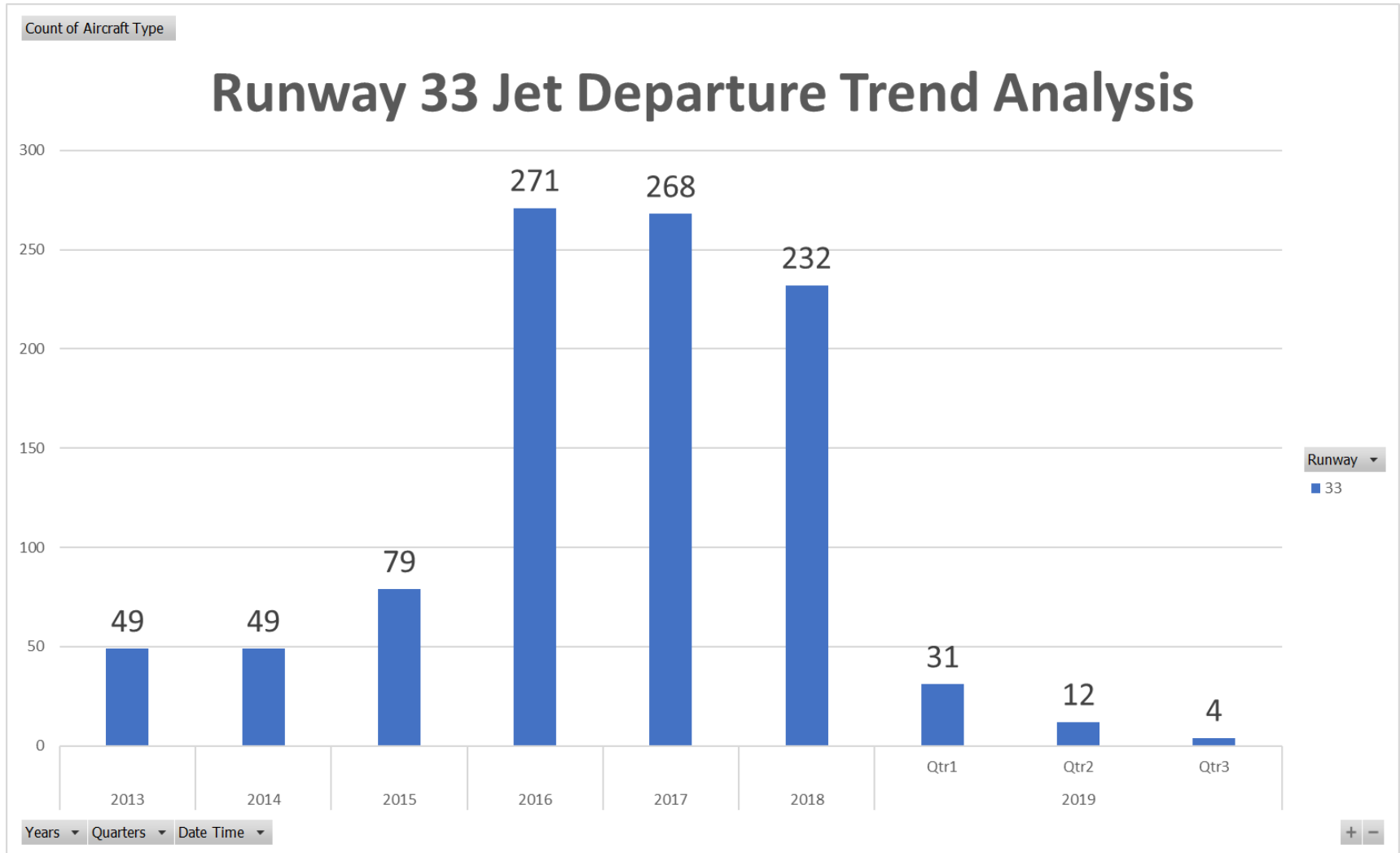
2018Q3
94% Compliance
(2,802 total departures)
(167 non-compliant)

Heading: 325
Elevation: 15

Arrivals
Departures
Touch and Go
Overflights

RUNWAY 33 JET DEPARTURES

Third Quarter 2019



Operation Details
Beacon Code: 4564
AC Type: C550
Operation Type: Arrival
Runway: 10R
Date/Time: 12/15/2016 8:15:42 PM

© 2004 CDL, Inc. and its licensors, Rel. 07/2004
© MapBox © OpenStreetMap

Runway 10R/L Jet Landing NAP

2019Q3

100% Compliance
(0 total landings)
(0 non-compliant)

2018Q3

44% Compliance
(9 total landings)
(5 non-compliant)

Heading: 325
Elevation: 15

Arrivals
Departures
Touch and Go
Overflights

Operation Details
Beacon Code: 4544
AC Type: P28A
Operation Type: Departure
Runway: 28R
Date/Time: 6/1/2016 6:27:01 PM

Heading: 338
Elevation: 29



VFR Aircraft Departure NAP

2019Q3
96% Compliance
(339 total departures)
(14 non-compliant)

2018Q3
93% Compliance
(405 total departures)
(30 non-compliant)

Operation Details
Beacon Code: 3351
AC Type: PC12
Operation Type: Departure
Runway: 28R
Date/Time: 12/13/2016 6:02:33 AM

© 2004 GDT, Inc. and its licensors, Rel. 07/2004
© MapBox © OpenStreetMap

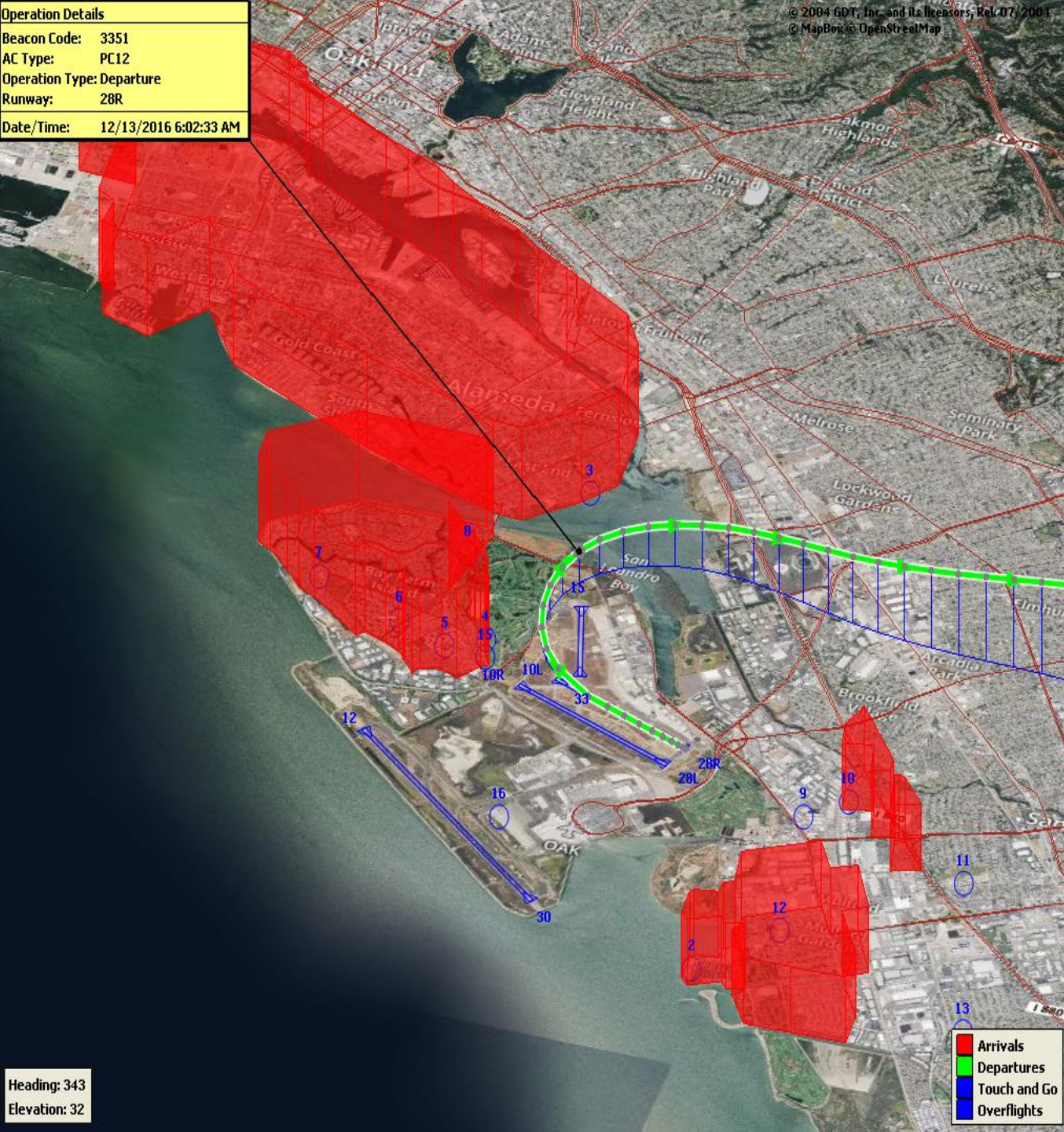
North Field Quiet Hours NAP

2019Q3
75% Compliance
(291 total departures)
(72 non-compliant)

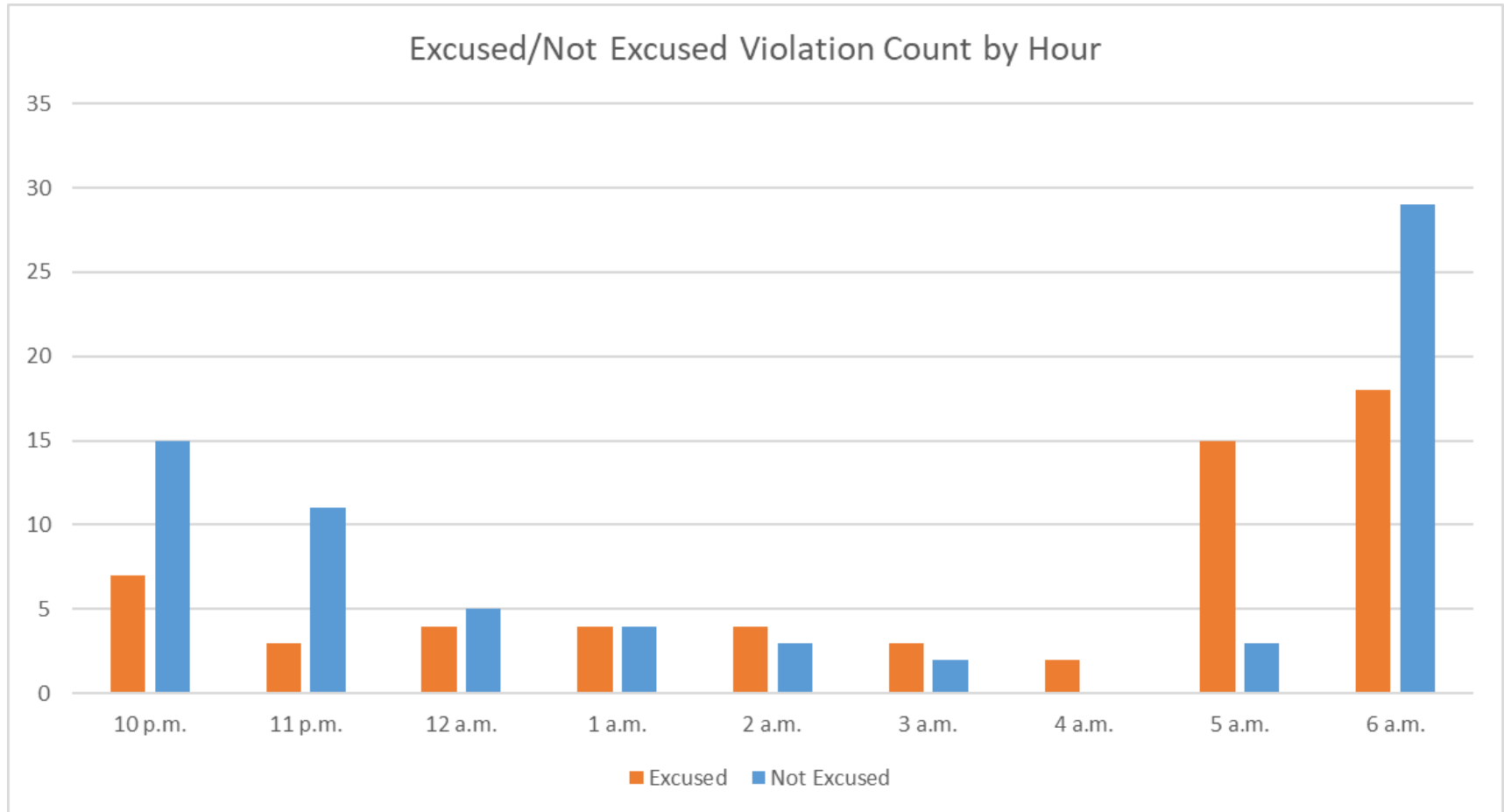
2018Q3
69% Compliance
(318 total departures)
(97 non-compliant)

Heading: 343
Elevation: 32

Arrivals
Departures
Touch and Go
Overflights



North Field Quiet Hours NAP Non-Compliant by Hour



Operation Details
 Beacon Code: 3641
 AC Type: B737
 Operation Type: Departure
 Runway: 30
 Date/Time: 8/22/2017 10:16:59 PM



Night Time Departure NAP

2019Q3

93% Compliance
(4,014 total departures)
(266 non-compliant)

*REBAS Gate non-compliant = 259

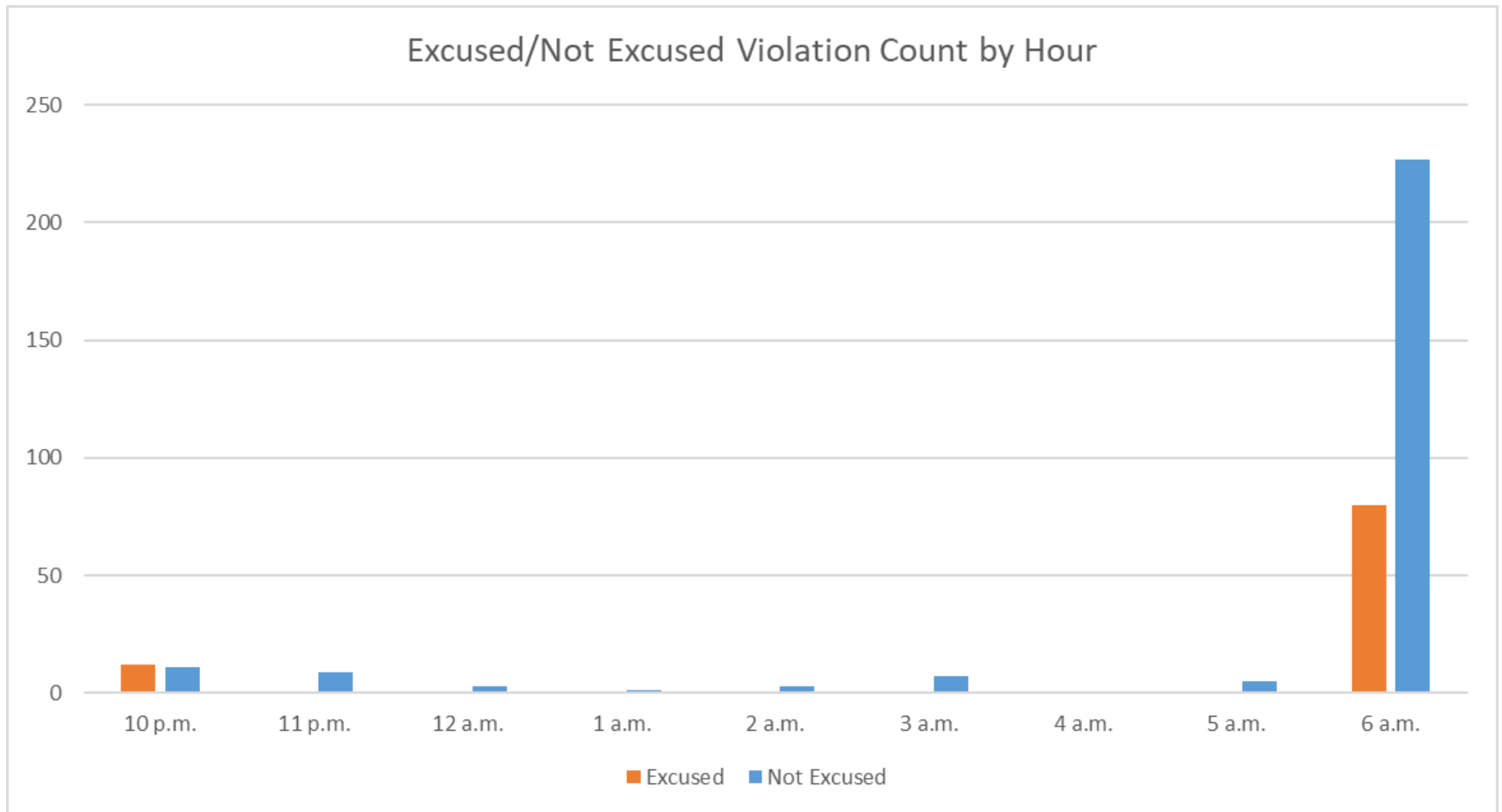
2018Q3

98% Compliance
(3,892 total departures)
(78 non-compliant)

*SFO Runway work
 Quiet Hours ended at 6:00 am
 instead of 7:00 am

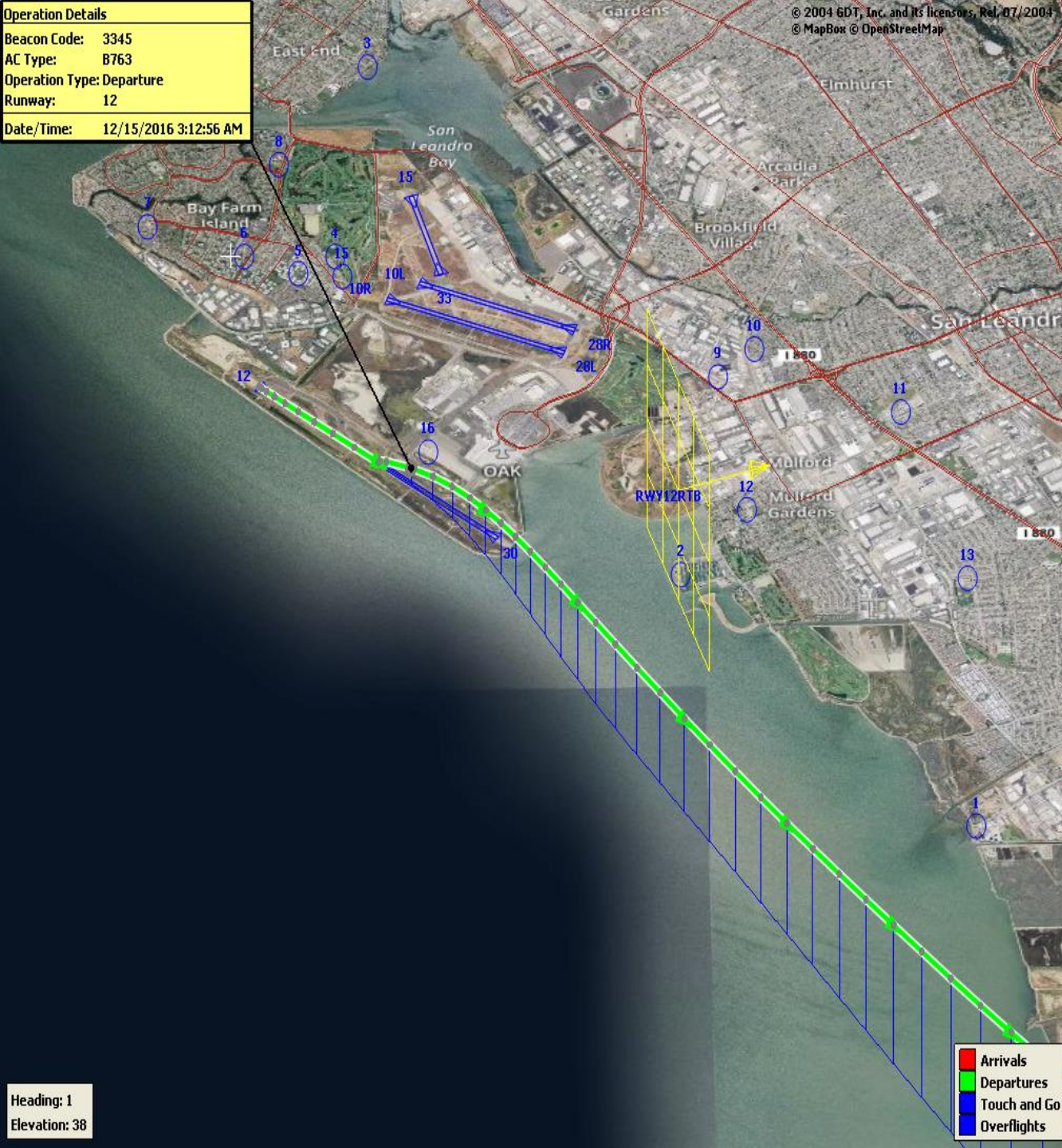
Heading: 349
 Elevation: 59

Night Time NAP Non-Compliant Count by Hour



Operation Details
Beacon Code: 3345
AC Type: B763
Operation Type: Departure
Runway: 12
Date/Time: 12/15/2016 3:12:56 AM

Heading: 1
Elevation: 38

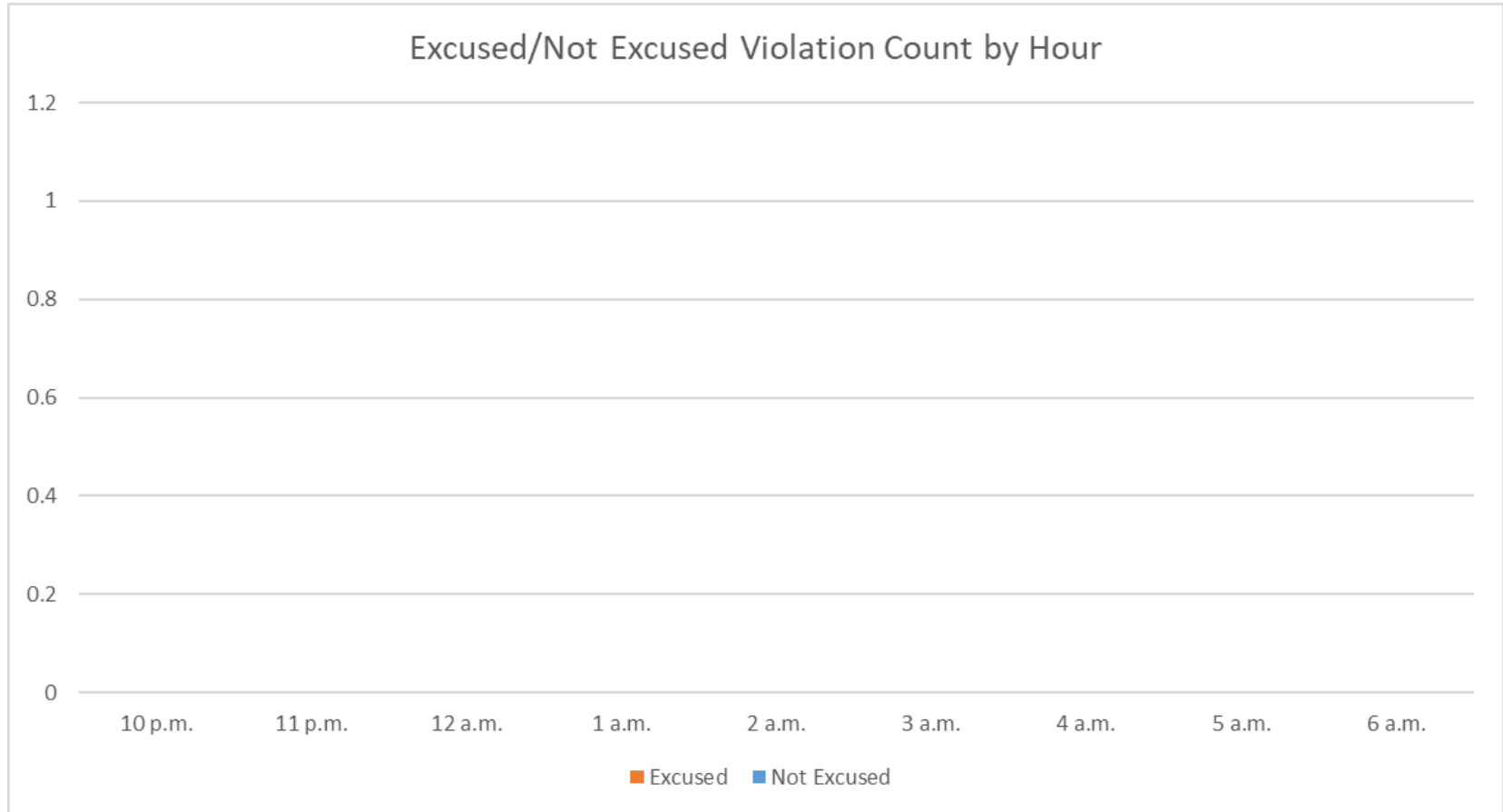


Runway 12 Night Departure NAP

2019Q3
100% Compliance
(0 total departures)
(0 non-compliant)

2018Q3
100% Compliance
(0 total departures)
(0 non-compliant)

Runway 12 Night Departure Non-Compliant Count by Hour



Operation Details	
Beacon Code:	3374
AC Type:	B737
Operation Type:	Departure
Runway:	30
Date/Time:	1/7/2019 8:57:05 AM

© 2004 GDT, Inc. and its licensors, Rel. 07/2004
© MapBox © OpenStreetMap

Runway 30 Bay Farm Right Turn NAP

2019Q3
100% Compliance
(21,257 total departures)
(5 non-compliant)

2018Q3
100% Compliance
(20,440 total departures)
(4 non-compliant)

Heading: 299
Elevation: 36



Arrivals
Departures
Touch and Go
Overflights



Runway 30 East Turn NAP

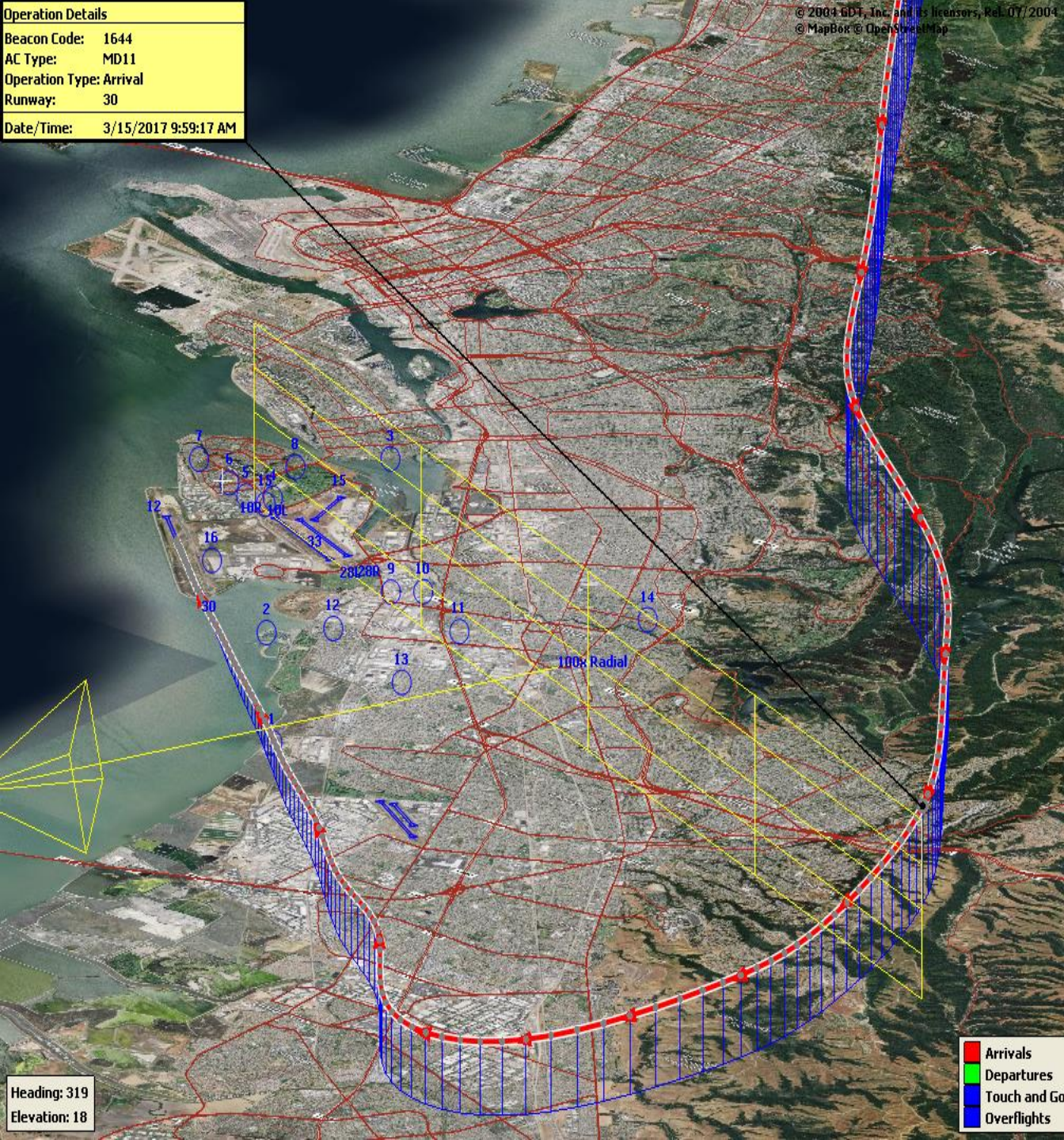
2019Q3
100% Compliance
(5,994 total departures)
(13 non-compliant)

*2019Q3 Excused Departures = 94

2018Q3
100% Compliance
(6,650 total departures)
(3 non-compliant)

Operation Details
Beacon Code: 1644
AC Type: MD11
Operation Type: Arrival
Runway: 30
Date/Time: 3/15/2017 9:59:17 AM

© 2004 GDT, Inc. and its licensors, Rel. 07/2004
© MapBox © OpenStreetMap



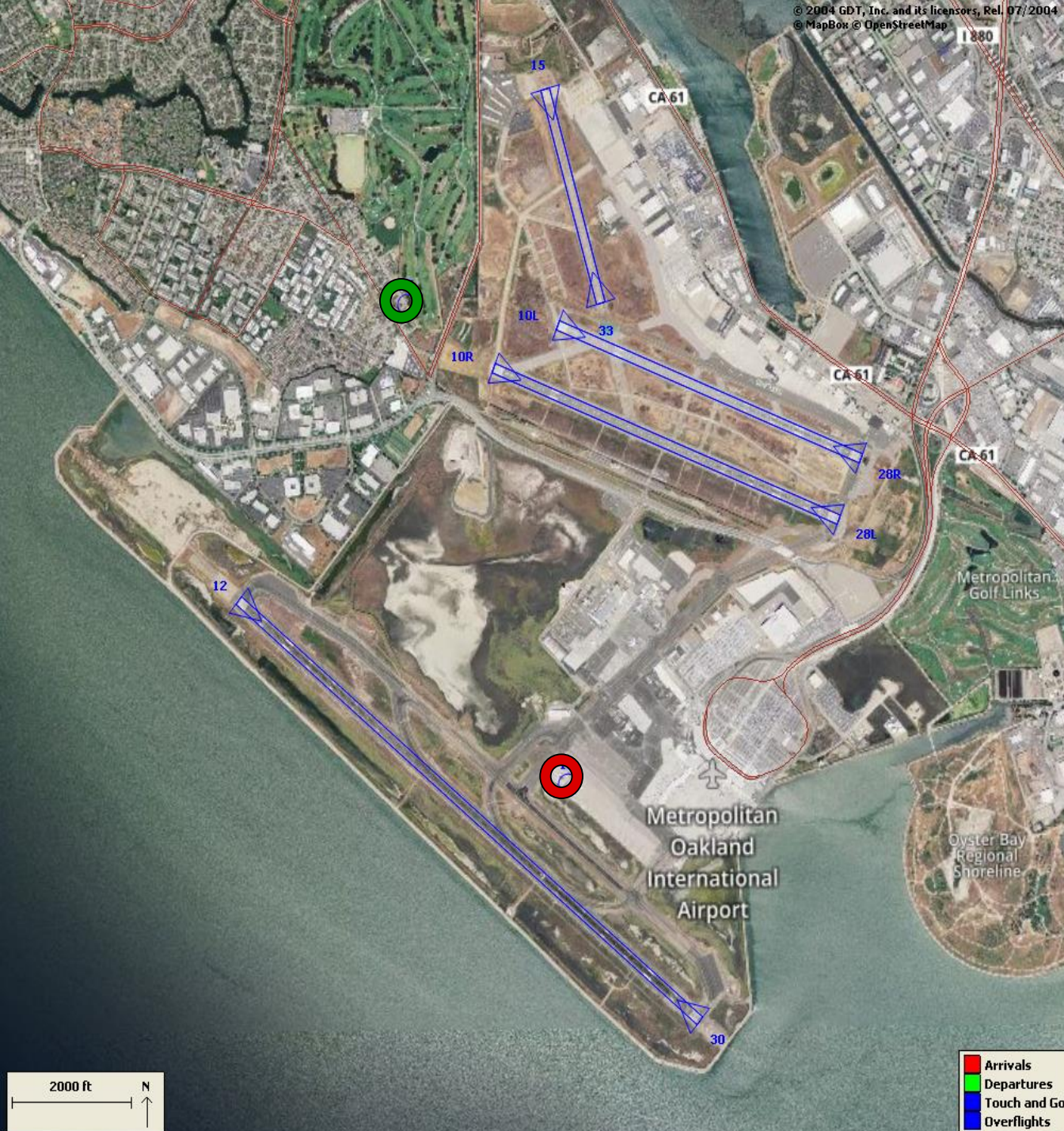
100 Degree Radial At 3,000 ft. NAP

2019Q3
99% Compliance
(1,395 total landings)
(14 non-compliant)

2018Q3
99% Compliance
(1,303 total landings)
(9 non-compliant)

Heading: 319
Elevation: 18

- Arrivals
- Departures
- Touch and Go
- Overflights



Engine Run-up NAP

2019Q3

**100% Compliance
(11 engine run-ups)*
(0 non-compliant)**

2018Q3

**100% Compliance
(26 engine run-ups)
(0 non-compliant)**

***Only above idle-power run-ups
recorded.**

Compliance Monitoring Quarterly Summary Comparison Third Quarter 2019 - Quarter-to-Quarter				
	2019Q2		2019Q3	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	96%	4%	95%	5%
Total Airport-wide Corporate Jet Departures	3,162	126	2,917	141
Runway 10R/L Jet Landing Compliance	83%	17%	100%	0%
Total Southeast Plan Corporate Jet Landings	84	14	0	0
North Field VFR Departure Compliance	94%	6%	96%	4%
Total Runways 28R/L & 33 Departures	294	19	325	14
North Field Quiet Hours Compliance	82%	18%	75%	25%
Total North Field Quiet Hours Departures	283	52	219	72
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	20,139	9	21,252	5
Night Time Departure Compliance	99%	1%	93%	7%
Total Runway 30 Night Turbojet Departures	4,190	43	3,748	266
Runway 12 Night Departure Compliance	100%	0%	100%	0%
Total Runway 12 Night Turbojet Departures	49	0	0	0
Runway 30 East Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 East Turn Departures	5,546	9	5,981	13
100 Degree Radial Turbojet Landing Compliance	99%	1%	99%	1%
Total 100 Degree Radial Turbojet Landings	1,329	9	1,381	14
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	9	0	11	0
Note: N/C means non-compliant. Percentage values are rounded out.				

Table 1. North Field Night Aircraft Departure SEL Noise Measurements
Total Aircraft Departures = 127

Third Quarter 2019 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
1	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
2	2	1	0.0	0.2%	0	0.0	0.0%	0	0.0	0.0%	3
3	26	5	0.1	0.9%	0	0.0	0.0%	0	0.0	0.0%	31
4	25	41	0.5	7.2%	18	0.2	3.2%	20	0.2	3.5%	104
5	45	6	0.1	1.1%	12	0.1	2.1%	25	0.3	4.4%	88
6	13	7	0.1	1.2%	14	0.2	2.5%	17	0.2	3.0%	51
7	8	12	0.1	2.1%	19	0.2	3.4%	1	0.0	0.2%	40
8	26	11	0.1	1.9%	1	0.0	0.2%	0	0.0	0.0%	38
9	3	2	0.0	0.4%	0	0.0	0.0%	1	0.0	0.2%	6
10	4	1	0.0	0.2%	1	0.0	0.2%	0	0.0	0.0%	6
11	1	0	0.0	0.0%	1	0.0	0.2%	0	0.0	0.0%	2
12	3	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	3
13	2	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	2
14	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
All NMTs	158	86	1	0	66	1	0	64	1	0	374

Table 2. Aircraft SEL Noise Measurements in Alameda - Total Aircraft Departures = 121

Third Quarter 2019 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
3	26	5	0.1	2.1%	0	0.0	0.0%	0	0.0	0.0%	31
4	25	41	0.5	17.2%	18	0.2	7.5%	20	0.2	8.4%	104
5	45	6	0.1	2.5%	12	0.1	5.0%	25	0.3	10.5%	88
6	13	7	0.1	2.9%	14	0.2	5.9%	17	0.2	7.1%	51
7	8	12	0.1	5.0%	19	0.2	7.9%	1	0.0	0.4%	40
8	26	11	0.1	4.6%	1	0.0	0.4%	0	0.0	0.0%	38
Total	143	82	0.9		64	0.7		63	0.7		352

Table 3. Aircraft SEL Noise Measurements in San Leandro - Total Aircraft Departures = 6

Third Quarter 2019 (10:00 p.m. to 7:00 a.m.)

NMT Number	Aircraft Noise Events Below SEL 80 dBA	Aircraft Noise Events SEL 80 - 84.9 dBA			Aircraft Noise Events SEL 85 - 89.9 dBA			Aircraft Noise Events SEL ≥ 90 dBA			Total Aircraft Noise Events
		Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	Amount	Nightly Average	As Percentage of Departures	
2	2	1	0.0	0.3%	0	0.0	0.0%	0	0.0	0.0%	3
9	3	2	0.0	0.6%	0	0.0	0.0%	1	0.0	0.3%	6
10	4	1	0.0	0.3%	1	0.0	0.3%	0	0.0	0.0%	6
11	1	0	0.0	0.0%	1	0.0	0.3%	0	0.0	0.0%	2
12	3	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	3
13	2	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	2
14	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
Total	15	4	0.0		2	0.0		1	0.0		22

Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
Third Quarter 2019, NMT 2

	Aircraft Departures	Recorded Noise Events (a)	Lmax Average	SEL Average	Avg. Duration (seconds)
Baseline (November 2002) [A]					
DC10/MD10	87	32	69	78	22
MD11	32	13	70	79	24
A306	67	21	67	77	25
Third Quarter 2019 [B]					
	Total [X]	Est. Avg. Monthly [X/3]			
B763	122	41	6	64	72
DC10/MD10	53	18	6	66	75
MD11	259	86	58	66	74
A306	116	39	13	67	76
B757	173	58	12	67	74
B77L	88	29	5	66	74
Difference [A-B]					
DC10/MD10		-69	-26	-3	-3
MD11		54	45	-4	-5
A306		-28	-8	0	-1

(a) For the current calendar quarter reported, ANOMS does not correlate all departures to their respective noise events; that is most, but not all, aircraft back-blast noise events are effectively correlated as the program software algorithms may misidentify an aircraft noise event.

Source: ANOMS (Airport Noise and Operations Monitoring System)

**Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
Third Quarter 2018, NMT 2**

	Aircraft Departures	Recorded Noise Events (a)	Lmax Average	SEL Average	Avg. Duration (seconds)
Baseline (November 2002) [A]					
DC10/MD10	87	32	69	78	22
MD11	32	13	70	79	24
A306	67	21	67	77	25
Third Quarter 2018 [B]					
	Total [X]	Est. Avg. Monthly [X/3]			
B763	182	61	3	64	71
DC10/MD10	47	16	4	64	71
MD11	211	70	48	64	73
A306	118	39	8	65	73
B757	178	59	15	65	73
B77L	76	25	7	65	73
Difference [A-B]					
DC10/MD10		-71	-28	-5	-7
MD11		38	35	-6	-6
A306		-28	-13	-2	-4

(a) For the current calendar quarter reported, ANOMS does not correlate all departures to their respective noise events; that is most, but not all, aircraft back-blast noise events are effectively correlated as the program software algorithms may misidentify an aircraft noise event.

Source: ANOMS (Airport Noise and Operations Monitoring System)

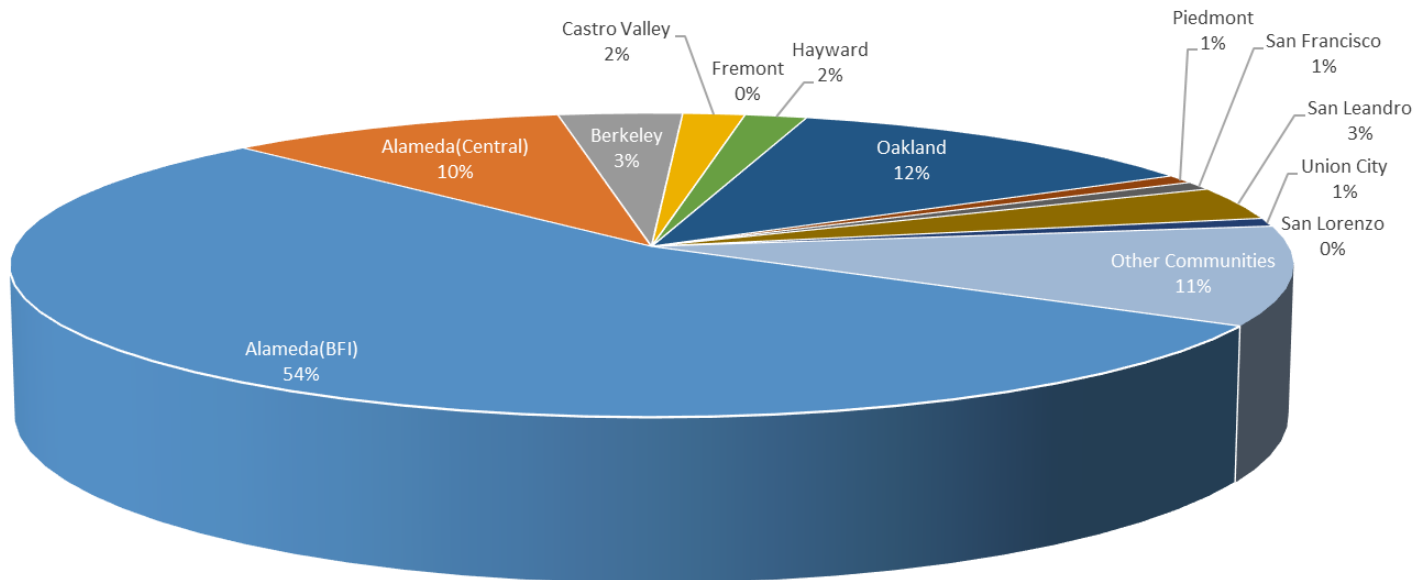
**Oakland International Airport
Noise Complaint Summary
July 2019**

Community	Callers	Complaints
Alameda(BFI)	62	1059
Alameda(Central)	11	70
Berkeley	4	21
Castro Valley	2	12
Fremont	0	0
Hayw ard	2	31
Oakland	14	3102
Piedmont	1	1
San Francisco	1	1
San Leandro	4	19
Union City	1	276
San Lorenzo	0	0
Other Communities	12	1091
Total	114	5683
Complaints by Type		
Website	1401	
E-mail	3200	
Phone	26	
View point App	1056	
Complaints by Time of Day		
Day (0700 - 1900)	1425	
Evening (1900 - 2200)	962	
Night (2200 - 0700)	3296	
Complaints by Type of Operation		
Arrivals	3597	
Departures	1830	
Over-flights	199	
Touch & Go	57	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	172	
Helicopter	40	
Jet	4923	
Military	0	
Not Reported	0	
Other	137	
Propeller	329	
Turbo-prop	82	

Number of Callers

July 2019

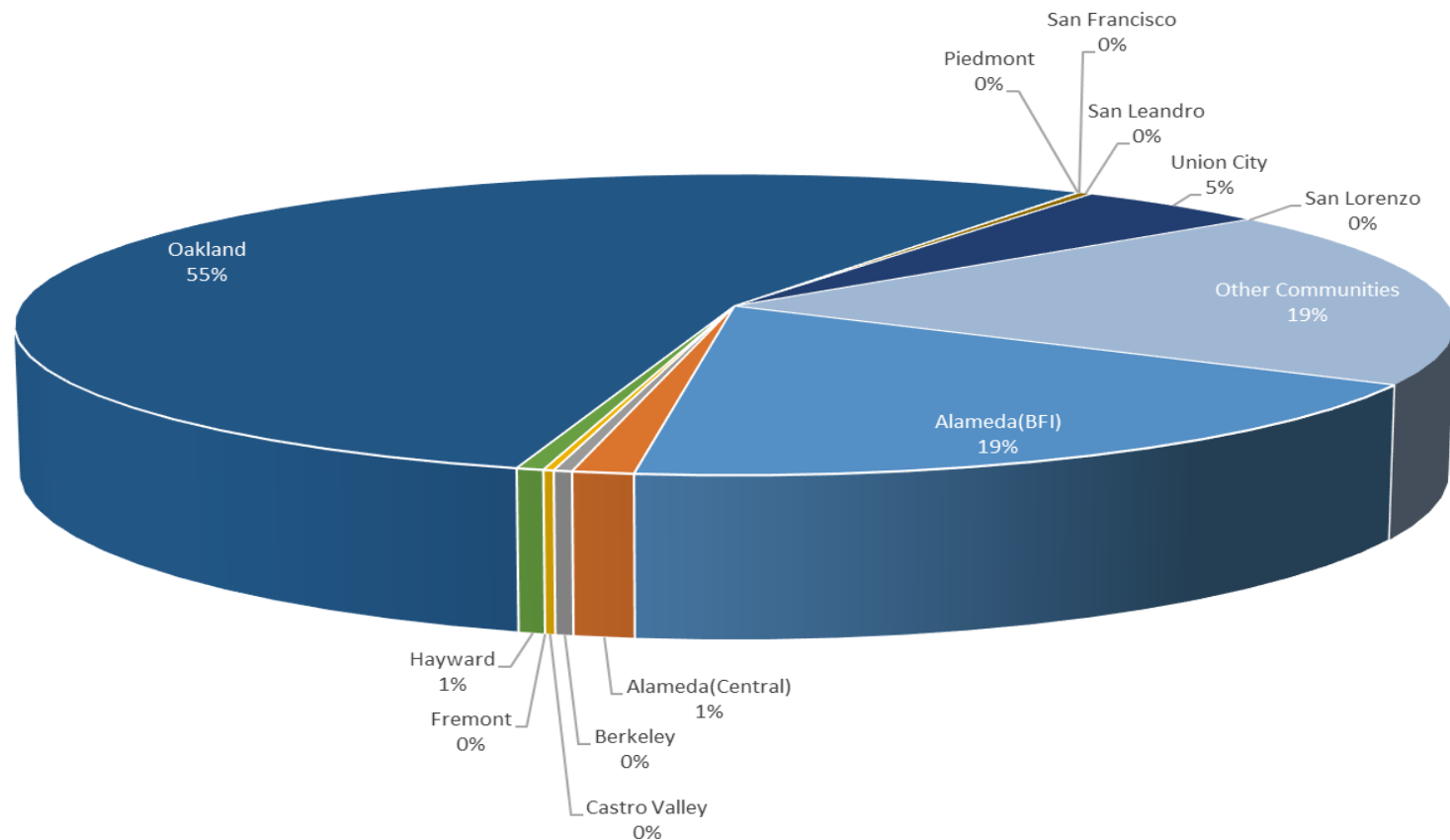
Noise Complaints Summary by Number of Callers



Number of Complaints

July 2019

Noise Complaints Summary by Number of Complaints



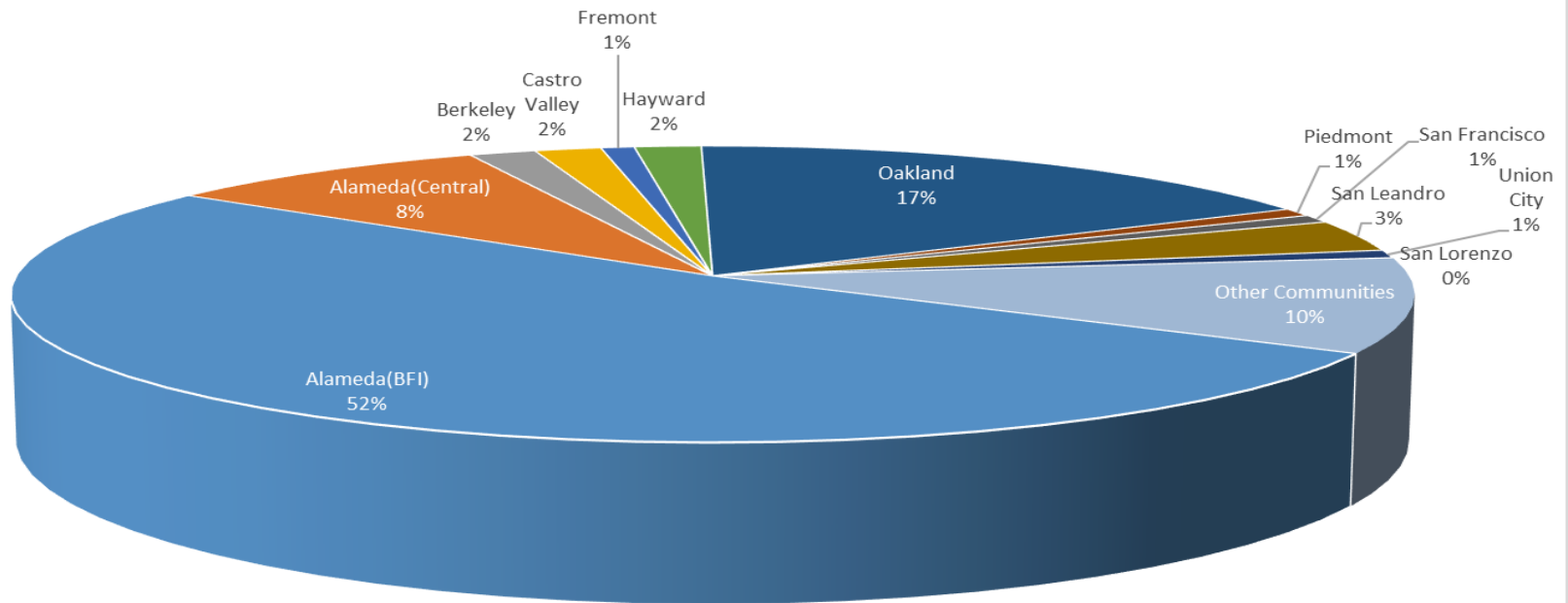
**Oakland International Airport
Noise Complaint Summary
August 2019**

Community	Callers	Complaints
Alameda(BFI)	60	513
Alameda(Central)	10	41
Berkeley	2	13
Castro Valley	2	17
Fremont	1	4
Hayw ard	2	60
Oakland	20	2267
Piedmont	1	2
San Francisco	1	1
San Leandro	4	6
Union City	1	111
San Lorenzo	0	0
Other Communities	12	1338
Total	116	4373
Complaints by Type		
Website	399	
E-mail	2198	
Phone	46	
View point App	1730	
Complaints by Time of Day		
Day (0700 - 1900)	1432	
Evening (1900 - 2200)	511	
Night (2200 - 0700)	2430	
Complaints by Type of Operation		
Arrivals	2577	
Departures	1489	
Over-flights	255	
Touch & Go	52	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	480	
Helicopter	38	
Jet	3171	
Military	0	
Not Reported	10	
Other	139	
Propeller	381	
Turbo-prop	154	

Number of Callers

August 2019

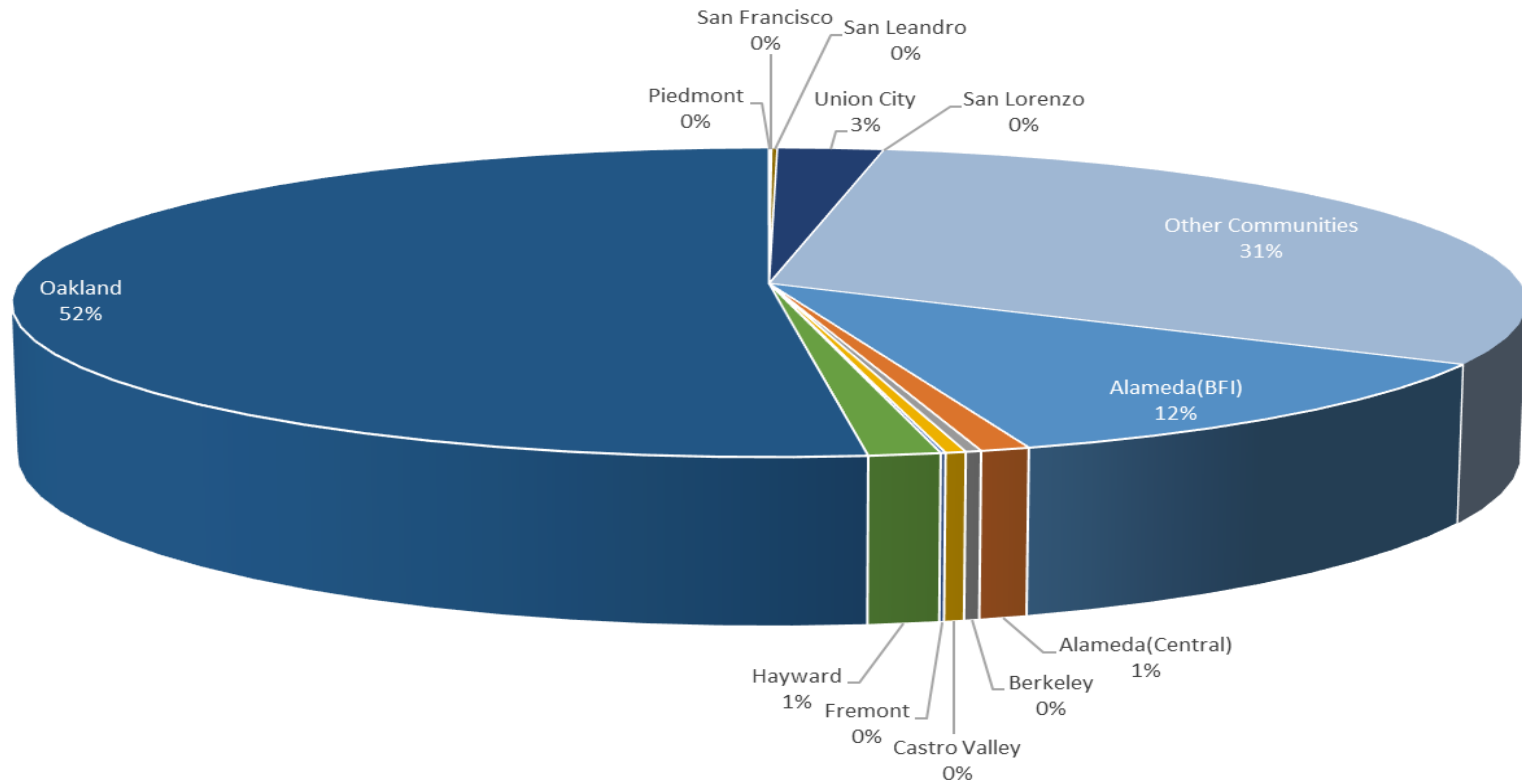
Noise Complaints Summary by Number of Callers



Number of Complaints

August 2019

Noise Complaints Summary by Number of Complaints



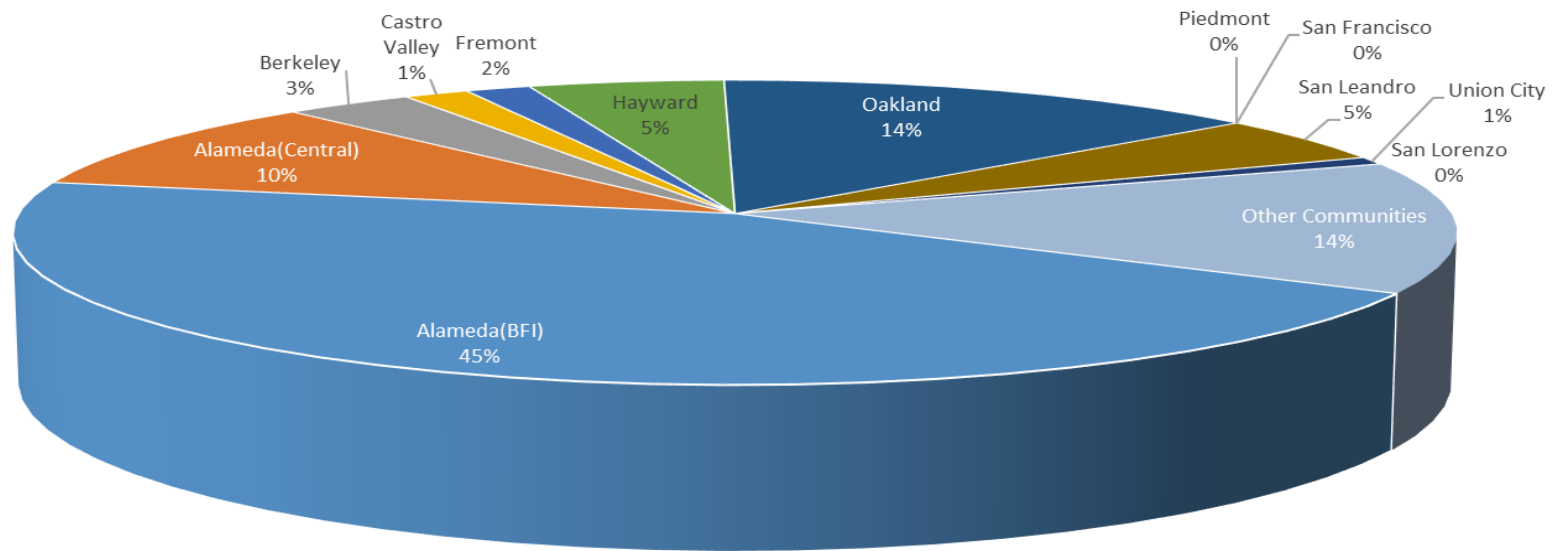
**Oakland International Airport
Noise Complaint Summary
September 2019**

Community	Callers	Complaints
Alameda(BFI)	55	1176
Alameda(Central)	12	36
Berkeley	4	9
Castro Valley	2	9
Fremont	2	5
Hayw ard	6	89
Oakland	17	3096
Piedmont	0	0
San Francisco	0	0
San Leandro	6	12
Union City	1	467
San Lorenzo	0	0
Other Communities	17	1680
Total	122	6579
Complaints by Type		
Website	0	
E-mail	3551	
Phone	173	
View point App	2855	
Complaints by Time of Day		
Day (0700 - 1900)	2342	
Evening (1900 - 2200)	1032	
Night (2200 - 0700)	3205	
Complaints by Type of Operation		
Arrivals	3685	
Departures	2327	
Over-flights	371	
Touch & Go	196	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	237	
Helicopter	41	
Jet	5212	
Military	0	
Not Reported	119	
Other	215	
Propeller	611	
Turbo-prop	144	

Number of Callers

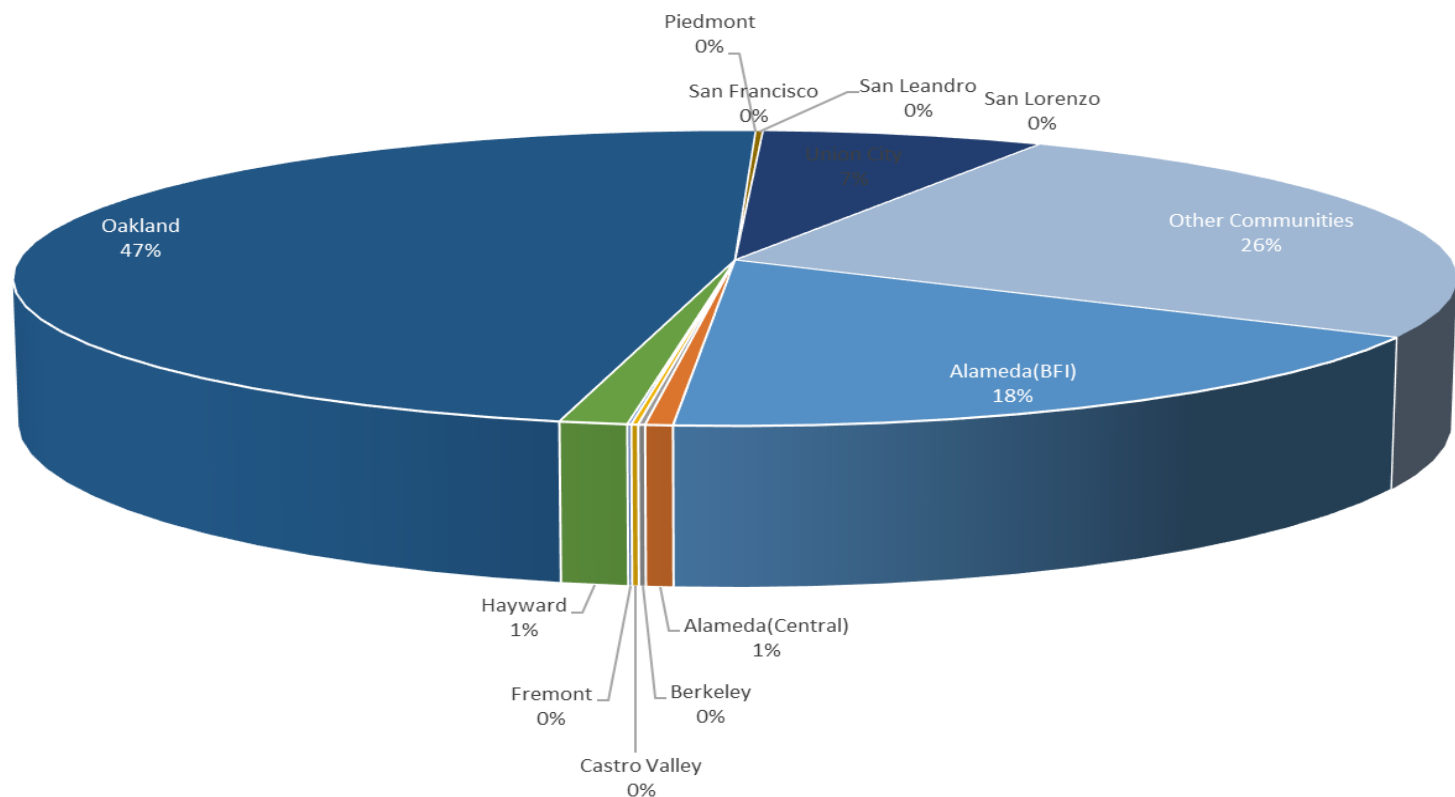
September 2019

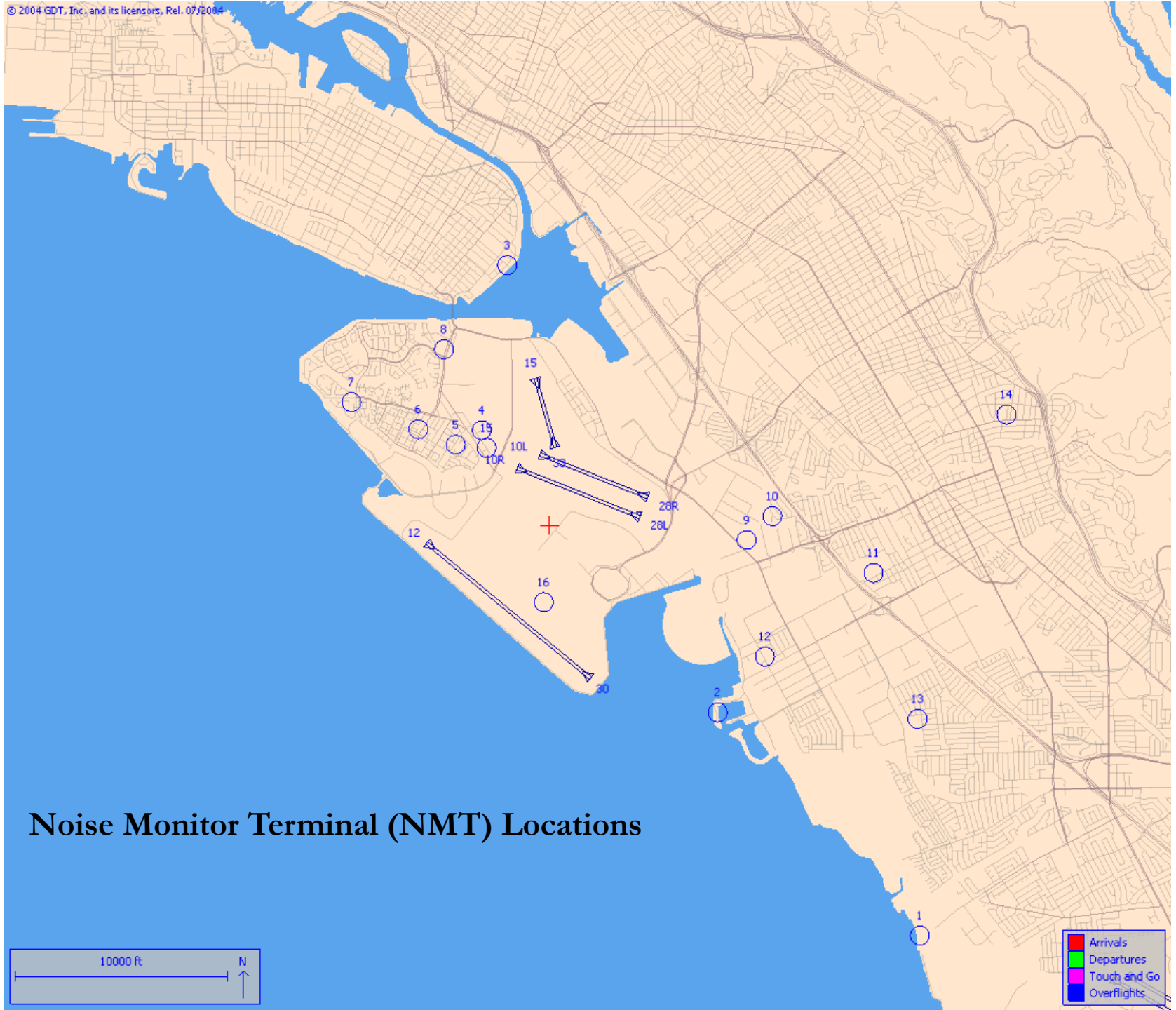
Noise Complaints Summary by Number of Callers



Number of Complaints September 2019

Noise Complaints Summary by Number of Complaints





Noise Monitor Terminal (NMT) Locations