

NOISE FORUM SUMMARY

North/South Field Working Groups



NOISE ABATEMENT REPORT

FOURTH QUARTER 2022

Disclaimer

The Port of Oakland's Airport Noise and Operations Monitoring System (ANOMS) is the source of the data used in this report. Although ANOMS is a very sophisticated computer program that provides a state-of-the-art solution for collecting aircraft noise complaints. The number of aircraft noise complaints in the report are for informational purposes. Airport staff carefully reviews the data for accuracy and will make corrections whenever possible.

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Compliance Monitoring Quarterly Summary Comparison Fourth Quarter 2022				
	2021Q4		2022Q4	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	95%	5%	93%	7%
Total Airport-wide Corporate Jet Departures	2,948	168	2,375	175
Runway 10R/L Jet Landing Compliance	89%	11%	92%	8%
Total Southeast Plan Corporate Jet Landings	281	33	113	10
North Field VFR Departure Compliance	85%	15%	89%	11%
Total Runways 28R/L & 33 Departures	169	31	203	24
North Field Quiet Hours Compliance	79%	21%	81%	19%
Total North Field Quiet Hours Departures	141	37	128	31
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	14,379	9	17,150	1
Night Time Departure Compliance	99%	1%	99%	1%
Total Runway 30 Night Turbojet Departures	2,381	24	3,252	28
Runway 12 Night Departure Compliance	99%	1%	96%	4%
Total Runway 12 Night Turbojet Departures	313	4	43	2
Runway 30 East Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 East Turn Departures	3,948	5	4,159	5
100 Degree Radial Turbojet Landing Compliance	99%	1%	98%	2%
Total 100 Degree Radial Turbojet Landings	739	4	993	22
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	6	0	3	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

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Runway 28R/L Jet Departure NAP

2022Q4

93% Compliance
(2,550 total departures)
(175 non-compliant)

2021Q4

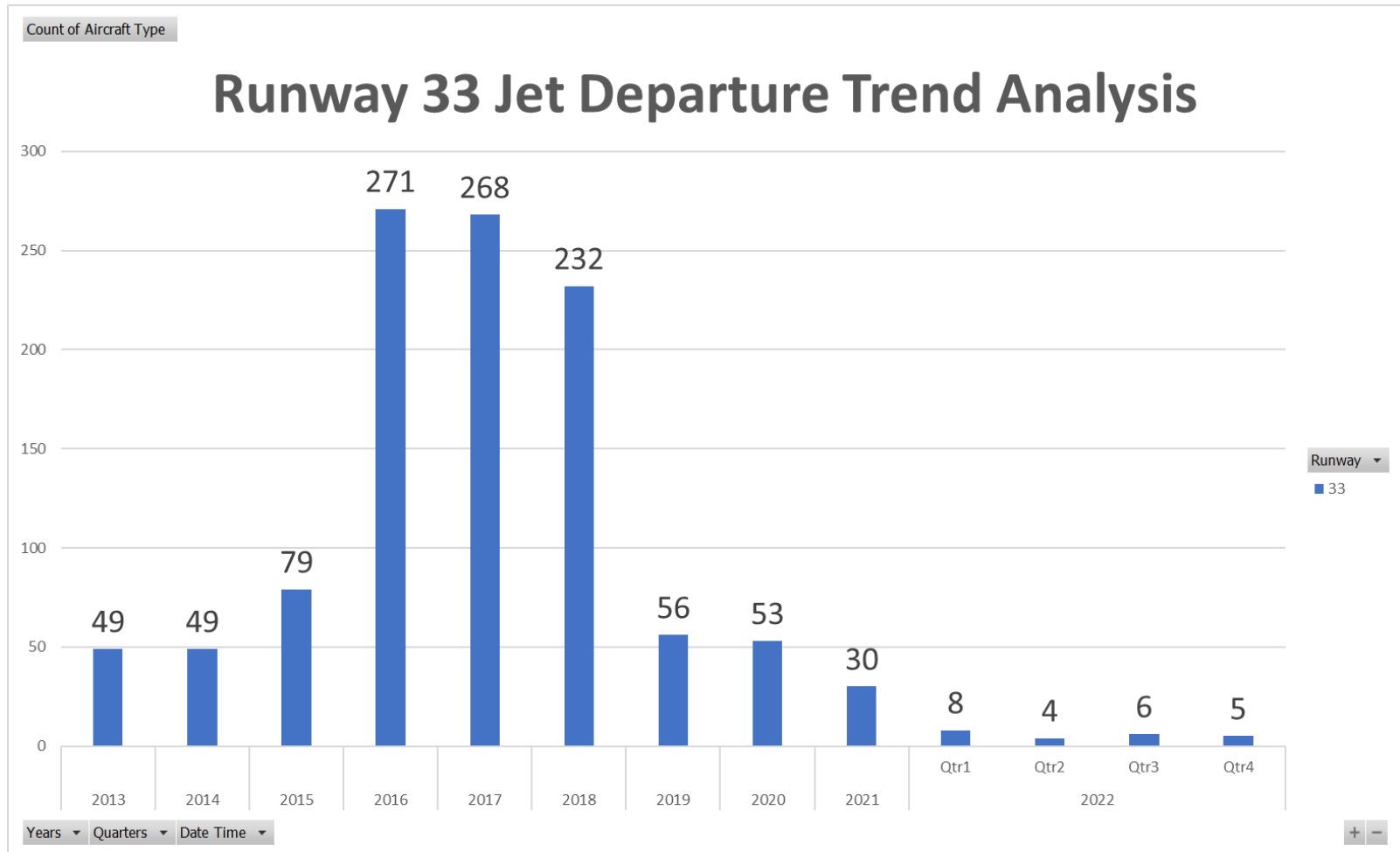
95% Compliance
(3,116 total departures)
(168 non-compliant)

Heading: 325
Elevation: 15



RUNWAY 33 JET DEPARTURES

FOURTH Quarter 2022



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

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Runway 10R/L Jet Landing NAP

2022Q4

92% Compliance
(123 total landings)
(10 non-compliant)

2021Q4

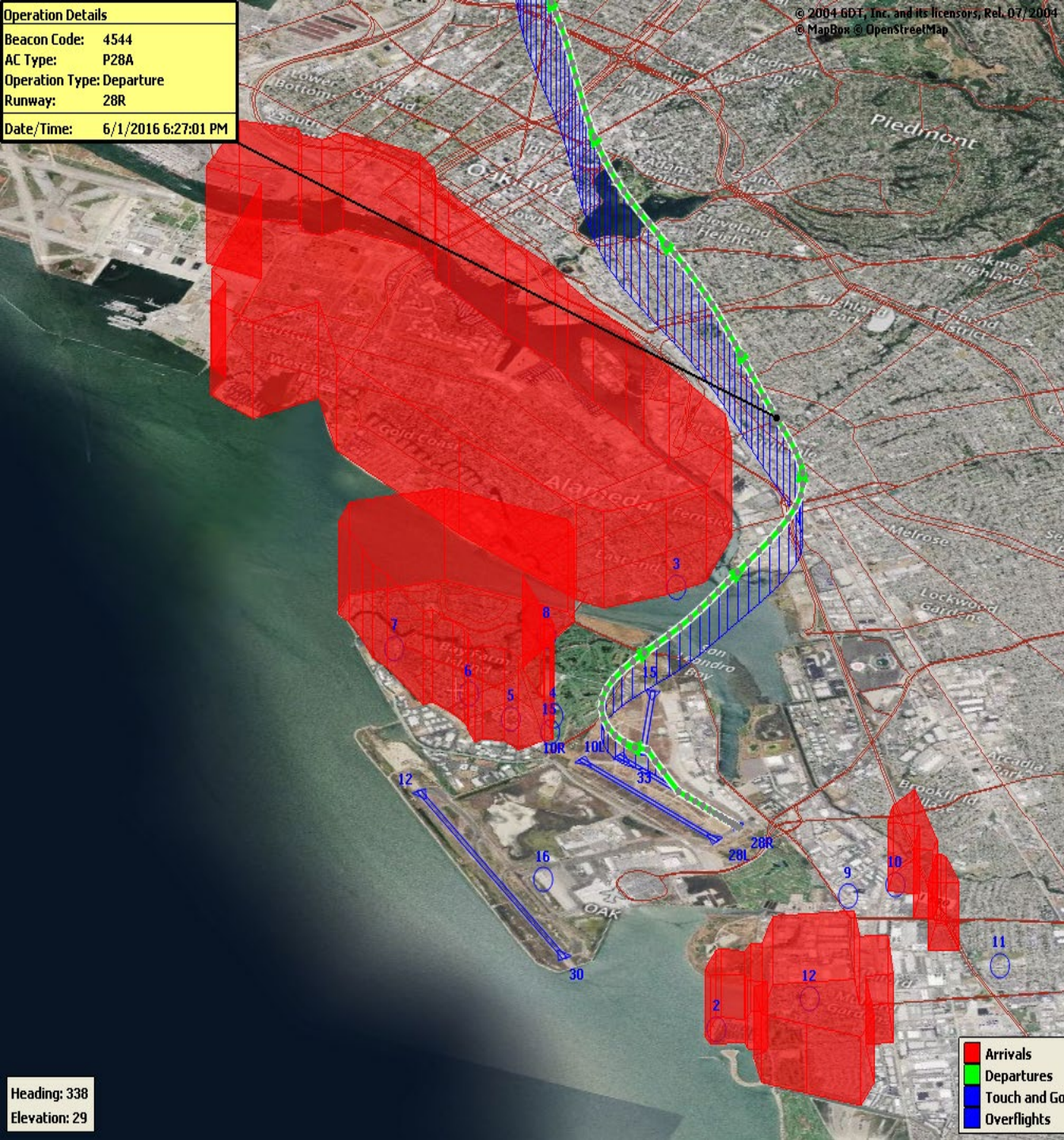
89% Compliance
(314 total landings)
(33 non-compliant)

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

2022Q4

89% Compliance
(227 total departures)
(24 non-compliant)

2021Q4

85% Compliance
(200 total departures)
(31 non-compliant)



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

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North Field Quiet Hours NAP

2022Q4
81% Compliance
(159 total departures)
(31 non-compliant)

2021Q4
79% Compliance
(178 total departures)
(37 non-compliant)

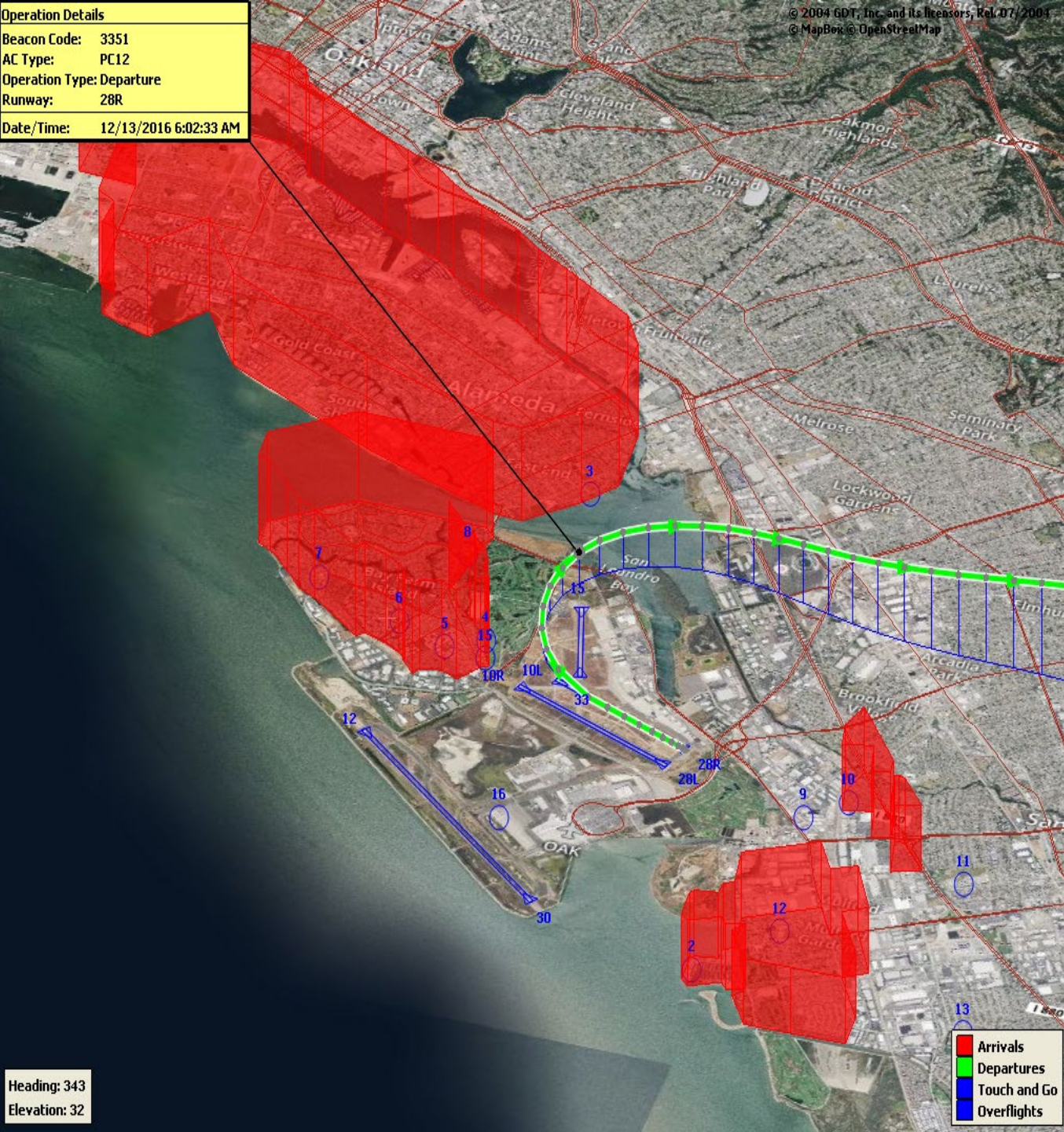
Heading: 343
Elevation: 32

Arrivals

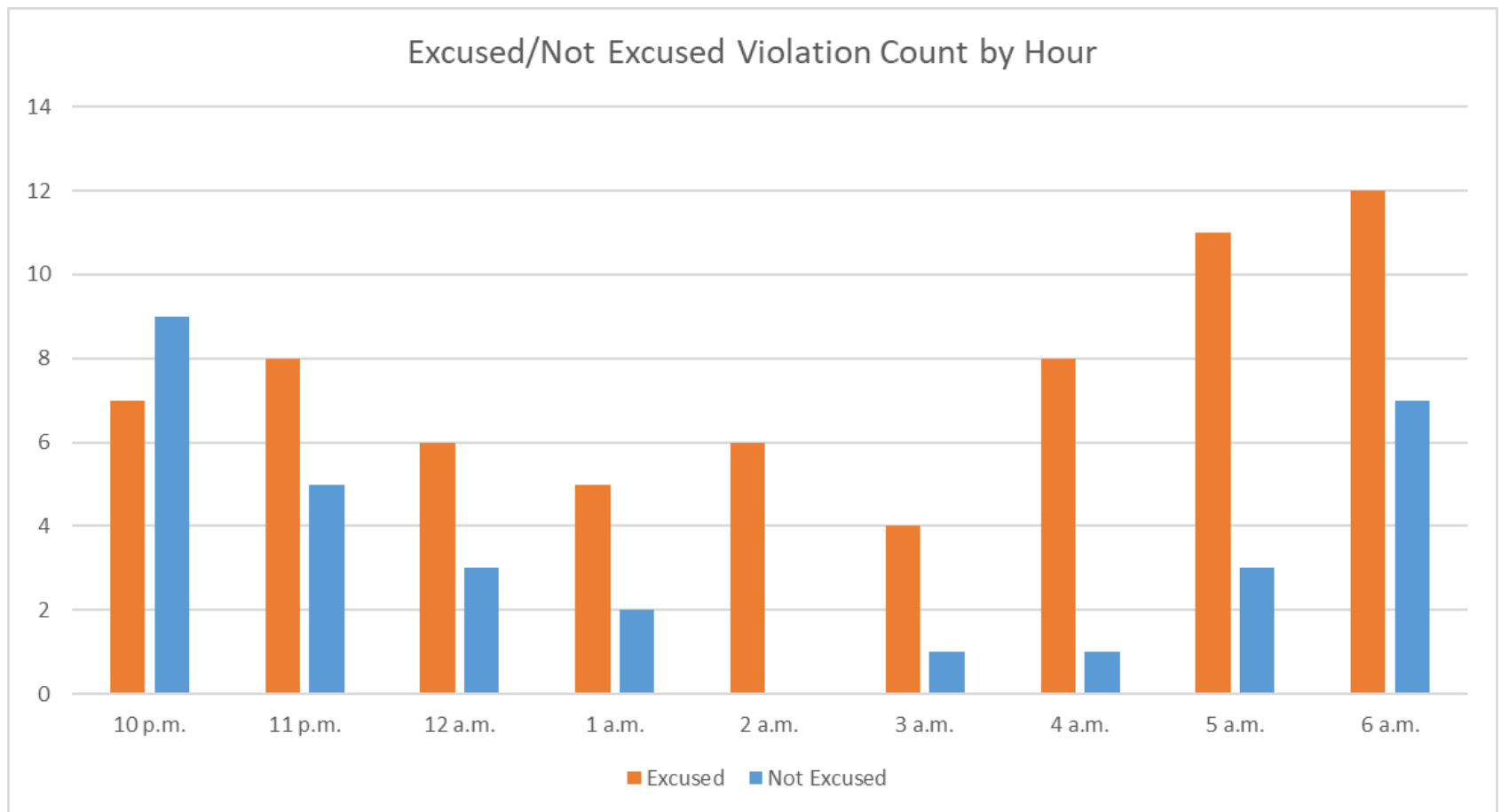
Departures

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

2022Q4

99% Compliance
(3,280 total departures)
(28 non-compliant)

***REBAS Gate non-compliant = 26**

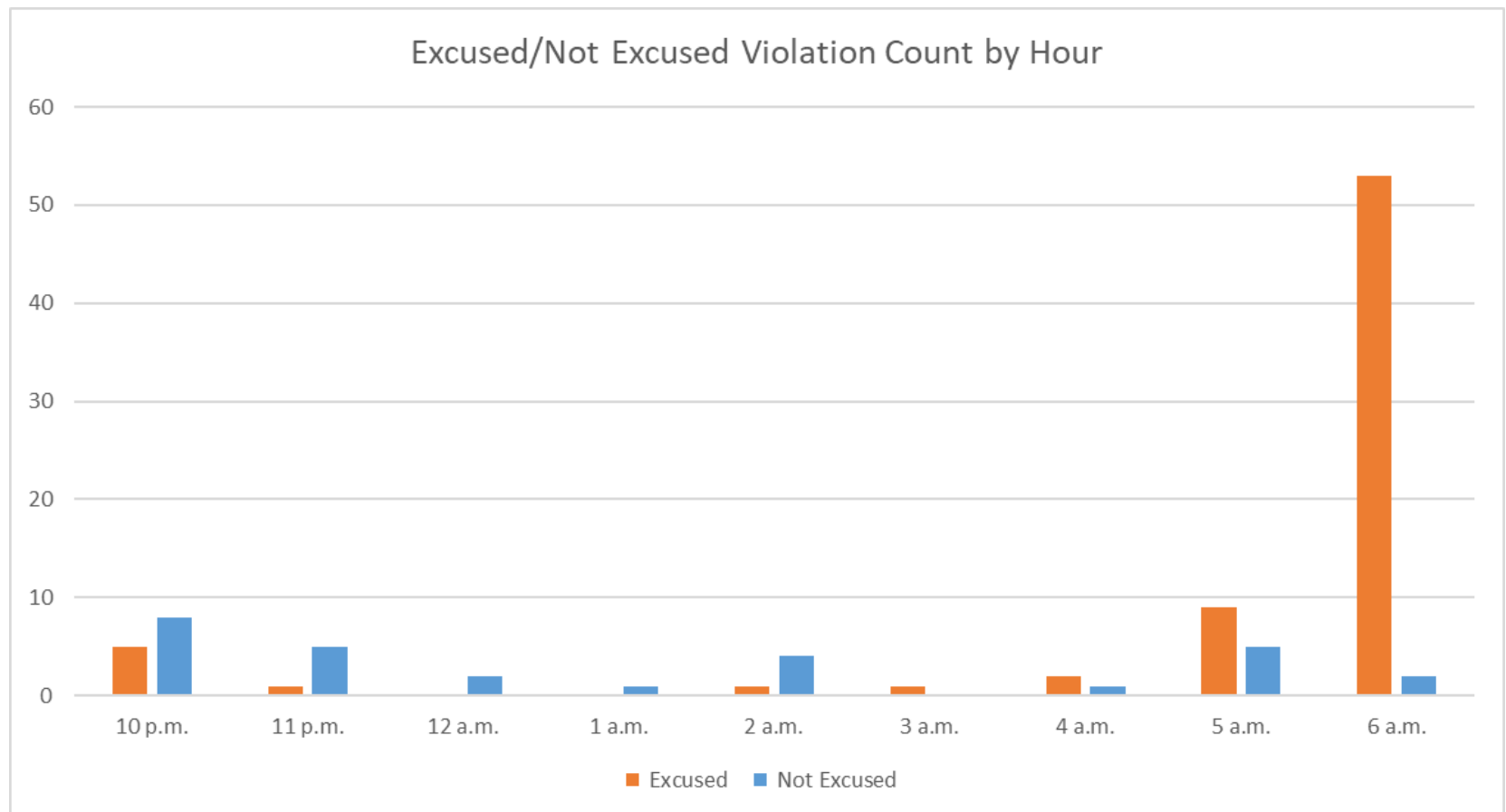
2021Q4

99% Compliance
(2,405 total departures)
(24 non-compliant)

Heading: 349
 Elevation: 59

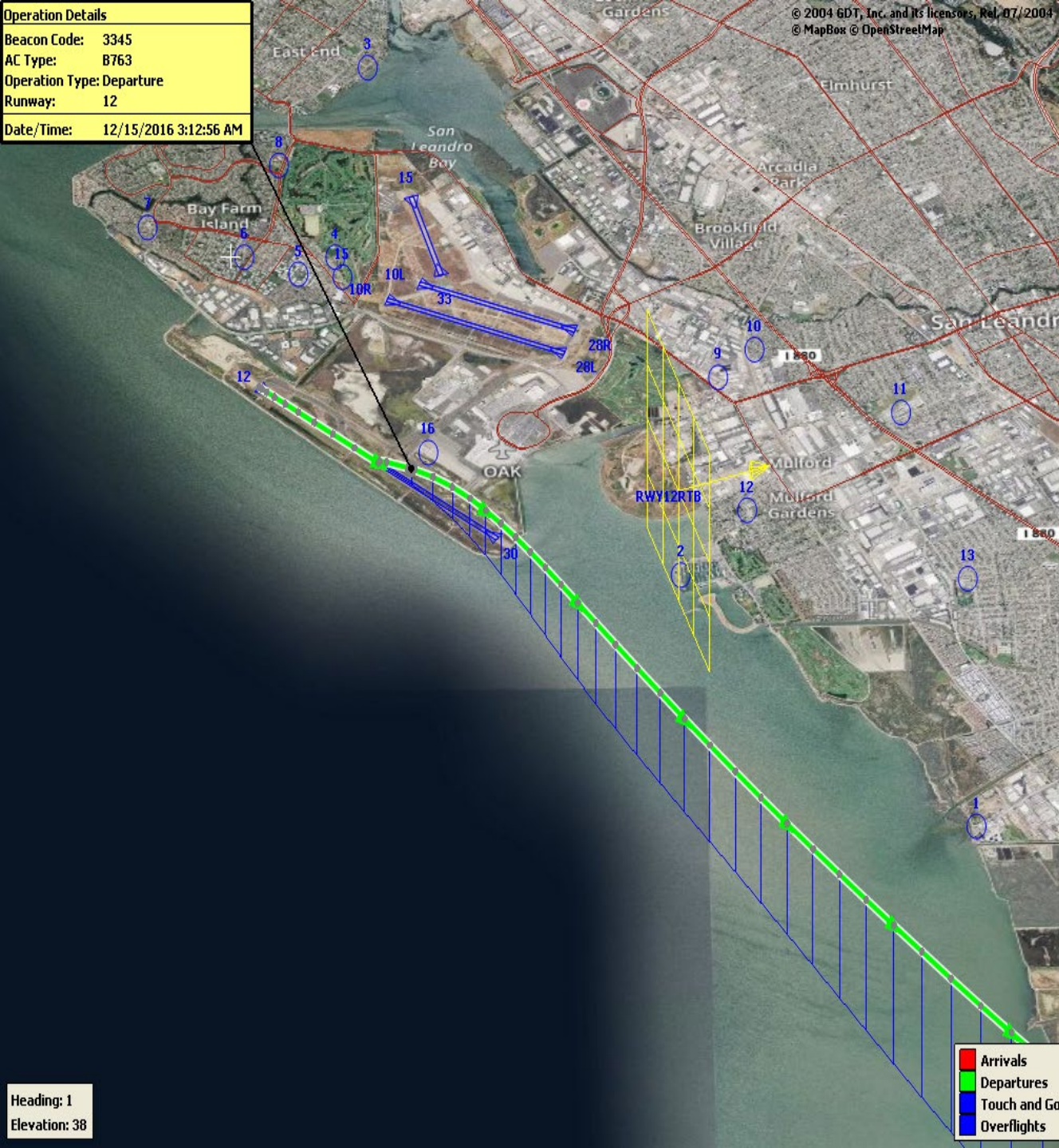
Arrivals
 Departures
 Touch and Go
 Overflights

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

2022Q4

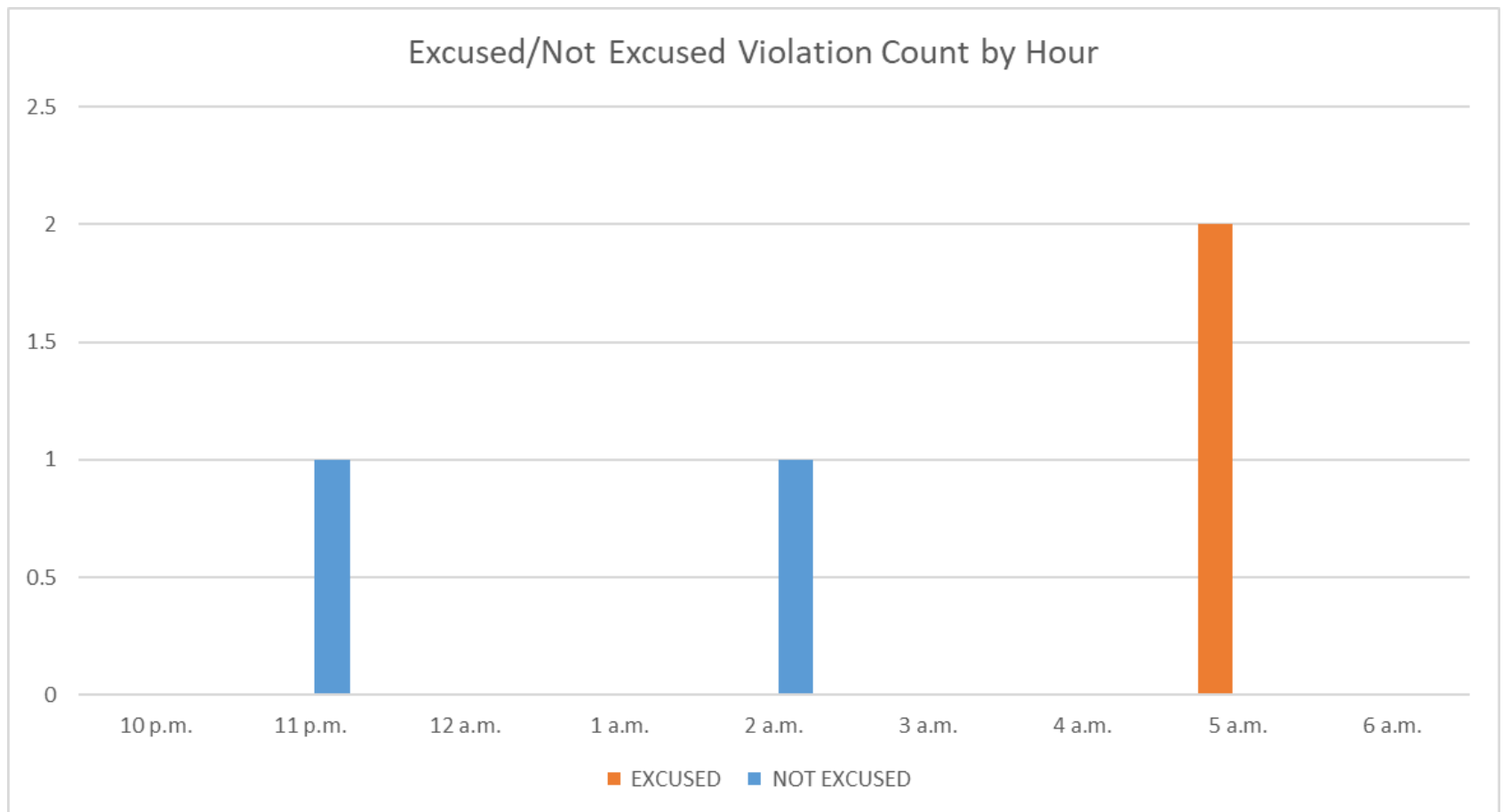
96% Compliance
(45 total departures)
(2 non-compliant)

2021Q4

99% Compliance
(317 total departures)
(4 non-compliant)

Arrivals
Departures
Touch and Go
Overflights

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

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Runway 30 Bay Farm Right Turn NAP

2022Q4
100% Compliance
(17,151 total departures)
(1 non-compliant)

2021Q4
100% Compliance
(14,388 total departures)
(9 non-compliant)

Heading: 299
Elevation: 36



Arrivals
Departures
Touch and Go
Overflights

Runway 30 East Turn NAP

2022Q4
100% Compliance
(4,164 total departures)
(5 non-compliant)

*Excused Departures = 24

2021Q4
100% Compliance
(3,953 total departures)
(5 non-compliant)

Operation Details

Beacon Code: 3777

AC Type: B737

Operation Type: Departure

Runway: 30

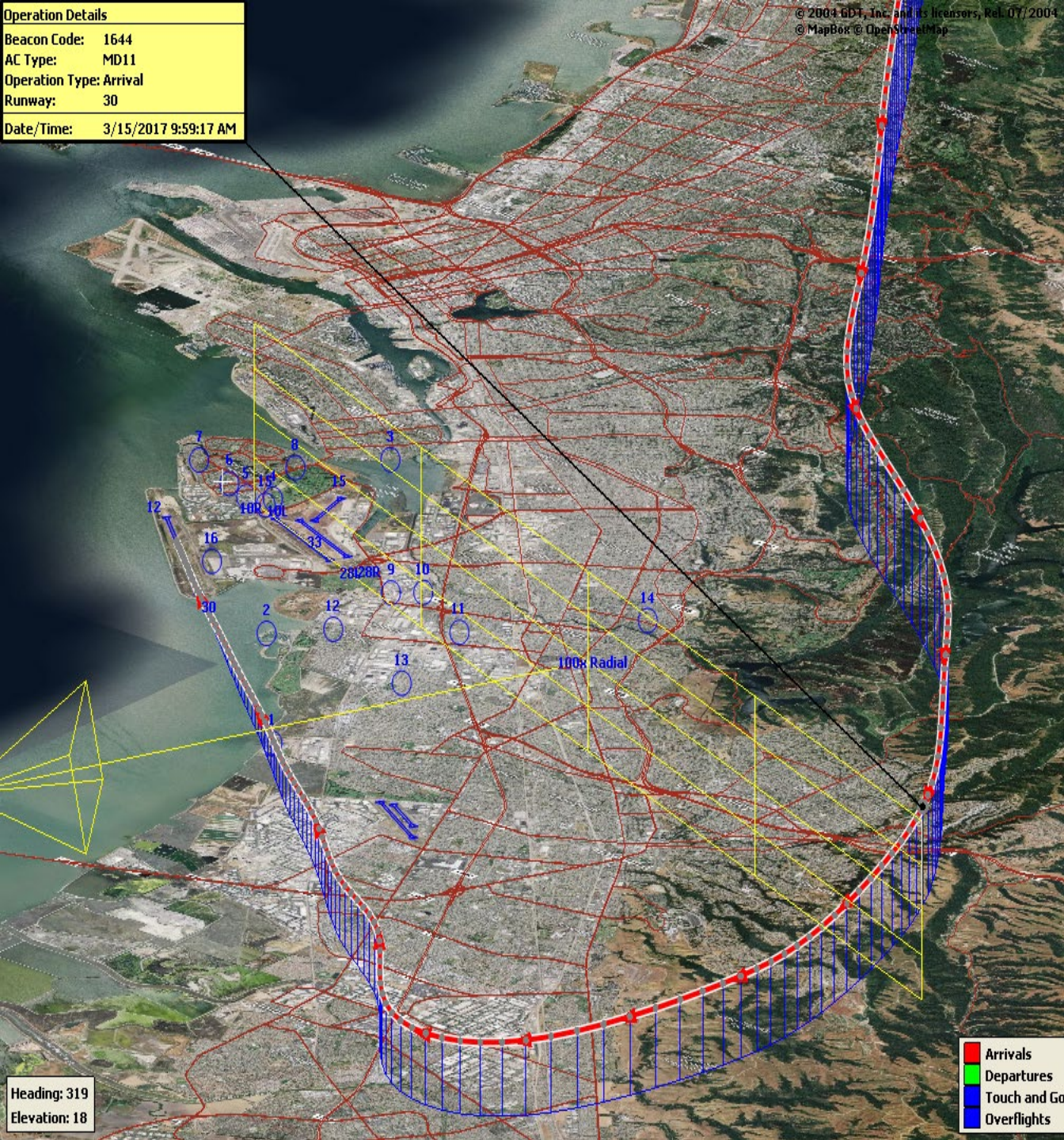
Date/Time: 3/15/2017 9:53:47 AM

Alameda Rwy 30



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

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100 Degree Radial At 3,000 ft. NAP

2022Q4

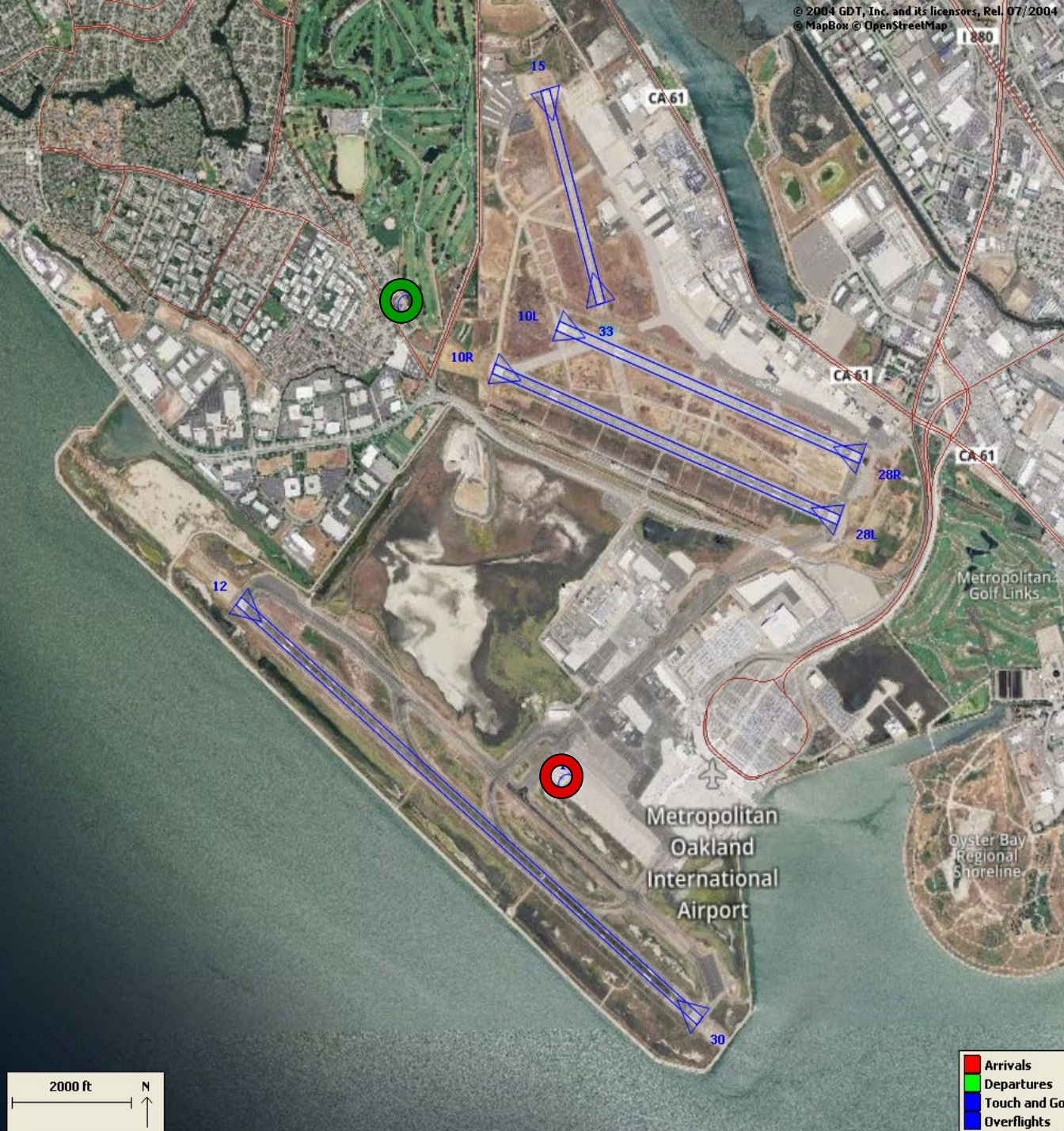
98% Compliance
(1,015 total landings)
(22 non-compliant)

2021Q4

99% Compliance
(743 total landings)
(4 non-compliant)

Heading: 319
Elevation: 18

- Arrivals
- Departures
- Touch and Go
- Overflights



Engine Run-up NAP

2022Q4

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

2021Q4

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

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

Compliance Monitoring Quarterly Summary Comparison Fourth Quarter 2022 - Quarter-to-Quarter				
	2022Q3		2022Q4	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	94%	6%	93%	7%
Total Airport-wide Corporate Jet Departures	2,326	157	2,375	175
Runway 10R/L Jet Landing Compliance	83%	17%	92%	8%
Total Southeast Plan Corporate Jet Landings	40	8	113	10
North Field VFR Departure Compliance	89%	11%	89%	11%
Total Runways 28R/L & 33 Departures	207	26	203	24
North Field Quiet Hours Compliance	76%	24%	81%	19%
Total North Field Quiet Hours Departures	117	37	128	31
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	18,887	3	17,150	1
Night Time Departure Compliance	99%	1%	99%	1%
Total Runway 30 Night Turbojet Departures	3,749	27	3,252	28
Runway 12 Night Departure Compliance	100%	0%	96%	4%
Total Runway 12 Night Turbojet Departures	47	0	43	2
Runway 30 East Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 East Turn Departures	4,631	3	4,159	5
100 Degree Radial Turbojet Landing Compliance	98%	2%	98%	2%
Total 100 Degree Radial Turbojet Landings	1,112	19	993	22
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	7	0	3	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 = 159

Fourth Quarter 2022 (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	3	2	0.0	0.4%	0	0.0	0.0%	0	0.0	0.0%	5
2	22	8	0.1	1.4%	0	0.0	0.0%	0	0.0	0.0%	30
3	37	2	0.0	0.4%	2	0.0	0.4%	0	0.0	0.0%	41
4	48	51	0.6	9.0%	29	0.3	5.1%	19	0.2	3.4%	147
5	60	19	0.2	3.4%	15	0.2	2.6%	16	0.2	2.8%	110
6	59	12	0.1	2.1%	12	0.1	2.1%	13	0.1	2.3%	96
7	22	13	0.1	2.3%	13	0.1	2.3%	1	0.0	0.2%	49
8	37	15	0.2	2.6%	3	0.0	0.5%	4	0.0	0.7%	59
9	10	6	0.1	1.1%	13	0.1	2.3%	0	0.0	0.0%	29
10	54	25	0.3	4.4%	4	0.0	0.7%	1	0.0	0.2%	84
11	6	4	0.0	0.7%	1	0.0	0.2%	0	0.0	0.0%	11
12	14	9	0.1	1.6%	2	0.0	0.4%	1	0.0	0.2%	26
13	10	1	0.0	0.2%	0	0.0	0.0%	0	0.0	0.0%	11
14	25	1	0.0	0.2%	0	0.0	0.0%	0	0.0	0.0%	26
All NMTs	407	168	2	0	94	1	0	55	1	0	724

Table 2. Aircraft SEL Noise Measurements in Alameda - Total Aircraft Departures = 131

Fourth Quarter 2022 (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	37	2	0.0	0.8%	2	0.0	0.8%	0	0.0	0.0%	41
4	48	51	0.6	21.3%	29	0.3	12.1%	19	0.2	7.9%	147
5	60	19	0.2	7.9%	15	0.2	6.3%	16	0.2	6.7%	110
6	59	12	0.1	5.0%	12	0.1	5.0%	13	0.1	5.4%	96
7	22	13	0.1	5.4%	13	0.1	5.4%	1	0.0	0.4%	49
8	37	15	0.2	6.3%	3	0.0	1.3%	4	0.0	1.7%	59
Total	263	112	1.2		74	0.8		53	0.6		502

Table 3. Aircraft SEL Noise Measurements in San Leandro - Total Aircraft Departures = 28

Fourth Quarter 2022 (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	22	8	0.1	2.4%	0	0.0	0.0%	0	0.0	0.0%	30
9	10	6	0.1	1.8%	13	0.1	4.0%	0	0.0	0.0%	29
10	54	25	0.3	7.6%	4	0.0	1.2%	1	0.0	0.3%	84
11	6	4	0.0	1.2%	1	0.0	0.3%	0	0.0	0.0%	11
12	14	9	0.1	2.7%	2	0.0	0.6%	1	0.0	0.3%	26
13	10	1	0.0	0.3%	0	0.0	0.0%	0	0.0	0.0%	11
14	25	1	0.0	0.3%	0	0.0	0.0%	0	0.0	0.0%	26
Total	141	54	0.6		20	0.2		2	0.0		217

**Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)
Fourth Quarter 2022, 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	
A 306	67	21	67	77	25	
Fourth Quarter 2022 [B]						
	Total [X]	Est. Avg. Monthly [X/3]				
B763	221	74	77	65	75	18
DC10/MD10	1	0	-	-	-	-
MD11	252	84	188	67	76	19
A 306	36	12	19	66	75	15
B757	168	56	76	66	75	17
B77L	115	38	29	65	73	14
Difference [A-B]						
DC10/MD10		-87	-32	-69	-78	-22
MD11		52	175	-3	-3	-5
A 306		-55	-2	-1	-2	-10

(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)
Fourth Quarter 2021, 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
Fourth Quarter 2021 [B]					
	Total [X]	Est. Avg. Monthly [X/3]			
B763	219	73	37	66	74
DC10/MD10	44	15	9	67	76
MD11	212	71	69	67	76
A306	18	6	3	67	75
B757	144	48	22	67	75
B77L	113	38	10	65	74
Difference [A-B]					
DC10/MD10		-72	-23	-2	-5
MD11		39	56	-3	-7
A306		-61	-18	0	-12

(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)

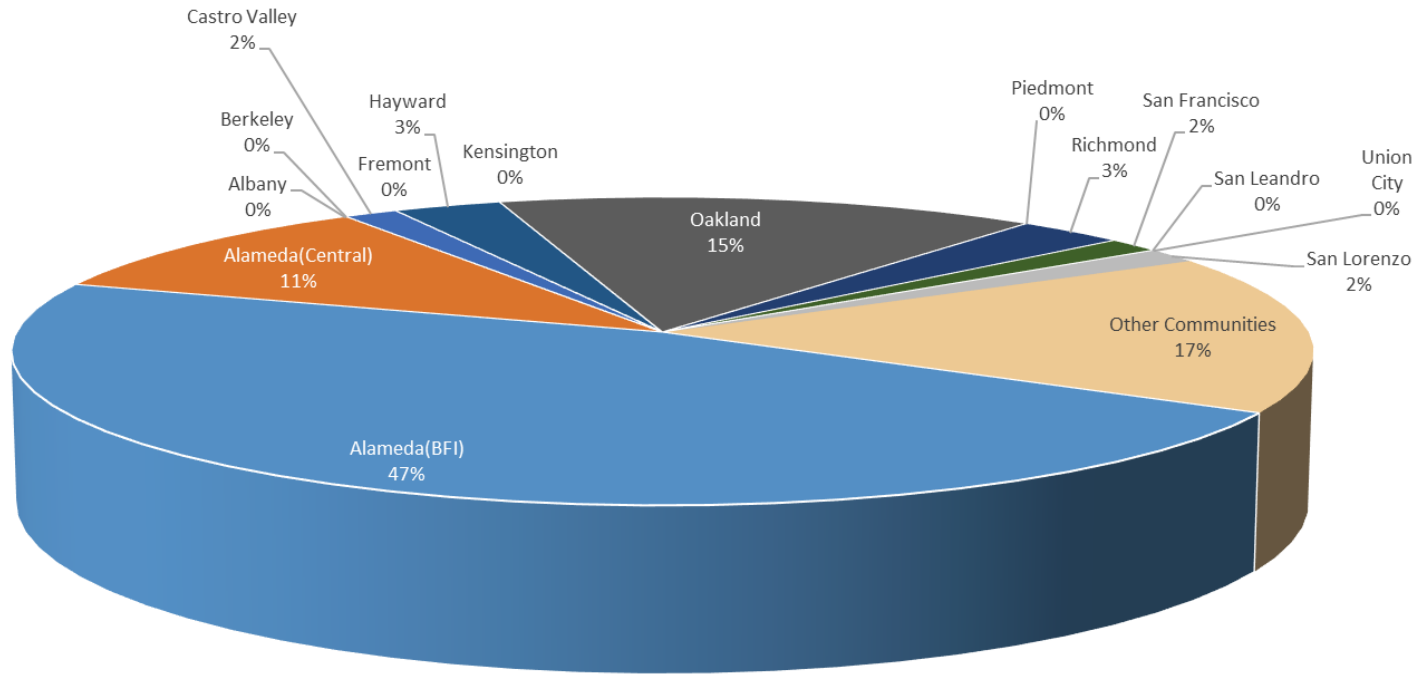
**Oakland International Airport
Noise Complaint Summary
October 2022**

Community	Callers	Complaints
Alameda(BFI)	31	1903
Alameda(Central)	7	23
Albany	0	0
Berkeley	0	0
Castro Valley	1	135
Fremont	0	0
Hayw ard	2	9
Kensington	0	0
Oakland	10	4499
Piedmont	0	0
Richmond	2	274
San Francisco	1	1
San Leandro	0	0
Union City	0	0
San Lorenzo	1	1
Other Communities	11	50
Total	66	6895
Complaints by Type		
E-mail		3393
View point App		3502
Complaints by Time of Day		
Day (0700 - 1900)		1735
Evening (1900 - 2200)		447
Night (2200 - 0700)		4713
Complaints by Type of Operation		
Arrivals		4261
Departures		2469
Over-flights		85
Touch & Go		80
Not Linked to an Operation		0
Complaints by Type of Aircraft		
Business Jet		256
Helicopter		77
Jet		5756
Military		4
Not Reported (not linked to an aircraft)		0
Other (Type information not available)		156
Propeller		338
Turbo-prop		308

Number of Callers

October 2022

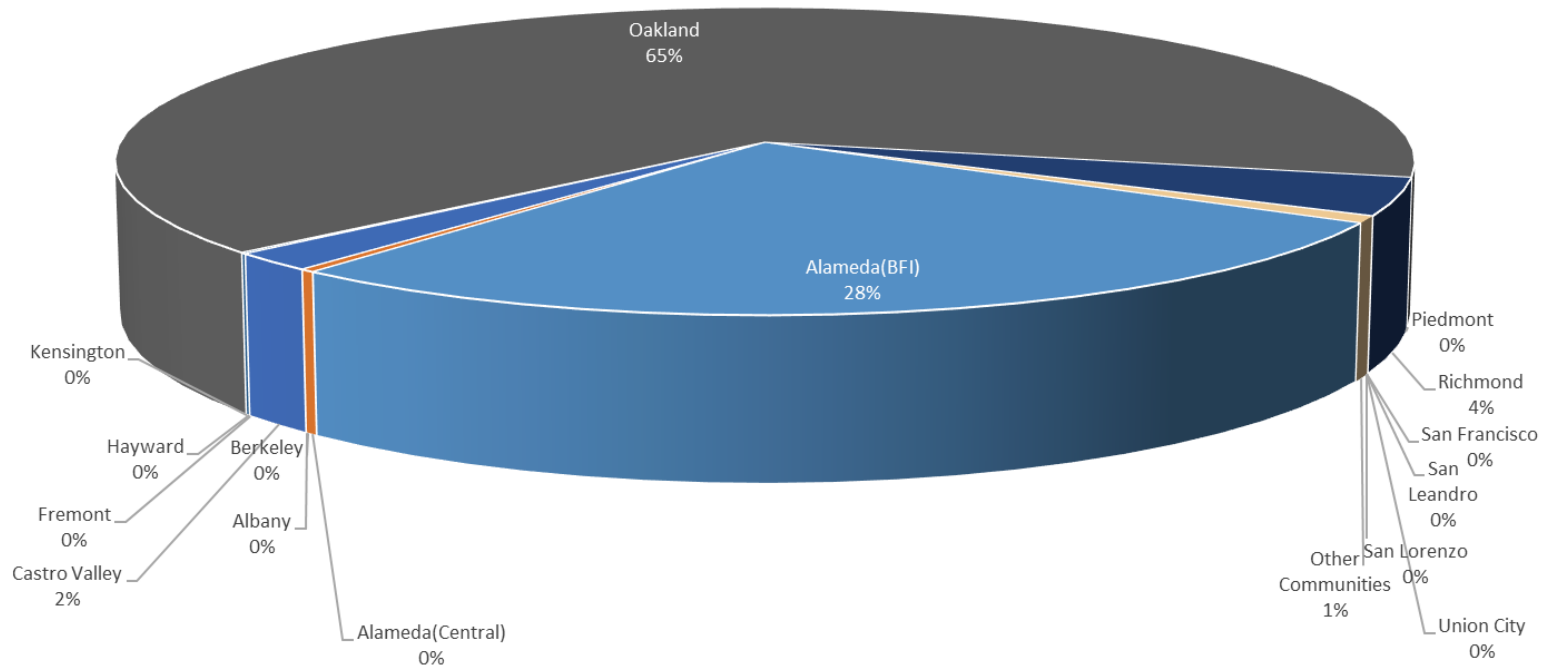
Noise Complaints Summary by Number of Callers



Number of Complaints

October 2022

Noise Complaints Summary by Number of Complaints



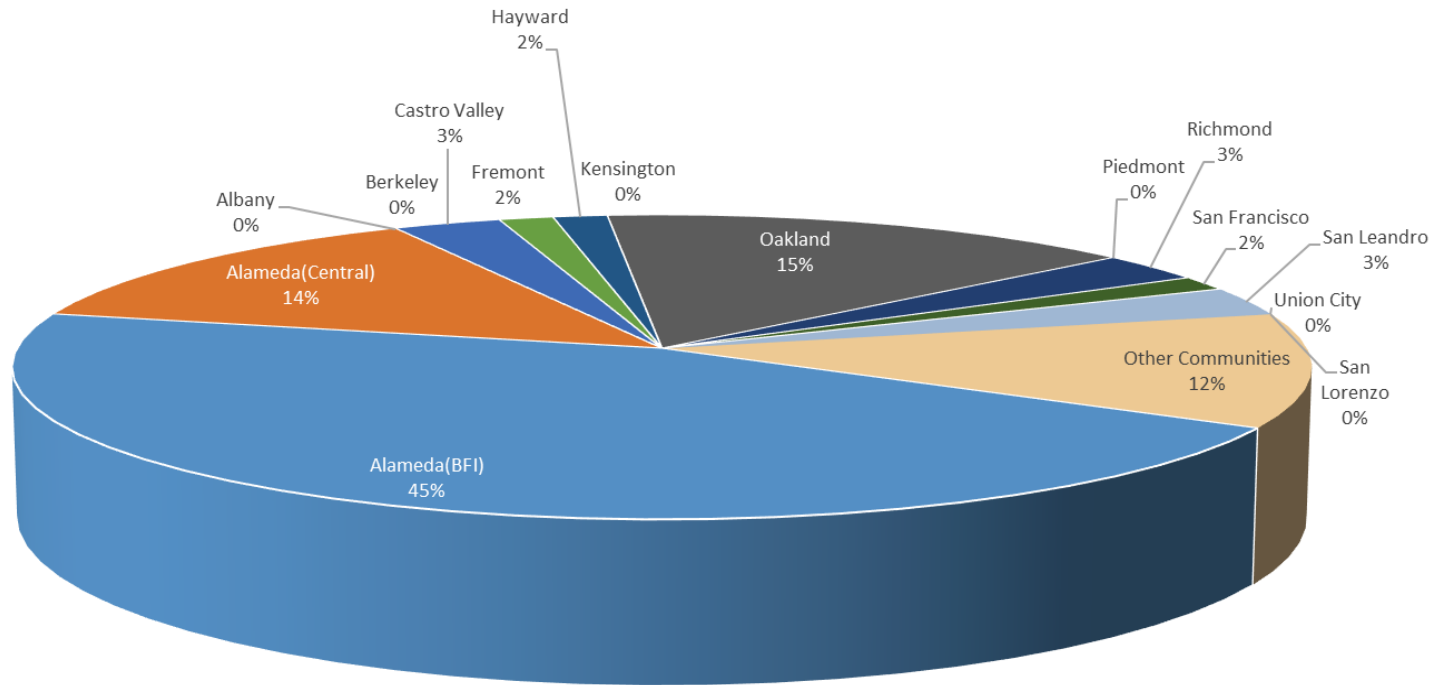
**Oakland International Airport
Noise Complaint Summary
November 2022**

Community	Callers	Complaints
Alameda(BFI)	30	1588
Alameda(Central)	9	38
Albany	0	0
Berkeley	0	0
Castro Valley	2	99
Fremont	1	3
Hayw ard	1	5
Kensington	0	0
Oakland	10	3577
Piedmont	0	0
Richmond	2	411
San Francisco	1	2
San Leandro	2	25
Union City	0	0
San Lorenzo	0	0
Other Communities	8	144
Total	66	5892
Complaints by Type		
E-mail		3317
View point App		2575
Complaints by Time of Day		
Day (0700 - 1900)		1229
Evening (1900 - 2200)		1023
Night (2200 - 0700)		3640
Complaints by Type of Operation		
Arrivals		2791
Departures		2966
Over-flights		65
Touch & Go		70
Not Linked to an Operation		0
Complaints by Type of Aircraft		
Business Jet		259
Helicopter		84
Jet		4821
Military		0
Not Reported (not linked to an aircraft)		0
Other (Type information not available)		13
Propeller		578
Turbo-prop		137

Number of Callers

November 2022

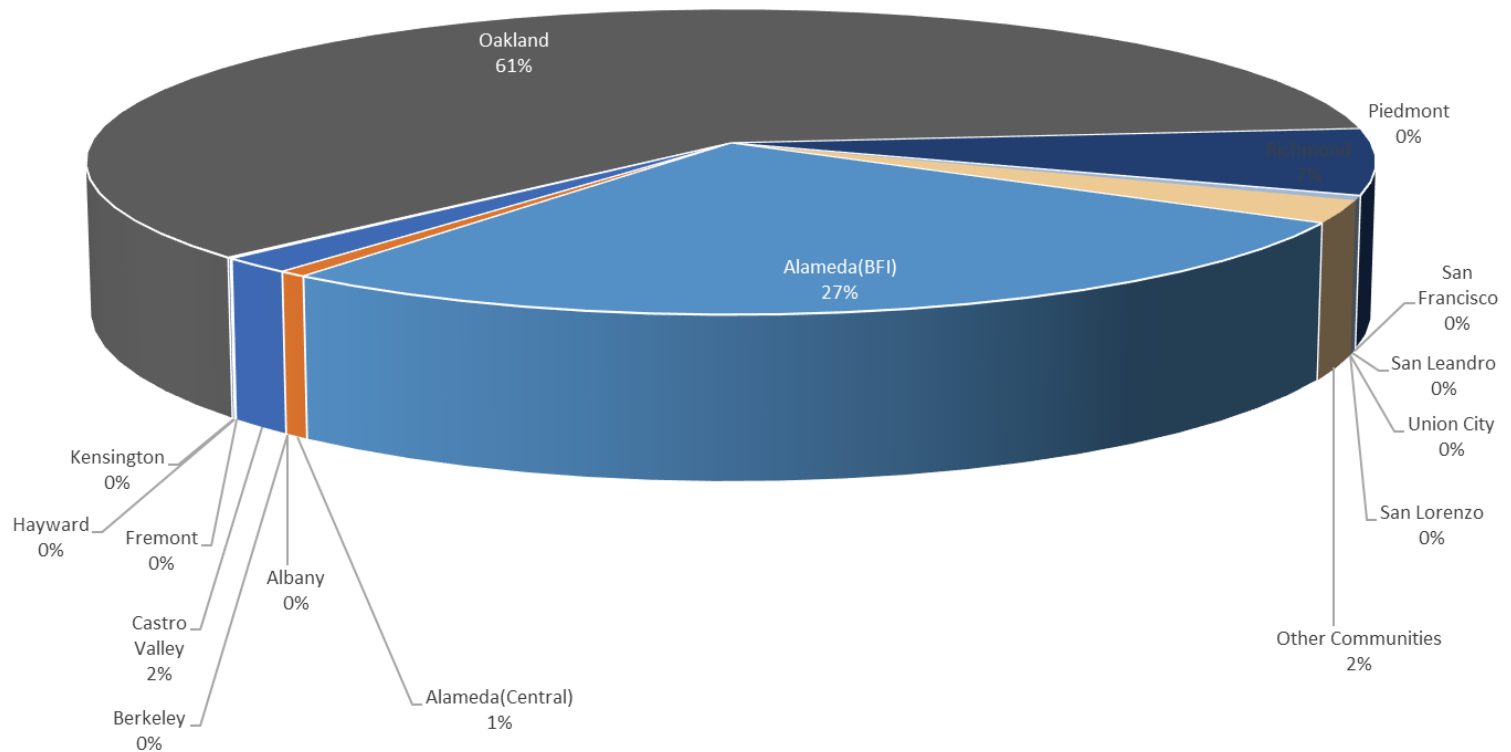
Noise Complaints Summary by Number of Callers



Number of Complaints

November 2022

Noise Complaints Summary by Number of Complaints



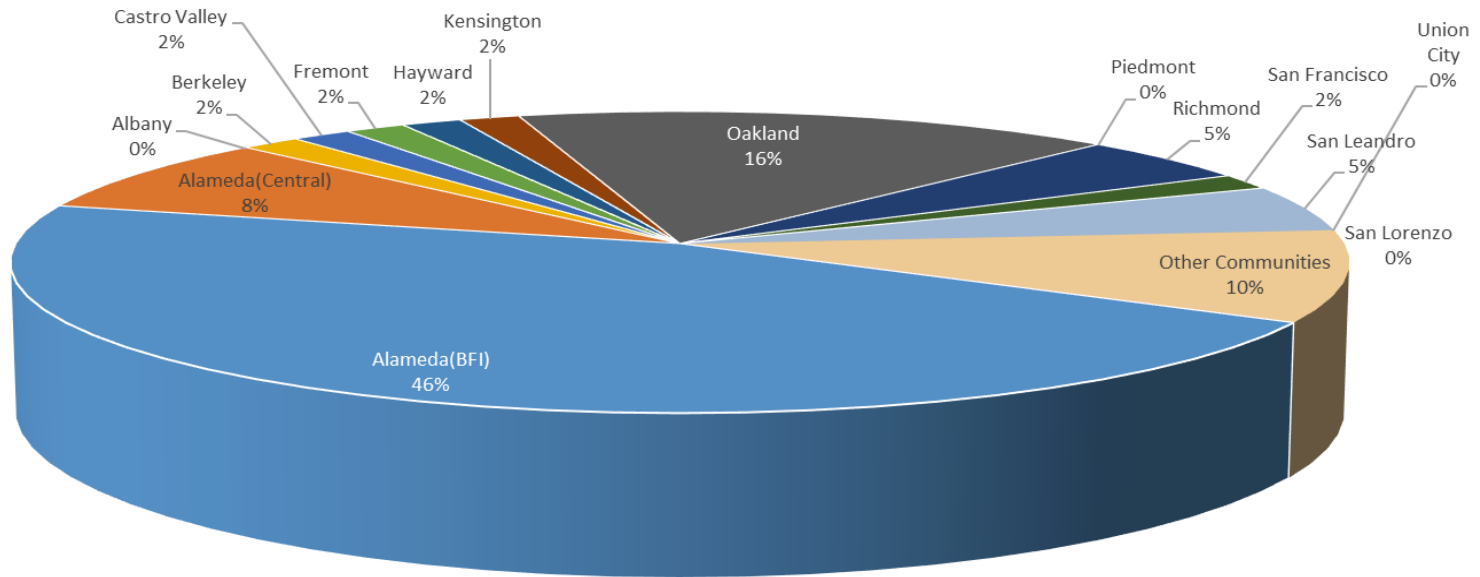
**Oakland International Airport
Noise Complaint Summary
December 2022**

Community	Callers	Complaints
Alameda(BFI)	28	1753
Alameda(Central)	5	26
Albany	0	0
Berkeley	1	1
Castro Valley	1	103
Fremont	1	1
Hayw ard	1	1
Kensington	1	1
Oakland	10	2920
Piedmont	0	0
Richmond	3	321
San Francisco	1	1
San Leandro	3	21
Union City	0	0
San Lorenzo	0	0
Other Communities	6	165
Total	61	5314
Complaints by Type		
E-mail	2862	
View point App	2452	
Complaints by Time of Day		
Day (0700 - 1900)	1091	
Evening (1900 - 2200)	572	
Night (2200 - 0700)	3651	
Complaints by Type of Operation		
Arrivals	3272	
Departures	1917	
Over-flights	68	
Touch & Go	57	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	256	
Helicopter	68	
Jet	4559	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	26	
Propeller	224	
Turbo-prop	181	

Number of Callers

December 2022

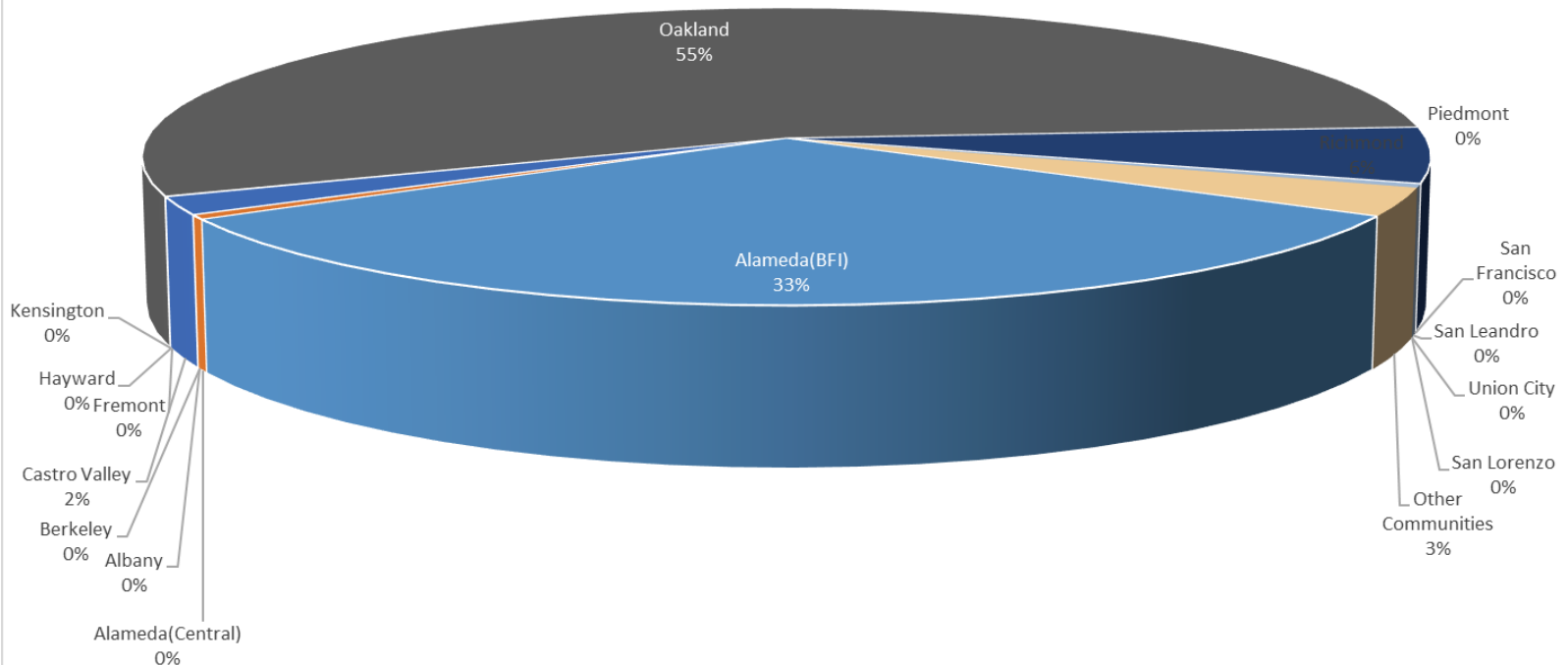
Noise Complaints Summary by Number of Callers

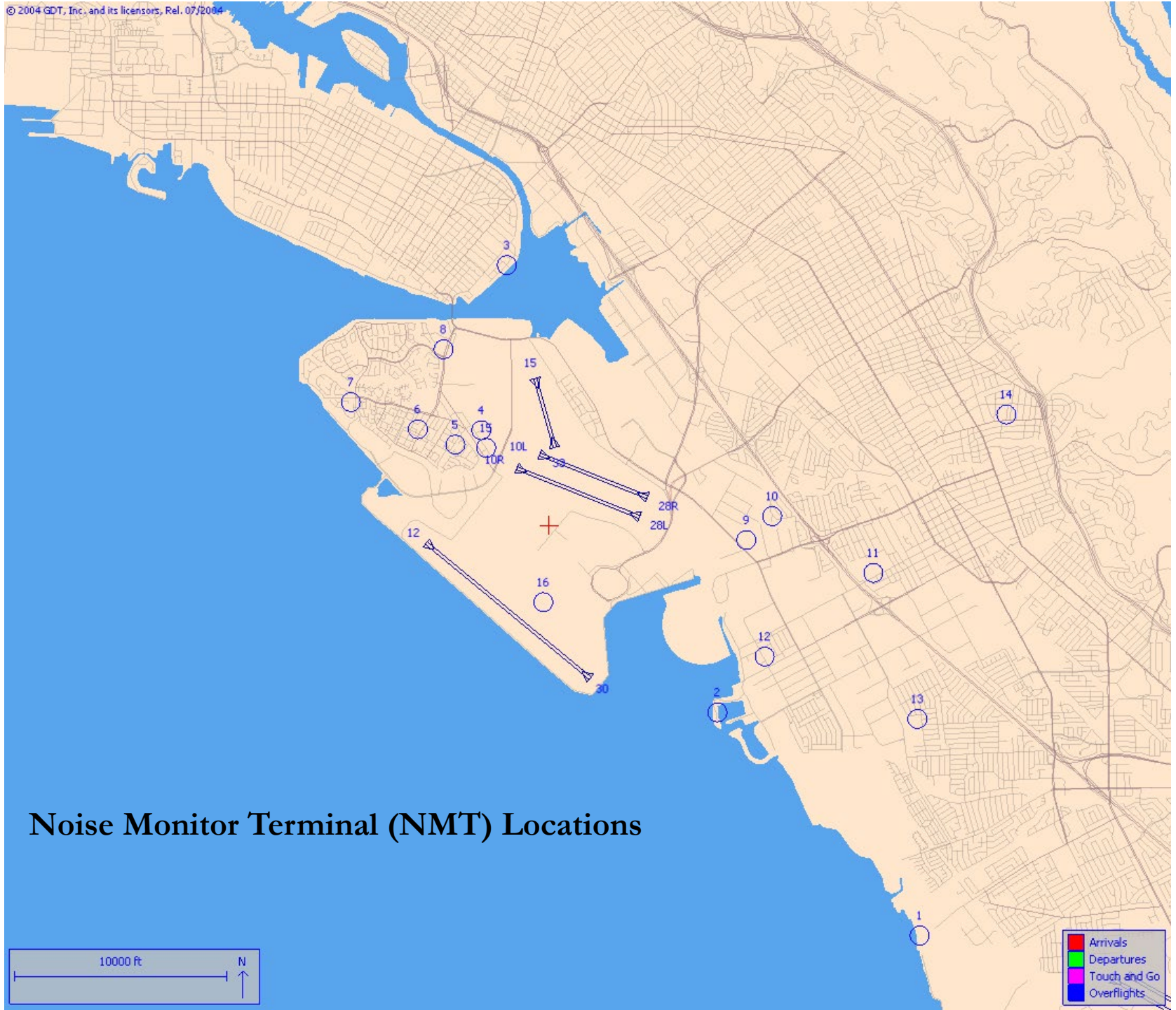


Number of Complaints

December 2022

Noise Complaints Summary by Number of Complaints





Noise Monitor Terminal (NMT) Locations