

# NOISE FORUM SUMMARY

North/South Field Working Groups



**NOISE ABATEMENT REPORT**

**FOURTH QUARTER 2021**

Compliance Monitoring Quarterly Summary Comparison Fourth Quarter 2021				
	2020Q4		2021Q4	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	94%	6%	95%	5%
Total Airport-wide Corporate Jet Departures	2,083	132	2,948	168
Runway 10R/L Jet Landing Compliance	84%	16%	89%	11%
Total Southeast Plan Corporate Jet Landings	46	9	281	33
North Field VFR Departure Compliance	92%	8%	85%	15%
Total Runways 28R/L & 33 Departures	278	24	169	31
North Field Quiet Hours Compliance	76%	24%	79%	21%
Total North Field Quiet Hours Departures	102	32	141	37
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	11,926	1	14,379	9
Night Time Departure Compliance	99%	1%	99%	1%
Total Runway 30 Night Turbojet Departures	2,154	17	2,381	24
Runway 12 Night Departure Compliance	98%	2%	99%	1%
Total Runway 12 Night Turbojet Departures	55	1	313	4
Runway 30 East Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 East Turn Departures	4,009	4	3,948	5
100 Degree Radial Turbojet Landing Compliance	99%	1%	99%	1%
Total 100 Degree Radial Turbojet Landings	805	10	739	4
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	6	0	6	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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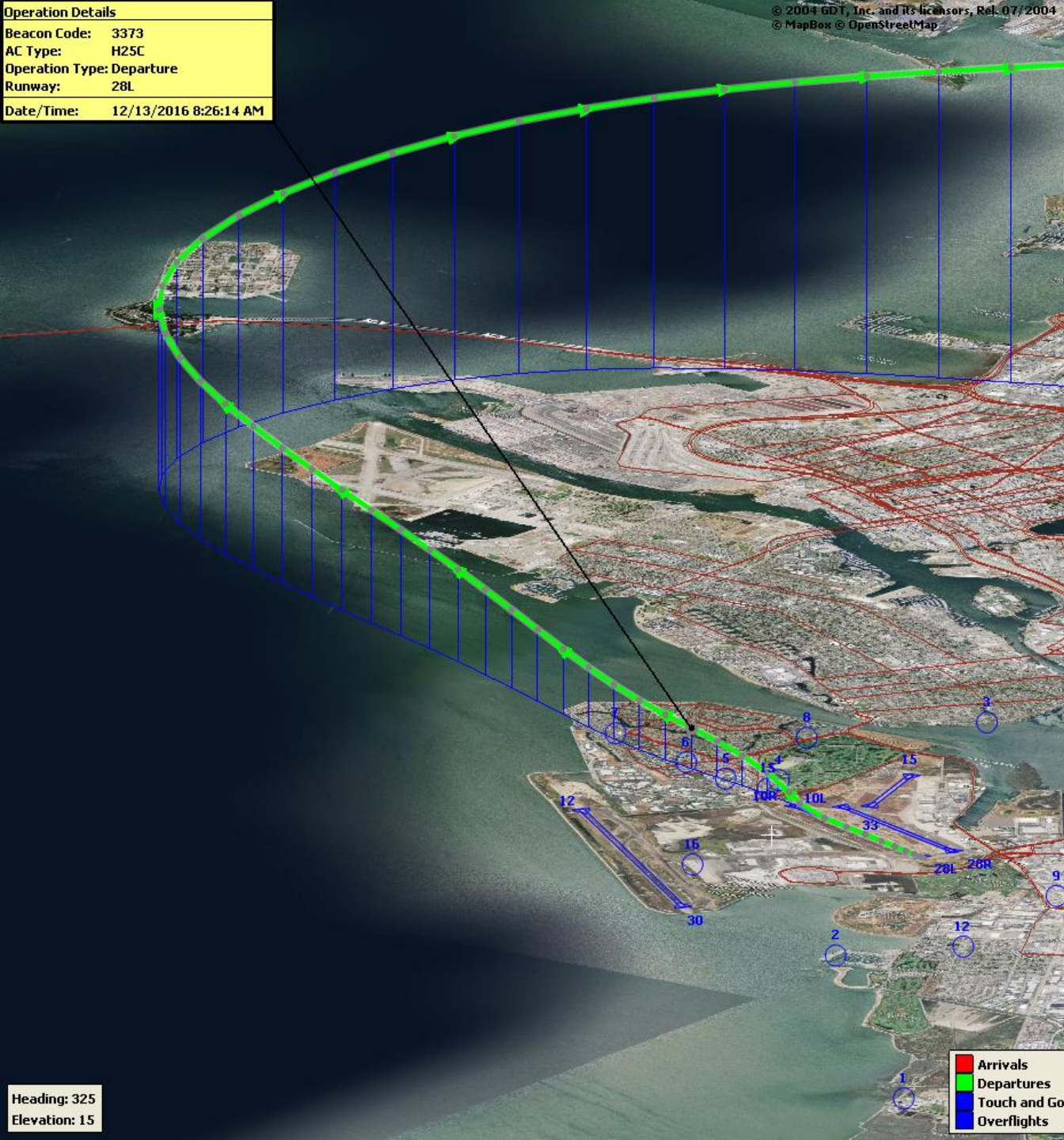
## Runway 28R/L Jet Departure NAP

**2021Q4**  
**95% Compliance**  
**(3,116 total departures)**  
**(168 non-compliant)**

**2020Q4**  
**94% Compliance**  
**(2,215 total departures)**  
**(132 non-compliant)**

Heading: 325  
Elevation: 15

Arrivals  
Departures  
Touch and Go  
Overflights

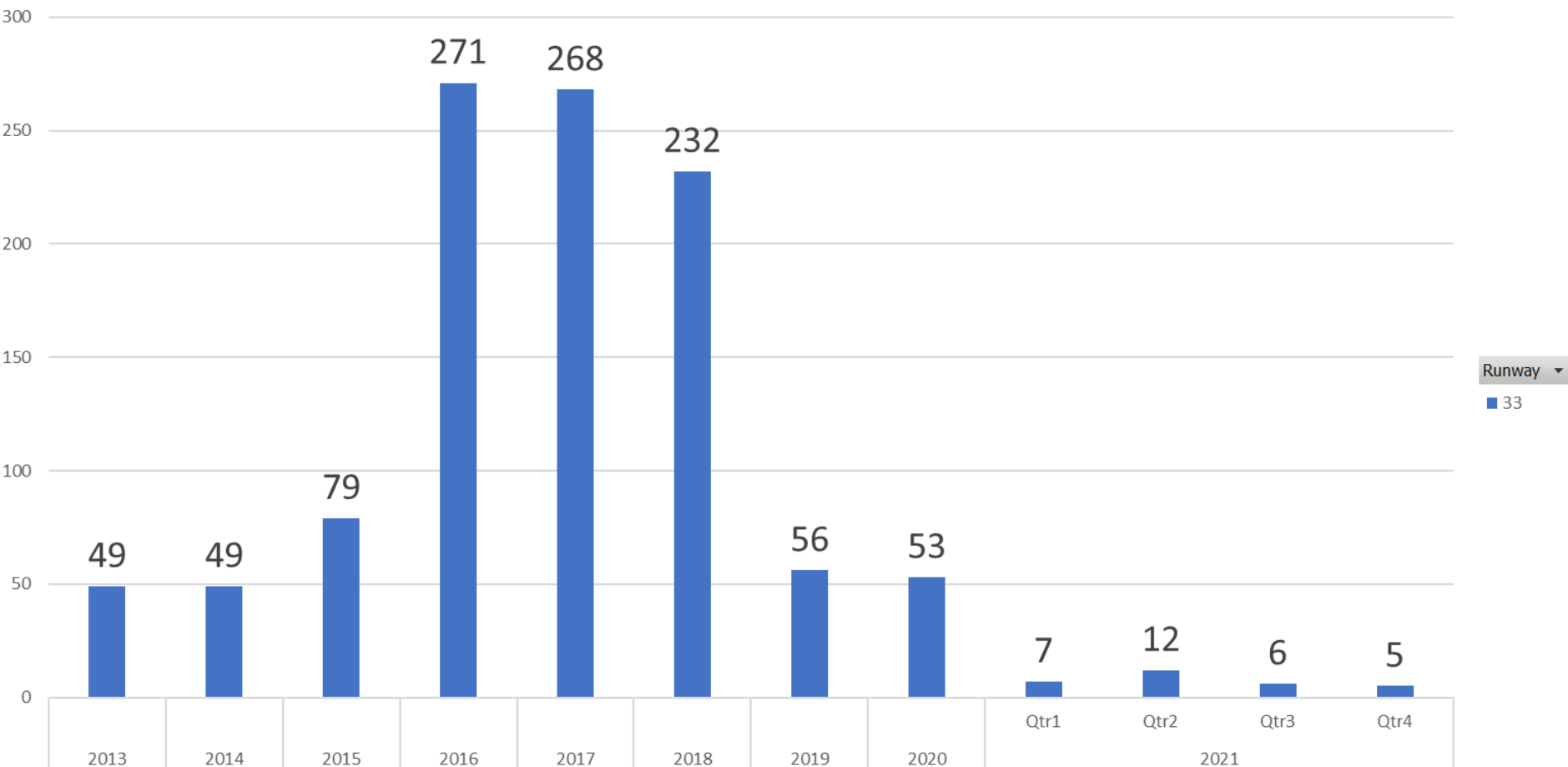


# RUNWAY 33 JET DEPARTURES

## Fourth Quarter 2021

Count of Aircraft Type

### Runway 33 Jet Departure Trend Analysis



Years ▾ Quarters ▾ Date Time ▾

+ -

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

**2021Q4**

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

**2020Q4**

**84% Compliance**  
**(55 total landings)**  
**(9 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



## VFR Aircraft Departure NAP

**2021Q4**  
**85% Compliance**  
**(200 total departures)**  
**(31 non-compliant)**

**2020Q4**  
**92% Compliance**  
**(302 total departures)**  
**(24 non-compliant)**

Heading: 338  
Elevation: 29

- Arrivals
- Departures
- Touch and Go
- Overflights

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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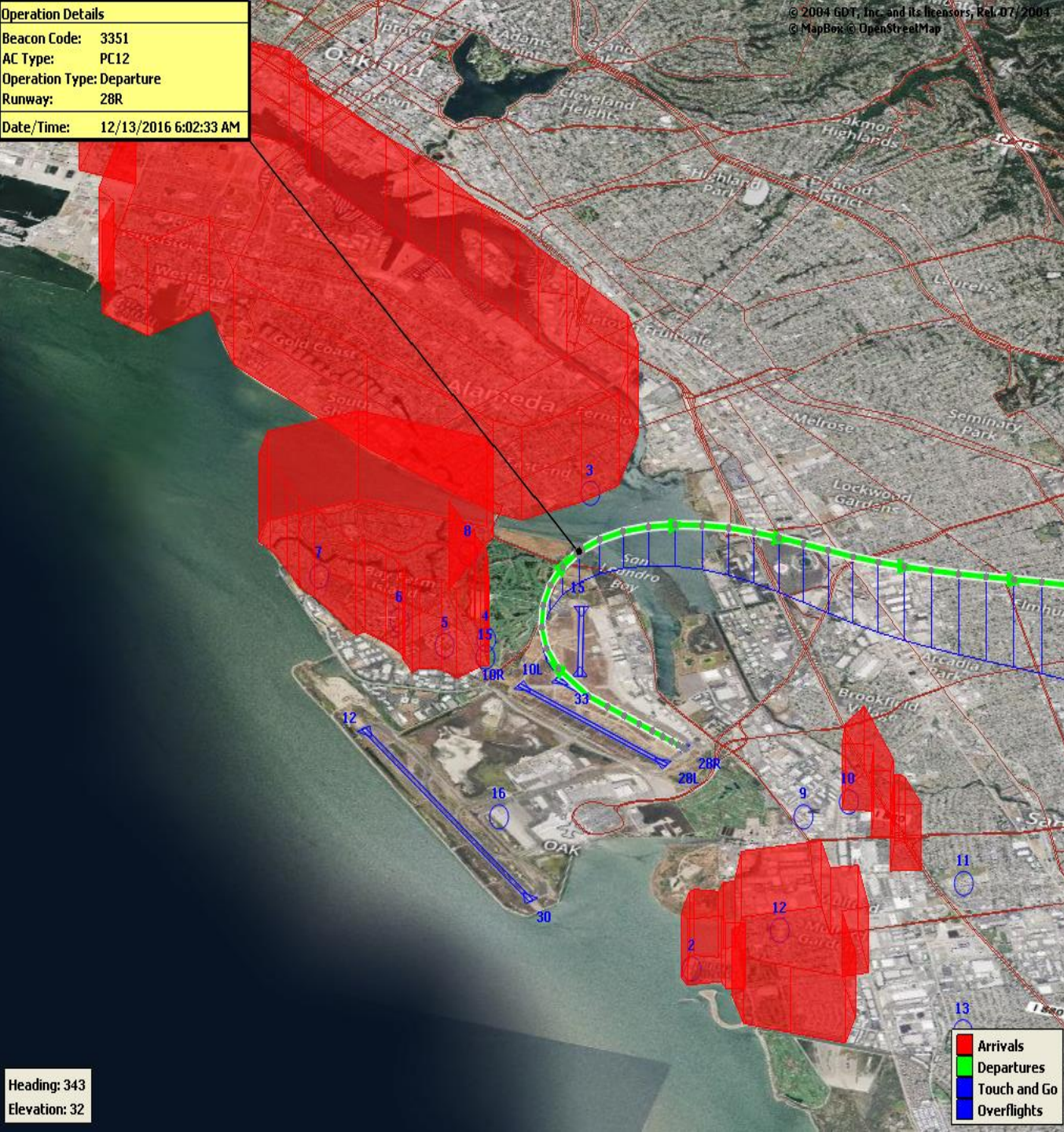
## North Field Quiet Hours NAP

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

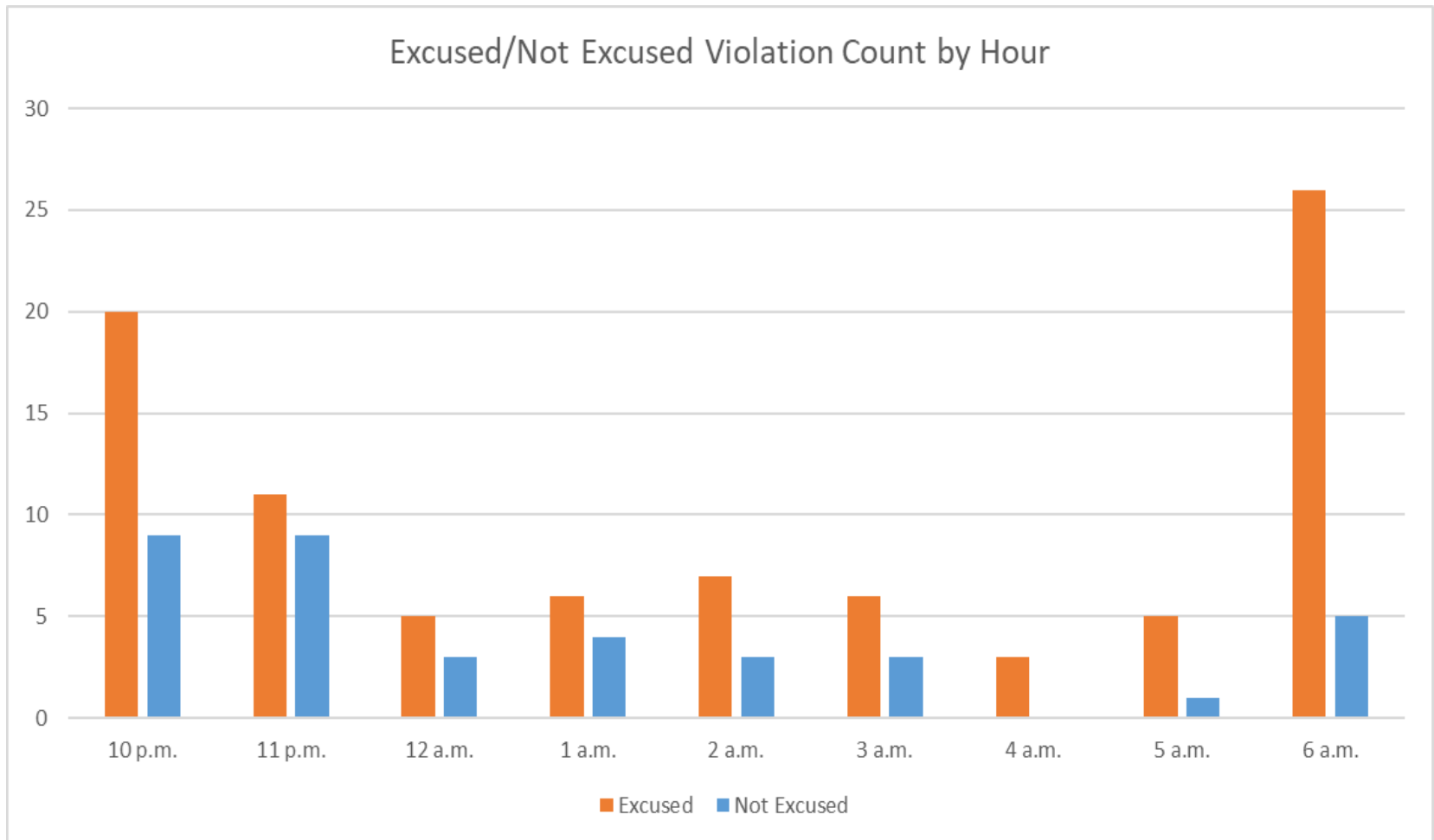
**2020Q4**  
**76% Compliance**  
**(134 total departures)**  
**(32 non-compliant)**

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



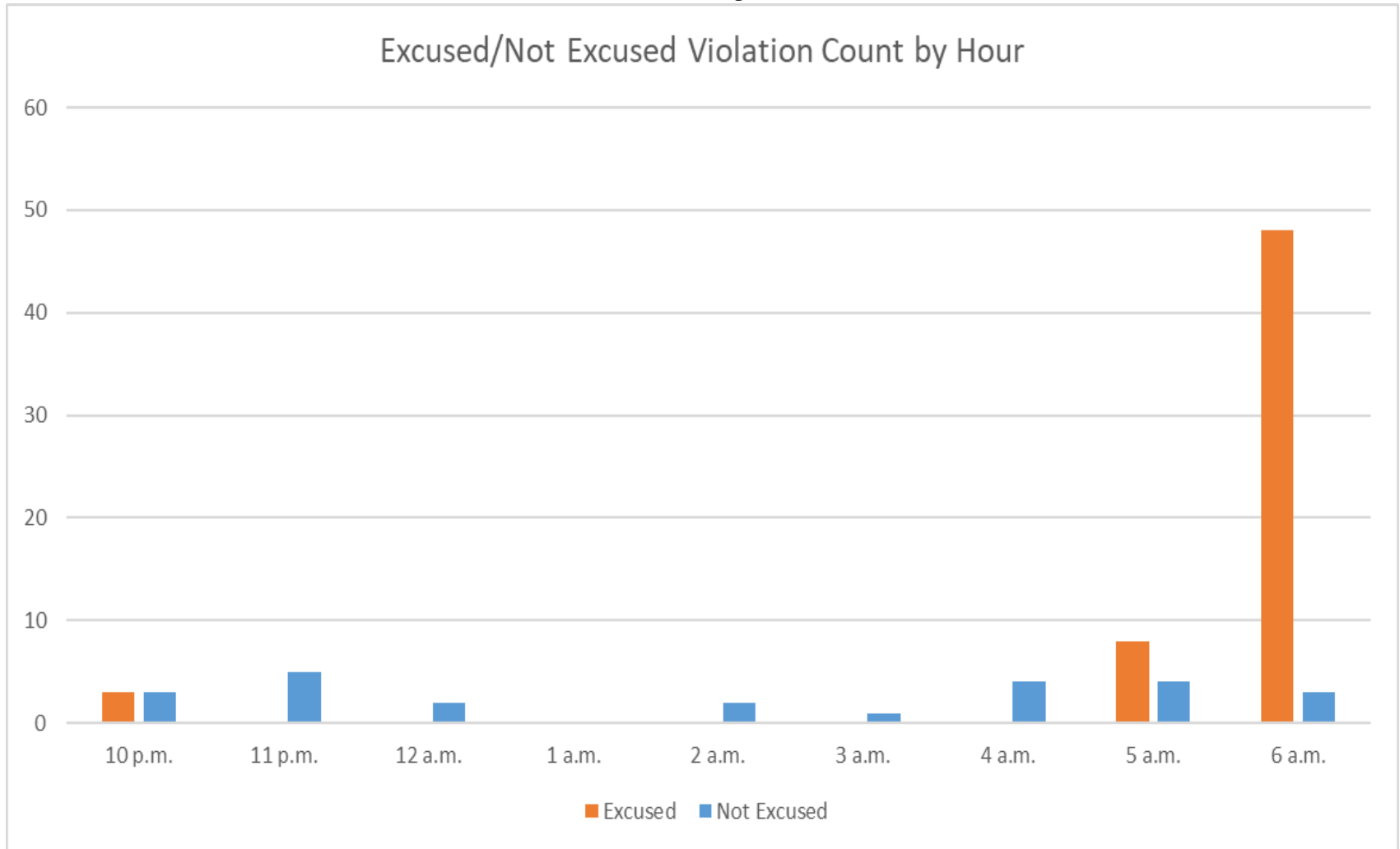
## Night Time Departure NAP

**2021Q4**  
**99% Compliance**  
**(2,405 total departures)**  
**(24 non-compliant)**

\*REBAS Gate non-compliant = 24

**2020Q4**  
**99% Compliance**  
**(2,171 total departures)**  
**(17 non-compliant)**

# 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

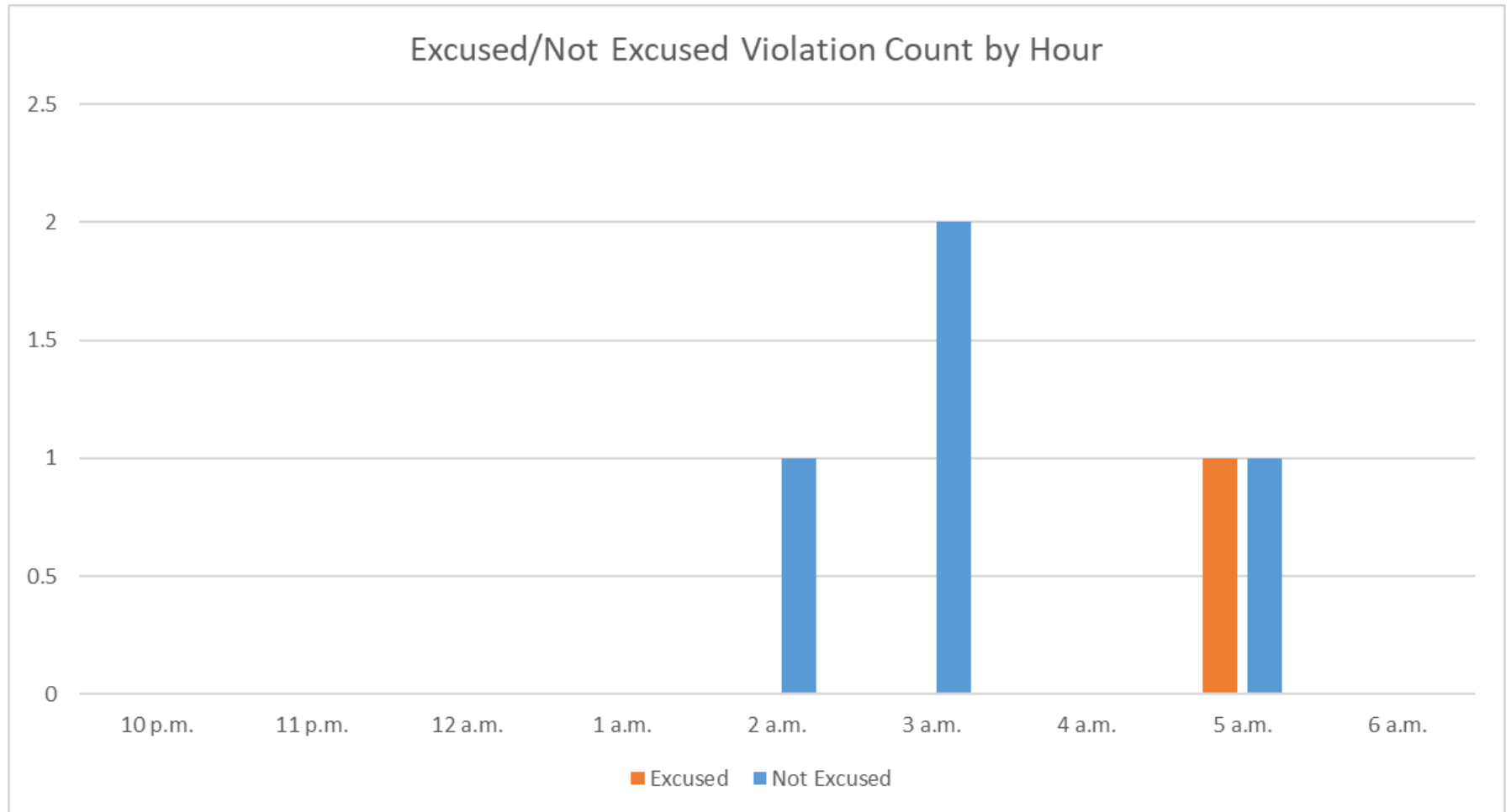
2021Q4

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

2020Q4

98% Compliance  
(56 total departures)  
(1 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

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## Runway 30 Bay Farm Right Turn NAP

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

**2020Q4**  
**100% Compliance**  
**(11,927 total departures)**  
**(1 non-compliant)**

Heading: 299  
Elevation: 36



## Runway 30 East Turn NAP

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

\*Excused Departures = 30

**2020Q4**  
**100% Compliance**  
**(4,013 total departures)**  
**(4 non-compliant)**

### Operation Details

Beacon Code: 3777

AC Type: B737

Operation Type: Departure

Runway: 30

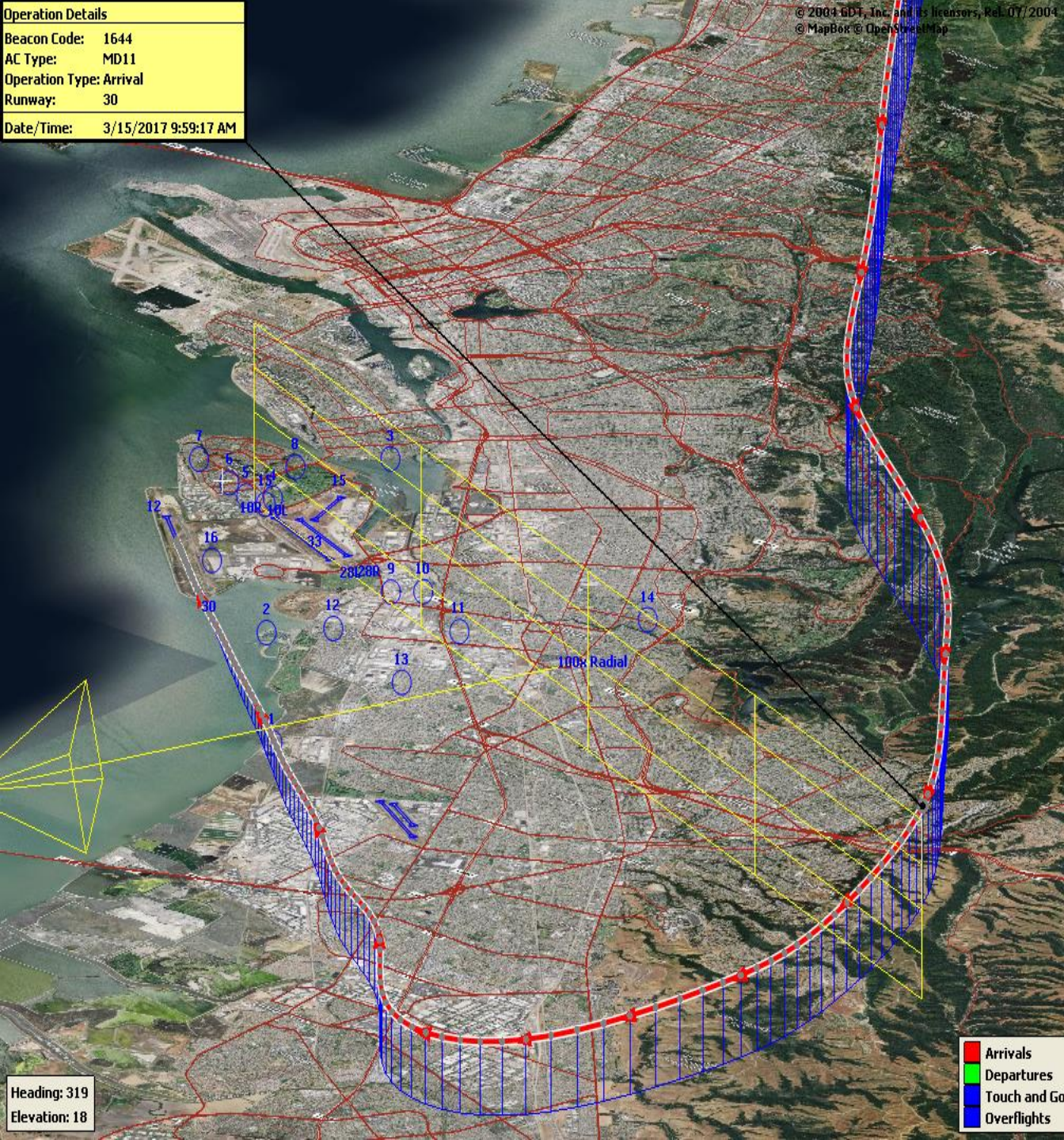
Date/Time: 3/15/2017 9:53:47 AM

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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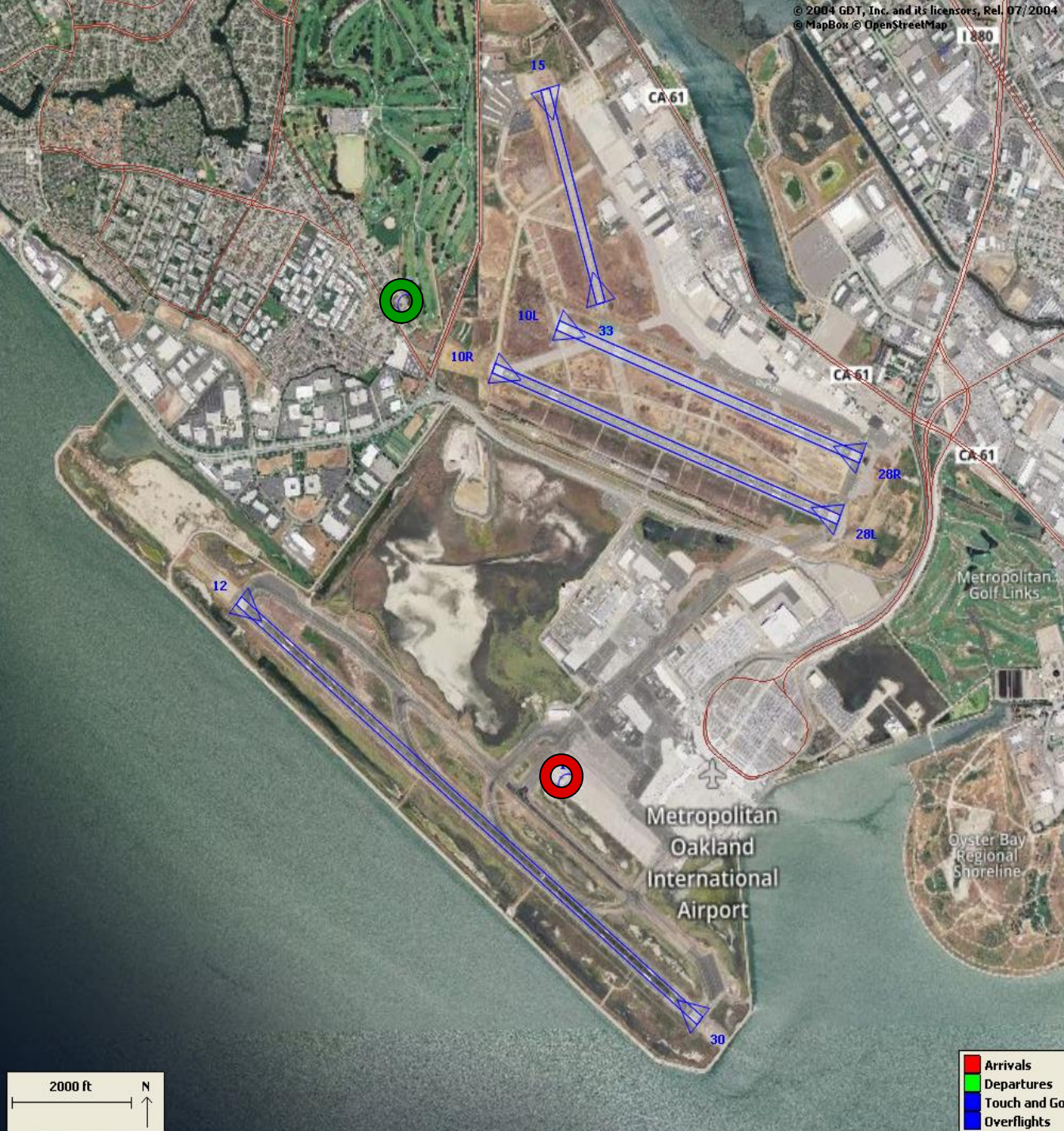
**100 Degree Radial  
At 3,000 ft. NAP**

**2021Q4  
99% Compliance  
(743 total landings)  
(4 non-compliant)**

**2020Q4  
99% Compliance  
(815 total landings)  
(10 non-compliant)**

- Arrivals
- Departures
- Touch and Go
- Overflights

Heading: 319  
Elevation: 18



## Engine Run-up NAP

2021Q4

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

2020Q4

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

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

Compliance Monitoring Quarterly Summary Comparison Fourth Quarter 2021 - Quarter-to-Quarter				
	2021Q3		2021Q4	
	Compl.	N/C	Compl.	N/C
Runway 28R/L Jet Departure Compliance	96%	4%	95%	5%
Total Airport-wide Corporate Jet Departures	2,596	119	2,948	168
Runway 10R/L Jet Landing Compliance	N/A	N/A	89%	11%
Total Southeast Plan Corporate Jet Landings	0	0	281	33
North Field VFR Departure Compliance	87%	13%	85%	15%
Total Runways 28R/L & 33 Departures	180	27	169	31
North Field Quiet Hours Compliance	90%	10%	79%	21%
Total North Field Quiet Hours Departures	222	24	141	37
Runway 30 BFI Right Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 Turbojet Departures	15,360	4	14,379	9
Night Time Departure Compliance	100%	0%	99%	1%
Total Runway 30 Night Turbojet Departures	2,846	14	2,381	24
Runway 12 Night Departure Compliance	93%	7%	99%	1%
Total Runway 12 Night Turbojet Departures	26	2	313	4
Runway 30 East Turn Departure Compliance	100%	0%	100%	0%
Total Runway 30 East Turn Departures	4,646	15	3,948	5
100 Degree Radial Turbojet Landing Compliance	98%	2%	99%	1%
Total 100 Degree Radial Turbojet Landings	698	11	739	4
Engine Runup Program Compliance	100%	0%	100%	0%
Total Evening and Nighttime Engine Runups	6	0	6	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 = 178**

**Fourth Quarter 2021 (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	1	0	0.0	0.0%	1	0.0	0.2%	0	0.0	0.0%	2
2	9	1	0.0	0.2%	2	0.0	0.4%	0	0.0	0.0%	12
3	19	2	0.0	0.4%	0	0.0	0.0%	0	0.0	0.0%	21
4	43	48	0.5	8.5%	29	0.3	5.1%	28	0.3	4.9%	148
5	44	16	0.2	2.8%	35	0.4	6.2%	37	0.4	6.5%	132
6	11	20	0.2	3.5%	33	0.4	5.8%	26	0.3	4.6%	90
7	18	33	0.4	5.8%	24	0.3	4.2%	7	0.1	1.2%	82
8	27	24	0.3	4.2%	2	0.0	0.4%	1	0.0	0.2%	54
9	4	16	0.2	2.8%	15	0.2	2.6%	5	0.1	0.9%	40
10	47	12	0.1	2.1%	5	0.1	0.9%	1	0.0	0.2%	65
11	5	3	0.0	0.5%	1	0.0	0.2%	1	0.0	0.2%	10
12	20	6	0.1	1.1%	1	0.0	0.2%	2	0.0	0.4%	29
13	13	1	0.0	0.2%	0	0.0	0.0%	0	0.0	0.0%	14
14	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
<b>All NMTs</b>	261	182	2	0	148	2	0	108	1	0	699

**Table 2. Aircraft SEL Noise Measurements in Alameda - Total Aircraft Departures = 138**

**Fourth Quarter 2021 (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	19	2	0.0	0.8%	0	0.0	0.0%	0	0.0	0.0%	21
4	43	48	0.5	20.1%	29	0.3	12.1%	28	0.3	11.7%	148
5	44	16	0.2	6.7%	35	0.4	14.6%	37	0.4	15.5%	132
6	11	20	0.2	8.4%	33	0.4	13.8%	26	0.3	10.9%	90
7	18	33	0.4	13.8%	24	0.3	10.0%	7	0.1	2.9%	82
8	27	24	0.3	10.0%	2	0.0	0.8%	1	0.0	0.4%	54
<b>Total</b>	<b>162</b>	<b>143</b>	<b>1.6</b>		<b>123</b>	<b>1.4</b>		<b>99</b>	<b>1.1</b>		<b>527</b>

**Table 3. Aircraft SEL Noise Measurements in San Leandro - Total Aircraft Departures = 40**

**Fourth Quarter 2021 (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	9	1	0.0	0.3%	2	0.0	0.6%	0	0.0	0.0%	12
9	4	16	0.2	4.9%	15	0.2	4.6%	5	0.1	1.5%	40
10	47	12	0.1	3.7%	5	0.1	1.5%	1	0.0	0.3%	65
11	5	3	0.0	0.9%	1	0.0	0.3%	1	0.0	0.3%	10
12	20	6	0.1	1.8%	1	0.0	0.3%	2	0.0	0.6%	29
13	13	1	0.0	0.3%	0	0.0	0.0%	0	0.0	0.0%	14
14	0	0	0.0	0.0%	0	0.0	0.0%	0	0.0	0.0%	0
<b>Total</b>	<b>98</b>	<b>39</b>	<b>0.4</b>		<b>24</b>	<b>0.3</b>		<b>9</b>	<b>0.1</b>		<b>170</b>

**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	14
DC10/MD10	44	15	9	67	76	17
MD11	212	71	69	67	76	17
A306	18	6	3	67	75	13
B757	144	48	22	67	75	13
B77L	113	38	10	65	74	15
Difference [A-B]						
DC10/MD10		-72	-23	-2	-2	-5
MD11		39	56	-3	-3	-7
A306		-61	-18	0	-2	-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)

**Rolling Take-off Night Departure Procedure (1:00 to 5:00 AM)**  
**Fourth Quarter 2020, 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 2020 [B]						
	Total [X]	Est. Avg. Monthly [X/3]				
B763	173	58	83	65	75	18
DC10/MD10	52	17	40	68	77	23
MD11	202	67	184	67	77	21
A306	76	25	42	65	74	17
B757	168	56	88	65	74	15
B77L	127	42	35	65	74	17
Difference [A-B]						
DC10/MD10		-70	8	-1	-1	1
MD11		35	171	-3	-2	-3
A306		-42	21	-2	-3	-8

(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.

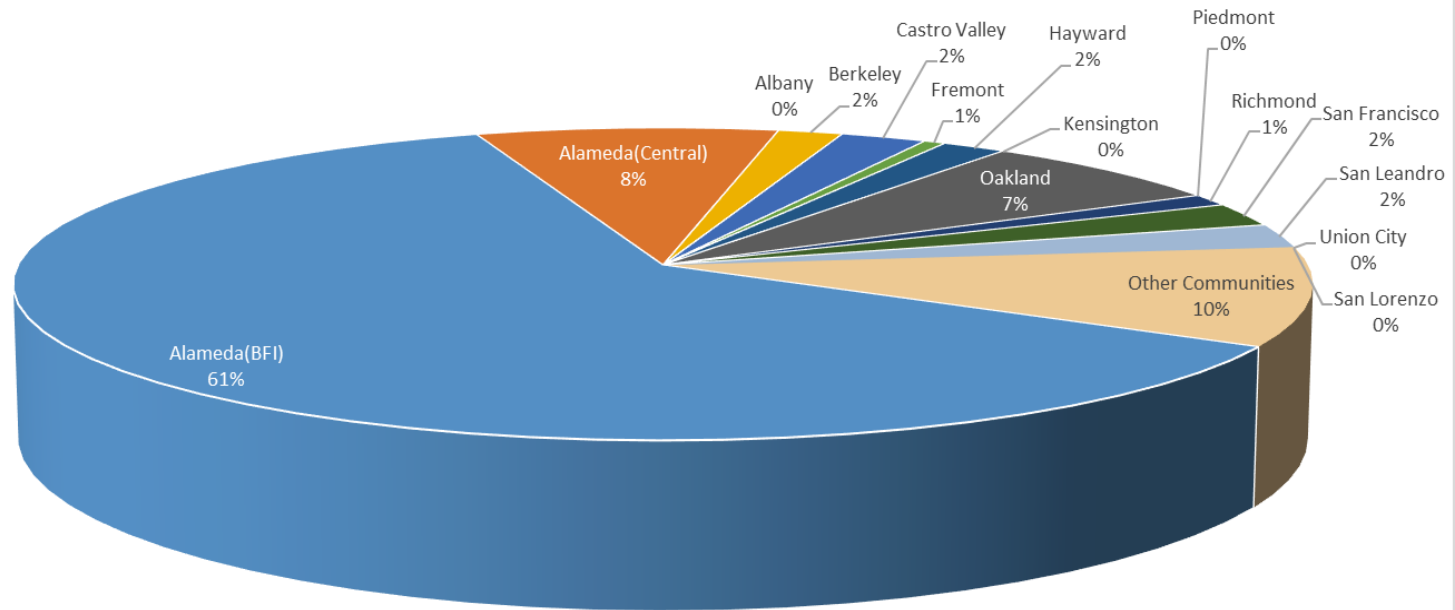
Source: ANOMS (Airport Noise and Operations Monitoring System)

Oakland International Airport Noise Complaint Summary October 2021		
Community	Callers	Complaints
Alameda(BFI)	102	4158
Alameda(Central)	14	118
Albany	0	0
Berkeley	3	24
Castro Valley	4	78
Fremont	1	229
Hayward	3	5
Kensington	0	0
Oakland	12	2717
Piedmont	0	0
Richmond	2	51
San Francisco	4	4
San Leandro	4	28
Union City	0	0
San Lorenzo	0	0
Other Communities	17	593
<b>Total</b>	<b>166</b>	<b>8005</b>
Complaints by Type		
Website	0	
E-mail	3314	
Phone	0	
View point App	4691	
Complaints by Time of Day		
Day ( 0700 - 1900 )	3416	
Evening ( 1900 - 2200 )	1414	
Night ( 2200 - 0700 )	3175	
Complaints by Type of Operation		
Arrivals	3641	
Departures	4103	
Over-flights	51	
Touch & Go	210	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	786	
Helicopter	45	
Jet	6266	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	13	
Propeller	475	
Turbo-prop	420	

# Number of Callers

## October 2021

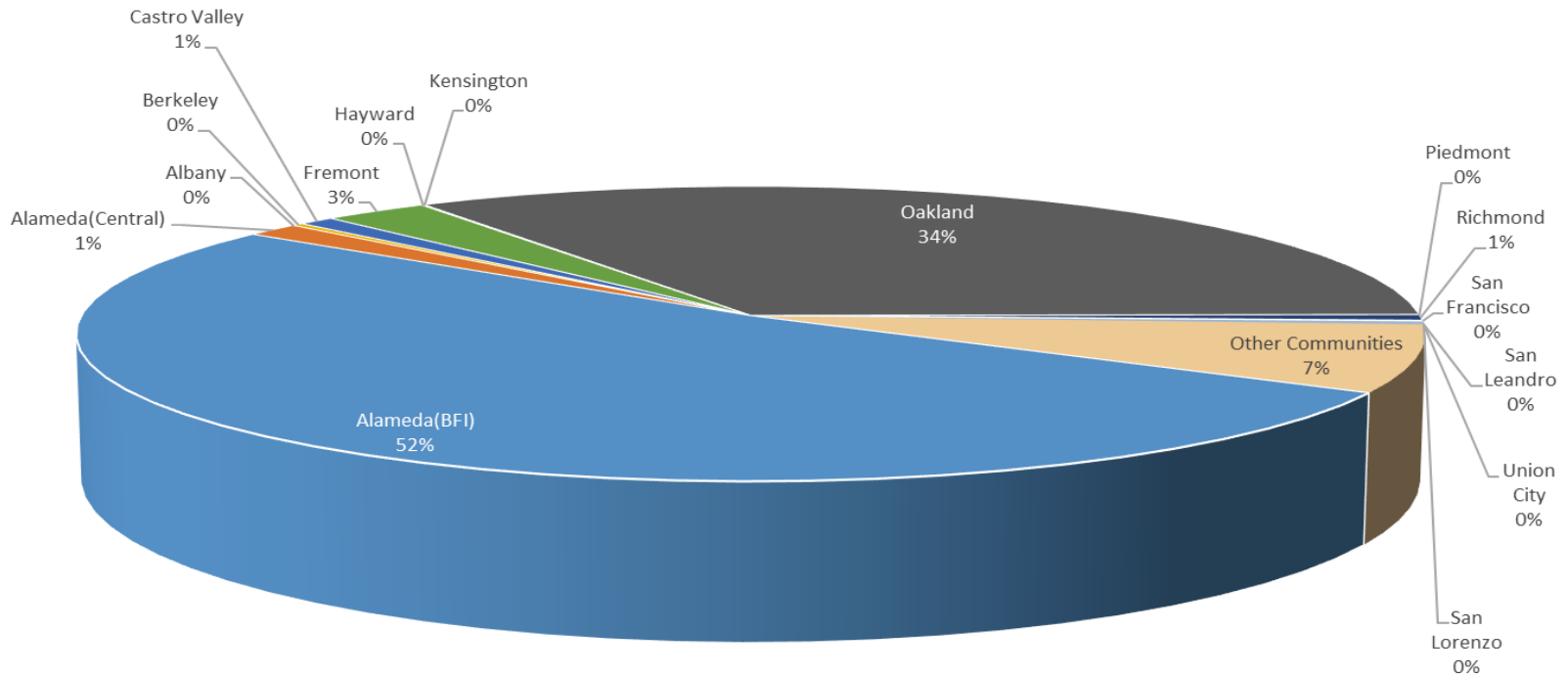
### Noise Complaints Summary by Number of Callers



# Number of Complaints

## October 2021

### Noise Complaints Summary by Number of Complaints

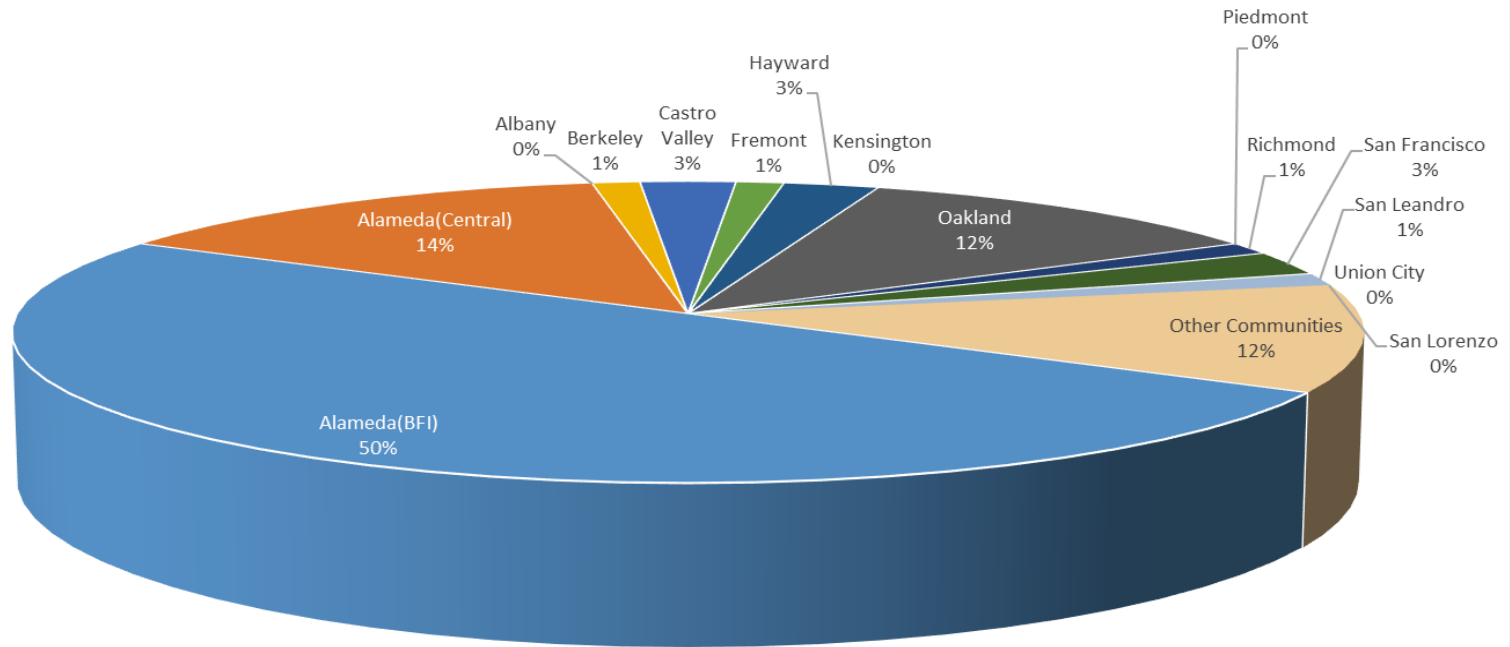


Oakland International Airport Noise Complaint Summary November 2021		
Community	Callers	Complaints
Alameda(BFI)	39	2934
Alameda(Central)	11	33
Albany	0	0
Berkeley	1	1
Castro Valley	2	59
Fremont	1	119
Hayward	2	2
Kensington	0	0
Oakland	9	2510
Piedmont	0	0
Richmond	1	83
San Francisco	2	3
San Leandro	1	1
Union City	0	0
San Lorenzo	0	0
Other Communities	9	323
<b>Total</b>	<b>78</b>	<b>6068</b>
Complaints by Type		
Website	0	
E-mail	2868	
Phone	0	
View point App	3200	
Complaints by Time of Day		
Day ( 0700 - 1900 )	2459	
Evening ( 1900 - 2200 )	927	
Night ( 2200 - 0700 )	2682	
Complaints by Type of Operation		
Arrivals	2738	
Departures	3169	
Over-flights	42	
Touch & Go	119	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	429	
Helicopter	25	
Jet	5252	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	11	
Propeller	270	
Turbo-prop	81	

# Number of Callers

## November 2021

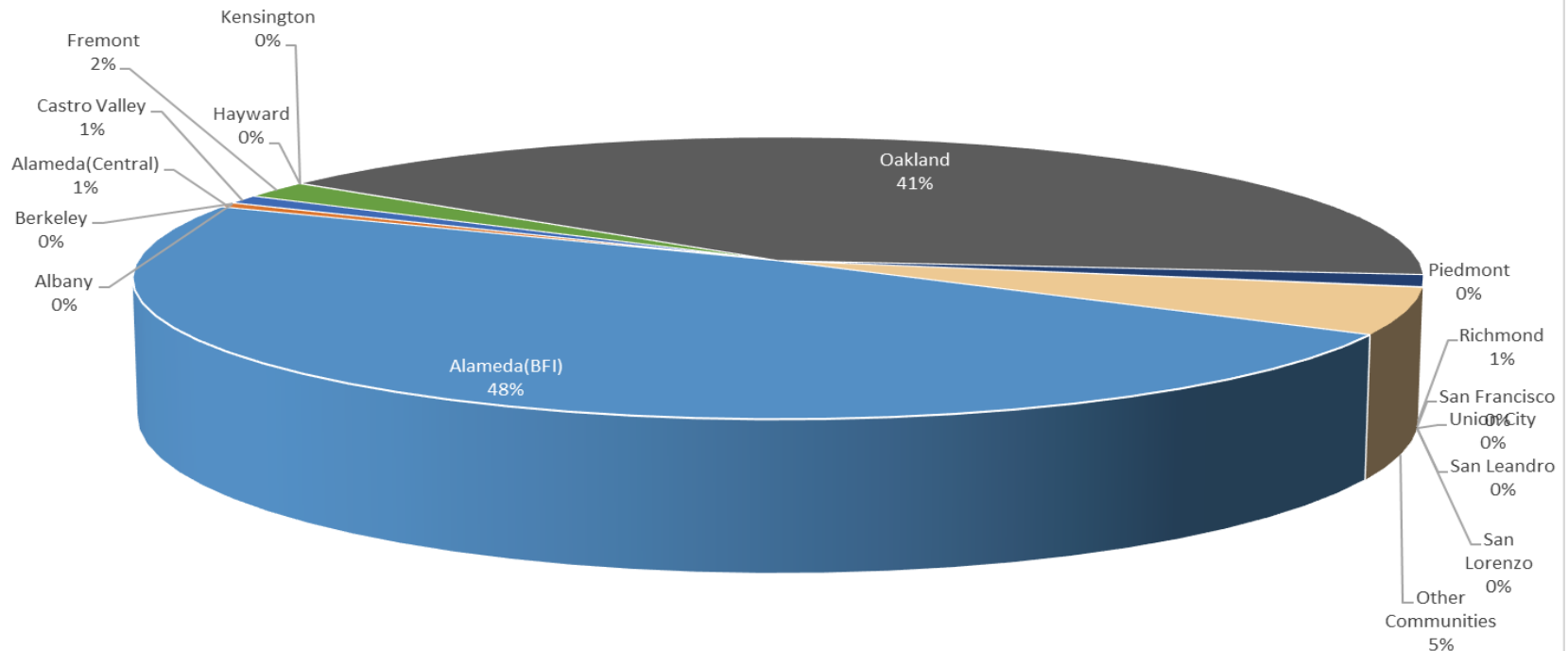
### Noise Complaints Summary by Number of Callers



# Number of Complaints

## November 2021

Noise Complaints Summary by Number of Complaints

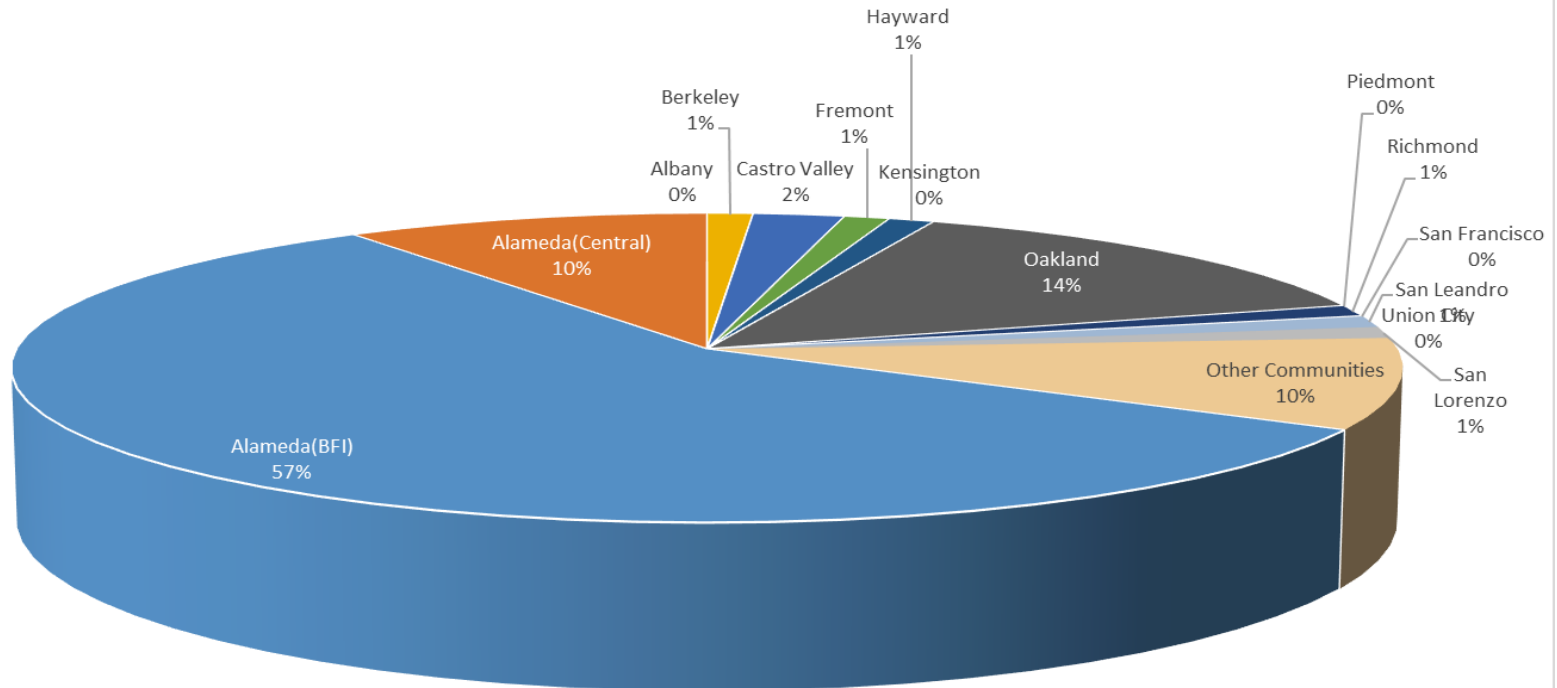


Oakland International Airport Noise Complaint Summary December 2021		
Community	Callers	Complaints
Alameda(BFI)	48	2862
Alameda(Central)	8	51
Albany	0	0
Berkeley	1	1
Castro Valley	2	21
Fremont	1	142
Hayward	1	1
Kensington	0	0
Oakland	12	2638
Piedmont	0	0
Richmond	1	174
San Francisco	0	0
San Leandro	1	32
Union City	0	0
San Lorenzo	1	2
Other Communities	8	409
<b>Total</b>	<b>84</b>	<b>6333</b>
Complaints by Type		
Website	0	
E-mail	3116	
Phone	2	
View point App	3215	
Complaints by Time of Day		
Day ( 0700 - 1900 )	2721	
Evening ( 1900 - 2200 )	1400	
Night ( 2200 - 0700 )	2212	
Complaints by Type of Operation		
Arrivals	2554	
Departures	3559	
Over-flights	116	
Touch & Go	104	
Not Linked to an Operation	0	
Complaints by Type of Aircraft		
Business Jet	382	
Helicopter	117	
Jet	5168	
Military	0	
Not Reported (not linked to an aircraft)	0	
Other (Type information not available)	4	
Propeller	203	
Turbo-prop	459	

# Number of Callers

## December 2021

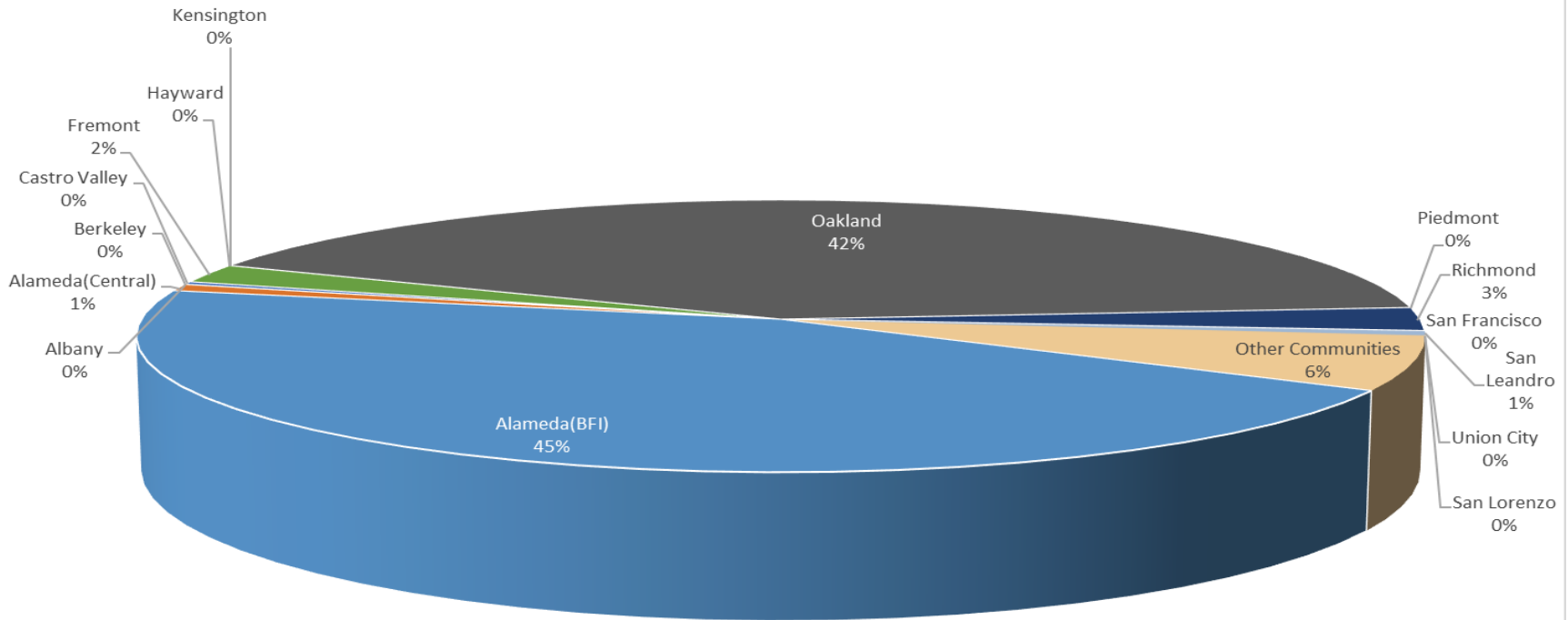
Noise Complaints Summary by Number of Callers

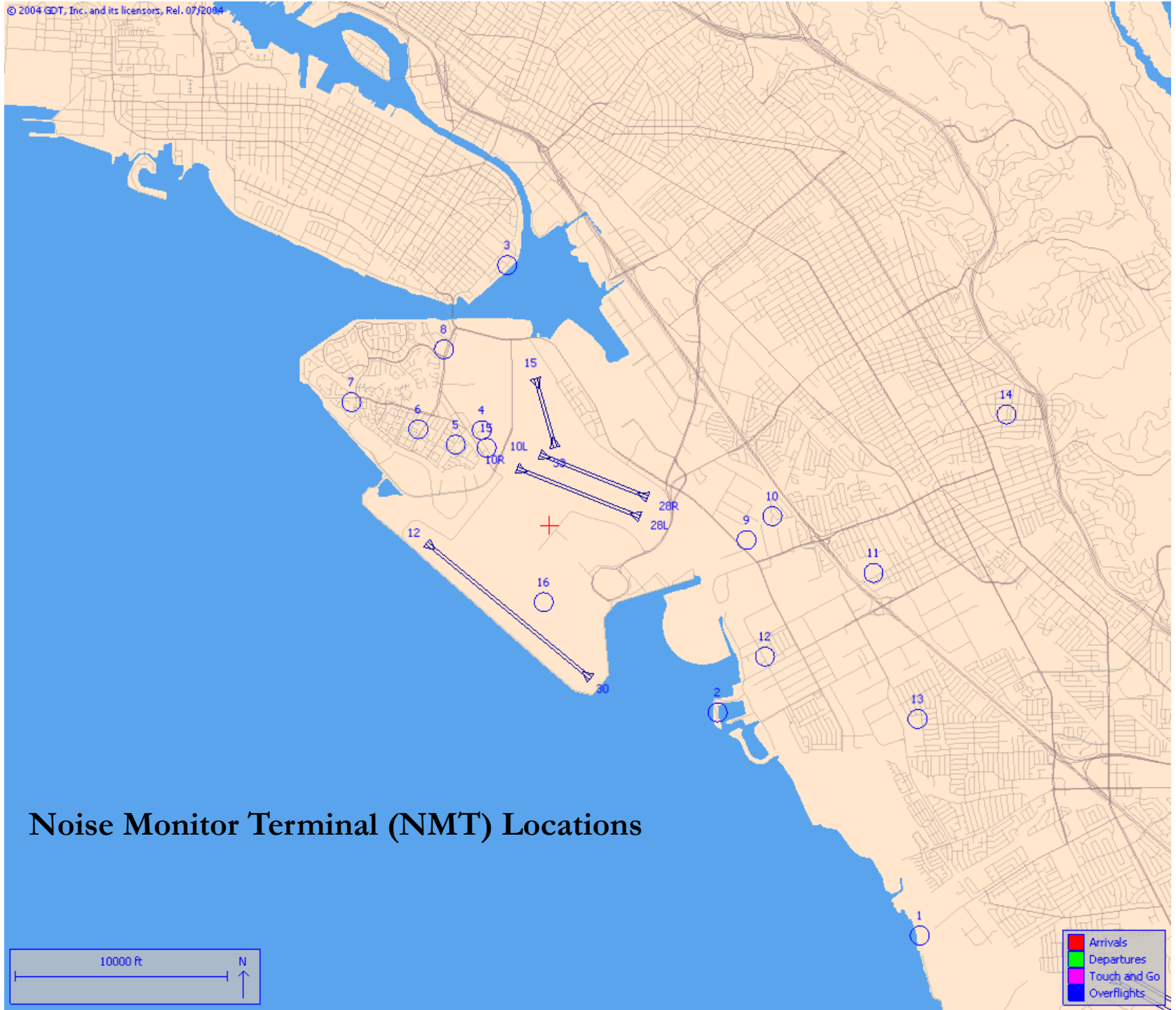


# Number of Complaints

## December 2021

**Noise Complaints Summary by Number of Complaints**





## Noise Monitor Terminal (NMT) Locations