NOISE FORUM SUMMARY

North/South Field Working Groups

NOISE ABATEMENT REPORT FIRST QUARTER 2014

| Compliance Monitoring C First C | Quarterly Sumn Quarter 2014 | nary Comparis | on | | |
|---|--------------------------------|---------------|--------|-----|--|
| | 201: | 3Q1 | 2014Q1 | | |
| | Compl. | N/C | Compl. | N/C | |
| Runway 28R/L Jet Departure Compliance | 97% | 3% | 95% | 5% | |
| Total Airport-wide Corporate Jet Departures | 2,190 | 67 | 2,526 | 132 | |
| Runway 10R/L Jet Landing Compliance | 79% | 21% | 79% | 21% | |
| Total Southeast Plan Corporate Jet Landings | 54 | 14 | 225 | 60 | |
| North Field VFR Departure Compliance | 97% | 3% | 97% | 3% | |
| Total Runways 28R/L & 33 Departures | 967 | 27 | 831 | 25 | |
| North Field Quiet Hours Compliance | 85% | 15% | 84% | 16% | |
| Total North Field Quiet Hours Departures | 132 | 23 | 163 | 32 | |
| Runway 30 BFI Right Turn Departure Compliance | 100% | 0% | 100% | 0% | |
| Total Runway 30 Turbojet Departures | 14,632 | 3 | 13,087 | 3 | |
| Silent8 Night Departure Compliance | 99% | 1% | 99% | 1% | |
| Total Runway 30 Night Turbojet Departures | 2,768 | 20 | 2,283 | 34 | |
| Runway 12 Night Departure Compliance | 78% | 22% | 71% | 29% | |
| Total Runway 12 Night Turbojet Departures | 14 | 4 | 124 | 50 | |
| Runway 30 East Turn Departure Compliance | 98% | 2% | 97% | 3% | |
| Total Runway 30 East Turn Departures | 3,421 | 85 | 2,941 | 85 | |
| 100 Degree Radial Turbojet Landing Compliance | 91% | 9% | 86% | 14% | |
| Total 100 Degree Radial Turbojet Landings | 1,925 | 188 | 1,027 | 166 | |
| Engine Runup Program Compliance | 100% | 0% | 100% | 0% | |
| Total Evening and Nighttime Engine Runups | 30 | 0 | 7 | 0 | |

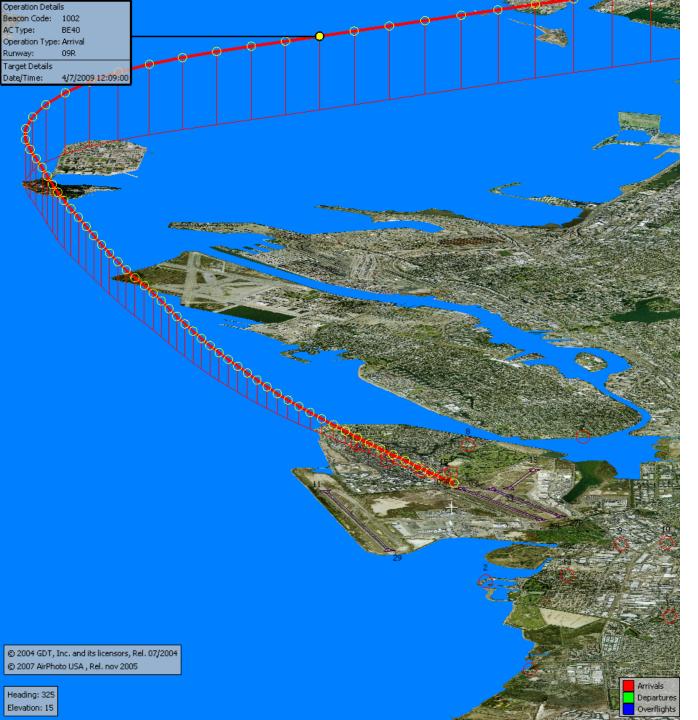
Link to full report: <u>http://flyquietoak.com/pages/reports/quarterly_noise_compliance.html</u>



Runway 28R/L Jet Departure NAP

2014Q1 95% Compliance (2,658 departures)

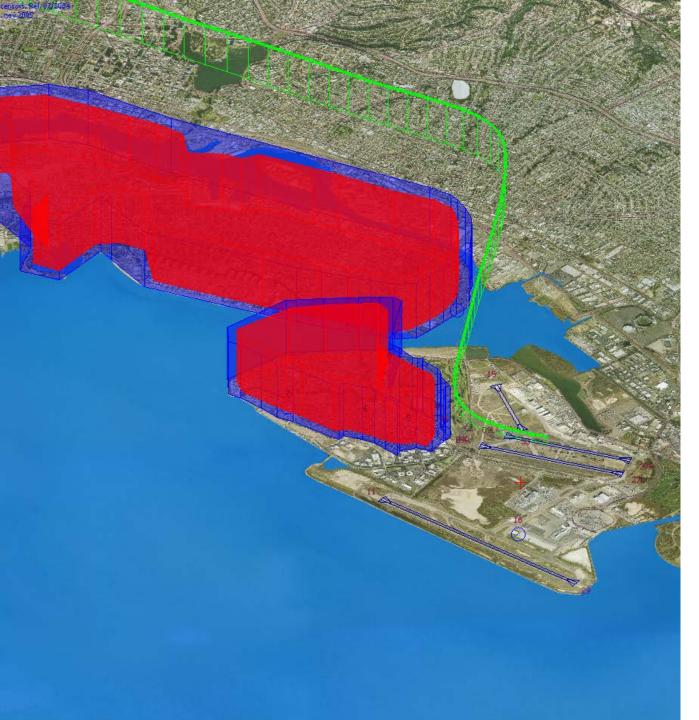
2013Q1 97% Compliance (2,257 departures)



Runway 10R/L Jet Landing NAP

2014Q1 79% Compliance (285 landings)

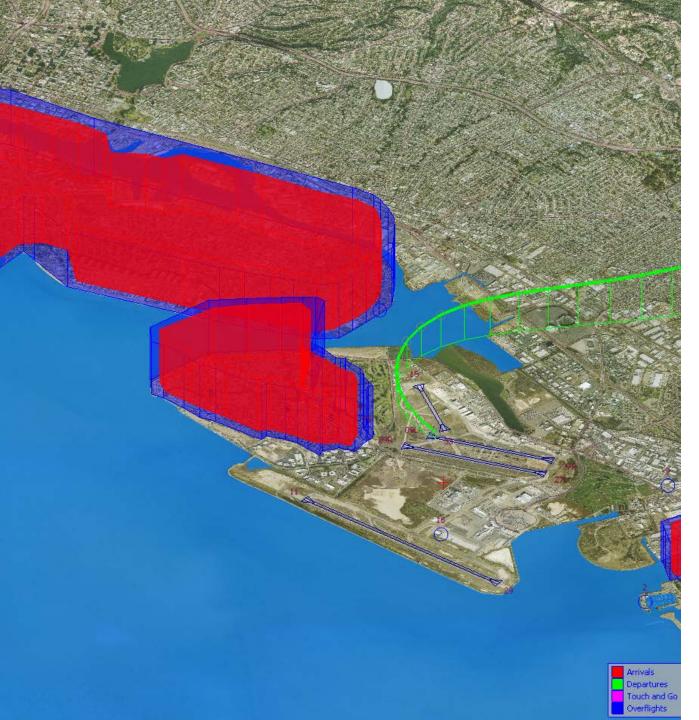
2013Q1 79% Compliance (68 landings)



VFR Aircraft Departure NAP

2014Q1 97% Compliance (856 departures)

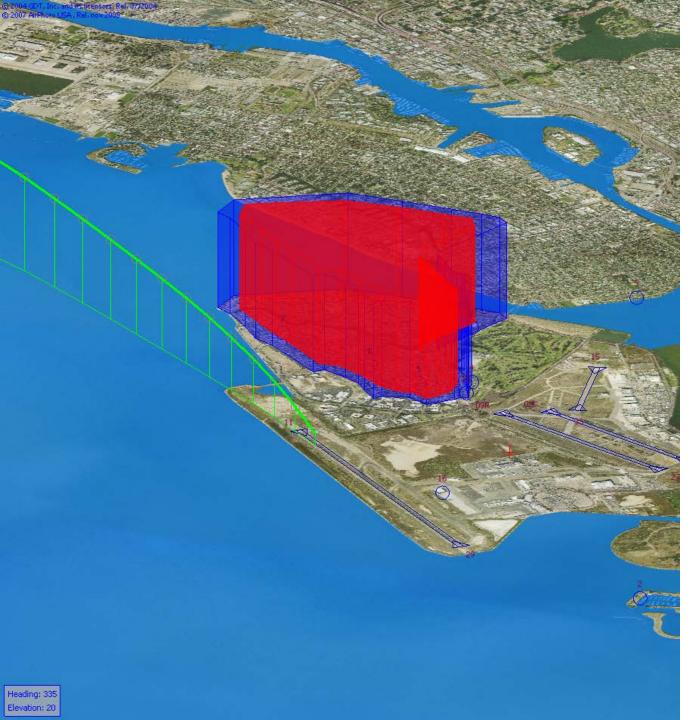
2013Q1 97% Compliance (994 departures)



North Field Quiet Hours NAP

2014Q1 84% Compliance (195 departures)

2013Q1 85% Compliance (155 departures)



Runway 30 Bay Farm Right Turn NAP

2014Q1 100% Compliance (13,087 departures)

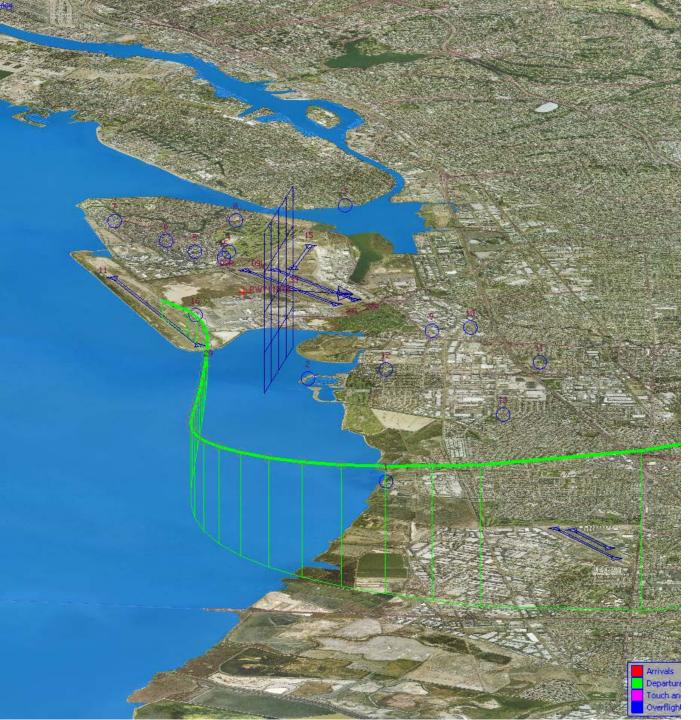
2013Q1 100% Compliance (14,635 departures)



Silent7 Night Departure NAP

2014Q1 99% Compliance (2,317 departures)

2013Q1 99% Compliance (2,788 departures)



Runway 12 Night Departure NAP

2014Q1 71% Compliance (174 departures)

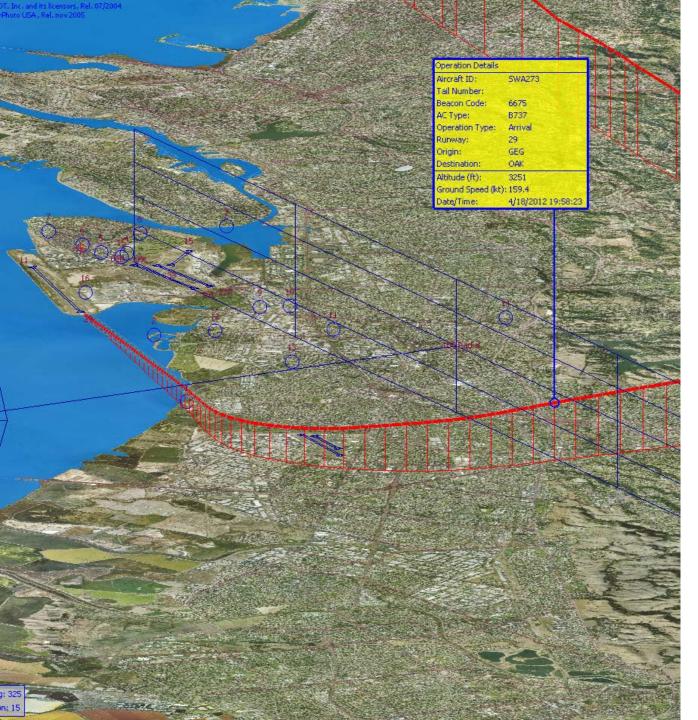
2013Q1 78% Compliance (18 departures)



Runway 30 East Turn NAP

2014Q1 97% Compliance (3,026 departures)

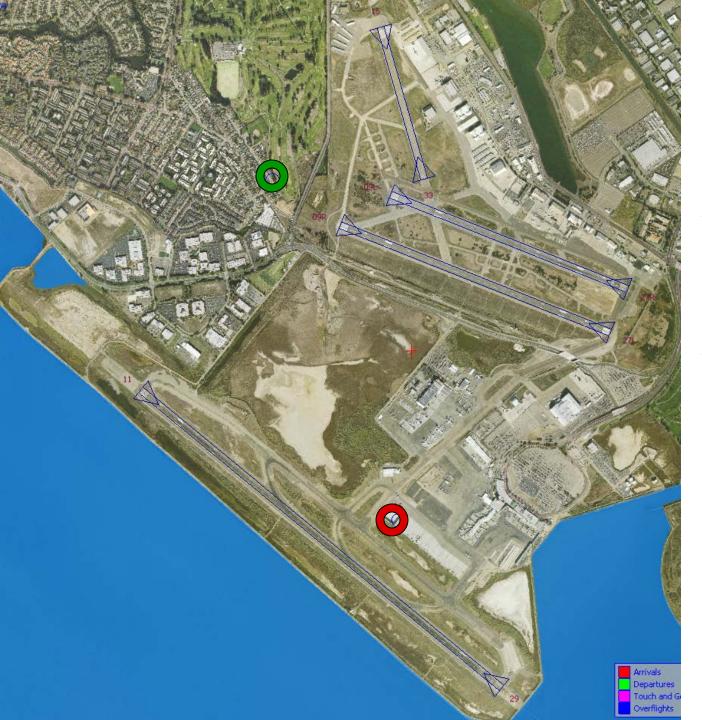
2013Q1 98% Compliance (3,506 departures)



100 Degree Radial At 3,000 ft. NAP

2014Q1 91% Compliance (1,831 landings)

2013Q1 91% Compliance (2,113 landings)



Engine Run-up NAP

2014Q1 100% Compliance (7 engine run-ups)*

2013Q1 100% Compliance (30 engine run-ups)

*Only above idle-power run-ups recorded.



Noise Monitor Terminal (NMT)

Site Map

| | Table 1. North Field Night Aircraft Departure SEL Noise Measurements Total Aircraft Departures = 195 | | | | | | | | | | | |
|-------------------|---|--|--------------------------------|----------|--------------------|--|---------------|--------------------|---------------------------------------|--------------|-----|--|
| | | | | First Qu | arter 2014 (| (10:00 p.m. | to 6:00 a.m.) | | | | | |
| NMT | Aircraft Noise | Aircraft Noise Events SEL 80 - 84.9 dBA | | | | Aircraft Noise Events SEL 85 - 89.9 dBA | | | Aircraft Noise Events SEL ≥ 90 dBA | | | |
| Number SEL 80 dBA | Amount | Nightly Average | As Percentage of Departures | Amount | Nightly Average | As Percentage of Departures | Amount | Nightly Average | As Percentage of Departures | Noise Events | | |
| 1 | 3 | 2 | 0.0 | 0.4% | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 5 | |
| 2 | 32 | 3 | 0.0 | 0.5% | 1 | 0.0 | 0.2% | 0 | 0.0 | 0.0% | 36 | |
| 3 | 41 | 3 | 0.0 | 0.5% | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 44 | |
| 4 | 59 | 42 | 0.5 | 7.4% | 9 | 0.1 | 1.6% | 21 | 0.2 | 3.7% | 131 | |
| 5 | 44 | 8 | 0.1 | 1.4% | 7 | 0.1 | 1.2% | 20 | 0.2 | 3.5% | 79 | |
| 6 | 12 | 7 | 0.1 | 1.2% | 9 | 0.1 | 1.6% | 16 | 0.2 | 2.8% | 44 | |
| 7 | 15 | 11 | 0.1 | 1.9% | 13 | 0.1 | 2.3% | 0 | 0.0 | 0.0% | 39 | |
| 8 | 19 | 20 | 0.2 | 3.5% | 4 | 0.0 | 0.7% | 0 | 0.0 | 0.0% | 43 | |
| 9 | 23 | 14 | 0.2 | 2.5% | 19 | 0.2 | 3.4% | 1 | 0.0 | 0.2% | 57 | |
| 10 | 52 | 37 | 0.4 | 6.5% | 3 | 0.0 | 0.5% | 0 | 0.0 | 0.0% | 92 | |
| 11 | 8 | 3 | 0.0 | 0.5% | 1 | 0.0 | 0.2% | 0 | 0.0 | 0.0% | 12 | |
| 12 | 28 | 11 | 0.1 | 1.9% | 6 | 0.1 | 1.1% | 0 | 0.0 | 0.0% | 45 | |
| 13 | 9 | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 9 | |
| 14 | 7 | 2 | 0.0 | 0.4% | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 9 | |
| All NMTs | 352 | 163 | 2 | 0 | 72 | 1 | 0 | 58 | 1 | 0 | 645 | |

| First Quarter 2014 (10:00 p.m. to 6:00 a.m.) | | | | | | | | | | | |
|--|--|--------------------|--------------------------------|--|--------------------|--------------------------------|---------------------------------------|--------------------|--------------------------------|-------------------|-----|
| NMT Number 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 | |
| | Amount | Nightly Average | As Percentage of Departures | Amount | Nightly Average | As Percentage of Departures | Amount | Nightly Average | As Percentage of Departures | Noise Events | |
| 3 | 41 | 3 | 0.0 | 1.3% | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 44 |
| 4 | 59 | 42 | 0.5 | 17.6% | 9 | 0.1 | 3.8% | 21 | 0.2 | 8.8% | 131 |
| 5 | 44 | 8 | 0.1 | 3.3% | 7 | 0.1 | 2.9% | 20 | 0.2 | 8.4% | 79 |
| 6 | 12 | 7 | 0.1 | 2.9% | 9 | 0.1 | 3.8% | 16 | 0.2 | 6.7% | 44 |
| 7 | 15 | 11 | 0.1 | 4.6% | 13 | 0.1 | 5.4% | 0 | 0.0 | 0.0% | 39 |
| 8 | 19 | 20 | 0.2 | 8.4% | 4 | 0.0 | 1.7% | 0 | 0.0 | 0.0% | 43 |
| Total | 190 | 91 | 1.0 | | 42 | 0.5 | | 57 | 0.6 | | 380 |

| | First Quarter 2014 (10:00 p.m. to 6:00 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 | | | | Total Aircraft | | | | |
| | Amount | Nightly Average | As Percentage of Departures | Amount | Nightly Average | As Percentage of Departures | Amount | Nightly Average | As Percentage of Departures | Noise Events | | |
| 2 | 32 | 3 | 0.0 | 0.9% | 1 | 0.0 | 0.3% | 0 | 0.0 | 0.0% | 36 | |
| 9 | 23 | 14 | 0.2 | 4.3% | 19 | 0.2 | 5.8% | 1 | 0.0 | 0.3% | 57 | |
| 10 | 52 | 37 | 0.4 | 11.3% | 3 | 0.0 | 0.9% | 0 | 0.0 | 0.0% | 92 | |
| 11 | 8 | 3 | 0.0 | 0.9% | 1 | 0.0 | 0.3% | 0 | 0.0 | 0.0% | 12 | |
| 12 | 28 | 11 | 0.1 | 3.4% | 6 | 0.1 | 1.8% | 0 | 0.0 | 0.0% | 45 | |
| 13 | 9 | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 9 | |
| 14 | 7 | 2 | 0.0 | 0.6% | 0 | 0.0 | 0.0% | 0 | 0.0 | 0.0% | 9 | |
| Total | 159 | 70 | 0.8 | | 30 | 0.3 | | 1 | 0.0 | | 260 | |

| | Ro | | t Departure Proced st Quarter 2014, NM | - | M) | | |
|-----------|------------------------|----------------------------|---|--------|-------------|----------------------------|--|
| | Aircraft Departures | | Recorded Noise Events (a) Lmax Average | | SEL Average | Avg. Duration (seconds) | |
| | | Base | line (November 2002 | 2) [A] | | | |
| B727 | | 104 | 101 | 76 | 87 | 44 | |
| DC10/MD10 | | 87 | 32 | 69 | 78 | 22 | |
| MD11 | | 32 | 13 | 70 | 79 | 24 | |
| A306 | | 67 | 21 | 67 | 77 | 25 | |
| | | F | First Quarter 2014 [B |] | | | |
| | Total [X] | Est. Avg. Monthly [X/3] | | | | | |
| B727 | 0 | - | - | - | - | | |
| DC10/MD10 | 132 | 44 | 34 | 68 | 78 | 24 | |
| MD11 | 171 | 57 | 49 | 70 | 79 | 25 | |
| A306 | 96 | 32 | 20 | 67 | 76 | 19 | |
| B757 | 155 | 52 | 39 | 67 | 76 | 23 | |
| | | | Difference [A-B] | | | | |
| B727 | | -104 | -101 | -76 | -87 | -44 | |
| DC10/MD10 | | -43 | 2 | -1 | 0 | 2 | |
| MD11 | | 25 | 36 | 0 | 0 | 1 | |
| A306 | | -35 | -1 | 0 | -1 | -6 | |

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)

| | Airc Depa | | Recorded Noise Events (a) | Lmax Average | SEL Average | Avg. Duration (seconds) |
|-----------|--------------|----------------------------|------------------------------|--------------|-------------|----------------------------|
| | | Base | line (November 2002 | 2) [A] | | |
| B727 | | 104 | 101 | 76 | 87 | 44 |
| DC10/MD10 | | 87 | 32 | 69 | 78 | 22 |
| MD11 | | 32 | 13 | 70 | 79 | 24 |
| A306 | | 67 | 21 | 67 | 77 | 25 |
| | | F | First Quarter 2013 [E | 3] | | |
| | Total [X] | Est. Avg. Monthly [X/3] | | | | |
| B727 | 0 | - | - | - | - | |
| DC10/MD10 | 147 | 49 | 96 | 68 | 78 | 24 |
| MD11 | 194 | 65 | 145 | 69 | 78 | 23 |
| A306 | 223 | 74 | 108 | 65 | 75 | 18 |
| B757 | 63 21 | | 26 | 65 | 74 | 15 |
| | | | Difference [A-B] | | | |
| B727 | | -104 | -101 | -76 | -87 | -44 |
| DC10/MD10 | | -38 | 64 | -1 | 0 | 2 |
| MD11 | | 33 | 132 | -1 | -1 | -1 |
| A306 | | 7 | 87 | -2 | -2 | -7 |

