



Noise Compatibility

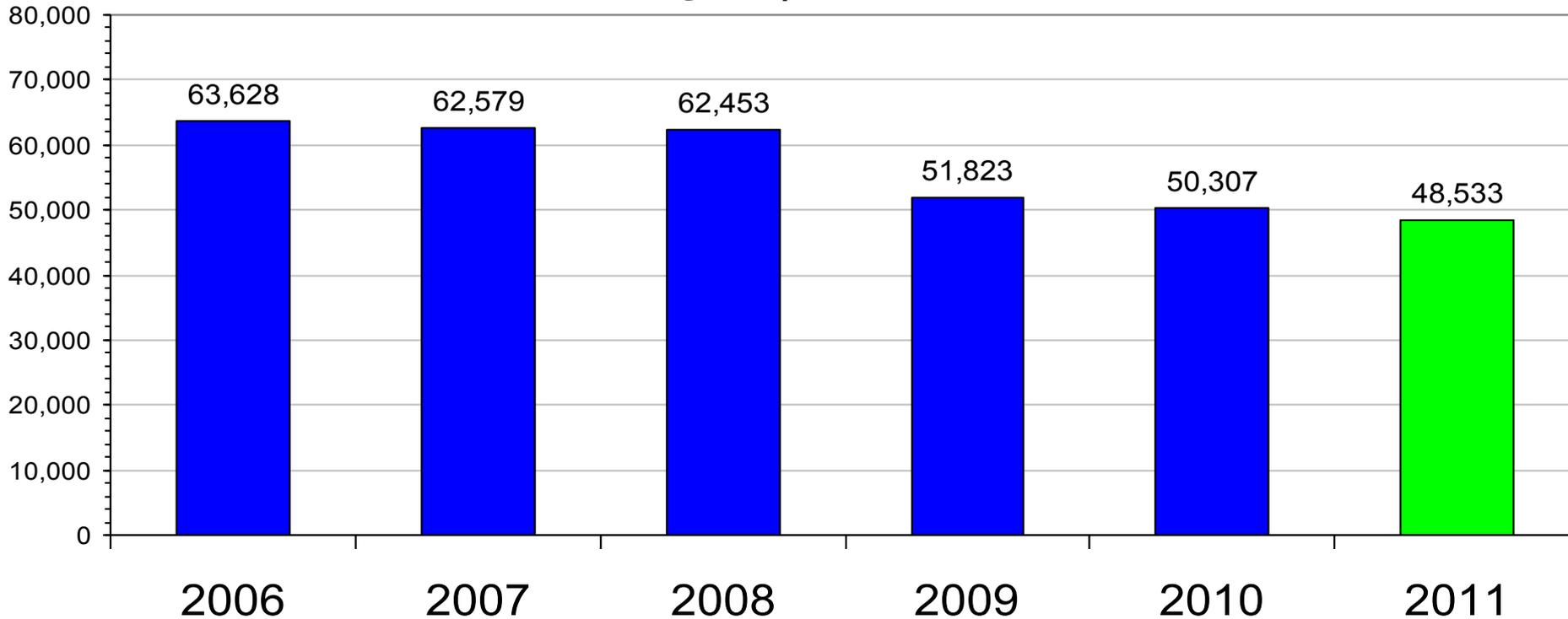
3rd Quarter, 2011

December 9, 2011

Aircraft Operations



Cleveland 3rd Qtr. Operations 2006 - 2011



There were 48,533 landings and takeoffs in the 3rd qtr. 2011; this is 3.5% below the 3rd qtr. 2010.

Source: FAA Control Tower Traffic Count Reports

Fleet Mix: 3rd Qtr, 2011 vs. 3rd Qtr, 2010

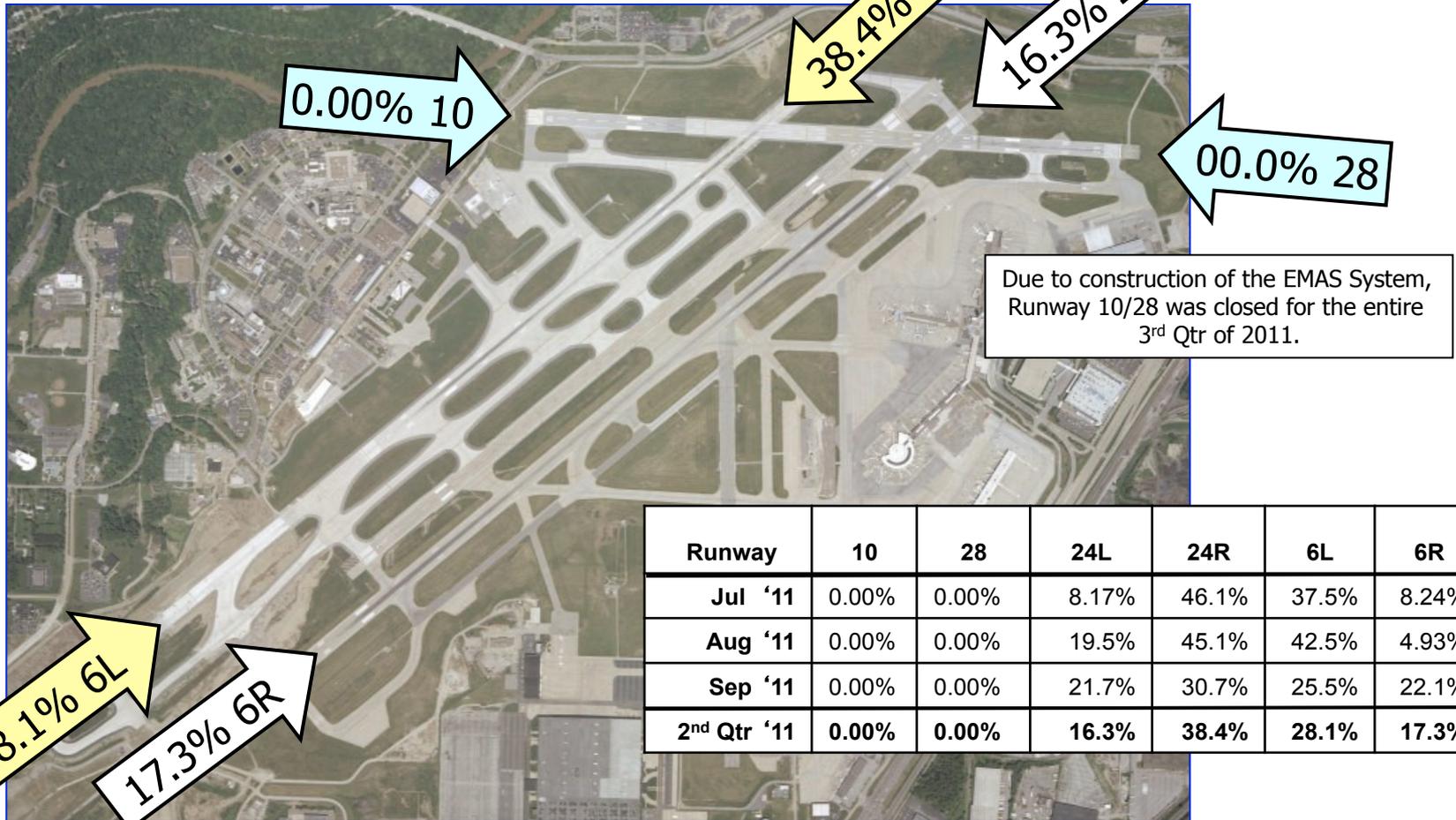


Landings & Takeoffs

| | 3 rd Qtr, 2011 | | 3 rd Qtr, 2010 | |
|--------------------------|---------------------------|---------------|---------------------------|---------------|
| Commercial | | | | |
| -Stage 2 with hush kit | 113 | 0.23% | 174 | 0.35% |
| -Heavy (incl. all B757s) | 1,057 | 2.18% | 1,041 | 2.07% |
| -MD80 series | 715 | 1.47% | 61 | 0.12% |
| -Other Stage 3 | 11,447 | 23.59% | 12,627 | 25.10% |
| -Regional Jet | 22,222 | 45.79% | 25,793 | 51.27% |
| -Turboprop | 10,452 | 21.54% | 7,345 | 14.60% |
| Air Taxi | 316 | 0.65% | 880 | 1.75% |
| General Aviation | 2,113 | 4.35% | 2,268 | 4.51% |
| Military | 98 | 0.20% | 118 | 0.23% |
| Total | 48,533 | 100.0% | 50,307 | 100.0% |

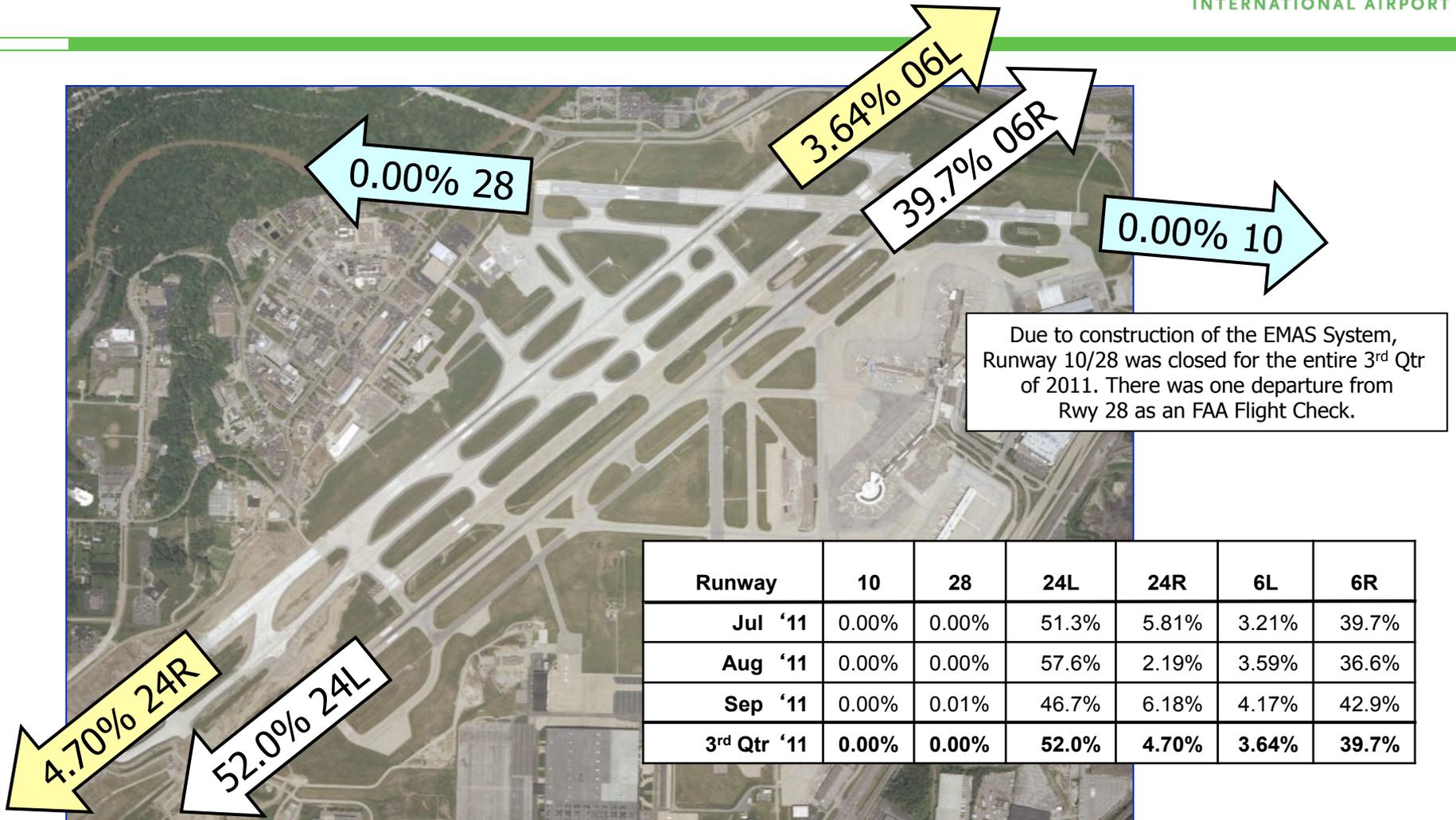
All aircraft above are Stage 3 certified with the exception of some Military aircraft and about 2% of General Aviation aircraft, counting helicopters. A hush kit reduces noise enough to meet Stage 3 levels, but well short of the noise level of typical aircraft originally manufactured as Stage 3.

Runway Use: 3rd Qtr, 2011 Landings

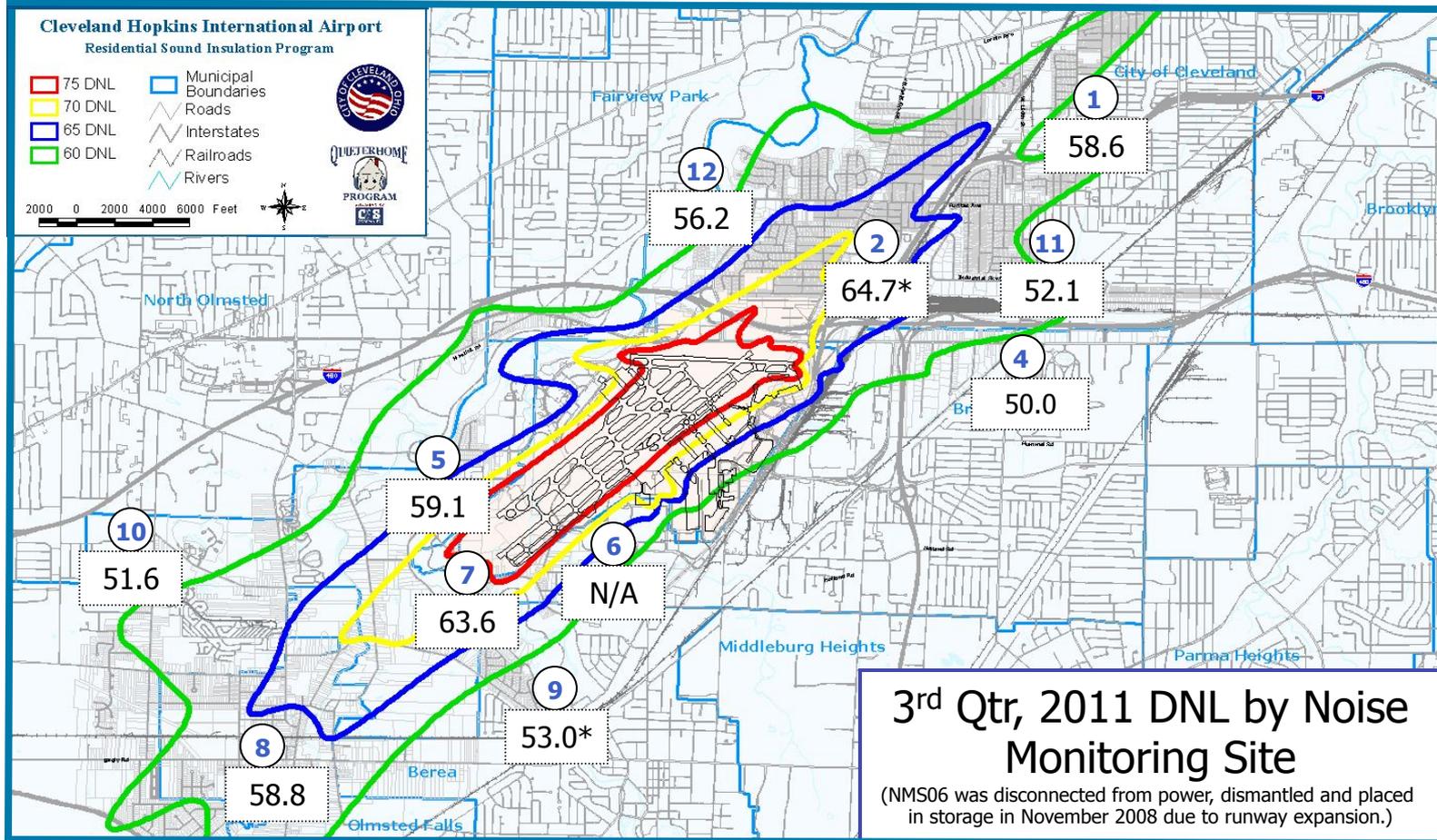


| Runway | 10 | 28 | 24L | 24R | 6L | 6R |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Jul '11 | 0.00% | 0.00% | 8.17% | 46.1% | 37.5% | 8.24% |
| Aug '11 | 0.00% | 0.00% | 19.5% | 45.1% | 42.5% | 4.93% |
| Sep '11 | 0.00% | 0.00% | 21.7% | 30.7% | 25.5% | 22.1% |
| 2 nd Qtr '11 | 0.00% | 0.00% | 16.3% | 38.4% | 28.1% | 17.3% |

Runway Use: 3rd Qtr, 2011 Take-Offs

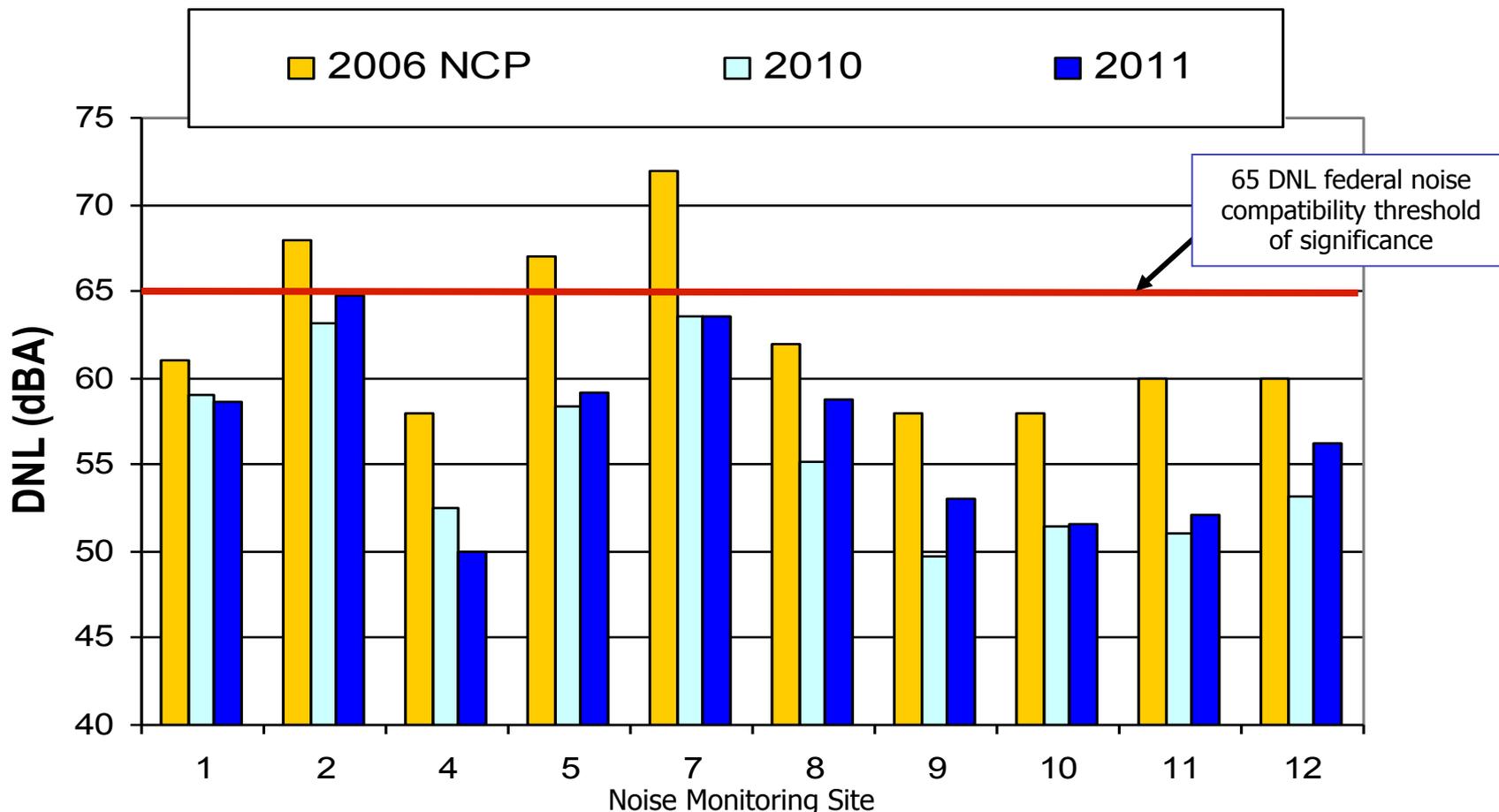


Aircraft Noise



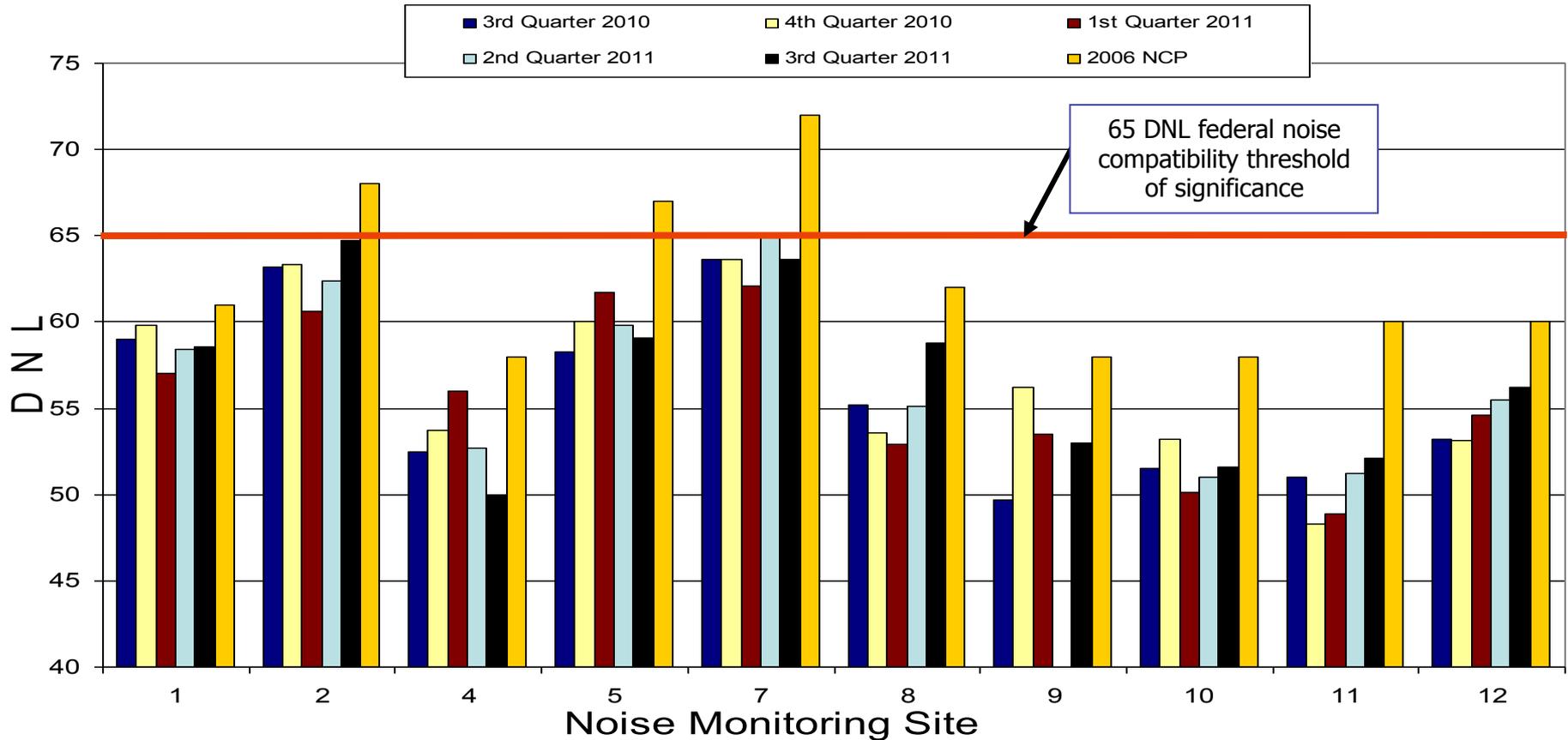
Due to malfunctions, 2011 data for NMS09 was unavailable except on Jul 21, Aug 7-10, and some partial days until Sep 13. The partial days together with the five full days add up to a total of about 9 days. Malfunctions limited available NMS02 data to 42 complete days out of 92 in the quarter. Most of Jul 15-Aug 20 and Sep 3-11 lack NMS02 data. To estimate quarterly DNLs for both locations, DNLs for missing days were calculated from runway use numbers with parameters that were consistent with existing data from the quarter.

DNL: 3rd Qtr, 2011 vs. 3rd Qtr, 2010



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Five Qtr DNL Comparison

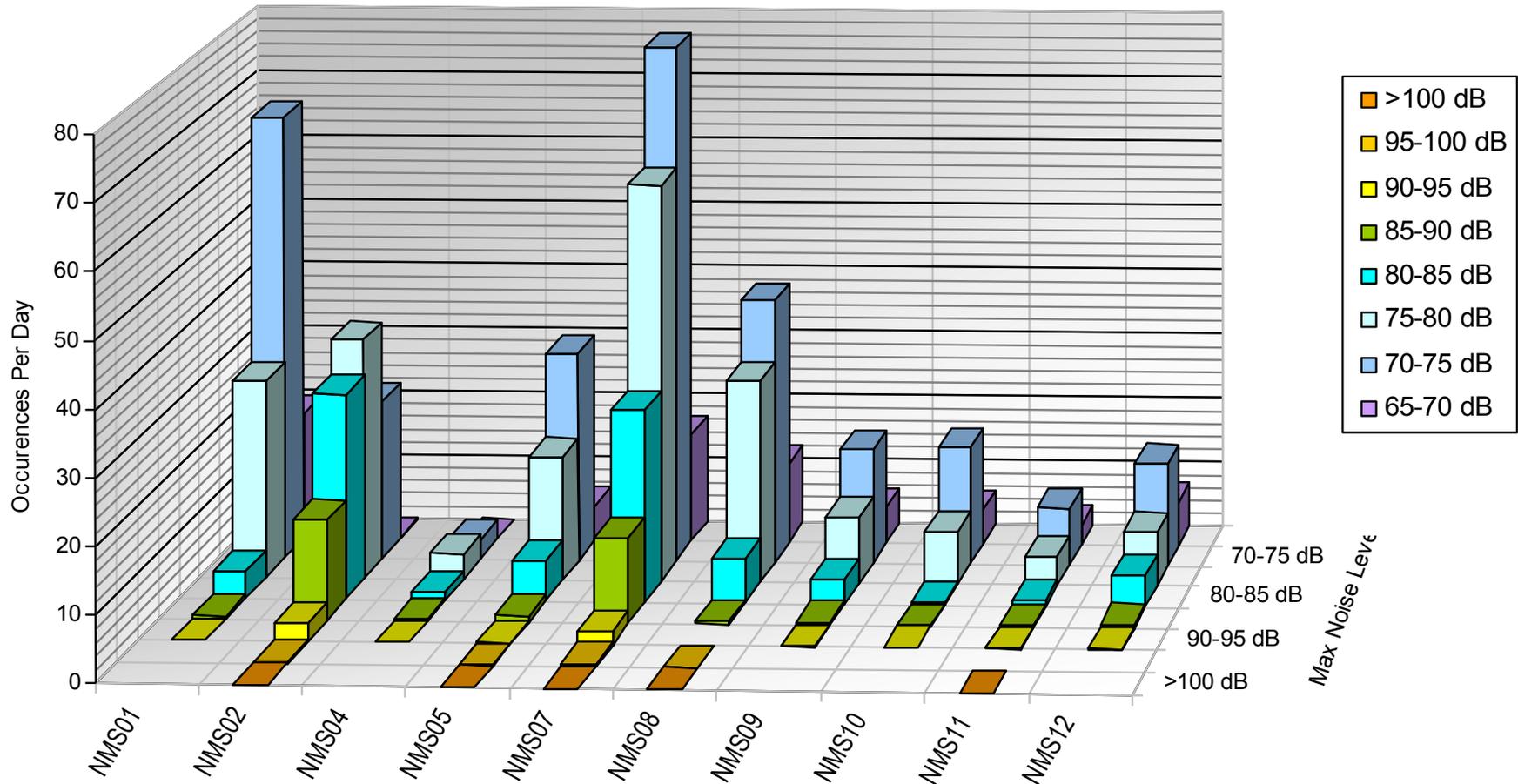


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NMS06 was disconnected from power, dismantled and placed in storage in November 2008 due to runway expansion.

Distribution of Noise Events

Distribution of Lmax, Averaged by Day, 3rd Qtr 2011



Top 3 Lmaxs at each NMS, 3rd Qtr, (1 of 2)



| NMS | Lmax (dB) | Aircraft | Operation | Time and date | Sound Exposure Level (dB) | Duration (sec) |
|-------|-----------|-----------------|------------------------|------------------|---------------------------|----------------|
| MS01 | 93.2 | Military Jet | Departure off Rwy 6R | 9/ 3/11 1:04 PM | 99.7 | 33.5 |
| NMS01 | 90.3 | Airbus 300-600 | Arrival on Rwy 24L | 9/13/11 6:22 AM | 95.4 | 31.0 |
| NMS01 | 90.2 | Unknown | Departure off Rwy 6R ? | 9/ 2/11 10:30 AM | 95.5 | 14.0 |
| NMS02 | 102.1 | Military Jet(s) | Departure off Rwy 6R | 9/ 2/11 10:04 AM | 106.9 | 24.5 |
| NMS02 | 101.7 | Military Jet | Departure off Rwy 6R | 7/ 9/11 1:57 PM | 111.2 | 37.5 |
| NMS02 | 98.2 | Lear Jet 25 | Arrival on Rwy 24L | 9/26/11 3:21 PM | 103.6 | 31.5 |
| NMS04 | 90.7 | B727-200 | Departure off Rwy 6R | 7/ 1/11 12:52 AM | 99.1 | 37.0 |
| NMS04 | 90.6 | Military Jet(s) | Departure off Rwy 6R | 9/ 5/11 2:47 PM | 101.4 | 72.5 |
| NMS04 | 90.6 | Military Jet(s) | Departure off Rwy 6L | 9/ 3/11 3:35 PM | 99.1 | 60.0 |
| NMS05 | 102.3 | Military Jet(s) | Departure off Rwy 6R | 9/ 6/11 12:23 PM | 107.6 | 39.0 |
| NMS05 | 99.5 | Military Jet | Departure off Rwy 6R | 9/ 6/11 9:49 AM | 107.2 | 73.5 |
| NMS05 | 99.4 | Military Jet(s) | Departure off Rwy 6R | 9/ 7/11 1:29 PM | 106.8 | 67.5 |
| NMS07 | 103.5 | B727-100 | Departure off Rwy 24L | 7/10/11 7:53 PM | 110.2 | 37.0 |
| NMS07 | 99.8 | DC9-50 | Departure off Rwy 24L | 9/22/11 8:04 AM | 106.8 | 48.5 |
| NMS07 | 99.4 | Military Jet(s) | Departure off Rwy 24L | 9/ 1/11 6:10 PM | 106.7 | 43.0 |

Sound Exposure Level is a measure that takes into account all noise over the entire duration of an event.

Top 3 Lmaxs at each NMS, 3rd Qtr, (2 of 2)

| NMS | Lmax (dB) | Aircraft | Operation | Time and date | Sound Exposure Level (dB) | Duration (sec) |
|-------|-----------|-----------------|-----------------------|------------------|---------------------------|----------------|
| NMS08 | 100.4 | Military Jet(s) | Take-off Roll on 6L | 9/ 3/11 4:47 PM | 103.5 | 29.0 |
| NMS08 | 99.2 | Military Jet | Take-off Roll on 6R | 9/ 5/11 1:50 PM | 106.3 | 23.0 |
| NMS08 | 89.9 | B727-100 | Departure off Rwy 24L | 7/17/11 10:54 AM | 98.8 | 44.5 |
| NMS09 | 92.7 | DC9-30 | Departure off Rwy 24L | 8/10/11 1:57 PM | 99.5 | 33.0 |
| NMS09 | 89.5 | DC9-30 | Departure off Rwy 24L | 8/10/11 10:42 AM | 97.3 | 43.0 |
| NMS09 | 86.1 | MD-88 | Departure off Rwy 24L | 7/21/11 7:08 AM | 91.2 | 29.0 |
| NMS10 | 94.8 | Military Jet(s) | Arrival on Rwy 6L | 9/ 5/11 3:18 PM | 100.7 | 43.5 |
| NMS10 | 91.3 | Military Jet | Arrival on Rwy 6R | 9/ 5/11 1:49 PM | 99.0 | 40.5 |
| NMS10 | 90.6 | Lear Jet 25 | Departure off Rwy 24L | 9/28/11 1:18 PM | 97.9 | 50.5 |
| NMS11 | 104.9 | Military Jet(s) | Departure off Rwy 6R | 9/ 5/11 2:47 PM | 111.3 | 78.5 |
| NMS11 | 101.3 | Military Jet(s) | Departure off Rwy 6L | 9/ 3/11 3:34 PM | 107.8 | 80.5 |
| NMS11 | 100.3 | Military Jet | Departure off Rwy 6R | 7/ 9/11 1:57 PM | 109.4 | 38.0 |
| NMS12 | 93.5 | Lear Jet 25 | Departure off Rwy 6R | 8/ 4/11 6:15 PM | 100.9 | 47.0 |
| NMS12 | 92.7 | Military Jet(s) | Departure off Rwy 6L | 9/ 9/11 11:55 AM | 100.4 | 34.5 |
| NMS12 | 91.6 | MD-82 | Departure off Rwy 6L | 8/11/11 1:26 PM | 99.2 | 29.5 |

Sound Exposure Level is a measure that takes into account all noise over the entire duration of an event.

Noise Hotline (216.898.5220)



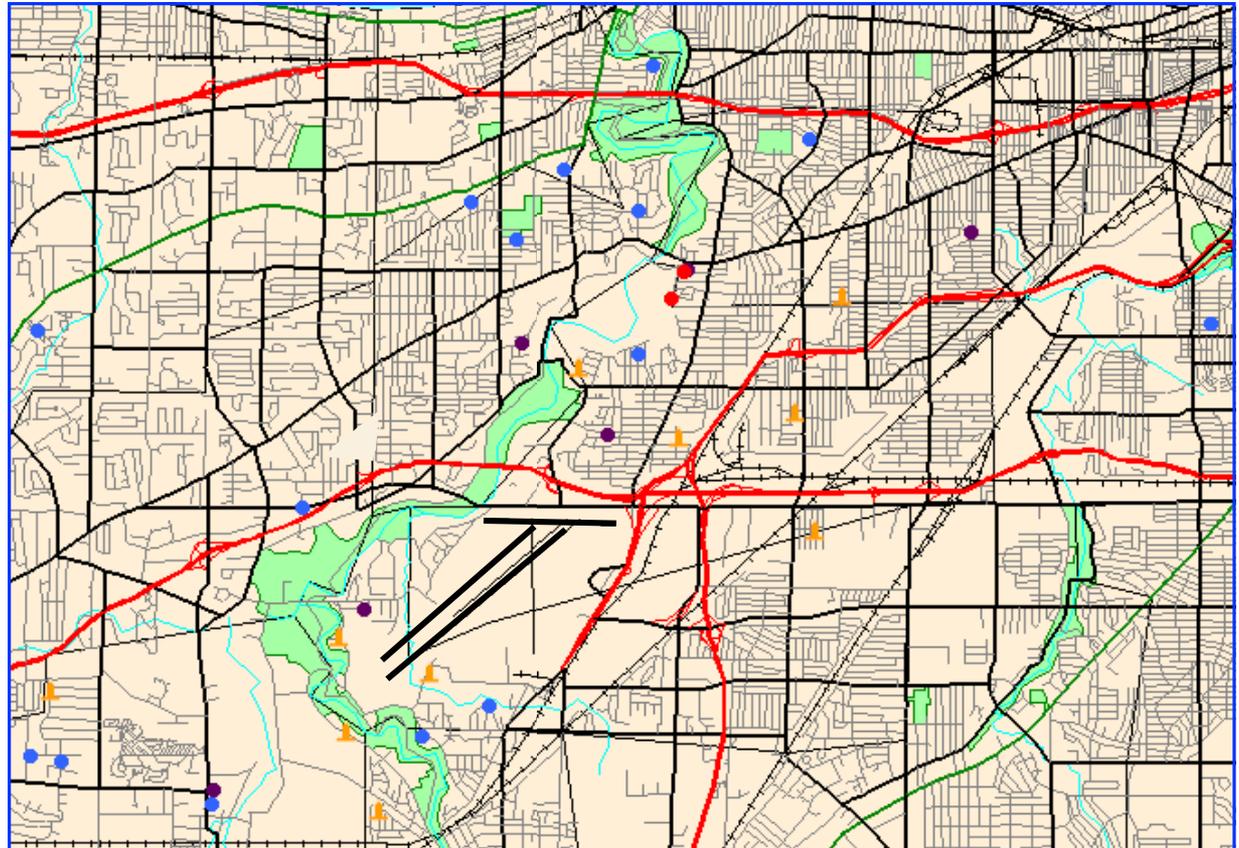
| | Jul | Aug | Sep | 2nd Qtr | % | Callers | % |
|---------------------|-----------|-----------|-----------|-----------|----------------|-----------|----------------|
| Berea | 0 | 0 | 1 | 1 | 2.22% | 1 | 4.55% |
| Brook Park | 1 | 1 | 0 | 2 | 4.44% | 2 | 9.09% |
| Cleveland | 8 | 4 | 16 | 28 | 62.22% | 7 | 31.82% |
| Fairview Park | 3 | 0 | 2 | 5 | 11.11% | 4 | 18.18% |
| Lakewood | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00% |
| Middleburg Hts. | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00% |
| North Olmsted | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00% |
| Olmsted Falls | 3 | 0 | 0 | 3 | 1.64% | 2 | 9.09% |
| Olmsted Twp | 1 | 1 | 0 | 2 | 0.00% | 2 | 9.09% |
| Parma | 0 | 0 | 0 | 0 | 0.00% | 0 | 0.00% |
| Parma Heights | 0 | 0 | 0 | 0 | 0.00% | 0 | 13.64% |
| Rocky River | 1 | 0 | 2 | 3 | 8.20% | 3 | 4.55% |
| Westlake | 1 | 0 | 0 | 1 | 0.00% | 1 | 0.00% |
| Other | 0 | 0 | 0 | 0 | 3.28% | 0 | 13.33% |
| Total (2011) | 18 | 6 | 21 | 45 | 100.00% | 22 | 100.00% |
| Total (2010) | 28 | 24 | 22 | 74 | 100.00% | 30 | 100.00% |

Complaint Location Map: 3rd Qtr, 2011

LEGEND

Complaints per household

- 1 complaint
- 2 to 5 complaints
- 6 or more
- 📍 Noise Monitoring Station



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