



Noise Compatibility

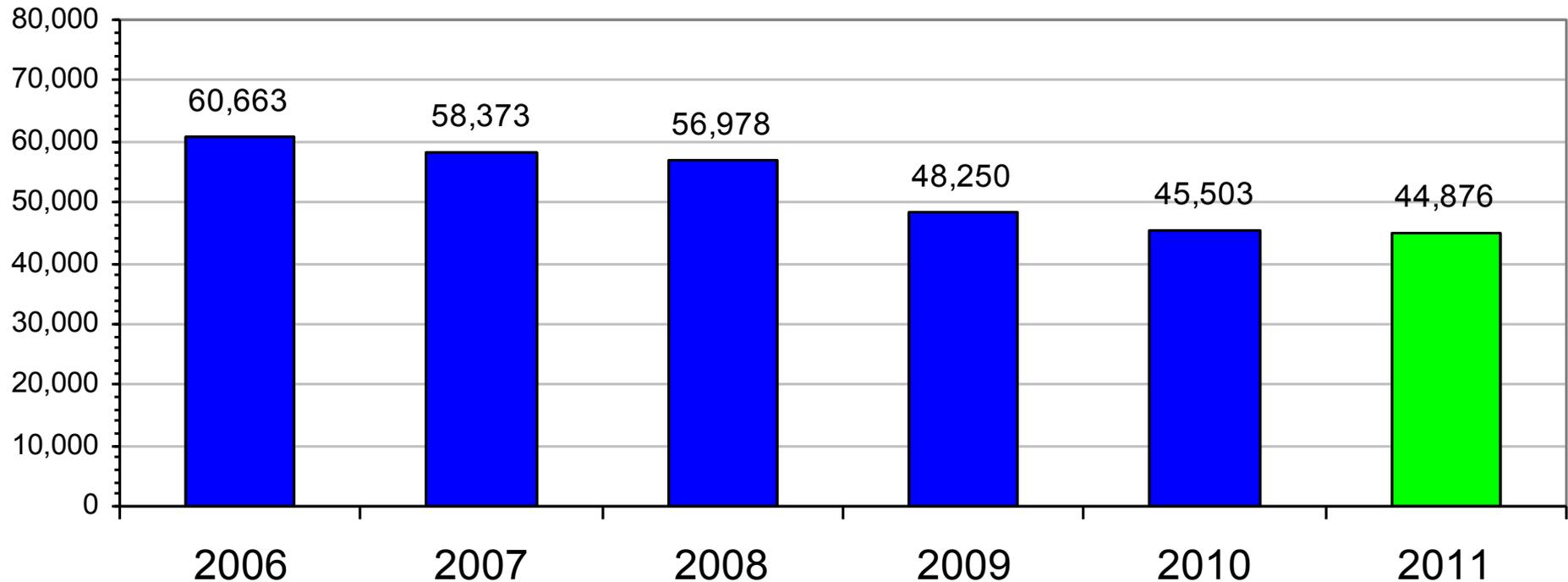
1st Quarter 2011

June 1, 2011

Aircraft Operations



Cleveland 1st Qtr. Operations 2006 - 2011



There were 44,876 landings and takeoffs in the 1st qtr. 2011; this is 1.38% below the 1st qtr. 2010.

Source: FAA Control Tower Traffic Count Reports

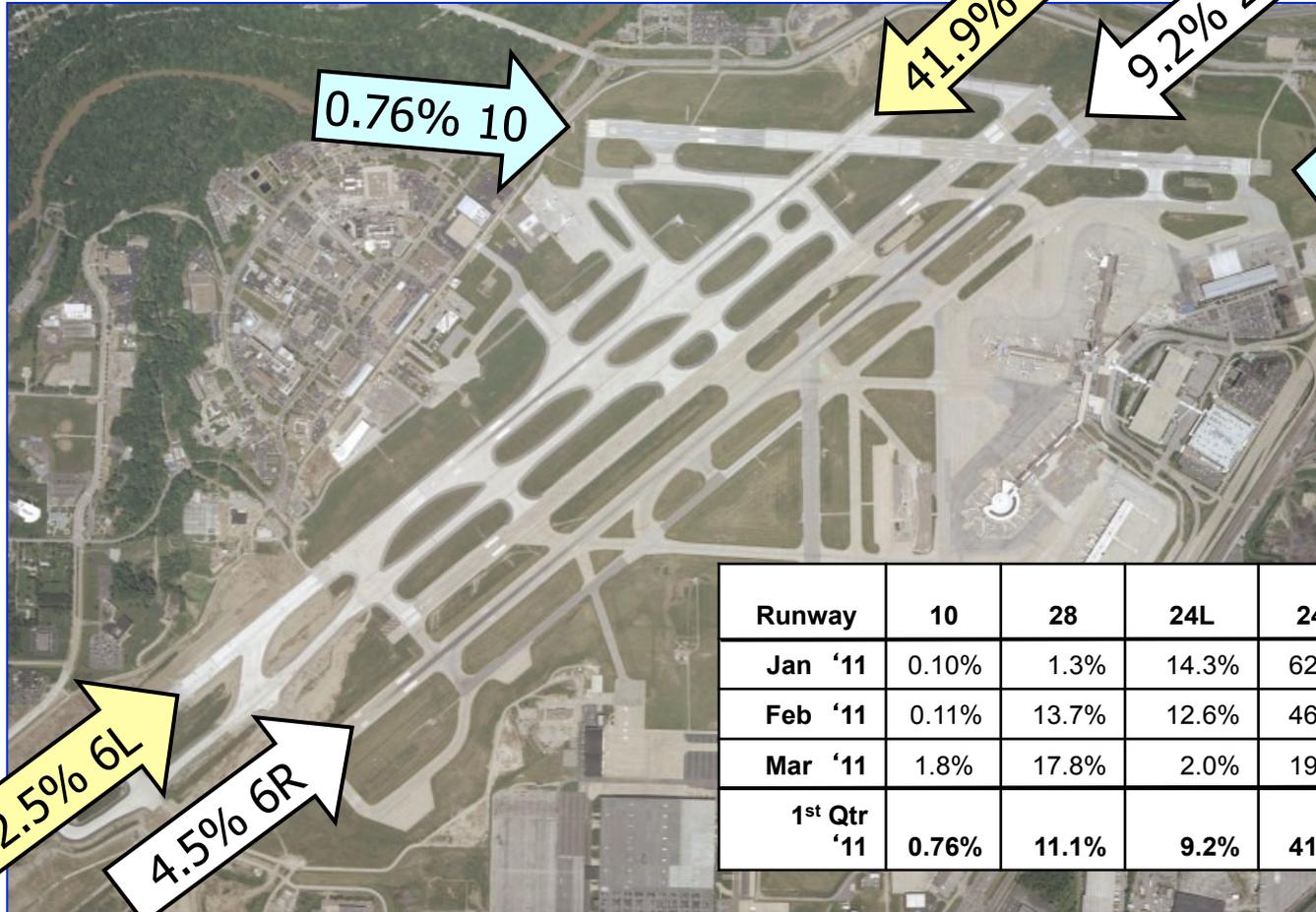
Fleet Mix : 1st Qtr, 2011 vs. 1st Qtr, 2010



Landings & Takeoffs

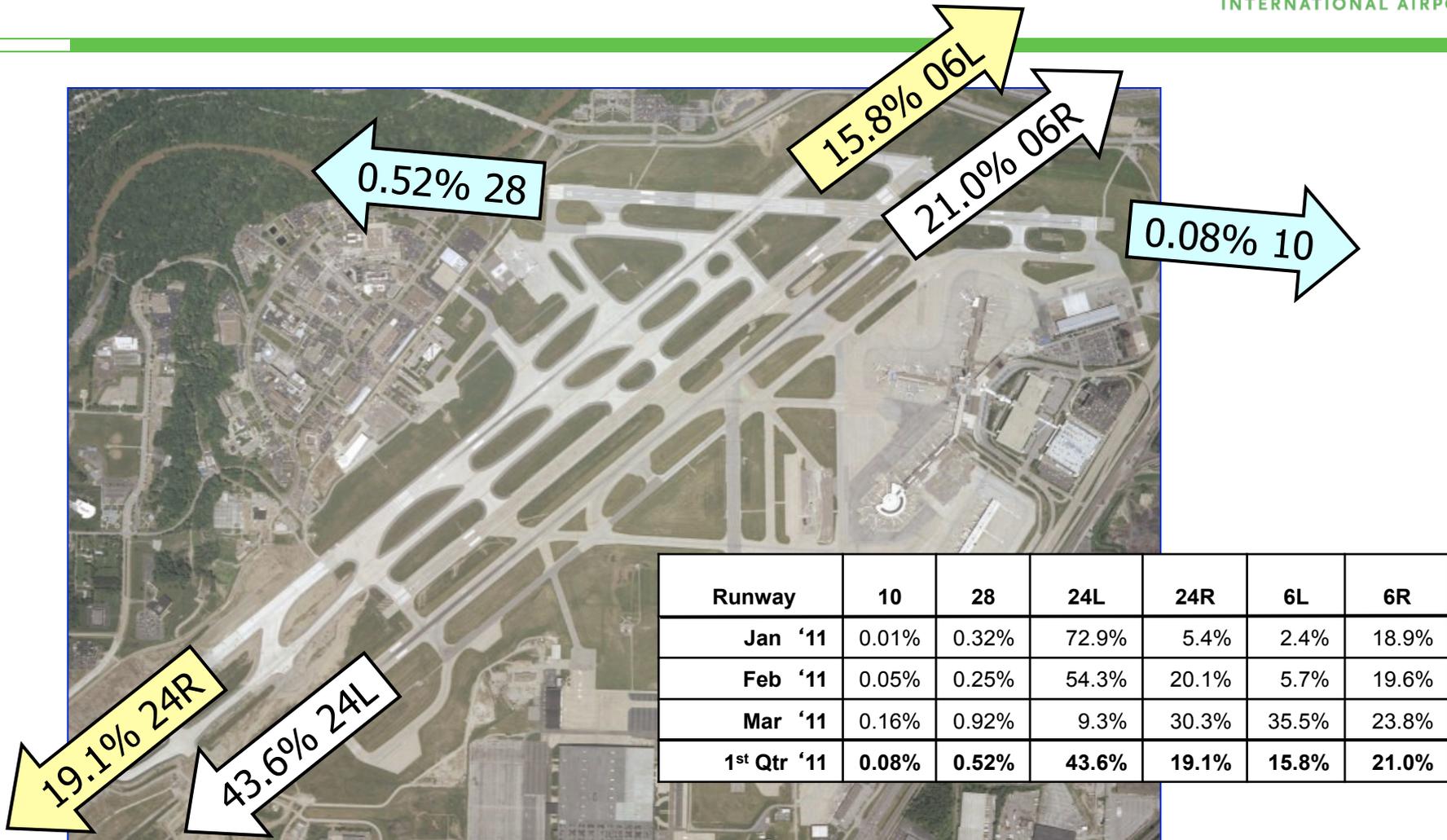
	1 st Qtr, 2011		1 st Qtr, 2010	
Commercial				
-Stage 2 with hush kit	249	0.55%	46	0.10%
-Heavy (incl all B757s)	800	1.78%	680	1.50%
-Other Stage 3	12,999	28.97%	11,724	25.77%
-Regional Jet	20,335	45.31%	23,781	52.26%
-Turboprop	8,118	18.09%	6,190	13.60%
Air Taxi	103	0.23%	1,052	2.31%
General Aviation	2,229	4.97%	1,961	4.31%
Military	43	0.10%	69	0.15%
Total	44,876	100.00%	45,503	100.00%

Runway Use: 1st Qtr, 2011 Landings

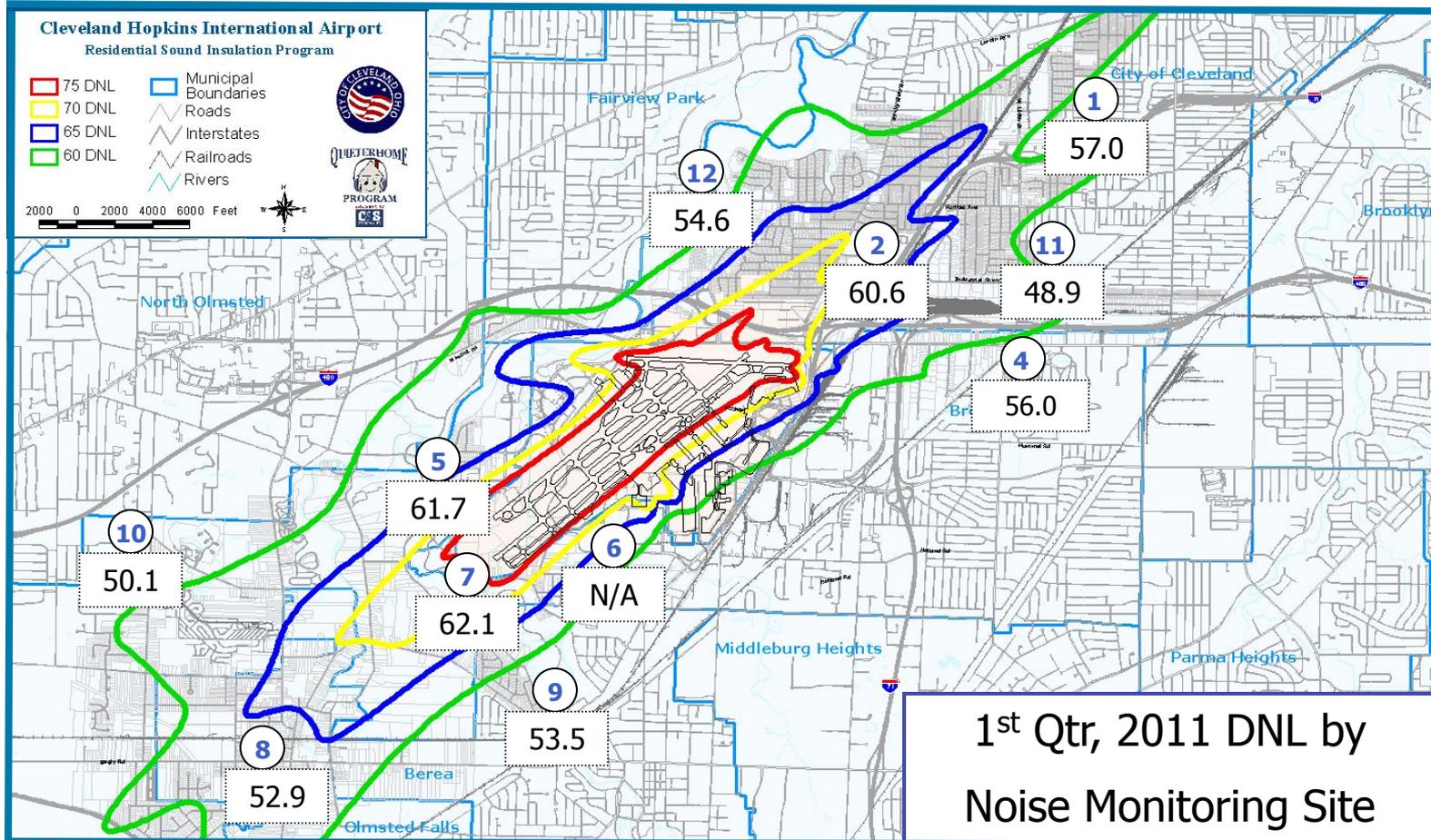


Runway	10	28	24L	24R	6L	6R
Jan '11	0.10%	1.3%	14.3%	62.9%	15.5%	5.9%
Feb '11	0.11%	13.7%	12.6%	46.9%	22.3%	4.4%
Mar '11	1.8%	17.8%	2.0%	19.2%	55.7%	3.4%
1st Qtr '11	0.76%	11.1%	9.2%	41.9%	32.5%	4.5%

Runway Use: 1st Qtr, 2011 Take-Offs

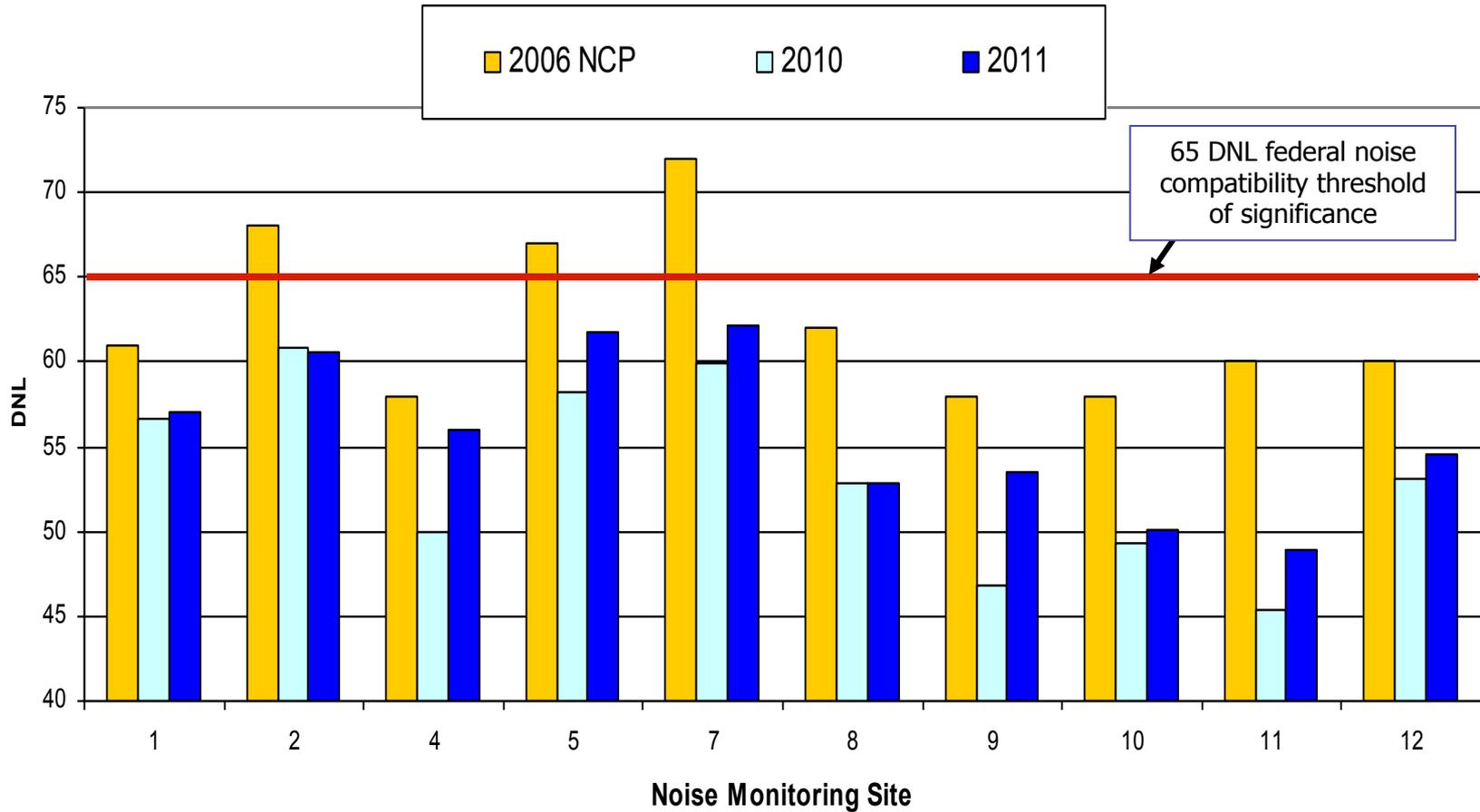


Aircraft Noise



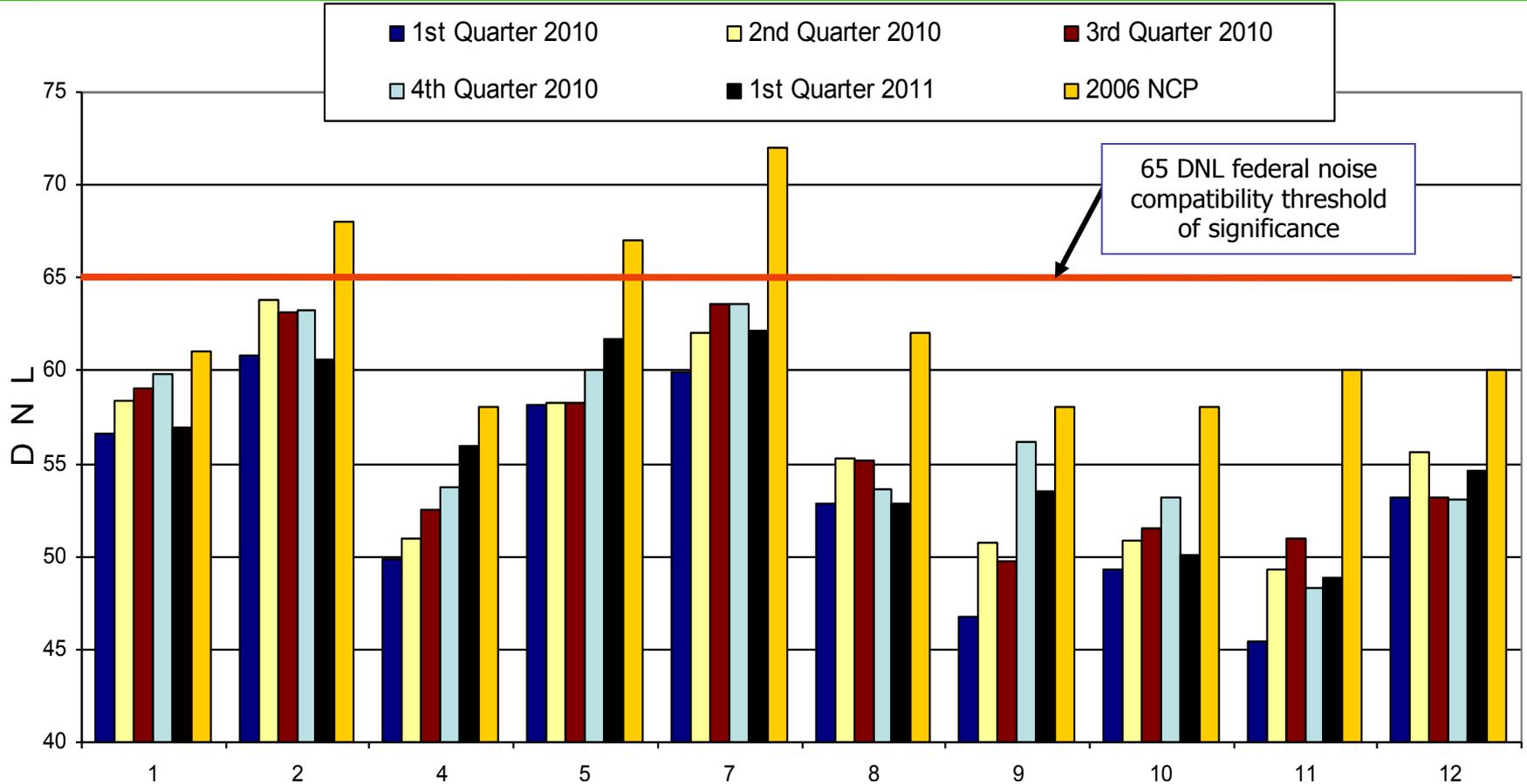
Due to malfunctions at NMS09 in Feb and Mar, the quarterly DNL at NMS09 was estimated from daily Jan DNLs and the runway use patterns over the remainder of the quarter. NMS06 was disconnected from power, dismantled and placed in storage in November 2008 due to runway expansion.

DNL: 1st Qtr, 2011 vs. 1st Qtr, 2010



Due to malfunctions at NMS09 in Feb and Mar, the 1st Qtr, 2011 DNL at that site was estimated from daily Jan DNLs and runway use patterns for the remainder of the quarter.

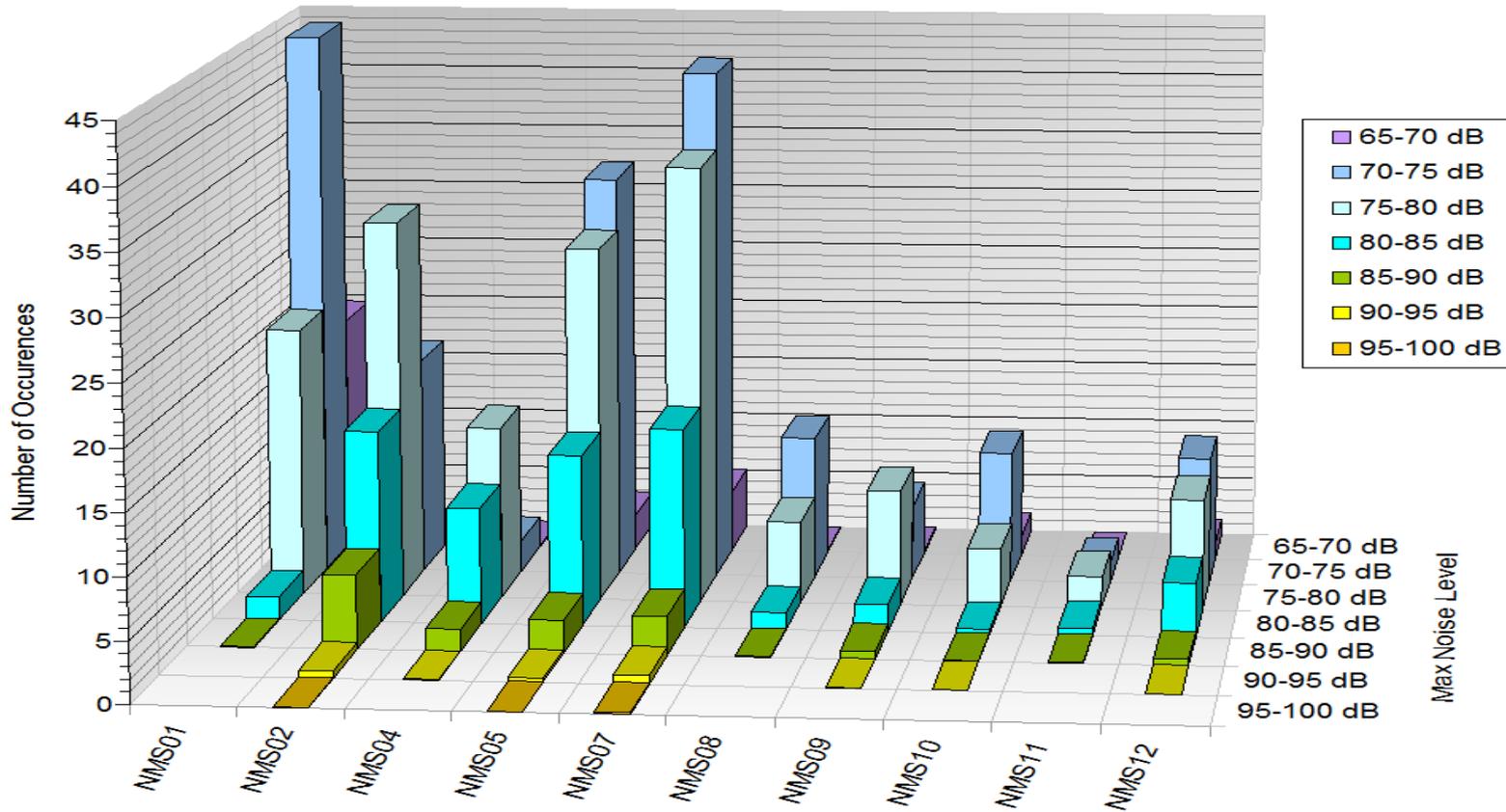
Five Qtr DNL Comparison



NMS09 data was available Jan 2-24, but not most of Feb, nor any of Mar. DNL at NMS09 was estimated over all days from daily operations per runway, especially those by louder hush-kitted aircraft. These numbers were used to calculate the DNL at NMS09 for this quarter as a whole. This quarter, data was available every day at the remaining nine sites.

Distribution of Noise Events

Distribution of Lmax, Averaged by Day, 1st Qtr 2011



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



NMS	Lmax (dB)	Aircraft	Operation	Time and date	Sound Exposure Level (dB)	Duration (sec)
NMS01	87.1	DC9-50	Arrival on Rwy 24R	3/15/11 9:38 PM	94.4	31.0
NMS01	86.3	MD88	Arrival on Rwy 24R	1/19/11 8:56 PM	91.4	22.0
NMS01	86.1	DC9-50	Arrival on Rwy 24R	2/17/11 9:11 PM	94.1	35.0
NMS02	97.4	DC9-50	Departure off Rwy 6L	3/23/11 7:04 AM	105.2	37.5
NMS02	95.8	DC9-50	Departure off Rwy 6R	2/23/11 7:07 AM	103.1	30.5
NMS02	95.4	B727-200	Arrival on Rwy 24L	2/24/11 5:09 AM	98.9	18.0
NMS04	90.7	DC9-50	Departure off Rwy 6R	1/30/11 5:09 PM	98.4	39.5
NMS04	90.5	DC9-50	Departure off Rwy 6L	3/26/11 7:10 AM	98.5	31.0
NMS04	90.1	B727-200	Departure off Rwy 6R	2/24/11 11:04 PM	101.5	58.5
NMS05	99.6	B727-200	Departure off Rwy 24L	1/28/11 10:52 AM	106.2	49.5
NMS05	98.6	Lear 25	Departure on Rwy 6L (Takeoff roll)	3/19/11 8:39 PM	105.1	64.5
NMS05	96.4	B737-200	Departure on Rwy 6L (Takeoff roll)	2/22/11 1:17 AM	103.2	67.5
NMS07	99.3	DC9-50	Departure off Rwy 24R	3/5/11 7:14 AM	106.5	39.5
NMS07	98.8	DC9-50	Departure off Rwy 24L	3/9/11 6:56 AM	105.7	54.0
NMS07	98.6	B727-200	Departure off Rwy 24L	1/10/11 6:34 AM	104.5	47.5

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, 1st Qtr, (2 of 2)



NMS	Lmax (dB)	Aircraft	Operation	Time and date	Sound Exposure Level (dB)	Duration (sec)
NMS08	89.6	MD88	Departure off Rwy 24L	2/ 7/11 4:41 PM	95.6	26.0
NMS08	87.8	DC9-50	Departure off Rwy 24R	3/10/11 6:57 AM	96.5	47.0
NMS08	85.8	B727-200	Arrival on Rwy 6R	2/25/11 6:25 AM	93.5	30.5
NMS09	90.1	MD88	Departure off Rwy 24L	1/12/11 5:15 PM	96.3	31.5
NMS09	88.6	B737-200	Departure off Rwy 24L	1/15/11 1:04 PM	96.5	42.0
NMS09	88.0	B727-200	Departure off Rwy 24L	1/25/11 12:55 AM	95.2	38.5
NMS10	90.5	B727-100	Departure off Rwy 24L	1/28/11 6:46 PM	99.4	46.5
NMS10	89.7	B727-200	Departure off Rwy 24L	2/23/11 10:41 PM	98.2	48.5
NMS10	86.4	B727-200	Departure off Rwy 24L	1/5/11 10:50 PM	92.9	28.0
NMS11	88.8	MD83	Departure off Rwy 6L	3/15/11 7:37 PM	95.7	36.5
NMS11	88.6	B727-200	Departure off Rwy 6L	2/22/11 1:45 AM	99.3	73.0
NMS11	88.6	DC9-50	Departure off Rwy 6L	3/23/11 7:05 AM	96.6	35.5
NMS12	94.7	B727-200	Departure off Rwy 6R	2/22/11 2:04 PM	104.4	48.0
NMS12	89.5	MD87	Departure off Rwy 6R	3/2/11 6:21 PM	97.2	31.5
NMS12	87.9	B737-800	Departure off Rwy 6R	2/22/11 5:01 PM	93.6	27.0

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

Noise Hotline (216.898.5220)



	Jan	Feb	Mar	1st Qtr	%	Callers	%
Berea	0	1	0	1	2.44%	1	6.67%
Brook Park	0	0	3	3	7.32%	2	13.33%
Cleveland	2	10	15	27	65.85%	3	20.00%
Fairview Park	0	1	4	5	12.20%	5	33.33%
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	0	0	0	0	0.00%	0	0.00%
Olmsted Twp	0	0	0	0	0.00%	0	0.00%
Parma	0	1	3	4	9.76%	3	20.00%
Parma Heights	0	0	0	0	0.00%	0	0.00%
Rocky River	0	0	0	0	0.00%	0	0.00%
Westlake	0	0	0	0	0.00%	0	0.00%
Other	0	0	1	1	2.44%	1	6.67%
Total (2011)	2	13	26	41	100.00%	15	100.00%
Total (2010)	14	5	34	53	100.00%	12	100.00%

Complaint Location Map: 1st Qtr, 2011

LEGEND

Complaints per household

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



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