



***Noise Compatibility***  
**2009 Year End Report**

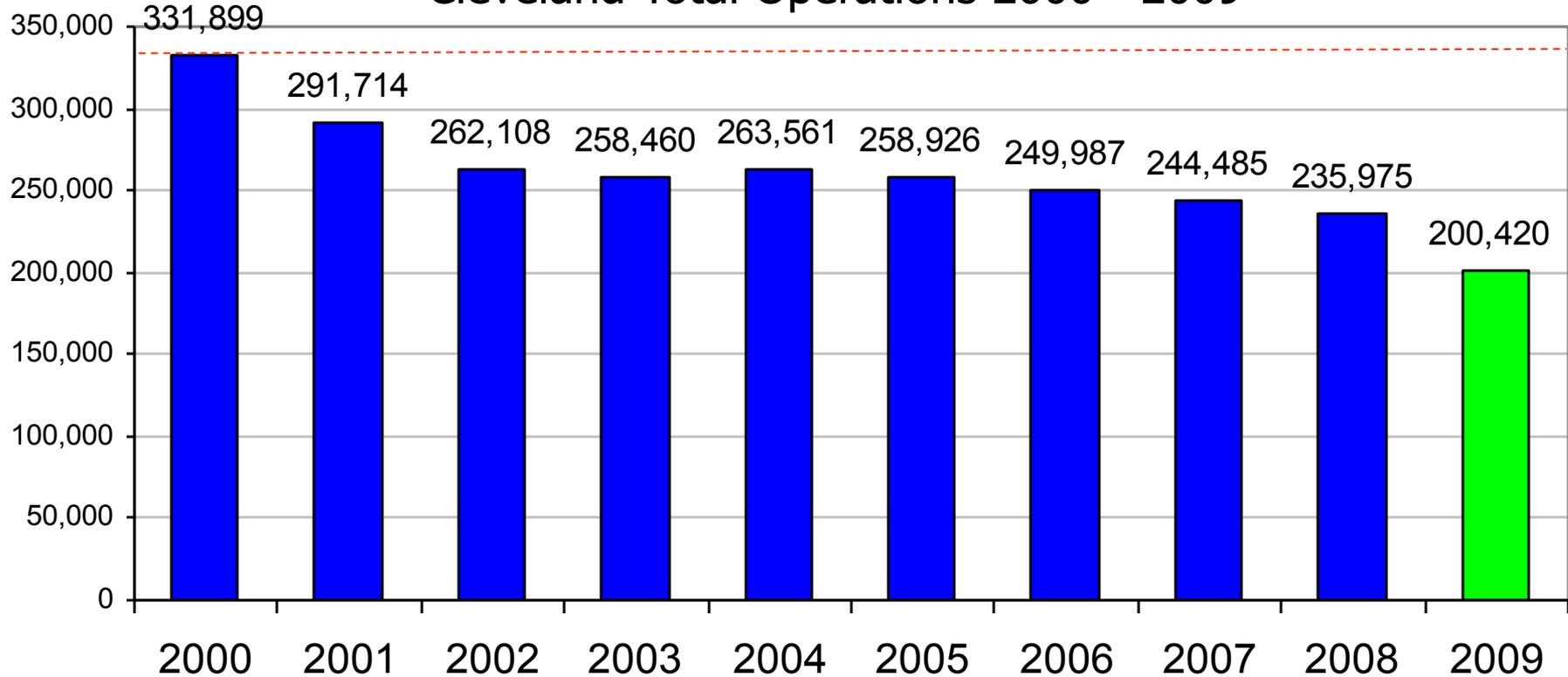
# Noise Highlights of 2009



- Airport operations for the year ending 2009 were down 15.1%, compared to the year ending 2008
- Stage 2 (with hush kit) operations declined 80% for the Year of 2009, as compared to the Year of 2008.
- Heavy operations declined 14% for the Year of 2009, as compared to the Year of 2008.
- Runway 6R/24L was closed from June 14<sup>th</sup> - 17<sup>th</sup> from 2:00 PM to 5:30 PM each day for maintenance, from August 17<sup>th</sup> -22<sup>nd</sup> and from October 12<sup>th</sup> - 22<sup>nd</sup> for construction, and from 10:00 AM to 1:45 PM on Nov 10<sup>th</sup> and 11<sup>th</sup> for surveying.
- Flight data collection of departure tracks through the Noise Monitoring System dramatically improved starting July 15, 2009. Between July 15<sup>th</sup> and December 31<sup>st</sup>, more than 99.9% of departure tracks were collected, as compared to 78.8% for the same time period in 2008. Flight data collection from Jan 1<sup>st</sup> to Jul 14<sup>th</sup>, 2009 was 77.2%. (Data collection was improved due to the FAA granting access to additional beacon codes). Arrival data collection of flights also improved over the same time periods; from 96.3% before July 15, 2009 to 99.2% after July 15<sup>th</sup>.
- Noise Compatibility Plan Update (FAR Part 150 Study)
  - There is a dedicated public website at [www.CLEnoisestudy.com](http://www.CLEnoisestudy.com) and a dedicated Part 150 Hotline number at 216.898.6788
  - There were four public workshops and three working group meetings held and two newsletters issued.
- Complaints
  - There was a 22% reduction in noise complaints for Year 2009, as compared to Year 2008.

# Aircraft Operations

## Cleveland Total Operations 2000 - 2009



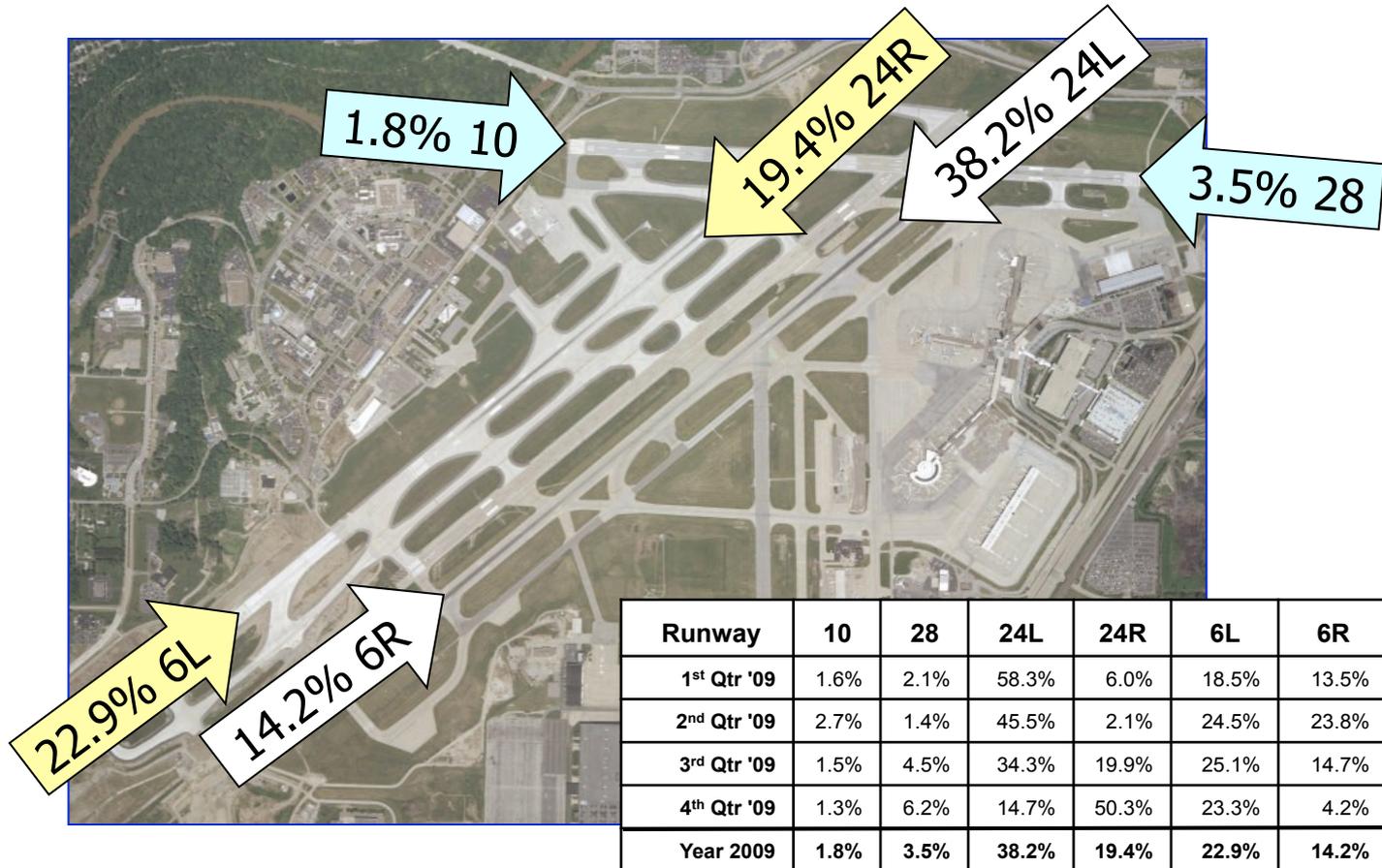
There were 200,420 landings and takeoffs in 2009; this is 15.1% below 2008 and 39.6% below 2000

Source: FAA Control Tower Traffic Count Reports

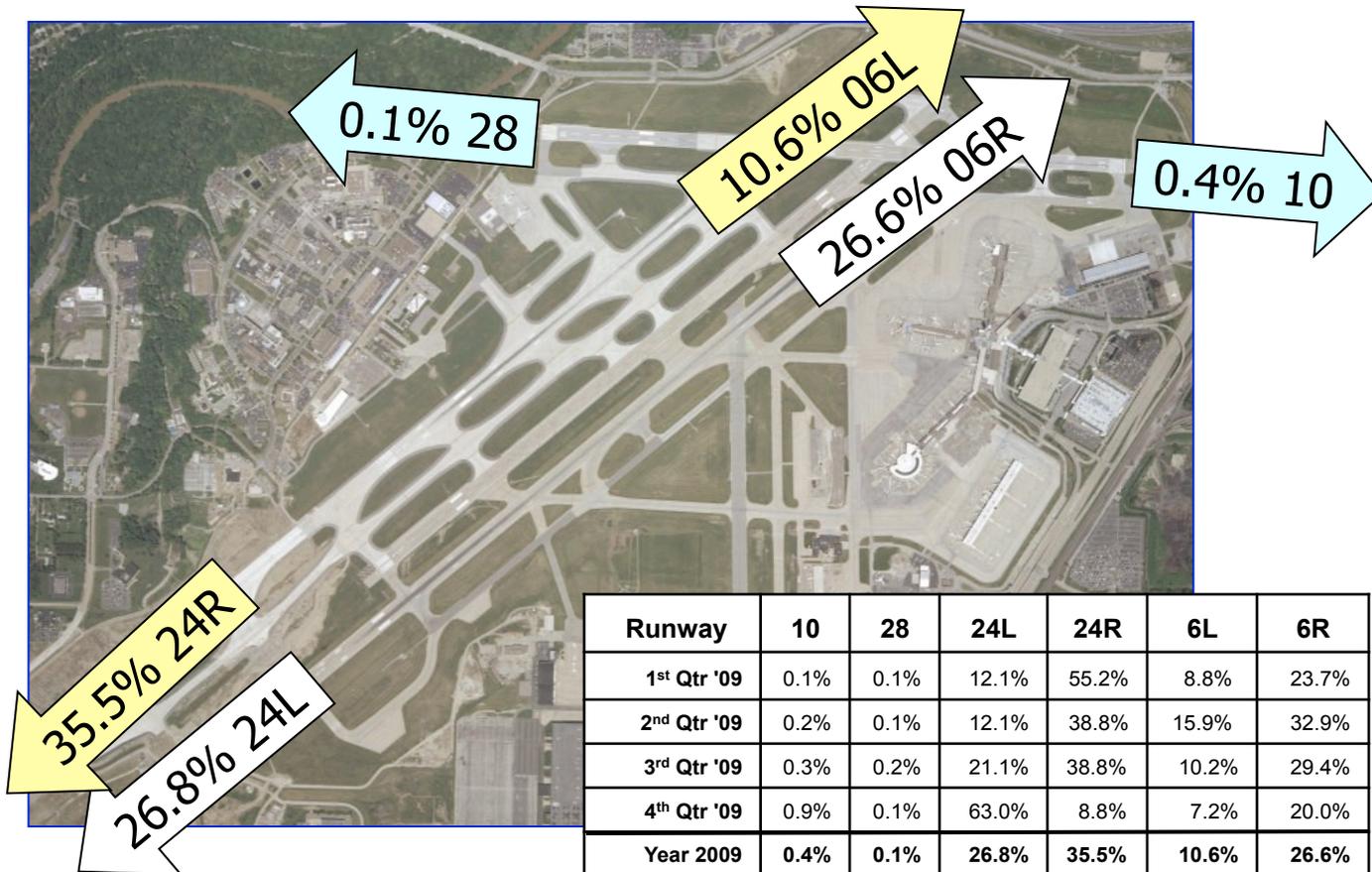
## Landings & Takeoffs

	2008 Activity		2009 Activity	
Commercial				
-Stage 2 with hush kit	1,705	0.72%	337	0.17%
-Heavy	4,700	1.99%	4,042	2.02%
-Other Stage 3	61,440	26.04%	54,929	27.40%
-Regional Jet	114,262	48.42%	99,684	49.74%
-Turboprop	35,979	15.25%	29,863	14.90%
Air Taxi	6,391	2.71%	3,472	1.73%
General Aviation	11,170	4.73%	7,813	3.90%
Military	328	0.14%	280	0.14%
<b>Total</b>	<b>235,975</b>	<b>100.0%</b>	<b>200,420</b>	<b>100.00%</b>

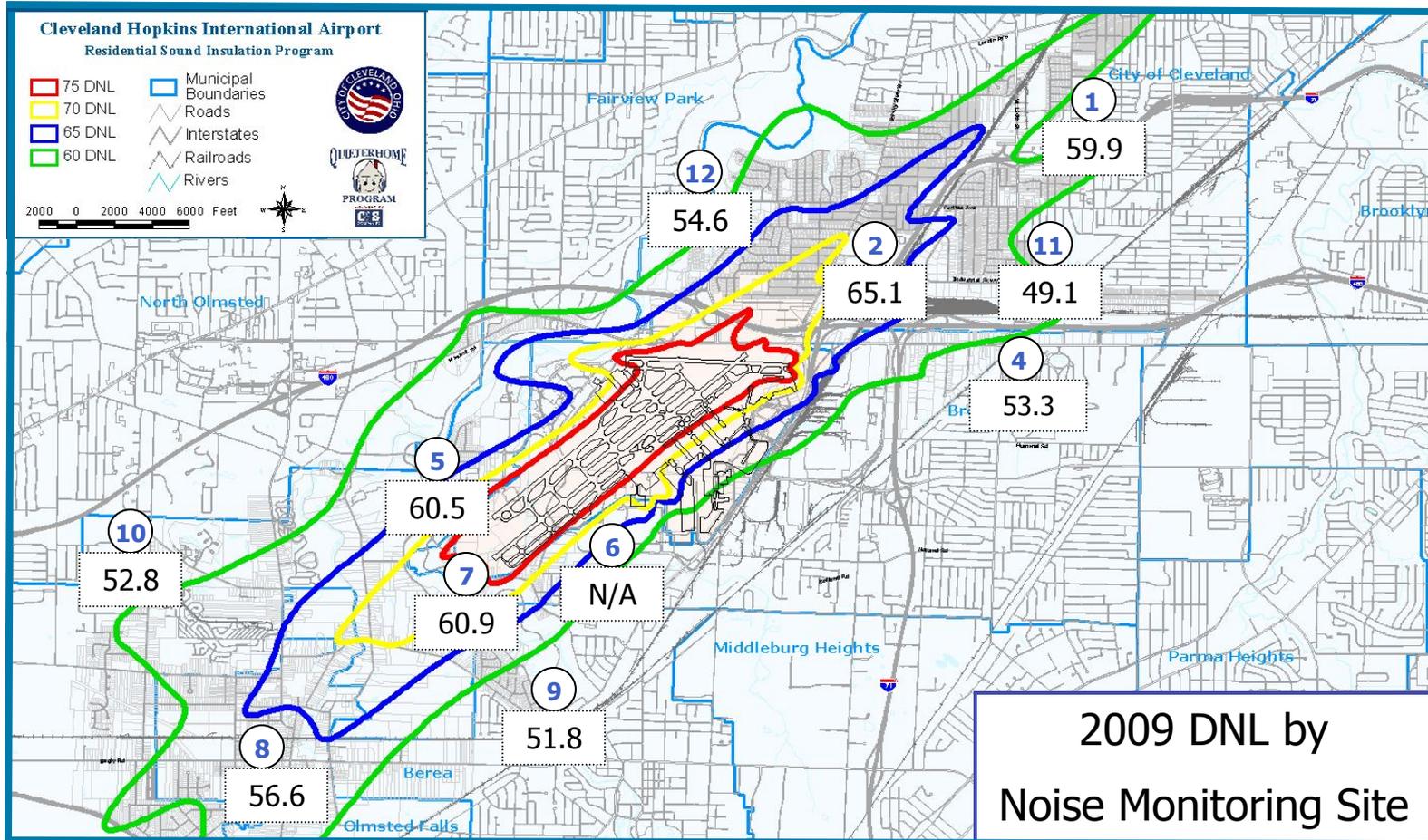
# Runway Use: Year 2009 Landings



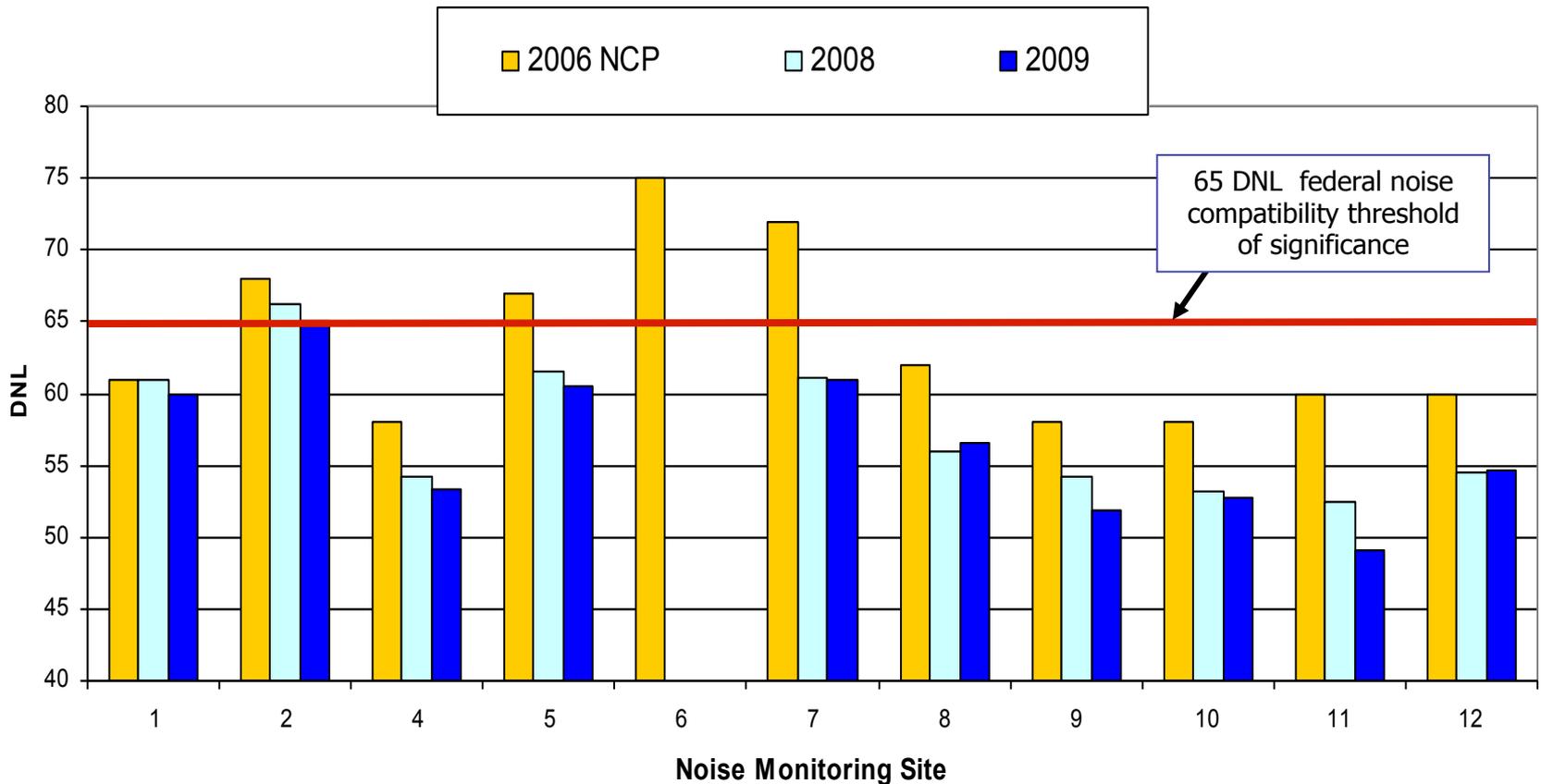
# Runway Use: Year 2009 Take-Offs



# Aircraft Noise

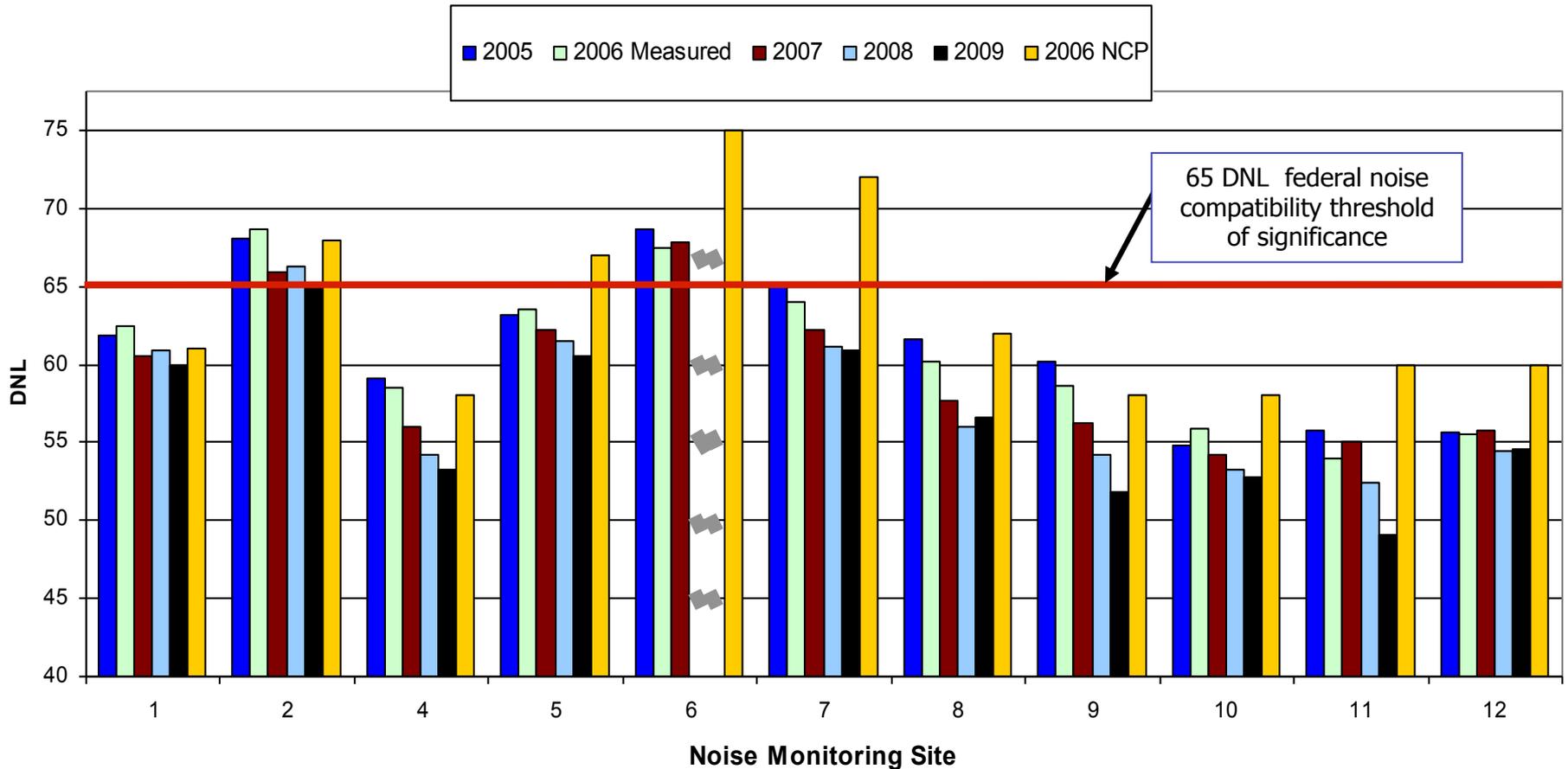


# DNL Change from 2008 to 2009



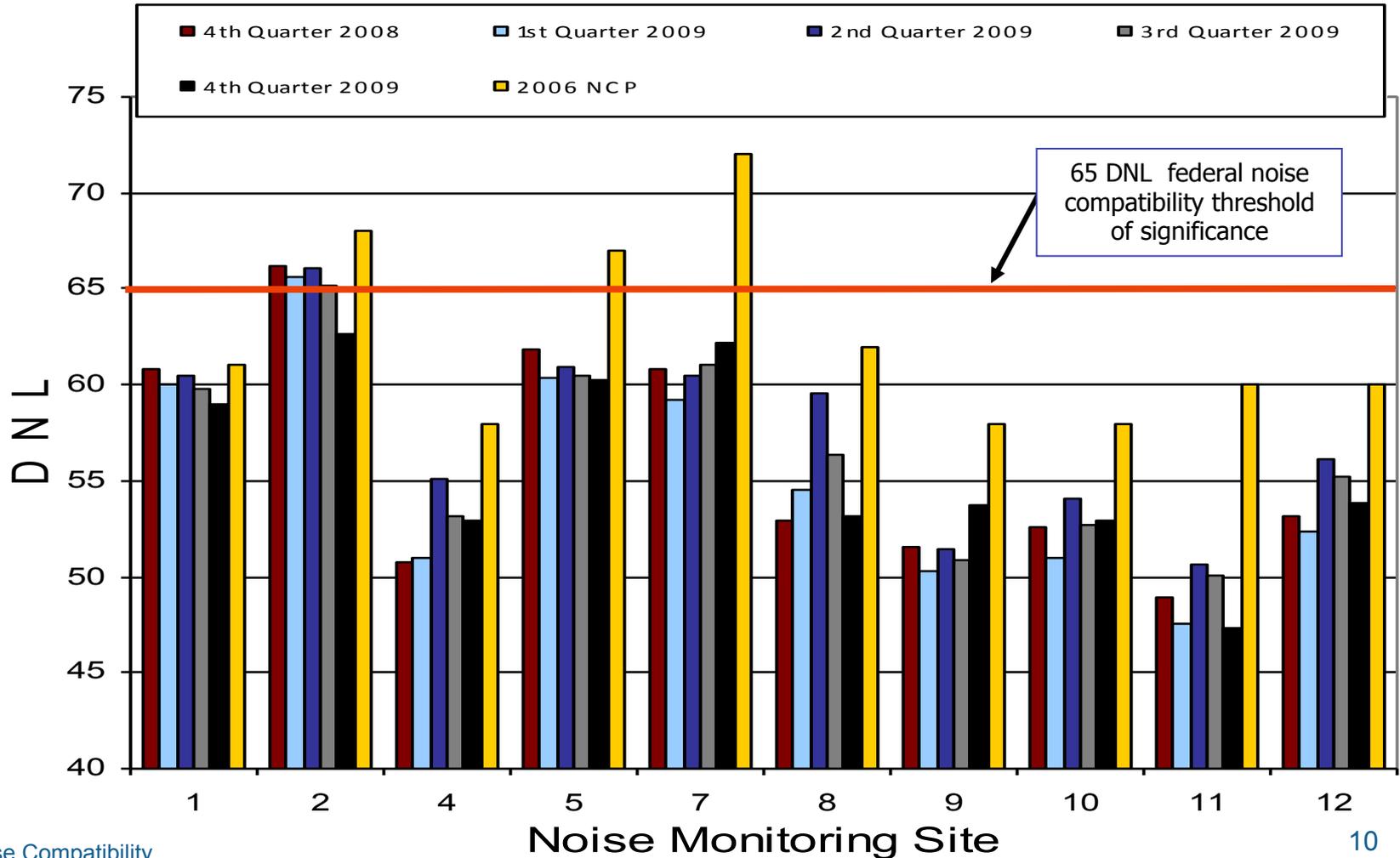
NMS06 was disconnected from power, dismantled and placed in storage in November 2008 due to runway expansion. Less than 6 months of data is available from 2008.

# DNL Comparison by Year



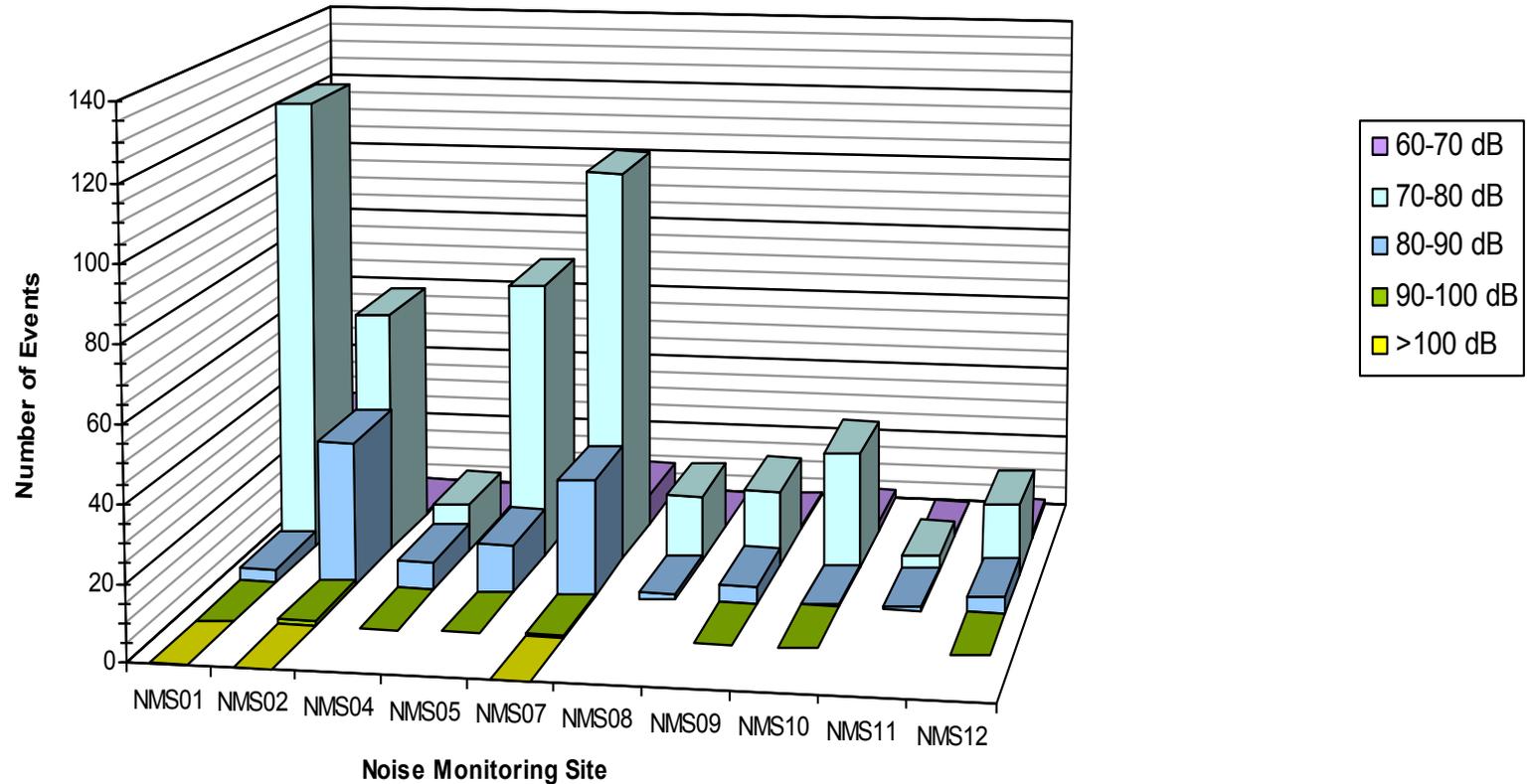
NMS06 was disconnected from power, dismantled and placed in storage in November 2008 due to runway expansion. Less than 6 months of data is available from 2008.

# DNL Comparison by Quarter



# Distribution of Noise Events

Distribution of Lmax Averaged by Day, 4th Quarter, 2009



## Top 3 Lmaxs at each NMS, 4<sup>th</sup> Qtr, (1 of 2)

NMS	Lmax (dB)	Aircraft	Operation	Time and date	Sound Exposure Level (dB)	Duration (sec)
NMS01	100.9	Learjet 25	Arrival on Rwy 24R	12/16/2009 5:38 p.m.	104.8	59.0
NMS01	90.8	Gulf 3	Arrival on Rwy 24L	10/31/2009 8:13 p.m.	95.4	24.5
NMS01	87.9	MD-11	Arrival on Rwy 24L	10/30/2009 5:44 a.m.	95.0	30.5
NMS02	100.5	Learjet 25	Arrival on Rwy 24L	11/24/2009 7:47 p.m.	103.4	11.5
NMS02	96.5	Learjet 25	Arrival on Rwy 24L	11/06/2009 8:28 p.m.	101.4	18.5
NMS02	96.4	MD-11	Arrival on Rwy 24L	11/25/2009 6:00 a.m.	100.2	21.0
NMS04	92.9	Military (C-9)	Departure off Rwy 6R	11/17/2009 11:06 a.m.	99.8	40.5
NMS04	89.6	Boeing 737-500	Arrival on Rwy 28	10/22/2009 5:22 p.m.	94.4	23.0
NMS04	88.4	Boeing 737-200	Departure off Rwy 10	10/12/2009 8:42 p.m.	97.6	47.5
NMS05	95.6	Learjet 25	Departure off Rwy 24L	11/24/2009 8:09 p.m.	104.3	61.5
NMS05	93.4	Unknown Aircraft	Departure off Rwy 24L or 24R	12/17/2009 11:06 a.m.	101.0	33.5
NMS05	92.8	MD-11	Departure off Rwy 24L	10/30/2009 10:39 p.m.	99.2	35.5
NMS07	101.8	Learjet 25	Departure off Rwy 24L	11/06/2009 10:20 p.m.	107.9	47.0
NMS07	100.3	Learjet 25	Departure off Rwy 24L	10/02/2009 6:03 p.m.	107.5	45.0
NMS07	100.3	Boeing 727-200	Departure off Rwy 24L	12/27/2009 10:27 p.m.	108.2	51.5

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, 4<sup>th</sup> Qtr, (2 of 2)



NMS	Lmax (dB)	Aircraft	Operation	Time and date	Sound Exposure Level (dB)	Duration (sec)
NMS08	89.8	Boeing 727-200	Departure off Rwy 24L	12/27/2009 10:27 p.m.	98.8	43.5
NMS08	87.4	Airbus A300-600	Arrival on Rwy 6R	12/23/2009 8:13 p.m.	91.4	22.5
NMS08	86.2	Boeing 737-500	Arrival on Rwy 6R	10/10/2009 8:12 a.m.	90.9	16.5
NMS09	95.9	Unknown Aircraft	Departure off Rwy 24L or 24R	12/17/2009 11:06 a.m.	103.7	37.5
NMS09	89.8	Boeing 737-200	Departure off Rwy 24L	11/29/2009 1:06 p.m.	98.9	54.5
NMS09	89.6	Boeing 737-200	Departure off Rwy 24L	11/20/2009 10:55 a.m.	98.0	36.0
NMS10	90.6	Unknown Aircraft	Departure off Rwy 24L or 24R	11/06/2009 12:28 a.m.	98.0	38.5
NMS10	85.8	Learjet 25	Departure off Rwy 24L	11/24/2009 8:10 p.m.	95.1	49.5
NMS10	84.7	Boeing 727-200	Departure off Rwy 24L	11/30/2009 11:31 p.m.	92.3	45.5
NMS11	85.9	Boeing 737-200	Departure off Rwy 6L	10/16/2009 8:46 a.m.	94.3	30.5
NMS11	85.9	Beechcraft 1900	Arrival on Rwy 24L	11/26/2009 5:59 p.m.	91.7	21.0
NMS11	84.9	Boeing 737-300	Departure off Rwy 6L or 6R	10/12/2009 6:21 p.m.	91.8	20.0
NMS12	91.9	MD-87	Departure off Rwy 6L	10/17/2009 2:49 p.m.	98.3	28.5
NMS12	89.2	MD-11	Departure off Rwy 6R	12/08/2009 10:56 p.m.	95.8	42.0
NMS12	88.3	Airbus A300-600	Departure off Rwy 6R	12/08/2009 12:04 a.m.	95.5	33.5

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

# Noise Hotline



City	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	Annual	%	Callers	%
Berea	0	0	1	1	<b>2</b>	0.35%	2	1.17%
Brook Park	0	0	4	3	<b>7</b>	1.21%	6	3.51%
Cleveland	41	107	124	49	<b>321</b>	55.54%	55	32.16%
Fairview Park	4	12	93	5	<b>114</b>	19.72%	47	27.49%
Lakewood	2	0	0	0	<b>2</b>	0.35%	1	0.58%
Middleburg Hts.	0	0	0	0	<b>0</b>	0.00%	0	0.00%
North Olmsted	0	2	1	0	<b>3</b>	0.52%	1	0.58%
Olmsted Falls	3	4	7	0	<b>14</b>	2.42%	9	5.26%
Olmsted Twp.	1	7	15	2	<b>25</b>	4.32%	8	4.68%
Parma	0	2	15	8	<b>25</b>	4.32%	20	11.70%
Parma Heights	0	0	0	0	<b>0</b>	0.00%	0	0.00%
Rocky River	0	33	17	3	<b>53</b>	9.17%	12	7.02%
Westlake	0	1	2	0	<b>3</b>	0.52%	3	1.76%
Other	1	1	5	2	<b>9</b>	1.56%	7	4.09%
<b>Total 2009</b>	<b>52</b>	<b>169</b>	<b>284</b>	<b>73</b>	<b>578</b>	<b>100.0%</b>	<b>171</b>	<b>100.0%</b>
Total 2008	100	230	322	92	744	100.0%	183	100.0%

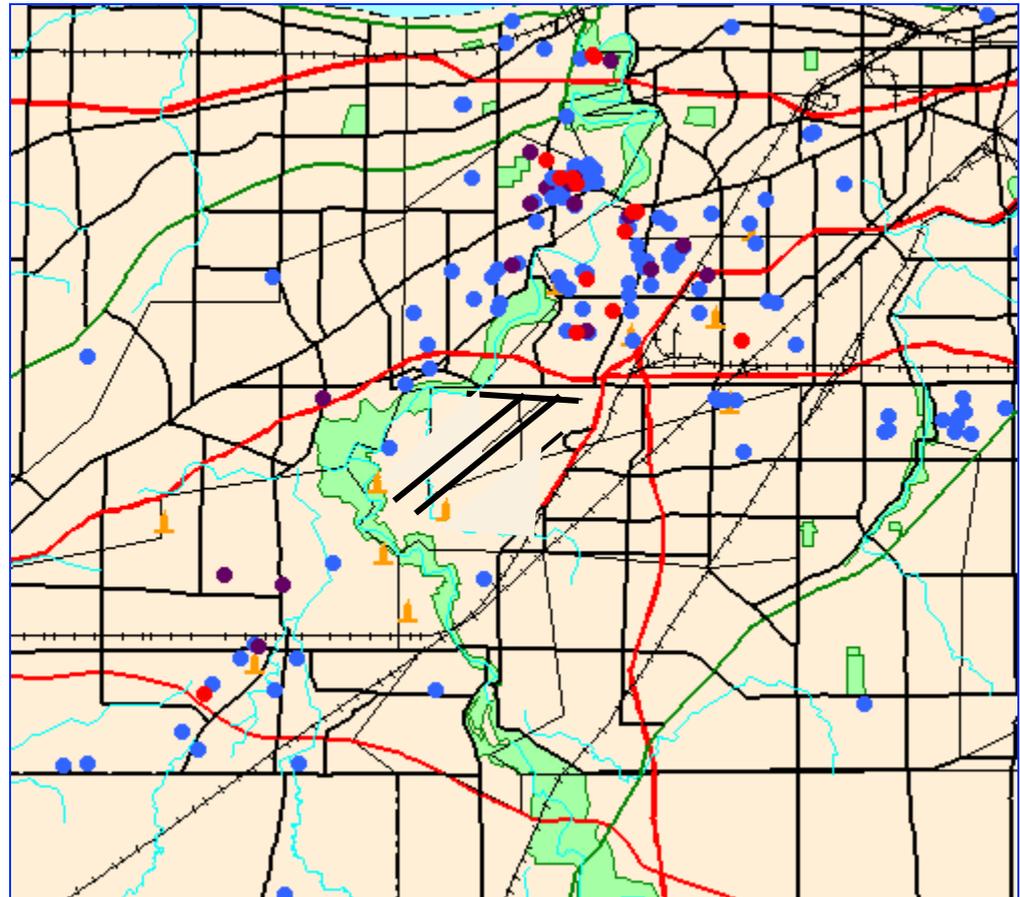
**There was a 22% reduction in noise complaints for Year 2009, as compared to Year 2008**

# 2009 Annual Complaint Map

## LEGEND

Complaints per household

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



## *2010 Forward Plan*

- Noise Compatibility Plan Update (FAR Part 150 Study)
  - Additional Working Group meetings and Public Workshops to be held
  - Study to be submitted to the FAA for approval
- Labor Day Air show to be held at Burke Lakefront Airport featuring the Blue Angels
- Airport perimeter road construction now in progress; may cause intermittent closures of Runway 10/28
- Planned Runway 10/28 project may start in fall 2010
- Master Plan will be finalized and submitted to the FAA for approval
- Stimulus funded taxiway and hold pad project will be substantially complete

**CLE.**  
**Going places.™**

