

May 2015
Monthly Report



Airport Noise Management System

Chicago O'Hare International Airport



Visit the O'Hare Noise Management webpage
on the Internet at

www.flychicago.com

Airport Noise Management System Monthly Report

Report Descriptions



Background

Installed in 1996, the Airport Noise Management System (ANMS) enables the City of Chicago to monitor the amount of noise being generated over the communities surrounding O’Hare by the aircraft operating at the Airport. The ANMS collects, analyzes and processes data from a number of sources of information including a network of 32 noise monitors around O’Hare, FAA radar data, weather data and noise complaints. Over 150,000 flights and 400,000 noise events are recorded by the ANMS each month for the Chicago Department of Aviation (CDA). The City of Chicago and the O’Hare Noise Compatibility Commission utilize data from the ANMS to facilitate the development and management of noise abatement programs at the Airport. The following reports summarize pertinent monthly information from that data concerning the noise levels and operations at the Airport.

Runway Use Report

O’Hare has eight runways that are all utilized at different times depending primarily upon the prevailing wind conditions on the airfield, as well as any runway maintenance.

The Runway Use Report presents the average percentage of use for each runway for the current month, the previous month and a 12-month average. The percentage of use for departures and arrivals is shown graphically for each runway. This data is for daytime hours (7 a.m. to 10 p.m.) and for all aircraft types. Also shown is the runway use for the nighttime hours (10 p.m. to 7 a.m.). Percentage is a ratio whereas a percentage point is the difference between two percentages.

Highlights for **May 2015** include:

Departures

Most used departure runway: **28R – 40%**
 22L departures increased by **7pp** from April 2015
 10L departures decreased by **6pp** from April 2015

Arrivals

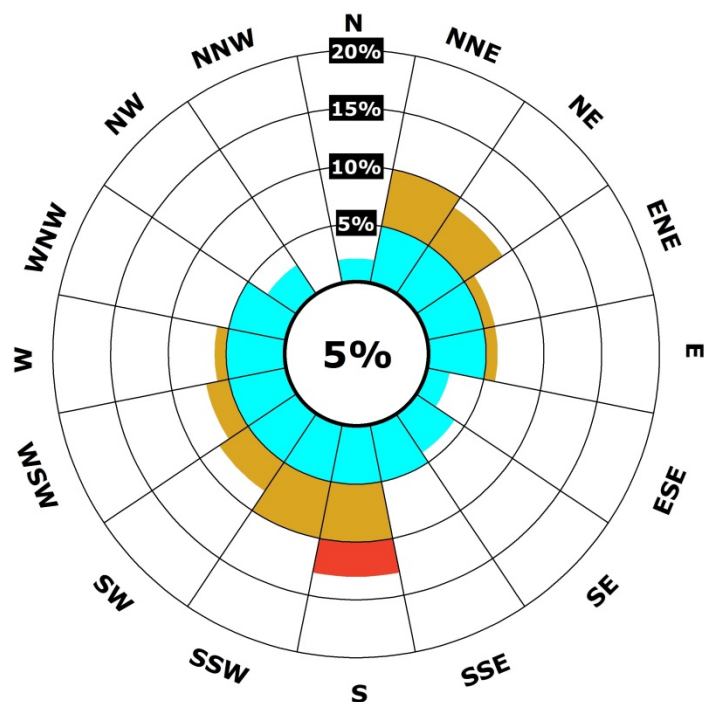
Most used arrival runway: **27L – 29%**
 27L arrivals increased by **3pp** from April 2015
 9L arrivals decreased by **2pp** from April 2015

Total Operations – 76,329
pp = Percentage Points

Total Operations are based on the FAA’s Air Traffic Activity Data System (ATADS).

Wind Summary

Wind is a key factor influencing runway use and operation. Aircraft performance requirements make it necessary for aircraft to take off and land into the wind for safety purposes. Ideally, aircraft should take off and land into the wind as the increased airflow over the wings provides improved lift. The diagram to the right summarizes the percent of wind occurrences by direction based on hourly data from the KORD Automated Surface Observing System (ASOS), which is a joint effort of multiple government agencies.



Legend

- 0% - 5%
- 5% - 10%
- 10% - 15%
- 15% - 20%
- Calm/Variable Percentage

Aircraft Noise Report

The Aircraft Noise Report summarizes noise measurements from each of the 32 noise monitors located around the Airport. The data presented summarizes the Day-Night Average Sound Levels (DNL's). DNL is a 24-hour time-averaged sound exposure level with a 10 decibel (dB) nighttime (10 p.m. to 7 a.m.) weighting to account for the lower background noise levels during the nighttime hours.

The data displays the measured aircraft DNL for each month and its comparison to the same month of the previous year, and it compares the current month to the 12-month average. The aircraft noise report identifies noise from the existing aircraft operations at O'Hare. The modeled values for each monitor are shown for 1997, 2000 and the OMP Build-Out Noise Contours. The aircraft noise levels for each monitor vary from month to month. This is primarily due to runways being utilized differently under changing wind conditions.

Aircraft Fleet Mix Report

The Aircraft Fleet Mix Report summarizes the number and type of aircraft operating at O'Hare International Airport during both all hours of the day and during the nighttime hours.

In 1990, Congress enacted legislation to eliminate all Stage 2 aircraft operating in the continental United States by the year 2000. In response, the FAA created a program to "phase-out" the older, louder Stage 2 aircraft over a ten-year period to achieve full compliance by the 2000 deadline. As of January 2000, all aircraft operating at O'Hare and within the United States were Stage 3. Stage 3 aircraft, such as the Boeing 757 (B757) and new Boeing 737's (B737) use a quieter type of engine that significantly reduces noise at the source. Also, a Stage 3 aircraft can be a previous Stage 2 aircraft with the engines retrofitted with a "hush-kit" such as a Boeing 727 (B72Q), Boeing 737-200 (B73Q) and DC-9 (DC9Q). Greater than **99%** of the operations at O'Hare International Airport are originally certified as Stage 3 aircraft.

Noise Complaint Report

The Chicago Department of Aviation (CDA) maintains a toll-free noise hotline (**1-800-435-9569**) and an on-line service at www.flychicago.com for citizens to express their concern about particular aircraft events or aircraft noise levels in general. The Noise Complaint Report summarizes the number of complaints received and where the complainants were located. The tabular report lists the number of complaints by community as well as the number of individual complainants. The graphs illustrate the nature of complaints during the specified month.

Also shown are complaints by month displaying seasonal trends. The chart at the bottom of this page illustrates the trend in monthly complaints. These totals only include complaints made within the State of Illinois to the O'Hare Noise Hotline toll-free number or on-line feature.

Complaints by Month									
Month	2007	2008	2009	2010	2011	2012	2013	2014	2015
January	66	31	860	907	1,349	5,635	1,357	6,321	39,500
February	23	20	1,186	968	1,060	3,236	966	7,472	122,803
March	105	60	1,069	1,222	1,209	2,175	1,402	11,145	352,846
April	69	63	985	1,478	1,099	1,113	1,863	10,961	408,468
May	132	92	1,235	1,168	1,192	1,210	1,881	21,436	407,523*
June	166	140	1,131	1,587	1,340	1,332	2,419	22,566	
July	185	138	1,466	1,077	849	1,074	2,280	27,956	
August	145	210	1,649	1,358	2,050	1,470	2,296	30,249	
September	149	151	1,883	1,290	3,120	993	2,124	32,532	
October	133	123	1,514	1,207	3,292	1,366	3,496	33,866	
November	50	271	825	1,234	3,443	877	4,763	30,748	
December	25	1,184	1,055	850	4,044	1,016	4,646	32,959	
Total Calls	1,248	2,483	14,858	14,346	24,047	21,497	29,493	268,211	1,331,140

*42% of the complaints in May came from 12 addresses.

Runway Use Report

Chicago O'Hare International Airport
 Period: May 2015
 Time of Day: 7:00 a.m. to 10:00 p.m.



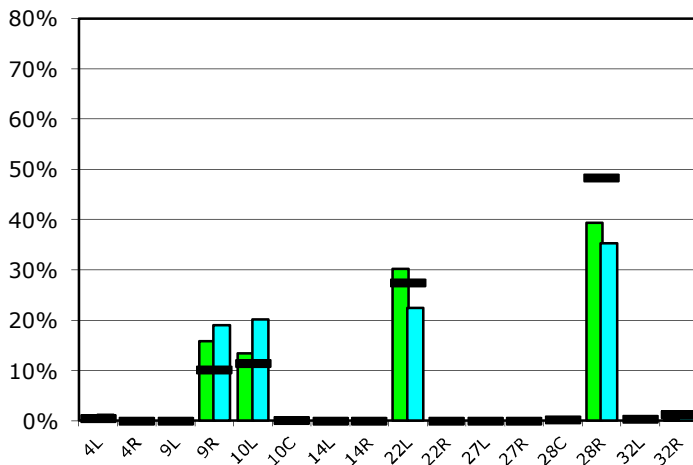
Runway Use (7 a.m. to 10 p.m.)

Source: Airport Noise Management System (ANMS)

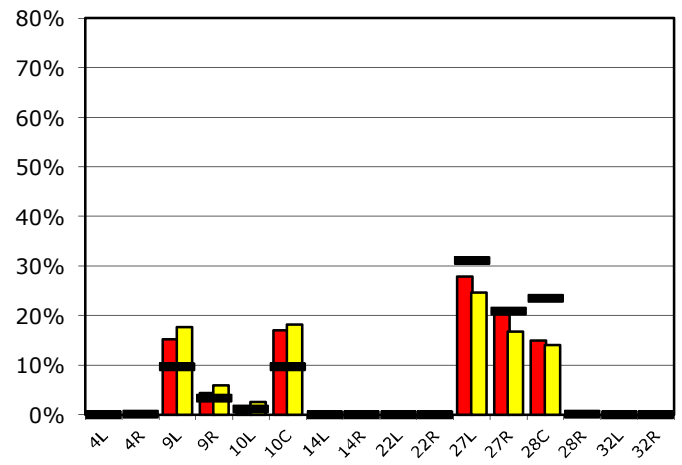
Runway Utilization

	4L	4R	9L	9R	10L	10C	14L	14R	22L	22R	27L	27R	28C	28R	32L	32R
Average Daily Departures																
May 2015	7	0	0	173	146	0	0	0	330	0	0	0	3	429	0	2
April 2015	13	0	0	207	220	3	0	0	244	0	1	0	2	385	4	10
12 Month Avg.	6	0	0	110	124	1	0	0	298	0	0	0	3	524	4	14
Average Daily Arrivals																
May 2015	0	0	158	45	2	177	0	0	0	0	289	209	155	1	0	0
April 2015	0	0	181	61	26	186	0	1	0	0	252	172	144	3	0	0
12 Month Avg.	0	1	100	35	12	101	0	0	1	1	322	216	243	2	0	0

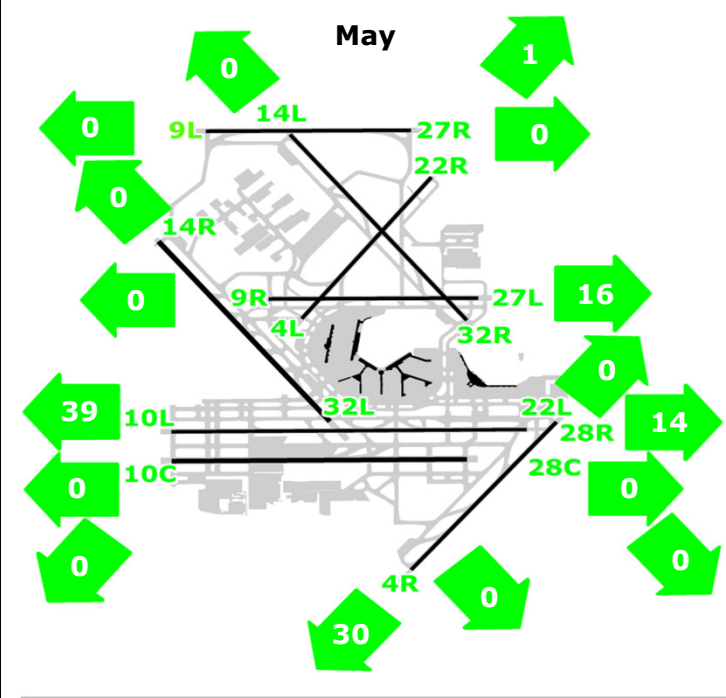
Departures (7 a.m. to 10 p.m.)



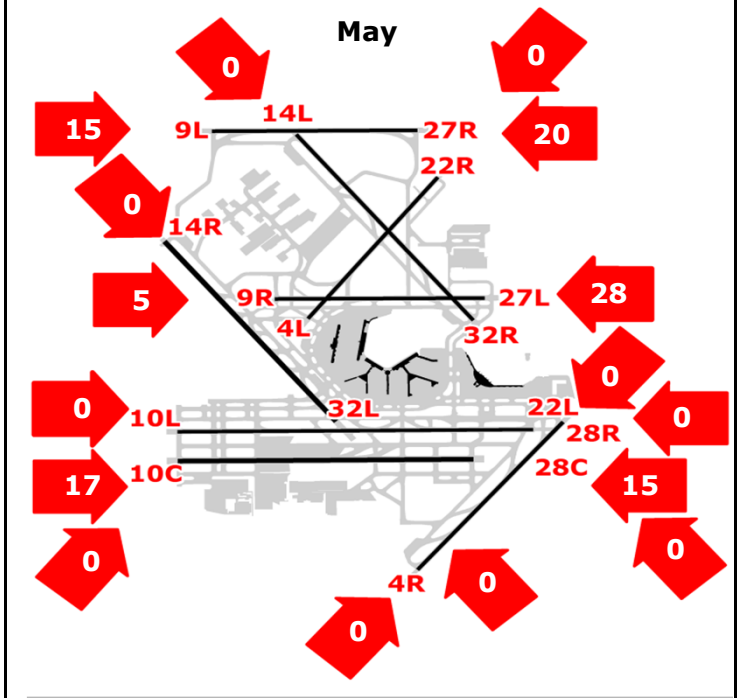
Arrivals (7 a.m. to 10 p.m.)



Percentage Departure Utilization



Percentage Arrival Utilization



Runway Use Report

Chicago O'Hare International Airport

Period: May 2015

Time of Day: 10:00 p.m. to 7:00 a.m.



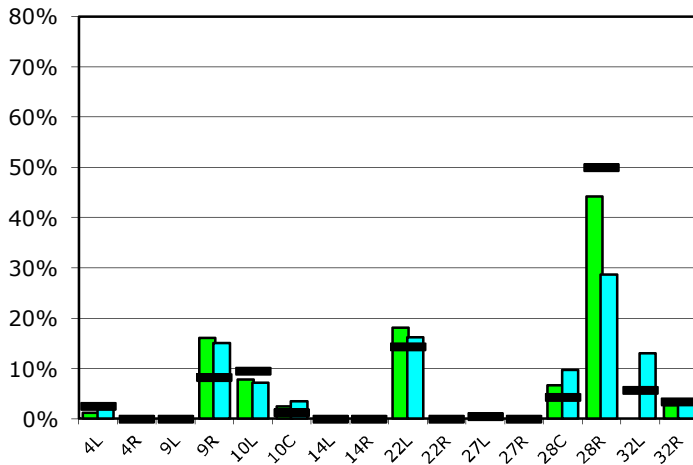
Runway Use (10 p.m. to 7 a.m.)

Source: Airport Noise Management System (ANMS)

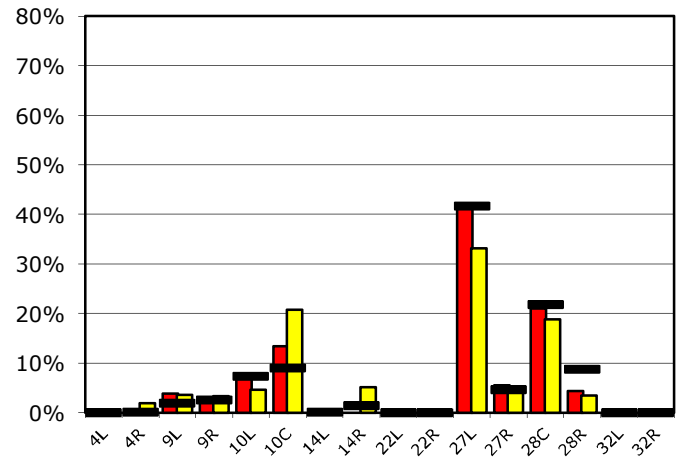
Runway Utilization

	4L	4R	9L	9R	10L	10C	14L	14R	22L	22R	27L	27R	28C	28R	32L	32R
Average Daily Departures																
May 2015	1	0	0	19	9	3	0	0	21	0	1	0	8	52	0	3
April 2015	3	0	0	16	8	4	0	0	18	0	1	0	11	31	14	4
12 Month Avg.	3	0	0	9	11	1	0	0	16	0	1	0	5	57	7	4
Average Daily Arrivals																
May 2015	0	0	5	4	10	19	0	0	0	0	57	8	29	6	0	0
April 2015	0	3	5	5	6	28	0	7	0	0	45	7	26	5	0	0
12 Month Avg.	0	0	3	4	10	12	0	2	0	0	56	6	29	12	0	0

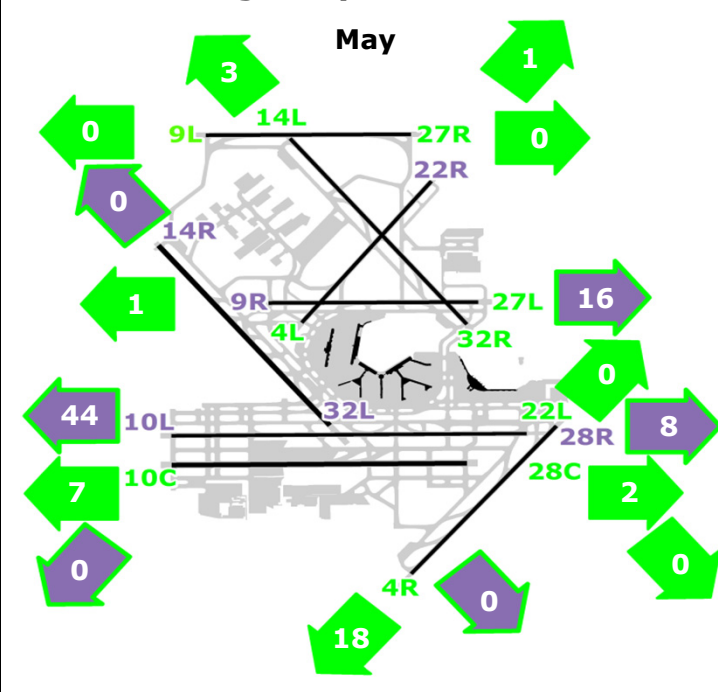
Departures (10 p.m. to 7 a.m.)



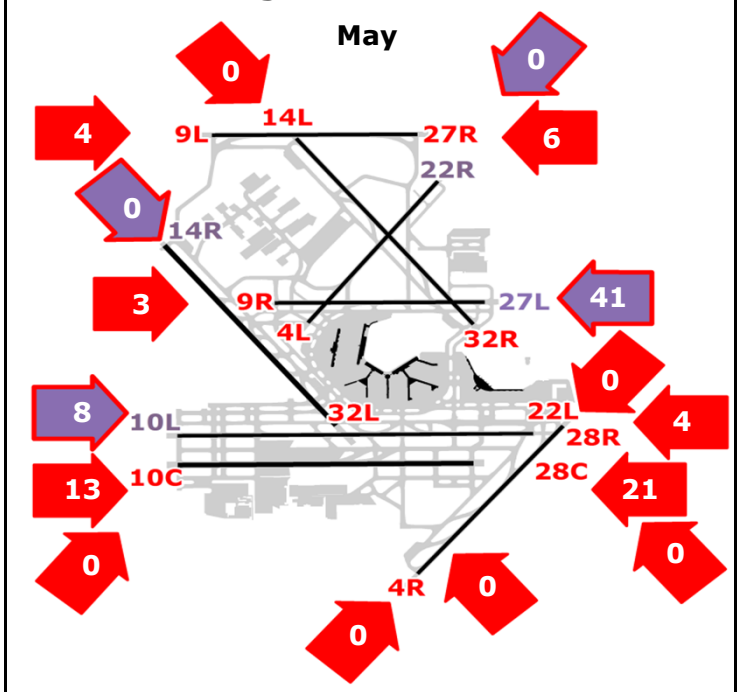
Arrivals (10 p.m. to 7 a.m.)



Percentage Departure Utilization



Percentage Arrival Utilization



Purple denotes Fly Quiet preferential departure and arrival runways.

Aircraft Noise Report

Chicago O'Hare International Airport

Period: May 2015

Metric: Aircraft DNL



RMT #	Community	Last 12 Months Monitored Noise Levels											Last May 14	12 Month Average vs 1997 ²	Modeled 1997 Values	Modeled 2000 Values	Modeled OMP Build Out Values	
		Jun 14	Jul 14	Aug 14	Sep 14	Oct 14	Nov 14	Dec 14	Jan 15	Feb 15	Mar 15	Apr 15						May ¹ 15
1	Arlington Heights	51.7	52.2	52.1	55.4	51.6	51.9	52.0	51.4	50.0	54.6	55.8	52.6	56.3	53.0	63.0	63.0	50.5
2	Melrose Park	56.2	54.2	53.8	54.7	54.3	54.0	53.7	52.9	54.4	58.0	59.5	57.5	57.3	55.8	63.4	61.0	50.3
3	Bensenville	63.7	65.0	63.7	64.6	65.4	65.3	64.7	64.1	63.1	64.3	64.7	64.0	63.7	64.4	71.3	67.3	64.9
4	Schiller Park	56.5	58.9	55.4	55.1	55.3	52.0	53.2	51.4	51.2	54.3	55.6	--	58.1	55.0	62.6	62.6	58.8
5	Chicago	61.9	62.6	60.8	62.2	61.1	61.2	60.4	60.3	58.8	60.2	60.6	61.7	59.7	61.1	60.8	59.8	61.9
7	Des Plaines	52.3	53.5	54.7	55.6	57.3	53.0	50.9	52.7	51.9	57.0	53.4	52.1	54.6	54.2	65.4	62.0	48.5
8	Des Plaines	60.8	56.8	57.6	55.6	57.1	56.0	54.1	54.4	52.8	56.8	58.3	59.9	61.0	57.3	70.0	68.8	60.8
10	Rolling Meadows	58.9	51.8	50.6	52.3	50.7	48.5	50.0	49.5	46.8	52.7	53.8	52.0	52.3	52.7	59.0	60.8	48.9
11	Chicago	66.9	62.4	54.3	52.8	53.6	51.6	52.4	52.2	51.4	53.9	54.2	54.2	57.4	58.6	60.9	60.7	50.3
12	Elk Grove Village	61.8	61.1	59.6	--	63.3	59.9	64.7	62.5	56.3	57.8	64.6	62.1	60.5	61.9	66.7	62.1	57.6
13	Elk Grove Village	62.7	62.5	63.4	62.2	62.9	61.4	63.9	63.5	62.7	66.5	68.0	63.6	64.1	64.0	80.0	77.6	64.6
14	Elk Grove Village	53.4	53.9	55.2	55.3	54.9	57.7	54.9	56.2	53.8	57.7	62.5	57.0	59.0	56.9	67.6	65.7	54.5
15	Franklin Park	54.6	52.1	53.6	52.5	54.1	52.5	51.5	50.7	52.2	54.0	54.6	52.8	57.2	53.1	64.1	62.6	53.6
16	Franklin Park	65.1	65.4	64.4	64.6	66.7	66.0	65.5	64.8	63.0	64.8	65.9	65.4	63.6	65.2	72.2	72.1	63.4
17	Harwood Heights	63.3	63.6	64.0	64.5	63.8	63.7	63.3	62.6	61.2	63.4	62.6	63.7	61.4	63.4	66.4	65.4	57.9
19	Stone Park	57.1	56.6	56.6	56.6	56.7	54.3	51.7	51.8	51.5	54.8	54.4	54.5	56.3	55.1	64.7	61.7	51.6
20	Mount Prospect	56.2	60.2	57.1	54.1	51.9	53.0	51.1	51.1	50.3	53.6	54.7	52.9	--	54.3	63.5	62.4	49.1
21	Mount Prospect	47.6	48.5	47.5	50.2	48.7	51.6	47.7	49.5	47.2	47.1	52.6	49.8	48.7	49.4	59.6	58.6	53.6
22	Norridge	64.9	64.2	65.2	64.7	64.7	64.2	--	--	--	--	--	--	65.7	64.7	69.2	67.7	59.2
23	Northlake	62.8	64.1	63.7	62.7	64.6	63.3	63.8	62.9	62.1	63.5	63.6	64.4	61.2	63.5	73.5	69.1	59.6
24	Park Ridge	54.5	50.7	52.2	53.2	51.7	48.7	50.1	48.3	46.0	51.8	53.5	53.2	55.5	51.7	60.3	58.8	50.6
25	Park Ridge	61.4	59.5	60.0	60.7	61.7	60.2	60.3	59.6	57.9	61.0	62.3	63.3	61.4	60.9	69.1	61.8	66.7
26	Park Ridge	57.7	54.9	56.5	58.1	57.6	54.9	54.6	53.7	51.2	56.2	57.8	57.5	58.5	56.3	64.0	61.2	59.5
27	Rosemont	67.4	65.7	65.0	67.2	67.8	64.9	66.3	65.2	63.5	67.2	68.3	68.7	67.8	66.7	73.0	67.6	70.2
28	Schiller Park	74.3	71.9	74.3	73.9	74.4	74.5	74.5	73.6	73.4	73.4	73.7	73.9	75.7	73.9	79.6	78.7	67.9
29	Wood Dale	67.1	66.0	67.1	65.6	66.1	63.8	65.3	64.2	63.6	66.0	67.1	67.2	67.2	65.9	n/a	n/a	65.1
30	Wood Dale	56.0	56.8	55.5	56.1	57.5	57.8	57.4	56.5	55.7	56.8	56.5	55.6	57.8	56.6	n/a	n/a	58.5
32	Wood Dale	66.4	67.8	66.8	68.4	67.8	68.1	67.9	66.5	65.0	65.9	65.3	67.6	64.9	67.1	71.2	66.4	63.8
33	Park Ridge	63.0	62.7	62.2	62.5	63.4	62.5	62.0	60.3	58.9	61.6	63.2	63.5	62.2	62.3	n/a	n/a	61.9
34	Elk Grove Village	61.2	59.0	58.3	59.9	58.8	58.8	58.4	56.8	54.8	57.6	58.7	60.0	58.1	58.8	66.3	61.2	61.4
35	Unincorporated Cook	58.3	59.2	58.0	59.2	59.7	59.5	58.4	57.7	55.6	58.4	59.0	58.9	58.7	58.6	70.8	65.4	54.7
37	Mount Prospect	58.7	49.4	54.0	54.0	51.7	49.0	46.2	45.4	45.0	46.4	52.0	50.7	55.1	52.2	55.1	57.0	50.5

-- Data unavailable.

n/a - Not Applicable

1. **Red** represents an increase of 1 dB or more from the same month of the previous year (10 monitors). **Green** represents a decrease of 1dB or more from the same month of the previous year (12 monitors).

2. **Red** represents an increase of 1 dB or more from the modeled 1997 noise contour level (0 monitors). **Green** represents a decrease of 1dB or more from the modeled 1997 noise contour level (29 monitors).










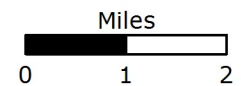
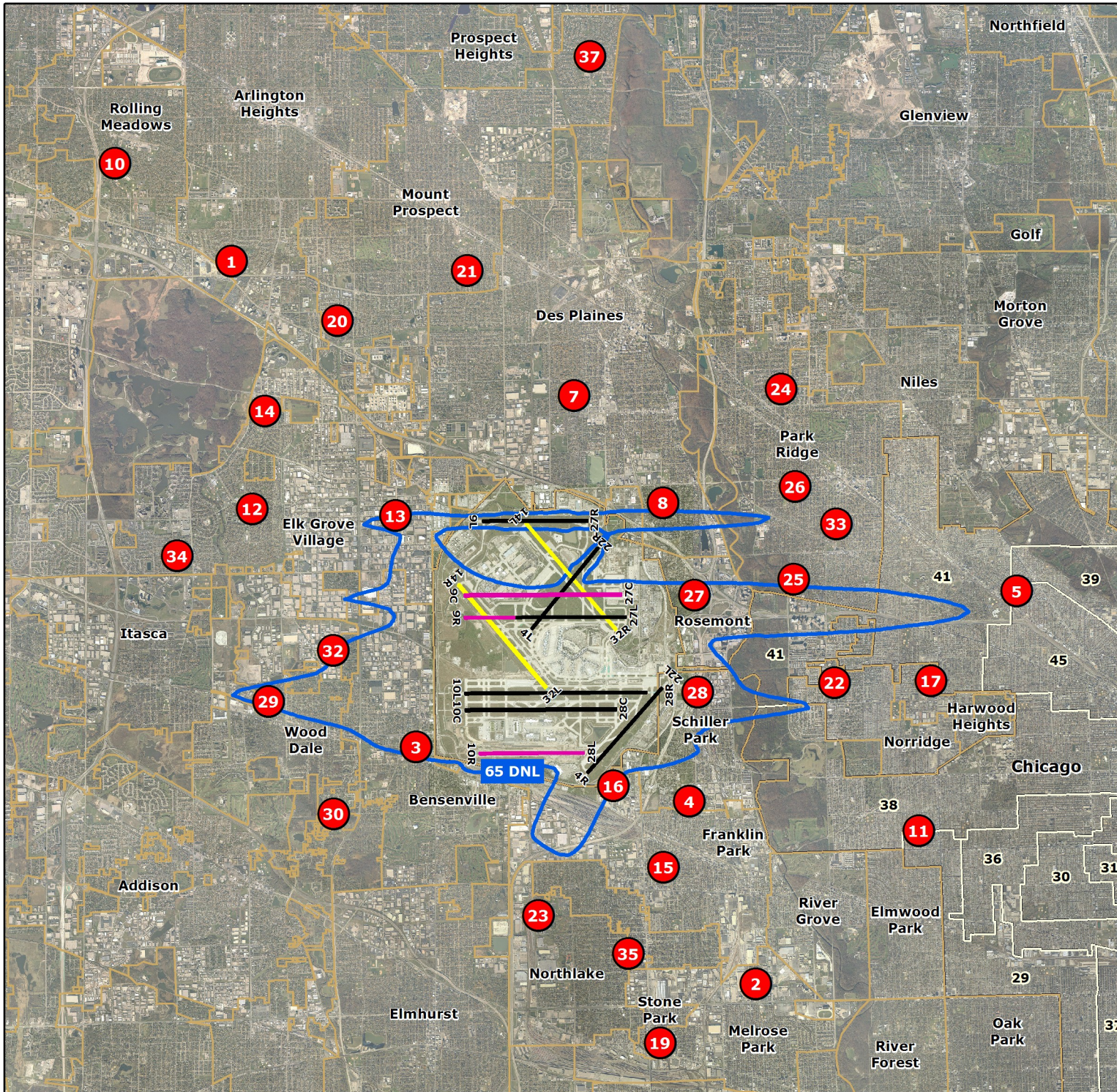
Permanent Noise Monitor Locations


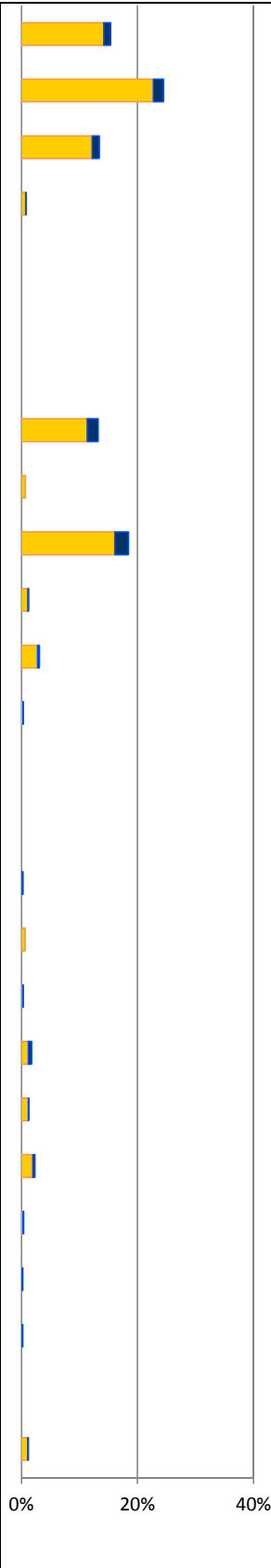



















City of Chicago
Rahm Emanuel, Mayor

Department of Aviation
Ginger S. Evans, Commissioner

Legend

-  Permanent Noise Monitors (32)
-  Existing Runways
-  Existing Runways to be Decommissioned
-  Future Runways
-  O'Hare Modernization Program Build-Out Noise Contour (65 DNL)
-  Chicago Ward Boundaries
-  Community Boundaries

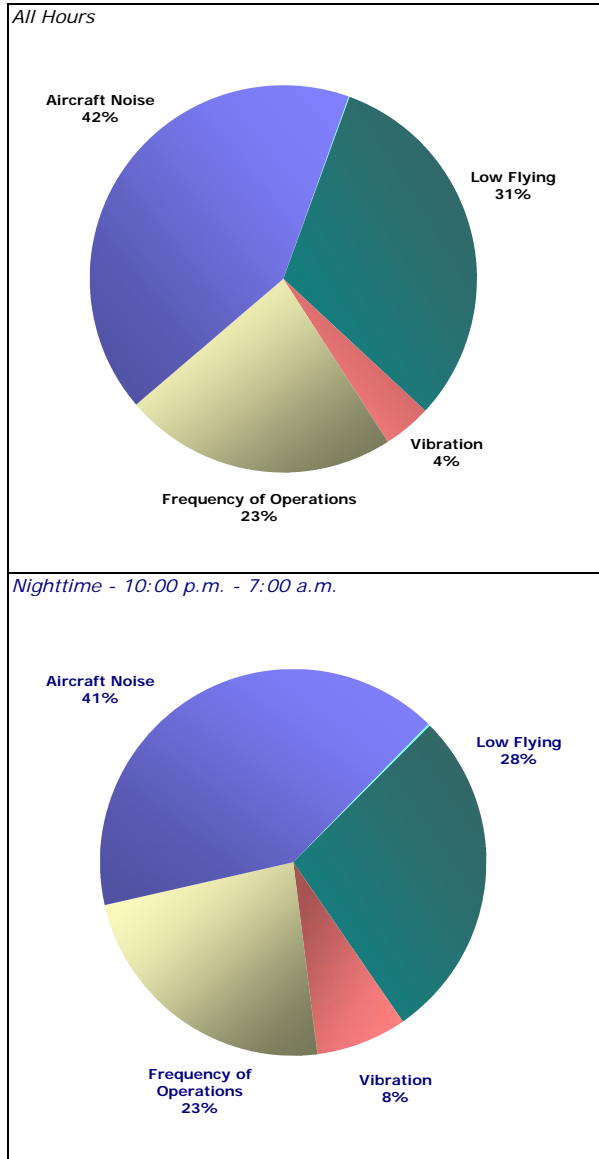


Aircraft	Average Operations Per Day (All Hours)	Average Operations Per Night (10 p.m. - 7 a.m.)	Percent of Total (All Hours)	Percent of Total (10 p.m. - 7 a.m.)	Percentage of Total
Regional Aircraft					
 CRJ200/700/900	367	28	15.4%	1.2%	
 E135/E145	584	42	24.5%	1.8%	
 E170	320	29	13.4%	1.2%	
 E190	8	1	0.0%	0.0%	
 C208	18	1	0.8%	0.0%	
Subtotal	1,297	101	54.1%	4.2%	
Narrow-Body Aircraft					
 A319/320/321	315	45	13.2%	1.9%	
 B717	16	0	0.7%	0.0%	
 B737	440	56	18.5%	2.3%	
 B757	30	4	1.3%	0.2%	
 MD80	74	8	3.1%	0.3%	
 MD90	8	1	0.3%	0.0%	
Subtotal	883	114	37.0%	4.8%	
Wide-Body Aircraft					
 A300	7	6	0.3%	0.3%	
 A330	15	0	0.6%	0.0%	
 A340	7	1	0.3%	0.0%	
 B747	42	14	1.8%	0.6%	
 B767	30	2	1.3%	0.1%	
 B777	56	9	2.3%	0.4%	
 B787	9	1	0.4%	0.0%	
 DC10	5	2	0.2%	0.1%	
 MD11	5	2	0.2%	0.1%	
Subtotal	176	37	7.4%	1.6%	
General Aviation	28	2	1.2%	0.1%	
Total	2,384	254	100%	11%	

Monthly Complaints by Community¹

Community	Complaints		Complainants	
	All Hours	Nighttime	All Hours	Nighttime
Addison	1,526	601	10	3
Arlington Heights	150	38	33	11
Bartlett	62	11	1	1
Bensenville ²	127,181	29,931	49	36
Berkeley	8	2	6	2
Bloomington	287	62	10	4
Buffalo Grove	1	--	1	--
Campton Hills	1	1	1	1
Carol Stream	51	3	3	1
Chicago ³	146,692	35,002	17,472 ⁵	4,836
Ward 36	2	1	2	1
Ward 38	7,886	1,746	75	48
Ward 39	36,484	9,915	206	158
Ward 40	9,123	2,642	48	38
Ward 41	44,655	7,930	298	189
Ward 45	15,406	4,214	113	79
Ward Other	16,957	4,512	551	281
Ward Unknown	16,179	4,042	16,179	4,042
Des Plaines	50	25	22	5
Downers Grove	1	1	1	1
Elgin	18	11	2	2
Elk Grove Village	25,640	3,924	4,390	781
Elmhurst	1,342	137	15	8
Evanston	4	--	4	--
Franklin Park	535	27	7	2
Geneva	1	1	1	1
Glen Ellyn	54	10	53	9
Glenview	170	61	5	3
Hampshire	16	--	1	--
Hanover Park	6	4	2	2
Harwood Heights	663	214	22	16
Hillside	11	6	2	2
Itasca	12,706	3,927	139	123
Kildeer	4	1	4	1
Lincolnwood	4,414	1,407	79	9
Medinah	408	178	5	4
Melrose Park	14	4	6	2
Mettawa	1	--	1	--
Mount Prospect	18	5	3	1
Niles	197	19	6	5
Norridge	10,347	1,742	176	74
Northbrook	737	16	18	9
Northlake	9	--	3	--
Oak Park	1	--	1	--
Park Ridge	14,252	1,996	693	97
River Forest	721	83	721	83
River Grove	10	--	9	--
Riverside	11	4	1	4
Rolling Meadows	8	--	1	--
Roscoe	119	6	1	6
Roselle	22	4	5	3
Rosemont	4	--	1	--
Schaumburg	4,076	836	3,510	794
Schiller Park ⁴	16,336	2,775	78	23
Skokie	7	3	7	3
St. Charles	3	1	3	1
Streamwood	1	--	1	--
West Chicago	2,746	420	25	4
Westchester	1	--	1	--
Westmont	1	--	1	--
Wheaton	20	1	11	1
Winfield	85	6	55	5
Wood Dale ⁵	33,256	5,260	205	61
Community Unknown	2,518	1,952	2,518	1,952

Nature of Noise Complaints



Method of Noise Complaint

Phone	0.3%
Internet	99.7%
Total	100%

Notes:

- Complaints made within the State of Illinois.
- 114,842 of 127,181 complaints in Bensenville came from 3 addresses.
- 23,799 of 146,691 complaints in Chicago came from 5 addresses.
- 9,070 of 16,336 complaints in Schiller Park came from 1 address.
- 21,419 of 33,256 complaints in Wood Dale came from 3 addresses.
- 16,506 of 17,471 complainants in Chicago are anonymous.

May 2015 Total	407,523	90,718	30,401	8,992
Previous Month Total	408,468	72,609	42,162	7,207



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