

Runway Rotation Test 2 Report

April 30, 2017 – July 23, 2017

Fly Quiet Program

Chicago O'Hare International Airport



Visit the O'Hare Noise Webpage on the Internet at
www.flychicago.com/ORDNoise

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SUMMARY

On September 18, 2015, the ONCC formed an ad hoc Fly Quiet Committee (Committee) to review, modify and make recommendations regarding nighttime noise abatement procedures at O'Hare International Airport (O'Hare). The Committee was formed as a result of the CDA's Noise Recommendations modifying the Fly Quiet Program. The Committee began a series of public meetings to address Fly Quiet modifications and set the following goals for a Runway Rotation Program:

1. **Provide Near-Term Relief** – 12-Week Test with Citizen Feedback
2. **Reduce Impacts to the Highest Impacted Communities** – Provide Relief to Significantly Impacted Communities
3. **Provide Predictability** – Publish a rotation schedule that allows citizens to predict periods of relief to the extent possible

The Committee set specific criteria for a runway rotation program and the ONCC formally recommended to the Chicago Department of Aviation (CDA) on March 10, 2017, that a second Fly Quiet Runway Rotation Test (Test 2) be implemented. The CDA established Test 2 that met the goals and specific criteria established by the ONCC and received approval by the Federal Aviation Administration (FAA) on March 31, 2017.



The CDA conducted Test 2 for a 12-week period in 2017 from the night of April 30, 2017, through the morning of July 23, 2017 (Test Period), as approved by the FAA. The purpose of Test 2 is to test the capabilities of the different configurations in response to FAA comments, as well as test new configurations that were not included in Test 1. Test 2 occurred during the overnight hours and followed a 12-week schedule, beginning the evening of April 30, 2017, and ending the morning of July 23, 2017. Test 2 included ten (10) designated Fly Quiet Runway Configurations, along with runway rotations, intended to balance the overnight noise. Primary and Secondary Runway Configurations were designated for each week of the Test. Each new week began on Sunday evening at 10 p.m. or later, when demand allowed for one designated arrival runway and one designated departure runway.

The results of Test 2 show that 55 percent of the aircraft operations (operations) that occurred during the overnight Fly Quiet Hours utilized the designated rotation runways. Each night during Fly Quiet hours, there was an average of 115 operations, 63 of which operated on designated runways. Please refer to the following sections for additional details. Note that radar data was not available for three (3) of the 84 nights, therefore data for those nights are not reflected in this report.

FLY QUIET MODE

The FAA considers nighttime hours as 10:00 p.m. - 07:00 a.m.¹ It is the CDA's goal for the Fly Quiet Program to occur during the entire nine-hour nighttime period of 10:00 p.m. to 7:00 a.m., however due to operational demand by the airlines and traveling public, Fly Quiet is typically limited to a period less than nine hours. Fly Quiet Mode, the period of time in Fly Quiet, starts each night on or after 10:00 p.m., once demand allows for two departure runways and one arrival runway and allows for the preferential flight tracks as outlined in the CDA's *Fly Quiet Manual*. Demand for the majority of the night allows for one arrival runway and one departure runway. Once demand increases in the morning where additional runways are needed and preferential flight tracks can no longer be utilized, Fly Quiet Mode stops.

For each week of the Test, the Start and Stop times of Fly Quiet was recorded and reported on the Test website: www.flychicago.com/flyquiettest.

¹ Airport Noise Compatibility Planning (14 CFR Part 150)

FIGURE 1
AVERAGE DAILY FLY QUIET START AND STOP TIMES

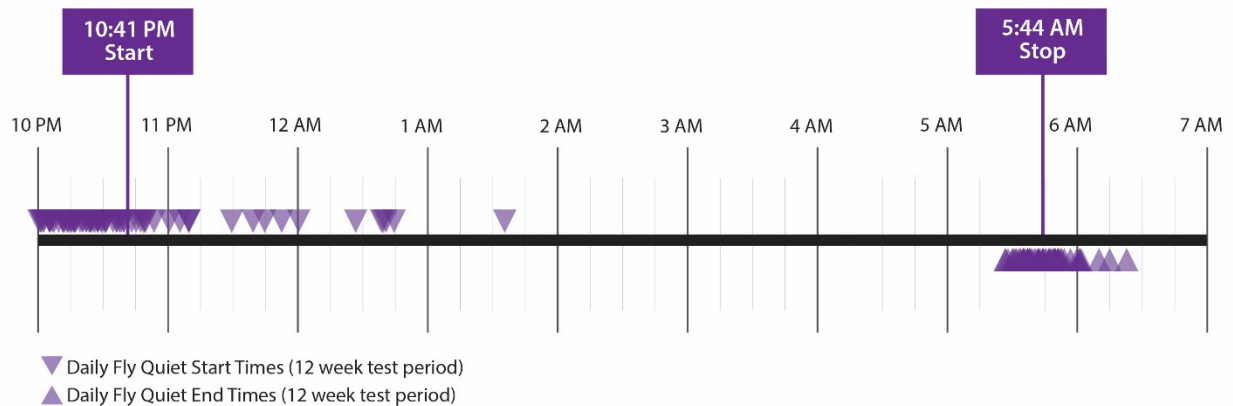
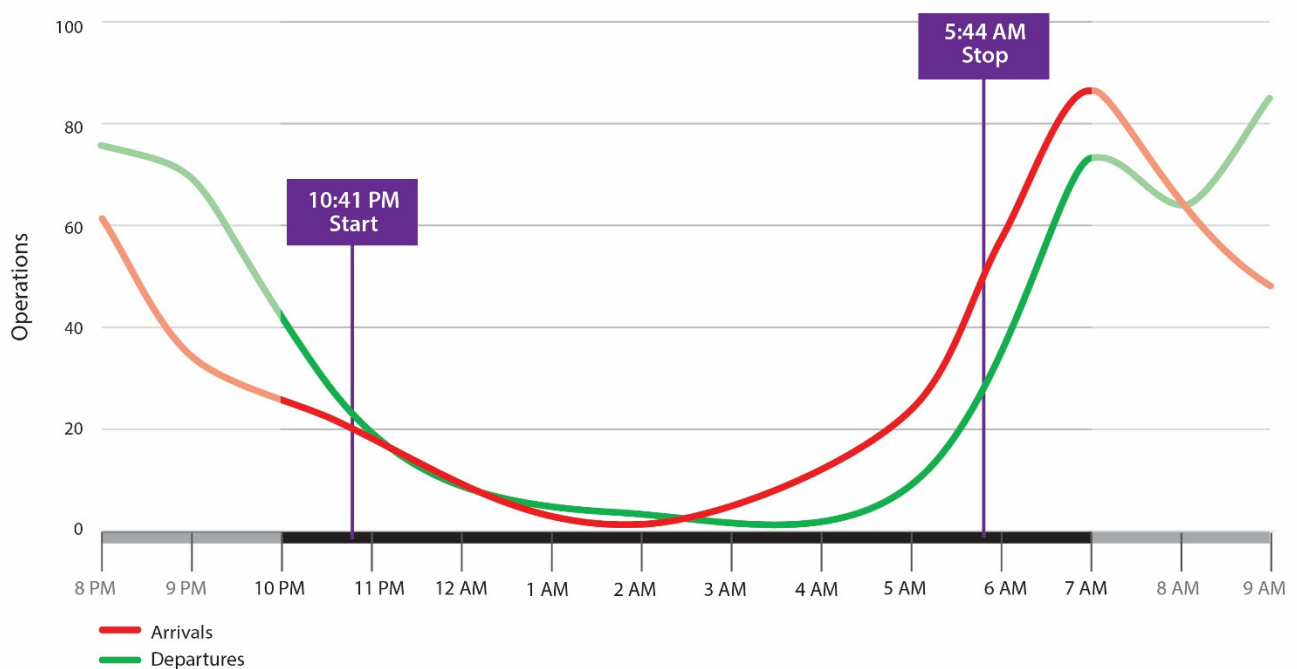


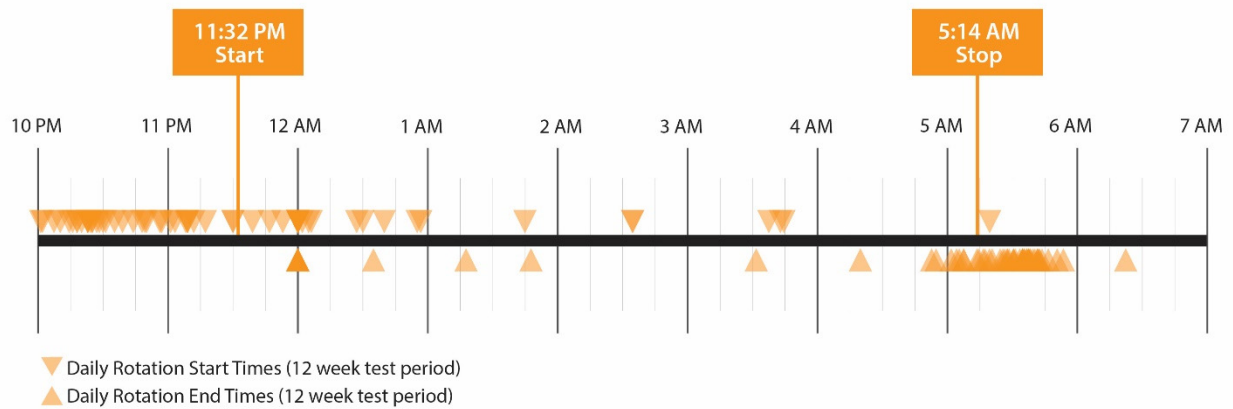
Figure 1 shows the daily Fly Quiet Start and Stop times for every night of the Test. The average daily Fly Quiet Start Time was 10:41 p.m. and the average daily Fly Quiet Stop Time was 5:44 a.m., for an average of seven (7) hours each night. The Fly Quiet Start and Stop times were based on runway demand. As shown in **Figure 2**, there is a departure bank before 10:41 p.m. that typically prevents Fly Quiet from beginning any earlier. If that departure bank is delayed for any reason, the start of Fly Quiet is also delayed. Similarly, there is a large arrival bank before 7 a.m. that causes Fly Quiet to typically end at 5:44 a.m. If this arrival bank is delayed, Fly Quiet can continue longer.

FIGURE 2
AVERAGE OPERATIONS BY HOUR FOR TEST PERIOD



ROTATION MODE

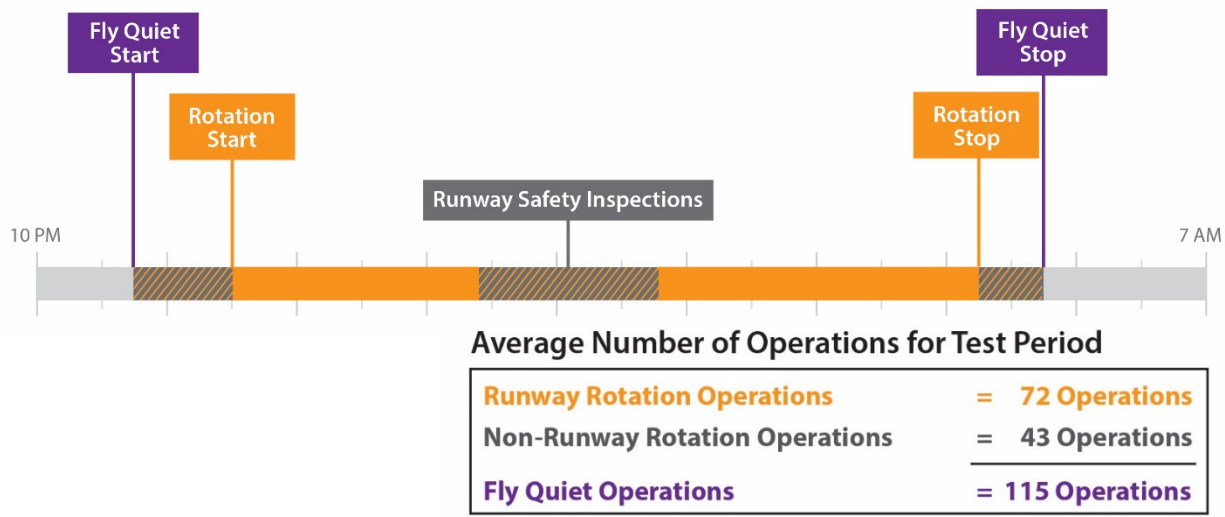
FIGURE 3
AVERAGE DAILY ROTATION MODE START AND STOP TIMES



For every week of Test 2, one runway was designated for arrivals and one runway was designated for departures - which were defined as configurations. These configurations included both. Each configuration also had a daily start and stop time, where both an arrival and departure runway were utilized. As shown in **Figure 3**, the daily Rotation Start and Stop times were tracked and reported for the Test. The average daily Rotation Start Time was 11:32 p.m. and the average daily Rotation Stop Time was 5:14 a.m.

Each runway at O'Hare is required to be closed throughout the night for approximately one hour in order to perform a proper runway safety inspection for FAR Part 139. During this time, a configuration will stop and typically resumes after the safety inspection is complete. In addition, there are typically periods of time immediately after Fly Quiet Mode starts and immediately before Fly Quiet Mode stops that the designated runways are not utilized or only partially utilized for many reasons.² The period of time when both the arrival and departure runway are utilized is Rotation Mode. Rotation Mode was conducted 62 of the possible 84 nights during Test 2. **Figure 4** depicts a typical night for Fly Quiet Start and Stop, Rotation Start and Stop and quantifies operations for periods.

FIGURE 4
USAGE OF DESIGNATED ROTATION RUNWAYS
FOR TEST PERIOD

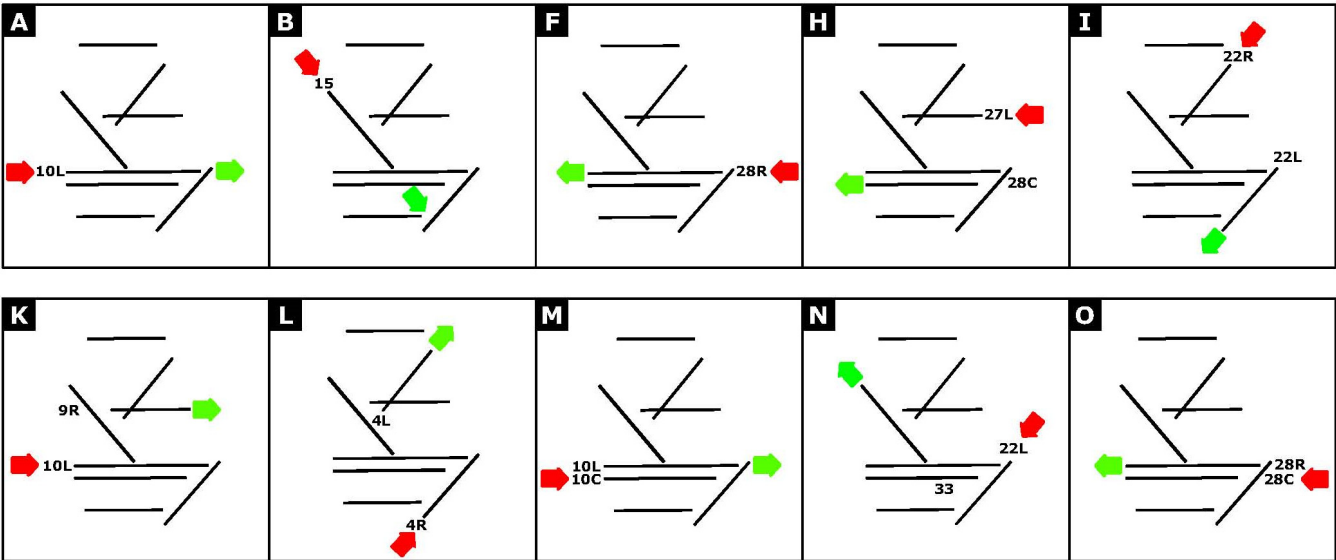


² On any given night, Test configurations may not have been allowed due to occurrences including, but not limited to, runway safety closures, thunderstorms, snow removal, FAA flight checks, construction, rubber removal, runway requests, and similar.

FLY QUIET TEST RUNWAY CONFIGURATIONS

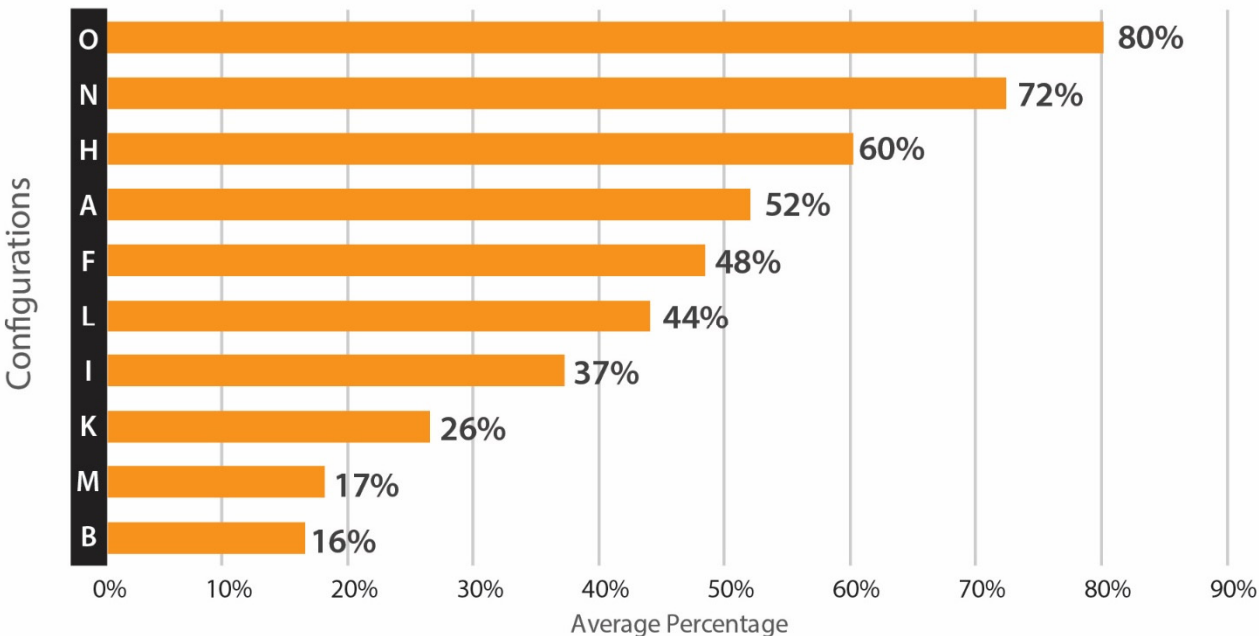
Ten (10) Fly Quiet Runway Configurations were developed and scheduled for a 12-week Test as show in **Figure 5**, below. As nighttime airfield construction affected the schedule, construction alternatives were utilized for those weeks while notifying the public in advance on the Test website: www.flychicago.com/flyquiettest .

FIGURE 5
FLY QUIET TEST CONFIGURATIONS



The results of Test 2 show that 55 percent of the operations that occurred during Fly Quiet utilized the designated runways. **Figure 6**, below, ranks the order of Fly Quiet Configuration usage, from highest to lowest.

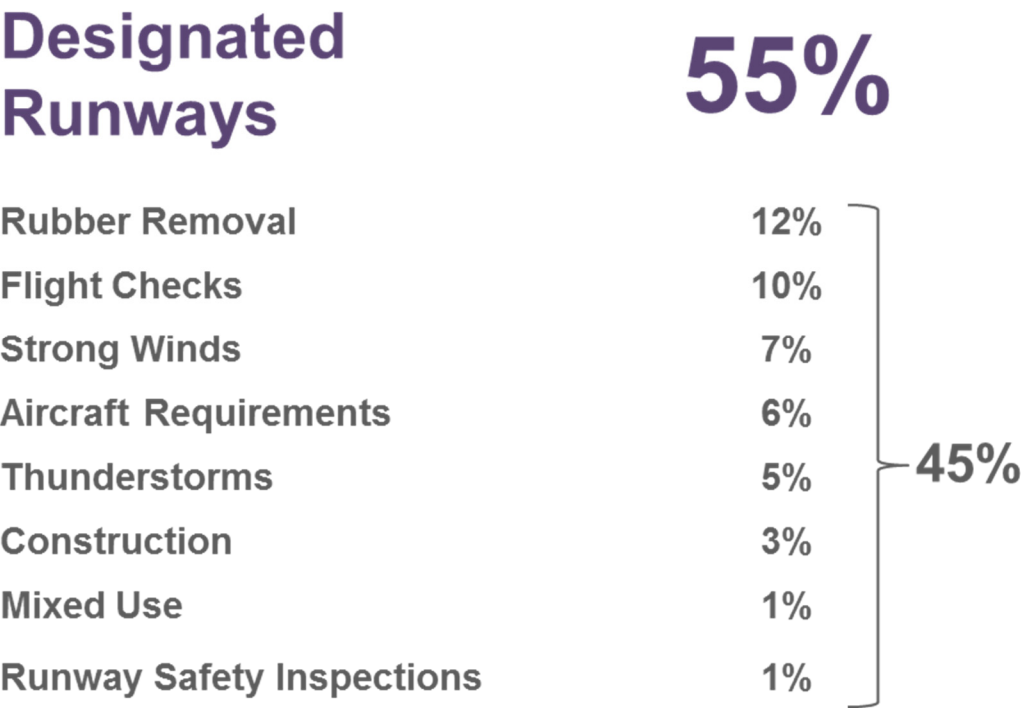
FIGURE 6
AVERAGE RUNWAY CONFIGURATION USAGE



Note: Does not include Construction Alternatives during the Test.

DESIGNATED RUNWAYS

Each night (10:00 p.m. to 7:00 a.m.) there was an average of 274 operations. Fly Quiet Mode had an average daily Start Time of 10:41 p.m. and an average daily Stop Time of 5:44 a.m. The results of Test 2 show that 55 percent of the aircraft operations that occurred during the Fly Quiet Mode utilized the designated rotation runways. Each night there was an average of 115 operations, 63 of which operated on designated runways. The remaining 45 percent of the operations were not on the designated runways due to the following reasons:



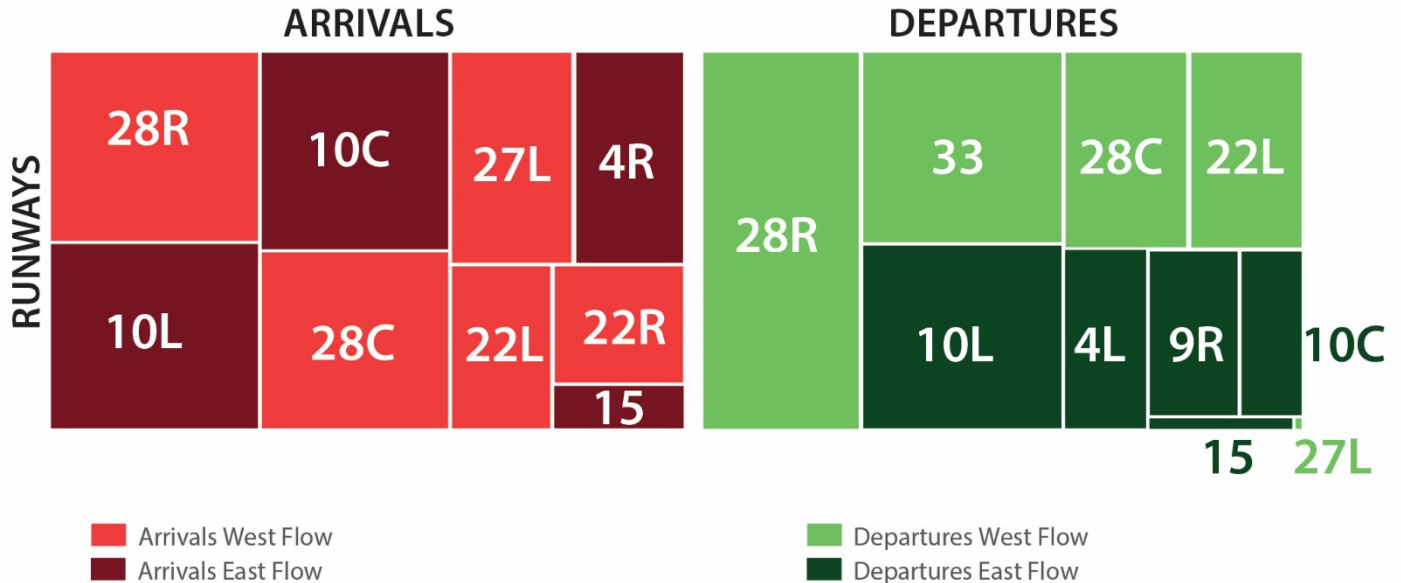
RUNWAY UTILIZATION FOR TEST PERIOD

Test 2 was designed to balance the runway utilization during Fly Quiet. The Test schedule included alternating weeks of utilizing parallel and diagonal runways and the Test included an equal number of East and West Flow weeks. Every week had a secondary configuration to accommodate opposite wind flow, but remained on parallel or diagonal runways similar to the primary configuration. The average operations for Fly Quiet Mode are broken out as follows:

Arrivals	68
Departures	47
Operations	115

Figure 7 is a TreeMap that displays proportional boxes in size for each runway operation, representative of the average throughout the Test. The lighter boxes represent West Flow operations and the darker boxes represent East Flow operations.

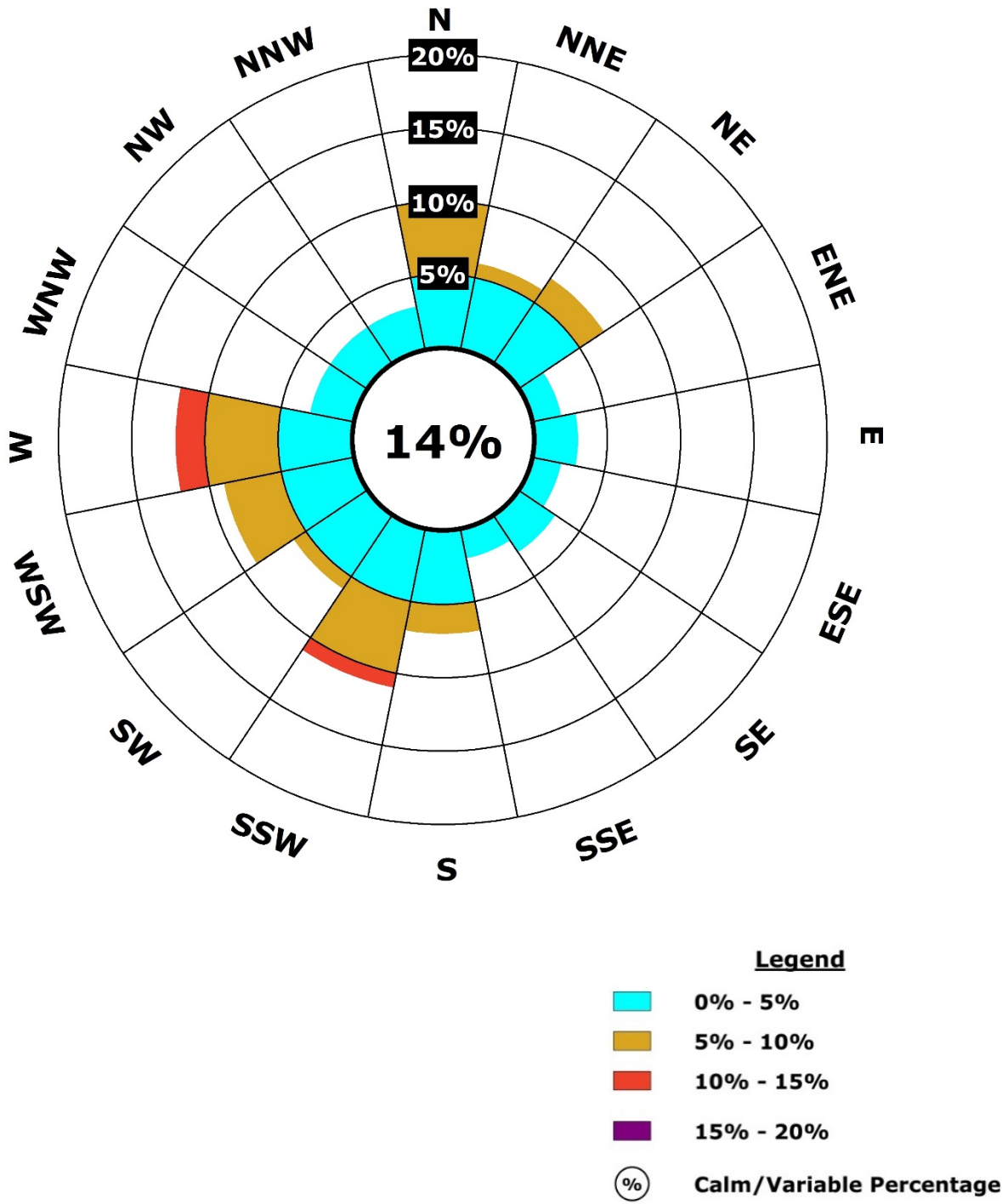
FIGURE 7
FLY QUIET MODE AVERAGE RUNWAY UTILIZATION FOR TEST PERIOD



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. **Figure 8** 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.

FIGURE 8
PERCENT OF WIND OCCURRENCES DURING THE TEST



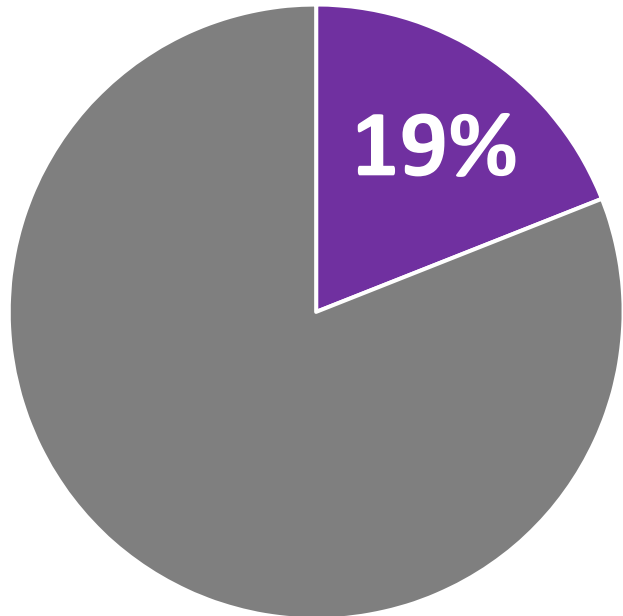
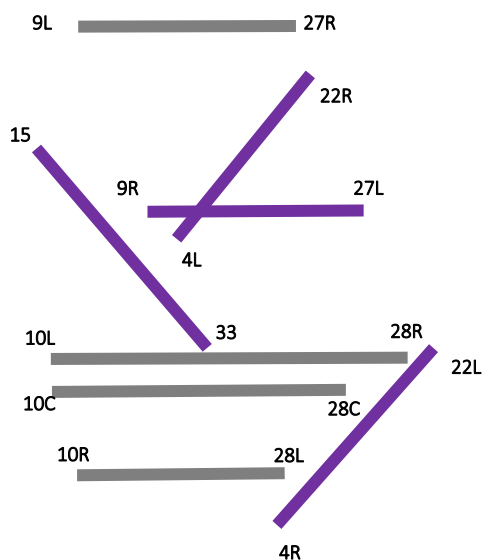
WIDE-BODY AIRCRAFT

Many wide-body aircraft operating during the nighttime hours at O'Hare are cargo aircraft with large payloads. The typical wide-body aircraft that operate at O'Hare are the 767, 777, 747, and DC-10. These aircraft are often louder and can climb at a slower rate that may cause significant noise complaints. Wide-body aircraft typically utilize the following two longest runways at O'Hare:

1. Runway 10L/28R 13,000 feet long
2. Runway 10C/28C 10,801 feet long

Wide-body operations on runway 10L/28R and 10C/28C heavily impact the communities of Bensenville and Schiller Park. While the Test did not prevent these operations from occurring on these runways, it recommended that airlines specifically request these longer runways if they were not the designated runways for that night. During the Test, the CDA asked airlines to request specific runways two hours in advance if a specific runway was needed for operational considerations. All requests were granted during the Test unless that specific runway was closed for maintenance. Due to specific FAA request, either runway 10L/28R or runway 10C/28C was left open every night of Test 2 for safety reasons. Test 2 results showed that 19% of wide-body operations (an average of 6 operations per night) were conducted on runways with lengths of less than 10,000 feet, which provided relief of nighttime noise to the communities impacted by runway 10L/28R and 10C/28C operations.

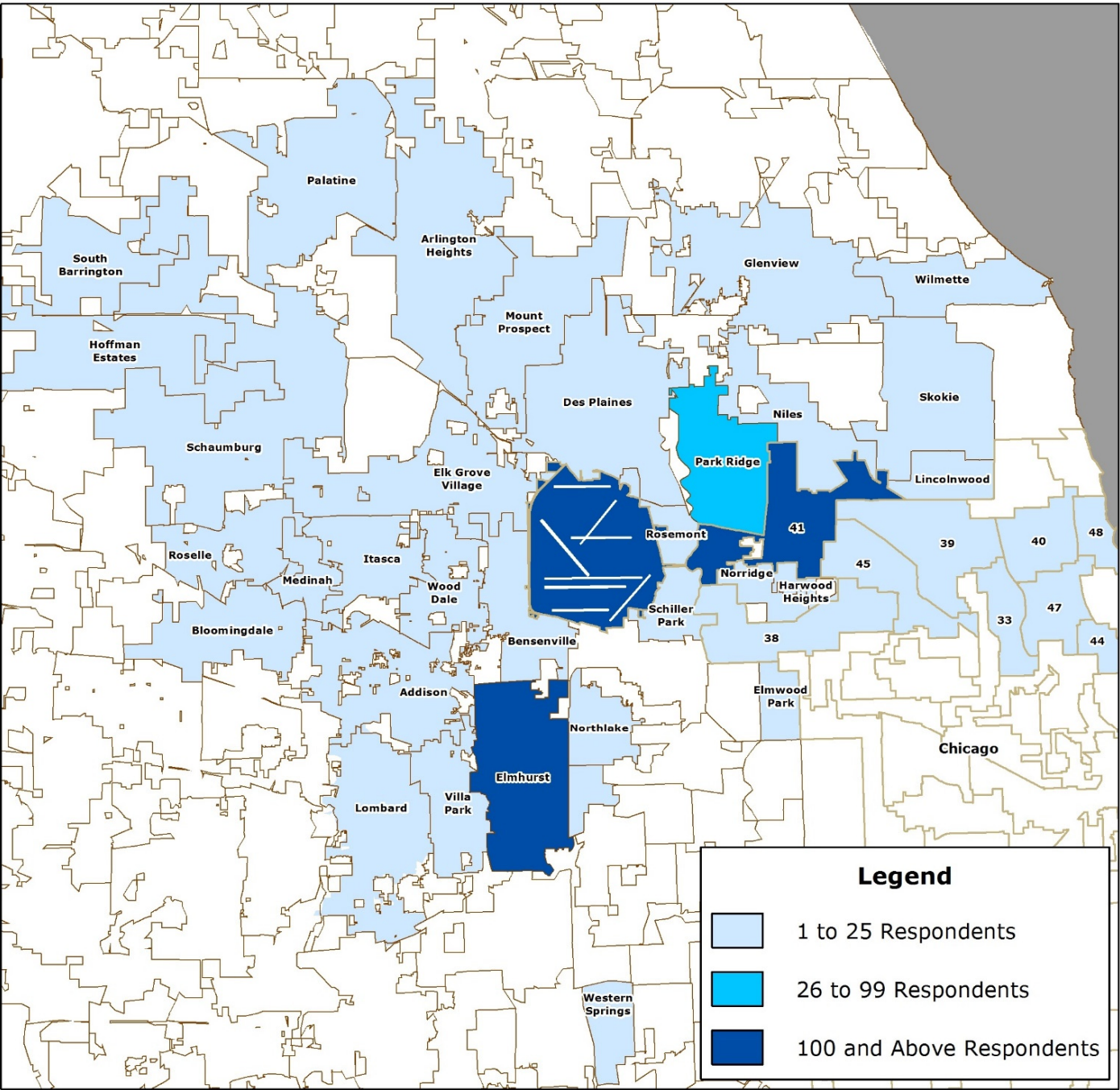
FIGURE 9
OPERATIONS OCCURRING ON RUNWAYS LESS THAN 10,000'



SURVEY FEEDBACK

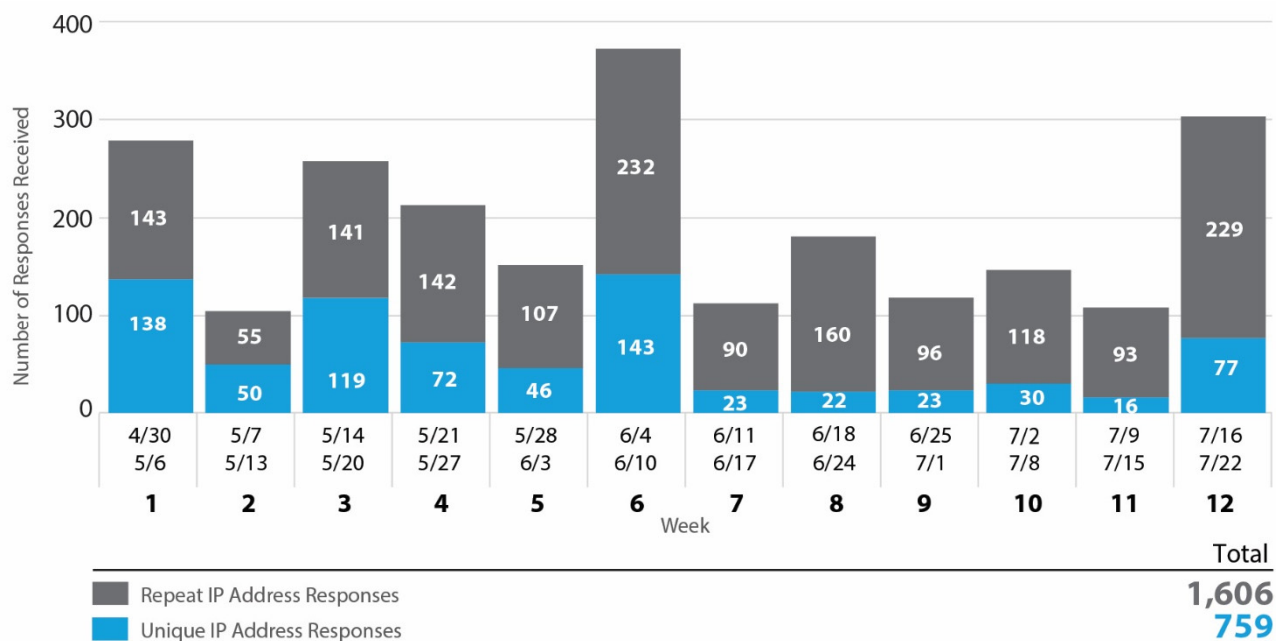
An online public survey was available during the Test in order for the CDA to receive feedback from residents of the communities surrounding O’Hare. There were 1,606 survey responses submitted, which originated from ,759 unique IP addresses from 35 different communities in the Chicago region. The numbers of survey respondents by community are shown in **Figure 10**. The number of survey responses by week are shown in **Figure 11**.

**FIGURE 10
COMMUNITIES WITH SURVEY RESPONSES**



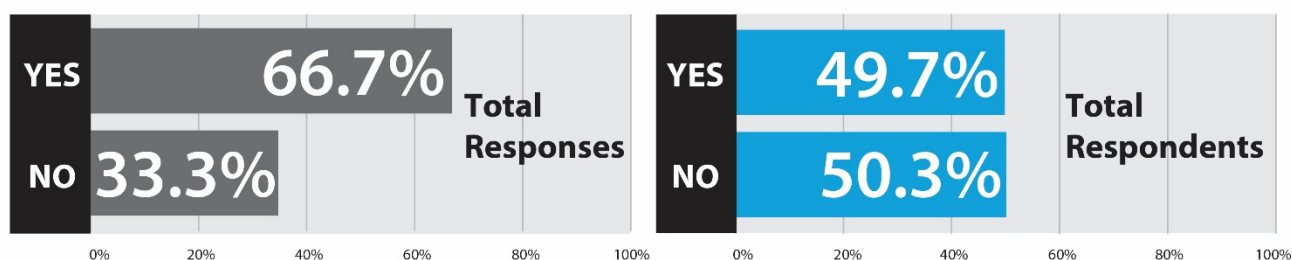
Note: The full list of survey responses is included in the Reports Section of this document.

FIGURE 11
SURVEY RESPONSES BY WEEK



As shown in **Figure 12**, 66.7% of the total survey responses indicate that the Test should continue. See the Reports Section of this document for detailed Survey results.

FIGURE 12
SURVEY QUESTION 16: WOULD YOU LIKE THE FLY QUIET RUNWAY ROTATION TO CONTINUE AFTER THE TEST?



Would you like the Fly Quiet Runway Rotation to be in place from Spring 2018 until Fall 2020?

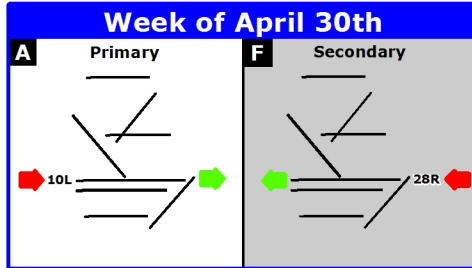
- A. YES
- B. NO

Note: Respondents represents unique IP addresses.

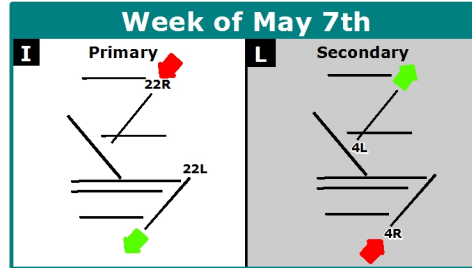
FLY QUIET RUNWAY ROTATION TEST 2 (Weeks 1-12)

The graphic below outlines the Fly Quiet Runway Rotation Test 2 Schedule. For each week, a primary and secondary runway use configuration is provided to accommodate potential changes in wind direction. The runway use configurations have been defined and approved by the ONCC to balance noise exposure to the extent possible. Special procedures have been defined to accommodate aircraft that require specific runways.

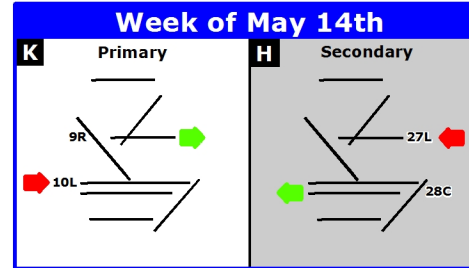
Parallel - East



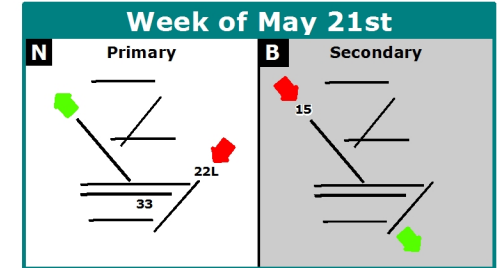
Diagonal - West



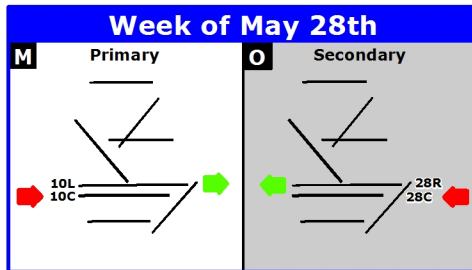
Parallel - East



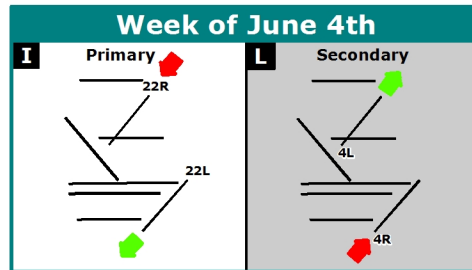
Diagonal - West



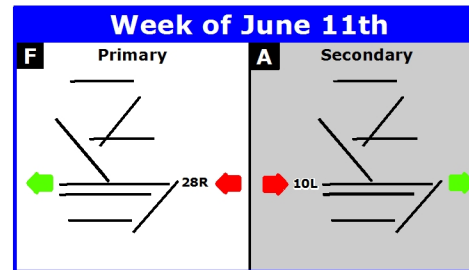
Parallel - East



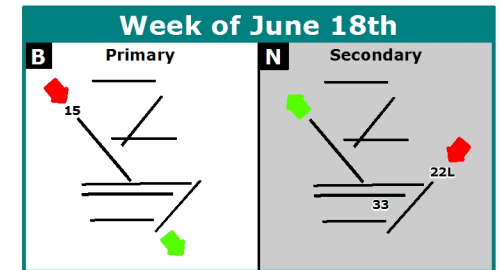
Diagonal - West



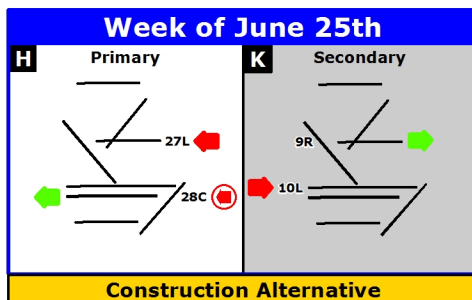
Parallel - West



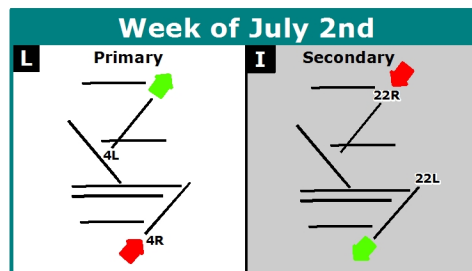
Diagonal - East



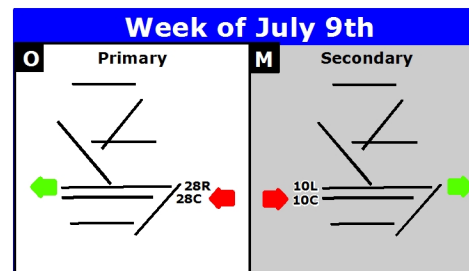
Parallel - West



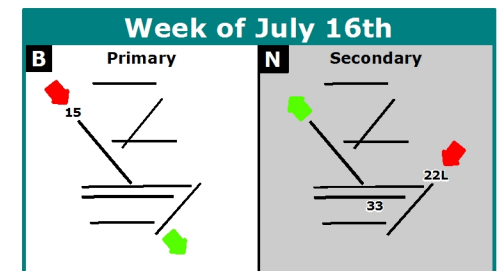
Diagonal - East



Parallel - West



Diagonal - East

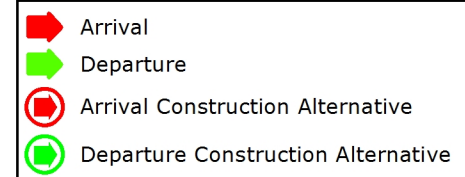


- Week** - Parallel Runways
- Week** - Diagonal Runways

Each weekly period will begin on Sunday evening at 10 p.m. or after when demand allows for one arrival and one departure runway.

Notes

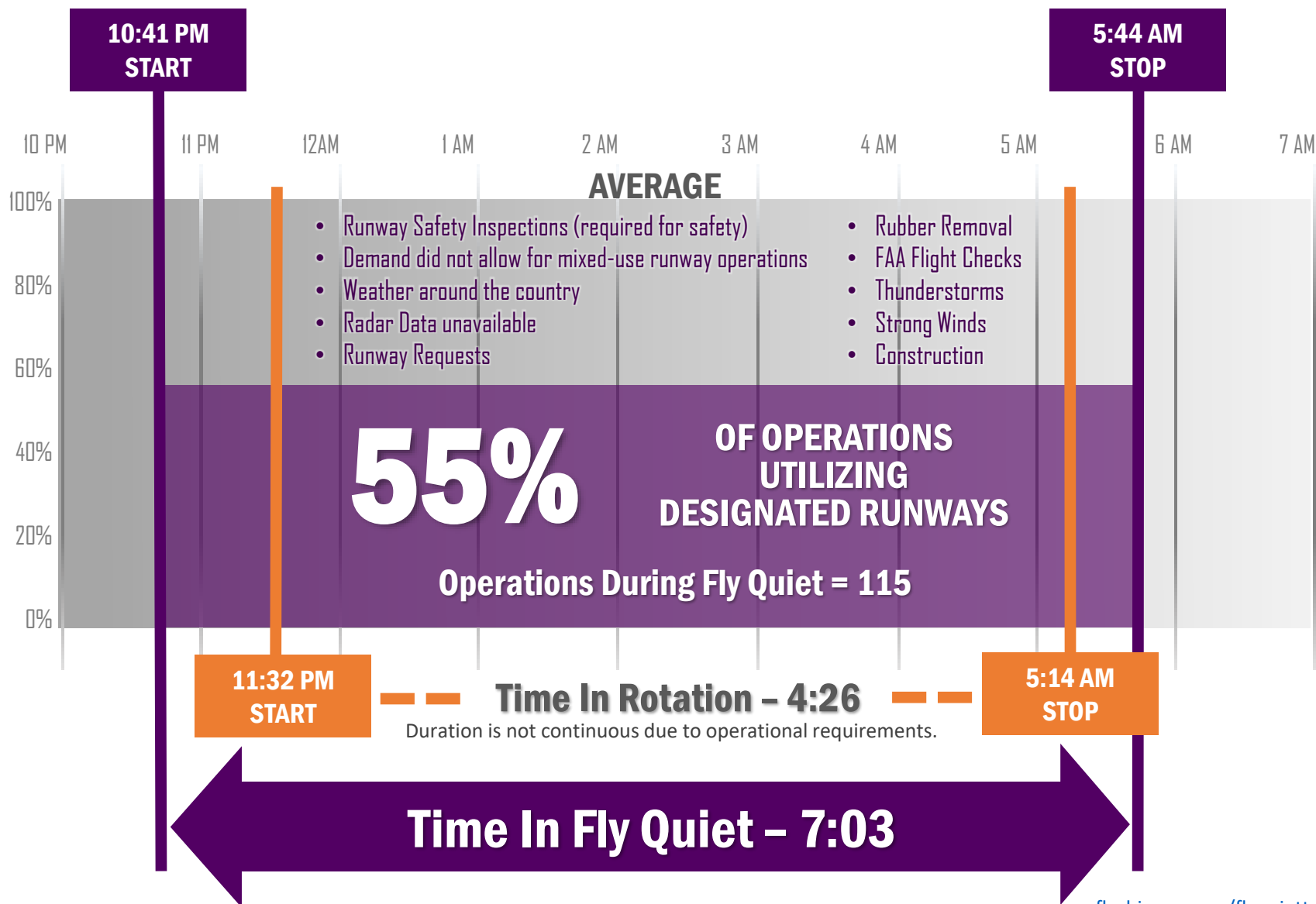
- Flights that require additional runway length should contact Chicago Department of Aviation (CDA) Operations at a minimum of 2 hours prior to arrival or departure.
- Alternative runways may be used to allow for construction, snow removal, runway maintenance, runway inspection and strong winds.
- Available runways are determined by CDA.



FLY QUIET SUMMARY

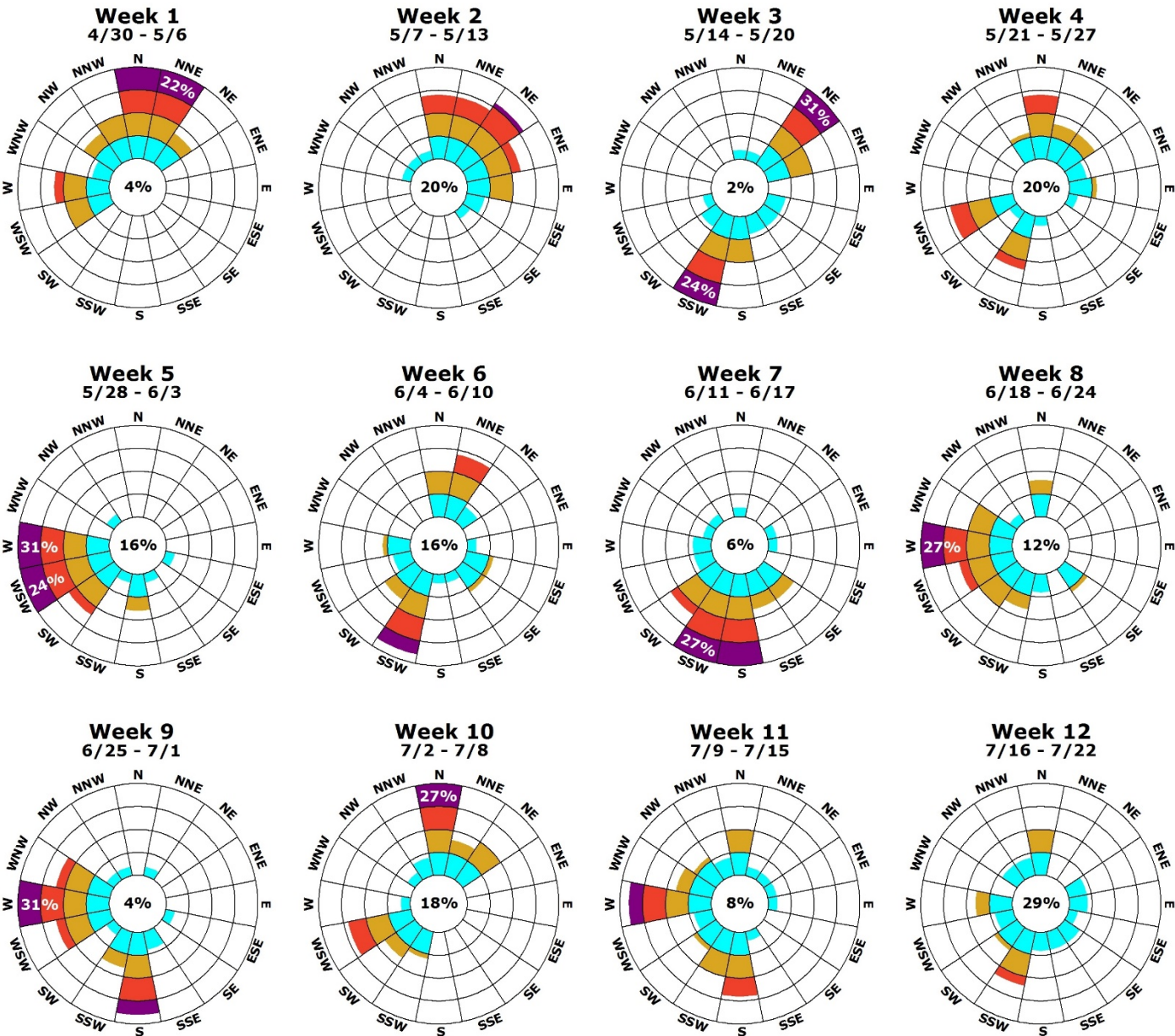
APRIL 30 – JULY 22, 2017

12 WEEK AVERAGE

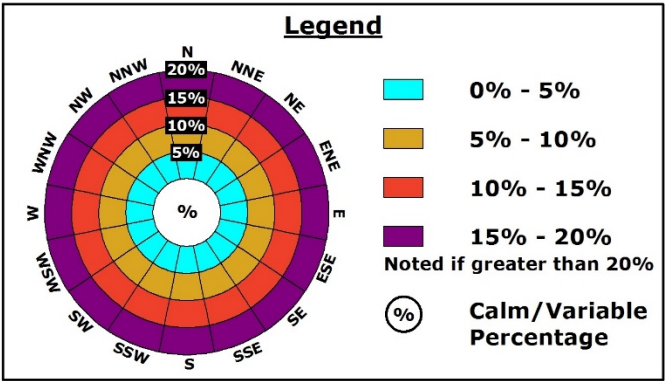


Note: Values above represent the average for time period.

NIGHTTIME WEEKLY WIND SUMMARY WEEKS 1 - 12



Source: National Climatic Data Center, 4/30/2017 - 7/23/2017;
<http://www.ncdc.noaa.gov>



RUNWAY ROTATION TEST 2
APRIL 30, 2017 TO JUNE 24, 2017



Fly Quiet Mode ¹						
Time				Operations		
Start	Stop	Duration (hrs: mins)	Percentage of Nighttime ²	Primary ³	Secondary ³	Operations ⁴
5/1/17 - 12:40 AM	5/1/17 - 05:37 AM	4:57	21%	58%	19%	59
5/1/17 - 10:07 PM	5/2/17 - 05:49 AM	7:42	32%	0%	77%	141
5/2/17 - 10:17 PM	5/3/17 - 05:35 AM	7:18	30%	0%	82%	93
5/3/17 - 10:26 PM	5/4/17 - 05:51 AM	7:25	31%	74%	0%	125
5/4/17 - 10:12 PM	5/5/17 - 06:00 AM	7:48	32%	76%	0%	118
5/5/17 - 10:13 PM	5/6/17 - 05:37 AM	7:24	31%	53%	28%	116
5/6/17 - 10:01 PM	5/7/17 - 05:42 AM	7:41	32%	85%	6%	87
5/7/17 - 10:30 PM	5/8/17 - 05:51 AM	7:21	82%	0%	0%	104
5/8/17 - 10:40 PM	5/9/17 - 05:50 AM	7:10	80%	2%	0%	93
5/9/17 - 10:06 PM	5/10/17 - 05:50 AM	7:44	86%	2%	0%	125
5/10/17 - 11:40 PM	5/11/17 - 05:50 AM	6:10	69%	0%	51%	96
5/11/17 - 10:25 PM	5/12/17 - 05:48 AM	7:23	82%	2%	57%	131
5/12/17 - 10:28 PM	5/13/17 - 05:42 AM	7:14	80%	29%	45%	96
5/13/17 - 10:02 PM	5/14/17 - 05:39 AM	7:37	85%	27%	43%	96
5/14/17 - 10:06 PM	5/15/17 - 05:36 AM	7:30	83%	60%	0%	109
5/15/17 - 10:50 PM	5/16/17 - 05:42 AM	6:52	76%	7%	0%	89
5/16/17 - 10:00 PM	5/17/17 - 05:39 AM	7:39	85%	0%	3%	132
5/18/17 - 12:39 AM	5/18/17 - 05:45 AM	5:06	57%	0%	30%	117
5/18/17 - 10:54 PM	5/19/17 - 06:02 AM	7:08	79%	74%	0%	125
5/19/17 - 10:08 PM	5/20/17 - 05:51 AM	7:43	86%	85%	0%	149
5/20/17 - 10:06 PM	5/21/17 - 05:52 AM	7:46	86%	26%	44%	99
5/21/17 - 10:20 PM	5/22/17 - 05:50 AM	7:30	83%	73%	0%	119
5/22/17 - 10:00 PM	5/23/17 - 05:44 AM	7:44	86%	34%	0%	131
5/23/17 - 10:12 PM	5/24/17 - 05:47 AM	7:35	84%	57%	0%	137
5/24/17 - 10:15 PM	5/25/17 - 05:44 AM	7:29	83%	18%	0%	131
5/25/17 - 10:27 PM	5/26/17 - 05:57 AM	7:30	83%	29%	29%	140
5/26/17 - 10:03 PM	5/27/17 - 06:01 AM	7:58	89%	24%	0%	147
5/27/17 - 10:00 PM	5/28/17 - 05:49 AM	7:49	87%	71%	0%	102
5/28/17 - 10:18 PM	5/29/17 - 05:37 AM	7:19	81%	0%	90%	89
5/29/17 - 10:10 PM	5/30/17 - 05:37 AM	7:27	83%	0%	98%	97
5/30/17 - 10:17 PM	5/31/17 - 05:42 AM	7:25	82%	0%	40%	121
5/31/17 - 10:16 PM	6/1/17 - 05:35 AM	7:19	81%	0%	46%	120
6/1/17 - 10:46 PM	6/2/17 - 05:44 AM	6:58	77%	21%	12%	102
6/2/17 - 10:24 PM	6/3/17 - 05:53 AM	7:29	83%	17%	1%	126
6/3/17 - 10:02 PM	6/4/17 - 05:54 AM	7:52	87%	0%	92%	114
6/4/17 - 10:40 PM	6/5/17 - 05:49 AM	7:09	79%	0%	0%	123
6/5/17 - 10:38 PM	6/6/17 - 05:53 AM	7:15	81%	0%	45%	125
6/6/17 - 10:30 PM	6/7/17 - 05:44 AM	7:14	80%	0%	72%	117
6/7/17 - 10:25 PM	6/8/17 - 05:44 AM	7:19	81%	20%	23%	124
6/8/17 - 10:23 PM	6/9/17 - 05:43 AM	7:20	81%	75%	0%	136
6/9/17 - 10:31 PM	6/10/17 - 05:35 AM	7:04	79%	67%	0%	133
6/10/17 - 10:14 PM	6/11/17 - 05:35 AM	7:21	82%	69%	0%	104
6/11/17 - 10:21 PM	6/12/17 - 05:31 AM	7:10	80%	79%	0%	134
6/12/17 - 10:44 PM	6/13/17 - 05:32 AM	6:48	76%	2%	85%	107
6/14/17 - 12:01 AM	6/14/17 - 05:27 AM	5:26	60%	45%	32%	66
6/15/17 - 01:36 AM	6/15/17 - 05:33 AM	3:57	44%	52%	0%	66
6/15/17 - 10:37 PM	6/16/17 - 05:51 AM	7:14	80%	70%	0%	160
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6/19/17 - 11:30 PM	6/20/17 - 05:37 AM	6:07	68%	0%	65%	100
6/20/17 - 10:28 PM	6/21/17 - 05:47 AM	7:19	81%	0%	29%	148
6/21/17 - 10:28 PM	6/22/17 - 05:30 AM	7:02	78%	0%	0%	132
6/22/17 - 11:06 PM	6/23/17 - 06:10 AM	7:04	79%	30%	0%	89
6/23/17 - 11:10 PM	6/24/17 - 05:38 AM	6:28	72%	0%	52%	105
6/24/17 - 10:03 PM	6/25/17 - 05:48 AM	7:45	86%	0%	65%	124

RUNWAY ROTATION TEST 2
JUNE 25, 2017 TO JULY 22, 2017



Fly Quiet Mode ¹						
Time				Operations		
Start	Stop	Duration (hrs: mins)	Percentage of Nighttime ²	Primary ³	Secondary ³	Operations ⁴
6/25/17 - 10:12 PM	6/26/17 - 05:30 AM	7:18	81%	79%	0%	133
6/26/17 - 10:14 PM	6/27/17 - 05:40 AM	7:26	83%	81%	0%	127
6/27/17 - 10:23 PM	6/28/17 - 05:38 AM	7:15	81%	89%	0%	128
6/29/17 - 12:41 AM	6/29/17 - 05:34 AM	4:53	54%	72%	0%	76
6/29/17 - 10:25 PM	6/30/17 - 05:41 AM	7:16	81%	56%	0%	154
6/30/17 - 11:01 PM	7/1/17 - 05:49 AM	6:48	76%	61%	0%	140
7/1/17 - 10:39 PM	7/2/17 - 05:38 AM	6:59	78%	82%	0%	95
7/2/17 - 10:28 PM	7/3/17 - 06:01 AM	7:33	84%	49%	0%	118
7/3/17 - 10:06 PM	7/4/17 - 05:37 AM	7:31	84%	45%	0%	93
7/4/17 - 10:18 PM	7/5/17 - 05:37 AM	7:19	81%	77%	1%	87
7/5/17 - 10:32 PM	7/6/17 - 05:34 AM	7:02	78%	24%	3%	125
7/6/17 - 10:16 PM	7/7/17 - 05:37 AM	7:21	82%	0%	65%	159
7/7/17 - 10:49 PM	7/8/17 - 05:27 AM	6:38	74%	76%	2%	131
7/8/17 - 10:25 PM	7/9/17 - 05:32 AM	7:07	79%	0%	79%	95
7/9/17 - 10:21 PM	7/10/17 - 06:23 AM	8:02	89%	87%	0%	117
7/10/17 - 11:53 PM	7/11/17 - 05:42 AM	5:49	65%	0%	85%	87
7/11/17 - 10:35 PM	7/12/17 - 05:47 AM	7:12	80%	58%	31%	132
7/13/17 - 12:27 AM	7/13/17 - 05:36 AM	5:09	57%	88%	0%	78
7/13/17 - 10:37 PM	7/14/17 - 05:47 AM	7:10	80%	20%	0%	141
7/14/17 - 11:10 PM	7/15/17 - 06:01 AM	6:51	76%	11%	10%	121
7/15/17 - 10:32 PM	7/16/17 - 05:50 AM	7:18	81%	29%	2%	113
7/16/17 - 10:48 PM	7/17/17 - 05:35 AM	6:47	75%	0%	28%	103
7/17/17 - 10:50 PM	7/18/17 - 05:38 AM	6:48	76%	23%	24%	148
7/18/17 - 10:17 PM	7/19/17 - 05:28 AM	7:11	80%	0%	75%	153
7/19/17 - 11:45 PM	7/20/17 - 06:15 AM	6:30	72%	0%	27%	132
7/20/17 - 11:10 PM	7/21/17 - 05:49 AM	6:39	74%	0%	0%	131
7/22/17 - 12:45 AM	7/22/17 - 05:51 AM	5:06	57%	0%	0%	68
7/22/17 - 10:32 PM	7/23/17 - 05:46 AM	7:14	80%	59%	0%	100

Notes:

- 1: Fly Quiet Mode is the period of time in which the nighttime operations are operating in accordance with CDA's Fly Quiet Program.
- 2: FAR Part 150 considers nighttime hours 10:00 PM - 07:00 AM.
- 3: Percentage of operations on designated runways within Fly Quiet Mode.
- 4: Operations within Fly Quiet Mode.

RUNWAY ROTATION TEST 2
APRIL 30, 2017 TO JUNE 24, 2017



Rotation Mode ¹						
Time				Operations		
Start	Stop	Duration ² (hrs: mins)	Percentage of Nighttime ³	Primary ⁴	Secondary ⁴	Operations ⁵
5/1/17 - 12:40 AM	5/1/17 - 05:29 AM	3:16	36%	77%	23%	43
5/1/17 - 11:01 PM	5/2/17 - 05:31 AM	5:14	58%	0%	100%	79
5/2/17 - 11:03 PM	5/3/17 - 05:28 AM	5:12	58%	0%	100%	60
5/3/17 - 11:12 PM	5/4/17 - 05:41 AM	4:13	47%	100%	0%	72
5/4/17 - 11:09 PM	5/5/17 - 05:38 AM	6:29	72%	100%	0%	71
5/5/17 - 10:56 PM	5/6/17 - 05:37 AM	5:35	62%	59%	41%	79
5/6/17 - 10:01 PM	5/7/17 - 05:35 AM	6:33	73%	97%	3%	76
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5/11/17 - 03:43 AM	5/11/17 - 05:44 AM	2:01	22%	0%	97%	33
5/11/17 - 10:25 PM	5/12/17 - 04:53 AM	5:13	58%	0%	71%	100
5/12/17 - 10:28 PM	5/13/17 - 05:42 AM	5:38	63%	33%	50%	86
5/13/17 - 10:07 PM	5/14/17 - 05:39 AM	5:22	60%	31%	46%	83
5/15/17 - 05:20 AM	5/15/17 - 05:36 AM	0:16	3%	100%	0%	6
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5/18/17 - 11:09 PM	5/19/17 - 05:42 AM	4:24	49%	81%	0%	100
5/19/17 - 10:23 PM	5/20/17 - 05:51 AM	5:30	61%	88%	0%	129
5/20/17 - 11:09 PM	5/21/17 - 03:32 AM	2:00	22%	67%	0%	39
5/21/17 - 10:20 PM	5/22/17 - 05:02 AM	5:22	60%	89%	0%	94
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5/23/17 - 10:24 PM	5/24/17 - 12:35 AM	2:11	24%	92%	0%	71
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5/26/17 - 02:35 AM	5/26/17 - 05:43 AM	3:08	35%	95%	0%	42
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5/27/17 - 10:00 PM	5/28/17 - 05:38 AM	6:52	76%	70%	0%	103
5/28/17 - 10:18 PM	5/29/17 - 05:37 AM	3:51	43%	0%	100%	72
5/29/17 - 10:10 PM	5/30/17 - 05:37 AM	5:28	61%	0%	100%	86
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6/3/17 - 10:02 PM	6/4/17 - 05:54 AM	4:11	79%	0%	99%	95
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6/5/17 - 11:39 PM	6/6/17 - 05:26 AM	4:23	49%	0%	77%	53
6/6/17 - 10:30 PM	6/7/17 - 05:17 AM	5:29	61%	0%	85%	94
6/8/17 - 03:45 AM	6/8/17 - 05:31 AM	1:46	20%	0%	83%	29
6/8/17 - 10:23 PM	6/9/17 - 05:43 AM	6:20	70%	80%	0%	128
6/9/17 - 10:50 PM	6/10/17 - 05:35 AM	3:25	38%	85%	0%	93
6/10/17 - 10:14 PM	6/11/17 - 05:25 AM	5:40	63%	81%	0%	88
6/11/17 - 11:17 PM	6/12/17 - 05:31 AM	5:21	59%	99%	0%	76
6/12/17 - 10:44 PM	6/13/17 - 05:08 AM	5:09	57%	1%	99%	92
6/14/17 - 12:30 AM	6/14/17 - 05:27 AM	4:04	45%	64%	36%	47
6/15/17 - 02:35 AM	6/15/17 - 05:08 AM	1:23	15%	100%	0%	18
6/16/17 - 12:00 AM	6/16/17 - 05:39 AM	4:52	54%	100%	0%	69
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6/19/17 - 11:30 PM	6/20/17 - 05:14 AM	3:17	36%	0%	91%	69
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6/23/17 - 12:06 AM	6/23/17 - 04:20 AM	3:28	39%	84%	0%	31
6/24/17 - 03:38 AM	6/24/17 - 05:38 AM	2:00	22%	0%	83%	36
6/24/17 - 10:48 PM	6/25/17 - 05:35 AM	6:02	67%	0%	90%	81

RUNWAY ROTATION TEST 2
JUNE 25, 2017 TO JULY 22, 2017



Rotation Mode ¹						
Time				Operations		
Start	Stop	Duration ² (hrs: mins)	Percentage of Nighttime ³	Primary ⁴	Secondary ⁴	Operations ⁵
6/25/17 - 10:27 PM	6/26/17 - 05:18 AM	4:14	47%	93%	0%	97
6/26/17 - 10:23 PM	6/27/17 - 05:40 AM	6:08	68%	85%	0%	113
6/27/17 - 10:23 PM	6/28/17 - 05:38 AM	6:10	69%	90%	0%	124
6/29/17 - 12:55 AM	6/29/17 - 05:34 AM	3:52	43%	77%	0%	62
6/30/17 - 12:05 AM	6/30/17 - 05:35 AM	3:44	41%	86%	0%	65
7/1/17 - 12:00 AM	7/1/17 - 05:36 AM	3:32	39%	86%	0%	57
7/1/17 - 10:39 PM	7/2/17 - 05:38 AM	5:39	63%	90%	0%	82
7/2/17 - 10:57 PM	7/3/17 - 05:20 AM	5:05	56%	74%	0%	70
7/3/17 - 11:47 PM	7/4/17 - 04:55 AM	3:58	44%	75%	0%	24
7/4/17 - 10:18 PM	7/5/17 - 05:15 AM	6:04	67%	93%	0%	72
7/6/17 - 12:02 AM	7/6/17 - 01:18 AM	1:16	14%	67%	0%	15
7/6/17 - 10:16 PM	7/7/17 - 05:28 AM	5:06	57%	0%	74%	140
7/7/17 - 10:49 PM	7/8/17 - 05:21 AM	5:31	61%	84%	0%	119
7/8/17 - 10:25 PM	7/9/17 - 05:32 AM	6:02	67%	0%	82%	91
7/9/17 - 10:31 PM	7/10/17 - 06:23 AM	7:16	81%	100%	0%	96
7/10/17 - 11:53 PM	7/11/17 - 05:42 AM	3:39	41%	0%	98%	66
7/11/17 - 10:35 PM	7/12/17 - 05:47 AM	6:09	68%	59%	32%	127
7/13/17 - 12:27 AM	7/13/17 - 05:36 AM	3:14	36%	100%	0%	64
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7/18/17 - 01:45 AM	7/18/17 - 05:04 AM	3:19	37%	93%	0%	30
7/18/17 - 11:08 PM	7/19/17 - 05:06 AM	5:17	59%	0%	95%	84
7/20/17 - 12:57 AM	7/20/17 - 01:48 AM	0:51	9%	0%	100%	4
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7/22/17 - 11:30 PM	7/23/17 - 05:35 AM	4:59	55%	95%	0%	61

Notes:

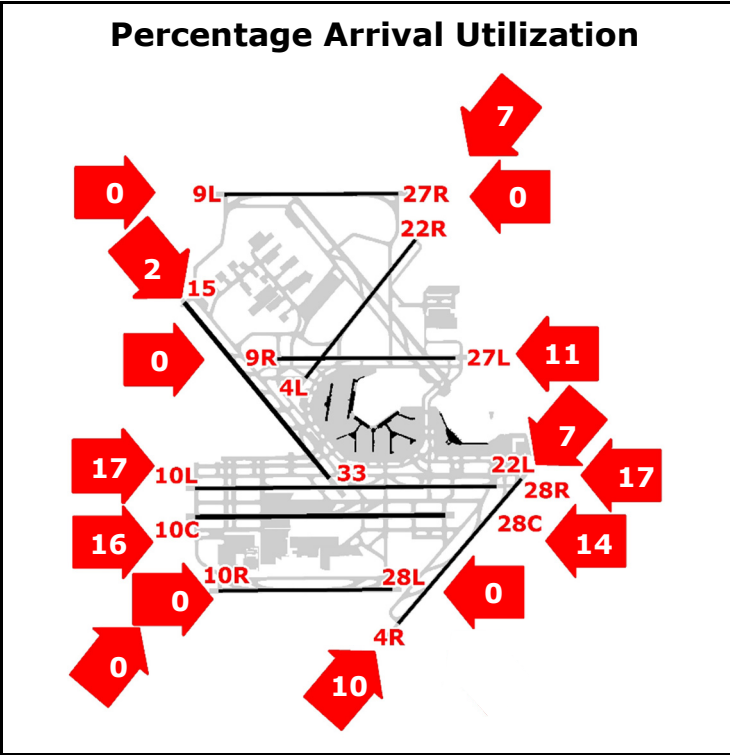
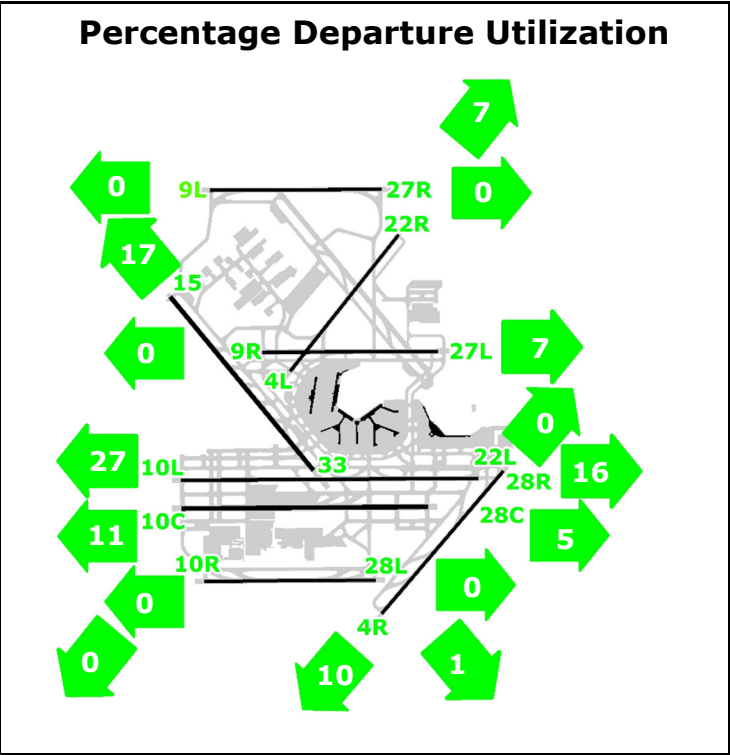
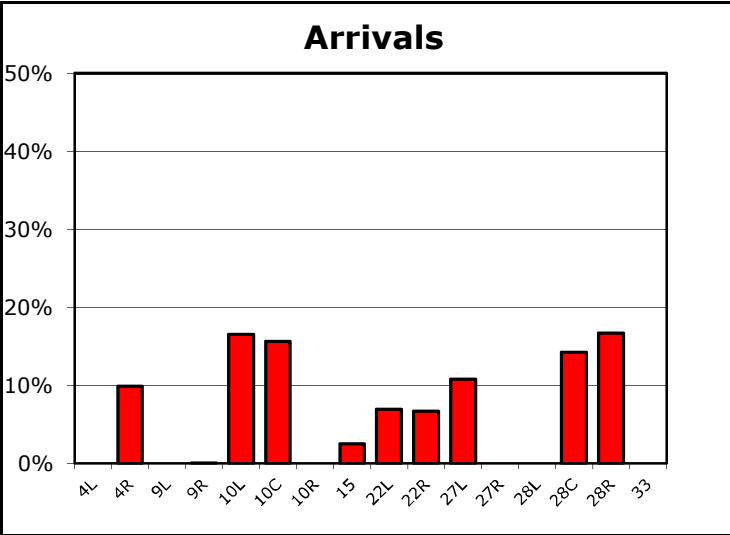
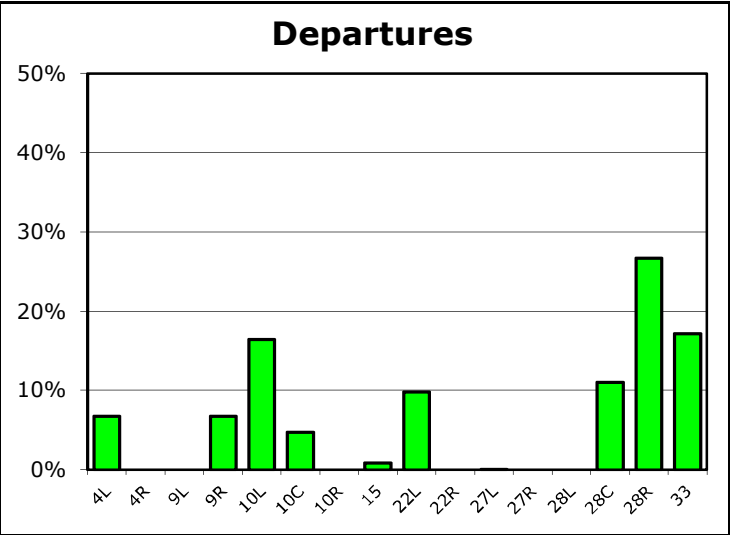
- 1: Rotation Mode is the period of time in which both arrivals and departures are operating in accordance with the Test.
Rotation Mode is a subset of Fly Quiet Mode.
- 2: Duration was not continuous because FAR Part 139.
- 3: FAR Part 150 considers nighttime hours 10:00 PM - 07:00 AM.
- 4: Percentage of operations on designated runways within Rotation Mode.
- 5: Operations within Rotation Mode.

Runway Use Report

Chicago O'Hare International Airport
 Period: Night of April 30 through morning of July 23, 2017
 Fly Quiet Mode



		Runway Utilization															
		4L	4R	9L	9R	10L	10C	10R	15	22L	22R	27L	27R	28L	28C	28R	33
Average Daily Operations																	
Departures		3	0	0	3	8	2	0	0	5	0	0	0	0	5	13	8
Arrivals		0	7	0	0	11	11	0	2	5	5	7	0	0	10	11	n/a
Percentage Utilization																	
Departures		7%	0%	0%	7%	16%	5%	0%	1%	10%	0%	0%	0%	0%	11%	27%	17%
Arrivals		0%	10%	0%	0%	17%	16%	0%	2%	7%	7%	11%	0%	0%	14%	17%	n/a

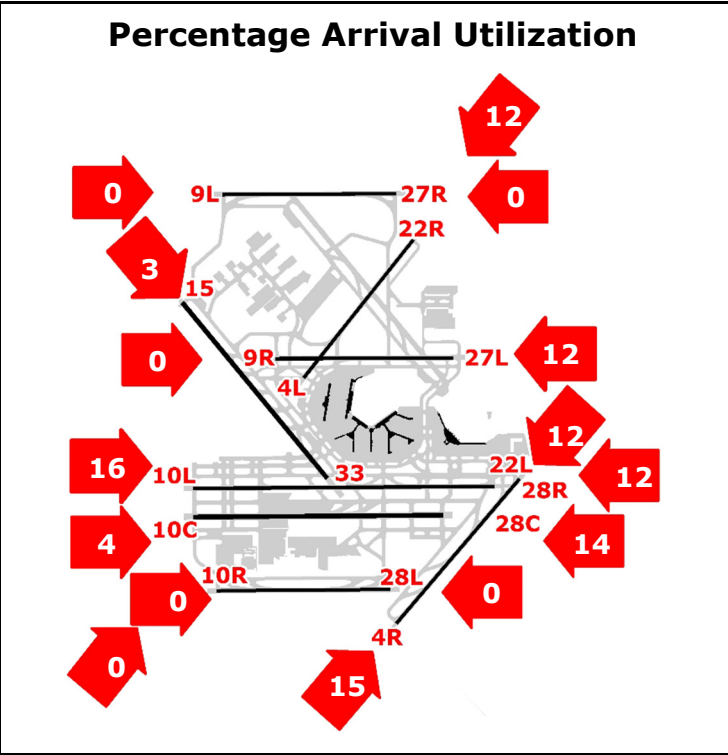
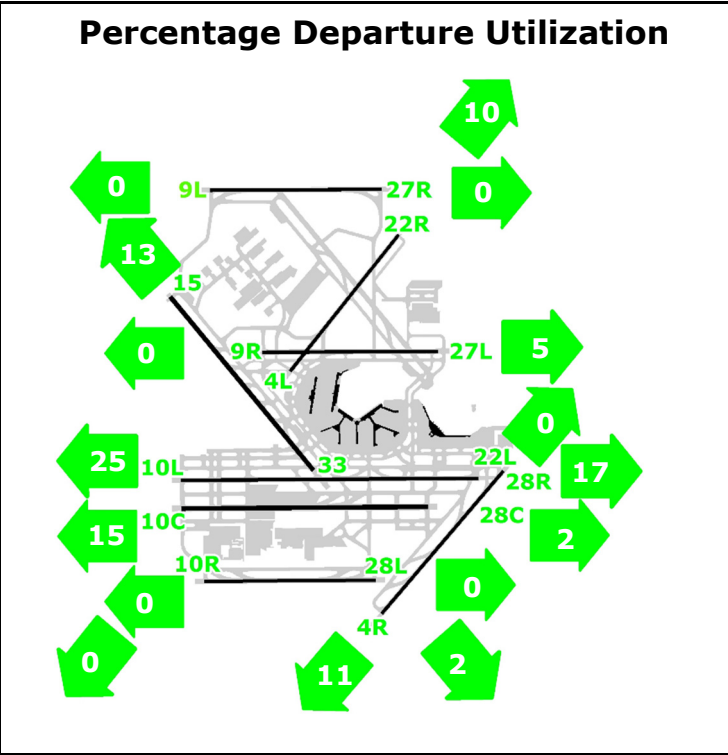
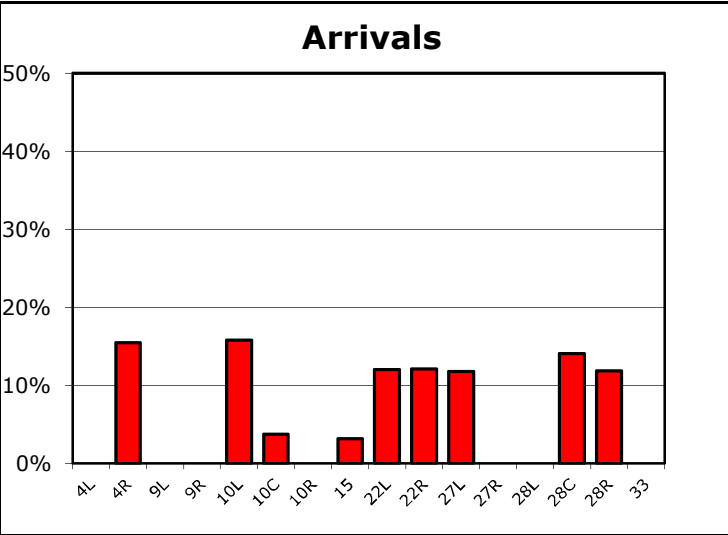
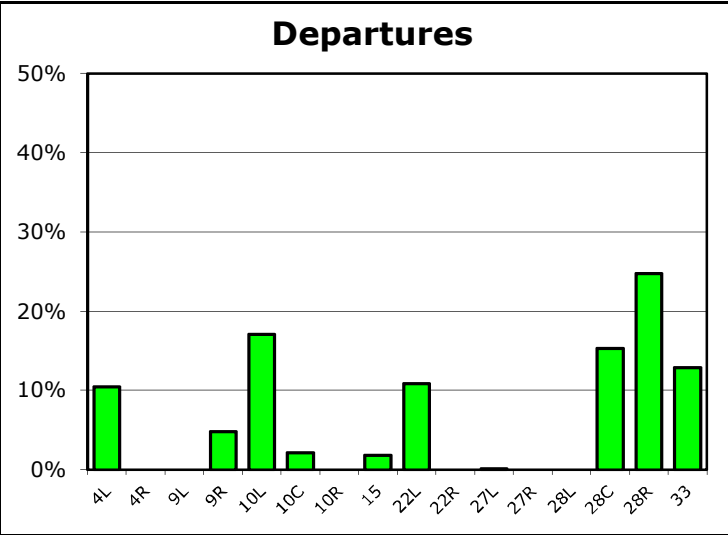


Runway Use Report

Chicago O'Hare International Airport
 Period: Night of April 30 through morning of July 23, 2017
 Runway Rotation Mode



		Runway Utilization															
		4L	4R	9L	9R	10L	10C	10R	15	22L	22R	27L	27R	28L	28C	28R	33
Average Daily Operations																	
Departures		3	0	0	1	4	1	0	0	3	0	0	0	0	4	6	3
Arrivals		0	7	0	0	7	2	0	1	5	6	5	0	0	6	5	n/a
Percentage Utilization																	
Departures		10%	0%	0%	5%	17%	2%	0%	2%	11%	0%	0%	0%	0%	15%	25%	13%
Arrivals		0%	15%	0%	0%	16%	4%	0%	3%	12%	12%	12%	0%	0%	14%	12%	n/a




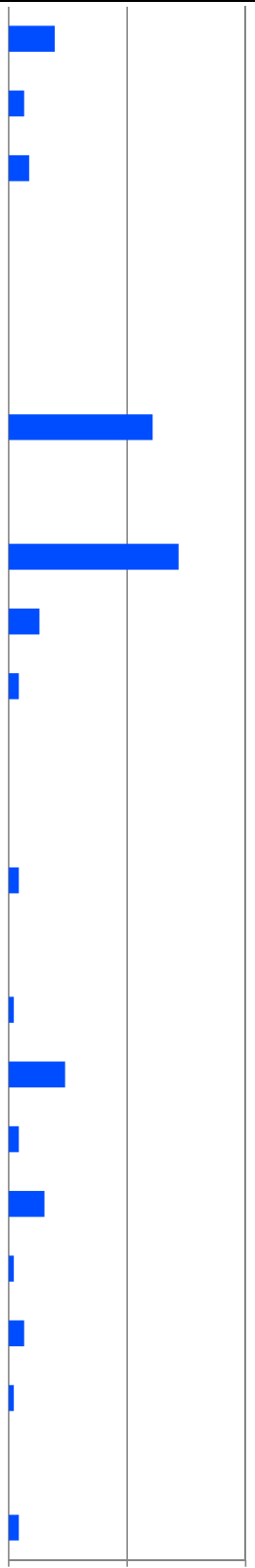





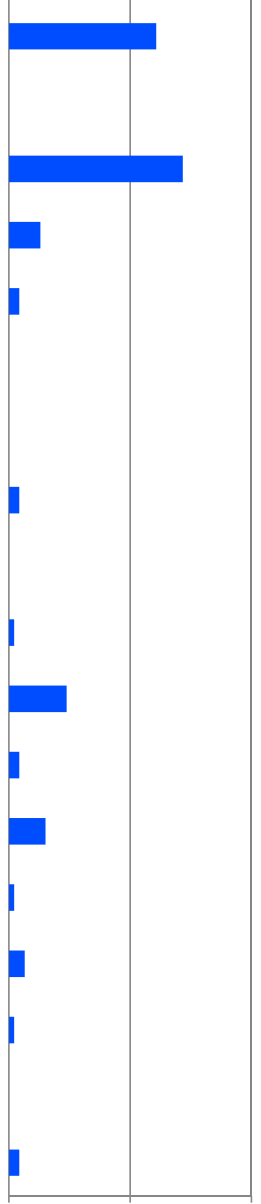






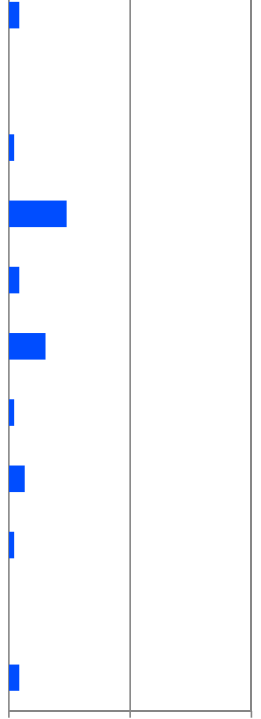








Aircraft Fleet Mix Report

Chicago O'Hare International Airport

Period: Night of April 30 through morning of July 23, 2017

Fly Quiet Mode



Aircraft	Average Operations per Day (Fly Quiet Mode)	Percentage of Total (Fly Quiet Mode)	Percentage of Total
Regional Aircraft			0% 20% 40%
 CRJ200/700/900	9	7.8%	
 E135/E145	3	2.6%	
 E170	4	3.5%	
 E190	0	0.0%	
 C208	0	0.0%	
Subtotal	16	13.9%	
Narrow-Body Aircraft			
 A319/320/321	28	24.3%	
 B717	0	0.0%	
 B737	33	28.7%	
 B757	6	5.2%	
 MD80	2	1.7%	
 MD90	0	0.0%	
Subtotal	69	60.0%	
Wide-Body Aircraft			
 A300	2	1.7%	
 A330	0	0.0%	
 A340	1	0.9%	
 B747	11	9.6%	
 B767	2	1.7%	
 B777	7	6.1%	
 B787	1	0.9%	
 DC10	3	2.6%	
 MD11	1	0.9%	
Subtotal	28	24.3%	
General Aviation	2	1.7%	
Total	115	100%	

Aircraft Fleet Mix Report

Chicago O'Hare International Airport

Period: Night of April 30 through morning of July 23, 2017

Runway Rotation Mode



Aircraft	Average Operations per Day (Rotation Test)	Percentage of Total (Rotation Test)	Percentage of Total
Regional Aircraft			0% 20% 40%
CRJ200/700/900	4	5.6%	
E135/E145	2	2.8%	
E170	2	2.8%	
E190	0	0.0%	
C208	0	0.0%	
Subtotal	8	11.1%	
Narrow-Body Aircraft			
A319/320/321	17	23.6%	
B717	0	0.0%	
B737	22	30.6%	
B757	3	4.2%	
MD80	1	1.4%	
MD90	0	0.0%	
Subtotal	43	59.7%	
Wide-Body Aircraft			
A300	1	1.4%	
A330	0	0.0%	
A340	1	1.4%	
B747	7	9.7%	
B767	2	2.8%	
B777	5	6.9%	
B787	1	1.4%	
DC10	2	2.8%	
MD11	1	1.4%	
Subtotal	20	27.8%	
General Aviation	1	1.4%	
Total	72	100%	

Airline Summary
















Chicago O'Hare International Airport

Period: Night of April 30 through morning of July 23, 2017

Fly Quiet Mode



Airline	Arrivals	Departures	Total
United Airlines	1,663	587	2,250
American Airlines	1,116	552	1,668
Sky West Aviation	209	419	628
Spirit Airlines	348	193	541
FedEx	229	177	406
AeroMexico	182	153	335
UPS	161	107	268
United Express/ASA	140	59	199
Republic Airlines	79	118	197
Interjet	76	79	155
Frontier Airlines	129	26	155
Asiana Airlines	50	99	149
American Eagle/Envoy	47	98	145
Korean Air Lines	70	67	137
Delta Air Lines	126	6	132
Cargolux Airlines	67	64	131
Alaska Airlines	96	25	121
United Express/Gojet	17	100	117
Volaris	52	56	108
JetBlue Airways	77	28	105
Atlas Air	26	78	104
AirBridge Cargo Airlines	44	58	102
Virgin America	96	3	99
Nippon Cargo Airlines	26	68	94
EVA Air	5	80	85
Cathay Pacific Airways	34	40	74
Copa Airlines	73	--	73
Lufthansa	--	72	72
Emirates	28	44	72
General Aviation	35	36	71
Qatar Airways	28	37	65
United Express/Trans States	28	16	44
Scandinavian Airlines	1	42	43
Qantas Airways	15	25	40
Kalitta Air	17	22	39
Lufthansa Cargo	18	19	37
Air Canada	25	5	30
American Eagle/PSA Airlines	6	21	27
Finnair	1	25	26
AeroUnion	12	9	21
Air France	2	15	17
Polar Air Cargo	12	5	17
Aerologic	--	15	15
China Southern Airlines	14	1	15
Delta Connection/Endeavor Air	12	3	15
Air Canada Express/Sky Regional	11	3	14
National Air Cargo	9	3	12
China Cargo Airlines	5	6	11
LOT	1	10	11
Yangtze River Express Airlines	4	7	11

Airline	Arrivals	Departures	Total
China Airlines 	4	4	8
Turkish Airlines 	1	7	8
Etihad Airways 	4	3	7
Singapore Airlines Cargo 	2	5	7
Miami Air International 	3	1	4
Royal Jordanian 	--	4	4
United Express/Mesa 	1	1	2
British Airways 	--	2	2
Aer Lingus 	1	1	2
Freight Runners Express 	1	1	2
Western Global Airlines 	--	2	2
WestJet Airlines 	1	1	2
DHL/Airborne Express 	1	--	1
Air India 	1	--	1
Sky Lease Cargo 	--	1	1
Total	65	3,814	9,356












Carrier Category	Percent of Total
United & American	42%
Other Domestic	27%
Other International	17%
Dedicated Cargo	13%
General Aviation	1%
Total	100%

Airline Summary

Chicago O'Hare International Airport
Period: Night of April 30 through morning of July 23, 2017
Runway Rotation Mode



Airline	Arrivals	Departures	Total
United Airlines	871	224	1,095
American Airlines	542	226	768
Spirit Airlines	152	88	240
Sky West Aviation	72	166	238
FedEx	123	65	188
AeroMexico	100	62	162
UPS	91	33	124
Republic Airlines	29	49	78
United Express/ASA	49	26	75
Frontier Airlines	64	10	74
Asiana Airlines	24	44	68
Alaska Airlines	57	10	67
Interjet	42	19	61
Cargolux Airlines	33	25	58
Korean Air Lines	34	21	55
Delta Air Lines	53	1	54
Volaris	30	21	51
EVA Air	1	48	49
Atlas Air	10	39	49
JetBlue Airways	35	12	47
American Eagle/Envoy	11	35	46
Virgin America	43	3	46
AirBridge Cargo Airlines	22	22	44
Nippon Cargo Airlines	8	36	44
Emirates	18	24	42
Copa Airlines	39	--	39
Qatar Airways	16	18	34
Cathay Pacific Airways	19	14	33
Lufthansa	--	33	33
United Express/Gojet	3	30	33
General Aviation	12	20	32
Scandinavian Airlines	1	17	18
Kalitta Air	8	9	17
Qantas Airways	4	11	15
Air Canada	12	2	14
Lufthansa Cargo	7	6	13
Finnair	--	12	12
United Express/Trans States	6	6	12
AeroUnion	6	4	10
Air Canada Express/Sky Regional	7	2	9
Air France	1	7	8
Delta Connection/Endeavor Air	8	--	8
American Eagle/PSA Airlines	2	6	8
Polar Air Cargo	6	1	7
China Cargo Airlines	2	4	6
China Southern Airlines	6	--	6
National Air Cargo	4	2	6
Aerologic	--	4	4
Yangtze River Express Airlines	1	3	4
Miami Air International	2	1	3

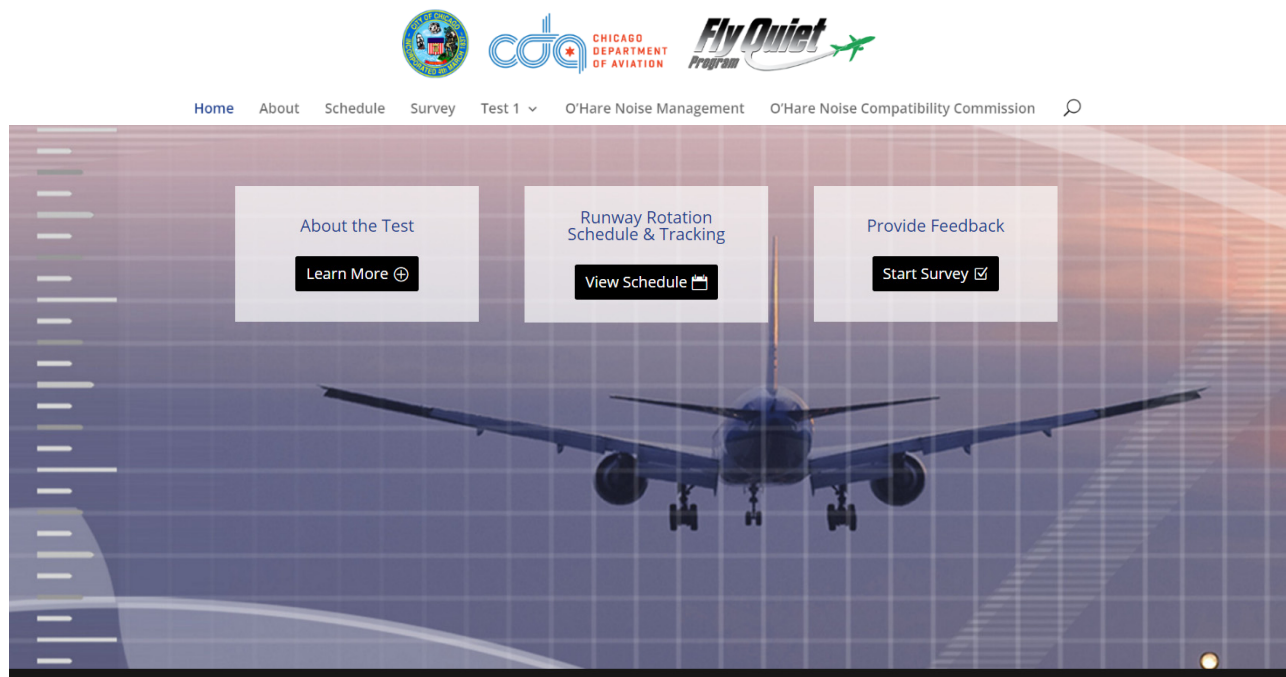
Airline	Arrivals	Departures	Total
China Airlines 	1	2	3
LOT 	--	3	3
Turkish Airlines 	1	2	3
Aer Lingus 	1	1	2
Etihad Airways 	--	2	2
Singapore Airlines Cargo 	1	1	2
DHL/Airborne Express 	1	--	1
Sky Lease Cargo 	--	1	1
Royal Jordanian 	--	1	1
Western Global Airlines 	--	1	1
WestJet Airlines 	--	1	1
Total	61	1,536	4,227

Carrier Category	Percent of Total
United & American	44%
Other Domestic	24%
Other International	17%
Dedicated Cargo	14%
General Aviation	1%
Total	100%

SURVEY RESULTS: CITIZEN FEEDBACK

In order to capture citizen feedback regarding the Test, the CDA administered a public website that included the following:

- **Background Information** – Information on the Fly Quiet Program and the Test
- **Test Schedules** – Downloadable Test schedule in multiple formats
- **Weekly updates** – Adherence tracking of the Test
- **Survey** – Public survey, as approved by the ONCC



www.flychicago.org/flyquiittest

There were 1,606 survey responses submitted, which originated from 759 unique IP addresses. See **Table 1** on the following page for the number of survey responses by community. For the purposes of this report, each unique IP address is considered to be one respondent. In some cases, repeat respondents provided inconsistent responses. Therefore, in such cases, the CDA made assumptions to summarize all survey responses.

Survey results show that 66.6% of the total survey responses believe that the Test should continue. Based on unique IP addresses received, 49.7% believe that the Test should continue.

The detailed results of the survey are included in this section of the document. The following pages include the public survey questions, as well as summarized responses to each survey question.

FLY QUIET PROGRAM

RUNWAY ROTATION TEST 2

FINAL SURVEY QUESTIONS

Welcome to the Fly Quiet Runway Rotation Test 2 Survey. The survey consists of 16 questions and should take less than five minutes to complete. All questions must be answered in order to complete the survey. Survey results will be compiled after the test has ended.

1. What is your address?
 - a. User input in address format (mandatory)
2. Has your home been sound insulated?
 - a. Yes
 - b. No
3. What is your age?
 - a. Under 20
 - b. 20 – 29
 - c. 30 – 39
 - d. 40 – 49
 - e. 50 – 59
 - f. 60 – 69
 - g. 70 and over
4. In what type of building do you live?
 - a. Single-family
 - b. Multi-family
 - c. Mixed-Use (residential and commercial)
5. What is the approximate age of the building in which you live?
 - a. Less than 10 years
 - b. 10 – 20 years
 - c. 20 – 30 years
 - d. 30 – 40 years
 - e. 40 – 50 years
 - f. Greater than 50 years
6. How long have you lived at this address?
 - a. Less than 1 year
 - b. 1-5 years
 - c. 5-10 years
 - d. 10-20 years
 - e. 20 or more years
7. How many people live in your home?
 - a. 1
 - b. 2
 - c. 3-5
 - d. 6-8
 - e. More than 8
8. Is this your primary residence?
 - a. Yes
 - b. No
9. Other than aircraft noise, would you say that your neighborhood is generally quiet or noisy at night?
 - a. Quiet
 - b. Noisy
10. What time do you typically go to sleep?
 - a. User input in time format

11. What time do you typically wake up in the morning?
 - a. User input in time format
12. What time of day do you typically work?
 - a. Daytime
 - b. Nighttime
 - c. Both
 - d. Do not work
13. Do aircraft from O'Hare fly directly over your residence or further away?
 - a. Directly Overhead
 - b. Further Away
14. On a scale of 1-5 (5 being the highest), how helpful was the information on this website regarding the runway rotation test?

a. 1	c. 3	e. 5
b. 2	d. 4	
15. Are the aircraft noise levels during the Fly Quiet overnight period (roughly 11 p.m. – 5:30 a.m.) better or worse than before the test period began on April 30?
 - a. Better
 - b. Worse
16. Would you like a nighttime Fly Quiet Runway Rotation to be in place from Spring 2018 until Fall 2020?
 - a. Yes
 - b. No

Thank You for taking the survey. The results will be compiled and made available after the six-month test is complete. For more aircraft noise information, please use the below links:

[Noise Complaints](#)

[Sound Insulation](#)

[Flight Tracker](#)

[Introduction to Noise](#)

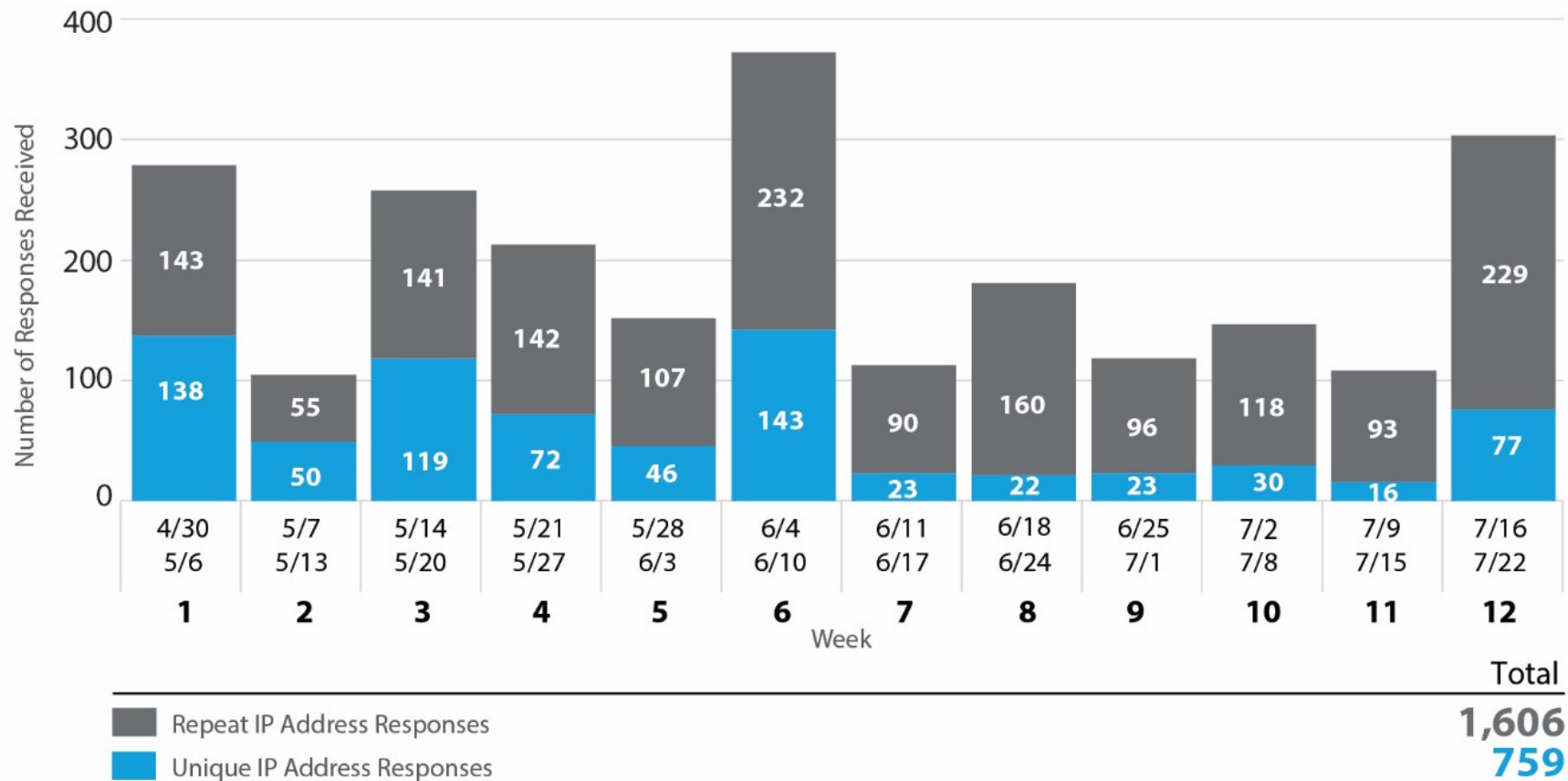
[ONCC Meeting Dates](#)

TABLE 1
SURVEY RESPONSES BY COMMUNITY

Community	Number of Survey Responses	Number of Unique IP Addresses
Bensenville	655	10
Elmhurst	409	282
Chicago	255	235
Park Ridge	74	69
Wood Dale	29	23
Glenview	27	20
Elk Grove Village	20	8
Harwood Heights	17	14
Lombard	17	15
Villa Park	14	7
Elgin	11	10
Itasca	9	8
Schaumburg	9	7
Niles	6	6
Hoffman Estates	6	5
Bloomington	5	4
Lincolnwood	5	5
Norridge	5	2
Schiller Park	4	3
Addison	4	4
Mount Prospect	3	1
Arlington Heights	3	3
Palatine	3	3
Medinah	2	2
Des Plaines	2	2
Elmwood Park	2	2
Roselle	2	2
Hanover Park*	1	0
Western Springs	1	1
Northlake	1	1
Berkeley	1	1
Wilmette	1	1
Skokie	1	1
South Barrington	1	1
Rosemont	1	1
TOTAL	35	759

*Note: There were multiple survey responses from the same IP address, representing more than one community.

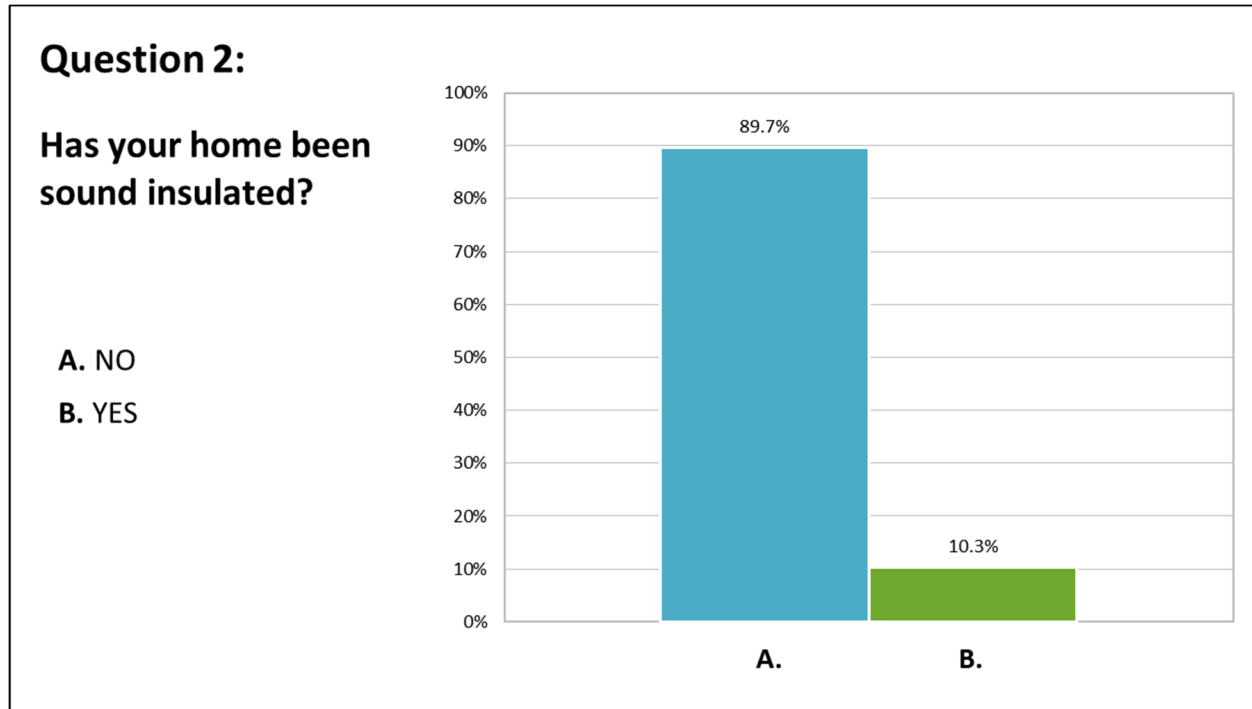
The graph below shows the number of survey responses by week, broken-down by unique IP Addresses and repeat IP addresses.



SURVEY QUESTION 1
What is your address?

Based on total responses, 832 unique community addresses were entered.

SURVEY QUESTION 2
Has your home been sound insulated?



Based on unique IP address responses.

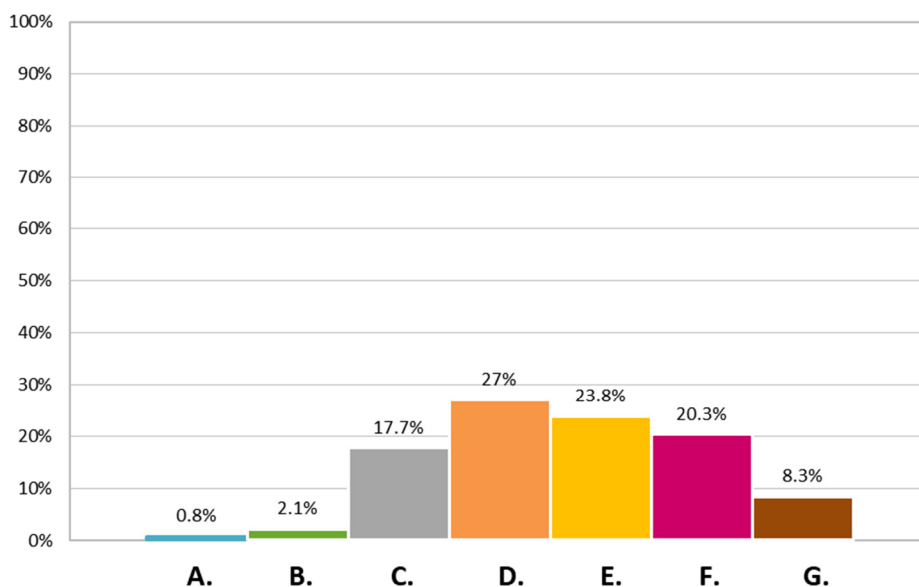
SURVEY QUESTION 3

What is your age?

Question 3:

What is your age?

- A. Under 20
- B. 20-29
- C. 30-39
- D. 40-49
- E. 50-59
- F. 60-69
- G. 70 and over



Based on unique IP address responses.

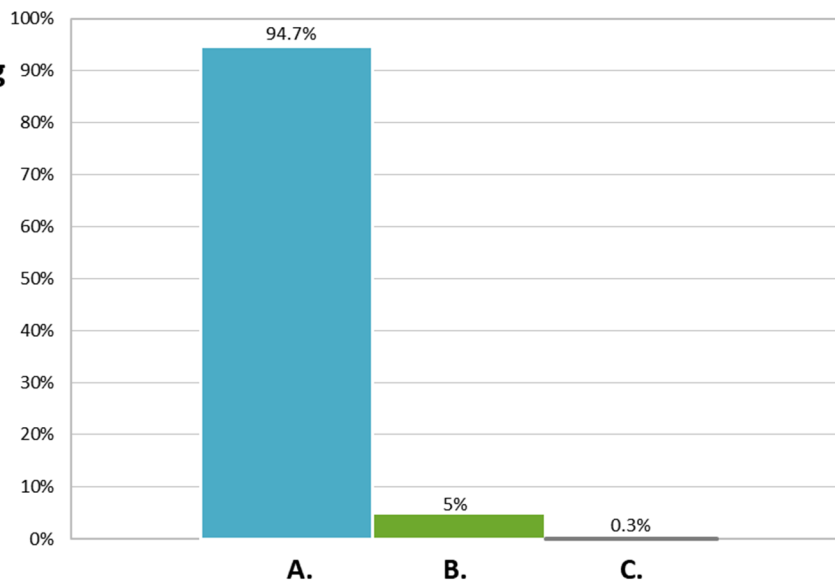
SURVEY QUESTION 4

In what type of building do you live?

Question 4:

In what type of building do you live?

- A. Single-Family
- B. Multi-Family
- C. Mixed-Use (residential and commercial)



Based on unique IP address responses.

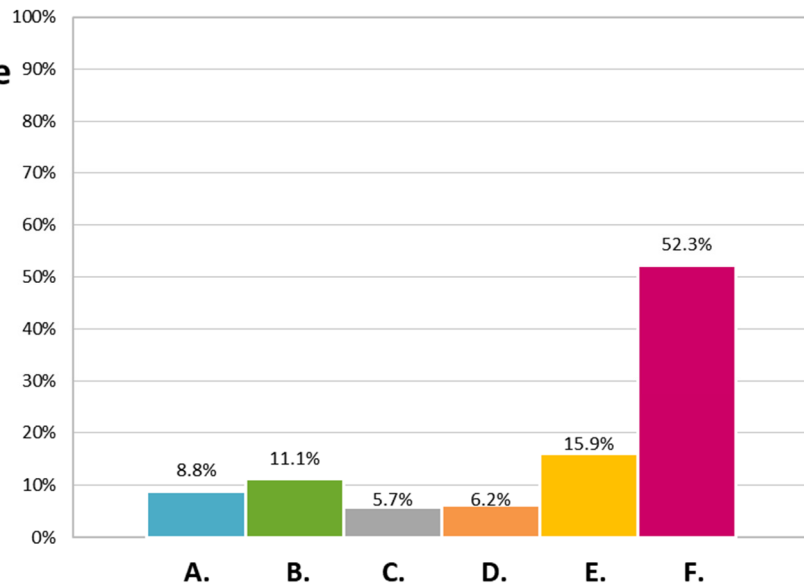
SURVEY QUESTION 5

What is the approximate age of the building in which you live?

Question 5:

What is the approximate age of the building in which you live?

- A. Less than 10 years
- B. 10-20 years
- C. 20-30 years
- D. 30-40 years
- E. 40-50 years
- F. Greater than 50 years



Based on unique IP address responses.

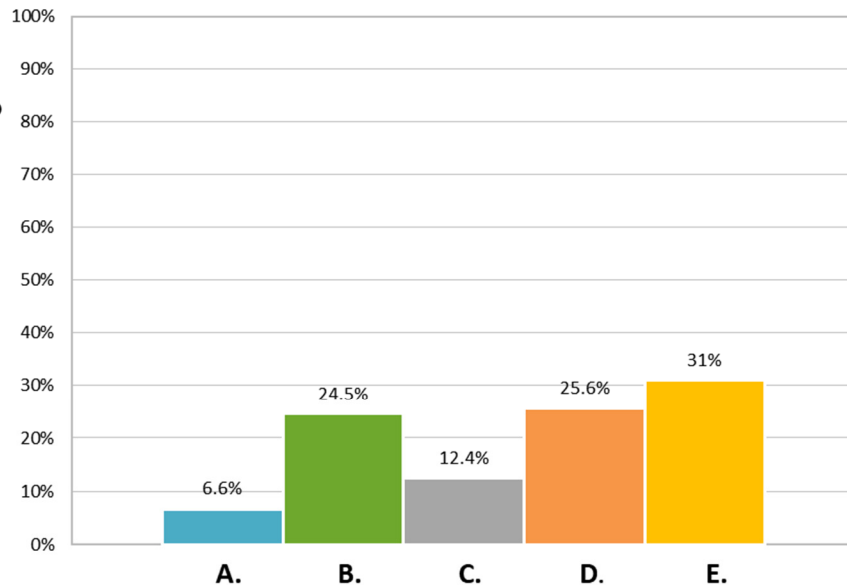
SURVEY QUESTION 6

How long have you lived at this address?

Question 6:

How long have you lived at this address?

- A. Less than 1 year
- B. 1-5 years
- C. 5-10 years
- D. 10-20 years
- E. 20 or more years



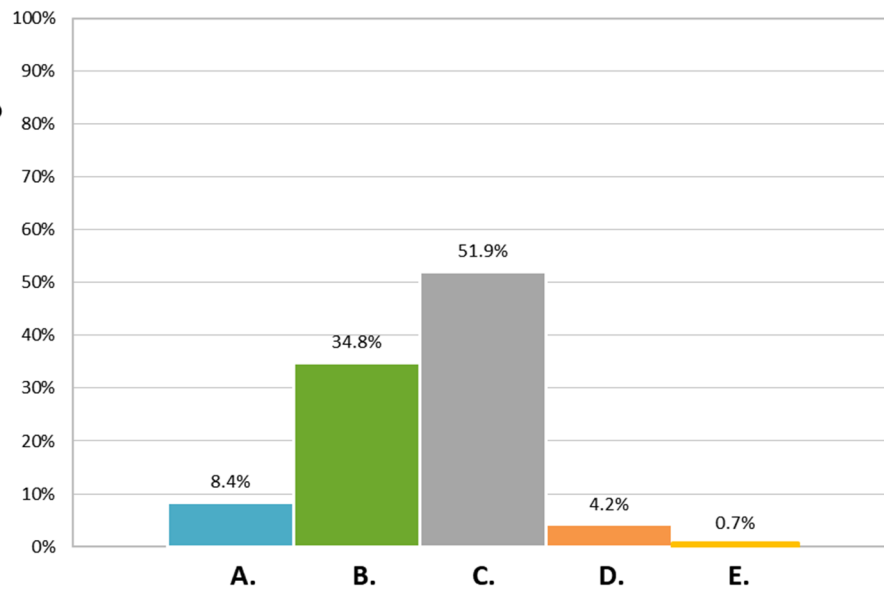
Based on unique IP address responses.

SURVEY QUESTION 7
How many people live in your home?

Question 7:

How many people live in your home?

- A. 1**
- B. 2**
- C. 3-5**
- D. 6-8**
- E. More than 8**



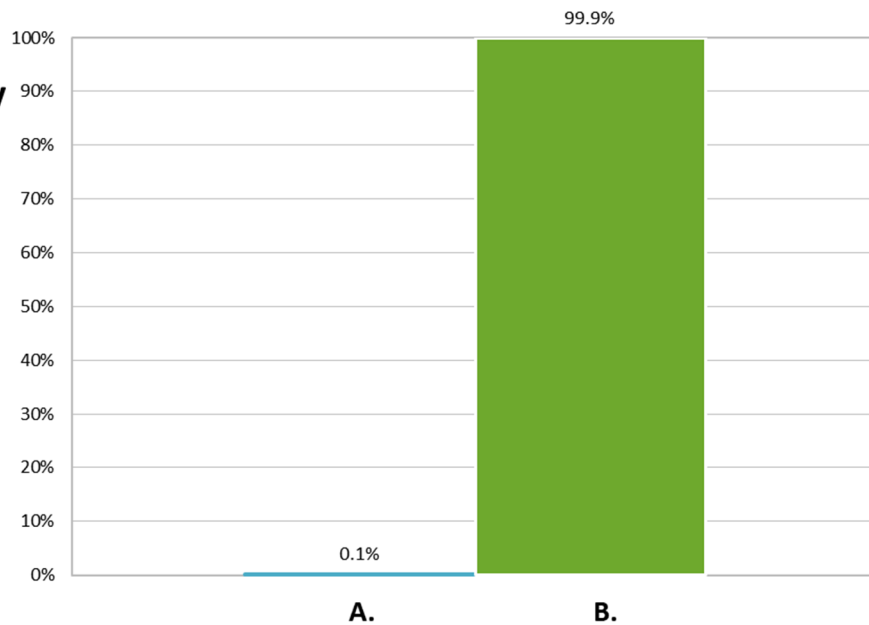
Based on unique IP address responses.

SURVEY QUESTION 8
Is this your primary residence?

Question 8:

Is this your primary residence?

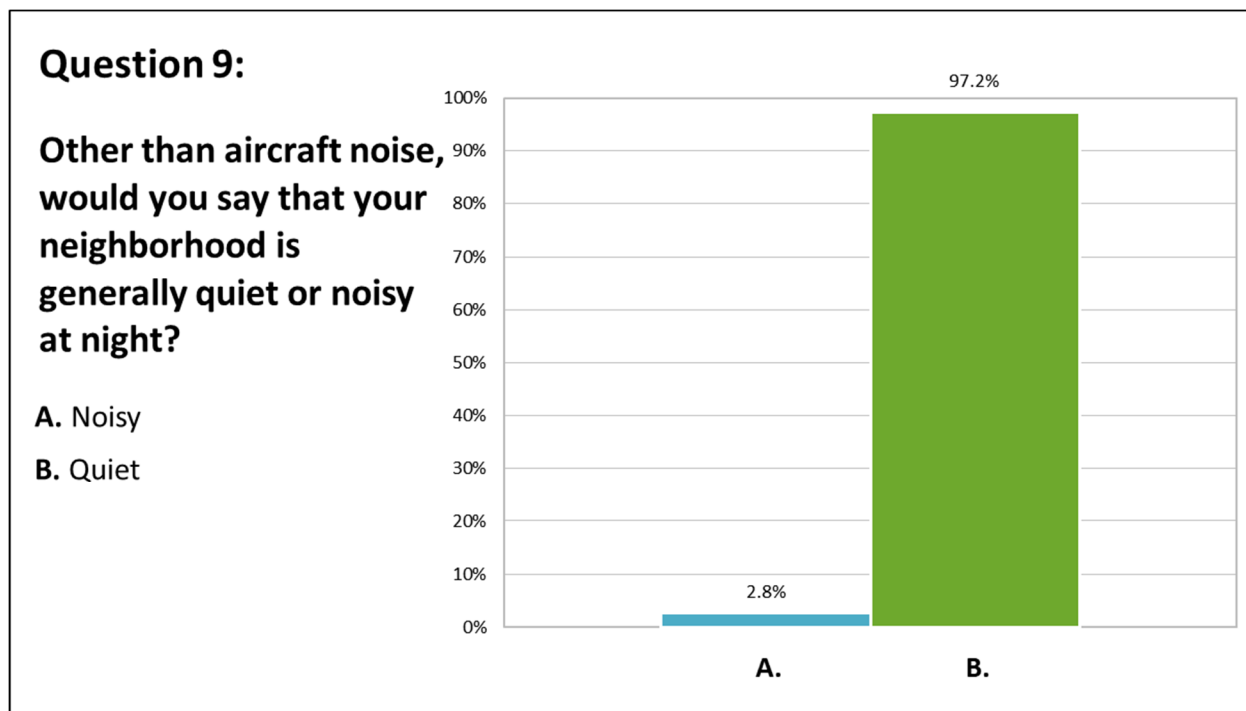
- A. NO**
- B. YES**



Based on unique IP address responses.

SURVEY QUESTION 9

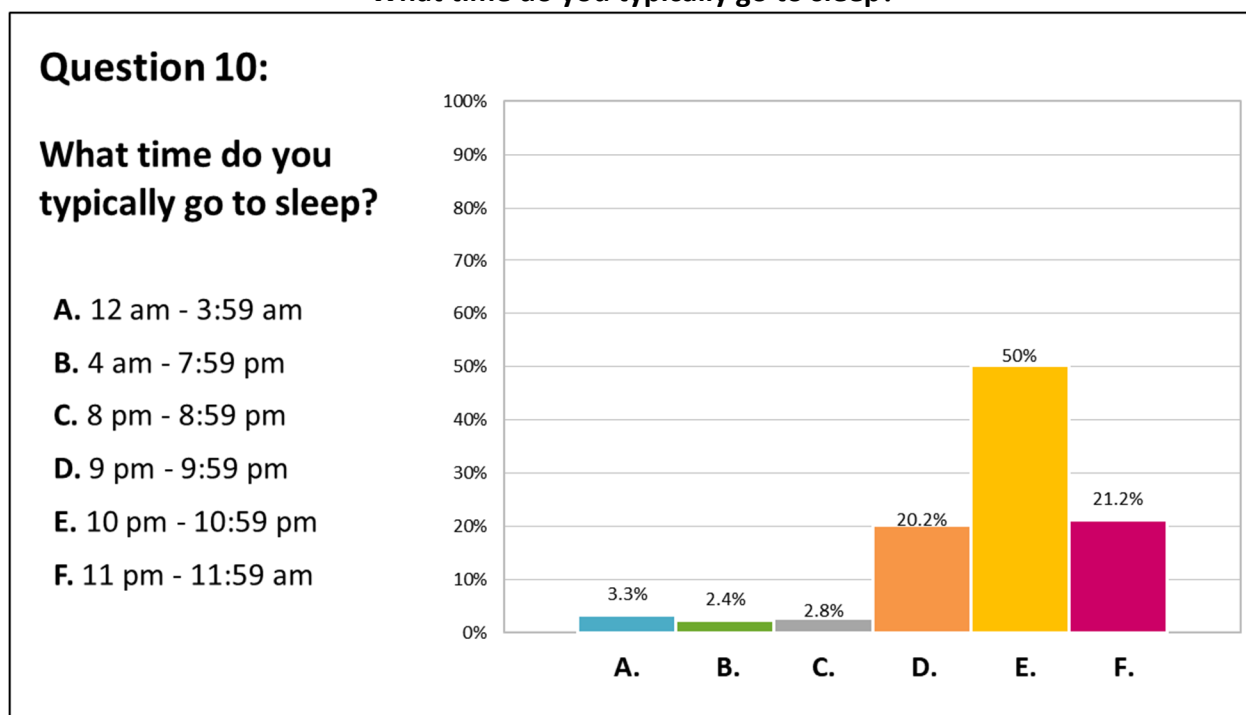
Other than aircraft noise, would you say that your neighborhood is generally quiet or noisy at night?



Based on unique IP address responses.

SURVEY QUESTION 10

What time do you typically go to sleep?



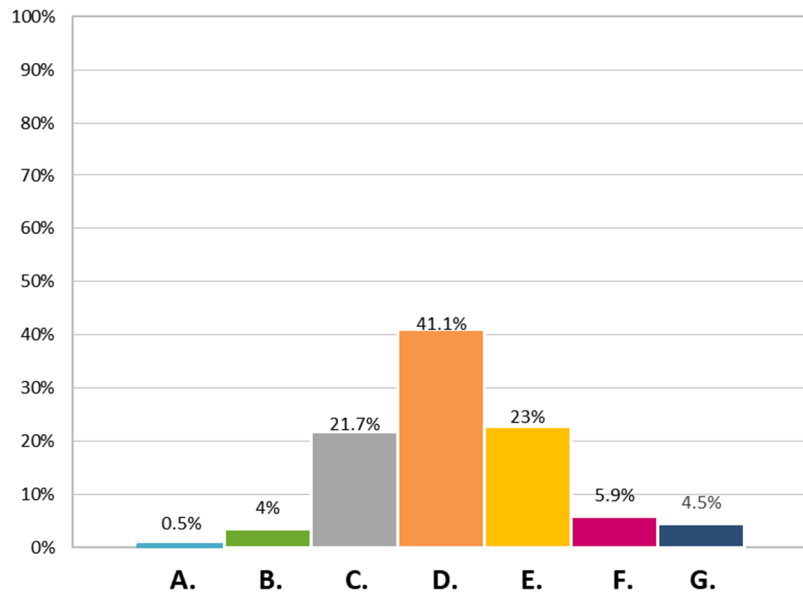
Based on unique IP address responses.

SURVEY QUESTION 11
What time do you typically wake up in the morning?

Question 11:

What time do you typically wake up in the morning?

- A. 12 am - 3:59 am
- B. 4 am - 4:59 am
- C. 5 am - 5:59 am
- D. 6 am - 6:59 am
- E. 7 am - 7:59 am
- F. 8 am - 8:59 am
- G. 9 am - 11:59 pm



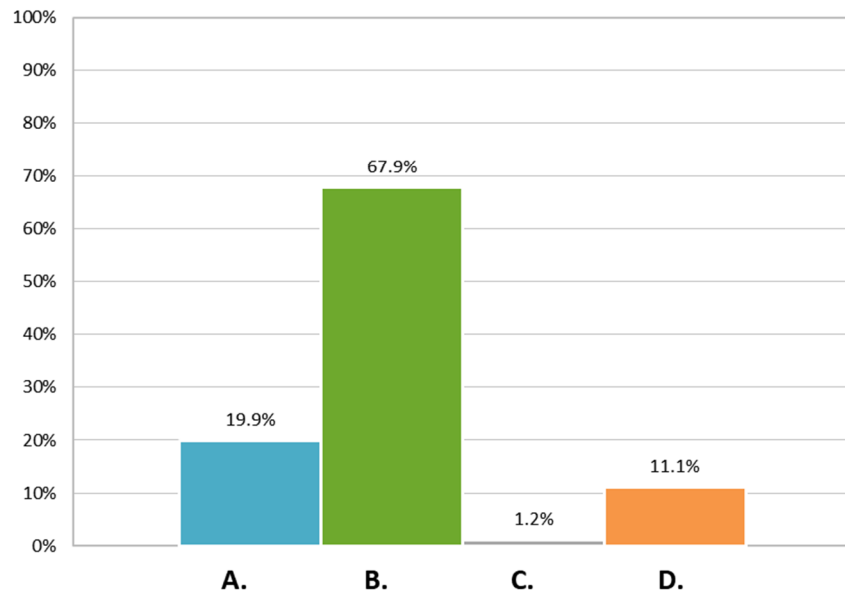
Based on unique IP address responses.

SURVEY QUESTION 12
What time of day do you typically work?

Question 12:

What time of day do you typically work?

- A. Do not work
- B. Daytime
- C. Nighttime
- D. Both, Daytime and Nighttime



Based on unique IP address responses.

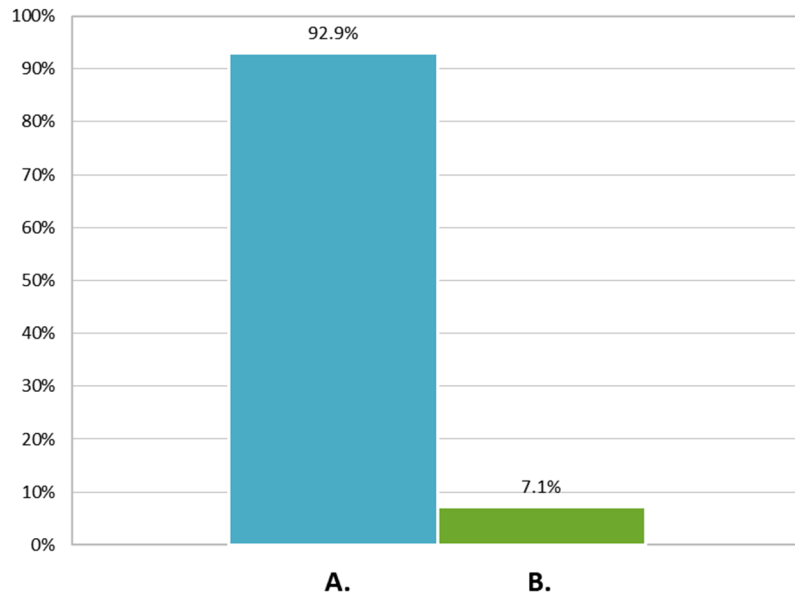
SURVEY QUESTION 13

Do aircraft from O'Hare fly directly over your residence or further away?

Question 13:

Do aircraft from O'Hare fly directly over your residence or further away?

- A. Directly Overheard
- B. Further Away



Based on unique IP address responses.

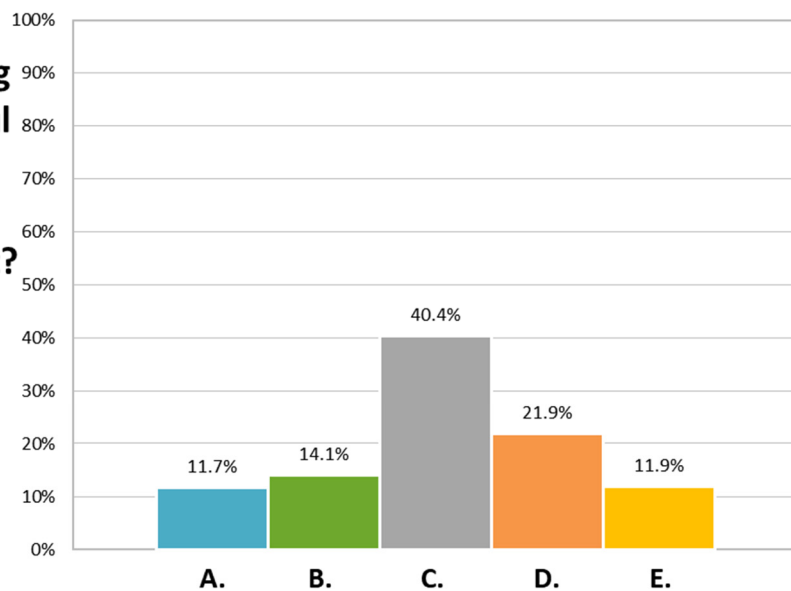
SURVEY QUESTION 14

On a scale of 1-5 (5 being the highest), how helpful was the information on this website regarding the runway rotation test?

Question 14:

On a scale of 1-5 (5 being the highest), how helpful was the information on this website regarding the runway rotation test?

- A. 1
- B. 2
- C. 3
- D. 4
- E. 5



Based on unique IP address responses.

Based

SURVEY QUESTION 15

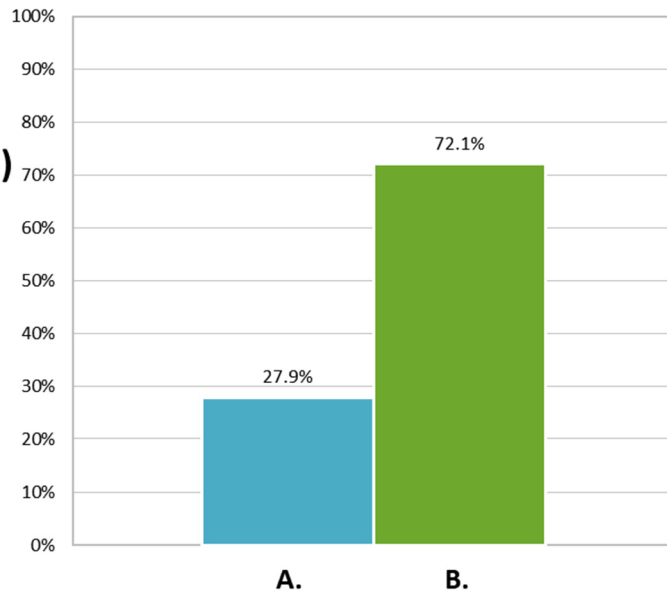
Are the aircraft noise levels during the Fly Quiet overnight period (roughly 11 pm – 5:30 am) better or worse than before the test period began on April 30?

Question 15:

Are the aircraft noise levels during the Fly Quiet overnight period (roughly 11 pm – 5:30 am) better or worse than before the test period began on April 30?

A. Better

B. Worse



Based on unique IP address responses.

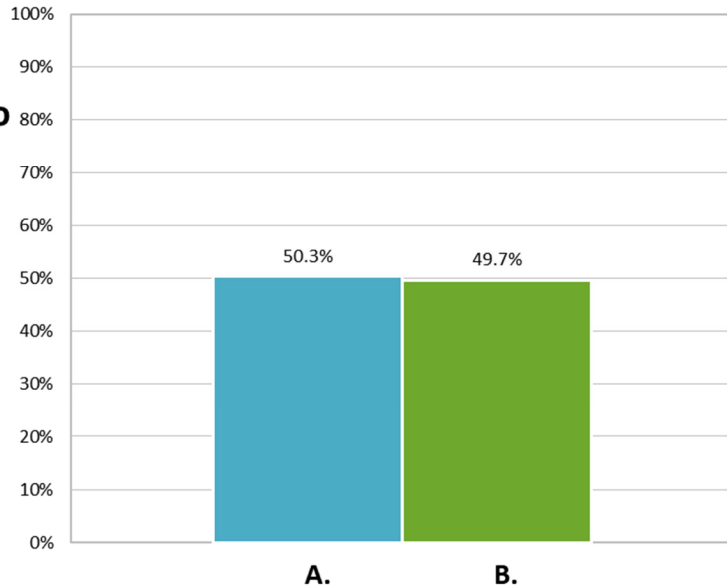
SURVEY QUESTION 16

Would you like a nighttime Fly Quiet Runway rotation to be in place from Spring 2018 until Fall 2020?

Question 16:

Would you like a nighttime Fly Quiet Runway Rotation to be in place from Spring 2018 until Fall 2020?*

- A. No
- B. Yes



* Note: Results based on unique ip address responses

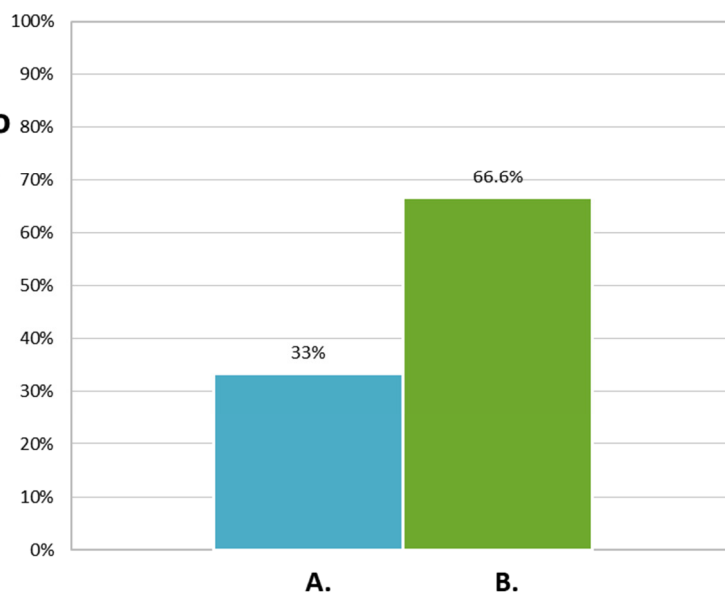
SURVEY QUESTION 16

Would you like a nighttime Fly Quiet Runway rotation to be in place from Spring 2018 until Fall 2020?

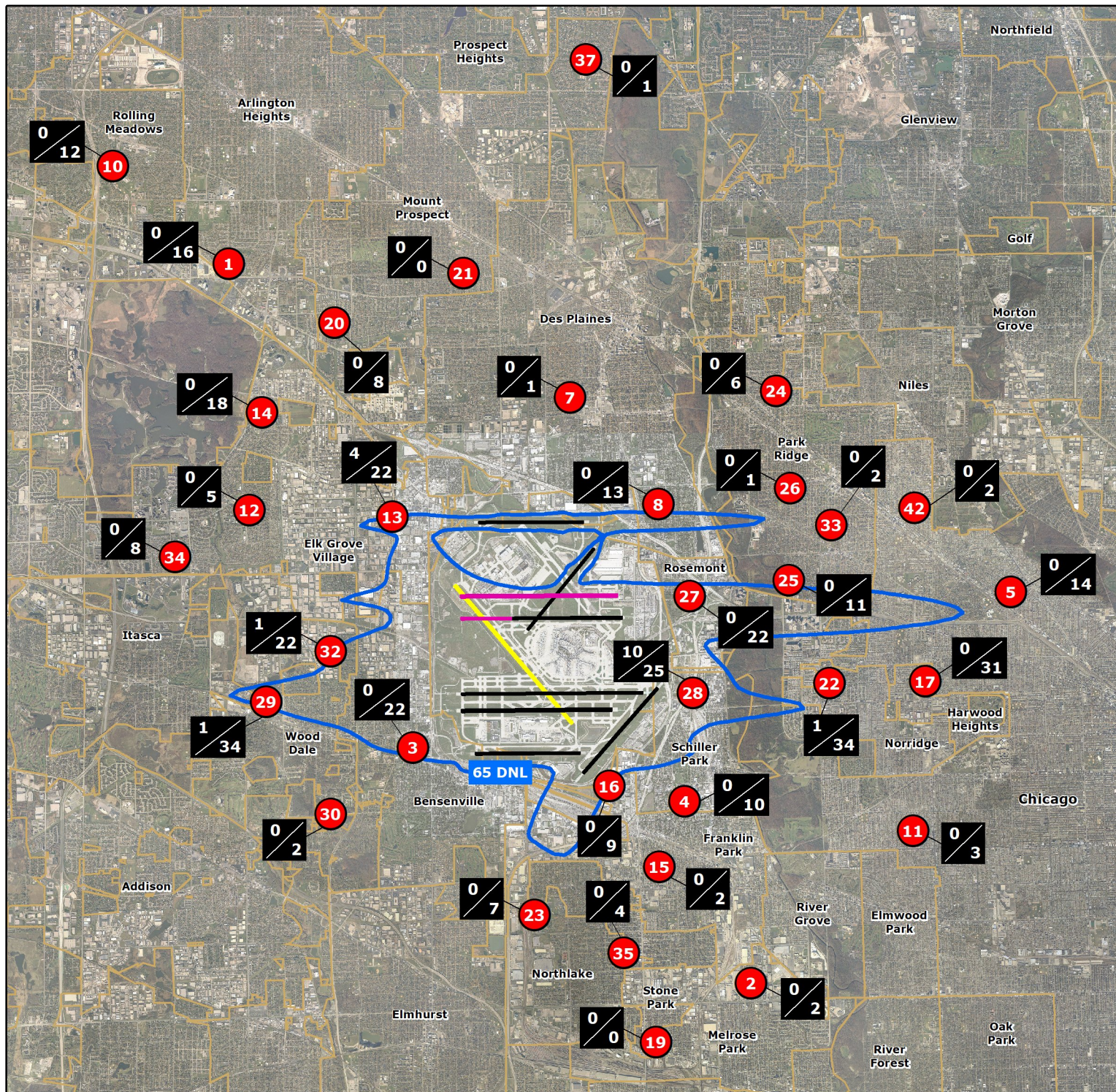
Question 16:

Would you like a nighttime Fly Quiet Runway Rotation to be in place from Spring 2018 until Fall 2020?**

- A. No
- B. Yes



** Note: Results based on all responses received



O'Hare International Airport

Average* Fly Quiet Mode Aircraft Noise Events

April 30, 2017 through July 23, 2017

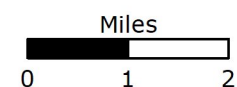
City of Chicago
Rahm Emanuel, Mayor

Department of Aviation
Ginger S. Evans, Commissioner

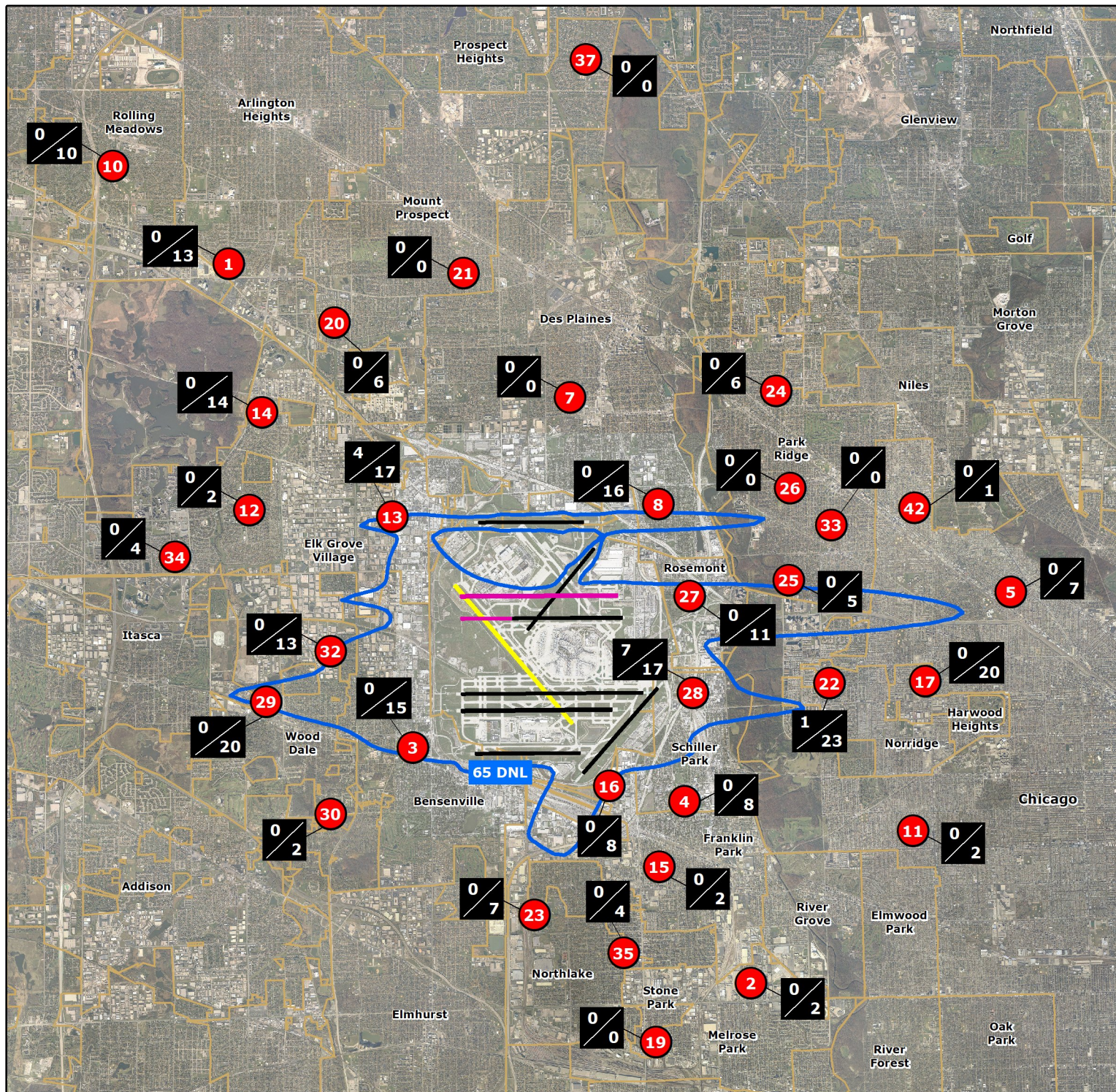
Legend

- Existing RMT Sites (33)
- Average Events 85dB and Greater
- Average Events 65dB and Greater
- Existing Runways
- Existing Runway to be Decommissioned
- Future Runways
- OMP Build Out Noise Contour (Measured in DNL - Day/Night Average Sound Level)
- Community Boundaries

*Average is the total number of aircraft noise events divided by the total number of nights in Fly Quiet Mode during Test 2.



Date: September 19, 2017
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O'Hare International Airport

Average* Rotation Mode Aircraft Noise Events

April 30, 2017 through July 23, 2017

City of Chicago

Rahm Emanuel, Mayor

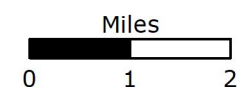
Department of Aviation

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Legend

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*Average is the total number of aircraft noise events divided by the total number of nights in Rotation Mode during Test 2.



Date: September 19, 2017
File: ORDRT_ADANE_043017-072317.mxd