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# Noise Compatibility Report

2020 Quarter 4  
October - December

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## Disclaimer

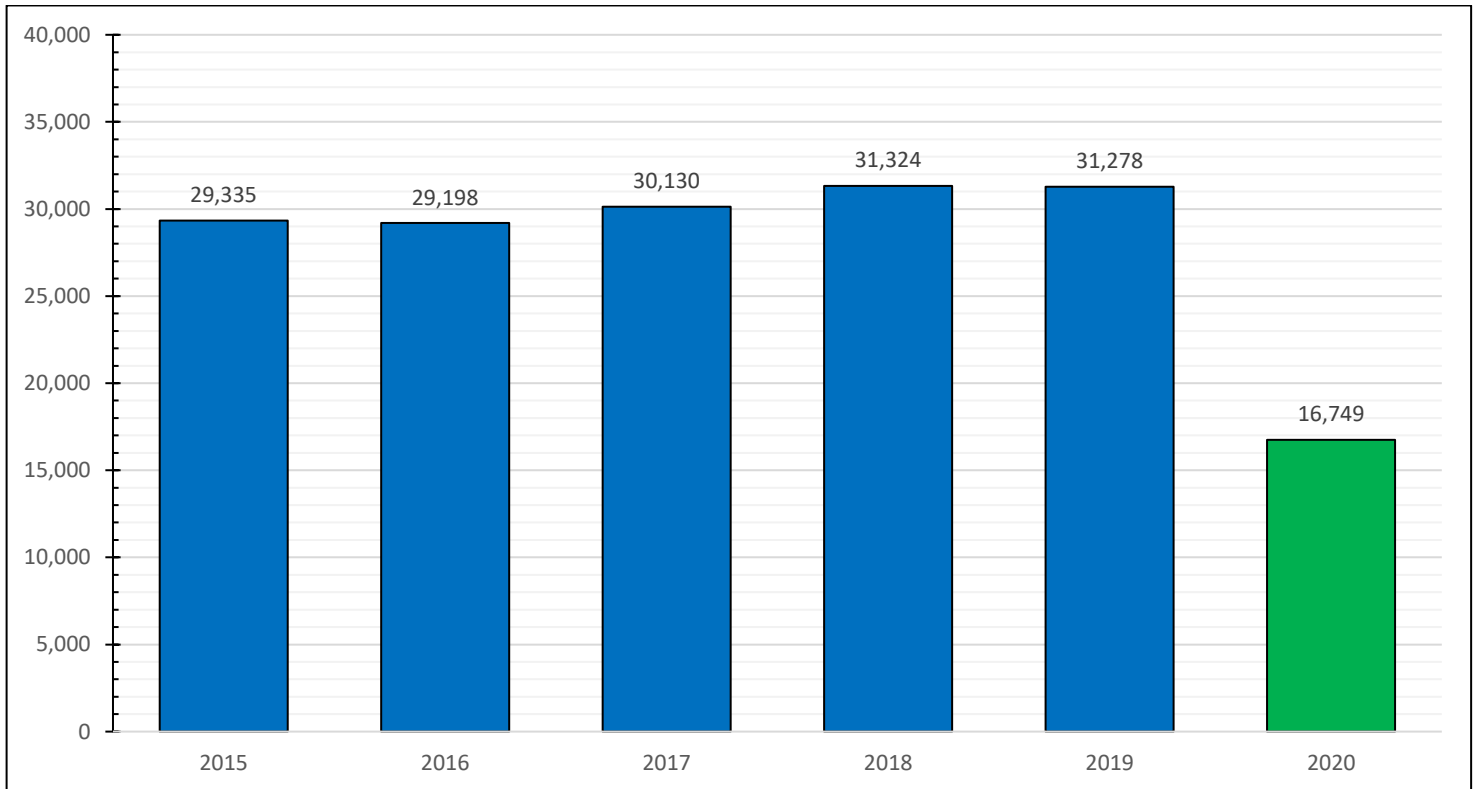
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- The Noise Compatibility Plan (NCP) at Cleveland Hopkins International Airport (CLE) combines the existing approved Part 150 Noise Compatibility Plan with Air Traffic Control Tower (ATCT) requirements to ensure the safe and expeditious handling of air traffic. While safety is paramount to any aircraft operation, noise sensitivity to the surrounding communities is also of key importance in airport operations.
- CLE is not directly responsible for changes made to flight plans or routes of aircraft.
- Adherence to approved noise abatement measures is voluntary and subject to change based on weather, efficiency, and safety.
- The contents of this report are for informational purposes only. The information cannot be used for enforcement of any Noise Abatement Measure.
- Due to the large volume of data when reporting noise, not all noise and flight information can be shown in this report.
- If more information is needed, please contact the noise hotline and the airport will respond as soon as possible.

# Aircraft Operations

## Cleveland 4<sup>th</sup> Quarter Operations 2015 – 2020

- There were **16,749** operations in the 4<sup>th</sup> Qtr. 2020; this is 46% below the 4<sup>th</sup> Qtr. 2019.



# Fleet Mix

Cleveland Hopkins had **16,749** operations in Quarter 4 of 2020. Here are some of the notable aircraft that CLE welcomes and sends off on a regular basis.

Aircraft	Total
Boeing 737 Series	3,306
Embraer ERJ 175	929
Bombardier CRJ-900	941
Airbus A320	3,817
MD-11	123



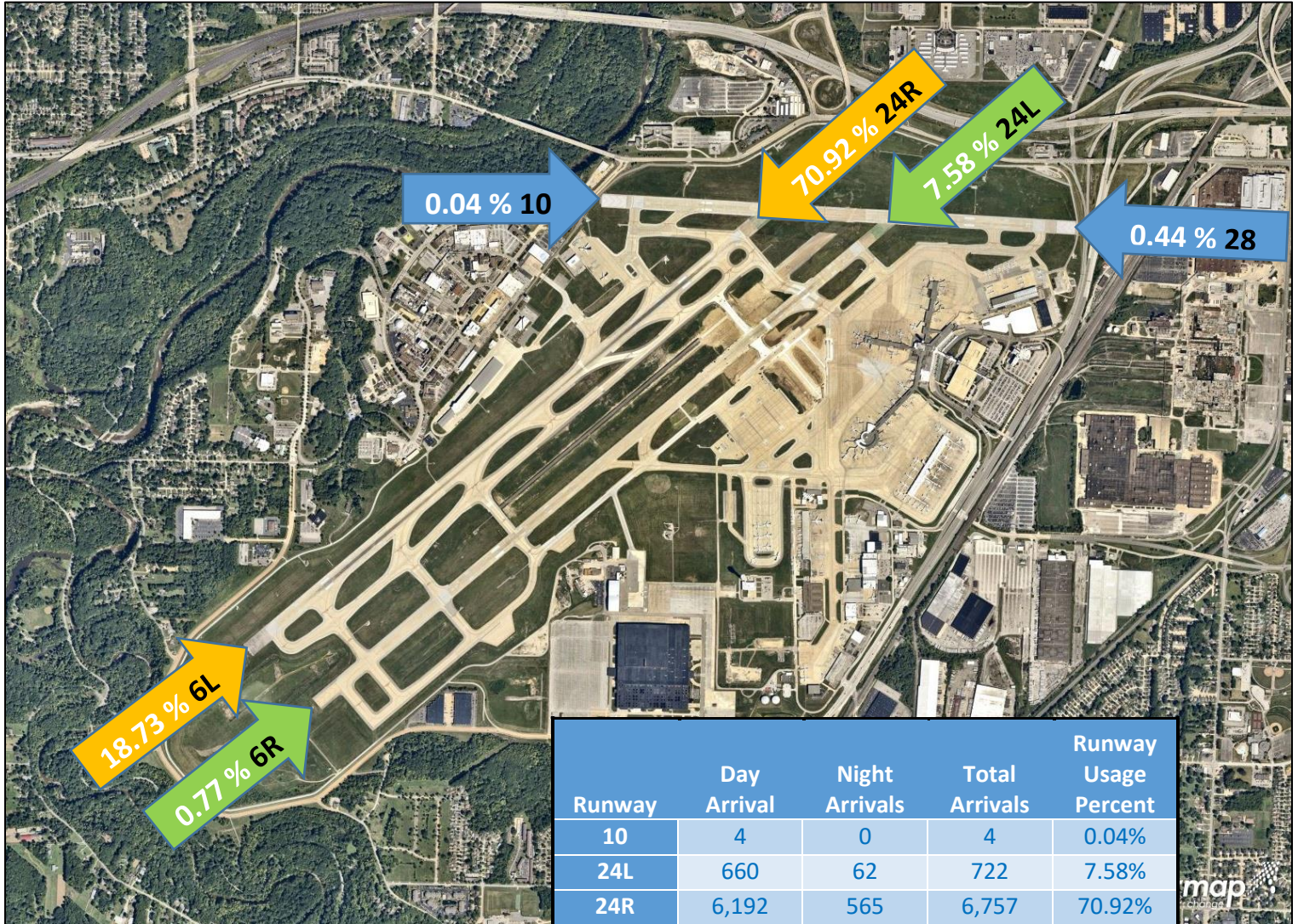
Other notable aircraft operations include:

Aircraft	Total
Air Taxi	2,173
General Aviation	1,203
Military	64





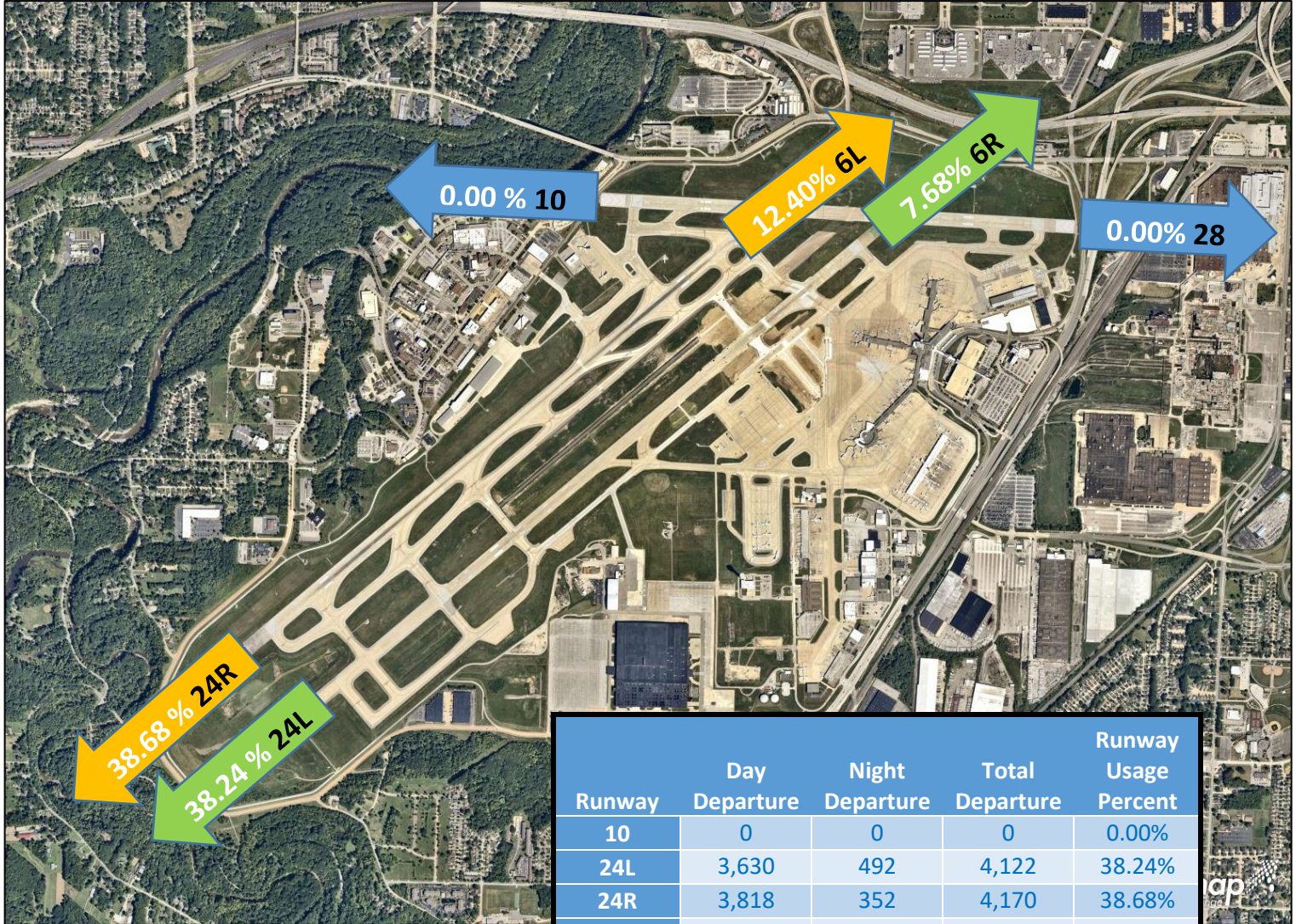
# Runway Use: 4<sup>th</sup> Quarter, 2020 Arrivals



Runway	Day Arrival	Night Arrivals	Total Arrivals	Runway Usage Percent
10	4	0	4	0.04%
24L	660	62	722	7.58%
24R	6,192	565	6,757	70.92%
28	25	17	42	0.44%
6L	1,630	155	1,785	18.73%
6R	59	14	73	0.77%
UNK	130	15	145	1.52%
Totals	8700	828	9528	100.00%



# Runway Use: 4<sup>th</sup> Quarter, 2020 Departures



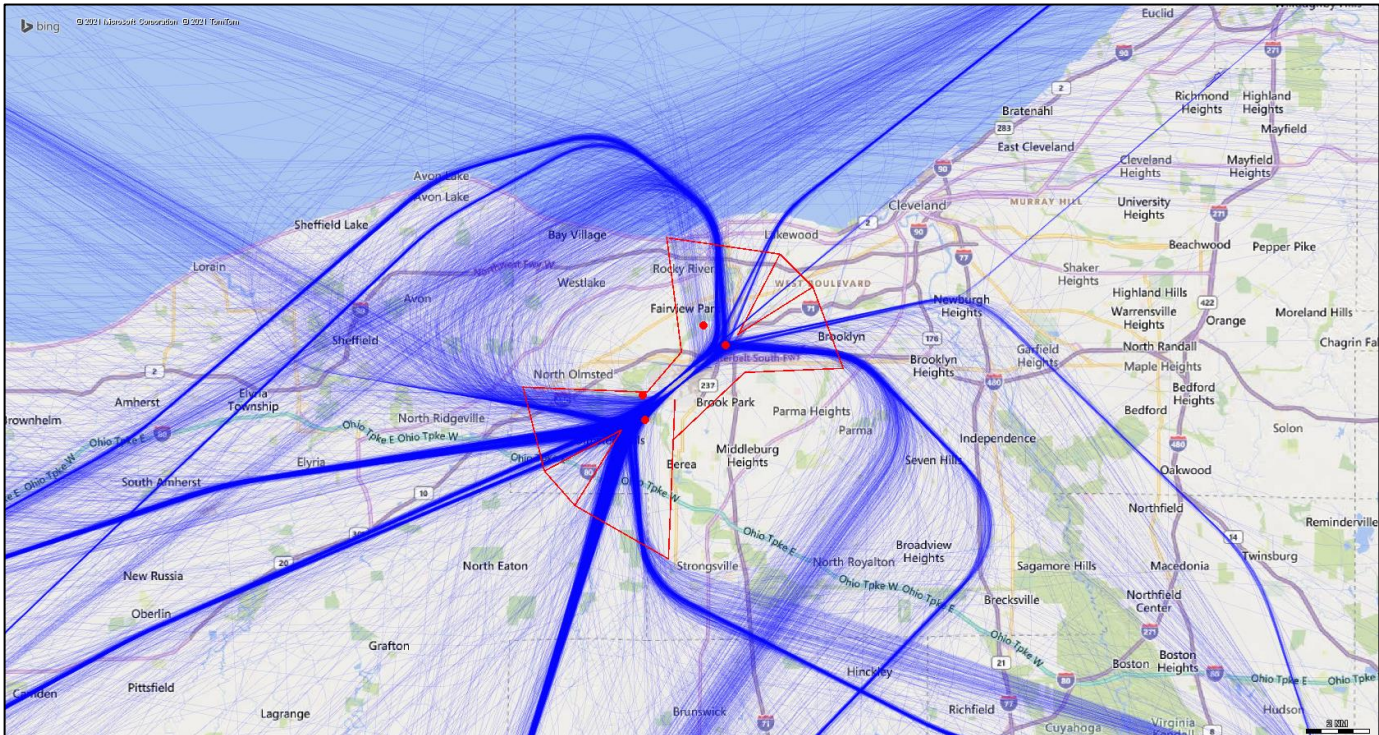
Runway	Day Departure	Night Departure	Total Departure	Runway Usage Percent
10	0	0	0	0.00%
24L	3,630	492	4,122	38.24%
24R	3,818	352	4,170	38.68%
28	0	0	0	0.00%
6L	1,205	132	1,337	12.40%
6R	721	107	828	7.68%
UNK	277	46	323	3.00%
Totals	9651	1129	10780	100.00%



# Departure Headings, 4<sup>th</sup> Quarter: Day-time

2020 4<sup>th</sup> Quarter day-time departure flight tracks (jet propulsion only). Day-time reflects 06:00 am to 11:00 pm.

Of **7,406** departure flights only **338 (4.5%)** were outside or too low for their respective departure corridor. These corridors represent the airspace through which aircraft depart and arrive. When an aircraft departs, it has a certain path it follows which is a function of altitude and heading.

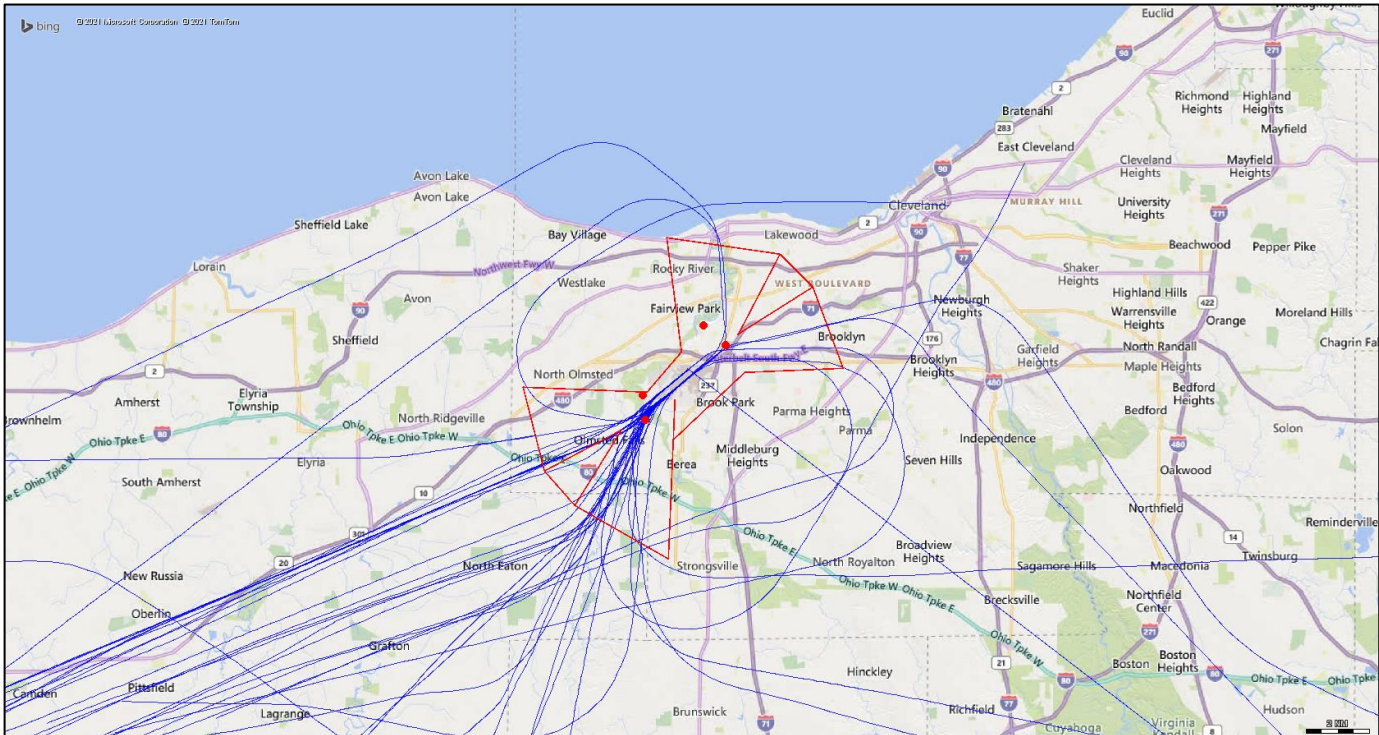


- Key:**
- Flight Tracks —
  - Departure Gates —
  - Noise Monitoring Station ●

# Departure Headings, 4<sup>th</sup> Quarter: Night-time

2020 4<sup>th</sup> Quarter night-time departure flight tracks (jet propulsion only). Night-time reflects 11:00 pm to 06:00 am.

Of **41** departure flights only **3 (7%)** were outside or too low for their respective departure corridor. These corridors represent the airspace through which aircraft depart and arrive. When an aircraft departs, it has a certain path it follows which is a function of altitude and heading.



## Key:

Flight Tracks —————

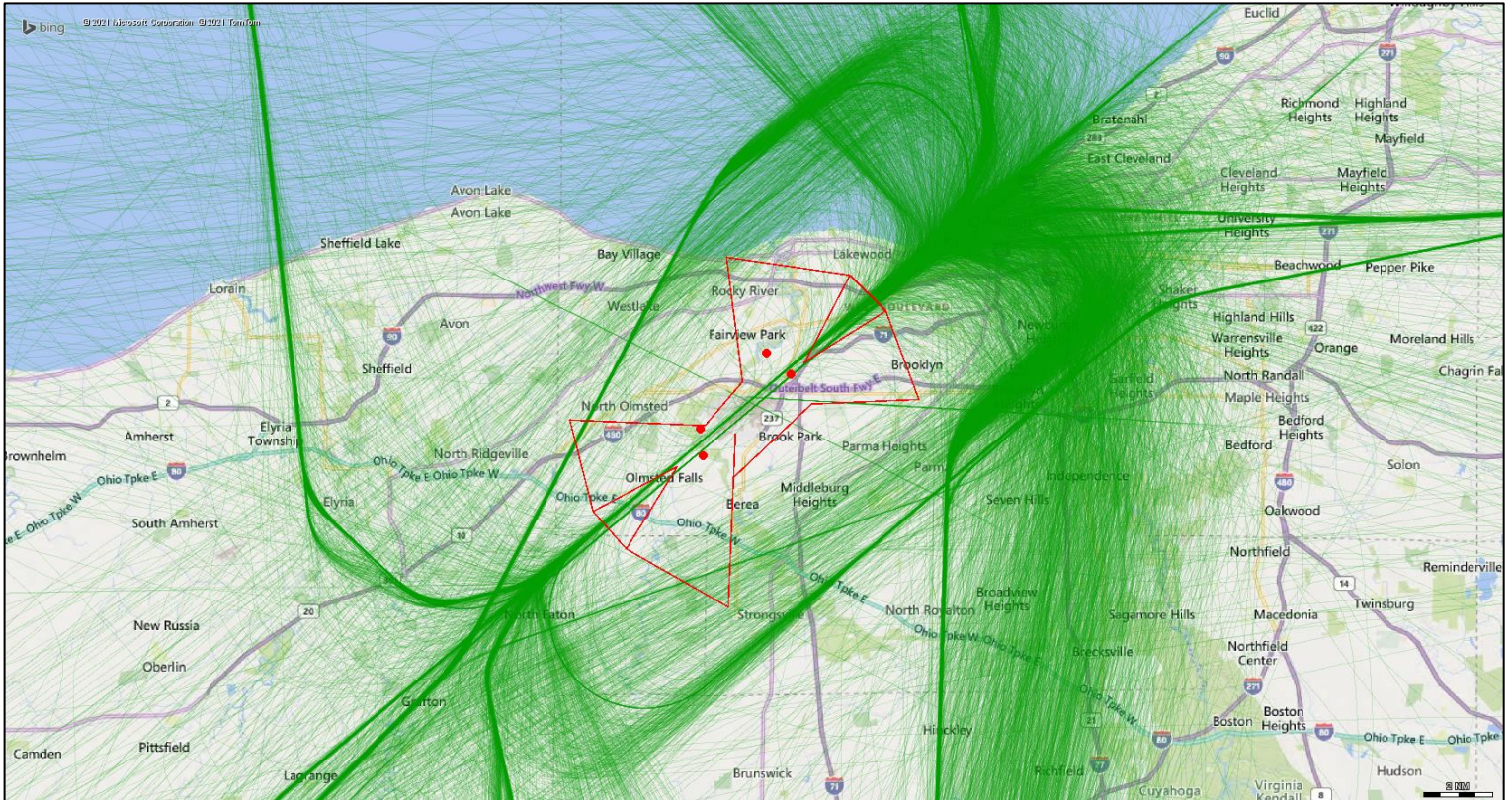
Departure Gates ————


Noise Monitoring Station ●



# Arrival Headings, 4<sup>th</sup> Quarter

Day-time and night-time arrivals for all of Quarter 4 are shown here (all propulsion types). Note that a voluntary measure or the Noise Compatibility Program calls for all aircraft arriving between 10:00 pm and 7:00 pm, wind and weather permitting, to intercept final approach course no closer than four miles before touchdown.



Flight Tracks 

Noise Monitoring Station 



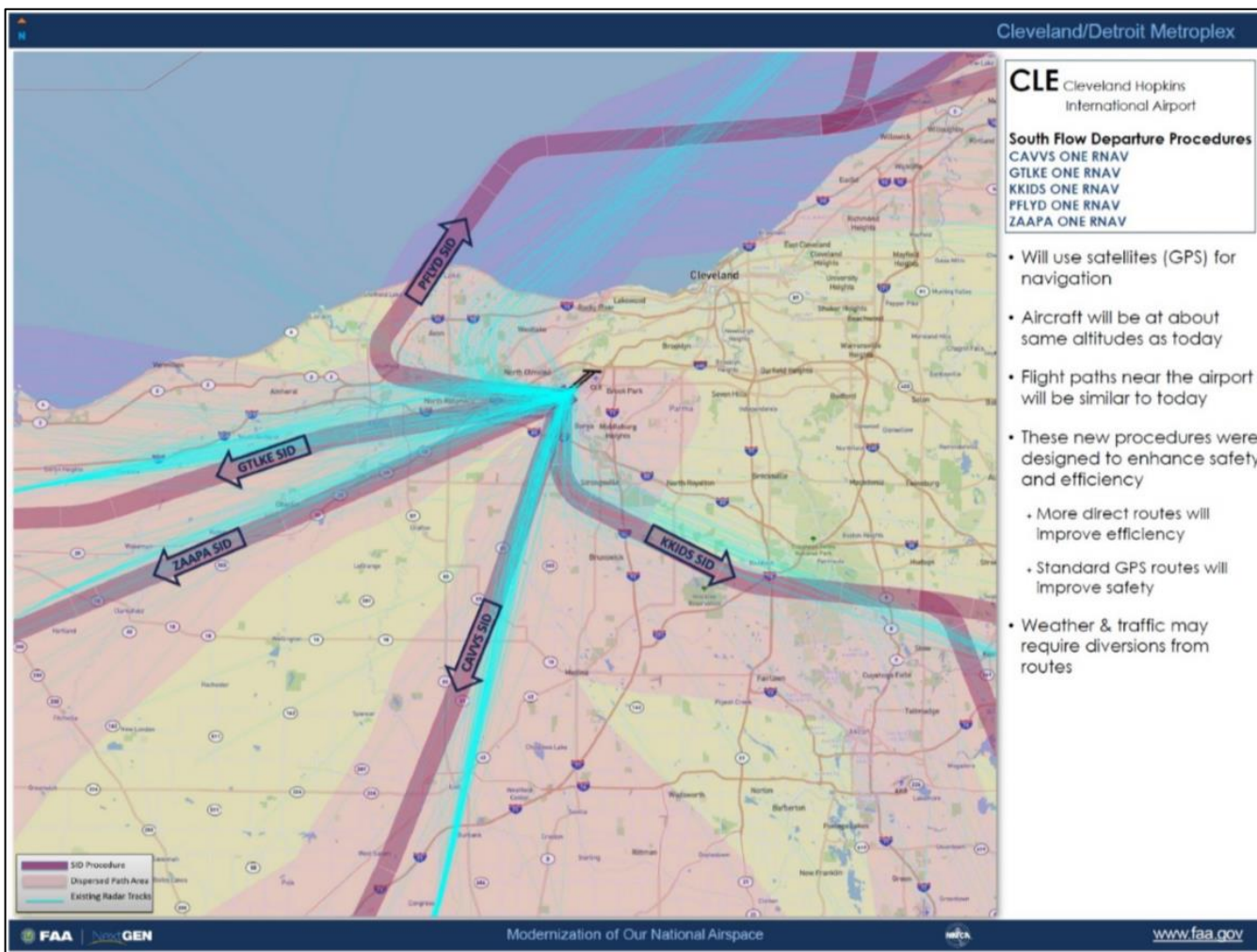
# Metroplex: South Flow (Departures)

## What is the Cleveland/Detroit Metroplex?

- Starting in mid-September 2018, the Federal Aviation Administration (FAA) made airspace changes in and around Cleveland and Detroit airports. These changes are part of the Cleveland-Detroit Metroplex project, which will bring updated satellite procedures to improve traffic flow.
- In most cases, aircraft will follow the same tracks that they do today. The difference is that aircraft will be using modernized procedures that replace dozens of decades-old conventional air traffic control procedures. In all, the Cleveland/Detroit Metroplex project includes 71 new satellite-based procedures. This project is a key component of the FAA's Next Generation Air Transportation System (NextGen) and a nationwide effort to build the foundation for future safety and efficiency improvements.

Source: <https://www.clevelandairport.com/faa-makes-airspace-changes-clevelanddetroit-metroplex-project>

## South flow departures take off from runway 24L and runway 24R.



Note: Flight tracks are historic and do not represent the current quarter.

Source: [www.metroplexenvironmental.com](http://www.metroplexenvironmental.com)

Cleveland Hopkins International Airport

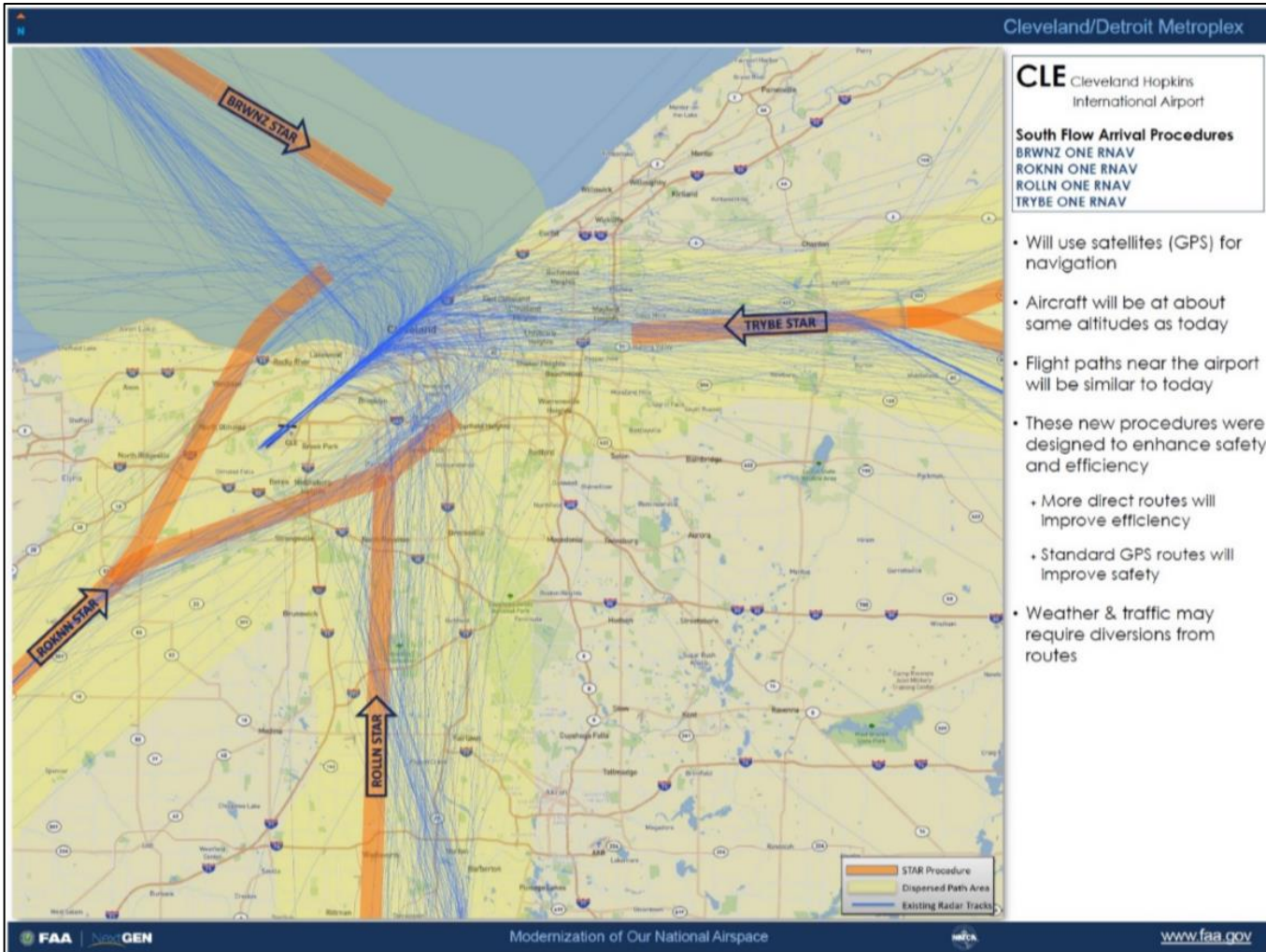
Noise Hotline: 216-898-5220

[clevelandairport.com](http://clevelandairport.com)



# Metroplex: South Flow (Arrivals)

South flow arrivals land on runway 24L and runway 24R.

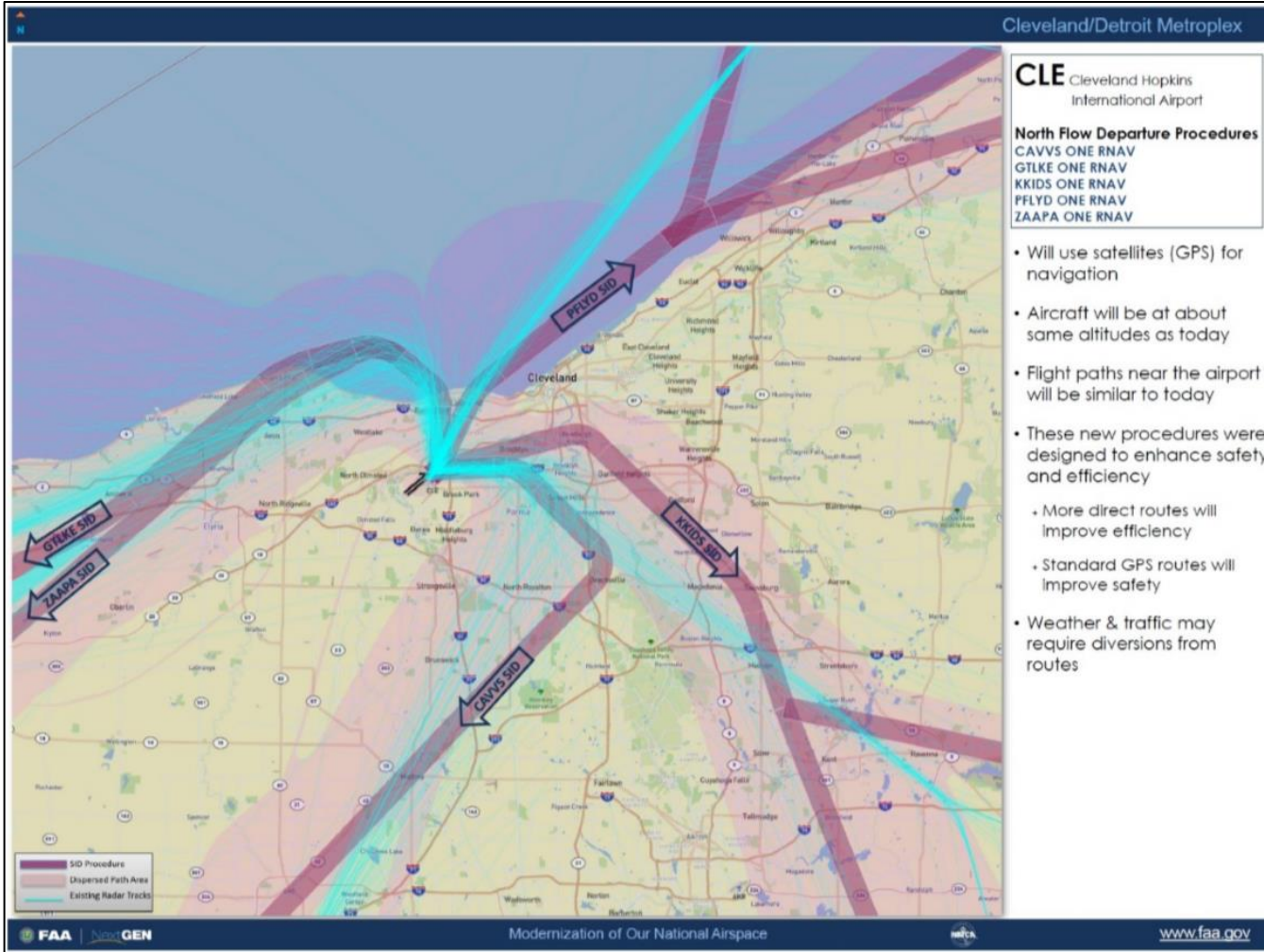


Note: Flight tracks are historic and do not represent the current quarter.

Source: [www.metroplexenvironmental.com](http://www.metroplexenvironmental.com)

# Metroplex: North Flow (Departures)

North flow departures take off from runway 6L and runway 6R.



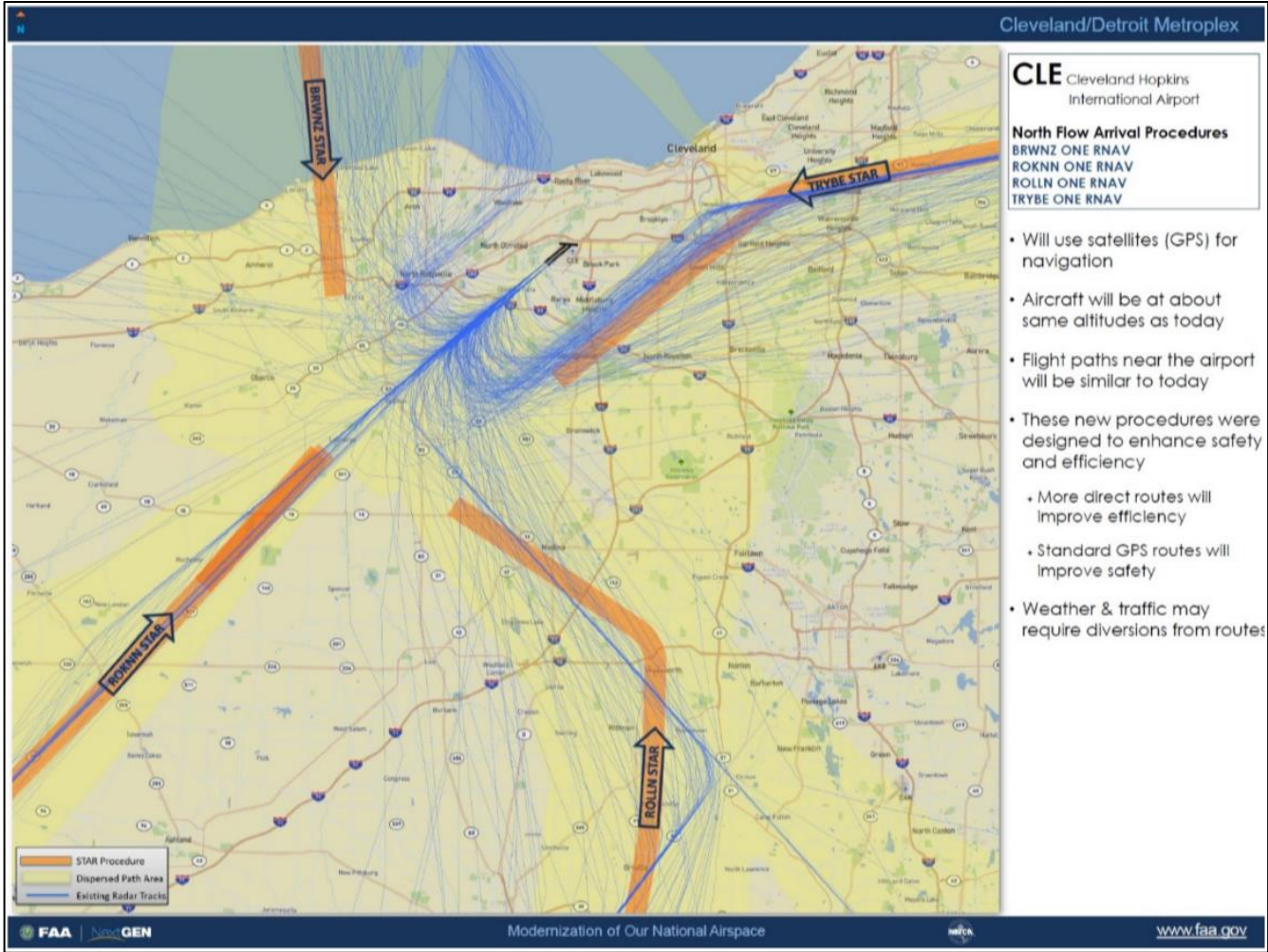
Note: Flight tracks are historic and do not represent the current quarter.

Source: [www.metroplexenvironmental.com](http://www.metroplexenvironmental.com)



# Metroplex: North Flow (Arrivals)

North flow arrivals land on runway 6L and runway 6R.



Note: Flight tracks are historic and do not represent the current quarter.

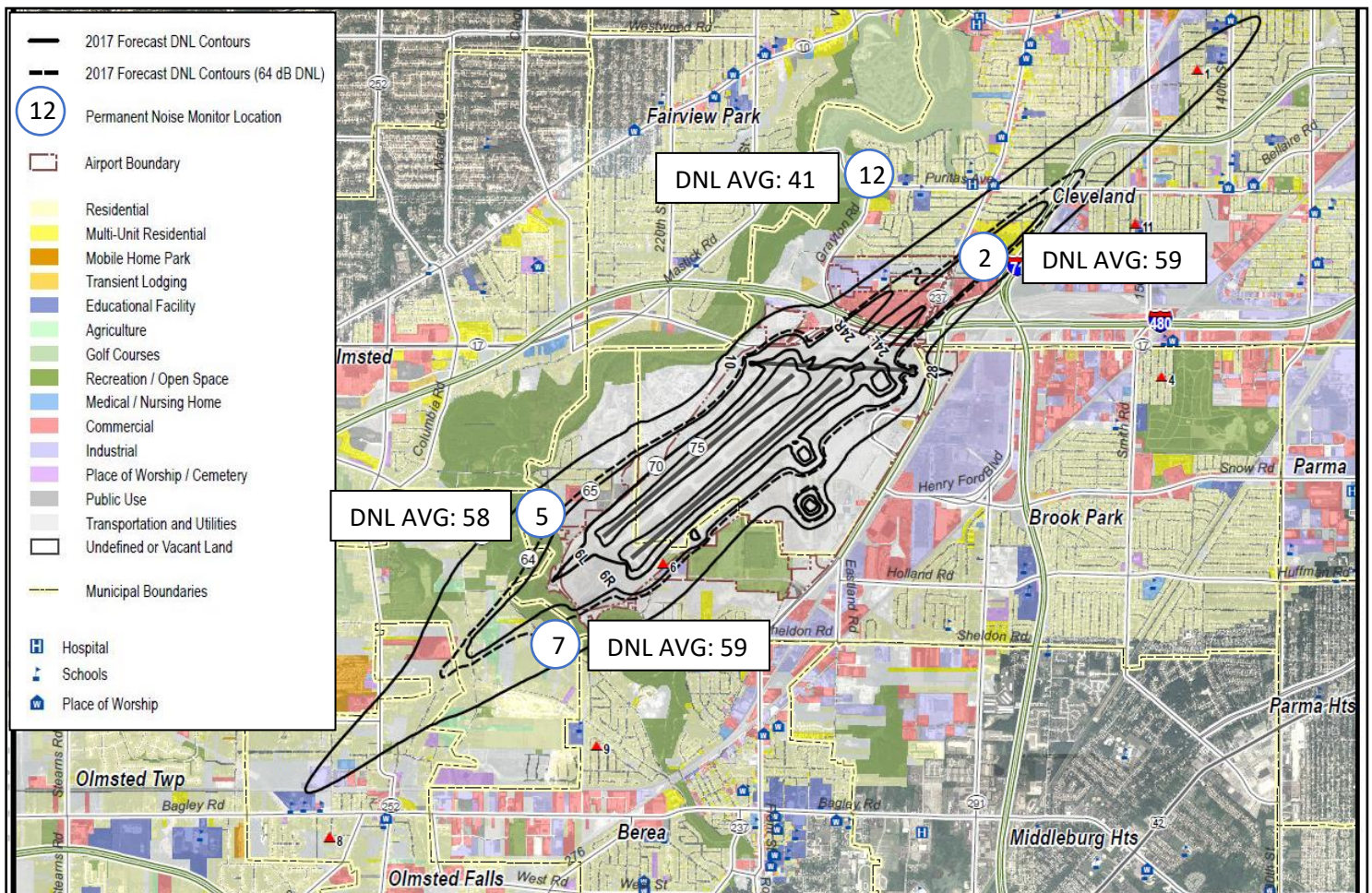
Source: [www.metroplexenvironmental.com](http://www.metroplexenvironmental.com)



# Aircraft Noise: Q4 Average DNL by Noise Monitoring Station (NMS)

## What is DNL?

- As FAA's primary metric for aviation noise analysis, the FAA has determined that the cumulative noise energy exposure of individuals to noise resulting from aviation activities must be established in terms of the day-night average sound level (DNL) in decibels (dB). The 65 DNL is the Federal significance threshold for aircraft noise exposure.
- If interested in the Fundamentals of Noise and Sound, please visit: [https://www.faa.gov/regulations\\_policies/policy\\_guidance/noise/basics/](https://www.faa.gov/regulations_policies/policy_guidance/noise/basics/)





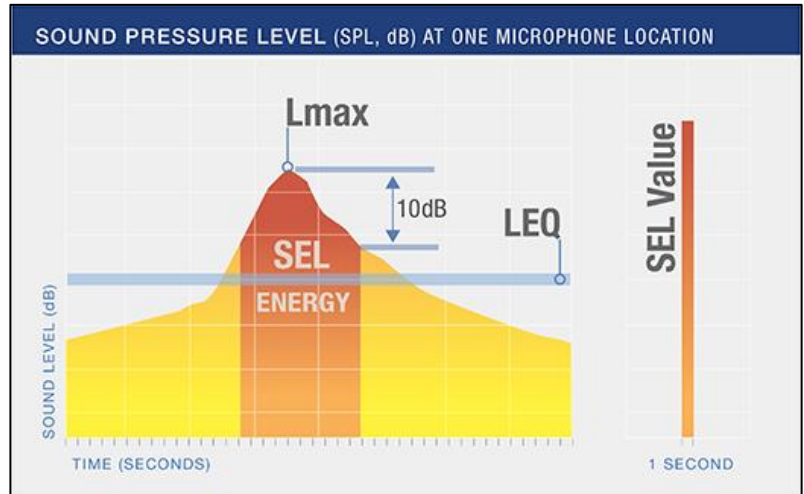
# Top Three Lmax at Each NMS

**Lmax** is the single loudest point during a noise event.

**Sounds Exposure Level (SEL)** is a measure that takes into account all noises over the entire duration of the noise event.

**Decibel (db)** is the unit used to measure the intensity of a sound. The human ear hears sound pressures over a wide range. Decibels, which are measured on a *logarithmic* scale, correspond to the way our ears interpret sound pressures.

**NMS – Noise Monitoring Station:** For a map of these stations, refer to the previous page.

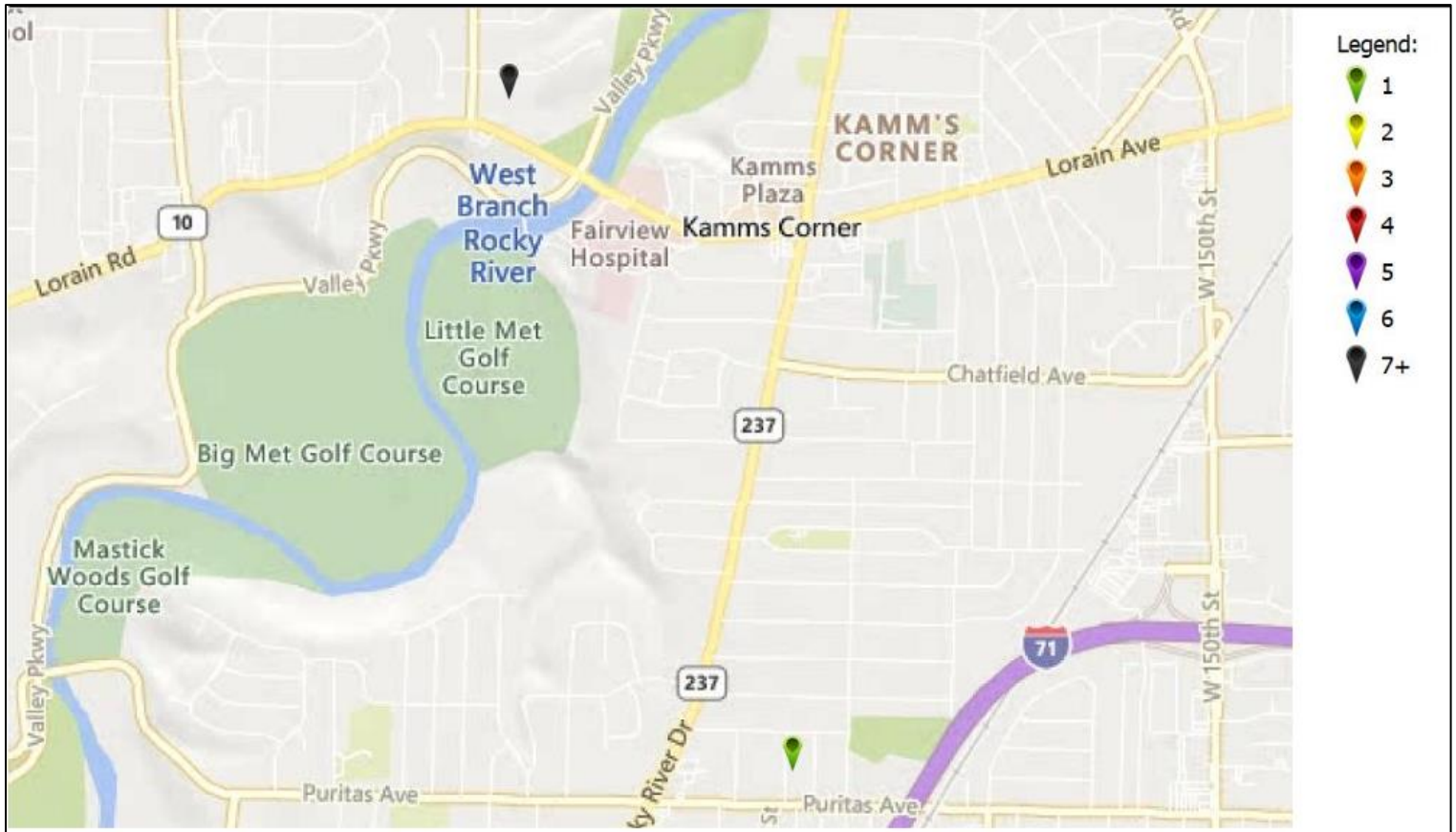


Source: [www.faa.gov](http://www.faa.gov)

Date and Time	NMS	Lmax (dB)	Sound Exposure Level (dB)	Duration (sec)	Operation	Aircraft
10/21/2020 7:54	NMS02	92.8	105.196	93	Departure 24R	Boeing 738
10/22/2020 12:47	NMS02	92	99.258	26	Departure 6L	Airbus A321
10/6/2020 12:36	NMS02	90.8	103.763	64	Departure 24R	Airbus A321
11/27/2020 15:35	<b>NMS05</b>	91.7	100.034	37	Departure 24L	DC-91
12/2/2020 8:44	<b>NMS05</b>	91	99.161	31	Departure 24L	Boeing 722
11/9/2020 21:33	<b>NMS05</b>	90.4	97.574	32	Departure 24R	MD-11
11/17/2020 10:49	<b>NMS07</b>	88.9	104.812	70	Departure 24L	Boeing 722
11/18/2020 22:09	<b>NMS07</b>	88	100.922	27	Departure 24L	Boeing 744
12/19/2020 18:12	<b>NMS07</b>	85.5	100.426	37	Departure 24L	Boeing 732
11/12/2020 6:48	<b>NMS12</b>	96.67	98.214	38	Departure 6L	Boeing 722
10/19/2020 21:51	<b>NMS12</b>	89.84	95.879	29	Departure 6L	MD-11
11/12/2020 22:30	<b>NMS12</b>	95.33	94.294	31	Departure 6L	MD-83

# 4<sup>th</sup> Quarter Complaint Map

Complaints from Q4 2020



City	Number of Complainants	Number of Complaints
Cleveland	2	4
Fairview Park	1	131
Lakewood	1	1

Note: some complaint locations may not appear on the map.



## Do you have a noise complaint?

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Please visit the [Symphony PublicVue](https://www.clevelandairport.com/contact) to submit a noise complaint. This site can also be found by going to <https://www.clevelandairport.com/contact> and click on “Learn More” under Noise Complaints. If you prefer to leave a message on our Noise Hotline, please call 216-898-5220. Please be patient while we take time to process your message and respond with the appropriate information.

