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# Noise Compatibility Report

2022 Quarter 4  
October - December

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## Disclaimer

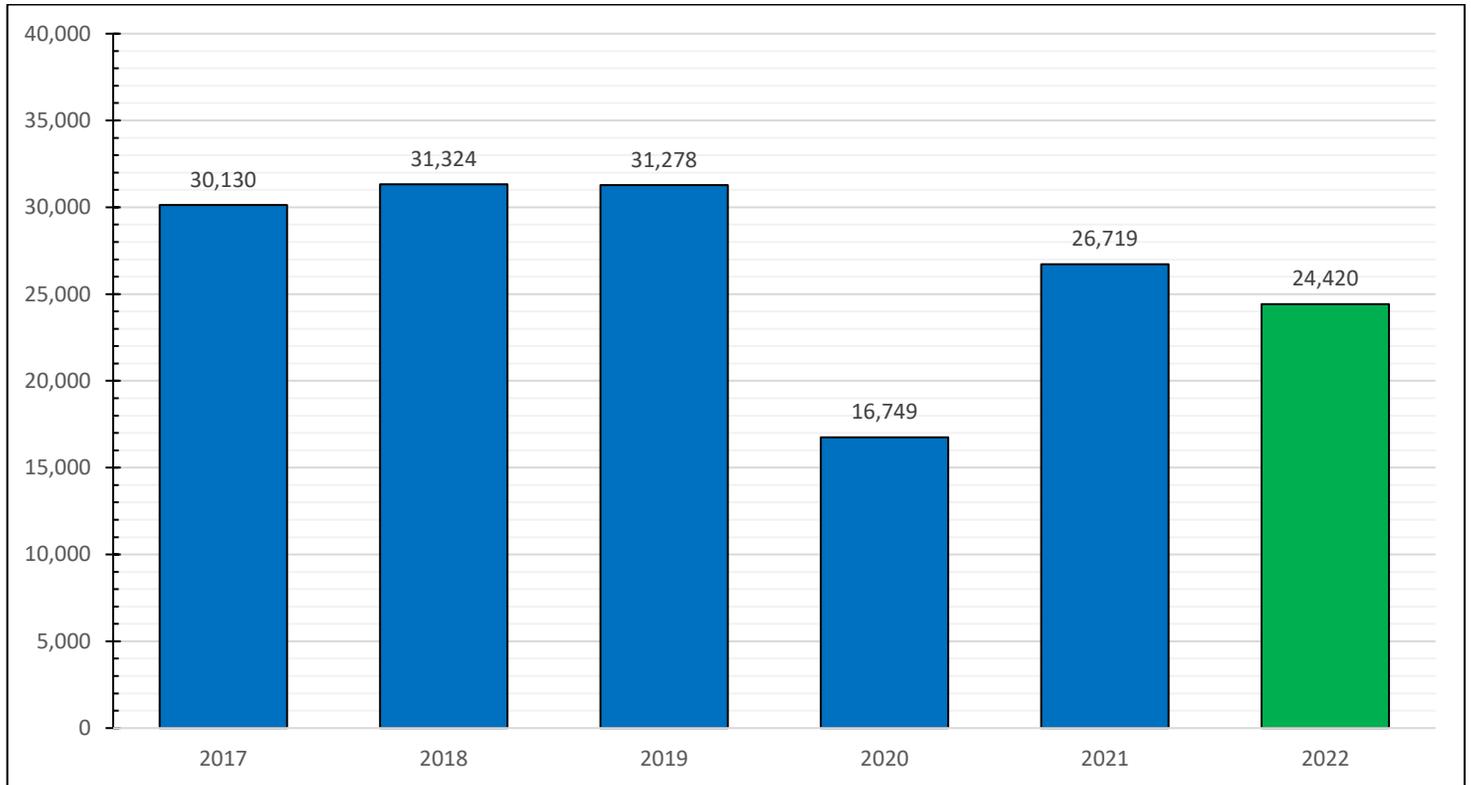
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- The Noise Compatibility Plan (NCP) at Cleveland Hopkins International Airport (CLE) combines the existing approved Part 150 Noise Compatibility Plan with Air Traffic Control Tower (ATCT) requirements to ensure the safe and expeditious handling of 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 airport via [www.clevelandairport.com/contact](http://www.clevelandairport.com/contact) and we will respond as soon as possible.

# Aircraft Operations

## Cleveland 4<sup>th</sup> Quarter Operations 2017 – 2022

- There were **24,420** operations in the 4<sup>th</sup> quarter 2022; this is a 9% decrease over 4<sup>th</sup> quarter 2021.



Source: FAA Operations Network (OPSNET) - <https://aspm.faa.gov/opsnet/sys/Main.asp?force=atads>  
The Operations Network (OPSNET) is the official source of FAA air traffic operations and delay data.



# Fleet Mix

Cleveland Hopkins had **24,420** operations in Quarter 4 of 2022. Here are some of the notable aircraft that CLE welcomes and sends off on a regular basis.

Aircraft	Total
Boeing 737 Series	7,320
Embraer ERJ 145	288
Bombardier CRJ-900	1,778
Airbus A320	4,334
MD-11	107



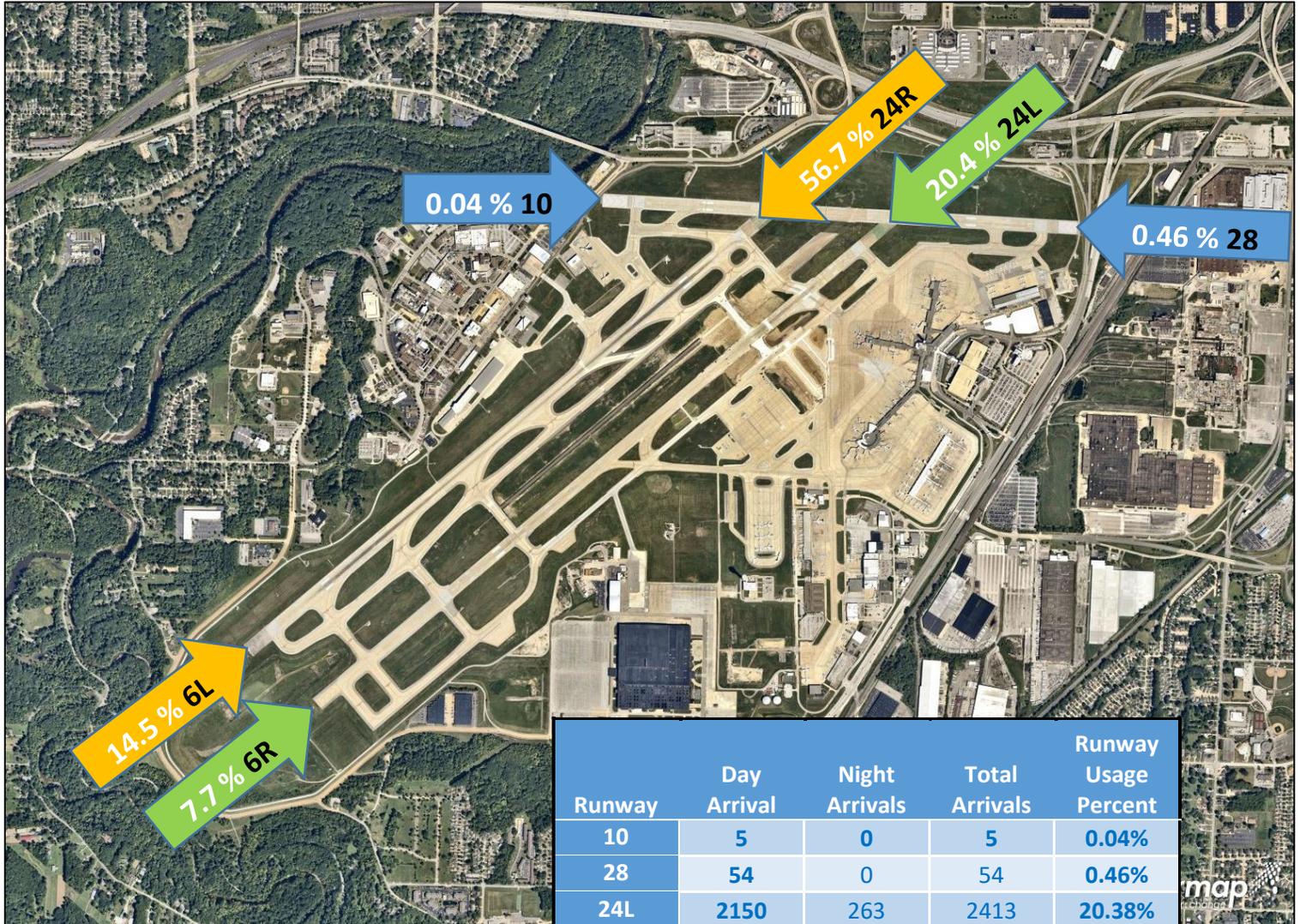
Other notable aircraft operations include:

Aircraft	Total
Air Carrier	19,771
Air Taxi	3,090
General Aviation	1,540
Military	19



Source: FAA Operations Network (OPSNET) - <https://aspm.faa.gov/opsnet/sys/Main.asp?force=atads>  
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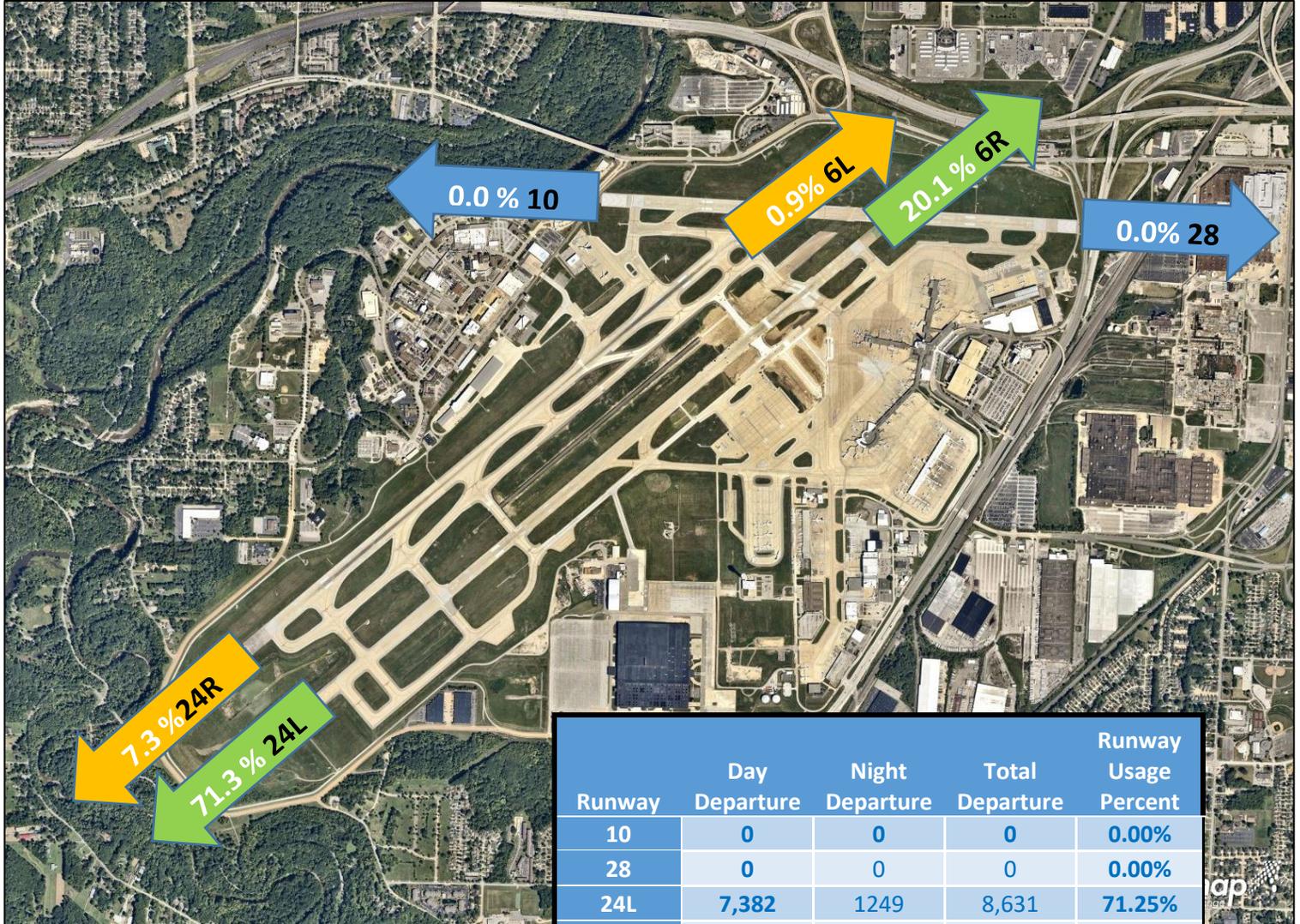
# Runway Use: 4<sup>th</sup> Quarter, 2022 Arrivals



Runway	Day Arrival	Night Arrivals	Total Arrivals	Runway Usage Percent
10	5	0	5	0.04%
28	54	0	54	0.46%
24L	2150	263	2413	20.38%
24R	5,652	1059	6,711	56.69%
6L	1,332	381	1,713	14.47%
6R	813	102	915	7.73%
UNK	26	1	27	0.23%
<b>Totals</b>	<b>10032</b>	<b>1806</b>	<b>11838</b>	<b>100.00%</b>

Note: Runway usage totals may not match FAA operation totals due to different system tracking methods and potential duplicate data. Data is generated using L3 Harris Symphony EnvironmentalVue.

# Runway Use: 4<sup>th</sup> Quarter, 2022 Departures

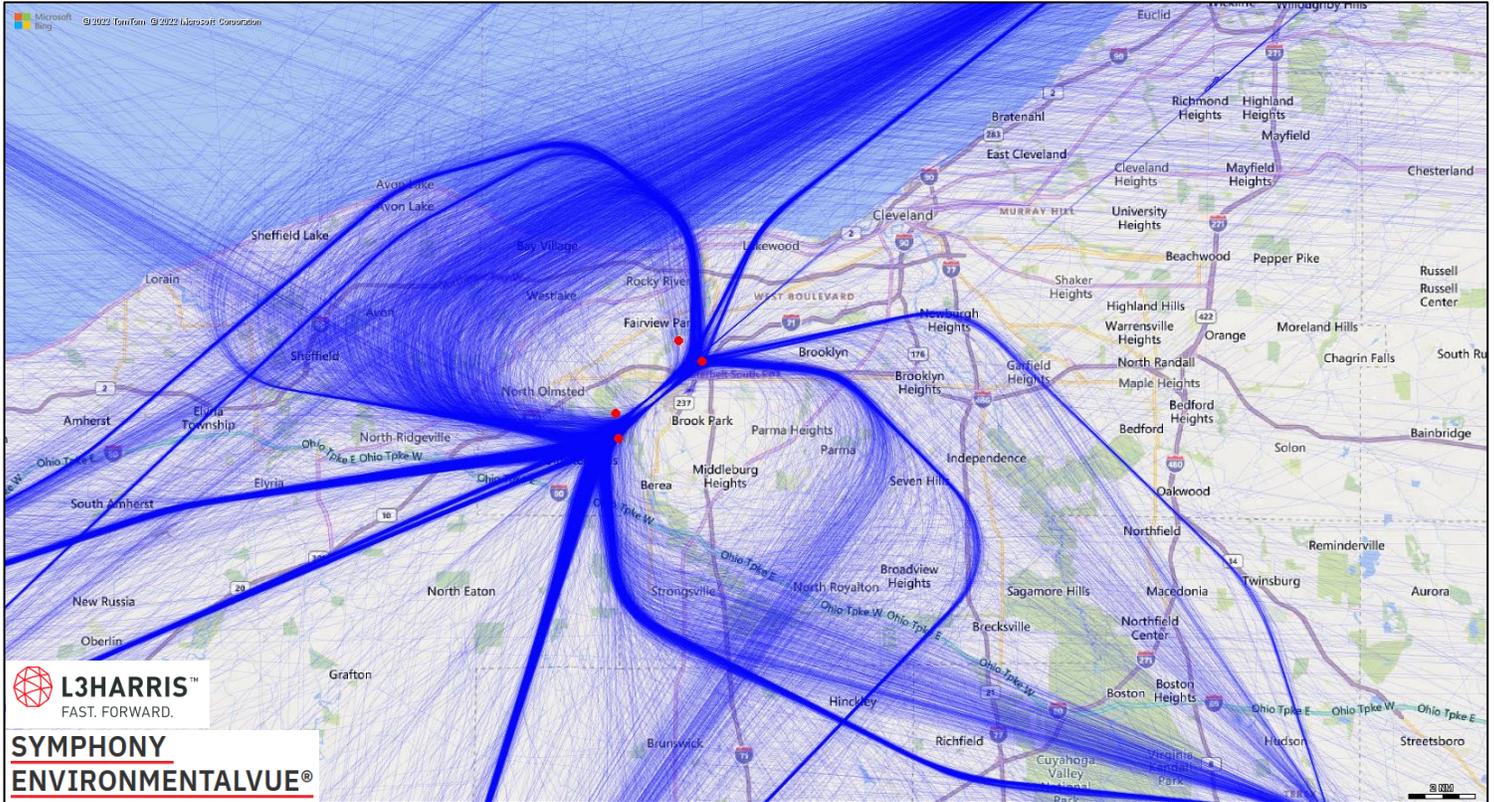


Runway	Day Departure	Night Departure	Total Departure	Runway Usage Percent
10	0	0	0	0.00%
28	0	0	0	0.00%
24L	7,382	1,249	8,631	71.25%
24R	823	59	882	7.28%
6L	110	2	112	0.92%
6R	2,056	383	2,439	20.13%
UNK	46	4	50	0.41%
<b>Totals</b>	<b>10,417</b>	<b>1,697</b>	<b>12,114</b>	<b>100.00%</b>

Note: Runway usage totals may not match FAA operation totals due to different system tracking methods and potential duplicate data. Data is generated using L3 Harris Symphony EnvironmentalVue.

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

2022 4<sup>th</sup> quarter day-time departure – 12,728 flight tracks (jet propulsion only). Daytime reflects 06:00 am to 11:00 pm.



Flight tracks generated using L3 Harris Symphony EnvironmentalVue

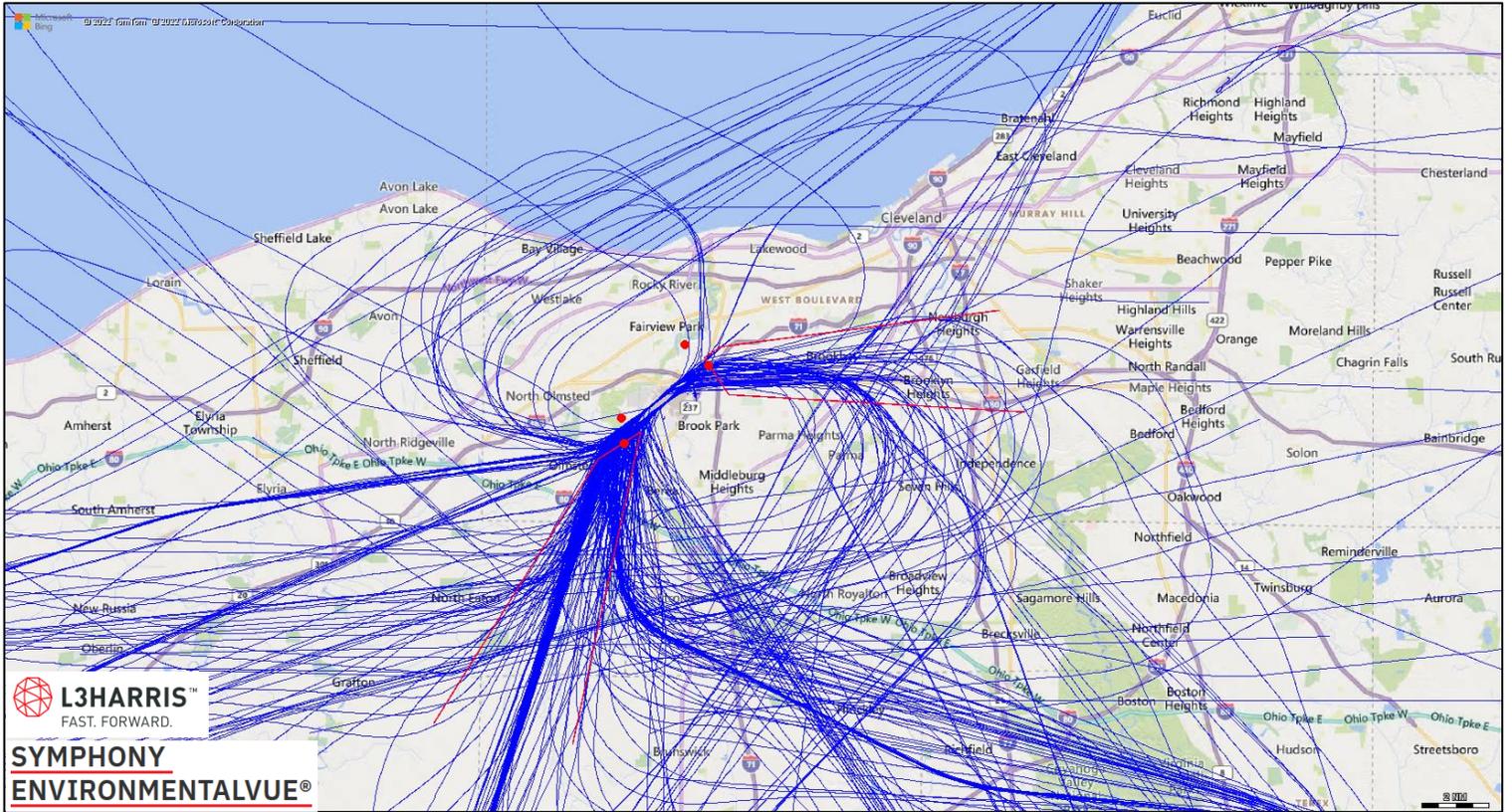
## Key:

- Flight Tracks 
- Departure Gates 
- Noise Monitoring Station 

# Departure Headings, 4<sup>th</sup> Quarter: Nighttime

2022 4<sup>th</sup> Quarter night-time departure flight tracks (jet propulsion only). Night-time reflects 11:00 pm to 06:00 am.

Of **428** departure flights **33%** (142) were outside of the voluntary noise abatement 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. These corridors are voluntary based on weather and other aircraft related factors.



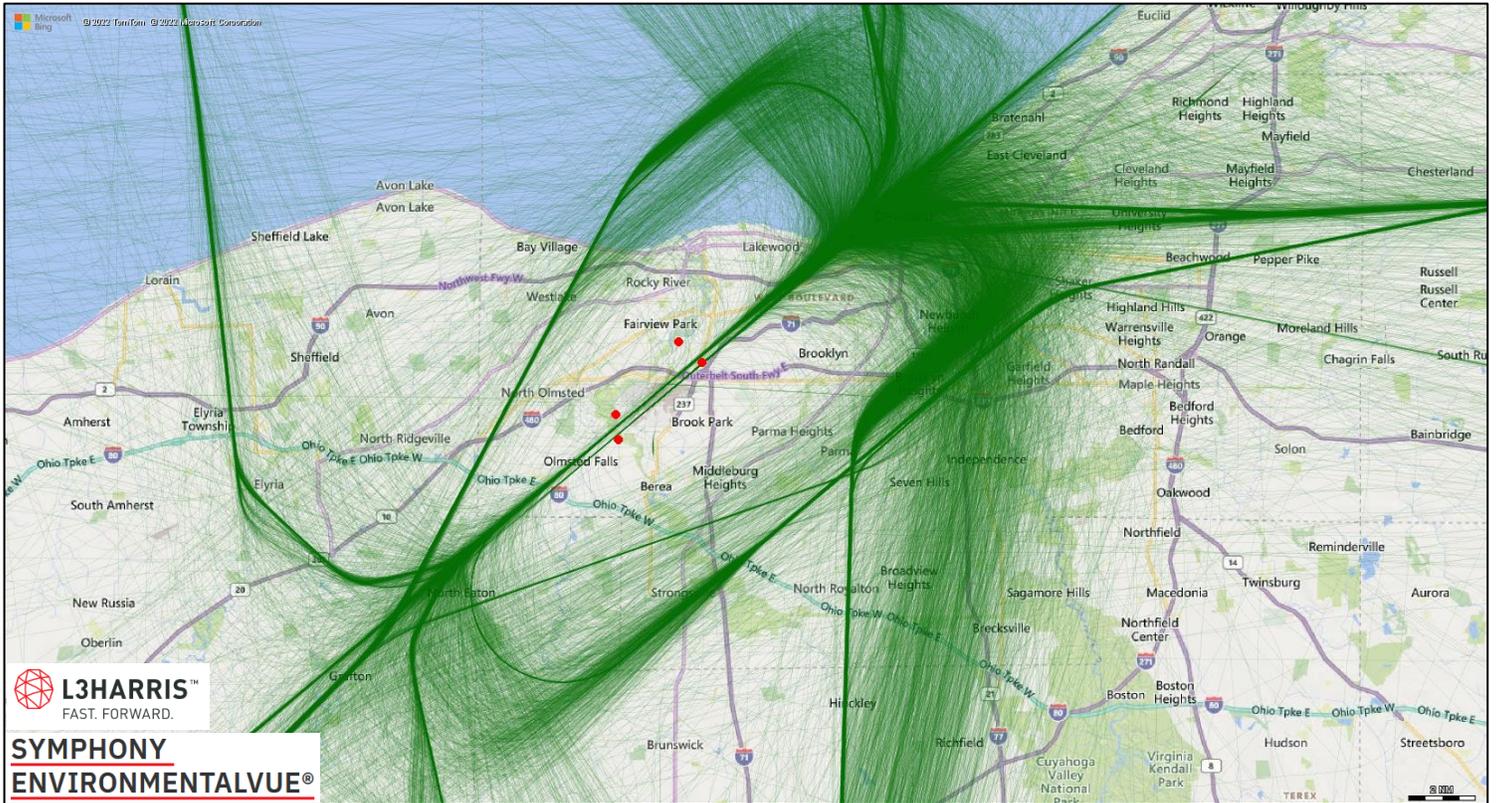
Flight tracks generated using L3 Harris Symphony EnvironmentalVue

**Key:**

- Flight Tracks —————
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# 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 11:00 pm and 6:00 am, wind and weather permitting, to intercept final approach course no closer than four miles before touchdown.



Flight tracks generated using L3 Harris Symphony EnvironmentalVue

Flight Tracks 

Noise Monitoring Station 

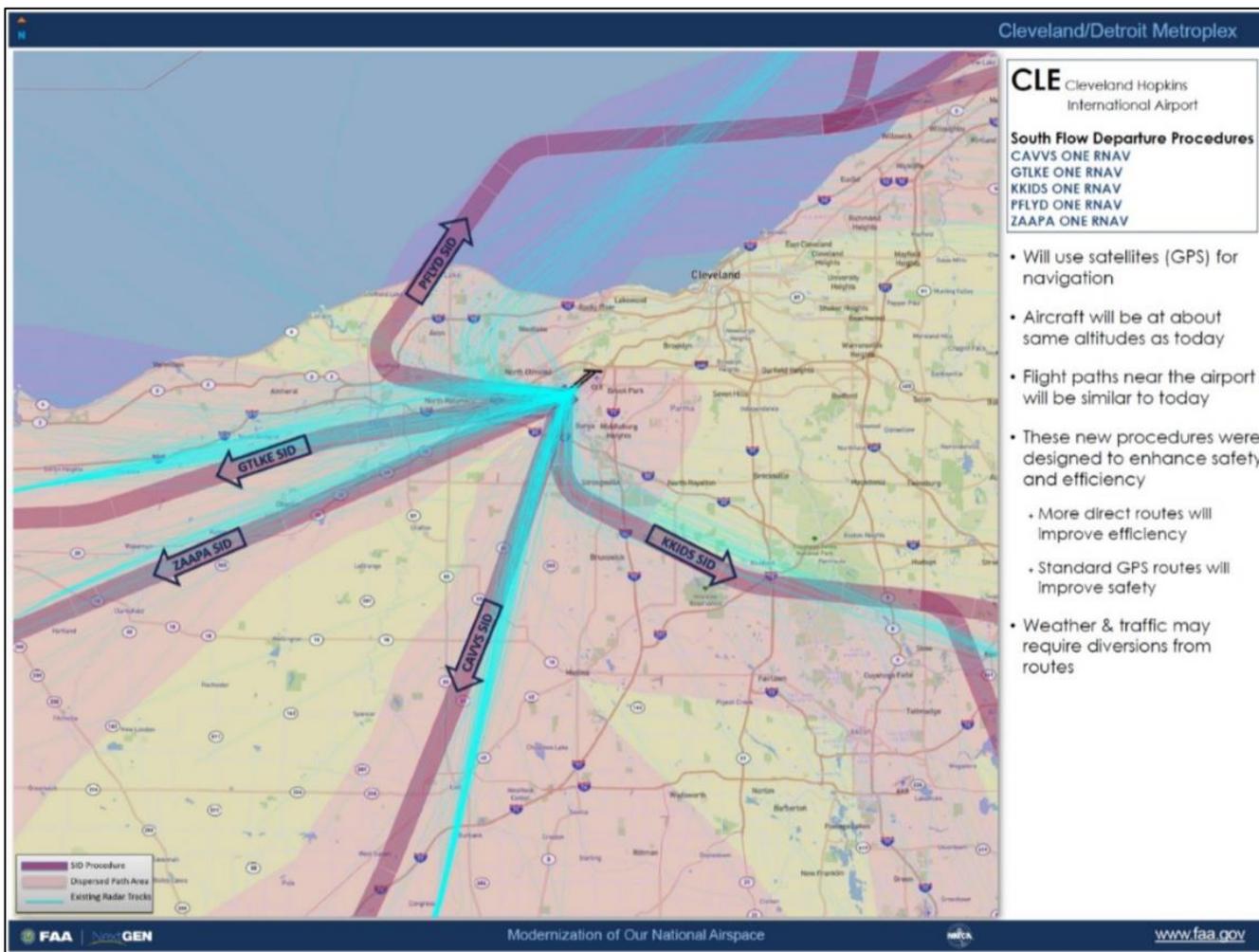
# Metroplex: South Flow (Departures)

## 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.

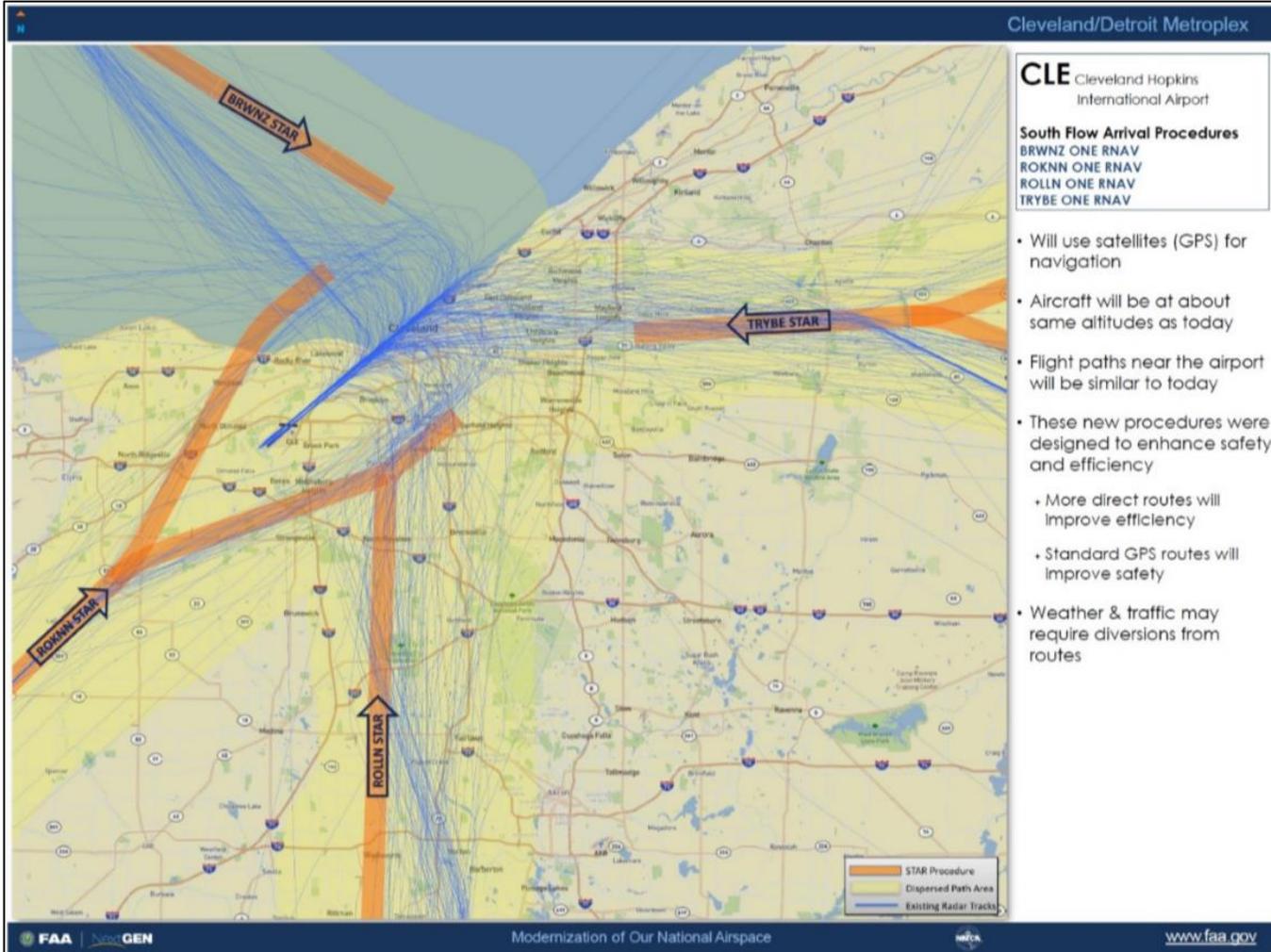


Note: Flight tracks are pre-metroplex and do not represent the current quarter.

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

# Metroplex: South Flow (Arrivals)

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

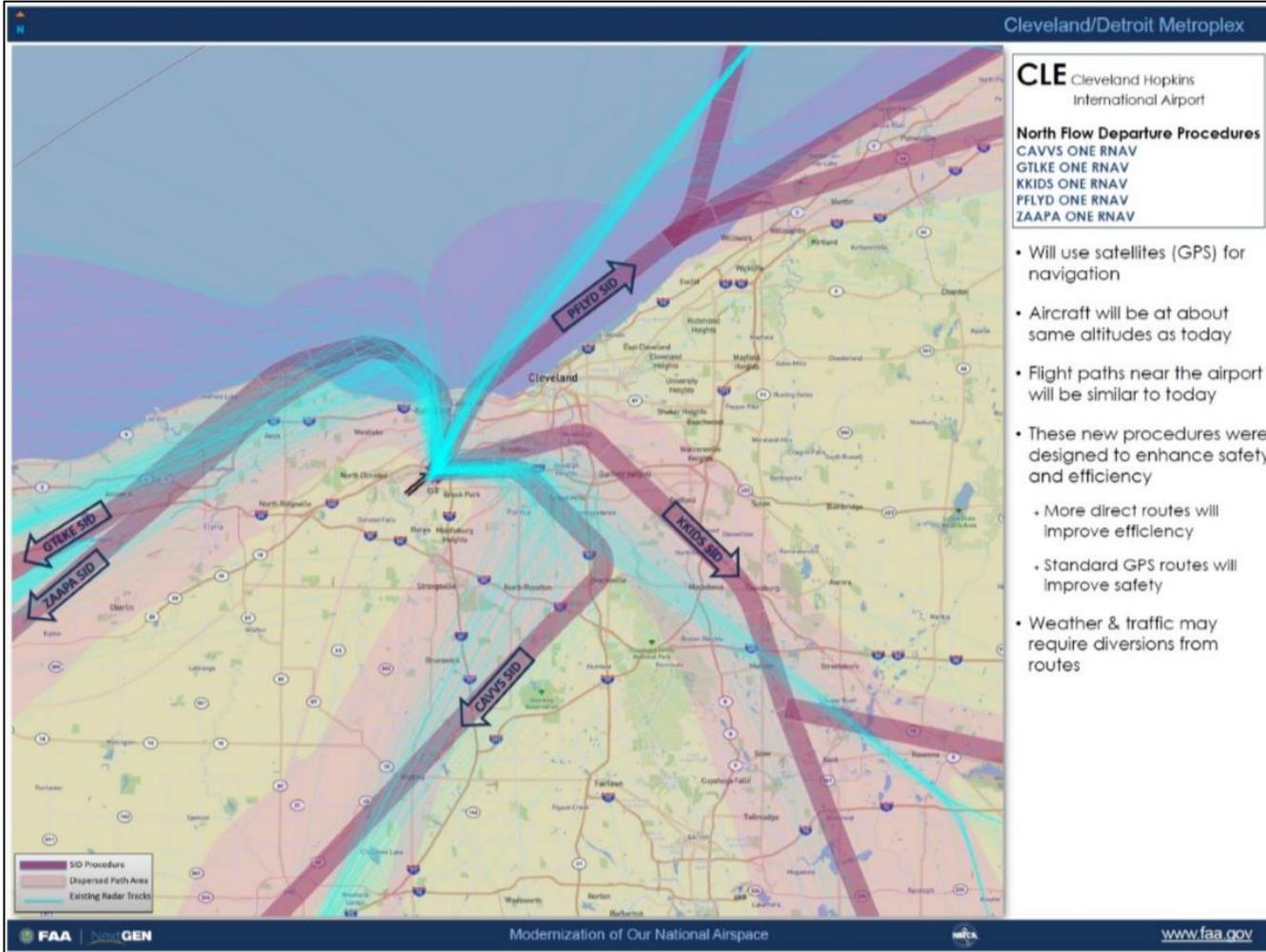


Note: Flight tracks are pre-metroplex and do not represent the current quarter.

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

# Metroplex: North Flow (Departures)

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

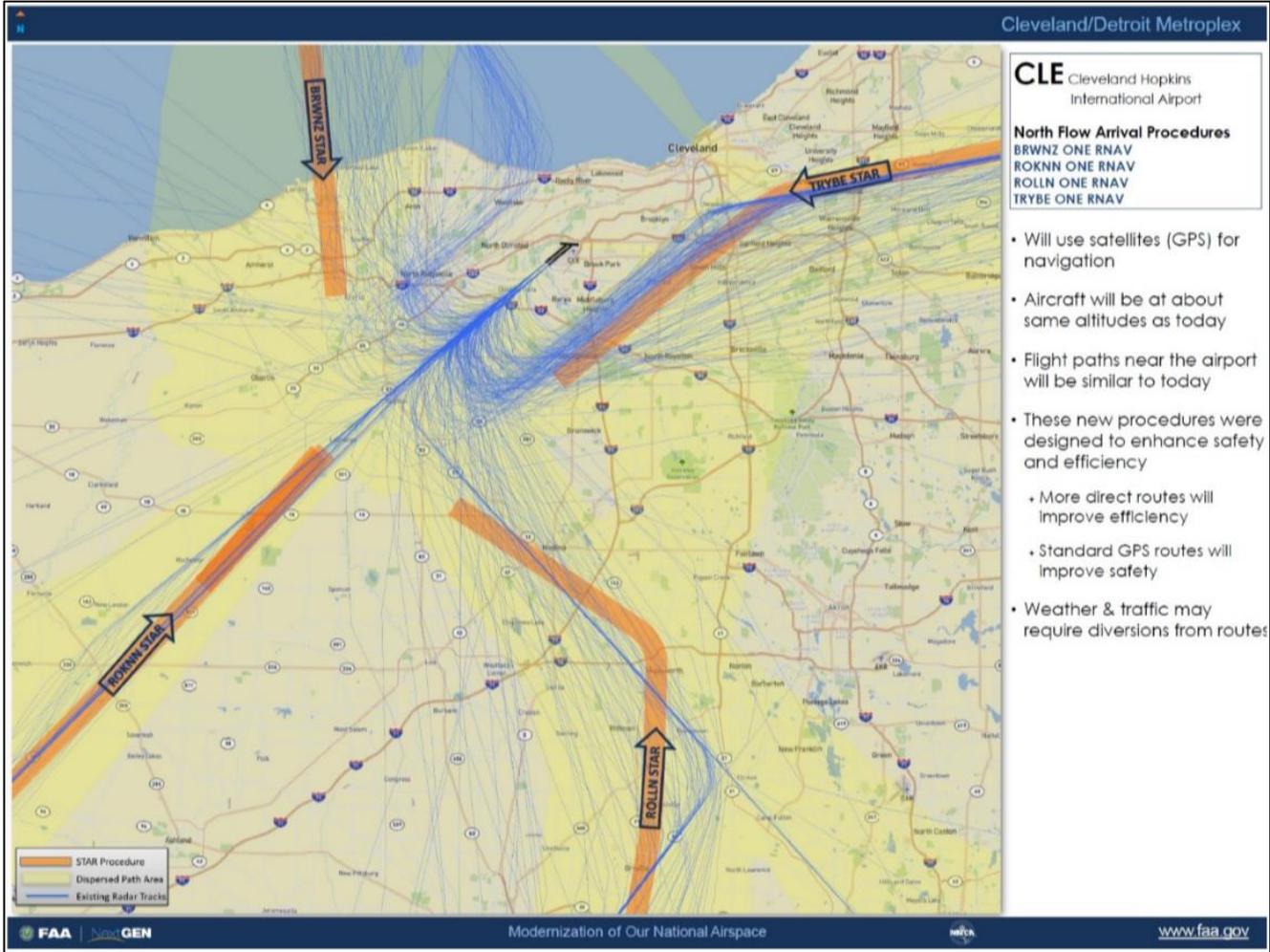


Note: Flight tracks are pre-metroplex and do not represent the current quarter.

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

# Metroplex: North Flow (Arrivals)

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



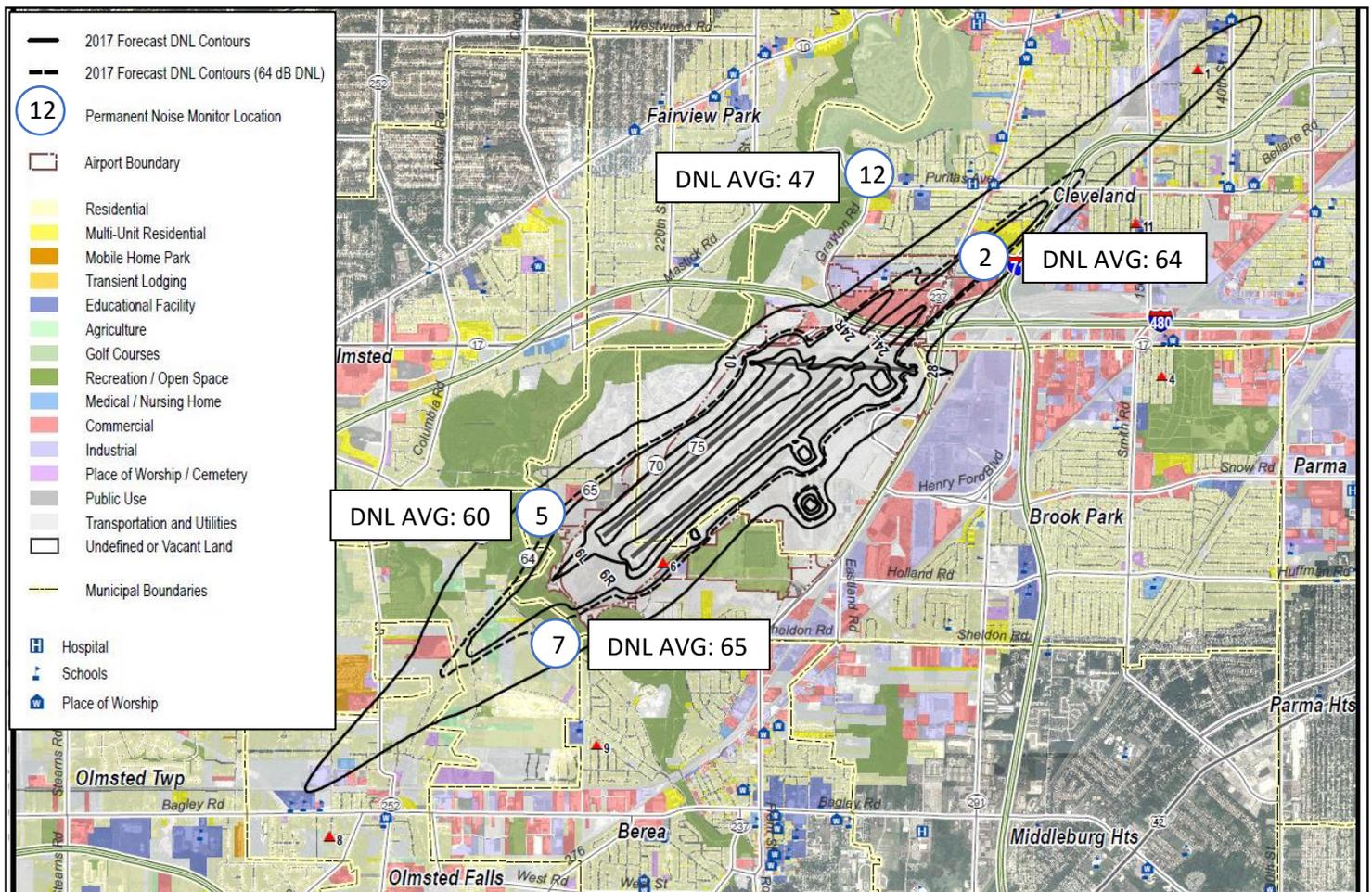
Note: Flight tracks are pre-metroplex and do not represent the current quarter.

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

# Aircraft Noise: 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/)



Data generated using L3 Harris Symphony EnvironmentalVue

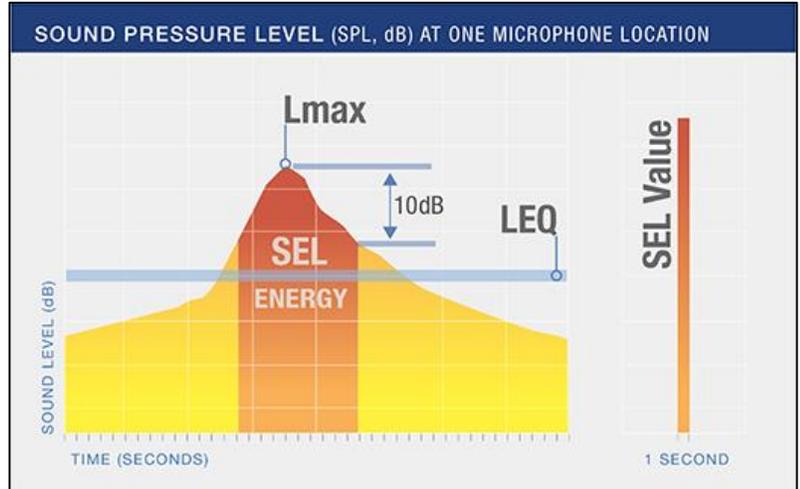
# Top Three Lmax at Each NMS

**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 (24 hr)	NMS	Lmax (dB)	Sound Exposure Level (dB)	Duration (sec)	Operation	Aircraft
10/11/2022 21:31	NMS02	100.8	105.25	16	Arrival 24L	Boeing 722
10/11/2022 5:30	NMS02	95.9	101.03	22	Arrival 24L	MD-11
10/11/2022 6:01	NMS02	95.5	101.61	19	Arrival 24L	Boeing 763
10/11/2022 22:42	NMS05	91.1	100.43	38	Departure 24L	Boeing 722
11/4/2022 8:47	NMS05	89.4	97.26	30	Departure 24R	Airbus A321
12/27/2022 10:33	NMS05	88.8	99.17	42	Departure 24R	MD-88
12/27/2022 13:58	NMS07	94.4	102.11	35	Departure 24L	Boeing 744
10/5/2022 8:58	NMS07	91.6	98.41	23	Departure 24L	Airbus A321
12/11/2022 7:16	NMS07	90.5	96.6	20	Departure 24L	Boeing 739
12/6/2022 17:10	NMS12	81.5	89.83	23	Departure 6R	Airbus A321
10/28/2022 19:48	NMS12	80.3	89.14	22	Departure 6R	Boeing 737
11/27/2022 7:34	NMS12	80	90.21	32	Departure 24L	Boeing 739

Data generated using L3 Harris Symphony EnvironmentalVue

## Do you have a noise complaint?

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Please visit the [Symphony PublicVue](#) 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. Please be patient while we take time to process your message and respond with the appropriate information.

