



Noise Compatibility Report

2021 Quarter 4
October - December

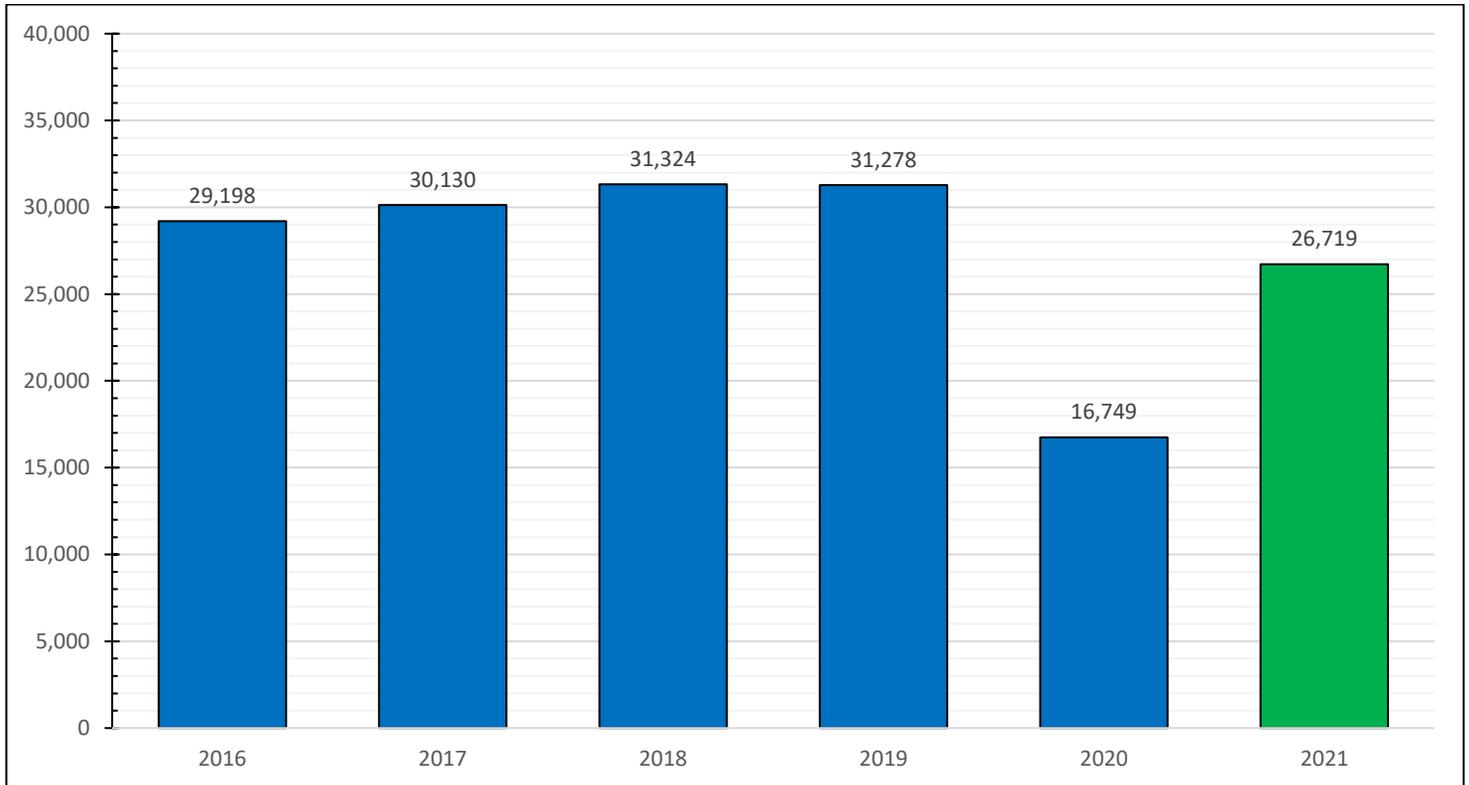
Disclaimer

- 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 and we will respond as soon as possible.

Aircraft Operations

Cleveland 4th Quarter Operations 2016 – 2021

- There were **26,719** operations in the 4th quarter 2021; this is a 37.3% increase over 4th quarter 2020.



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 **26,719** operations in Quarter 4 of 2021. Here are some of the notable aircraft that CLE welcomes and sends off on a regular basis.

Aircraft	Total
Boeing 737 Series	6,995
Embraer ERJ 145	509
Bombardier CRJ-900	2,537
Airbus A320	4,490
MD-11	130



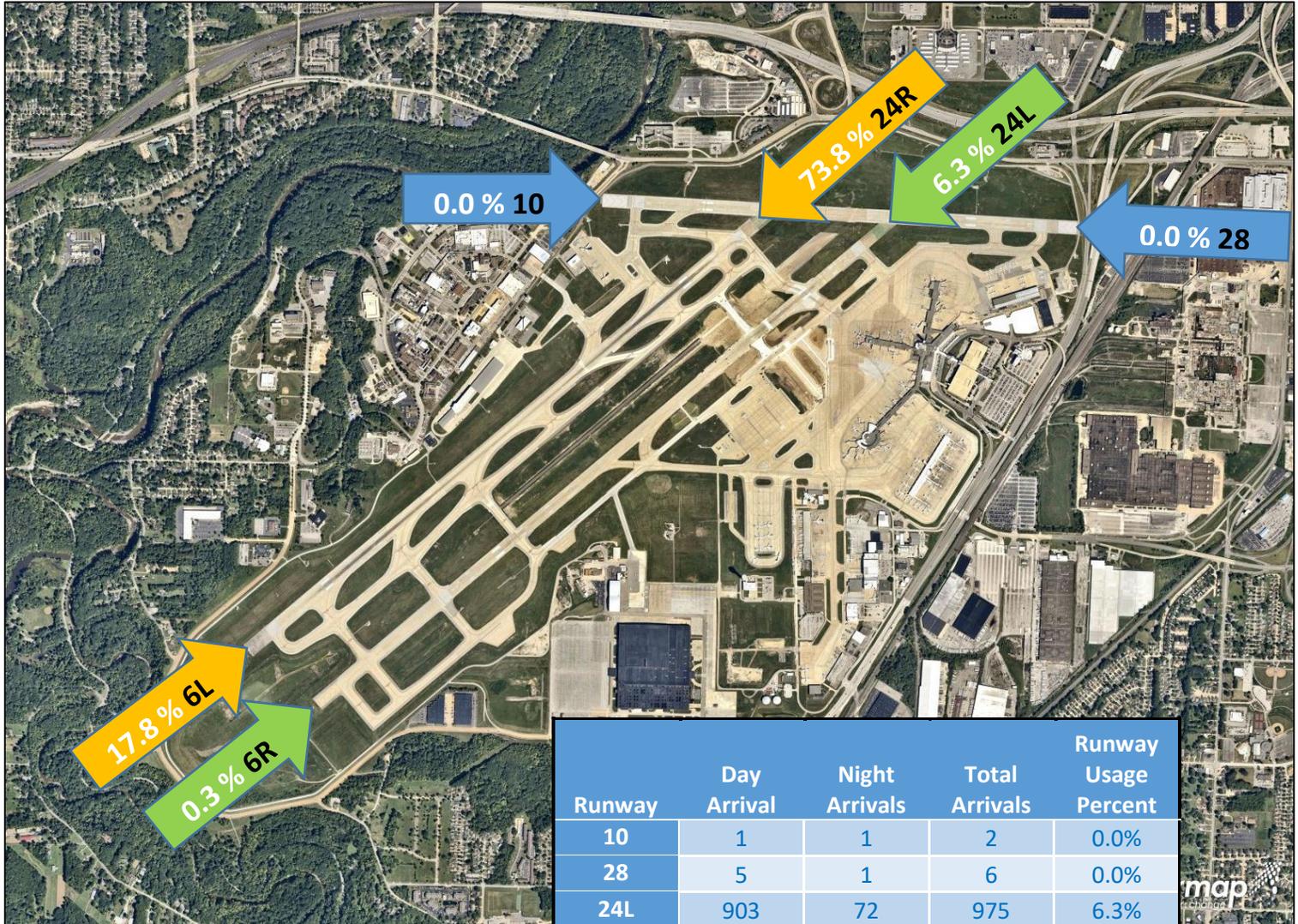
Other notable aircraft operations include:

Aircraft	Total
Air Carrier	21,771
Air Taxi	3,354
General Aviation	1,571
Military	23



Source: FAA Operations Network (OPSNET) - <https://aspm.faa.gov/opsnet/sys/Main.asp?force=atads>
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Runway Use: 4th Quarter, 2021 Arrivals

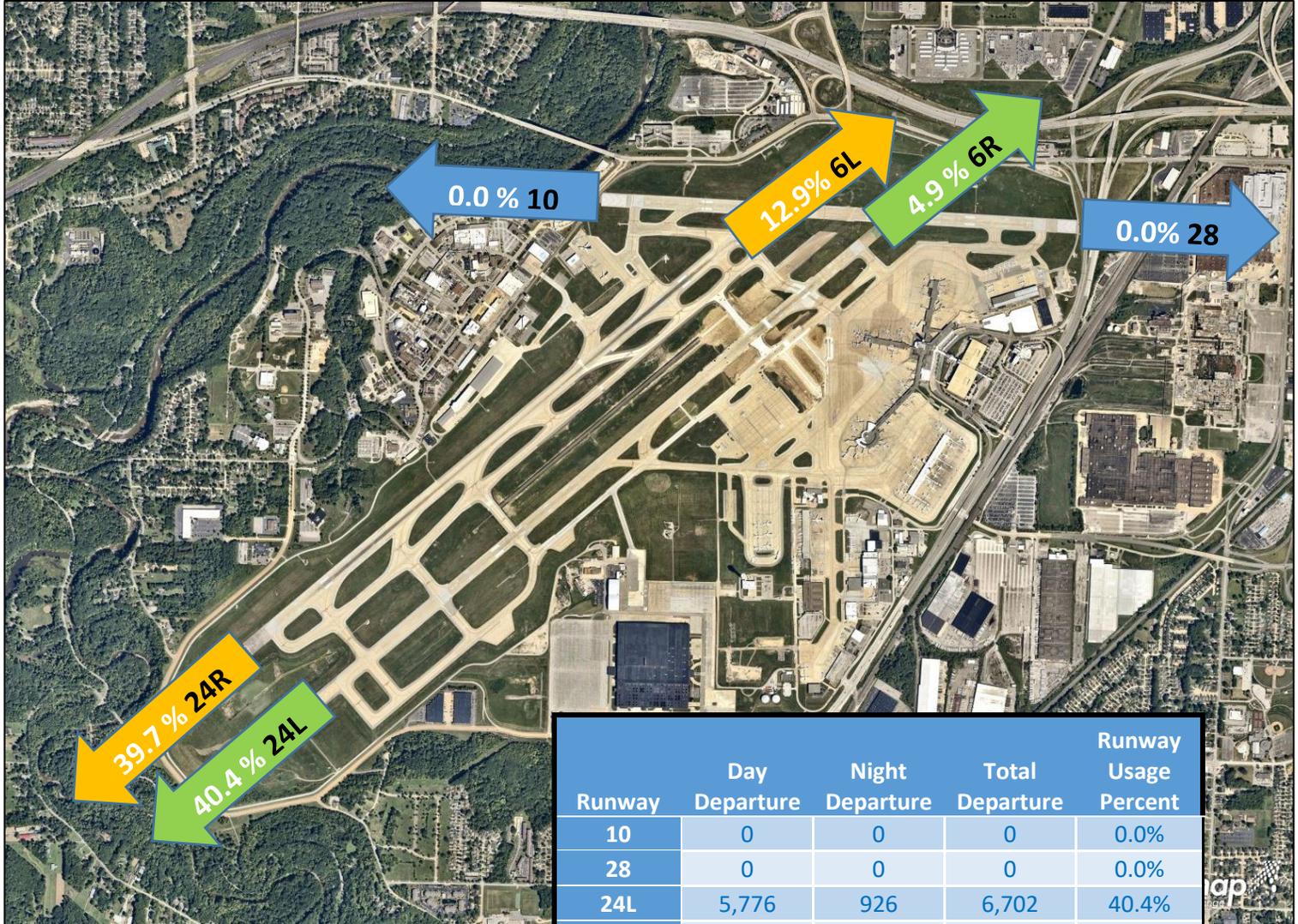


Runway	Day Arrival	Night Arrivals	Total Arrivals	Runway Usage Percent
10	1	1	2	0.0%
28	5	1	6	0.0%
24L	903	72	975	6.3%
24R	9,980	1,397	11,377	73.8%
6L	2,361	377	2,738	17.8%
6R	37	6	43	0.3%
UNK	254	26	280	1.8%
Totals	13541	1880	15421	100.0%

NOTE: There were less runway operations on Runways 6R-24L due to the North Airfield Improvement Project. 6R-24L reopened late in Q4.

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: 4th Quarter, 2021 Departures



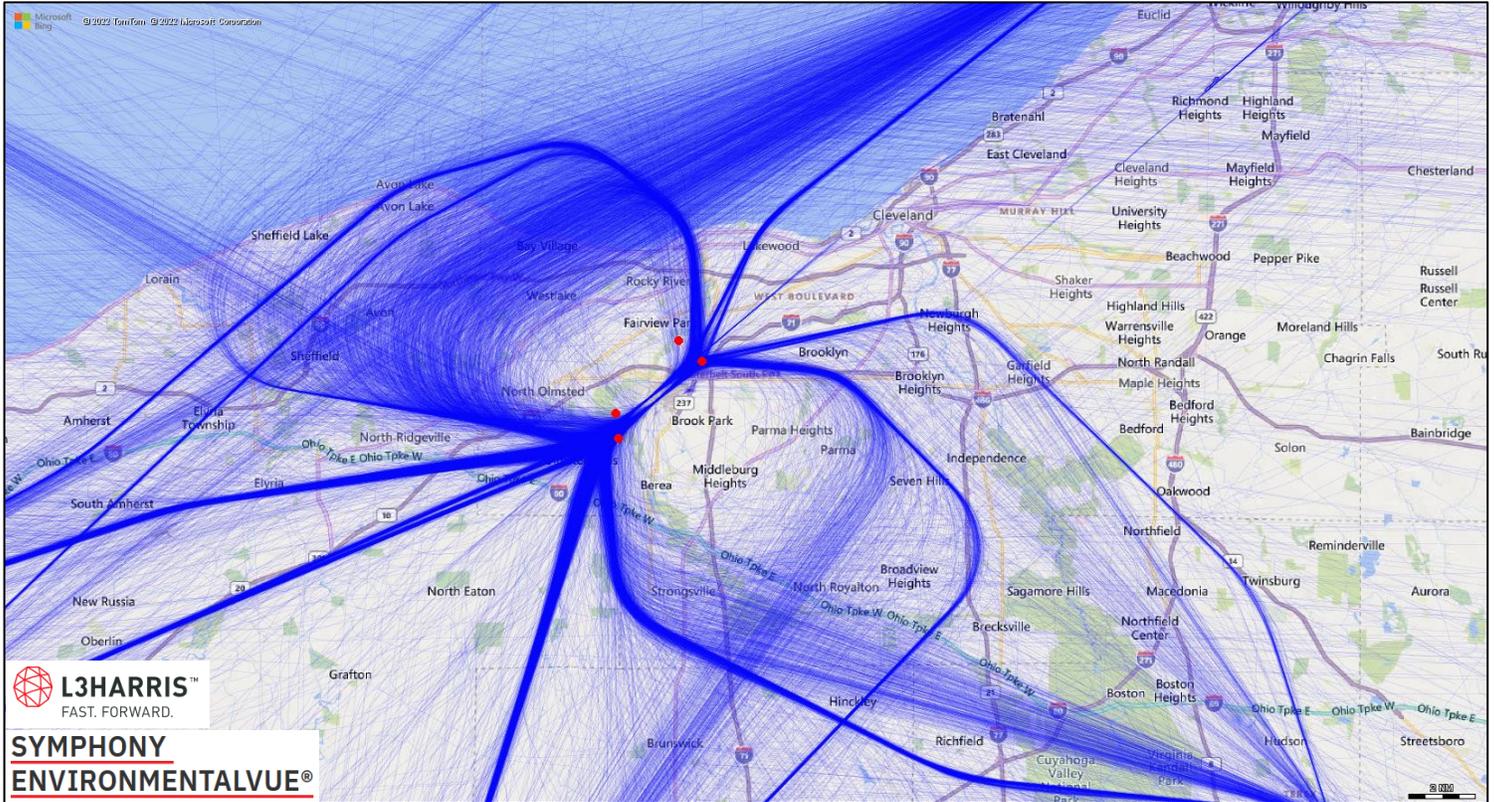
Runway	Day Departure	Night Departure	Total Departure	Runway Usage Percent
10	0	0	0	0.0%
28	0	0	0	0.0%
24L	5,776	926	6,702	40.4%
24R	5,873	712	6,585	39.7%
6L	1,929	218	2,147	12.9%
6R	715	92	807	4.9%
UNK	331	32	363	2.2%
Totals	14624	1980	16604	100.0%

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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, 4th Quarter: Day-time

2021 4th 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, 4th Quarter: Nighttime

2021 4th Quarter night-time departure flight tracks (jet propulsion only). Night-time reflects 11:00 pm to 06:00 am.

Of **408** departure flights only **25%** (101) were outside or too low for their respective late night 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.



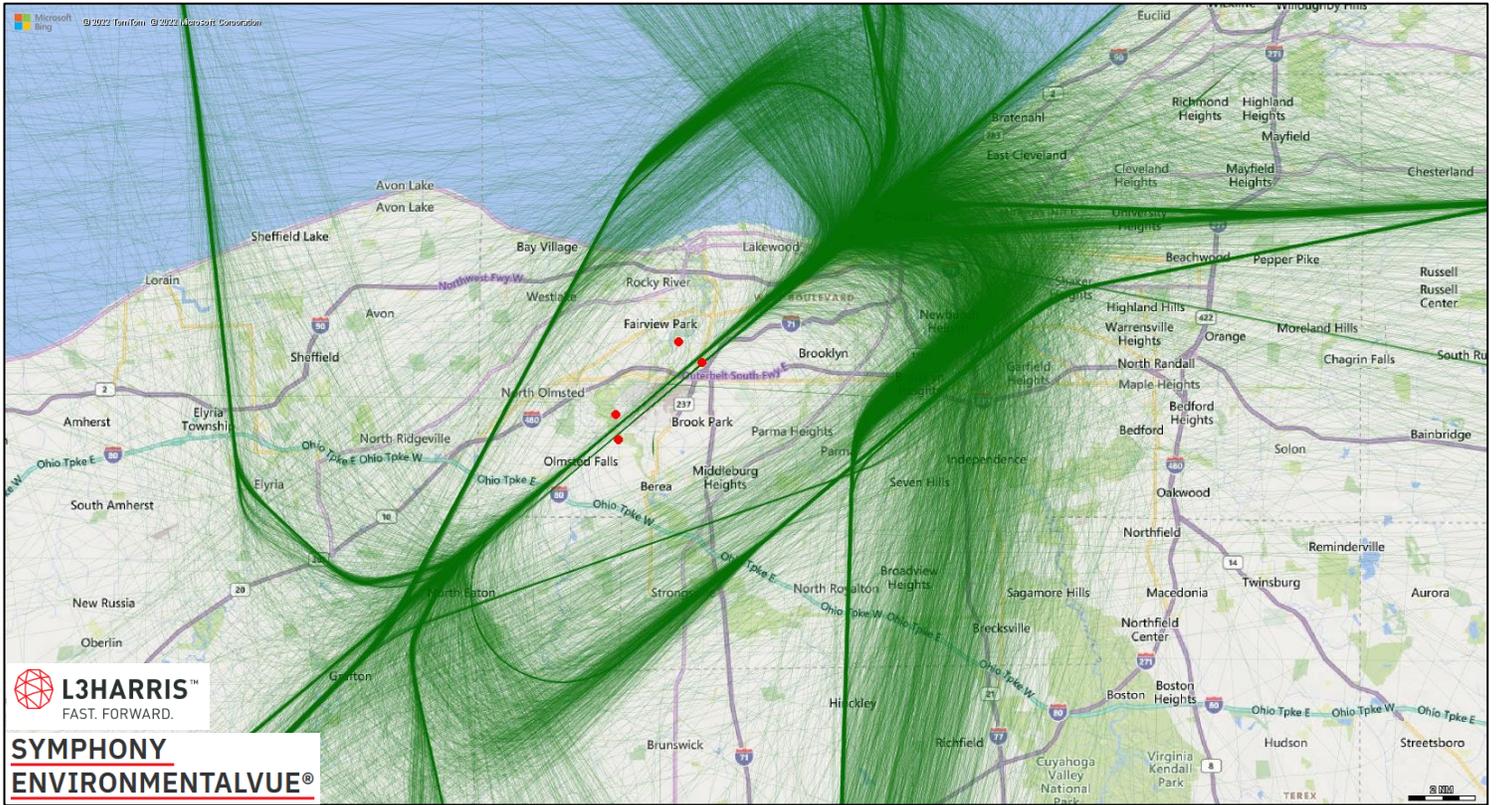
Flight tracks generated using L3 Harris Symphony EnvironmentalVue

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- Flight Tracks ————
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Arrival Headings, 4th 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 

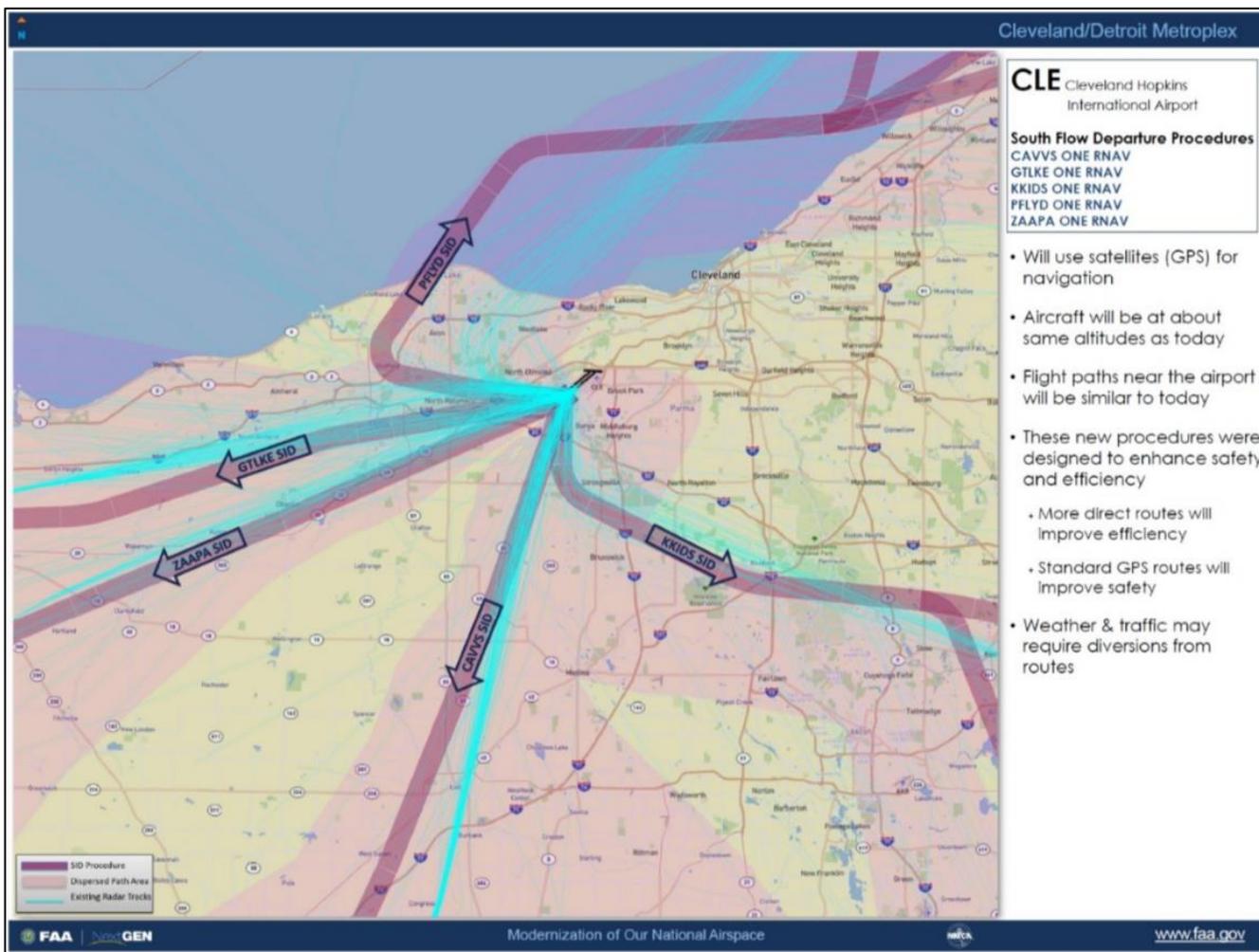
Metroplex: South Flow (Departures)

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.

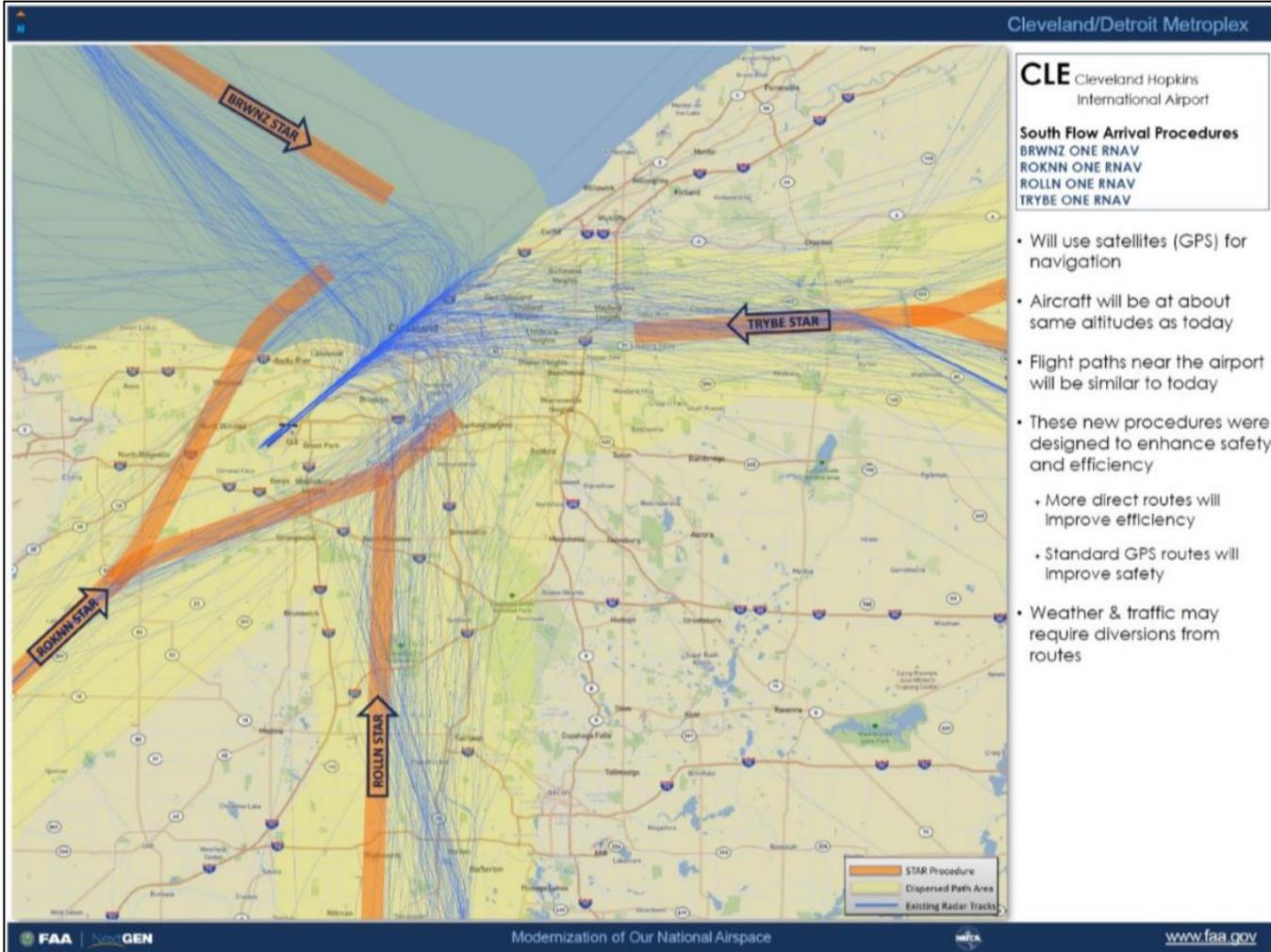


Note: Flight tracks are pre-metroplex and do not represent the current quarter.

Source: www.metroplexenvironmental.com

Metroplex: South Flow (Arrivals)

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

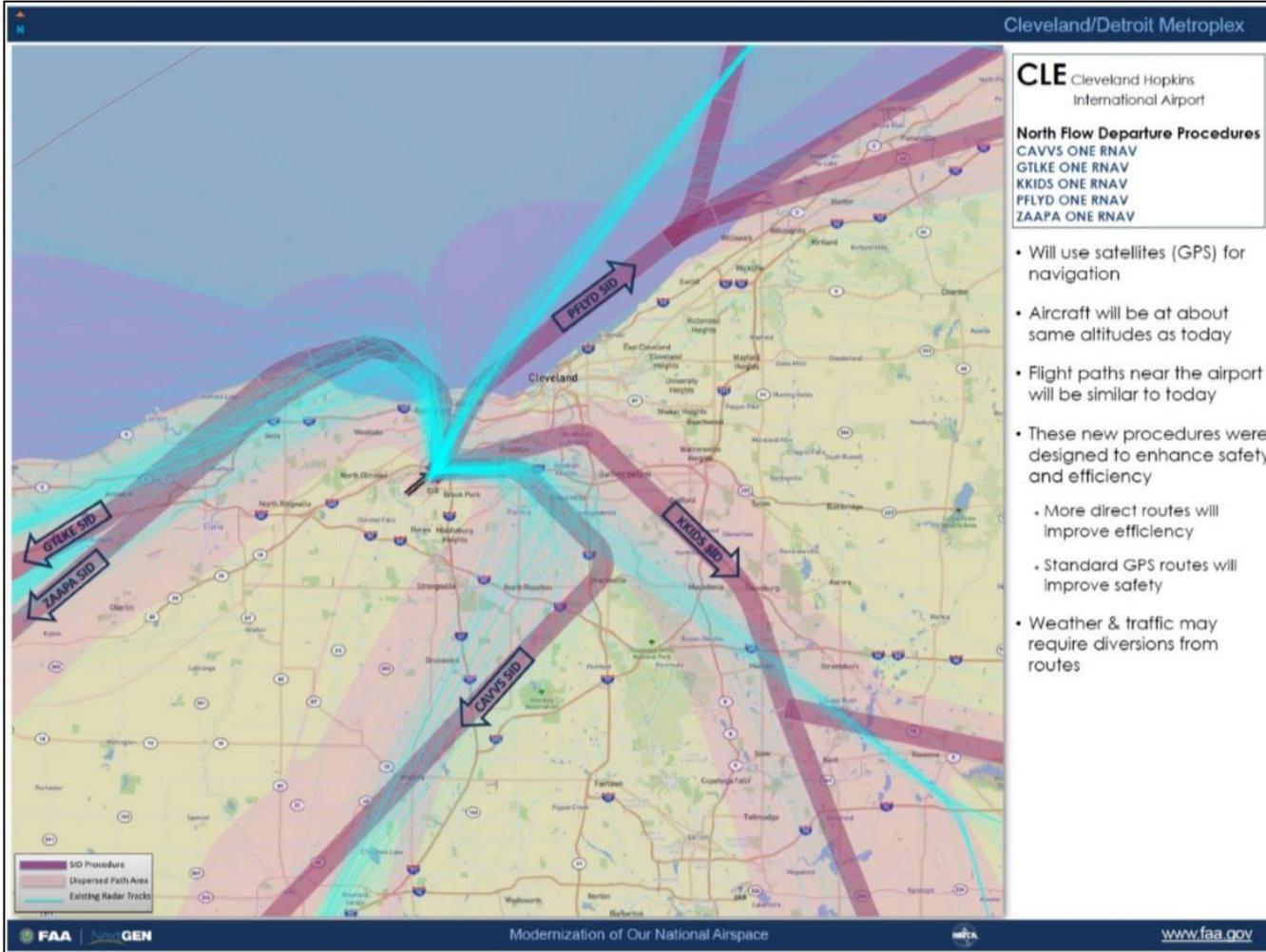


Note: Flight tracks are pre-metroplex and do not represent the current quarter.

Source: www.metroplexenvironmental.com

Metroplex: North Flow (Departures)

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

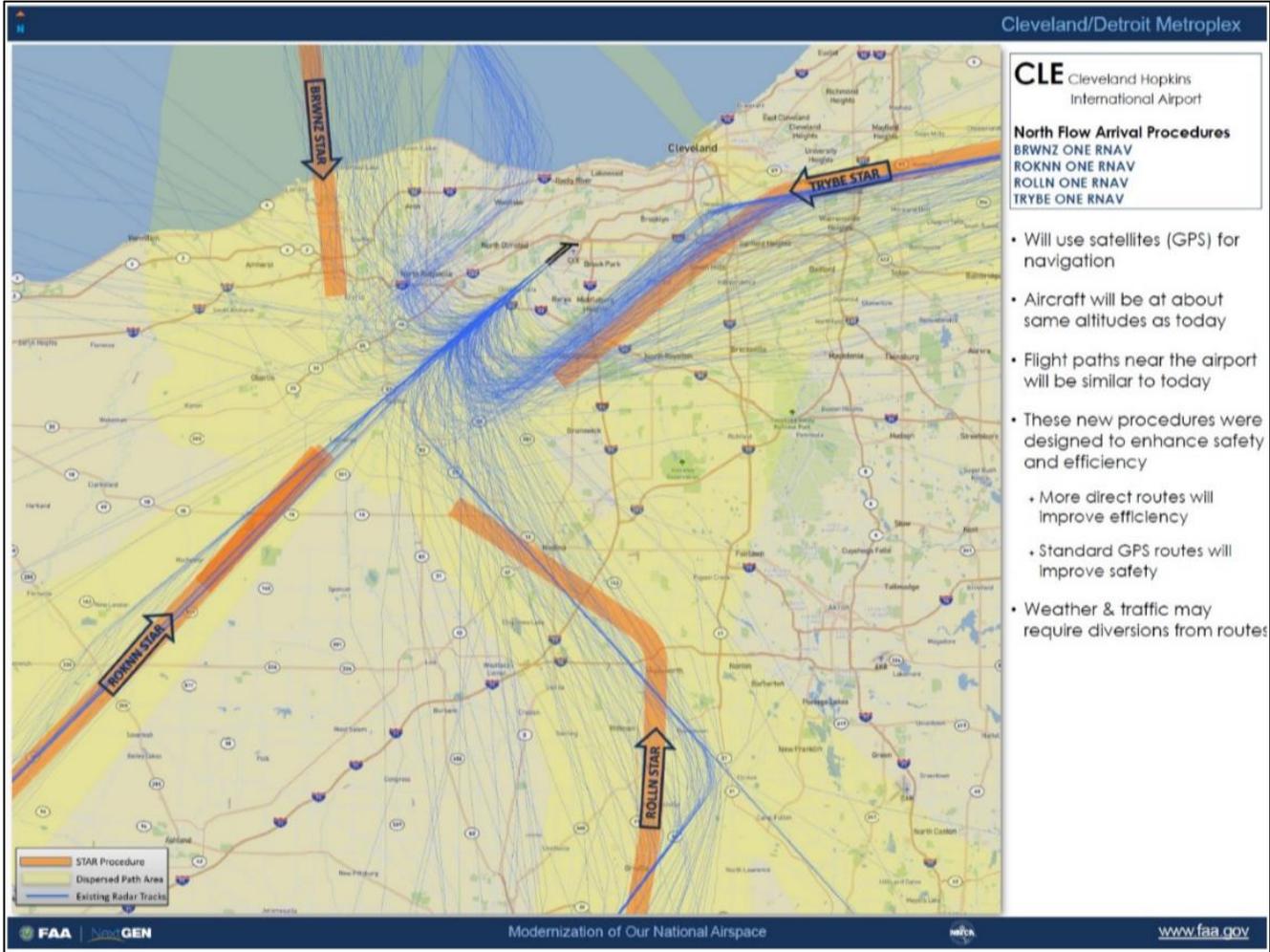


Note: Flight tracks are pre-metroplex and do not represent the current quarter.

Source: www.metroplexenvironmental.com

Metroplex: North Flow (Arrivals)

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



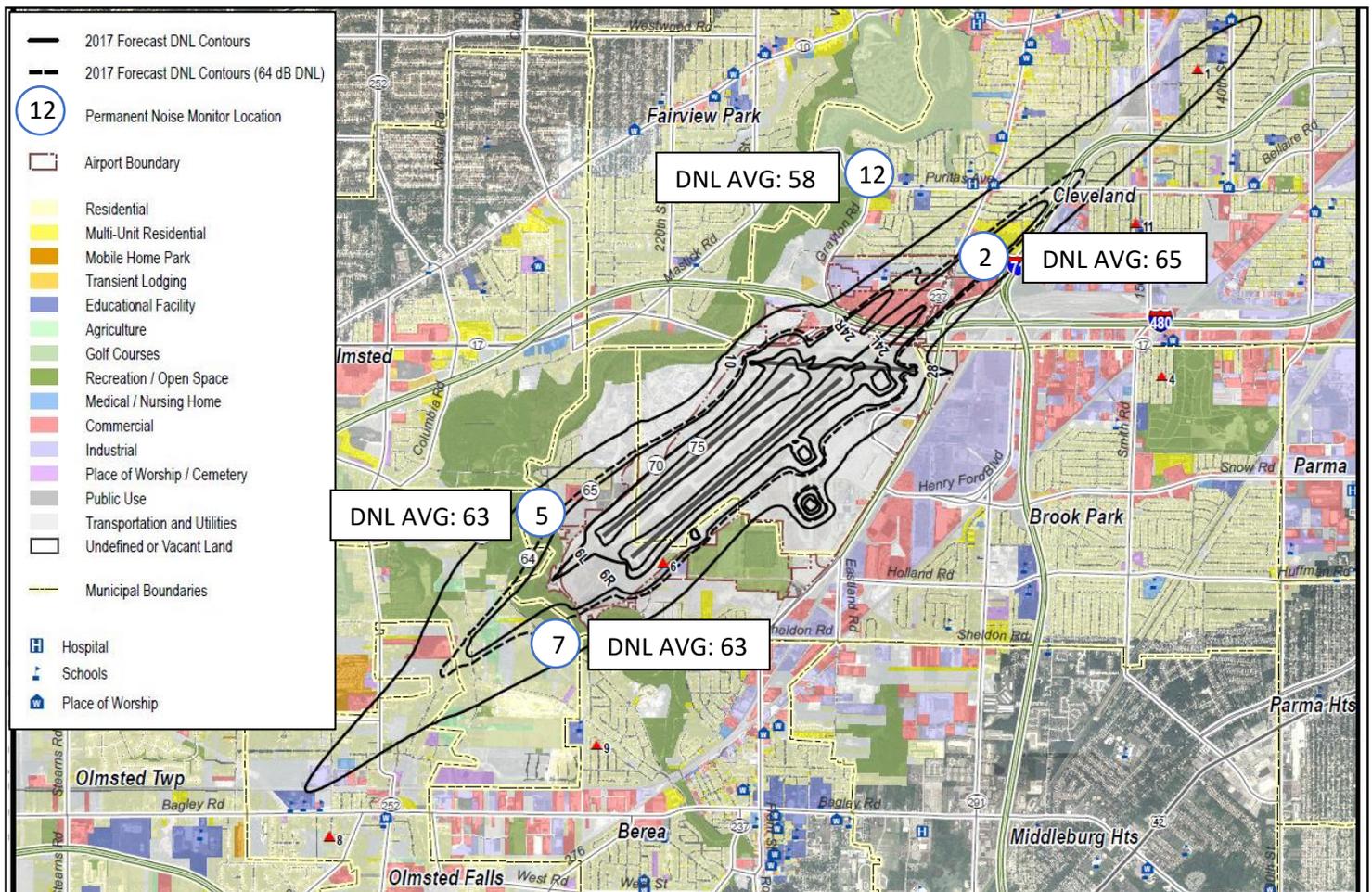
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Source: www.metroplexenvironmental.com

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/



Data generated using L3 Harris Symphony EnvironmentalVue

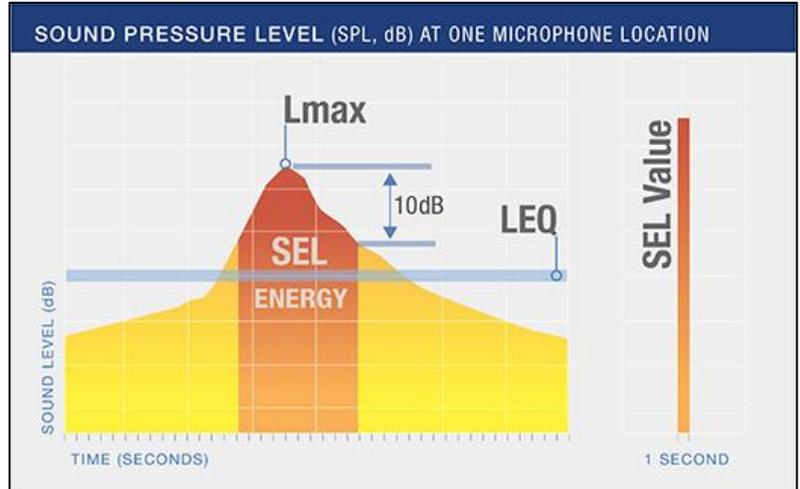
Top Three Lmax at Each NMS

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

Date and Time (24 hr)	NMS	Lmax (dB)	Sound Exposure Level (dB)	Duration (sec)	Operation	Aircraft
11/17/2021 10:40	NMS02	94.1	98.7	20	Arrival 24L	Airbus A306
12/02/2021 07:34	NMS02	91.9	96.9	19	Departure 24L	Boeing B739
12/03/2021 21:45	NMS02	91.4	98.7	29	Departure 6L	MD-11
10/14/2021 12:59	NMS05	91.2	97.3	15	Departure 24R	C680
11/12/2021 14:06	NMS05	90.4	96.5	28	Departure 24R	Airbus A321
10/24/2021 11:34	NMS05	90.1	96.1	27	Departure 24R	Airbus A321
12/18/2021 16:32	NMS07	90.2	97.4	26	Departure 24L	Airbus A321
12/18/2021 19:02	NMS07	89.8	96.4	22	Departure 24L	Boeing B738
12/10/2021 13:48	NMS07	89.6	96.3	27	Departure 24L	Airbus A321
10/25/2021 11:54	NMS12	87.7	88.3	9	Arrival 24R	Airbus A321
10/07/2021 16:49	NMS12	86.2	95.1	24	Departure 6L	Boeing B739
12/20/2021 15:38	NMS12	85.2	90.1	35	Departure 6L	Boeing B738

Data generated using L3 Harris Symphony EnvironmentalVue

Do you have a noise complaint?

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. Please be patient while we take time to process your message and respond with the appropriate information.

