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# Noise Compatibility Report

**2023 Quarter 2**  
**April - May - June**

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## Disclaimer

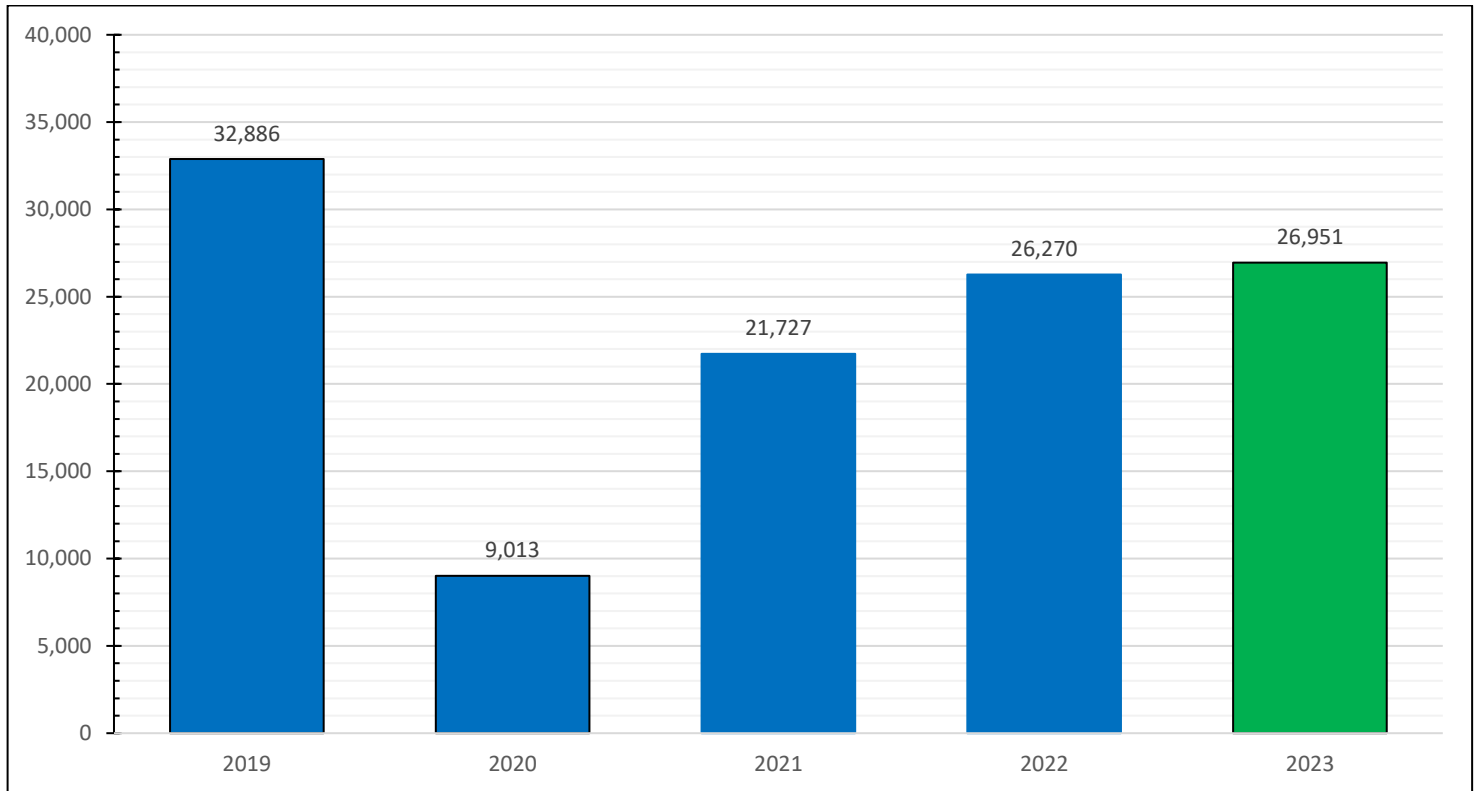
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- The Noise Compatibility Plan (NCP) at Cleveland Hopkins International Airport (CLE) combines the existing approved Part 150 Noise Compatibility Plan with Air Traffic Control Tower (ATCT) requirements to ensure the safe and expeditious handling of 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 2<sup>nd</sup> Quarter Operations 2019 – 2023

- There were **26,951** operations in the 2<sup>nd</sup> Qtr. 2023; This is a 1% change above the 2<sup>nd</sup> Qtr. 2022.



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 **26,951** operations in Quarter 2 of 2023. Here are some of the notable aircraft that CLE welcomes and sends off on a regular basis.

Aircraft	Total
Boeing 737 Series	7,202
Embraer E-Jet Family	3,667
Bombardier CRJ-900	2,475
Airbus A320/A321/A319	5,286
MD-11	118



Other notable aircraft operations include:

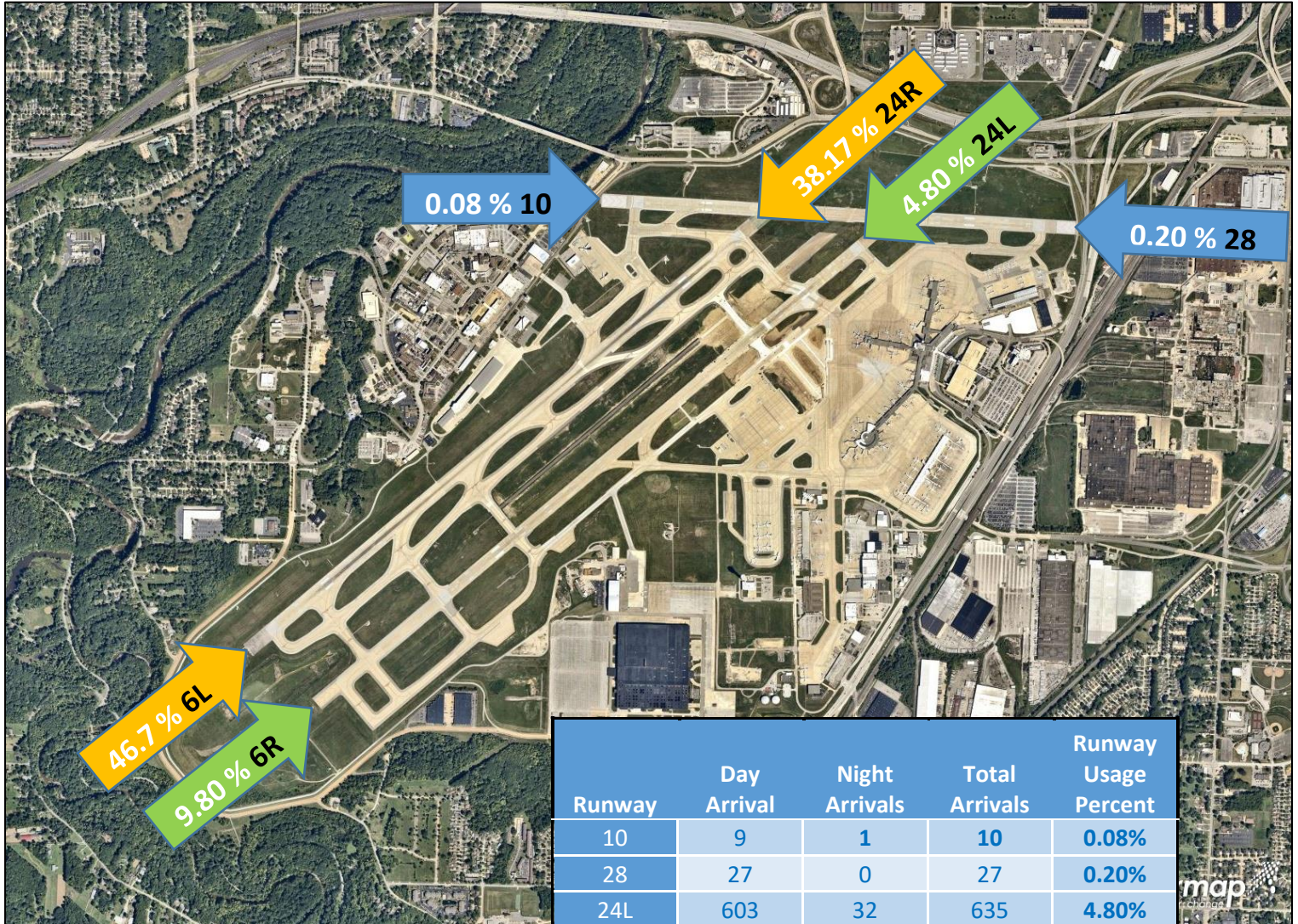
Aircraft	Total
Air Taxi	3,236
General Aviation	1,812
Military	43



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.



# Runway Use: 2<sup>nd</sup> Quarter, 2023 Arrivals

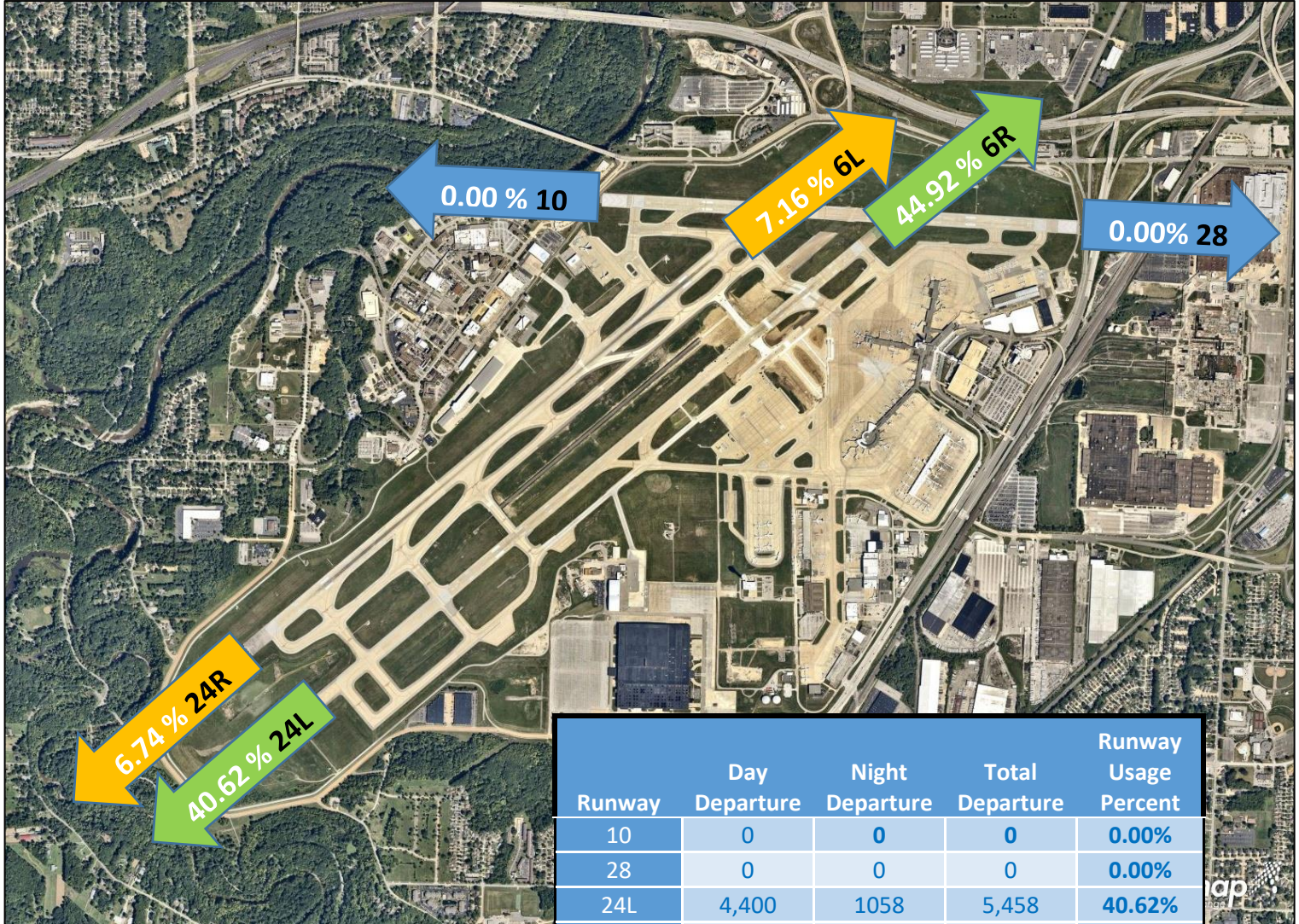


Runway	Day Arrival	Night Arrivals	Total Arrivals	Runway Usage Percent
10	9	1	10	0.08%
28	27	0	27	0.20%
24L	603	32	635	4.80%
24R	4,181	872	5,053	38.17%
6L	4,969	1155	6,124	46.26%
6R	1183	114	1297	9.80%
UNK	70	23	93	0.70%
<b>TOTALS</b>	<b>11042</b>	<b>2197</b>	<b>13239</b>	<b>100.00%</b>

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



# Runway Use: 2<sup>nd</sup> Quarter, 2023 Departures



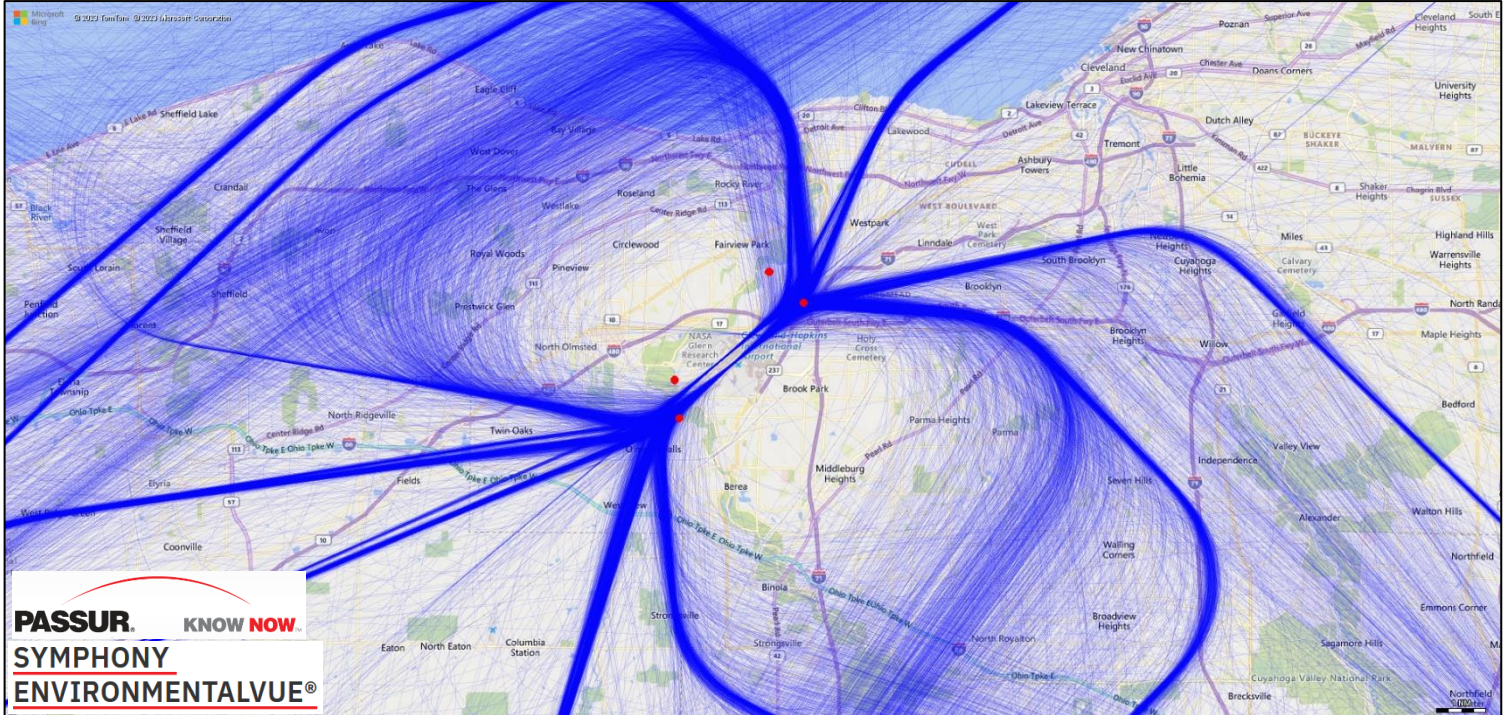
Runway	Day Departure	Night Departure	Total Departure	Runway Usage Percent
10	0	0	0	0.00%
28	0	0	0	0.00%
24L	4,400	1058	5,458	40.62%
24R	826	80	906	6.74%
6L	937	25	962	7.16%
6R	5050	986	6036	44.92%
UNK	67	8	75	0.56%
<b>Totals</b>	<b>11280</b>	<b>2157</b>	<b>13437</b>	<b>100.00%</b>

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



# Departure Headings, 2<sup>nd</sup> Quarter: Day-time

2023 2<sup>nd</sup> Quarter Day-time departure – 12,424 flight tracks (jet propulsion only). Day-time reflects 06:00 am to 11:00 pm.



Flight tracks generated using PASSUR Symphony EnvironmentalVue

## Key:

Flight Tracks ———

Departure Gates ———

Noise Monitoring Station ●



# Departure Headings, 2<sup>nd</sup> Quarter: Night-time

2023 2<sup>nd</sup> Quarter nighttime departure flight tracks (jet propulsion only). Night-time reflects 11:00 pm to 06:00 am.

Of **563** departure flights, **208 (37%)** were outside their respective late night departure corridor. These corridors represent the airspace through which aircraft depart and arrive. These corridors are not mandatory. When an aircraft departs, it has a certain path it follows which is a function of altitude and heading.



Flight tracks generated using PASSUR Symphony EnvironmentalVue

## Key:

Flight Tracks 

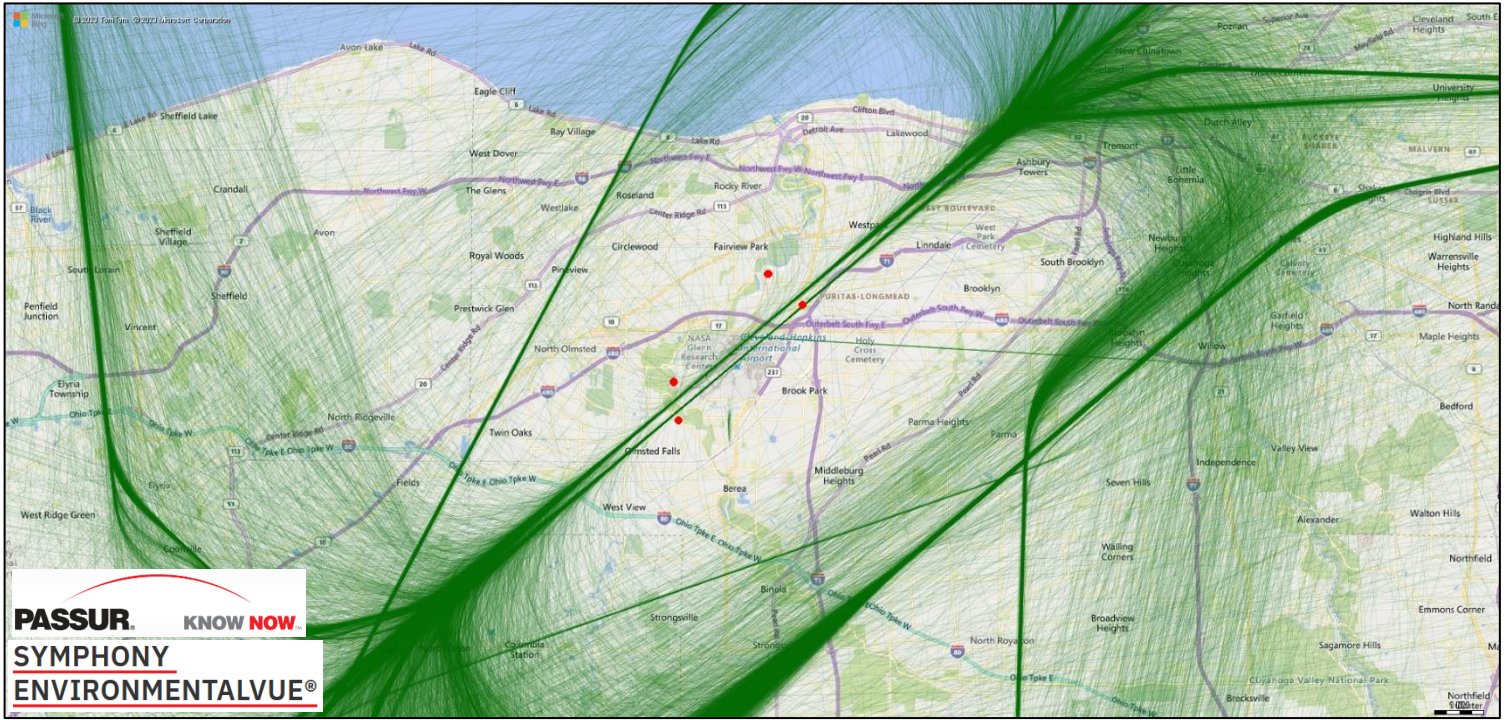
Departure Gates 

Noise Monitoring Station 



# Arrival Headings, 2<sup>nd</sup> Quarter

Day-time and night-time arrivals for all of Quarter 2 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 PASSUR Symphony EnvironmentalVue

Flight Tracks ———

Noise Monitoring Station ●

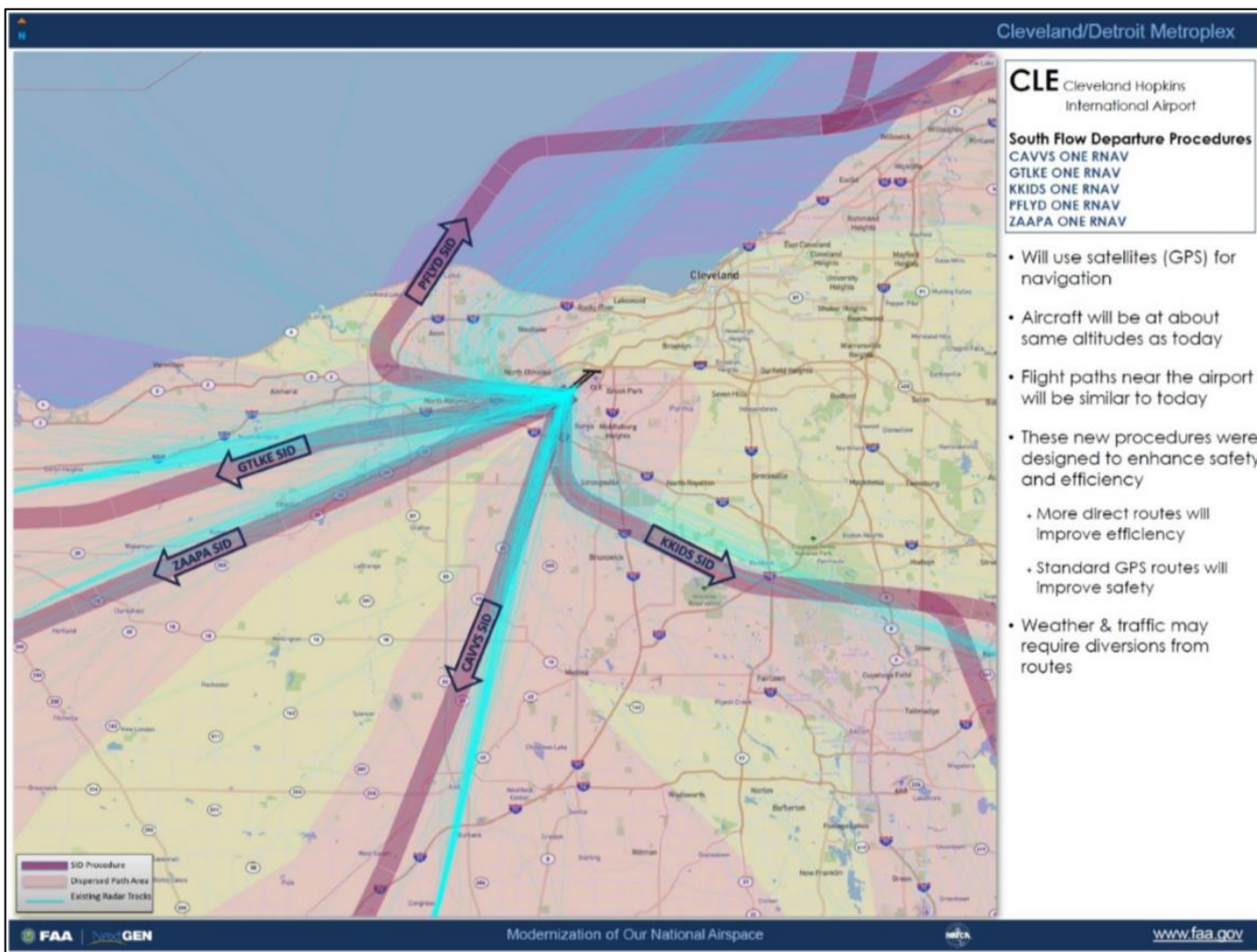
# Metroplex: South Flow (Departures)

## 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.



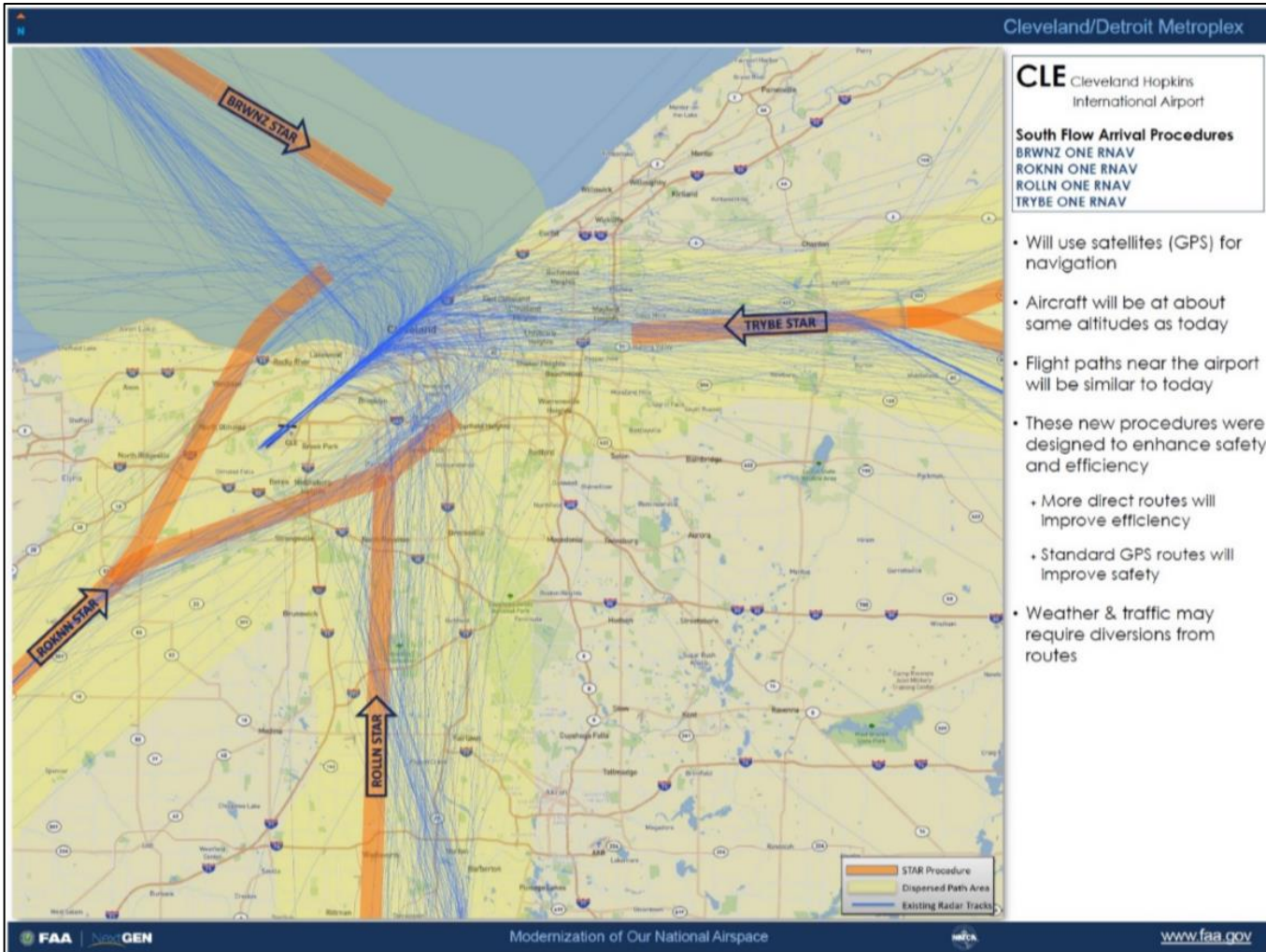
Note: Flight tracks are historic and do not represent the current quarter.

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



# Metroplex: South Flow (Arrivals)

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

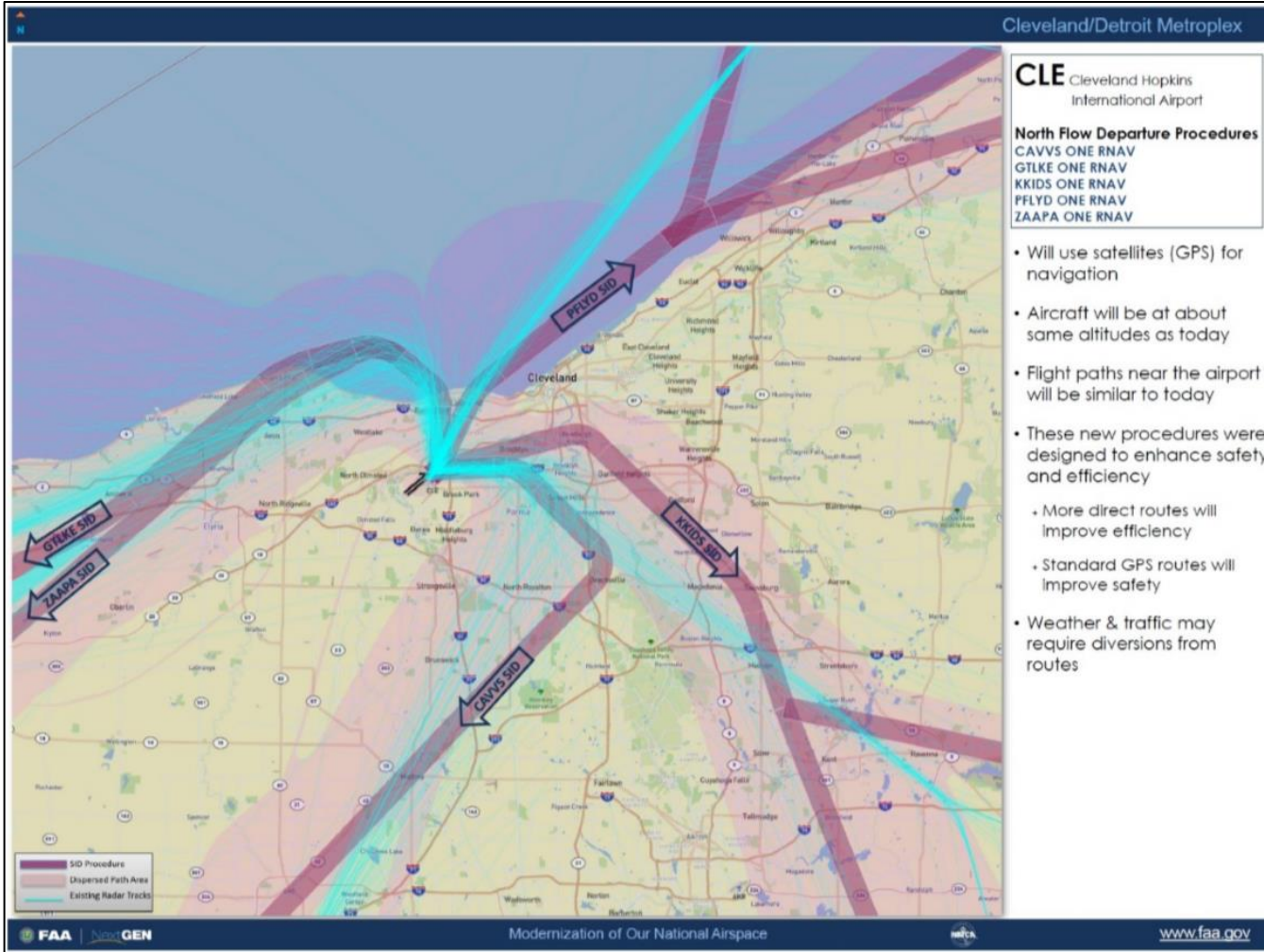


Note: Flight tracks are historic and do not represent the current quarter.

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

# Metroplex: North Flow (Departures)

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



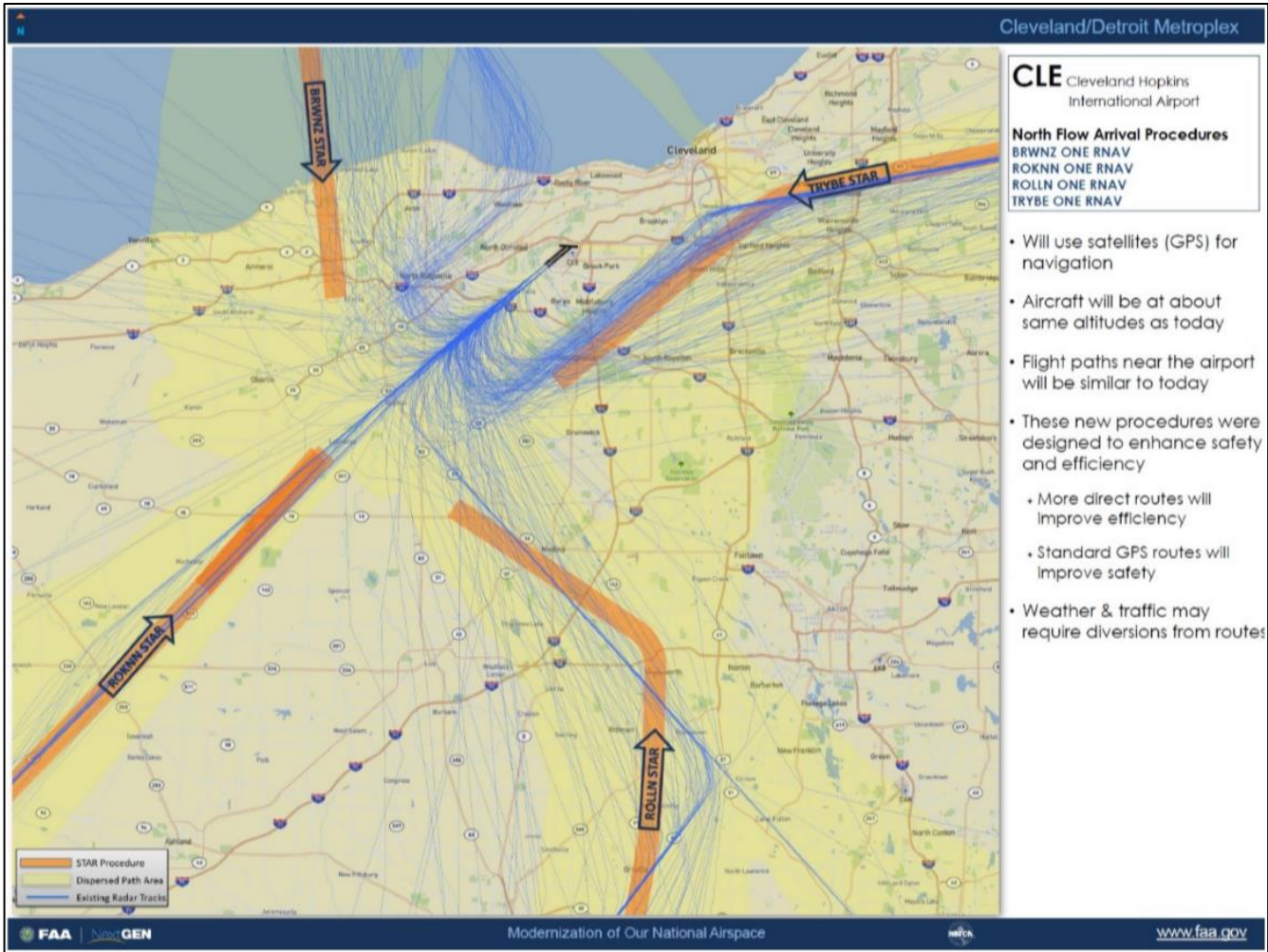
Note: Flight tracks are historic and do not represent the current quarter.

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.

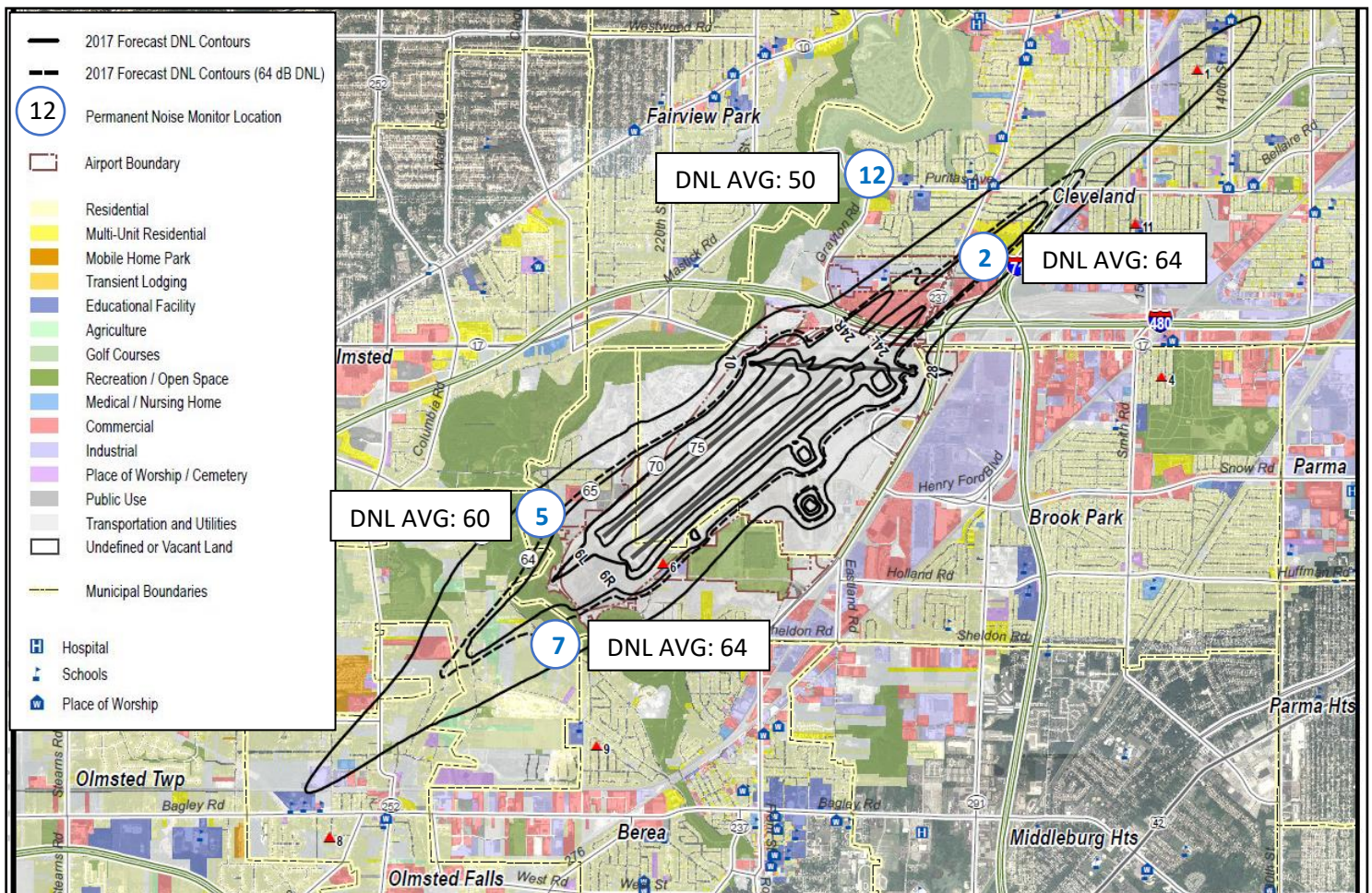
Source: [www.metroplexenvironmental.com](http://www.metroplexenvironmental.com)



# Aircraft Noise: Q2 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 PASSUR Symphony EnvironmentalVue

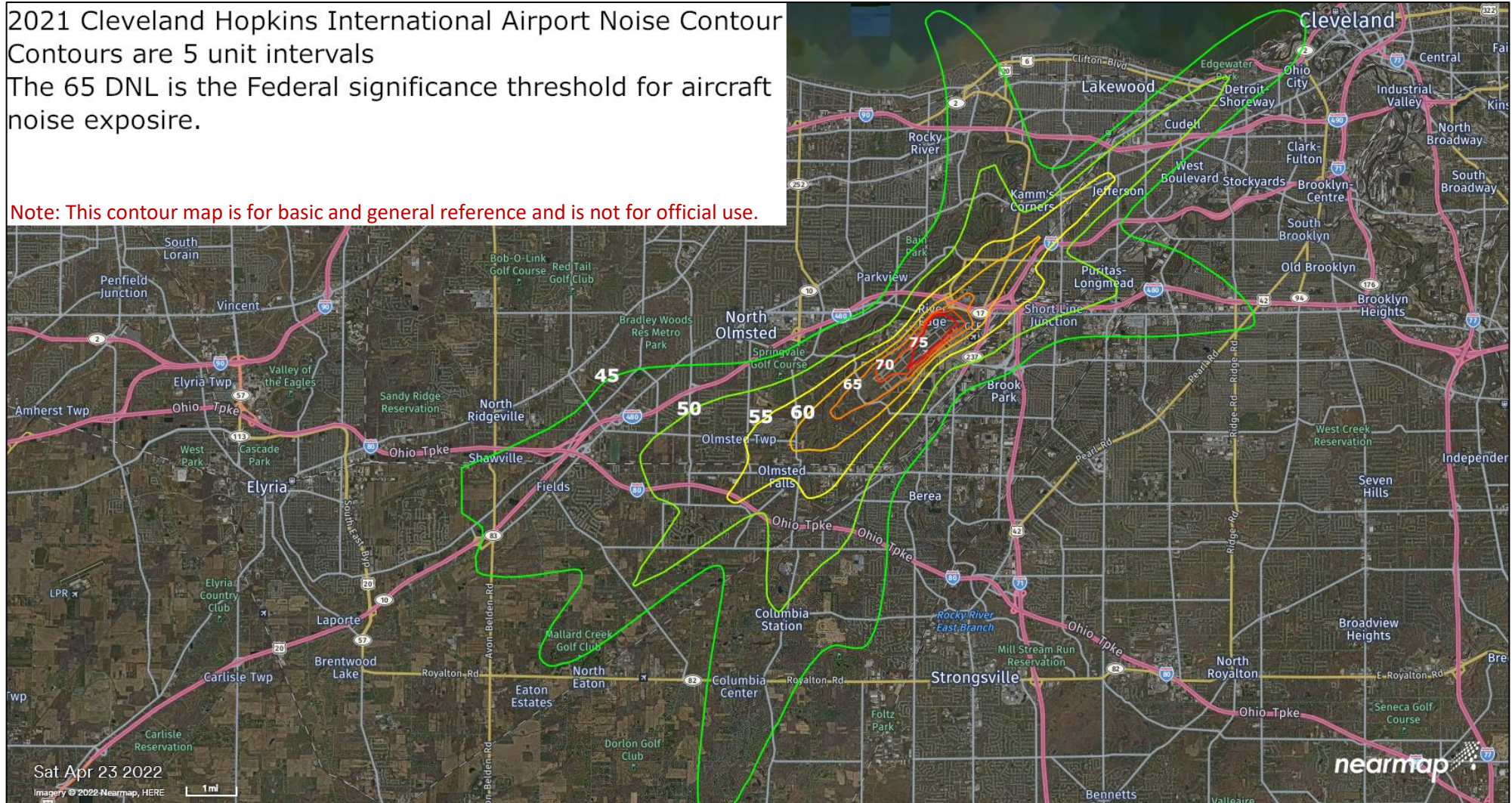


# 2021 Yearly Noise Contour

Noise levels can be computed at individual locations of interest, but to show how noise can vary over extended areas, noise metric results like DNL are often drawn on maps in terms of lines connecting points of the same decibel (dBA). Like topographical maps showing the elevation of terrain in an area, these noise "contours" are useful for comparing aircraft noise exposure throughout an airport community. The shape of noise contours depends on many factors but are influenced by things like whether more arriving or departing aircraft are flying over an area.

2021 Cleveland Hopkins International Airport Noise Contour  
Contours are 5 unit intervals  
The 65 DNL is the Federal significance threshold for aircraft noise exposure.

Note: This contour map is for basic and general reference and is not for official use.





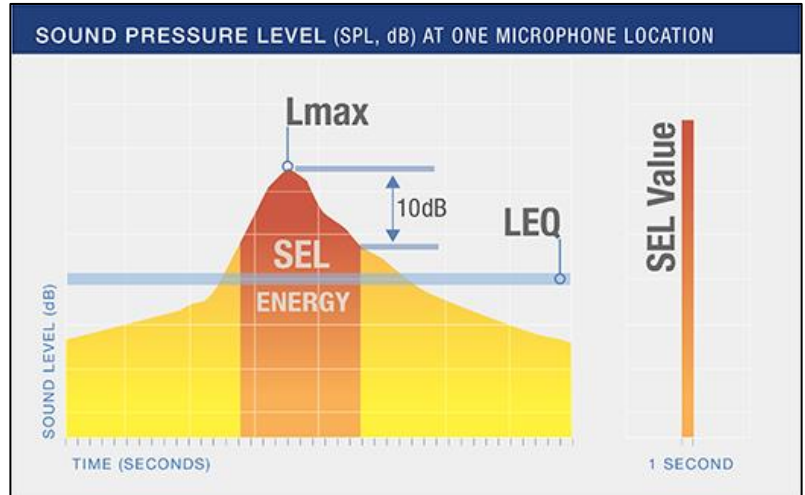
# Top Three Lmax at Each NMS

**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 pages.



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

Date and Time	NMS	Lmax (dB)	Sound Exposure Level (dB)	Duration (sec)	Operation	Aircraft
5/22/2023 19:13	NMS02	96.5	100.3	12	Departure 6R	Airbus A320
5/4/2023 23:29	NMS02	96.4	102.56	29	Departure 6R	Boeing 747-400
5/4/2023 23:29	NMS02	96.4	102.56	29	Departure 6R	Boeing 747-400
6/19/2023 20:18	NMS05	90	94.03	11	Arrival 6L	CRJ 200
4/28/2023 21:37	NMS05	89.4	96.08	36	Departure 6L	MD-11
5/6/2023 16:31	NMS05	89.1	93.55	16	Arrival 6L	Airbus A320
5/20/2023 7:52	NMS07	92.4	98.47	25	Departure 24L	Boeing 739
4/22/2023 7:32	NMS07	92	98.34	25	Departure 24L	Boeing 739
5/23/2023 16:03	NMS07	91.5	95.09	18	Departure 6L	Embraer 175L
5/14/2023 16:05	NMS12	85.6	95.19	42	Departure 6L	MD-88
5/9/2023 17:07	NMS12	84.7	93.74	37	Departure 6R	MD-88
5/30/2023 18:25	NMS12	84.3	93.17	42	Departure 6L	MD-88

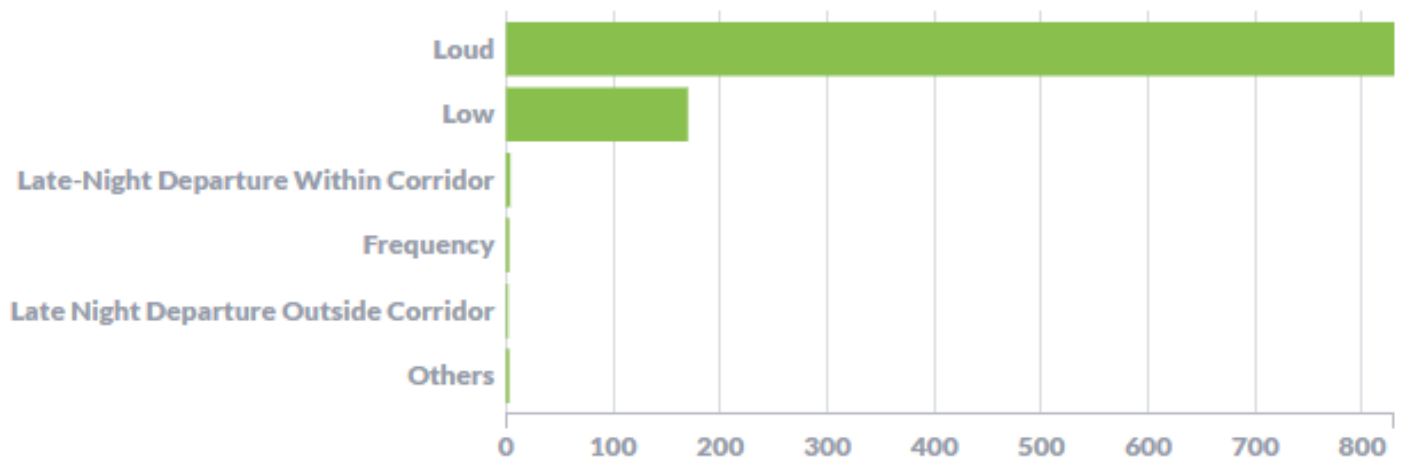
Data generated using PASSUR Symphony EnvironmentalVue



# Noise Complainant Metrics – Q2 2023

City	Complainant	Count
Berea	R002	1
Cleveland	Ad001	911
Cleveland	Ar005	5
Cleveland	De001	3
Cleveland	Mi005	1
Fairview Park	OI002	10
Lakewood	St004	4
North Olmsted	Ni001	1
Olmsted Township	He001	1
Parma	Sc015	1
Valley City	OI002	99

Complaint by Disturbance Type



Noise Events, Count, Grouped by Site

SITE	Count
NMS02	11,365
NMS05	7,688
NMS07	13,239
NMS12	2,499



# Noise Complainant Map – Q2 2023





# Do you have a question or 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. Please be patient while we take time to process your message and respond with the appropriate information.

