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# Noise Compatibility Report

2024 Quarter 4

October – November - December

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# Disclaimer

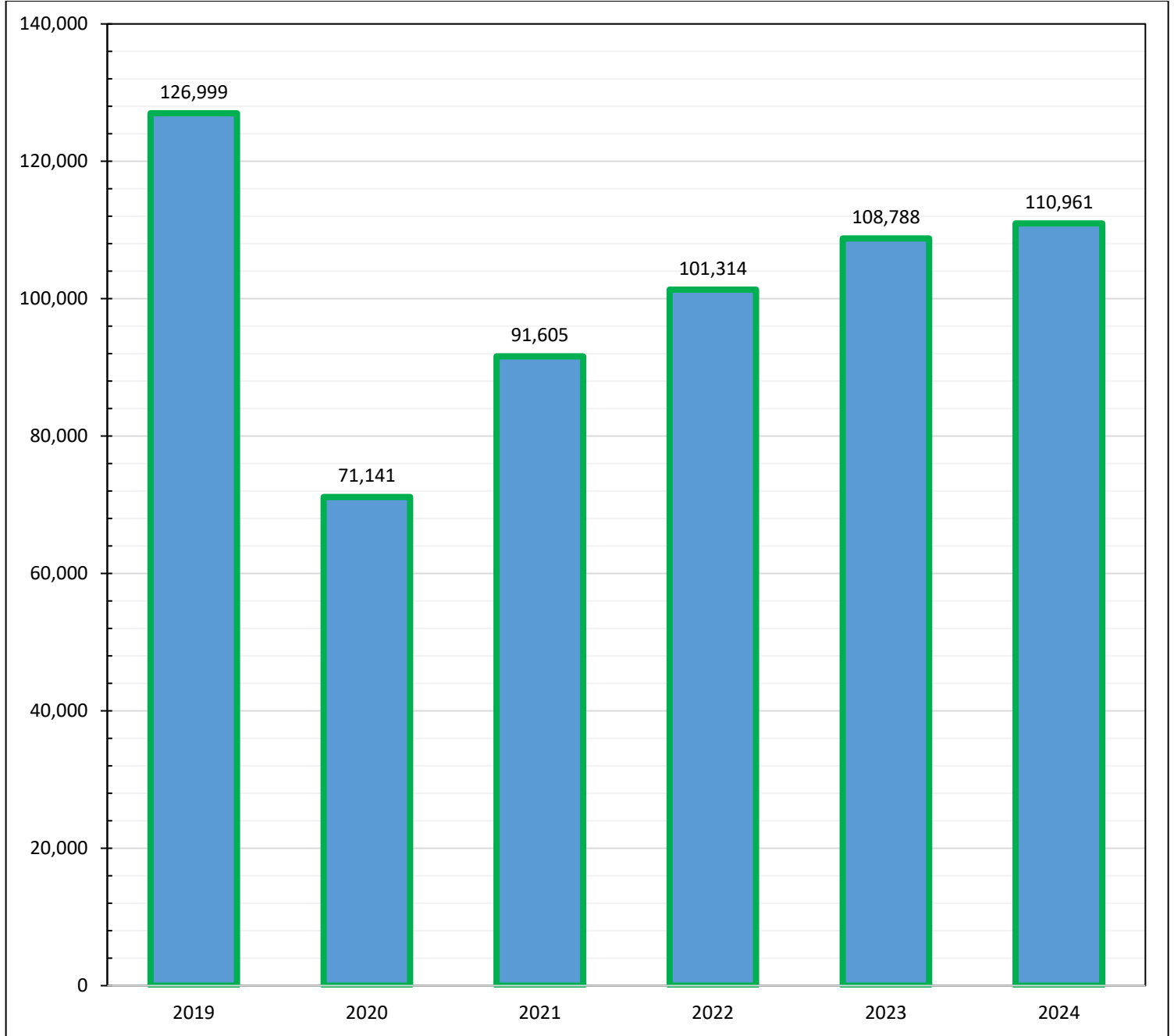
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- The Noise Compatibility Plan (NCP) at Cleveland Hopkins International Airport (CLE) combines the existing approved Part 150 Noise Compatibility Plan with Air Traffic Control Tower (ATCT) requirements to ensure the safe and expeditious handling of 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 and we will respond as soon as possible.

# Annual Aircraft Operations

## Cleveland Year over Year Operations 2019 – 2024

- CLE saw a 2% increase in 2024 over 2023.



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.



# 2024 Yearly Noise Complaint Stats

This table represents individual complainants and what city they are from.

City	Complainant Code	Count		City	Count
Berea	K001	1		Berea	1
Cleveland	S005	1		Cleveland	3094
Cleveland	G002	1		Fairview Park	80
Cleveland	V001	1		Lakewood	5
Cleveland	G001	1		Olmsted Falls	13
Cleveland	J001	3086	>	Parma	1
Cleveland	R006	1		Rocky River	5
Cleveland	S010	1		Valley City	229
Cleveland	S012	1			
Cleveland	V005	1			
Fairview Park	G009	79			
Fairview Park	M025	1			
Lakewood	G016	2			
Lakewood	B003	1			
Lakewood	P019	1			
Lakewood	S045	1			
Olmsted Falls	M023	1			
Olmsted Falls	K012	1			
Olmsted Falls	R003	11			
Parma	R026	1			
Rocky River	M004	5			
Valley City	C001	229			

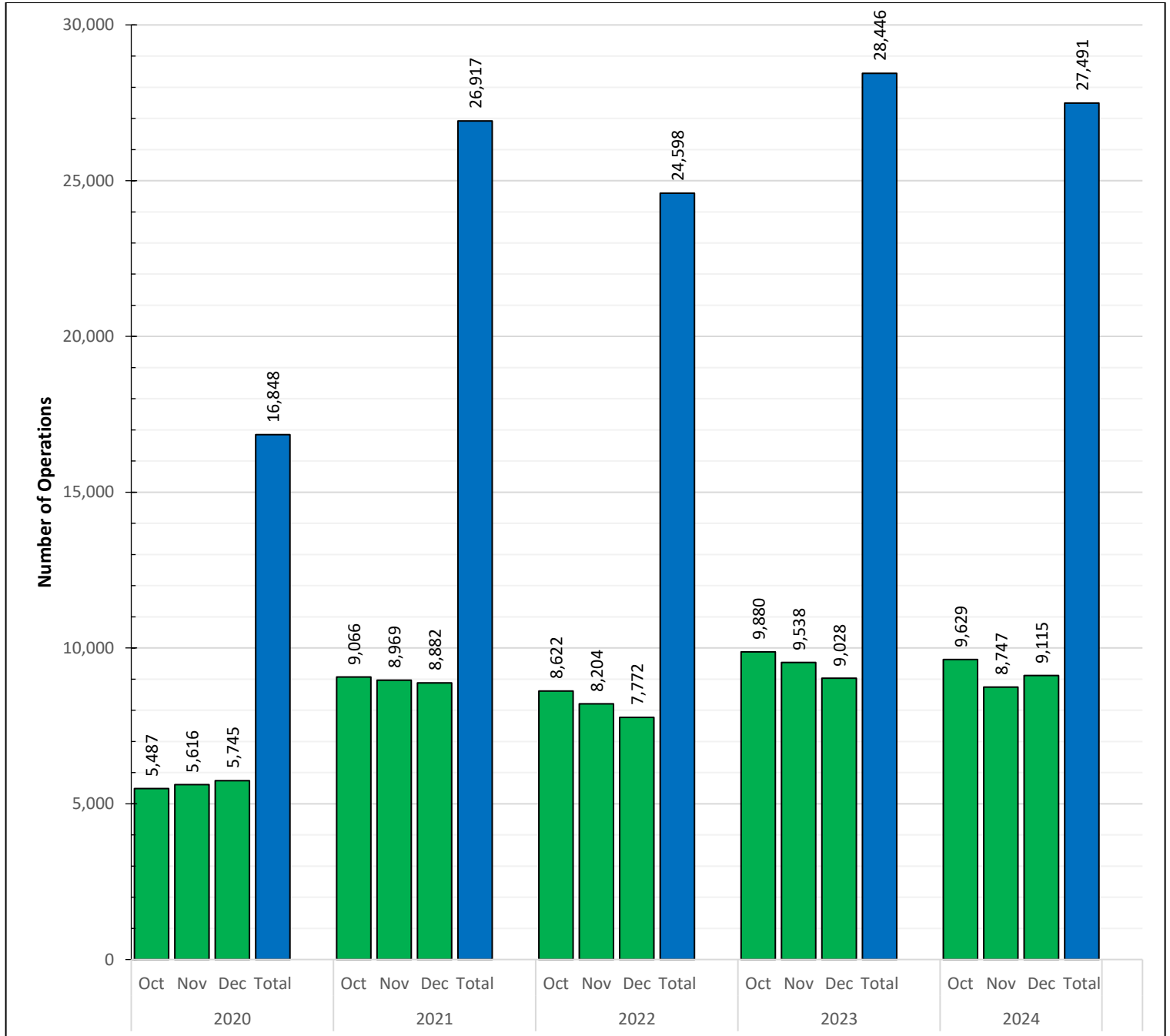
## Complaints by City with Primary & Secondary Disturbances

City	Primary Disturbance	Secondary Disturbance	City	Primary Disturbance	Secondary Disturbance
<b>Berea</b>	<b>1</b>	<b>1</b>	<b>Lakewood</b>	<b>5</b>	<b>5</b>
(blank)	1	1	Loud	2	2
<b>Cleveland</b>	<b>3094</b>	<b>2179</b>	Low	3	3
Arrival Reverse Thrust	1	1	<b>Olmsted Falls</b>	<b>13</b>	<b>13</b>
Frequency	5	5	Arrival Reverse Thrust	1	1
Loud	521	521	Late Night Departure Outside Corridor	1	1
Low	966	966	Low	3	3
Other	3	3	Other	8	8
Take-off Thrust	1	1	<b>Parma</b>	<b>1</b>	<b>1</b>
(blank)	1597	682	Take-off Thrust	1	1
<b>Fairview Park</b>	<b>80</b>	<b>80</b>	<b>Rocky River</b>	<b>5</b>	<b>2</b>
Frequency	48	48	Frequency	1	1
Late Night Departure Outside Corridor	3	3	(blank)	4	1
Loud	2	2	<b>Valley City</b>	<b>229</b>	<b>229</b>
Low	13	13	Arrival Reverse Thrust	2	2
Off Course	13	13	Loud	213	213
(blank)	1	1	Low	14	14
			<b>Grand Total</b>	<b>3428</b>	<b>2510</b>

# Aircraft Operations

## Cleveland 4<sup>th</sup> Quarter Operations 2020 – 2024

- There were **27,491** operations in the 4<sup>th</sup> Qtr. 2024; This is a 3% decrease over 4<sup>th</sup> Qtr. 2023.

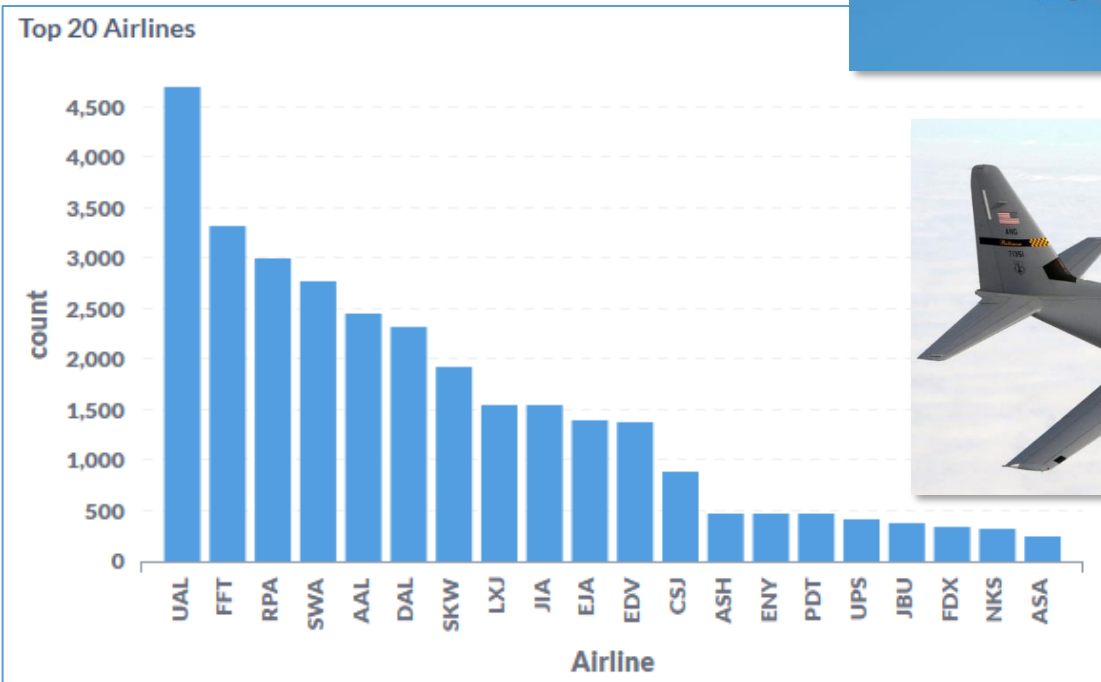
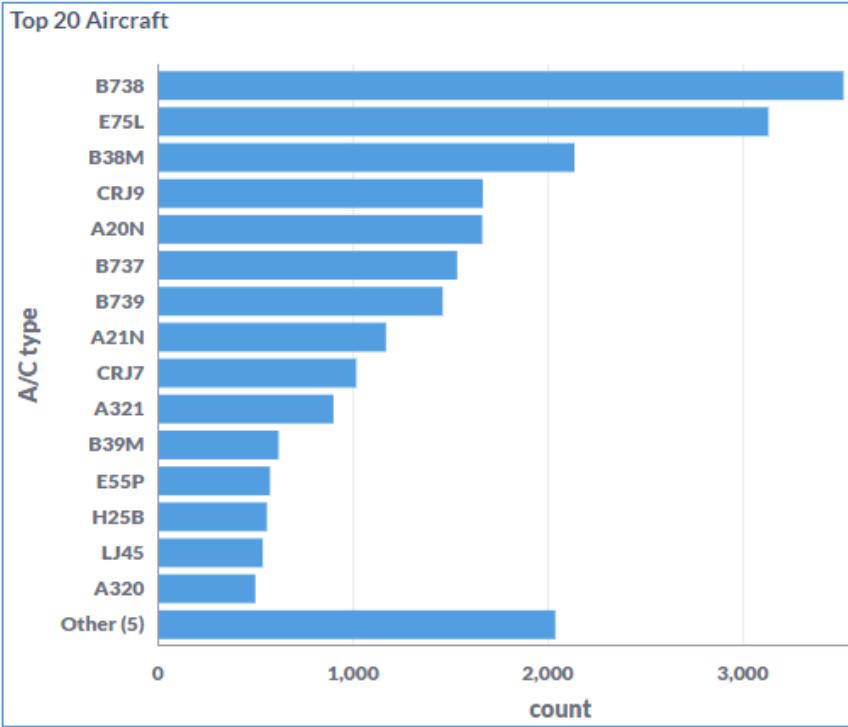


Source: FAA Operations Network (OPSNET) - <https://aspm.faa.gov/opsnet/sys/Main.asp?force=atads>  
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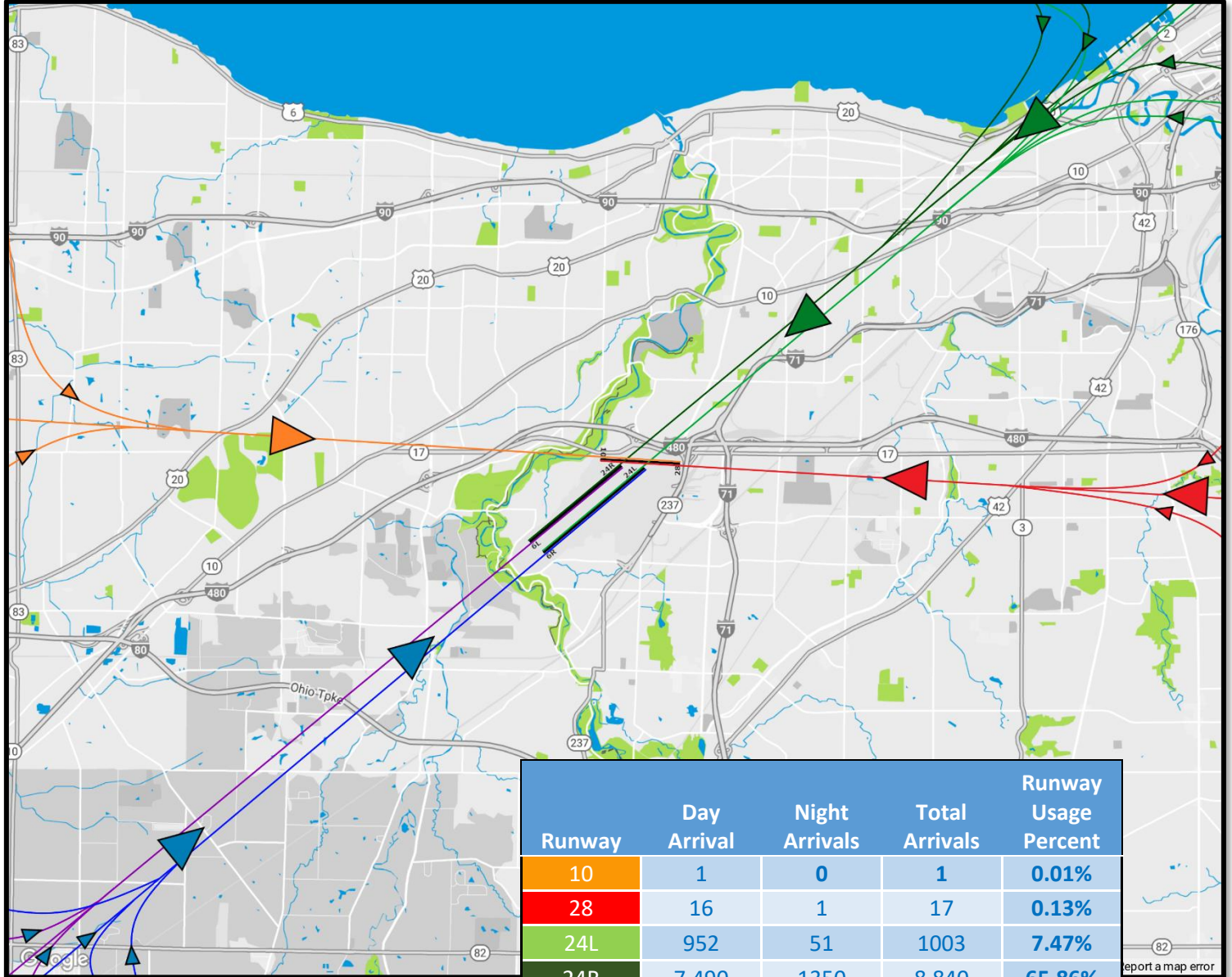
# Fleet Mix

Cleveland Hopkins had 27,491 operations in Quarter 4 of 2024. Here are some of the notable aircraft and airlines that CLE welcomes and sends off on a regular basis.



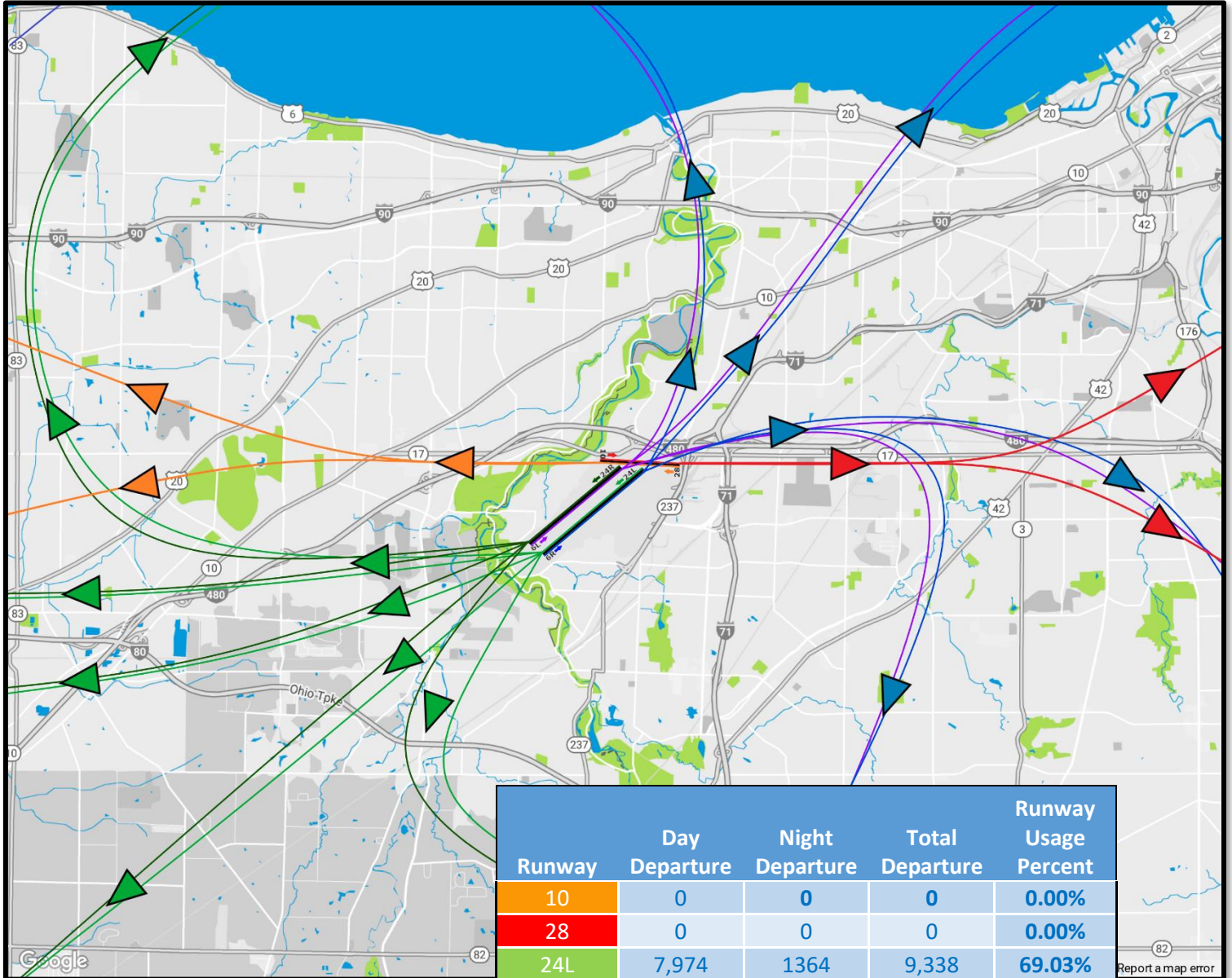
Source: PASSUR Symphony EnvironmentalVue

# Runway Use: 4<sup>th</sup> Quarter, 2024 Arrivals



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: 4<sup>th</sup> Quarter, 2024 Departures



Runway	Day Departure	Night Departure	Total Departure	Runway Usage Percent
10	0	0	0	0.00%
28	0	0	0	0.00%
24L	7,974	1,364	9,338	69.03%
24R	734	34	768	5.68%
6L	388	2	390	2.88%
6R	2,580	393	2,973	21.98%
UNK	34	24	58	0.43%
<b>Totals</b>	<b>11,710</b>	<b>1,817</b>	<b>13,527</b>	<b>100.00%</b>

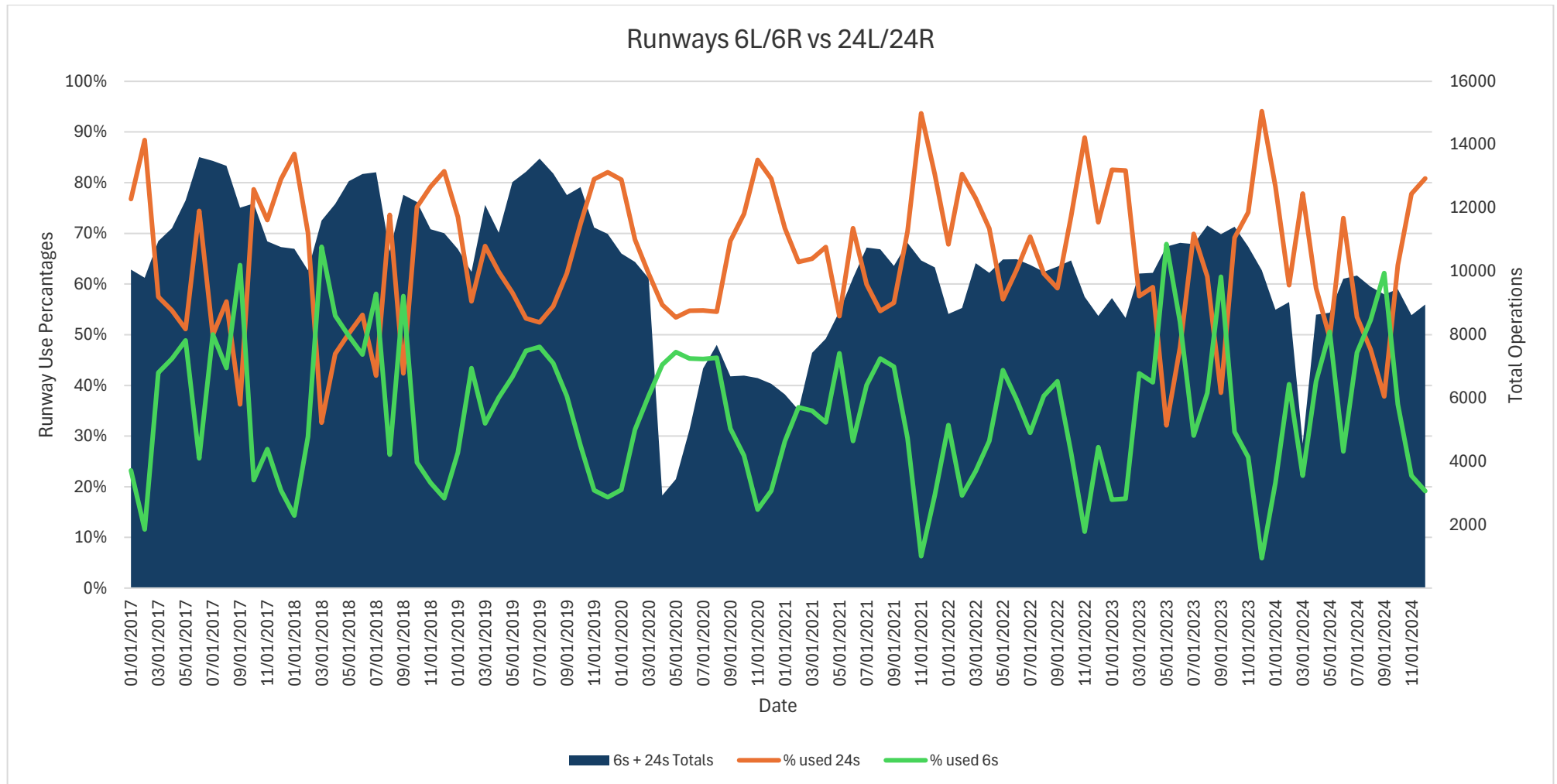
Note: Runway usage totals may not match FAA operation totals due to different system tracking methods and potential duplicate data. Data is generated using PASSUR Symphony EnvironmentalVue.



# Primary Air Traffic Flow 6L/6R vs 24L/24R

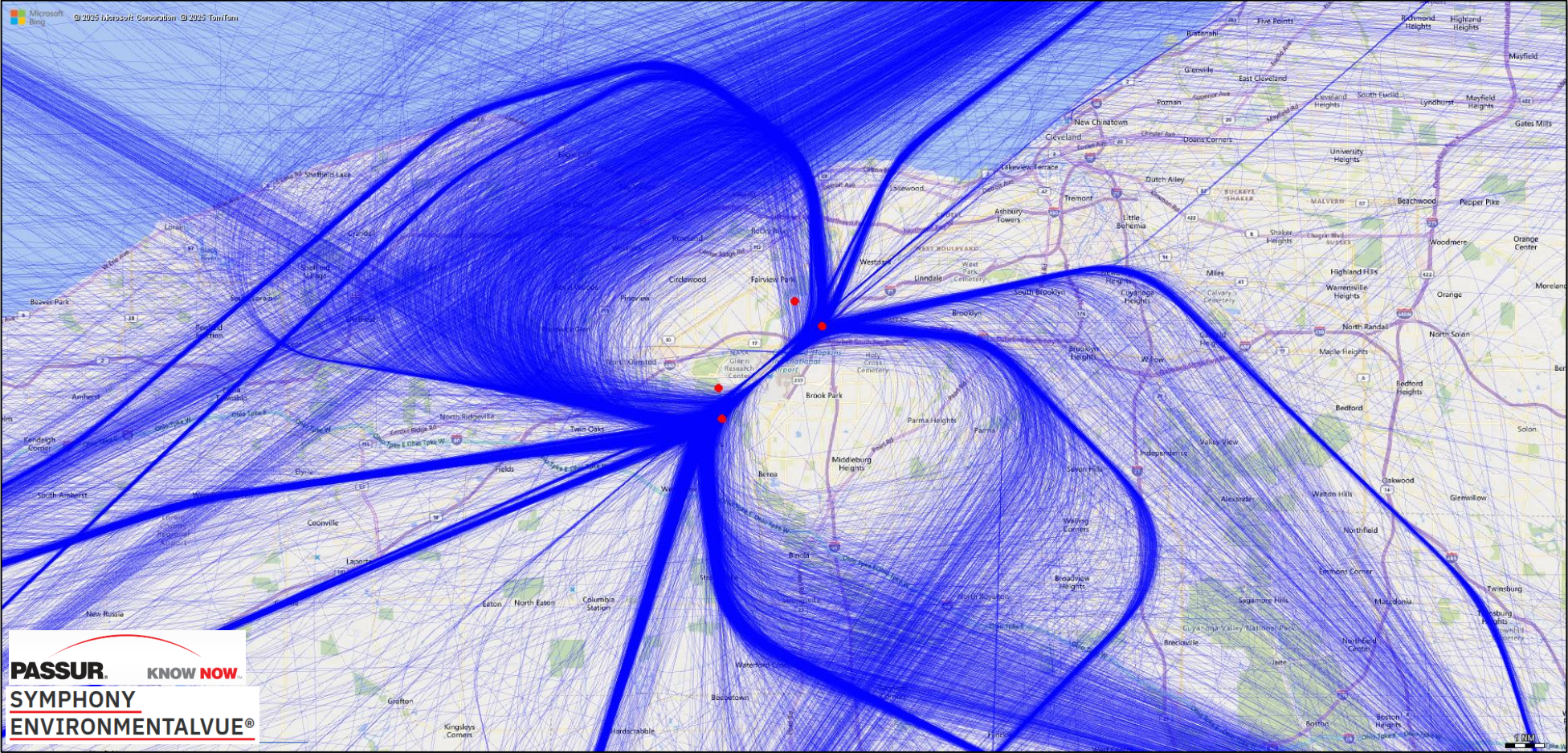
In general, CLE mostly operates in a 24 flow throughout the year. The reason for this almost always has to do with the prevailing wind direction. Aircraft operate most efficiently and safely when taking off and landing into the wind. Generally, winds move across the United States from west to east. Runways 24L and 24R are aligned southwest, thus making them the most used runway configuration for arrivals and departures.

**On average, Runways 24L & 24R are used 65% of the time. Runways 6L & 6R are used 35% of the time. Runway 10-28 (not included on this graph) is CLE's crosswind runway and is used in less than 1% of all operations.**



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

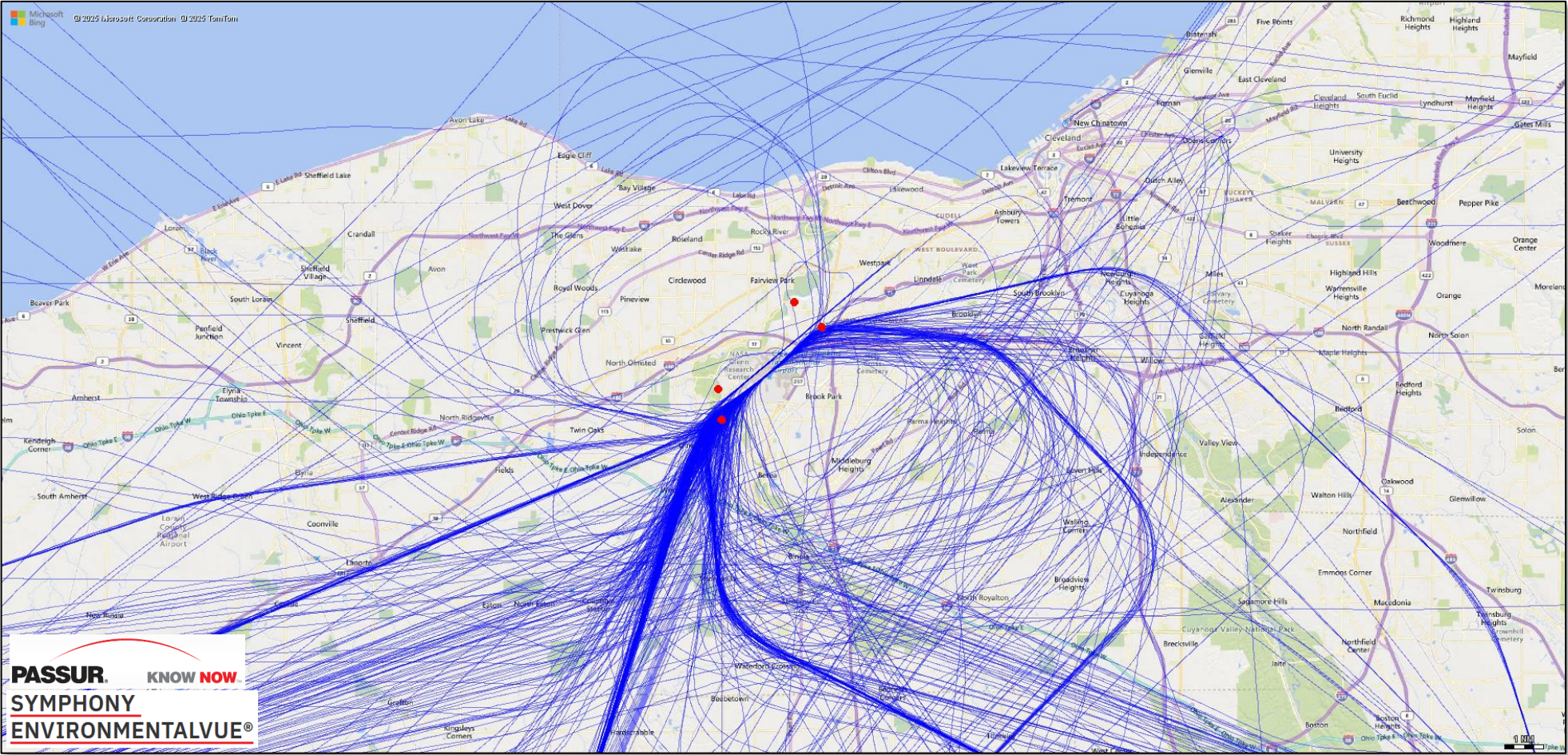
2024 4<sup>th</sup> Quarter Day-time departure – 12,695 flight tracks (jet propulsion only). Daytime reflects 06:00 am to 11:00 pm.



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

2024 4<sup>th</sup> Quarter nighttime departure flight tracks (all propulsion types). Night-time is from 11:00 pm to 06:00 am.

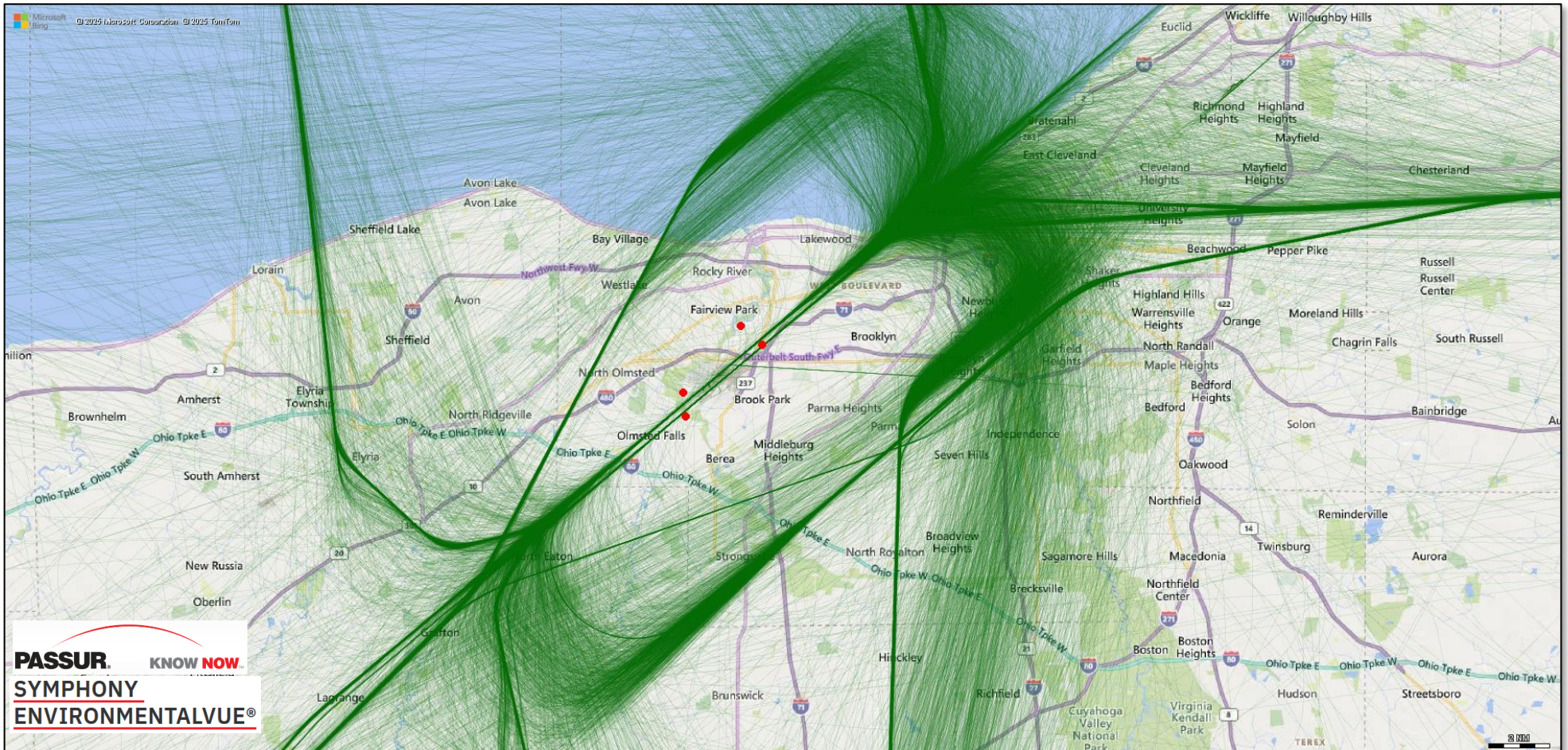
Of 520 departure flights, 194 (37%) were outside their respective late night departure corridors. These corridors represent the airspace through which aircraft depart. These corridors are not mandatory, but they are strongly recommended to pilots. As such, there are no penalties for not departing in these corridors. Weather, wind direction, and other factors play into whether the late-night corridors are followed.



Key: Flight Tracks ———  
Noise Monitoring Station ●

# Daytime and Nighttime Arrival Headings, 4<sup>th</sup> Quarter

Daytime and nighttime 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.



**Key:** Flight Tracks —————  
Noise Monitoring Station ●

Cleveland Hopkins International Airport  
[clevelandairport.com/contact](http://clevelandairport.com/contact)

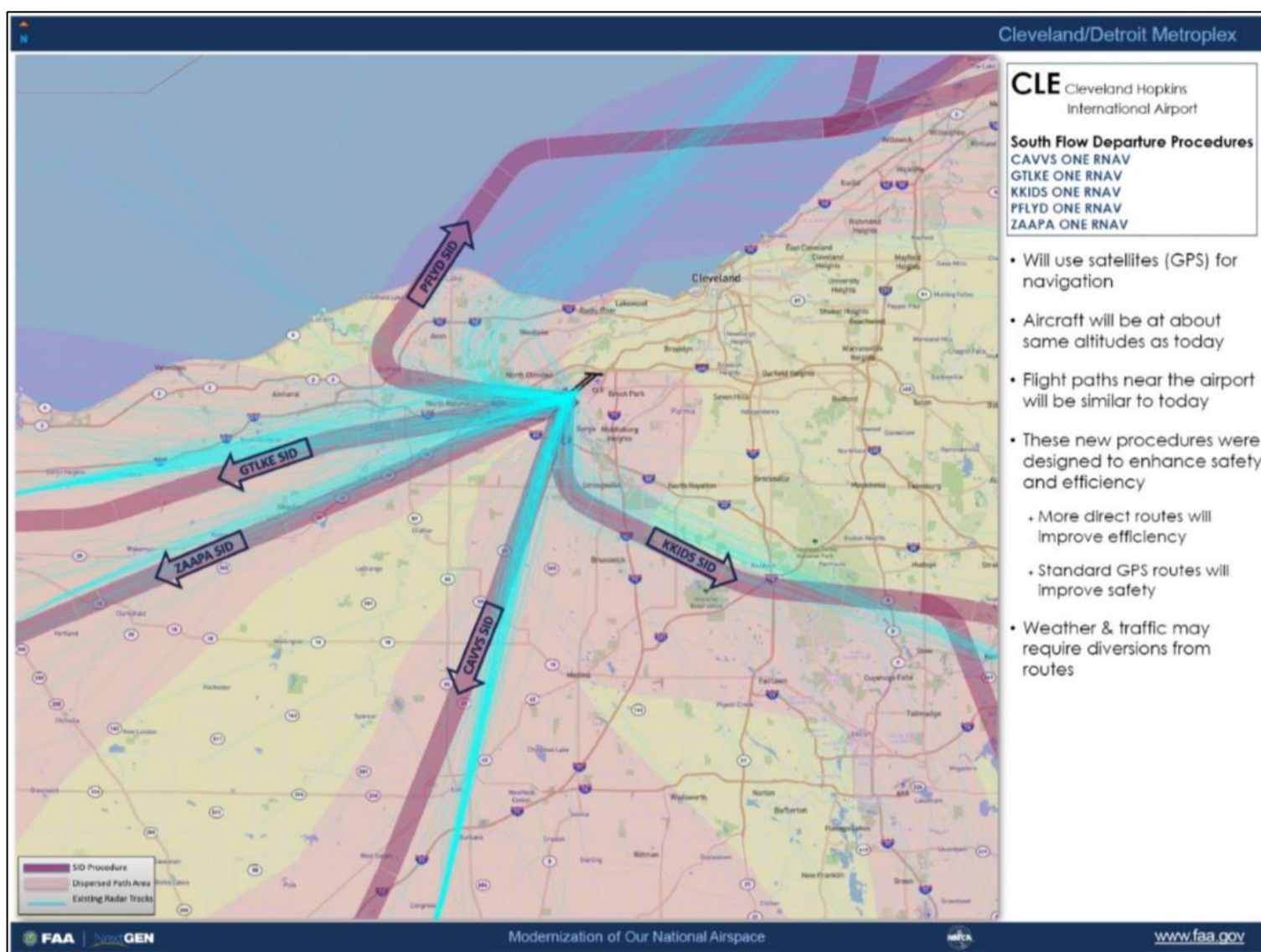
# Metroplex: South Flow (Departures)

## 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.



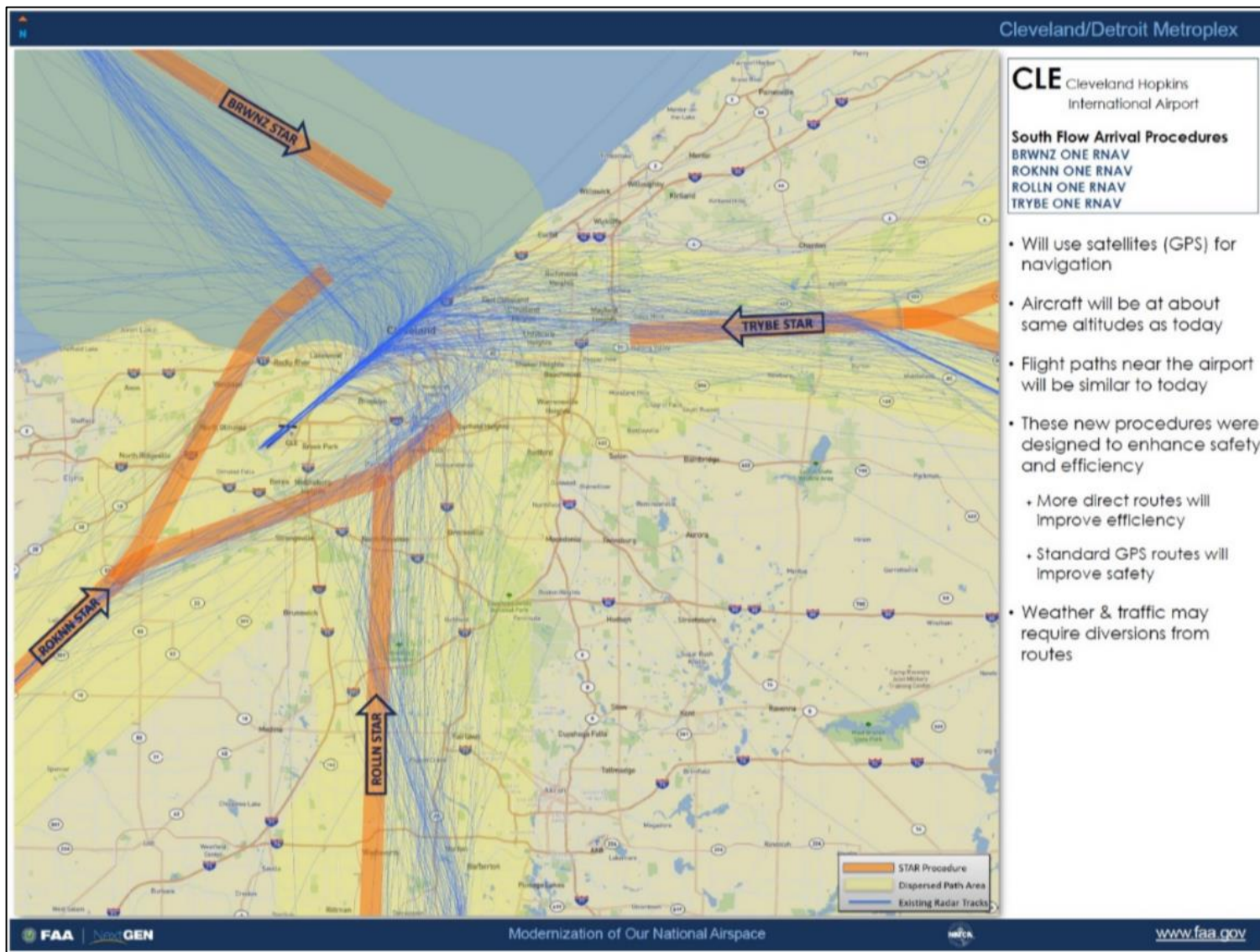
Note: Flight tracks are historic and do not represent the current quarter.

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

Cleveland Hopkins International Airport  
[clevelandairport.com/contact](http://clevelandairport.com/contact)

# Metroplex: South Flow (Arrivals)

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

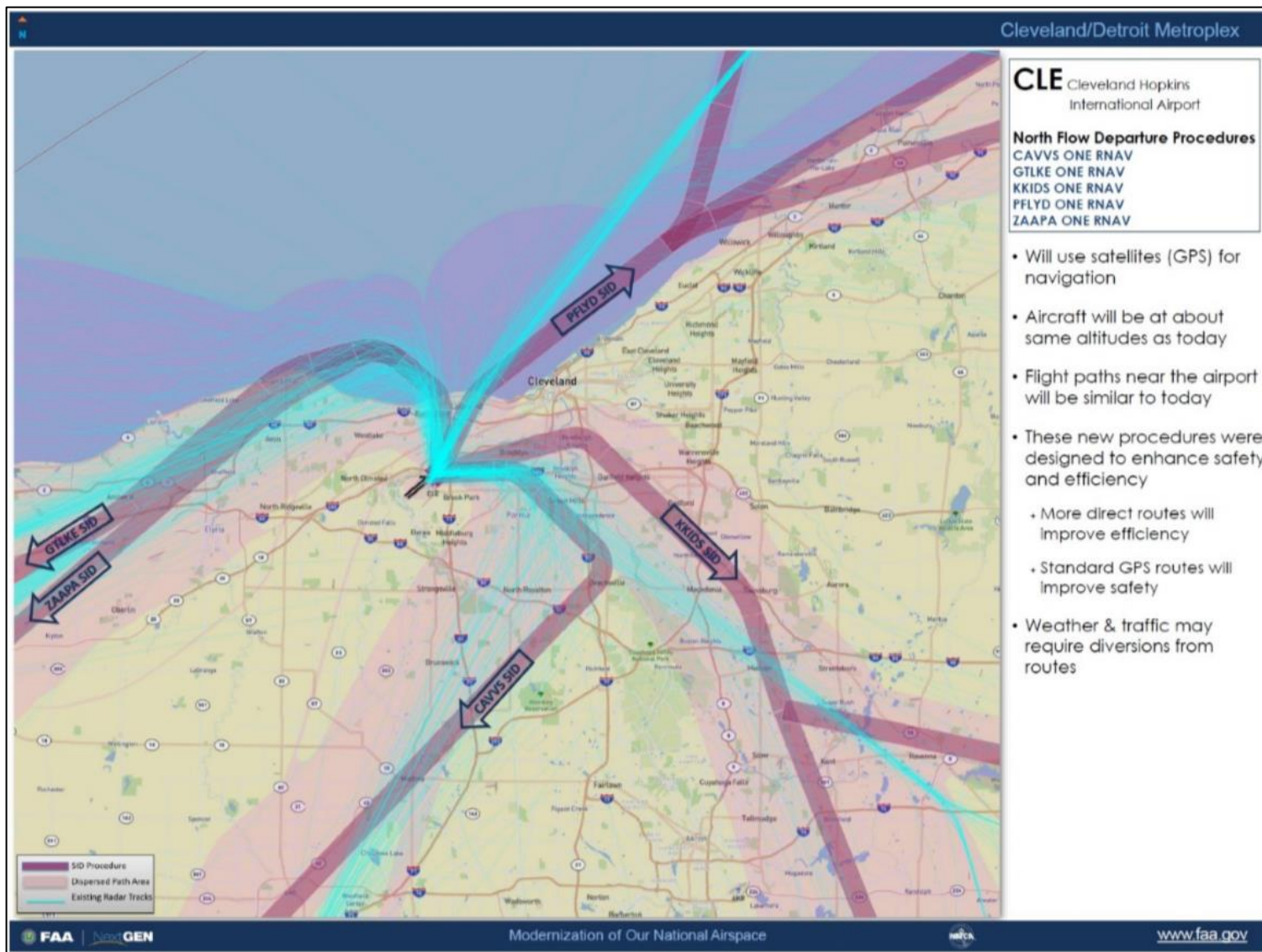


Note: Flight tracks are historic and do not represent the current quarter.

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

# Metroplex: North Flow (Departures)

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

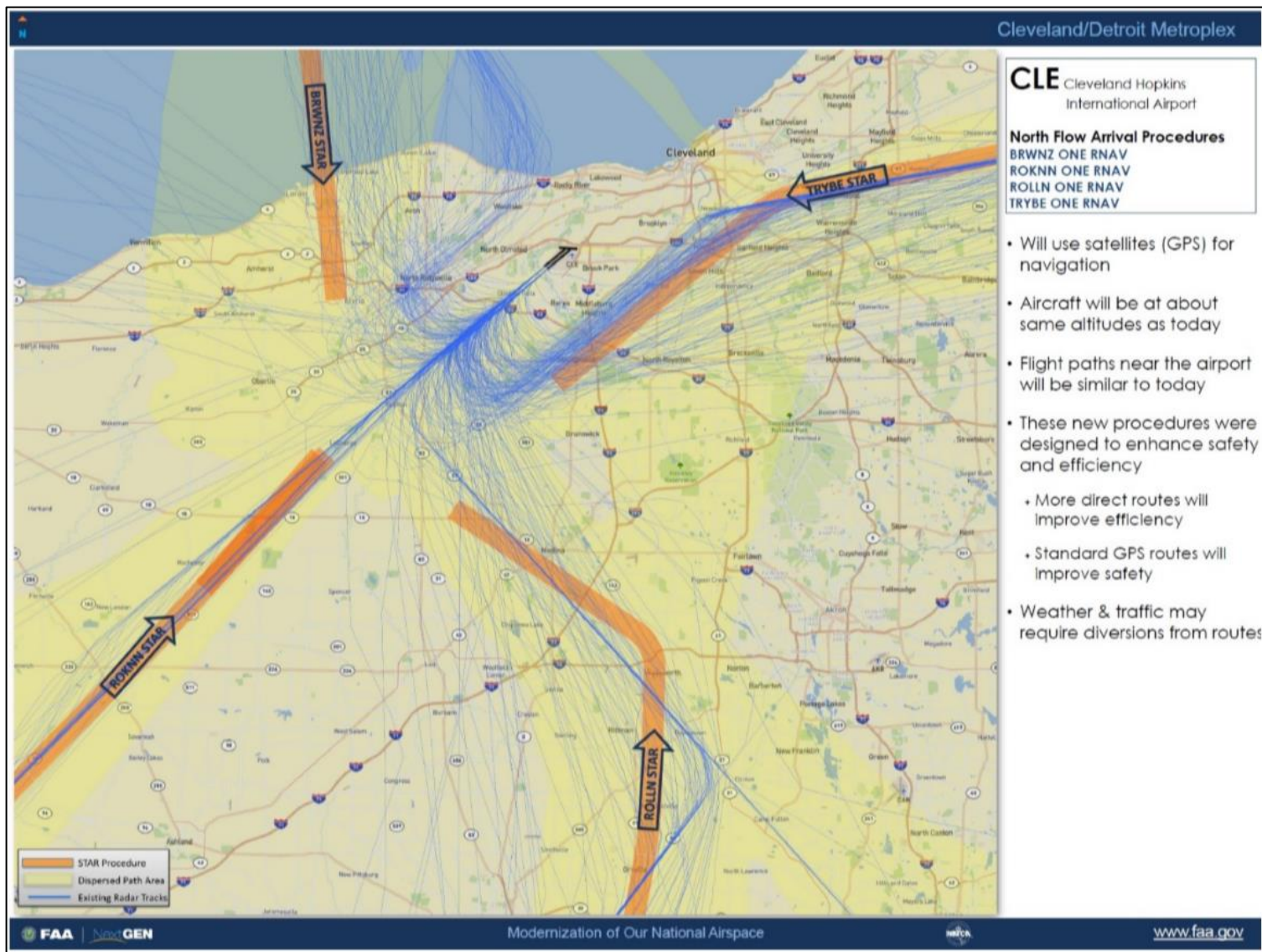


Note: Flight tracks are historic and do not represent the current quarter.

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.

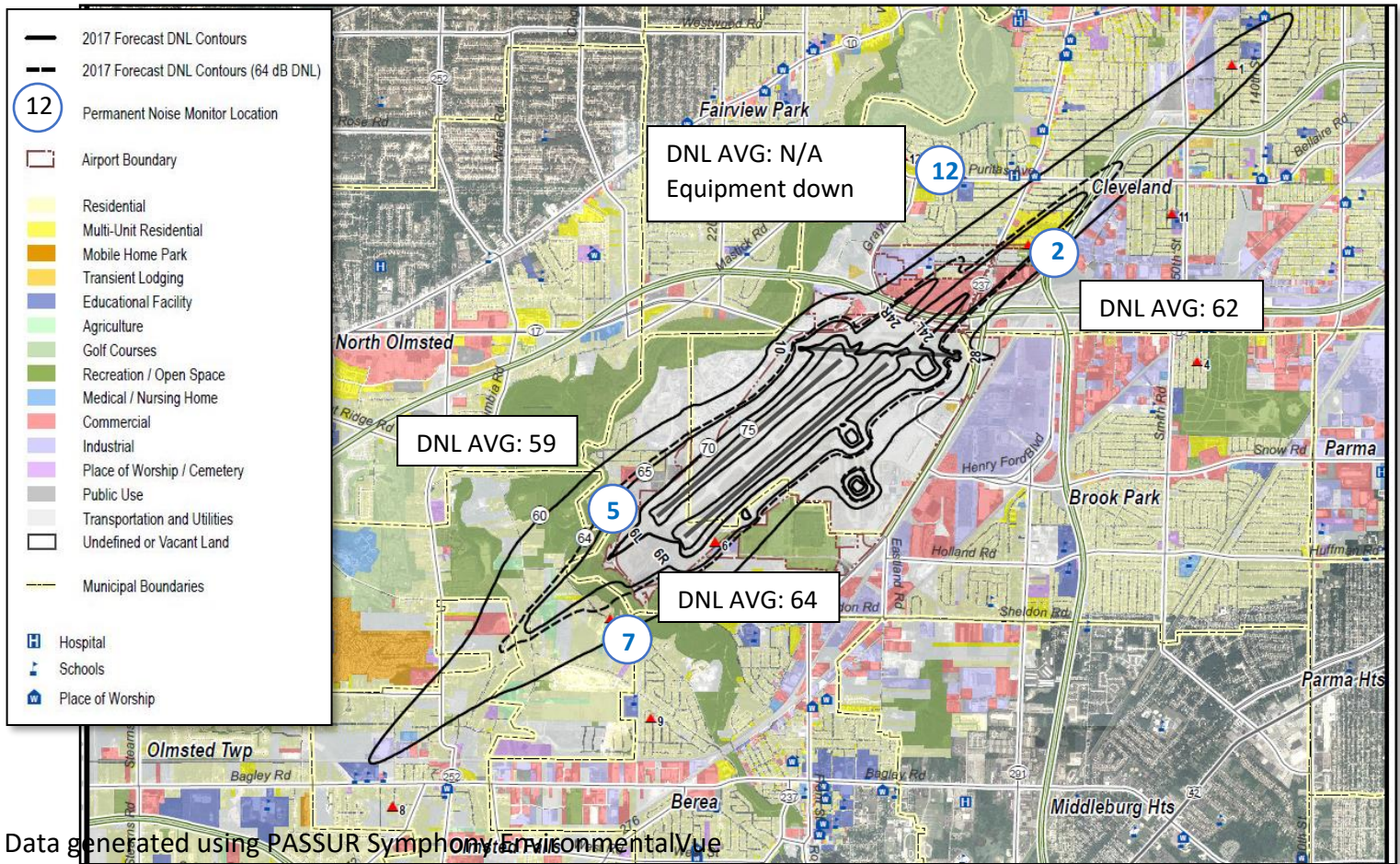
Source: [www.metroplexenvironmental.com](http://www.metroplexenvironmental.com)



# 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/)



**Interesting Fact:** The map above shows the variety of land uses around Cleveland Hopkins. CLE has grown with the communities around it and there are many residential neighborhoods in every direction from the airport. Due to the land-locked nature of the airport, it is impossible for aircraft to avoid operating over these residential areas.

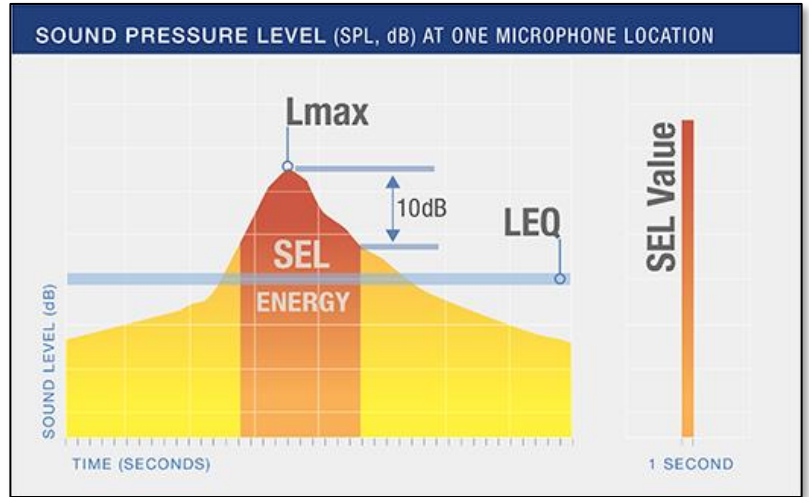
# Top Three Lmax at Each NMS

**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.

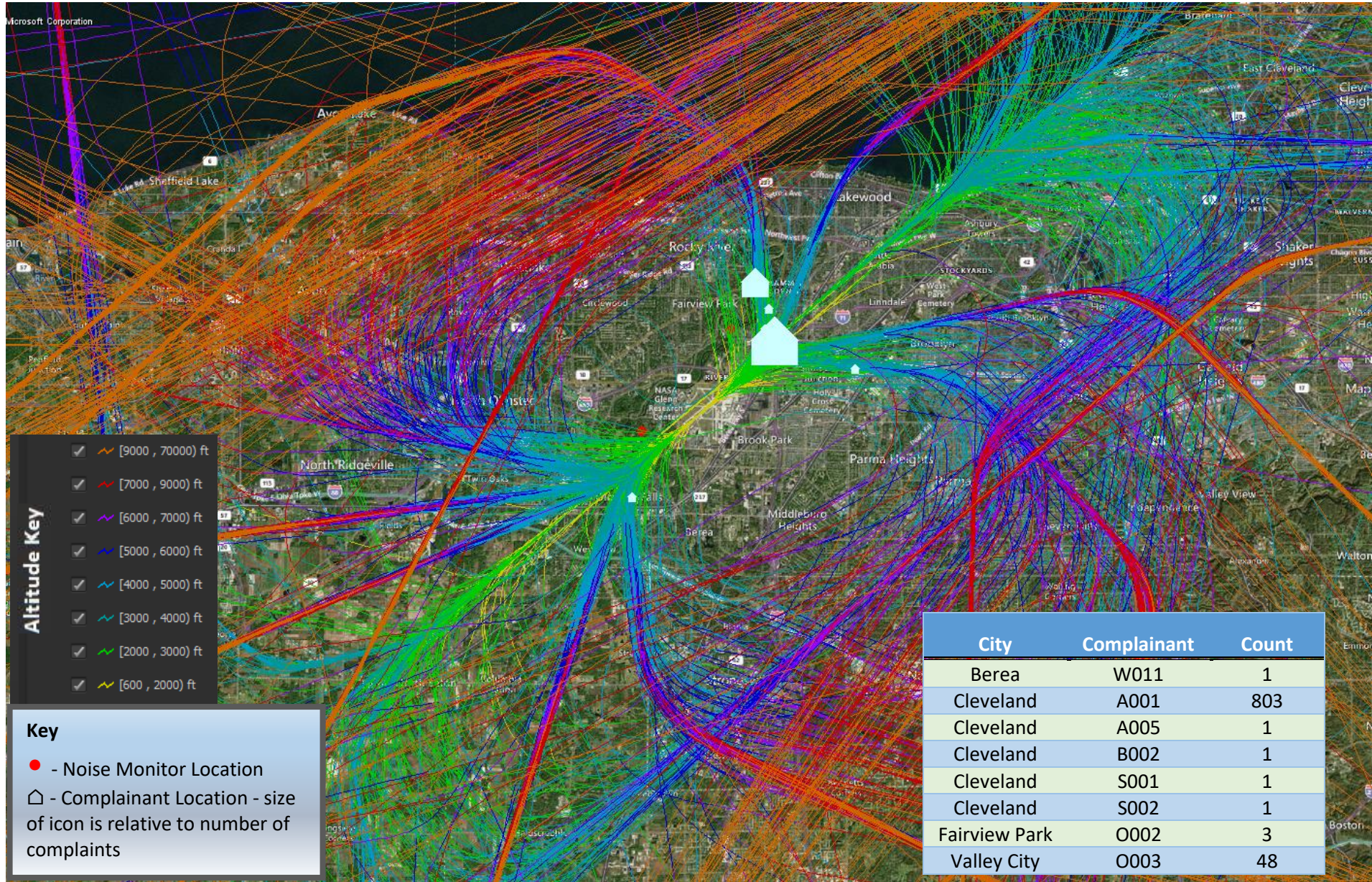


Source: [www.faa.gov](http://www.faa.gov)

Date and Time	NMS	Lmax (dB)	Sound Exposure Level (dB)	Duration (sec)	Operation	Aircraft
12/16/2024 2:23	NMS02	101.6	109	28	Arrival 24R	Boeing 727-200
10/29/2024 18:46	NMS02	93.4	98.55	18	Arrival 24L	Boeing 767
12/26/2024 6:20	NMS02	90.8	97.81	30	Departure 6R	Embraer E175
11/30/2024 9:43	NMS05	100.5	108.79	63	Departure 24L	Airbus A320
12/16/2024 21:41	NMS05	90.7	100.71	42	Departure 24R	MD-11
12/16/2024 4:33	NMS05	88.4	98.56	59	Departure 24L	Boeing 727-200
11/22/2024 12:11	NMS07	93.6	100.88	34	Departure 24L	Boeing 737-900
11/15/2024 20:18	NMS07	94.9	100.87	31	Departure 24L	Cessna Citation III
11/22/2024 13:00	NMS07	92.3	99.29	33	Departure 24L	Embraer E190
No Data	NMS12	NMS12 equipment was down for most of this quarter. The equipment was repaired January 30, 2025.				

Data generated using PASSUR Symphony EnvironmentalVue

# Noise Complainant Map – Q4 2024



# Do you have a question or 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.

