Noise Compatibility Report

2020 Quarter 1
January - March

Disclaimer

➢ The Noise Compatibility Plan (NCP) at Cleveland Hopkins international Airprt (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 1st Quarter Operations 2015 – 2020

- There were **30,872** operations in the 1st Qtr. 2020; this is 0.04% below the 1st Qtr. 2019.
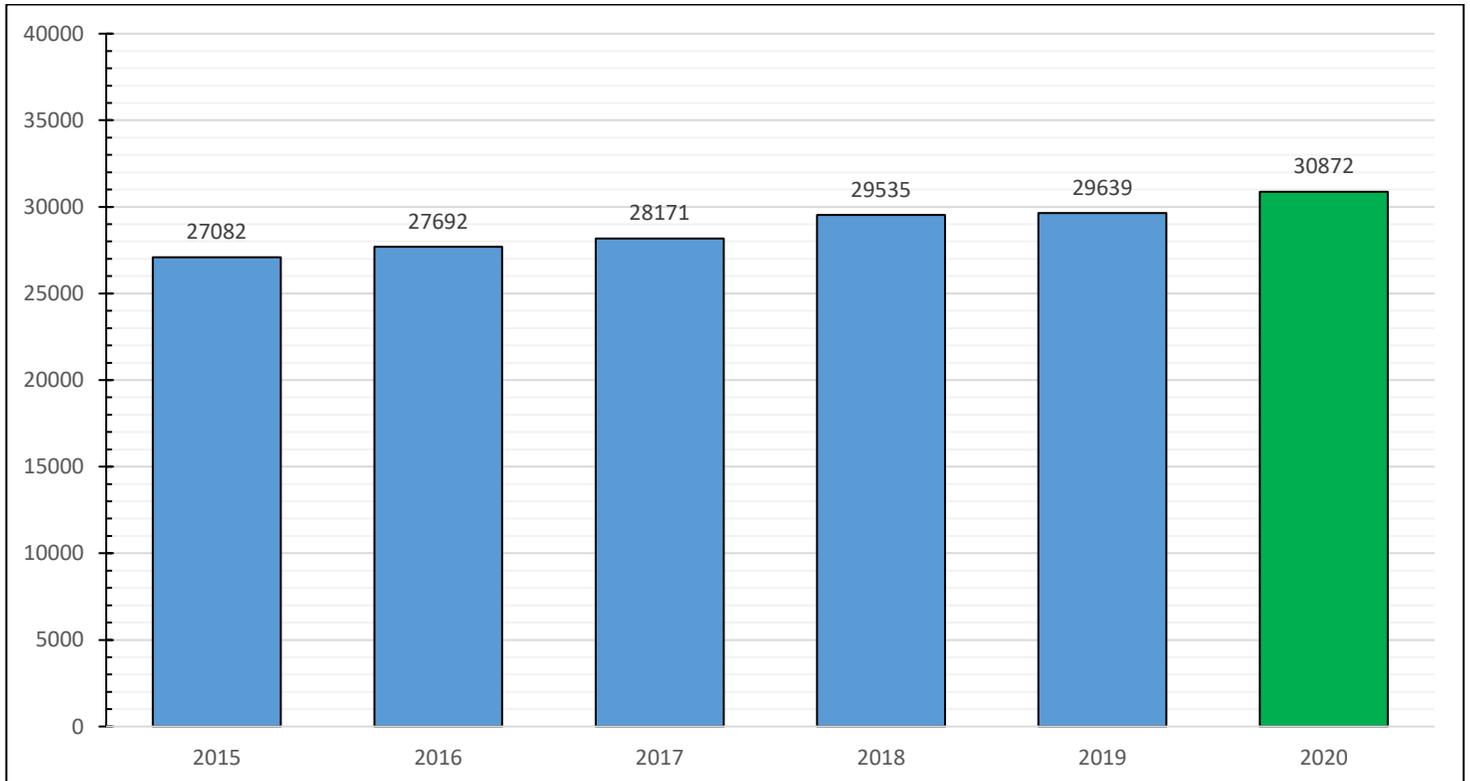
Fleet Mix

Cleveland Hopkins had **30,872** operations in Quarter 1 of 2020. Here are some of the notable aircraft that CLE welcomes and sends off on a regular basis.

Aircraft	Q1 Total
Boeing 737 Series	3279
Embraer ERJ 145	2945
Bombardier CRJ-900	2882
Airbus A320	2140
MD-80 Series	1023

Other notable aircraft operations include:

Aircraft	Q1 Total
Air Taxi	7440
General Aviation	1370
Military	31

Runway Use: 1st Quarter, 2020 Arrivals

26.33% 10   62.50% 24R   7.82 % 24L   7.82 % 28

26.33% 6L   2.91% 6R
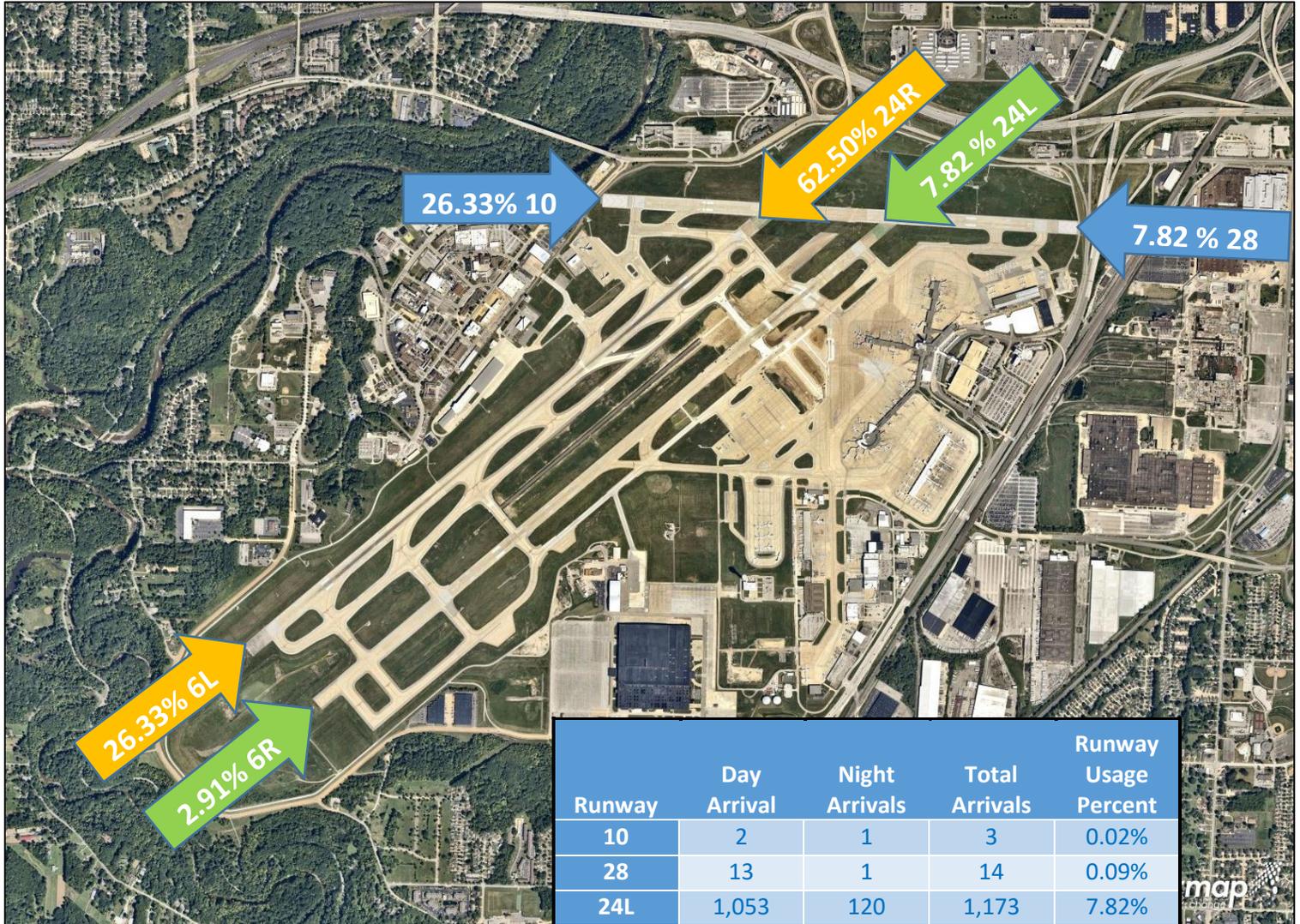
Runway	Day Arrival	Night Arrivals	Total Arrivals	Runway Usage Percent
10	2	1	3	0.02%
28	13	1	14	0.09%
24L	1,053	120	1,173	7.82%
24R	8,293	1,082	9,375	62.50%
6L	3,388	562	3,950	26.33%
6R	385	51	436	2.91%
UNK	45	4	49	0.33%
Totals	13179	1821	15000	100.00%

Runway Use: 1st Quarter, 2020 Departures

0.00 % 10

4.5 % 6L

24.26%

0.00% 28

7.25 % 24R
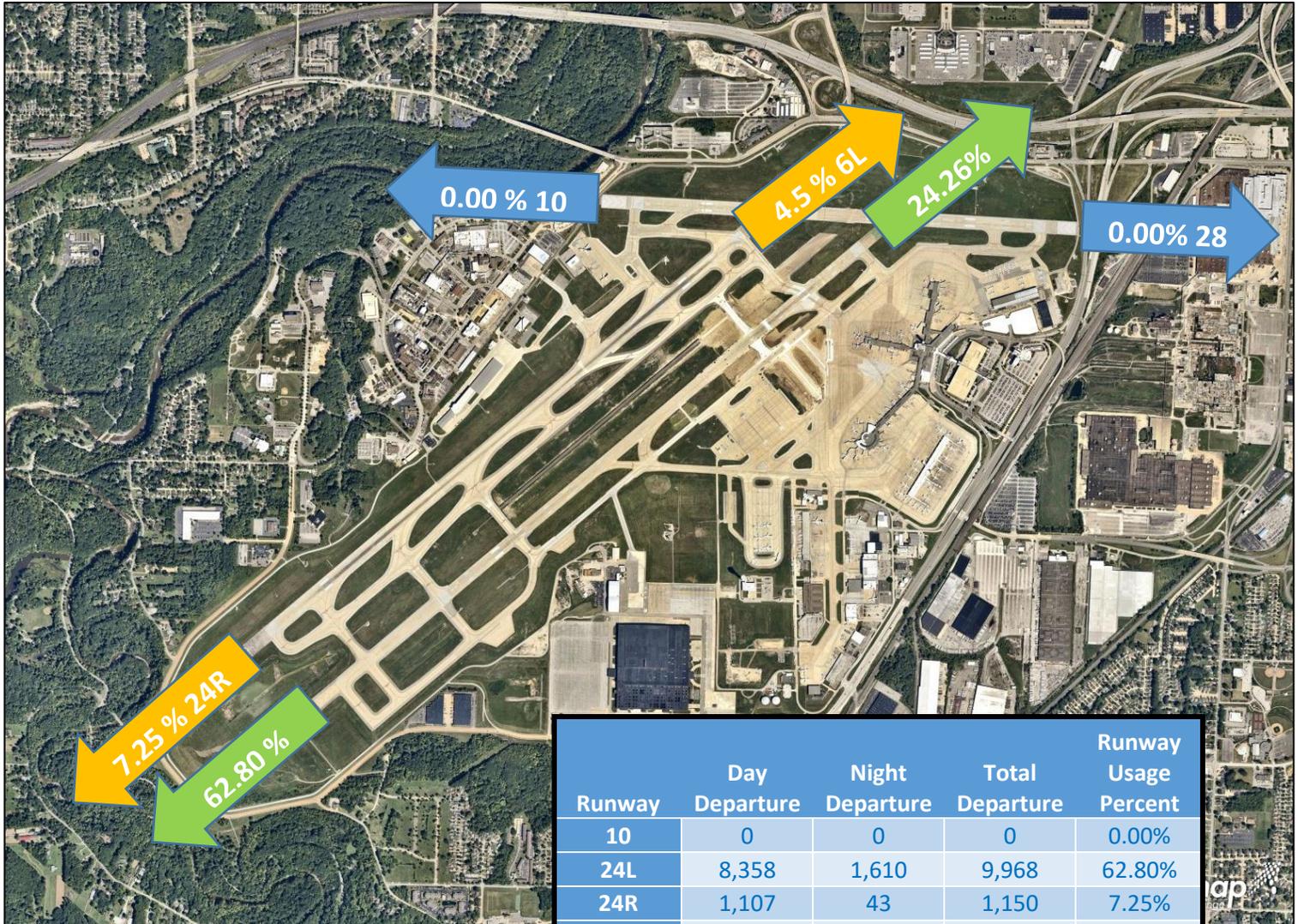
62.80 %

Runway	Day Departure	Night Departure	Total Departure	Runway Usage Percent
10	0	0	0	0.00%
24L	8,358	1,610	9,968	62.80%
24R	1,107	43	1,150	7.25%
28	0	0	0	0.00%
6L	668	46	714	4.50%
6R	3,255	627	3,882	24.46%
UNK	134	24	158	1.00%
Totals	13522	2350	15872	100.00%

Cleveland Hopkins International Airport
Noise Hotline: 216-898-5220
clevelandairport.com

Departure Headings, 1st Quarter: Day-time

2020 1st Quarter day-time departure flight tracks. Day-time reflects 07:00 am to 10:00 pm.

Of **11,030** departure flights only **630 (6%)** 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 🔴

Cleveland Hopkins International Airport
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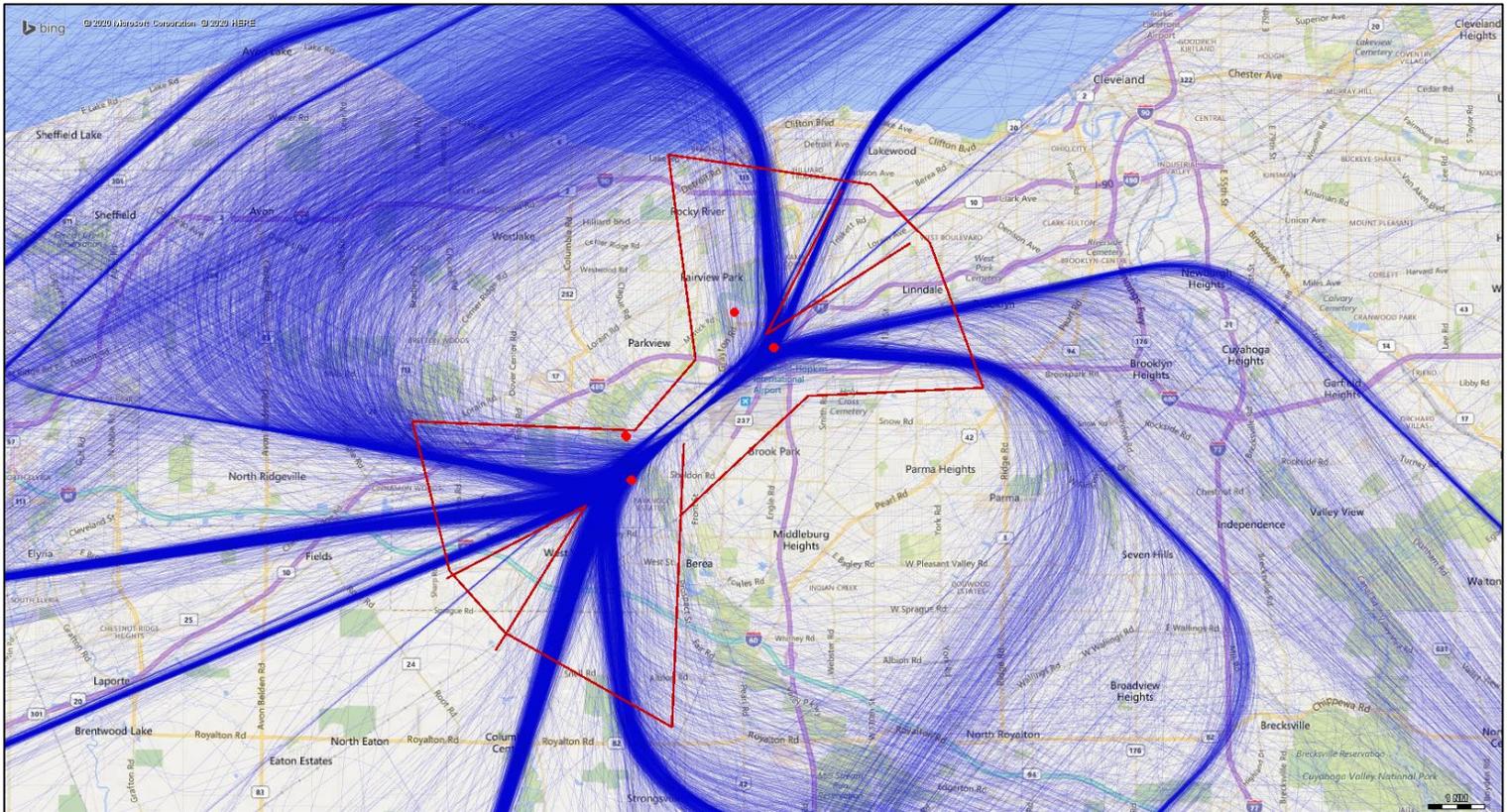
Departure Headings, 1ˢᵗ Quarter: Night-time

2020 1ˢᵗ Quarter night-time departure flight tracks. Night-time reflects 11:00 pm to 07:00 am.

Of **2073** departure flights only **120 (6%)** 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

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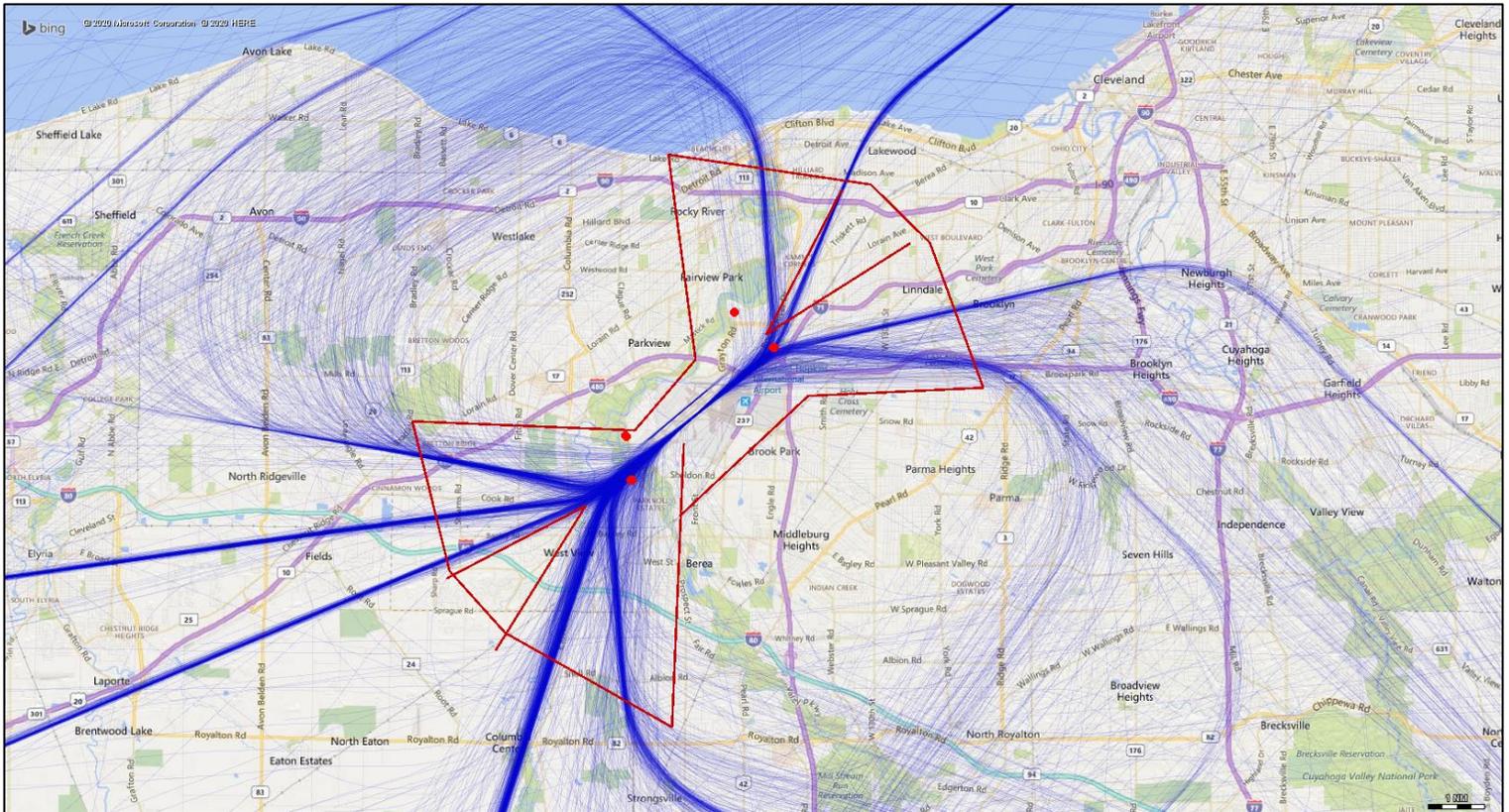
Arrival Headings, 1st Quarter

Day-time and night-time arrivals for all of Quarter 1 are shown here. 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.
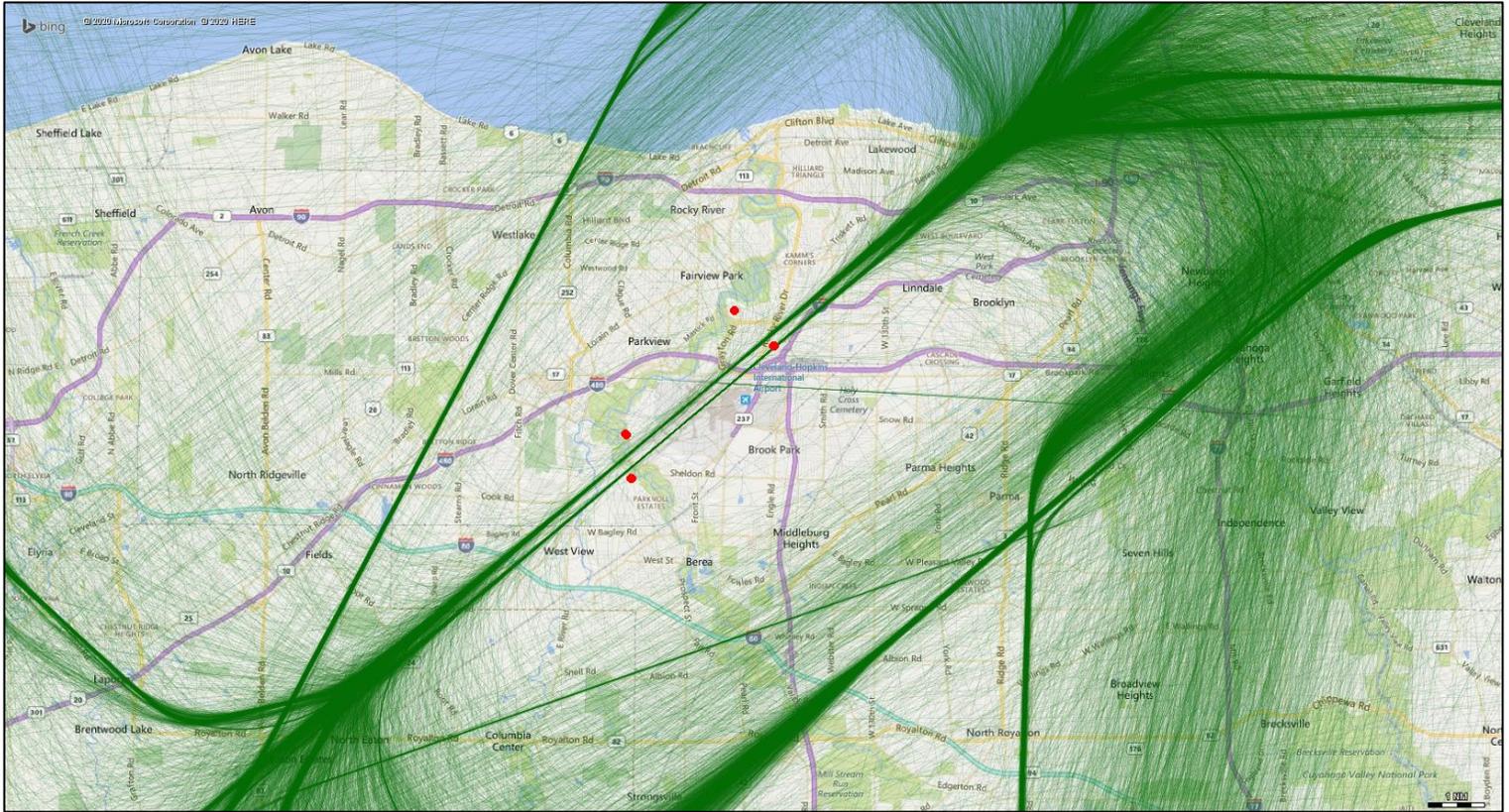
Flight Tracks ——————

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.
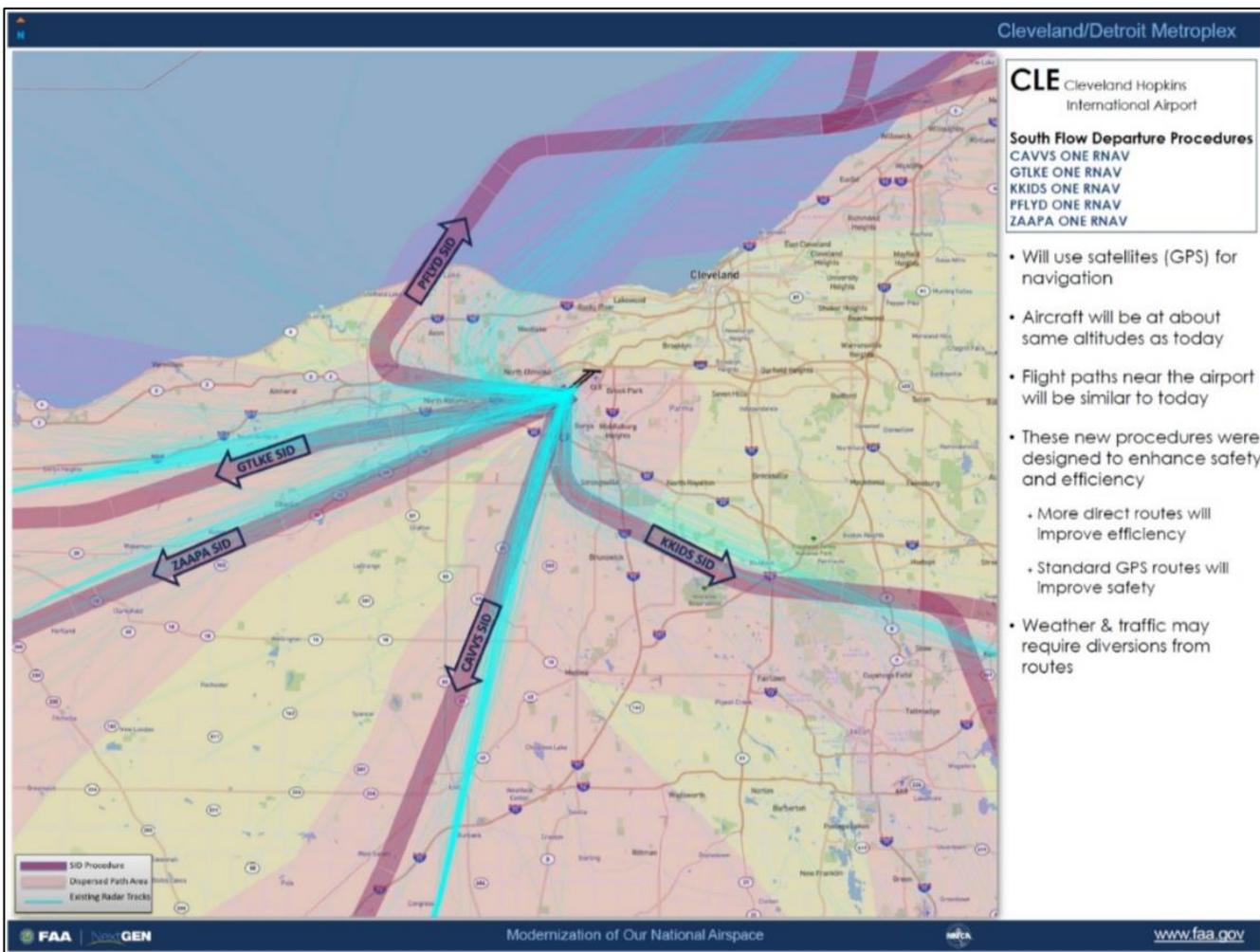
Note: Flight tracks are historic and do not represent the current quarter.
Source: www.metroplexenvironmental.com

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Metroplex: South Flow (Arrivals)

**South flow arrivals land on runway 24L and runway 24R.**
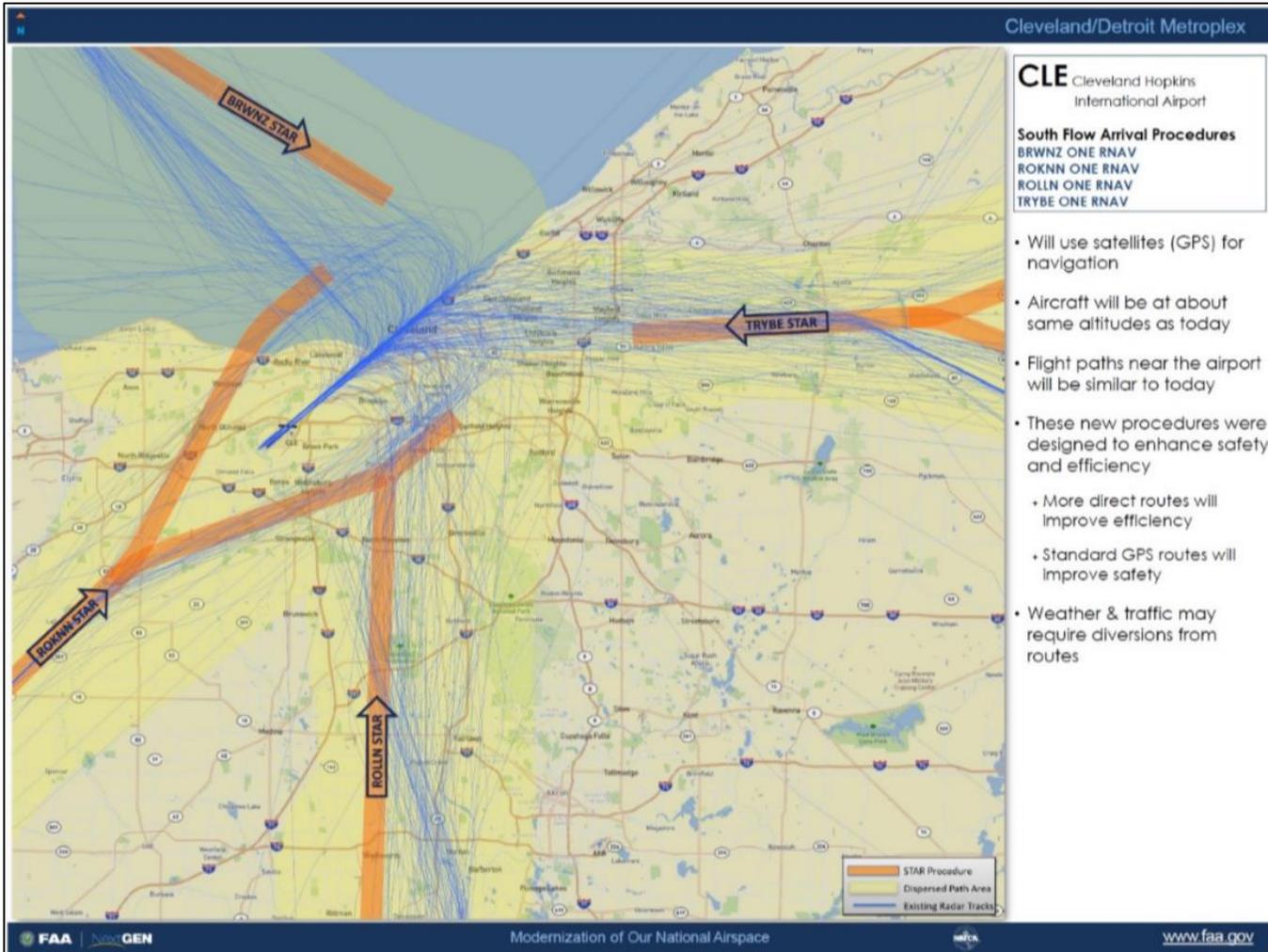
Note: Flight tracks are historic and do not represent the current quarter.

Source: www.metroplexenvironmental.com

Metroplex: North Flow (Departures)

**North flow departures take of from runway 6L and runway 6R.**
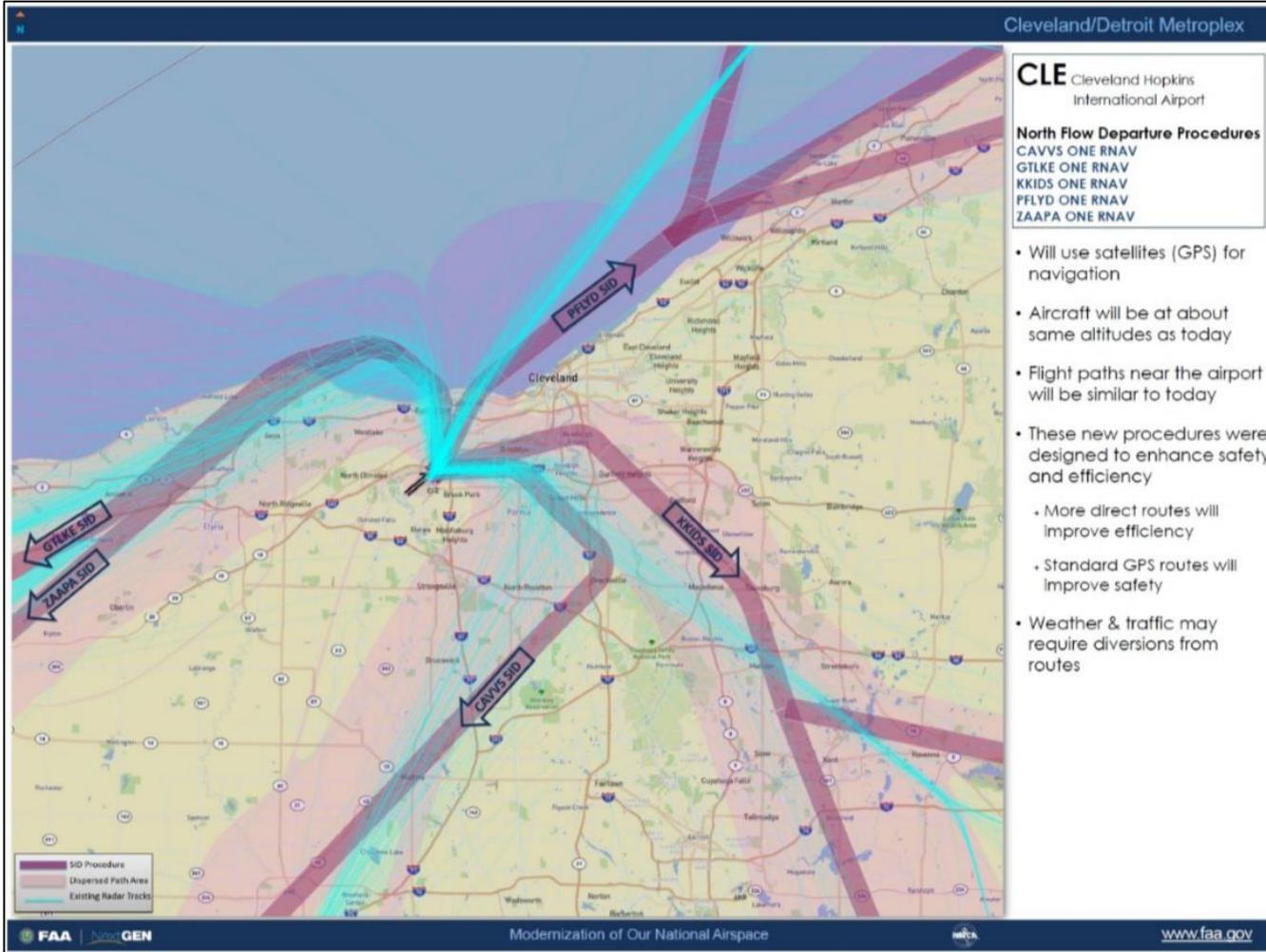
Note: Flight tracks are historic and do not represent the current quarter.

Source: www.metroplexenvironmental.com

Metroplex: North Flow (Arrivals)

North flow arrivals land on runway 6L and runway 6R.
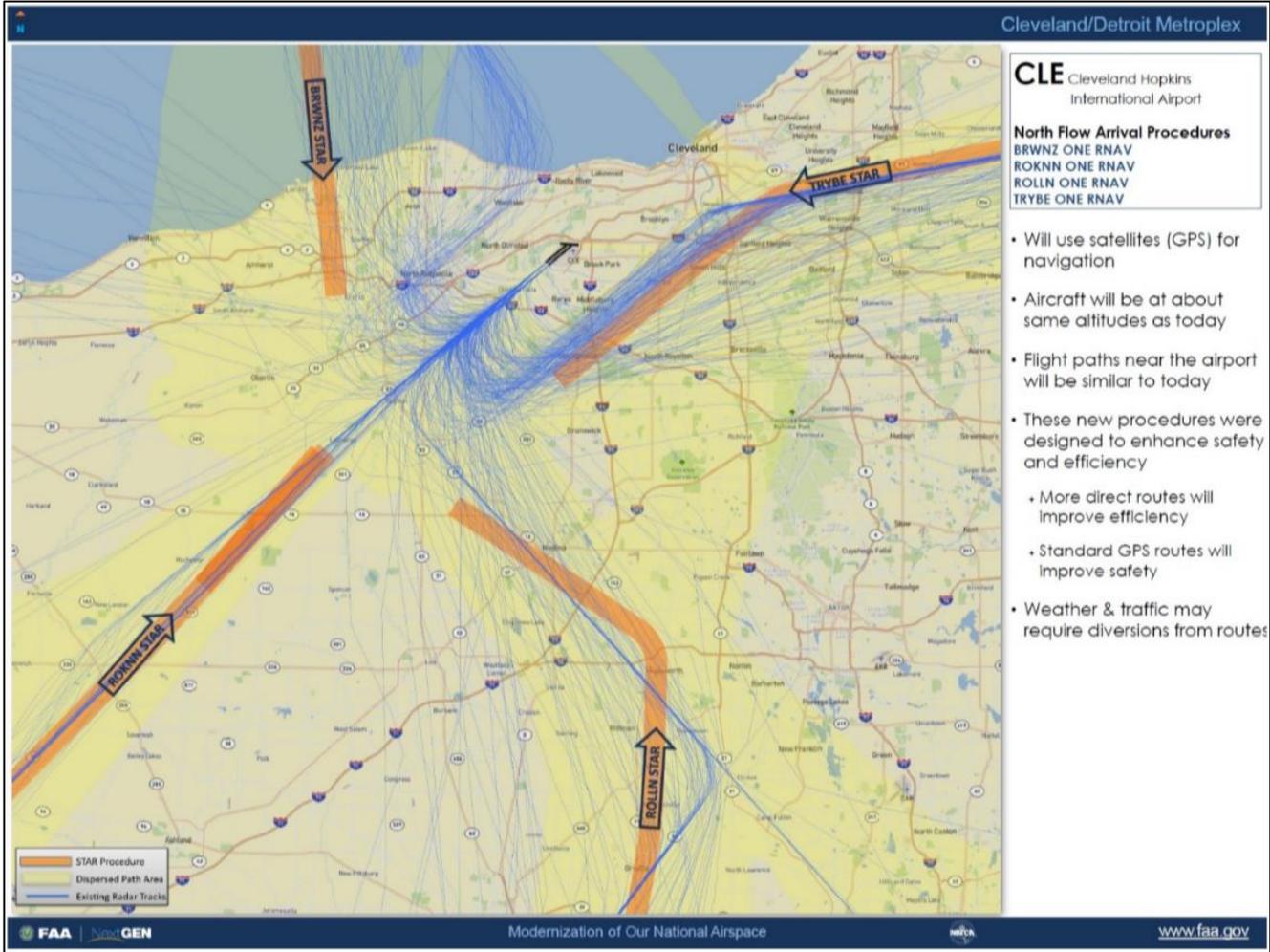
Note: Flight tracks are historic and do not represent the current quarter.

Source: www.metroplexenvironmental.com

Aircraft Noise: Average DNL by Noise Monitoring Site (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/


Legend:
- 2017 Forecast DNL Contours
- 2017 Forecast DNL Contours (64 dB DNL)
- 12 Permanent Noise Monitor Location
- Airport Boundary
- Residential
- Multi-Unit Residential
- Mobile Home Park
- Transient Lodging
- Educational Facility
- Agriculture
- Golf Courses
- Recreation / Open Space
- Medical / Nursing Home
- Commercial
- Industrial
- Place of Worship / Cemetery
- Public Use
- Transportation and Utilities
- Undefined or Vacant Land
- Municipal Boundaries
- H Hospital
- Schools
- Place of Worship

DNL AVG: 59.1 — 12
DNL AVG: 61.6 — 2
DNL AVG: 41.9 — 5
DNL AVG: 63.5 — 7

Top Three Lmaxs 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.
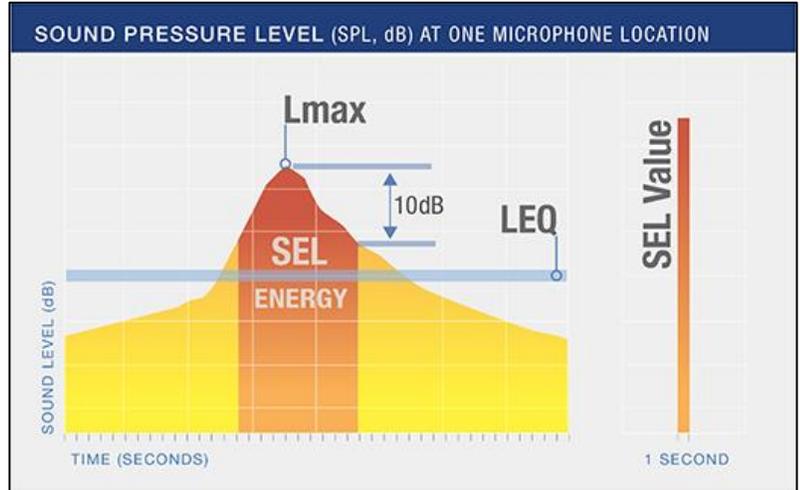

Source: www.faa.gov

Date and Time	NMS	Lmax (dB)	Sound Esposure Level (dB)	Duration (sec)	Operation	Aircraft
1/30/2020 17:24	NMS02	95.2	100.9	29	Departure 6R	MD-88
2/3/2020 19:12	NMS02	94.8	101.4	29	Departure 6R	MD-88
2/17/2020 12:54	NMS02	95.5	102	43	Departure 6R	MD-88
3/7/2020 12:02	NMS05	92.6	99.8	61	Departure 6R	MD-88
1/4/2020 12:02	NMS05	96.5	100.5	70	Arrival 6L	Hawker H25B
1/4/2020 12:00	NMS05	93.4	102.4	90	Arrival 6L	Bombardier CRJ700
3/5/2020 5:56	NMS07	95.8	102.3	40	Departure 24L	MD-88
3/26/2020 17:25	NMS07	99.2	105.4	30	Departure 24L	Bombardier CRJ200
3/13/2020 5:48	NMS07	96.4	101.9	32	Departure 24L	MD-88
1/13/2020 9:48	NMS12	86.9	91.3	41	Arrival 24R	Gulfstream 5
3/16/2020 9:42	NMS12	87.7	94.7	75	Arrival 24R	Embraer ERJ 145
1/20/2020 14:48	NMS12	88.6	93.1	18	Departure 6R	Airbus A320

1st Quarter Complaint Map

Complaints from January 2020
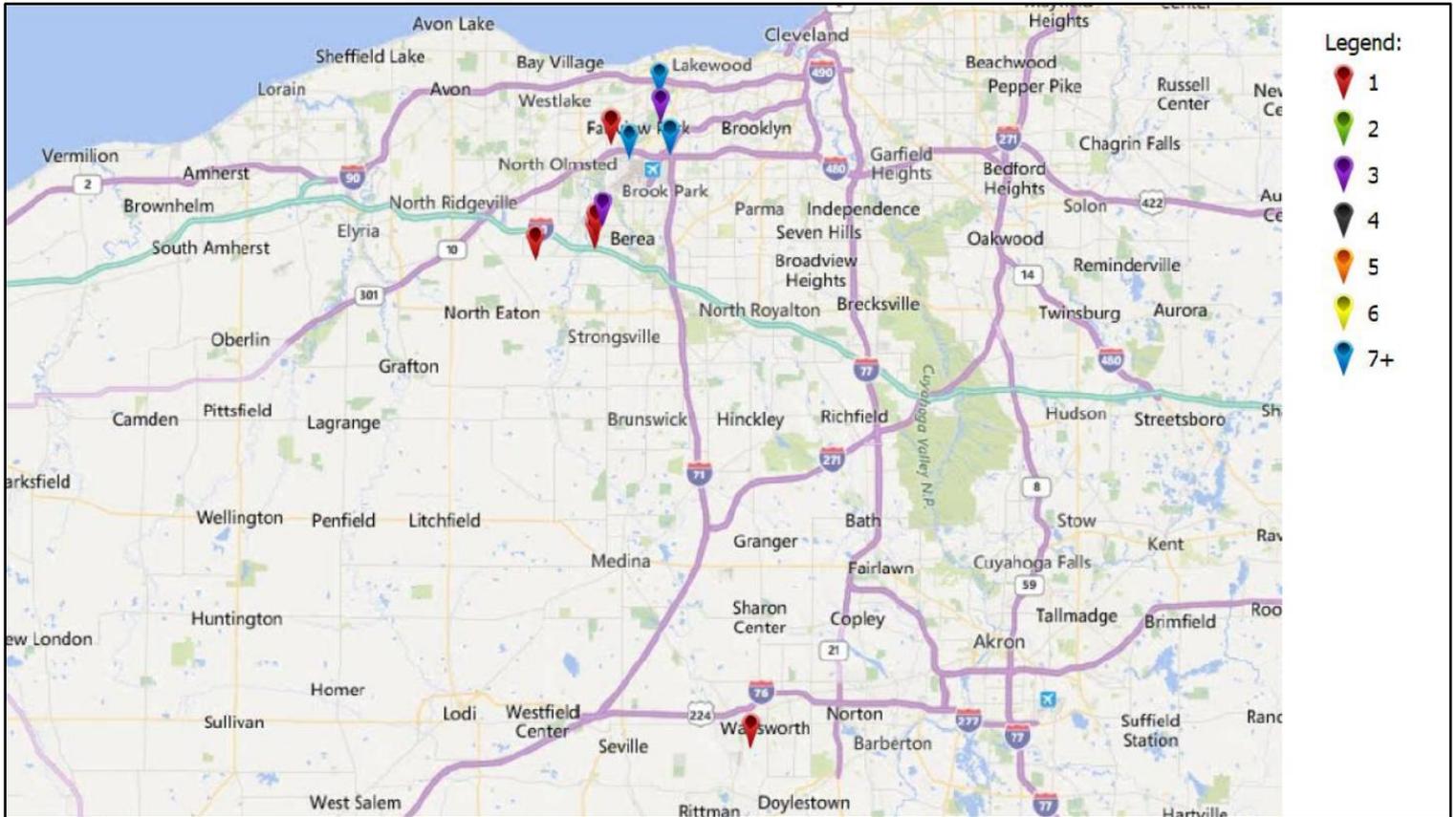
City	Number of Complainants	Number of Complaints
Berea	2	5
Cleveland	2	381
Fairview Park	5	276
Olmsted Falls	2	3
Olmsted Twp	1	3
Rocky River	1	29
Unknown	1	1
Wadsworth	1	1
Totals:	15	699

1ˢᵗ Quarter Complaint Map

Complaints from February 2020
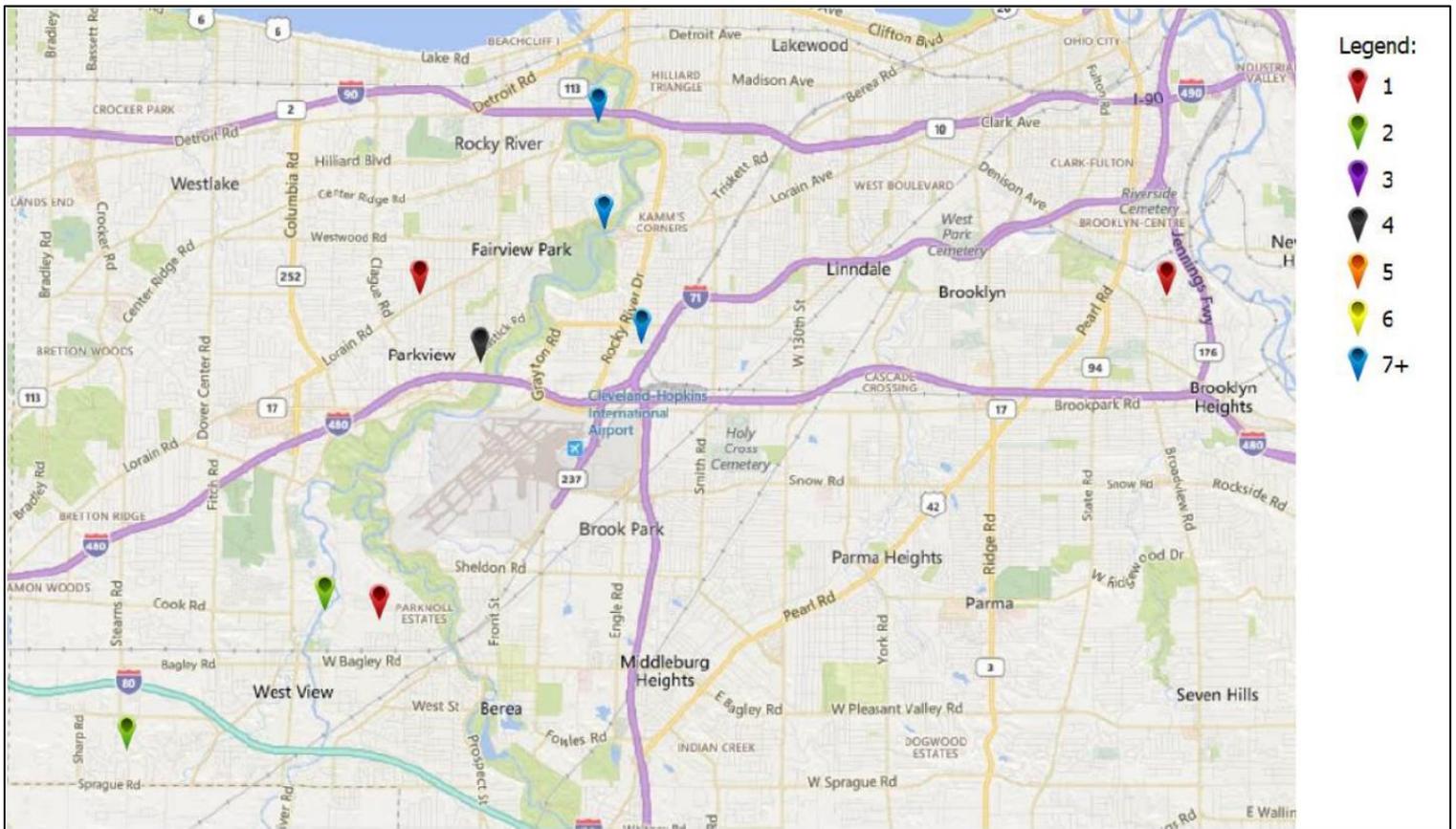
City	Number of Complainants	Number of Complaints
Berea	1	2
Brook Park	1	1
Cleveland	2	446
Fairview Park	4	475
Olmsted Falls	1	2
Olmsted Twp	1	2
Parma	1	1
Rocky River	1	35
Totals:	12	964

1st Quarter Complaint Map

Complaints from March 2020

Legend:
- 1 (red)
- 2 (green)
- 3 (purple)
- 4 (black)
- 5 (orange)
- 6 (yellow)
- 7+ (blue)
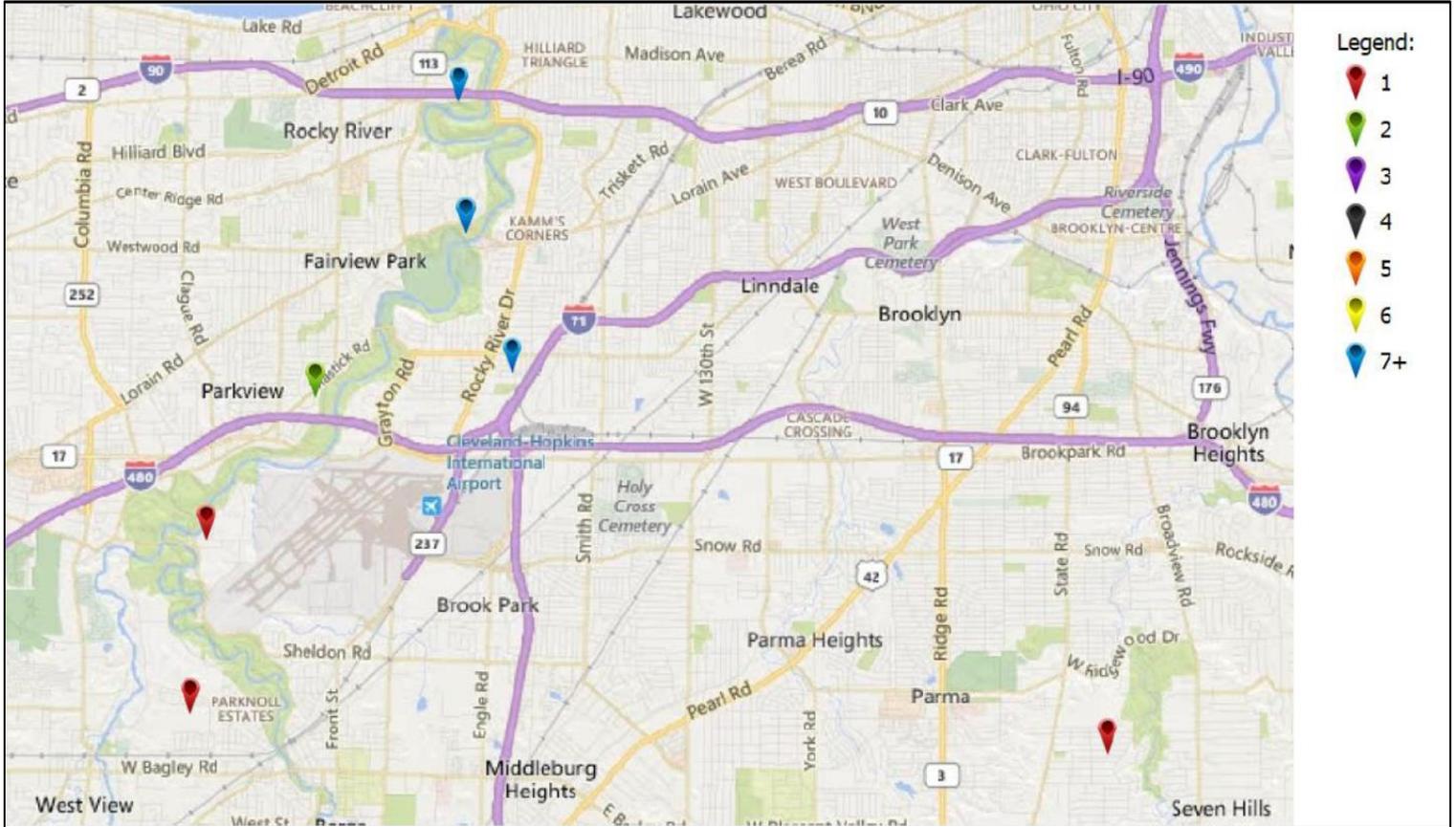
City	Number of Complainants	Number of Complaints
Berea	1	1
Brook Park	2	2
Cleveland	2	192
Fairview Park	4	268
Parma	1	1
Rocky River	1	33
Totals:	11	497

Do you have a noise complaint?

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. 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.