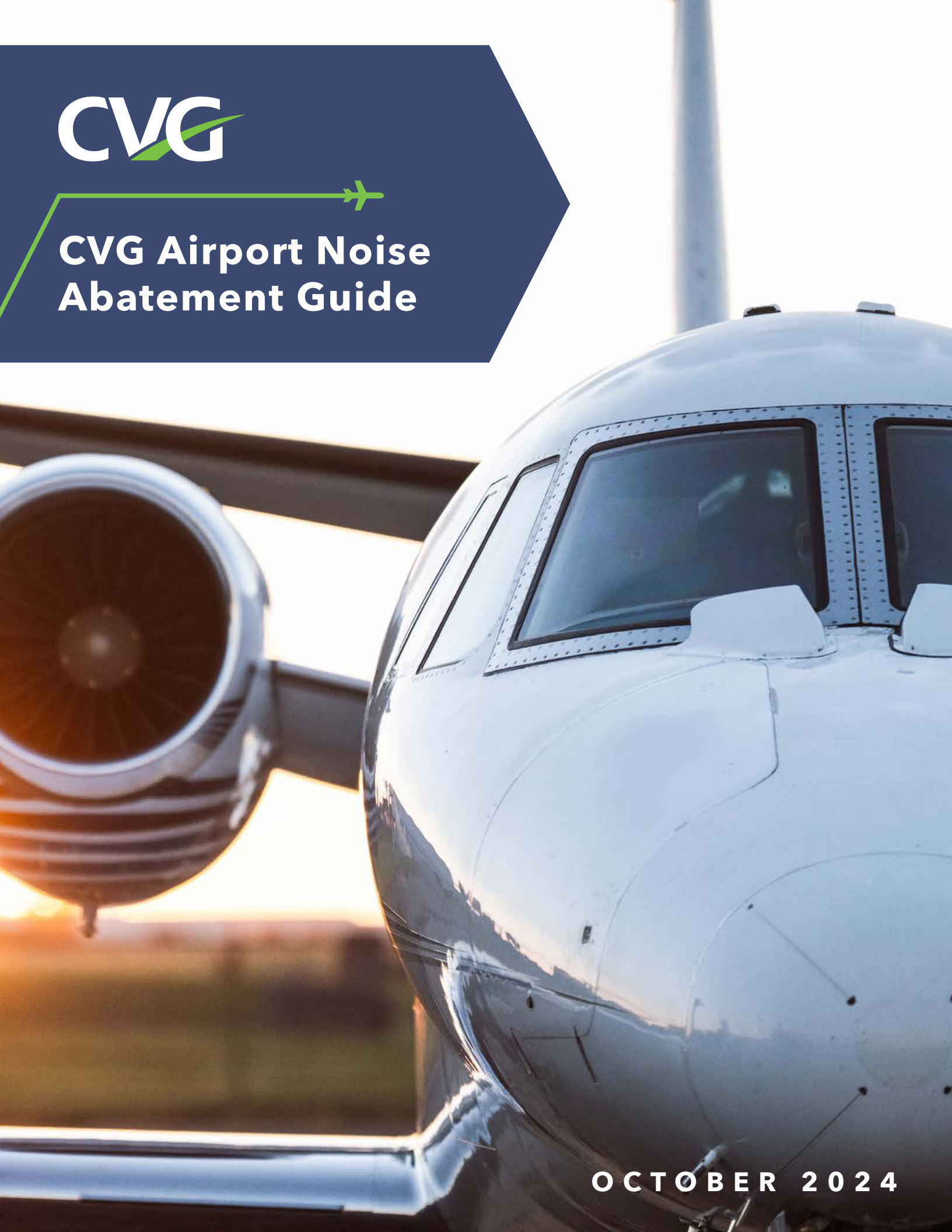
CVG Airport Noise Abatement Guide



OCTOBER 2024

CVG Airport Noise Abatement Guide

The CVG Airport Authority, owner/operator of the Cincinnati/Northern Kentucky International Airport (CVG) proudly serves the Cincinnati region throughout Ohio, Kentucky, Indiana, and beyond. CVG remains committed to driving economic growth and maintaining transparency within the day-to-day procedures that could impact the community.

In collaboration with the Federal Aviation Administration, the Air Traffic Control Tower, and our surrounding community, CVG's commitment to noise abatement is guided by the following priorities:

- Majority of nighttime activity is directed over less populated areas
- Industry-leading flight tracking system monitors compliance
- Designated departure corridors are designed to keep larger jets away from residential areas

The CVG Airport Authority works with the community, particularly noise-sensitive areas, to promote understanding and information-sharing on efforts that have been and are undertaken to minimize the impact of aircraft noise on the community. The CVG Airport Authority is proud to maintain its long-standing commitment to address local aviation noise concerns.

Last updated October 2024

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Roles & Responsibilities

Air Traffic Control

The Federal Aviation Administration Air Traffic Control Tower and approach control are responsible for the safe movement of aircraft both in the air and on the ground. Runway assignments, headings, altitudes and other directions to pilots are assigned only by air traffic controllers. Safety is the number one consideration of the Federal Aviation Administration. The safe operation of aircraft in the national airspace system will always supersede noise abatement procedures.

CVG Airport Management

CVG Airport staff manage the airport's noise abatement programs. The role of the noise abatement staff is to record and investigate noise complaints, monitor flight procedures, and act as an informational resource. CVG provides community outreach, engages with local leaders, and builds awareness and understanding about the airport's role in the community and the impact of aviation-related business on the local economy.

Residents and Prospective Residents

The residents in areas surrounding the airport should seek to understand aircraft operations in the community and be aware of what procedures can and cannot be taken to minimize the effect of aircraft noise. Individual and community responses to aircraft noise differ substantially and, for some individuals, a reduced level of noise may not eliminate the annoyance or irritation. Prospective residents should investigate the location of the airport to determine the potential effects of aircraft noise on their individual quality of life and make decisions accordingly.

History of the Noise Abatement Program

Land Acquisition and Sound Insulation

Over the years, CVG Airport has made substantial investments in the community to mitigate the impact of aviation noise. Hundreds of eligible residential homes have participated in sound insulation or purchase programs. In addition, many schools surrounding CVG have been sound insulated.

All CVG noise mitigation programs were completed in 2008. CVG experienced a significant decrease in operations between 2006 and 2012 and although there has been some increase in aircraft activity in recent years, CVG's current noise exposure contours do not reflect an increase in size over residential communities since the last approved program. The aircraft industry has made significant advancements over the years in developing quieter aircraft engines. The passenger and cargo fleet of today are much quieter than in the 1990s and 2000s. The FAA uses 65 DNL (Day-Night Level) as the threshold for significant noise exposure, below which residential land uses are compatible.

Noise Compatibility Program; FAR Part 150 Study

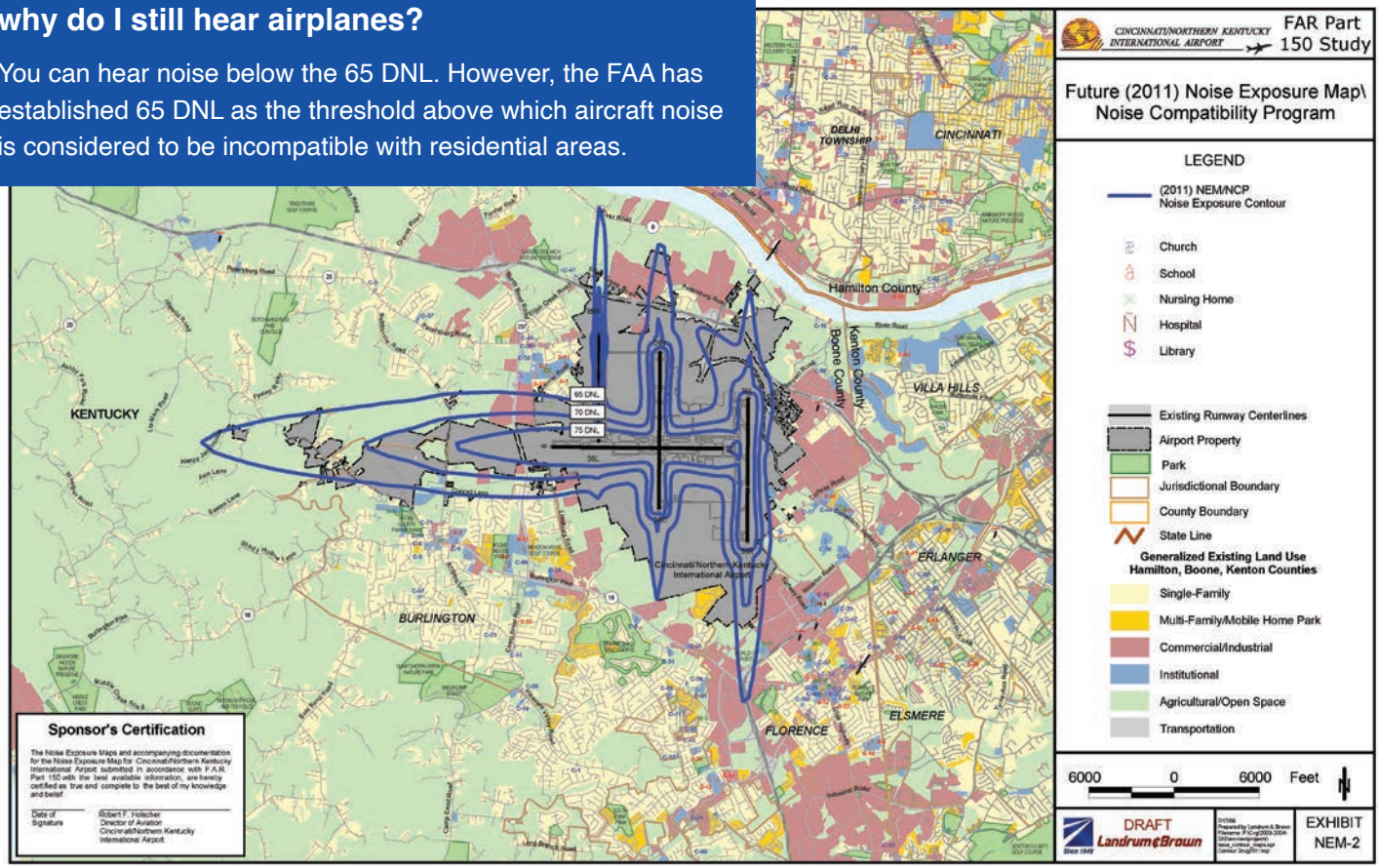
The last federally funded noise mitigation program at CVG concluded in 2008 which was approved by the FAA from the1999 Part 150 Noise Compatibility Study. The map shown below details the most recent federally approved residential mitigation programs located within the 65 DNL noise contours.

Day-Night Average Sound Level

DNL is a noise metric that represents the cumulative environmental exposure to sound over a 24-hour period. This metric assesses the impact from single aircraft noise events, as well as the total number of operations at an airport. This accounts for intensity, duration, frequency, and time through the course of an entire day. DNL calculations include a 10-fold weighting for nighttime flights, which accounts for the fact that people are more sensitive to noise at night.

Since I live outside of the DNL noise contour, why do I still hear airplanes?

You can hear noise below the 65 DNL. However, the FAA has established 65 DNL as the threshold above which aircraft noise is considered to be incompatible with residential areas.



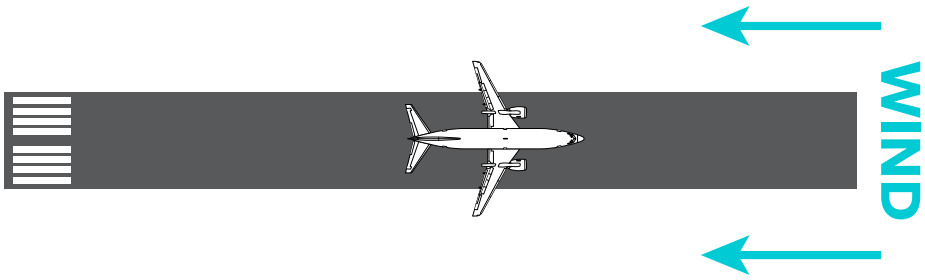
CVG Flight Paths & Conditions

Historical Wind & Weather Patterns

Weather plays a critical role in aircraft operations, as aircraft land and take off into the wind.

Cloud coverage also impacts noise perception. On cloudy days, noise can seem louder as it is generated from the aircraft and rebounds to the surface of the earth from low level clouds, which can amplify the original sound.

In **warmer weather**, aircraft climb more slowly, making operations louder on the ground. On days with high wind speed, aircraft noise can be carried farther distances at ground level.



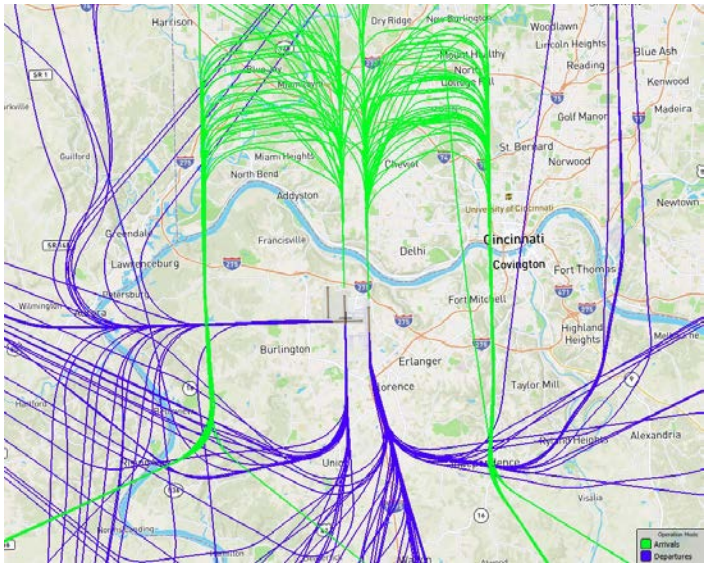
Flight Paths

The departure and arrival procedures in use at CVG were established in the early 1990s.
Temporary variations to flight paths may occur due to wind, weather, or operational conditions to ensure flight safety.

Typical Daytime Operations (7am – 10pm)

Aircraft take off and land into the wind. Approximately 80% of the time on an annual basis, CVG aircraft operations depart to the south and west and land over the north (South Flow) based on historical south/southwest wind conditions at CVG. North winds and poor weather conditions require north operations (departures to the north and west and arrivals over the south) approximately 20% of the time annually. Large jets are required to adhere to noise abatement departure procedures established for each runway. Small regional jets and/or prop aircraft can turn on course when instructed by Air Traffic Control.

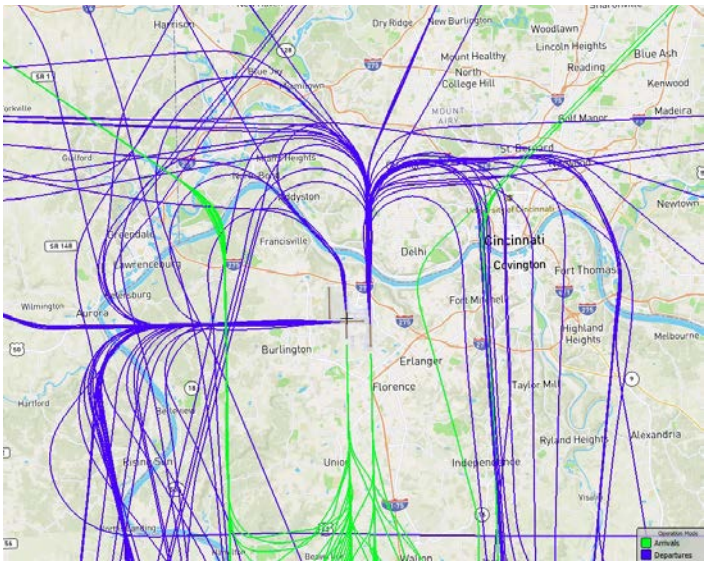
South Flow
Mainline / Cargo Jet Aircraft



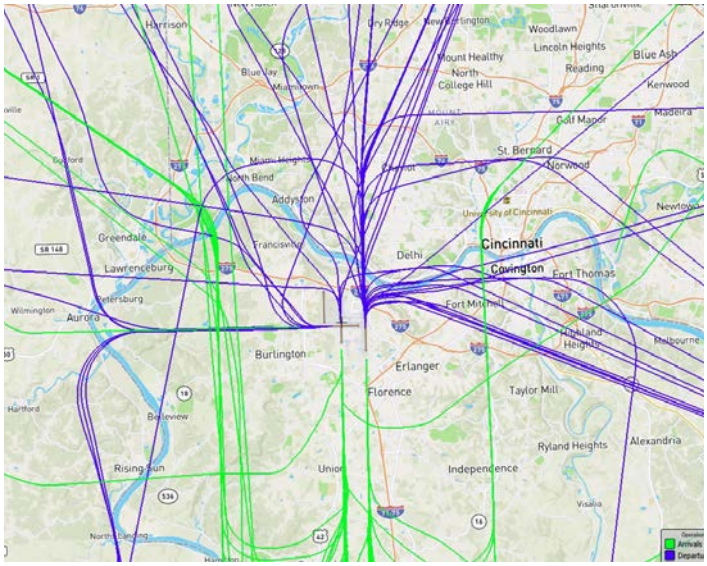
South Flow
Narrowbody / Business Aircraft

CVG Flight Paths & Conditions

North Flow
Mainline / Cargo Jet Aircraft



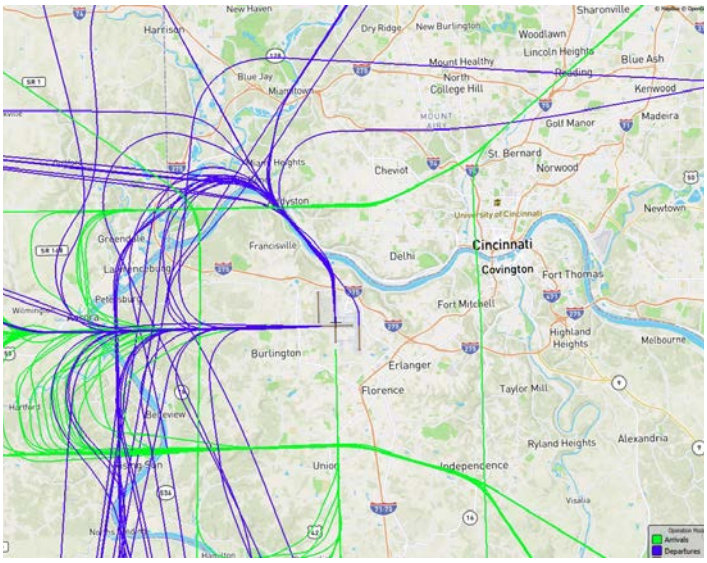
North Flow
Narrowbody / Business Aircraft



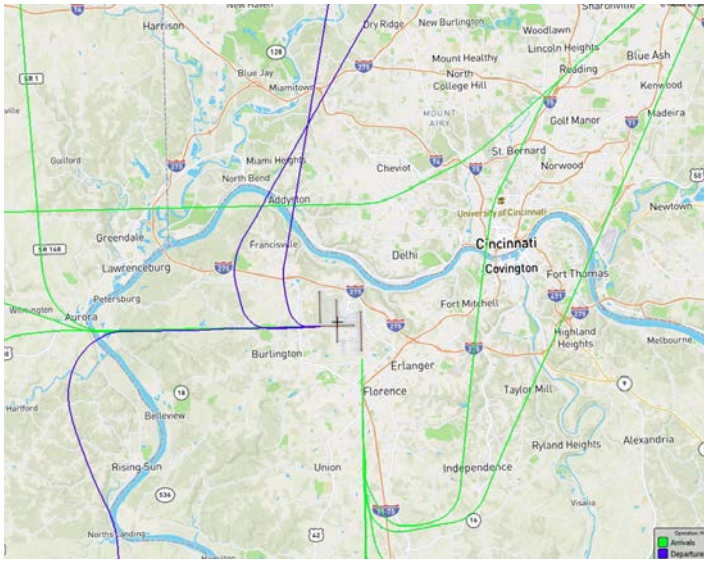
Typical Nighttime Operations (10pm – 7am); Preferential Nighttime Program

The nighttime program at CVG was established to focus the majority of nighttime traffic over the west side of the airport (arrivals to Runway 9 over the west and departures from Runway 27 to the west). The center north/south runway (Runway 18C/36C) is designated as the alternate nighttime runway.

Nighttime Operations
Mainline / Cargo Jet Aircraft



Nighttime Operations
Narrowbody / Business Aircraft



CVG Airfield and Runways

CVG's airfield is anchored by four (4) runways—three parallel north/south runways and one crosswinds or east/west runway.

Runway 9/27 (east/west)

is the longest runway at 12,000 feet and is utilized as the primary nighttime runway. This runway is original to CVG, but it has been extended in length several times over the years.

Runway 18L/36R (eastern-most north/south runway)

is 10,000 feet. This runway was built in 1990.

Runway 18C/36C (center north/south runway)

is 11,000 feet and is currently designated as the alternate nighttime runway. This runway is original to CVG but has been extended in length several times over the years.

Runway 18R/36L (western-most north/south runway)

is 8,000 feet and was built in 2006.

Can the airport impose a curfew over residential areas to regulate flights for commercial or freight traffic?

No. The Aviation Noise and Capacity Act of 1990 prohibits implementing local noise rules that interfere with interstate commerce. If an airport is evaluating the restriction any operations for noise, then the airport must conduct what is called a FAR Part 161 Study. To date, the FAA has not approved Part 161 Studies that restrict operations for noise at any airport in the U.S. Some airports had pre-existing noise rules in place prior to the Aviation Noise and Capacity Act of 1990.

Who makes decisions regarding flight paths?

It is important to remember that the FAA Air Traffic Control Tower and approach control are responsible for safe movement of aircraft on the ground and in the air. Safety will always be the priority that guides air traffic decisions. The FAA follows established flight corridors and procedures, accounting for wind and weather, time of day, and aircraft type.

Proactive Resources & Groups

Noise Abatement Web Page

Scan the QR code or type the URL to visit CVG's online resources related to noise abatement.

(cvgairport.com/business/noise-abatement)

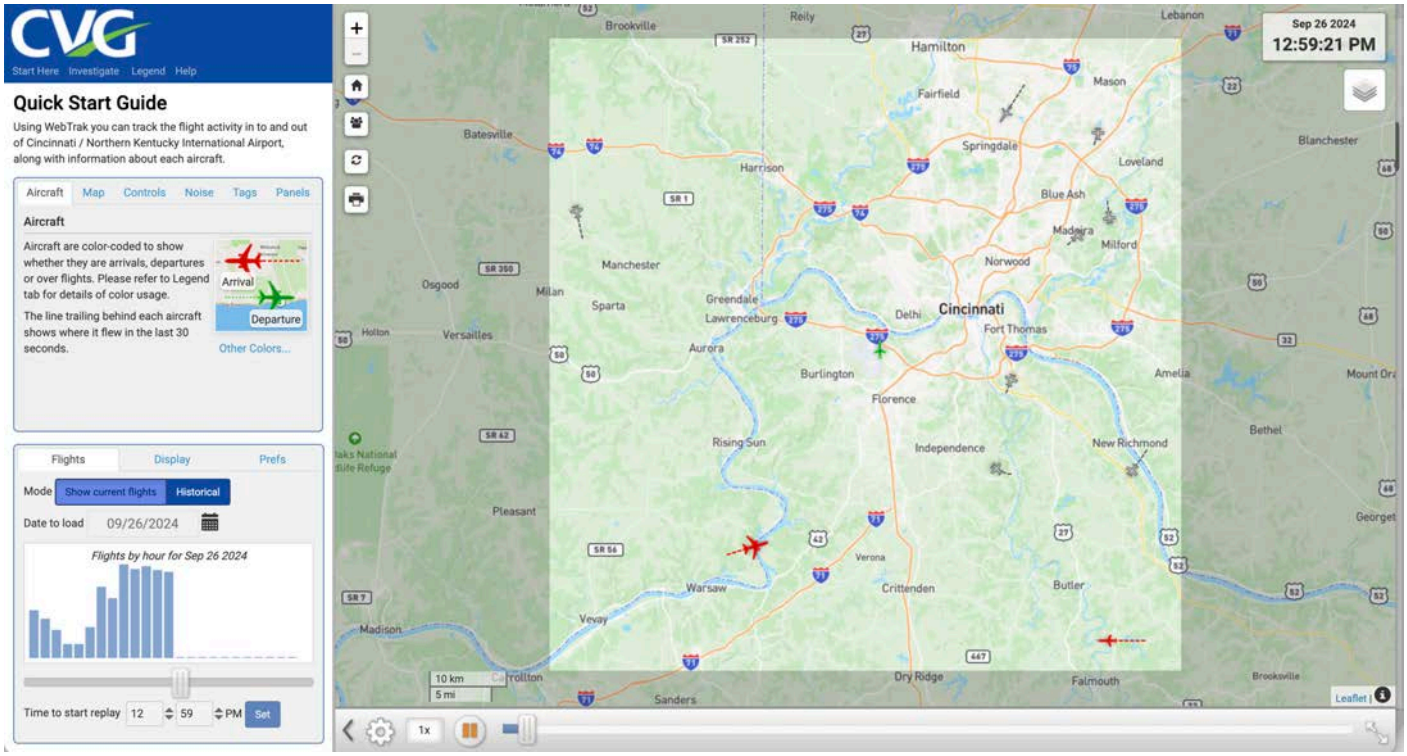
Construction-related activity information

From time to time, airfield construction may result in closures to all or part of certain runways, taxiways, or taxilanes. These closures may also result in temporary variation of a flight path OR runway utilization (routine runway rehabilitation projects, taxilane closures, special flight procedures, etc.).

Near real-time web flight tracking

Scan the QR code or type the URL to visit the tool CVG has invested in for the community to track flight activity in near-realtime, which also allows users to log complaints by individual aircraft. This tool also includes a feature to look back at recent historical flight data.

webtrak.emsbk.com/cvg2



Online complaint form

Scan the QR code or type the URL to log a complaint related to aircraft noise at CVG. Users have the option to request more information or follow-up with CVG noise abatement staff or to simply send a complaint to be logged.

webtrak.emsbk.com/cvg5

Tips for Homeowners

Looking to buy a home in the Greater Cincinnati/Northern Kentucky area and have concerns about aircraft noise? Below are some tips to help you make an informed decision.

Check the Flight Patterns

Flight patterns affect most areas around CVG. Some areas may experience more air traffic than others due to wind, weather, or operational conditions. There can also be variation in the altitude of the airplanes for various reasons, both on departure and on approach. The Federal Aviation Administration is solely responsible for the movement of aircraft throughout the national airspace system and assigns headings, altitudes, etc. Please note that the flight patterns may change per FAA regulations.

Assess the Homesite

Since noise is subjective, we encourage prospective homebuyers to listen to the aircraft activity in the street/subdivision of interest during different times of the day and night to determine if the level of aircraft noise is acceptable to you and your family. If you have questions regarding flight activity in a particular area, street, or subdivision, please feel free to contact CVG's noise abatement staff.

Screen Information Carefully

Real estate agents, property developers, neighbors, and concerned citizens may not be familiar with aircraft operations at CVG. Do your own due diligence, and do not rely solely on what others share with you. While we highly encourage you to speak with potential neighbors regarding noise over the areas, keep in mind that noise is subjective. If you have technical questions regarding flight patterns, current aircraft operations, aircraft over-flight areas, or future growth at the airport, please call noise abatement staff.

Other Common FAQs

How do air cargo schedules operate?

The nature of an overnight air cargo operation requires that the cargo (i.e. mostly packages) be delivered to its destination by a specific date and time — usually on the next business day by 8:00 a.m. and 10:30 a.m. There is a narrow window through which the cargo operators can operate to meet this deadline. For example, to ensure that a package going from New York to Tampa is delivered the next morning, the aircraft must depart New York no later than 10:00 p.m. for arrival at CVG between 12:00 a.m. and 2:00 a.m. From 2:00 a.m. to 4:00 a.m., cargo is sorted and reloaded on to aircraft. Departure from CVG occurs between 4:00 a.m. and 6:00 a.m., with the arrival at Tampa between 6:00 a.m. and 8:00 a.m. Sortation and ground delivery in Tampa can then be achieved between 8:00 a.m. and 10:30 a.m. If the aircraft cannot depart on time from CVG, the on-time morning delivery deadline for all packages on the aircraft is missed. Because meeting the delivery deadline is the business focus of the air cargo industry, it is critical to customer satisfaction and business reputation that aircraft move within a narrow window of operation. Missing the delivery deadline carries a cost to the airlines in the potential loss of customer accounts, and/or refunds for late delivery. As a service-based business, it is essential that carriers have the ability to expand their business without sacrificing service reliability, which is inherent to an overnight air cargo operation.

Has the noise increased over the years?

The planes that are flying now are significantly quieter than the previous generation of aircraft that they replaced. Total aircraft operations in 2023 numbered over 165,735, as opposed to 2004 (peak year) which had 517,520 annual operations.

Are takeoffs noisier than landings?

Generally speaking, yes. An aircraft is noisier on takeoff because it is operating at full power.

Contact Us

If you have questions or concerns regarding the information found in this Guide, or if you have questions that are not addressed in this Guide, please contact the CVG Noise Abatement Team at noise@cvgairport.com or by calling (859) 767-7020.