

Aircraft Noise Information

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For More Information

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To share a noise
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(770) 43- NOISE

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Special Points of Interest:

- Noise Mitigation
- History
- Frequently Asked Questions
- Facts
- Trends
- Roles & Responsibilities

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History of Noise Mitigation Efforts

The noise abatement/mitigation program at H-JAIA (Hartsfield-Jackson Atlanta International Airport) has been ongoing for almost 30 years. It started with the implementation of noise abatement departure tracks in 1972. Mitigation efforts began in 1975 with the acquisition and relocation of the Mountain View community in Clayton County, and continued in 1978 with the initiation of the Airport Noise Abatement and Land Use Compatibility (ANALUC) study sponsored by the City of Atlanta and surrounding jurisdictions. Completed in 1980, the study's results set the stage for aircraft operational controls and land use compatibility planning for the Airport. When the federal government passed noise regulations in the early 1980's, Hartsfield started a formal Federal Aviation Regulation (FAR) Part 150 study. This study led to the establishment of the Airport Noise Mitigation Program, which continues today. Hartsfield's program is one of the oldest and most comprehensive airport noise abatement/mitigation programs in the United States.



Frequently asked questions

What is a DNL?

DNL (Day-Night Sound Level) is based on sound levels measured in relative intensity of sound, or decibels (dB), on the "A" weighted scale (dBA). This scale most closely approximates the response characteristics of the human ear to sound. The higher the number, the louder the sound. DNL represents noise exposure events over a 24-hour period. To account for human sensitivity to noise between the hours of 10:00 pm and 7:00 am, noise events occurring during these hours receive a "penalty" when the DNL is calculated. Each event is measured as if ten events occurred.

What is NOMS?

NOMS is the acronym for a Noise and Operations Monitoring System. It consists of two basic elements: (1) a direct-connect to the FAA's radar system for the purpose of acquiring flight track information and (2) a geographic information system to correlate noise complaint locations and flight tracks. The integration of these two systems allows the DOA to gather information on the flight of aircraft over communities surrounding Hartsfield-Jackson Atlanta International Airport.

Which is Quieter — An Arrival or Departure?

Arriving aircraft at low altitudes are generally quieter than departures of the same aircraft type because this mode of flight requires much less engine power. However, close to the airport, the relative "quietness" of an arrival may be offset by the fact that they are typically lower in altitude than departures over the same location.

To date, the program has resulted in:

- The sound insulation of approximately 10,150 structures at a cost of about \$174.5 million.
- The relocation of residents, including the acquisition of over 2,720 structures at a cost of about \$177.7 million.
- The establishment of procedures to control nighttime aircraft maintenance run-ups.
- The installation of a permanent noise and operations monitoring system (NOMS) to provide the public information on Hartsfield-Jackson's operations and address specific community concerns.

How Noise Levels are Determined

To more consistently and easily describe and compare noise environments comprised of numerous single events, that vary in duration and magnitude over long periods of time, the U.S. Environmental Protection Agency developed a single number descriptor. This descriptor is the DNL, a noise metric which describes an average day/night sound level. DNLs are used to quantify aircraft noise exposure in the vicinity of an airport. Noise contours of specific DNL levels are developed using the FAA's Integrated Noise Model (INM). Airport specific data used in the model to develop the contours results in the depiction of noise exposure in the vicinity of an airport. Airport specific data used in the INM includes:

AVERAGE DAILY OPERATIONS - An aircraft operation is defined as an aircraft takeoff or an aircraft landing.

AIRCRAFT FLEET MIX - An aircraft fleet mix describes the types of aircraft using the airport. This data is important as some types of aircraft are noisier or quieter than others.

RUNWAY USE - Wind speed and direction are two primary factors that determine the direction of flow of aircraft using an airport's runways.

FLIGHT CORRIDORS AND USAGE- Flight corridors describe concentrated areas of aircraft activity through which aircraft arrive and depart an airport.

DEPARTURE DESTINATIONS - Departure destinations are segregated into trip length categories corresponding to approximate flight distances. Aircraft traveling a long distance are usually heavier due to additional fuel requirements and are usually closer to the ground during climb-out than flights of shorter distance.

DAY/NIGHT USE - The percentage of operations during the day versus night is important as nighttime operations are penalized to account for the increased sensitivity of nearby residents to aircraft noise during these hours.

Noise Contours

Noise contours are a series of lines superimposed on a map of the airport's environs. These lines represent various DNL levels (typically 65, 70, and 75 dBA). DNL noise contours are used for several purposes:

- Noise contours highlight existing or potential areas of significant aircraft noise exposure (as defined by the FAA).
- Noise contours are used to assess the relative aircraft noise exposure levels of different runway and/or flight corridor alternatives.
- Noise contours provide guidance to political jurisdictions in the development of land use control measures. These measures include zoning ordinances, subdivision regulations, building codes, and airport overlay zones.

It is the areas within the 65, 70, and 75 DNL noise contours that are considered by the FAA to be the most impacted by aircraft-generated noise. Beyond the 65 DNL noise contour, noise is most noticeable in areas below established flight corridors.

The approved Hartsfield-Jackson Atlanta International Airport noise contours can be reviewed at the DOA's office located at the Airport (404-209-2955).

For More Information

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Aircraft Noise Trends

Today, more people than ever before are choosing aviation as their preferred method of long distance transportation. Serving this demand, while managing aircraft noise within the airport's environs, is a challenge for all airports proprietors.

Noise standards established by the FAA have already resulted in the replacement or modification of what are known as Stage 1 and 2 aircraft (applies to aircraft over 75,000 lbs. maximum take-off weight). FAR 91.805 mandated the phase-out of Stage 1 aircraft by January 1, 1985 and FAR 91.853 stipulated that only an airplane shown to comply with Stage 3 standards could be operated post December 31, 1999. Because of the replacement of older, noisier jets with newer, quieter ones, and the improved climb capabilities of some Stage 3 aircraft (the B757, the B767, and next-generation B737), airports have been able to continue to serve the growing demand for aircraft travel while the number of people significantly impacted by aircraft noise has been reduced.

Roles and Responsibilities

The Aviation Noise Abatement Policy of 1976 summarized the key responsibilities of various entities to control aircraft noise.

THE FAA has the authority and responsibility to reduce aircraft noise at the source, implement safe (and legal) noise abatement operational procedures which are recommended by the airport proprietor, and encourage compatible land development.

AIRPORT PROPRIETORS are primarily responsible for planning and implementing actions that manage the effects of aircraft noise within the airport's environs. Such actions include noise abatement ground procedures; land acquisition; acoustical treatments; other controls which do not discriminate, create an unsafe situation, impede the management of the air navigation system, or interfere with interstate or foreign commerce; and suggesting noise abatement operational procedures.

STATE/LOCAL GOVERNMENTS AND PLANNING AGENCIES are responsible for compatible land development through zoning, promulgating and enforcing building codes that incorporate acoustically attenuating materials into edifices (especially residences), and disclosing the noise impacts to their citizens.

AIR CARRIERS are responsible for retiring, replacing, and retrofitting older jets (per FAA regulations) and for flying aircraft in ways that minimize noise impacts on surrounding communities.

RESIDENTS AND PROSPECTIVE RESIDENTS in areas surrounding airports should strive to understand the noise problem and measures which can be taken to minimize the effect of noise.