



DENVER INTERNATIONAL AIRPORT

2026 IGA NOISE RELEASE STUDY

JULY 30, 2026



INTRODUCTION

This Noise Release Study was prepared pursuant to Section 4.5.3 “Noise Studies” of the Intergovernmental Agreement dated April 21, 1988, between Adams County and the City & County of Denver related to the Denver International Airport (“airport”). Section 4.5.3 provides that the airport shall conduct a noise study complying in form with 14 CFR 150, subparts A and B, for the purpose of determining whether Noise Release Conditions have occurred with respect to land use in Adams County adjacent to the boundaries of the airport. The first study of this type by the airport under the terms of the Intergovernmental Agreement (“IGA”) was completed and transmitted to Adams County on February 28, 2000. Subsequent studies, according to IGA requirements, have been completed every two years starting in 2002. This current study (2025) continues the mandated every-two-year schedule.

Part 150 is a regulation developed under the Aviation Safety and Noise Abatement Act of 1979 (49 USC 2101 et. seq.) and addresses noise compatibility planning activities of operators of all public use airports. The Denver International Airport is a public use airport. Subpart A covers the general scope of Part 150 and its purpose and Subpart B covers the development of noise exposure maps and noise compatibility programs. The purposes and process of both subparts have been modified to comply with the objectives of the IGA as it relates to Noise Release Conditions as that term is defined within the IGA.

DENVER INTERNATIONAL AIRPORT STATISTICS

Denver International Airport is located approximately 23 miles northeast of downtown Denver. The airport and its access corridor occupy 53 square miles of land which had previously been used primarily for agricultural purposes.

DEN currently has six operating runways, five of which are 12,000’ long, with the sixth at 16,000’ in length. The airport also currently has a 1.5 million square foot main terminal building, with three remote concourses of varying sizes. Both the airfield and the terminal/concourse complex can be expanded to accommodate future growth. DEN has been designed to ultimately support as many as 12 runways, as well as a doubling of the current size of the main terminal, and the construction of two additional concourses.

DEN opened on February 28, 1995, replacing Stapleton International Airport as Denver’s primary commercial airport. DEN is served by a variety of domestic and international air carriers and is the second largest hub for United Airlines. DEN is also the home and hub for Frontier Airlines, as well as a hub for Southwest Airlines. Passenger traffic at DEN continues recovery from passenger downturn due to the pandemic, with 82,427,962 passengers passing through the airport in 2025. This was the highest yearly total in the history of DEN and represented a 0.1% increase over the 82,358,744 passengers that used the airport in 2024¹. The continued recovery has been due to the strong demand for travel and an increase in the share of connecting passengers and places DEN among the top recovering markets of peer large-hub airports worldwide.

¹ [Year to Date Operations and Traffic Report](#)

LAND USES

The underlying base maps in Figures 1 and 2 depict existing land uses in the vicinity of DEN. Arapahoe, Adams, Denver, and Weld Counties have historically provided parcel data in GIS format, along with existing land use codes. Please note that Commerce City is working on a legislative rezoning process to adopt a new unified zoning map under the 2025 Land Development Code, which was adopted late last year (2025). The new zoning map is anticipated to be adopted in late summer of this year (2026) and was not available when this report was developed. Therefore, the same layer for Commerce City as was in the previous IGA study was used.

The Adams County 2012 Comprehensive Plan states as a matter of policy that agricultural uses will be encouraged within the 60 L_{dn} contour. See enclosed Noise Exposure Maps (Figures 1 & 2) for depictions of existing land uses as approved by the Federal Aviation Administration (FAA) per FAR Part 150 process.

NOISE MEASUREMENT METHODOLOGY

For the purpose of this study, the City and County of Denver contracted with HNTB Corporation to prepare a set of Noise Exposure Maps (NEM). These maps illustrate the location of the 55, 60, and 65 L_{dn} contour lines for the years 2025 and 2030.

HNTB prepared the contour maps using the FAA's Aviation Environmental Design Tool (AEDT) version 4a. AEDT is a computer model that uses aircraft operations data, correlated with known acoustical information for each type of aircraft, to calculate noise contours. AEDT is the required aircraft related noise, fuel burn, and emission modeling tool for FAA actions. While development of the DNL noise contours is not completed to meet FAA requirements in this study, use of the model and its latest version ensures that the industry standard for noise modeling is applied.

Contours for the 2025 base case were generated based upon actual 2025 DEN flight operations data. For the 2030 contour projection, HNTB utilized data from the 2025 contour, airline retirement and replacement plan, changes in flight procedures, FAA forecast, and the InterVISTAS forecast approved by the FAA in January 2023. The resultant noise contours were compared with each other and with the 2024 IGA study. Potential factors contributing to the changes were identified.

NOISE CONTOURS

Figures 1 and 2 in this 2026 Study Report illustrate the location of the 55, 60, and 65 L_{dn} noise contours for the years 2025 and 2030.

Each of the contour lines encloses a geographic region within which the same average annual sound level (due to aircraft) exists. These levels are expressed in terms of a measurement unit called L_{dn} (also sometimes referred to as DNL). These L_{dn} levels represent the average annual aircraft-produced sound exposure within each contour line. Additionally, the L_{dn} metric includes a 10-decibel (dB) weighting factor which is applied to any events which occur during the nighttime hours, defined for this purpose as 10:00 pm to 7:00 am.

It should be noted that the 2025 L_{dn} contours depicted in Figure 1 may not be identical to the contours contained in the DEN Noise Abatement Office's 2025 Annual Noise Report. AEDT was used to calculate the contours for the Noise Release Study, while the contours in the 2025 Annual Report were calculated by a program called ARTSMAP. AEDT is designed primarily to predict future aircraft noise, while ARTSMAP calculates noise based upon thousands of actual radar flight tracks and is therefore more useful for calculating existing noise than for predicting future noise.

LAND USE IMPACTS 2030

The projections for 2030 indicate that the contours will expand and contract very slightly in all directions as compared to 2025. These fluctuations are due to projected fleet mix changes to quieter aircraft operations by utilizing the Boeing 737 MAX over the noisier Boeing 737NG aircraft. In 2025 and 2030, the Boeing aircraft family represented and will represent the dominant of aircraft types in terms of overall operations. It should be noted that the FEIS projections were based on the airport operating at full capacity with 12 runways; therefore, the current contour of the Noise Overlay Zone should be maintained until full build-out of the airport.

It should also be noted that on both the 2025 and 2030 contour maps, numerous areas to the east and north of the airport are colored yellow, indicating residential land use. Most of the areas so designated are not residentially zoned but are rather agricultural zones within which Adams County permits one home to be built on a parcel of land having a minimum size of 35 acres. The source of all Adams County land use data used on these maps is Adams County.

FIGURE 1

2025 IGA DNL NOISE CONTOURS

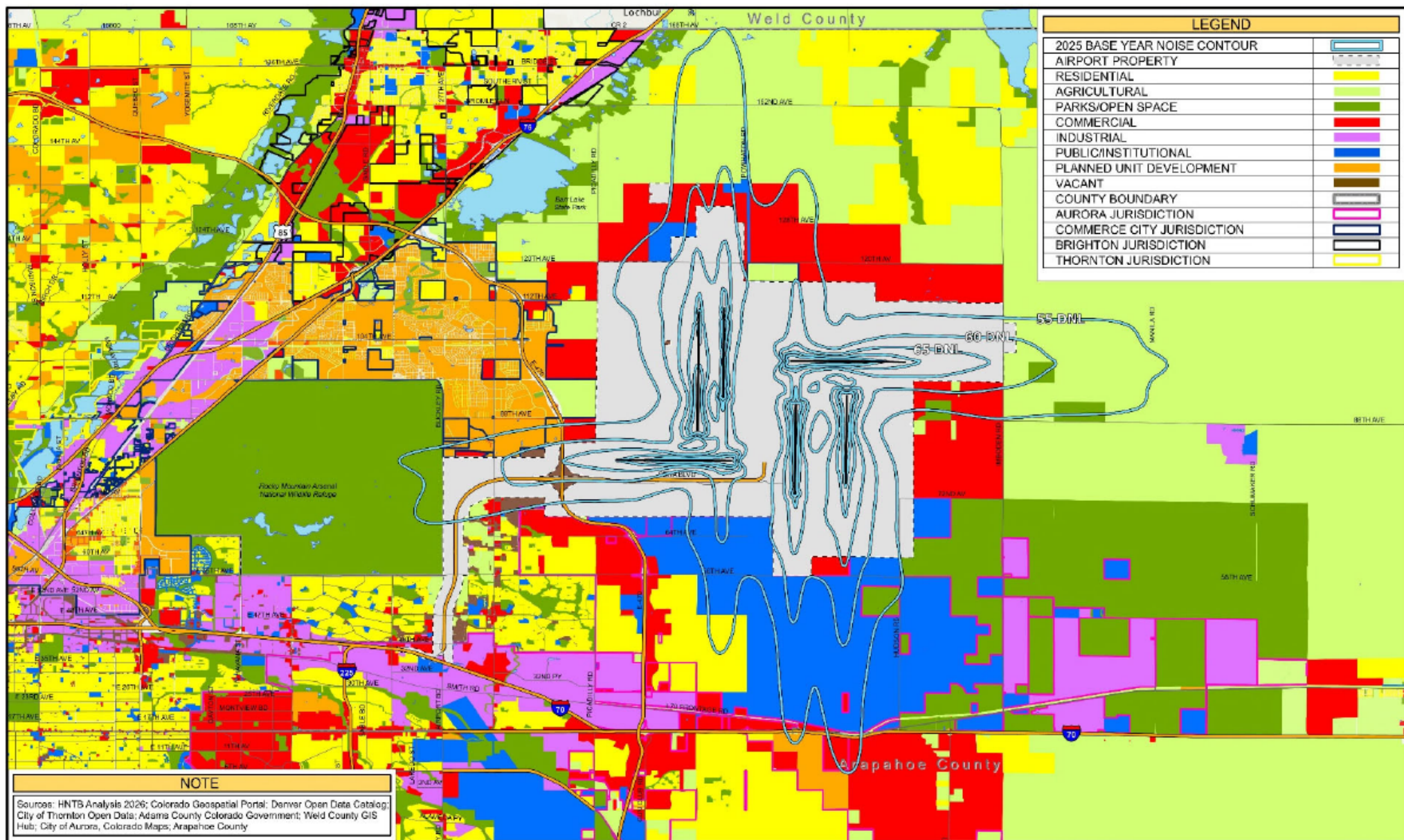


FIGURE 2

2030 IGA DNL NOISE CONTOURS

