Hollywood Burbank Airport

Burbank-Glendale-Pasadena Airport Authority

Part 150 Noise Study Update

Draft Noise Exposure Map Update Appendices

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Appendix A: Noise Metrics

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A.1 Aircraft Noise Terminology

Noise is a complex physical quantity. The properties, measurement, and presentation of noise involve specialized terminology that can be difficult to understand. To provide a basic reference on these technical issues, this section introduces fundamentals of noise terminology, the effects of noise on human activity, and noise propagation.

A.1.1 Introduction to Noise Terminology

Analyses of potential impacts from changes in aircraft noise levels rely largely on a measure of cumulative noise exposure over an entire calendar year, expressed in terms of a metric called the Day-Night Average Sound Level (DNL). However, DNL does not provide an adequate description of noise for many purposes. A variety of measures, which are further described in subsequent subsections, are available to address essentially any issue of concern, including:

- Sound Pressure Level (SPL) and the decibel (dB)
- A-Weighted Decibel (dBA)
- Maximum A-Weighted Sound Level (L_{max})
- Time Above (TA)
- Sound Exposure Level (SEL)
- Equivalent A-Weighted Sound Level (L_{eq})
- Day-Night Average Sound Level (DNL)

A.1.2 Sound Pressure Level (SPL) and the Decibel (dB)

All sounds come from a sound source—a musical instrument, a voice speaking, an airplane passing overhead. It takes energy to produce sound. The sound energy produced by any sound source travels through the air in sound waves—tiny, quick oscillations of pressure just above and just below atmospheric pressure. The ear senses these pressure variations and, with much processing in our brain, translates them into “sound.”

Our ears are sensitive to a wide range of sound pressures. The loudest sounds that we can hear without pain contain about one million times more energy than the quietest sounds we can detect. To allow us to perceive sound over this very wide range, our ear/brain “auditory system” compresses our response in a complex manner, represented by a term called sound pressure level (SPL), which we express in units called decibels (dB).

Mathematically, SPL is a logarithmic quantity based on the ratio of two sound pressures, the numerator being the pressure of the sound source of interest (P_{source}), and the denominator being a reference pressure ($P_{reference}$).[1]

$$\text{Sound Pressure Level (SPL)} = 20 * Log\left(\frac{P_{source}}{P_{reference}}\right) dB$$

The logarithmic conversion of sound pressure to SPL means that the quietest sound that we can hear (the reference pressure) has a sound pressure level of about 0 dB, while the loudest sounds that we

[1] The reference pressure is approximately the quietest sound that a healthy young adult can hear.

hear without pain have sound pressure levels of about 120 dB. Most sounds in our day-to-day environment have sound pressure levels from about 40 to 100 dB.[2]

Because decibels are logarithmic quantities, we cannot use common arithmetic to combine them. For example, if two sound sources each produce 100 dB operating individually, when they operate simultaneously, they produce 103 dB—not the 200 dB we might expect. Increasing to four equal sources operating simultaneously will add another 3 dB of noise, resulting in a total SPL of 106 dB. For every doubling of the number of equal sources, the SPL goes up another 3 dB.

If one noise source is much louder than another is, the louder source "masks" the quieter one and the two sources together produce virtually the same SPL as the louder source alone. For example, 100 dB and 80 dB sources produce approximately 100 dB of noise when operating together.

Two useful "rules of thumb" related to SPL are worth noting: (1) humans generally perceive a 6 to 10 dB increase in SPL to be about a doubling of loudness,[3] and (2) changes in SPL of less than about 3 dB for an particular sound are not readily detectable outside of a laboratory environment.

A.1.3 A-Weighted Decibel

An important characteristic of sound is its frequency, or "pitch." This is the per-second oscillation rate of the sound pressure variation at our ear, expressed in units known as Hertz (Hz).

When analyzing the total noise of any source, acousticians often break the noise into frequency components (or bands) to consider the "low," "medium," and "high" frequency components. This breakdown is important for two reasons:

- Our ear is better equipped to hear mid and high frequencies and is least sensitive to lower frequencies. Thus, we find mid- and high-frequency noise more annoying.
- Engineering solutions to noise problems differ with frequency content. Low-frequency noise is generally harder to control.

The normal frequency range of hearing for most people extends from a low of about 20 Hz to a high of about 10,000 to 15,000 Hz. Most people respond to sound most readily when the predominant frequency is in the range of normal conversation, typically around 1,000 to 2,000 Hz. The acoustical community has defined several "filters," which approximate this sensitivity of our ear and thus, help us to judge the relative loudness of various sounds made up of many different frequencies.

The so-called "A" filter ("A weighting") generally does the best job of matching human response to most environmental noise sources, including natural sounds and sound from common transportation sources. "A-weighted decibels" are abbreviated "dBA." Because of the correlation with our hearing, the U. S. Environmental Protection Agency (EPA) and nearly every other federal and state agency have adopted A-weighted decibels as the metric for use in describing environmental and transportation noise. Figure A-1 depicts A-weighting adjustments to sound from approximately 20 Hz to 10,000 Hz.

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[2] The logarithmic ratio used in its calculation means that SPL changes relatively quickly at low sound pressures and more slowly at high pressures. This relationship matches human detection of changes in pressure. We are much more sensitive to changes in level when the SPL is low (for example, hearing a baby crying in a distant bedroom), than we are to changes in level when the SPL is high (for example, when listening to highly amplified music).

[3] A "10 dB per doubling" rule of thumb is the most often used approximation.

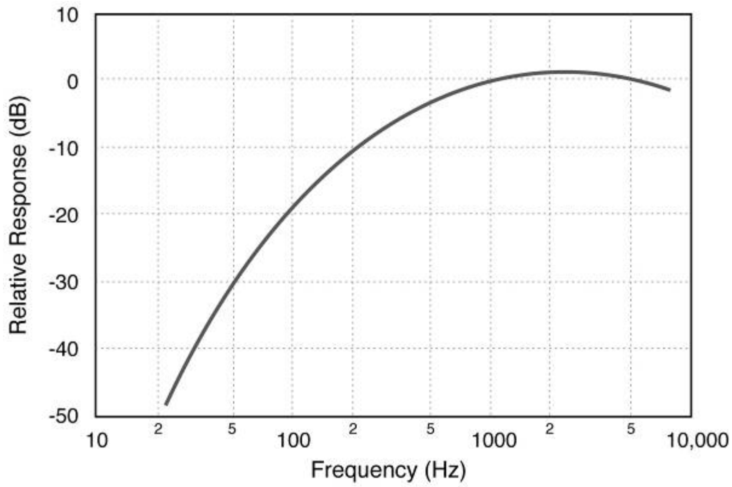

Figure A-1. A-Weighting Frequency Response

Source: Extract from Harris, Cyril M., Editor, "Handbook of Acoustical Measurements and Control," McGraw-Hill, Inc., 1991, pg. 5.13; HMMH

As the figure shows, A-weighting significantly de-emphasizes noise content at lower and higher frequencies where we do not hear as well, and has little effect, or is nearly "flat," in for mid-range frequencies between 1,000 and 5,000 Hz. All sound pressure levels presented in this document are A-weighted unless otherwise specified.

Figure A-2 depicts representative A-weighted sound levels for a variety of common sounds.

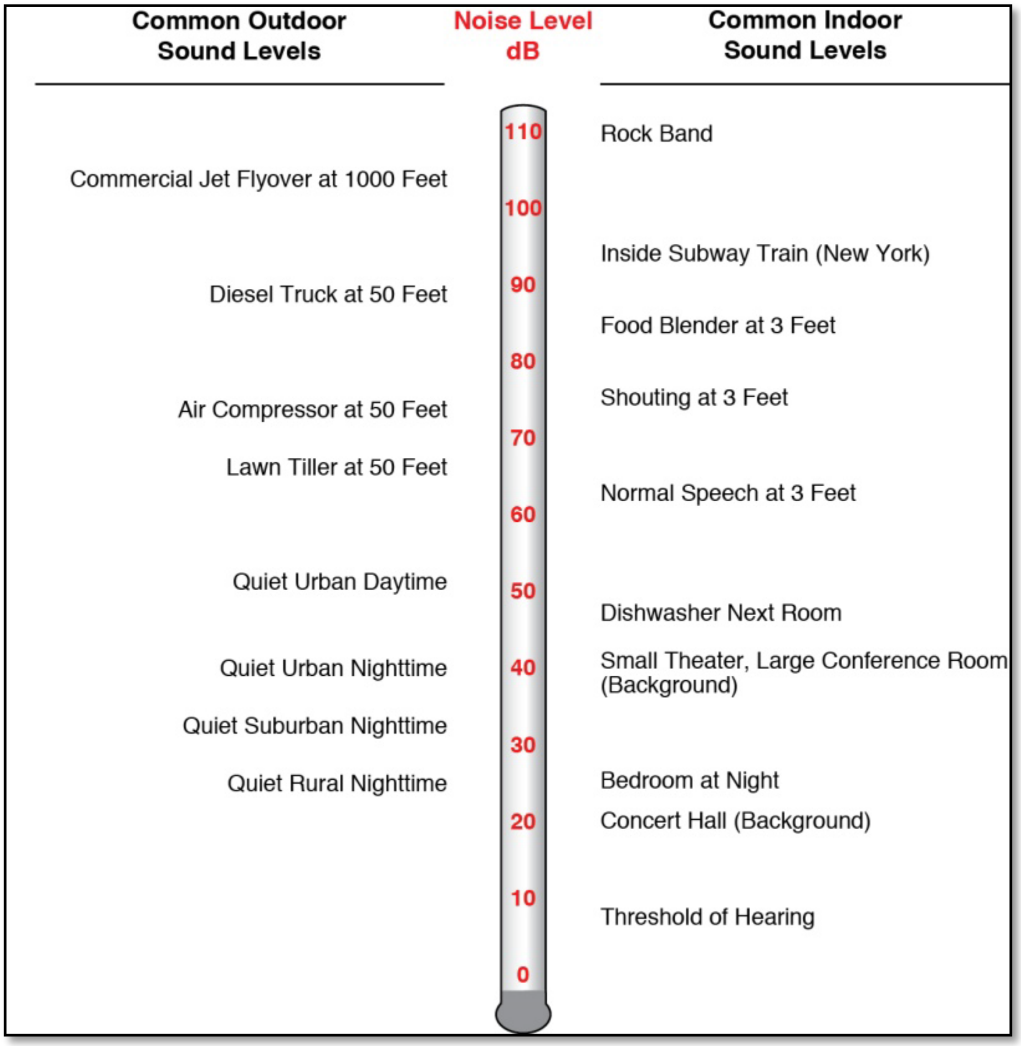

Figure A-2. A-Weighted Sound Levels for Common Sounds
Source: HMMH

A.1.4 Maximum A-Weighted Sound Level (L_{max})

An additional dimension to environmental noise is that A-weighted levels vary with time. For example, the sound level increases as a car or aircraft approaches, then falls and blends into the background as the aircraft recedes into the distance. The background or "ambient" level continues to vary in the absence of a distinctive source (e.g., due to birds chirping, insects buzzing, or leaves rustling). It is often convenient to describe a particular noise "event" (e.g., a vehicle passing by or a dog barking) by its maximum sound level, abbreviated as L_{max}.

Figure A-3 depicts this general concept, for a hypothetical noise event with an L_{max} of approximately 102 dB.

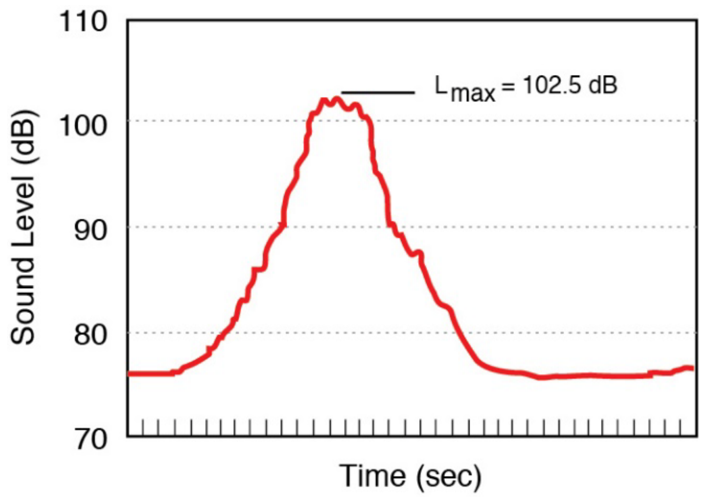

Figure A-3. Variation in A-Weighted Sound Level over Time and Maximum Noise Level

Source: HMMH

While the maximum level is easy to understand, it suffers from a serious drawback when used to describe the relative "noisiness" of an event such as an aircraft flyover, i.e., it describes only one dimension of the event and provides no information on the event's overall, or cumulative, noise exposure. In fact, two events with identical maximum levels may produce very different total exposures. One may be of very short duration, while the other may continue for an extended period and be judged much more annoying.

The next section introduces a measure that accounts for this concept of a noise "dose" or the cumulative exposure associated with an individual "noise event" such as an aircraft flyover.

A.1.5 Sound Exposure Level (SEL)

The most commonly used measure of cumulative noise exposure for an individual noise event, such as an aircraft flyover, is the Sound Exposure Level, or SEL. SEL is a summation of the A-weighted sound energy over the entire duration of a noise event. SEL expresses the accumulated energy in terms of the one-second-long steady-state sound level that would contain the same amount of energy as the actual time-varying level.

SEL provides a basis for comparing noise events that generally match our impression of their overall "noisiness," including the effects of both duration and level. The higher the SEL, the more annoying a noise event is likely to be. In simple terms, SEL "compresses" the energy for the noise event into a single second. Figure A-4 depicts this compression, for the same hypothetical event shown in Figure A-3. Note that the SEL is higher than the L_{max}.

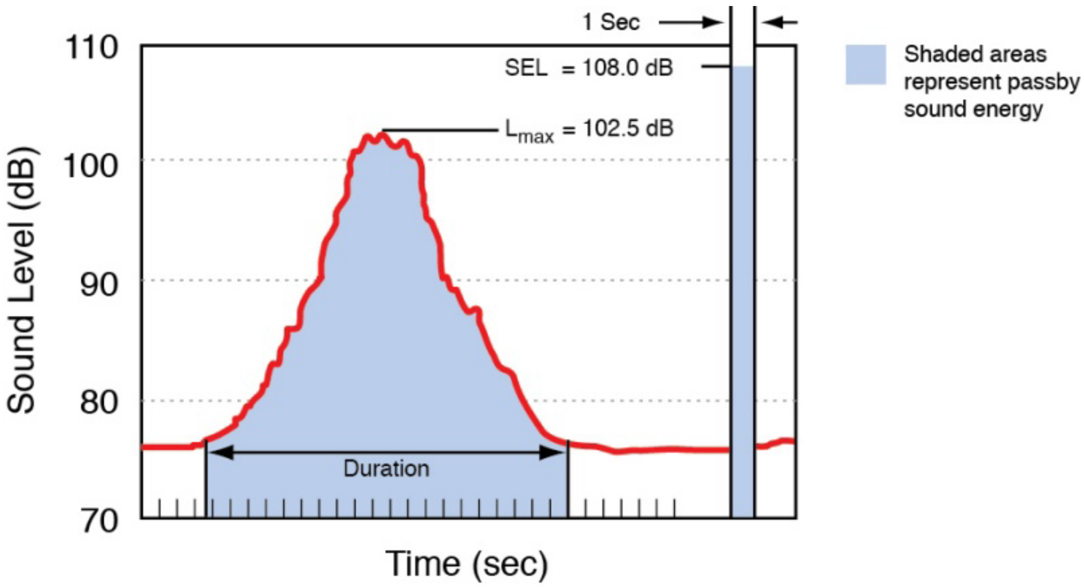

Figure A-4. Graphical Depiction of Sound Exposure Level

Source: HMMH

The "compression" of energy into one second means that a given noise event's SEL will almost always will be a higher value than its L_{max}. For most aircraft flyovers, SEL is roughly 5 to 12 dB higher than L_{max}. Adjustment for duration means that relatively slow and quiet propeller aircraft can have the same or higher SEL than faster, louder jets, which produce shorter duration events.

A.1.6 Equivalent A-Weighted Sound Level, L_{eq}

The Equivalent Sound Level, abbreviated L_{eq}, is a measure of the exposure resulting from the accumulation of sound levels over a particular period of interest (e.g., 1 hour, an 8-hour school day, nighttime, or a full 24-hour day). L_{eq} plots for consecutive hours can help illustrate how the noise dose rises and falls over a day or how a few loud aircraft significantly affect some hours.

L_{eq} may be thought of as the constant sound level over the period of interest that would contain as much sound energy as the actual varying level. It is a way of assigning a single number to a time-varying sound level. Figure A-5 illustrates this concept for the same hypothetical event shown in Figure A-3 and Figure A-4. Note that the L_{eq} is lower than either the L_{max} or SEL.

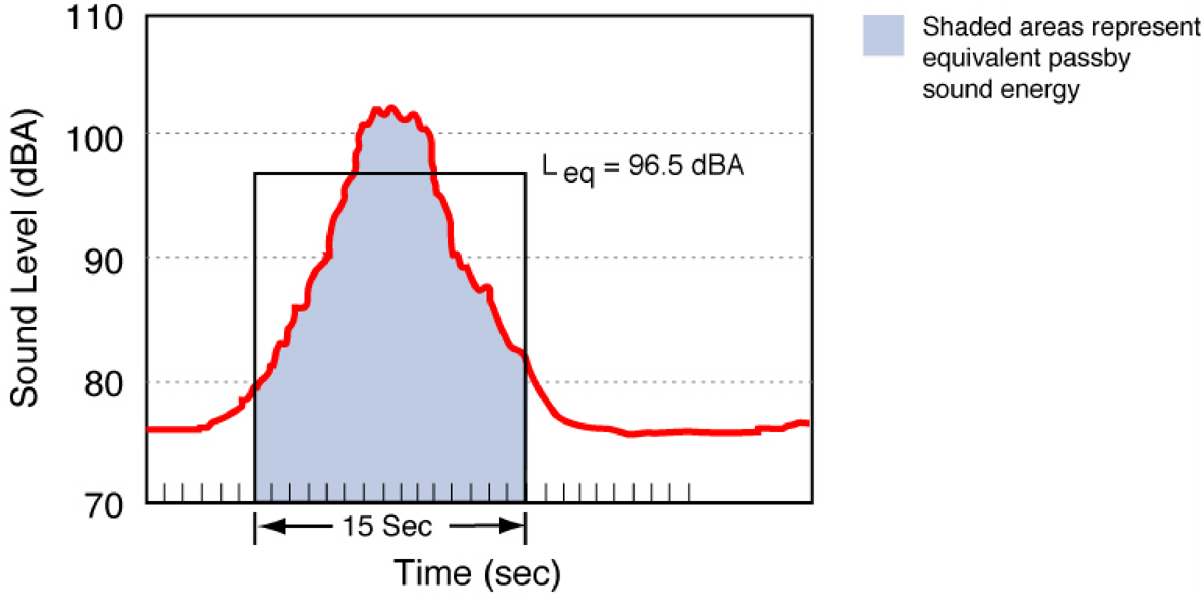

Figure A-5. Example of a 15-Second Equivalent Sound Level

Source: HMMH

A.1.7 Day-Night Average Sound Level (DNL or L_{dn})

The Federal Aviation Administration (FAA) requires that airports use a measure of noise exposure that is slightly more complicated than L_{eq} to describe cumulative noise exposure: the Day-Night Average Sound Level, DNL.

The U.S. EPA identified DNL as the most appropriate means of evaluating airport noise based on the following considerations.[4]

- The measure should be applicable to the evaluation of pervasive long-term noise in various defined areas and under various conditions over long periods.
- The measure should correlate well with known effects of the noise environment and on individuals and the public.
- The measure should be simple, practical, and accurate. In principle, it should be useful for planning as well as for enforcement or monitoring purposes.
- The required measurement equipment, with standard characteristics, should be commercially available.
- The measure should be closely related to existing methods currently in use.
- The single measure of noise at a given location should be predictable, within an acceptable tolerance, from knowledge of the physical events producing the noise.
- The measure should lend itself to small, simple monitors, which can be left unattended in public areas for long periods.

[4] "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," U. S. EPA Report No. 550/9-74-004, March 1974.

Most federal agencies dealing with noise have formally adopted DNL. The Federal Interagency Committee on Noise (FICON) reaffirmed the appropriateness of DNL in 1992. The FICON summary report stated, "There are no new descriptors or metrics of sufficient scientific standing to substitute for the present DNL cumulative noise exposure metric."

In 2015, the FAA began a multi-year effort to update the scientific evidence on the relationship between aircraft noise exposure and its effects on communities around airports.[5] This was the most comprehensive study using a single noise survey ever undertaken in the United States, polling communities surrounding 20 airports nationwide. The FAA Reauthorization Act of 2018 under Section 188 and 173, required FAA to complete the evaluation of alternative metrics to the DNL standard within one year. The Section 188 and 173 Report to Congress was delivered on April 14, 2020[6] and concluded that while no single noise metric can cover all situations, DNL provides the most comprehensive way to consider the range of factors influencing exposure to aircraft noise. In addition, use of supplemental metrics is both encouraged and supported to further disclose and aid in the public understanding of community noise impacts. The full study supporting these reports was released in January 2021. If changes are warranted in the use of DNL, which DNL level to assess or the use of supplemental metrics, FAA will propose revised policy and related guidance and regulations, subject to interagency coordination, as well as public review and comment.

In simple terms, DNL is the 24-hour L_{eq} with one adjustment: all noises occurring at night (defined as 10 p.m. through 7 a.m.) are increased by 10 dB to reflect the added intrusiveness of nighttime noise events when background noise levels decrease. In calculating aircraft exposure, this 10 dB increase is mathematically identical to counting each nighttime aircraft noise event ten times.

DNL can be measured or estimated. Measurements are practical only for obtaining DNL values for limited numbers of points, and, in the absence of a permanently installed monitoring system, only for relatively short periods. Most airport noise studies use computer-generated DNL estimates depicted as equal-exposure noise contours (much as topographic maps have contours of equal elevation).

The annual DNL is mathematically identical to the DNL for the average annual day, i.e., a day on which the number of operations is equal to the annual total divided by 365 (366 in a leap year). Figure A-6 graphically depicts the manner in which the nighttime adjustment applies in calculating DNL. Figure A-7 presents representative outdoor DNL values measured at various U.S. locations.

[5] Federal Aviation Administration. Press Release – FAA To Re-Evaluate Method for Measuring Effects of Aircraft Noise. https://www.faa.gov/news/press_releases/news_story.cfm?newsId=18774

[6] Federal Aviation Administration. Report to Congress on an evaluation of alternative noise metrics. https://www.faa.gov/about/plans_reports/congress/media/Day-Night_Average_Sound_Levels_COMPLETED_report_w_letters.pdf

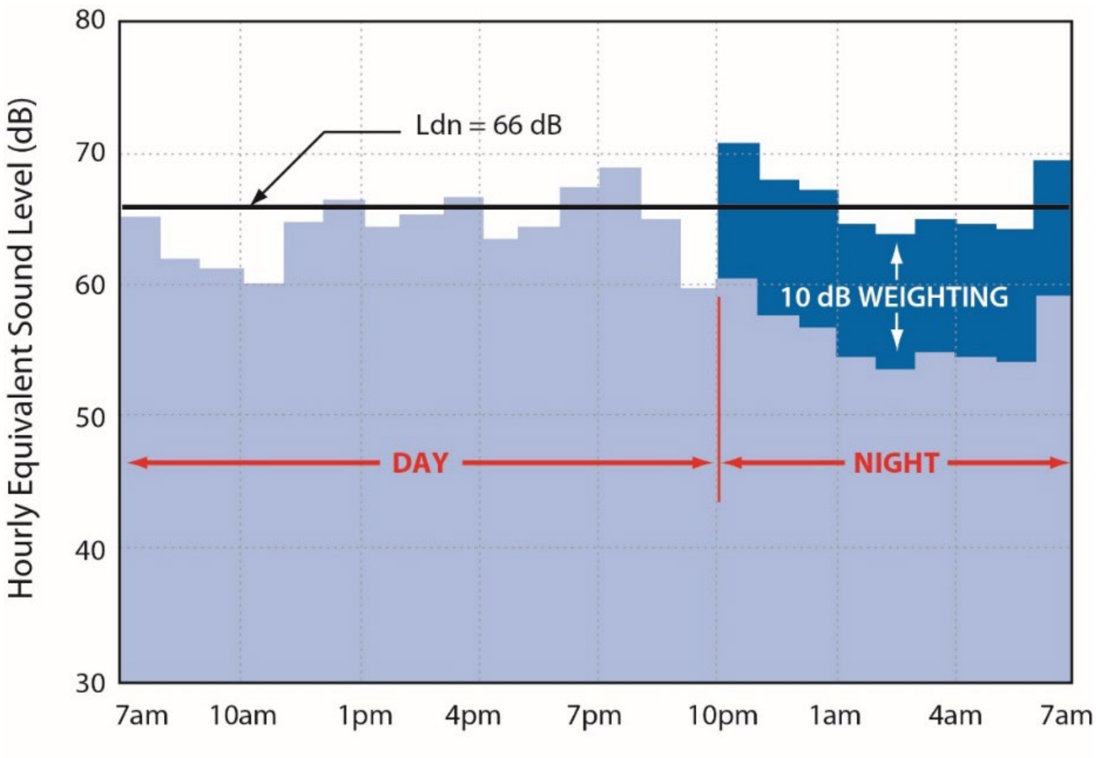

Figure A-6. Example of a Day-Night Average Sound Level Calculation

Source: HMMH

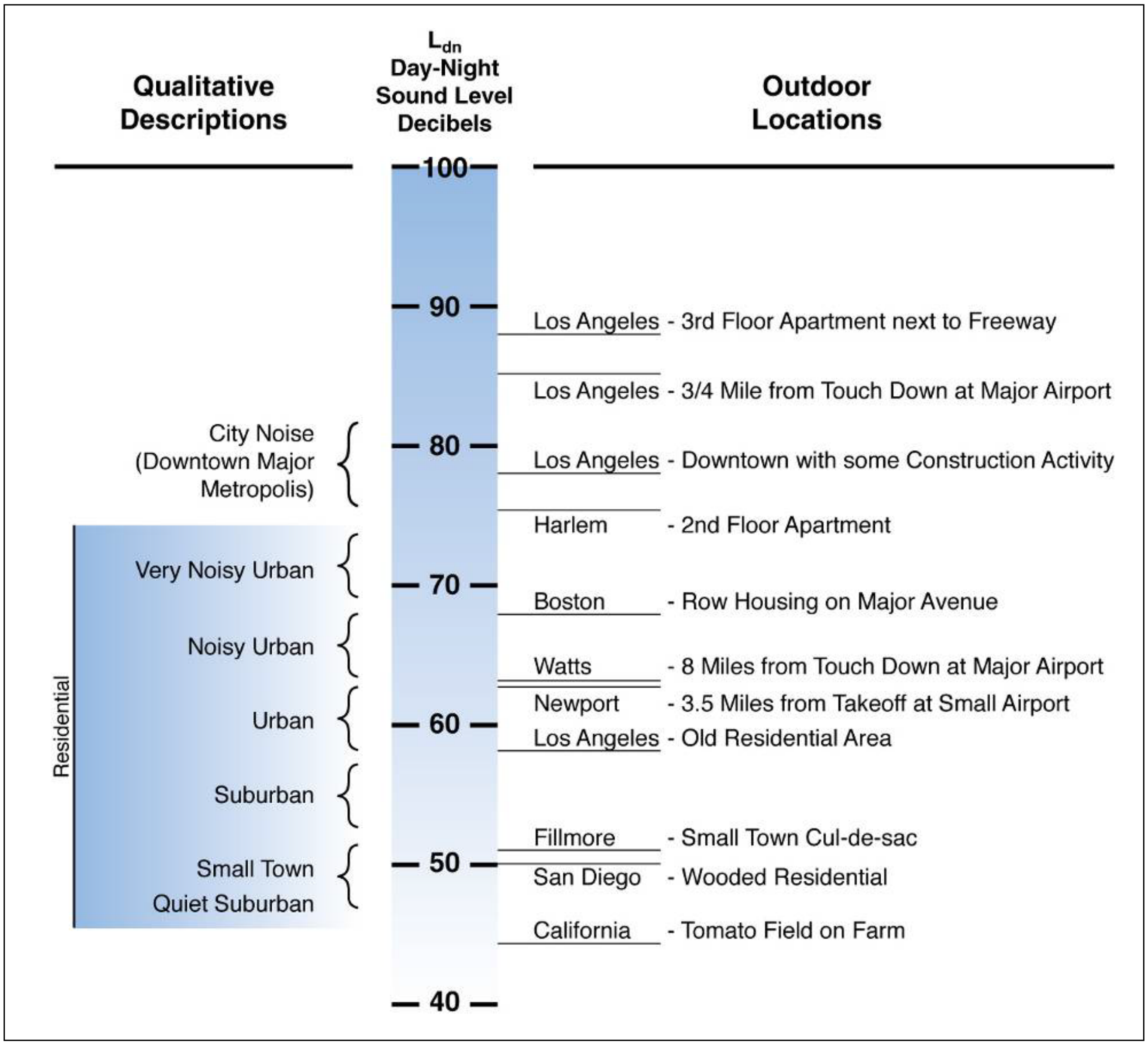

Figure A-7. Examples of Measured Day-Night Average Sound Levels, DNL

Source: U.S. Environmental Protection Agency, "Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety," March 1974, p.14.

Appendix B: Existing Noise Compatibility Program

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U.S. DEPARTMENT OF TRANSPORTATION

FEDERAL AVIATION ADMINISTRATION

RECORD OF APPROVAL

14 CFR PART 150

NOISE COMPATIBILITY PROGRAM

BOB HOPE AIRPORT

BURBANK, CALIFORNIA

for Regional Counsel, AWP-7	10/24/2016 Date	✓ CONCUR	NONCONCUR
for Director, Office of Airports, Western-Pacific Region, AWP-600	10/24/16 Date	✓ APPROVED	DISAPPROVED

Record of Approval
Bob Hope Airport
Burbank, California
Noise Compatibility Program Revision #2

INTRODUCTION

The Bob Hope Airport (Airport), Burbank, California, Noise Compatibility Program (NCP) Revision #2 describes the current and future noncompatible land uses based upon the parameters established in Title 14, Code of Federal Regulations (CFR), Part 150, *Airport Noise Compatibility Planning*. The NCP revision replaces the various NCP measures approved by the Federal Aviation Administration (FAA) on November 27, 2000. Additionally, on August 4, 2004, the Bob Hope Airport added Land Use Measure 7 (seven), which was to retain property located in the northeast quadrant within the 2003, 65 Community Noise Equivalent Level (CNEL) noise exposure contour. The NCP Update recommends a total of 18 (eighteen) measures to reduce the effect of noise generated at the Airport. The recommendations include 9 (nine) Noise Abatement measures, 4 (four) Noise Mitigation measures, 1 (one) Land Use measure, and 4 (four) Program Management measures. The recommended program measures are summarized in Table 7E, and described in detail in Chapter 1 and Appendix A of the NCP Update. During the 14 CFR Part 150 review process, the FAA identified a typographical error throughout the signed November 27, 2000, Record of Approval (Appendix A) that references the 1988 NCP. The NCP was approved by FAA on July 27, 1989. Thus, the correct approval reference for the original 14 CFR Part 150 NCP is 1989 NCP.

The approvals listed herein include approvals of actions that the Burbank-Glendale-Pasadena Airport Authority (the Airport Operator) recommends be taken by the FAA. It should be noted that these approvals indicate only that the actions would, if implemented, be consistent with the purposes of 14 CFR Part 150. These approvals do not constitute decisions to implement the actions. These approvals do not constitute a commitment by the FAA to provide Federal financial assistance for these projects. Later decisions concerning possible implementation of the actions may be subject to applicable environmental or other procedures or requirements.

The recommendations below summarize, as closely as possible, the Airport Operator's recommendations in the NCP and are cross-referenced to the program. The statements contained within the summarized recommendations and before the indicated FAA approval, disapproval, or other determinations do not represent the opinions or decisions of the FAA.

NOISE ABATEMENT MEASURES

1. Continue Requiring All Transport Category and Turbojet Aircraft to Comply with Federal Aircraft Noise Regulations.

Description: This measure recommends the continuation of an existing noise abatement rule. The rule states: *"All subsonic transport category airplanes and all subsonic turbojet powered airplanes regardless of category operating at the Burbank airport shall be in compliance with all Federal Air Regulations respecting noise, as the same may be amended from time to time."* The applicable Federal aircraft noise rules are in Title 14 of the Code of Federal Regulations (14 CFR) Parts 36 and 91. This measure was previously approved by the FAA as an element of the 1989 NCP. This measure was previously approved by the FAA as an element of the 2000 NCP. (NCP Page 1, Table 7E, Appendix A - page A-10).

FAA Action: Approved.

2. Continue Requiring Compliance with the Airport's Engine Test Run-up Policy.

Description: This measure recommends the continuation of an existing noise abatement rule. The rule states: *"Each aircraft operator and maintenance and repair facility shall adhere to the Authority Engine Test Run Up Policy as contained in the Airport Operations Manual, as the same may be amended from time to time."* Among these policies are a prohibition on maintenance engine run-ups between 10:00 p.m. and 7:00 a.m., unless delay of the run-up would cause an aircraft to arrive or depart after 10:00 p.m. in the succeeding 24-hour period. In addition, specific run-up locations are designated at the run-up pad on the north edge of Taxiway D and in front of the Ameriflight hangar. The element of this measure related to the prohibition on maintenance engine run-ups between 10:00 p.m. and 7:00 a.m. was previously disapproved by the FAA pending the submittal of additional information. The element of this measure related to the designation of specific run-up locations was previously approved by the FAA. This measure was previously approved by the FAA as an element of the 1989 NCP and 2000 NCP. (NCP Page 1, Table 7E, Appendix A - page A-11).

FAA Action: Approved.

3. Continue Promoting Use of AC 91-53A, Noise Abatement Departure Procedures by Air Carrier Jets.

Description: This measure recommends that the Airport Authority continue promoting the use of noise abatement departure procedures in Advisory Circular 91-53A by airlines operating jet aircraft over 75,000 pounds, certificated gross takeoff weight. This measure was previously approved by the FAA as a voluntary measure only, as an element of the 1989 NCP and 2000 NCP. (NCP Page 1, Table 7E, Appendix A - page A-11).

FAA Action: Approved as Voluntary Only.

4. Continue Promoting Use of NBAA Noise Abatement Procedures, or Equivalent Manufacturer Procedures, by General Aviation Jet Aircraft.

Description: This measure recommends that the Airport Authority continue to actively encourage jet operators to use the National Business Aviation Association (NBAA) Approach and Landing Procedure and Standard Noise Abatement Departure Procedures, or equivalent quiet flying procedures developed by aircraft manufacturer. This measure was previously approved by the FAA as an element of the 1989 and 2000 NCP. (NCP Page 2, Table 7E, Appendix A - page A-11).

FAA Action: Approved as Voluntary Only.

5. Continue Working with the FAA Airport Traffic Control Tower to Maintain the Typical Traffic Pattern Altitude of 1,800 feet MSL.

Description: This measure recommends that the Airport Authority continue to work with the FAA Airport Traffic Control Tower to maintain the typical traffic pattern altitude of 1,800 feet above mean sea level (MSL). This altitude corresponds to a typical traffic pattern altitude of 1,000 feet above ground level. A similar measure was previously approved by the FAA as an element of the 1989 NCP. This measure was previously approved by the FAA as a voluntary measure only, as an element of the 1989 NCP and 2000 NCP. (NCP Page 2, Table 7E, Appendix A - pages A-11, and A-12).

FAA Action: Approved as Voluntary Only. Specific language for inclusion or amendment to existing FAA tower procedures is subject to separate FAA review and approval.

6. Continue the Placement of New Buildings on the Airport North of Runway 8-26 to Shield Nearby Neighborhood From Noise on Runway.

Description: This measure recommends new hangars and other aviation related buildings constructed in the area north of Runway 8-26 and west of Runway 15-33 be positioned to attenuate some of the noise of aircraft on the ground, shielding nearby residential neighborhoods. This measure was previously approved by the FAA as an element of the 2000 NCP. (NCP Page 2, Table 7E, Appendix A - page A-12).

FAA Action: Approved.

7. Designate Runway 26 as Nighttime Preferential Departure Runway.

Description: This measure recommends that Runway 26 be designated the preferential departure runway, weather and traffic permitting, after 10:00 p.m. and before 7:00 a.m. The primary effect of this policy would be to reduce noise exposure over the areas south of the airport exposed to noise from takeoffs on Runway 15. While aircraft noise would increase over areas west of the airport, most of the increase at levels above 65 CNEL would be confined to the commercial/industrial corridor along Sherman Way and the Southern Pacific Railroad tracks. This measure is proposed as an official, informal runway use program. This measure was previously approved by the FAA as a voluntary measure only, as an element of the 2000 NCP. (NCP Page 2, Table 7E, Appendix A - page A-12).

FAA Action: Approved as Voluntary Only. Specific language for inclusion or amendment to FAA tower procedures is subject to separate FAA review and approval. Airfield signs and other publications must not construe the procedure as mandatory and must be consistent with applicable FAA airfield signage standards

8. Establish Noise Abatement Departure Turn for Jet Takeoffs on Runway 26.

Description: This measure recommends a right turn to a heading of 275 degrees, beginning approximately 1,000 feet off the west end of Runway 26. Aircraft would continue to climb on this heading for at least three miles before turning to assigned headings. The intent is to confine departures to the Southern Pacific Railroad corridor extending west-northwest from the runway. By confining departing aircraft to this corridor, overflights of nearby residential neighborhoods can be reduced. It is recommended that this turn apply only to jet aircraft. This measure is recommended for implementation simultaneously with the nighttime preferential runway use program recommended in Measure 7 above. This measure was previously identified by the FAA as no action required at this time, as an element of the 2000 NCP. (NCP Page 2, Table 7E, Appendix A - page A-12).

FAA Action: No Action Required at This Time. This measure relates to flight procedures under Section 104(b). Additional review by FAA is necessary to evaluate the operational safety, feasibility, and environmental effects of this proposal.

9. Build Engine Maintenance Run-Up Enclosure

Description: This measure recommends the construction of an engine run-up enclosure to attenuate noise from maintenance run-ups. This measure further recommends the Airport Authority establish policies governing the use of the run-up enclosure. Such policies may include the requirement that all maintenance run-ups done at more than idle power be required to use the facility. With the required use of the run-up enclosure, consideration may also be given to the removal of existing nighttime maintenance run-up restrictions (Measure 2) if it can be demonstrated that no adverse noise impacts will be caused in residential areas as a result of such action. This measure was previously approved by the FAA as an element of the 2000 NCP. (NCP Page, 3, Table 7E, Appendix A - page A-13).

FAA Action: Approved.

NOISE MITIGATION MEASURES

1. Continue Existing Acoustical Treatment Program for Single Family Homes.

Description: This measure recommends the Airport Authority continue the acoustical treatment program for all single-family homes within the 65 CNEL noise contour based on projected noise for the year 2000 developed in the 1989 Noise Compatibility Study. This measure was previously approved by the FAA as an element of the 1989 NCP and 2000 NCP. (NCP Page 3, Table 7E, Appendix A - page A-14).

FAA Action: Approved in part, Disapproved in part. The portion of this measure that is approved is the Airport Authority may continue its acoustical treatment of single family homes that are located within the 65 CNEL noise contour for the forecasted year 2017 accepted by the FAA on October 10, 2013.

The portion that is disapproved is acoustical treatment of homes that previously were within the 65 CNEL contour for the forecast year 2000 NEM submitted in 1988, but that are now outside of the 65 CNEL contours for the NEMs submitted with this Part 150 update. Those homes are now outside of the 65 CNEL contour and thus are considered compatible with airport operations pursuant to 14 CFR Part 150. Thus, acoustical treatment of homes outside the 65 CNEL is inconsistent with FAA's Airport Revenue Use Policy.

2. Revise Residential Acoustical Treatment Program to Include Single Family Homes Within 65 CNEL Contour Based on 2017 NEM.

Description: This measure recommends that the eligibility area for the residential acoustical treatment program be expanded to include homes within the 65 CNEL noise contour based on the 2017 NEM which are not eligible under the existing acoustical treatment program. This measure was previously approved by the FAA as an element of the 2000 NCP and has been updated to reflect the 2017 NEM. (NCP Pages 9-10, Exhibits 1B and 1C, Table 7E, Appendix A, page A-14).

FAA Action: **Approved.** This measure is similar to Noise Mitigation Measure No.1. The Airport Authority may continue its acoustical treatment of single family homes that are located within the 65 CNEL noise contour for the forecasted year 2017 accepted by the FAA on October 10, 2013.

3. Establish Acoustical Treatment Program for Multi-Family Dwelling Units Within the 2017 Acoustical Treatment Eligibility Area.

Description: Through the Residential Acoustical Treatment Program (RATP), which was initiated in 1997, the Authority has provided sound insulation for over 2,000 dwelling units. As part of an earlier phase of the RATP, 363 multi-family residential dwelling units were insulated. However, through coordination with FAA, it was determined that sound insulation for multi-family dwellings, although allowable by Part 150 regulations, were not eligible for Federal funding since the Authority's 2000 NCP did not specify multi-family dwellings within its Noise Mitigation measure or NCP. Since the inception of the RATP, it has been the Authority's intent to pursue sound insulation for multi-family parcels where practical. (NCP Page 16, Table 7E, Exhibit 1E).

FAA Action: **Approved.** The specific identification of structures recommended for inclusion in the program and specific definition of the scope of the program will be required prior to approval for Federal funding based on the 2017 NEM.

4. For Otherwise Qualified Property Owners Who Have Been Unable to Participate in the Residential Acoustical Treatment Program (RATP) Due to Building Code Deficiencies, Offer to Purchase a Noise Easement as an Option for Owners of Single Family and Multi-Family Properties in the 2017 Acoustical Treatment Eligibility Area That Have Not Been Treated.

Description: Noise easements for the purpose of the NCP would be offered only after the following conditions are met: 1) the property owner enrolls in and is within the RATP boundary, 2) the property has an existing interior noise level of 45 CNEL or greater as measured with the windows closed, and 3) the property has code violation issues that the homeowner is unwilling/unable to remedy and is therefore unable to fully participate in the sound insulation program. (NCP Pages 17, 18, Table 7E).

FAA Action: **Approved in part, Disapproved in part.** The portion of this measure that is approved is the Airport Authority may offer avigation easements to property owners within the 2017 65 CNEL noise contour accepted by the FAA on October 10, 2013.

The portions that are disapproved are the additional local requirements proposed for easement eligibility.

LAND USE PLANNING MEASURES

1. Provision for Retention or an Easement Preventing Noise-Sensitive Land Uses of Property Located in the Northeast Quadrant of the Airport within the 2017 65 CNEL Noise Exposure Contour.

Description: The primary reason for retaining property impacted by high noise levels is to remove or prevent the development of noise-sensitive land uses on the subject property. The Burbank-Glendale-Pasadena Airport Authority does not have land use planning authority off airport property. Therefore, a potential exists for noise sensitive development to occur on the subject property under the current zoning by the City of Burbank. This measure would ensure future land use compatibility within the 65 CNEL noise contour for Bob Hope Airport. This measure was previously approved by the FAA as an element of the 2004 amendment to the NCP and has been updated to include an easement and reflect the 2017 NEM. (NCP page 12, Exhibit 1D, Table 7E, Appendix A - pages A-18 and A-19).

FAA Action: Approved. The subject land was originally acquired from Lockheed-Martin Corporation for a proposed passenger terminal partly on the former Lockheed Martin "B-6" property. The City of Burbank has prevented the Burbank-Glendale-Pasadena Airport Authority from constructing the replacement passenger terminal. This new measure would enable the Burbank-Glendale-Pasadena Airport Authority to retain property impacted by high noise levels to prevent the development of noise-sensitive land uses within the 65 CNEL noise contour and that would jeopardize the long-term viability of the airport. This revision does not affect the noise contours; increase the number of individuals affected by aircraft noise; delay the implementation of the other elements of the program; or result in an increased cost to the program.

PROGRAM MANAGEMENT MEASURES

1. Continue Noise Abatement Information Program.

Description: This measure recommends the Airport Authority continue use of the noise monitoring and flight track system to provide general information to the public and airport users upon request. This measure also recommends that the Airport Authority maintain the noise complaint phone number to log aircraft noise complaints and better respond to area residents. This measure was previously approved by the FAA as an element of the 2000 NCP and has been updated to reflect that Federal law now prohibits operation of Stage 2 aircraft in the continental United States. 49 United States Code (USC) §47354 completed the full phase-out of operations by Stage 2 jets as of December 31, 2015. (NCP Page 15, Table 7E, Appendix A - page A-16).

FAA Action: **Approved.** For reasons of aviation safety, this approval does not extend to use of the noise monitoring equipment for enforcement purposes by in situ measurement of any pre-determined noise thresholds.

2. Monitor Implementation of Updated Noise Compatibility Program.

Description: This measure recommends that the Airport Authority monitor implementation and compliance with the Noise Abatement Element of the Noise Compatibility Plan through periodic communications with the FAA Airport Traffic Control Tower, airport users, and planning officials of the cities of Burbank and Los Angeles. This measure also recommends that the Airport Authority develop informational and promotional materials explaining the noise abatement program to pilots. This measure was previously approved by the FAA as an element of the 2000 NCP. (NCP Page 6, Table 7E, Appendix A - page A-17).

FAA Action: **Approved.**

3. Update Noise Exposure Maps and Noise Compatibility Program.

Description: This measure recommends that the Airport Authority review the Noise Exposure Maps and the Noise Compatibility Program and consider revisions and refinements as necessary. This measure was previously approved by the FAA as an element of the 2000 NCP. (NCP Page 6, Table 7E, Appendix A - page A-17).

FAA Action: **Approved**. The program should be updated to respond to changing conditions in the local area and in the aviation industry. Any update, or changes to the NCP should be reviewed by the FAA, all affected aircraft operators, and local agencies. In order to comply with 14 CFR Part 150, the proposed changes should be submitted to FAA for approval after local consultation and a public hearing has been conducted.

4. Maintain Log of Nighttime Runway Use and Operations by Aircraft Type.

Description: This measure recommends that the Airport Authority standardize its nighttime operations log recording the date, time, aircraft identification number, aircraft type, operations type, runway used, and weather information for each operation. This measure was previously approved by the FAA as an element of the 2000 NCP. (NCP Page 6, Table 7E, Appendix A, page A-17).

FAA Action: **Approved.**

END OF RECORD OF APPROVAL

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Appendix C: Noise Modeling

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Operational Forecast Documents

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Technical Memorandum

To:	Timothy Middleton, HMMH
From:	Mead & Hunt
Date:	October 3, 2024
Subject:	BUR Part 150 Study – FAA TAF Confirmation

The purpose of this memorandum is to provide rationale for the Burbank-Glendale-Pasadena Airport Authority (BGPAA or Authority) to seek Federal Aviation Administration (FAA) approval for the Hollywood Burbank Airport (BUR) aircraft operational activity levels used in the 2025 Noise Exposure Map (NEM) update, which is being conducted in accordance with Title 14 of the Code of Federal Regulations Part 150 "Airport Noise Compatibility Planning". The BUR 2025 NEM will include aircraft operational levels representing existing conditions (2025) and forecast conditions (2030).

The FAA's 2023 Terminal Area Forecast (TAF), issued in February 2024, will be used as the basis for the BUR 2025 NEM, including for the generation of the existing and future years noise exposure contours. The 2023 TAF for BUR was confirmed through the preparation of independent forecasts of passenger enplanements, which informed the development of passenger airline operations. The remaining aircraft operations forecast segments were completed using standard methodologies (shown below). The independent forecasts are consistent with the TAF with respect to passenger enplanements, commercial aircraft operations, and total operations.

Given the small variance between the independent forecast and the TAF, we recommend the 2023 TAF forecast of operations for BUR in 2030 be used in the development of the aviation activity forecast for use in the NEM update.

1. Historical Data

The following tables include an overview of the historical activity from 2014 to 2023 for each market segment to be forecasted. The data sources referenced include:

- Airport activity records from https://www.hollywoodburbankairport.com/about-us/airport-statistics/
- US DOT T100 data
- FAA OPSNET data
- Diio Mi airline schedule data

Table 1 presents historical enplanements for the ten-year period from 2014 to 2023. As shown, enplanements have grown at a compound annual growth rate (CAGR) of 5 percent since 2014.

Table 1: BUR Passenger Enplanement Data 2014-2023

Calendar Year	Enplanements
2014	1,931,948
2015	1,972,531
2016	2,069,853
2017	2,365,919
2018	2,626,134
2019	2,987,495
2020	996,712
2021	1,861,199
2022	2,941,565
2023	3,005,380
CAGR 2014 -2023	**5.0%**

Source: Airport records accessed May 2024.

Table 2 presents historical operations for the Airport. As shown, airport operations have grown at 2.0%, with commercial operations growing at 4.3%.

Table 2: BUR Aircraft Operations Data 2014-2023

Year	Commercial operations			General aviation	Military	Total
	Air carrier	Air taxi & commuter	Subtotal			
2014	39,706	21,204	60,910	56,843	801	118,554
2015	40,302	20,817	61,119	66,034	1015	128,168
2016	43,846	20,205	64,051	67,173	1167	132,391
2017	51,486	19,625	71,111	59,466	1082	131,659
2018	53,678	22,509	76,187	55,118	718	132,023
2019	61,643	26,316	87,959	57,930	551	146,440
2020	32,761	17,231	49,992	55,450	423	105,865
2021	42,034	20,613	62,647	62,410	372	125,429
2022	63,938	25,920	89,858	52,306	447	142,611
2023	63,734	25,548	89,282	51,993	403	141,678
CAGR 2014 -2023	**5.4%**	**2.1%**	**4.3%**	**-1.0%**	**-7.4%**	**2. 0%**

Source: Airport records accessed May 2024.

Table 3 presents the historical and forecast economic data from the Los Angeles County geographical area that was used to generate forecasts of passenger enplanements. Population data was sourced from the California Department of Finance and economic data was sourced from Woods & Poole.

Table 3: BUR Los Angeles County Key Economic Data 2014-2030

Year	Population	Income per Capita	GRP ($ mil)	Employment	Earnings ($ mil)	Retail Sales ($ mil)
2014	10,078,942	$67,146	$825,974	6,075,758	$514,823	$205,699
2015	10,124,800	$71,068	$872,223	6,243,639	$538,376	$214,324
2016	10,150,386	$72,586	$889,519	6,358,580	$549,860	$220,993
2017	10,181,162	$73,568	$917,260	6,413,139	$559,713	$227,740
2018	10,192,593	$74,902	$944,205	6,551,507	$569,067	$230,986
2019	10,163,139	$77,678	$976,753	6,582,503	$586,654	$232,573
2020	10,014,009	$83,093	$914,032	6,094,927	$574,468	$229,084
2021	9,942,011	$82,194	$963,013	6,524,082	$604,758	$264,675
2022	9,834,503	$83,983	$987,925	6,738,666	$619,915	$261,636
2023	9,761,210	$85,785	$1,012,855	6,953,246	$635,073	$258,597
-	-	-	-	-	-	-
2025	9,676,333	$88,880	$1,055,883	7,143,667	$661,108	$259,530
2030	9,566,663	$96,840	$1,164,941	7,597,871	$727,039	$277,650
CAGR 2023 – 2030	**-0.3%**	**1.7%**	**2.0%**	**1.3%**	**2.0%**	**1.0%**

Sources: California Department of Finance (Population); Woods & Poole, accessed May 2024 (Income per Capita, GRP, Employment, Earnings, and Retail Sales).

2. Forecasts of Aviation Activity

The following sections summarize independent forecasts and, where applicable, a comparison to the FAA 2023 TAF as published in 2024. The aviation activity segments below include:

- Passenger enplanements
- Aircraft operations
  - Passenger airline operations
  - Cargo airline operations
  - Unscheduled commercial operations
  - General aviation operations
  - Military operations

A. Passenger Enplanement Forecasts

Single-variable regression analyses were conducted using population, employment, income per capita, and gross regional product (GRP) data as presented in **Table 3**. GRP and income per capita resulted in positive correlation coefficients. “Two methods yielded positive correlation coefficients, GRP (method 1) and income per capita (method 2). Single-variable regression analysis of both variables also resulted in strong R-squared values that indicate a valid forecast. The results of the regression-based forecast are shown in **Table 4**. While both method 1 and method 2 provide valid forecasts, the enplanements from method 1 were used to generate the aircraft operations presented in **Table 5** of this memo.

Table 4: BUR Passenger Enplanement Forecasts

Year	Method 1 Income Per Capita Regression	Method 2 Gross Regional Product Regression	2023 FAA TAF	Variance from method 1
2023 (actual)	3,005,380	3,005,380	3,080,904	-
2025	3,295,722	3,300,640	3,358,262	-1.9%
2030	3,780,347	3,975,601	3,697,766	2.2%
CAGR 2023-2030	**3.3%**	**4.1%**	**2.6%**	**-**
Correlation coefficient	0.843	0.908	N/A	-
R-squared value	0.801	0.899	N/A	-

Source: M&H forecast analysis and the FAA 2023 Terminal Area Forecast, published in February 2024.

B. Aircraft operations

This section presents forecasts of:

- Passenger aircraft operations
- Air cargo operations
- Unscheduled commercial operations
- General aviation operations

Table 6 presents a forecast of passenger aircraft operations. These aircraft operations were derived from the passenger enplanement forecasts presented in **Table 5**, which also shows assumptions of load factor and average aircraft gauge (in terms of seats). Departures were projected using the assumed load factors and gauge and then doubled to calculate the total number of operations.

Table 5: BUR Passenger Airline Aircraft Operations Forecasts

Year	Operations	Seats per departure	Load factor
Historical			
2014	46,992	116	71%
2015	48,634	113	72%
2016	48,126	123	70%
2017	53,240	127	70%
2018	55,648	129	73%
2019	67,072	127	70%
2020	38,978	124	41%
2021	41,732	138	65%
2022	65,262	141	64%
2023	62,758	139	69%
Forecast			
2025	67,269	139	70%
2030	74,493	141	72%
CAGR 2023-2030	**2.5%**	**0.2%**	**-**

Source: M&H analysis of scheduled airline data from Diio Mi, accessed in May 2024.

Table 6 presents a forecast of air cargo aircraft operations. Air cargo tonnage has declined over this 10-year historic period and, given that the historical tonnage has varied between a low of approximately 34,000 in 2023 and a high of approximately 51,000 tons, the average of the most recent 5 years was used to project 44,518 tons in 2025 and 2030. Over that same period, the tons per operation averaged 27 tons, resulting in cargo operations growing from 1,412 in 2023 to 1,631 in 2025.

Table 6: BUR Air Cargo Aircraft Operations Forecasts

Year	Tonnage	Operations	Tons per Operation
Historical			
2014	51,059	1,705	29.9
2015	49,672	1,771	28.0
2016	48,152	1,812	26.6
2017	49,356	1,737	28.4
2018	49,627	1,785	27.8
2019	48,103	1,770	27.2
2020	51,316	1,837	27.9
2021	48,929	1,663	29.4
2022	40,434	1,453	27.8
2023	33,807	1,412	23.9
Forecast			
2025	44,518	1,631	27.3
2030	44,518	1,631	27.3
CAGR 2014-2023	**-4.5%**	**-2.1%**	**-2.5%**
CAGR 2023-2030	**4.0%**	**2.1**	**1.9%**

Source: M&H analysis of USDOT T100 data, accessed in May 2024.

Table 7 presents a forecast of chartered and unscheduled commercial operations. At BUR, these operations include those conducted by JSX on 30-seat Embraer 135 aircraft, which comprise 8.9% of the total operations in this category from 2023. Together, passenger airline, cargo airline, and unscheduled commercial operations comprise BUR's commercial operations, which were compared to the FAA TAF Commercial Operations (air carrier / air taxi).

Notably, JSX operations have been the subject of recent news stories (June 2024) regarding the FAA's evaluation of public charter operations. This forecast presumes that their activity would continue to be conservative assumption.[1]

Table 8 summarizes the commercial aircraft operations for the Airport by summing the passenger airline, cargo airline, and unscheduled commercial aircraft operations from **Table 5**, **Table 6**, and **Table 7**. As shown, the forecasts of commercial operations compare to those from the Terminal Area Forecast, with a variance of -0.4% in 2025 and 3.5% in 2030.

Table 7: BUR Chartered and Unscheduled Commercial Operations

Year	Aircraft operations
Historical	
2014	12,185
2015	10,654
2016	14,126
2017	16,134
2018	18,754
2019	18,950
2020	8,811
2021	19,252
2022	23,143
2023	25,112
Forecast	
2025	23,967
2030	29,334
CAGR 2023-2030	**2.2%**

Note: Unscheduled operations were estimated subtracting the sum of scheduled airline (from Diio Mi) and cargo airline operations (from T100) from the air carrier and air taxi commuter totals from airport records.
Source: Airport records.

Table 8: BUR Commercial Aircraft Operations Forecasts Comparison to TAF

Year	Commercial Operations (COM Ops)				TAF Commercial Operations (TAF Ops)			Variance
	Passenger Airline	Cargo Airline	Unscheduled Commercial	Total COM Ops	Air Carrier	Air Taxi & Commuter	Total TAF Ops	
Historical								
2014	46,992	1,705	12,185	60,882	39,699	21,570	61,269	-0.6%
2015	48,634	1,771	10,654	61,059	39,799	21,053	60,852	0.3%
2016	48,126	1,812	14,126	64,064	42,935	20,085	63,020	1.7%
2017	53,240	1,737	16,134	71,111	49,269	19,537	68,806	3.3%
2018	55,648	1,785	18,754	76,187	53,213	22,289	75,502	0.9%
2019	67,072	1,770	18,950	87,792	59,691	24,925	84,616	3.8%
2020	38,978	1,837	8,811	49,626	42,619	20,204	62,823	-21.0%
2021	41,732	1,663	19,252	62,647	33,180	18,491	51,671	21.2%
2022	65,262	1,453	23,143	89,858	63,291	25,397	88,688	1.3%
2023	62,758	1,412	25,112	89,282	62,664	26,103	88,767	0.6%
Forecast								
2025	67,269	1,631	23,967	92,866	67,477	25,769	93,246	-0.4%
2030	74,493	1,631	29,334	105,548	74,827	27,084	101,911	3.5%
CAGR 2023-2030	**2.5%**	**2.1%**	**2.2%**	2.4%	**2.6%**	**0.5%**	**2.0%**	**-**

Source: M&H forecasts, Diio Mi schedule data, airport records, T100 data, and FAA Terminal Area Forecast 2023.

[1] https://skift.com/2024/06/17/faa-seeks-to-toughen-safety-rules-on-public-charter-flights/

Table 9 presents total general aviation (GA) operations forecasts prepared for BUR. Two methods were used: 10-year trend analysis (method 1) and the application of FAA Aerospace Forecasts national growth rate for general aviation (method 2); these methods resulted in a CAGR projection of 0.46% for itinerant GA and a CAGR projection of 0.50% for local GA operations. As with cargo, a more conservative forecast (with increasing general aviation operations) was used for the purposes of comparison to the FAA TAF in **Table 11**. **Table 10** presents a summary of the selected aircraft operations forecasts presented in **Table 5** through **Table 9**.

Table 9: BUR General Aviation Aircraft operations

	10-year trend	FAA Aerospace	FAA TAF	Variance from Aerospace-Informed Forecast
Historical				
2014	56,843	56,843	57,767	-1.6%
2015	66,034	66,034	64,468	2.4%
2016	67,173	67,173	66,949	0.3%
2017	59,466	59,466	59,406	0.1%
2018	55,118	55,118	57,638	-4.4%
2019	57,930	57,930	56,645	2.3%
2020	55,450	55,450	55,528	-0.1%
2021	62,410	62,410	61,792	1.0%
2022	52,306	52,306	54,686	-4.4%
2023	51,993	51,993	50,593	2.8%
Forecast				
2025	51,365	52,494	56,594	-7.2%
2030	45,829	53,767	60,665	-11.4%
CAGR 2023-2030	**-1.8%**	**0.5%**	**2.6%**	

Source: M&H forecast analysis and the FAA 2023 Terminal Area Forecast.

Table 10: BUR Aircraft Operations Forecasts Summary

Year	Commercial operations*	General aviation	Military	Total operations
Historical				
2014	60,882	56,843	801	118,526
2015	61,059	66,034	1015	128,108
2016	64,064	67,173	1167	132,404
2017	71,111	59,466	1082	131,659
2018	76,187	55,118	718	132,023
2019	87,792	57,930	551	146,273
2020	49,626	55,450	423	105,499
2021	62,647	62,410	372	125,429
2022	89,858	52,306	447	142,611
2023	89,282	51,993	403	141,678
Forecast				
2025	92,866	52,494	400	145,967
2030	105,458	53,767	400	159,626
CAGR 2023-2030	**2.4%**	**0.5%**	**-0.1%**	**1.7%**

*Notes: *Historical commercial operations = sum of air carrier and air taxi operations as reported in OPSNET.*
Source: M&H forecast analysis, FAA OPSNET.

Table 11 presents a summary of the forecast comparison to the FAA 2023 TAF for BUR. The variances are each below 4% for each segment of the forecast. The FAA considers forecasts technically consistent when the variance is less than 10% in 5 years and less than 15% in 10 years. Given the small variances in **Table 11**, it is recommended that the 2023 TAF be used for the BUR 2025 NEM.

Table 11: BUR Comparison of Forecasts

Year	M&H forecast	2023 TAF	Variance
Passenger enplanements			
2023	3,005,380	3,080,904	-2.5%
2025	3,295,722	3,358,262	-1.9%
2030	3,780,347	3,697,766	2.2%
Commercial operations			
2023	89,282	88,767	0.6%
2025	92,866	93,246	-0.4%
2030	105,458	101,911	3.5%
Total operations			
2023	141,678	139,760	1.4%
2025	145,760	150,240	-3.0%
2030	159,626	162,976	-2.1%

Source: M&H forecast analysis, FAA OPSNET.

3. Fleet Mix Forecast for Noise Analysis

Table 12 presents fleet mix inputs for the AEDT model. The fleet mix composition shown for 2023 was based upon the fleet mix radar data provided by HMMH for 2023, apart from the military fleet. In the military category, TFMSC data from 2023 was evaluated and representative sample of the military fleet mix is presented herein. The 2023 Terminal Area Forecast operational totals for each category drive the aggregate number of operations represented for each future year.

A summary of the changes between the years included in the analysis follows.

From 2023 to 2025:

1. The operational totals were increased to proportionally illustrate the 2025 total operations by category, reflecting existing conditions for the 2025 existing NEM, to align with the submittal date of 2025.
2. The air carrier category fleet mix was adjusted for the narrowbody aircraft used by the passenger and all-cargo airlines by evaluating the US T100 and Diio Mi airline schedule data.
3. The commuter category share of the CRJ-200 activity was decreased (informed by the Diio Mi airline schedule data), though this category remained largely unchanged from 2023.
4. The general aviation fleet mix was largely unchanged.
5. The military fleet mix reflects a representative sample of aircraft categorized as military that are recorded in the FAA's TFMSC data from 2023.

From 2025 to 2030:

1. The operational totals were increased to proportionally illustrate the 2030 total operations by category.
2. In the air carrier category:
   - It was assumed for passenger airlines that some of the older and lesser-gauge narrowbodies would be up-gauged, meaning a larger aircraft would be used to fulfill the same operational mission.
     - For example, Southwest and United were assumed to fly more 737 MAX variants in 2028 relative to 2023, which results in fewer A320 and older B737 variants. In addition, the A220 was introduced to the fleet (e.g., Delta Air Lines, JetBlue) which potentially results in fewer 70-seat Embraer regional jets in the commuter category.
   - It was assumed that the air cargo fleet mix would continue to be dominated by B757 aircraft, with fewer A300 variants for both FedEx and UPS.
3. In the commuter category, the share of CRJ-200 activity was eliminated from the fleet mix. This reflects the fact that the carriers still flying the CRJ-200 have been retiring them at a rate that will likely have them removed from larger markets like BUR. Further, the share of Embraer 175 and similar ~70 seat aircraft was reviewed to reflect some up-gauging to narrowbody aircraft in the air carrier category.
4. The general aviation and military fleet mix was largely unchanged from 2025.

Table 12: BUR Operations Fleet Mix 2023-2030

Aircraft	2023		2025		2030	
	Operations	% of Fleet	Operations	% of Fleet	Operations	% of Fleet
Cargo Air Carrier						
Airbus A300F4-600 Series	1,336.2	82.1%	776.0	45.0%	764.9	40.0%
Boeing 757-200 Series Freighter	291.0	17.9%	86.2	5.0%	57.4	3.0%
Boeing 767-300F	0.0	0.0%	862.2	50.0%	1,089.9	57.0%
Sum	**1,627.2**	**100.0%**	**1,724.3**	**100.0%**	**1,912.2**	**100.0%**
Passenger Air Carrier						
Boeing 737-700 Series / Max 7	44,407.0	71.6%	36,821.5	56.0%	37,915.7	52.0%
Embraer ERJ175-LR	6,851.0	11.0%	8,547.8	13.0%	10,208.1	14.0%
Boeing 737-800 Series	2,726.3	4.4%	3,945.2	6.0%	2,916.6	4.0%
Boeing 737-900-ER	2,319.1	3.7%	1,972.6	3.0%	2,187.4	3.0%
Boeing 737-9 / Max 9	940.4	1.5%	1,315.1	2.0%	3,645.7	5.0%
Boeing 737 Max 8	0.0	0.0%	3,945.2	6.0%	5,833.2	8.0%
Airbus A320-200 Series	2,015.7	3.2%	1,643.8	2.0%	0.0	0.0%
Airbus A319-100 Series	1,111.1	1.8%	1,972.6	3.0%	1,458.3	2.0%
Airbus A320-NEO	966.4	1.6%	2,630.1	4.0%	3,645.7	5.0%
Airbus A321-NEO	0.0	0.0%	1,315.1	2.0%	2,916.6	4.0%
Airbus A220	0.0	0.0%	1,315.1	2.0%	2,187.4	3.0%
Bombardier CRJ-700	711.8	1.1%	657.5	1.0%	0.0	0.0%
Sum	**62,048.8**	**100.0%**	**65,752.7**	**100.0%**	**72,914.8**	**100.0%**
Commuter/Air Taxi						
Embraer ERJ140	4,576.3	18.0%	4,756.4	18.5%	5,130.6	18.9%
Embraer ERJ145-LR	4,282.9	16.8%	4,451.5	17.3%	4,801.7	17.7%
Embraer ERJ135-LR	1,923.8	7.6%	1,999.6	7.8%	2,156.9	8.0%
Bombardier CRJ-200	303.2	1.2%	0.0	0.0%	0.0	0.0%
Raytheon Super King Air 300	1,776.8	7.0%	1,801.9	7.0%	1,855.5	6.9%
Fairchild Metro IVC	1,733.0	6.8%	1,757.4	6.8%	1,809.7	6.7%
Cessna 680-A Citation Latitude	1,267.6	5.0%	1,285.5	5.0%	1,323.8	4.9%
Raytheon Beech 99	1,225.2	4.8%	1,242.5	4.8%	1,279.5	4.7%
Bombardier Challenger 350	1,121.1	4.4%	1,136.9	4.4%	1,170.7	4.3%
Cessna Citation Jet CJ/CJ1 (Cessna 525)	1,097.3	4.3%	1,112.8	4.3%	1,145.9	4.2%
Embraer Phenom 300 (EMB-505)	982.6	3.9%	996.5	3.9%	1,026.1	3.8%
Gulfstream G450	802.2	3.2%	813.5	3.2%	837.7	3.1%
Bombardier Challenger 300	724.5	2.8%	734.7	2.9%	756.6	2.8%
Eurocopter EC-T2 (CPDS)	621.9	2.4%	630.7	2.4%	649.5	2.4%
Cessna 700 Citation Longitude	462.1	1.8%	468.6	1.8%	482.6	1.8%
Bombardier Learjet 35	376.5	1.5%	381.9	1.5%	393.2	1.5%
Cessna 560 Citation XLS	363.6	1.4%	368.7	1.4%	379.7	1.4%
Cessna 750 Citation X	351.9	1.4%	356.9	1.4%	367.5	1.4%
Embraer ERJ135-ER	350.5	1.4%	355.5	1.4%	366.0	1.4%
Bombardier Challenger 600	337.5	1.3%	342.2	1.3%	352.4	1.3%
Agusta A-109	316.8	1.2%	321.3	1.2%	330.9	1.2%
Bombardier Challenger 605	240.0	0.9%	243.4	0.9%	250.6	0.9%
Pilatus PC-12	207.6	0.8%	210.5	0.8%	216.8	0.8%
Sum	**25,445.0**	**100.0%**	**25,769.0**	**100.0%**	**27,084.0**	**100.0%**
General Aviation						
Robinson R22	3,478.6	6.6%	3,757.6	6.6%	4,027.9	6.6%
Robinson R44 Raven / Lycoming O-540-F1B5	26,650.2	50.9%	28,787.7	50.9%	30,858.5	50.9%
Agusta A-109	535.7	1.0%	578.7	1.0%	620.3	1.0%
Aerospatiale SA-350D Astar (AS-350)	2,220.3	4.2%	2,398.4	4.2%	2,570.9	4.2%
Eurocopter EC-130	1,483.2	2.8%	1,602.2	2.8%	1,717.4	2.8%
Boeing MD520N	1,011.5	1.9%	1,092.6	1.9%	1,171.2	1.9%
Cessna Citation Jet CJ/CJ1 (Cessna 525)	618.6	1.2%	668.2	1.2%	716.2	1.2%
Cessna 560 Citation XLS	734.9	1.4%	793.8	1.4%	850.9	1.4%
Cessna 750 Citation X	153.6	0.3%	165.9	0.3%	177.9	0.3%
Bombardier Challenger 600	170.4	0.3%	184.1	0.3%	197.3	0.3%
Embraer Praetor 600	537.4	1.0%	580.5	1.0%	622.3	1.0%
Dassault Falcon 2000	523.8	1.0%	565.8	1.0%	606.5	1.0%
Falcon 7X	651.4	1.2%	703.6	1.2%	754.2	1.2%
Bombardier Global Express	1,269.0	2.4%	1,370.8	2.4%	1,469.4	2.4%
Gulfstream G-5 Gulfstream 5 / G-5SP Gulfstream G500	1,992.7	3.8%	2,152.5	3.8%	2,307.3	3.8%
Gulfstream G650ER	1,574.3	3.0%	1,700.5	3.0%	1,822.8	3.0%
Raytheon Hawker 800	691.7	1.3%	747.2	1.3%	801.0	1.3%
Cessna 172 Skyhawk	2,913.7	5.6%	3,147.4	5.6%	3,373.8	5.6%
Cessna 182	603.6	1.2%	652.0	1.2%	698.9	1.2%
Piper PA-28 Cherokee Series	522.8	1.0%	564.7	1.0%	605.4	1.0%
Cirrus SR20	683.7	1.3%	738.5	1.3%	791.6	1.3%
Cirrus SR22 (FAS)	1,118.3	2.1%	1,208.0	2.1%	1,294.9	2.1%
Raytheon Super King Air 200	1,096.8	2.1%	1,184.8	2.1%	1,270.0	2.1%
Pilatus PC-12	1,155.7	2.2%	1,248.4	2.2%	1,338.2	2.2%
Sum	**52,392.0**	**100.0%**	**56,594.0**	**100.0%**	**60,665.0**	**100.0%**
Military						
H60 - Sikorsky SH-60 Seahawk	81	20.0%	80	20.0%	80	20.0%
V22 - Bell V-22 Osprey	73	18.1%	73	18.1%	73	18.1%
GLEX - Bombardier BD-700 Global Express	79	19.4%	78	19.4%	78	19.4%
EC45/EC35 - Eurocopter	68	16.9%	68	16.9%	68	16.9%
C17 - Boeing Globemaster 3	48	11.9%	48	11.9%	48	11.9%
C30J - C-130J Hercules ; Lockheed	56	13.8%	55	13.8%	55	13.8%
Sum	**405.0**	**100.0%**	**400.00**	**100.0%**	**400.00**	**100.0%**

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division
Los Angeles Airports District Office

777 S. Aviation Blvd, Suite 105
El Segundo, CA 90245

March 14, 2025

Transmitted Electronically via email

Mr. Aaron Galinis
Senior Airport Planner
Hollywood Burbank Airport
2627 N Hollywood Way
Burbank, CA 91505-1062

Hollywood Burbank Airport (BUR)
Part 150 Forecast Approval

Dear Mr. Galinis,

The Federal Aviation Administration (FAA) approves the baseline scenario (2025) through year 2030 in the Hollywood Burbank Airport (BUR) TAF confirmation, submitted on February 18, 2025 for use in the Part 150 "Airport Noise Compatibility Planning" Study. The review included coordination with APP-400 in FAA Headquarters. We found the forecast to be generally consistent with the 2024 TAF. It uses current data and is supported by generally accepted forecasting methodologies.

The approval of the forecast does not automatically constitute a commitment on the part of the United States to participate in any development recommended in the Part 150 study or shown on the ALP. FAA approval of the baseline scenario in this forecast does not constitute justification for future projects. Justification for future projects will be made based on activity levels at the time the project is requested for development, in accordance with criteria in FAA Orders 5090.5 and 5100.38. Documentation of actual activity levels meeting planning activity levels will be necessary to justify AIP funding for eligible projects. Further, the approved forecast may be subject to additional analyses if the fundamental rationale of the forecast or the critical aircraft changes materially.

If you have any questions about this forecast approval, please call me at 424-405-7286.

Sincerely,

VINCENT K NGUYEN

Digitally signed by VINCENT K NGUYEN
Date: 2025.03.14 14:00:26 -07'00'

Vincent Nguyen
Los Angeles Airports District Office – Program Manager

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Non-Standard Modeling Documents

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HMMH
700 District Avenue, Suite 800
Burlington, MA 01803
781.229.0707

TECHNICAL MEMORANDUM

To:	Aaron Galinis, Airport Planner Maggie Martinez, Director Noise & Environmental Affairs Patrick Lammerding, Deputy Executive Director, Planning & Development
From:	David Crandall, Principal Consultant Timothy Middleton, C.M., Principal Consultant Mariano Sarrate, Senior Technical Analyst
Date:	December 20, 2024
Subject:	Hollywood Burbank Airport (BUR) Part 150 Update Request for Non-standard AEDT Modeling Approval
Reference:	HMMH Project Number 22-0262A

1.0 Introduction

The Burbank-Glendale-Pasadena Airport Authority (BGPAA) has retained HMMH, in collaboration with Mead & Hunt and Arellano Associates, to conduct a Part 150 Study for Hollywood Burbank Airport (BUR). The Study will be prepared in accordance with Title 14 of the Code of Federal Regulations Part 150 (14 CFR Part 150 or Part 150). HMMH will use the Federal Aviation Administration (FAA) Aviation Environmental Design Tool (AEDT), Version 3g[1], to generate noise exposure contours for the Noise Exposure Map (NEM) under both existing and forecast conditions.

The purpose of this memorandum is to request FAA approval for non-standard aircraft substitutions, specifically for aircraft types that lack predefined entries within the AEDT database.

2.0 Background

This memorandum aligns with the guidance in Section 5 of the FAA document titled "Guidance on Using the Aviation Environmental Design Tool (AEDT) to Conduct Environmental Modeling for FAA Actions Subject to NEPA" dated October 27, 2017 (herein referred to as "AEDT guidance document").[2] This request falls under Section 5.2.2, which covers analysis methods requiring review by the Office of Environment and Energy (AEE), including:

- Non-standard aircraft noise and performance data substitutions for aircraft that do not exist in AEDT default data.

HMMH believes that this request should be routed in accordance with Section 5.1 of the AEDT guidance document, which states that the project consultant must submit the review package to the appropriate FAA headquarters office after coordinating with the FAA project manager in the district office. We ask that you route this memo appropriately within FAA. After review at FAA headquarters, we expect a document from AEE responding to the methods presented in this memorandum. The AEE response will be included in the BUR Part 150 Noise Exposure Map (NEM) technical documentation supporting the noise analysis.

3.0 Aircraft Substitution

Mead & Hunt, in collaboration with HMMH and airport staff, has developed a draft BUR operations forecast to use for the BUR Part 150 study. The draft forecast included various aircraft types that are defined within AEDT. **Table 1** shows the aircraft type designators in the draft forecast that do not appear in the "FltActypeToUniqueEquipMap" table in the AEDT 3g FLEET database. Both aircraft types have relatively few total operations at BUR; however, they

[1] Released August 28, 2024. https://aedt.faa.gov/3g_information.aspx
[2] https://aedt.faa.gov/Documents/guidance_aedt_nepa.pdf

make up a noticeable portion of the military operations at the airport. **Table 1** also provides information on the proposed non-standard AEDT 3g assignments for each.

Table 1. Summary of Requested Non-standard AEDT Aircraft Substitutions

Aircraft Information			**Proposed AEDT 3g Assignment Data**				
Aircraft Designator	Aircraft Model	Description and Engine Type	AEDT Equipment ID	AEDT Airframe	AEDT Engine Model	AEDT ANP Type	AEDT BADA_ID
V22	Bell-Boeing V-22 Osprey	Tiltrotor, to turbine engines	1951	Fokker F27-300 Series	RDa.7	HS748A	F27
EC45	Eurocopter Airbus Helicopters-KawasakiBK-117C-2/ EC-145 / UH-72 Lakota	Helicopter 2 turbo shaft	4125	Bell 429	TPE331-1	B429	P28A

3.1 Bell-Boeing V-22 Osprey (V22)

The V-22 Osprey is a twin turboprop military tilt-rotor aircraft. Although the V-22 is anecdotally most known for its vertical take-off and landing (VTOL) capability, the aircraft can also operate in a variety of modes with the nacelles and rotors pitched forward with some combination of the wing and rotors jointly providing lift and resulting in higher available take-off weights. The listed VTOL maximum take-off weight is listed as 52,700 pounds, although in some missions it can have a take-off weight of up to 60,500 pounds.[3]

The number of V-22 operations at the airport is relatively small compared to the overall activity at BUR. However, the V-22 operations are noticeable to the public because of the aircraft's uniqueness. The V-22 is one of the few military aircraft types operating at the airport. Discussions with BUR airport staff indicate operations of the V-22 at BUR generally follow fixed-wing flight paths as opposed to helicopter operational paths, especially off airport property. This includes using departure flight paths like fixed-wing aircraft and approaches lining up on runway centerline as fixed-wing aircraft do, as opposed to the helicopter flight paths.

3.1.1 Proposed AEDT Substitution

We propose to model the V-22 operations as a fixed-wing aircraft, heavy twin-engine turboprop. We initially identified ANP types HS784A, CVR580 and ATR72 as candidates based on the AEDT listed ANP weight.[4] We then identified the HS784A as likely the loudest of the three via review of the respective Noise-Power-Distance curves.[5] Of the AEDT equipment IDs using HS784A, we further subdivided to Airframe and BADA type Fokker 27 because of its high wing configuration similar to the V-22. Ultimately, we selected airframe Fokker F27-300 Series with AEDT equipment ID 1951. AEDT 3g equipment ID 1951 is not expected to represent any other operations on this project, which allows the V-22 operations to be identifiable throughout the modeling and reporting process.

Further, we performed an Area Equivalent Method (AEM) analysis using the draft 2025 operations forecast, which is under review, substituting the V-22 operations for the HS784A (used as the AEM Baseline) compared to the

[3] Websites of the aircraft manufacturing partners and the three current US military branches indicate the VTOL maximum take-off weight is 52,700 pounds, the "Takeoff, Short", maximum weight is 57,000 pounds and the "Takeoff, Self-Deploy" maximum weight is 60,500 pounds.
https://www.aviation.marines.mil/About/Aircraft/Tilt-Rotor/
https://www.af.mil/About-Us/Fact-Sheets/Display/Article/104531/cv-22-osprey/
https://www.navy.mil/Resources/Fact-Files/Display-FactFiles/Article/2417719/
https://www.bellflight.com/products/bell-boeing-v-22
https://www.boeing.com/defense/v-22-osprey#technical-specifications
[4] AEDT table FLT_ANP_AIRPLANES
[5] FLT_ANP_AIRPLANE_NPD_CURVES where NOISE_TYPE = 'S' for Sound Exposure Level, which is the curve used to support DNL and CNEL.

CVR580 (assigned as the AEM Alternative). The percentage change of the area is less than 3/100ths of a percent and therefore considered negligible. For perspective, typical use of the AEM uses a threshold of a 17 percent change in area as an indication that further analysis is warranted.[6]

3.2 Eurocopter 145 (EC45)

The Eurocopter is associated with several manufacturers and several variants. In this project, the EC45 is associated with military operations and therefore are presumed to be the US Army's UH-72 Lakota variant. The number of operations is relatively small compared to the overall activity at BUR; however, this is one of the few military aircraft types operating at the airport.

3.2.1 Proposed AEDT Substitution

We propose to represent UH-72 operations with ANP type B429. The selection of ANP type B429 is based on information represented in the AEDT FAQs dated August 2024 via the listed "UH72" "Lakota - EC145 mili version" variants.[7] However, that document does not indicate if the helicopters substitutions listed, including this UH72/ B429 association, are approved in accordance with the aforementioned AEDT guidance document and therefore it is included in this request. We have selected AEDT 3g equipment ID 4125, which uses ANP Helicopter Type B429. AEDT 3g equipment ID 4125 is not expected to represent any other operations on this project, which allows the UH72/EC45 operations to be identifiable throughout the modeling and reporting process. We also ask that this substitution is valid for potential civilian EC45 operations, should further research indicate other operators of the type at BUR.

3.3 Request for Approval

We respectfully request the FAA's review and approval of these proposed non-standard substitutions. Following approval, the AEE's response will be appended to the technical documentation of the NEM.

[6] The AEM model, Version 2c SP2, and associated documentation, was available at the time of analysis at https://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aem_model
The ATR72 is not available in AEM model Version 2c SP2.
[7] The August 2024 edition is publicly available at https://aedt.faa.gov/FAQs/allFAQs.aspx

APPENDIX A. AREA EQUIVALENT METHOD (AEM) VERSION 2C SP2

- aem_2c_sp2_V22_HS784A_CVR580_20241024.pdf

Federal Aviation Administration

Office of Environment and Energy

http://www.faa.gov/about/office_org/headquarters_offices/apl/research/models/aem_model/

Area Equivalent Method (AEM) Version 2c SP2

Airport Name/Code:	DRAFT 2025 ops w/ V-22 as HS784A (Base) vs CVR580 (Alt)

DNL (dBA)	Baseline Area (Sq. Mi.)	Alternative Area (Sq. Mi.)	Percent Change in Area
65	1.0	1.0	-0.029%
70	0.4	0.4	-0.021%

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
707				
720				
737				
7478				
707120				
707320				
717200				
727100				
727200				
737300				
737400				
737500				
737700	51.11	1.13	51.11	1.13
737800	14.79	0.52	14.79	0.52
747100				
747200				
747400				
757300				
767300	0.82	0.36	0.82	0.36
767400				
777200				
777300				
1900D				
707QN				
720B				
727D15				
727D17				
727EM1				
727EM2				
727Q15				
727Q7				
727Q9				
727QF				
7373B2				
737D17				
737N17				
737N9				
737QN				
74710Q				
74720A				
74720B				

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
747SP				
757PW	0.05	0.01	0.05	0.01
757RR	0.06	0.00	0.06	0.00
767CF6				
767JT9				
7773ER				
7878R				
A10A				
A3				
A300-622R	0.69	0.37	0.69	0.37
A300B4-203				
A310-304				
A319-131	2.62	0.08	2.62	0.08
A320-211				
A320-232	5.20	0.21	5.20	0.21
A321-232	1.70	0.10	1.70	0.10
A330-301				
A330-343				
A340-211				
A340-642				
A37				
A380-841				
A380-861				
A4C				
A6A				
A7D				
A7E				
B1				
B2A				
B52BDE				
B52G				
B52H				
B57E				
BAC111				
BAE146				
BAE300				
BEC58P				
C118				
C12				
C130				
C130AD	0.07		0.07	
C130E				
C-130E				
C130HP				
C131B				
C135A				
C135B				
C137				
C140				
C141A				
C17	0.07		0.07	
C18A				
C-20				
C21A				
C22				
C23				
C5A				
C7A				
C9A				
CIT3				

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
CL600	2.74	0.15	2.74	0.15
CL601	1.42	0.10	1.42	0.10
CNA172	4.17	0.14	4.17	0.14
CNA182	0.87	0.02	0.87	0.02
CNA182FLT				
CNA206				
CNA208	1.78	0.22	1.78	0.22
CNA20T				
CNA441				
CNA500				
CNA510				
CNA525C	1.89	0.55	1.89	0.55
CNA55B	1.31	0.06	1.31	0.06
CNA560E				
CNA560U				
CNA560XL	1.53	0.06	1.53	0.06
CNA680	2.31	0.10	2.31	0.10
CNA750	1.45	0.05	1.45	0.05
COMJET				
COMSEP	2.60	0.07	2.60	0.07
CONCRD				
CRJ9-ER	0.90	0.00	0.90	0.00
CRJ9-LR				
CVR580			0.10	
DC1010				
DC1030				
DC1040				
DC3				
DC6				
DC820				
DC850				
DC860				
DC870				
DC8QN				
DC910				
DC930				
DC93LW				
DC950				
DC95HW				
DC9Q7				
DC9Q9				
DHC-2FLT				
DHC6	6.88	1.32	6.88	1.32
DHC6QP				
DHC7				
DHC8				
DHC830				
DO228				
DO328				
E3A				
E4				
EA6B				
ECLIPSE500				
EMB120				
EMB145	9.66	0.08	9.66	0.08
EMB14L	6.00	0.10	6.00	0.10
EMB170				
EMB175	11.52	0.19	11.52	0.19
EMB190				
EMB195				

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
F10062				
F10065				
F100D				
F101B				
F102				
F104G				
F105D				
F106				
F111AE				
F111D				
F-111F				
F117A				
F14A				
F15A				
F15E20				
F15E29				
F16A				
F16GE				
F16PW0				
F-18				
F28MK2				
F28MK4				
F4C				
F-4C				
F5AB				
F5E				
F8				
FAL20				
FB111A				
GASEPF	0.73	0.04	0.73	0.04
GASEPV	52.83	1.02	52.83	1.02
GII				
GIIB				
GIV	1.87	0.20	1.87	0.20
GV	6.67	0.60	6.67	0.60
HS748A	0.10			
IA1125				
JAGUAR				
KC10A				
KC135				
KC-135				
KC135B				
KC135R				
L1011				
L10115				
L188				
LEAR25				
LEAR35	1.38	0.17	1.38	0.17
MD11GE				
MD11PW				
MD81				
MD82				
MD83				
MD9025				
MD9028				
MU3001				
OV10A				
P3A				
PA28				
PA30				

	BASE Case		ALTERNATIVE Case	
Aircraft Type	Daytime LTO Cycles	Nighttime LTO Cycles	Daytime LTO Cycles	Nighttime LTO Cycles
PA31				
PA42				
S3A&B				
SABR80				
SD330				
SF340				
SR71				
T1				
T29				
T-2C				
T3				
T33A				
T34				
T37B				
T-38A				
T39A				
T41				
T42				
T-43A				
T44				
TORNAD				
TR1				
U2				
U21				
U6				
U8F				
Total LTOs	197.78	8.02	197.78	8.02

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Western-Pacific Region
Airports Division
Los Angeles Airports District Office

777 S. Aviation Blvd., Suite 150
El Segundo, CA 90245-4851

March 19, 2025

Mr. Aaron Galinis
Senior Airport Planner
Hollywood Burbank Airport
2627 N Hollywood Way
Burbank, CA 91505-1062

Subject: Hollywood Burbank Airport – Noise Exposure Map Update – Aviation Environmental Design Tool – Aircraft Substitution Approval

Dear Mr. Galinis:

The Federal Aviation Administration (FAA) has completed its review of Hollywood Burbank Airport's December 20, 2024 request for Aviation Environmental Design Tool (AEDT) Version 3g aircraft substitutions for completion of the Title 14 Code of Federal Regulations Part 150, Airport Noise Compatibility Planning (Part 150) Noise Exposure Map (NEM) update for Hollywood Burbank Airport (BUR). The FAA approves the aircraft substitutions proposed for the two aircraft that are not in the AEDT database.

AIRCRAFT	PROPOSED SUBSTITUTION	RECOMMENDATION
Bell-Boeing V22 Osprey	ANP type of HS748A	Use AEDT Equipment ID 1951
EC145/Eurocopter UH-72 Lakota	ANP type of B429	Use AEDT Equipment ID 4125

This approval is limited to this particular NEM update for BUR. Any other projects or non-standard AEDT input for this study will require separate approval.

I am available at (424) 405-7286 or email me at Vincent.K.Nguyen@faa.gov if you have any questions or concerns.

Sincerely,

VINCENT K NGUYEN

Digitally signed by VINCENT K NGUYEN
Date: 2025.03.19 07:54:37 -07'00'

Vincent Nguyen
Program Manager

cc:
Maggie Martinez, Hollywood Burbank Airport
Patrick Lammerding, Hollywood Burbank Airport

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Appendix D: Stakeholder Engagement

Table of Contents

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Technical Advisory Committee (TAC) Meeting Materials

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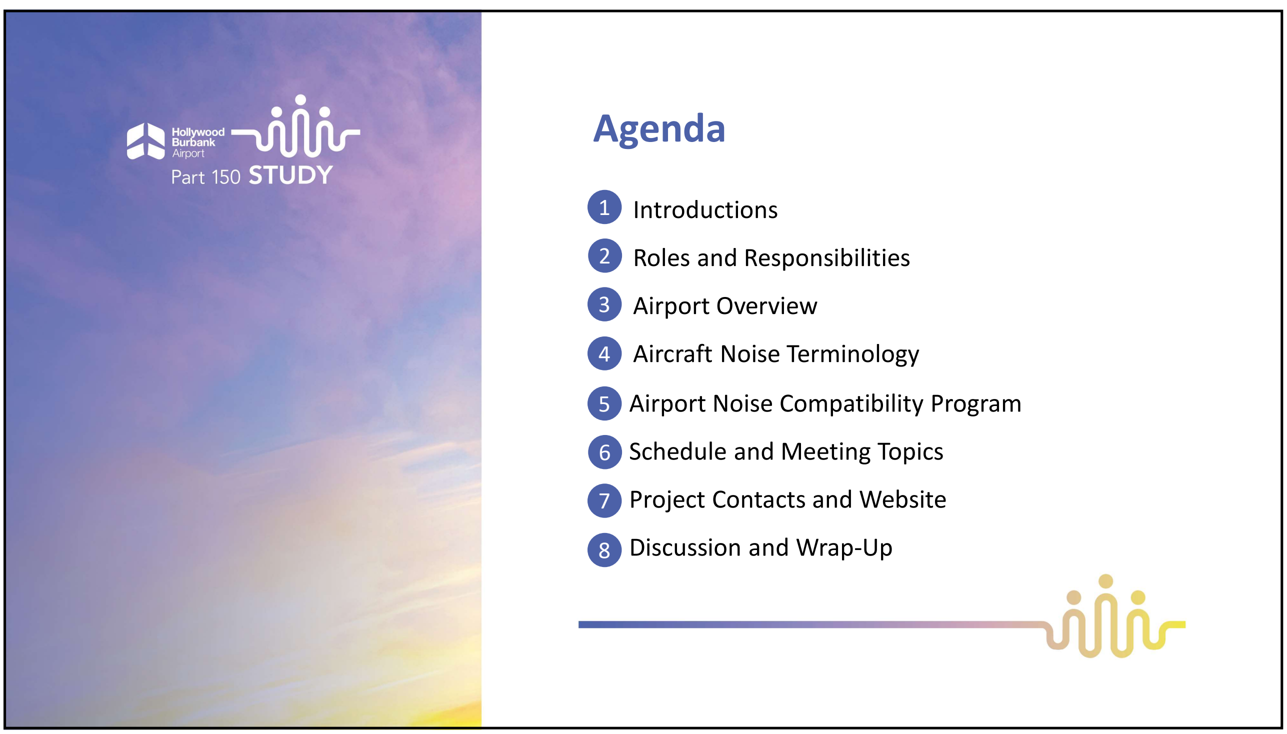
Hollywood Burbank Airport
Part 150 STUDY
Noise Compatibility Study
Technical Advisory Committee
Meeting #1
January 30, 2025

1


Hollywood Burbank Airport
Part 150 STUDY
Agenda
1 Introductions
2 Roles and Responsibilities
3 Airport Overview
4 Aircraft Noise Terminology
5 Airport Noise Compatibility Program
6 Schedule and Meeting Topics
7 Project Contacts and Website
8 Discussion and Wrap-Up

2

INTRODUCTIONS

Study Team

Hollywood Burbank Airport

Aaron Galinis
Project Manager

Patrick Lammerding
Deputy Executive Director
Planning & Development

Maggie Martinez
Director, Noise &
Environmental Affairs

hmmh

Tim Middleton
Project Manager

Mariano Sarrate
Asst. Project Manager

Gene Reindel
Principal-in-Charge

Mead&Hunt

Kate Andrus
NCP Manager

Ryk Dunkelberg
Regulatory Advisor

Corbett Smith
Aviation Forecaster

arellano associates

Stacey Falcioni
Outreach Strategist

Stevie Espinosa
Outreach Manager

AIRPORT — **PROJECT TEAM**

Hollywood Burbank Airport Part 150 STUDY

3

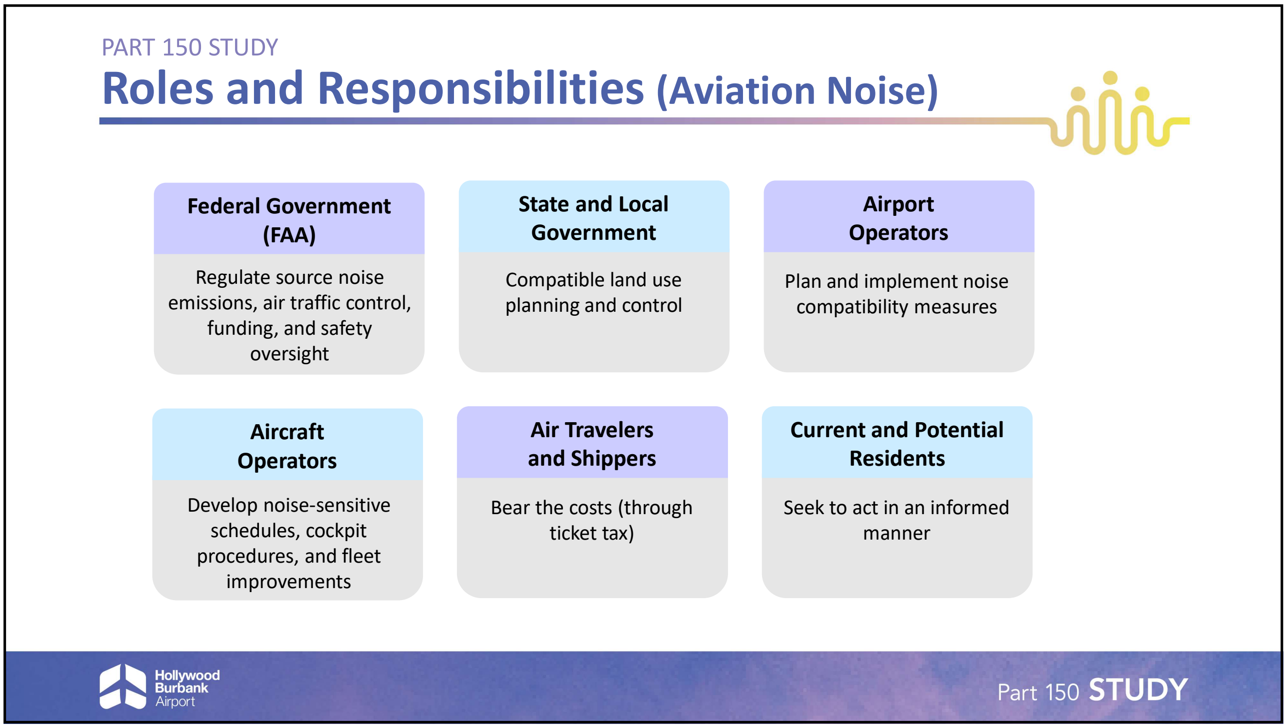
INTRODUCTIONS

Technical Advisory Committee Members

Member Category	Organization	TAC Member
Airport	Hollywood Burbank Airport (BUR)	Aaron Galinis
Airport	Burbank-Glendale-Pasadena Airport Authority (BGPAA)	Maggie Martinez
FAA	FAA Airports District Office (ADO)	Vincent Nguyen, PE
FAA	FAA Airport Traffic Control Tower (ATCT)	Brian Marshall
Industry	National Business Aviation Association (NBAA)	Alex Gertson
Airline	Alaska	Lynae Craig
Airline	JetBlue	Cory Robertson
Airline	Southwest	Trey Tuner
Airline	Spirit	Carl Stallone
Cargo Carrier	FedEx	Scott Campbell
Cargo Carrier	UPS	Thomas Hamm
Cargo Carrier	Harbor Freight	James Matinas
Fixed Base Operator	Atlantic Aviation	Joseph Slama
Fixed Base Operator	Million Air	Ron Reynolds
Land Use	LA County Airport Land Use Commission	Lauren De La Cruz
Land Use	City of Burbank Land Use Planner	Daniel Villa
Land Use	City of Los Angeles Land Use Planner	Sarah Hounsell

Hollywood Burbank Airport Part 150 STUDY

4


PART 150 STUDY
Roles and Responsibilities (Aviation Noise)
Federal Government (FAA)
Regulate source noise emissions, air traffic control, funding, and safety oversight
State and Local Government
Compatible land use planning and control
Airport Operators
Plan and implement noise compatibility measures
Aircraft Operators
Develop noise-sensitive schedules, cockpit procedures, and fleet improvements
Air Travelers and Shippers
Bear the costs (through ticket tax)
Current and Potential Residents
Seek to act in an informed manner
Hollywood Burbank Airport
Part 150 STUDY

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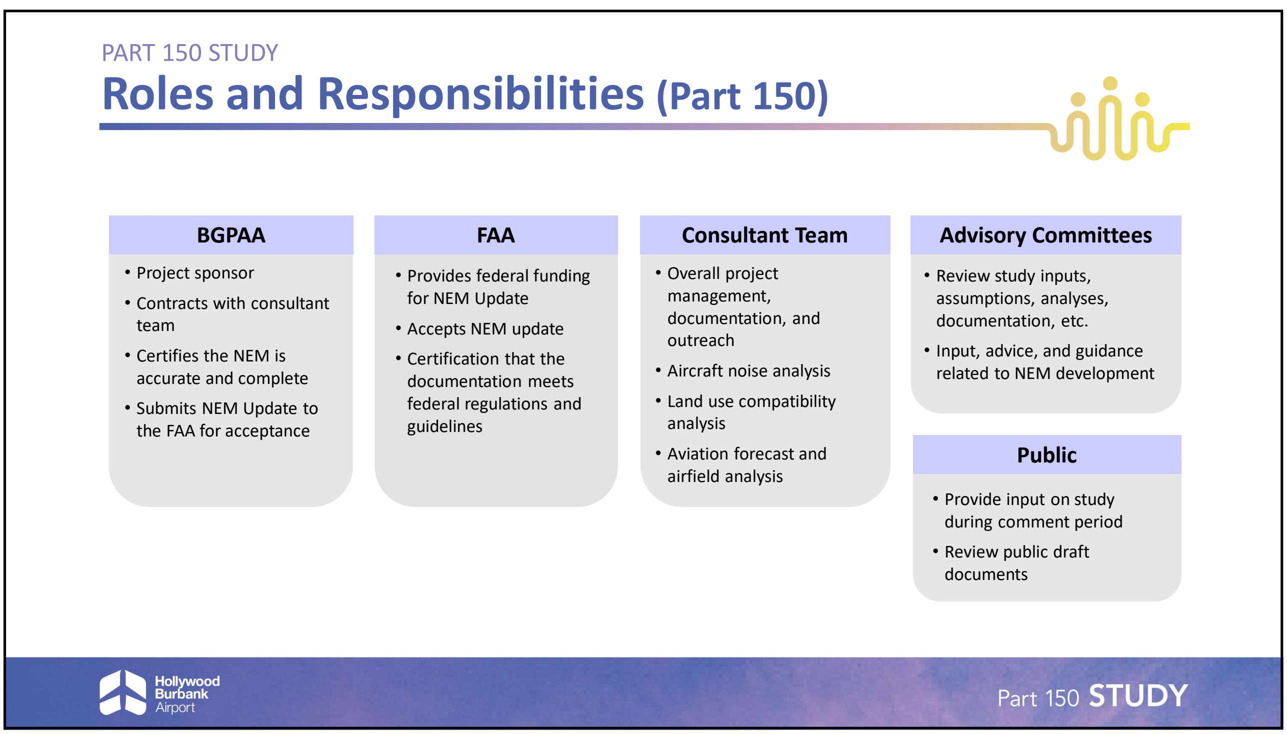
PART 150 STUDY
Roles and Responsibilities (Part 150)
BGPAA
• Project sponsor
• Contracts with consultant team
• Certifies the NEM is accurate and complete
• Submits NEM Update to the FAA for acceptance
FAA
• Provides federal funding for NEM Update
• Accepts NEM update
• Certification that the documentation meets federal regulations and guidelines
Consultant Team
• Overall project management, documentation, and outreach
• Aircraft noise analysis
• Land use compatibility analysis
• Aviation forecast and airfield analysis
Advisory Committees
• Review study inputs, assumptions, analyses, documentation, etc.
• Input, advice, and guidance related to NEM development
Public
• Provide input on study during comment period
• Review public draft documents
Hollywood Burbank Airport
Part 150 STUDY

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ROLES AND RESPONSIBILITIES

Technical Advisory Committee

Technical Advisory Committee

- ***Advisory*** to BUR solely for purposes of the BUR Part 150
- ***Reviews*** study inputs, assumptions, analysis, documentation, etc.
- ***Provides*** input, advice, and guidance related to NEM and NCP development
- ***Communicates*** to and from the committee and their respective organizations/constituents
- *Recognizes that the FAA is responsible for accepting the NEM/NCP and for approving Airport-recommended NCP measures*

BUR shall respect and consider TAC input but must retain overall responsibility for the Part 150 Study and NCP recommendations.

Hollywood Burbank Airport — Part 150 STUDY

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Airport History

1930	Opens as United Airport; largest in LA until 1946
1934 - 1940	Renamed Union Air Terminal, then Lockheed Air Terminal after purchase by Lockheed
1967	Renamed Hollywood–Burbank Airport, introducing jet services
1978	Authority acquired Airport, and renamed it to Burbank–Glendale–Pasadena Airport
2003	Renamed Bob Hope Airport in honor of the comedian
2014 - 2017	Regional Intermodal Transportation Center (RITC) opens; rebranded as Hollywood Burbank Airport
2024 - 2026	Breaks ground on new terminal, set to open in 2026 with modern facilities

Noise Exposure Map (NEM) accepted by FAA in 1988, 2000, and 2013.

Noise Compatibility Program (NCP) measures approved by FAA in 1989, 2000, 2004, and 2016.

Hollywood Burbank Airport — Part 150 STUDY

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Airport Facility Overview - 2024

- **2** Intersecting Runways
- **6,886** Feet of Runway, North-South
- **5,802** Feet of Runway, East-West
- **555** Acres on the Premises
- **140,000** Total Aircraft Operations
- **6 million** Annual Passengers
- **24,000** General Aviation Operations
- **400** Military Operations
- **64,000** Air Carrier Operations
- **25,000** Air Taxi Operations
- **1** Aircraft Rescue and Firefighting Station
- **2** Fixed-Base Operators & 2 Cargo Carriers

Hollywood Burbank Airport Part 150 STUDY

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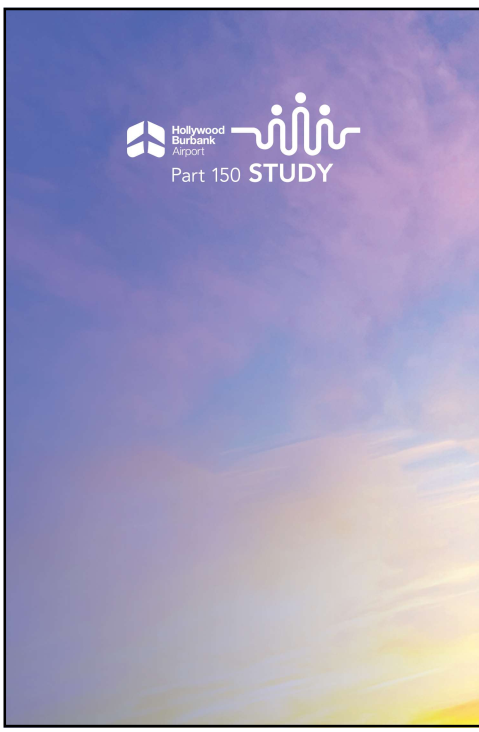
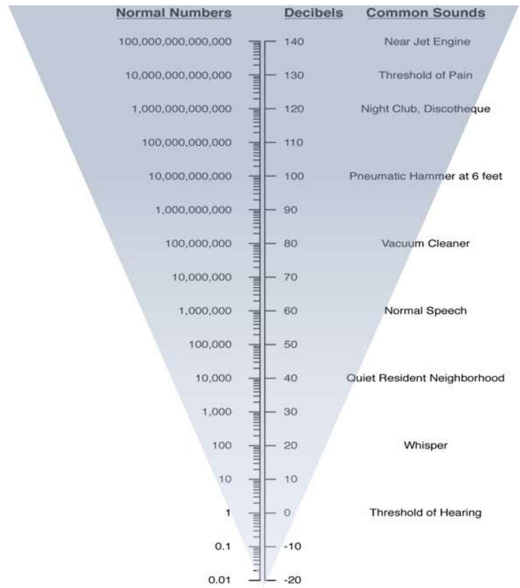


Aircraft Noise Terminology

10

Noise Terminology

- Reported in A-weighted decibels (dB)
  - Logarithmic scale base 10
  - We hear sound pressures over a large range
  - We perceive sounds in decibels



Hollywood Burbank Airport

Part 150 STUDY

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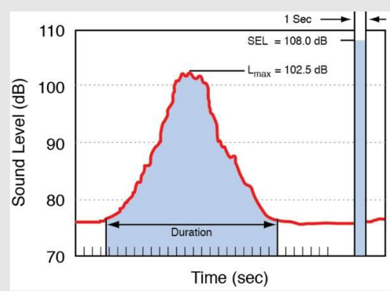
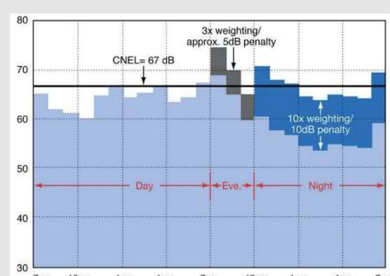
Noise Terminology

- Maximum Noise Level (L_{max})
- Single Event Noise Exposure Level (SENEL)
- Equivalent Sound Level (L_{eq})
- Community Noise Equivalent Level (CNEL)





Hollywood Burbank Airport

Part 150 STUDY

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Noise Terminology

Decibels

- The decibel **(dB)** is a complex logarithmic quantity based on sound pressure
- A-weighted decibels correlate well with how we hear

Noise Levels

- Noise levels can be expressed many ways depending on their purpose, including but not limited to:
  - Instantaneous maximum noise levels (L_{max})
  - Single event dose (SEL)
  - Long-duration exposure (CNEL)

Part 150 Requirements

- FAA requires use of DNL in a Part 150 study (CNEL in California)
- FAA Part 150 land use compatibility guidelines:
  - ***All land use is compatible with aircraft noise less than CNEL 65 dB***
  - Land use compatibility assessments use 5-dB contour bands
    - 65 to 70 dB
    - 70 to 75 dB
    - Greater than 75 dB

Hollywood Burbank Airport Part 150 STUDY

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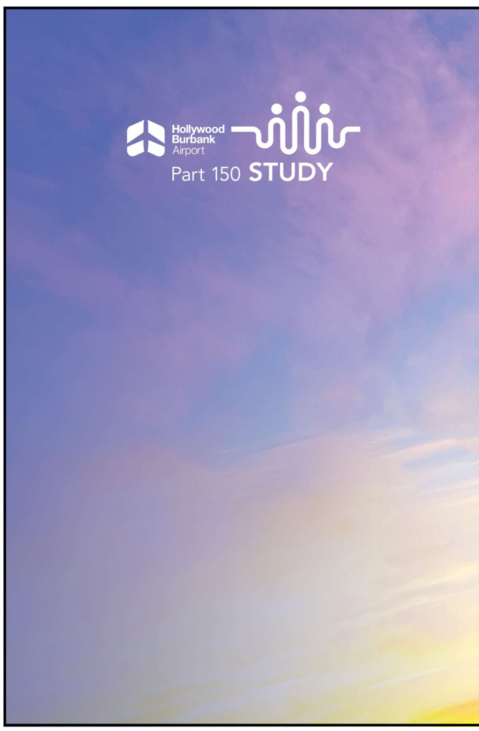

Airport Noise Compatibility Planning

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Part 150 Overview

Regulation

Title 14 of the Code of Federal Regulations Part 150 (14 CFR Part 150 or "Part 150"), "Airport Noise Compatibility Planning"

- Voluntary FAA-defined process for airport noise studies
  - Over 250 airports have participated
- Sets national standards for analysis
- Provides access to FAA funding of some approved measures

Technical Elements

Part 150 has two technical elements:

1. **Noise Exposure Map (NEM)**
   FAA Accepts the document as being completed per 14 CFR Part 150
2. **Noise Compatibility Program (NCP)**
   FAA Accepts the document as being completed per 14 CFR Part 150
   FAA approves/disapproved each Airport-recommended measure in a Record of Approval (ROA)

Hollywood Burbank Airport — Part 150 STUDY

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AIRPORT NOISE COMPATIBILITY

Planning Process

Study Initiation

- Finalize methodology
- Establish Citizen's Advisory Committee
- Establish Technical Advisory Committee
- Develop project schedule and milestones

Verification

- Existing Noise Exposure Maps, planning, and environmental documents
- Noise complaint data
- GIS and land use data
- Flight track, operations, and noise data
- FAA activity forecasts

Develop NEMs

- Develop noise contours for existing and 5-year forecast conditions
- Review land use data & policies
- Noise impact evaluation for DNL 65-75 dBa
- Identify incompatible land uses and review existing NCP
- Prepare maps in accordance with 14 CFR Part 150

Develop NCP

- Consider noise abatement strategies
- Consider land use strategies
- Consider programmatic strategies
- Update NCP in accordance with 14 CFR Part 150

Stakeholder Engagement and Public Outreach

Citizen's Advisory Committee • Technical Advisory Committee • Public Meetings/Hearing • Public Website Materials and Newsletters

Hollywood Burbank Airport — Part 150 STUDY

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PART 150 OVERVIEW

Typical Progression

Step 1 — **Identify Incompatible Land Uses**
- Existing conditions Noise Exposure Map
- Forecast conditions Noise Exposure Map

Step 2 — **Consider Noise Abatement Strategies**
- *Reduce* exposure over incompatible uses
- *Limit* growth in exposure over incompatible uses

Step 3 — **Consider Land Use Strategies**
- *Mitigate* residual incompatibilities
- *Prevent* introduction of new incompatible uses

Step 4 — **Consider Programmatic Strategies**
- *Implement* and *promote* measures
- *Monitor* and *report* on effectiveness
- *Update* NEMs and *revise* NCP as appropriate

Hollywood Burbank Airport — Part 150 STUDY

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AIRPORT NOISE COMPATIBILITY PLANNING

NEM Development

- ✓ Develop noise contours for existing (2025) and 5-year forecast (2030) conditions
- ✓ Collect land use data and policies
- ✓ Assess noise compatibility for aircraft exposure of CNEL 65 dB and greater
- ✓ Prepare documentation in accordance with 14 CFR Part 150

FAA-Accepted 2017 Noise Exposure Map for BUR

Hollywood Burbank Airport — Part 150 STUDY

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AIRPORT NOISE COMPATIBILITY PLANNING

NEM Update Goals

Goals

- Identify incompatible land uses potentially eligible for noise mitigation
- Review implementation of the Noise Compatibility Program
- Share pertinent data and information with the public

Note: *FAA requires that Noise Exposure Maps reflect existing and/or forecast conditions at all times – thus the need to update them on a regular basis.*

Hollywood Burbank Airport

Part 150 STUDY

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Tentative Schedule

January 2024	Project Kick Off
February 2024	Data Collection and Study Protocol Development
January 30, 2025	**TAC/CAC Meeting #1**, Open House #1 (Study Introduction)
March 27, 2025	**TAC/CAC Meeting #2** (Review of Noise Modeling Inputs)
Spring 2025	Publish Draft NEM Document, 30-Day Review Period
May 22, 2025	**TAC/CAC Meeting #3** (Noise Modeling Results & Existing NCP Review) Open House Meeting #2 (NEM Draft Document)
Summer 2025	Submit NEM to FAA, NCP Phase Begins
Fall 2025	TAC/CAC Meeting #4 (Noise Abatement Measures)
Winter 2026	TAC/CAC Meeting #5 (Land Use & Programmatic Measures)
Spring 2026	TAC/CAC Meeting #6, Open House #3 (Draft NCP Recommendations)
Fall 2026	Open House #4 and Public Hearing (Draft NCP document)
November 2026	Submit NCP to FAA

Please hold dates underlined above for upcoming TAC meetings.

Hollywood Burbank Airport

Part 150 STUDY

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Hollywood Burbank Airport Part 150 STUDY

Project Contacts

Project Website	www.hollywoodburbankairport.com/noise/part-150-study-update
Project email address	BURPart150Study@arellanoassociates.com
Project Manager	Timothy Middleton, C.M. tmiddleton@hmmh.com

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Hollywood Burbank Airport Part 150 STUDY

Discussion

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Hollywood-Burbank Airport Part 150 Study

Technical Advisory Committee Meeting #1 – Summary Report

Thursday, January 30, 2025

I. Introduction

The Technical Advisory Committee (TAC) supports the Hollywood Burbank Airport Part 150 Noise Compatibility Planning Study by reviewing technical materials and providing input. The Study examines current and future aircraft noise exposure, assesses land use compatibility, and explores mitigation strategies in line with Part 150 regulations. TAC members representing their organizations are asked to share insights, and analyze data on airport operations, flight paths, and noise impacts to provide informed feedback for the Airport Authority's consideration.

II. Attendance

Attendee Names & Organizations	
Study Staff Attendees	• **11 Study Staff Attendees** ○ Patrick Lammerding, Hollywood Burbank Airport Authority ○ Aaron Galinis, Hollywood Burbank Airport Authority ○ Maggie Martinez, Hollywood Burbank Airport Authority ○ Gene Reindel, HMMH ○ Timothy Middleton, HMMH ○ Mariano Sarrate, HMMH ○ Corbett Smith, Mead & Hunt ○ Ryk Dunkelberg, Mead & Hunt ○ Stacey Falcioni, Arellano Associates ○ Stevie Espinoza, Arellano Associates ○ Eric Davidian, Arellano Associates
Technical Advisory Committee Member Attendees	• **10 TAC Attendees** ○ Lauren De La Cruz, LA County Airport Land Use Commision ○ Justin Kim, Federal Aviation Administration ○ Vincent Nguyen, Federal Aviation Administration ○ Joseph Slama, Atlantic Aviation

	○ Ron Reynolds, Million Air ○ Erik Felix, City of Los Angeles Planning ○ Zeke Wagner, City of Los Angeles Planning ○ Carl Stallone, Southwest Airlines ○ Larry Beck, Southwest Airlines ○ Bill Scott, Southwest Airlines

III. Meeting Overview

The Hollywood-Burbank Airport Authority held the first Part 150 Study Technical Advisory Committee meeting on January 30, 2025, at the Hollywood Burbank Airport Sky Room. A Zoom virtual participation option was available for those unable to attend in-person.

Gene Reindel, Vice President with HMMH, provided an overview of the Hollywood Burbank Airport Part 150 Noise Compatibility Planning Study, outlining the FAA's Part 150 framework and the Technical Advisory Committee's (TAC) role. The presentation also highlighted the aircraft noise exposure analysis, land use compatibility assessment, and potential mitigation measures. Key study components, including noise measurement, aircraft operations data, and TAC's advisory role in reviewing findings, were discussed. To view the full presentation please see **Appendix A**.

Discussion Highlights

During the meeting, attendees provided a total of seven questions and comments related to noise exposure maps, scheduling, public engagement, land use, and noise complaints.

<u>Key Themes</u>

1. Availability of Noise Exposure Maps

- **Agency:** LA County Planning
- **Discussion Points:**
  - Question regarding whether previous noise exposure maps are publicly available.
  - Understanding historical data could help jurisdictions and planners analyze long-term noise trends.

2. Projected Schedule & Noise Exposure Map Updates

- **Agency:** City of Los Angeles
- **Discussion Points:**
  - There were inquiries about whether the project schedule is expected to change.
  - Participants sought clarification on whether the noise exposure map would be updated as new data becomes available.

3. Public Engagement & Outreach Strategy

- **Agency:** City of Los Angeles
- **Discussion Points:**
  - Questions were raised about when new public stakeholders would be engaged.

- Interest in ensuring that additional TAC members or community representatives could be incorporated at the appropriate stage.

4. Impact of Residential Development on Noise Conditions

- **Agency:** City of Los Angeles
- **Discussion Points:**
  - Request to understand how ongoing and planned residential development might influence noise conditions.
  - Emphasized importance of assessing unit counts and scale of projects as part of the analysis was noted.

5. Land Use and Compatibility Considerations

- **Agency/Organization:** City of Los Angeles, Million Air
- **Discussion Points:**
  - Concerns were raised about how land use could be adjusted if new buildings have been constructed over the past two decades.
  - Questions regarding the necessity of the study given existing development trends.
  - Inquiries about how zoning updates and land use changes would be reflected in the study's findings.

6. Noise Complaints & Community Concerns

- **Agency:** LA County Planning
- **Discussion Points:**
  - Stakeholders wanted to understand the overall volume and nature of noise complaints received by the airport.
  - This information could help gauge community concerns and inform mitigation strategies.

A full list of the questions and responses are found in **Appendix B.**

IV. Notification

TAC members were notified about the first meeting through standard electronic and personal email correspondence to encourage participation from members to attend either in-person or virtually.

Notification included the following methods:

- Four Weekly E-Blasts
- One round of personalized email follow-ups with TAC members

V. Next Steps

The second Technical Advisory Committee is tentatively scheduled to be held on March 27, 2025, to evaluate the data and comments from the committee that is collected and review the updated noise modeling inputs.

VI. Appendix

Appendix A

- Presentation

Appendix B

- Comment Log


Hollywood
Burbank
Airport
Part 150 STUDY
Noise Compatibility Study
Technical Advisory Committee
Meeting #2
March 27, 2025

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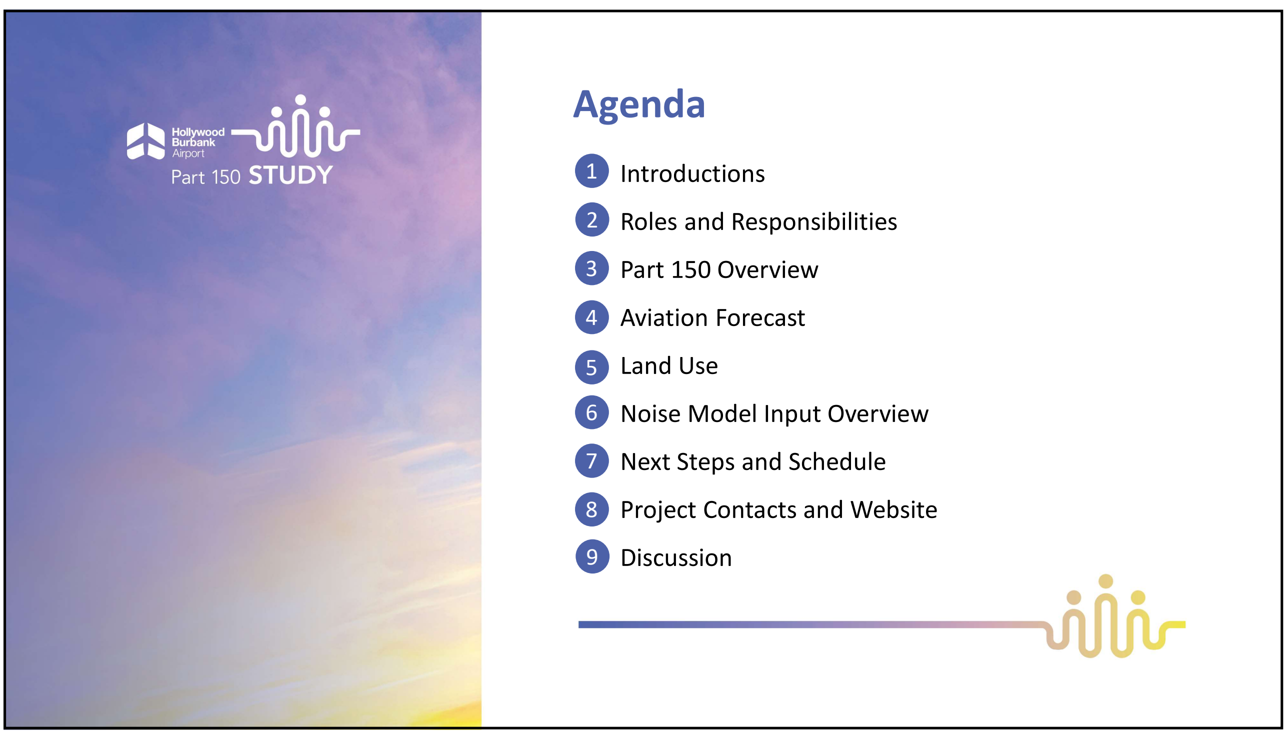
Hollywood
Burbank
Airport
Part 150 STUDY
Agenda
1 Introductions
2 Roles and Responsibilities
3 Part 150 Overview
4 Aviation Forecast
5 Land Use
6 Noise Model Input Overview
7 Next Steps and Schedule
8 Project Contacts and Website
9 Discussion

2

INTRODUCTIONS

Study Team

Hollywood Burbank Airport

Aaron Galinis
Project Manager

Patrick Lammerding
Deputy Executive Director
Planning & Development

Maggie Martinez
Director, Noise &
Environmental Affairs

hmmh

Tim Middleton
Project Manager

Mariano Sarrate
Asst. Project Manager

Gene Reindel
Principal-in-Charge

Mead&Hunt

Kate Andrus
NCP Manager

Ryk Dunkelberg
Regulatory Advisor

Corbett Smith
Aviation Forecaster

arellano associates

Stacey Falcioni
Outreach Strategist

Stevie Espinosa
Outreach Manager

AIRPORT — **PROJECT TEAM**

Hollywood Burbank Airport — Part 150 STUDY

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INTRODUCTIONS

Technical Advisory Committee Members

Member Category	Organization	TAC Member
Airport	Hollywood Burbank Airport (BUR)	Aaron Galinis
Airport	Burbank-Glendale-Pasadena Airport Authority (BGPAA)	Maggie Martinez
FAA	FAA Airports District Office (ADO)	Vincent Nguyen, PE
FAA	FAA Airport Traffic Control Tower (ATCT)	Brian Marshall
Industry	National Business Aviation Association (NBAA)	Alex Gertson
Airline	Alaska	Lynae Craig
Airline	JetBlue	Cory Robertson
Airline	Southwest	Trey Tuner
Airline	Spirit	Carl Stallone
Cargo Carrier	FedEx	Scott Campbell
Cargo Carrier	UPS	Thomas Hamm
Cargo Carrier	Harbor Freight	James Matinas
Fixed Base Operator	Atlantic Aviation	Joseph Slama
Fixed Base Operator	Million Air	Ron Reynolds
Land Use	LA County Airport Land Use Commission	Lauren De La Cruz
Land Use	City of Burbank Land Use Planner	Daniel Villa
Land Use	City of Los Angeles Land Use Planner	Sarah Hounsell

Hollywood Burbank Airport — Part 150 STUDY

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ROLES AND RESPONSIBILITIES

Technical Advisory Committee

Technical Advisory Committee

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- ***Reviews*** study inputs, assumptions, analysis, documentation, etc.
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Hollywood Burbank Airport — Part 150 STUDY

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Part 150 Overview

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Hollywood Burbank Airport — Part 150 STUDY

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Part 150 Overview
Noise Exposure Map (NEM)

The NEM document describes:

- Airport layout and operation
- Aircraft-related noise exposure
- Land uses in the airport environs
- Noise/land use compatibility

- An NEM must provide information for two timeframes:
  - Year of submission (2025)
  - Five-year forecast (2030)
- An FAA checklist identifies NEM requirements and documentation
- Annual average community noise equivalent level (CNEL) is depicted using contour lines on a map

Hollywood Burbank Airport Part 150 STUDY

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Aviation Forecast

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FAA Terminal Area Forecast (TAF)

Terminal Area Forecast (TAF)

- Official FAA forecast of aviation activity for U.S. airports
- Prepared for major users of the National Airspace System including
  - Air carrier
  - Air taxi/commuter
  - General aviation
  - Military
- Meets the budget and planning needs of the FAA
- Provides information for use by state and local authorities, the aviation industry, and the public

BUR Part 150

- The 2024 FAA TAF (published Feb 2025) is being used as the basis for the forecast aircraft operations at BUR.
  - Confirmed through independent forecasts

https://www.faa.gov/data_research/aviation/taf

Hollywood Burbank Airport | Part 150 STUDY

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Comparison of Forecasts

Year	M&H Forecast	2024 TAF	Variance
Enplanements			
2023	3,005,380	3,075,619	+2.3%
2025	3,295,722	3,764,361	+12.4%
2030	3,780,347	4,412,330	+14.3%
Commercial Operations			
2023	89,282	88,767	-0.6%
2025	92,866	97,700	+4.9%
2030	105,458	113,741	+7.3%
Total Operations			
2023	141,678	139,760	-1.4%
2025	145,760	159,671	+8.7%
2030	159,626	178,515	+10.6%

Source: Mead & Hunt analysis, FAA 2024 TAF, and FAA OPSNET

Hollywood Burbank Airport | Part 150 STUDY

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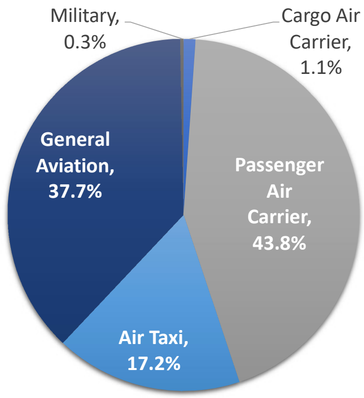
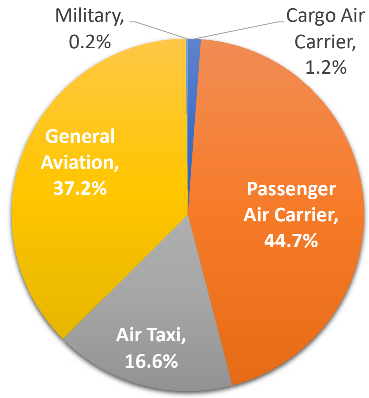
Aircraft Summary by Category

2025 Operations



2030 Operations



- Most operations based on 2023 flight track and aircraft identification data from BUR Airport Noise & Operations Monitoring System (ANOMS™)
- Military operations based on 2023 FAA Traffic Flow Management System Counts (TFMSC) data

Hollywood Burbank Airport Part 150 STUDY

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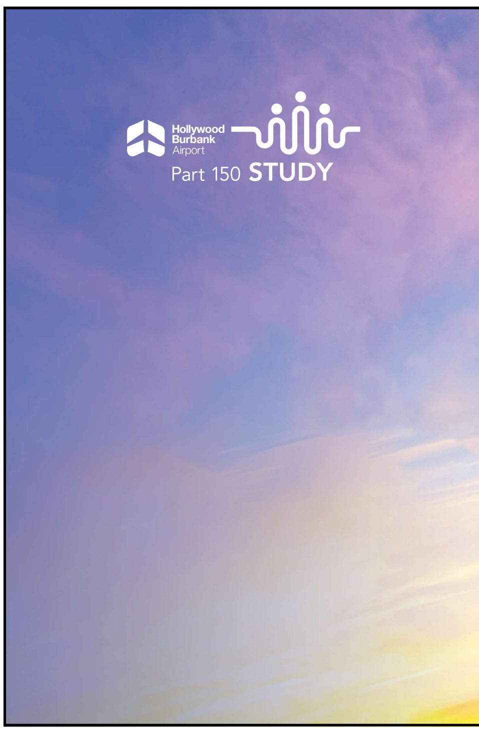

Land Use

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Land Use Data Collection & Review

Primary data collection steps include:

- Assemble and review land use, zoning, and population data
- Identify noise-sensitive sites, e.g., schools and places of worship
- Identify any local land use policies that address airport operations
- Create draft land use maps
- Verify land uses through windshield survey (in area of expected 65 dB CNEL contour)
- Local jurisdictions to review maps and advise of necessary corrections
- Assess any deficiencies of land use data and corrective approaches

Hollywood Burbank Airport | Part 150 STUDY

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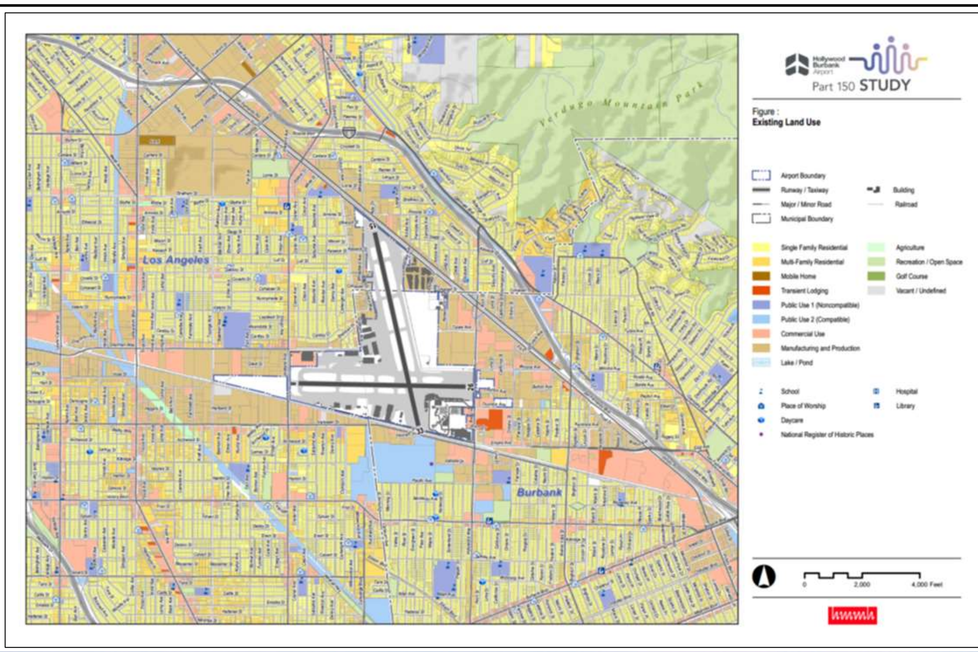

Hollywood Burbank Airport | Part 150 STUDY

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Noise Model Input Overview

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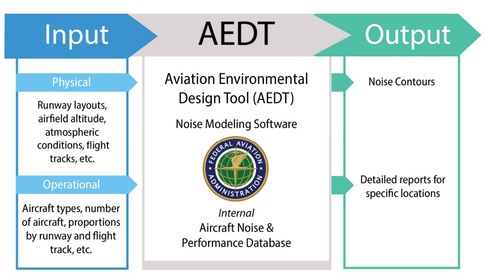
Noise Model Overview



- FAA requires use of their Aviation Environmental Design Tool (AEDT) for civilian aircraft operations
  - Version 3g is the most current version (at study's commencement)
  - https://aedt.faa.gov

Noise model input data categories:

1 Aircraft Noise and Performance Data
- Aircraft performance profiles
- Noise level vs. distance curves

2 Airport Physical Inputs
- Airport Layout
- Weather data
- Terrain data

3 Aircraft Operational Inputs
- Number of aircraft operations
- Aircraft fleet mix
- Day-evening-night split of flight and runup operations
- Runway utilization
- Flight track geometry and utilization

Hollywood Burbank Airport Part 150 STUDY

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Noise Modeling Process

Base Year
2/1/2023 through 1/31/2024

- Obtained, processed and analyzed 12 months of flight track and aircraft identification data
- Determined day-night split of aircraft operations, and fleet mix

Existing & Forecast Conditions
2025 and 2030

- Confirmation of FAA's Terminal Area Forecast (TAF)
- Scaled base year operations with updated fleet to 2025 existing operations and 2030 forecast operations

Hollywood Burbank Airport

Part 150 STUDY

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Physical Conditions

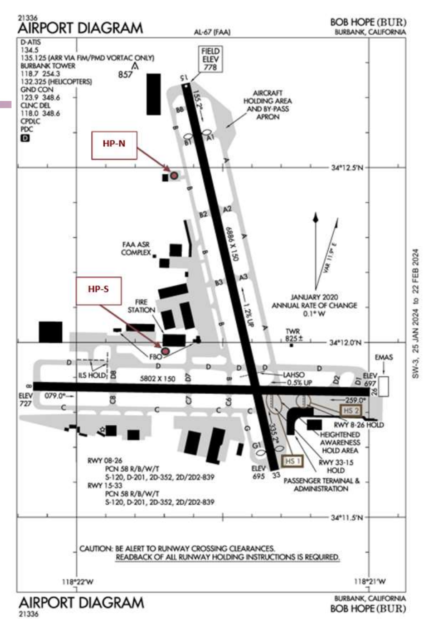
AIRFIELD LAYOUT

Runways

- Runway 15/33
- Runway 8/26
- **Helipads** (designated as red dots on diagram)
    - Differentiated by north (HP-N) and south (HP-S)

New Terminal

- Projected to open in 2026
- No changes to the Runways or Helipads



Hollywood Burbank Airport

Part 150 STUDY

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Weather and Terrain

METEOROLOGICAL CONDITIONS

- AEDT database includes recent 10-year (2013-2022) averages:

Temperature	65.28° F
Station Pressure	988.38 mbar
Sea Level Pressure	1013.92 mbar
Relative Humidity	50.03 %
Dew Point	46.1° F
Wind Speed	4.48 knots

TERRAIN DATA

- Describes elevation of ground surrounding the airport and airport property
- Data obtained from the U.S. Geological Survey National Elevation Dataset

Hollywood Burbank Airport Part 150 STUDY

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Aircraft Operations

Annual Average Day Operations	Existing Year 2025 Forecast Year 2030	
Aircraft Type	Jet Turboprop Helicopter Piston	*Matched to specific AEDT Aircraft Types*
Day-Evening-Night Split	Day: 7 AM – 7 PM Evening: 7 PM – 10 PM Night: 10 PM – 7 AM	
Runway Use, Flight Tracks, Track Use	*Represents where the flight operations occur*	
Stage Length	Surrogate for aircraft weight; determined by distance from departure to destination airport	

AIRCRAFT OPERATIONS

Year	Commercial	General Aviation	Military	Total
2025	92,866	52,494	400	145,967
2030	105,458	53,767	400	159,626

Note 1: Forecast Pending FAA Approval.
Note 2: Operations sums may appear to be off due to rounding.
Source: M&H Forecast, FAA 2023 TAF

Hollywood Burbank Airport Part 150 STUDY

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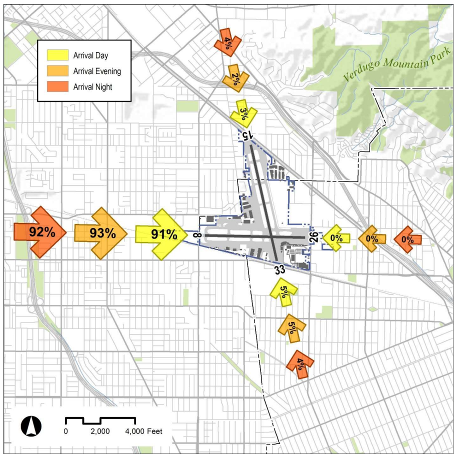
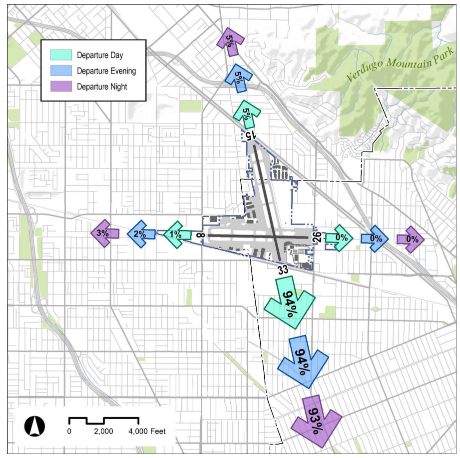
Runway Use



Jet Arrival Runway Use Percentages



Jet Departure Runway Use Percentages

Hollywood Burbank Airport

Part 150 STUDY

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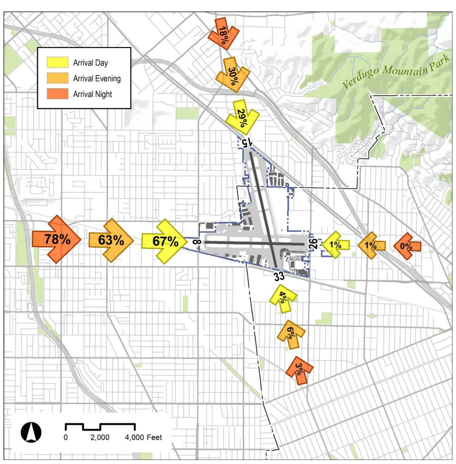
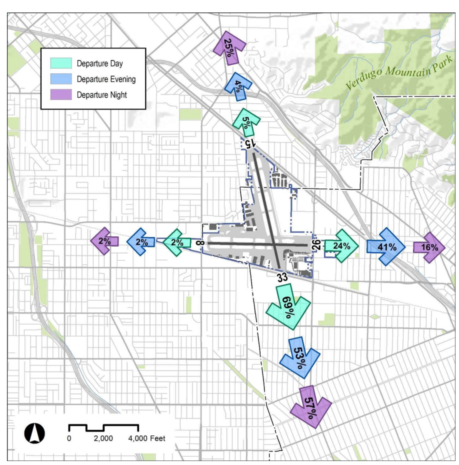
Runway Use



Non-Jet Arrival Runway Use Percentages



Non-Jet Departure Runway Use Percentages

Hollywood Burbank Airport

Part 150 STUDY

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Aircraft Flight Tracks

- Model flight tracks have been developed for arrivals and departures based on analysis of radar data
- Model "Backbone" tracks are developed for major origin/destination directions; backbones have subtracks, to increase fidelity of modeling

Model Track Development Process

- Actual flight tracks are grouped into bundles (by aircraft type, runway, operation type, and destination)
- Track groups are represented by a "backbone" track and sub-tracks on either side to represent the dispersion of the bundle
- Representative tracks are developed to the extent of the study area
- Separate track use percentages are developed for each track bundle and type of operation

Hollywood Burbank Airport Part 150 STUDY

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Aircraft Flight Tracks

- Process is the same for arrivals and departures for each runway, aircraft type, direction, and track group
- Prepared 385 tracks: 103 backbone and 282 sub-tracks

Subsequent slides

- Illustrate the results of HMMH development of model tracks
- Present overall arrival and departure flight track figures for each aircraft group

Runway	Arrival Tracks		Departure Tracks	
	Backbone	Sub-Track	Backbone	Sub-Track
15	8	20	16	68
33	10	22	11	28
8	17	60	6	14
26	3	0	6	18
HS	6	13	7	13
HN	6	11	7	15
Total	50	126	53	156

Hollywood Burbank Airport Part 150 STUDY

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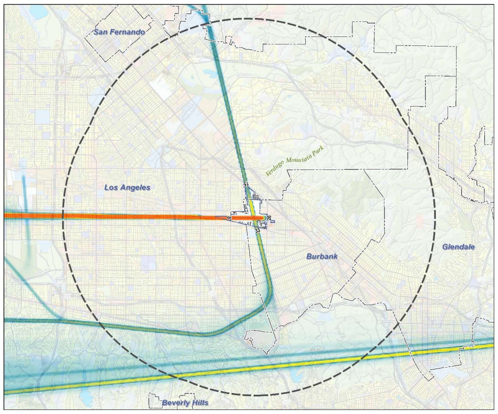
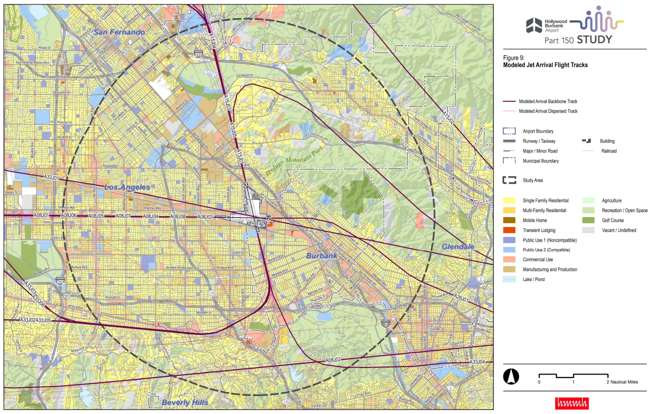
Flight Tracks – Jet Arrivals



2023 Flight Track Density



Model Flight Tracks

Hollywood Burbank Airport   Part 150 STUDY

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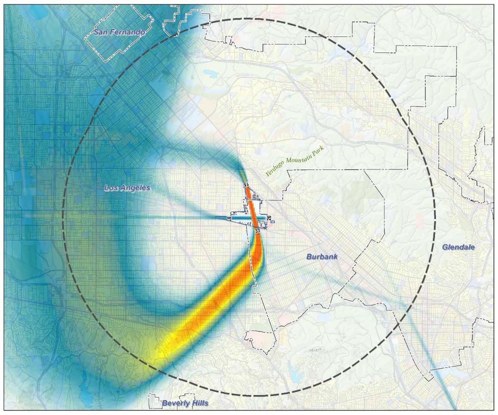
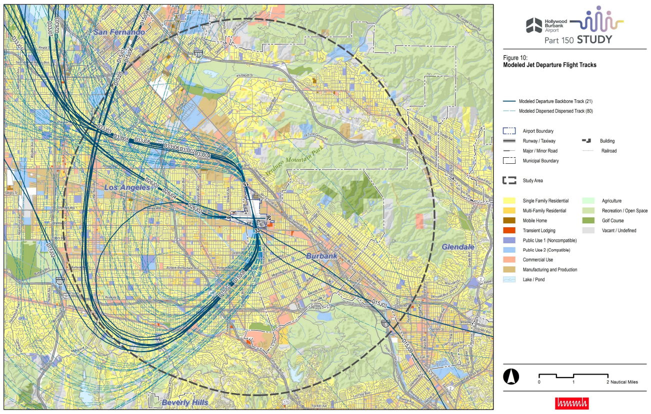
Flight Tracks – Jet Departures



2023 Flight Track Density



Model Flight Tracks

Hollywood Burbank Airport   Part 150 STUDY

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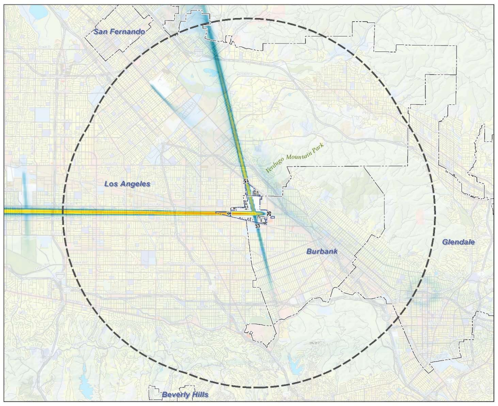
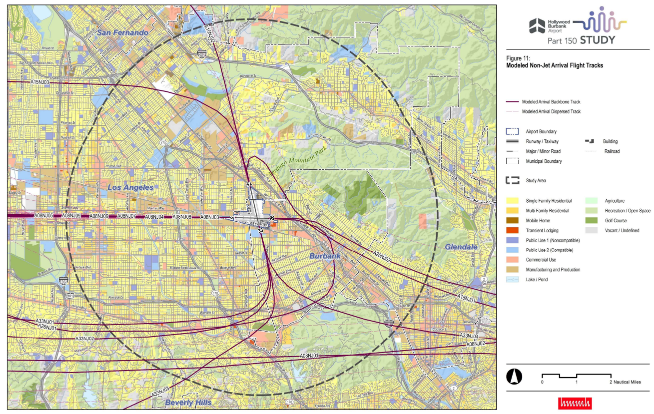
Flight Tracks – Non-Jet Arrivals



2023 Flight Track Density



Model Flight Tracks

Hollywood Burbank Airport   Part 150 STUDY

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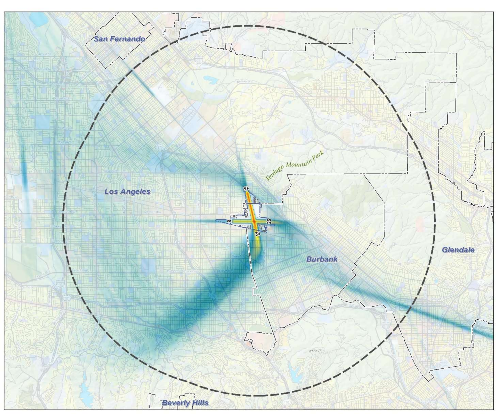
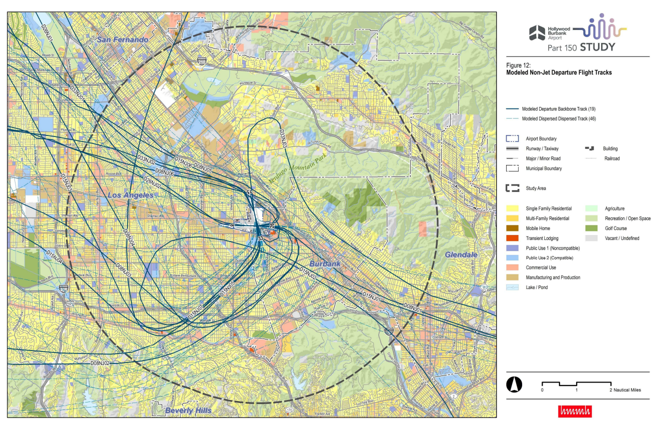
Flight Tracks – Non-Jet Departures



2023 Flight Track Density



Model Flight Tracks

Hollywood Burbank Airport   Part 150 STUDY

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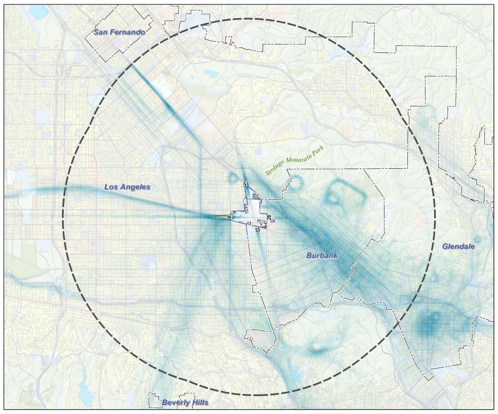
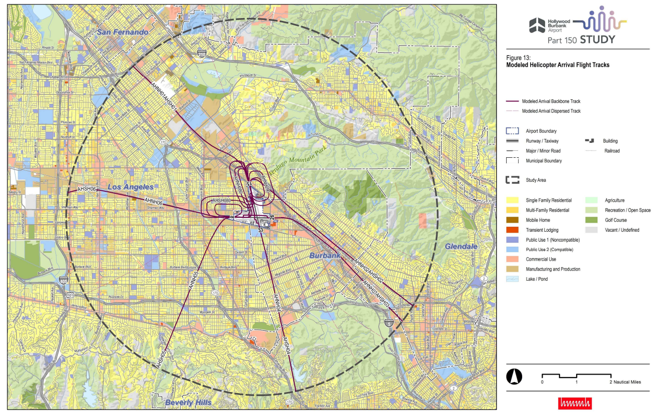
Flight Tracks – Helicopter Arrivals



2023 Flight Track Density



Model Flight Tracks

Hollywood Burbank Airport

Part 150 STUDY

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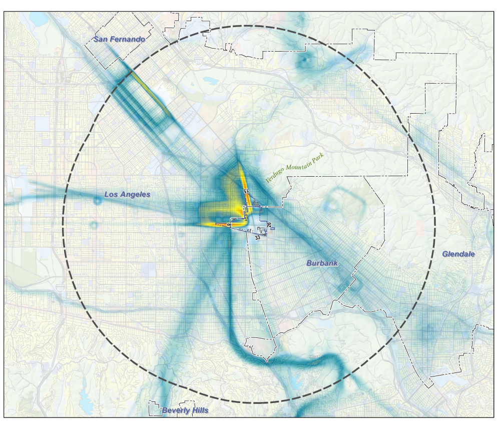
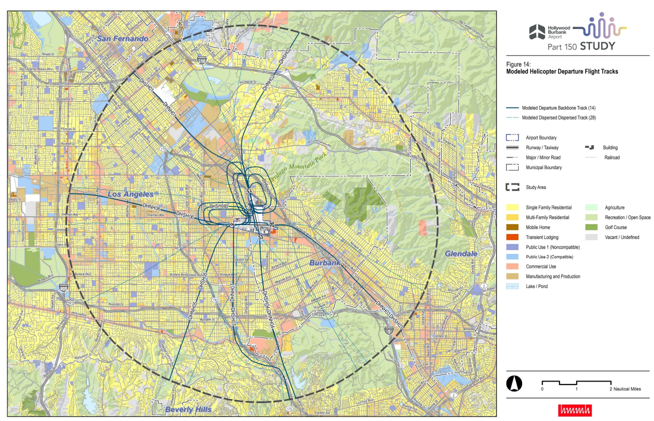
Flight Tracks – Helicopter Departures



2023 Flight Track Density



Model Flight Tracks

Hollywood Burbank Airport

Part 150 STUDY

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Next Steps

- Generate noise contours with AEDT
- Assess land use compatibility
- Develop draft Noise Exposure Maps and report
- Present draft NEM to the public
- Submit the NEM to the FAA for review and acceptance
- Evaluate:
  - Potential **noise abatement measures** to reduce the number of people exposed to 65 dB CNEL and higher aircraft noise levels
  - Potential **land use measures** to mitigate uses not compatible with aircraft noise and prohibit introduction of future non-compatible land uses
  - Potential **programmatic measures** to implement, monitor and report on the Authority-recommended noise abatement and land use measures
- Update the Noise Compatibility Program

Hollywood Burbank Airport   Part 150 NOISE STUDY

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Tentative Schedule

January 2024	Project Kick Off
February 2024	Data Collection and Study Protocol Development
January 30, 2025	**TAC/CAC Meeting #1**, Open House #1 (Study Introduction)
March 27, 2025	**TAC/CAC Meeting #2** (Review of Noise Modeling Inputs)
Spring 2025	Publish Draft NEM Document, 30-Day Review Period
May 22, 2025	**TAC/CAC Meeting #3** (Noise Modeling Results & Existing NCP Review) Open House Meeting #2 (NEM Draft Document)
Summer 2025	Submit NEM to FAA, NCP Phase Begins
Fall 2025	**TAC/CAC Meeting #4** (Noise Abatement Measures)
Winter 2026	**TAC/CAC Meeting #5** (Land Use & Programmatic Measures)
Spring 2026	**TAC/CAC Meeting #6**, Open House #3 (Draft NCP Recommendations)
Fall 2026	Open House #4 and Public Hearing (Draft NCP document)
November 2026	Submit NCP to FAA

Please hold dates underlined above for upcoming TAC meetings.

Hollywood Burbank Airport   Part 150 STUDY

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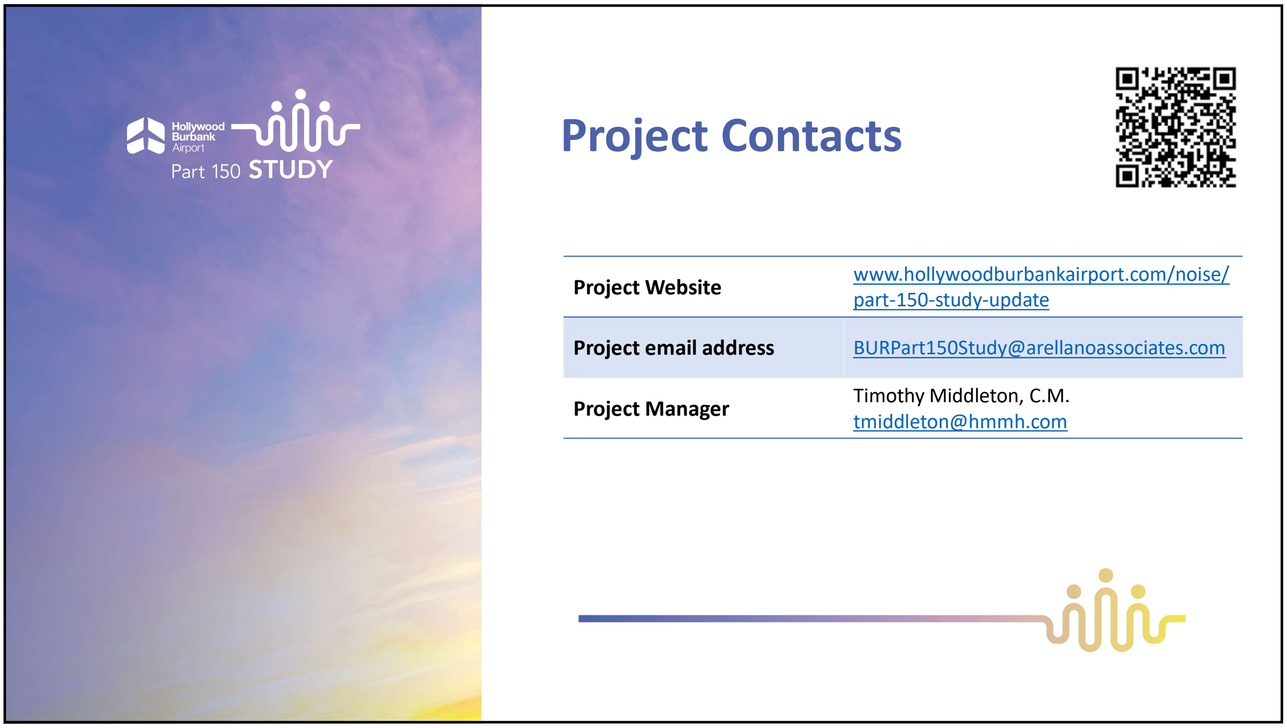
Hollywood Burbank Airport
Part 150 STUDY
Project Contacts
Project Website
www.hollywoodburbankairport.com/noise/part-150-study-update
Project email address
BURPart150Study@arellanoassociates.com
Project Manager
Timothy Middleton, C.M.
tmiddleton@hmmh.com

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Hollywood Burbank Airport
Part 150 STUDY
Discussion

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Hollywood-Burbank Airport Part 150 Study

Technical Advisory Committee Meeting #2 – Summary Report

Thursday, March 27, 2025

I. Introduction

The Technical Advisory Committee (TAC) supports the Hollywood Burbank Airport Part 150 Noise Compatibility Planning Study by reviewing technical materials and providing input. The Study examines current and future aircraft noise exposure, assesses land use compatibility, and explores abatement, mitigation and programmatic strategies in line with Part 150 regulations.

II. Attendance

Attendee Names & Organizations	
Technical Advisory Committee Member Attendees	• **10 TAC Attendees** o Lauren De La Cruz, LA County Airport Land Use Commission o Daniel Villa, City of Burbank Planning o Justin Kim, Federal Aviation Administration o Vincent Nguyen, Federal Aviation Administration o Joseph Slama, Atlantic Aviation o Erik Felix, City of Los Angeles Planning o Zeke Wagner, City of Los Angeles Planning o Carl Stallone, Spirit Airlines o Bill Scott, Southwest Airlines
Study Staff Attendees	• **10 Study Staff Attendees** o Patrick Lammerding, Hollywood Burbank Airport Authority o Aaron Galinis, Hollywood Burbank Airport Authority o Maggie Martinez, Hollywood Burbank Airport Authority o Gene Reindel, HMMH o Timothy Middleton, HMMH o Corbett Smith, Mead & Hunt o Ryk Dunkelberg, Mead & Hunt o Stacey Falcioni, Arellano Associates o Stevie Espinoza, Arellano Associates o Eric Davidian, Arellano Associates

III. Meeting Overview

The Hollywood-Burbank Airport Authority held the second Part 150 Study TAC meeting on January 30, 2025, at the Hollywood Burbank Airport Sky Room. A virtual participation option via Zoom was available for those unable to attend in-person.

Gene Reindel, Vice President with HMMH, provided an overview of the Hollywood Burbank Airport Part 150 Noise Compatibility Planning Study, outlining the FAA's Part 150 framework and the TAC role. The presentation highlighted the aviation forecast, the process of collecting and reviewing land use data, an overview of the noise model input, and next steps of the study. Key study components, including aviation forecasting, aircraft operations data, and TAC's advisory role in reviewing findings and providing land use analysis, were discussed. To view the full presentation please see **Appendix A**.

Discussion Highlights

During the meeting, attendees provided a total of three comments and questions that were received relating to land use and mapping data access.

Key Themes

1. Coordination on Land Use Planning

- **Discussion Points:**
  - City of Burbank has ongoing work on the Golden State Specific Plan that will include potential land use updates relevant to the noise compatibility map.
  - Emphasized interest in coordinating with the study team to ensure alignment.
  - Mentioned formation of a technical committee and intent to engage with the project team as planning progresses.

2. Upcoming Land Use Updates

- **Discussion Points:**
  - Indicated potential shifts in commercial land use areas within the City of Los Angeles.
  - Offered to provide updated land use information once plans are further developed and more concrete.
  - Expressed willingness to share input to support the accuracy of the noise compatibility map.

3. Request for Data Access and Map Files

- **Discussion Points:**
  - TAC members requested a copy of the land use map and associated shapefiles for review.
  - Appreciation in advance for receiving this data to support their planning efforts.

IV. Notification

TAC members were notified about the second meeting through standard electronic and personal email correspondence to encourage participation from members to attend either in-person or virtually.

Notification included the following methods:

- One Save-the-Date calendar hold
- Three Weekly Reminder E-Blasts
- One round of personalized email follow-ups with TAC members

V. Next Steps

The third TAC meeting is tentatively scheduled to be held on May 22nd, 2025, to analyze the noise modeling results and review the existing nose compatibility program.

VI. Appendix

Appendix A

- Presentation

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Citizen's Advisory Committee (CAC) Meeting Materials

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January 24, 2025

CALL AND NOTICE OF A REGULAR MEETING OF THE
CITIZEN'S ADVISORY COMMITTEE
OF THE
BURBANK-GLENDALE-PASADENA AIRPORT AUTHORITY

NOTICE is hereby given that a regular meeting of the Citizen's Advisory Committee (CAC) for the Hollywood Burbank Airport Part 150 Study will be held Thursday, January 30, 2025 from 4:00 p.m. to 6:00 p.m. at the Elks Lodge, 2232 North Hollywood Way, Burbank, California 91505.

Leslie Whitmore, Board Secretary
Burbank-Glendale-Pasadena Airport Authority

REGULAR MEETING OF THE
CITIZEN'S ADVISORY COMMITTEE (CAC)
FOR THE HOLLYWOOD BURBANK AIRPORT PART 150 STUDY
Elks Lodge
Thursday, January 30, 2025
4:00 p.m.

The public comment period is the opportunity for members of the public to address the Committee on agenda items and on airport-related non-agenda matters that are within the Committee's subject matter jurisdiction. At the discretion of the presiding officer, public comment on an agenda item may be presented when that item is reached.

Members of the public are requested to observe the following decorum when attending or participating in meetings of the Committee:

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- *If you desire to address the Committee during the public comment period, fill out a speaker request card and present it to the Board Secretary.*
- *Confine remarks to agenda items or to airport-related non-agenda matters that are within the Committee's subject matter jurisdiction.*
- *Limit comments to three minutes or to such other period of time as may be specified by the presiding officer.*

The following activities are prohibited:

- *Allocation of speaker time to another person.*
- *Video presentations requiring use of Authority equipment.*

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the Authority to the Committee less than 72 hours prior to that meeting are available for public inspection at Hollywood Burbank Airport (2627 N. Hollywood Way, Burbank) in the administrative office during normal business hours.

In accordance with the Americans with Disabilities Act of 1990, if you require a disability related modification or accommodation to attend or participate in this meeting, including auxiliary aids or services, please call the Board Secretary at (818) 840-8840 at least 48 hours prior to the meeting.

AGENDA

Thursday, January 30, 2025

1. Roll Call
    - A brief acknowledgement of Committee members in attendance to confirm quorum and document participation for the meeting.

2. Introductions
    - Introduction of the study team and Citizen's Advisory Committee members.

3. Public Comment
    - Opportunity for members of the public to address the Committee.

4. Roles and Responsibilities
    - Brief overview of the roles and responsibilities of stakeholders and the Committee.

5. Airport Overview
    - Summary of airport history and facilities.

6. Aircraft Noise Terminology
    - Overview of common noise terminology related to the Part 150 study.

7. Airport Noise Compatibility Program
    - Summary of the Part 150 study, the planning process, and goals of the study.

8. Schedule and Meeting Topics
    - List of dates and topics of upcoming meetings for the Part 150 study.

9. Project Contacts and Website
    - List of contact information for the Part 150 study.

10. Discussion and Wrap Up
    - Opportunity for Committee members to ask questions regarding agenda-related items.


Hollywood Burbank Airport
Part 150 STUDY
Noise Compatibility Study
Citizen's Advisory Committee
Meeting #1
January 30, 2025

Agenda

1. Roll Call
2. Introductions
3. Public Comment
4. Roles and Responsibilities
5. Airport Overview
6. Aircraft Noise Terminology
7. Airport Noise Compatibility Program
8. Schedule and Meeting Topics
9. Project Contacts and Website
10. Discussion and Wrap-Up

INTRODUCTIONS

Study Team

Hollywood Burbank Airport	hmmh	Mead & Hunt	arellano associates
Aaron Galinis Project Manager	Tim Middleton Project Manager	Kate Andrus NCP Manager	Stacey Falcioni Outreach Strategist
Patrick Lammerding Deputy Executive Director Planning & Development	Mariano Sarrate Asst. Project Manager	Ryk Dunkelberg Regulatory Advisor	Stevie Espinosa Outreach Manager
Maggie Martinez Director, Noise & Environmental Affairs	Gene Reindel Principal-in-Charge	Corbett Smith Aviation Forecaster	

AIRPORT — **PROJECT TEAM**

INTRODUCTIONS

Citizen's Advisory Committee Members

City Represented	CAC Member
Burbank	Raymond Scholl
	Laura Ioanou
	Matin Perlmutter
Glendale	Aurora Abracia
	Adrian Fieda
	Carl Povilaitis
Pasadena	Rey Rodriguez
	Dino Barajas
	Phlunté Riddle

Roles and Responsibilities

Federal Government (FAA)	State and Local Government	Airport Operators
Regulate source noise emissions, air traffic control, funding, and safety oversight	Compatible land use planning and control	Plan and implement noise compatibility measures

Aircraft Operators	Air Travelers and Shippers	Current and Potential Residents
Develop noise-sensitive schedules, cockpit procedures, and fleet improvements	Bear the costs (through ticket tax)	Seek to act in an informed manner

Roles and Responsibilities

BGPAA

- Project sponsor
- Contracts with consultant team
- Certifies the NEM is accurate and complete
- Submits NEM Update to the FAA for acceptance

FAA

- Provides federal funding for NEM Update
- Accepts NEM update
- Certification that the documentation meets federal regulations and guidelines

Consultant Team

- Overall project management, documentation, and outreach
- Aircraft noise analysis
- Land use compatibility analysis
- Aviation forecast and airfield analysis

Advisory Committees

- Review study inputs, assumptions, analyses, documentation, etc.
- Input, advice, and guidance related to NEM development

Public

- Provide input on study during comment period
- Review public draft documents

ROLES AND RESPONSIBILITIES

Citizen's Advisory Committee (CAC)

Citizen's Advisory Committee

- ***Advisory*** to BUR solely for purposes of the BUR Part 150 Study
- ***Conveys*** a broad range of community perspectives to the Study
- ***Represents*** respective constituencies
- ***Recognizes*** *that the FAA is responsible for accepting the NEM/NCP and for approving Airport-recommended NCP measures*

CAC responsible for:

- Participating in CAC meetings and distributing information about the Study with their constituencies
- Providing input to the Study
- Reviewing information/documentation
- Providing comments on study documentation

BUR shall respect and consider CAC input but must retain overall responsibility for the Part 150 Study and NCP recommendations.

The CAC was appointed by the Airport Authority (BGPAA) and must comply with the responsibilities of a Brown Act committee

Airport History

1930 Opens as United Airport; largest in LA until 1946

1934 - 1940 Renamed Union Air Terminal, then Lockheed Air Terminal after purchase by Lockheed

1967 Renamed Hollywood–Burbank Airport, introducing jet services

1978 Authority acquired Airport, and renamed it to Burbank–Glendale–Pasadena Airport

2003 Renamed Bob Hope Airport in honor of the comedian

2014 - 2017 Regional Intermodal Transportation Center (RITC) opens; rebranded as Hollywood Burbank Airport

2024 - 2026 Breaks ground on new terminal, set to open in 2026 with modern facilities

Noise Exposure Map (NEM) accepted by FAA in 1988, 2000, and 2013.

Noise Compatibility Program (NCP) measures approved by FAA in 1989, 2000, 2004, and 2016.

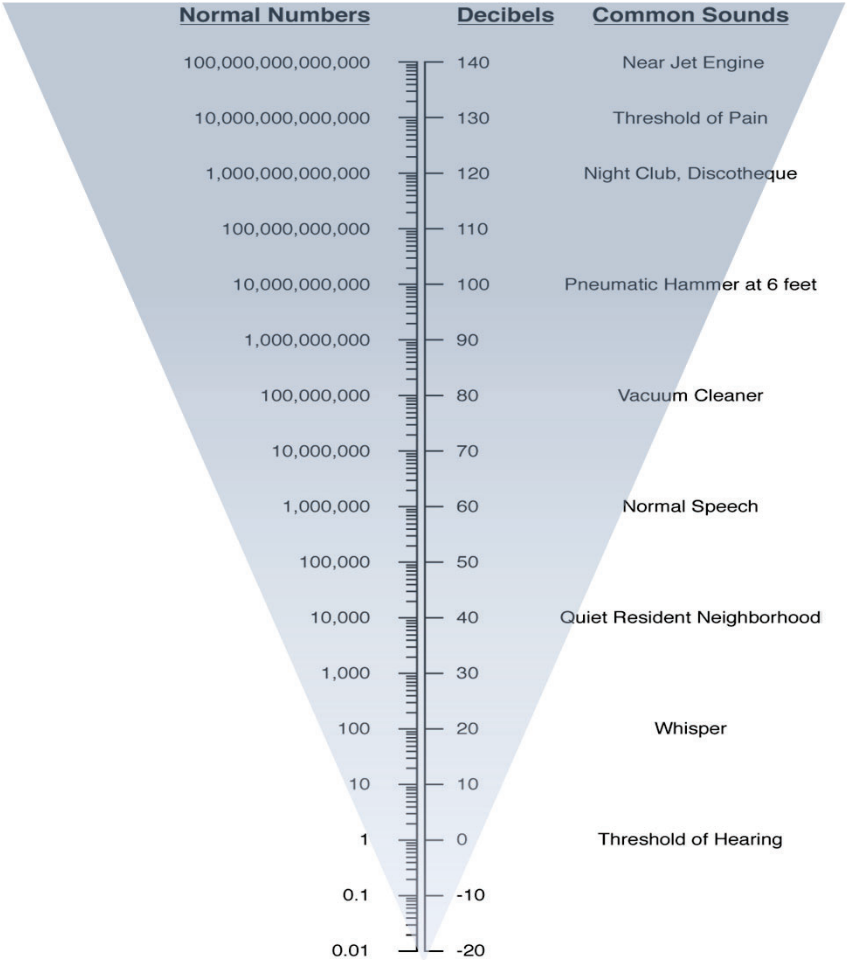
Airport Facility Overview - 2024

2 Intersecting Runways	**6,886** Feet of Runway, North-South	**5,802** Feet of Runway, East-West	**555** Acres on the Premises	**140,000** Total Aircraft Operations	**6 million** Annual Passengers
24,000 General Aviation Operations	**400** Military Operations	**64,000** Air Carrier Operations	**25,000** Air Taxi Operations	**1** Aircraft Rescue and Firefighting Station	**2** Fixed-Base Operators & 2 Cargo Carriers

Aircraft Noise Terminology

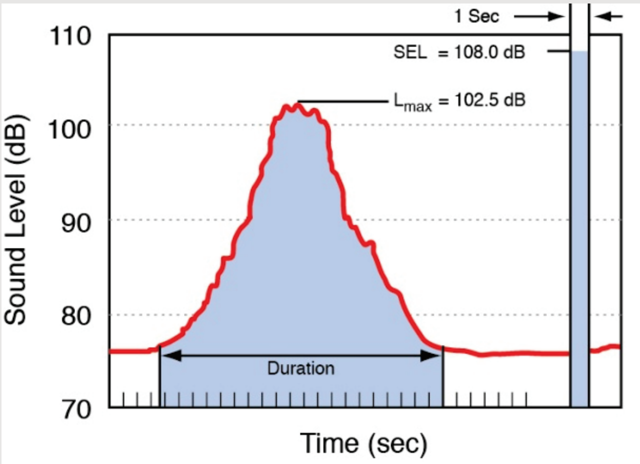
Noise Terminology

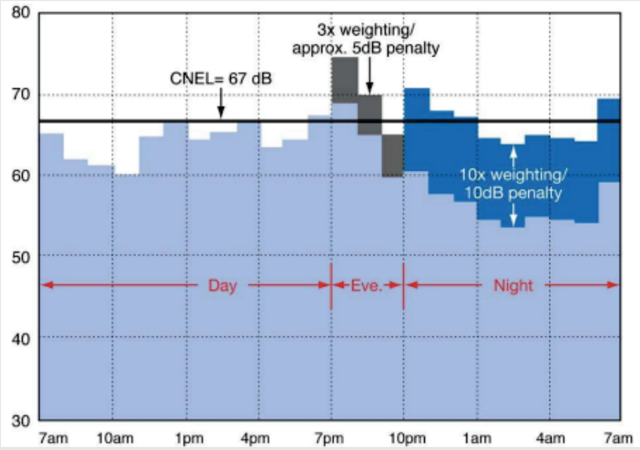
- Reported in A-weighted decibels (dB)
  - Logarithmic scale base 10
  - We hear sound pressures over a large range
  - We perceive sounds in decibels



Noise Terminology

- Maximum Noise Level (L_{max})
- Single Event Noise Exposure Level (SENEL)
- Equivalent Sound Level (L_{eq})
- Community Noise Equivalent Level (CNEL)





Noise Terminology

Decibels

- The decibel **(dB)** is a complex logarithmic quantity based on sound pressure
- A-weighted decibels correlate well with how we hear

Noise Levels

- Noise levels can be expressed many ways depending on their purpose, including but not limited to:
    - Instantaneous maximum noise levels (L_{max})
    - Single event dose (SEL)
    - Long-duration exposure (CNEL)

Part 150 Requirements

- FAA requires use of DNL in a Part 150 study (CNEL in California)
- FAA Part 150 land use compatibility guidelines:
    - ***All land use is compatible with aircraft noise less than CNEL 65 dB***
    - Land use compatibility assessments use 5-dB contour bands
        - 65 to 70 dB
        - 70 to 75 dB
        - Greater than 75 dB

Airport Noise Compatibility Planning

Part 150 Overview

Regulation

Title 14 of the Code of Federal Regulations Part 150 (14 CFR Part 150 or "Part 150"), "Airport Noise Compatibility Planning"

- Voluntary FAA-defined process for airport noise studies
  - Over 250 airports have participated
- Sets national standards for analysis
- Provides access to FAA funding of some approved measures

Technical Elements

Part 150 has two technical elements:

1. **Noise Exposure Map (NEM)**
   FAA Accepts the document as being completed per 14 CFR Part 150
2. **Noise Compatibility Program (NCP)**
   FAA Accepts the document as being completed per 14 CFR Part 150
   FAA approves/disapproved each Airport-recommended measure in a Record of Approval (ROA)

Planning Process

Study Initiation

- Finalize methodology
- Establish Citizen's Advisory Committee
- Establish Technical Advisory Committee
- Develop project schedule and milestones

Verification

- Existing Noise Exposure Maps, planning, and environmental documents
- Noise complaint data
- GIS and land use data
- Flight track, operations, and noise data
- FAA activity forecasts

Develop NEMs

- Develop noise contours for existing and 5-year forecast conditions
- Review land use data & policies
- Noise impact evaluation for DNL 65-75 dBa
- Identify incompatible land uses and review existing NCP
- Prepare maps in accordance with 14 CFR Part 150

Develop NCP

- Consider noise abatement strategies
- Consider land use strategies
- Consider programmatic strategies
- Update NCP in accordance with 14 CFR Part 150

Stakeholder Engagement and Public Outreach

Citizen's Advisory Committee • Technical Advisory Committee • Public Meetings/Hearing • Public Website Materials and Newsletters

Typical Progression

Step 1 **Identify Incompatible Land Uses**
- Existing conditions Noise Exposure Map
- Forecast conditions Noise Exposure Map

Step 2 **Consider Noise Abatement Strategies**
- *Reduce* exposure over incompatible uses
- *Limit* growth in exposure over incompatible uses

Step 3 **Consider Land Use Strategies**
- *Mitigate* residual incompatibilities
- *Prevent* introduction of new incompatible uses

Step 4 **Consider Programmatic Strategies**
- *Implement* and *promote* measures
- *Monitor* and *report* on effectiveness
- *Update* NEMs and *revise* NCP as appropriate

AIRPORT NOISE COMPATIBILITY PLANNING

NEM Development

- ✓ Develop noise contours for existing (2025) and 5-year forecast (2030) conditions
- ✓ Collect land use data and policies
- ✓ Assess noise compatibility for aircraft exposure of CNEL 65 dB and greater
- ✓ Prepare documentation in accordance with 14 CFR Part 150

FAA-Accepted 2017 Noise Exposure Map for BUR

NEM Update Goals

Goals

- Identify incompatible land uses potentially eligible for noise mitigation
- Review implementation of the Noise Compatibility Program
- Share pertinent data and information with the public

Note: *FAA requires that Noise Exposure Maps reflect existing and/or forecast conditions at all times – thus the need to update them on a regular basis.*

Public Participation Process (NEM)

Provide public with an opportunity for review of the Draft NEM Update and associated documentation

Request comments from public on Draft NEM Update

Hold a public workshop:

- Provide overview of Draft NEM Update
- One-on-one time with NEM Update project team
- Information sharing
- Education

Tentative Schedule

January 2024	Project Kick Off
February 2024	Data Collection and Study Protocol Development
January 30, 2025	**TAC/CAC Meeting #1**, Open House #1 (Study Introduction)
March 27, 2025	**TAC/CAC Meeting #2** (Review of Noise Modeling Inputs)
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Fall 2026	Open House #4 and Hearing (Draft NCP document)
Winter 2026/27	Submit NCP for FAA Review

Please hold dates underlined above for upcoming CAC meetings.

Project Contacts

Project Website	www.hollywoodburbankairport.com/noise/part-150-study-update
Project email address	BURPart150Study@arellanoassociates.com
Project Manager	Timothy Middleton, C.M. tmiddleton@hmmh.com

Discussion

March 20, 2025

CALL AND NOTICE OF A REGULAR MEETING OF THE
CITIZEN'S ADVISORY COMMITTEE
OF THE
BURBANK-GLENDALE-PASADENA AIRPORT AUTHORITY

NOTICE is hereby given that a regular meeting of the Citizen's Advisory Committee (CAC) for the Hollywood Burbank Airport Part 150 Study will be held Thursday, March 27, 2025 from 4:00 p.m. to 6:00 p.m. in the Airport Skyroom of Hollywood Burbank Airport, 2627 N. Hollywood Way, Burbank, California 91505.

Terri Williams, Board Secretary
Burbank-Glendale-Pasadena Airport Authority

REGULAR MEETING OF THE
CITIZEN'S ADVISORY COMMITTEE (CAC)
FOR THE HOLLYWOOD BURBANK AIRPORT PART 150 STUDY
Airport Skyroom
Thursday, March 27, 2025
4:00 p.m.

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- *Confine remarks to agenda items or to airport-related non-agenda matters that are within the Committee's subject matter jurisdiction.*
- *Limit comments to three minutes or to such other period of time as may be specified by the presiding officer.*

The following activities are prohibited:

- *Allocation of speaker time to another person.*
- *Video presentations requiring use of Authority equipment.*

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the Authority to the Committee less than 72 hours prior to that meeting are available for public inspection at Hollywood Burbank Airport (2627 N. Hollywood Way, Burbank) in the administrative office during normal business hours.

In accordance with the Americans with Disabilities Act of 1990, if you require a disability related modification or accommodation to attend or participate in this meeting, including auxiliary aids or services, please call the Board Secretary at (818) 840-8840 at least 48 hours prior to the meeting.

AGENDA

Thursday, March 27, 2025

1. Roll Call
   - A brief acknowledgement of Committee members in attendance to confirm quorum and document participation for the meeting.

2. Approval of Agenda

3. Approval of Minutes – January 30, 2025

4. Introductions
   - Introduction of the study team and Citizen's Advisory Committee members.

5. Public Comment
   - Opportunity for members of the public to address the Committee.

6. Roles and Responsibilities
   - Brief overview of the roles and responsibilities of stakeholders and the Committee.

7. Update on March 17th BGPAA Commission Meeting
   - Information regarding CAC membership agenda item

8. Committee Chair Selection Process

9. Part 150 Overview
   - Summary of the Part 150 regulation and technical elements.

10. Aviation Forecast
    - Overview of the aviation forecast for the Part 150 study.

11. Land Use
    - Summary of land use data collection and review of the land use map for the Part 150 study.

12. Noise Model Input Overview
    - Overview of the noise modeling process and results for the Part 150 study.

13. Next Steps, Schedule, and Project Contacts
    - Summary of the next steps, project schedule, and list of contact information for the Part 150 study.

14. Discussion
    - Opportunity for Committee members to ask questions regarding agenda-related items.

MINUTES OF THE CITIZEN'S ADVISORY COMMITTEE MEETING
BURBANK-GLENDALE-PASADENA AIRPORT AUTHORITY

THURSDAY, JANUARY 30, 2025

The Airport Authority held the first Part 150 Study Citizen's Advisory Committee meeting that was called to order on this date at the Burbank Elks Lodge at 4:02 PM by Eugene Reindel, Vice President with HMMH. A roll call was announced, and with a total of eight members of the committee present, a quorum was declared.

1. **Roll Call**

Present: Raymond Scholl, Laura Ioanou, Martin Perlmutter, Aurora Abracia, Adrian Fieda, Carl Povilaitis, Rey Rodriguez, Phlunte Riddle

Absent: Dino Barajas

Also Present: Authority staff: Patrick Lammerding, Aaron Galinis, Maggie Martinez; HMMH: Eugene Reindel, Timothy Middleton, Mariano Sarrate, Corbett Smith; Mead&Hunt: Ryk Dunkelberg; Arellano Associates: Stacey Falcioni and Eric Davidian

2. **Introductions** — Eugene Reindel, HMMH, introduced the study team and CAC members and reviewed the meeting agenda.

3. **Public Comment** — Thirteen members of the public provided public comments, including: Federico F., Lori Rittenberg, Heidi Mackay, Janine Love, John Van Tongern, Susan Hammer, Linda Clarke, Eric Robinson, Jane Goe, Benj Thall, Amy Higgins, Doug Mensman; Luke Klipp, Office of Laura Friedman.

4. **Roles and Responsibilities** — The Citizen's Advisory Committee (CAC) serves as an advisory body for the Hollywood Burbank Airport Part 150 Noise Compatibility Study focused on gathering public input on aircraft noise issues and assisting in the update of the Noise Exposure Map (NEM) and Noise Compatibility Program (NCP). Members are responsible for reviewing technical materials, analyzing aircraft noise data, and providing community perspectives on land use compatibility and mitigation measures. While CAC members represent their respective cities and contribute insights, the Authority Commission retains the discretion to accept or reject their recommendations and is responsible for submitting the final study to the FAA, which holds ultimate decision-making authority.

5. **Airport Overview** — Eugene Reindel, Vice President with HMMH provided am overview of the Airport Authority and noted that the Airport has undergone multiple FAA-approved Noise Compatibility Program (NCP) measures and Noise Exposure Map (NEM) updates to address aircraft noise.

6. **Aircraft Noise Terminology** — Eugene Reindel, HMMH, reviewed Aircraft Noise Terminology. The FAA Part 150 study requires DNL, but California mandates CNEL to assess land use compatibility in 5-dB contour bands starting at 65 dB CNEL. He noted that the measurements help regulate noise impacts and inform mitigation strategies under FAA's Noise Compatibility Planning process.

7. Noise Compatibility Program

Eugene Reindel, HMMH, described the Airport Noise Compatibility Program (NCP). Under FAA Part 150, the NCP mitigates aircraft noise through Noise Exposure Maps (NEMs) and strategic Noise Compatibility Programs (NCPs). It assesses noise abatement, land use planning, and mitigation measures, with FAA-approved actions eligible for federal funding. Regular updates ensure compliance, and public input is integral through workshops and comment periods.

8. Schedule and Meeting Topics

Eugene Reindel, HMMH, stated the second Citizens Advisory Committee (CAC) meeting is anticipated to be held on March 27, 2025. The focus of the meeting will be to review collected data, committee feedback, and updated noise modeling inputs. He also presented that the Part 150 Study will span from 2024 to winter 2026/27, with data collection, public meetings, and workshops leading to NEM submission in summer 2025, followed by the NCP phase and final FAA submission by Winter 2026/27.

9. Project Contacts

Eugene Reindel, HMMH mentioned the project contacts for the Part 150 Study include a dedicated project website for updates and resources, an email contact BURPart150Study@arellanoassociates.com for inquiries, and Timothy Middleton, C.M., as the Project Manager for direct communication.

10. Discussions

Following the presentation, Stacey Falcioni, Project Manager, Arellano Associates administered a discussion with committee members. Committee members engaged in a discussion, raising a total of 20 questions and comments.

Part 150 STUDY

Noise Compatibility Study
Citizen’s Advisory Committee
Meeting #2

March 27, 2025

Agenda

1. Roll Call
2. Introductions
3. Public Comment
4. Roles and Responsibilities
5. Results of March 17th BGPAA Airport Commission Meeting
6. Part 150 Overview
7. Aviation Forecast
8. Land Use
9. Noise Model Input Overview
10. Next Steps, Schedule, and Project Contacts
11. Discussion

INTRODUCTIONS

Study Team

Hollywood Burbank Airport	hmmh	Mead&Hunt	arellano associates
Aaron Galinis Project Manager	Tim Middleton Project Manager	Kate Andrus NCP Manager	Stacey Falcioni Outreach Strategist
Patrick Lammerding Deputy Executive Director Planning & Development	Mariano Sarrate Asst. Project Manager	Ryk Dunkelberg Regulatory Advisor	Stevie Espinosa Outreach Manager
Maggie Martinez Director, Noise & Environmental Affairs	Gene Reindel Principal-in-Charge	Corbett Smith Aviation Forecaster	

AIRPORT — **PROJECT TEAM**

Citizen's Advisory Committee Members

City Represented	CAC Member
Burbank	Raymond Scholl
	Laura Ioanou
	Martin Perlmutter
Glendale	Aurora Abracia
	Adrian Fieda
	Carl Povilaitis
Pasadena	Rey Rodriguez
	Dino Barajas
	Phlunté Riddle

Citizen's Advisory Committee (CAC)

Citizen's Advisory Committee

- ***Advisory*** to BUR solely for purposes of the BUR Part 150 Study
- ***Conveys*** a broad range of community perspectives to the Study
- ***Represents*** respective constituencies
- ***Recognizes*** *that the FAA is responsible for accepting the NEM/NCP and for approving Airport-recommended NCP measures*

CAC responsible for:

- Participating in CAC meetings and distributing information about the Study with their constituencies
- Providing input to the Study
- Reviewing information/documentation
- Providing comments on study documentation

BUR shall respect and consider CAC input but must retain overall responsibility for the Part 150 Study and NCP recommendations.

The CAC was appointed by the Airport Authority (BGPAA) and must comply with the responsibilities of a Brown Act committee

Results of March 17th BGPAA Airport Commission Meeting

CAC Membership Commission Agenda Item Discussion

Part 150 Overview

Regulation

Title 14 of the Code of Federal Regulations Part 150 (14 CFR Part 150 or "Part 150"), "Airport Noise Compatibility Planning"

- Voluntary FAA-defined process for airport noise studies
    - Over 250 airports have participated
- Sets national standards for analysis
- Provides access to FAA funding of some approved measures

Technical Elements

Part 150 has two technical elements:

1. **Noise Exposure Map (NEM)**
   FAA Accepts the document as being completed per 14 CFR Part 150
2. **Noise Compatibility Program (NCP)**
   FAA Accepts the document as being completed per 14 CFR Part 150
   FAA approves/disapproved each Airport-recommended measure in a Record of Approval (ROA)

Part 150 Overview
Noise Exposure Map (NEM)

The NEM document describes:

- ☑ Airport layout and operation
- ☑ Aircraft-related noise exposure
- ☑ Land uses in the airport environs
- ☑ Noise/land use compatibility

- An NEM must provide information for two timeframes:
  - Year of submission (2025)
  - Five-year forecast (2030)
- An FAA checklist identifies NEM requirements and documentation
- Annual average community noise equivalent level (CNEL) is depicted using contour lines on a map

Aviation Forecast

FAA Terminal Area Forecast (TAF)

Terminal Area Forecast (TAF)

- Official FAA forecast of aviation activity for U.S. airports
- Prepared for major users of the National Airspace System including
  - Air carrier
  - Air taxi/commuter
  - General aviation
  - Military
- Meets the budget and planning needs of the FAA
- Provides information for use by state and local authorities, the aviation industry, and the public

BUR Part 150

- The 2024 FAA TAF (published Feb 2025) is being used as the basis for the forecast aircraft operations at BUR.
  - Confirmed through independent forecasts

https://www.faa.gov/data_research/aviation/taf

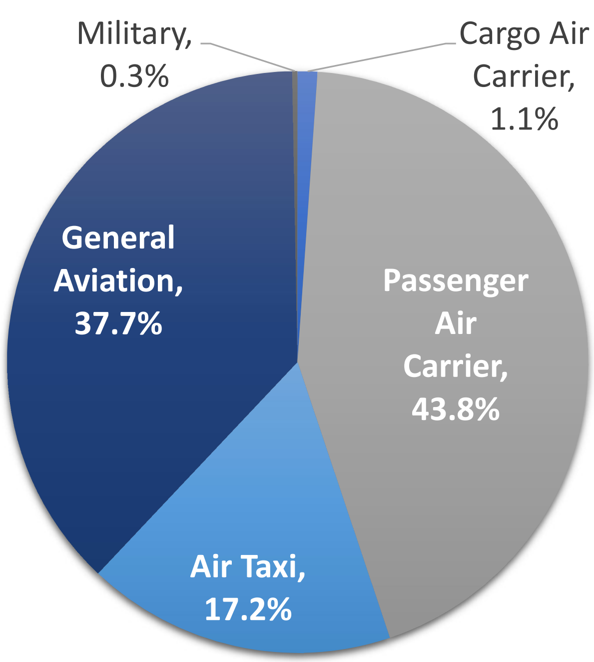
Comparison of Forecasts

Year	M&H Forecast	2024 TAF	Variance
Enplanements			
2023	3,005,380	3,075,619	+2.3%
2025	3,295,722	3,764,361	+12.4%
2030	3,780,347	4,412,330	+14.3%
Commercial Operations			
2023	89,282	88,767	-0.6%
2025	92,866	97,700	+4.9%
2030	105,458	113,741	+7.3%
Total Operations			
2023	141,678	139,760	-1.4%
2025	145,760	159,671	+8.7%
2030	159,626	178,515	+10.6%

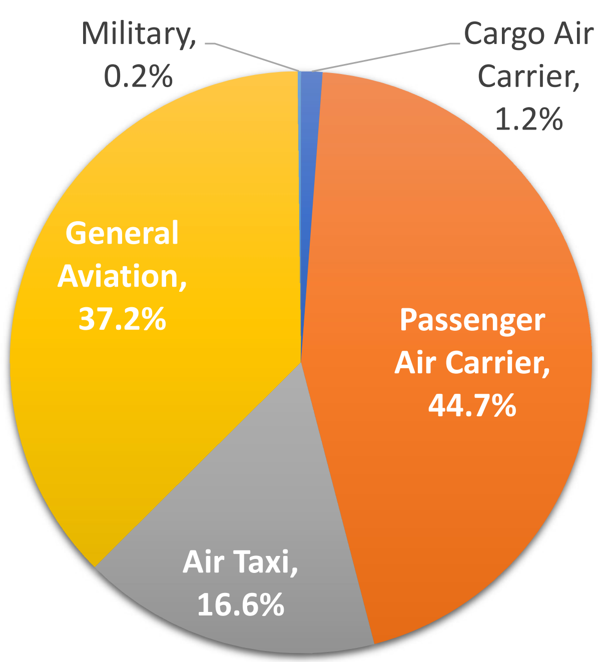
Source: Mead & Hunt analysis, FAA 2024 TAF, and FAA OPSNET

Aircraft Summary by Category

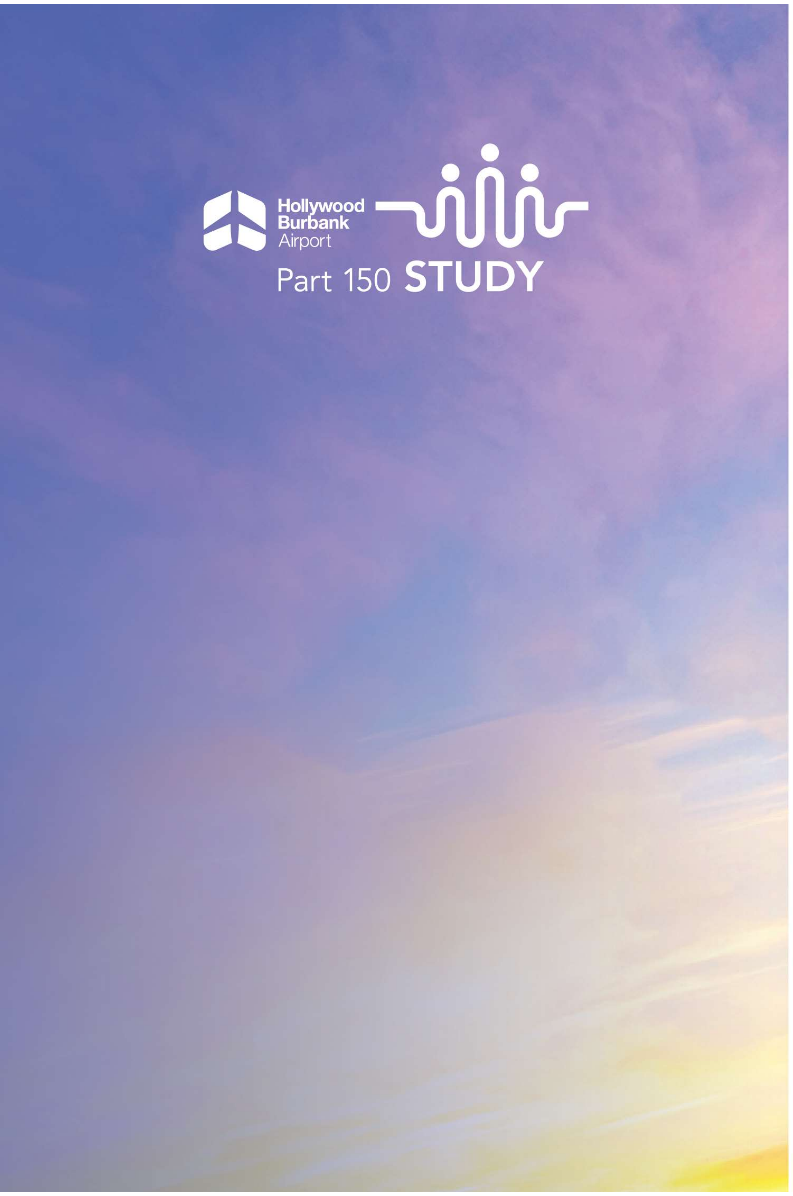
2025 Operations



2030 Operations



- Most operations based on 2023 flight track and aircraft identification data from BUR Airport Noise & Operations Monitoring System (ANOMS™)
- Military operations based on 2023 FAA Traffic Flow Management System Counts (TFMSC) data

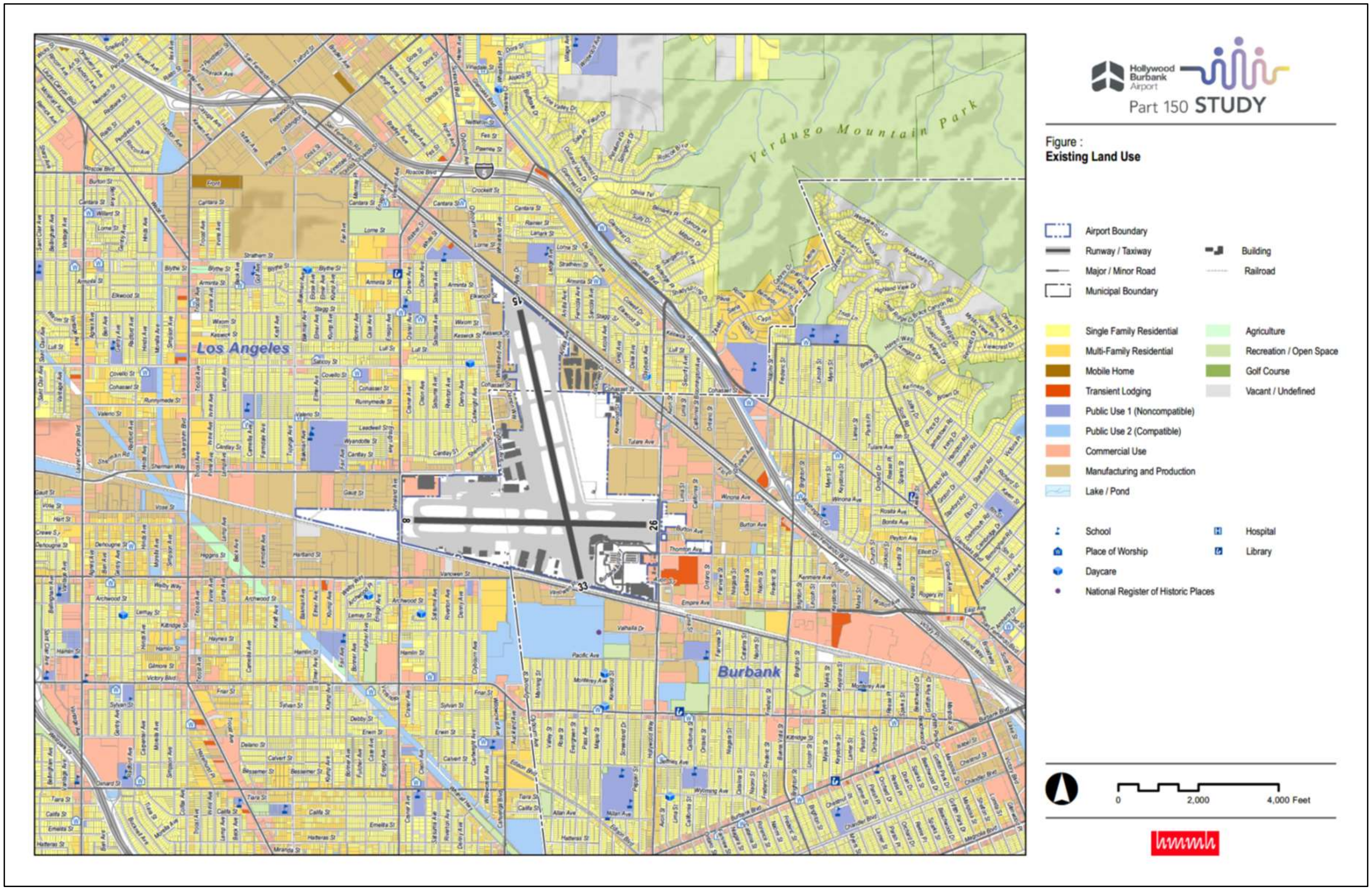


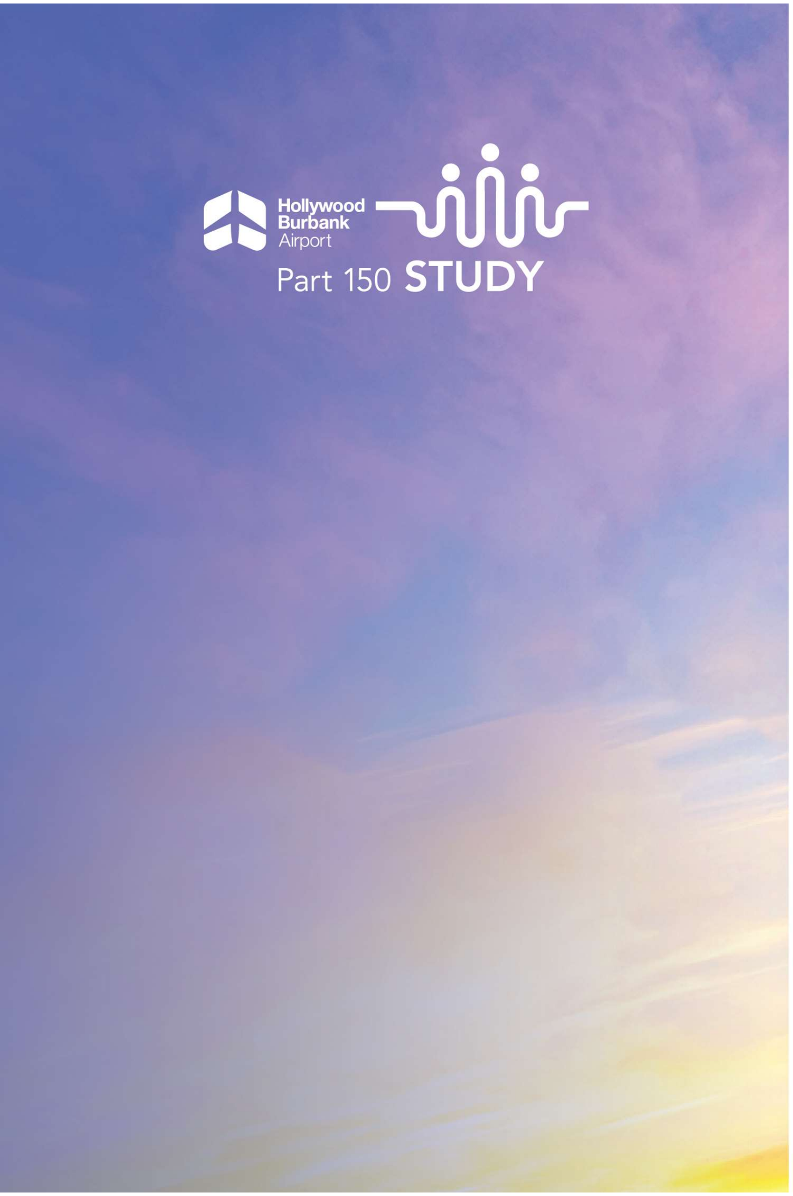
Land Use

Land Use Data Collection & Review

Primary data collection steps include:

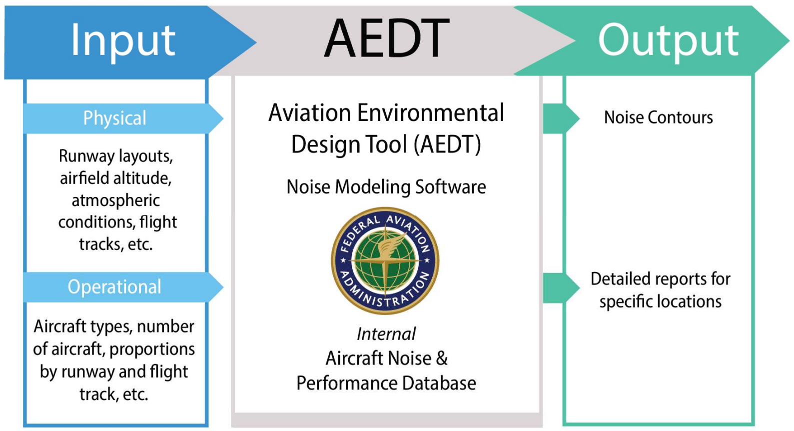
- Assemble and review land use, zoning, and population data
- Identify noise-sensitive sites, e.g., schools and places of worship
- Identify any local land use policies that address airport operations
- Create draft land use maps
- Verify land uses through windshield survey (in area of expected 65 dB CNEL contour)
- Local jurisdictions to review maps and advise of necessary corrections
- Assess any deficiencies of land use data and corrective approaches


Hollywood Burbank Airport
Part 150 STUDY
Figure :
Existing Land Use
Airport Boundary
Runway / Taxiway
Major / Minor Road
Municipal Boundary
Building
Railroad
Single Family Residential
Multi-Family Residential
Mobile Home
Transient Lodging
Public Use 1 (Noncompatible)
Public Use 2 (Compatible)
Commercial Use
Manufacturing and Production
Lake / Pond
Agriculture
Recreation / Open Space
Golf Course
Vacant / Undefined
School
Place of Worship
Daycare
National Register of Historic Places
Hospital
Library
0
2,000
4,000 Feet
hmmh
Verdugo Mountain Park
Los Angeles
Burbank



Noise Model Input Overview

Noise Model Overview



- FAA requires use of their Aviation Environmental Design Tool (AEDT) for civilian aircraft operations
  - Version 3g is the most current version (at study's commencement)
  - https://aedt.faa.gov

Noise model input data categories:

1 Aircraft Noise and Performance Data

- Aircraft performance profiles
- Noise level vs. distance curves

2 Airport Physical Inputs

- Airport Layout
- Weather data
- Terrain data

3 Aircraft Operational Inputs

- Number of aircraft operations
- Aircraft fleet mix
- Day-evening-night split of flight and runup operations
- Runway utilization
- Flight track geometry and utilization

Noise Modeling Process

Base Year
2/1/2023 through 1/31/2024

- Obtained, processed and analyzed 12 months of flight track and aircraft identification data
- Determined day-night split of aircraft operations, and fleet mix

Existing & Forecast Conditions
2025 and 2030

- Confirmation of FAA's Terminal Area Forecast (TAF)
- Scaled base year operations with updated fleet to 2025 existing operations and 2030 forecast operations

Physical Conditions

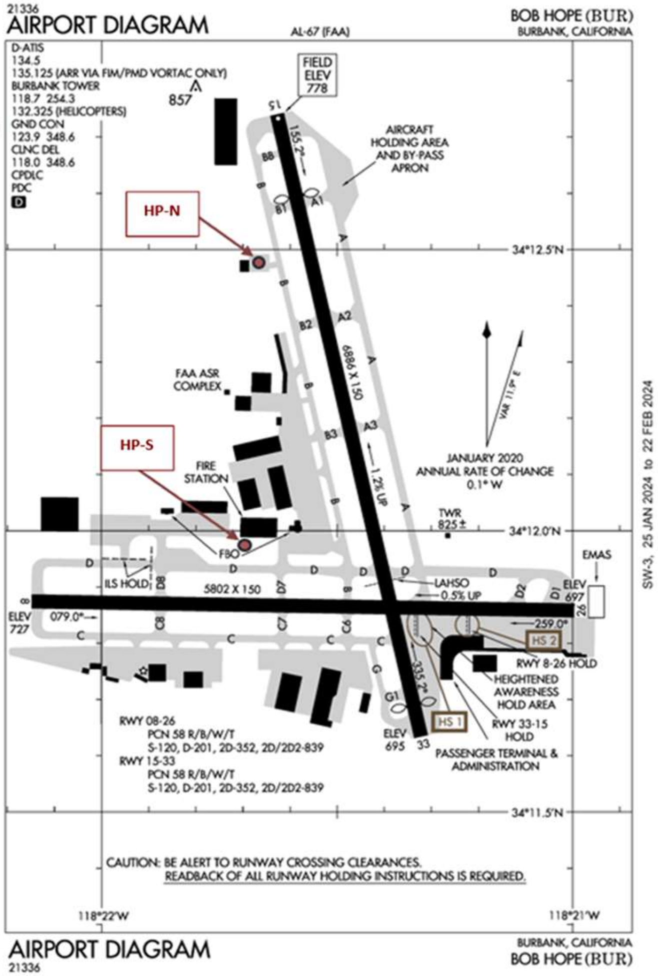
AIRFIELD LAYOUT

Runways

- Runway 15/33
- Runway 8/26
- **Helipads** (designated as red dots on diagram)
  - Differentiated by north (HP-N) and south (HP-S)

New Terminal

- Projected to open in 2026
- No changes to the Runways or Helipads



Weather and Terrain

METEOROLOGICAL CONDITIONS

- AEDT database includes recent 10-year (2013-2022) averages:

Temperature	65.28° F
Station Pressure	988.38 mbar
Sea Level Pressure	1013.92 mbar
Relative Humidity	50.03 %
Dew Point	46.1° F
Wind Speed	4.48 knots

TERRAIN DATA

- Describes elevation of ground surrounding the airport and airport property
- Data obtained from the U.S. Geological Survey National Elevation Dataset

Aircraft Operations

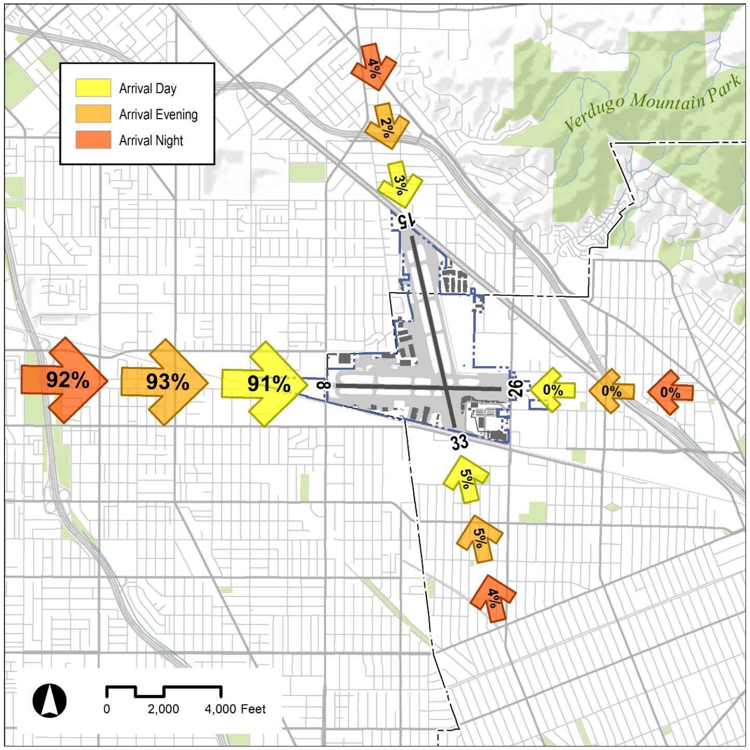
Annual Average Day Operations	Existing Year 2025 Forecast Year 2030	
Aircraft Type	Jet Turboprop Helicopter Piston	*Matched to specific AEDT Aircraft Types*
Day-Evening-Night Split	Day: 7 AM – 7 PM Evening: 7 PM – 10 PM Night: 10 PM – 7 AM	
Runway Use, Flight Tracks, Track Use	*Represents where the flight operations occur*	
Stage Length	Surrogate for aircraft weight; determined by distance from departure to destination airport	

AIRCRAFT OPERATIONS

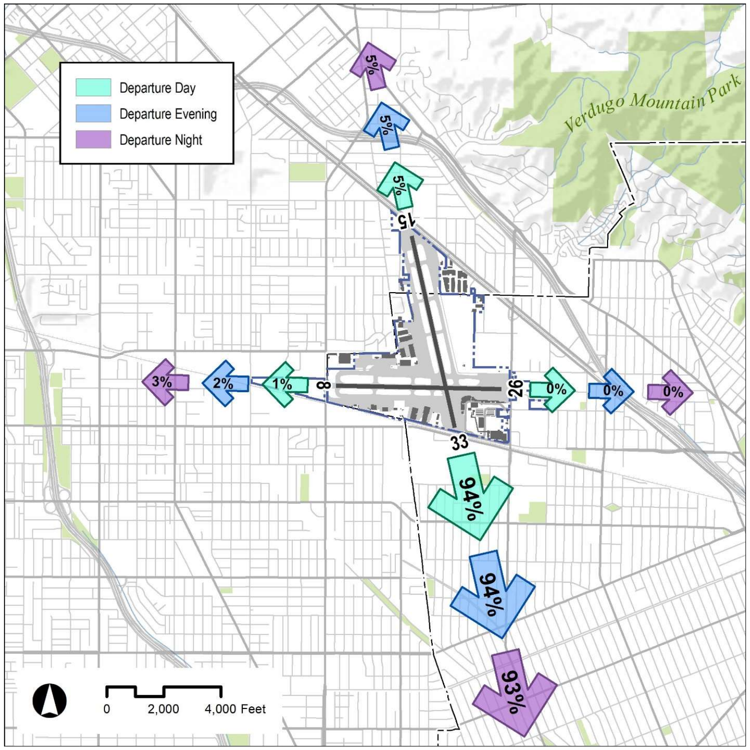
Year	Commercial	General Aviation	Military	Total
2025	92,866	52,494	400	145,967
2030	105,458	53,767	400	159,626

Note 1: Forecast Pending FAA Approval.
Note 2: Operations sums may appear to be off due to rounding.
Source: M&H Forecast, FAA 2023 TAF

Runway Use

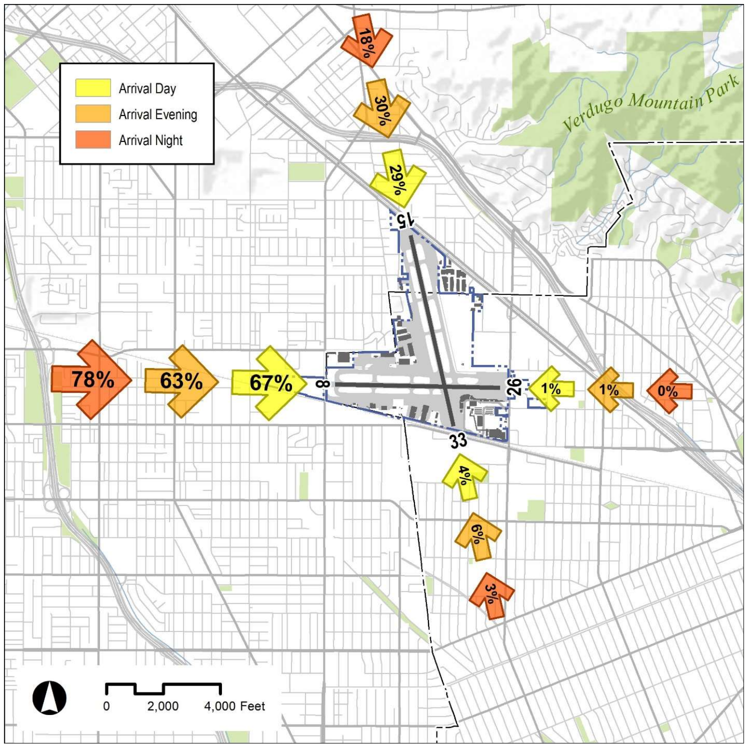


Jet Arrival Runway Use Percentages

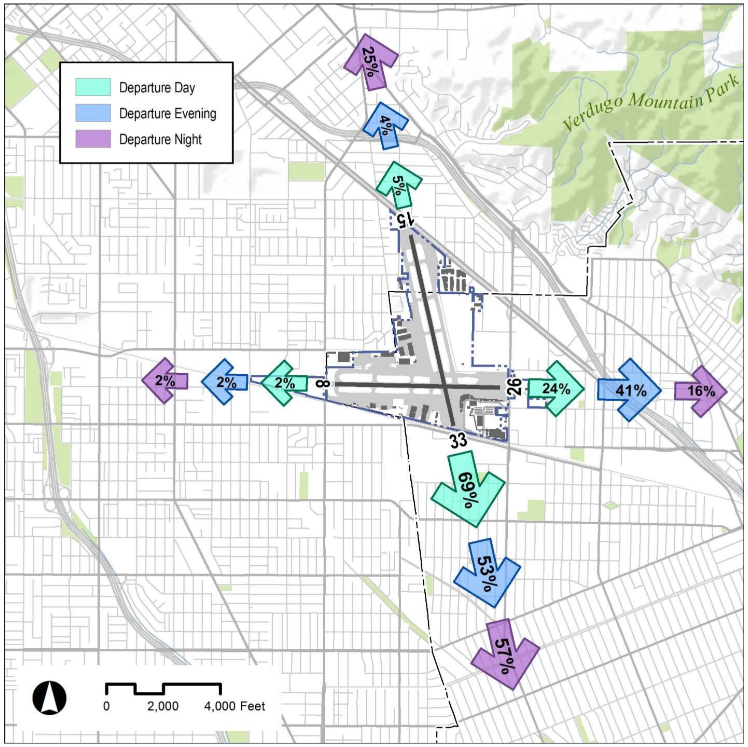


Jet Departure Runway Use Percentages

Runway Use



Non-Jet Arrival Runway Use Percentages



Non-Jet Departure Runway Use Percentages

Aircraft Flight Tracks

- Model flight tracks have been developed for arrivals and departures based on analysis of radar data
- Model "Backbone" tracks are developed for major origin/destination directions; backbones have subtracks, to increase fidelity of modeling

Model Track Development Process

- Actual flight tracks are grouped into bundles (by aircraft type, runway, operation type, and destination)
- Track groups are represented by a "backbone" track and sub-tracks on either side to represent the dispersion of the bundle
- Representative tracks are developed to the extent of the study area
- Separate track use percentages are developed for each track bundle and type of operation

Aircraft Flight Tracks

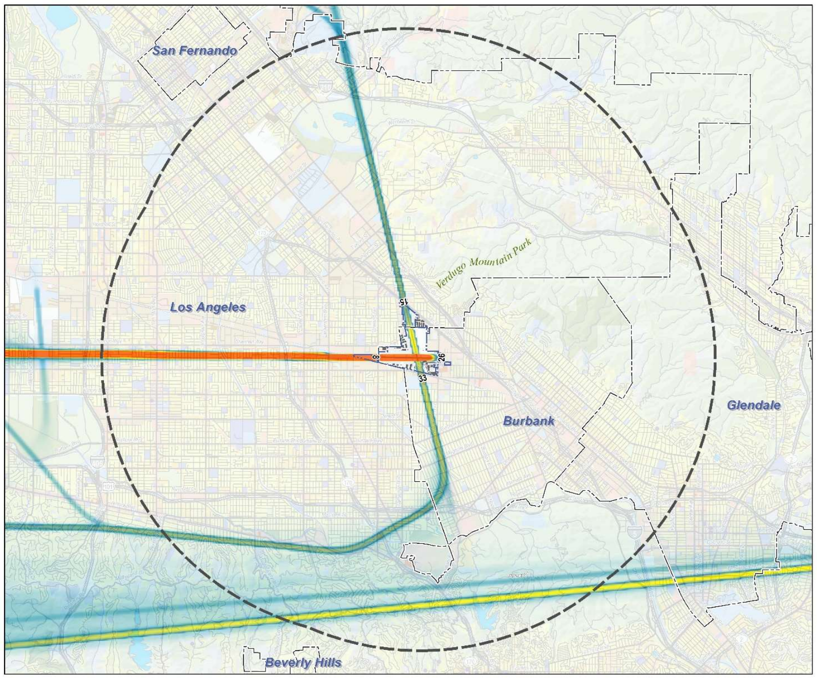
- Process is the same for arrivals and departures for each runway, aircraft type, direction, and track group
- Prepared 385 tracks: 103 backbone and 282 sub-tracks

Subsequent slides

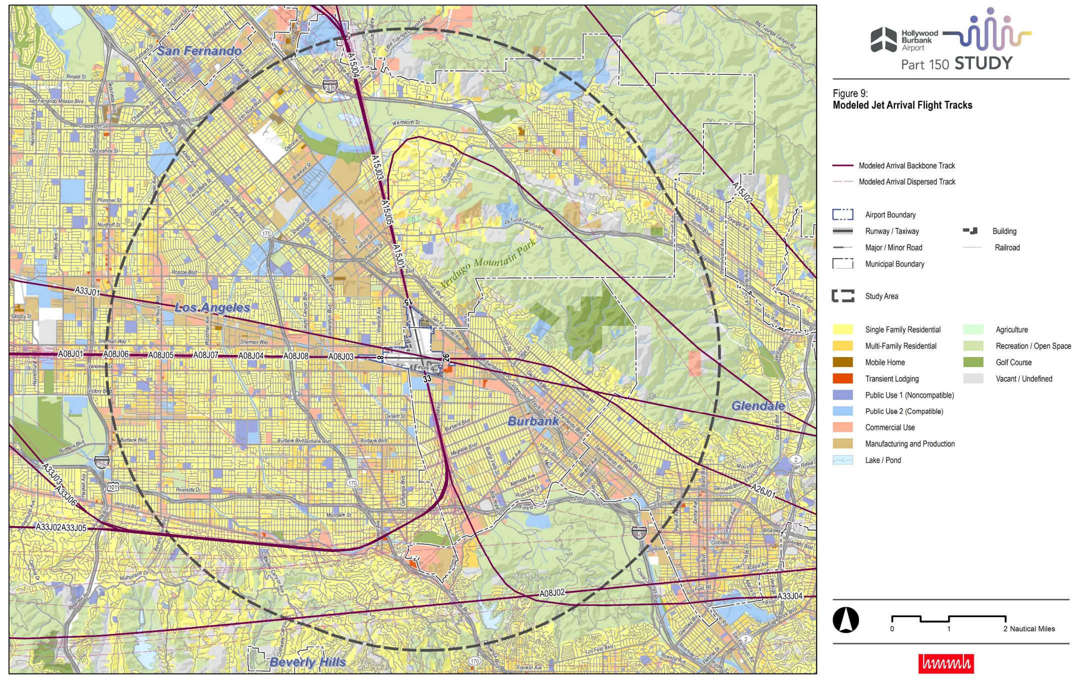
- Illustrate the results of HMMH development of model tracks
- Present overall arrival and departure flight track figures for each aircraft group

Runway	Arrival Tracks		Departure Tracks	
	Backbone	Sub-Track	Backbone	Sub-Track
15	8	20	16	68
33	10	22	11	28
8	17	60	6	14
26	3	0	6	18
HS	6	13	7	13
HN	6	11	7	15
Total	50	126	53	156

Flight Tracks – Jet Arrivals

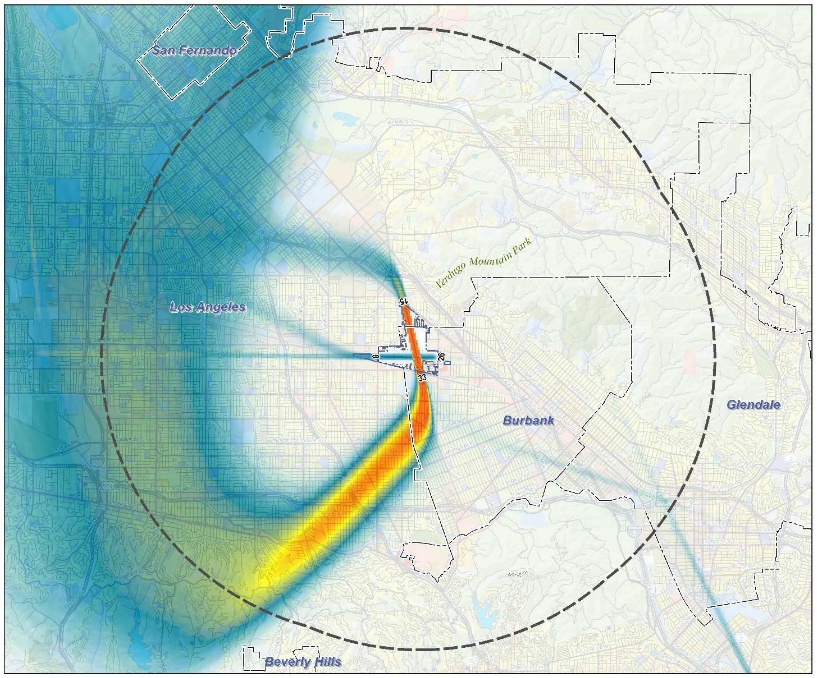


2023 Flight Track Density

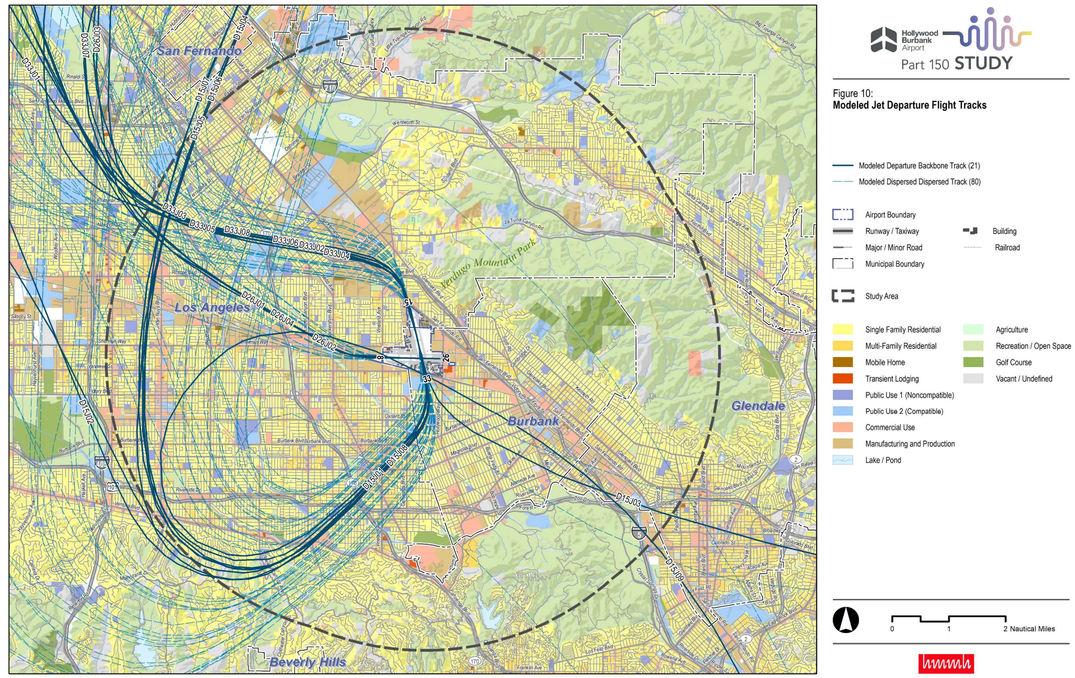


Model Flight Tracks

Flight Tracks – Jet Departures

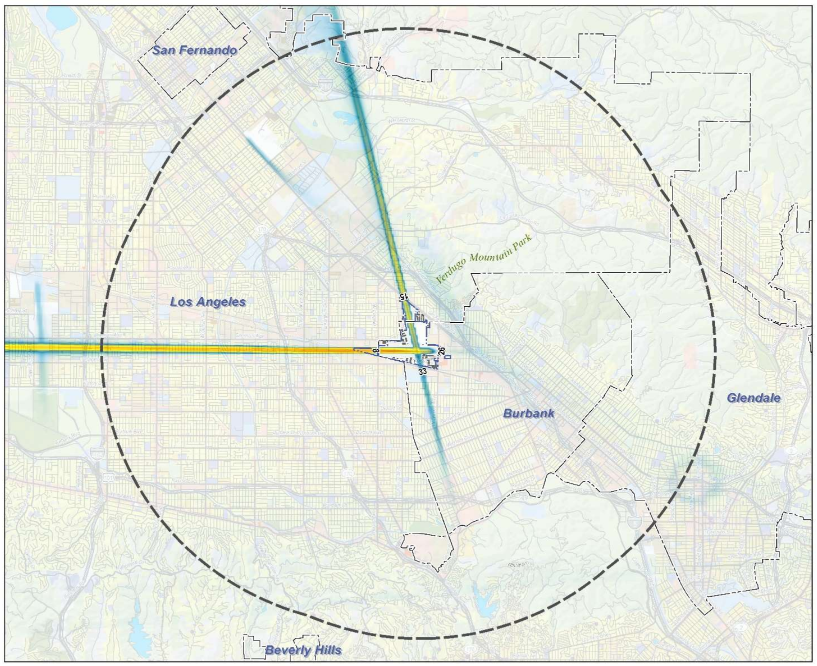


2023 Flight Track Density

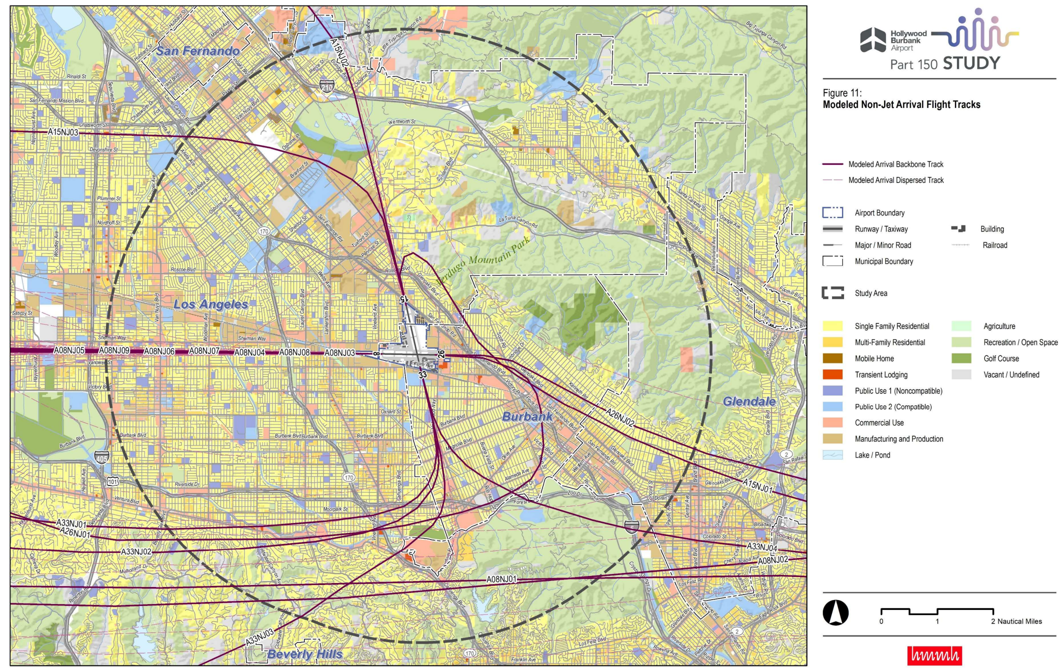


Model Flight Tracks

Flight Tracks – Non-Jet Arrivals



2023 Flight Track Density

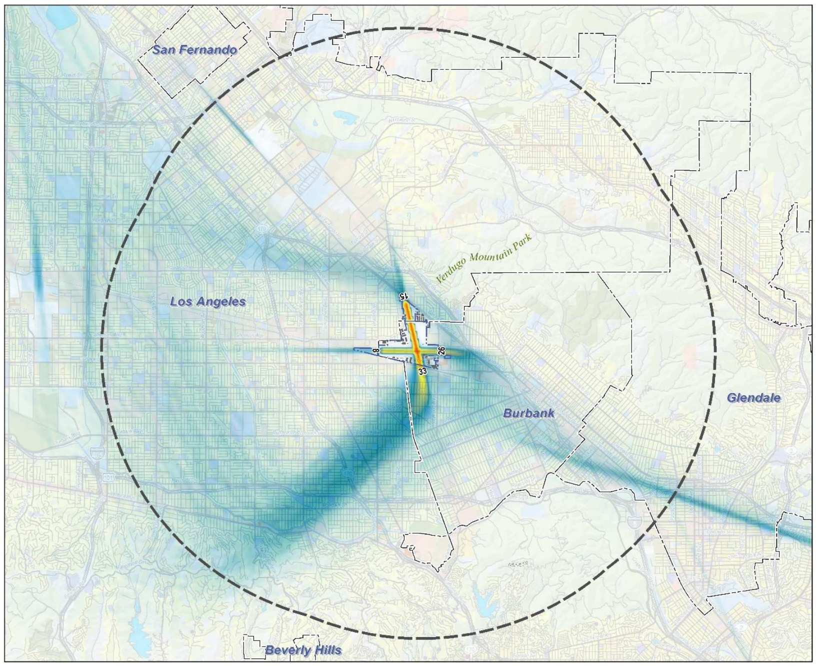


Model Flight Tracks

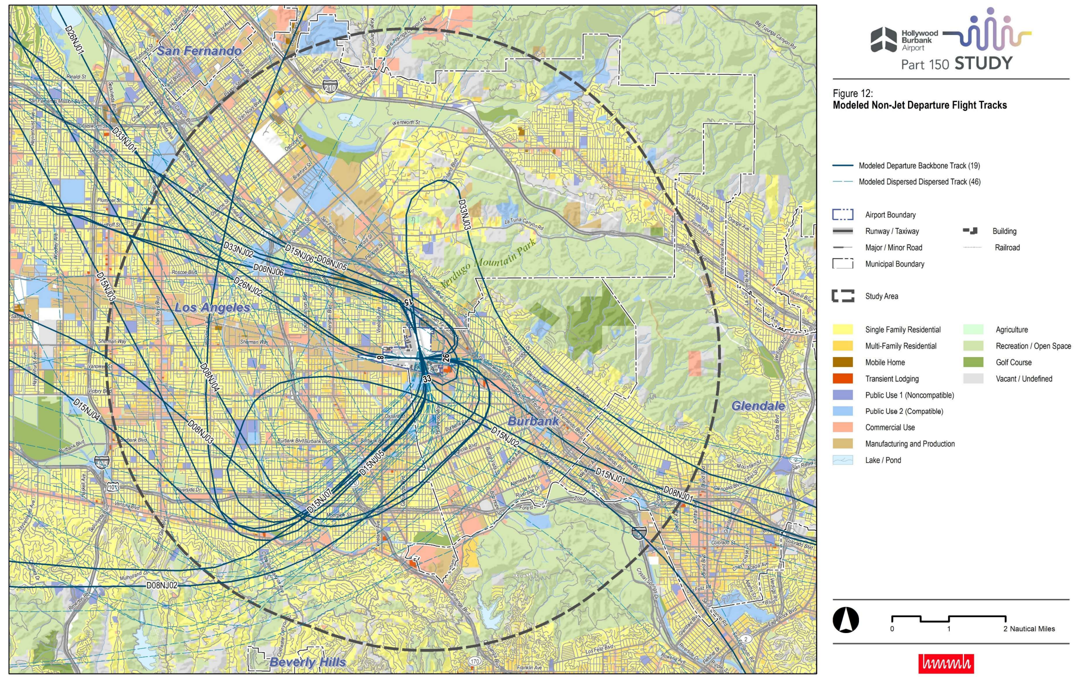
Hollywood Burbank Airport

Part 150 STUDY

Flight Tracks – Non-Jet Departures

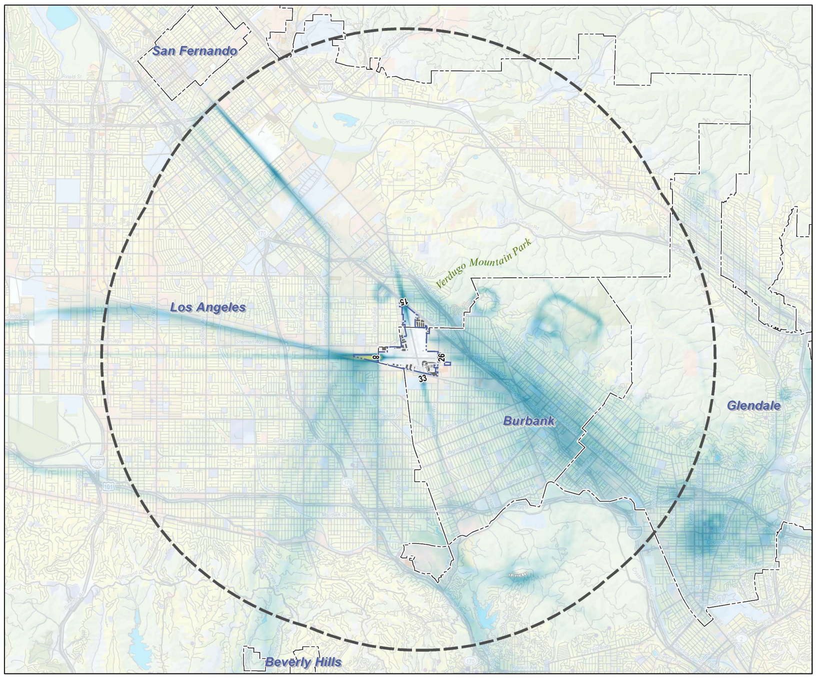


2023 Flight Track Density

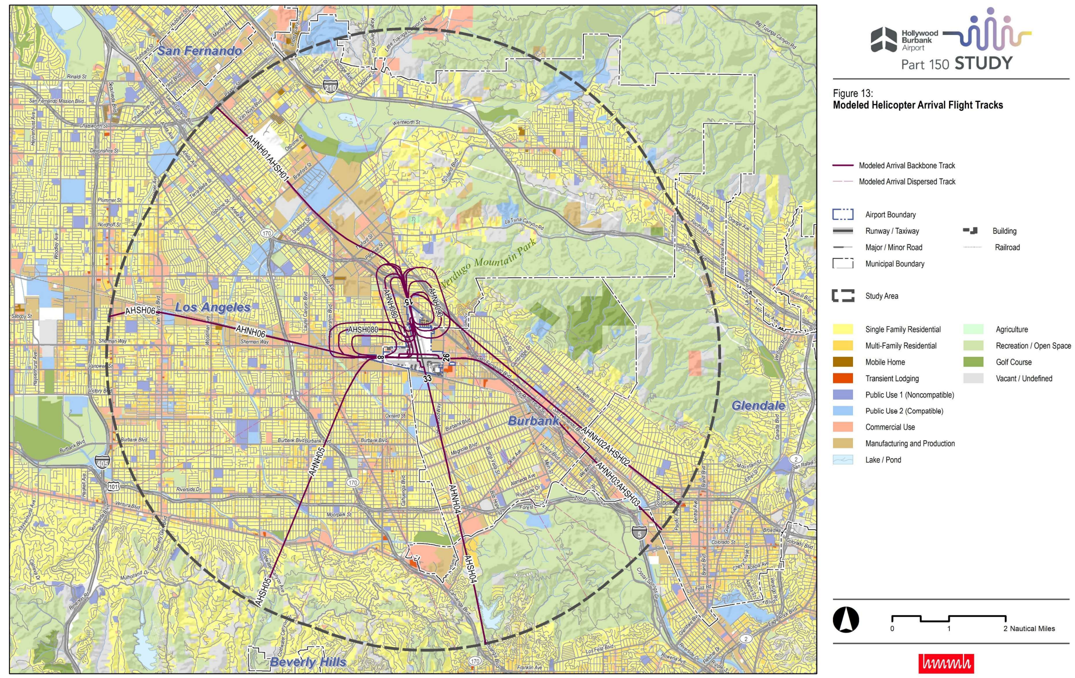


Model Flight Tracks

Flight Tracks – Helicopter Arrivals

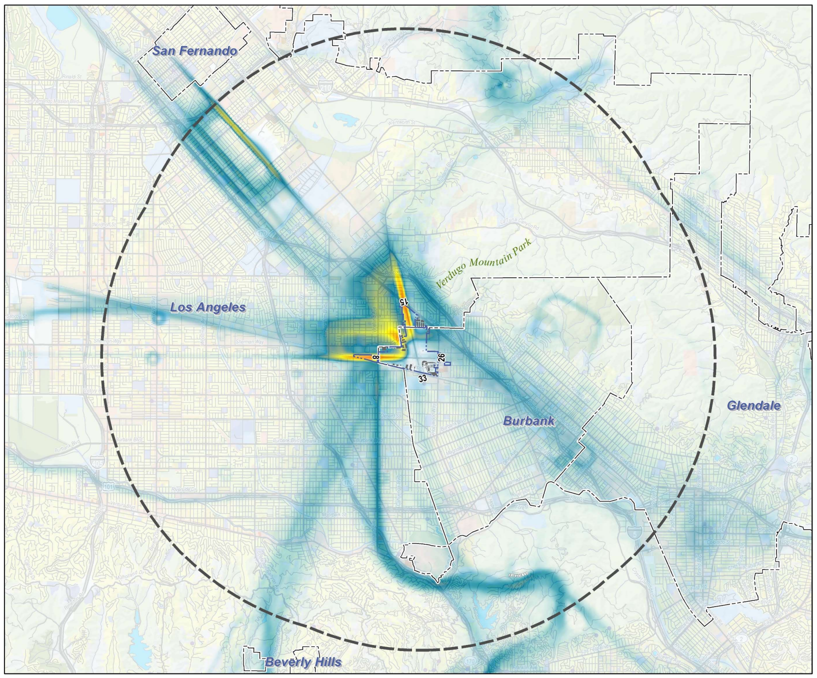


2023 Flight Track Density

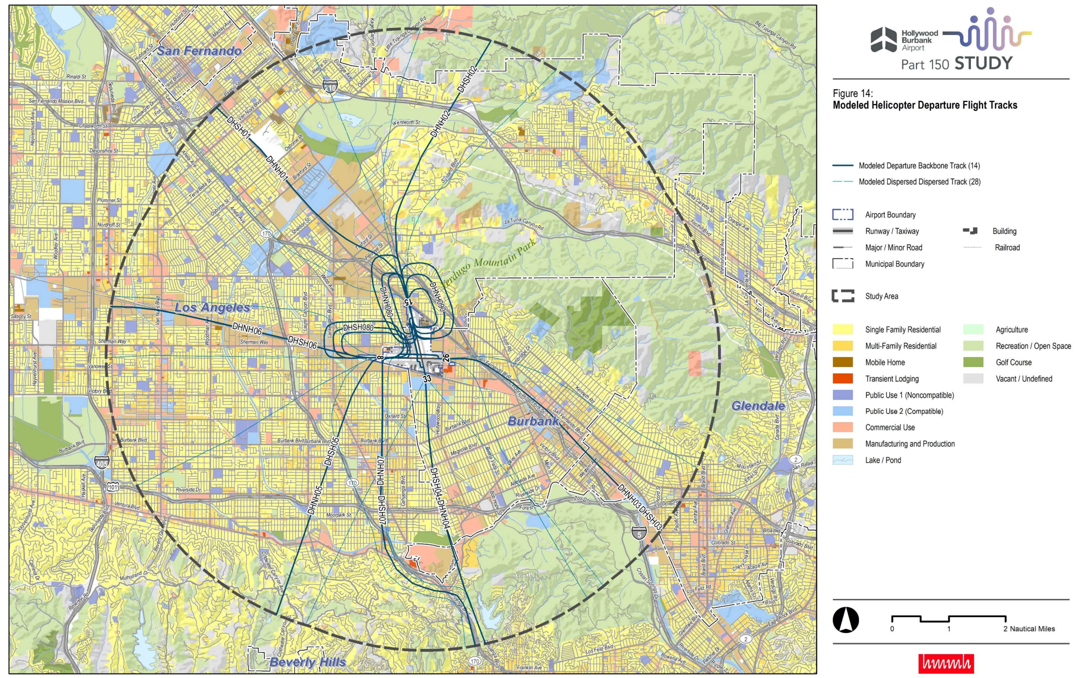


Model Flight Tracks

Flight Tracks – Helicopter Departures



2023 Flight Track Density



Model Flight Tracks

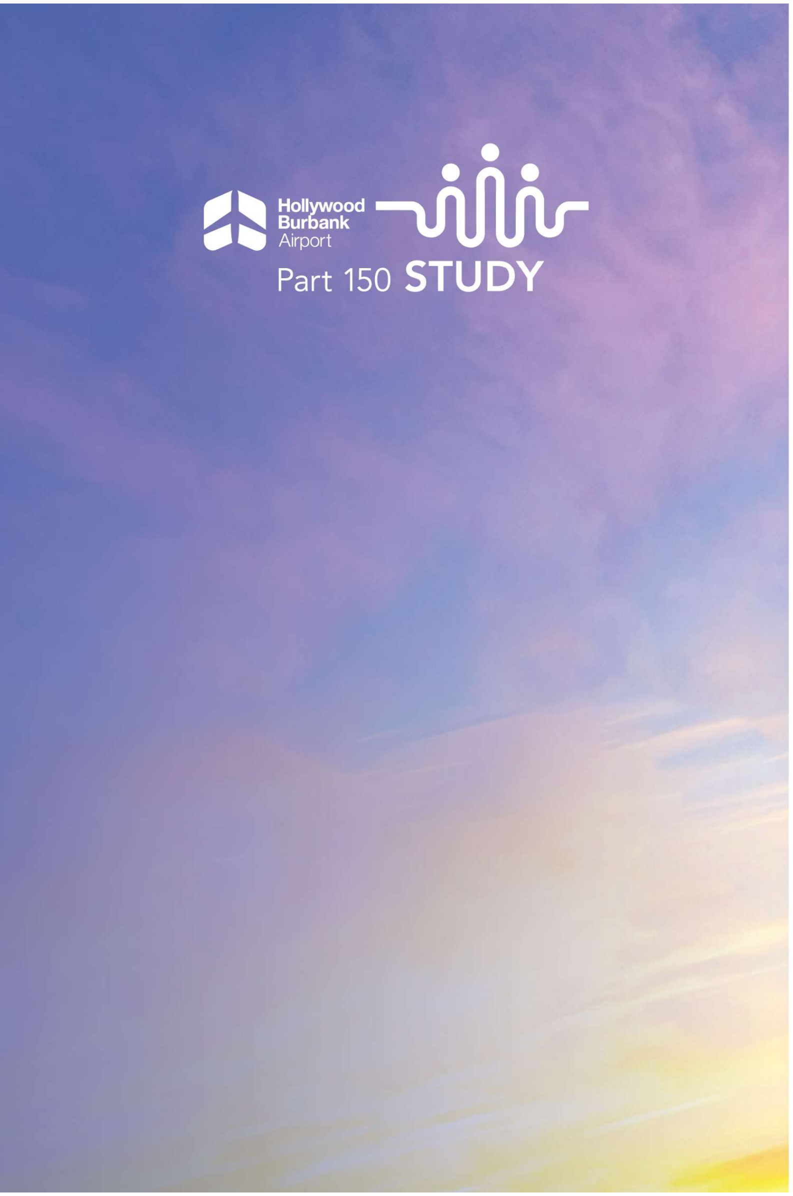
Next Steps

- Generate noise contours with AEDT
- Assess land use compatibility
- Develop draft Noise Exposure Maps and report
- Present draft NEM to the public
- Submit the NEM to the FAA for review and acceptance
- Evaluate:
  - Potential **noise abatement measures** to reduce the number of people exposed to 65 dB CNEL and higher aircraft noise levels
  - Potential **land use measures** to mitigate uses not compatible with aircraft noise and prohibit introduction of future non-compatible land uses
  - Potential pr**ogrammatic measures** to implement, monitor and report on the Authority-recommended noise abatement and land use measures
- Update the Noise Compatibility Program

Tentative Schedule

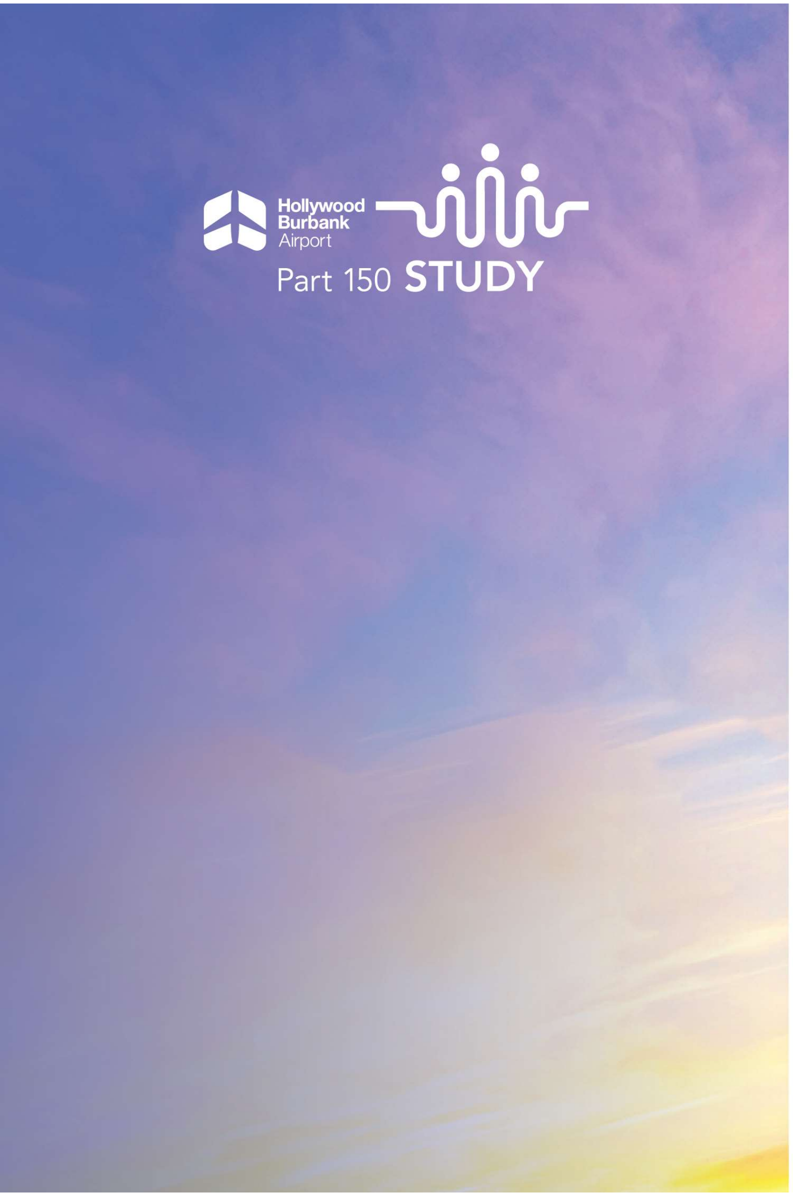
January 2024	Project Kick Off
February 2024	Data Collection and Study Protocol Development
January 30, 2025	**TAC/CAC Meeting #1**, Open House #1 (Study Introduction)
March 27, 2025	**TAC/CAC Meeting #2** (Review of Noise Modeling Inputs)
Spring 2025	Publish Draft NEM Document, 30-Day Review Period
May 22, 2025	**TAC/CAC Meeting #3** (Noise Modeling Results & Existing NCP Review) Open House Meeting #2 (NEM Draft Document)
Summer 2025	Submit NEM to FAA, NCP Phase Begins
Fall 2025	**TAC/CAC Meeting #4** (Noise Abatement Measures)
Winter 2026	**TAC/CAC Meeting #5** (Land Use & Programmatic Measures)
Spring 2026	**TAC/CAC Meeting #6**, Open House #3 (Draft NCP Recommendations)
Fall 2026	Open House #4 and Public Hearing (Draft NCP document)
November 2026	Submit NCP to FAA

Please hold dates underlined above for upcoming TAC meetings.



Project Contacts

Project Website	www.hollywoodburbankairport.com/noise/part-150-study-update
Project email address	BURPart150Study@arellanoassociates.com
Project Manager	Timothy Middleton, C.M. tmiddleton@hmmh.com



Discussion

Public Open House Meeting Materials

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Hollywood Burbank Airport

Part 150 STUDY

Noise Compatibility Study Public Open House

Airport History

1930 Opens as United Airport; largest in LA until 1946

1934 - 1940 Renamed Union Air Terminal, then Lockheed Air Terminal after purchase by Lockheed.

1967 Renamed Hollywood–Burbank Airport, introducing jet services.

1978 Authority acquired Airport, and renamed it to Burbank-Glendale-Pasadena Airport

2003 Renamed Bob Hope Airport in honor of the comedian.

2014 - 2017 Regional Intermodal Transportation Center opens; rebranded as Hollywood Burbank Airport.

2024 - 2026 Breaks ground on new terminal, set to open in 2026 with modern facilities.

Noise Exposure Map (NEM) accepted by FAA in 1988, 2000, and 2013.

Noise Compatibility Program (NCP) measures approved by FAA in 1989, 2000, 2004, and 2016.

Airport Facility Overview

2
Intersecting Runways

6,886
Feet of Runway, North-South

5,802
Feet of Runway, East-West

555
Acres on the Premises

140,000
Total Aircraft Operations

6 million
Annual Passengers

24,000
General Aviation Operations

400
Military Operations

64,000
Air Carrier Operations

25,000
Air Taxi Operations

1
Aircraft Rescue and Firefighting Station

2
Fixed-Base Operators & 2 Cargo Carriers

Part 150 Overview

Regulation

Title 14 of the Code of Federal Regulations Part 150 (Part 150), "Airport Noise Compatibility Planning"

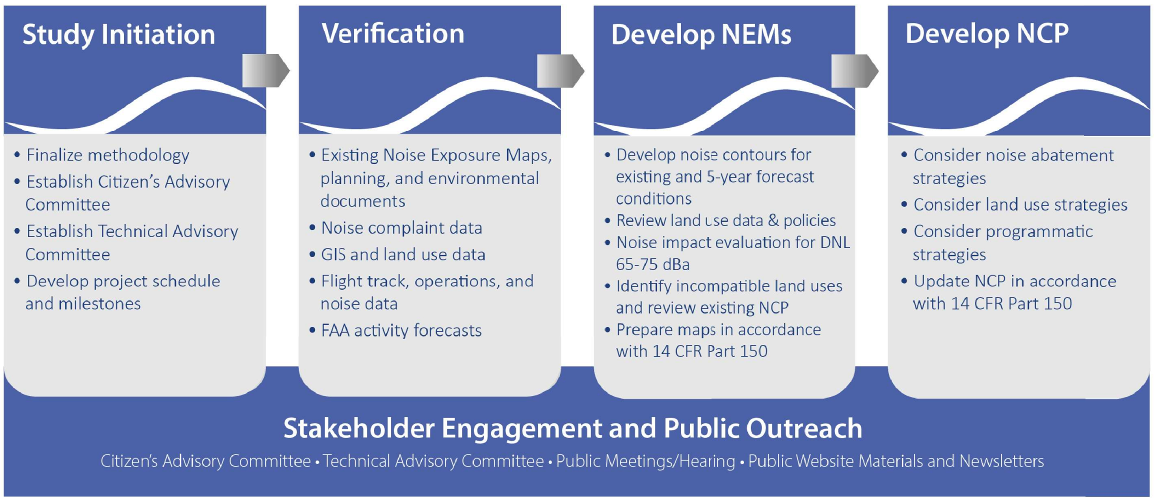
- Voluntary FAA-defined process for airport noise studies
- Over 250 airports have participated
- Sets national standards for analysis
- Provides access to FAA funding of some approved measures

Technical Elements

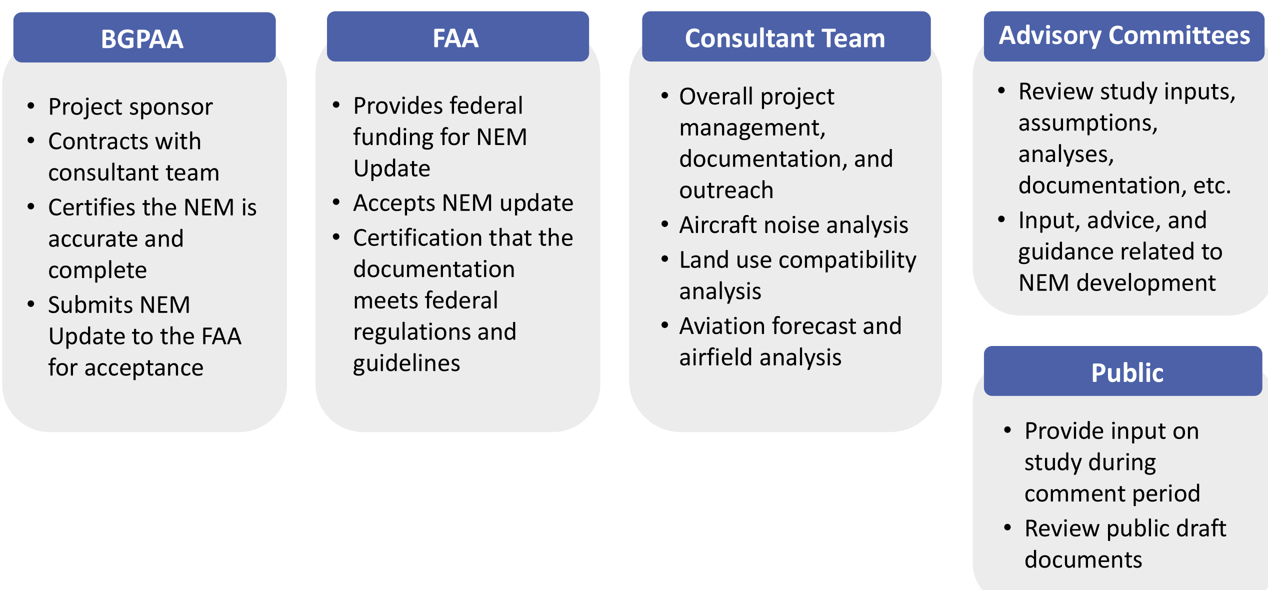
Part 150 has two technical elements:

1. **Noise Exposure Map (NEM)**
   FAA Accepts the document as being completed per 14 CFR Part 150
2. **Noise Compatibility Program (NCP)**
   FAA Accepts the document as being completed per 14 CFR Part 150
   FAA approves/disapproved each Airport-recommended measure in a Record of Approval (ROA)

Planning Process



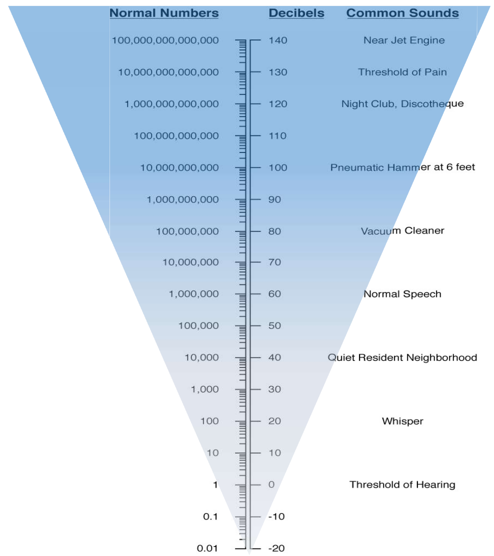
Roles and Responsibilities



Noise Terminology

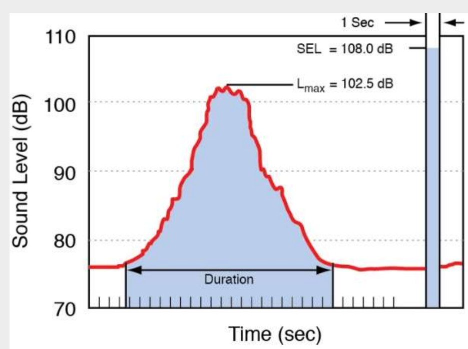
Reported in A-weighted decibels (dB)

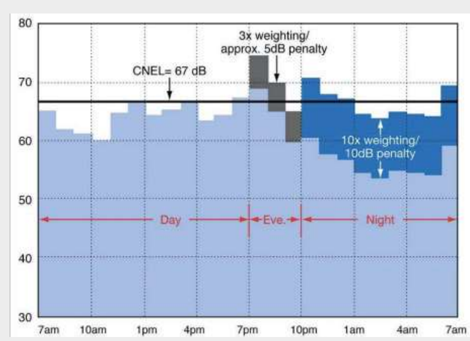
- Logarithmic scale base 10
- We hear sound pressures over a large range
- We perceive sounds in decibels



Noise Terminology

- Maximum Noise Level (L_{max})
- Single Event Noise Exposure Level (SENEL)
- Equivalent Sound Level (L_{eq})
- Community Noise Equivalent Level (CNEL)





Noise Terminology

Decibels

- The decibel **(dB)** is a complex logarithmic quantity based on sound pressure
- A-weighted decibels correlate well with how we hear

Noise Levels

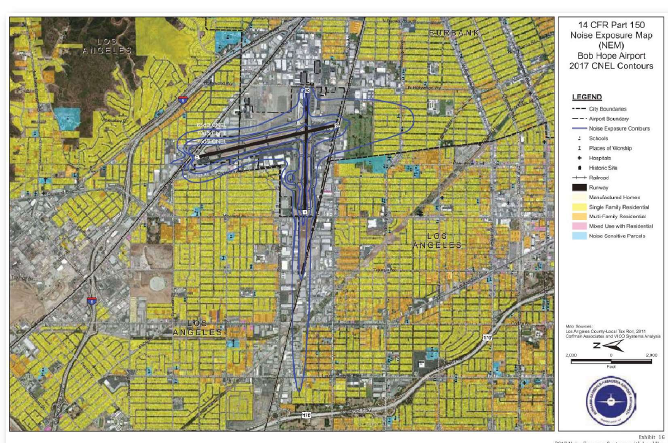
- Noise levels can be expressed many ways depending on their purpose, including but not limited to:
  - Instantaneous maximum noise levels (L_{max})
  - Single event dose (SEL)
  - Long-duration exposure (CNEL)

Part 150 Requirements

- FAA requires use of CNEL in a Part 150 study
- FAA Part 150 land use compatibility guidelines:
  - ***All land use is compatible with aircraft noise less than CNEL 65 dB***
  - Land use compatibility assessments use 5-dB contour bands
    - 65 to 70 dB
    - 70 to 75 dB
    - Greater than 75 dB

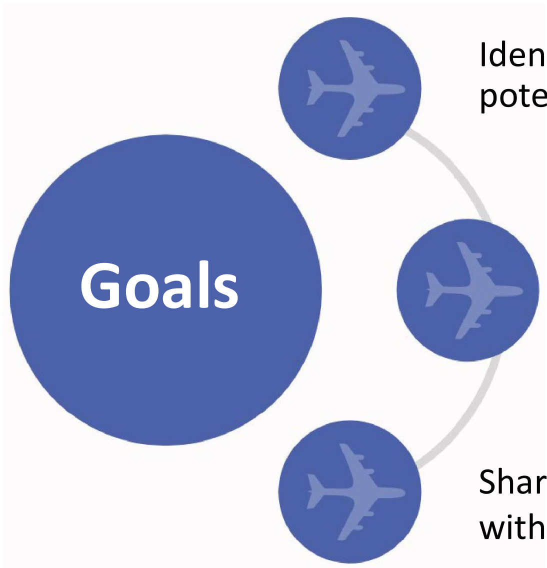
NEM Development

- ✓ Develop noise contours for existing (2025) and 5-year forecast (2030) conditions
- ✓ Collect land use data and policies
- ✓ Assess noise compatibility for aircraft exposure of CNEL 65 dB and greater
- ✓ Prepare documentation in accordance with 14 CFR Part 150



FAA-Accepted 2017 Noise Exposure Map for BUR

NEM Update Goals



- Identify incompatible land uses potentially eligible for noise mitigation
- Review implementation of the Noise Compatibility Program
- Share pertinent data and information with the public

Note: *FAA requires that Noise Exposure Maps reflect existing and/or forecast conditions at all times – thus the need to update them on a regular basis.*

NCP Development

Objectives of Proposed Measures

- **Reduce** exposure over incompatible uses
- **Limit** growth in exposure over incompatible uses
- **Mitigate** exposure where it cannot be reduced to compatible levels
- **Prevent** introduction of new incompatible uses

Land Use Strategies

- Land acquisition
- Sound insulation
- Avigation easements
- Prevention
- Land use controls
- Real estate disclosures

Noise Abatement Strategies

- Flight tracks
- Preferential runway use
- Arrival/departure procedures
- Airport layout modifications
- Use restrictions

Programmatic Measures

- Implementation
- Promotion
- Monitoring
- Reporting
- NEM updating
- NCP Revision

Analysis and Selection Process

1) Evaluate effectiveness in addressing objectives
2) Evaluate feasibility (economic, operational, safety, etc.)
3) Select most effective "package" of measures
4) Identify implementation responsibilities, schedule, etc.
5) If not recommended, document reason(s)

Typical Progression

Step 1 — **Identify Incompatible Land Uses**
- Existing conditions Noise Exposure Map
- Forecast conditions Noise Exposure Map

Step 2 — **Consider Noise Abatement Strategies**
- *Reduce* exposure over incompatible uses
- *Limit* growth in exposure over incompatible uses

Step 3 — **Consider Land Use Strategies**
- *Mitigate* residual incompatibilities
- *Prevent* introduction of new incompatible uses

Step 4 — **Consider Programmatic Strategies**
- *Implement* and *promote* measures
- *Monitor* and *report* on effectiveness
- *Update* NEMs and *revise* NCP as appropriate

Hollywood Burbank Airport

Part 150 STUDY

Hollywood Burbank Airport

Part 150 STUDY

Schedule

January 2024	Project Kick Off
February 2024	Data Collection and Study Protocol Development
January 30, 2025	Open House #1 (Study Introduction)
Spring 2025	Publish Draft NEM Document, 30-Day Review Period
May 29, 2025	Open House Meeting #2 (NEM Draft Document)
Summer 2025	Submit NEM to FAA, NCP Phase Begins
Spring 2026	Open House #3 (Draft NCP Recommendations)
Fall 2026	Open House #4 and Public Hearing (Draft NCP document)
November 2026	Submit NCP to FAA

Leave a Comment

Comment Form:
https://sur-vey.typeform.com/to/V0PugDM0

Find Out More

Website:
www.hollywoodburbankairport.com/noise/part-150-study-update

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Hollywood Burbank Airport

Part 150 STUDY

Hollywood-Burbank Airport Part 150 Study

Community Open House #1 – Summary Report

Thursday, January 30, 2025

I. Introduction

The Burbank-Glendale-Pasadena Airport Authority ("Authority") is updating the Hollywood Burbank Airport (BUR or "Airport") Noise Compatibility Study in accordance with the Federal Aviation Administration's (FAA's) process codified under Title 14, Part 150 of the Code of Federal Regulations ("Part 150"). A Part 150 Study is a voluntary, federally funded and supervised formal process for airport operators to address aircraft noise in terms of land use compatibility.

II. Open House Overview

The Hollywood-Burbank Airport Authority held the first Part 150 Community Open House on January 30, 2025, at the Burbank Elks Lodge from 6:30-8:30 PM. The open house was the first opportunity for the public to learn about the study and ask questions to the project team. A total of 28 community members attended.

During the open house, information was presented via a series of printed boards arranged in an open, walk-up format that encouraged community engagement and showcased a comprehensive overview of the Hollywood Burbank Airport Noise Compatibility Planning Study.

The open house boards, which can be viewed in **Appendix A**, were organized into four information stations guiding visitors through key aspects of the study from historical context and technical definitions to the processes for updating the Noise Exposure Map and Noise Compatibility Program. The display boards were categorized as follows:

1. Airport History
2. Part 150 Overview
3. Noise Terminology
4. Noise Compatibility Planning

Study staff were stationed at each board and offered additional explanations, answered questions, and engaged in discussion. Providing study team members at each station ensured that attendees could explore the exhibits at their own pace while gaining a thorough understanding of the study's key components. To view images from the open house meeting please click here.

Written Public Comments

A designated comment area was provided to encourage the public to submit written feedback on the study. In total, six comment cards were submitted at the first open house. All written comments were documented and reviewed for consideration by the study team and are found in **Appendix B**.

Notification

A trilingual (English, Spanish, and Armenian) targeted notification campaign was developed to announce the first community open house for the Part 150 Study. The robust notification campaign included: social media posts, targeted door to door flyer distribution, public counter outreach, four paid advertisements published in local newspapers for each language, and meeting electronic notifications.

Notification included the following methods listed below and can be found in **Appendix C**:

- Targeted door to door flyer distribution
- Four weekly e-blasts
- Four organic social media posts via Airport Authority social portals, including Airport Authority website and Facebook.
- Trilingual print and online newspaper advertisements in the following publications: *MyBurbank, Burbank Leader, El Clasificado, and Asbarez*.

III. Next Steps

The second community open house is tentatively scheduled for May 29, 2025, and will focus on reviewing and receiving feedback on the noise exposure map draft document.

IV. Appendix

Appendix A

- Display Boards

Appendix B

- Comment Cards

Appendix C

- Meeting Notification

Appendix D

- Earned Media

Other Outreach Materials

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Hollywood Burbank Airport

Part 150 STUDY

Project Background

The Burbank-Glendale-Pasadena Airport Authority (Authority) is updating the Hollywood Burbank Airport (BUR or Airport) Noise Compatibility Study (Study or Part 150 Study) in accordance with the Federal Aviation Administration's (FAA's) process codified under Title 14, Part 150 of the Code of Federal Regulations (Part 150). A Part 150 Study is a voluntary, federally funded and supervised formal process for airport operators to address aircraft noise in terms of land use compatibility. A Part 150 Study includes the following two principal elements:

- The Noise Exposure Map (NEM) element describes the airport layout and operation, aircraft-related noise exposure, land uses in the airport environs, and the resulting noise/land use compatibility. Part 150 requires that the documentation address aircraft operations during two time periods: the year of submission and a forecast year at least five years following the year of submission.
- The Noise Compatibility Program (NCP) element describes the actions the airport operator recommends to address existing and future land use incompatibilities with aircraft operations

A Part 150 Study:

- Determines the current and projected annualized aircraft noise exposure surrounding the Airport using the Community Noise Equivalent Level (CNEL) noise metric.
- Identifies measures to improve land use compatibility around the Airport.
- Creates a method for implementing, evaluating, and updating the Airport's NCP as necessary.

A Part 150 Study does not:

- Evaluate aircraft operations from other nearby area airports.
- Consider other types of effects from aircraft operations (air quality, accidents, etc.).
- Use noise metrics other than CNEL to assess noise effects.

A series of four open houses and one public hearing are planned for the Part 150 Study between 2024-2026. Be sure to sign up on our project webpage to receive the latest updates!

Study Timeline

Timeline	Milestone
Winter 2024	Study Kickoff
Summer - Fall 2024	Noise Modeling Development
Winter 2025	**Open House #1** Study Introduction
Spring 2025	**Open House #2** Noise Exposure Map
Spring - Winter 2026	Noise Abatement & Land Use Analysis
Spring 2026	**Open House #3** Draft Noise Compatibility Program Recommendations
Winter - Spring 2026	Noise Compatibility Program Development
Fall 2026	**Open House #4 & Public Hearing** Present NCP
Fall 2026	Submit Noise Compatibility Program from FAA Review
Summer 2027	Anticipated Noise Compatibility Program FAA Approval

Get Involved

The Part 150 Study is committed to proactive, two-way communication throughout the study process. For more information and to provide comments on the study, visit our webpage.

BURPart150Study@arellanoassociates.com

www.hollywoodburbankairport.com/noise/part-150-study-update

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Part 150 Study Update

Noise

Airport Noise and Capacity Act (ANCA)

Noise Issues

Noise Monitoring

Noise Rules

Part 150 Study Update

Part 161 Study

Voluntary Curfew

Flight Path Analysis Report – October 2018

Task Force

Comments & Email Sign Up

Thank you for your interest in the Part 150 Study. If you'd like to provide a comment or sign up to receive Study updates, please click here.

Introduction

The Burbank-Glendale-Pasadena Airport Authority (BGPAA or Authority) is updating the Hollywood Burbank Airport (BUR or Airport) Noise Compatibility Study (Study or Part 150 Study) in accordance with the Federal Aviation Administration's (FAA's) process codified under Title 14, Part 150 of the Code of Federal Regulations (14 CFR Part 150 or Part 150). A Part 150 Study is a voluntary, federally funded and supervised formal process for airport operators to address aircraft noise in terms of land use compatibility. A Part 150 Study includes the following two principal elements:

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Appendix E: Public Comments

Public comments will be included with the Final version of the Noise Exposure Map document.

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