

Glossary of Terms

Term	Definition
14 CODE OF FEDERAL REGULATIONS (CFR) PART 36	This regulation, titled "Noise Standards: Aircraft Type and Airworthiness Certification," establishes noise standards for the civil aviation fleet. Certain extensions for compliance are included in the Aviation Safety and Noise Abatement Act of 1979.
14 CFR PART 77	This regulation, titled "Safe, Efficient Use and Preservation of the Navigable Airspace," establishes standards for determining obstructions and their potential effects on aircraft operations. Objects are considered obstructions to air navigation according to 14 CFR Part 77 if they exceed certain heights or penetrate certain imaginary surfaces established in relation to airport operations. Objects classified as obstructions are subject to an FAA aeronautical analysis to determine their potential effects on aircraft operations.
14 CFR PART 91	This regulation, titled "General Operating and Flight Rules," includes an amendment issued by the FAA on September 25, 1991 (to 14 CFR 91) in conformance with requirements of the Airport Noise and Capacity Act of 1990. The amendment to the aircraft operating rules required a phased transition to an all-Stage-3 aircraft fleet operating in the 48 contiguous United States and the District of Columbia by December 31, 1999.
14 CFR PART 150	This regulation, titled "Airport Noise Compatibility Planning," sets forth criteria for developing a 14 CFR Part 150 Noise Compatibility Program, an FAA-assisted program designed to increase the compatibility of land and land uses in the areas surrounding an airport that are most directly affected by operation of the airport. The specific purpose is to reduce the adverse effects of noise as much as possible by implementing both on-airport noise abatement measures and off-airport noise mitigation measures. The basic products of a 14 CFR Part 150 program typically include (1) noise exposure maps for the existing condition and for 5 years in the future; (2) workable on-airport noise abatement measures (preferential runway use programs, new or preferential flight tracks), (3) off-airport noise mitigation measures (land acquisition, soundproofing, or special zoning); (4) an analysis of the costs and the financial feasibility of the recommended measures; and (5) policies and procedures related to the implementation of on- and off-airport programs. Community involvement opportunities are provided throughout all phases of Noise Compatibility Program development.
14 CFR PART 158	This regulation, titled "Passenger Facility Charges," establishes a passenger facility charge (PFC) program. The regulation implements Sections 9110 and 9111 of the Airport Noise and Capacity Act of 1990, which requires the Department of Transportation to issue regulations under which a public agency may be authorized to impose a PFC per enplaned passenger at a commercial service airport it controls. The proceeds from such PFCs are to be used to finance eligible airport-related projects that preserve or enhance safety, capacity, or security of the national air transportation system, reduce noise from an airport that is part of such system, or furnish opportunities for enhanced competition between or among airlines. The rule sets forth procedures for public agency applications for authority to impose PFCs, for FAA processing of such applications; for collection, handling, and remittance of PFCs by airlines; for record keeping and auditing by airlines and public agencies; for terminating PFC authority; and for reducing federal grant funds apportioned to large and medium hub airports where a PFC is imposed.

Term	Definition
14 CFR PART 161	This regulation, titled "Notice and Approval of Airport Noise and Access Restrictions," establishes a program for reviewing airport noise and access restrictions on the operations of Stage 2 and Stage 3 aircraft. This regulation is in response to specific provisions in the Airport Noise and Capacity Act of 1990 (ANCA) and is a major element of the national aviation noise policy required by that Act. Even if such an airport noise and access restriction is proposed as an element of a 14 CFR Part 150 Noise Compatibility Program, it is still subject to the guidelines of 14 CFR Part 161 prior to approval. Some of the public notice requirements, however, may be met during development of the 14 CFR Part 150 Program.
A-WEIGHTED SOUND LEVEL (dBA)	The ear does not respond equally to different frequencies of sound. It is less sensitive to low and high frequencies than to medium or speech-range frequencies. Thus, to obtain a single number representing the sound level of a noise having a wide range of frequencies in a manner representative of the ear's response, it is necessary to reduce the effects of the low and high frequencies with respect to the medium frequencies. The resultant sound level is said to be A-weighted, and the units are decibels (dB); hence, the abbreviation is dBA. The A-weighted sound level is also referred to as the noise level. Sound level meters have an A-weighting network for measuring noise in A-weighted decibels.
ABSORPTION	Absorption is a property of materials that reduces the amount of sound energy reflected. Thus, introduction of an "absorbent" into the surfaces of a room will reduce the sound pressure level in that room because sound energy striking the room's surfaces will be partially absorbed rather than totally reflected. The process of absorption is different from that of transmission loss through a material, which determines how much sound enters a room via the walls, ceiling, and floor. Absorption reduces the resultant sound level in the room produced by energy that has already entered the room.
ACCEPTABLE	Relating to noise, day-night average sound level (DNL) or community noise equivalent level (CNEL) not exceeding 65 decibels as defined by 14 CFR Part 150, "Airport Noise Compatibility Planning."
ACOUSTICS	(1) The science of sound, including the generation, transmission, and effects of audible and inaudible sound waves. (2) The physical qualities (such as size and shape) of a room or other enclosure that determine the audibility and perception of speech and music.
ADVISORY CIRCULAR (AC)	An external Federal Aviation Administration (FAA) publication consisting of non-regulatory material of a policy, guidance, or informational nature.
AVIATION ENVIRONMENTAL DESIGN TOOL	The FAA-approved aircraft noise and air emissions model for calculating aircraft noise exposure and air emissions levels for existing or proposed projects. AEDT replaced the Integrated Noise Model (INM) and the Emissions Dispersion Modeling System (EDMS).
AFFECTED LOCAL GOVERNMENT AGENCIES	The local government agencies that have the authority to control land uses in areas that may be adversely affected by aviation activities.
AIR CARRIER, CERTIFICATED ROUTE	An airline company that: (1) performs at least five round trips per week between two or more points and publishes flight schedules that specify the times, days of the week, and places between which such flights are performed; or (2) transports mail by air pursuant to a contract with the U.S. Postal Service, certificated in accordance with 14 CFR Parts 121 and 127.
AIR CARRIER, COMMUTER	An air taxi operator that (1) performs at least five round trips per week between two or more points and publishes flight schedules that specify the times, days of the week, and places between which such flights are performed; or (2) transports mail by air pursuant to a contract with the U.S. Postal Service.
AIRCRAFT DELAY	The additional travel time, caused by airfield or airspace congestion, needed by an aircraft to move from point A to point B.

Term	Definition
AIRCRAFT OPERATION	An aircraft arrival (landing) or an aircraft departure (takeoff) represents one aircraft operation. A touch-and-go operation is counted as both a landing and a takeoff, i.e., two operations. The Federal Aviation Administration (FAA) records aircraft operations in four categories: air carrier, air taxi, general aviation, and military. Operations can also be described as local or itinerant.
AIR CARRIER	Operations performed in revenue service by certificated route air carriers.
AIR TAXI/COMMUTER	Operations performed by operators of aircraft holding an air taxi certificate. This category includes commuter airline operations (excluding certificated commuter airlines), mail carriers under contract with the U.S. Postal Service, and operators of nonscheduled air taxi service.
GENERAL AVIATION	All civil aircraft operations not classified as air carrier or air taxi operations.
MILITARY	Operations performed by military groups, such as the Air National Guard, the U.S. Air Force, or the U.S. Marine Corps.
LOCAL	Local operations are performed by aircraft that (1) operate in the local traffic pattern or within sight of the airport, (2) are known to be departing for, or arriving from, local practice areas within a 20-mile radius of the airport, or (3) execute simulated or practice instrument approaches or low passes at the airport. Touch-and-go operations are counted as two local operations.
ITINERANT	All aircraft operations other than local operations.
AIR NAVIGATION FACILITY (NAVAID)	A facility designed for use as an aid to air navigation, including landing aids, lights, any apparatus or equipment for disseminating weather information; for signaling for radio direction finding or for radio or other electronic communication; and any other structure or mechanism having a similar purpose for guiding and controlling flight in the air or the landing or takeoff of aircraft.
AIRPORT ELEVATION	The highest point of an airport's usable runways measured in feet above mean sea level.
AIRPORT ENVIRONS	The area surrounding an airport that is considered to be directly affected by the presence and operation of the airport.
AIRPORT IMAGINARY SURFACES	Imaginary surfaces established at an airport for the purposes of identifying obstructions to air navigation. The imaginary surfaces consist of primary, approach-departure, horizontal, vertical, conical, and transitional surfaces.
AIRPORT IMPROVEMENT PROGRAM (AIP)	A program administered by the FAA to provide financial grants-in-aid for airport planning, airport development projects, and noise compatibility programs. The AIP was established through the Airport and Airway Improvement Act of 1982, which was incorporated as Title V of the Tax Equity and Fiscal Responsibility Act of 1982 (Public Law 97-248). Funds are appropriated by the U.S. Congress for the AIP annually.
AIRPORT NOISE AND CAPACITY ACT OF 1990	Commonly referred to as the national noise policy; the Act was enacted on November 5, 1990 (Public Law 101-508). Two important provisions of the Act were the establishment of a national aviation noise policy (Sections 9308 and 9309) and the creation of a passenger facility charge (Sections 9110 and 9111), which enables airport operators to impose fees on the tickets issued to eligible enplaning passengers. An amendment to 14 CFR Part 91, "Transition to an All Stage 3 Fleet Operating in the 48 Contiguous United States and the District of Columbia," and new 14 CFR Part 161, "Notice and Approval of Airport Noise and Access Restrictions," implement the national noise policy. 14 CFR Part 158, "Passenger Facility Charges," implements that portion of the Act authorizing the imposition of such a charge.
AIRPORT OPERATOR	A public agency, such as a municipality or airport authority, authorized to own and operate an airport, obtain property interests, obtain funds, and be legally, financially, and otherwise able to meet all applicable requirements of current laws and regulations.

Term	Definition
AIRPORT TRAFFIC CONTROL TOWER (ATCT)	A central operations facility in the terminal area air traffic control system, consisting of a tower cab structure and an associated instrument flight rule (IFR) room if radar equipped, using air/ground communications and/or radar, visual signaling, and other devices, to provide safe and expeditious movement of terminal area air traffic.
AIRSPACE	Space in the air above the surface of the earth or a particular portion of such space, usually defined by the boundaries of an area on the surface projected upward.
AIR TRAFFIC CONTROL (ATC)	A service operated by an appropriate authority (the FAA) to promote the safe, orderly, and expeditious flow of air traffic.
AMPLITUDE	A direct measurement of a sound's magnitude, expressed in decibels (dB).
ANNUAL AVERAGE DAY	A year of aircraft operations represented as the average number of operations occurring over a 24-hour period.
APRON	A paved area that provides the connection between the terminal buildings and the airfield. The apron includes aircraft parking areas, called ramps, and aircraft circulation and taxiing areas for access to these ramps. On the ramp, aircraft park in locations typically designated as gate positions or gates.
AREA NAVIGATION (RNAV)	A type of aircraft navigation technology that typically uses satellite navigation capabilities in equipped aircraft so that aircraft can be guided to locations without the need to use ground-based navigational aids.
ATTENUATION	Acoustical phenomenon whereby a reduction of sound energy is experienced between the noise source and the receiver. This energy loss can be attributed to atmospheric conditions, terrain, vegetation, man-made features, and natural features.
AVIATION SAFETY AND NOISE ABATEMENT ACT OF 1979 (ASNA)	The purpose of the Act is to assist airport operators in preparing and carrying out noise compatibility programs and in assuring continued safety for aviation. The Act also contains provisions extending to January 1, 1988, the requirement for certain types of aircraft to comply with 14 CFR Part 36.
AVIGATION EASEMENT	A type of land acquisition that involves less-than-fee purchase. One form of avigation easement grants the right to perform aircraft operations over the designated property, including operations that might cause noise, vibration, and other effects. A stronger form of easement is a deed restriction that may include (1) the right to perform aircraft operations over the property, and (2) public acquisition of a landowner's rights restricting future development of the property in any use more intensive than that existing at the time of the transaction. This easement may also include specific prohibitions as to the uses for which the property may be developed. Maximum heights of structures and other objects may also be specified.
BUILDING CODE	A legal document that sets forth requirements to protect the public health, safety, and general welfare as they relate to the construction and occupancy of buildings and structures. The code establishes the minimum acceptable conditions for matters found to be in need of regulation. Topics generally covered are exits, fire protection, structural design, sanitary facilities, lighting, and ventilation. Sound insulation may also be included.
BUILDING PERMIT	A permit issued by a local political jurisdiction (village, town, city, or county) to erect or modify a structure.
CATEGORICAL EXCLUSION	A proposed federal action as defined by a federal agency guidance that by its nature will not result in significant environmental impacts under the National Environmental Policy Act of 1969. (Public Law 91-190.)
CEILING	The height above the earth's surface of the lowest layer of clouds or obscuring phenomena that is reported as "broken," "overcast," or "obscuration," and not classified as "thin" or "partial."
CORRECTIVE	In the context of land use management measures, a type of measure that addresses noise exposure at the location of existing noncompatible uses.

Term	Definition
COMMUNITY NOISE EQUIVALENT LEVEL (CNEL)	A measure used to predict, by a single number rating, cumulative aircraft noise that affects communities in airport environs. CNEL represents decibels of noise as measured by an A-weighted sound-level meter. In the CNEL metric, the noise exposure from each aircraft takeoff or landing is calculated at ground level around an airport or along a flight corridor, and these noise exposure levels are accumulated for a typical 24-hour period. (The 24-hour period often used is the annual average day for aircraft operations during the year being analyzed.) Daytime, evening, and nighttime noise exposure is considered separately. Evening and nighttime noise events are multiplied by 3 and 10, respectively. These weighting factors result in a 4.77 dB and 10 dB penalty to each operation between 7:00 P.M. and 9:59:59 P.M. and 10:00 P.M. and 6:59:59 A.M., respectively. These penalties are intended to account for the increased sensitivity of people to evening and nighttime noise events. CNEL can be expressed graphically on maps using either contours or grid points. CNEL is only used in California.
DAY-NIGHT AVERAGE SOUND LEVEL (DNL)	A measure used to predict, by a single number rating, cumulative aircraft noise that affects communities in airport environs. DNL represents decibels of noise as measured by an A-weighted sound-level meter. In the DNL metric, the noise exposure from each aircraft takeoff or landing is calculated at ground level around an airport or along a flight corridor, and these noise exposure levels are accumulated for a typical 24-hour period. (The 24-hour period often used is the annual average day for aircraft operations during the year being analyzed.) Daytime and nighttime noise exposure is considered separately. A weighting factor equivalent to 10 decibels is applied to operations between 10:00 P.M. and 6:59:59 A.M. to account for the increased sensitivity of people to nighttime noise. DNL can be expressed graphically on maps using either contours or grid points.
DAYTIME	In the context of DNL, the time period of 7:00 A.M. to 9:59:59 P.M. In the context of CNEL, the time period of 7:00 A.M. to 6:59:59 P.M.
DECIBEL (dB)	A unit for measuring the volume of a sound, equal to the logarithm of the ratio of the intensity of the sound to the intensity of an arbitrarily chosen standard sound.
DURATION	The length of time that a noise event, such as an aircraft flyover, is experienced (typically reported in seconds). "Duration" may also refer to the length of time that the noise event exceeds a specified threshold noise level.
ENPLANED PASSENGERS	The passengers on aircraft outbound (departing) from an airport. The total annual number of passengers at an airport is the total of enplaned and deplaned passengers.
EQUIVALENT CONTINUOUS SOUND LEVEL (L_{eq})	L_{eq} is the sound level, expressed in dBA, of a steady sound that has the same A-weighted sound energy as the time-varying sound over the averaging period. Unlike Sound Exposure Level (SEL), L_{eq} is the average sound level for a specified time period (e.g., 24 hours, 8 hours, 1 hour, etc.). L_{eq} is calculated by integrating the sound energy from all noise events over a given time period and applying a factor for the number of events.
ENVIRONMENTAL ASSESSMENT (EA)	A study prepared under the National Environmental Policy Act of 1969 to assess and disclose the impact or impacts of certain federal actions. (Public Law 91-190.)
ENVIRONMENTAL IMPACT STATEMENT (EIS)	A study prepared under the National Environmental Policy Act of 1969 to assess and disclose the impact or impacts of certain federal actions. (Public Law 91-190.) An EIS is prepared when impacts exceed thresholds of significance as defined by the lead federal agency.
FAA MODERNIZATION AND REFORM ACT OF 2012 (FMRA)	This Act became law on February 14, 2012 (Public Law 112-95) to authorize appropriations for the FAA for federal fiscal years 2011 through 2014. In the context of aircraft noise control, the Act prohibited operation of Stage 1 and Stage 2 aircraft with a maximum weight of 75,000 pounds or lower within the 48 contiguous United States after December 31, 2015.

Term	Definition
FEDERAL AVIATION ADMINISTRATION (FAA)	The FAA, an agency of the U.S. Department of Transportation, is charged with (1) regulating air commerce to promote its safety and development; (2) achieving the efficient use of navigable airspace of the United States; (3) promoting, encouraging, and developing civil aviation; (4) developing and operating a common system of air traffic control and air navigation for both civilian and military aircraft; and (5) promoting the development of a national system of airports.
FLIGHT TRACK	The average flight path flown by aircraft within specific corridors. Deviation from these tracks occurs because of weather, pilot technique, air traffic control, and aircraft weight. Individual flight tracks within a corridor are "averaged" for purposes of modeling noise exposure using the FAA's Integrated Noise Model.
FREQUENCY	A direct measurement of how rapidly a sound wave alternates between high and low pressure; expressed in cycles per second (Hertz, or Hz).
GENERAL AVIATION (GA)	All civil aviation except that classified as air carrier, military, or air taxi. The types of aircraft typically used in GA activities vary from multiengine jet aircraft to single-engine piston aircraft.
GLIDE SLOPE	An FAA navigational system that: (1) provides the vertical (or altitude) profile followed by an aircraft during the approach and landing; (2) is an electronic vertical guidance provided by airborne and ground instruments for instrument approaches using equipment such as an instrument landing system (ILS) as well as visual ground aids, such as a visual approach slope indicator (VASI), for a visual flight rule (VFR) approach or for the visual portion of an instrument approach and landing.
GROUND TRACK	The trajectory of an aircraft flight path projected onto the ground surface.
HELIPAD	A small area designated for takeoff, landing, or parking of helicopters.
HERTZ (Hz)	The number of oscillation cycles that an oscillating phenomenon, such as a sound wave, undergoes per second.
IFR AIRPORT	An airport with an authorized instrument approach procedure.
IFR CONDITIONS	Weather conditions that require aircraft to be operated in accordance with instrument flight rules.
IFR MINIMUMS AND DEPARTURE PROCEDURES (14 CFR PART 91)	Prescribed takeoff rules. For some airports, obstructions or other factors require the establishment of nonstandard takeoff minimums or departure procedures, or both, to assist pilots in avoiding obstacles during climb to the minimum en route altitude.
IMPACT	In environmental studies, the word "impact" is used to express the extent or severity of an environmental problem, e.g., the number of persons exposed to a given noise environment. As indicated in 40 CFR Part 1500 (Sec. 1508.8), impacts and effects are considered to be synonymous. Effects or impacts may be ecological, aesthetic, historic, cultural, economic, social, or health related, and they may be direct, indirect, or cumulative.
INSTRUMENT APPROACH	An aircraft approach to an airport, with intent to land, by a pilot flying in accordance with an IFR flight plan. Often occurs when the visibility is less than 3 miles and/or when the ceiling is at or below the minimum initial approach altitude.
INSTRUMENT APPROACH RUNWAY	A runway equipped with electronic and visual navigation aids for which a precision or nonprecision approach procedure having straight-in landing minimums has been approved.
INSTRUMENT FLIGHT RULES (IFR)	Rules specified by the FAA for flight under weather conditions that do not meet the minimum requirements for VFR (see also). Under these conditions, the pilot must rely on instruments to fly and navigate.
INSTRUMENT LANDING SYSTEM (ILS)	A system that provides, in the aircraft, the lateral and longitudinal (localizer), and vertical (glide slope) electronic guidance necessary for an instrument landing.

Term	Definition
INSTRUMENT OPERATION	An aircraft operation in accordance with an IFR flight plan or an operation where IFR separation between aircraft is provided by a terminal control facility or air route traffic control center.
INSTRUMENT RUNWAY	A runway equipped with electronic and visual air navigation aids and for which a straight-in (precision or nonprecision) approach procedure has been approved or is planned.
INTEGRATED NOISE MODEL (INM)	A computer model developed by the FAA and required by the FAA before May 29, 2015 for use in environmental assessments, environmental impact statements, and 14 CFR Part 150 studies for developing existing and future aircraft noise exposure maps.
LAND USE COMPATIBILITY	The compatibility of land uses surrounding an airport with airport activities and particularly with the noise from aircraft operations.
LAND USE CONTROLS	Controls established by local or state governments to implement land use planning. The controls include zoning, subdivision regulations, land acquisition (in fee simple, leaseback, or easements), building codes, building permits, and capital improvement programs (to provide sewer, water, utilities, or other service facilities).
LAND USE PLANNING	Comprehensive planning carried out by units of local government, for all areas under their jurisdiction, to identify the optimum uses of land and to serve as a basis for the adoption of zoning or other land use controls.
LOCALIZER (LOC)	Navigational equipment that provides electronic course guidance. The ground-based equipment sends two signals, which, when received and receded by airborne equipment with equal intensity, indicate that the aircraft is on course. If the received and receded signals have unequal intensity, then the aircraft is off course. A localizer is the part of an ILS that provides lateral and longitudinal course guidance to the runway.
LOUDNESS	The judgment of the intensity of a sound by a person, loudness depends primarily on the sound pressure of the stimulus. Over much of the loudness range, it takes about a threefold increase in sound pressure (approximately 10 decibels) to produce a doubling of loudness.
METROPLEX	A metropolitan area with multiple airports and complex air traffic flows.
METROPLEX PROCESS	The FAA's process of enhancing the way aircraft navigate this complex airspace to improve airport access and make flight routes more efficient.
NATIONAL AIRSPACE SYSTEM (NAS)	A network of airspace structures, air navigation facilities, and air traffic control facilities, along with appropriate procedures and rules required to establish a safe and efficient operating environment for aircraft operating within the United States.
NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)	National Environmental Policy Act of 1969. (Public Law 91-190.)
NEXTGEN	A comprehensive overhaul of the United States National Airspace System (NAS), led by the Federal Aviation Administration (FAA), to make air travel more convenient and dependable, while ensure that flying is as safe, secure and convenient as possible.
NIGHTTIME	In the context of DNL and CNEL, the time period of 10:00 P.M. to 6:59:59 A.M.
NOISE	Noise is any sound that is considered undesirable because it interferes with speech and hearing, is intense enough to damage hearing, or is otherwise annoying.
NOISE ABATEMENT DEPARTURE PROCEDURE (NADP)	Aircraft climb-out procedures that can provide noise benefits. In 1993, the FAA published acceptable criteria for two safe noise abatement departure procedures (NADP) for commercial jet aircraft: the close-in NADP, also known as NADP1, and the distant NADP, also known as NADP2. These are described in FAA Advisory Circular (AC) 91-53A.

Term	Definition
NOISE ABATEMENT PROCEDURE	A change in runway use, flight approach and departure routes and procedures, or other air traffic procedures that is intended to reduce aircraft noise exposure in noise-sensitive areas (such as residential neighborhoods).
NOISE ATTENUATION OF BUILDINGS	The use of building materials to reduce noise through absorption, transmission loss, and reflection of sound energy.
NOISE CONTOURS	Lines drawn on a map that connect points of equivalent noise exposure levels. For aircraft noise analyses conducted using CNEL or DNL, noise contours are usually drawn in 5-dB intervals, such as intervals of CNEL or DNL 65, 70, and 75, and so forth.
NOISE COMPATIBILITY PROGRAM (NCP)	The NCP can consist of a combination of preferred noise abatement procedures, land use controls, and administrative measures as well as a plan for the implementation. For planning purposes, the implementation plan also includes the estimated cost for each of the recommended measures to the airport operator, the FAA, airport users, and the local units of government.
NOISE EXPOSURE MAP (NEM)	A map prepared in accordance with 14 CFR Part 150 or other FAA environmental regulations that depicts actual (existing or historical conditions) or anticipated (future conditions) aircraft noise exposure and the affected land uses. NEMs for future conditions may take into account anticipated land use changes around the airport.
NOISE LEVEL REDUCTION (NLR)	The noise reduction between two areas or rooms is the numerical difference, in decibels, of the average sound pressure levels in those areas or rooms. Noise reduction is measured by combining the effect of the transmission loss performance of structures separating the two areas or rooms and the effect of acoustic absorption in the receiving room.
NOISE METRIC	A way of communicating information about the magnitude and frequency of noise. Common noise metrics include Day-Night Average Sound Level (DNL), Community Noise Equivalent Level (CNEL), Sound Exposure Level (SEL), and Equivalent Continuous Sound Level (L_{eq}).
NOISE-SENSITIVE AREA	See NOISE-SENSITIVE LAND USE.
NOISE-SENSITIVE LAND USE	A land use that can be adversely affected by high levels of aircraft noise. Residences, schools, hospitals, religious facilities, libraries, and other similar uses are typically considered noise-sensitive.
NONCOMPATIBLE LAND USE	Residential, public, recreational, and certain other noise-sensitive land uses that are designated as unacceptable within specific ranges of cumulative (CNEL or DNL) noise exposure as set forth in 14 CFR Part 150, Appendix A, Table 1.
NORMALLY UNACCEPTABLE	CNEL or DNL higher than 65 but not higher than 75 decibels (see UNACCEPTABLE); barriers may be necessary between the site and prominent noise sources to make the outdoor environment acceptable; special building construction may be necessary to ensure that people indoors are sufficiently protected from outdoor noise.
OBSTRUCTION	An object that exceeds a limiting height or penetrates an imaginary surface described by 14 CFR Part 77.
OPTIMIZED PROFILE DESCENT (OPD)	An arrival procedure that optimizes noise and air emissions reduction by minimizing changes in thrust by using favorable initial flight path angle and strategic management of flaps and landing gear.
OUTDOOR TO INDOOR TRANSMISSION CLASS (OITC)	A rating of the noise reduction provided by a structure.
PATTERN	The configuration or form of a flight path flown by an aircraft, or prescribed to be flown, as in making an approach for landing.
PERCEIVED NOISE DECIBELS (PNdB)	PNdB expresses the perceived loudness of an individual aircraft noise event.

Term	Definition
PERFORMANCE BASED NAVIGATION (PBN)	A type of NextGen technology that features the use of satellites to guide aircraft along precise flight paths. Examples of PBN procedures include Area Navigation (RNAV).
PREFERENTIAL RUNWAY USE (PROGRAM)	A noise abatement action whereby the FAA Air Traffic Organization, in conjunction with the FAA Office of Airports, assists the airport operator in developing a program that gives preference to the use of a specific runway(s), unless weather or other conditions prevail, to reduce overflights of noise-sensitive areas.
PREVENTIVE	In the context of land use management measures, a type of measure that is intended to limit the introduction of new noncompatible land uses.
PROPRIETARY USE RESTRICTION	A restriction by an airport operator on the number, type, class, manner, or time of aircraft operations at the airport. The ability of an airport operator to impose proprietary use restrictions was significantly affected by passage of the Airport Noise and Capacity Act of 1990 (see AIRPORT NOISE AND CAPACITY ACT OF 1990).
RUNWAY	A defined rectangular area on an airport for the purpose of landing and taking off aircraft. Runways are numbered in relation to their magnetic direction, rounded to the nearest 10 degrees (e.g., Runway 14, Runway 32).
RUNWAY THRESHOLD	The beginning of that portion of a runway usable for landing.
SHIELDING	The attenuation of a sound by placing walls, buildings, plants, or other barriers between a sound source and the receiver. Also used with light to minimize impacts by introducing manmade or natural elements to reduce or eliminate glare.
RUNWAY USE	The percentage of time a runway is used relative to all of the runways at an airport.
SIGNIFICANT EFFECT ON THE ENVIRONMENT	A substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself is not considered a significant effect on the environment. However, a social or economic change that is related to a physical change may be considered in determining whether a physical change is significant.
SIGNIFICANT NOISE IMPACT THRESHOLD	A significant noise impact is defined as an increase in aircraft noise of CNEL or DNL 1.5 dB or greater in an area exposed to aircraft noise at or above CNEL or DNL 65 dB and developed with noise sensitive land uses.
SINGLE EVENT	Noise generated by a single event, such as a single aircraft flyover.
SOUND	A wave of alternating high and low pressure levels that travels through the air.
SOUND EXPOSURE LEVEL (SEL)	SEL is a time-integrated measure, expressed in decibels, of the sound energy of a single noise event. The sound level is integrated over the period that the level exceeds a threshold (normally 65 dBA for aircraft noise events). Therefore, SEL accounts for the duration of the sound. SELs for aircraft noise events depend on the location of the aircraft, the type of operation (landing, takeoff, or overflight), and the type of aircraft.
SOUND INSULATION	(1) The use of structures and materials designed to reduce the transmission of sound from one room or area to another or from the exterior to the interior of a building. (2) The degree of reduction in sound transmission, or noise level reduction, by means of sound insulating structures and materials.
SOUND LEVEL (NOISE LEVEL)	The weighted sound pressure level obtained by the use of a sound level meter having a standard frequency filter for attenuating part of the sound spectrum.
SOUND LEVEL METER	An instrument consisting of a microphone, an amplifier, an output meter, and frequency-weighting networks used to measure noise and sound levels in a specified manner.
SOUND TRANSMISSION CLASS (STC)	A rating of how well a building wall attenuates airborne sound.

Term	Definition
STAGE 1 AIRCRAFT	An aircraft that does not meet the noise standards established in 14 CFR Part 36, Appendix B, Sec. 36.5(b).
STAGE 2 AIRCRAFT	An aircraft that meets the noise standards established in 14 CFR Part 36, Appendix B, Sec. 36.5(b), but does not meet more-stringent noise standards in Sec. 36.5(c).
TERMINAL RADAR APPROACH CONTROL (TRACON)	Radar approach facility serving generally more than one airport providing separation, safety alerts, and sequencing of arrival, departure, and transitioning air traffic.
UNACCEPTABLE	CNEL or DNL above 75 decibels. Noise exposure at the site is so severe that the construction cost to make the indoor noise environment acceptable may be prohibitive and the outdoor environment would still be unacceptable.
VISUAL APPROACH	An approach to an airport wherein an aircraft on an IFR flight plan, operating in VFR conditions under the control of a radar facility and having air traffic control authorization, may deviate from the prescribed instrument approach procedure and proceed to and land at the airport of destination, served by an operational ATCT, by visual reference to the surface.
VISUAL FLIGHT RULES (VFR)	A set of regulations that a pilot may operate under when weather conditions meet certain minimum requirements. The requirements are designed to provide sufficient visibility so that other aircraft can be seen and avoided. Under VFR, the pilot generally controls the attitude of the aircraft by relying on what can be seen out the window, although this may be supplemented by referring to the instrument panel.
ZONING AND ZONING ORDINANCES	Ordinances that divide a community into zones or districts according to the current and potential use of properties for the purpose of controlling and directing the use and development of those properties. Zoning is concerned primarily with the use of land and buildings, the height and bulk of buildings, the proportion of a lot that buildings may cover, and the density of population of a given area. As an instrument for noise compatibility plan implementation, zoning deals principally with the use and development of privately owned land and buildings. The objectives of zoning are to establish regulations that provide locations for all essential uses of land and buildings and ensure that each use is located in the most appropriate place. In noise compatibility planning, zoning can be used to achieve two major aims: (1) to reinforce existing compatible land uses and promote the location of future compatible uses in vacant or underdeveloped land, and (2) to convert existing incompatible uses to compatible uses over time.

SOURCE: Environmental Science Associates, 2019.

Acronyms List

AAD	Average Annual Day
AC	Advisory Circular
AEDT	Aviation Environmental Design Tool
AEE	Federal Aviation Administration Office of Environment and Energy
ADO	Airports District Office
AIP	Airport Improvement Program
ANCA	Airport Noise and Capacity Act of 1990
ANOMS	Airport Noise and Operations Management System
ASNA	Aviation Safety and Noise Abatement Act of 1979
ATC	Air Traffic Control
ATCT	Airport Traffic Control Tower
ATO	Federal Aviation Administration Air Traffic Organization
CATEX	Categorical Exclusion
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
dB	Decibel
dba	A-weighted decibel
DNL	Day-Night Average Sound Level
EA	Environmental Assessment
EIS	Environmental Impact Statement
FAA	Federal Aviation Administration
FAQs	Frequently Asked Questions
FMRA	FAA Modernization and Reform Act of 2012
FONSI	Finding of No Significant Impact
FSDO	Flight Standards Division Office
GA	General Aviation
GIS	Geographic Information System
GS	Glide Slope
Hz	Hertz
ICAO	International Civil Aviation Organization

IFR	Instrument Flight Rules
ILS	Instrument Landing System
INM	Integrated Noise Model
L_{eq}	Equivalent Continuous Sound Level
LOC	Localizer
NAC	NextGen Advisory Committee
NADP	Noise Abatement Departure Procedure
NADP1	Close-In Noise Abatement Departure Procedure
NADP2	Distant Noise Abatement Departure Procedure
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NCP	Noise Compatibility Program
NEM	Noise Exposure Map
NEPA	National Environmental Policy Act
NLR	Noise Level Reduction
NOMS	Noise and Operations Management System
OITC	Outdoor-to-Indoor Transmission Class
OPD	Optimized Profile Descent
PANS-OPS	International Civil Aviation Organization Doc 8168, <i>Procedures for Air Navigation Services – Aircraft Operations</i>
PBN	Performance Based Navigation
PNdB	Perceived Noise Decibels
RNAV	Area Navigation
ROA	Record of Approval
RWY	Runway
SEL	Sound Exposure Level
SLUCM	Standard Land Use Coding Manual
STC	Sound Transmission Class
TAC	Technical Advisory Committee
TARGETS	Terminal Area Route Generation and Traffic Simulation
TRACON	Terminal Radar Approach Control
VFR	Visual Flight Rules

SOURCE: Environmental Science Associates, 2019.