

GLOSSARY

ambient noise: the prevailing general noise existing at a location or in a space, usually consisting of a composite of sounds from many sources near and far.

arterial road: road that moves large volumes of traffic from one section of a city to another and beyond.

attainment: applies to specific criteria pollutants of air quality, if air quality standards are achieved.

A-weighted sound level: the sound pressure level in decibels as measured on a sound level meter using the internationally standardized A-weighting filter or as computed from sound spectral data to which A-weighting adjustments have been made. A-weighting de-emphasizes the low and very high frequency components of the sound in a manner similar to the response of the average human ear. Community noise evaluations universally use A-weighted sound levels because they correlate well to subjective reactions of people. Noise evaluations are generally taken in root mean square units, using meters with calibrated standardized time responses.

circuit breaker: a switching device capable of making, carrying, and interrupting currents under normal circuit conditions and also making, carrying for a specified time, and interrupting currents under abnormal circuit conditions.

conductor: any metallic material, usually in the form of wire, cable, or bar, suitable for carrying an electric current.

community noise equivalent level: is a 24-hour average metric for community noise exposure involving a 24-hour average of the 1-hour equivalent sound levels that differentiates between daytime and nighttime noise exposures with a 5 dBA penalty for L_{eq} between 7 p.m. and 10 p.m. and 10-dBA penalty for noise between the hours of 10pm and 7am. CNEL is generally about 4.5 dBA higher than the daily L_{eq} for the same location due to the mathematic effect of the penalties.

criteria pollutants: air pollutants pervasive in urban environments and closely monitored due to immediate public health issues. Permissible levels of these pollutants are standardized through health-based criteria (science-based guidelines). National and state ambient air quality standards have been established for such pollutants.

day-night sound level: the L_{eq} of the A-weighted noise level over a 24-hour period with a 10 dB penalty applied to noise levels between 10 p.m. and 7 a.m.

decibel: a measure on a logarithmic scale of the magnitude of a particular quantity (such as sound pressure, sound power, and sound intensity) with respect to a standardized quantity.

emissions: substances discharged into the air.

energy equivalent level: the level of a steady noise that would have the same energy as the fluctuating noise level integrated over the period of interest. L_{eq} is widely used as a single-number descriptor of environmental noise. L_{eq} is based on the logarithmic or energy summation, and it places more emphasis on high noise level periods than does L_{50} or a straight arithmetic average of noise level over time. This energy average is not the same as the average sound pressure levels over the period of interest, but must be computed by a procedure involving summation or mathematical integration.

Frequency: The number of oscillations per second of a periodic noise (or vibration) expressed in Hertz (abbreviated Hz). Frequency in Hertz is the same as cycles per second.

historical resource: often used interchangeably with the term *cultural resource*. *Historical resources* include, but are not limited to, any object, building, structure, site, area, place, record, or manuscript that is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic agricultural, educational, social, political, military, or cultural annals of California.

kilovolt: the electrical unit of potential difference equal to 1,000 volts.

landscape character: the combination of physical, biological, and cultural attributes that make each landscape identifiable or unique.

level of service: a qualitative measure describing operational conditions within a traffic stream and motorists' perception of those conditions. LOS ratings typically range from LOS A, which represents free flow conditions, to LOS F, which is characterized by forced flow, heavy congestion, stop-and-go traffic, and long queues forming behind breakdown points.

megawatt: the electrical unit of power that is equal to 1,000 kilowatts or 1,000,000 watts.

noise: unwanted sound. Sound is usually measured via the logarithmic decibel scale referenced to the minimum threshold pressure for audibility (20 micro Pascal.) A change of 3 dB is equal to a doubling of sound pressure. A change of 10 dB represents a 10x change in sound pressure but is perceived as a doubling of sound. Five dB is considered to be a definite noticeable change in sound level

non-attainment: applies to specific criteria pollutants of air quality, if air quality standards are violated.

1/3 Octave Band: One octave is an interval between two sound frequencies that have a ratio of two. For example, the frequency range of 200 Hz to 400 Hz is one octave, as is the frequency range of 2,000 Hz to 4,000 Hz. An octave band is a frequency range that is one octave wide. A standard series of octaves is used in acoustics, and they are specified by their center frequencies. In acoustics, to increase resolution, the frequency content of a sound or vibration is often analyzed in terms of 1/3 octave bands, where each octave is divided into three 1/3 octave bands.

Root-Mean-Square (RMS): Root-mean-square is an averaging methodology, whereby a signal is squared, then the mean is found, and the square root of the mean is taken. Human perception of noise and vibration is closely correlated to this metric, rather than peak noise or vibration levels.

seismicity: the frequency, intensity, and distribution of earthquake activity in a given area.

sensitive receptors: facilities or land uses that include people who are particularly susceptible to the affects of air pollution, including children, the elderly, and people with illnesses. Schools, hospitals, and residential areas are all examples of sensitive receptors.

Statistical Distribution Terms: L_{50} is a statistical descriptor of the typical average background noise (or vibration) levels observed during a measurement period, normally made up of the summation of a large number of sound sources distant from the measurement position and not usually recognizable as individual noise sources. Generally, the prevalent source of this residual noise is distant street traffic. L_{50} is not strongly influenced by occasional local motor vehicle pass-byes. However, it can be influenced by stationary sources, such as air conditioning equipment.

traffic congestion: traffic volume divided by roadway capacity, which results in a volume-to-capacity (v/c) ratio, usually ranging from 0 to 100.

toxic air pollutants/contaminants: air pollutants that occur at relatively low concentrations and are associated with carcinogenic or acute health effects. Ambient air quality standards have not been established at the national or state level.

unclassified: applies to specific criteria pollutants of air quality, if there is insufficient information to determine whether a criteria pollutant is in “attainment” or “nonattainment” status.

ACRONYMS

Acronym/ Abbreviation	Definition
o	degrees
$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AAQS	Ambient Air Quality Standards
AB-32	Assembly Bill 32
ACOE	U.S. Army Corps of Engineers
APM(s)	avoidance and protection measure(s)
ASTM	American Society for Testing Materials
BAAQMD	Bay Area Air Quality Management District
BMP(s)	best management practice(s)
BPA	Bonneville Power Administration
CAA	Clean Air Act
Caltrans	California Department of Transportation
CALUP	California Airport Land Use Plan for Sonoma County
CARB	California Air Resources Board
CBC	California Building Code
CDF	California Department of Forestry and Fire Protection
CDFG	California Department of Fish and Game
CEE	Customer Energy Efficiency
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CESA	California Endangered Species Act
CFR	Code of Federal Regulations
CH ₄	Methane
CNDDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide

Acronym/ Abbreviation	Definition
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CPUC	California Public Utilities Commission
CRHR	California Register of Historic Resources
CRLF	California red-legged frog
CTS	California tiger salamander
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
CWHR	California Wildlife Habitat Relationships
dBA	A-weighted sound level
dbh	diameter at breast height
du/ac	dwelling units per acre
DPA	Distribution Planning Area
DTSC	California Environmental Protection Agency's Department of Toxic Substances Control
DWR	Department of Water Resources
EFZ	Earthquake Fault Zone
EMF	Electric and Magnetic Fields
ESRP	Eastside Road Storage Project
F	Fahrenheit
FAA	Federal Aviation Administration
FESA	Federal Endangered Species Act
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
GHG	Green House Gases
GIS	Geographic Information System
GLO	General Land Office
H ₂ S	hydrogen sulfide

Acronym/ Abbreviation	Definition
HFCs	hydrofluorocarbons
kVA	kilovolt-ampere
kV	kilovolt
L _{eq}	energy equivalent sound level
L _{dn}	day-night equivalent noise level
LI	Light Industrial
LIRP	Local Integrated Resource Planning
LOS	Level of Service
MBTA	Migratory Bird Treaty Act
MRZ	mineral resource zone
MTCO _{2e} /yr	metric tons of CO _{2e} per year
MVA	megavolt-ampere
MW	megawatt
NAHC	California Native American Heritage Commission
NCRA	North Coast Railroad Authority
NO ₂	nitrogen dioxide
NO _x	nitrogen oxide
NPDES	National Pollutant Discharge Elimination System
NPPA	Native Plant Protection Act
NRHP	National Register of Historic Places
NWIC	Northwest Information Center of the California Historical Resources Information System
NWPRR	Northwestern Pacific Railroad
NWPT	Northwestern pond turtle
O ₃	ozone
OPR	Office of Planning and Research
OSZ-A	Outer Safety Zone-A
Pb	lead
PCBs	polychlorinated biphenyls

Acronym/ Abbreviation	Definition
PEA	Proponent's Environmental Assessment
PFC	perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM _{2.5}	Particulate matter with a diameter less than or equal to 2.5 microns
PM ₁₀	particulate matter less than 10 microns in equivalent diameter
ppm	parts per million
PRC	Public Resources Code
PTC	Permit to Construct
PUE	Public Utility Easement
ROG	reactive organic gas
ROW	right-of-way
RWQCB	Regional Water Quality Control Board
SCADA	Supervisory Control and Data Acquisition
SF ₆	sulfur hexafluoride gas
SFBAB	San Francisco Bay Area Basin
SO ₂	sulfur dioxide
SPCC	Spill Prevention Countermeasure and Control
SMART	Sonoma Marin Area Rail Transit District
SUSMP	Standard Urban Stormwater Mitigation Plan
SWPPP	Stormwater Pollution Prevention Plan
TSCA	Toxic Substance Control Act
TSP	Tubular Steel Pole
UBC	Uniform Building Code
UCMP	University of California Museum of Paleontology
URBEMIS	Urban Emmisions
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey
USFWS	U.S. Fish and Wildlife Service

Acronym/ Abbreviation	Definition
VRP	visibility reducing particles
WST	Western spadefoot toad
YLF	yellow-legged frog