

Sec. 20-1. - Sound and vibration.

(a) *Legislative findings.* The city council of the City of Pasadena finds and declares:

- (1) That sound and vibration of such character, intensity and duration as are reasonably calculated to be detrimental to the health, welfare or safety of a reasonably sensitive person degrades the environment of the city to a degree which:
  - a. Is harmful and hazardous to the health, welfare and safety of it's inhabitants;
  - b. Interferes with the comfortable enjoyment of life, property and recreation and with the conduct and operation of business and industry; and
  - c. Is a nuisance in fact.
- (2) The effective control and elimination of excessive sound and vibration is essential to the furtherance of the health, welfare and safety of the city's inhabitants.

(b) *Definitions.* The following definitions shall apply to this article and appropriate court shall take judicial notice of same.

*Ambient sound pressure level:* Composite of sound in the environment excluding the specific sound under investigation.

*A-weighted network:* dB(A) frequency response characteristics provided by a standard sound level meter which attempts to duplicate the response of the human ear to a measured sound pressure level.

*Decibel (dB):* A measurement used to express the sound pressure level or intensity of sound. It is defined as a dimensionless unit related to the logarithm of the ratio of a measured quantity to a reference quantity.

*Equivalent continuous sound pressure level ( $L_{eq}$ ):* Used to denote the average sound pressure level in dB(A) during a specified period of time.

*Octave band analysis:* A detailed measurement that divides sound into component or octave bands which are limited to a specific frequency range. Sound pressure levels are assigned to each octave band. The specific frequency range is considered to be an octave in width when the upper band edge frequency is twice the lower band edge frequency.

*Octave band analyzer:* An instrument that measures sound pressure levels within a specific frequency range denoted as an octave band.

*Octave band center frequency:* A designation for the octave band frequency widths. The octave band center frequency is the geometric mean of the upper and lower band edge frequencies.

*Peak sound pressure level:* Used to denote the maximum instantaneous sound pressure level during a specified period of time.

*Person:* A person, firm, association, joint venture, corporation, or any entity, public or private in nature.

*Real property boundary:* An imaginary line along the ground surface, and its vertical extension, which separates the real property owned or in possession of one person from that real property owned or in possession of another.

*Receiving real property:* Any property outside the real property boundary of the sound source.

*Reference quantity:* The reference quantity used is 0.00002 Newtons per meter squared (N/m<sup>2</sup>); this quantity is further defined as zero dB.

*Residential property:* Any location used for noncommercial purposes as a place of abode by any person.

*Sound:* Any pressure variation that can be detected by the human ear.

*Sound amplifying equipment:* Any machine or device for the amplification of the human voice, music or other.

*Sound level meter:* An instrument which includes a microphone, amplifier, RMS detector, integrator or time averager, output meter, and weighting networks to measure sound pressure levels and that meets the American National Standards Institute (ANSI) specifications.

*Vibration:* An oscillatory motion of solid bodies described by displacement, velocity or acceleration.

(c) *Prohibited conduct.*

- (1) It shall be unlawful for any person to operate or cause to be operated any source of sound or vibration or to discharge or allow the escape of any sound or vibration:
  - a. Of such character, intensity, volume or duration as to be unreasonably loud, raucous, jarring, disturbing or annoying to a reasonably sensitive person within the area or property receiving such sound or vibration; or
  - b. That causes adverse psychological or physiological effects detrimental to the health, welfare, or safety of a reasonably sensitive person within the area or property receiving such sound or vibration; or
  - c. Which is in violation of standards prescribed by this article.
- (2) It shall be prima facie unlawful and a violation of this article for any person to operate or cause to be operated any source of sound or to discharge or allow the escape of any sound in such a manner as to cause or create a sound pressure level which reaches or exceeds the following standards when measured at any point within the real property boundary of the receiving real property:
  - a. A peak sound pressure level of seventy-five (75) dB(A) at any time on any receiving property.
  - b. A peak sound pressure level of ten (10) dB above the ambient measured on any nonresidential property location between the hours of 10:00 p.m. and 7:00 a.m. on any day of the week.
  - c. A peak sound pressure level of five (5) dB above the ambient measured on any residential property location between the hours of 10:00 p.m. and 7:00 a.m. on any day of the week.
  - d. A peak sound pressure level of ten (10) dB above ambient as measured in any octave band center frequency as follows:

| Octave Band Center Frequencies (Hertz) |     |     |     |      |      |      |      |
|--|-----|-----|-----|------|------|------|------|
| 63                                     | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 |

- (3) It shall be prima facie unlawful and a violation of this article for any person to operate or cause to be operated any source of vibration or to discharge or allow the escape of any vibration in such a manner as to cause by such operation a vibration that can be detected without the aid of instruments at any point within the receiving real property.

(4)

It shall be unlawful and a violation of this article for any person to use, operate or permit to be played, used or operated any radio receiving set, musical instrument, phonograph, or other machine or device for the producing or reproducing of sound, including but not limited to amplification equipment contained in or mounted on a motor vehicle in such a manner as to disturb the peace, quiet, and comfort of the neighboring inhabitants or at any time with louder volume than is necessary for convenient hearing for the persons who are in the room, vehicle or chamber in which such machine or device is operated. The operation of such set, instrument, phonograph, machine, device or amplification equipment in such a manner as to be plainly audible at a distance of fifty (50) feet from the building, structure or vehicle in which it is located shall be prima facie evidence of a violation of this section.

(d) *Noisy animals and birds.* The keeping of any animal or bird that causes or makes frequent or long and continued sound that unreasonably disturbs, injures, or endangers the comfort, repose, health, peace, or safety of ordinary, reasonable persons of normal sensibilities and ordinary tastes, habits, and modes of living who reside in the vicinity thereof is hereby prohibited and declared to be unlawful as a sound nuisance in violation of this chapter, regardless of whether the sound so created by said animal or bird is within the permissible levels specified in section 20-1(c)(2) of this Code.

(e) *Measurements and standards.*

(1) Measurement of sound may be made, as applicable, with a sound level meter or with an octave band analyzer meeting the standards prescribed by the American National Standards Institute (ANSI). A calibration check shall be made before and after the time of any sound measurement. Sound measurements shall be obtained in a manner that provides proper representation of the sound in question. A microphone windscreen shall be used when necessary to avoid interference from the wind. The instrument shall be positioned at arms length or positioned on a stationary tripod with the microphone positioned in such a manner that will avoid any unnatural enhancement or diminution of the sound in question. Traffic, aircraft, and other sound shall not be considered except in instances where they interfere with the sound of interest or ambient samples.

To establish a representative sound sample, at least three (3) sound measurements should be taken within an hour period on at least two (2) separate occasions. Sound samples shall be obtained specifically during sound producing and nonproducing or ambient conditions.

Ambient sound pressure level shall be obtained in the same manner as described above during periods of ambient conditions. Ambient sound pressure levels shall be obtained as soon as possible and at the same location used to obtain sound pressure levels of the sound of interest.

(2) The city or its designated agents or representatives may inspect from time to time any installation, premises, equipment, devices and appurtenances thereto that may, can or do cause sounds or vibrations and the city may take measurements and make analysis of such sound or vibration. Where directed, the owner shall provide assistance in obtaining normal operating conditions during periods of measurement.

(3) The city may order the owner, lessee or any agent of any source of sound and/or vibration which may be or is in excess of that permitted by this chapter or the regulations adopted hereunder to furnish such information, plans, specifications, analysis, performance data and tests or examinations as will disclose the nature, effects, extent, quantity, watts or degree of sound or vibration which are or may be discharged from such source.

(f) *Penalties and remedies.*

(1) Any person who violates any provisions of this article shall be guilty of an offense and upon conviction thereof shall be fined in an amount not to exceed five hundred dollars (\$500.00). A separate offense shall be deemed committed on each day during or on which a violation occurs or continues and shall be punishable as such.

- (2) The penalty provided for herein shall be in addition to any other legal remedies available to the city to prevent and prohibit any such violation of this article. The city may institute any appropriate administrative action or proceeding or any action at law or equity to require compliance with the provisions of this article.
- (g) *Defenses.* It is an affirmative defense to prosecution for an offense established in this chapter that:
- (1) The emission of any sound was for the purpose of alerting persons to the existence of an emergency, danger or attempted crime.
  - (2) The sound was produced by an authorized emergency vehicle.
  - (3) The sound was produced by emergency work necessary to restore public utilities, or to restore property to a safe condition, or to protect persons or property from imminent danger, following a fire, accident or natural disaster.
  - (4) The sound was generated:
    - a. At a lawfully scheduled stadium event;
    - b. By a parade and spectators and participants on the parade route during a permitted parade;
    - c. By spectators and participants at a lawfully scheduled amphitheater event;
    - d. By patrons and participants using cannons and gunfire during historical battle reenactments for which a pyrotechnic permit was obtained and the explosives were inspected by the fire marshal;
    - e. By a pyrotechnic display that was inspected and approved by the fire marshal;
    - f. By spectators and participants of any outdoor event, fun run, race, festival, fiesta, or concert which was sponsored, cosponsored, or permitted by the city; or
    - g. Any other lawful activity which constitutes protected expression pursuant to the First Amendment of the United States Constitution.
  - (5) The sound was produced by aircraft in flight or in operation at an airport, or railroad equipment in operation on railroad rights-of-way.
  - (6) The sound was produced by operating or permitting the operation of any mechanically powered saw, drill, sander, router, grinder, lawn or garden tool, lawn mower, or any other similar device used between the hours of 7:00 a.m. and 8:00 p.m. and which device did not produce a sound exceeding eighty-five (85) dB(A) when measured from the nearest residential property where the sound is being received and was used for the maintenance or upkeep of the property on which it was used.
  - (7) The sound was produced by the operation of any air conditioning unit which did not produce a sound exceeding sixty-five (65) dB(A) on nonresidential property, when measured at or near fifteen (15) feet from the air conditioning unit producing the sound being measured.
  - (8) The sound was produced by church bells or church chimes when used as a part of a religious observance or service during daytime hours and which did not exceed five (5) continuous minutes in duration in any one-hour period.

(Code 1964, § 17-7; Ord. No. 85-205, § 1, 10-15-85; Ord. No. 90-128, §§ 1, 2, 7-24-90; Ord. No. 98-77, § 1, 5-19-98; Ord. No. 95-15, § 1, 1-31-95; Ord. No. 04-73, §§ 1, 2, 4-6-04)

**Cross reference—** Central loudspeakers prohibited at drive-in theaters, § 5-29; operation of vehicles so as to produce "tire squeal," § 36-74.