

NOISE

Noise pollution, defined as unwanted or excessive sound, is another undesirable byproduct of modern life. It can be a nuisance, interfere with activities, and can cause physical damage. Transportation noise is among the most pervasive noise sources in our environment today, particularly for people who live within five hundred feet of heavily traveled highways or within one hundred to two hundred feet of lightly traveled roads (Bedminster Township 2010).

STATE NOISE RESTRICTIONS

New Jersey's Noise Control Act was enacted in 1971 to protect citizens from noise pollution. These regulations include a daytime sound level standard of 65 decibels and a nighttime standard of 50 decibels as measured at the property line of an affected person. The standards were set based on scientific information dealing with speech interference and sleep interruption, respectively. Indoor noise is currently not regulated under the State noise regulations. However, the Department's regulatory authority is limited. The Federal Railroad Administration (FRA) oversees railroad noise, aircraft noise is overseen by the Federal Aviation Administration (FAA) and the New Jersey Department of Transportation oversees state highway noise (Noise Control in New Jersey).

HAWTHORNE NOISE RESTRICTIONS

Under Hawthorne's "Code of the Borough of Hawthorne", last updated in 2003, Chapter 139, Section 139-1 clearly specifies the restrictions of noise. The following acts are considered loud, offensive, disturbing, and unnecessary noise:

- Radios, televisions, & phonographs that disturb the peace, quiet, and comfort of the neighboring inhabitants **or** at a louder volume necessary for the convenient hearing of the people listening.
- Operation of any radio, television, or phonograph between the hours of 11:00 pm and 7:00 am that can be plainly audible at a distance of one hundred feet from the source.
- Playing loudspeakers or sound amplifiers on the streets or in public places **or** that can be heard in streets or public places.
- Yelling, shouting, hooting, whistling, or singing on the public streets at any time so as to annoy or disturb the quiet or comfort of any person in the vicinity.
- Owning an animal that causes frequent or long-continued noise that disturbs the comfort of any person.
- Sounding a horn or other warning device on any motor vehicle except when required by law.

- Discharging the exhaust of any steam engine, stationary internal-combustion engine, or motor vehicle except through a muffler or other device that will prevent loud or explosive noises.
- Using any defective vehicle that will create loud and unnecessary grating, grinding, rattling, or otherwise.
- Performing any construction or repairs that will make any loud or disturbing noise on any Sunday, legal holiday, or on weekdays between the hours of 6:00pm and 7:00 am that is within one thousand feet of any dwelling or business property. In cases of emergency, a permit may be obtained from the Director of the Department of Public Safety or the Construction Code Official.
- Creating any excessive noise on any street adjacent to any school, institution of learning, church, or court while the institution is in use and unreasonably interferes with the working of such institution.
- Sounding of any or the blowing of any whistle attached to any building or locomotive.
- Creating any loud or excessive noises when loading & unloading any vehicle.
- Using or playing any drum, loudspeaker, or other instrument for the purpose of attracting attention to any performance, show or sale, or display of merchandise.
- Operating any air conditioner, refrigerator unit, cooling tower, evaporative condenser, air-cooled condenser, mechanical fan, compressor unit, or other such apparatus that causes frequent, irregular, or continued noise that causes discomfort or annoyance to or which unreasonably invades the privacy of the public.

The above are only situations that are specified in the Code of the Borough of Hawthorne, New Jersey; however is not exclusive to other similar situations. Most, if not all, of these scenarios have worsened consequences if done between the hours of 10:00 pm and 7:00 am. Any person who is found guilty of these violations shall be subject to: (1) a fine not to exceed \$1000 (2) imprisonment for a term not to exceed ninety days (3) required to perform community service for a period not to exceed ninety days (Code 2003).

I-1 INDUSTRIAL ZONES

Hawthorne's "Code of the Borough of Hawthorne, New Jersey", Chapter 225, Article X, Section 225-76 is reading building permits and certificates for all uses in I-1 Industrial Zone Districts. No building permit and certificate of occupancy shall be issued unless in compliance with the following performance standards. All shall be conditional upon and subject to continuing compliance with such stands:

Frequency Ranges Containing Stand Octave Bands (cycles per second)	Octave Band Sound-Pressure Level (decibels re 0.0002 dyne/cm ²)
20-75	69
75-150	54
150-300	47
300-600	41
600-1,200	37
1,200-2,400	34
2,400-4,800	31
Above 4,800	28

Table 37. Noise Restriction Levels. Code of the Borough of Hawthorne, New Jersey

Table 37 can be spelled out in more simpler terms, in order to fully understand. The column on the left describes the frequency of the sound. The higher the frequency, the “higher” the sound. For example, a high note on a musical scale has a higher frequency than a low note. The right column describes how loud a sound can be at a certain decibel. For example, if strumming a guitar and you strum one string, that same string, though the same frequency, can be played loud or soft. In short, given a certain frequency, a sound can only be a certain decibel level (Fedorko 2010).

However, certain corrections to the decibel level can be made given a certain situation. If the noise is not smooth and continuous and is not radiated at nighttime between the hours of 7:00 pm and 7:00 am, one or more of the following corrections shall be added or subtracted from each of the decibel bands given above (Code of the Borough of Hawthorne, New Jersey):

- Day time operation only (+5)
- Noise source operates less than:
 - 20% of any 1-hour period (+5)
 - 5% of any 1-hour period (+10)
- Noise of impulsive character (hammering, etc) (-5)
- Noise of periodic character (hum, screech, etc) (-5)
- Property is located not within 500 feet measured horizontally or vertically of any R District (+10)

COMPARISON CHART

In order to understand decibels, a chart of common comparisons is provided (**Fig. 25**). On the low end of the chart, breathing is averaged to be about ten decibels; while a normal conversation is said to be about sixty decibels. At around 120 decibels the human begins to feel discomfort from sound; and at about 130 decibels, the average human ear will feel pain.

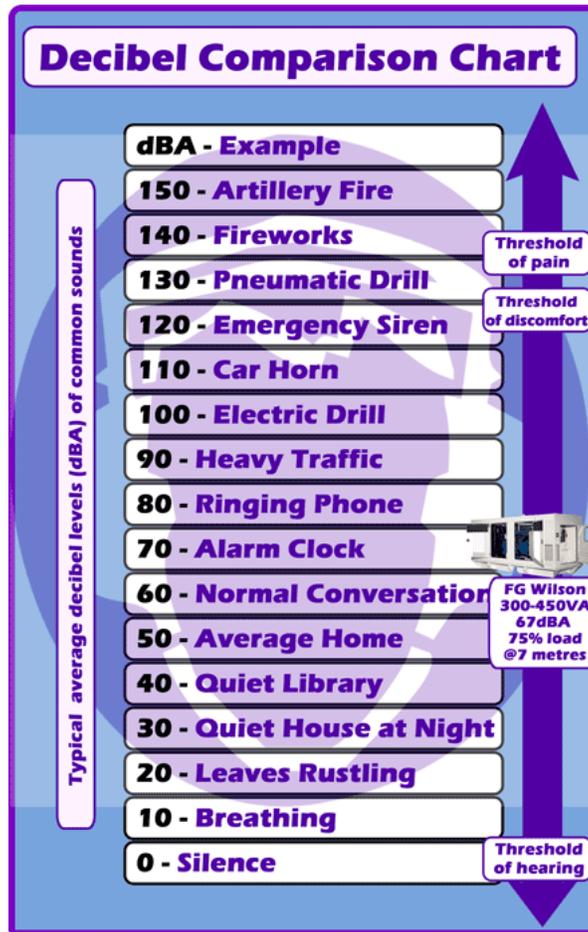


Fig. 25. Decibel Comparison Chart. Chart from the Stuart Group.