

N.J.A.C. 7:29

Statutory Authority

CHAPTER AUTHORITY:

N.J.S.A. 13:1G-1 et seq.

History

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See: 58 N.J.R. 1193(a).

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Chapter 29, Noise Control, was adopted as R.1974 d.12, effective January 18, 1974. See: 5 N.J.R. 334(a), 6 N.J.R. 59(b).

Subchapter 2, Noise from Vessels and Watercraft, was adopted as R.1977 d.177, effective May 20, 1977. See: 9 N.J.R. 167(d), 9 N.J.R. 266(a).

Subchapter 2, Noise from Vessels and Watercraft, was repealed by R.1979 d.12, effective March 1, 1979. See: 10 N.J.R. 475(a), 11 N.J.R. 63(d).

Pursuant to Executive Order No. 66(1978), Chapter 29, Noise Control, was readopted as R.1990 d.262, effective May 21, 1990. See: 22 N.J.R. 307(b), 22 N.J.R. 1576(a).

Subchapter 2, Procedures for the Determination of Noise from Stationary Sources, was adopted as R.1993 d.301, effective June 21, 1993. See: 27 N.J.R. 1091(a), 27 N.J.R. 2390(c).

Pursuant to Executive Order No. 66(1978), Chapter 29, Noise Control, was readopted as R.1995 d.302, effective May 19, 1995. See: 27 N.J.R. 1091(a), 27 N.J.R. 2390(c).

Pursuant to Executive Order No. 66(1978), Chapter 29, Noise Control, was readopted as R.2000 d.247, effective May 19, 2000. See: 32 N.J.R. 1115(a), 32 N.J.R. 2230(b).

Chapter 29, Noise Control, was readopted as R.2005 d.431, effective November 9, 2005. See: 37 N.J.R. 1980(a), 37 N.J.R. 4535(b).

In accordance with N.J.S.A. 52:14B-5.1b, Chapter 29, Noise Control, was scheduled to expire on May 8, 2013. See: 43 N.J.R. 1203(a).

Chapter 29, Noise Control, was readopted as R.2012 d.127, effective June 7, 2012. See: 42 N.J.R. 3024(a), 43 N.J.R. 3300(a), 44 N.J.R. 1881(a).

Chapter 29, Noise Control, was readopted, effective April 11, 2019. See 51 N.J.R. 612(a).

Chapter 29, Noise Control, was readopted, effective February 17, 2026. See: Source and Effective Date.

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Table of contents

SUBCHAPTER 1. GENERAL PROVISIONS

7:29-1.1	Definitions
7:29-1.2	Permissible sound level limits
7:29-1.3	Railroad noise—incorporation by reference
7:29-1.4	Stationary emergency signaling devices
7:29-1.5	Exemptions
7:29-1.6	Performance test principle
7:29-1.7	Enforcement
7:29-1.8	County and municipal ordinances to regulate noise

SUBCHAPTER 2. PROCEDURES FOR THE DETERMINATION OF NOISE FROM STATIONARY SOURCES

7:29-2.1	Acceptable test methods
7:29-2.2	Measurement principle
7:29-2.3	Operating conditions during the investigation
7:29-2.4	General requirements
7:29-2.5	Equipment
7:29-2.6	Reporting requirements
7:29-2.7	Sound testing procedure
7:29-2.8	Calculations
7:29-2.9	Qualifications of enforcement personnel

SUBCHAPTER 1. GENERAL PROVISIONS

§ 7:29-1.1 Definitions

The following words and terms, when used in this subchapter, shall have the following meanings unless the context clearly indicates otherwise.

"Affected person" means any person who has registered a noise complaint with an authorized enforcement agency that he or she is a receptor of noise on a protected property category, and

said affected person has an interest in the protected property category as an owner, tenant, or employee.

"Agricultural activities" means those activities required to cultivate the soil, produce crops, or raise livestock, and activities associated with the growing, producing, processing, or selling of farm-related products, as long as those activities are conducted on a commercial farm, as defined in the Right to Farm Act, N.J.S.A. 4:1C-1 et seq. The operation of a sound production device is not considered agricultural activity.

"ANSI" means the American National Standards Institute. ANSI standards referenced in this chapter are available at www.ANSI.org, and are incorporated herein by reference, as amended or supplemented.

"Authorized enforcement agency" means the Department, a local, county, or regional health agency certified pursuant to the County Environmental Health Act (N.J.S.A. 26:3A2-21 et seq.), to perform noise enforcement activities, a municipality with a Department-approved noise control ordinance, or an employee of a county or municipal government who has received noise enforcement training and who is currently certified in noise enforcement pursuant to N.J.A.C. 7:29-2.9; provided such agency, municipality, or employee is acting within its designated jurisdiction.

"A-scale" means the A-weighting network of a sound level meter utilized to measure sound levels. The level so read is reported in decibels and designated dBA. The A-scale discriminates against the lower frequencies according to a relationship approximating the auditory sensitivity of the human ear.

"Commercial facility" means any premises, property, or facility involving traffic in goods or furnishing of services for sale or profit including, but not limited to:

1. Banking and other financial institutions;
2. Dining establishments;
3. Establishments for providing retail services;
4. Establishments for providing wholesale services;
5. Establishments for recreation and entertainment;
6. Office buildings;
7. Transportation;
8. Warehouses; and
9. Establishments providing living accommodations that exceed six dwelling units, including, but not limited to, apartments, condominiums, co-ops, hotels, motels, and dormitories, when they are the source of the sound that is being investigated and the source of sound is a mechanical device, electronic device, or sound production device owned or operated by the commercial facility.

"Community service facility" means, except as provided at paragraph 4 of the definition of "residential property," any facility used to provide services to the public, including, but not limited to:

1. Club meeting halls, offices and facilities;
2. Organization offices and facilities;
3. Facilities for the support and practice of religion;
4. Public, private, and parochial schools (including colleges and universities);
5. Health care facilities, as defined in the Health Care Facilities Planning Act, N.J.S.A. 26:2H-1 et seq.;
6. Offices and buildings of agencies or instrumentalities of government; and
7. Maintenance centers (such as department of public works facilities).

"Continuous airborne sound" means sound that is measured by the slow response setting of a sound level meter in accordance with the provisions at N.J.A.C. 7:29-2, and that lasts one second or longer. Impulsive sounds that are rapidly repetitive over a duration of one second or longer shall be measured as continuous airborne sound.

"dBA" means the abbreviation designating the unit of sound level as measured by a sound level meter using the dBA setting.

"dBZ" means the abbreviation designating the unit of sound level as measured by a sound level meter using the dBZ setting.

"Decibel" means the practical unit of measurement for sound pressure level; the number of decibels of a measured sound is equal to 20 times the logarithm to the base 10 of the ratio of the sound pressure of the measured sound to the sound pressure of a standard sound (20 micropascals); abbreviated "dB".

"Department" means the Department of Environmental Protection.

"Duty cycle" means the duration of one operating cycle for equipment that cycles periodically, whether or not the cycle is at regular intervals. For example, equipment that is on for five minutes, and off for 10 minutes, repeatedly, has a duty cycle of 15 minutes. A duty cycle also includes varying conditions of load or operation, such as an HVAC unit that operates at a higher or lower intensity in response to demand.

"Electronic device" means a device that accomplishes its purpose electronically.

"Emergency" means an unexpected occurrence or situation resulting from natural or unnatural causes that endangers or has the potential to endanger a public or private facility or the health, safety, or resources of citizens and as such, necessitates prompt action and response at the site of the emergency.

"Emergency energy release device" means a device (such as a pressure release valve) used specifically to release excess energy on a non-scheduled basis as necessary for purposes of safety.

"Emergency services personnel" means those people who are trained or designated to respond to an emergency, as defined in this section, or who participate in activities associated with a response to an emergency.

"Extraneous sound" means an intermittent sound that is neither neighborhood residual sound nor sound from the source under investigation. Examples of an extraneous sound include the following intermittent sounds: car horns, passing sirens, unmuffled vehicles, aircraft, and transient birds.

"Frequency" means the number of sound pressure oscillations per second, expressed in hertz; abbreviated "Hz".

"IEC" means the International Electrotechnical Commission. IEC standards referenced in this chapter are available at www.iec.ch, and are incorporated herein by reference, as amended or supplemented.

"Impulsive sound" means either a single pressure peak or a single burst (multiple pressure peaks) having a duration of less than one second.

"Industrial facility" means any facility, whether public or private, and its related premises, property, or equipment involving:

1. The fabrication, manufacture, or production of durable or nondurable goods; or
2. Industrial-like activities including, but not limited to:
 - i. Waste collection;
 - ii. Waste incineration;
 - iii. Waste recycling;
 - iv. Water and sewage treatment; and
 - v. Electricity generation.

"Maximum sound level" means the maximum sound level measured by a sound level meter.

"Mechanical device" means a mechanism consisting of a device that works on mechanical principles. For the purposes of this chapter, this shall also include devices that work on fluid dynamics principles to control the flow of gasses and liquids.

"Neighborhood residual sound level" means the measured value that represents the sound at the property of an affected person measured in accordance with N.J.A.C. 7:29-2.7(f)2 from all sound sources, exclusive of extraneous sound and the sound from the source property under investigation. Neighborhood residual sounds are differentiated from extraneous sounds by the fact that neighborhood residual sounds are being emitted the majority of the time, although they may not be continuous. Examples of neighborhood residual sounds include consistent, but not necessarily continuous, off-site traffic of properly muffled vehicles, surf, mechanical equipment not located on the property under investigation, seasonal insects, and a flock of non-transient birds.

"Noise" means any sound that is not in conformance with the provisions of this chapter.

"Octave band" means a grouping of sound frequencies identified by a nominal mid-band frequency as defined in ANSI S1.6. The octave bands referenced in this chapter are 31.5, 63, 125, 250, 500, 1000, 2000, 4000, and 8000 hertz.

"Octave band sound pressure level" means the sound pressure level measured in decibels in standard octave bands with a sound level meter.

"Person" means any individual, public, or private corporation, political subdivision, governmental agency, department or bureau of the State, industry, or association, including a condominium or co-op association, limited liability corporation, partnership, or limited liability partnership.

"Residential property" means property used for human habitation, unless the habitation is a condition of employment. "Residential property" includes, but is not limited to:

1. Private property used for human habitation;
2. Commercial living accommodations and commercial property used for human habitation;
3. Recreational and entertainment property used for human habitation (for example, a campground); and
4. For purposes of measuring sound at a receptor, the portion of a community service facility used for human habitation including:
 - i. Housing associated with a boarding school, college, or university;
 - ii. Staff or patient housing portion of a healthcare facility, as defined in the Health Care Facilities Planning Act, N.J.S.A. 26:2H-1 et seq.; and
 - iii. A shelter facility that is licensed or otherwise government- approved.

"Responsible entity" means the person causing or controlling a source of sound.

"Sound level" means the sound pressure level measured in decibels with a sound level meter set for A-scale; sound level is expressed in dBA.

"Sound level meter" means equipment that is used to measure sound pressure level, sound level, octave band sound pressure level, or maximum sound level, separately or in combination.

"Sound pressure level" means the ratio of a measured pressure in air to a reference pressure as measured with a sound level meter, in units of dB or dBZ.

"Sound production device" means any device for which the primary function is the production of sound including, but not limited to, a musical instrument, loudspeaker, radio, television, digital or analog music player, public address system, or sound-amplifying equipment.

"Sound source" means any person, animal, device, equipment, operation, process, activity, or phenomenon that emits or causes sound.

"Stationary emergency signaling device" means any device, excluding those attached to motor vehicles, used to alert emergency service personnel or the public.

"Total sound level" means the measured level that represents the summation of the sounds from the source under investigation and the neighborhood residual sound level, excluding any extraneous sound, when measured on the property of an affected person.

"Wind screen" means a device recommended by the manufacturer as a microphone cover to reduce the effect of wind.

"Z-scale" means the Z-weighting network of a sound level meter utilized to measure sound pressure levels. The level so read is reported in decibels and designated dB or dBZ. Z-weighting (or zero weighting) is a flat (unweighted) response between 10 Hz to 20 Hz.

§ 7:29-1.2 Permissible sound level limits

(a) This subchapter applies to sound from industrial facilities, commercial facilities, and community service facilities.

(b) This subchapter applies to sound received at commercial facilities, community service facilities, and residential property.

(c) No person shall cause, suffer, allow, or permit sound from any industrial, commercial, or community service facility that, when measured at or within any residential property line of any affected person, is in excess of any of the following:

1. From 7:00 A.M. to 10:00 P.M.:

- i. Continuous airborne sound that has a sound level in excess of 65 dBA; or
- ii. Continuous airborne sound that has an octave band sound pressure level in decibels (dB or dBZ) that exceeds the values listed below in one or more octave bands:

Octave Band Center Frequency (Hz)	Octave Band Sound Pressure Level (dB or dBZ)
31.5	96
63	82
125	74
250	67
500	63
1000	60
2000	57
4000	55
8000	53

or

- iii. Impulsive sound in air that has a maximum sound level in excess of 80 dBA.

2. From 10:00 P.M. to 7:00 A.M.

- i.** Continuous airborne sound that has a sound level in excess of 50 dBA; or
- ii.** Continuous airborne sound that has an octave band sound pressure level in decibels (dB or dBZ) that exceeds the value listed below in one or more octave bands:

Octave Band Center Frequency (Hz)	Octave Band Sound Pressure Level (dB or dBZ)
31.5	86
63	71
125	61
250	53
500	48
1000	45
2000	42
4000	40
8000	38

or

- iii.** Impulsive sound in air that has a maximum sound level in excess of 80 dBA and such impulsive sound shall not be repeated more than four times in any hour. Impulsive sound that repeats more than four times in any hour shall not exceed 50 dBA.

(d) No person shall cause, suffer, allow, or permit sound from any industrial, commercial, or community service facility that, when measured at or within the property line of any other commercial, or community service facility of any affected person, is in excess of any of the following:

- 1.** Continuous airborne sound that has a sound level in excess of 65 dBA; or
- 2.** Continuous airborne sound that has an octave band sound pressure level in decibels (dB or dBZ) that exceeds the values listed below in one or more octave bands:

Octave Band Center Frequency (Hz)	Octave Band Sound Pressure Level (dB or dBZ)
31.5	96
63	82
125	74
250	67
500	63
1000	60
2000	57

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Octave Band Center Frequency (Hz)	Octave Band Sound Pressure Level (dB or dBZ)
4000	55
8000	53

or

3. Impulsive sound in air that has a maximum sound level in excess of 80 dBA.

§ 7:29-1.3 Railroad noise--incorporation by reference

(a) Except as provided in (b) below, the following provisions of the Code of Federal Regulations, including all future amendments and supplements thereto, are hereby incorporated by reference: 40 CFR 201 Noise Emission Standards for Transportation Equipment; Interstate Rail Carriers, and 49 CFR 210 Railroad Noise Emission Compliance Regulations. This incorporation by reference only pertains to the sound level standards and measurement of railroad noise generated by idling train locomotives and rail car coupling operations.

(b) The following provisions are not incorporated by reference under (a) above: 40 CFR 201.12 Standard for locomotive operation under moving conditions; 40 CFR 201.13 Standard for rail car operations; 40 CFR 201.14 Standard for retarders; 40 CFR 201.16 Standard for locomotive load cell test stands; 40 CFR 201.27 Procedures for (1) Determining applicability of the locomotive load cell test stand standard and switcher locomotive standard by noise measurement on a receiving property; (2) measurement of locomotive load cell test stands more than 120 meters (400 feet) on a receiving property; 40 CFR 201.28 Testing by a railroad to determine probable compliance with the standard; and 49 CFR 210.11 Waivers.

§ 7:29-1.4 Stationary emergency signaling devices

(a) Testing of only the stationary emergency signaling device shall occur no more than once per day on a regular schedule, but not before 8:00 A.M. or after 8:00 P.M. The duration of testing shall not exceed 10 seconds, except as required for repair or replacement or as provided for at (b) below.

(b) Testing of the complete emergency signaling system, including the signaling device and the personnel response to the signal, shall not occur more than once in each calendar month. Such testing shall not occur before 8:00 A.M. or after 8:00 P.M. The duration of the testing shall be limited to the minimum time necessary to determine whether the system is operating properly.

- (c) Stationary emergency signaling devices shall be used only for testing in compliance with applicable provisions of these regulations or for an emergency.
- (d) A stationary emergency signaling device used to alert firefighters, or other emergency services personnel of a fire or other emergency shall be located no closer than 250 feet from any elementary school or adjacent school yard or playground, except that this restriction shall not apply to any stationary emergency signaling device that is located on the premises of a fire station or other facility operated by a local fire department or force or first aid, rescue or emergency squad.
- (e) The requirement of (d) above shall not apply to stationary emergency signaling devices placed in service before July 16, 1992 and located in municipalities with a population of less than 25,000 persons and with a population density of more than 2,500 persons per square mile, according to the latest Federal decennial census.
- (f) Nothing in this section shall have the effect of restricting the use of a stationary emergency signaling device to alert the public of an emergency pursuant to the provisions of the Emergency Management Act, P.L. 1942, c. 251 (N.J.S.A. App. A:9-33 et seq.), or any applicable Federal laws or regulations pertaining to emergency planning and preparedness. This section only pertains to the use of stationary emergency signaling devices to alert local emergency services personnel and/or local citizens of a local emergency. This section does not apply when stationary emergency signaling devices are used or tested as part of the operations of the National Warning System, pursuant to the Federal Emergency Management Agency's Civil Preparedness Guide 1-16, or pursuant to the Federal Emergency Management Agency's Guide for the Evaluation of Alert and Notification Systems for Nuclear Power Plants, FEMA Rep. 10.
- (g) A dual-purpose stationary emergency signaling device that is used to alert the public of a national or State emergency and that is also used to alert local emergency services personnel of local emergencies shall not be required to comply with (d), (e), and (f) above. If a dual-purpose stationary emergency signaling device is used for local purposes, the device shall comply with all other provisions of this section.
- (h) When operated or tested in accordance with the requirements of this section, stationary emergency signaling devices are not required to comply with the operational performance standards at N.J.A.C. 7:29-1.2.

§ 7:29-1.5 Exemptions

- (a) The operational performance standards set forth at N.J.A.C. 7:29-1.2 shall not apply to any of the following sound sources:

 - 1. Agricultural activities; provided that farm equipment and vehicles are operated with mufflers and/or sound reduction devices, in good working order, as originally equipped by the

manufacturer, or otherwise fitted with a muffler and/or sound reduction device that is acoustically equivalent to the original manufacturer equipment;

2. Bells, chimes or carillons, which may include electronic devices that imitate the sounds of bells, chimes or carillons, while being used in conjunction with religious services;
3. Emergency energy release devices;
4. When public health or safety is involved, emergency work to provide electricity, water, or other public utilities; to conduct emergency construction or demolition work; to make emergency repairs to public roadways or bridges; to address emergency incidents such as the cleanup of spills of hazardous materials; or upon written approval of the authorized enforcement agency, to utilize sound producing devices to relocate wildlife;
5. Motor vehicle racetrack facilities engaged in the racing of motor vehicles;
6. National Warning System (NAWAS): Systems used to warn the community of attack or imminent public danger such as flooding or explosion. These systems are controlled by the New Jersey Department of Law and Public Safety;
7. Sound from aircraft operations;
8. Public celebration. An event, such as a festival or a parade, that commemorates a special occasion and is authorized by a government body. The event must be not for profit and open to the public, and if a fee is charged, the fee may be used only to offset the expenses directly associated with the event;
9. Public roadways;
10. Surface carriers engaged in commerce by railroad when trains are in motion, operating retarders, train horns and whistles, or performing locomotive load test cell stands;
11. The unamplified human voice;
12. Use of explosive devices: As regulated by the New Jersey Department of Labor and Workforce Development pursuant to the Explosives Act, N.J.S.A. 21:1A-128 et seq.;
13. Operation of a handgun, rifle, shotgun, skeetshooting, or trapshooting range that has been maintained continuously in the same location since January 24, 1972;
14. Emergency electricity generators at an industrial, commercial, or community service facility in use during an electrical outage;
15. Wildlife not under the control of a person; or
16. An unamplified musical band during scheduled extramural competitive events, or within two hours prior to such event, at an academic institution or a venue utilized by an academic institution.

§ 7:29-1.6 Performance test principle

For the purposes of measuring sound in accordance with the applicable provisions of these regulations, test equipment methods and procedures shall conform to the provisions of N.J.A.C. 7:29-2.

§ 7:29-1.7 Enforcement

- (a)** This section governs the initiation of enforcement actions and the imposition of civil penalties for violations of the Noise Control Act, N.J.S.A. 13:1G-1 et seq., and these rules.
- (b)** If any responsible entity violates any provision of the Noise Control Act, N.J.S.A. 13:1G-1 et seq., this chapter, or an order issued pursuant thereto, the authorized enforcement agency may institute an action in a court of competent jurisdiction for injunctive relief to prohibit and prevent such violation or violations and the said court may proceed in the action in a summary manner.
- (c)** Any responsible entity who violates any provision of the Noise Control Act, N.J.S.A. 13:1G-1 et seq., this chapter, or an order issued pursuant thereto shall be subject, upon order of a court, to a civil penalty of not more than \$ 3,000 for each offense and each day during which the violation continues shall constitute an additional, separate, and distinct offense.
- (d)** Upon identification of a violation of the Noise Control Act, N.J.S.A. 13:1G-1 et seq., these rules, or an order issued pursuant thereto, the authorized enforcement agency shall issue an enforcement document to the violator. The enforcement document may be sent to the violator by certified mail, return receipt requested. The enforcement document shall:
 - 1.** Identify the condition or activity that constitutes the violation and the specific provision of the Act, rule or order that has been violated;
 - 2.** Indicate whether the violator has a period of time to correct the violation before a penalty is sought, as follows:
 - i.** If the violation is deemed by the authorized enforcement agency to be a minor violation pursuant to (f) below, notify the violator that the activity or condition which constitutes the violation must be corrected and compliance achieved within 30 days or, at the discretion of the authorized enforcement agency, any other reasonable period of time, not to exceed 180 days, to be determined based upon the nature and extent of the violation and a reasonable estimate of the time needed to correct the violation. The violator may request, from the authorized enforcement agency, an extension of the compliance deadline in the enforcement action and the authorized enforcement agency shall approve any reasonable request for an extension if the violator can demonstrate that a good faith effort has been made to achieve compliance;

- ii. If the violation is not deemed by the authorized enforcement agency to be a minor violation pursuant to (f) below, notify the violator that he or she will not be allowed a period of time to correct the violation before a penalty is sought.
 - 3. Notify the violator that he or she may be liable to a civil penalty of no more than \$ 3,000 for the violation that is the subject of the enforcement document; and
 - 4. If the violation is deemed by the authorized enforcement agency to be a minor violation pursuant to (f) below, notify the violator that if he or she achieves compliance within the period of time specified in the enforcement document, the authorized enforcement agency shall not seek to collect a civil penalty from the violator for that violation.
- (e) The authorized enforcement agency may seek injunctive relief and/or a penalty for a violation of the Act, these rules, or an order issued pursuant thereto:
- 1. If the violator does not correct the minor violation within the period of time specified in the enforcement document initiated pursuant to (d) above; or
 - 2. If the violation is not considered a minor violation pursuant to (f) below.
- (f) A violation shall be considered a minor violation if both the following conditions are met:
- 1. The violation is not the result of the purposeful, reckless, or criminally negligent conduct of the violator; and
 - 2. The activity or condition constituting the violation has not been the subject of an enforcement action by the authorized enforcement agency against the violator within the immediately preceding 12 months.
- (g) Any claim for a civil penalty may be compromised and settled based on the following factors:
- 1. Mitigating or any other extenuating circumstances;
 - 2. The timely implementation by the violator of measures which lead to compliance;
 - 3. The conduct of the violator; and
 - 4. The compliance history of the violator.

§ 7:29-1.8 County and municipal ordinances to regulate noise

- (a) A governing body of a municipality or county or board of health may adopt a noise control ordinance in accordance with the Noise Control Act of 1971, N.J.S.A. 13:1G-21; provided that the ordinance shall be more stringent than the Noise Control Act or the regulations promulgated pursuant thereto, must be otherwise consistent with the Statewide scheme of noise control, and meet the written approval of the Department.

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(b) Enforcement of a noise control ordinance is limited to the authorized enforcement agency as specified in the ordinance and enforcement actions shall be conducted in accordance with N.J.A.C. 7:29-1.7, Enforcement.

SUBCHAPTER 2. PROCEDURES FOR THE DETERMINATION OF NOISE FROM STATIONARY SOURCES

§ 7:29-2.1 Acceptable test methods

Testing shall be conducted in accordance with methods set forth hereinafter. Alternative methods, procedures, or equipment may be used subject to approval and conditions prescribed by the Department. The Department may itself employ such alternatives when warranted by test conditions or other circumstances.

§ 7:29-2.2 Measurement principle

For purposes of measuring sound in accordance with applicable provisions of the rules of the Department, sound levels shall be determined by a qualified investigator using equipment and procedures prescribed by the Department.

§ 7:29-2.3 Operating conditions during the investigation

Insofar as practicable, sound will be measured while the source under investigation is operating at a condition that is representative of the complaint.

§ 7:29-2.4 General requirements

- (a) All tests shall be conducted in accordance with the following procedures:
1. The investigator shall, as set forth at N.J.A.C. 7:29-2.7(a), confirm the facility under investigation and, to the extent practicable, identify all sources contributing to neighborhood residual sound and extraneous sound to the point of measurement.
 2. Measurements of total sound shall be taken at or within the property line of any affected person. Total sound shall be measured as set forth at N.J.A.C. 7:29-2.7(f)1.

3. Neighborhood residual sound shall be measured as set forth at N.J.A.C. 7:29-2.7(f)2.
4. The investigator shall perform a field calibration check on the sound level meter at the beginning and the end of the measurement session.
5. The sound level meter and the calibrator must be laboratory certified at least once per year by the manufacturer or by a laboratory accredited for calibrations by the American Association for Laboratory Accreditation, ANSI National Accreditation Board, or the National Institute of Standards and Technology.
6. No outdoor measurements shall be made:
 - i. During periods when the wind speed exceeds 12 miles per hour (including gusts).
 - ii. Without a wind screen properly attached to the measuring device.
 - iii. Under any condition which allows the measuring device to become wet, such as rain, snow, or condensation.
 - iv. When the ambient temperature range during the test is beyond the range of Class 1 (Type 1) or Class 2 (Type 2) accuracy of the sound level meter and calibrator.

§ 7:29-2.5 Equipment

(a) Requirements for equipment are as follows:

1. Sound level meters:
 - i. Measurements of continuous or impulsive sound shall be made either with a Class 1 Type 1 or a Class 2 Type 2 sound level meter manufactured to the requirements at ANSI S1.4 or IEC 61672.
 - ii. Measurements of sound by octave bands shall be made with a sound level meter with an octave band frequency filter set that conforms to the requirements of Class 1 or Class 2, as specified at ANSI S1.11 or IEC 61260.
2. Shall conform to the requirements of Class 1 or Class 2, as specified at ANSI S1.40 or IEC 60942.
3. Other equipment:
 - i. A wind screen, as recommended by the sound level meter manufacturer.
 - ii. Wind speed measuring equipment including a range of five to 15 miles per hour (2.2 to 6.7 meters per second) with plus or minus two miles per hour (plus or minus 0.9 meters per second) accuracy.

§ 7:29-2.6 Reporting requirements

- (a)** Reports shall be provided on forms approved by the Department.
- (b)** The report for each test shall include:
 - 1. The date and day of the week on which the test is made;
 - 2. The time of measurements, clearly indicating A.M. or P.M.;
 - 3. The times that the investigator conducted field calibration checks of the sound level meter while on site;
 - 4. The weather conditions;
 - 5. The temperature;
 - 6. The wind speed;
 - 7. The identification of all measurement equipment by manufacturer, model number, and serial number;
 - 8. The date each piece of equipment was last recertified as set forth at N.J.A.C. 7:29-2.4(a)4;
 - 9. The duty cycle of source of interest, if applicable;
 - 10. The total sound level in dBA, or in dB or dBZ if measuring octave bands, at the measurement location;
 - 11. The neighborhood residual sound level in dBA, or dB or dBZ if in octave bands, at the measurement location;
 - 12. A sketch of the site, not necessarily to scale, orienting the sound source(s) under investigation, the neighborhood residual source(s), and the location of the affected person(s), including relevant property boundaries, measurement locations, topographic features, and adjacent structures. The sketch shall provide sufficient information for another investigator to repeat the measurements under similar conditions;
 - 13. A description of the sound sources under investigation by character and location; and
 - 14. A description of the neighborhood residual sounds and extraneous sounds by character and location, to the extent feasible.

§ 7:29-2.7 Sound testing procedure

- (a)** Survey: During an investigation, the investigator shall explore the vicinity of the suspected source on foot to identify sound sources that could affect measurements, establish their

approximate location and character, and to select suitable locations from which to measure the sound from the facility under investigation and the neighborhood residual sound. The investigator shall also confirm the facility under investigation is the responsible entity.

(b) Nature of sound: The investigator shall determine whether the sound under investigation is continuous or impulsive. The duty cycle, if applicable, shall be measured and noted.

(c) Wind speed measurement: The investigator shall measure the wind speed at the measurement site with an appropriate wind meter. If the wind speed does not exceed 12 miles per hour (5.4 meters per second), proceed using a sound level meter equipped with a wind screen. When the wind speed exceeds 12 miles per hour (5.4 meters per second), including gusts, sound level readings shall not be made, but shall be postponed until the wind speed decreases below 12 miles per hour (5.4 meters per second).

(d) Equipment selection: After determining the character of the sound to be measured, the investigator shall select the appropriate measuring equipment pursuant to the requirements at N.J.A.C. 7:29-2.5.

(e) Calibration of sound level meter: The investigator shall conduct a field calibration check of the sound level meter and perform any necessary adjustments as prescribed by the manufacturer of the sound level meter.

(f) Measurement: After conducting the field calibration check, the investigator shall select the appropriate weighting setting and response time, and place the wind screen over the microphone.

1. Total sound level is measured as follows:

- i.** Position the microphone at the point at which the sound is to be measured.
- ii.** During sound level measurements, the sound level meter microphone is to be mounted on a tripod or held at arm's length, at a minimum of three feet (0.9 meter) above ground level, and pointed at the proper angle to an imaginary line from the sound source to the microphone. The proper angle is specified by the manufacturer, according to the microphone characteristics.
- iii.** When measuring continuous sound, the measuring device shall be set for A scale, "slow" response time. When the measured sound is variable, causing the meter display to fluctuate, record both the minimum and maximum readings, for example, 66-69 dBA, indicating that the reading was not less than 66, nor more than 69, during the measurement.
- iv.** When octave band measurements are made, the sound from the source must be constant in level and in character. Use flat-scale, linear-scale, or Z-scale settings, as appropriate to the equipment. Record the maximum and minimum readings as measured. If level variations exceed plus or minus 2 dB in the bands containing the principal source frequencies, discontinue the measurement.
- v.** To measure impulsive sound, the investigator shall set the meter for A-scale. The investigator may use either the fast or impulse response time and may employ the "hold" setting if the meter is so equipped. If the investigator is not employing the "hold" setting,

he or she should report the maximum sound level displayed on the meter for a representative number of impulses. If the "hold" setting is employed after measuring an impulse, press the reset button to prepare for measurement of the next impulse. If there are numerous impulses, it is not necessary to measure every impulse. Impulsive sounds that are rapidly repetitive over a duration of one second or longer shall be measured as continuous airborne sound.

vi. While making sound level measurements, observe whether the meter reading is increased by extraneous sound sources such as passing vehicles, aircraft flying overhead, barking dogs, etc. In such cases, postpone the sound level measurement until the extraneous sound has abated.

vii. There are instances in which the sound propagation from a source is such that the sound level varies significantly with elevation. In such cases, the investigator may also conduct measurements at the window or other appropriate elevation of the affected person. A field calibration check of the assembled sound measurement equipment shall be performed in accordance with (f)1ix below.

viii. Continue the test over a period of time sufficient to ensure that the sound levels measured are typical of the source under observation but in no event should the duration of the test be less than 10 minutes, unless the duration or duty cycle of the sound source under observation is less than 10 minutes.

ix. Prior to beginning sound measurements, and again at the conclusion of measurements, perform a field calibration check of the sound level meter, check the condition of the batteries, measure the wind speed, and record the results for inclusion in the Noise Measurement Report. If the sound level meter has drifted more than 0.5 dB off calibration, or if the sound level meter battery check procedure indicates that the battery charge is too low, or if the wind speed has increased to greater than 12 miles per hour (5.4 meters per second), then measurements taken since the previous calibration check shall be considered invalid. A meter with an electronic display showing a "low battery" indication may continue to be operated for the duration specified in the manufacturer's manual without invalidating the previous readings, if a subsequent calibration check is satisfactory. Periodic wind gusts greater than 12 mph shall not invalidate measurements taken during periods when sustained wind speeds remain at or below 12 mph.

2. Neighborhood residual sound is measured as follows:

i. When the sound from the source under investigation can be discontinued, the neighborhood residual sound shall be measured at the same location at which the total sound was measured. When the sound under investigation cannot be reasonably discontinued, the neighborhood residual sound may be measured at an alternative location, in accordance with the following procedure:

(1) The alternative location should be as close as feasible to the original sound measurement location, but so located that the sound from the source has as little effect as possible on the neighborhood residual sound measurement. Even if the source sound

is audible or is sufficient to raise the sound level above that which would be measured were it inaudible at the alternative location, the reading is sufficient for the purpose of this procedure.

(2) The alternative location chosen must be such that buildings in the vicinity are similar in size and distribution, the local topography is similar in character to the location of the affected property where the total sound was measured.

(3) Traffic conditions at the time of neighborhood residual sound measurement must be similar to those at the location of the affected property where the total sound was measured.

§ 7:29-2.8 Calculations

- (a) Corrected source sound level: Correct the total sound level for the neighborhood residual sound in accordance with the procedure for using Table 1 to determine the sound level from the sound source of interest. If the difference between the total sound level and the neighborhood residual sound level is greater than 10 dB, no correction is necessary.

TABLE 1
THE DETERMINATION OF SOURCE SOUND LEVEL FROM TOTAL AND NEIGHBORHOOD RESIDUAL
SOUND MEASUREMENTS

A	B
Sound Level Difference (Decibels)	Correction Factor (Decibels)
0.5	9.6
1	6.9
2	4.3
3	3
4	2.2
5	1.7
6	1.3
7	1.0
8	0.7
9	0.6
10	0.5
Greater than 10	0.0

Procedure for Using Table 1

Step 1: Subtract the maximum measured level of the neighborhood residual sound from the minimum measured level of the total sound. If the value obtained is a decimal number, round the value down to the nearest lower value in Column A.

THIS IS A COURTESY COPY OF THIS RULE. ALL OF THE DEPARTMENT'S RULES ARE COMPILED IN TITLE 7 OF THE NEW JERSEY ADMINISTRATIVE CODE.

Step 2: In Column A, find the difference determined under Step 1 and its corresponding correction factor in Column B.

Step 3: Subtract the value obtained from Column B in Step 2 from the minimum measured total sound level (used in Step 1) to determine the sound level attributable to the sound source.

§ 7:29-2.9 Qualifications of enforcement personnel

For the purposes of this chapter, an employee representing an authorized enforcement agency shall be considered qualified to conduct sound measurements and enforce this chapter or a municipal noise ordinance approved by the Department, if such person completes a noise certification course, and is recertified, at least once every two years, at a Department-approved noise certification course that is offered by Rutgers, the State University of New Jersey, or another Department-approved institution, found at the Department's noise control website (currently at www.nj.gov/dep/enforcement/ncp.html). The Department shall provide an extension for recertification on a case-by-case basis beyond the two-year period for a person until the next time the recertification course is offered. Such requests shall be made, in writing, by submitting a Department-approved form, available from the Department's noise control website, to the Department at least 10 working days prior to the expiration of the person's certification. The Department will consider, on a case-by-case basis, a request for an extension for recertification that is submitted fewer than 10 working days prior to the expiration of the person's certification, if the person presents documentation of an emergency or extenuating circumstance that prevented timely submission of the request. If a scheduled recertification course is canceled, the person's certification shall automatically be extended, without making a request to the Department, until the next time the recertification course is offered.