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NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION  
COMPLIANCE AND ENFORCEMENT

Noise Control

Proposed Amendments: **N.J.A.C. 7:29-1.1, 1.2, 1.5, 2.1, 2.5, 2.6, 2.8, 2.9, 2.10, 2.11 and 2.12**

Proposed New Rule: **N.J.A.C. 7:29-1.3**

Authorized By: Lisa P. Jackson, Commissioner  
Department of Environmental Protection

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

Calendar Reference: See summary below for explanation of the exception to the calendar requirement.

DEP Docket Number:

Proposal Number: PRN 2006-

A public hearing concerning this proposal will be held:

Tuesday, July 18, 2006 from 1:30 p.m. to 3:00 p.m., or until the close of testimony  
New Jersey Department of Environmental Protection  
Public Hearing Room  
401 East State Street, 1st Floor  
Trenton, New Jersey 08625

Submit written comments by (60 days after publication) to:

Oneida Cuevas, Esq.  
Attention: DEP Docket Number \_\_\_\_\_  
Department of Environmental Protection, Office of Legal Affairs  
P.O. Box 402  
Trenton, New Jersey 08625-0402

The Department of Environmental Protection (Department) requests that commenters submit comments on disk or CD as well as on paper. Submission of a disk or CD is not a requirement. The Department prefers Microsoft Word 6.0 or above. Macintosh™ formats should not be used. Each comment should be identified by the applicable N.J.A.C. citation, with the commenter's name and affiliation following the comment.

This rule proposal can be viewed or downloaded from the Department's website at  
<http://www.state.nj.us.dep>.

The agency proposal follows:

### Summary

As the Department has provided a 60-day comment period on this notice of proposal, this notice is excepted from the rulemaking calendar requirement under N.J.A.C. 1:30-3.3(a)5.

On January 5, 2006, the Department received a petition for rulemaking from Teaneck Township, Bergen County, in which the Township requested that the Department remove the existing exception for "surface carriers engaged in commerce by railroad" in the Noise Control rules at N.J.A.C. 7:29-1.4. See 38 N.J.R. 1245(a); 38 N.J.R. 1586(a). The Department granted the rule petition, in part, and accordingly is now proposing to amend the rules at N.J.A.C. 7:29-1.4(a)10 to modify the exception for "surface carriers engaged in commerce by railroad" such that idling train locomotives and rail car coupling activities will be required to comply with the applicable Federal sound level standards. The Department proposes to adopt a new rule at N.J.A.C. 7:29-1.3 that incorporates by reference the Federal Noise Control regulations at 40 C.F.R. 201 and 49 C.F.R. 210. These provisions govern sound level standards and measurement of noise generated by idling train locomotives and rail car coupling operations.

The Department is also proposing other amendments to the rules that include improving definitions; clarifying exceptions pertaining to bells, chimes or carillons, emergency work, motor vehicle racetracks, public celebrations; adding emergency generators to the list of exceptions; updating the rules pertaining to sound measurement technology; and clarifying that only persons employed by authorized enforcement agencies and certified in accordance with the rules are qualified to make noise measurements and enforce the standards.

#### SUBCHAPTER 1. GENERAL PROVISIONS

**N.J.A.C. 7:29-1.1 Definitions.** This section contains definitions for terms used in Subchapter 1.

The Department is proposing to amend the definition to "Authorized enforcement agency" to clarify that employees must be certified to conduct noise enforcement in accordance with the requirements set forth at N.J.A.C. 7:29-2.11.

The Department is proposing to add the definition of "A-weighted sound level" to clarify that the number of decibels quantifying a sound measurement is weighted on a scale approximating the human ear. The measurement is commonly reported as "dBA."

The Department is proposing to amend "commercial facility" to add outdoor amplified sound system as a sound source at commercial establishments that provide living accommodations since outdoor amplified sound systems have been a source of concern regarding excessive noise in some communities.

The Department is proposing to amend the definition of "emergency" by including reference to contractors working in response to emergencies in order to clarify that the sound generated by such contractors at the site of an emergency is exempt as per N.J.A.C. 7:29-1.4(a)4.

The Department is proposing to delete the definition for "peak sound pressure level" and add a definition for "maximum sound level" since, in accordance with N.J.A.C. 7:29-1.2, impulse sound levels will

be determined utilizing the metric of “maximum sound level,” as measured on the A-scale.

**N.J.A.C. 7:29-1.2 Industrial, commercial, public service, or community service facilities.** This section establishes the standards for sound levels emanating from industrial, commercial, public service, or community service facilities. Specifically, this section prohibits continuous sound levels, when measured from a residential property line, from exceeding 65 dBA between 7:00 a.m. and 10:00 p.m. and from exceeding 50 dBA between 10:00 p.m. and 7:00 a.m. This section also prohibits impulse sound in excess of 80 decibels.

At N.J.A.C. 7:29-1.2(a)1iii and 1.2(a)2iii, the Department is proposing to replace the reference to “peak sound pressure level” with “maximum sound level.” Measurements using this metric are more easily conducted with sound measurement equipment generally available to enforcement officers, which has a digital readout display rather than a needle indicating a peak sound level. Further, “peak sound pressure level” implies an unweighted measurement of sound, which conflicts with the requirement at N.J.A.C. 7:29-2.7(b)10 that peak sound levels be reported on the A-scale. This means the maximum sound level for impulse sound is measured in dBA, instead of decibels, to reflect the use of “A-weighted sound levels.”

At N.J.A.C. 7:29-1.2(a)1iii, 1.2(a)2iii and 1.2(b)3, the Department is proposing to replace the term “decibels” with “dBA” to indicate the measurement is using the A-weighted sound level scale.

**N.J.A.C. 7:29-1.3 Railroad Noise - Incorporation by Reference.** The current rule at N.J.A.C. 7:29-1.3, Stationary emergency signaling devices, is proposed to be recodified at N.J.A.C. 7:29-1.4, with no change in text. As explained below, at N.J.A.C. 7:29-1.3, the Department is proposing a new section that incorporates by reference certain Federal standards for railroad noise.

On January 5, 2006, the Department received a petition for rulemaking pursuant to N.J.S.A. 52:14B-4(f) and N.J.A.C. 7:1D-1.1 from the Township of Teaneck, Bergen County (petitioner). The petitioner requested that the Department amend its Noise Control rules to remove the exception for “surface carriers engaged in commerce by railroad,” and in addition, incorporate by reference the Federal Noise Control regulations relating to “special local conditions.” The petitioner requested these amendments so that the Department could approve the enactment by Teaneck of a noise control ordinance restricting rail freight locomotive noise on the basis of “special local conditions.”

The petitioner sought the rule amendments because the noise ordinance that might ultimately result would help eliminate excessive noise from idling train locomotives operated by CSX Corporation and its subsidiary CSX Transportation, Inc. (collectively, “CSX”) over the 2.5 mile north-south section of the West Shore line that bisects Teaneck. The request was predicated on the Department’s incorporating by reference the governing Federal Noise Control regulation’s procedure for recognizing an exception based on “special local conditions.” The petitioner asserted that under the governing Federal Noise Control regulation, Teaneck’s ordinance need not be identical with the Federal Noise Control Act (“NCA”) because special locations in this case permit applying the NCA’s “special local conditions” exception. Under this exception, the petitioner asserted Teaneck should be afforded the flexibility to provide for stricter noise control standards.

In 1971, the New Jersey legislature enacted the State Noise Control Act N.J.S.A. 13:1G-1 et seq. The Act provides, at N.J.S.A. 13:1G-2, that the “people of the State are entitled to and should be ensured an environment free from noise which unnecessarily degrades the quality of life.” In 1974, the Department adopted Noise Control rules under the authority of the Act at N.J.A.C. 7:29, which set forth operational performance standards for industrial and commercial noise sources. The rules contain a list of exceptions which, at N.J.A.C. 7:29-1.4(a)10, exempts “[s]urface carriers engaged in commerce by railroad,” from the operational performance standards established at N.J.A.C. 7:29-1.2. Pursuant to 42 U.S.C.A. 4916 (c)(1), states are preempted from adopting standards applicable to noise emissions from railroads where the United States Environmental Protection Agency (USEPA) has already promulgated such standards, unless the state standards are identical to or mirror the Federal sound standards.

Although the Department does not currently regulate railroad noise, it does not view local regulation, in this situation, as being inconsistent with its statewide approach to noise control and the Department does not believe that the exception stands as a prohibition against municipal regulation of such noise. However, since the Department had recently expressed its intent to modify the N.J.A.C. 7:29-1.4(a)10 exception in order to clarify its authority to regulate railroad noise (see 37 N.J.R. 1980), and to avoid the possible interpretation that the Department’s rules prohibit municipal regulation of train noise, the Department granted the portion of Teaneck’s petition related to the exception for railroad noise at N.J.A.C. 7:29-1.4(a)10.

The Federal Noise Control Act authorizes any state or political subdivision thereof to establish or enforce standards or controls on levels of environmental noise if the Administrator of the USEPA, after consultation with the Secretary of Transportation, determines that such a standard or control is “necessitated by special local conditions and is not in conflict with regulations promulgated under this section.” 42 U.S.C.A. 4917(c)(2). However, there is no provision in the statute or applicable case law regarding how to obtain approval from the Federal government in order to promulgate standards necessitated by special local conditions. Because the section is part of the Federal statute, the Department does not have the authority to approve special local conditions pursuant to 42 U.S.C.A. 4916 (c)(2). Therefore, the portion of the petition requesting that the Department incorporate by reference the Federal Noise Control Act procedures relating to “special local conditions” was denied.

The Department supports the idea behind Teaneck’s petition, which is to protect township residents from the harmful effects of noise from idling train locomotives within the township’s jurisdiction. Of particular concern to the Department are the effects of noise from idling train locomotives at night, since the Federal sound standards of 73 decibels for locomotives built before December 31, 1979, and 70 decibels for locomotives built after that date (see 40 C.F.R. 201.11) are significantly above New Jersey’s nighttime standard of 50 decibels. However, as discussed above, a state government is preempted from adopting standards applicable to noise emissions from railroads where the USEPA has already promulgated such standards pursuant to 42 U.S.C.A. 4916 (a), unless, as stated in 42 U.S.C.A. 4916(c)(1), the state standards are identical to or mirror the Federal standards.

Proposed new N.J.A.C. 7:29-1.3(a) incorporates by reference parts of 40 C.F.R. 201 and 49 C.F.R. 210, which govern railroad noise emission compliance regulations. Specifically, the provisions govern sound level standards and measurement of noise generated by idling train locomotives and rail car coupling operations. As such, in accordance with the Act, and police powers under the Home Rule Act at N.J.S.A.40:48-1(8), municipalities affected by these types of rail noise can develop and submit ordinances to

the Department for approval that would authorize them to investigate resident complaints about idling train locomotives and/or rail car coupling; and allow them to enforce the Federal railroad sound standards at 40 C.F.R. 201 and 49 C.F.R. 210.

Proposed new N.J.A.C. 7:29-1.3(b) states that the Department is not incorporating by reference Federal sound level standards at 40 C.F.R. 201.12, 40 C.F.R. 201.13, 40 C.F.R. 201.14, 40 C.F.R. 201.16, 40 C.F.R. 201.27, 40 C.F.R. 201.28 and 49 C.F.R. 210.11 for moving trains, retarders (i.e. brake systems), and performance of locomotive load cell test stands (a testing procedure for engine loading). These aspects of rail noise will continue to be exempted from the Noise Control rules, under N.J.A.C. 7:29-1.5(a)10, as proposed to be amended and recodified. The Department has not received complaints about moving trains, the use of retarders, and the performance of locomotive load cell test stands.

The Department will continue to exempt train horns and whistles at proposed N.J.A.C. 7:29-1.5(a)10, although the Department has received complaints about these noise sources. The FRA has issued a Final Rule on the use of train horns and whistles that took effect on June 24, 2005 (see 49 C.F.R. 222 and 229). This rule requires that train horns be sounded as a warning at public highway rail crossings and preempts any state or local laws regarding the use of train horns at public crossings. The Final Rule does allow municipalities to mitigate the effects of the noise created by such use by establishing "Quiet Zones." Municipalities wishing to establish Quiet Zones in their communities must follow procedures established by the FRA, which can be found at the FRA website at <http://www.fra.dot.gov/us/content/1318>. At this time, Montclair and Westfield are the only municipalities in New Jersey that have filed for Quiet Zone status with the FRA. The Department has no authority or role in approving Quiet Zones.

The Department believes that enforcement by local officials to control noise from idling train locomotives and rail car coupling will not be unduly burdensome on rail operators since they are already required to comply with the applicable Federal standards, currently enforced by the FRA. Local enforcement of certain Federal rail noise standards will supplement the noise control efforts of the FRA. A municipality that wishes to enforce the Federal rail noise standards will be required to adopt an ordinance, subject to approval by the Department. The municipality will be required to have at least one employee who is certified through the Rutgers University Community Noise Enforcement Course, in accordance with N.J.A.C. 7:29-2.11. Local officials investigating rail noise complaints will have to adhere to the Federal standards and procedures set forth at 40 C.F.R. 201 and 49 C.F.R. 210. These are the same procedures followed by FRA rail noise investigators.

**N.J.A.C 7:29-1.4 Stationary emergency signaling devices.** This rule is proposed to be recodified without change from N.J.A.C. 7:29-1.3 to section N.J.A.C. 7:29-1.4 due to the addition of the new Railroad Noise rule at N.J.A.C. 7:29-1.3.

**N.J.A.C 7:29-1.5 Exceptions.** This section specifies the activities that are not required to comply with the State's sound level standards. It is proposed to be recodified from N.J.A.C. 7:29-1.4 to N.J.A.C. 7:29-1.5 due to the addition of the new Railroad Noise rule at N.J.A.C. 7:29-1.3.

At N.J.A.C. 7:29-1.5(a), the Department is proposing to replace the word "services" with the word "sources," to correct a typographical error made when the rule was last amended.

At N.J.A.C. 7:29-1.5(a)2, the Department is proposing to include in the exception for "bells, chimes or carillons," the use of electronic devices that imitate the sounds of bells, chimes or carillons. The Department has been made aware of local concerns regarding the use of bells, chimes, and carillons that may not necessarily qualify for the exception, such as the marking of time. The use of bells, chimes and carillons for non-religious purposes is not an exempt activity.

At N.J.A.C. 7:29-1.5(a)4, the Department is proposing to add wording for emergency work to include emergency construction and demolition work and hazardous materials spill cleanups. These activities would be undertaken to address immediate public health or safety concerns, and therefore, are appropriately included in the exception.

At N.J.A.C. 7:29-1.5(a)5, the Department is proposing to clarify the motor vehicle racetrack exception so that it is limited only to motor vehicle racetrack facilities engaged in the racing of motor vehicles. The use of motor vehicle racetracks for non-racing events such as concerts or flea markets does not qualify for the exception. These are considered commercial activities and thus subject to the sound level standards set forth at N.J.A.C. 7:29-1.2 for commercial facilities.

In 1971, the exception for motor vehicle racetracks was established in the Noise Control rules as a "reservation" pending a future rule amendment to control noise from motor vehicle racetracks. The Department has expended considerable resources to evaluate methods to regulate noise from motor vehicle racetracks. The Department continues to monitor this issue but based on its experience to date, believes that racetrack noise is most appropriately enforced at the local level. In the absence of statewide noise regulations for motor vehicle racetrack noise, municipalities with motor vehicle racetracks operating within their jurisdiction regulate the operation of these facilities by limiting the days and/or times the facilities can operate.

At N.J.A.C. 7:29-1.5(a)6 the Department is proposing to replace "Office of Emergency Management or Hazardous Spill Management, Division of State Police" with "Department of Public Law and Safety" to correctly reflect the government agency responsible for implementing national warning systems in the State.

At N.J.A.C. 7:29-1.5(a)8, the Department is proposing to amend the exception for "public celebrations" to clarify that these are only for government-sponsored or government-permitted events. The Department is aware of noise complaints involving public facilities used for private parties and celebrations, which are activities not covered by this exception. Clarification is needed to distinguish between the two types of functions so enforcement can be implemented when necessary for private parties held on public property that are noisy and affect nearby residents.

At N.J.A.C. 7:29-1.5(a)10, the Department is proposing to amend the exception for "surface carriers engaged in commerce by railroad" to limit the exception to noise emanating from trains in motion, retarders, locomotive load cell test stands, and train horns. As explained above, with regard to proposed N.J.A.C. 7:29-1.3, the Department is incorporating the federal noise standards for idling train locomotives and rail car coupling activities.

At N.J.A.C. 7:29-1.5(a)14, the Department is proposing to add a new exception regarding the use of

emergency electrical generators at an industrial or commercial facility, or a public service or community service facility during an electrical outage, and the testing of emergency generators for a duration not to exceed the manufacturer's minimum recommendation for the test. These generators must be routinely tested to ensure that they will work when needed; however, the Department proposes that there will be no more than one test per week between the hours of 8:00 a.m. and 8:00 p.m.

**N.J.A.C. 7:29-1.6 Performance Test Principle.** This rule is proposed to be recodified without change from N.J.A.C. 7:29-1.5 to N.J.A.C. 7:29-1.6 due to the addition of the new Railroad Noise rule at N.J.A.C. 7:29-1.3.

**N.J.A.C. 7:29-1.8 County and municipal ordinance to regulate noise.** This rule is proposed to be recodified without change from N.J.A.C. 7:29-1.7 to N.J.A.C. 7:29-1.8 due to the addition of the new Railroad Noise rule at N.J.A.C. 7:29-1.3.

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

**N.J.A.C. 7:29-2.1 Definitions.** This section contains definitions for terms used in Subchapter 2.

The Department is proposing to amend "extraneous sound" to provide that such a sound is "intermittent," and that the sound is not part of the neighborhood residual sound, and is not from the noise source under investigation.

The Department is proposing to amend the definition of "sound level meter" by replacing "peak sound pressure" with "maximum sound pressure" level as discussed at N.J.A.C. 7:29-1.2 above.

The definition of "sound source" is proposed to be amended to clarify that "equipment" such as several heating and cooling units on a rooftop can also be the source of sound under investigation.

The Department is proposing to amend "total sound level" to clarify that the appropriate method to determine whether a violation is occurring includes the measurement of the sound level of the sound source under investigation and combining it with the measurement of the level of neighborhood residual sounds, but excluding the measurement of extraneous sounds when on the property of an affected person.

The Department is proposing to delete the term "transient sound" and its definition, since the concept of transient sound is covered by the proposed amendments to the definition of "extraneous sound." The Department is proposing to replace "transient sources" with "extraneous sound" in the definition of "neighborhood residual sound level" to reconcile the definitions.

**N.J.A.C. 7:29-2.5 General Requirements.** This section establishes general requirements on where, how, and under what conditions the noise determination tests can be performed. The Department is proposing to amend N.J.A.C. 7:29-2.5(a)4, to reflect that a sound level meter must be "recalibrated" instead of "recertified," and that the calibration must be done either by the manufacturer or a laboratory accredited either by the American Association for Laboratory Accreditation or the National Institute of Standards and Technology. The laboratory accreditation requirement is proposed to establish a minimum standard for laboratories hired by authorized enforcement agencies to calibrate sound level meters and the calibrator

device rather than relying on the Department to approve laboratories.

**N.J.A.C. 7:29-2.6 Equipment.** This section establishes requirements for equipment to be used during testing and measurements. The Department is proposing to delete N.J.A.C. 7:29-2.6(a)1ii since N.J.A.C. 7:29-2.12(a)3 is proposed for deletion. At N.J.A.C. 7:29-2.6(a)1i, the Department proposes to require that both continuous and impulse sound must be measured using a sound level meter meeting the specified requirements. The current rule at N.J.A.C. 7:29-2.6(a)1iii is proposed to be recodified at N.J.A.C. 7:29-2.6(a)1ii, and amended to add the wording, “or its successor” at the end to include any updates or changes to the cited American National Standards Institute (ANSI) reference.

**N.J.A.C. 7:29-2.8 Preparation for testing.** This section establishes the procedures to be followed to determine site conditions prior to testing. The Department is proposing to delete the term “transient” and replace it with “extraneous,” because the Department is deleting the definition of “transient sound,” as explained above.

**N.J.A.C. 7:29-2.9 Procedure.** This section establishes the actual procedures used to calibrate equipment and take sound measurements. The Department is proposing to delete N.J.A.C. 7:29-2.9(a)9, since the steps to be taken to calibrate a sound level meter for impulse sound are now the same procedures as set forth at N.J.A.C. 7:29-2.9(a)1-8.

At N.J.A.C. 7:29-2.9(b)1iii, the Department is proposing to replace the word “needle” with the word “display,” since current meters have digital readout displays.

At N.J.A.C. 7:29-2.9(b)1v, the Department is proposing to delete the wording “peak hold, and the appropriate range for the needle to be on scale,” and proposes to codify an alternative method for the measurement of impulse noise using the “maximum sound level” metric rather than the “peak sound pressure level” metric.

At N.J.A.C. 7:29-2.9(b)1viii, the Department proposes to clarify that while the preferred duration of time to conduct a sound measurement test is 10 minutes, not all sources of sound will afford the investigator the preferred 10 minute sample duration time. The proposed amendment will allow the investigator to collect sound measurements in those instances when the sound source has a cycle that runs less than the 10 minute period. The investigator will now be able to use readings collected during these infrequent instances to determine if a violation is occurring.

At N.J.A.C. 7:29-2.9(b)1ix, the Department is proposing to clarify that a meter with an electronic display showing a “low battery” indication will not invalidate the measurements immediately collected prior to the indicator light coming on during a noise investigation as long as a subsequent calibration check is satisfactory. Further, it is proposed that when collecting sound measurements that wind gusts of over 12 mph will invalidate measurements when less than one hour of measurements has already been collected. If wind gusts over 12 mph occur after one hour of measurements, the measurements already collected will be considered valid.

**N.J.A.C. 7:29-2.10 Calculations.** This section directs how measured data is to be corrected to account for other sound sources not related to the facility or sound sources that are being investigated and



evaluated. The Department is proposing to add the wording “including decimals, if displayed,” in Step 1 to emphasize that decimals may be part of the calculations since newer sound meters have a digital readout display instead of a needle, which typically includes decimals.

Deleted: .

The Department is proposing to add a Step 4 “round the value obtained down to the nearest whole number” to emphasize that investigators should not round up, which could artificially increase the number above the sound level standards and result in a violation.

**N.J.A.C. 7:29-2.11 Qualifications of investigative personnel.** This section identifies the qualifications required of individuals performing the test methods and procedures set forth in this subchapter. In the title of this section and at N.J.A.C. 7:29-2.11(a), the Department is proposing to clarify that only employees representing an authorized enforcement agency and who complete the Rutgers Noise Certification course are qualified to collect sound measurements in order to enforce the State's Noise Code and/or municipal noise control ordinance approved by the Department. The Department is proposing to amend this section so that it pertains to both Subchapters 1 and 2, since the enforcement procedures to be followed by an employee of an authorized enforcement agency are found at N.J.A.C. 7:29-1.6. Persons who are not affiliated with an authorized enforcement agency that register and attend the Rutgers Noise Certification course may choose to do so, but their successful completion of the course is to only be construed to mean they are qualified to collect sound measurements in accordance with N.J.A.C. 7:29, and not to mean they may undertake noise enforcement activities.

The Department is also proposing an extension for recertification, beyond the two-year period, on a case-by-case basis until the next time the recertification course is offered. This will allow some flexibility in a case of illness or a planned absence that prevents an investigator from taking the recertification course within 24 months of his or her last noise course.

The Department is proposing to delete N.J.A.C. 7:29-2.11(b) since a noise enforcement workshop was never developed by the Department of Environmental Sciences of Cook College, Rutgers, the State University of New Jersey or the Department due to a lack of interest by local noise officials.

**N.J.A.C. 7:29-2.12 Incorporation by Reference.** This section provides for the incorporation by reference of other testing criteria for equipment. The Department is proposing to delete N.J.A.C. 7:29-2.12(a)3 since this references sound level meters equipped for measuring “peak” values, which is a measurement proposed to be deleted and replaced with the proposed metric “maximum sound level.”

#### **Social Impact**

The proposed new rule at N.J.A.C. 7:29-1.3 and proposed amendments at N.J.A.C. 7:29-1.5(a)10 should have a positive social impact for many New Jersey residents who are affected by idling train locomotives and rail car coupling activities. Municipalities affected by these types of rail noise can develop and submit ordinances to the Department for approval that would authorize them to investigate resident complaints about idling train locomotives and rail car coupling activities.

The proposed amendments to the rest of the chapter will allow the Department to continue, in full force and effect, the beneficial noise control programs administered by county and municipal agencies. These

proposed amendments will also have a positive social impact since noise continues to affect the health and well being of many New Jersey residents, who are affected by a variety of noise sources that are mitigated by county and municipal noise control programs.

#### **Economic Impact**

The Department anticipates that the proposed new rule at N.J.A.C. 7:29-1.3 and the proposed amendments at N.J.A.C. 7:29-1.5(a)10 may have a negative economic impact if rail operators are not already in compliance with the Federal sound level standards. If a rail operator is found to be in violation of the proposed standards, solutions could include moving the train away from an impacted community; retrofitting the locomotive with a generator unit to allow it to idle more quietly at a cost of about \$20,000 per locomotive; or stopping the activity altogether.

There are no anticipated economic impacts of the other proposed amendments for person complying with the sound level standards set forth in the Noise Control rules. However, persons subject to this chapter who exceed the sound level standards may have to evaluate their facilities to identify noise abatement strategies. The actual abatement measures could range from a simple noise barrier costing a few hundred dollars to a multi-phased abatement plan costing thousands of dollars. The range of costs depends on many factors, such as the number of individual sources of noise, the corresponding sound levels, the distance between the noise sources and receiving properties, and reflective and absorptive surfaces nearby.

#### **Environmental Impact**

The Department anticipates that the proposed new rule at N.J.A.C. 7:29-1.3 and the proposed amendments at N.J.A.C. 7:29-1.5(a)10 will have a positive environmental impact, since municipalities will be able to investigate rail noise complaints more promptly than the Federal Railroad Administration.

The Department anticipates that the proposed amendments to the rest of the chapter will also have a positive environmental impact because the proposed amendments serve to protect public health and preserve a high quality of life for New Jersey residents.

#### **Federal Standards Statement**

Executive Order No. 27 (1994), and N.J.S.A. 52:14B-1 et seq., require State agencies that adopt, readopt or amend State regulations that exceed any Federal standards or requirements to include, in the rulemaking document, a Federal standards analysis. The proposed new rule and proposed amendments do not impose any standards or requirements which exceed the standards or requirements imposed by any applicable Federal law. It is noted that there are some Federal sound level standards for certain sources of noise, such as trains and that sections of these Federal train noise standards are adopted by reference in the proposed new rule at N.J.A.C. 7:29-1.3. See 40 C.F.R. 201 and 49 C.F.R. 210. The proposed new is therefore, subject to, but does not exceed any Federal standards. Accordingly, a Federal standards analysis is unnecessary.

#### **Jobs Impact**

The Department does not anticipate that the proposed rule amendments and proposed new rule will

have any impact on jobs.

### **Agricultural Industry Impact Statement**

In accordance with P.L. 1998, c.48, amending the Right to Farm Act, the Department has reviewed the proposed amendments and proposed new rule and has determined that the proposed amendments and proposed new rule will continue to exempt agricultural activities from complying with the Noise Control rules.

### **Regulatory Flexibility Analysis**

As required by the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq., the Department has evaluated the reporting, recordkeeping and other compliance requirements that the proposed amendments and proposed new rule would impose on small businesses. The Regulatory Flexibility Act defines the term "small business" as "any business which is a resident in this State, independently owned and operated and not dominant in its field, and which employs fewer than 100 full-time employees."

The proposed amendments and proposed new rule would apply to all rail operators. Some rail operators may be classified as small businesses as defined by the New Jersey Regulatory Flexibility Act. The proposed amendments and new rule do not impose any reporting or recordkeeping requirements on rail operators. However, the proposed amendments and proposed new rule do impose compliance requirements on all rail operators.

The proposed amendments and proposed new rule will have little or no economic impact on rail operators complying with the sound level standards prescribed in the Noise Control rules. However, rail operators that exceed the noise standards will have to evaluate their practices to identify noise abatement strategies. As discussed in the Summary and Economic Impact statement, the actual abatement measures could range from moving the train away from an impacted community; retrofitting the locomotive with a generator unit to allow it to idle more quietly at a cost of about \$20,000 per locomotive; or stopping the activity altogether.

The Department believes that some commercial, industrial, public service, and community service facilities affected by the proposed amendments may be small businesses. The Department anticipates that the proposed amendments will impose compliance requirements on small businesses that exceed noise level standards. In order to comply with the noise level standards, small businesses may have to evaluate their facilities to identify noise abatement strategies. As discussed in the Economic Impact statement, the actual abatement measures could range from a simple noise barrier costing a few hundred dollars to a multi-phased abatement plan costing thousands of dollars, depending on the number of individual sources of noise, the corresponding sound levels, the distance between the noise sources and the receiving properties, and reflective and absorptive surfaces nearby. The Department anticipates that there may be a need to hire a noise abatement consultant, if engineering controls are necessary to minimize the effects of noise. It is anticipated that the cost of hiring a noise abatement consultant could range from a few hundred dollars to several thousand dollars, depending on the extent of the noise abatement project.

Small as well as large businesses have the potential to create noise in violation of this chapter.

Therefore, it is not appropriate to exempt small businesses from this chapter solely by virtue of their size, since the rules are designed to protect human health, welfare and the environment. However, when working with a facility to achieve compliance, the authorized enforcement agency has the discretion to establish differing timetables for compliance that take into account the resources available to small businesses. Thus, it is possible to minimize any adverse economic impact on small businesses in this fashion.

### **Smart Growth Impact**

Executive Order No. 4 (2002) requires State agencies that adopt, amend or repeal State regulations to include in the rulemaking document a Smart Growth Impact statement that describes the impact the proposed amendments and proposed new rule would have on the achievement of smart growth and implementation of the State Development and Redevelopment Plan (State Plan). The Department has evaluated this rulemaking to determine the nature and extent of the impact on smart growth and implementation of the State Plan. The proposed amendments and proposed new rule may continue to affect land use policies, particularly when considering the potential impacts of noise from the siting of new commercial and industrial facilities near residential areas. Since the Noise Control rules are protective of public health and the environment, the Department believes the proposed amendments and proposed new rule are consistent with the State's achievement of smart growth and implementation of the State Plan.

**Full text** of the proposed amendments and proposed new rule follows (additions indicated in boldface **thus**; deletions indicated in brackets [thus]):

## **SUBCHAPTER 1. GENERAL PROVISIONS**

### **7:29-1.1 Definitions**

...

"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. 7:29-2.11, provided such agency, municipality or employee is acting within its designated jurisdiction.

"A-weighted sound level" means the sound level in decibels, reported as measured by a sound level measuring instrument having an "A"-weighting network which discriminates against the lower frequencies according to a relationship approximating the auditory sensitivity of the human ear. The level so read is designated dBA.

...

"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;

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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 which exceed six dwelling units, including, but not limited to, apartments, 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 heating, air conditioning [or], pool filter unit or system, or outdoor amplified sound system.

• • •

"Emergency" means an unexpected occurrence or situation resulting from natural or unnatural causes which endangers or has the potential to endanger the health, safety or resources of citizens or a municipality, and as such, necessitates prompt action and response on the part of emergency services personnel, or contractors working at the site of the emergency to address an emergency.

• • •

"Maximum sound level" means the maximum sound level measured by a sound level meter on the "fast" or "impulse" setting.

["Peak sound pressure level" means the maximum instantaneous sound pressure level measured by a sound level meter on the PEAK setting.]

#### **7:29-1.2 Industrial, commercial, public service, or community service facilities**

(a) No person shall cause, suffer, allow, or permit sound from any industrial, commercial, public service or community service facility that, when measured at 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.-ii. (No change.)

iii. Impulsive sound in air which has a [peak sound pressure] maximum sound level in excess of 80 [decibels] dBA.

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

i.-ii. (No change.)

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iii. Impulsive sound in air which has a [peak sound pressure]maximum sound level in excess of 80 [decibels] dBA and such impulse sound shall not be repeated more than four times in any hour. Impulsive sound which repeats more than four times in any hour shall not exceed 50 dBA.

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

1.-2. (No change.)

3. Impulsive sound in air which has a maximum sound level in excess of 80 [decibels] 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 C.F.R. 201 – Noise Emission Standards for Transportation Equipment; Interstate Rail Carriers and 49 C.F.R. 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 C.F.R. 201.12 Standard for locomotive operation under moving conditions; 40 C.F.R. 201.13 Standard for rail car operations; 40 C.F.R. 201.14 Standard for retarders; 40 C.F.R. 201.16 Standard for locomotive load cell test stands; 40 C.F.R. 201.16 Standard for locomotive load cell test stands; 40 C.F.R. 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 C.F.R. 201.28 Testing by a railroad to determine probable compliance with the standard; and 49 C.F.R. 210.11 Waivers.

**7:29-1.[3]4 Stationary emergency signaling devices** (No change in text.)

#### **7:29-1.[4]5 Exceptions**

(a) The operational performance standards established at N.J.A.C. 7:29-1.2 shall not apply to any of the following noise [services] sources:

1. (No change.)

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. (No change.)

4. When public health or safety is involved, emergency work to provide electricity, water, or

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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[s] 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 [Office of Emergency Management or Hazardous Spill Management, Division of State Police] Department of Law and Public Safety;

7. (No change.)

8. Public celebrations that are government-sponsored or government-permitted events;

9. (No change.)

10. Surface carriers engaged in commerce by railroad when the noise sources in question are trains in motion, operating retarders, train horns and whistles, or performing locomotive load test cell stands;

11. -12. (No change.)

13. Normal operation of a handgun, rifle, shotgun, skeetshooting or trapshooting range which has been maintained continuously in the same location since January 24, 1972[.]; or

14. Emergency electricity generators at an industrial or commercial facility, or a public service or community service facility in use during an electrical outage, and the testing of such emergency generators, which shall be limited to one test per week between the hours of 8:00 A.M. and 8:00 P.M. for a duration not to exceed the generator manufacturer's minimum recommendation for the test.

**7:29-1.[5]6 Performance Test Principle** (No change in text.)

**7:29-1.[6]7 Enforcement** (No change in text.)

**7:29-1.[7]8 County and municipal ordinances to regulate noise** (No change in text.)

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

### **7:29-2.1 Definitions**

...

"Extraneous sound" means [a] an intermittent sound which is neither [part of the] neighborhood residual sound nor [comes from the] sound from the source under investigation.

...

"Neighborhood residual sound level" means that measured value which represents the summation of the sound from all of the discrete sources affecting a given site at a given time, exclusive of extraneous [and transient sounds] sound and the sound from the source of interest.

...

"Sound level meter" means an instrument which is used to measure sound pressure level, sound level, octave band sound pressure level, or [peak] maximum sound [pressure] level, separately or in [any] combination[s thereof,] and which conforms to the requirements set forth at N.J.A.C. 7:29-2.6(a) 1 for such meters.

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

...

"Total sound level" means that measured level which represents the summation of the sounds from [all of the sound sources affecting a given place at a given time] the source under investigation and the neighborhood residual sound level, excluding any extraneous sound, when measured on the property of an affected person.

["Transient sound" means a sound whose level does not remain constant during measurement.]

...

#### **7:29-2.5 General requirements**

(a) All tests shall be conducted in accordance with the following procedures:

1.-3. (No change.)

4. The [measuring device] sound level meter must be [recertified] recalibrated and the calibrator must be recalibrated at least once per year by the manufacturer or by a [person that has been approved by the Department] laboratory accredited for such calibrations by either the American Association for Laboratory Accreditation or the National Institute of Standards and Technology. A copy of written documentation of such [recertification and] recalibration, in a form approved by the Department, shall be kept with the equipment to which it refers.

5. (No change)

#### **7:29-2.6 Equipment**

(a) Requirements for equipment are as follows:

1. Sound level meters:

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i. Measurements of continuous or impulse sound shall be made either with a Type 1 (Precision) or a Type 2 (General Purpose) sound level meter manufactured to the requirements of ANSI S1.4-1971 specification for sound level meters (see N.J.A.C. 7:29-2.12(a)2) or its successor.

ii. [Measurements of impulse sound shall be either with a Type 1 (Precision) or a Type 2 (General Purpose) sound level meter equipped for measuring peak values and manufactured to the requirements of IEC Publication 651 (1979) "Sound Level Meters" (see N.J.A.C. 7:29-2.12(a)3) or its successor.]

[iii.] Measurements of sound by octave bands shall be made with a sound level meter with octave band frequency filter set that conforms to the requirements of Class II as specified in ANSI S1.11-1966 (R-1976) "specification for octave, half-octave, and third-octave band filter sets" (see N.J.A.C. 7:29-2.12(a)1) or its successor.

2-3. (No change.)

#### **7:29-2.8 Preparation for testing**

(a) (No change.)

(b) Nature of sound. While the sound source or sources are under observation the investigator shall ascertain whether the sound is steady state or [transient] extraneous. The duty cycle time, if any, shall be measured and noted.

(c) – (d) (No change.)

#### **7:29-2.9 Procedure**

(a) Calibration of Sound Measuring Equipment: When a meter zero adjust screw is accessible from outside the sound measuring equipment, then prior to making sound level measurements, the investigator shall zero adjust in accordance with the manufacturer's instructions. If the zero adjust screw of the equipment is not readily accessible, and if the investigator observes that the meter zero adjust is defective, the equipment shall be taken out of service until repaired. Before and after making a set of sound level measurements, the investigator shall check, and if warranted, adjust the sound level meter calibration at the level specified by the sound level calibrator used. When a multi-frequency calibrator is used, it shall be set at 1000 Hertz. The procedures below shall be followed before and after each set of measurements:

1-8. (No change.)

[9. If the sound level meter being calibrated is to be used for measuring impulse sound, the following additional steps must be taken:

i. Switch the detector characteristic setting from "Slow Response" to "Impulse" and note the meter reading. The change must not be more than 0.25 dB.

ii. Switch the detector characteristic setting from "Impulse" to "Peak". The meter reading must increase by 3.0 plus or minus 0.5 dB.

iii. If the requirements of either (a)9i or (a)9ii above are not met, no further measurements shall be made with that sound level meter. It shall be taken out of service for repair and recertification.]

(b) Measurement: After calibrating the sound level meter, switch to the appropriate weighting position and place the wind screen over the microphone. The appropriate weighting position is "A" for measurement of continuous or impulse sound, and "flat" or "ext. Filter" for octave band measurements. The meter is now ready for measuring the sound level.

1. Total sound level is measured as follows:

i.-ii. (No change.)

iii. When measuring continuous sound, the measuring device shall be set for "A" weighting, "slow" meter response, and the range switch shall be set to that range in which the meter [needle] display reads nearest to the maximum end of the scale. When the measured sound is variable, causing the meter [needle] display to fluctuate, record both the minimum and maximum readings, e.g. 66-69 dBA, indicating that the reading was not less than 66 nor more than 69, during the measurement. When selecting the proper range setting for making the measurement, do not include extraneous sounds.

iv. (No change.)

v. To measure impulse noise, the investigator shall set the meter for "A" weighting, [peak hold, and the appropriate range for the needle to be on scale.] The investigator may use either the fast or impulse setting, and may employ the "hold" setting. 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 [A]after measuring an impulse [peak], press the reset button to prepare for measurement of the next impulse. If the impulses follow each other rapidly as for example in a fusillade, it is not necessary to measure every impulse. In such a case, measure as many impulses as feasible, estimate the number of impulses occurring, and the time period during which they occur.

vi. – vii. (No change.)

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. No less frequently than at one hour intervals during the investigation, and again at the conclusion of measurement, calibrate 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

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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. Wind gusts over 12 miles per hour (5.4 meters per second) [at this time] that begin after at least one hour of measurements shall not invalidate measurements already collected [since readings would not have been taken during previous gusts].

2. (No change.)

#### 7:29-2.10 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	Correction
Difference	Factor
(Decibels)	(Decibels)
0.5	9.6
1	7
2	4
3	3
4	1.8
5	1.6
6	1.2
7	1
8	0.75
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[.], including decimals, if displayed.

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.

Step 4: Round the value obtained down to the nearest whole number.

#### **7:29-2.11 Qualifications of [investigative] enforcement personnel**

(a) For the purposes of this [subchapter] chapter, an [person] employee representing an authorized enforcement agency shall be considered qualified to make noise measurements and enforce the State's Noise rules or a municipal noise ordinance approved by the Department, as the case may be, if such person completes a noise certification course, and is recertified, at least once every two years, at a noise certification course which is offered by the Department of Environmental Sciences of Cook College, Rutgers, the State University. The Department of Environmental Protection 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 to the Department at least 10 working days prior to the expiration of the person's certification.

[(b) For the purpose of this subchapter, a person shall be considered qualified to monitor compliance with those sound standards which do not require the measurement of sound levels if such person completes a noise enforcement workshop which is offered by the Department of Environmental Sciences of Cook College, Rutgers, the State University of New Jersey or by the Department.]

#### **7:29-2.12 Incorporation by reference**

(a) Wherever referenced in this subchapter, the following sources are incorporated by reference as part of this subchapter:

1.-2. (No change).

[3. "Sound Level Meters" IEC Publication 651 (1979) can be purchased from the Catalogue of International Electrotechnic Commission Publications-1980, 1, Rue de Varembe, Geneva, Switzerland. Approximate Cost: \$48.14.]