

# Illinois Noise Related Statutes and Regulations

## STATUTES

### **20 ILCS 3515/2**

#### **Sec. 2. Declaration of necessity and purpose - Liberal construction.**

(a) The General Assembly finds:

- (i) that environmental damage seriously endangers the public health and welfare;
- (ii) that such environmental damage results from air, water, and other resource pollution and from public water supply, solid waste disposal, **noise**, surface mining and other environmental problems;

(iii) – (vii)

(b) – (e)

(f) This Act shall be liberally construed to accomplish the intentions expressed herein.

### **20 ILCS 2705/2705-300**

#### **Sec. 2705-300. Powers concerning mass transportation.**

(1) – (5)

(6) Cooperate with mass transit districts and systems, local governments, and other State agencies in meeting those problems of air, **noise**, and water pollution associated with transportation.

### **20 ILCS 2705/2705-321**

#### **Sec. 2705-321. Illinois Transit Ridership and Economic Development (TRED) Pilot Project Program; new facilities and service.**

(a)

(1)-(3)

(4) Contribute to an improved environment through the reduction of air, water, and **noise** pollution.

### **20 ILCS 3515/3**

#### **Sec. 3. Definitions.**

In this Act, unless the context otherwise clearly requires, the terms used herein shall have the meanings ascribed to them as follows:

(a)-(e)

(f) "Pollution" means any form of environmental pollution including, but not limited to, water pollution, air pollution, land pollution, solid waste pollution, thermal pollution, radiation contamination, or **noise** pollution as determined by the various standards prescribed by this state or the federal government and including but not limited to, anything which is considered as pollution or environmental damage in the Environmental Protection Act, approved June 29, 1970, as now or hereafter amended.

## **415 ILCS 5/2**

### **Sec. 2.**

(a) The General Assembly finds:

(i) that environmental damage seriously endangers the public health and welfare, as more specifically described in later sections of this Act;

(ii) that because environmental damage does not respect political boundaries, it is necessary to establish a unified state-wide program for environmental protection and to cooperate fully with other States and with the United States in protecting the environment;

(iii) that air, water, and other resource pollution, public water supply, solid waste disposal, **noise**, and other environmental problems are closely interrelated and must be dealt with as a unified whole in order to safeguard the environment;

(iv) that it is the obligation of the State Government to manage its own activities so as to minimize environmental damage; to encourage and assist local governments to adopt and implement environmental protection programs consistent with this Act; to promote the development of technology for environmental protection and conservation of natural resources; and in appropriate cases to afford financial assistance in preventing environmental damage;

(v) that in order to alleviate the burden on enforcement agencies, to assure that all interests are given a full hearing, and to increase public participation in the task of protecting the environment, private as well as governmental remedies must be provided;

(vi) that despite the existing laws and regulations concerning environmental damage there exist continuing destruction and damage to the environment and harm to the public health, safety and welfare of the people of this State, and that among the most significant sources of this destruction, damage, and harm are the improper and unsafe transportation, treatment, storage, disposal, and dumping of hazardous wastes;

(vii) that it is necessary to supplement and strengthen existing criminal sanctions regarding environmental damage, by enacting specific penalties for injury to public health and welfare and the environment.

(b) It is the purpose of this Act, as more specifically described in later sections, to establish a unified, state-wide program supplemented by private remedies, to restore, protect and enhance the quality of the environment, and to assure that adverse effects upon the environment are fully considered and borne by those who cause them.

(c) The terms and provisions of this Act shall be liberally construed so as to effectuate the purposes of this Act as set forth in subsection (b) of this Section, but to the extent that this Act prescribes criminal penalties, it shall be construed in accordance with the "Criminal Code of 1961", as amended.

## **415 ILCS 5/4**

### **Sec. 4. Environmental Protection Agency; establishment; duties.**

(a) There is established in the Executive Branch of the State Government an agency to be known as the Environmental Protection Agency. This Agency shall be under the supervision and direction of a Director who shall be appointed by the Governor with the advice and consent of the Senate. The term of office of the Director shall expire on the third Monday of January in odd numbered years, provided that he or she shall hold office until a successor is appointed and has qualified. The Director shall receive an annual salary as set by the Compensation Review Board. The Director, in accord with the Personnel Code, shall employ and direct such personnel, and

shall provide for such laboratory and other facilities, as may be necessary to carry out the purposes of this Act. In addition, the Director may by agreement secure such services as he or she may deem necessary from any other department, agency, or unit of the State Government, and may employ and compensate such consultants and technical assistants as may be required.

(b) The Agency shall have the duty to collect and disseminate such information, acquire such technical data, and conduct such experiments as may be required to carry out the purposes of this Act, including ascertainment of the quantity and nature of discharges from any contaminant source and data on those sources, and to operate and arrange for the operation of devices for the monitoring of environmental quality.

(c) The Agency shall have authority to conduct a program of continuing surveillance and of regular or periodic inspection of actual or potential contaminant or **noise** sources, of public water supplies, and of refuse disposal sites.

#### **415 ILCS 5/22.38**

##### **Sec. 22.38. Facilities accepting exclusively general construction or demolition debris for transfer, storage, or treatment.**

(a) Facilities accepting exclusively general construction or demolition debris for transfer, storage, or treatment shall be subject to local zoning, ordinance, and land use requirements. Those facilities shall be located in accordance with local zoning requirements or, in the absence of local zoning requirements, shall be located so that no part of the facility boundary is closer than 1,320 feet from the nearest property zoned for primarily residential use.

(b) An owner or operator of a facility accepting exclusively general construction or demolition debris for transfer, storage, or treatment shall:

(1) - (6)

(7) Control odor, **noise**, combustion of materials, disease vectors, dust, and litter.

#### **415 ILCS 5/24**

##### **Sec. 24.**

No person shall emit beyond the boundaries of his property any **noise** that unreasonably interferes with the enjoyment of life or with any lawful business or activity, so as to violate any regulation or standard adopted by the Board under this Act.

#### **415 ILCS 5/25**

##### **Sec. 25.**

The Board, pursuant to the procedures prescribed in Title VII of this Act, may adopt regulations prescribing limitations on **noise** emissions beyond the boundaries of the property of any person and prescribing requirements and standards for equipment and procedures for monitoring **noise** and the collection, reporting and retention of data resulting from such monitoring.

The Board shall, by regulations under this Section, categorize the types and sources of noise emissions that unreasonably interfere with the enjoyment of life, or with any lawful business, or activity, and shall prescribe for each such category the maximum permissible limits on such **noise** emissions. The Board shall secure the co-operation of the Department in determining the categories of **noise** emission and the technological and economic feasibility of such **noise** level limits.

In establishing such limits, the Board, in addition to considering those factors set forth in Section 27 of this Act, shall consider the adverse ecological effects on and interference with the

enjoyment of natural, scenic, wilderness or other outdoor recreational areas, parks, and forests occasioned by **noise** emissions from automotive, mechanical, and other sources and may establish lower permissible **noise** levels applicable to sources in such outdoor recreational uses. No Board standards for monitoring **noise** or regulations prescribing limitations on **noise** emissions shall apply to any organized amateur or professional sporting activity except as otherwise provided in this Section. Baseball, football or soccer sporting events played during nighttime hours, by professional athletes, in a city with more than 1,000,000 inhabitants, in a stadium at which such nighttime events were not played prior to July 1, 1982, shall be subject to nighttime **noise** emission regulations promulgated by the Illinois Pollution Control Board; however, the following events shall not be subject to such regulations:

- (1) baseball World Series games, league championship series games and other playoff games played after the conclusion of the regular season, and baseball All Star games; and
- (2) sporting events or other events held in a stadium which replaces a stadium not subject to such regulations and constructed within 1500 yards of the original stadium by the Illinois Sports Facilities Authority.

For purposes of this Section and Section 24, "beyond the boundaries of his property" or "beyond the boundaries of the property of any person" includes personal property as well as real property.

## **620 ILCS 35/1**

### **Sec. 1. Short title.**

This Act may be cited as the Permanent Noise Monitoring Act.

## **620 ILCS 35/5**

### **Sec. 5. Definitions.**

As used in this Act:

(a) "Airport" means an airport, as defined in Section 6 of the Illinois Aeronautics Act, that has more than 500,000 aircraft operations (take-offs and landings) per year.

(a-1) "Airport sponsor" means any municipality, as defined in Section 20 of the Illinois Aeronautics Act, that can own and operate an airport.

(b) "Permanent noise monitoring system" or "system" means a system that includes at least:

(1) automated noise monitors capable of recording noise levels 24 hours per day 365 days per year; and

2) computer equipment sufficient to process the data from each noise monitor so that permanent noise monitoring reports in accordance with Section 15 of this Act can be generated.

## **620 ILCS 35/10**

### **Sec. 10. Establishment of permanent noise monitoring systems.**

No later than December 31, 2008, each airport shall have an operable permanent **noise** monitoring system. The system shall be operated by the airport sponsor. The airport sponsor shall be responsible for the construction or the design and construction of any system not constructed or designed and constructed as of the effective date of this amendatory Act of the 96th General Assembly. The cost of the systems and of the permanent noise monitoring reports under Section 15 of this Act shall be borne by the airport sponsor.

## **620 ILCS 35/15**

### **Sec. 15. Permanent noise monitoring reports.**

Beginning in 1993 and through 2008, the Division shall, on June 30th and December 31st of each year, prepare a permanent **noise** monitoring report and make the report available to the public. Beginning in 2009, the airport sponsor shall, on June 30th and December 31st of each year, prepare a permanent **noise** monitoring report and make the report available to the public. Copies of the report shall be submitted to: the Office of the Governor; the Office of the President of the Senate; the Office of the Senate Minority Leader; the Office of the Speaker of the House; the Office of the House Minority Leader; the United States Environmental Protection Agency, Region V; and the Illinois Environmental Protection Agency. Beginning in 2009, a copy of the report shall also be submitted to the division. The permanent **noise** monitoring report shall contain all of the following:

- (a) Copies of the actual data collected by each permanent **noise** monitor in the system.
- (b) A summary of the data collected by each permanent **noise** monitor in the system, showing the data organized by:
  - (1) day of the week;
  - (2) time of day;
  - (3) week of the year;
  - (4) type of aircraft; and
  - (5) the single highest **noise** event recorded at each monitor.
- (c) Noise contour maps showing the 65 Ldn, 70 Ldn and 75 Ldn zones around the airport.
- (d) Noise contour maps showing the 65 decibel (dBA), 70 dBA, and 75 dBA zones around the airport for:
  - (1) 7:00 a.m. to 10:00 p.m.;
  - (2) 10:00 p.m. to 7:00 a.m.; and
  - (3) types of aircraft.
- (e) The **noise** contour maps produced under subsections (c) and (d) shall also indicate:
  - (1) residential areas (single and multi-family);
  - (2) schools;
  - (3) hospitals and nursing homes;
  - (4) recreational areas, including but not limited to parks and forest preserves;
  - (5) commercial areas;
  - (6) industrial areas;
  - (7) the boundary of the airport;
  - (8) the number of residences (single and
  - (9) the number of residents within each contour;
  - (10) the number of schools within each contour; and
  - (11) the number of school students within each contour.
- (f) Through 2008, a certification by the Division that the system was in proper working order during the period or, if it was not, a specific description of any and all problems with the System during the period.
- (g) Beginning in 2009, a certification by the airport sponsor that the system was in proper working order during the period or, if it was not, a specific description of any and all problems with the system during the period.

## **620 ILCS 52/5**

### **Sec. 5. Definitions.**

As used in this Act:

- (a) "Air Installation Compatible Use Zone Study" means the study conducted by the United States Air Force that reaffirms the policy of promoting public health, safety, and general welfare in the areas surrounding Air Force bases.
- (b) "Clear zones and runway protection zones" mean the zones that have the highest potential for an aircraft accident among the safety zones designated by the United States Air Force around an Air Force base.
- (c) "Accident potential zones I" mean the zones that, other than clear zones and runway protection zones, have the highest potential for an aircraft accident among the safety zones designated by the United States Air Force around an Air Force base.
- (d) "Accident potential zones II" mean the zones that, other than clear zones and runway protection zones and accident potential zones I, have the highest potential for an aircraft accident among the safety zones established by the United States Air Force around an Air Force base.
- (e) "Sixty five decibel A Weighted **noise** contour" means the **noise** level that has been determined by the United States Air Force to result from aircraft operations and flight tracks around an Air Force base.

## **620 ILCS 52/15**

### **Sec. 15. County eminent domain powers.**

If a land use exists or a municipality approves a land use that is incompatible with the Air Installation Compatible Use Zone Study, and any portion of the affected land is within areas designated in the Air Installation Compatible Use Zone Study as clear zones and runway protection zones, accident potential zones I, or accident potential zones II, or is within the 65 decibel A-weighted **noise** contour, the county may use eminent domain to acquire either the fee simple title to that portion of the affected land or the easement rights in that portion of the affected land that are necessary for the compatible land use defined under the Air Installation Compatible Use Zone Study. If a municipality within those zones controls the use of land in a manner compatible with the Air Installation Compatible Use Zone Study, the county does not have eminent domain authority.

## **625 ILCS 5/6-204**

### **Sec. 6-204. When Court to forward License and Reports.**

(a) For the purpose of providing to the Secretary of State the records essential to the performance of the Secretary's duties under this Code to cancel, revoke or suspend the driver's license and privilege to drive motor vehicles of certain minors adjudicated truant minors in need of supervision, addicted, or delinquent and of persons found guilty of the criminal offenses or traffic violations which this Code recognizes as evidence relating to unfitness to safely operate motor vehicles, the following duties are imposed upon public officials:

(1)

(2) Whenever any person is convicted of any offense under this Code or similar offenses under a municipal ordinance, other than regulations governing standing, parking or weights of vehicles, and excepting the following enumerated Sections of this Code: Sections 11-1406 (obstruction to driver's view or control), 11-1407 (improper opening of door into traffic), 11-1410 (coasting on downgrade), 11-1411 (following fire apparatus), 11-1419.01 (Motor Fuel Tax I.D. Card), 12-101 (driving vehicle which is in

unsafe condition or improperly equipped), 12-201(a) (daytime lights on motorcycles), 12-202 (clearance, identification and side marker lamps), 12-204 (lamp or flag on projecting load), 12-205 (failure to display the safety lights required), 12-401 (restrictions as to tire equipment), 12-502 (mirrors), 12-503 (windshields must be unobstructed and equipped with wipers), 12-601 (**horns** and **warning** devices), 12-602 (mufflers, prevention of **noise** or smoke),.....

## **625 ILCS 5/11-505**

### **Sec. 11-505.**

No person shall operate any motor vehicle in such a manner as to cause or allow to be emitted squealing, screeching or other such **noise** from the vehicle's tires due to rapid acceleration or excessive speed around corners or other such reason.

This Section shall not apply to the following conditions:

- (a) an authorized emergency vehicle, when responding to an emergency call or when in the pursuit of an actual or suspected violator; nor
- (b) the emergency operation of a motor vehicle when avoiding imminent danger; nor
- (c) any raceway, racing facility or other public event, not part of a highway, sanctioned by the appropriate governmental authority.

## **625 ILCS 5/12-602.1**

### **Sec. 12-602.1. Excessive engine braking noise signs.**

(a) A county or municipality may post signs that prohibit the driver of a commercial vehicle, as defined in Section 1-111.8 of this Code, from operating or actuating any engine braking system that emits excessive **noise**. The Department of Transportation may erect and maintain the signs on interstate highways near weigh stations that are adjacent to residential areas or communities.

(b) The sign shall state, "EXCESSIVE ENGINE BRAKING NOISE PROHIBITED". The Department of Transportation shall adopt rules providing for the erection and placement of these signs.

(c) This Section does not apply to the use of an engine braking system that has an adequate sound muffling system in proper working order that prevents excessive noise.

(d) It is a defense to this Section that the driver used an engine braking system that emits excessive noise in an emergency to avoid a collision with a person or another vehicle on the highway.

(e) A violation of this Section is an equipment violation punishable by a fine of \$75.

## **625 ILCS 5/12-815.2**

### **Sec. 12-815.2. Noise suppression switch.**

Any school bus manufactured on or after January 1, 2006 must be equipped with a noise suppression switch capable of turning off noise producing accessories, including: heater blowers; defroster fans; auxiliary fans; and radios.

## **625 ILCS 5/18c-7402.1**

### **Sec. 18c-7402.1. Pilot projects; automated audible warning devices.**

(a) The General Assembly finds and declares that, for the communities of the State that are traversed by railroads, there is a growing need to mitigate train horn **noise** without compromising the safety of the public. Therefore, after applications are filed and approved by the Commission, the Commission shall authorize pilot projects in the counties of Cook, DuPage, Lake, and Will to

test the utility and safety of stationary automated **audible** warning devices as an alternative to trains having to sound their **horns** as they approach highway/rail crossings.

(b) In light of the pending proposed ruling by the Federal Railroad Administration on the use of locomotive horns at all highway/rail crossings across the nation, it is in the best interest of the State for the Commission to expedite the pilot projects in order to contribute data to the federal rulemaking process regarding the possible inclusion of stationary automated warning devices in the counties of Cook, DuPage, Lake, and Will as a safety measure option to the proposed federal rule.

(c) The Commission shall adopt rules for implementing the pilot projects in the counties of Cook, DuPage, Lake, and Will.

#### **625 ILCS 40/4-1**

##### **Sec. 4-1. Equipment.**

All snowmobiles operating within the State of Illinois shall be equipped with:  
A. – D.

E. Adequate sound suppression equipment. No snowmobile manufactured after June 1, 1972, shall be sold or offered for sale, unless it is equipped with sound suppression devices that limit total machine **noise** in accordance with **noise** pollution standards established pursuant to the Environmental Protection Act.

#### **625 ILCS 40/4-2**

##### **Sec. 4-2. Inspection and Testing**

The Department may adopt rules and regulations with respect to the inspection of snowmobiles and the testing of machine **noise**.

#### **625 ILCS 40/4-3**

##### **Sec. 4-3. Sale Prohibited.**

No person shall have for sale, sell, or offer for sale in this State any snowmobile which fails to comply with Section 4-1, or which does not comply with the specifications for such equipment required by the rules and regulations of the Department after the effective date of such rules and regulations.

#### **625 ILCS 40/4-4**

##### **Sec. 4-4. Racing Machines.**

Snowmobiles used only on international or national competition circuits in events for which written permission has been obtained by the sponsoring or sanctioning body from the governmental unit having jurisdiction over the location of any event held in this State are exempt from the provisions of this Article.

#### **625 ILCS 45/4-3**

##### **Sec. 4-3. Mufflers.**

a. All motorboats shall be equipped and maintained with an effective muffler or underwater exhaust system. For the purpose of this Section, an effective muffler or underwater exhaust system is one that does not produce sound levels that create excessive or unusual **noise**, or sound levels that are in excess of 90 decibels when subjected to a stationary sound level test as prescribed by the Society of Automotive Engineers in its procedure J2005.



- b. No person may operate a motorboat on the waters of this State in a manner to exceed a noise level of 75 decibels measured as specified in the Society of Automotive Engineers in its procedure J1970 from any point on the shoreline, or from any point on the water within 20 feet of the shoreline, of the body of water on which the motorboat is being operated.
- c. No person may manufacture or offer for sale any motorboat for use on the waters of this State if that motorboat cannot be operated in compliance with the sound levels in subsections a and b above.
- d. The provisions of this Section shall apply to all public waters over which the State has jurisdiction.
- e. This Section does not apply to:
- (1) a motorboat tuning up for or participating in official trials for a sanctioned race or regatta conducted as authorized by the appropriate unit of government, or engine manufacturer for the purpose of testing or development as authorized by the appropriate unit of government.
  - 2) a motorboat being operated by a boat or marine engine manufacturer for the purpose of testing or development as authorized by the appropriate unit of government.
- f. Any person violating subsection a or b of this Section shall be required to:
- (1) install an effective muffler system on the motorboat in violation;
  - (2) pass the sound level test prescribed by the Society of Automotive Engineers in its procedure J2005 before putting the motorboat back into use; and
  - (3) be subject to a Class B misdemeanor for the first offense and a Class A misdemeanor for any subsequent offense occurring within 3 years of the date of the most recent offense.
- G. Any person violating subsection c of this Section shall be required to:
- (1) install an effective muffler system on the motorboat in violation;
  - (2) pass the sound level test prescribed by the Society of Automotive Engineers in its procedure J2005 before putting the motorboat back into use; and
  - 3) be subject to a Class A misdemeanor for the first offense and a Class 4 felony for any subsequent offense.
- H. Any person who operates any motorboat upon the waters of this State shall be deemed to have given consent to the test or tests as may be prescribed in this Section or by the Department to determine if the motorboat is in compliance with the provisions of this Section.

## **625 ILCS 45/4-8**

### **Sec. 4-8. Sirens and flashing lights.**

- (a) Except as provided in this Section, it shall be unlawful for any person to use a watercraft equipped with a **siren** or any red or blue oscillating, rotating, or flashing light. The use of a siren or light in violation of this Section shall constitute a public nuisance subject to confiscation and disposal as determined by a court of competent jurisdiction.
- (b) Any authorized emergency watercraft described in subsection (c) or (d) may be equipped with a **siren**, but the siren shall not be used except when the watercraft is operating in response to an emergency call or in the immediate pursuit of an actual or suspected violator of the law.

## **720 ILCS 5/26-6**

### **Sec. 26-6. Disorderly conduct at a funeral or memorial service.**

- (a) The General Assembly finds and declares that due to the unique nature of funeral and memorial services and the heightened opportunity for extreme emotional distress on such

occasions, the purpose of this Section is to protect the privacy and ability to mourn of grieving families directly before, during, and after a funeral or memorial service.

(b) For purposes of this Section:

(1) "Funeral" means the ceremonies, rituals, processions, and memorial services held at a funeral site in connection with the burial, cremation, or memorial of a deceased person.

(2) "Funeral site" means a church, synagogue, mosque funeral home, mortuary, cemetery, gravesite, mausoleum, or other place at which a funeral is conducted or is scheduled to be conducted within the next 30 minutes or has been conducted within the last 30 minutes.

(c) A person commits the offense of disorderly conduct at a funeral or memorial service when he or she:

(1) engages, with knowledge of the existence of a funeral site, in any **loud** singing, playing of music, chanting, whistling, yelling, or **noisemaking** with, or without, **noise** amplification including, but not limited to, bullhorns, auto horns, and microphones within 200 feet of any ingress or egress of that funeral site, where the volume of such singing, music, chanting, whistling, yelling, or **noisemaking** is likely to be audible at and disturbing to the funeral site;

(2) displays, with knowledge of the existence of a funeral site and within 200 feet of any ingress or egress of that funeral site, any visual images that convey fighting words or actual or veiled threats against any other person; or

(3) with knowledge of the existence of a funeral site, knowingly obstructs, hinders, impedes, or blocks another person's entry to or exit from that funeral site or a facility containing that funeral site, except that the owner or occupant of property may take lawful actions to exclude others from that property.

(d) Disorderly conduct at a funeral or memorial service is a Class C misdemeanor. A second or subsequent violation is a Class 4 felony.

(e) If any clause, sentence, section, provision, or part of this Section or the application thereof to any person or circumstance is adjudged to be unconstitutional, the remainder of this Section or its application to persons or circumstances other than those to which it is held invalid, is not affected thereby.

## **740 ILCS 130/4.1**

### **Sec. 4.1. Off road riding facilities; liability.**

(a) As used in this Section, "off road riding facility" means:

(1) an area of land, consisting of a closed course, designed for use of off-highway vehicles in events such as, but not limited to, dirt track, short track, flat track, speedway, drag racing, grand prix, hare scrambles, hill climb, ice racing, observed trails, mud and snow scrambles, tractor pulls, sled pulls, truck pulls, mud runs, or other contests of a side by side nature in a sporting event for practice, instruction, testing, or competition of off highway vehicles; or

(2) a thoroughfare or track across land or snow used for off highway motorcycles or all terrain vehicles.

b) An owner or operator of an off road riding facility in existence on January 1, 2002 is immune from any criminal liability arising out of or as a consequence of noise or sound emissions resulting from the normal use of the off road riding facility. An owner or operator of a off road riding facility is not subject to any action for public or private nuisance or trespass, and no court

in this State may enjoin the use or operation of a off road riding facility on the basis of noise or sound emissions resulting from the normal use of the off road riding facility

(c) An owner or operator of a off road riding facility placed in operation after January 1, 2002 is immune from any criminal liability and is not subject to any action for public or private nuisance or trespass arising out of or as a consequence of noise or sound emissions resulting from the normal use of the off road riding facility, if the off road riding facility conforms to any one of the following requirements:

(1) All areas from which an off road vehicle may be properly operated are at least 1,000 feet from any occupied permanent dwelling on adjacent property at the time the facility was placed into operation.

(2) The off road riding facility is situated on land otherwise subject to land use zoning, and the off road riding facility was not prohibited by the zoning authority at the time the facility was placed into operation.

(3) The off road riding facility is operated by a governmental entity or the off road riding facility was the recipient of grants under the Recreational Trails of Illinois Act.

(d) The civil immunity in subsection (c) does not apply if there is willful or wanton misconduct outside the normal use of the off road riding facility.

## REGULATIONS

### TITLE 35: ENVIRONMENTAL PROTECTION SUBTITLE H: NOISE CHAPTER I: POLLUTION CONTROL BOARD PART 900 GENERAL PROVISIONS

#### **Section 900.101 Definitions**

Except as stated and unless a different meaning of a term is clear from its context, the definitions of terms used in this Chapter are the same as those used in the Environmental Protection Act. All definitions of acoustical terminology must be in conformance with those contained in American National Standards Institute (ANSI) S1.1 – 1994 (R1999) “American National Standard Acoustical Terminology” and S12.9-1988 (R1998) “American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound - Part 1,” incorporated by reference at Section 900.106. As used in 35 Ill. Adm. Code 900 through 910, the following terms mean:

*A-Weighted Sound Level*: 10 times the logarithm to the base 10 of the square of the ratio of the A-weighted (and time-averaged) sound pressure, to the reference sound pressure of 20 micropascal. The frequency and time weighting must be specified in accordance with ANSI S1.4–1983 (R2001) “American National Standard Specification for Sound Level Meters”, incorporated by reference at Section 900.106. The unit of sound level is the decibel (dB) with the letter (A) appended to the decibel unit symbol to indicate the frequency weighting and written as dB(A).

*Ambient*: the all-encompassing sound associated with a given environment without contributions from the noise source or sources of interest.

*Angle of incidence*: the orientation of the microphone relative to the sound source.

*ANSI*: American National Standards Institute or its successor bodies.

*Antique vehicle*: a motor vehicle that is more than 25 years of age or a bona fide replica thereof and which is driven on the highways only going to and returning from an antique auto show or

an exhibition, or for servicing or demonstration, or a fire-fighting vehicle more than 20 years old which is not used as fire-fighting equipment but is used only for the purpose of exhibition or demonstration.

*Background ambient sound level:* means the ambient sound level, measured in accordance with the procedures specified in 35 Ill. Adm. Code 910.

*Bus:* every motor vehicle designed for carrying more than 10 passengers and used for the transportation of passengers; and every motor vehicle, other than a taxicab, designed and used for the transportation of persons for compensation.

*C-weighted sound level:* in decibels, a frequency-weighted sound pressure level, determined by the use of the metering characteristics and C-weighted network specified in ANSI S1.4-1983 (R2001) “American National Standard Specification for Sound Level Meters,” incorporated by reference at Section 900.106.

*Construction:* on-site erection, fabrication, installation, alteration, demolition or removal of any structure, facility, or addition thereto, including all related activities including, but not restricted to, clearing of land, earth-moving, blasting and landscaping.

*Daytime hours:* 7:00 am to 10:00 pm, local time.

*dB(A):* see “A-weighted sound level in decibels.”

*Dealer:* every person engaged in the business of selling vehicles to persons who purchase such vehicles for purposes other than resale, and who has an established place of business for such activity in this state.

*Decibel (dB):* a unit of measure, on a logarithmic scale to the base 10, of the ratio of the magnitude of a particular sound pressure to a standard reference pressure, which, for purposes of this Chapter, shall be 20 micronewtons per square meter ( $\mu\text{N}/\text{m}^2$ ) or 20 micropascals ( $\mu\text{Pa}$ ).

*Discrete tone:* a sound wave whose instantaneous sound pressure varies essentially as a simple sinusoidal function of time.

*Exhaust system:* the system comprised of a combination of components which provides for the enclosed flow of exhaust gas from engine parts to the atmosphere.

*Existing property-line-noise-source:* any property-line-noise-source, the construction or establishment of which commenced prior to August 10, 1973. For the purposes of this subsection, any property-line-noise-source whose A, B or C land use classification changes, on or after August 10, 1973, is not considered an existing property-line-noise-source.

*Farm tractor:* every motor vehicle designed and used primarily as a farm implement for drawing wagons, plows, mowing machines and other implements of husbandry, and every implement of husbandry which is self-propelled.

*Fast Dynamic Characteristic:* the dynamic characteristic specified as fast in ANSI S1.4-1983 (R-2001) “American National Standard Specification for Sound Level Meters,” incorporated by reference at Section 900.106.

*Fast meter response:* as specified in ANSI, S1.4–1983 (R2001) “American National Standard Specification for Sound Level Meters,” incorporated by reference at Section 900.106.

*Fluctuating sound:* a class of non steady sound where sound pressure level varies over a range greater than 6 decibels (dB) with the “slow” meter characteristic, and where the meter indication does not equal the ambient level more than once during the period of observation.

*Frequency-weighted sound pressure:* root mean square of the instantaneous sound pressure which is frequency-weighted (i.e., filtered) with a standard frequency characteristic (e.g., A or C) and exponentially time-weighted in accordance with the standardized characteristics slow (S), fast (F), impulse (I) or peak, with both weightings specified in accordance with ANSI S1.4–1983

(R2001) “American National Standard Specification for Sound Level Meters,” incorporated by reference at Section 900.106. The frequency weighting used shall be specified explicitly (e.g., A, C or octave band). The unit frequency-weighted sound pressure is the pascal (Pa).

*Gross Vehicle Weight (GVW)*: the maximum loaded weight for which a motor vehicle is registered or, for vehicles not so registered, the value specified by the manufacturer as the loaded weight of the vehicle.

*Highly Impulsive Sound*: either a single pressure peak or a single burst (multiple pressure peaks) for a duration usually less than one second. Examples of highly impulsive sound sources are drop forge hammer and explosive blasting.

*Highway*: the entire width between the boundary lines of every way publicly maintained when any part thereof is open to the use of the public for purposes of vehicular travel.

*IHRA*: International Hot Rod Association or its successor body.

*Intermittent sound*: a class of non steady sound where the meter indicates a sound pressure level equal to the ambient level two or more times during the measurement period. The period of time during which the level of the sound remains at a value different from that of the ambient is of the order of one second or more.

*LBCS*: the Land-Based Classification Standards which designate land, use functions by means of numeric codes.

*L<sub>eq</sub>*: equivalent continuous sound pressure level in decibels: 10 times the logarithm to the base 10 of the ratio of a time mean square sound pressure, during the specified time period, to the square of reference sound pressure. The reference sound pressure is 20 micronewtons per square meter or equivalent continuous frequency-weighted sound pressure.

*L<sub>eq</sub> (A)*: A-weighted time-average (equivalent-continuous) sound pressure level.

*L<sub>eq</sub> (octave band-Hz)*: time-average (equivalent-continuous) sound pressure level in the octave band specified by its center frequency e.g. L<sub>eq</sub> (125-Hz).

*Measurement Period*: the time interval during which acoustical data are obtained. The measurement period is determined by the characteristics of the noise being measured and must be at least ten times as long as the response time of the instrumentation. The greater the variation in indicated sound level, the longer must be the observation time for a given expected precision of the measurement.

*Motor driven cycle*: every motorcycle, motor scooter, or bicycle with motor attached, with less than 150 cubic centimeter piston displacement.

*Motor vehicle*: every vehicle which is self-propelled and any combination of vehicles which are propelled or drawn by a vehicle which is self-propelled.

*Motorcycle*: every motor vehicle having a seat or saddle for the use of the rider and designed to travel on not more than 3 wheels in contact with the ground, but excluding a tractor.

*Muffler*: a device for abating the sounds of escaping gases of an internal combustion engine.

*New snowmobile*: a snowmobile, the equitable or legal title to which has never passed to a person who purchases it for purposes other than resale.

*Nighttime hours*: 10:00 pm to 7:00 am, local time.

*Noise floor*: the electrical noise (in decibels) of the sound measurement system. When the noise floor is determined by placing a calibrator over the microphone of the sound measurement system, the noise floor may include acoustic noise due to leakage around the calibrator.

*Noise pollution*: the emission of sound that unreasonably interferes with the enjoyment of life or with any lawful business or activity.

*Non-steady sound:* a sound whose sound pressure level shifts significantly during the measurement period. Meter variations are greater than +/- 3 dB using the “slow” meter characteristic.

*Octave band sound pressure level:* the sound pressure level for the sound being measured contained within the specified octave band. The reference pressure is 20 micronewtons per square meter.

*Pascal (Pa):* a unit of pressure. One Pascal is equal to one newton per square meter.

*Passenger car:* a motor vehicle designed for the carrying of not more than ten persons, including a multi-purpose passenger vehicle, except any motor vehicle of the second division as defined in 625 ILCS 5/1-146, and except any motorcycle or motor driven cycle.

*Person:* any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, agency, political subdivision of this State, any other State or political subdivision or agency thereof or any legal successor, representative, agent or agency of the foregoing.

*Preferred frequencies:* those frequencies in Hertz preferred for acoustical measurements which, for the purposes of this Chapter, consist of the following set of values: 20, 25, 31.5, 40, 50, 63, 80, 100, 125, 160, 200, 250, 315, 400, 500, 630, 800, 1000, 1250, 1600, 2000, 2500, 3150, 4000, 5000, 6300, 8000, 10,000, 12,500.

*Prominent discrete tone:* sound, having a one-third octave band sound pressure level which, when measured in a one-third octave band at the preferred frequencies, exceeds the arithmetic average of the sound pressure levels of the two adjacent one-third octave bands on either side of such one-third octave band by:

5 dB for such one-third octave band with a center frequency from 500 Hertz to 10,000 Hertz, inclusive. Provided such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band, or;

8 dB for such one-third octave band with a center frequency from 160 Hertz to 400 Hertz, inclusive. Provided such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band, or;

15 dB for such one-third octave band with a center frequency from 25 Hertz to 125 Hertz, inclusive. Provided such one-third octave band sound pressure level exceeds the sound pressure level of each adjacent one-third octave band.

*Property-line-noise-source:* any equipment or facility, or combination thereof, which operates within any land used as specified by 35 Ill. Adm. Code 901.101. Such equipment or facility, or combination thereof, must be capable of emitting sound beyond the property line of the land on which operated.

*Quasi-steady sound:* a train of two or more acoustical impulses. Examples of quasi-steady sound are that from riveting and pneumatic hammer.

*Reflective surface:* any building, hillside, or similar object (other than the flat ground surface) that reflects sufficient sound to affect the sound pressure level readings obtained from a noise source. Not included as reflective surfaces are small objects such as trees, posts, chain-linked fences, fire hydrants, vegetation such as bushes and shrubs, or any similar object.

*Registered:* a vehicle is registered when a current registration certificate or certificates and registration plates have been issued for it under the laws of any state pertaining to the registration of vehicles.

*Residential dwelling unit:* all land used as specified by the Land-Based Classification Standards (LBCS) Codes 1100 through 1340 and those portions of land used as specified by LBCS Code 6222 used for sleeping.

*SAE:* Society of Automotive Engineers.

*Slow Dynamic Characteristic:* the dynamic characteristic specified as "Slow" in ANSI S1.4–1983 (R2001) "American National Standard Specification for Sound Level Meters," incorporated by reference at Section 900.106.

*Snowmobile:* a self-propelled device designed for travel on snow or ice or natural terrain steered by skis or runners, and supported in part by skis, belts, or cleats.

*Sound:* a physical disturbance causing an oscillation in pressure in a medium (e.g., air) that is capable of being detected by the human ear or a sound measuring instrument.

*Sound exposure (SE):* time integral of squared, frequency-weighted instantaneous sound pressure over a given time interval. The time period of integration must be specified: when the sound exposure of the background noise is a significant contributor to the total sound exposure; or when the threshold sound level of the instrument (a level below which the instrument does not accumulate contributions to the integral) used is above the level of the background noise; or when such data is needed to identify a source; or when the time period of integration is otherwise useful. The customary unit for sound exposure is *Pascal-squared second* ( $\text{Pa}^2\text{-s}$ ).

*Sound exposure level (SEL or  $L_{eT}$ ):* 10 times the logarithm to the base 10 of the ratio of sound exposure to the reference sound exposure ( $E_0$ ) of 400 micropascal-squared seconds ( $\mu\text{Pa}^2\text{-s}$ ). For a given measurement time period of T seconds, the sound exposure level ( $L_{eT}$ ) is related to the time-average sound level ( $L_{pT}$ ) as follows:  $L_{eT} = L_{pT} + \log(T/t_0)$  where  $t_0$  is the reference duration of 1 second. The time period of integration (T) must be specified. The frequency weighting used must be specified explicitly (e.g., A, C or octave band). The A-weighted SEL and C-weighted SEL are abbreviated ASEL and CSEL respectively. An octave band SEL is expressed in terms of the center frequency (e.g., SEL at 125-Hz). The unit for sound exposure level is decibel (dB).

*Sound level (weighted sound pressure level):* 20 times the logarithm to the base 10 of the ratio of the frequency-weighted (and time-averaged) sound pressure to the reference pressure of 20 micropascals. The frequency weighting used shall be specified explicitly (e.g., A, C or octave band). The unit for sound level is decibel (dB).

*Sound pressure:* the root mean square of the instantaneous sound pressures during a specified time interval in a stated frequency band. The unit for sound pressure is Pascal (Pa).

*Sound pressure level:* 20 times the logarithm to the base 10 of the ratio of the particular sound pressure to the reference sound pressure of 20 micropascals. ANSI S12.9- 1988 (R1998) "American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound - Part 1," incorporated by reference at Section 900.106, reserves the term sound pressure level to denote the unweighted sound pressure. The unit for sound pressure level is decibel (dB).

*Special mobile equipment:* every vehicle not designed or used primarily for the transportation of persons or property and only incidentally operated or moved over a highway, including but not limited to: ditch digging apparatus, well-boring apparatus and road construction and maintenance machinery such as asphalt spreaders, bituminous mixers, bucket loaders, tractors other than truck tractors, leveling graders, finishing machines, motor graders, road rollers, scarifiers, earth-moving carryalls and scrapers, power shovels and drag lines, and self-propelled cranes and other earth-moving equipment.

*Steady sound:* a sound whose sound pressure level remains essentially constant (that is, meter fluctuations are negligibly small) during the measurement period. Meter variations are less than or equal to +/- 3 dB using the “slow” meter characteristic.

*Tactical military vehicle:* every vehicle operated by any federal or state military organization and designed for use in field operations, but not including vehicles such as staff cars and personnel carriers designed primarily for normal highway use.

*Time-average sound level* (or equivalent-continuous sound level or equivalent-continuous frequency-weighted sound pressure level): 20 times the logarithm to the base 10 of the ratio of the time-average (frequency-weighted) sound pressure to the reference pressure of 20 micropascal. The frequency weighting used must be specified explicitly (e.g., A, C or octave band). The unit of time-average sound level is the decibel (dB).

*Time-average (frequency-weighted) sound pressure:* square root of the quotient of the time integral of frequency-weighted squared instantaneous sound pressures divided by the time period of integration; or the square root of the quotient of the sound exposure, in Pascal-squared seconds ( $\text{Pa}^2\text{-s}$ ), in a specified time period, divided by the time period of integration in seconds. The frequency weighting used must be specified explicitly (e.g., A, C or octave band). The unit of time-average sound pressure is the Pascal (Pa).

*Unregulated safety relief valve:* a safety relief valve used and designed to be actuated by high pressure in the pipe or vessel to which it is connected and which is used and designed to prevent explosion or other hazardous reaction from pressure buildup, rather than being used and designed as a process pressure blow down.

*Used motor vehicle:* a motor vehicle that is not a new motor vehicle.

*Vehicle:* every device in, upon, or by which any person or property is or may be transported or drawn upon a highway.

*Weekday:* any day which occurs during the period of time commencing at 10:00 p.m. Sunday and ending at 10:00 p.m. Friday during any particular week.

*Weekend day:* any day which occurs during the period of time commencing at 10:00 p.m. Friday and ending at 10:00 p.m. Sunday during any particular week.

*Well-maintained muffler:* any muffler which is free from defects which affect its sound reduction. Such muffler shall be free of visible defects such as holes and other acoustical leaks.

### **Section 900.102 Prohibition of Noise Pollution**

No person shall cause or allow the emission of sound beyond the boundaries of his property, as property is defined in Section 25 of the Illinois Environmental Protection Act, so as to cause noise pollution in Illinois, or so as to violate any provision of this Chapter.

### **Section 900.103 Measurement Procedures**

(a) Procedures Applicable to all of 35 Ill. Adm. Code: Subtitle H, Chapter I

The Agency may adopt procedures which set forth criteria for the measurement of sound for all Parts except 35 Ill. Adm. Code 900 and 901. Such procedures shall be in substantial conformity with standards and recommended practices established by the American National Standards Institute, Inc. (ANSI) or the Society of Automotive Engineers, Inc. (SAE), incorporated by reference at Section 900.106. Such procedures shall be revised from time to time to reflect current engineering judgment and advances in noise measurement techniques. Such procedures, and revisions, thereof, shall not become effective until filed with the Administrative Code Division of the Office of the Secretary of State as required by the Illinois Administrative



Procedure Act [5 ILCS 100]. Measurement procedures for 35 Ill. Adm. Code 900 and 901 shall conform to 35 Ill. Adm. Code 910.

(b) Procedures Applicable only to 35 Ill. Adm. Code 901

(1) All measurement and all measurement procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 901 shall, with the exception of measurements to determine whether emissions of sound comply with 35 Ill. Adm. Code 901.109, be based on Leq averaging, as defined in 35 Ill. Adm. Code 900.101, using a reference time as follows:

(A) Except as specified in subsection (b)(1)(B) for steady sound, a reference time of at least 1

hour shall be used for all sound measurements and measurement procedures.

(B) For measurement of steady sound as defined in Section 101 of this Part, the reference time shall be at least 10 minutes.

(2) All measurements and measurement procedures under subsection (b)(1)(B) of this Section must correct, or provide for the correction of such emissions for the presence of ambient or background noise in accordance with the procedures in 35 Ill. Adm. Code 910. All measurements must be in conformity with the following ANSI standards, incorporated by reference at Section 900.106:

(A) ANSI S1.4-1983 (R2001) "American National Standard Specification for Sound Level Meters."

(B) ANSI S1.6-1984 (R2001) "American National Standard Preferred Frequencies, Frequency Levels, and Band Numbers for Acoustical Measurements."

(C) ANSI S1.11-1986 (R1998) "American National Standard Specification for Octave-Band and Fractional-Octave-Band Analog and Digital Filters."

(D) ANSI S1.13-1995 (R1999) "American National Standard Measurement of Sound Pressure Level in Air."

(E) ANSI S12.9-1993 (R1998) "American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound - Part 3: Short-Term Measurements With an Observer Present."

(c) Procedures Applicable only to 35 Ill. Adm. Code 902

(1) Measurement procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 902.120 through 902.123 must be in conformity with the following ANSI standards incorporated by reference at Section 900.106:

(A) ANSI S1.4-1983 (R2001) "American National Standard Specification for Sound Level Meters."

(B) ANSI S1.13-1995 (R1999) "American National Standard Measurement of Sound Pressure Level in Air."

(2) The procedures for sound measurement under 35 Ill. Adm. Code 902.123 must conform to the ANSI standards prescribed in subsection (c)(1), above, provided that the procedures are in conformity with those established by the U.S. Department of Transportation under 49 CFR 325 pursuant to Section 17 of the Federal Noise Control Act of 1972, 42 USC §4901 et seq.

(3) The Board may provide for measurement at distances other than the 50 feet specified in 35 Ill. Adm. Code 902.120 through 902.123 provided that correction factors are applied so that the sound levels so determined are substantially equivalent to those measured at 50

feet and the measurement distance does not exceed 100 feet. The correction factors used shall be consistent with California Highway Patrol Sound Measurement Procedures HPH 83.1 (October 1, 1973, as amended November 9, 1975), incorporated by reference at Section 900.106.

(d) Procedures Applicable only to 35 Ill. Adm. Code 905

(1) Measurement procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 905.102(a) and 905.103(a)(1) must be in conformity with the following standards incorporated by reference at Section 900.106:

(A) ANSI S1.4-1983 (R2001) "American National Standard Specification for Sound Level Meters."

(B) SAE Recommended Practice J192 "Exterior Sound Level for Snowmobiles." March 1985.

(2) Measurement procedures to determine whether emissions of sound comply with 35 Ill. Adm. Code 905.102(b) and 905.103(a)(2) shall be in substantial conformity with the following standards incorporated by reference at Section 900.106:

(A) ANSI S1.4-1983 (R2001) "American National Standard Specification for Sound Level Meters."

(B) SAE/ANSI Recommended Practice J1161 "Operational Sound Level Measurement Procedure for Snow Vehicles", March 1983.

(3) The Agency may establish criteria for measuring at distances other than the 50 feet specified in 35 Ill. Adm. Code 905.102 and 905.103, provided that correction factors are applied so that the sound levels so determined are substantially equivalent to those measured at 50 feet. In adopting new or revised criteria, the Agency shall comply with the requirements of the Illinois Administrative Procedure Act, [5 ILCS 100].

### **Section 900.104 Burden of Persuasion Regarding Exceptions**

In any proceeding pursuant to this Chapter, if an exception stated in this Chapter would limit an obligation, limit a liability, or eliminate either an obligation or a liability, the person who would benefit from the application of the exception shall have the burden of persuasion that the exception applies and that the terms of the exception have been met. The Agency shall cooperate with and assist persons in determining the application of the provisions of this Chapter.

### **Section 900.105 Severability**

If any provision of these rules or regulations is adjudged invalid, or if the application thereof to any person or in any circumstances is adjudged invalid, such invalidity shall not affect the validity of this Chapter as a whole or of any part, sub-part, sentence or clause thereof not adjudged invalid.

### **Section 900.106 Incorporation by Reference**

The Board incorporates the following material by reference. These incorporations include no later amendments or editions.

(a) American National Standards Institute, 25 West 43rd Street, 4th Fl., New York, New York 10036. (212)-642-4900.

(1) ANSI S1.1-1994 (R1999) "American National Standard Acoustical Terminology."

- (2) ANSI S1.4-1983 (R2001) “American National Standard Specification for Sound Level Meters”
  - (3) ANSI S1.6-1984 (R2001) “American National Standard Preferred Frequencies, Frequency Levels, and Band Numbers for Acoustical Measurements.”
  - (4) ANSI S1.8-1989 “American National Standard Reference Quantities for Acoustical Levels.”
  - (5) ANSI S1.11-1986 (R1998) “American National Standard Specification for Octave-Band and Fractional-Octave-Band Analog and Digital Filters.”
  - (6) ANSI S1.13-1995 (R1999) “American National Standard Measurement of Sound Pressure Level in Air.”
  - (7) ANSI S12.9- 1988 (R1998) “American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound - Part 1.”
  - (8) ANSI S12.9-1993 (R1998) “American National Standard Quantities and Procedures for Description and Measurement of Environmental Sound - Part 3: Short-Term Measurements With an Observer Present.”
  - (9) ANSI S12.31-1990 (R2001) “American National Standard Precision Methods for the Determination of Sound Power Levels of Broad-Band Noise Sources in Reverberation Rooms.”
  - (10) ANSI S12.32-1990 (R2001) “American National Standard Precision Methods for the Determination of Sound Power Levels of Discrete-Frequency and Narrow-Band Noise Sources in Reverberation Rooms.”
  - (11) International Electrotechnical Commission, IEC 804-2000 “Integrating/Averaging Sound Level Meters.”
- (b) Society of Automotive Engineers, 400 Commonwealth Drive, Warrendale, PA 15096. (877) 606-7323.
- (1) SAE Recommended Practice J184 “Qualifying a Sound Data Acquisition System.” November 1998.
  - (2) SAE Recommended Practice J192 “Exterior Sound Level for Snowmobiles.” March 1985.
  - (3) SAE/ANSI Recommended Practice J1161 “Operational Sound Level Measurement Procedure for Snow Vehicles.” March 1983.
- (c) California Highway Patrol Sound Measurement Procedures HPH 83.1 (October 1, 1973, as amended November 9, 1975. Available at Illinois Pollution Control Board Clerk’s Office, 100 W. Randolph Street, Suite 11-500, Chicago, IL 60601. (312) 814-3620.

## PART 901: SOUND EMISSION STANDARDS AND LIMITATIONS FOR PROPERTY LINE NOISE SOURCES

### **Section 901.101 Classification of Land According to Use**

- (a) The land use classification system used for the purposes of applying numeric sound standards for this Part is based on the Land-Based Classification Standards (LBCS) (Jeer, Sanjay. 2001. Land-Based Classification Standards. The LBCS applicable to this Part is set forth in Appendix B.
- (b) Class A land includes all land used as specified by LBCS Codes 1000 through 1340, 2410 through 2455, 5200 through 5230, 5500, 6100 through 6145, 6222, 6510 through 6530, 6568 through 6600.

(c) Class B land includes all land used as specified by LBCS Codes 2100 through 2336, 2500 through 2720, 3500 through 3600, 4220 through 4243, 5100 through 5160, 5300 through 5390, 5400, 6147, 6210 through 6221, 6300 through 6320, 6400 through 6430, 6560 through 6567, 6700 through 6830, 7100 through 7380.

(d) Class C land includes all land used as specified by LBCS Codes 3100 through 3440, 4120 through 4180, 4210 through 4212, 4300 through 4347, 7400 through 7450, 8000 through 8500, and 9100 through 9520.

(e) A parcel or tract of land used as specified by LBCS Code 9100, 9400, or 5500 when adjacent to Class B or C land may be classified similarly by action of a municipal government having zoning jurisdiction over such land. Notwithstanding any subsequent changes in actual land use, land so classified retains such B or C classification until the municipal government removes the classification adopted by it.

**Section 901.102 Sound Emitted to Class A Land**

(a) Except as elsewhere provided in this Part, no person shall cause or allow the emission of sound during **daytime** hours from any property-line-noise-source located on any Class A, B or C land to any receiving Class A land which exceeds any allowable octave band sound pressure level specified in the following table, when measured at any point within such receiving Class A land, provided, however, that no measurement of sound pressure levels shall be made less than 25 feet from such property-line-noise-source.

Octave Band Center Frequency (Hertz)	Allowable Octave Band Sound Pressure Levels (dB) of Sound Emitted to any Receiving Class A Land from		
	Class C Land	Class B Land	Class A Land
31.5	75	72	72
63	74	71	71
125	69	65	65
250	64	57	57
500	58	51	51
1000	52	45	45
2000	47	39	39
4000	43	34	34
8000	40	32	32

(b) Except as provided elsewhere in this Part, no person shall cause or allow the emission of sound during **nighttime** hours from any property-line-noise-source located on any Class A, B or C land to any receiving Class A land which exceeds any allowable octave band sound pressure level specified in the following table, when measured at any point within such receiving Class A land, provided, however, that no measurement of sound pressure levels shall be made less than 25 feet from such property-line-noise-source.

Octave Band Center Frequency (Hertz)	Allowable Octave Band Sound Pressure Levels (dB) of Sound Emitted to any Receiving Class A Land from		
	Class C Land	Class B Land	Class A Land
31.5	69	63	63
63	67	61	61
125	62	55	55
250	54	47	47
500	47	40	40
1000	41	35	35
2000	36	30	30
4000	32	25	25
8000	32	25	25

**Section 901.103 Sound Emitted to Class B Land**

Except as provided elsewhere in this Part, no person shall cause or allow the emission of sound from any property-line-noise-source located on any Class A, B or C land to any receiving Class B land which exceeds any allowable octave band sound pressure level specified in the following table, when measured at any point within such receiving Class B land, provided, however, that no measurement of sound pressure levels shall be made less than 25 feet from such property-line-noise-source.

Octave Band Center Frequency (Hertz)	Allowable Octave Band Sound Pressure Levels (dB) of Sound Emitted to any Receiving Class B Land from		
	Class C Land	Class B Land	Class A Land
31.5	80	79	72
63	79	78	71
125	74	72	65
250	69	64	57
500	63	58	51
1000	57	52	45
2000	52	46	39
4000	48	41	34
8000	45	39	32

**Section 901.104 Highly-Impulsive Sound**

Except as provided elsewhere in this Part, no person shall cause or allow the emission of highly-impulsive sound from any property-line-noise-source located on any Class A, B, or C land to any receiving Class A or B land which exceeds the allowable A-weighted sound levels, measured with fast dynamic characteristic, specified in the following table when measured in accordance with the procedure of 35 Ill. Adm. Code 900.103 at any point within such receiving Class A or B land, provided, however, that no measurement of sound levels shall be made less than 25 feet from such property-line-noise-source.

Classification of Land on which Property-Line Noise-Source: is Located	Allowable A-weighted Sound Levels in Decibels of Highly-Impulsive Sound Emitted to Receiving Class A or B Land		
	Class B Land	Class A Land Daytime	Class A Land Nighttime
Class A Land	47	47	37
Class B Land	54	47	37
Class C Land	58	53	43

**Section 901.105 Impact Forging Operations**

(a) For purposes of this Section, only the following are applicable:

- (1) Daytime hours means any continuous 16-hour period between 6:00 a.m. and 11:00 p.m. local time; and
- (2) Nighttime hours means those 8 hours between 10:00 p.m. and 7:00 a.m. which are not part of the 16 continuous daytime hours.
- (3) The reference time for Leq, as defined in 35 Ill. Adm. Code 900.101 is one hour.
- (4) New Impacting Forging Operation is that property-line-noise-source comprised of impact forging operation on which construction began after September 1, 1982.
- (5) Existing Impact Forging Operation is that property-line-noise-source comprised of impact forging operations which are in existence on September 1, 1982,

(b) Emission Limitations for New Impact Forging Operation. No impact forging operation shall cause or allow the emission of impulsive sound to any receiving Class A or B land which exceeds the allowable sound levels specified in the following table when measured at any point within such receiving land, provided however, that no measurement of sound levels shall be made less than 25 feet from such new impact forging operation's property-line.

Highly- Impulsive Sound Levels (Leq) in Decibels Emitted To Class A or B Land from New Impact Forging Operation		
Class B Land	Class A Land Daytime	Class A Land Nighttime
59.5	53.5	48.5

(c) Limitations for Existing Impact Forging Operation

No existing impact forging operation shall cause or allow the emission of highly-impulsive sound to any receiving Class A or B land which exceeds the allowable sound levels specified in the following table, when measured at any point within such receiving land, provided however, that no measurement of sound levels shall be made less than 25 feet from such existing impact forging operation's property-line, unless such forging operation is granted a permanent site specific allowable operational level pursuant to subsection (d).

Highly- Impulsive Sound Levels ( $L_{eq}$ ) in Decibels Emitted To Class A or B Land from Existing Impact Forging Operation		
Class B Land	Class A Land Daytime	Class A Land Nighttime
64.5	58.5	53.5

(d) Site Specific Allowable Operational Level for Existing Impact Forging Operation

(1) An existing impact forging operation which does not comply with subsection (c) may seek a permanent site specific allowable operational level from the Board. A permanent site specific level is that level of operation allowed petitioner after review and approval by the Board and after implementation of abatement measures, if any, approved by the Board.

(2) Any existing impact forging operation seeking a permanent site specific operational level must submit as its petition the following:

(A) The location of the petitioner, a description of the surrounding community, and a map locating the petitioner within the community;

(B) A description of the petitioner's operations, the number and size of the petitioner's forging hammers, the current hours of hammer operation, the approximate number of forgings manufactured during each of the three prior calendar years and the approximate number of hammer blows used to manufacture the forgings.

(C) A description of any existing sound abatement measure.

(D) The sound levels in excess of those permitted by subsection (c) emitted by the petitioner into the community, in 5 decibel increments measured in  $L_{eq}$ , shown on the map of the community.

(E) The number of residences exposed to sound levels in excess of those permitted by subsection (c);

(F) A description of other significant sources of noise (mobile and stationary) and their location shown on the map of the community;

(G) A description of the proposed operational level and proposed physical abatement measures, if any, a schedule for their implementation and their costs;

(H) The predicted improvement in community sound levels as a result of implementation of the proposed abatement measures; and

(I) A description of the economic and technical considerations which justify the permanent site specific allowable operational level sought by petitioner.

(e) Land Use Classifications Preserved

The land use classifications in effect within a one-mile radius of an existing impact forging operation on September 1, 1982 remains the applicable land use classification for enforcement of these rules against an existing forging operation and any future modification thereof, regardless of actual subsequent changes in land use unless such actual changes would impose less restrictive limitations on the impact forging operations.

(f) Site-Specific Operational Levels

Each individual existing forging operation identified in Sections 901.110, 901.111 and 901.112 must comply with the site-specific operational level defined, or is otherwise subject to Section 901.105(c).

### **Section 901.106 Prominent Discrete Tones**

(a) No person shall cause or allow the emission of any prominent discrete tone from any property-line-noise-source located on any Class A, B or C land to any receiving Class A, B or C land, provided, however, that no measurement of one-third octave band sound pressure levels shall be made less than 25 feet from such property-line source.

(b) This rule shall not apply to prominent discrete tones having a one-third octave band sound pressure level 10 or more dB below the allowable octave band sound pressure level specified in Sections 901.102 through 901.104 for the octave band which contains such one-third octave band. In the application of this sub-section, the applicable numeric standard for sound emitted from any existing property-line-noise-source to receiving Class A land, for both daytime and nighttime operations, is found in Section 901.102(a).

### **Section 901.107 Exceptions**

(a) Sections 901.102 through 901.106 inclusive does not apply to sound emitted from land used as specified by LBCS Codes 1100, 6600 and 5500.

(b) Sections 901.102 through 901.106 inclusive does not apply to sound emitted from emergency warning devices and unregulated safety relief valves.

(c) Sections 901.102 through 901.106 inclusive does not apply to sound emitted from lawn care maintenance equipment and agricultural field machinery used during daytime hours. For the purposes of this sub-section, grain dryers operated off the farm are not considered agricultural field machinery.

(d) Sections 901.102 through 901.106 inclusive do not apply to sound emitted from equipment being used for construction.

(e) Section 901.102(b) do not apply to sound emitted from existing property-line-noise-sources during nighttime hours, provided, however, that sound emitted from such existing property-line-noise-sources are governed during nighttime hours by the limits specified in Section 901.102.

(f) Sections 901.102 through 901.106 inclusive do not apply to the operation of any vehicle registered for highway use while such vehicle is being operated within any land used as specified by Section 901.101 in the course of ingress to or egress from a highway.

(g) Sections 901.102 through 901.106 inclusive do not apply to sound emitted from land used as specified by LBCS Codes 5130 and 5140 when used for automobile and motorcycle racing; and, any land used for contests, rallies, time trials, test runs or similar operations of any self-propelled device, and upon or by which any person is or may be transported or drawn, when such self-propelled device is actually being used for sport or recreation and is actually participating in an activity or event organized, regulated, and supervised under the sponsorship and sanction of a club, organization or corporation having national or statewide recognition; provided, however, that the exceptions granted in this subsection do not apply to any automobile and motorcycle race, contest, rally, time trial, test run or similar operation of any self-propelled device if such event is started between the hours of 10:30 p.m. to 7:00 a.m., local time weekdays, or between the hours of 11:00 p.m. and 7:00 a.m., local time, weekend days.



(h) Section 901.104 shall not apply to impulsive sound produced by explosive blasting activities conducted on any Class C land other than the land used as specified by LBCS Codes 8300 and 8500, but such operations shall be governed by Section 901.109.

(i) Part 901 shall not apply to impulsive sound produced by explosive blasting activities, which are:

(1) Conducted on any Class C land used as specified by LBCS Codes 8300 and 8500; and

(2) Regulated by the Department of Natural Resources in accordance with Section 6.5 of the Surface-Mined Land Conservation and Reclamation Act [225 ILCS 715/6.5] and Section 3.13 of the Surface Coal Mining Land Conservation and Reclamation Act [225 ILCS 720/3.13].

(j) Sections 901.102 through 901.106 inclusive do not apply to sound emitted from snowmobiles.

### **Section 901.108 Compliance Dates for Part 901**

(a) Except as provided in subsections (g), (i), and (j), every owner or operator of a new property-line-noise-source must comply with the standards and limitations of this Part on and after August 10, 1973.

(b) Except as otherwise provided in this rule, every owner or operator of an existing property-line-noise-source must comply with the standards and limitations of this Part on and August 10, 1974.

(c) Every owner or operator of an existing property-line-noise-source who emits sound which exceeds any allowable octave band sound pressure level of Section 901.102 or 901.103 by 10 dB or more in any octave band with a center frequency of 31.5 Hertz, 63 Hertz or 125 Hertz must comply with the standards and limitations of this Part on and after February 10, 1975.

(d) Except as provided in subsections (g) and (h), every owner or operator of an existing property-line-noise-source required to comply with Section 901.104 must comply with the standards and limitations of this Part on and after February 10, 1975.

(e) Every owner or operator of an existing property-line-noise-source required to comply with Section 901.106 must comply with the standards and limitations of this Part on and after February 10, 1975.

(f) Every owner or operator of Class C land now and hereafter used as specified by LBCS Code 4120 will have until August 10, 1976 to bring the sound from railroad car coupling in compliance with Section 901.104.

(g) Existing impact forging operations as defined in Section 901.105 which do not seek permanent site specific allowable operational levels must comply with Section 901.105 by December 1, 1983. Those seeking permanent site specific allowable operational levels pursuant to Section 901.105(d) must comply as of the effective date of the site specific rule granted or denied.

(h) Every owner or operator of Class C land now or hereafter used as specified by LBCS Code 3310 must comply with the standards and limitations of this Part on August 10, 1975.

(i) Every owner or operator of Class C land now or hereafter used as specified by LBCS Code 5130 and 5140 when used for automobile and motorcycle racing must comply with the standards and limitations of this Part on February 10, 1976.

**Section 901.109 Highly-Impulsive Sound From Explosive Blasting**

(a) During the daytime hours that cover the period after sunrise and before sunset, no person shall cause or allow any explosive blasting conducted on any Class C land other than land used as specified by LBCS Codes 8300 and 8500 so as to allow the emission of sound to any receiving Class A or B land which exceeds the allowable outdoor C-weighted sound levels, measured with the slow dynamic characteristic, specified in the following table, when measured at any point, of reasonable interference with the use of such receiving Class A or B land.

Allowable Outdoor C-Weighted Sound Exposure Levels in Decibels of Explosive Blasting Sounds Emitted to Receiving Class A or B Land from Any Class C Land other than Land Used as Specified by LBCS Code 8300 or 8500	
Receiving Class A Land	Receiving Class B Land
107	112

The allowable sound exposure level limits in the above table must be lowered by three decibels (3 dB) for each doubling of the number of blasts during the day or night.

(b) Compliance with outdoor peak sound pressure level limits in the following table shall constitute prima facie level limits of this rule when measured on such receiving Class A or B land.

Equivalent Maximum Sound Pressure Level (Peak) Limits in Decibels		
Lower Frequency Limit of Measuring System for Flat Response, a Variation from Linear Response of + or - 3dB (Hz)	Receiving Class A Land (dB)	Receiving Class B Land (dB)
< 2.0 but > 0.1	133	133

(c) During the period defined by both the beginning of the nighttime hours (10:00 pm) or sunset, whichever occurs earlier, and the ending of the nighttime hours (7:00 am) or sunrise, whichever occurs later, the allowable sound level limits in subsections (a) and (b) must be reduced by 10 decibels except in emergency situations where rain, lightning, other atmospheric conditions, or operator or public safety requires unscheduled nighttime hour explosive blasting.

(d) Persons causing or allowing explosive blasting to be conducted on any Class C land other than land used as specified by LBCS Code 8300 or 8500 must notify the local public of such blasting prior to its occurrence, except when emergency situations require unscheduled blasting, by publication of a blasting schedule, identifying the work days or dates and time periods when explosives are expected to be detonated, at least every three months in a newspaper of general circulation in the locality of the blast site.

**Section 901.110 Amforge Operational Level**

Amforge Division of Rockwell International located at 119th Street, Chicago, Illinois must:

- (a) Operate only ten forging hammers at any one time;
- (b) Operation of its forging hammers is limited to the hours of 7:00 a.m. through 11:00 p.m., with occasional operations beginning at 6:00 a.m. and ending at midnight, Monday through Saturdays; and

(c) Install sound absorptive materials on each of the forging hammer structures as each is routinely overhauled, but no later than January 1, 1987.

**Section 901.111 Modern Drop Forge Operational Level**

Modern Drop Forge Company located at 139th Street and Western Avenue in Blue Island, Illinois must:

- (a) Operate only twenty-one forging hammers at any one time; and
- (b) Operate its forging hammers only during the hours of 6:00 a.m. through midnight, Mondays through Fridays, and 6:30 a.m. until 7:30 p.m. on Saturdays.

**Section 901.112 Wyman-Gordon Operational Level**

Wyman-Gordon Company located at 147th Street and Wood Street, Harvey, Illinois shall:

- (a) Operate only six forging hammer units, each consisting of two hammers, after January 1, 1984.
- (b) Operate forging units in Buildings 6 and 7, located at the southern perimeter of the Wyman-Gordon Company's Harvey facility, to produce no more than 20% of the total annual hammer production at the Harvey facility;
- (c) Operate forging units between the hours of 6:00 a.m. and midnight; limit forging operations on Saturdays and Sundays to no more than half a year's total; and limit forging operations during the hours of 6:00 a.m. and 7:00 a.m. and 11:00 p.m. and midnight to less than 2% of the Harvey's facility total annual hammer production; and
- (d) Consolidate the two existing steel inventory yards at the one located north of Building 75 no later than January 1, 1984.

**Section 901.114 Moline Forge Operational Level**

Moline Forge and future owners of the forging facility located at 4101 Fourth Avenue, Moline, Illinois, shall comply with the following site-specific operational level:

- (a) Operate no more than nine forging hammers at any one time; and
- (b) Operate its forging hammers only between the hours of 6:00 a.m. until 11:00 p.m. Monday through Friday and from 6:00 a.m. until 3:30 p.m. on Saturdays.

**Section 901.115 Cornell Forge Hampshire Division Site-Specific Operational Level**

Cornell Forge, Hampshire Division and future owners of the forging facility located at Walker Road, Hampshire, Illinois, shall comply with the following site-specific operational level:

- (a) Operate no more than seven forging hammers at any one time; and
- (b) Operate its forging hammers only on Monday through Saturday between the hours of 7:00 a.m. to 3:30 p.m. with an additional shift that may run from either 3:30 p.m. to 12:00 p.m. or from 10:30 p.m. to 7:00 a.m.

**Section 901.116 Forgings and Stampings, Inc. Operational Level**

Forgings and Stampings, Inc. and future owners of the forging facility located at 1025 23rd Avenue, Rockford, Illinois, shall comply with the following site-specific operational level:

- (a) Operate no more than six forging hammers at any one time; and
- (b) Operate its forging hammers only between the hours of 6:00 a.m. and 6:00 p.m. Monday through Friday and 6:00 a.m. and 2:00 p.m. on Saturday.

**Section 901.117 Rockford Drop Forge Company Operational Level**

Rockford Drop Forge Company and future owners of the forging facility located at 2031 Ninth Street, Rockford, Illinois, shall comply with the following site-specific operational level:

- (a) Operate no more than twelve forging hammers at any one time; and
- (b) Operate its forging hammers only between the hours of 6:00 a.m. and 10:00 p.m. Monday through Saturday.

**Section 901.118 Scot Forge Company – Franklin Park Division Operational Level**

Scot Forge and future owners of the forging facility located at 9394 W. Belmont Avenue, Franklin Park, Illinois, must comply with the following site-specific operational level:

- (a) Operate no more than seven forging hammers at any one time; and
- (b) Operate its forging hammers only between the hours of 6:00 a.m. and 6:00 p.m. Monday through Saturday.

**Section 901.119 Clifford-Jacobs Operational Level**

Clifford-Jacobs Forging Company and future owners of the forging facility located at North Market Street, Champaign, Illinois, shall comply with the following site-specific operational level:

- (a) Operate no more than fourteen hammers at any one time; and
- (b) Operate its forging hammers only between the hours of 6:00 a.m. and 11:00 p.m. Monday through Saturday.

**Section 901.120 C.S. Norcross Operational Level**

C.S. Norcross & Sons Company and future owners of the forging facility located at the intersection of Davis and Dean Streets, Bushnell, Illinois, shall comply with the following site-specific operational level:

- (a) Operate no more than twelve forging hammers at any one time; and
- (b) Operate its forging hammers only between the hours of 7:00 a.m. and 1:00 a.m. Monday through Saturday.

**Section 901.121 Vaughan & Bushnell Operational Level**

Vaughan & Bushnell Manufacturing Company and the future owners of the forging facility located at the intersection of Davis and Main Streets, Bushnell, Illinois, must comply with the following site-specific operational level:

- (a) Operate no more than ten hammers at any one time; and
- (b) Vaughan & Bushnell may operate 24 hours per day, Monday through Sunday.

**Section 901.122 Ameren Elgin Facility Site-Specific Noise Emission Limitations**

The Combustion Turbine Power Generation Facility located at 1559 Gifford Road in Elgin, Illinois shall not cause or allow the emission of sound from any property-line-noise source located on that property which exceeds any allowable octave band sound pressure level specified in the following table, when measured at any point within the receiving Class A or Class B land.

Octave Band Center Frequency (Hertz)	Allowable Octave Band Sound Pressure Levels (dB) of Sound Emitted to any Receiving Class A or Class B Land from Ameren Elgin Facility	
	Class A Land	Class B Land
31.5	80	80
63	74	79
125	69	74
250	64	69
500	58	63
1000	58	58
2000	58	58
4000	50	50
8000	40	45

**Section 901.APPENDIX B Land-Based Classification Standards and Corresponding 35 Ill. Adm. Code 901 Land Classes**

LBCS		Description	35 IAC 901 Land Class
Main Category	Function Code		

Residence or accommodation functions	<b>1000</b>	Residence or accommodation functions	<b>A</b>
	<b>1100</b>	Private household	
	<b>1200</b>	Housing services for the elderly	<input type="checkbox"/>
	1210	Retirement housing services	
	1220	Congregate living services	
	1230	Assisted-living services	
	1240	Life care or continuing care services	
	1250	Skilled-nursing services	
	<b>1300</b>	Hotels, motels, or other accommodation services	<input type="checkbox"/>
	1310	Bed and breakfast inn	
	1320	Rooming and boarding	
	1330	Hotel, motel, or tourist court	
	1340	Casino hotel	
General sales or services	<b>2000</b>	General sales or services	<b>B</b>
	<b>2100</b>	Retail sales or service	
	2110	Automobile sales or service establishment	
	2111	Car dealer	
	2112	Bus, truck, mobile homes, or large vehicles	
2113	Bicycle, motorcycle, ATV, etc.	<input type="checkbox"/>	

LBCS		Description	35 IAC 901 Land Class
Main Category	Function Code		
	2114	Boat or marine craft dealer	<input type="checkbox"/>
	2115	Parts, accessories, or tires	<input type="checkbox"/>
	2116	Gasoline service	<input type="checkbox"/>
	2120	Heavy consumer goods sales or service	<input type="checkbox"/>
	2121	Furniture or home furnishings	<input type="checkbox"/>
	2122	Hardware, home centers, etc.	<input type="checkbox"/>
	2123	Lawn and garden supplies	<input type="checkbox"/>
	2124	Department store, warehouse club or superstore	<input type="checkbox"/>
	2125	Electronics and Appliances	<input type="checkbox"/>
	2126	Lumber yard and building materials	<input type="checkbox"/>
	2127	Heating and plumbing equipment	<input type="checkbox"/>
	2130	Durable consumer goods sales and service	<input type="checkbox"/>
	2131	Computer and software	<input type="checkbox"/>
	2132	Camera and photographic supplies	<input type="checkbox"/>
	2133	Clothing, jewelry, luggage, shoes, etc.	<input type="checkbox"/>
	2134	Sporting goods, toy and hobby, and musical instruments	<input type="checkbox"/>
	2135	Books, magazines, music, stationery	<input type="checkbox"/>
	2140	Consumer goods, other	<input type="checkbox"/>
	2141	Florist	<input type="checkbox"/>
	2142	Art dealers, supplies, sales and service	<input type="checkbox"/>
	2143	Tobacco or tobacconist establishment	<input type="checkbox"/>
	2144	Mail order or direct selling establishment	<input type="checkbox"/>
	2145	Antique shops, flea markets, etc.	<input type="checkbox"/>
	2150	Grocery, food, beverage, dairy, etc.	<input type="checkbox"/>
	2151	Grocery store, supermarket, or bakery	<input type="checkbox"/>
	2152	Convenience store	<input type="checkbox"/>
	2153	Specialty food store	<input type="checkbox"/>
	2154	Fruit and vegetable store	<input type="checkbox"/>
	2155	Beer, wine, and liquor store	<input type="checkbox"/>
	2160	Health and personal care	<input type="checkbox"/>
	2161	Pharmacy or drug store	<input type="checkbox"/>
	2162	Cosmetic and beauty supplies	<input type="checkbox"/>
	2163	Optical	<input type="checkbox"/>
	<b>2200</b>	<b>Finance and Insurance</b>	<input type="checkbox"/>
	2210	Bank, credit union, or savings institution	<input type="checkbox"/>
	2220	Credit and finance establishment	<input type="checkbox"/>

LBCS		Description	35 IAC 901 Land Class	
Main Category	Function Code			
	2230	Investment banking, securities, and brokerages	<input type="checkbox"/>	
	2240	Insurance-related establishment	<input type="checkbox"/>	
	2250	Fund, trust, or other financial establishment	<input type="checkbox"/>	
	<b>2300</b>	Real estate, and rental and leasing	<input type="checkbox"/>	
	2310	Real estate services	<input type="checkbox"/>	
	2320	Property management services	<input type="checkbox"/>	
	2321	Commercial property-related	<input type="checkbox"/>	
	2322	Rental housing-related	<input type="checkbox"/>	
	2330	Rental and leasing	<input type="checkbox"/>	
	2331	Cars	<input type="checkbox"/>	
	2332	Leasing trucks, trailers, RVs, etc.	<input type="checkbox"/>	
	2333	Recreational goods rental	<input type="checkbox"/>	
	2334	Leasing commercial, industrial machinery, and equipment	<input type="checkbox"/>	
	2335	Consumer goods rental	<input type="checkbox"/>	
	2336	Intellectual property rental (video, music, software, etc.)	<b>B</b>	
	<b>2400</b>	Business, professional, scientific, and technical services	<b>A</b>	
	2410	Professional services		
	2411	Legal services		
	2412	Accounting, tax, bookkeeping, payroll services		
	2413	Architectural, engineering, and related services		<input type="checkbox"/>
	2414	Graphic, industrial, interior design services		<input type="checkbox"/>
	2415	Consulting services (management, environmental, etc.)		<input type="checkbox"/>
	2416	Research and development services (scientific, etc.)		<input type="checkbox"/>
	2417	Advertising, media, and photography services		<input type="checkbox"/>
	2418	Veterinary services		<input type="checkbox"/>
	2420	Administrative services		<input type="checkbox"/>
	2421	Office and administrative services		<input type="checkbox"/>
	2422	Facilities support services		<input type="checkbox"/>
	2423	Employment agency		<input type="checkbox"/>
	2424	Business support services		<input type="checkbox"/>
	2425	Collection agency		<input type="checkbox"/>
	2430	Travel arrangement and reservation services		<input type="checkbox"/>
	2440	Investigation and security services		<input type="checkbox"/>
	2450	Services to buildings and dwellings		<input type="checkbox"/>
	2451	Extermination and pest control		<input type="checkbox"/>
	2452	Janitorial	<input type="checkbox"/>	

<b>LBCS</b>		<b>Description</b>	<b>35 IAC 901 Land Class</b>
<b>Main Category</b>	<b>Function Code</b>		
	2453	Landscaping	<input type="checkbox"/>
	2454	Carpet and upholstery cleaning	
	2455	Packing, crating, and convention and trade show services	<b>A</b>
	<b>2500</b>	Food services	<b>B</b>
	2510	Full-service restaurant	
	2520	Cafeteria or limited service restaurant	
	2530	Snack or nonalcoholic bar	<input type="checkbox"/>
	2540	Bar or drinking place	<input type="checkbox"/>
	2550	Mobile food services	<input type="checkbox"/>
	2560	Caterer	<input type="checkbox"/>
	2570	Food service contractor	<input type="checkbox"/>
	2580	Vending machine operator	<input type="checkbox"/>
	<b>2600</b>	Personal services	<input type="checkbox"/>
	<b>2700</b>	Pet and animal sales or service (except veterinary)	<input type="checkbox"/>
	2710	Pet or pet supply store	
	2720	Animal and pet services	<b>B</b>
<b>Manufacturing and wholesale trade</b>	<b>3000</b>	Manufacturing and wholesale trade	
	<b>3100</b>	Food, textiles, and related products	<b>C</b>
	3110	Food and beverages	
	3120	Tobacco manufacturing establishment	
	3130	Textiles	<input type="checkbox"/>
	3140	Leather and allied products	<input type="checkbox"/>
	<b>3200</b>	Wood, paper, and printing products	<input type="checkbox"/>
	3210	Wood products establishment	<input type="checkbox"/>
	3220	Paper and printing materials	<input type="checkbox"/>
	3230	Furniture and related products	<input type="checkbox"/>
	<b>3300</b>	Chemicals, and metals, machinery, and electronics manufacturing	<input type="checkbox"/>
	3310	Petroleum and coal products	<input type="checkbox"/>
	3320	Chemicals, plastics, and rubber products	<input type="checkbox"/>
	3330	Nonmetallic mineral products	<input type="checkbox"/>
	3340	Primary metal manufacturing	<input type="checkbox"/>
	3350	Machinery manufacturing	<input type="checkbox"/>
3360	Electrical equipment, appliance, and components manufacturing	<input type="checkbox"/>	
3370	Transportation equipment, automobiles, etc.	<input type="checkbox"/>	



<b>LBCS</b>		<b>Description</b>	<b>35 IAC 901 Land Class</b>
<b>Main Category</b>	<b>Function Code</b>		
	<b>3400</b>	Miscellaneous manufacturing	<input type="checkbox"/>
	3410	Jewelry and silverware	<input type="checkbox"/>
	3420	Dolls, toys, games, and musical instruments	<input type="checkbox"/>
	3430	Office supplies, inks, etc.	
	3440	Signs	<b>C</b>
	<b>3500</b>	Wholesale trade establishment	<b>B</b>
	3510	Durable goods	
	3520	Nondurable goods	<input type="checkbox"/>
	<b>3600</b>	Warehouse and storage services	<b>B</b>
Transportation, communication, information, and utilities	<b>4000</b>	Transportation, communication, information, and utilities	
	<b>4100</b>	Transportation services	
	4110	<b>Air transportation</b>	<b>U</b>
	4111	Air passenger transportation	
	4112	Air freight transportation	
	4113	Airport and support establishment	<input type="checkbox"/>
	4114	Aircraft and accessories	
	4115	Other air transportation (including scenic, balloon, etc.)	<b>U</b>
	4120	Rail transportation	<b>C</b>
	4121	Rail passenger transportation	
	4122	Rail freight transportation	
	4123	Rail transportation support establishment	<input type="checkbox"/>
	4130	Road, ground passenger, and transit transportation	<input type="checkbox"/>
	4131	Local transit systems-mixed mode	<input type="checkbox"/>
	4132	Local transit systems-commuter rail	<input type="checkbox"/>
	4133	Local transit systems-bus, special needs, and other motor vehicles	<input type="checkbox"/>
	4134	Interurban, charter bus, and other similar establishments	<input type="checkbox"/>
	4135	School and employee bus transportation	<input type="checkbox"/>
	4136	Special purpose transit transportation (including scenic, sightseeing, etc.)	<input type="checkbox"/>
	4137	Taxi and limousine service	<input type="checkbox"/>
4138	Towing and other road and ground services	<input type="checkbox"/>	
4140	Truck and freight transportation services	<input type="checkbox"/>	
4141	General freight trucking, local	<input type="checkbox"/>	
4142	General freight trucking, long-distance	<input type="checkbox"/>	

LBCS		Description	35 IAC 901 Land Class
Main Category	Function Code		
	4143	Freight trucking, specialized (used household and office goods)	<input type="checkbox"/>
	4144	Freight trucking, specialized (except used goods)	<input type="checkbox"/>
	4150	Marine and water transportation	<input type="checkbox"/>
	4151	Marine passenger transportation	<input type="checkbox"/>
	4152	Marine freight transportation	<input type="checkbox"/>
	4153	Marine port and harbor operations	<input type="checkbox"/>
	4154	Marine cargo handling and dry dock services	<input type="checkbox"/>
	4155	Marine navigational and other services	<input type="checkbox"/>
	4160	Courier and messenger services	<input type="checkbox"/>
	4170	Postal services	
	4180	Pipeline transportation	<b>C</b>
<b>4200</b>		Communications and information	
	4210	Publishing	<b>C</b>
	4211	Newspapers, books, periodicals, etc.	<b>C</b>
	4212	Software publisher	<b>C</b>
	4220	Motion pictures and sound recording	<b>B</b>
	4221	Motion picture and video production, publishing, and distribution	
	4222	Motion picture viewing and exhibition services	<input type="checkbox"/>
	4223	Sound recording, production, publishing, and distribution	<input type="checkbox"/>
	4230	Telecommunications and broadcasting	<input type="checkbox"/>
	4231	Radio and television broadcasting	<input type="checkbox"/>
	4232	Cable networks and distribution	<input type="checkbox"/>
	4233	Wireless telecommunications	<input type="checkbox"/>
	4234	Telephone and other wired telecommunications	<input type="checkbox"/>
	4240	Information services and data processing industries	<input type="checkbox"/>
	4241	Online information services	<input type="checkbox"/>
	4242	Libraries and archives	
	4243	News syndicate	<b>B</b>
<b>4300</b>		Utilities and utility services	<b>C</b>
	4310	Electric power	
	4311	Hydroelectric	
	4312	Fossil	<input type="checkbox"/>
	4313	Nuclear	<input type="checkbox"/>
	4314	Alternative energy sources	<input type="checkbox"/>
	4320	Natural gas, petroleum, fuels, etc.	<input type="checkbox"/>

<b>LBCS</b>		<b>Description</b>	<b>35 IAC 901 Land Class</b>
<b>Main Category</b>	<b>Function Code</b>		
	4330	Water, steam, air conditioning supply	<input type="checkbox"/>
	4331	Drinking water	<input type="checkbox"/>
	4332	Irrigation and industrial water supply	<input type="checkbox"/>
	4333	Air conditioning and steam supply	<input type="checkbox"/>
	4340	Sewer, solid waste, and related services	<input type="checkbox"/>
	4341	Hazardous waste collection	<input type="checkbox"/>
	4342	Hazardous waste treatment and disposal	<input type="checkbox"/>
	4343	Solid waste collection	<input type="checkbox"/>
	4344	Solid waste combustor or incinerator	<input type="checkbox"/>
	4345	Solid waste landfill	<input type="checkbox"/>
	4346	Waste treatment and disposal	<input type="checkbox"/>
	4347	Septic tank and related services	<input type="checkbox"/>
			<b>C</b>
<b>Arts, entertainment, and recreation</b>	<b>5000</b>	Arts, entertainment, and recreation	
	<b>5100</b>	Performing arts or supporting establishment	<b>B</b>
	5110	Theater, dance, or music establishment	
	5120	Sports team or club	
	5130	Racetrack establishment	<input type="checkbox"/>
	5140	Promoter of performing arts, sports, and similar events	<input type="checkbox"/>
	5150	Agent for management services	
	5160	Independent artist, writer, or performer	<b>B</b>
	<b>5200</b>	Museums and other special purpose recreational institutions	<b>A</b>
	5210	Museum	
	5220	Historical or archeological institution	<input type="checkbox"/>
	5230	Zoos, botanical gardens, arboreta, etc.	<b>A</b>
	<b>5300</b>	Amusement, sports, or recreation establishment	<b>B</b>
	5310	Amusement or theme park establishment	
	5320	Games arcade establishment	
	5330	Casino or gambling establishment	<input type="checkbox"/>
	5340	Miniature golf establishment	<input type="checkbox"/>
	5350	Skiing	<input type="checkbox"/>
	5360	Marina or yachting club facility operators	<input type="checkbox"/>
	5370	Fitness, recreational sports, gym, or athletic club,	<input type="checkbox"/>
5380	Bowling, billiards, pool, etc.	<input type="checkbox"/>	
5390	Skating rinks, roller skates, etc.		
<b>5400</b>	Camps, camping, and related establishments	<b>B</b>	

<b>LBCS</b>		<b>Description</b>	<b>35 IAC 901 Land Class</b>
<b>Main Category</b>	<b>Function Code</b>		
	<b>5500</b>	Natural and other recreational parks	<b>A</b>
Education, public admin., health care, and other inst.	<b>6000</b>	Education, public admin., health care, and other inst.	
	<b>6100</b>	Educational services	
	6110	Nursery and preschool	<b>A</b>
	6120	Grade schools	
	6121	Elementary	
	6122	Middle	<input type="checkbox"/>
	6123	Senior	<input type="checkbox"/>
	6124	Continuance	<input type="checkbox"/>
	6125	Alternate education services	<input type="checkbox"/>
	6126	Adult education services	<input type="checkbox"/>
	6130	Colleges and universities	<input type="checkbox"/>
	6140	Technical, trade, and other specialty schools	<input type="checkbox"/>
	6141	Beauty schools	<input type="checkbox"/>
	6142	Business management	<input type="checkbox"/>
	6143	Computer training	<input type="checkbox"/>
	6144	Driving education	
	6145	Fine and performing arts education	<b>A</b>
	6146	Flight training	<b>U</b>
	6147	Sports and recreation education	<b>B</b>
	<b>6200</b>	Public administration	
	6210	Legislative and executive functions	<b>B</b>
	6220	Judicial functions	<b>B</b>
	6221	Courts	<b>B</b>
	6222	Correctional institutions	<b>A</b>
	<b>6300</b>	Other government functions	<b>B</b>
	6310	Military and national security	
	6320	Space research and technology	
	<b>6400</b>	Public Safety	<input type="checkbox"/>
6410	Fire and rescue	<input type="checkbox"/>	
6420	Police		
6430	Emergency response	<b>B</b>	
<b>6500</b>	Health and human services		
6510	Ambulatory or outpatient care services	<b>A</b>	
6511	Clinics		

<b>LBCS</b>		<b>Description</b>	<b>35 IAC 901 Land Class</b>
<b>Main Category</b>	<b>Function Code</b>		
	6512	Family planning and outpatient care centers	
	6513	Medical and diagnostic laboratories	<input type="checkbox"/>
	6514	Blood and organ banks	<input type="checkbox"/>
	6520	Nursing, supervision, and other rehabilitative services	
	6530	Hospital	<b>A</b>
	6560	Social assistance, welfare, and charitable services	<b>B</b>
	6561	Child and youth services	
	6562	Child day care	
	6563	Community food services	<input type="checkbox"/>
	6564	Emergency and relief services	<input type="checkbox"/>
	6565	Other family services	<input type="checkbox"/>
	6566	Services for elderly and disabled	
	6567	Veterans affairs	<b>B</b>
	6568	Vocational rehabilitation	<b>A</b>
	<b>6600</b>	Religious institutions	<b>A</b>
	<b>6700</b>	Death care services	<b>B</b>
	6710	Funeral homes and services	
	6720	Cremation services and cemeteries	
	<b>6800</b>	Associations, nonprofit organizations, etc.	<input type="checkbox"/>
	6810	Labor and political organizations	<input type="checkbox"/>
	6820	Business associations and professional membership organizations	<input type="checkbox"/>
	6830	Civic, social, and fraternal organizations	<b>B</b>
<b>Construction-related businesses</b>	<b>7000</b>	Construction-related businesses	
	<b>7100</b>	Building, developing, and general contracting	<b>B</b>
	7110	Residential construction	
	7120	Land development and subdivision	
	7130	Industrial, commercial and institutional building construction	<input type="checkbox"/>
	<b>7200</b>	Machinery related	<input type="checkbox"/>
	7210	Building equipment and machinery installation contractors	<input type="checkbox"/>
	7220	Excavation contractor	<input type="checkbox"/>
	7230	Water well drilling contractor	<input type="checkbox"/>
	7240	Wrecking and demolition establishment	<input type="checkbox"/>
	7250	Structural steel erection contractor	<input type="checkbox"/>
	<b>7300</b>	<b>Special trade contractor</b>	<input type="checkbox"/>
7310	Carpentry, floor, and tile contractor	<input type="checkbox"/>	

<b>LBCS</b>		<b>Description</b>	<b>35 IAC 901 Land Class</b>
<b>Main Category</b>	<b>Function Code</b>		
	7320	Concrete contractor	<input type="checkbox"/>
	7330	Electrical contractor	<input type="checkbox"/>
	7340	Glass and glazing contractor	<input type="checkbox"/>
	7350	Masonry and drywall contractors	<input type="checkbox"/>
	7360	Painting and wall covering	<input type="checkbox"/>
	7370	Plumbing, heating, and air-conditioning	
	7380	Roofing, siding, and sheet metal contractors	<b>B</b>
	<b>7400</b>	Heavy construction	<b>C</b>
	7410	Highway and street construction;	
	7420	Bridge and tunnel construction	
	7430	Water, sewer, and pipeline construction	<input type="checkbox"/>
	7440	Power lines, communication and transmission lines	
	7450	Industrial and other nonbuilding construction	<b>C</b>
Mining and extraction establishments	<b>8000</b>	Mining and extraction establishments	<b>C</b>
	<b>8100</b>	Oil and natural gas	
	<b>8200</b>	Metals (iron, copper, etc.)	
	<b>8300</b>	Coal	<input type="checkbox"/>
	<b>8400</b>	Nonmetallic mining	
	<b>8500</b>	Quarrying and stone cutting establishment	<b>C</b>
Agriculture, forestry, fishing and hunting	<b>9000</b>	Agriculture, forestry, fishing and hunting	
	<b>9100</b>	Crop production	<b>C</b>
	9110	Grain and oilseed	
	9111	Wheat	
	9112	Corn	<input type="checkbox"/>
	9113	Rice	<input type="checkbox"/>
	9114	Soybean and oilseed	<input type="checkbox"/>
	9115	Dry pea and bean	<input type="checkbox"/>
	9120	Vegetable farming or growing services	<input type="checkbox"/>
	9130	Fruits and trees	<input type="checkbox"/>
	9140	Greenhouse, nursery, and floriculture	<input type="checkbox"/>
	9141	Food crops grown under cover	<input type="checkbox"/>
	9142	Nursery and tree production	<input type="checkbox"/>
	9143	Floriculture production	<input type="checkbox"/>
	9150	All other crops	<input type="checkbox"/>
9151	Tobacco crop	<input type="checkbox"/>	

<b>LBCS</b>		<b>Description</b>	<b>35 IAC 901 Land Class</b>
<b>Main Category</b>	<b>Function Code</b>		
	9152	Cotton crop	<input type="checkbox"/>
	9153	Sugarcane crop	<input type="checkbox"/>
	9154	Hay	<input type="checkbox"/>
	9155	Peanut crop	<input type="checkbox"/>
<b>9200</b>		Support functions for agriculture	<input type="checkbox"/>
	9210	Farm and farm labor management services	<input type="checkbox"/>
	9220	Spraying, dusting, and other related services	<input type="checkbox"/>
	9230	Crop harvesting and post harvest crop activities (including drying, siloing, etc.)	<input type="checkbox"/>
	9240	Cotton ginning, grist milling, etc.	<input type="checkbox"/>
<b>9300</b>		Animal production including slaughter	<input type="checkbox"/>
	9310	Cattle ranch and crops	<input type="checkbox"/>
	9311	Beef cattle ranch establishments	<input type="checkbox"/>
	9312	Cattle feedlot establishment	<input type="checkbox"/>
	9320	Dairy cattle and milk production	<input type="checkbox"/>
	9330	Hog and pig farm	<input type="checkbox"/>
	9340	Poultry and egg production and hatcheries	<input type="checkbox"/>
	9350	Sheep and goat farming establishments	<input type="checkbox"/>
	9360	Fish hatcheries, fisheries, and aquaculture	<input type="checkbox"/>
	9370	All other animal production	<input type="checkbox"/>
	9371	Apiculture (bees, wax, and related operations)	<input type="checkbox"/>
	9372	Horse and equine production	<input type="checkbox"/>
	9373	Fur-bearing animal production	<input type="checkbox"/>
	9380	Support functions for animal production	<input type="checkbox"/>
<b>9400</b>		Forestry and Logging	<input type="checkbox"/>
	9410	Logging	<input type="checkbox"/>
	9420	Forest nurseries	<input type="checkbox"/>
	9430	Support functions for forestry	<input type="checkbox"/>
<b>9500</b>		Fishing, hunting and trapping, game preserves	<input type="checkbox"/>
	9510	Fishing	<input type="checkbox"/>
	9520	Hunting and trapping, game retreats, game and fishing preserves	<b>C</b>
<b>9900</b>		Unclassifiable function	<b>U</b>
	9910	Not applicable to this dimension	
	9990	To be determined	<input type="checkbox"/>
	9999	To be determined	<b>U</b>

## PART 902: SOUND EMISSION STANDARDS AND LIMITATIONS FOR MOTOR VEHICLES

### **Section 902.101 Exhaust System**

No person shall operate or cause or allow the operation of a motor vehicle on a public right of way unless it is at all times equipped with an adequate muffler or other sound dissipative device which is:

- (a) In constant operation and properly maintained to prevent any excessive or unusual noise;
- (b) Free from defects which affect sound reduction; and
- (c) Not modified in a manner which will amplify or increase the noise of such muffler or other sound dissipative device above that emitted by the muffler originally installed on the vehicle so as to produce excessive or unusual noise.

### **Section 902.102 Tires**

No person shall operate or cause or allow the operation of a motor vehicle with one or more tires having a tread pattern which is composed primarily of cavities in the tread (excluding sipes and local chunking) which are not vented by grooves to the tire shoulder or circumferentially to each other around the tire.

## SUBPART B: OPERATIONAL STANDARDS

### **Section 902.120 Standards Applicable to all Passenger Cars and to Other Motor Vehicles with GVW of 8,000 Pounds or Less**

- (a) This rule shall apply to all passenger cars regardless of weight and to other motor vehicles with a gross vehicle weight of 8,000 pounds or less, except motorcycles and motor driven cycles.
- (b) No person shall operate or cause or allow the operation of a motor vehicle subject to this rule at any time under any conditions of highway grade, load, acceleration or deceleration in such a manner as to exceed the following limits:
  - (1) On highways with speed limits of 35 miles per hour or less, 74 dB(A), or 76 dB(A) when operating on a grade exceeding 3%, measured with fast meter response at 50 feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures established under 35 Ill. Adm. Code 900.103;
  - (2) On highways with speed limits of more than 35 miles per hour, 82 dB(A), or 85 dB(A) if the vehicle is equipped with two or more snow or mud/snow tires, measured with fast meter response at 50 feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures established under 35 Ill. Adm. Code 900.103.

### **Section 902.121 Standards Applicable to Motor Vehicles with GVW in Excess of 8,000 pounds**

- (a) This rule shall apply to motor vehicles with a gross vehicle weight in excess of 8,000 pounds, except passenger cars.
- (b) No person shall operate or cause or allow the operation of a motor vehicle subject to this rule at any time under any conditions of highway grade, load, acceleration or deceleration in such a manner as to exceed the following limits:



(1) On highways with speed limits of 35 miles per hour or less, 86 dB(A), measured with fast meter response at 50 feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures established under 35 Ill. Adm. Code 900.103;

(2) On highways with speed limits of more than 35 miles per hour, 90 dB(A), measured with fast meter response at 50 feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures established under 35 Ill. Adm. Code 900.103.

(c) No person shall operate or cause or allow the operation of a motor vehicle subject to this rule, powered by an engine with engine speed governor, which generates a sound level in excess of 88 dB(A) measured with fast meter response at 50 feet from the longitudinal centerline of the vehicle or an equivalent sound level limit measured in accordance with procedures established under 35 Ill. Adm. Code 900.103, when that engine is accelerated from idle with wide open throttle to governed speed with the vehicle stationary, transmission in neutral, and clutch engaged.

### **Section 902.122 Standards Applicable to Motorcycles and Motor Driven Cycles**

(a) This rule shall apply to all motorcycles and motor driven cycles.

(b) No person shall operate or cause or allow the operation of a motor vehicle subject to this rule at any time or under any conditions of highway grade, load, acceleration or deceleration in such a manner as to exceed the following limits:

(1) On highways with speed limits of 35 miles per hour or less, 80 dB(A), or 82 dB(A) when operating on a grade exceeding 3%, measured with fast meter response at 50 feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures established under 35 Ill. Adm. Code 900.103;

(2) On highways with speed limits of more than 35 miles per hour, 86 dB(A), measured with fast meter response at 50 feet from the centerline of lane of travel, or an equivalent sound level limit measured in accordance with procedures established under 35 Ill. Adm. Code 900.103.

### **Section 902.123 Exception for and Standards Applicable to Motor Carriers Engaged in Interstate Commerce with Respect to Operations Regulated Pursuant to the Federal Noise Control Act of 1972**

(a) Applicability

(1) After the effective date of the federal standards contained in 40 CFR Part 202, this rule shall apply to motor carriers engaged in interstate commerce with respect to noise emissions regulated by such federal standards. Motor carrier operations determined pursuant to 35 Ill. Adm. Code 900.104 to be governed by this rule shall be excepted from Section 902.101, 902.102 and 902.121.

(2) This rule shall apply to motor carriers with respect only to the operation of those motor vehicles of such carriers which have a gross vehicle weight rating or gross combination weight rating in excess of 10,000 pounds, and only when such motor vehicles are operated under the conditions specified below.

(3) Except as provided in subparagraph (4) of this paragraph (a), this rule shall apply to the total sound produced by such motor vehicles when operating under the specified

conditions, including the sound produced by auxiliary equipment mounted on such motor vehicles.

(4) This rule shall not apply to auxiliary equipment which is normally operated only when the transporting vehicle is stationary or is moving at a speed of 5 miles per hour or less. Examples of such equipment include, but are not limited to, cranes, asphalt spreaders, ditch diggers, liquid or slurry pumps, air compressors, welders, and refuse compactors.

(b) Equipment Standards

(1) Visual exhaust system inspection

No motor carrier subject to this rule shall operate any motor vehicle of a type with respect to which this rule is applicable unless the exhaust system of such vehicle is:

- (A) Equipped with a muffler or other noise dissipative device;
- (B) Free from defects which affect sound reduction; and
- (C) Not equipped with any cutout, bypass or similar device.

(2) Visual tire inspection

No motor carrier subject to this rule shall operate any motor vehicle of a type with respect to which this rule is applicable on a tire or tires having a tread pattern which as originally manufactured, or as newly retreaded, is composed primarily of cavities in the tread (excluding sipes and local chunking) which are not vented by grooves to the tire shoulder or circumferentially to each other around the tire. This subparagraph (2) shall not apply to any motor vehicle which is demonstrated by the motor carrier which operates it to be in compliance with the noise emission standard specified in paragraph (c) of this rule for operation on highways with speed limits of more than 35 miles per hour, if the demonstration is conducted at the highway speed limit in effect at the inspection location or, if speed is unlimited, the demonstration is conducted at a speed of 65 miles per hour.

(c) Standards for Highway Operation

No motor carrier subject to this rule shall operate any motor vehicle of a type with respect to which this rule is applicable and which at any time or under any condition of highway grade, load, acceleration or deceleration generates a sound level in excess of 86 dB(A) measured on an open site with fast meter response at 50 feet from the centerline of lane of travel on highways with speed limits of 35 miles per hour or less; or 90 dB(A) measured on an open site with fast meter response at 50 feet from the centerline of lane of travel on highways with speed limits of more than 35 miles per hour.

(d) Standard for Operation under Stationary Test

No motor carrier subject to this rule shall operate any motor vehicle of a type with respect to which this rule is applicable, and which is equipped with an engine speed governor, which generates a sound level in excess of 88 dB(A) measured on an open site with fast meter response at 50 feet from the longitudinal centerline of the vehicle, when its engine is accelerated from idle with wide open throttle to governed speed with the vehicle stationary, transmission in neutral, and clutch engaged.

(e) Additional Definitions Applicable Only to this Rule

(1) Common carrier by motor vehicle: any person who holds himself out to the general public to engage in the transportation by motor vehicle in interstate or foreign commerce of passengers or property or any class or classes thereof for compensation, whether over regular or irregular routes.

(2) Contract carrier by motor vehicle: any person who engages in transportation by motor vehicle of passengers or property in interstate or foreign commerce for compensation

(other than transportation referred to in subparagraph (1) of this paragraph) under continuing contracts with one person or a limited number of persons either

(A) for the furnishing of transportation services through the assignment of motor vehicles for a continuing period of time to the exclusive use of each person served or

(B) for the furnishing of transportation services designed to meet the distinct need of each individual customer.

(3) Gross combination weight rating: the value specified by the manufacturer as the loaded weight of a combination vehicle.

(4) Gross vehicle weight rating: the value specified by the manufacturer as the loaded weight of a single vehicle.

(5) Interstate commerce: the commerce between any place in a State and any place in another State or between places in the same State through another State, whether such commerce moves wholly by motor vehicle or partly by motor vehicle and partly by rail, express, water or air. This definition of "interstate commerce" for purposes of this rule is the same as the definition of "interstate commerce" in Section 203(a) of the Interstate Commerce Act (49 U.S.C. Section 303(a)).

(6) Motor carrier: a common carrier by motor vehicle, a contract carrier by motor vehicle, or a private carrier of property by motor vehicle, as those terms are defined by paragraphs (14), (15), and (17) of Section 203(a) of the Interstate Commerce Act (49 U.S.C. 303(a)). The term "motor carrier" includes those entities which own and operate the subject motor vehicles, but not the drivers thereof, unless said drivers are independent truckers who both own and drive their own vehicles.

(7) Open site: an area that is essentially free of large sound-reflecting objects, such as barriers, walls, board fences, signboards, parked vehicles, bridges or buildings.

(8) Private carrier of property by motor vehicle: any person not included in terms "common carrier by motor vehicle" or "contract carrier by motor vehicle", who transports in interstate or foreign commerce by motor vehicle property of which such person is the owner, lessee, or bailee, when such transportation is for sale, lease, rent or bailment, or in furtherance of any commercial enterprise.

### **Section 902.124 Horns and Other Warning Devices**

(a) No person shall sound a horn when upon a highway, except when reasonably necessary to insure safe operation. No person shall sound any horn on any motor vehicle for an unreasonable period of time or in a manner so as to circumvent enforcement of the operational standards contained in this Subpart B.

(b) No person shall sound any siren, whistle or bell of any motor vehicle except as provided in Ill. Rev. Stat. 1981, ch. 95 1/2, par. 12-601(b).

### **Section 902.125 Tire Noise**

No person shall operate a motor vehicle in such a manner as to cause or allow to be emitted squealing, screeching or other such noise from the tires in contact with the ground because of rapid acceleration or excessive speed around corners or other such reason, except that noise resulting from emergency operation to avoid imminent danger shall be exempt from this provision.

## SUBPART C: EXCEPTIONS AND COMPLIANCE DATES FOR PART 902

### Section 902.140 Exceptions

- (a) The standards and limitations of Part 902 shall not apply to:
- (1) any vehicle moved by human or animal powers;
  - (2) any vehicle moved by electrical power;
  - (3) any vehicle used exclusively upon stationary rails or tracks;
  - (4) any farm tractor;
  - (5) any antique vehicle, if licensed under Section 3-804 of the Illinois Vehicle Code Ill. Rev. Stat. 1981, ch. 95 1/2, par. 3-804;
  - (6) any snowmobile;
  - (7) any special mobile equipment;
  - (8) any vehicle while being used lawfully for racing competition or time racing events; and
  - (9) any lawn care maintenance equipment.
- (b) Sections 902.102 and 902.123(b)(2) shall not apply to any person who can show that a tread pattern as described in those rules was the result of wear and that the tire was not originally manufactured or newly retreaded with such a tread pattern.
- (c) The operational standards contained in Sections 902.120 through 902.123 inclusive shall not apply to warning devices, such as horns and sirens; or to emergency equipment and vehicles such as fire engines, ambulances, police vans, and rescue vans, when respond to emergency calls; to snow plows when in operation; or to tactical military vehicles.

### Section 902.141 Compliance Dates

- (a) Except as otherwise provided in this rule, any person subject to the standards and limitations of this Part shall comply with such standards and limitations on and after November 30, 1977.
- (b) Every owner or operator of a motor vehicle subject to Section 902.102 shall comply with such rule on and after May 31, 1978.
- (c) Every owner or operator of a motor vehicle subject to Section 902.120(b)(2) or 902.121(b)(2) shall comply with such rule on and after May 31, 1978.
- (d) Every motor carrier subject to Section 902.123 shall comply with such rule on and after May 31, 1977.

## PART 905: SOUND EMISSION STANDARDS AND LIMITATIONS FOR SNOWMOBILES

### Section 905.101 Exhaust Systems

- (a) No person shall operate or cause or allow the operation of a snowmobile unless the exhaust system of such snowmobile is:
- (1) free from defects which interfere with sound reduction;
  - (2) equipped with a muffler or other dissipative device;
  - (3) not equipped with a cutout, by-pass or similar device.
- (b) No person shall install any parts in or modify the cooling, intake, or exhaust system of a snowmobile in a manner which will amplify or increase the sound level emitted by that snowmobile above the level emitted by such snowmobile with the equipment originally installed on the snowmobile.
- (c) No person shall operate or cause or allow the operation of a snowmobile which has been modified in a manner which will amplify or increase the sound level emitted by that snowmobile

above the level emitted by such snowmobile with the equipment originally installed on the snowmobile.

#### **Section 905.102 Noise Emission Standards**

(a) No person shall operate or cause or allow the operation of a snowmobile manufactured after April 1, 1979 which generates a sound level in excess of 78 decibels on the A-scale at 50 feet when measured in accordance with procedures established under 35 Ill. Adm. Code 900.103(e)(1).

b) No person shall operate or cause or allow the operation of a snowmobile manufactured after April 1, 1979 which generates a sound level in excess of 73 decibels on the A-scale at 50 feet when measured in accordance with procedures established under 35 Ill. Adm. Code 900.103(e)(2).

#### **Section 905.103 Certification Requirement for Registration of New Snowmobiles**

(a) No new snowmobile shall be registered for use in Illinois unless the application for registration includes a certification by the selling dealer that the snowmobile complies with Section 905.101 and the level of sound it emits does not exceed:

(1) 78 decibels on the A-scale at 50 feet when measured in accordance with procedures established under 35 Ill. Adm. Code 900.103(e)(1).

(2) 73 decibels on the A-scale at 50 feet when measured in accordance with procedures established under 35 Ill. Adm. Code 900.103(e)(2).

(b) Certification by the selling dealer that the snowmobile has been certified by the Snowmobile Safety and Certification Committee on or after April 1, 1979 is prima facie proof of compliance with subparagraphs (a)(1) and (a)(2), provided that SSCC sound level requirements for certification remain identical to those contained in subparagraph (a).

#### **Section 905.104 Exemptions to Part 905**

(a) Sections 905.101 and 905.102 shall not apply to any snowmobile while being used lawfully for racing competition or timed racing events.

(b) Sections 905.101, 905.102, and 905.103 shall not apply to those snowmobiles described in Ill. Rev. Stat. 1981, ch. 95 1/2, par. 603-11 (C-D), as exempted from the numbering provision of the Snowmobile Registration and Safety Act.

(c) Section 905.103 shall not apply to those snowmobiles described in Ill. Rev. Stat. 1981, ch. 95 1/2, par. 603-11 (A-B) as exempted from the numbering provision of the Snowmobile Registration and Safety Act.

#### **Section 905.105 Compliance Dates for Part 905**

Except as otherwise provided in Section 905.104, every owner and operator of a snowmobile subject to this Part shall comply with the rules of this Part on and after November 8, 1981.

### **PART 910: MEASUREMENT PROCEDURES FOR THE ENFORCEMENT OF 35 ILL. ADM. CODE 900 & 901**

#### **Section 910.100 General**

This Part specifies the instrumentation to be used when conducting acoustical noise measurements and sets forth the specific acoustical measurement techniques to be employed

when conducting time-averaged sound level ( $L_{eq}$ ) measurements. The instrumentation requirements and measurement techniques as more specifically set forth in this Part must be used in determining whether a noise source is in compliance with 35 Ill. Adm. Code 900 and 901.

### **Section 910.102 Instrumentation**

#### **(a) Sound Measuring Equipment**

(1) An integrating sound level meter used alone or used in conjunction with an octave-band or 1/3 octave-band filter set or a real-time sound analyzer (octave-band or 1/3 octave-band) must conform with the following standards incorporated by reference at 35 Ill. Adm. Code 900.106:

(A) ANSI S1.4 – 1983 (R2001) “American National Standard Specification for Sound Level Meters”, and ANSI S1.4 A-1985 “Amendment to ANSI S1.4-1983.”

(B) ANSI S1.11 - 1986 (R1998) “American National Standard Specifications for Octave-Band and Fractional-Octave-Band Analog and Digital Filters.”

(C) ANSI S1.6 – 1984 (R2001) “American National Standard Preferred Frequencies, Frequency Levels, and Band Numbers for Acoustical Measurements.”

(D) ANSI S1.8 - 1989 “American National Standard Reference Quantities for Acoustical Levels.”

International Electrotechnical Commission, IEC 804-2000 Integrating/Averaging Sound Level Meters.

A magnetic tape recorder, graphic level recorder or other indicating device used must meet the requirements of the Society of Automotive Engineers (SAE) Recommended Practice J184 “Qualifying a Sound Data Acquisition System,” November 1998, incorporated by reference at 35 Ill. Adm. Code 900.106

The laboratory calibration of instrumentation used for acoustic measurement must be traceable to the National Bureau of Standards, and must be performed no less often than once every 12 months.

For outdoor measurement, a windscreen must be attached to the microphone.

#### **(b) Weather Measuring Equipment**

(1) An anemometer and compass or other devices must be used to measure wind speed and direction in accordance with the manufacturer's recommended procedures.

(2) A thermometer, designed to measure ambient temperature, must be used in accordance with the manufacturer's recommended procedures.

(3) A hygrometer must be used in accordance with the manufacturer's recommended procedures to measure the relative humidity.

(4) A barometer must be used in accordance with the manufacturer's recommended procedures to measure the barometric pressure.

### **Section 910.103 Definitions**

The definitions contained in 35 Ill. Adm. Code 900.101 apply to this Part.

### **Section 910.104 Measurement Techniques for 35 Ill. Adm. Code 900**

Sound pressure level measurements are not required to establish a violation of 35 Ill. Adm. Code 900.102 (nuisance noise). However, sound pressure level measurements may be introduced as corroborating evidence when alleging a violation of 35 Ill. Adm. Code 900.102. If sound pressure level measurements are collected, manufacturer's instructions must be followed for the equipment used and 35 Ill. Adm. Code 910.105 may be used as guidance in gathering data.

## **Section 910.105 Measurement Techniques for 35 Ill. Adm. Code 901**

Sound pressure level measurements must be obtained in accordance with the following measurement techniques to determine whether a noise source is in compliance with 35 Ill. Adm. Code 901:

### **(a) Site Selection**

(1) Measurements may be taken at one or more microphone positions within the appropriate receiving land. Measurement instruments must be set up outdoors within the boundaries of the receiving land for the purpose of determining whether a noise source is in compliance with 35 Ill. Adm. Code 901.

(2) Measurement instruments must be set up not less than 25 feet (7.6 meters (m)) from the property line noise source. The 25-foot (7.6 m) setback requirement is from the noise source and not the property line unless the noise source is contiguous to the property line.

(3) Other measurement locations may be used for investigatory purposes such as, but not limited to, the following:

(A) Determining the extent of noise pollution caused by the source of sound;

(B) Determining the ambient; and

(C) Analyzing those acoustical parameters that describe the sound source.

(4) For measurements of sound sources with no audible discrete tones, microphones should not be set up less than 25 feet (7.6 m) from any reflective surface that may affect data. If measurements must be taken within 25 feet (7.6 m), the effect, if any, of the reflective surface on the measured data must be determined.

(5) For measurements of sound sources with audible discrete tones, microphones must not be set up less than 50 feet (15.2 m) from any reflective surface that may affect data. If measurements must be taken within 50 feet (15.2 m), the effect, if any, of the reflective surface on the measured data must be determined.

(6) Objects with small dimensions (trees, posts, bushes, etc.) must not be within 5 feet (1.5 m) of the microphone position. If measurements must be taken within 5 feet (1.5 m) of such objects, the effect, if any, on the measured data must be determined.

### **(b) Instrumentation Set Up**

(1) A tripod must be set at the chosen site. The tripod must be extended to a height between 3 feet 8 inches (1.12 m) and 4 feet 10 inches (1.47 m) above ground.

(2) A microphone must be attached to the appropriate end of a 5-foot (1.5 m) or longer cable and must be affixed to the top of the tripod. The other end of the cable must be connected to the measuring instrument.

(3) The angle of incidence of the microphone must be adjusted to yield the flattest frequency response in accordance with the manufacturer's specifications.

(4) The measuring instrument must be separated from the microphone so as to minimize any influence on the measurements. The cable movement must be minimized during the measurement period.

### **(c) Measurement Site Operation and Instrument Calibration**

(1) Before taking sound pressure level measurements, measure and record (near the measurement site):

(A) Wind speed and direction;

(B) Ambient temperature;

(C) Relative humidity; and

- (D) Barometric pressure.
- (2) Turn the measuring instrument on and allow the instrument to stabilize. Monitor and record the battery condition of the calibrator and all measuring instruments.
  - (3) Turn the calibrator on at its appropriate frequency. Allow the calibrator to stabilize and calibrate the measuring system according to the manufacturer's specifications. After the measuring system has been calibrated, remove the calibrator and attach a windscreen to the microphone.
  - (4) Adjust the microphone to the angle of incidence that will yield the frequency response in accordance with the manufacturer's specifications.
  - (5) Measure the sound pressure level data within the limitations of subsection (d) and according to the manufacturer's recommended procedures. Other sound pressure levels may be used for investigatory purposes such as, but not limited to, the following:
    - (A) Determining the extent of noise pollution caused by the source of sound;
    - (B) Determining the ambient; and
    - (C) Analyzing those acoustical parameters that describe the sound source.
  - (6) While sound measurements are being taken, the operator must be separated from the microphone so as to minimize any influence on the measurements.
  - (7) While measurements are being taken, visual and aural surveillance of extraneous sound sources and varying wind conditions must be made to insure that the conditions of measurement are accurately known. Record any variations in these parameters that may affect data. The number and basis for affected data block must be recorded. When using a tape recorder, voice commentary concerning conditions will be recorded on the cue track.
  - (8) To minimize wind effects on the microphone, sound measurements must not be taken when the wind velocity is greater than 12 miles per hour (5.4 m/second) at the microphone position.
  - (9) For the purposes of data correction, the ambient sound at the measurement site must be determined by means of measurement or analysis.
  - (10) After taking sound pressure level measurements, remove the windscreen and attach the calibrator to the microphone. Turn the calibrator on at its appropriate frequency. After allowing the calibrator to stabilize, monitor and record the measuring system response. When the measuring system response varies by more than + 0.5 dB from the most recent field calibration, the sound pressure level measurements obtained since such most recent field calibration cannot be used for enforcement purposes.
  - (11) Before removing the calibrator from the microphone, turn the calibrator off. If the ambient sound has not been determined by means of measurement, determine the noise floor of the measuring system. If the noise floor is within 10 dB of the measured sound pressure level data, such noise floor measurements must be recorded.
  - (12) At the end of the sound survey, monitor and record the battery condition of the calibrator and all measuring instruments. Near the measurement site, measure and record:
    - (A) Wind speed and direction;
    - (B) Ambient temperature;
    - (C) Relative humidity; and
    - (D) Barometric pressure.
  - (13) Record the physical and topographical description of the ground surface within the vicinity of the measurement site, survey site location, a description of the sound source, a



diagram of the area, the location of reflective surfaces near the microphone, and the approximate location of the noise source relative to the microphone position.

(14) A magnetic tape recorder may be used to preserve the raw data. Calibration signals must be recorded at the beginning and end of each tape as well as at intermediate times such as when relocating to a new measurement site. Voice commentary concerning local conditions and affected data blocks must be recorded on the cue track. The original tape recording must be preserved for subsequent evaluation. Laboratory analyses may be performed on magnetic tape recorded field data. A description of the laboratory instrumentation and procedures must be recorded. Analyses used in the laboratory must be correlated to field measurement techniques.

(d) Limiting Procedures for Specific Types of Data Acquisition

(1) For measurements of non-impulsive sound with audible discrete tones, 1/3 octave-band sound pressure levels must be obtained in determining whether a noise source is in compliance with 35 Ill. Adm. Code 901.106.

(2) For measurements of non-impulsive sound with no audible discrete tones, octave-band sound pressure levels must be obtained in determining whether a noise source is in compliance with 35 Ill. Adm. Code 901.102 and 901.103.

(e) Correction Factors

If necessary, correction factors rounded to the nearest 1/2 decibel must be applied to sound pressure level measurements. The correction factors applicable to the measurement system may include, but are not limited to, corrections for windscreen interference and the sound pressure level difference between consecutive field calibrations. Such calibration correction factors must only be used to make negative corrections (subtraction from the field data). In no case must such calibration correction factors be added to the measured sound pressure levels so as to raise the sound pressure level field data. The correction factors applicable to the measurement site may include, but are not limited to, corrections for reflective surfaces and ambient sound.

### **Section 910.106 Protocols for Determination of Sound Levels**

(a) The raw data collection procedures for the determination of equivalent continuous sound pressure level (Leq) are described in this Section using as an example the determination of a 1-hour Leq corrected for ambient. The following procedures must be used:

(1) Using small blocks:

(A) The 1-hour interval is divided into many small blocks of time so that corruption of the data from short-term background transient sound and loss of data can be limited to the corrupted or bad blocks. The block duration in seconds must remain fixed for any measurement hour. The duration must be neither less than 10 seconds nor greater than 100 seconds. For example, if the block duration is chosen to be 60 seconds (1 minute), then the data collection proceeds for 60, 1-minute periods of measurement.

(B) The collected data for each block represents a block duration Leq (or sound exposure level (SEL)) in octave-bands (or 1/3 octave-bands if prominent discrete tones may be present).

(C) Data for any block corrupted by one or more short-term background transient sounds must be deleted.

(D) After deleting corrupted data blocks, there will be a fixed number of "good" data blocks remaining. This number is designated as NPLNS, where PLNS stands for

Property-Line-Noise-Source. These remaining “good” blocks must be numbered consecutively. The subscript *i* is used to denote the numbering of the blocks in time order after corrupted data blocks have been deleted.

The data for the NPLNS remaining blocks are time averaged on an energy basis by octave (or 1/3 octave-band) using Equation 1 below. In this equation, two subscripts are used, *i* to designate time and *j* to designate the specific frequency, either an octave-band or 1/3 octave-band. The raw, 1-hour Leq in the *j*th frequency band is given by Equation 1:

$$L_{eqj} = 10 \log \left( \frac{1}{N_{PLNS}} \sum_{i=1}^{N_{PLNS}} 10^{\left( \frac{L_{eqij}}{10} \right)} \right)$$

where Leq is the Leq in the *j*th frequency band for the *i*th non-deleted data block.

(F) In terms of SEL, the raw SEL in the *j*th frequency band is given by Equation 2:

$$SEL_j = 10 \log \left( \sum_{i=1}^{N_{PLNS}} 10^{\left( \frac{SEL_{ij}}{10} \right)} \right)$$

(G) The raw, 1-hour Leq in the *j*th frequency band is given in terms of the corresponding SEL<sub>*j*</sub> by Equation 3:

$$L_{eqj} = SEL_j + 10 \log \left( \frac{3600}{N_{PLNS} \Delta T} \right)$$

Where *T* is the block duration in seconds, NPLNS is the number of non-discarded data blocks, and 3600 is the number of seconds in an hour.

(2) Continuous Data Collection:

(A) The measuring instrument must be adjusted to continuously measure sound pressure and accumulate Leq for each block of time. For convenience, the hour may be split into several smaller blocks such as 10, 6-minute blocks or 4, 15-minute blocks, etc.

(B) A switch on the measuring instrument must be available to inhibit data collection whenever a short-term background transient sound occurs. This switch shall be used to prevent short-term background ambient sounds from corrupting the data.

(C) Data collection must proceed for one hour. The energy average of the several measured Leq<sub>*ij*</sub> each weighted by the number of seconds actually accumulated during the *i*th block results in the raw, 1-hour Leq in each frequency band given by Equation 4:

$$L_{eqj} = 10 \log \left( \frac{1}{T_{PLNS}} \sum_{i=1}^{N_{PLNS}} T_i 10^{\left( \frac{L_{eqij}}{10} \right)} \right)$$

Where  $Leq_{ij}$  is the  $Leq$  in the  $j$ th frequency band for the  $i$ th large block.  $T_i$  is the actual number of seconds of “good” data accumulated in the  $i$ th block of time (e.g., 6 to 15 minutes); and Equation 5

$$T_{PLNS} = \sum_{i=1}^{N_{PLNS}} T_i$$

(3) Minimum data collection requirements:

(A) Initial Measurement Duration. The property-line-noise-source measurements must proceed initially for one hour. Because of correction for short-term background transient sounds, actual reported data collection time  $T$ , in seconds, may be less than 3600 seconds (one hour).

(i) If small blocks of data are used for data collection, then the total measurement duration in seconds,  $T_{PLNS}$ , is given by  $N_{PLNS} T$ , where  $T$  is the length of each block in seconds and  $N_{PLNS}$  is the number of non-discarded blocks. If data inhibition is used for data collection, then  $T_{PLNS}$  is the number of non-inhibited seconds during the measurement hour. In either case,  $T_{PLNS}$  must be no less than 900 seconds.

(ii) If very few blocks were used for data collection, then the duration of each block,  $T$ , may be too long and should be reduced.

(iii) For either data collection method, sounds considered to be short-term transient may actually be part of the long-term background ambient and should be so redefined.

(B) Extended Measurement Duration. If  $T_{PLNS}$  is less than 900 seconds during the first hour of measurements, the raw data collection procedures must be appropriately modified and new measurements must proceed for an additional hour. If  $T_{PLNS}$  after combining the first and the second hour of measurements is also less than 900 seconds, then the raw data collection must continue using the data inhibition method or method employed during the second hour until  $T_{PLNS}$  is greater than or equal to 900 seconds.

(4) Correction for Long-Term Background Ambient Sound:

(A) The raw 1-hour  $Leq$  must be corrected for long-term background ambient sound. Subsection (b) of this Section describes methods to obtain the long-term background ambient sound level in the  $j$ th frequency band. The correction is dependent on the difference (in decibels) between the raw, 1-hour,  $j$ th band property-line-noise-source:  $Leq_j$  and corresponding  $j$ th band long-term background ambient sound level. The correction to be applied is as follows:

(i) If the difference between the raw 1-hour  $Leq$  and the long-term background ambient sound is larger than 10 decibels, then the correction must be set to 0.

(ii) If the difference between the raw 1-hour  $Leq$  and the long-term background ambient sound difference is less than 3 decibels, then the  $j$ th frequency-band level,  $Leq_j$ , must be set equal to 0.

(iii) If the difference between the raw 1-hour  $Leq$  and the long-term background ambient sound is between 3 and 10 decibels, then the correction given in Table 1 below must be subtracted from the raw, 1-hour property-line-noise-source  $Leq_j$

**Table 1 Corrections in dB for long-term background ambient sound**

Difference (dB)	Correction (dB)
3	3
4	2.3
5	1.7
6	1.3
7	1.0
8	0.7
9	0.6
10	0.5

(B) The long-term background ambient corrected level must be the property-line-noise-source  $Leqj$  reported for the  $j$ th frequency band.

(b) Obtaining the background ambient sound level:

(1) The background ambient must be measured for the purposes of this Section during a 10-minute interval.

(2) Long-term background ambient measurement procedures are similar to procedures to measure the property-line-noise-source itself. Eliminating short-term background ambient transient sounds from the measurement of average long-term background ambient sound proceeds in a manner similar to the measurement of the property-line-noise-source emissions themselves. The two methods for measurement are: to divide the 10-minute measurement into short blocks of data, or inhibit data collection when short-term background transient sounds occur. The same method must be used for gathering both the property-line-noise-source data and the corresponding long-term background ambient data. The measurement procedures for each method are given in subsections (b)(3), (b)(4) and (b)(5) of this Section:

(3) Using Small Blocks of Data

(A) The 10-minute measurement of long-term background ambient must be divided into short measurement blocks. The duration of these blocks must remain constant during the entire measurement, both when measuring the long-term background ambient and when measuring the property-line-noise-source. The duration of this measurement block in seconds,  $T$ , must divide exactly (without remainder) into 600 and must be neither greater than 100 seconds nor less than 10 seconds.

(B) All data for any measurement block corrupted by one or more short-term ambient transient sounds must be discarded. The number of remaining, non-discarded measurement blocks is designated  $NBA$ , where  $BA$  stands for background ambient.

(C) The  $Leq$  for each octave-(or 1/3 octave-) band are time-averaged on an energy basis over the  $NBA$  remaining measurement blocks to obtain average long-term background ambient  $Leq$  per band. Equation 1 (see subsection (a) (1) (E) of this Section) is used for this calculation with  $NBA$  replacing  $NPLNS$  as the number of elemental blocks to be summed. The total duration of the measurement in seconds,  $TBA$ , is given by  $NBA$  multiplied by  $T$ .

(4) Continuous Data Collection

(A) The measuring instrument must be adjusted according to manufacturer's instructions to continuously measure sound pressure and accumulate (i.e. record)

Leq. A switch must be available to inhibit data collection whenever a short-term background transient sound occurs, (and on some instruments, a button may be available to delete the most recent, previous data).

(B) The switches or buttons must be used to prevent short-term background ambient sounds from corrupting the data.

(C) Data collection must proceed for 10 minutes. The result is the 10-minute, long-term background ambient Leq in each band.

(D) TBA is the number of non-inhibited measurement seconds during the 10-minute measurement period.

(5) The minimum duration, for either method, TBA must be no less than 150 seconds. If TBA is less than 150 seconds, then the measurement of the long-term background ambient must continue beyond the original 10 minutes and until TBA for the total long-term background ambient measurement is greater than or equal to 150 seconds.

(6) Measurement Alternatives. The long-term background ambient noise should ideally be measured at the potential violation site just before measurement of the property-line-noise-source emissions. However, turning off the property-line-noise-source may not always be possible. The following are a hierarchical order of five procedures for obtaining the long-term background ambient noise. The first four procedures involve direct measurement; the fifth procedure provides for use of tables of values obtained from extensive measurements. These are not equivalent procedures but are ordered from what is considered to be the most accurate to what is considered to be the least accurate procedure.

(A) Direct Measurement Procedure –1: With the property-line-noise-source (PLNS) turned off, measure the long-term background ambient noise within the hour before or within the hour after measurement of the PLNS emissions at the location where the PLNS measurements are being taken and with the measurement equipment used for the PLNS measurements.

(B) Direct Measurement Procedure-2: With the PLNS turned off, measure the long-term background ambient during a similar time period in terms of background ambient sound level, within one to 24 hours before, or within one to 24 hours after measurement of the PLNS emissions at the location where the PLNS measurements are being taken and with the measurement equipment used for the PLNS.

(C) Direct Measurement Procedure- 3: With the PLNS turned off, measure the long-term background ambient during some other acoustically similar period within one to 30 days before, or within one to 30 days after measurement of the PLNS emissions. This alternate long-term background ambient measurement time might be a Saturday night or anytime during a Sunday or holiday. The measurements would be made at the location where the PLNS measurements are being taken and with the measurement equipment (or like equipment) used for the PLNS measurement.

(D) Direct Measurement Procedure-4: With the PLNS turned off, measure the long-term background ambient noise during some other acoustically similar period within 30 to 90 days before, or within 30 to 90 days after measurement of the PLNS emissions. These measurements would be made at the location where the PLNS measurements are being taken and with the measurement equipment (or like equipment) used for the property-line-noise-source measurements.

(E) Tables of Long-Term Background Ambient Noise. Where none of the alternatives can be used, use the applicable long-term background ambient data taken

from Tables A through D in Appendix A of this Part. These tables are organized by predominant land use and time of day (daytime or nighttime). There are separate tables for octave- and 1/3- octave-bands. The background environments presented in the table are based on extensive measurements conducted in the Chicago area and are divided into the five categories given below in accordance with G.L. Bonvallet, "Levels and Spectra of Traffic, Industrial, and Residential Area Noise," Journal of the Acoustical Society of America, 23 (4), pp 435-439, July 1951; and Dwight E. Bishop and Paul D. Schomer, Handbook of Acoustical Measurements and Noise Control, Chapter 50, Community Noise Measurements, 3rd Edition, Cyril M Harris, Editor, McGraw-Hill Book Co., New York (1991).

(i) Category 1: Noisy Commercial and Industrial Areas. Very heavy traffic conditions, such as in busy downtown commercial areas, at intersections of mass transportation and other vehicles, including the Chicago Transit Authority trains, heavy motor trucks and other heavy traffic, and street corners where motor buses and heavy trucks accelerate.

(ii) Category 2: Moderate Commercial and Industrial Areas, and Noisy Residential Areas. Heavy traffic areas with conditions similar to subsection (b)(6)(E)(i) of this Section but with somewhat less traffic, routes of relatively heavy or fast automobile traffic but where heavy truck traffic is not extremely dense, and motor bus routes.

(iii) Category 3: Quiet Commercial and Industrial Areas, and Moderate Residential Areas. Light traffic conditions where no mass transportation vehicles and relatively few automobiles and trucks pass, and where these vehicles generally travel at low speeds. Residential areas and commercial streets and intersections with little traffic comprise this category.

(iv) Category 4: Quiet Residential Areas. These areas are similar to Category 3 in subsection (b)(6)(E)(iii) of this Section but, for this group, the background is either distant traffic or is unidentifiable.

(v) Category 5: Very Quiet, Sparse Suburban or Rural Areas. These areas are similar to Category 4 subsection (b)(6)(E)(iv) of this Section but are usually in unincorporated areas and, for this group, there are few if any near neighbors.

**Section 910.107 Measurement Techniques for Highly-Impulsive Sound Under 35 Ill. Adm. Code 901.104.**

(a) Measurement of highly-impulsive sound under 35 Ill. Adm. Code 901.104 can be made in two distinct and equally valid ways, namely the general method and the controlled test method.

(b) General Method: The general method is to measure the 1-hour, A-weighted Leq (not the octave- or 1/3 octave-band levels) using essentially one of the two procedures described in Sections 910.105 and 910.106.

(1) The procedure using small blocks of time to collect data is as follows:

(A) The hour must be divided into small blocks and the A-weighted Leq must be measured for each of these small blocks of time. Leq must be measured for the entire hour but data collection must be inhibited whenever a short-term background transient sound occurs.

(B) The duration of each block must be held constant during the hour. This duration in seconds must divide exactly into 900 and must be neither greater than 100 seconds nor less than 10 seconds.

(C) The data for any block corrupted by one or more short-term background ambient sounds must be discarded.

(2) The continuous data collection procedure is as follows:

(A)  $L_{eq}$  must be measured for the entire hour.

(B) Data collection must be inhibited whenever a short-term background transient sound occurs.

(3) Correction for the long-term background ambient must be accomplished using all of the other procedures and requirements enumerated in Sections 910.105 and 910.106. These requirements must be complied with to determine an A-weighted, 1-hour, background-ambient-corrected  $L_{eq}$  for the highly impulsive property-line-noise-source under study.

(c) Controlled Test Method: For this method, the following procedures must be used:

(1) General Measurement Description

(A) The sound exposure per impulse from each separate individual impulsive source is measured.

(B) The total sound exposure per hour from each source is the sound exposure per event multiplied by the number of events per hour.

(C) The grand total sound exposure (SE) per hour is the sum of the sound exposures per hour from each of the separate individual sources.

(D) The reported SEL is obtained from the grand total sound exposure (SE) per hour using the following:

$$SEL = 10 \log (SE) + 94 \quad \text{[Equation 7]}$$

(E) The equivalent level,  $L_{eq}$  corresponding to a SEL measured or predicted for one hour (3600 seconds) is given by:

$$L_{eq} = SEL - 10 \log (3600) \quad \text{[Equation 8]}$$

(2) Determination of sound exposure per event must be as follows:

(A) The sound exposure per event from each, separate, individual source must be determined by measuring the total A-weighted sound exposure for about 10 repetitions of this source. This set of about 10 measurements may be performed continuously over a short period of time, or this set of measurements may be performed over a discontinuous set of measurement periods. In either case, the total measurement duration must be less than 100 seconds.

(B) These separate, individual property-line-noise- source controlled measurements must be free of any short-term ambient sounds. If any short-term background transient sounds occur during these measurements, then the measurement must be repeated until measurement data, free of any corrupting short-term background ambient sounds, are obtained.

(C) The total measured A-weighted sound exposure for this group of about 10 repetitions must be corrected for long-term background ambient by subtracting the A-weighted long-term background ambient sound exposure. The sound exposure

value subtracted must be the long-term A-weighted background ambient sound exposure per second multiplied by the number of seconds used to measure the several source repetitions.

(D) The reported Source: A-weighted sound exposure per event must be the total corrected sound exposure divided by the number of source repetitions measured.

(E) The background ambient must be measured for a short time, at least 30 seconds as near in time to the source measurements as possible, but within ½ hour. The total A-weighted long-term background ambient sound exposure per second is the total measured long-term background ambient sound exposure divided by the number of seconds of background ambient measurement.

(F) There must be no short-term background ambient sounds present during the measurement of the long-term background ambient. If any short-term background transient sounds occur during these measurements, then the measurements must be repeated until long-term background ambient measurement data free of any corrupting short-term background ambient sound are obtained.



**910.APPENDIX A Tables of Long-Term Background Ambient Noise**

**TABLE A. Daytime long-term background ambient  $L_{eq}$  levels in decibels by land use categories and 1/3 octave-band level**

Octave-Band Center Frequency (Hz)	Background Category				
	1	2	3	4	5
20	63	56	48	42	36
25	64	57	49	43	37
31	65	58	50	44	38
40	65	58	51	44	38
50	66	59	51	45	39
63	66	59	52	46	40
80	67	60	52	46	40
100	68	60	53	47	41
125	67	59	52	46	40
160	66	59	52	46	40
200	66	58	51	45	39
250	65	58	50	44	38
315	64	57	49	43	37
400	63	55	48	42	36
500	62	54	46	40	34
630	61	53	44	38	32
800	60	51	42	36	30
1000	58	49	40	34	28
1250	56	47	38	32	26
1600	54	45	36	30	24
2000	52	43	33	28	21
2500	50	41	30	25	19
3150	49	39	28	23	17
4000	48	37	25	20	15
5000	46	35	23	18	13
6300	44	33	21	16	10
8000	43	31	19	14	8
10,000	41	29	17	12	6
12,500	39	27	15	10	4

**TABLE B. Nighttime long-term background ambient  $L_{eq}$  levels in decibels by land use categories and 1/3 octave-band level**

Octave-Band Center Frequency (Hz)	Background Category				
	1	2	3	4	5
20	53	48	43	37	31
25	54	49	44	38	32
31	55	50	45	39	33
40	55	50	46	39	33
50	56	51	46	40	34
63	56	51	47	41	35
80	57	52	47	41	35
100	58	52	48	42	36
125	57	51	47	41	35
160	56	51	47	41	35
200	56	50	46	40	34
250	55	50	45	39	33
315	54	49	44	38	32
400	53	47	43	37	31
500	52	46	41	35	29
630	51	45	39	33	27
800	50	43	37	31	25
1000	48	41	35	29	23
1250	46	39	33	27	21
1600	44	37	31	25	19
2000	42	35	28	23	16
2500	40	33	25	20	14
3150	39	31	23	18	12
4000	38	29	20	15	10
5000	36	27	18	13	8
6300	34	25	16	11	5
8000	33	23	14	9	3
10,000	31	21	12	7	1
12,500	29	19	10	2	0

**TABLE C. Daytime long-term background ambient  $L_{eq}$  levels in decibels by land use categories and octave-band level**

Octave-Band Center Frequency (Hz)	Background Category				
	1	2	3	4	5
31	70	63	55	49	43
63	71	64	57	51	45
125	72	64	57	51	45
250	70	63	55	49	43
500	67	59	51	45	39
1000	63	54	45	39	33
2000	57	48	38	33	26
4000	53	42	30	25	20
8000	48	36	24	19	13

**TABLE D. Nighttime long-term background ambient  $L_{eq}$  levels in decibels by land use categories and octave-band level**

Octave-Band Center Frequency (Hz)	Background Category				
	1	2	3	4	5
31	60	55	50	44	38
63	61	56	52	46	40
125	62	56	52	46	40
250	60	55	50	44	38
500	57	51	46	40	34
1000	53	46	40	34	28
2000	47	40	33	28	21
4000	43	34	25	20	15
8000	38	28	19	14	8